



# SINGAPORE

## DETAILED ASSESSMENT OF COMPLIANCE—BASEL CORE PRINCIPLES FOR EFFECTIVE BANKING SUPERVISION

December 2013

This Detailed Assessment of Compliance on the Basel Core Principles for Effective Banking Supervision on Singapore was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on November 25, 2013. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Singapore or the Executive Board of the IMF.

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# SINGAPORE

## DETAILED ASSESSMENT OF COMPLIANCE

November 25, 2013

### BASEL CORE PRINCIPLES FOR EFFECTIVE BANKING SUPERVISION

Prepared By  
**Monetary and Capital  
Markets Department**

This Detailed Assessment Report was prepared in the context of an IMF Financial Sector Assessment Program (FSAP) mission in Singapore from April 3–17, 2013 led by Karl Habermeier, IMF and overseen by the Monetary and Capital Markets Department, IMF. Further information on the FSAP program can be found at <http://www.imf.org/external/np/fsap/fssa.aspx>

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## Glossary

AA	Accountants Act (Chapter 2)
AASC	Auditing and Assurance Standards Committee
AC	Additional criteria for the assessment of a principle
ACRA	Accounting and Corporate Regulatory Authority
AGC	Attorney General's Chambers
A-IRBA	Advanced internal ratings-based approach for credit risk
ALCO	Assets-liabilities committee
AMA	Advanced measurement approach for operational risk
AML/CFT	Anti-Money Laundering and Combating the Financing of Terrorism
APG	Asia/Pacific Group on Money Laundering
BA	Banking Act (Chapter 19)
BARS	MAS' Banking Analysis and Reports Teamsite
BCBS	Basel Committee on Banking Supervision (also, the Basel Committee)
BCM	Business Continuity Management
BCP	Basel Core Principles for Effective Banking Supervision
BSS	MAS' Banking Supervisory System
CA	Companies Act (Chapter 50)
CAD	Commercial Affairs Department
CAR	Capital adequacy ratio
CDD	Customer due diligence
CDSA	Corruption, Drug Trafficking and Other Serious Crimes (Confiscation of Benefits) Act (Chapter 65A)
CEO	Chief Executive Officer
CRO	Chief Risk Officer
CET1	Common Equity Tier 1
CFP	Contingency Funding Plans
CG	Corporate governance
CMG	Crisis management group
CMT	MAS' Crisis Management Team
CP	Core principle
CRAFT	MAS' Comprehensive Risk Assessment Framework and Techniques

CRAY	MAS' Credit Risk Analytics Tool
DFI	Distress Financial Institution
DI	Deposit insurance
EC	Essential criteria for the assessment of a principle
EPIC	MAS' External Party Information Collection
EMEAP-WGBS	Executives Meeting of East Asia Pacific Central Banks' Working Group on Banking Supervision
FAA	Financial Advisers Act (Chapter 110)
FATF	Financial Action Task Force
FHC	Financial holding company
F-IRBA	Foundation internal ratings-based approach for credit risk
FIU	Financial intelligence unit
FRS	Singapore Financial Reporting Standards
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSC	MAS' Management Financial Stability Committee
IAC	Inter-Agency Committee
IAD	MAS' Internal Audit Department
IBTRM	Internet banking and technology risk management
ICAAP	Pillar 2 internal capital adequacy assessment process
ICPAS	Institute of Certified Public Accountants of Singapore
IFRS	International Financial Reporting Standards
IMA	Internal models approach for market risk
IRBA	Internal ratings-based approach for credit risk
IRRBB	Interest rate risk in the banking book
IT	Information technology
IWE	MAS' industry-wide exercises
IWST	MAS' industry-wide stress tests
LCR	Liquidity Coverage Ratio
LGD	Loss given default
LOLR	Lender of last resort
LTV	Loan-to-value

MACMA	Mutual Assistance in Criminal Matters Act (Chapter 190A)
MAS	Monetary Authority of Singapore
MAS Act	Monetary Authority of Singapore Act (Chapter 186)
MASNET	Secure MAS portal
MCB	Minimum Cash Balances
MEPS+	MAS Electronic Payment System
MFSC	MAS' Management Financial Supervision Committee
MHA	Ministry of Home Affairs
MIS	Management information systems
MLA	Minimum Liquid Assets
MOF	Ministry of Finance
MoU	Memorandum of Understanding
MSD	MAS' Macroeconomic Surveillance Department
PAOC	Public Accountants Oversight Committee
PD	Probability of default
PROF	Professional Requisites and Outcomes Framework
QFB	Qualifying Full Bank
RC	Remuneration Committee
RWA	Risk-weighted assets
SA(OR)	Standardized Approach to Operational Risk
SAS	Singapore Statements of Accounting Standards
SDIC	Singapore Deposit Insurance Corporation
SGX	Singapore Exchange Limited
SMTA	MAS' Supervisory Methodologies, Transactions and Analytics Division
SSA	Singapore Standards of Auditing
STRO	Suspicious Transaction Reporting Office
TSOFA	Terrorism (Suppression of Financing) Act (Chapter 325)
VaR	Value-at-Risk

## INTRODUCTION

**1. The assessment of the Monetary Authority of Singapore (MAS) represents a very high level of compliance with the Basel Core Principles for Effective Banking Supervision (BCP) and demonstrates a strong commitment by MAS to their implementation.** MAS' current institutional reliability and its commitment to a prudent and sound domestic financial system have contributed to the strong economic development of Singapore and its role as one of the leading financial centers in the world. MAS has built up a strong and experienced supervisory staff that has put in place an effective supervisory and regulatory framework that includes active and constructive engagement with the management and boards of financial institutions under MAS supervision. To a large degree, this is a consequence of the strong support of the current Singaporean government for an effective and well-resourced MAS. That said, a high degree of compliance with the Core Principles (CPs) is not a guarantee (nor should it be) against the failure of banks. Banking supervision is intended to minimize the likelihood of bank failures, and to deal swiftly and effectively with troubled institutions to minimize the cost of any failures and to preserve financial stability.

**2. As a large financial center, MAS is well aware of the risks posed by a financial system that is significantly larger than the economy of Singapore, and comprised primarily of branches of foreign institutions operating in non-Singapore dollars.** Moreover, the local retail market is concentrated in essentially three locally-owned banking groups, a subsidiary of a foreign global bank, and nine foreign bank branches holding Qualifying Full Bank (QFB) privileges.<sup>1</sup> While having a limited number of large retail banks facilitates MAS supervisors staying on top of the operations and risk profiles of these institutions, it also means that several of these institutions, including all of the locally incorporated banks, are systemically important to Singapore.

**3. MAS has also set a high standard for approving foreign entrants, applying the same prudential framework to foreign branches as to its own locally incorporated banks.** In lieu of capital requirements, it has imposed risk-based requirements that set minimum cash balance, minimum liquid asset and asset maintenance ratios that foreign branches must maintain. It has established good working relationships with the home supervisors of the foreign branches and proactively engages with the management of the parent banks to ensure that they are aware of any risks or shortcomings that arise in the branches' operations and that they take responsibility for ensuring issues are resolved.

**4. The rest of the report is divided into seven sections:** (II) a general section providing background information and information on the methodology used; (III) an overview of institutional

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<sup>1</sup> There are 27 foreign full banks that can conduct the full range of banking businesses permitted under the Banking Act, including retail deposit-taking. Of these, ten (including the foreign subsidiary) have been granted QFB privileges, which give them greater branching privileges than other foreign banks.

setting and market infrastructure; (IV) a review of preconditions for effective banking supervision; (V) a summary of the results of the assessment; (VI) detailed principle-by-principle assessments; (VII) recommended actions; and (VIII) authority's response.

## BACKGROUND INFORMATION AND METHODOLOGY USED

**5. This assessment of the BCP is part of the 2013 FSAP-Update for Singapore.** The assessment was conducted during an IMF mission that visited Singapore from April 3 to 17, 2013.<sup>2</sup> Singapore is one of the first countries to be assessed under the updated CPs that were approved by the Basel Committee on Banking Supervision (BCBS) in September 2012. In revising the CPs to reflect the lessons from the recent financial sector crisis, the BCBS has sought to raise the bar for sound supervision and to update the principles on the basis of emerging supervisory best practices. New principles have been added along with new essential criteria (EC) for each principle that provide more detail and additional criteria (AC) that raise the bar even higher. Altogether, the revised CPs now contain 247 separate essential and additional criteria against which a supervisory agency may now be assessed.

**6. The purpose of the exercise was to assess the effectiveness of Singapore's banking supervisory systems and practices against the CPs.** By adhering to a common, agreed methodology, the assessment should provide an internationally consistent measure of the quality of its banking supervision in relation to the CPs. A primary purpose is identifying those areas of supervision policy and practice that would benefit in relative terms from future attention by the MAS. The revised CPs are dynamic in the sense that what meets the standards of best practices with respect to supervision and regulation continues to evolve along with changes in industry practices and with supervisory experience. The revised CPs intentionally raised the bar for bank supervisors, particularly for those in a global financial center, such as Singapore. Given the evolving nature of the financial system and the difficulty that virtually all supervisors around the world experience keeping up with the emerging risks in the financial sector, it is expected that every country has areas of supervision and regulation that could be enhanced and made more effective.

**7. The expectations applied in evaluating Singapore compliance with the BCP were high.** Singapore is a significant global financial center that is growing in importance. Supervisory practices should be commensurate with the important role that Singapore plays in the region and the risk profile and systemic importance of the banks operating in Singapore.

**8. Precise comparisons of this assessment result against previous assessments of Singapore or with other countries are not meaningful.** Since the last CPs assessment of Singapore, which was completed in 2004, the standards have been revised twice—once in 2006 and again in 2012. Moreover, the challenge facing supervisors varies based on the level of development

<sup>2</sup> The assessment team comprised Jonathan Fiechter and Antonio Pancorbo.



of the financial system, its structure and complexity, macroeconomic conditions, etc. In recognition of differences among countries, the revised CPs introduced the concept of proportionality “both in terms of the expectations on supervisors [...] and in terms of the standards that supervisors impose on banks.” The result is that an assessment of one jurisdiction is not directly comparable to that of another, even if against the same set of CPs. Hence, comparisons between this assessment and the earlier assessment of Singapore or going forward, between this assessment and assessments of other jurisdictions with similar financial systems and structures under the revised CPs, would be indicative at best. Also, seeking to compare countries by a simple reference to the number of “Compliant” (C) versus “Largely Compliant” (LC) or “Non-Compliant” grades they receive is unlikely to be informative.

**9. The assessment of compliance with each principle is made on a qualitative basis.** To assess compliance, the methodology proposes a set of essential and additional assessment criteria for each principle. Because of the important role of Singapore in the global financial system, MAS agreed to be assessed and graded on both the essential and additional criteria. The assessment of MAS’ against the CPs is not, nor is it intended to be an exact science. Assessors are expected to use their judgment in reviewing the quality of supervision and regulation and avoid a box-ticking exercise. The assessment allows assessor judgment on the extent to which MAS supervision and regulation, both the framework and in practice, when applied to the unique characteristics of Singapore, fully meet the intended objectives of the CPs.

**10. The assessment has made use of five categories to determine compliance: compliant; largely compliant, materially noncompliant, noncompliant, and non-applicable.** An assessment of “compliant” is given when all the essential and additional criteria are met without any significant deficiencies, including instances where the principle has been achieved by other means. A “largely compliant” assessment is given when only minor shortcomings are observed that do not raise any concerns about the authority’s ability and clear intent to achieve full compliance with the principle within a prescribed period of time. The assessment “largely compliant” can be used when the system does not meet all essential criteria, but the overall effectiveness is sufficiently good, and no material risks are left unaddressed. A principle is considered to be “materially noncompliant” in case of severe shortcomings, despite the existence of formal rules and procedures and there is evidence that supervision has clearly been ineffective or that the shortcomings are sufficient to raise doubts about the authority’s ability to achieve compliance. A principle is assessed “noncompliant” if it is not substantially implemented, several essential criteria are not complied with, or supervision is manifestly ineffective. Finally, a category of “non-applicable” is reserved for those cases that the criteria would not relate the country’s circumstances. Based on this, Singapore is in full compliance with most of the 29 principles; nonetheless, areas of focus still remain, which resulted in some of the principles being assessed as largely compliant (see discussion in the detailed principle-by-principle assessment section.)

**11. Emphasis should be placed on the commentaries that accompany each principle, rather than on the individual grades.** The primary goal of the exercise is to identify areas that would benefit from additional attention in order to set the stage for improvements and where

appropriate to develop an action plan. None of the principles assessed were viewed as having material deficiencies.

**12. The assessment is based on the review of the framework of laws, rules, policies and practices in place at the time of the assessment, and extensive meetings with officials of MAS, the industry, and relevant third parties.** The assessment does not reflect planned initiatives aimed at adopting new or amending existing regulations and practices. The team examined the current practice of bank supervision of MAS and sought to assess the quality and effectiveness of supervisory practices, and did not confine itself to an evaluation of the design of legislation and prudential rules.

**13. The team would like to acknowledge the very high quality of cooperation received from the authorities.** The team was given access to all of the requested information. In particular, the team extends its thanks to MAS staff who provided a very comprehensive, high-quality self-assessment and who responded promptly and comprehensively during the mission to the extensive information requests by the team.

## OVERVIEW OF THE INSTITUTIONAL SETTING AND MARKET STRUCTURE

**14. Singapore is a major financial center with a combination of local and foreign financial institutions that in the aggregate hold assets representing seven times GDP and whose share of Singapore's GDP was 12 percent in 2012.** The financial sector is dominated by the banking industry. As shown in the Table 1 below, the banking system is comprised of a small number of locally incorporated banks holding roughly one-third of the banking assets and a number of foreign branches holding approximately two-thirds of the assets. There are currently three domestic commercial banking groups,<sup>3</sup> all of which are designated as full banks, along with one global foreign bank that operates as a subsidiary and has full banking privileges. The three domestic commercial banking groups all have significant operations in neighboring countries. The composition of the credit institutions sector as of year-end 2012 is summarized as follows.

<sup>3</sup> These banks are DBS Limited, United Overseas Bank (UOB) Limited, and Overseas-Chinese Banking Corporation (OCBC) Limited.

**Table 1. Singapore: Structure of the Banking System as of End-2012**

	Assets (in S\$ billion)	Number
<b>Banks and Finance Companies</b>	<b>2,064.5</b>	<b>168</b>
Banks	1,957.1	123
Local banks (Singapore banking operations)	652.2	7*
Foreign branches	1,304.9	116
Merchant banks	92.4	42
Finance companies	15.0	3

Source: MAS.

\* Includes three locally incorporated banking groups and one foreign subsidiary.

**15. The authorities are well aware of the risks associated with operating a major financial center and have taken several steps to mitigate this risk.** These actions include:

- Placing significant emphasis on ensuring MAS has the capacity and resources to be a world-class supervisor;
- Setting high prudential standards such as capital requirements that exceed minimum international standards, high liquidity requirements, requiring robust risk management and governance systems, and adopting a system of intensive and intrusive supervision;
- Aiming to establish a balanced mix of domestic banks (local and foreign subsidiaries) and a diversified group of foreign branches that includes branches of some of the major global banks;
- Limiting the granting of full banking licenses and privileges to accept retail deposits;
- Treating foreign branches as similar to domestically incorporated banks for purposes of supervision and regulation;
- Setting a relatively conservative deposit insurance limit of S\$50,000, which is equivalent to 196 percent of annual median income<sup>4</sup> and covers 90 percent of all depositors; and
- During the crisis, Singapore felt compelled to follow the actions of other countries in the region of putting in place 100 percent deposit guarantee (from October 2008 until year-end 2010). Singapore minimized its fiscal exposure, however, by limiting its backstop of the guarantee to S\$150 billion based on its assessment of the possible liabilities arising from any failures.

<sup>4</sup> Among resident employed households, median monthly household income from work per household member was S\$2,130 in 2012. Source: "Key Household Income Trends, 2012", Singapore Department of Statistics.

**16. MAS plays a central role in the institutional design of the financial system in Singapore.** As described in more detail below, MAS acts as central bank, manages the official foreign reserves, is the integrated supervisor for the financial sector, is the resolution authority for financial institution, is the macroprudential authority, assesses and triggers payouts from the deposit insurance system, and has a mandate to develop Singapore as an international financial center.

**17. To discharge its mission, MAS regulates and supervises all financial intermediation, including banking, insurance and securities activities.** MAS has a tradition of adopting conservative prudential guidelines for capitalization, liquidity and operations management. It has adopted a risk-based supervisory framework, with supervisory intensity depending on the systemic importance of a financial institution and its assessed riskiness. The macroeconomic surveillance and supervisory functions in MAS are coordinated to identify and address the impact of developments in the macroeconomic environment on individual banks. The Financial Action Task Force (FATF) rated MAS highly on most of the anti-money laundering recommendations that are relevant as banking supervisor.

**18. The multiples roles assigned to MAS are both a strength and a vulnerability.** A benefit of placing so many responsibilities within MAS is that coordination, communication, and collaboration among the various functions are much more seamless and timely than in countries where these functions are placed in separate entities. On the other hand, such a bunching of responsibilities removes the advantage of a second pair of eyes. Moreover, combining responsibilities for prudential supervision and development of Singapore as an international financial center holds the potential, under different leadership, of creating situations in which MAS is forced to choose between prudential measures and making Singapore an attractive location for foreign operations. The team found no instances in which prudential supervision was sacrificed in order to meet developmental needs. In fact, Singapore has adopted a development strategy that emphasizes the strong and conservative approach to supervision practiced by the MAS, which reflects well on the banks permitted to operate there. The dual mandate, however, does create the future risk that under a different government, developmental objectives may be prioritized over prudential supervision.

**19. Two key features of Singapore’s banking sector are the prevalence of the “branch” model under which most foreign banks operate and allowing banks to own insurance companies and securities firms/broker dealers.** While the prevalence of foreign branches, most of which are reported to fund themselves outside of Singapore, helps limit the risk to Singapore, it has also put more of a supervisory burden on MAS given the absence or reduced effectiveness of some regulatory tools (e.g., capital and liquidity requirements) and supervisory instruments (e.g., direct supervision of the head office and effective resolution tools) that can be applied to the branch of a foreign bank. Partially in response to this concern, MAS has announced that it will require foreign branches with significant retail operations in Singapore to locally incorporate their retail operations (i.e. to convert to subsidiaries). Singapore has adopted a universal banking model for banks that allows them to own insurance companies and securities firms. While this provides a more diversified

source of income, it also raises the overall complexity of managing and supervising the banking groups.

## PRECONDITIONS FOR EFFECTIVE BANKING SUPERVISION

**20. The assessment of preconditions is beyond the scope of the assessments itself; however, a factual review facilitates an understanding of the environment in which the banking system and the supervisory framework operate.** This section discusses the following preconditions: sound and sustainable macroeconomic policies, a well established framework for financial stability policy formulation, a clear framework for crisis management, recovery and resolution, an appropriate level of systemic protection (or public safety net) while maintaining effective market discipline, and a well developed public infrastructure.

**21. Amid the current low interest rate environment and abundant global liquidity, macroprudential tools are deployed to address credit and inflation risks in specific asset markets.** Over the past decade (2003–12), GDP growth and consumer price index (CPI) inflation averaged 6.1 percent and 2.6 percent respectively. The exchange rate-centered monetary policy framework has been effective in terms of price stability and anchoring inflation expectations in the economy. The government adheres to the principle of fiscal prudence, and aims to run a balanced budget over the business cycle. The focus of the budget is on achieving longer-term structural and social goals, such as enhancing productivity growth and building a fair and inclusive society.

**22. MAS is the macroprudential authority in Singapore.** A Managing Director, who is accountable to the Board of the MAS, runs the day-to-day operations of the MAS. The Chairman of MAS presides over the Board-level Chairman’s Meeting, which is vested with duties for both microprudential and macroprudential policies. The Chairman’s Meeting, in its macroprudential policy role, is supported by MAS Management Financial Stability Committee, which is chaired by the Managing Director of MAS and comprises MAS senior management. The ongoing institution-specific monitoring by MAS’ financial supervision departments complements the top-down surveillance efforts to identify the risks and vulnerabilities of individual institutions and the financial system as a whole. To discuss emerging macroeconomic and financial stability issues and to collaborate on crisis management preparations MAS holds meetings with the Ministry of Finance (MOF). The current Chairman of MAS is also a Deputy Prime Minister and the Minister for Finance.

**23. MAS is the resolution authority for financial institutions in Singapore.** The resolution strategies available under the Banking Act include winding up, taking operational control, transfer or disposition of business, transfer of shares, restructuring of share capital, imposing of a moratorium, etc. Operationally, in the event that MAS departments detect that a crisis is developing in its area of responsibility, they should activate the internal Crisis Management Team (CMT) by obtaining approval from the Managing Director of MAS. Simulation exercises are conducted at industry-wide levels. MAS holds meetings with the MOF to collaborate on crisis management preparations as

needed and is working with supervisors in the region to reach agreement on a framework for cross border resolutions of regional banks.

**24. The Singapore Deposit Insurance Corporation (SDIC) was established in 2006 to protect small depositors.** Its board of directors is accountable to the Minister-in-charge of MAS. Membership is mandatory for retail deposit-taking institutions, i.e. full banks and finance companies. It insures the first S\$50,000 of Singapore dollar deposits placed by non-bank depositors in standard savings, current and fixed deposits accounts. This fully covers the deposits of close to 90 percent of retail depositors. The SDIC is pre-funded by contributions from members. MAS has also extended a contingent liquidity facility of up to S\$20 billion.

**25. Singapore enjoys well developed public infrastructures,** such as reliable accounting, auditing and legal professions, and payment, clearing and settlement systems. The legal system is based on English common law. Laws are strictly enforced and punishments are often severe. The World Economic Forum Global Competitiveness Report 2011–2012,<sup>5</sup> which surveyed 144 countries, has ranked Singapore highly on a wide range of different institutional aspects, such as the efficiency of the legal framework in determining disputes (1st), property rights (3rd), and judicial independence (20th).

## SUMMARY OF THE RESULTS

**26. Table 2 below offers a principle-by-principle summary of the assessment results.** Overall results of the assessment reflect the high quality and proactive nature of MAS. Anecdotal evidence gathered during the assessment suggests that this is also a view shared by the industry. On several occasions, the team was informed by the representatives of banks, both foreign and domestic, of examples where MAS staff had been well ahead of the international community in terms of prudential measures such as capital, liquidity, and governance. Industry representatives (bankers and external auditors) agreed on the strictness of MAS and their intrusive approach to supervision. On the other hand, MAS policy making was described as highly consultative with clear explanations and no surprises. In general, bankers praised the expertise and professionalism of MAS staff.

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<sup>5</sup> See: [http://www3.weforum.org/docs/WEF\\_GCR\\_Report\\_2011-12.pdf](http://www3.weforum.org/docs/WEF_GCR_Report_2011-12.pdf)

**Table 2. Singapore: Summary Compliance with the Basel Core Principles**

Core Principle	Grade	Comments
1. Responsibilities, objectives and powers	LC	<p>The responsibilities and objectives of MAS related to banking supervision are quite comprehensive and the underlying statutory framework provides the foundation that has enabled MAS to become a highly effective bank supervisor. The dual mandate of MAS, however, both to develop Singapore as a financial center and to act as the prudential supervisor of the financial industry raises the potential for safety and soundness to be compromised in an effort to make Singapore a business-friendly center that is attractive to foreign banks. The team found no evidence of an intentional lowering of prudential standards to attract more foreign business. In fact, the nature of the developmental work presently carried out by MAS, and public statements from senior officials, do not appear to be in conflict with MAS' prudential mandate. Nonetheless, the inherent risk, as demonstrated in other financial centers, of vesting supervisory agencies with a dual mandate, remains. Under different leadership, the dual mandate could in theory, result in prudential standards being weakened in an effort to attract additional foreign institutions. The potential for these two mandates to conflict in favor of the developmental objective does not raise serious concerns at the time of the assessment. Nevertheless, this is an area that needs to be monitored.</p>
2. Independence, accountability, resourcing and legal protection for supervisors	LC	<p>Because of the importance of the financial sector to Singapore, MAS is vested with significant supervisory authority and has the full backing of the government for access to adequate resources. The governance structure of MAS, however, raises the potential for political influence in the operations of MAS. While the mission neither observed nor was informed of any instances of inappropriate interference in the banking supervisory operations of MAS, having a Board at the top of MAS, of which four out of nine Board members including the Chairman and Deputy Chairman are government ministers and a fifth member is a permanent secretary of the MOF, raises the risk that under different leadership, the supervision of the financial system by MAS could be subject to undue governmental influence. As an example, the Chairman's Meeting, which is comprised entirely of government ministers and the Managing Director</p>

		of MAS, decides on major changes to the regulatory framework and supervisory policies of MAS. The Meeting also approves major changes to policies and strategies relating to financial center development. Again, this Committee, under different leadership, raises the potential for inappropriate governmental interference in regulatory and supervisory policy setting by MAS and/or too much emphasis on development objectives.
3. Cooperation and collaboration	C	A key advantage to MAS as an integrated supervisor, as well as resolution authority, macro-prudential authority and central bank is the seamless coordination and information sharing among the different functions. The senior MAS officers have also established very good working relationships with the relevant home supervisors, in part as a consequence of MAS being viewed as a strong and trustworthy supervisor, which is actively involved with the various standard setters and the Financial Stability Board (FSB). The one caution the team would offer, is that putting all of the functions under one organization runs the risk of reducing the opportunity for checks and balances and may not facilitate worthwhile debates of staff with different perspectives.
4. Permissible activities	C	MAS is very focused on maintaining the very solid reputation and credibility of the banking sector in Singapore, and fully meets the principle that any institutions offering banking services must be licensed by MAS and subject to bank supervision.
5. Licensing criteria	C	MAS has set a very high standard for granting banking licenses, particularly those authorized to gather insured retail deposits. Singapore sets a high capital requirement of S\$1.5 billion for new full banks and MAS undertakes a thorough assessment of both the parent bank and the home supervisor in the case of foreign entry into Singapore through either a subsidiary or branch. While MAS practice has been to informally dissuade unqualified or unsuitable applicants from submitting a license application in lieu of receiving a rejection, a more transparent process of occasionally rejecting applications might be a way of sending a strong signal to the market regarding the high hurdle rate for entry into the Singapore market.
6. Transfer of significant ownership	C	The legal and supervisory framework is correct. At the time of the assessment, there have been very limited instances of transfer of significant ownership.



7. Major acquisitions	C	MAS exercises a high level of prudence regarding major acquisitions. Suitable acquisitions generally are limited to companies engaged in the business of banking or under the supervision of MAS.
8. Supervisory approach	C	MAS has in place a world-class effective approach to banking supervision that is intrusive, intensive, and seeks to identify and address potential risks that may affect the safety and soundness of individual banks and the banking system. MAS makes effective use of moral suasion and soft powers to address prudential concerns. MAS has also a framework in place for early intervention, which should be considered in conjunction with CP11, on corrective and sanctioning powers.
9. Supervisory techniques and tools	C	MAS uses a wide range of tools and techniques in its risk-based supervision to monitor, analyze and review the safety and soundness of individual banks and the banking system. All banks are subject to a base-level of off-site supervision and on-site inspection. MAS uses primarily its own staff to conduct supervisory tasks. MAS' supervisory practices adhere to the notion that effective on-site work should be based on first-hand experience gained through MAS independent verification (whether conducted by own supervisors or through external experts under supervisors' scrutiny). According to this, MAS is well positioned to gain sound knowledge of banks' valuation of exposures and liabilities, risks and processes.
10. Supervisory reporting	C	Banks routinely furnish information that MAS requires to carry out its supervisory functions. To improve data quality while easing the burden on banks, MAS has developed "MASNET" and "EPIC," which facilitate the submission of information by electronic means. The practice of submitting internal management information to MAS is also a common avenue for banks' supervisory reporting.
11. Corrective and sanctioning powers of supervisors	LC	<p>MAS has the full range of traditional supervisory and resolution powers for locally incorporated banks. While its powers are necessarily more limited for foreign bank branches, it has established a set of policies and requirements that have successfully reduced the risks to Singapore posed by the large presence of foreign branches.</p> <p>MAS is able to take corrective actions, including requiring a bank to cease activities and/or assuming control of the bank when MAS believes that a bank is carrying on its business in a manner likely to be detrimental to the interests of its</p>

		<p>depositors or its creditors or where MAS considers it in the public interest to do so.</p> <p>MAS may revoke or suspend licenses on its own, with ex-post judicial review. MAS staff operate under an immunity clause that protects them from legal suit so long as they are operating in accordance with their official mandate.</p>
12. Consolidated supervision	C	MAS undertakes intensive supervision of locally incorporated banks on both a solo and group-wide basis, and performs risk assessments of each bank on a standalone and consolidated basis.
13. Home-host relationships	C	MAS shares information with home and host supervisors of cross-border banking groups and applies the same regulatory and supervisory standards to the local operations of foreign banks that it applies to locally incorporated banks. MAS is presently working with supervisors in the region on a multilateral sharing arrangement on resolution planning information.
14. Corporate governance	C	MAS fully meets the principle that banks and banking groups under its supervision have robust and effective corporate governance policies and processes.
15. Risk management process	C	MAS does an outstanding job of encouraging banks to adopt strong risk management systems that are commensurate with their risks and is in full compliance with both the essential and additional criteria. The conservative approach of MAS also limits the risky activities that banks can conduct, and strict limits are applied to the retail activities of the numerous foreign branches operating in Singapore. MAS regularly asks for and reviews internally-generated risk management reports produced for management and the board.
16. Capital adequacy	C	MAS has traditionally established capital regimes that equal or exceed the minimum standards adopted on a global basis and is in full compliance with all essential and additional criteria. Singapore voluntarily underwent a Regulatory Consistency Assessment during the 2012–2013 period by the BCBS regarding its adoption of Basel III standards and its overall capital regime was found to be compliant with the requirements of the Basel framework. While the higher capital requirements imposed by MAS may have in some respects put locally incorporated banks at an apparent competitive disadvantage vis-à-vis more leveraged foreign competitors, Singapore has chosen, as a financial center, to adopt a very

		conservative approach to regulation.
17. Credit risk	LC	As in most banking systems, credit risk is the most relevant risk in the banking system in Singapore. MAS is fully aware of the vulnerabilities that current developments on credit risk entail for the financial system, and monitors them carefully. Also, MAS has developed an intensive and intrusive approach to risk-based supervision that provides flexibility to its supervisory actions. While the team fully endorses MAS' philosophy of viewing bank management, bank risk management systems, and prudent internal risk cultures, etc, as the first line of defense against weak loan and asset portfolios, it believes that even more attention to this area is warranted, given the high risks. Since 2009, the Authorities have implemented a series of "cooling" measures to rein in the credit expansion, slow the rise in housing prices, and reduce the risk associated with lending against real estate and autos. MAS has also imposed limits on banks' exposure to the property market. It is not yet clear, however, whether MAS actions have been effective in achieving the desired outcomes—full assessment has to be deferred to a future evaluation.
18. Problem assets, provisions, and reserves	C	During inspections, supervisors assess that banks have established and adhered to adequate policies and processes for evaluating the quality of assets and the adequacy of loan loss provisions and reserves. MAS also assesses that banks regularly review and update these policies and practices.
19. Concentration risk and large exposure limits	C	MAS imposes relatively conservative limits on equity investments in a single company or investment fund, and on real estate holdings and property exposure. Excellent supervisory and regulatory initiatives may be tempered by the adoption by Singapore of the current relatively high international benchmark exposure limit of 25 percent of capital to any one counterparty and the local overall limit that large exposures in aggregate may not exceed 50 percent of total exposures; MAS has documented, however, that in fact, major banks and foreign branches have not made large loans that come close to these exposure limits.
20. Transactions with related parties	C	MAS' regulations and monitoring on a bank's transactions with related parties require banks to ensure that such transactions are conducted on an arm's length basis and that the relevant terms and conditions are not more favorable than transactions with non-related parties under similar circumstances

21. Country and transfer risks	C	Country and transfer risk can be considered relevant risks for the locally incorporated banks in Singapore. MAS' requirements on country and transfer risk management are in place and assessed by supervisors during inspections or as part of a review of the bank's Pillar 2 Internal Capital Adequacy Assessment Process (ICAAP). MAS has a dedicated team of credit risk specialists, who support the bank supervisors in their work.
22. Market risk	C	MAS has issued Market Risk Guidelines and market risk regulatory requirements in relation to regulatory capital. There is a dedicated team of market risk specialists who support the bank supervisors in their work.
23. Interest rate risk in the banking book	C	MAS monitors that banks have adequate systems commensurate with their risk profile to manage and to control or mitigate interest rate risk. Banks routinely run robust stress tests to measure their interest rate exposures and this information, which is provided to management on a monthly basis and the bank's board each quarter, is shared with MAS.
24. Liquidity risk	C	MAS monitors liquidity risk in locally incorporated banks and foreign bank branches. MAS requires banks and branches to measure and monitor their liquidity positions in the major currencies and during inspections, undertake analyses to ensure that the banks have effective processes in place. The nature of the foreign branch operations and the potential reliance on the home office for funding makes liquidity risk an area of vulnerability. Foreign branches have been required to reduce their liquidity risk through matched funding. For longer-dated assets, the branches have issued medium-term notes.
25. Operational risk	C	At the time of the assessment, three local banking groups and a foreign subsidiary are subject to capital requirements in Singapore. The three local banking groups have adopted the Standardized Approach for operational risk capital requirements, and the foreign subsidiary has adopted the Basic Indicator Approach (BIA). MAS holds banks accountable for putting into place effective operational risk frameworks and practices that have the full support of management and are routinely monitored and assessed by the various audit functions and management.
26. Internal control and audit	C	MAS puts a high priority on ensuring that banks and foreign branches have effective and timely internal control functions

		that are independent of management and staffed with competent individuals with access to the required resources.
27. Financial reporting and external audit	C	MAS holds local banks' and foreign branches' management accountable for producing timely and accurate financial reports and holds banks' external auditors fully accountable for verifying that the process and reports produced by the banks complies with MAS requirements and Singapore Financial Reporting Standards (FRS), as modified by MAS Notice 612 for the recognition of loan loss provisioning, which can be considered more conservative than the incurred loss measurement model under FRS 39. MAS receives a detailed long form report from the external auditor as part of the annual audit. It successfully holds auditors to a high standard through its power to revoke an audit firm partner or entire firm's authorization to conduct further bank audits in Singapore.
28. Disclosure and transparency	C	The quarterly and annual disclosures by banks incorporated in Singapore and the reports periodically published by MAS fully meet the criteria of disclosure and transparency.
29. Abuse of financial services	C	MAS has established a strict regime to prevent, identify and report possible abuses of financial services such as suspicious acts of money laundering, terrorism financing and incidents of fraud. MAS assesses banks' compliance with these requirements through inspections and off-site reviews. On Anti-Money Laundering and Combating the Financing of Terrorism (AML/CTF), MAS will be amending its notices and guidelines in line with the latest FATF standards. Also, MAS was last assessed against the AML/CFT standard in 2008 by a joint team of the FATF and the Asia/Pacific Group on Money Laundering (APG). Assessors found that, overall, AML/CFT preventative measures for the financial sector, as well as the supervisory framework for banks generally met a high level of compliance with the standard.

## DETAILED PRINCIPLE BY PRINCIPLE ASSESSMENT

27. Table 3 below provides a detailed principle-by-principle assessment of the BCP. The Table is structured as follows:

- The “description and findings” sections provide information on the legal and regulatory framework, and evidence of implementation and enforcement. For this Detailed Assessment Report, the team has chosen to utilize in large part the authorities' *Description and Finding* contained in their *Self Assessment*. The team has chosen this approach because of the high

quality of the Self-Assessment submission by MAS. While the accuracy of these descriptions has been assessed during the mission, the team had done minimal editing of the language provided by MAS. The team has also worked with MAS staff during the mission to clarify and provide more support in some sections that were found incomplete or ambiguous.

- **The “assessment” sections** contain only one line, stating whether the system is “compliant,” “largely compliant,” “materially non-compliant,” “non-compliant” or “not applicable” as described in paragraph 10.
- **The “comments” sections** explain why a particular grading is given. These sections are judgmental and also reflect the assessment team’s views regarding strengths and areas for further improvement in each principle.

**Table 3. Singapore: Detailed Assessment of Compliance with the Basel Core Principles**

<b>SUPERVISORY POWERS, RESPONSIBILITIES AND FUNCTIONS</b>	
<b>Principle 1</b>	<b>Responsibilities, objectives and powers.</b> An effective system of banking supervision has clear responsibilities and objectives for each authority involved in the supervision of banks and banking groups. A suitable legal framework for banking supervision is in place to provide each responsible authority with the necessary legal powers to authorize banks, conduct ongoing supervision, address compliance with laws and undertake timely corrective actions to address safety and soundness concerns.
<b>Essential Criteria</b>	
<b>EC1</b>	<b>The responsibilities and objectives of each of the authorities involved in banking supervision are clearly defined in legislation and publicly disclosed. Where more than one authority is responsible for supervising the banking system, a credible and publicly available framework is in place to avoid regulatory and supervisory gaps.</b>
Description and findings re EC1	<p>MAS is a statutory board established under the Monetary Authority of Singapore Act (Chapter 186) (MAS Act). The objectives, powers, duties and functions of MAS are set out under sections 4 and 23 of the MAS Act.</p> <p>MAS is the sole regulator of banks in Singapore and derives its supervisory powers primarily from the Banking Act (Chapter 19) (BA) although other written laws such as the MAS Act and Companies Act (Chapter 50) (CA) contain provisions that have a bearing.</p> <p>MAS has published monographs on <i>Objectives and Principles of Financial Supervision in Singapore</i>, <i>MAS' Framework for Impact and Risk Assessment of Financial Institutions</i> and <i>Tenets of Effective Regulation</i>. These monographs set out MAS' objectives of and approaches to supervision and regulation, and can be found on MAS' website. (<a href="http://www.mas.gov.sg/About-MAS/Monographs-and-information-papers/Monographs.aspx">http://www.mas.gov.sg/About-MAS/Monographs-and-information-papers/Monographs.aspx</a>)</p>
<b>EC2</b>	<b>The primary objective of banking supervision is to promote the safety and soundness of banks and the banking system. If the banking supervisor is assigned broader responsibilities, these are subordinate to the primary objective and do not conflict with it.</b>
Description and findings re EC2	<p>The focus of MAS' regulation and supervision is on the safety and soundness of financial intermediaries in Singapore. The primary role of the banking departments in MAS is to promote the safety and soundness of banks and the banking system in Singapore.</p> <p>MAS' principal objectives, one of which is "to foster a sound and reputable financial centre," are set out in section 4 of the MAS Act. The functions of MAS, one of which is "to conduct integrated supervision of financial services and financial stability surveillance," are also enshrined in the same section. Further, in MAS' monograph on</p>

	<p><i>Objectives and Principles of Financial Supervision in Singapore</i>, the objectives of a stable financial system and safe and sound intermediaries that are applicable to banking supervision are listed. Although safety and soundness is not the only objective of MAS, MAS' track record has shown that this objective has not been compromised. This is reinforced with the recent amendment of the MAS Act to underscore the promotion of financial stability as a principal object of MAS along with fostering a sound and reputable financial center.</p> <p>MAS operates on a single agency model—it is the central bank, integrated financial supervisor as well as financial sector developer. For a small country like Singapore with limited human capital, the single agency model allows MAS to more effectively utilize available expertise and to leverage on synergies that arise from the multiple elements in its objectives. MAS has in place appropriate organizational structures that clearly separate accountability and resources for the differing MAS objectives, which are intended to prevent distractions from core supervision. There are dedicated supervisory groups with their own Group Heads, who report to the Deputy Managing Director (Financial Supervision), and these reporting lines do not cross with the monetary policy or developmental groups.</p> <p>There is no evidence that developmental objectives have compromised safety and soundness objectives. MAS' has established a track record for the selective admission of new banks, prompt subscription to international prudential regulatory standards, pre-emptive implementation of prudent albeit unpopular measures and adoption of more stringent standards and policies than prescribed internationally or in other jurisdictions. For instance, despite industry pushback, MAS has required the locally-incorporated banks to meet Basel III minimum capital adequacy standards from January 1, 2013, two years ahead of BCBS' 2015 timeline. Further, from January 1, 2015, MAS will require these banks to meet capital adequacy requirements that are higher than the Basel III global capital standards (see CP16 EC2 for details).</p>
<b>EC3</b>	<p><b>Laws and regulations provide a framework for the supervisor to set and enforce minimum prudential standards for banks and banking groups. The supervisor has the power to increase the prudential requirements for individual banks and banking groups based on their risk profile and systemic importance.</b></p>
Description and findings re EC3	<p>The BA stipulates prudential standards including corporate governance requirements, licensing requirements, minimum capital requirements, minimum cash and liquid asset requirements, as well as prudential limits on lending to a single group of borrowers, lending to related parties, equity investments, property loans and investments.</p> <p>Under section 55 of the BA, MAS has the power to impose requirements on the operations or activities, and the standards to be maintained by individual banks.</p> <p>Under the BA, locally-incorporated banking groups are required to comply with risk-based capital requirements (section 10), large exposure limits (section 29), equity</p>



	<p>investment limits (section 31), requirements on major-stake investments in entities (section 32), immovable property limits (section 33), property sector exposure caps (section 35) and recommendations made by MAS to banks concerning credits and investments (section 42), as well as ensure adequate provision for bad and doubtful debts (section 23) on both a solo and a consolidated basis. These provisions also apply to foreign bank subsidiaries and foreign bank branches, with the exception of risk-based capital requirements (section 10), which do not apply to branches. (Instead, branches have to comply with asset maintenance requirements under section 40).</p> <p>The BA and Banking Regulations 2001 set out the general framework for prudential supervision. Within this framework, MAS has considerable scope to customize prudential rules to fit the needs of the situation or the risk profile and systemic importance of any bank or class of banks (including all foreign banks, whether they are branches or subsidiaries).</p>
<b>EC4</b>	<b>Banking laws, regulations and prudential standards are updated as necessary to ensure that they remain effective and relevant to changing industry and regulatory practices. These are subject to public consultation, as appropriate.</b>
Description and findings re EC4	<p>MAS reviews its banking laws, regulations and prudential standards on an ongoing basis to ensure that they remain effective and relevant, and in line with international best practices. The BA is reviewed and amended regularly, and regulatory requirements are updated through the issuance of notices and circulars covering areas such as corporate governance, prevention of money laundering and financing of terrorism, capital requirements, minimum liquid assets, minimum cash balance, exposures to single counterparty groups and related parties, residential property loans, unsecured credit facilities, and management of information technology risk.</p> <p>MAS conducts public consultations on major proposed changes to the regulatory framework. The consultation papers are posted on MAS' website and the public will be given a reasonable period of time to provide their feedback.  <a href="http://www.mas.gov.sg/News-and-Publications/Consultation-Paper.aspx">http://www.mas.gov.sg/News-and-Publications/Consultation-Paper.aspx</a></p>
<b>EC5</b>	<p><b>The supervisor has the power to:</b></p> <p><b>(a) have full access to banks' and banking groups' Boards, management, staff and records in order to review compliance with internal rules and limits as well as external laws and regulations;</b></p> <p><b>(b) review the overall activities of a banking group, both domestic and cross-border; and</b></p> <p><b>(c) Supervise the activities of foreign banks incorporated in its jurisdiction.</b></p>
Description and findings re EC5	<p>Section 43 of the BA empowers MAS to inspect the books of each bank in Singapore and of any branch, agency or office outside Singapore opened by a bank incorporated in Singapore. Section 44 of the BA empowers MAS to make an investigation of the books of any bank in Singapore if it has reason to believe that any bank is carrying on its business in a manner likely to be detrimental to the interests of</p>

its depositors and other creditors, has insufficient assets to cover its liabilities to the public, or is contravening the provisions of the BA. Section 44A of the BA requires banks under inspection (under section 43 of the BA) or investigation (under section 44 of the BA) to provide MAS with access to their books as well as any information or facilities that may be required to conduct the inspection or investigation. This includes access to banks' boards, management and staff.

MAS imposes prudential standards on and supervises the locally-incorporated banking groups on a consolidated basis, including their domestic and cross-border activities. Under the BA, the local banking groups are:

- Required to obtain MAS' prior approval before opening a new branch, agency or office outside Singapore. MAS does not allow the local banking groups to operate in any country that inhibits MAS from performing effective consolidated supervision of their overseas operations (section 12).
- Required to furnish external auditors' reports that cover their overseas branches; and relevant supervisory authority's report on the bank's operations of its overseas branches as and when the bank receives such report from the foreign supervisory authority (section 26).
- Only permitted to carry out banking and financial businesses that are regulated, prescribed or approved by MAS (section 30).
- Required to obtain MAS' prior approval for equity investment in a single company that exceeds 2 percent of their total eligible capital (section 31).
- Required to obtain MAS' prior approval to invest in a company where the investment exceeds 10 percent of the company's issued share capital or involves controlling more than 10 percent of the company's voting power or the directors or policy of the company. As a matter of policy, MAS only approves such investments in companies that carry out permissible activities under section 30 of the BA, and imposes conditions as part of the approval to enable MAS to have sufficient consolidated oversight of the activities even if they are carried out in foreign jurisdictions (section 32).
- Required to comply with risk-based capital requirements (section 10), large exposure limits (section 29), equity investment limits (section 31), requirements on major-stake investments in entities (section 32), immovable property limits (section 33), property sector exposure caps (section 35) and recommendations made by MAS concerning credits and investments (section 42) as well as ensure adequate provision for bad and doubtful debts (section 23) on both a solo and a consolidated basis (section 36).
- Inspected by MAS from time to time; the inspections can be extended to any

	<p>overseas branch, agency or office of local bank groups (section 43).</p> <p>MAS' legal framework is complemented by its supervisory approach. Among other practices, MAS regularly engages the Board and senior management of the local banking groups on their global operations, including cross-border activities that are significant to the group. In addition, MAS reviews the banks' risk reports and requires stress testing to be conducted on a group basis. Under MAS' Comprehensive Risk Assessment Framework and Techniques (CRAFT), the risk impact and assessment for each local bank group is performed on a whole-of-group basis, with line-by-line assessment for significant overseas subsidiaries (see CP8 EC2 for details on MAS' CRAFT).</p>
<b>EC6</b>	<p><b>When, in a supervisor's judgment, a bank is not complying with laws or regulations, or it is or is likely to be engaging in unsafe or unsound practices or actions that have the potential to jeopardize the bank or the banking system, the supervisor has the power to:</b></p> <p><b>(a) take (and/or require a bank to take) timely corrective action;</b></p> <p><b>(b) impose a range of sanctions;</b></p> <p><b>(c) revoke the bank's license; and</b></p> <p><b>(d) cooperate and collaborate with relevant authorities to achieve an orderly resolution of the bank, including triggering resolution where appropriate.</b></p>
Description and findings re EC6	<p>The BA empowers MAS to take or require a bank to take various actions should MAS deem a bank to be engaging in unsafe or unsound practices or should the bank not be in compliance with laws or regulations:</p> <ol style="list-style-type: none"> <li>Under sections 20, 49 and 54 of the BA, if a bank conducts its business in a manner likely to be detrimental to the interests of depositors or creditors, is unable to meet its obligations or insolvent, has contravened the provisions of the BA, or if it is in the public interest to do so, MAS could: (i) require the bank to take any action, to do or not to do any act or thing in relation to its business; (ii) appoint a person to advise the bank on the proper management of its business; (iii) assume or appoint someone to assume control of and manage the business of the bank; (iv) suspend the operations of the bank; or (v) revoke the banking license.</li> <li>Under section 7 of the BA, MAS may at any time, vary or revoke any existing conditions of the license of a bank or impose conditions or additional conditions.</li> <li>MAS can suspend or restrict the operations of a bank that fails to comply with the capital funds or capital adequacy ratio (CAR) requirement.</li> <li>Under section 38 of the BA, MAS may require any bank in Singapore to</li> </ol>

	<p>maintain a higher minimum amount of liquid assets, having regard to the risks arising from the activities of the bank.</p> <p>5. Under section 39 of the BA, MAS may require any bank license in Singapore to maintain a higher minimum cash balances on deposit with MAS as reserves against its deposits and other liabilities, having regard to the risks arising from the activities of the bank and the financial soundness of the bank.</p> <p>6. Under section 40 of the BA, MAS may require any bank to maintain a higher amount of assets in Singapore for the purpose of meeting its liabilities, having regard to the financial soundness and risk profile of the bank.</p> <p>Under the BA, MAS is also empowered to issue directives to and obtain information from banks, to inspect banks and to impose a fine on banks for non-compliance with certain provisions. Bank directors, executive officers, trustees, auditors, employees and agents will also be personally liable on conviction to a fine or imprisonment for certain offenses.</p> <p>MAS is the resolution authority for financial institutions in Singapore. The bank resolution regime and resolution strategies are set out in the BA and the MAS Act (see CP11 EC7 for details of the resolution strategies). The resolution regime provides that where MAS exercises its resolution powers, it must have regard to the interest of insured depositors covered under the Deposit Insurance (DI) Scheme and other non-bank depositors, the stability of the financial system in Singapore, public interest, as well as any other matter that MAS considers to be relevant.</p> <p>The resolution regime envisages and provides for MAS to commit to achieving cooperative solutions with foreign resolution authorities, wherever possible, and taking intervention actions either individually or in the financial system, where such actions are consistent with MAS' objectives of fostering a sound and reputable financial center. MAS' resolution powers can be exercised in relation to the Singapore branch of a bank that is incorporated elsewhere to support a resolution carried out by a foreign home authority.</p> <p>MAS works closely with both home and host supervisors as well as resolution authorities as part of its ongoing supervision and in times of crisis (see CP13 EC6 for examples of such collaboration). This allows for a common understanding and coordinated approach amongst supervisors in responding to distress at a financial institution under MAS' charge.</p>
<b>EC7</b>	<b>The supervisor has the power to review the activities of parent companies and of companies affiliated with parent companies to determine their impact on the safety and soundness of the bank and the banking group.</b>
Description and findings re EC7	Any entity that wishes to become a controller of local banking groups will need to satisfy the criteria under section 15C of the BA and obtain the approval of the Minister in charge of MAS. MAS has to be satisfied that: (i) the person (defined to include a

corporation) is fit and proper; and (ii) having regard to the likely influence of the person, the business of the bank will be or will continue to be conducted prudently and the provisions of the BA will be or will continue to be complied with in relation to such business. The Minister must also be satisfied that it is in the national interest to approve the application (see CP6 EC2 for details). In practice, MAS will determine, among others, the activities of the corporate owner and that of its related entities, and assess the risk of financial contagion to the local banking group.

Pursuant to section 15C of the BA, MAS can vary or impose additional conditions of approval on an existing controller of a local banking group. In the extreme case, MAS also has the power to object and/or make directions to an existing controller if MAS is satisfied that the controller ceases to be fit and proper, or the local banking group is no longer likely to conduct its business prudently or to comply with the rules under the influence of the controller, amongst other provisions.

Any non-MAS regulated holding company that wishes to become a substantial shareholder or controller of a local banking group is similarly subject to section 15C of the BA. MAS' powers under section 15C of the BA extends to any substantial shareholder or controller of a local banking group, including non MAS-regulated holding companies that have non-regulated affiliates in the group. Under section 18 of the BA, MAS has the power to require these companies to provide MAS with information on their activities to assess the risk of financial contagion to the local banking group, and to impose additional or to vary conditions to mitigate the risk to the banking group, under section 15C. In the extreme case, MAS has the power to object and/or make directions to an existing controller if MAS is satisfied that the controller ceases to be fit and proper, or the local banking group is no longer likely to conduct its business prudently or to comply with the rules under the influence of the controller, amongst other provisions.

Any bank that intends to acquire major stakes in other companies including non-regulated entities, is required under section 32 of the BA to obtain the approval of MAS. Such investments are also subject to the provisions of section 30 of the BA which prohibits banks from engaging directly in non-financial businesses. Where MAS is of the view that such stakes pose the risk of financial contagion to the banking group, MAS may refuse to approve such stakes or impose such conditions as to limit the risk of financial contagion.

Similarly, where a bank holding company is approved by MAS under section 28 of the Monetary Authority of Singapore Act, MAS has the power to require the bank holding company to obtain MAS' approval prior to acquiring stakes in other companies, including non-regulated entities. This power is also present in section 31 of the new Financial Holding Companies Act, which was passed by Parliament in April 2013. Where MAS is of the view that such stakes will pose the risk of financial

	contagion to the financial holding group or the banking group or both, MAS may refuse to approve such stakes or impose such conditions as to limit the risk of financial contagion.
<b>Assessment of Principle 1</b>	<b>Largely compliant</b>
Comments	<p>The responsibilities and objectives of MAS related to banking supervision are quite comprehensive and the underlying statutory framework provides the foundation that has enabled MAS to become a highly effective bank supervisor.</p> <p>The dual mandate of MAS, however, both to develop Singapore as a financial center and to act as the prudential supervisor of the financial industry raises the potential for safety and soundness to be compromised in an effort to make Singapore a business-friendly center that is attractive to foreign banks. The team found no evidence of an intentional lowering of prudential standards to attract more foreign business. In fact, the nature of the developmental work presently carried out by MAS, and public statements from senior officials, do not appear to be in conflict with MAS' prudential mandate. Nonetheless, the inherent risk, as demonstrated in other financial centers, of vesting supervisory agencies with a dual mandate, remains. Under different leadership, the dual mandate could in theory, result in prudential standards being weakened in an effort to attract additional foreign institutions. Because the potential for these two mandates to conflict in favor of the developmental objective does not raise serious concerns at the time of the assessment, the team has assessed this principle as largely compliant. Nevertheless, this is an area that needs to be monitored.</p> <p>To reach a higher level of compliance, authorities should reflect on a way to more clearly insulate the role of prudential supervision from the developmental mandate, either by shifting development out of MAS or by articulating that the developmental mandate of MAS is clearly subordinate to prudential supervision. The establishment of effective check and balances should also accompany such subordination to make it clear, that in the event of a conflict between prudential supervision and making Singapore attractive to foreign financial firms, prudential supervision will be the priority.</p>
<b>Principle 2</b>	<p><b>Independence, accountability, resourcing and legal protection for supervisors.</b></p> <p>The supervisor possesses operational independence, transparent processes, sound governance, budgetary processes that do not undermine autonomy and adequate resources, and is accountable for the discharge of its duties and use of its resources. The legal framework for banking supervision includes legal protection for the supervisor.</p>
<b>Essential criteria</b>	
<b>EC1</b>	<b>The operational independence, accountability and governance of the supervisor are prescribed in legislation and publicly disclosed. There is no government or industry interference that compromises the operational independence of the supervisor. The supervisor has full discretion to take any supervisory actions or</b>

	<b>decisions on banks and banking groups under its supervision.</b>
Description and findings re EC1	<p>The MAS Act provides for the establishment of MAS as a body corporate and therefore a separate legal person.</p> <p><b>Responsibilities of MAS Board</b></p> <p>MAS is governed by a Board of Directors, which is responsible for the policy and general administration of the affairs and business of MAS. The Board is involved in setting MAS' general direction but the day-to-day administration of MAS, including the supervision of individual institutions is the responsibility of the Managing Director, who is vested with the power to make decisions and exercise all powers that may be exercised by MAS under section 9 of the MAS Act. MAS enjoys operational autonomy and there are no indications that Government interferes in the supervision of individual financial institutions or that prudential licensing and supervision by MAS have been compromised.</p> <p>Pursuant to section 13A of the MAS Act, Board committees are formed to assist the Board in the exercise of its powers and carrying out of its duties. Terms of reference for Board committees have been developed and approved by the Board. The terms of reference also set out the composition of each Board committee. In particular, there is independent oversight by the Audit and Risk Committees. These Committees are chaired by independent directors, which is in line with international good corporate governance standards.</p> <p>The MAS Board meets every quarter. Over the past year (i.e. the past four MAS Board meetings from August 2012 to May 2013), items relating to the following areas were tabled at MAS Board meetings:</p> <ul style="list-style-type: none"> <li>• Reserves management (every quarter);</li> <li>• Risk management (every quarter);</li> <li>• Finance (every quarter);</li> <li>• Human resources (as and when necessary);</li> <li>• General updates on the outlook of the global and domestic economy (semi-annually);</li> <li>• General updates on the regulatory framework and developments (an update on the new Basel liquidity rules in early-2013);</li> <li>• Issuance of currency (as and when necessary); and</li> <li>• MAS Board governance and administrative matters (as and when necessary).</li> </ul>

**Accountability mechanisms**

MAS is required under section 34(1) of the MAS Act to include a report on the performance of MAS' functions and duties in its Annual Report, which must be presented to the President of Singapore and to Parliament within six months from the close of the financial year.

In addition, the MAS Act stipulates that the Managing Director reports to the Board for his/her actions and decisions. The MAS Act provides for the Board to inform the Government of the regulatory, supervisory and monetary policies of MAS and furnish the Minister in charge with information as the Minister may require in respect of the duties and functions of MAS. MAS is ultimately accountable to Parliament through the Minister in charge as the Singapore Constitution provides for the Cabinet, which comprises Ministers, to be collectively responsible to Parliament.

**Operational independence of MAS**

The Constitution of the Republic of Singapore provides for the Cabinet, which comprises Ministers, to be collectively responsible to Parliament. MAS is ultimately accountable to Parliament through the Minister in charge of MAS. This arrangement does not appear to have compromised the independence of MAS, nor weakened MAS' operational autonomy and supervisory effectiveness. In practice, MAS enjoys full operational autonomy in the regulation and supervision of banks and supervisory actions against banks are taken entirely within MAS.

Sections 14 and 15C of the BA provide that the Minister in charge of MAS, in considering national interest issues, cannot set aside prudential considerations as assessed by MAS, when assessing approvals for mergers and substantial shareholdings in banks. In addition, MAS prepares its own budget, which is approved by the President of Singapore, who is independently elected. MAS does not engage in directed lending, and the Government does not interfere when institutions lobby for their causes. MAS staff are not allowed to participate in any political activities.

MAS does not appear to be inappropriately influenced by industry. Under the MAS Act, a director of MAS must not be a director or salaried official of any financial institution licensed or approved by MAS. In addition, directors of MAS should not act as delegates on the Board of any commercial, financial, agricultural, industrial or other interests with which they may be connected.

MAS is both the licensing and supervisory authority of commercial banks. It derives supervisory powers under the BA. The formal group decision-making structures within the MAS allow MAS management to function independently. MAS makes changes to financial rules and regulations and exercises financial supervisory powers over banks autonomously. All regulatory and supervisory actions and decisions (including the granting and revocation of bank licenses), as well as enforcement actions rest solely with MAS. Decisions on day-to-day licensing and financial supervision matters are



	<p>routinely made at the Management Financial Supervision Committee (MFSC), chaired by the Deputy Managing Director (Financial Supervision) who provides oversight of all licensing and supervisory decisions. Individual banks' CRAFT assessments, including CRAFT assessments of the domestically systemically important banks, are approved by panels comprising BD supervisors, and where appropriate, by a panel headed by the Deputy Managing Director (Financial Supervision) or Assistant Managing Director (Banking and Insurance). The MAS Board is not involved in these decisions. Major policies relating to the regulation of the financial sector are decided within MAS via the Executive Committee. Financial supervision or regulation matters that might raise strategic implications or widespread economic or social impact may be surfaced to Chairman's Meeting either for information or discussion.</p> <p>The regular public announcements and explanations on regulatory and supervisory policies and approach, and the practice of consulting the public on major changes and initiatives, provide checks against government interference. The annual accounts of MAS are audited by the Auditor-General, and both the accounts and a report by the Board of Directors on the work of MAS for the year are required to be presented to the President and to Parliament.</p>
<b>EC2</b>	<p><b>The process for the appointment and removal of the head(s) of the supervisory authority and members of its governing body is transparent. The head(s) of the supervisory authority is (are) appointed for a minimum term and is removed from office during his/her term only for reasons specified in law or if (s)he is not physically or mentally capable of carrying out the role or has been found guilty of misconduct. The reason(s) for removal is publicly disclosed.</b></p>
Description and findings re EC2	<p>The process for the appointment and removal of the Chairman, Managing Director of MAS and the Board of Directors is transparent and provided for in the MAS Act, as follows:</p> <ul style="list-style-type: none"> <li>• The Chairman of MAS is appointed by the President on the recommendation of the Cabinet (section 7).</li> <li>• The other Board Directors are appointed by the President, who, on the recommendation of the Minister in charge of MAS, also appoints the Deputy Chairman (section 8).</li> <li>• The Managing Director of MAS is appointed by the President on the advice or recommendation of the Public Service Commission (section 9).</li> </ul> <p>The President may in his discretion refuse to appoint any person as Chairman, Board Director or Managing Director of MAS or refuse to revoke any such appointment if the President does not concur with the recommendation of the Cabinet (for appointment of Chairman), the Minister in charge of MAS (for appointment of other Board Directors) or Public Service Commission (for appointment of Managing Director)—see section 11A. The President cannot initiate the revocation of any of the above appointments.</p>

	<p>The Managing Director is appointed on such terms and conditions of service as the President may decide (section 9). The Board Directors (including the Chairman and Managing Director) hold office for a term not exceeding three years and are eligible for reappointment (section 9). In practice, Board Directors (including the Chairman and Managing Director) are appointed for a minimum term of two years. The appointments and the cessation of the appointments of the Managing Director and Board Directors are published in the <i>Gazette</i>.</p> <p>The reason(s) for a director's removal is publicly disclosed. As specified in section 10(2) of the MAS Act, the President may terminate the appointment of any director if the director:</p> <ul style="list-style-type: none"> <li>• resigns his office;</li> <li>• becomes mentally disordered and incapable of managing himself or his affairs;</li> <li>• becomes bankrupt or suspends payment to or compounds with his creditors;</li> <li>• is convicted of an offense involving dishonesty or fraud or moral turpitude;</li> <li>• is guilty of serious misconduct in relation to his duties;</li> <li>• is absent, without leave, from three consecutive meetings of the board; or</li> <li>• fails to comply with his obligations under the MAS Act.</li> </ul> <p>The Deputy Managing Director (Financial Supervision) oversees the regulation and supervision of all banking, insurance and capital markets entities licensed in Singapore. She/he reports to the Managing Director of the MAS.</p>
<b>EC3</b>	<b>The supervisor publishes its objectives and is accountable through a transparent framework for the discharge of its duties in relation to those objectives.</b>
Description and findings re EC3	<p>The powers, duties and functions of MAS are set out in the MAS Act. MAS has also published a monograph on <i>Objectives and Principles of Financial Supervision in Singapore</i>.</p> <p>In terms of accountability, the MAS Act requires the MAS Board to inform the Government of the regulatory, supervisory and monetary policies of MAS from time to time and to furnish the Minister in charge of MAS with such information as the Minister may require in respect of the duties and functions of MAS. MAS is accountable to Parliament through the Minister in charge of MAS under the Constitution of the Republic of Singapore. MAS is required under section 34(1) of the MAS Act to include a report on the performance of its functions and duties in its annual report, which must be presented to the President of Singapore and to Parliament within six months from the close of the financial year. Under section 34 of</p>

	<p>the MAS Act, MAS is required to report the performance of its functions and duties throughout the financial year to the President and to Parliament. MAS is subject to both internal and external audits. As the regulator of a financial center, MAS is also open to assessments by private agencies and international bodies as well as other central banks and regulators.</p> <p>The MAS makes regular public announcements and explanations on regulatory and supervisory policies and approach and consults the public on significant changes and initiatives pertaining to financial and regulatory policies, including the publication of responses to consultation feedback. This contributes towards ensuring that MAS operates within a transparent environment and that MAS remains accountable for the discharge of its duties in relation to its published objectives.</p>
<b>EC4</b>	<p><b>The supervisor has effective internal governance and communication processes that enable supervisory decisions to be taken at a level appropriate to the significance of the issue and timely decisions to be taken in the case of an emergency. The governing body is structured to avoid any real or perceived conflicts of interest.</b></p>
Description and findings re EC4	<p>Pursuant to section 9(6) of the MAS Act, the Managing Director of the MAS has formed the MFSC to assist him in the exercise of his powers and the carrying out of his duties in the supervision and regulation of the financial services sector entrusted to him by virtue of section 9(3) of the MAS Act.</p> <p>The MFSC is chaired by the Deputy Managing Director overseeing financial supervision and consists of the Assistant Managing Directors and heads of departments under the Financial Supervision Group and the General Counsel. The departments under the Financial Supervision Group include the Banking Departments, Insurance Department, Prudential Policy Department, Specialist Risk Department, Macroeconomic Surveillance Department, Capital Markets Intermediaries Department, Investment Intermediaries Department and Capital Markets Department.</p> <p>The MFSC, which meets weekly, is the forum that has been delegated the power to make all supervisory decisions. It serves as a key forum for discussion and decision-making on regulatory and legislative framework for regulated entities, supervisory policies and policy papers. It has the power to reject license applications, and make decisions on supervisory actions taken against financial institutions. Safety and soundness of financial institutions is a paramount consideration. Recommended approvals of license applications are subject to review and approval by the Minister.</p> <p>MAS' crisis management framework relies on a structure that facilitates information flow and communication with both external parties and staff during a crisis. A CMT oversees the processes for handling threats to stability of the financial system posed by individual financial institutions. There are Distress Financial Institution (DFI) handbooks for different type of financial institutions including banks that provides an easy-to-use reference guide by consolidating approved policy positions, international</p>

	<p>best practices, key considerations and possible options and actions that can be taken by MAS (see CP8 EC7 for details).</p> <p>MAS has its own Board of Directors, which is responsible for the policy and general administration of the affairs and business of MAS. Under the MAS Act, a director of MAS must not be a director or salaried official of any financial institution licensed or approved by MAS. In addition, directors of MAS must be independent and should not act as delegates on the Board of any commercial, financial, agricultural, industrial or other interests. MAS enjoys operational autonomy and there is no evidence that the Government interferes in the supervision of financial institutions.</p> <p>Pursuant to section 13A of the MAS Act, Board committees are formed to assist the Board in the exercise of its powers and carrying out of its duties. There is independent oversight by the Audit and Risk Committees, which are chaired by independent directors (see CP2 EC1 for details on MAS' operational independence).</p>
<b>EC5</b>	<p><b>The supervisor and its staff have credibility based on their professionalism and integrity. There are rules on how to avoid conflicts of interest and on the appropriate use of information obtained through work, with sanctions in place if these are not followed.</b></p>
Description and findings re EC5	<p>MAS conducts interviews and background checks on potential employees prior to recruitment. The MAS Code of Conduct sets out the conduct standard expected of MAS employees. Staff are required to comply with internal policies that include requirements to declare to MAS any conflicts of interests and indebtedness; to avoid involvement in political matters and matters of public controversy; not to place themselves in a pecuniary obligation to any person with whom they have official dealings; and to declare to MAS any gifts in the course of official dealings. There must not be any conflict of interest between an employee's official position/work and his activities outside his official duties. MAS staff are required to obtain department heads' permission before they can engage in any activity outside their official duties, which is related to their work, and the staff have to declare to their department heads all financial gains or benefits in kind from the activity to ensure transparency. Disciplinary action will be taken against staff for any breach of the policies.</p> <p>MAS staff are required to comply with statutory requirements regarding secrecy of information and the handling and custody of classified documents and information. The relevant statutes include the Official Secrets Act (Chapter 213), Statutory Bodies and Government Companies (Protection of Secrecy) Act (Chapter 319), MAS Act and Computer Misuse Act (Chapter 50A). All MAS staff commit to safeguarding official information as part of their appointment. This commitment is renewed once every three years. Senior officers are required to give a minimum notification period of three months before joining any external organizations that MAS has dealings with (including financial institutions under MAS' supervision). The required advance notification period could be up to six months under certain circumstances where officers have access to particularly sensitive information.</p>

	<p>MAS staff are fully expected to abide by the rules on how to avoid conflicts of interest and on the appropriate use of information obtained through work, and to also whistle blow if they observe a breach of these requirements by their colleagues. In the event of alleged violations of these rules, MAS has processes in place to review the allegations. There are sanctions in place if these rules are not followed. Appropriate disciplinary actions, ranging from reprimands to suspension from duties, dismissal and legal prosecution, will be taken depending on the severity of the infringement.</p>
<b>EC6</b>	<p><b>The supervisor has adequate resources for the conduct of effective supervision and oversight. It is financed in a manner that does not undermine its autonomy or operational independence. This includes:</b></p> <ul style="list-style-type: none"> <li><b>(a) a budget that provides for staff in sufficient numbers and with skills commensurate with the risk profile and systemic importance of the banks and banking groups supervised;</b></li> <li><b>(b) salary scales that allow it to attract and retain qualified staff;</b></li> <li><b>(c) the ability to commission external experts with the necessary professional skills and independence, and subject to necessary confidentiality restrictions to conduct supervisory tasks;</b></li> <li><b>(d) a budget and program for the regular training of staff;</b></li> <li><b>(e) a technology budget sufficient to equip its staff with the tools needed to supervise the banking industry and assess individual banks and banking groups; and</b></li> <li><b>(f) a travel budget that allows appropriate on-site work, effective cross-border cooperation and participation in domestic and international meetings of significant relevance (e.g., supervisory colleges).</b></li> </ul>
Description and findings re EC6	<p>MAS is a statutory board with various avenues for self-funding (e.g., fees and minimum cash balances). It does not receive funding from the Government for its operations. It prepares its own budget for each financial year, which is approved ultimately by the President of Singapore, acting in his own discretion. The President of Singapore is separately elected from the Government. He has his own appointed Council of Presidential Advisers to advise him and he can request for any information to satisfy himself that the budget does not draw on the past reserves of MAS. Further, the MAS Act requires MAS to present its financial statements (audited by the Auditor-General) to Parliament annually. The audited financial statements of MAS also have to be published in the Gazette and transmitted to the President within six months of close of financial year-end.</p> <p>MAS enjoys independence in determining its staff resource levels and remuneration policies. Section 17(1) of the MAS Act provides that MAS may appoint employees as it thinks fit and determine all matters relating to their remuneration and terms and conditions of appointment and employment. The Board of Directors, appointed by the President, has ultimate responsibility for the personnel policies of MAS. Under its</p>

planning review, MAS evaluates its staffing profile to assess that its supervisory resources, both in terms of numbers and skill-sets, are commensurate with the risk profile and systemic importance of the institutions MAS supervises (see EC 7). The departments determine the staff required to deliver the day-to-day operational and strategic objectives of the department. This is done at least annually. Any assessed need for an increase in headcount each year is submitted to the Board of Directors for approval. Every year, departments prepare the financial budget based on the required activities and resources. The budget includes allocations for salaries, training, equipment, as well as travel for on-site work, cross-border cooperation and participation in domestic and international meetings. Each Head of Department is fully accountable for the management of funds allocated to his department and may utilize its allocation as he/she deems necessary within MAS' existing policy guidelines. Should the need arise, departments may request additional resources above the amount originally allocated to them in their budget. MAS has a total of 185 senior officers responsible for the supervision of the 123 banks licensed in Singapore, as of end-December 2012. These bank supervisors are supported in their supervisory function by more than 90 functional specialists, including market, liquidity, credit, technology risk and business continuity management specialists, capital and prudential policy analysts, macroeconomic surveillance economists and in-house counsels.

To attract and retain staff, MAS pays a competitive remuneration package vis-à-vis those in the financial sector. MAS uses market surveys to assess comparability of salary structure to the private sector. MAS' budget for staff remuneration is increased annually taking into account any increase in headcount and wage increases needed to keep the organization's wages competitive. To enhance competitiveness of its remuneration, MAS pays a premium for specific skill sets. MAS has been able to attract and recruit staff with excellent qualifications and expertise. Entry-level Senior Officer hires are graduates with at least a second class honors degree from top local and foreign universities, while mid-career hires generally bring with them relevant experience and strong expertise in their respective fields. Senior bankers interviewed noted that at times, the examiners expertise exceeded what the banks had in-house.

Section 17(2) of the MAS Act provides that MAS may engage the services of advisers and set the terms and conditions of such engagements as it thinks fit. MAS engages senior regulators as well as bankers with expertise in areas such as capital markets, information technology and risk modeling to help bolster its internal expertise. In addition, MAS has engaged respected ex-regulators from other supervisory agencies as consultants to further strengthen and refine its supervisory approach. External consultants have also been engaged to study into specific areas.

MAS invests in developing its human resources. MAS has set up the MAS Academy to centralize in-house professional and leadership training programs for all departments. The Academy aims to inculcate MAS' values and ethics in its officers, and to engage in

	<p>capacity-building for MAS. It organizes the MAS Diploma in Central Banking for entry-level officers to acquire broad-based financial sector knowledge and understanding of MAS' key functions and core values. It develops various focused functional and general development training courses to equip MAS officers of all levels with the skills and knowledge identified based on MAS' functional competency framework—the Professional Requisites and Outcomes Framework (PROF). Besides the use of in-house trainers, the Academy uses external professional trainers to conduct courses to keep MAS officers abreast of latest developments and trends in financial markets, activities and products and best market practices in risk management and internal controls. For functional training courses, they are organized broadly under the eight knowledge blocks of macroeconomics and monetary policy, financial supervision, financial markets and products, risk management, accounting and financial analysis, general management, managing external relations and managing operating processes.</p> <p>The MAS Academy organizes regular talks by leading regulators and senior industry practitioners to share knowledge and exchange views on various supervisory and regulatory issues. External training is provided through secondments and study trips to foreign regulatory bodies, accounting firms, standard setting bodies and major financial institutions.</p> <p>To further build and deepen the in-house expertise, MAS provides scholarships to officers to pursue postgraduate studies of up to PhD levels. MAS staff have also participated in international initiatives such as FSAP and FATF's assessment of countries. MAS undertakes talent reviews and regular assessments of its expertise levels to facilitate succession planning and early identification of gaps.</p> <p>Every officer is given a PC/laptop and other essential equipment/tools on his/her first day of work and resource needs are evaluated annually.</p> <p>Going forward, MAS has embarked on several strategic enterprise-wide, multi-year information technology (IT) programs to support MAS' core functions, including its banking supervisory function. New systems and tools which will aid banking supervision work will be rolled out within the next 2 years. These include an integrated platform to track MAS' interactions with financial institutions and external stakeholders; enhanced structures tools and processes to optimize the way information is managed and used across MAS; and enhancements to MAS' primary industry data collection platform, in terms of expansion of scope and coverage of regulatory returns.</p> <p>As noted, adequate budget is set aside for the conduct of local and overseas inspections, and participation in cross-border cooperation, as well as domestic and international meetings, including supervisory colleges.</p>
EC7	<p><b>As part of their annual resource planning exercise, supervisors regularly take stock of existing skills and projected requirements over the short- and medium-</b></p>



	<b>term, taking into account relevant emerging supervisory practices. Supervisors review and implement measures to bridge any gaps in numbers and/or skill-sets identified.</b>
Description and findings re EC7	<p>MAS reviews its staffing needs at least annually. The review and approval process for increasing full-time employees occurs annually along with the budget review process. On an off-cycle basis, departments can also obtain additional resources.</p> <p>MAS utilizes a competency framework, the PROF, as part of its annual performance review process, to identify skill requirements and facilitate the structured development of professional financial supervisory skills. In the area of bank supervision, these include the ability to identify and assess risks from financial products and activities, evaluate the adequacy of controls that are necessary to monitor, manage and mitigate these risks, identify and analyze thematic issues, and review supervisory returns and indicators for developments that may impact the banks' operations. The PROF competency roadmap that sets out the various levels of professional expertise required for the banking departments is updated on a yearly basis or when necessary, e.g., when job requirements change, to ensure its continued relevance.</p> <p>To bridge gaps in numbers, MAS continually recruits externally. Since 2008, the headcount in the banking departments has increased by 30 percent to 199 staff, as of April 2013.</p> <p>To bridge gaps in skill-sets in specialized business or product areas, MAS has implemented several measures, such as setting up Peer Groups comprising officers who have accumulated extensive knowledge in specific areas over their careers in and outside MAS. MAS also attaches supervisory staff to international regulatory bodies, large international banks and other financial sector regulators to enhance their skills. Before the start of each financial year, the MAS Academy will seek inputs from the line departments on their core and new training needs. This enables MAS to develop new training programs that develop knowledge and skills required to regulate and supervise new products and innovation on the financial markets based on the latest training needs. For example, following the global financial crisis, training topics on complex products, credit risk and economic capital modeling, were delivered to enhance supervisory capabilities.</p>
<b>EC8</b>	<b>In determining supervisory programs and allocating resources, supervisors take into account the risk profile and systemic importance of individual banks and banking groups, and the different mitigation approaches available.</b>
Description and findings re EC8	MAS adopts a risk-based supervision approach, and employs the risk bucketing framework and CRAFT to assess the risk and impact of individual banks and banking groups. MAS' supervisory assessment of a bank/banking group's risk profile and systemic importance as well as risk management processes will determine its supervisory strategy towards that bank/banking group, and in turn the supervisory activities in which MAS engages, the intensity of MAS' supervisory attention and the



	<p>amount of supervisory resources allocated.</p> <p>MAS has in place measures to assure that its supervisory activities are proportionate to the individual bank/banking group's risk profile and systemic importance. These include:</p> <ul style="list-style-type: none"> <li>• Comprehensive operating procedures to guide supervisory staff;</li> <li>• A system of challenge and review by experienced supervisors or panels of senior and specialist staff for key supervisory assessments of individual financial institutions;</li> <li>• Senior management review of major regulatory or supervisory issues at senior management forums; and</li> <li>• Regular checks on the efficacy of supervisory processes by MAS' internal audit function.</li> </ul> <p>MAS' supervision approach and the measures above are set out in the monograph on <i>MAS' Framework for Impact and Risk Assessment of Financial Institutions</i> (see CP8 EC1 for details).</p>
<b>EC9</b>	<b>Laws provide protection to the supervisor and its staff against lawsuits for actions taken and/or omissions made while discharging their duties in good faith. The supervisor and its staff are adequately protected against the costs of defending their actions and/or omissions made while discharging their duties in good faith.</b>
Description and findings re EC9	Section 22 of the MAS Act provides for the legal protection of MAS, any director, officer or employee of MAS for anything done, including any statements made, or omitted to be done in good faith. MAS provides legal aid on a full indemnity basis as and when the costs are incurred.
<b>Assessment of Principle 2</b>	<b>Largely compliant</b>
Comments	<p>Because of the importance of the financial sector to Singapore, the MAS is vested with significant supervisory authority and has the full backing of the government for access to adequate resources. MAS has control over its budget, it has extensive staff training programs, staff compensation is very competitive, and MAS has been able to attract strong technical experts on to its staff. The number of supervisory staff has been steadily increasing over the past five years although as noted under Principle 17, despite the hard work and dedication of MAS staff, additional staff is likely to be needed. Turnover remains relatively low in part reflecting the attitude that a career in MAS, particularly in supervision, is desirable. Staff is provided legal protection for actions taken in the course of carrying out their official responsibilities and legal aid is provided if required.</p> <p>The governance structure of the MAS, however, raises the potential for political</p>

	<p>influence in the operations of the MAS. While the mission neither observed nor was informed of any instances of inappropriate interference in the banking supervisory operations of MAS, having a Board at the top of MAS, of which four out of nine Board members including the Chairman and Deputy Chairman are government ministers and another member is a permanent secretary at the MOF, raises the risk that under different leadership, the supervision of the financial system by MAS could be subject to undue governmental influence.</p> <p>As an example, the Chairman’s Meeting, which is comprised entirely of government ministers and the Managing Director of the MAS, decides on major changes to the regulatory framework and supervisory policies of MAS. The Meeting also approves major changes to policies and strategies relating to financial center development. The result of this process to date has been positive—MAS has adopted supervisory policies that are more conservative than suggested by international guidelines. But, again, this Committee, under different leadership, has the potential for shifting gears and inappropriately interfering in regulatory and supervisory policy setting by the MAS and/or a shift in emphasis towards development objectives.</p> <p>This deficiency does not raise serious concerns at the moment of the assessment. MAS has gained a reputation as a very conservative supervisor and has been an early adopter of capital, liquidity, and governance standards that exceed global standards. While it is always possible that a new government may adopt a different posture, the current government appears to have fully recognized the benefits to Singapore, as a financial centre, in maintaining its reputation as a supervisor with very high prudential and licensing standards. As a result, the team assesses this principle as largely compliant.</p> <p>To achieve a higher level of compliance with the criteria that government interference does not compromise the operational independence of the supervisor, the authorities should consider changing the composition of the board appointments to have more independent board members in lieu of primarily political appointments and the permanent secretary. The authorities should also consider establishing effective check and balances at the highest possible level to ensure MAS’ ability and willingness to act, as a supervisory authority, and to counter any bias for inaction or delay due to external pressures or other inappropriate political objectives.</p>
<p><b>Principle 3</b></p>	<p><b>Cooperation and collaboration.</b> Laws, regulations or other arrangements provide a framework for cooperation and collaboration with relevant domestic authorities and foreign supervisors. These arrangements reflect the need to protect confidential information.<sup>6</sup></p>

<sup>6</sup> Principle 3 is developed further in the Principles dealing with “Consolidated supervision” (12), “Home-host relationships” (13) and “Abuse of financial services” (29).

<b>Essential criteria</b>	
<b>EC1</b>	<b>Arrangements, formal or informal, are in place for cooperation, including analysis and sharing of information, and undertaking collaborative work, with all domestic authorities with responsibility for the safety and soundness of banks, other financial institutions and/or the stability of the financial system. There is evidence that these arrangements work in practice, where necessary.</b>
Description and findings re EC1	<p>MAS is the integrated supervisor of financial institutions across banking, insurance and capital markets sectors in Singapore. MAS supervisory departments cooperate closely, share relevant information and coordinate supervisory activities (see CP8 EC4 for details). MAS' MFSC (a senior decision-making forum on matters related to supervision and regulation of the financial sector) determines important bank and non-bank policies, decides on supervisory matters raised for their attention, and takes a consistent policy and supervisory approach on issues common across the sectors. In addition, the MFSC meets regularly to discuss risks and developments that could impact Singapore's macroeconomic and financial stability. Senior management representation at the meeting includes supervisors and those responsible for macroeconomic surveillance and monetary policy.</p> <p>MAS also participates in cross ministry/agency project teams on policies of mutual concerns. For instance, MAS has been working closely with relevant government agencies in designing and implementing measures to temper the property market since September 2009. The calibrated measures are aimed at pre-empting a property bubble from forming by tempering sentiments and encouraging financial prudence among property purchasers. There have been seven rounds of property measures, including the latest set of measures introduced in January 2013.</p>
<b>EC2</b>	<b>Arrangements, formal or informal, are in place for cooperation, including analysis and sharing of information, and undertaking collaborative work, with relevant foreign supervisors of banks and banking groups. There is evidence that these arrangements work in practice, where necessary.</b>
Description and findings re EC2	<p>MAS has established several Memorandums of Understanding (MoUs) with foreign supervisors for information sharing and mutual cooperation. MAS' co-operation with foreign supervisors includes information sharing during the authorization and licensing process, regular dialogues through email/phone correspondences, periodic meetings and joint examinations of banks. MAS inspects the overseas branches/subsidiaries of Singapore-incorporated banking groups and allows parent supervisors to inspect their banks' branches/subsidiaries in Singapore. Results of examinations are exchanged between MAS and the foreign supervisors. For instance, MAS has participated in joint supervisory validations of the Basel II internal ratings-based approach (IRBA) systems used in the major overseas subsidiaries of local banking groups with foreign supervisors, as well as non-IRBA related inspections of internal controls and risk management systems. Inspection reports issued by MAS on the overseas subsidiaries of local banking groups are shared with relevant foreign supervisors.</p>

	<p>MAS hosts supervisory college meetings for the local banking groups involving supervisors in the region where the banks have sizeable or strategic operations. The most recent meetings were held in April 2012 and the key objectives were to provide a platform for supervisors to share their risk assessments of the local banking groups in their respective jurisdictions to help supervisors develop a better understanding of the risk profile of the banking group, and formulate appropriate supervisory plans to address any shortcomings (see CP13 EC1 for details). There are also regular meetings across various levels of seniority between MAS and foreign supervisors, including bilateral meetings, supervisory roundtables and regional groupings. MAS has an informal arrangement with host supervisors to update each other on changes to supervisory contacts to facilitate communication on an ongoing basis.</p> <p>For the foreign banks, collaborative work and information exchanges with home and other host supervisors have been taking place under the Basel Concordat and at various bilateral and international supervisory meetings. For instance, it has been a long-standing practice for MAS to send copies of reports on on-site examinations of foreign banks to their respective home supervisor to aid in its consolidated supervision of the bank. MAS has also been participating in examinations conducted by home supervisors of their banks in Singapore. MAS also actively participates in supervisory college and crisis management group (CMG) meetings hosted by the respective home supervisors. For instance, MAS is participating in the cross-border CMG meetings of six globally systemic banks. In 2012, MAS attended some 20 supervisory college meetings for the foreign banks.</p> <p>These arrangements have helped strengthen the effectiveness of MAS' consolidated supervision of local banking groups and oversight of large international players that are systemic in Singapore's banking system.</p>
EC3	<p><b>The supervisor may provide confidential information to another domestic authority or foreign supervisor but must take reasonable steps to determine that any confidential information so released will be used only for bank-specific or system-wide supervisory purposes and will be treated as confidential by the receiving party.</b></p>
Description and findings re EC3	<p>Under section 46 of the BA, banks may share inspection/special investigation reports with their parent supervisors if MAS grants them approval to do so. In the preface of the report, the recipients are notified that the report is furnished for confidential use only, and under no circumstances should any portion of it be disclosed without prior approval from MAS. MAS has also imposed the condition for MAS to be notified immediately if a subpoena or other legal process is received calling for the production of the report.</p> <p>Under the Third Schedule of the BA, the disclosure of customer information by a bank to its parent supervisory authority is permitted only if the disclosure is strictly necessary for compliance with a request made by its parent supervisory authority. The customer information should only be disclosed on the condition that the parent</p>

	<p>supervisory authority is prohibited by the laws applicable to it from disclosing the information obtained by it to any person unless compelled to do so by the laws or courts of the country or territory where it is established. Notwithstanding this, no deposit information shall be disclosed to the parent supervisory authority.</p> <p>MAS has MoUs with foreign supervisors for information sharing and mutual cooperation. Prior to the formalization of an MoU, MAS will seek a written confirmation from the overseas regulatory authority on their confidentiality protections regime to ensure that information provided to an overseas regulatory authority will be subject to adequate and appropriate confidentiality protections. The MoU will also include clauses on the safeguarding of confidential information shared. The MoUs broadly cover the following:</p> <ul style="list-style-type: none"> <li>• Each Authority is subject to certain confidentiality restrictions set out in their own laws.</li> <li>• Each Authority will reciprocate the same level of confidentiality accorded to the information they receive as the level given by the other Authority (the same level of confidentiality as it will be if the information is collected domestically).</li> <li>• Each Authority will keep the requests and communications made within the framework of the MoU confidential.</li> <li>• Conditions under which information disclosed under the MoU may be further disclosed.</li> <li>• Each Authority should inform the other before making any further disclosure of information.</li> <li>• Each Authority will inform the other if there is any change in confidentiality protection to information being disclosed under the framework.</li> </ul> <p>Supervisory information on banks is not shared with other domestic authorities as MAS is the sole regulator of banks in Singapore.</p>
EC4	<p><b>The supervisor receiving confidential information from other supervisors uses the confidential information for bank-specific or system-wide supervisory purposes only. The supervisor does not disclose confidential information received to third parties without the permission of the supervisor providing the information and is able to deny any demand (other than a court order or mandate from a legislative body) for confidential information in its possession. In the event that the supervisor is legally compelled to disclose confidential information it has received from another supervisor, the supervisor promptly notifies the originating supervisor, indicating what information it is compelled to release and the circumstances surrounding the release. Where consent to</b></p>

	<b>passing on confidential information is not given, the supervisor uses all reasonable means to resist such a demand or protect the confidentiality of the information.</b>
Description and findings re EC4	Information received by MAS from foreign supervisors in the course of its supervision is treated as confidential. Under section 14 of the MAS Act (Chapter 186), no MAS employee shall disclose to any person any information relating to the affairs of MAS or of any person, which he has acquired in the performance of his duties, except when required to do so by any court or under the provisions of any written law. The MoUs which MAS has with foreign supervisors include clauses on the safeguarding of confidential information shared. In addition, under section 5 of the Official Secrets Act (Chapter 213), a person shall be guilty of an offense if there is wrongful communication of information by that person.
<b>EC5</b>	<b>Processes are in place for the supervisor to support resolution authorities (e.g., central banks and finance ministries as appropriate) to undertake recovery and resolution planning and actions.</b>
Description and findings re EC5	<p>MAS is the central bank, integrated financial sector supervisor, as well as resolution authority for financial institutions in Singapore. The MOF which controls the reserves of Singapore that may be utilized in a crisis may also be involved in the event that funding is required for various stability reasons. MAS and the MOF have regular meetings, which serve as an avenue for collaboration both in business-as-usual periods and in times of crises. During periods of financial stability, the meetings provide an avenue for MAS and MOF to share information on financial stability risks and collaborate on crisis management preparations. In times of crises, which specifically put public monies at risk, and for which crisis management and resolution require tools and inputs from both MAS and MOF, the objective of the meetings expands from information sharing and assessing crisis management tools to focus on joint decision-making on coordination and execution of actual crisis responses.</p> <p>The SDIC administers the DI Scheme in Singapore. Upon MAS' determination that compensation should be paid out to insured depositors in the event of an insolvency, MAS will give notice in writing to SDIC so that SDIC may proceed to make the permitted payments in accordance with the procedures under the Deposit Insurance and Policy Owners' Protection Schemes Act (Chapter 77B). There are currently working arrangements between MAS and SDIC.</p> <p>On cross-border resolution, see earlier ECs.</p> <p>To strengthen the process for recovery and resolution planning, MAS has required several systemically important banks to submit their recovery plans. MAS has engaged the banks as part of an iterative process to formulate MAS' rules on recovery and resolution planning (see CP8 EC6 for details). In addition, MAS is currently working towards a multilateral sharing arrangement amongst Executives Meeting of East Asia Pacific Central Banks' Working Group on Banking Supervision (EMEAP-WGBS) members on resolution planning information, via a resolution planning survey</p>

	<p>to be completed and shared amongst the member countries. MAS will also be engaging host supervisors bilaterally on bank-specific resolution issues, such as the systemic importance and relevance of the Singapore operations in the host jurisdictions and their financial systems. These inputs will inform the formulation of resolution plans for the local banking groups.</p> <p>During times of crisis, MAS will step up the level of engagement particularly with supervisors or resolution authorities of banks in distress. In the global financial crisis, it stepped up monitoring of banks and the sharing of information with foreign counterparts to calibrate its supervisory response and to enable home supervisors to form a comprehensive picture of the entire financial group.</p>
<b>Assessment of Principle 3</b>	<b>Compliant</b>
Comments	A key advantage to MAS as an integrated supervisor, as well as resolution authority, macro-prudential authority and central bank is the seamless coordination and information sharing among the different functions. The senior MAS officers have also established very good working relationships with the relevant home supervisors, in part as a consequence of MAS being viewed as a strong and trustworthy supervisor, which is actively involved with the various standard setters and the FSB. The mission assesses MAS as being in full compliance with this principle. The one caution the team would offer, is that putting all of the functions under one organization runs the risk of reducing the opportunity for checks and balances and may not facilitate worthwhile debates of staff with different perspectives (e.g., increases the risk of "groupthink").
<b>Principle 4</b>	<b>Permissible activities.</b> The permissible activities of institutions that are licensed and subject to supervision as banks are clearly defined and the use of the word "bank" in names is controlled.
<b>Essential criteria</b>	
<b>EC1</b>	<b>The term "bank" is clearly defined in laws or regulations.</b>
Description and findings re EC1	<p>The term "bank" is defined in section 2 of the BA as any company which holds a banking license under the BA.</p> <p>Under section 4 of the BA, no banking business can be transacted in Singapore except by a company holding a banking license under the BA. Banking business is defined under section 2 of the BA as the business of receiving money on current or deposit accounts, paying and collecting checks drawn by or paid in by customers, the making of advances to customers and includes such other business as MAS may prescribe.</p>
<b>EC2</b>	<b>The permissible activities of institutions that are licensed and subject to supervision as banks are clearly defined either by supervisors, or in laws or regulations.</b>
Description and findings re EC2	<p>Permissible activities of banks are clearly defined under section 30 of the BA.</p> <p>Section 30 of the BA stipulates that no bank in Singapore shall carry on any business</p>

	<p>except for:</p> <ul style="list-style-type: none"> <li>(I) banking business;</li> <li>(ii) any business the conduct of which is regulated or authorized by MAS under any other written law;</li> <li>(iii) any business which is incidental to the business which the bank may carry on under (I) or (ii);</li> <li>(iv) any business or class of business as MAS may prescribe, subject to such conditions as may be prescribed; or</li> <li>(v) Any other business as MAS may approve, subject to such conditions as MAS may impose.</li> </ul> <p>Prescribed businesses of any bank in Singapore are provided in Part IX of Banking Regulations 2001. Part (ii) above includes securities dealing, fund management, financial advisory services, and other capital market services.</p>
<b>EC3</b>	<b>The use of the word “bank” and any derivations such as “banking” in a name, including domain names, is limited to licensed and supervised institutions in all circumstances where the general public might otherwise be misled.</b>
Description and findings re EC3	<p>Pursuant to section 5 of the BA, no persons or entities, other than banks, shall use the word "bank" or any of its derivatives in any language, or any other word indicating that it transacts banking business, without MAS' approval.</p> <p>Section 5A of the BA stipulates that no person shall use any name, logo or trade mark in a manner which indicates or represents that he or his trade/business is related to or associated with a bank incorporated in Singapore without MAS' approval. No locally-incorporated bank shall knowingly permit any person (other than its related financial institutions) to use its name, logo or trademark without MAS' approval.</p>
<b>EC4</b>	<b>The taking of deposits from the public is reserved for institutions that are licensed and subject to supervision as banks.</b>
Description and findings re EC4	<p>Section 4A of the BA stipulates that no person is allowed to accept or solicit deposits, except for institutions that are licensed, approved, authorized or otherwise empowered under any written law to accept deposits in Singapore in accordance with such law.</p> <p>Finance companies may accept from the public fixed deposits like those offered by banks. Such companies are licensed and supervised by MAS under the Finance Companies Act (Chapter 108). The regulatory and supervisory approach is similar to that for banks. As of December 2012, there were only three finance companies and they held approximately 1 percent of total deposits in the banking system.</p>
<b>EC5</b>	<b>The supervisor or licensing authority publishes or otherwise makes available a current list of licensed banks, including branches of foreign banks, operating within its jurisdiction in a way that is easily accessible to the public.</b>
Description and findings re EC5	A list of licensed banks, including branches of foreign banks, is provided in the Financial Institution Directory on MAS' website: <a href="https://secure.mas.gov.sg/fid/">https://secure.mas.gov.sg/fid/</a>



<b>Assessment of Principle 4</b>	<b>Compliant</b>
Comments	The MAS, which is very focused on maintaining the very solid reputation and credibility of the banking sector in Singapore, fully meets the principle that any institutions offering banking services must be licensed by MAS and subject to bank supervision. No entity engaged in deposit taking may call itself a bank (or finance company in the case of three entities that may accept deposits, are supervised like banks and represent less than 1 percent of deposits).
<b>Principle 5</b>	<b>Licensing criteria.</b> The licensing authority has the power to set criteria and reject applications for establishments that do not meet the criteria. At a minimum, the licensing process consists of an assessment of the ownership structure and governance (including the fitness and propriety of Board members and senior management) <sup>7</sup> of the bank and its wider group, and its strategic and operating plan, internal controls, risk management and projected financial condition-(including capital base). Where the proposed owner or parent organization is a foreign bank, the prior consent of its home supervisor is obtained.
<b>Essential criteria</b>	
<b>EC1</b>	<b>The law identifies the authority responsible for granting and withdrawing a banking license. The licensing authority could be the banking supervisor or another competent authority. If the licensing authority and the supervisor are not the same, the supervisor has the right to have its views on each application considered, and its concerns addressed. In addition, the licensing authority provides the supervisor with any information that may be material to the supervision of the licensed bank. The supervisor imposes prudential conditions or limitations on the newly licensed bank, where appropriate.</b>
Description and findings re EC1	MAS is both the licensing and supervisory authority of banks in Singapore. Under section 4 of the BA, a company may conduct banking business in Singapore only if it holds a banking license granted by MAS. A company that wishes to carry on banking business may under section 7 of the BA send in an application to MAS for a bank license. MAS will review the application and decide whether to grant a license. Section 7 of the BA also gives MAS the power to impose and vary conditions of the banking license.  Where there are some concerns about an application but which meets the criteria for

<sup>7</sup> This document refers to a governance structure composed of a board and senior management. The Committee recognizes that there are significant differences in the legislative and regulatory frameworks across countries regarding these functions. Some countries use a two-tier board structure, where the supervisory function of the board is performed by a separate entity known as a supervisory board, which has no executive functions. Other countries, in contrast, use a one-tier board structure in which the board has a broader role. Owing to these differences, this document does not advocate a specific board structure. Consequently, in this document, the terms "board" and "senior management" are only used as a way to refer to the oversight function and the management function in general and should be interpreted throughout the document in accordance with the applicable law within each jurisdiction.

	a license, supervisors may impose appropriate prudential requirements and limits such as deposit-taking and funding restrictions, leverage ratio and business size limits.
<b>EC2</b>	<b>Laws or regulations give the licensing authority the power to set criteria for licensing banks. If the criteria are not fulfilled or if the information provided is inadequate, the licensing authority has the power to reject an application. If the licensing authority or-supervisor determines that the license was based on false information, the license can be revoked.</b>
Description and findings re EC2	<p>Section 7(1) of the BA gives MAS the power to set criteria for licensing of banks. MAS also specifies the minimum capital requirements (sections 9 and 9A), risk-based capital requirements (section 10) as well as license fees (section 8) which banks must satisfy.</p> <p>Sections 7(3) of the BA gives MAS the power to reject an application if the criteria are not fulfilled or if the information provided is inadequate. Prospective applicants are encouraged to contact the MAS banking departments to discuss their plans prior to submitting a formal application. An assessment of the track record, financials, standing and reputation of the bank and its substantial shareholders and controllers is then performed. These can involve screening and background checks against public sources of information, and with the home and other host regulators, and institutions operating in the same industry segment. MAS has discouraged prospective applicants it viewed as raising issues despite claims that authorizations have been received from other jurisdictions. These include banks that MAS had serious reservations about given aggressive expansion and increasing leverage. MAS has also encouraged applicants to withdrawal their application given their short track record, lack of commensurate expertise and skills, issues relating to fitness and propriety of shareholders/controllers, and/or weak financial capacity, and supervisors' misgivings about the true purpose and intent for the proposed office in Singapore. It is recommended that process be more transparent and that MAS periodically reject an application rather than seeking to protect the applicant by encouraging them to withdrawal their application.</p> <p>Section 20 of the BA allows MAS to revoke a bank license in certain circumstances, including where the information furnished to MAS in connection with an application for a license was false or misleading.</p>
<b>EC3</b>	<b>The criteria for issuing licenses are consistent with those applied in ongoing supervision.</b>
Description and findings re EC3	<p>In assessing an application for a banking license, supervisors take into consideration, inter alia, the following factors—good track record and reputation, sound financials (including ability to satisfy international capital requirements), shareholders and management that meet the fit and proper criteria, a well-developed business strategy, and a risk management system and controls that are commensurate with the size and complexity of the business.</p> <p>These criteria are consistent with those applied in ongoing supervision. As part of</p>

	MAS' on-site and off-site supervision, supervisors assess that the bank satisfies prudential and supervisory requirements on bank management and board, ownership structure, capital level and risk management on an ongoing basis. Supervisors also keep up-to-date with the bank's business strategy and plans, and assess whether the bank has adequate risk management systems and is in compliance with the applicable laws, as well as any licensing or supervisory conditions imposed on the bank.
<b>EC4</b>	<b>The licensing authority determines that the proposed legal, managerial, operational and ownership structures of the bank and its wider group will not hinder effective supervision on both a solo and a consolidated basis. The licensing authority also determines, where appropriate, that these structures will not hinder effective implementation of corrective measures in the future.</b>
Description and findings re EC4	<p>Supervisors assess the transparency of the ownership structure, identify the ultimate shareholders (including beneficial owners) with significant ownership or controlling influence, and consider their suitability, to determine whether the proposed legal, ownership and managerial structures of the applicant and its wider group allow effective supervision on both a solo and a consolidated basis, or the implementation of corrective or resolution measures. The assessment also includes how the Singapore entity fits into the group's structure, and the entity which the Singapore branch or subsidiary will be reporting to, the nature and extent of intra-group exposures and linkages, linkages to Singapore's financial network and infrastructure, as well as any material interconnectedness and complexity which may impede the transfer or sale of business or obscure the unwinding of positions, or trigger contagion in a resolution.</p> <p>MAS requires foreign bank applicants to be adequately supervised by their home country supervisors, seeks confirmation via onsite visits and review of published reports that the supervisor is competent, and seeks confirmation from the home country supervisor that the foreign bank applicant, including the Singapore operations, is subject to proper consolidated supervision. MAS also requires the home country supervisor to confirm that there are no concerns with the bank's capital adequacy, asset quality, management, earnings and liquidity.</p> <p>Where there are impediments in terms of legal, ownership and managerial structures, MAS will highlight these issues to the bank during the application process. A license will only be granted when the issues are satisfactorily resolved.</p>
<b>EC5</b>	<b>The licensing authority identifies and determines the suitability of the bank's major shareholders, including the ultimate beneficial owners, and others that may exert significant influence. It also assesses the transparency of the ownership structure, the sources of initial capital and the ability of shareholders to provide additional financial support, where needed.</b>
Description and findings re EC5	To assess the transparency of ownership structure and the fitness and propriety of substantial shareholders (including the ultimate beneficial owners), supervisors review information on the organization of the bank (showing all subsidiaries and affiliates) as well as information on any holding company with controlling interest or ability to

	<p>exercise significant influence over the applicant. Supervisors also review the annual reports and credit rating agencies' reports (where applicable) of the holding company or shareholders and subject the key shareholders to screening and background checks.</p> <p>As part of the assessment, supervisors evaluate the background, financial standing and strength, credit and support ratings, reputation and integrity, other business holdings, etc, to determine that the substantial shareholders are able to provide additional financial support where warranted and to meet MAS' <i>Guidelines on Fit and Proper Criteria</i>. Following admission, the bank is required, as a licensing condition, to notify supervisors as soon as it becomes aware of any material information that may result in a substantial shareholder or indirect controller (as defined in CP6 EC1) ceasing to be a fit and proper person.</p>
<b>EC6</b>	<b>A minimum initial capital amount is stipulated for all banks.</b>
Description and findings re EC6	<p>Section 9 of the BA requires a bank incorporated in Singapore to have paid-up capital that is not less than S\$1,500 million or such other amount as may be prescribed, and its capital funds are not less than that amount. In the case of a bank incorporated outside Singapore, its head office capital funds shall not be less than the equivalent of S\$200 million.</p> <p>Section 9A of the BA requires a company incorporated in Singapore which is a qualifying subsidiary to have paid-up capital that is not less than S\$100 million. A qualifying subsidiary is defined as a company with more than 50 percent of its issued paid-up capital that is owned by a bank incorporated in Singapore, and such a bank meets the S\$1,500 million minimum capital requirement.</p>
<b>EC7</b>	<b>The licensing authority, at authorization, evaluates the bank's proposed Board members and senior management as to expertise and integrity (fit and proper test), and any potential for conflicts of interest. The fit and proper criteria include: (i) skills and experience in relevant financial operations commensurate with the intended activities of the bank; and (ii) no record of criminal activities or adverse regulatory judgments that make a person unfit to uphold important positions in a bank. The licensing authority determines whether the bank's Board has collective sound knowledge of the material activities the bank intends to pursue, and the associated risks.</b>
Description and findings re EC7	<p>Consistent with corporate governance requirements of existing banks, an applicant will have to satisfy supervisors as to the suitability of its proposed Board members and senior management. Any bank incorporated in Singapore is required under regulation 18 of the Banking (Corporate Governance) Regulations 2005 (CG Regulations), to obtain MAS' approval for the appointment of all directors, chairman of the board of directors, members of the Nominating Committee, chief executive officer (CEO) and deputy CEO, chief financial officer and chief risk officer. For foreign banks, MAS Notice 622A on <i>Appointment of Chief Executives of Branches of Banks incorporated outside of Singapore</i> and MAS Notice 753 on <i>Appointment of Head of Treasury and Register of Dealers</i> require the appointment of banks' CEO/deputy CEO</p>

	<p>and Head of Treasury, respectively, to be approved by MAS.</p> <p>In reviewing a proposed candidate, supervisors consider whether the person is fit and proper to hold the office. Under MAS' <i>Guidelines on Fit and Proper Criteria</i>, the criteria for considering whether a person is fit and proper include but are not limited to the following: (I) honesty, integrity and reputation; (ii) competence and capability; and (iii) financial soundness. The candidate must satisfy supervisors that his/her qualifications and experience are adequate for the appointment. Supervisors also conduct screening and background checks with the candidate's former employer, law enforcement agencies and foreign supervisors (if applicable) for any adverse or criminal records.</p> <p>Supervisors assess whether the Board's directors, as a group, have a sound knowledge of the major types of financial activities and related risks, which the bank intends to pursue. Further, the Board is assessed to ensure that directors possess core competencies such as accounting or finance, business or management experience, industry knowledge, strategic planning experience and customer-based experience or knowledge.</p>
<b>EC8</b>	<p><b>The licensing authority reviews the proposed strategic and operating plans of the bank. This includes determining that an appropriate system of corporate governance, risk management and internal controls, including those related to the detection and prevention of criminal activities, as well as the oversight of proposed outsourced functions, will be in place. The operational structure is required to reflect the scope and degree of sophistication of the proposed activities of the bank.</b></p>
Description and findings re EC8	<p>As part of the license application, an applicant is required to furnish information on its proposed strategic and operating plans that includes the applicant's risk management and corporate governance frameworks, internal controls, as well as manpower and risk systems to be based in Singapore. Supervisors assess whether the proposed risk management systems and controls are commensurate with the size and complexity of the proposed business activities of the bank. In cases where there is reliance on related or third parties for critical functions or systems, supervisors also assess the applicant's ability to exercise effective managerial oversight of these functions from Singapore and that appropriate anti-money laundering and countering the financing of terrorism policies and processes are in place.</p> <p>The CG Regulations require a locally-incorporated bank to put in place an appropriate system of corporate governance consisting of a Board and Board committees such as Nominating Committee, Remuneration Committee, Audit Committee and Risk Management Committee (see CP14 EC1 for details on their responsibilities).</p> <p>Under MAS Notice 622A, directors and chief executives of a foreign-incorporated bank are required to: (I) establish sound written policies for all operational areas; (ii) establish the limits of discretionary powers of each officer, committee, sub-committee for the purpose of lending and investing; and (iii) ensure that adequate</p>

	risk management systems and sound internal controls are in place for the bank's activities and operations.
<b>EC9</b>	<b>The licensing authority reviews pro forma financial statements and projections of the proposed bank. This includes an assessment of the adequacy of the financial strength to support the proposed strategic plan as well as financial information on the principal shareholders of the bank.</b>
Description and findings re EC9	<p>MAS reviews the projected financial statements of the proposed Singapore office and assesses, amongst other things, that the applicant has adequate financial strength and sound credit ratings to support the strategic plans and operations of the Singapore office.</p> <p>In the case of foreign bank applicants, MAS requires additionally the applicant to provide a letter of responsibility or undertaking from the head office or parent bank to accept full responsibility for all the operations of the Singapore office and provide adequate funds to make up for any liquidity shortfall in the Singapore office.</p> <p>Further, the head office or parent bank is to provide the appropriate management and technical expertise, employee training and any other form of support should weaknesses be identified in any area of the Singapore office.</p>
<b>EC10</b>	<b>In the case of foreign banks establishing a branch or subsidiary, before issuing a license, the host supervisor establishes that no objection (or a statement of no objection) from the home supervisor has been received. For cross-border banking operations in its country, the host supervisor determines whether the home supervisor practices global consolidated supervision.</b>
Description and findings re EC10	<p>A foreign bank applicant is required to submit to MAS an original letter from its home country supervisor approving the establishment of the office in Singapore, together with its application for a banking license in Singapore. MAS will seek confirmation from the home country supervisor that the foreign bank applicant, including the Singapore operations, will be subject to proper consolidated supervision and that it will inform MAS immediately if the applicant bank's license in the home country is withdrawn or if the interests of the applicant bank's depositors are threatened.</p> <p>In reviewing the foreign bank application, MAS takes into consideration the strength and reputation of the bank's home country supervision and its expressed willingness and ability to cooperate with MAS. This includes determining whether the home country supervisor practices consolidated supervision from public sources of information.</p>
<b>EC11</b>	<b>The licensing authority or supervisor has policies and processes to monitor the progress of new entrants in meeting their business and strategic goals, and to determine that supervisory requirements outlined in the license approval are being met.</b>
Description and findings re EC11	Newly-admitted banks have to comply with all prudential requirements upon commencement of operation, including those on supervisory reporting and audit. As part of ongoing supervision, supervisors review statistical information on the bank,

	<p>obtain regular updates on its business activities and developments, and regularly meet with its management and auditors to discuss business performance and supervisory concerns. This frequent interaction with new banks facilitates the monitoring of its progress in meeting its business or strategic goals. At the same time, these frequent interactions facilitate the new bank's awareness of MAS' expectations with regard to the conduct and standards to be observed at inception. Supervisors take into account the changes and developments in the bank's key business activities, as part of the risk assessment of the bank.</p> <p>Supervisors assess a bank's compliance with prudential regulations and other legal requirements (including prudential conditions imposed as part of the license approval) through off-site review of regulatory returns and internal and external audit reports, as well as on-site inspections. (See CP8 EC3 for details of supervisors' assessments of banks' compliance with prudential regulations and other legal requirements.)</p> <p>Under MAS' CRAFT, the risk assessment of a new bank has to be performed by supervisors no later than 18 months after the bank's commencement of operation.</p>
<b>Assessment of Principle 5</b>	<b>Compliant</b>
Comments	<p>MAS has set a very high standard for granting banking licenses, particularly those authorized to gather insured retail deposits and is fully compliant with this principle. It undertakes a very thorough assessment of both the parent bank and the home supervisor in the case of foreign entry into Singapore through either a subsidiary or branch. It requires the prior approval of the home supervisor before considering an application from a foreign bank. MAS monitors newly admitted banks closely to ensure their adherence to approved business plan.</p> <p>While MAS practice has been to informally dissuade unqualified or unsuitable applicants from submitting a license application in lieu of receiving a rejection, a more transparent process of occasionally rejecting applications might be a way of sending a strong signal to the market regarding the high hurdle rate for entry into the Singapore market.</p>
<b>Principle 6</b>	<b>Transfer of significant ownership.</b> The supervisor has the power to review, reject and impose prudential conditions on any proposals to transfer significant ownership or controlling interests held directly or indirectly in existing banks to other parties.
<b>Essential criteria</b>	
<b>EC1</b>	<b>Laws or regulations contain clear definitions of "significant ownership" and "controlling interest."</b>
Description and findings re EC1	The BA and section 81 of the CA define "substantial shareholding" as an interest or interests in one or more voting shares in the company, and the total votes attached to that share, or those shares, is not less than 5 percent of the total votes attached to all the voting shares in the company.



	<p>“Controlling interest” is defined through sections 15A and 15B of the BA, where any person (including a corporation), who intends to become a substantial shareholder, 12 percent controller, 20 percent controller or an indirect controller of a designated financial institution, must obtain the prior approval of the Minister in charge of MAS (the “Minister”). A designated financial institution is defined as a bank incorporated in Singapore or a financial holding company. The definitions of a 12 percent controller, 20 percent controller and an indirect controller are set out in section 15B of the BA. In particular, an indirect controller is defined as any person (with or without shareholding or controlling voting power) who is able to determine the policy of the bank or whose instructions will be acted upon by the bank’s directors.</p>
<b>EC2</b>	<p><b>There are requirements to obtain supervisory approval or provide immediate notification of proposed changes that would result in a change in ownership, including beneficial ownership, or the exercise of voting rights over a particular threshold or change in controlling interest.</b></p>
Description and findings re EC2	<p>Section 14 of the BA stipulates that a bank incorporated in Singapore cannot be merged or consolidated with, or be taken over by, any entity without the Minister’s prior written approval. The Minister may only approve such an application provided that</p> <ul style="list-style-type: none"> <li>(a) MAS has stated that it is satisfied that: (I) the entity is a fit and proper person or body of persons; and (ii) having regard to the likely influence of the entity, the business of the bank will be or will continue to be conducted prudently and the provisions of the BA will be or will continue to be complied with in relation to such business; and</li> <li>(b) The Minister is satisfied that it is in the national interest to approve the application.</li> </ul> <p>If the MAS is not satisfied with change in ownership, the Minister will not be able to approve the application even if he is satisfied that it is in the national interest to do so.</p> <p>A similar policy applies, under sections 15A and 15B of the BA, for any person who intends to become a substantial shareholder, 12 percent controller, 20 percent controller or an indirect controller of a designated financial institution (which is defined as a bank incorporated in Singapore or a bank financial holding company) and before any person enters into any agreement or arrangement, whether oral or in writing and whether express or implied, to act together with any person with respect to the acquisition, holding or disposal of, or the exercise of rights in relation to, their interests in voting shares of an aggregate of 5 percent or more of the total votes attached to all voting shares in a designated financial institution. A person is deemed to have an interest in any share if his interest falls within the provisions of section 7 of the CA, which also covers beneficial ownership.</p>



<b>EC3</b>	<b>The supervisor has the power to reject any proposal for a change in significant ownership, including beneficial ownership, or controlling interest, or prevent the exercise of voting rights in respect of such investments to ensure that any change in significant ownership meets criteria comparable to those used for licensing banks. If the supervisor determines that the change in significant ownership was based on false information, the supervisor has the power to reject, modify or reverse the change in significant ownership.</b>
Description and findings re EC3	<p>Under sections 14, 15A and 15B of the BA, the Minister may only approve applications if MAS is satisfied that the person is fit and proper and if MAS has no concerns with the likely influence of the person on the business of the bank, i.e. the Minister cannot override the determination of MAS to approve any application for a change in significant ownership. The Minister will also reject the application if it is not in the national interest. These factors are generally comparable to the criteria used for licensing banks.</p> <p>In addition, under section 15E of the BA, the Minister may serve a written notice of objection on an existing substantial shareholder or controller, in the event that MAS determines that it will not have been satisfied with the person's fitness and proprietary or likely influence on the bank, if MAS was aware, at that time, of circumstances relevant to the person's application. The Minister may also serve a notice of objection if he is satisfied that the person has furnished any false or misleading information or document in connection with an application. In the written notice of objection, the Minister will specify a reasonable period within which the person to be served the written notice of objection shall take steps to ensure that he ceases to be a substantial shareholder, a 12 percent controller, a 20 percent controller or an indirect controller.</p> <p>If the Minister has issued a written notice of objection under section 15E of the BA, under section 16, the Minister may, by notice in writing, (i) direct the transfer or disposal of all or any of the shares in the designated financial institution held by the person within such time or subject to such conditions as the Minister considers appropriate; (ii) restrict the transfer or disposal of the specified shares; or (iii) make such other direction as appropriate. Until the transfer or disposal is effected, no voting rights shall be exercisable in respect of the specified shares unless the Minister expressly permits such rights to be exercised.</p>
<b>EC4</b>	<b>The supervisor obtains from banks, through periodic reporting or on-site examinations, the names and holdings of all significant shareholders or those that exert controlling influence, including the identities of beneficial owners of shares being held by nominees, custodians and through vehicles that might be used to disguise ownership.</b>
Description and findings re EC4	Under MAS' licensing process, information on a bank's shareholding structure, including substantial shareholders, controllers and listing location, is obtained to assess, amongst others, international standing and reputation. Following admission, the bank is required, as a licensing condition, to notify MAS of any changes or

	<p>proposed changes in ownership or control over the bank, which will result in a change in the entity or entities having effective control over the bank. Such notification shall be made within seven days of the bank becoming aware of the change or proposed change.</p> <p>In addition, a locally-incorporated bank is required to annually provide supervisors the shareholdings of bank directors, as well as a list of its controlling and substantial shareholders. As publicly listed companies, the three locally-incorporated banks are required by the Singapore Exchange Limited to publish their 20 largest shareholders in their annual reports and to disclose any substantial shareholdings and changes thereto on an ongoing basis.</p> <p>Besides the requirements under section 15A and 15B of the BA (see CP6 EC2), MAS may require pursuant to section 18 of the BA: (i) a designated financial institution to obtain from any of its shareholders; or (ii) a shareholder of a designated financial institution, to provide any information relating to the shareholder, for the purpose of ascertaining or investigating into the control of shareholding or voting power in the designated financial institution. Such information includes whether that shareholder holds that interest as a beneficial owner or as trustee, and if he holds the interest as a trustee, to indicate as far as he can, the person for whom he holds the share (either by name or by other particulars sufficient to enable that person to be identified) and the nature of his interest.</p>
<b>EC5</b>	<b>The supervisor has the power to take appropriate action to modify, reverse or otherwise address a change of control that has taken place without the necessary notification to or approval from the supervisor.</b>
Description and findings re EC5	If the Minister is satisfied that any person has failed to obtain the prior approval as required under sections 15A or 15B of the BA, the Minister has the power to make directions under section 16 (see CP6 EC3 for details). Pursuant to section 17 of the BA, the person who contravenes sections 15A or 15B will be liable on conviction to a fine and/or imprisonment.
<b>EC6</b>	<b>Laws or regulations or the supervisor require banks to notify the supervisor as soon as they become aware of any material information which may negatively affect the suitability of a major shareholder or a party that has a controlling interest.</b>
Description and findings re EC6	<p>As a licensing condition, a bank is required to notify supervisors as soon as it becomes aware of any material information which may result in a substantial shareholder or indirect controller ceasing to be a fit and proper person, having regard to the MAS' <i>Guidelines on Fit and Proper Criteria</i>. Under the Guidelines, a bank should satisfy MAS that: (i) all of its substantial shareholders meet the fit and proper criteria; and (ii) it has in place adequate internal control systems and procedures that will reasonably ensure that the persons that it appoints to act on its behalf, in relation to its conduct of the activity regulated under the relevant legislation, meet the fit and proper criteria.</p> <p>Section 18 of the BA gives MAS the power to obtain information relating to the</p>

	controller which MAS may require for the purpose of ascertaining or investigating into the control of shareholding or voting power in the designated financial institution, or exercising any power or function under the BA relating to shareholding control levels and its terms and conditions of approval. Pursuant to section 15E of the BA, the Minister may serve a written notice of objection on a controller if MAS is satisfied that the controller ceases to be a fit and proper person (see CP6 EC3). Any person who fails to comply with such directions or furnishes false or misleading information shall be liable on conviction to a fine and/or imprisonment.
<b>Assessment of Principle 6</b>	<b>Compliant</b>
Comments	The Banking Act requires that the Minister in charge of MAS may only provide his/her approval of any person or entity intending to become a substantial shareholder or indirect controller of a locally incorporated bank, if the MAS is satisfied that the entity is fit and proper and that the bank will continue to be prudently operated in accordance with the provisions of the Banking Act. MAS must be notified of any changes or proposed changes in ownership or control. If MAS finds that a person or entity in control of a bank is no longer fit or proper of may have filed false or misleading information, MAS through the Minister may direct the transfer or disposal of shares. On this basis, the MAS is in full compliance with this principle.
<b>Principle 7</b>	<b>Major acquisitions.</b> The supervisor has the power to approve or reject (or recommend to the responsible authority the approval or rejection of), and impose prudential conditions on, major acquisitions or investments by a bank, against prescribed criteria, including the establishment of cross-border operations, and to determine that corporate affiliations or structures do not expose the bank to undue risks or hinder effective supervision.
<b>Essential criteria</b>	
<b>EC1</b>	<b>Laws or regulations clearly define:</b> <b>(a) what types and amounts (absolute and/or in relation to a bank's capital) of acquisitions and investments need prior supervisory approval; and</b> <b>(b) cases for which notification after the acquisition or investment is sufficient. Such cases are primarily activities closely related to banking and where the investment is small relative to the bank's capital.</b>
Description and findings re EC1	(a) A bank is required under section 32 of the BA to seek MAS' prior approval to acquire or hold, directly or indirectly, a stake of more than 10 percent voting rights or total number of issued shares in any company, or any interest in any company where the directors of the company are accustomed or under an obligation, whether formal or informal, to act in accordance with the bank's directions, instructions or wishes, or where the bank is in a position to determine the policy of the company.  MAS does not ordinarily grant such approval if the company carries on any prohibited business. Prohibited business means any business other than the businesses referred to in Section 30(1) of the BA. Section 30 of the BA stipulates that no bank in Singapore shall carry on any business except for:

- (i) banking business;
- (ii) any business the conduct of which is regulated or authorized by MAS under any other written law;
- (iii) any business which is incidental to the business which the bank may carry on under (i) or (ii);
- (iv) any business or class of business as MAS may prescribe (under Part IX of the Banking Regulations 2001), subject to such conditions as may be prescribed; or
- (v) any other business as MAS may approve, subject to such conditions as MAS may impose.

In addition, no bank shall acquire or hold equity investments in a single company which exceeds in the aggregate of 2 percent of its capital funds (section 31 of the BA).

(b) Under regulations 22, 23, 23A, 23B, 23C, 23D and 23E of the Banking Regulations, a bank shall notify MAS of its intention to commence certain prescribed business or its commencement of such business within 14 days after the commencement of such business. These businesses must be carried on under an arrangement as set out under the regulations.

Under regulation 23F, a bank may engage in a business that the MAS has pre-approved, and which is carried on by a company or the trustee of a trust, without MAS' prior approval. A bank carrying on business under regulation 23F is required to limit its total net book value of all such businesses to 10 percent of its capital funds at the bank and banking group level.

Regulation 23G allows a bank to carry on businesses which are related or complementary to the bank's core financial business, subject to certain conditions, limits and reporting requirements. To ensure that a bank has assessed that all the conditions under regulation 23G are met, MAS requires the bank to develop and submit to MAS an approval framework for businesses to be carried on under regulation 23G, before the commencement of any business. This framework should include the governance, internal approval processes and parameters for businesses carried on under regulation 23G. It should also clearly set out criteria and parameters for the bank's Board and senior management to assess whether a business meets the conditions under regulation 23G.

In addition, the aggregate size of all businesses conducted under regulation 23G is limited to 15 percent of the bank's capital funds at the bank and banking group level. Aggregate size is based on the highest of the following three measures—total balance sheet asset value, total revenue or total exposures. In addition, there is a combined cap of 20 percent of the bank's capital funds for businesses carried on under regulations 23F and 23G.

The bank is required to provide quarterly reports to MAS on the scale and the scope

	of businesses carried on under regulation 23G, the risks involved, and the capabilities of the bank to manage these risks and such other information as MAS may require in relation to the business, including the requirements specified in the Fourth Schedule of the Banking Regulations. The quarterly reporting enables supervisors to maintain oversight of the businesses being carried on under regulation 23G and the bank's risk management practices.
<b>EC2</b>	<b>Laws or regulations provide criteria by which to judge individual proposals.</b>
Description and findings re EC2	<p>Under section 32 of the BA, MAS does not ordinarily grant approval for banks to hold more than 10 percent voting rights or total number of issued shares in, or to control, companies undertaking prohibited business.</p> <p>In addition, Part IX of the Banking Regulations sets out the parameters for the types of prescribed businesses that a bank may conduct and provides specific conditions. For instance, regulation 23F and MAS Notice 630 on <i>Private Equity and Venture Capital Investments</i> set out parameters for the types of prescribed businesses that a bank may conduct under specific conditions such as Islamic banking transactions and private equity/venture capital investments. Section 33 of the BA sets out that a bank shall not hold immovable property, the value of which exceeds 20 percent of its capital funds (see CP7 EC1 for other examples).</p>
<b>EC3</b>	<b>Consistent with the licensing requirements, among the objective criteria that the supervisor uses is that any new acquisitions and investments do not expose the bank to undue risks or hinder effective supervision. The supervisor also determines, where appropriate, that these new acquisitions and investments will not hinder effective implementation of corrective measures in the future. The supervisor can prohibit banks from making major acquisitions/investments (including the establishment of cross-border banking operations) in countries with laws or regulations prohibiting information flows deemed necessary for adequate consolidated supervision. The supervisor takes into consideration the effectiveness of supervision in the host country and its own ability to exercise supervision on a consolidated basis.</b>
Description and findings re EC3	<p>MAS expects banks to conduct proper due diligence before making any acquisitions or investments. For acquisitions and investments that require MAS' approval (more than 10 percent voting rights or total number of issued shares in a company, or control over a company), the bank should demonstrate that the Board or head office has sufficiently deliberated and is aware of the risks that the investee poses to the bank, and that the bank has the means to monitor, manage and mitigate such risks. For example, this includes any risks which are not presently applicable to the bank, such as where the investee engages in a business or product which is not currently offered by the bank. MAS should be satisfied that the Board or head office has sufficiently deliberated on the due diligence performed on the proposed acquisition or investment.</p> <p>Where the investee is based overseas and regulated by an overseas regulatory authority, MAS considers whether the supervisory regime of the investee will hinder</p>

	<p>its efforts to carry out consolidated supervision. MAS should have the right of access to the investee for the purpose of consolidated supervision. The bank must demonstrate that it is satisfied, from its own due diligence or from having sought professional advice, that MAS and any person appointed by MAS are not prohibited from obtaining any information from, or inspecting the books of, the investee for purpose of consolidated supervision. If necessary, MAS may impose conditions requiring the bank to ensure that: (i) MAS, or any agent appointed by MAS, is allowed access to the investee for the purpose of consolidated supervision; and (ii) the investee carries on its business in a manner that satisfies such conditions relating to its operations or activities as MAS may impose, from time to time, by notice in writing.</p> <p>MAS also assesses whether the investee will materially increase interconnectedness and organizational complexity, for instance, through intra-group funding, operational and information systems, managerial and other support requirements, and whether such risks can be adequately mitigated. MAS may impose the condition that MAS reserves the right to revoke the approval and require the bank to divest the investee if MAS assesses that the bank's acquisition/investment: (i) poses an impediment to the orderly recovery and resolution of the banking group; (ii) exposes the bank/banking group to undue risks or hinders MAS' effective consolidated supervision, or (iii) impedes MAS' ability to implement effective corrective measures.</p> <p>MAS may reject an application if supervisors assess that the investee principally carries on a prohibited business, or the risks involved are too high or improperly managed (e.g., if the investee has a large, complex and opaque organizational structure hindering effective consolidated supervision or if the bank does not have effective control of the investee such that the conditions MAS imposes cannot be effectively implemented).</p>
<b>EC4</b>	<b>The supervisor determines that the bank has, from the outset, adequate financial, managerial and organizational resources to handle the acquisition/investment.</b>
Description and findings re EC4	<p>For acquisitions or investments requiring MAS' approval, supervisors assess that the bank has performed adequate due diligence to satisfy itself of:</p> <ul style="list-style-type: none"> <li>• The economics of the transaction and its ability to fund the acquisition, specifically the impact of the acquisition on its capital position. The acquisition shall not result in the bank breaching the supervisory capital requirement and supervisors expect the bank to submit a capital management or raising plan where warranted.</li> <li>• Its representation in and control of the investee; its ability and capacity to manage the integration and the integrated banking group post-acquisition where relevant.</li> <li>• The extent to which it is obliged to provide further financial support to the investee in the future, and the materiality of the resultant contagion and financial</li> </ul>

	<p>risk to it.</p> <p>If the investee is a large entity, which may threaten the bank's financial soundness in the event of a crisis, supervisors will apply a more rigorous approach in assessing the transaction, notwithstanding the due diligence that has been performed by the bank's Board. This could entail obtaining and reviewing information used by the bank's Board to arrive at its decision, the bank's integration plans, the results of stress testing remotely possible adverse events occurring and the assumptions used, and the bank's financial capacity to deal with such a potential outcome.</p>
<b>EC5</b>	<b>The supervisor is aware of the risks that non-banking activities can pose to a banking group and has the means to take action to mitigate those risks. The supervisor considers the ability of the bank to manage these risks prior to permitting investment in non-banking activities.</b>
Description and findings re EC5	<p>In 2000, MAS introduced a policy to separate the financial and non-financial businesses of banks. As set out in the MAS monograph on <i>Tenets of Effective Regulation</i>, the intent of this "anti-commingling policy" is to limit the risks posed by non-financial activities to the soundness of banks. Such risks may arise from contagion from non-financial activities or non-arms-length transactions between banks and their non-bank affiliates.</p> <p>Under section 32 of the BA, MAS does not ordinarily grant approval for a bank to hold more than 10 percent voting rights or total number of issued shares in, or control, companies undertaking prohibited business.</p> <p>For acquisitions or investments requiring MAS' approval, supervisors assess, amongst other criteria, whether the bank has performed adequate due diligence to satisfy itself that the investee and/or its subsidiaries are not engaged in prohibited activities. This includes property development and other businesses that create contagion and reputational risk for the bank. Supervisors also assess that the bank is aware of the risks that the investee poses and has the means to monitor, manage and mitigate such risks.</p>
<b>Additional Criteria</b>	
<b>AC1</b>	<b>The supervisor reviews major acquisitions or investments by other entities in the banking group to determine that these do not expose the bank to any undue risks or hinder effective supervision. The supervisor also determines, where appropriate, that these new acquisitions and investments will not hinder effective implementation of corrective measures in the future. Where necessary, the supervisor is able to effectively address the risks to the bank arising from such acquisitions or investments.</b>
Description and findings re AC1	Under section 32 of the BA, MAS' approval is required for a bank to acquire or hold, whether directly or indirectly, a stake of more than 10 percent voting rights or total number of issued shares in any company, or any interest in any company where the directors of the company are accustomed or under an obligation, whether formal or



	<p>informal, to act in accordance with the bank's directions, instructions or wishes, or where the bank is in a position to determine the policy of the company.</p> <p>MAS may impose conditions of approval, including conditions relating to the operations or activities of the company, if MAS assesses that the bank's acquisition/investment: (i) poses an impediment to the orderly recovery and resolution of the banking group; (ii) exposes the bank/banking group to undue risks or hinders MAS' effective consolidated supervision, or (iii) impedes MAS' ability to implement effective corrective measures (see CP7 EC3 for details of MAS' review).</p>
<b>Assessment of Principle 7</b>	<b>Compliant</b>
Comments	The MAS exercises a high level of prudence regarding major acquisitions. In considering a proposed major acquisition, which the MAS must approve, MAS considers the effect on the acquirer's capital and risk profile, the capacity of management, whether the acquisition will hinder consolidated supervision, materially increase interconnectedness and organizational complexity, or hinder the implementation of future corrective measures, including orderly resolutions. Suitable acquisitions generally are limited to companies engaged in the business of banking or under the supervision of MAS.
<b>Principle 8</b>	<b>Supervisory approach.</b> An effective system of banking supervision requires the supervisor to develop and maintain a forward-looking assessment of the risk profile of individual banks and banking groups, proportionate to their systemic importance; identify, assess and address risks emanating from banks and the banking system as a whole; have a framework in place for early intervention; and have plans in place, in partnership with other relevant authorities, to take action to resolve banks in an orderly manner if they become non-viable.
<b>Essential criteria</b>	
<b>EC1</b>	<p><b>The supervisor uses a methodology for determining and assessing on an ongoing basis the nature, impact and scope of the risks:</b></p> <p>(a) <b>which banks or banking groups are exposed to, including risks posed by entities in the wider group; and</b></p> <p>(b) <b>which banks or banking groups present to the safety and soundness of the banking system.</b></p> <p><b>The methodology addresses, among other things, the business focus, group structure, risk profile, internal control environment and the resolvability of banks, and permits relevant comparisons between banks. The frequency and intensity of supervision of banks and banking groups reflect the outcome of this analysis.</b></p>
Description and findings re EC1	MAS adopts a risk-based approach in the supervision of all banks in Singapore. This approach is articulated in the monograph on <i>MAS' Framework for Impact and Risk Assessment of Financial Institutions</i> . At the heart of this framework is the impact and risk model which is used to assess banks on two aspects annually:



	<ul style="list-style-type: none"> <li>• Impact (relative systemic importance): The impact assessment looks at the potential impact that the bank might have on Singapore's financial system, broader economy and reputation, in the event of distress. Related institutions are grouped together for an assessment of their aggregate impact. Generally, the larger the bank's intermediary role in critical financial markets or the economy, or the greater its reach to retail customers, the higher is its assessed impact.</li> <li>• Risk (relative risk profile): The risk assessment examines the inherent risks of the bank's business activities, its ability to manage and control these risks, effectiveness of its oversight and governance structure, and adequacy of its financial resources to absorb losses and remain solvent. The assessment also takes into consideration the intra-group linkages between the bank and its related entities, and risks posed by other entities in the wider group (e.g., for a locally-incorporated banking group, risks posed by significant subsidiaries will be aggregated with the main banking entity and monitored on a consolidated basis). To ensure robustness and consistency, the risk assessments of individual banks are subject to a process of peer comparison, challenge and review by other experienced supervisors, or panels of senior and specialist staff for key banks.</li> </ul> <p>Based on the combined assessments of impact and risk (with the impact component accorded greater weight), the bank is assigned to one of four categories of supervisory significance, i.e. supervisory risk buckets numbering 1 to 4, where Bucket 1 groups banks that are supervised with the highest intensity because of their impact and risk. Regardless of their supervisory bucket, banks are subject to the same base level of off-site supervision and inspection. The intensity of supervision is stepped up from Bucket 4 to Bucket 1. For example, banks in Buckets 1 and 2 are supervised more closely with greater allocation of resources, subject to more frequent inspections, and have their risk assessments approved by more senior level of management.</p> <p>MAS is strengthening the process for recovery and resolution planning for systemically important banks. Several systemically important banks, including the locally-incorporated banks and domestic branches of foreign banks, are in the process of developing recovery plans. They are also required to identify critical business activities or functions performed in Singapore or the countries in which the bank has geographical reach, and submit detailed information such as their organizational structure, critical functions and cross-border inter-dependencies, to facilitate the development of resolution plans which will be reviewed through resolvability assessments. The development of credible and feasible recovery and resolution plans will be an iterative process involving the banks and supervisors. For foreign banks, MAS takes into account any recovery and resolution planning work being undertaken by their home authority such as those for globally systemic banks as part of crisis management groups.</p>
<b>EC2</b>	<b>The supervisor has processes to understand the risk profile of banks and</b>

	<b>banking groups and employs a well defined methodology to establish a forward-looking view of the profile. The nature of the supervisory work on each bank is based on the results of this analysis.</b>
Description and findings re EC2	<p>The supervision of banks is undertaken by teams who are responsible for the portfolio of banks they oversee. Banks that are part of a banking group or from the same home country are supervised by the same team of supervisors to facilitate group-wide view of the risks, more efficient monitoring of country and regulatory developments, and more effective engagement with the home supervisors. For locally-incorporated banking groups, the whole-of-group basis covers banking, insurance and capital market entities.</p> <p>Supervisors use the MAS' CRAFT to identify and assess the risks of banks and banking groups.</p> <p>CRAFT focuses on the main business activities of the bank as basic units of the risk assessment process. Individual activities that are material to the bank are identified as "significant activities." For locally-incorporated banking groups, the identification of significant activities is performed on a group basis, taking into account their Singapore and overseas operations.</p> <p>Within each significant activity, supervisors evaluate the key inherent risks before assessing the control factors that are in place to manage and control these inherent risks. The oversight and governance arrangements (Board, senior management, head office/parent company oversight) and financial strength factors (capital, earnings, parental support) are assessed holistically at the institution level to derive an overall risk rating of a bank.</p> <p>Risk assessments are conducted on a forward-looking basis with a one-year horizon and take into account changes in the institution's business strategy, industry or environment. All banks' risk assessments are reviewed annually except for Bucket 4 banks that are small, well-rated and do not take retail deposits (such banks are reviewed at least once every two years). Issues of supervisory concerns (e.g., in the area of risk management or governance issues) which are identified in the CRAFT assessment go into each institution's supervisory plan which guides the on- and off-site work to be carried out as part of the ongoing supervision of the bank. New control weaknesses or developments identified or remedial actions taken by the bank to address identified concerns may lead to further supervisory work or revision of planned supervisory activities. The outcomes of MAS' supervisory actions are taken into consideration at the next risk assessment of the bank.</p> <p>MAS conveys the outcome of the CRAFT assessments to the bank's senior management and Board of directors, in the case of a locally-incorporated bank, annually.</p>
<b>EC3</b>	<b>The supervisor assesses banks' and banking groups' compliance with prudential</b>

	<b>regulations and other legal requirements.</b>
Description and findings re EC3	<p>As part of the risk assessment of banks, supervisors evaluate the inherent legal and regulatory risks of banks as well as their track record of compliance with prudential rules and legal requirements.</p> <p>Supervisors assess the banks' compliance with prudential regulations and other legal requirements through inspections and off-site review of regulatory returns and internal and external audit reports. Supervisors also follow up with banks to ensure prompt rectification of weaknesses and that controls are instituted to prevent recurrence.</p> <p>Under MAS Notice 609 on <i>Auditors' Reports and Additional Information to be Submitted with Annual Accounts</i>, a bank is required to ensure that its external audit report furnished to MAS highlights any non-compliance with the BA, CA notices, guidelines and circulars issued by MAS, or any other relevant law and regulations. The auditors themselves are obligated under section 58(8) of the BA to immediately inform MAS if, in the course of an audit, they discover serious offenses or irregularities that jeopardize the interests of the bank's creditors and depositors.</p>
<b>EC4</b>	<b>The supervisor takes the macroeconomic environment into account in its risk assessment of banks and banking groups. The supervisor also takes into account cross-sectoral developments, for example in non-bank financial institutions, through frequent contact with their regulators.</b>
Description and findings re EC4	<p>Supervisors' risk assessments of banks take into account the macroprudential work by the Macroeconomic Surveillance Department (MSD) in MAS. MSD's macroprudential surveillance covers areas such as pro-cyclicality of the financial system, risk concentrations, common exposures, financial linkages (i.e. between financial institutions and between financial institutions and financial markets), and macro-financial linkages (i.e. between the financial and real sectors).</p> <p>MSD regularly shares with supervisors its work on macroeconomic or cross-sector developments and any concerns that are identified. For example, MSD leads the MAS industry-wide stress tests for financial institutions to assess the resilience of the financial system under plausible stressed macroeconomic and financial scenarios, which cover credit, market, liquidity and interbank contagion risks. The risk assessments of banks take into account vulnerabilities revealed by the stress tests in terms of banks' exposures and risk management practices.</p> <p>As an integrated supervisor, MAS supervisory departments co-operate closely and share information on cross-sector developments and issues. At the working level, the respective supervisors of banks and non-banks of the same financial group share relevant information such as audit reports, business developments and supervisory concerns, as well as coordinate supervisory activities such as inspections. For example, supervisors will take into account regulatory breaches by a related securities broker (overseen by a common country management) in their oversight of the bank.</p>

	MAS' MFSC (a weekly senior management decision-making forum on matters relating to supervision and regulation of the financial sector) determines important bank and non-bank policies, decides on supervisory matters raised for its attention, and takes a consistent policy and supervisory approach on issues common to the banking, insurance and capital markets sectors.
<b>EC5</b>	<b>The supervisor, in conjunction with other relevant authorities, identifies, monitors and assesses the build-up of risks, trends and concentrations within and across the banking system as a whole. This includes, among other things, banks' problem assets and sources of liquidity (such as domestic and foreign currency funding conditions, and costs). The supervisor incorporates this analysis into its assessment of banks and banking groups and addresses proactively any serious threat to the stability of the banking system. The supervisor communicates any significant trends or emerging risks identified to banks and to other relevant authorities with responsibilities for financial system stability.</b>
Description and findings re EC5	<p>MAS performs both micro- and macro-prudential surveillance on banks and the banking system. There is close cooperation and sharing of information between supervisors and the MSD, which carries out macro-prudential surveillance.</p> <p>Regular financial indicators from regulatory returns submitted by banks are compiled and analyzed by supervisors to identify any adverse developments, trends as well as build-up of risks and concentrations (see CP 9 EC 4 for tools used to assess safety and soundness of banks and the banking system). This analysis on a bank-specific level complements macro-prudential surveillance efforts, to identify potential risks and their transmission channels, arising from developments in the global and domestic financial systems.</p> <p>Supervisors engage banks regularly to communicate and understand any build-up of risks or emerging trends. Supervisors will require banks to take corrective actions promptly for significant areas of concern. Such supervisory work are factored into the annual risk assessment of banks where underlying concerns are conveyed to the bank's Board and/or senior management as part of a formal meeting to discuss the bank's risk ratings.</p>
<b>EC6</b>	<b>Drawing on information provided by the bank and other national supervisors, the supervisor, in conjunction with the resolution authority, assesses the bank's resolvability where appropriate, having regard to the bank's risk profile and systemic importance. When bank-specific barriers to orderly resolution are identified, the supervisor requires, where necessary, banks to adopt appropriate measures, such as changes to business strategies, managerial, operational and ownership structures, and internal procedures. Any such measures take into account their effect on the soundness and stability of ongoing business.</b>
Description and findings re EC6	MAS is the resolution authority for financial institutions in Singapore. In assessing new applicants for banking licenses, supervisors require the applicant to provide detailed information, including their group organizational structure, critical functions, cross-

border inter-dependencies, and home country resolution regime. With respect to operations to be set up in Singapore, the applicant must identify business lines which are critical to the group's operations and/or significantly connected to other financial market participants or Singapore's financial market infrastructure (e.g., exchanges, clearing houses and payment and settlement systems). Where there are material interconnectedness and organization complexity which are assessed to pose barriers to an orderly resolution, supervisors have the power to require banks, as part of their licensing conditions, to take actions such as:

- Adopt arms-length treatment of intra-group transactions or subjecting such transactions to standard risk management practices such as standard documentation and collateralization;
- Establish resilient operational arrangements that are protected from failure of other parts of the group;
- Maintain management information systems at the entity level so that there is detailed information on intra-group transactions; and
- Ensure separability of business which is connected to Singapore's financial market infrastructure.

To strengthen the process for recovery and resolution planning, MAS has required several systemically important banks to submit their recovery plans. The banks are also required to submit detailed information such as their critical functions and cross-border inter-dependencies, as well as to identify critical business activities or functions within the group, including an assessment of the feasibility of separating or isolating the critical business activities or functions in a restructuring or resolution scenario, to facilitate the development of a resolution plan.

MAS has engaged the banks as part of an iterative process to formulate MAS' rules on recovery and resolution planning. Where structural complexity is identified as an impediment which may hamper implementation of resolution measures, MAS has the powers to require a bank to take steps to simplify or restructure their existing business and organizational structures or take other measures to improve the resolvability of the bank, similar to those for newly admitted banks. For foreign banks, MAS takes into account any recovery and resolution planning work being undertaken by their home authority such as those for globally systemic banks.

Under section 55 of the BA, if it appears to MAS to be necessary or expedient in the public interest, or in the interest of depositors or the financial system in Singapore, MAS may by notice in writing to a bank in Singapore give directions or impose requirements on or relating to the operations or activities of, or the standards to be maintained by the bank. Similarly, under section 49 of the BA, MAS can require a

	bank to take any action (or refrain from), which is deemed necessary by MAS, upon meeting certain threshold conditions. These powers can be used to require banks to take steps to simplify or restructure their existing business and organizational structures, or take other measures to improve the resolvability of the bank.
<b>EC7</b>	<b>The supervisor has a clear framework or process for handling banks in times of stress, such that any decisions to require or undertake recovery or resolution actions are made in a timely manner.</b>
Description and findings re EC7	<p>MAS' crisis management framework relies on a structure that facilitates information flow and communication with both external parties and staff during a crisis. As part of this framework overseen by the CMT, the DFI framework sets out the processes for handling threats to stability of the financial system posed by individual financial institutions. There are DFI handbooks for different type of financial institutions including banks that provides an easy-to-use reference guide by consolidating approved policy positions, international best practices, key considerations and possible options and actions that can be taken by MAS.</p> <p>The DFI handbook covers the various stages of the DFI crisis including information gathering, assessment of the DFI's situation and the impact on the financial system, action triggers and escalation to CMT, the various actions that can be taken by MAS and crisis communication. Summaries are also presented in reference flowcharts. The process by which MAS manages a distressed bank is broadly as follows:</p> <ul style="list-style-type: none"> <li>• MAS' supervision and surveillance of a bank is intensified as its financial condition deteriorates. There will be close monitoring of the bank's financial position and increased engagement with the bank, as well as head office and home regulator for foreign banks;</li> <li>• MAS may dial up asset maintenance ratios, require the bank to de-risk or deleverage, impose higher liquidity requirements, prohibit the dissipation of assets, require the bank to immediately take any action (including activation of a recovery plan) or to do or not to do any act whatsoever in relation to its business, etc. There are prepared drawer templates for issuing directives to the affected bank and an intervention team can be dispatched on-site for more timely monitoring of the financial condition of the bank and the situation, as well as to enforce compliance with directives issued by MAS;</li> <li>• MAS will make an assessment based on information from the distressed bank and home regulators such as on its liquidity and availability of alternative funding, on the ability of the bank to meet its obligations and continued viability, as well as the risk to the stability of the financial system in the event that it is non-viable (i.e. legal triggers for resolution powers);</li> <li>• As an interim step, MAS may appoint a statutory manager to take operational control of the bank should MAS lose confidence and trust in the bank's</li> </ul>

	<p>management to address the problems or as a preparatory step to petitioning to wind up the bank or to implementing other resolution strategies; and</p> <ul style="list-style-type: none"> <li>• Where the distressed bank has been determined to be non-viable, MAS will implement the appropriate resolution strategy including transfer of business to another viable bank or winding up.</li> <li>• The resolution regime envisages and provides for MAS to commit to achieving cooperative solutions with foreign resolution authorities, wherever possible, and taking intervention actions either individually or in the financial system, where such actions are consistent with MAS' objectives of fostering a sound and reputable financial center.</li> </ul> <p>MAS has appropriately applied some of the measures mentioned above during the global financial crisis.</p>
<b>EC8</b>	<b>Where the supervisor becomes aware of bank-like activities being performed fully or partially outside the regulatory perimeter, the supervisor takes appropriate steps to draw the matter to the attention of the responsible authority. Where the supervisor becomes aware of banks restructuring their activities to avoid the regulatory perimeter, the supervisor takes appropriate steps to address this.</b>
Description and findings re EC8	<p>MAS is an integrated supervisor overseeing banks, insurers and capital market intermediaries. This allows greater efficiency and effectiveness in supervising financial conglomerates, and reduces supervisory gaps and scope for regulatory arbitrage. MAS' MFSC Committee facilitates a consistent policy and supervisory approach on issues common to the banking, insurance and capital markets sectors, and reduces the risks of banks restructuring their activities to avoid the regulatory perimeter. MAS' regulatory approach subjects similar activities and risks to equivalent treatment to mitigate the risk of regulatory arbitrage (e.g., capital treatment for similar risks is aligned across the banking, insurance and capital markets sectors).</p>
<b>Assessment of Principle 8</b>	<b>Compliant</b>
Comments	<p>MAS has in place an effective approach to banking supervision that is intrusive, intensive, and seeks to identify and address potential risks that may affect the safety and soundness of individual banks and the banking system. MAS makes effective use of moral suasion and soft powers to address prudential concerns.</p> <p>MAS developed in 2005 a risk-based methodology (known as CRAFT). It is currently the central piece of MAS' supervisory approach and guides its on- and off-site work. A salient attribute of MAS' approach is its proximity to supervised banks. MAS has also a framework in place for early intervention, which should be considered in conjunction with CP11, on corrective and sanctioning powers.</p>

<b>Principle 9</b>	<b>Supervisory techniques and tools.</b> The supervisor uses an appropriate range of techniques and tools to implement the supervisory approach and deploys supervisory resources on a proportionate basis, taking into account the risk profile and systemic importance of banks.
<b>Essential criteria</b>	
<b>EC1</b>	<b>The supervisor employs an appropriate mix of on-site<sup>8</sup> and off-site<sup>9</sup> supervision to evaluate the condition of banks and banking groups, their risk profile, internal control environment and the corrective measures necessary to address supervisory concerns. The specific mix between on-site and off-site supervision may be determined by the particular conditions and circumstances of the country and the bank. The supervisor regularly assesses the quality, effectiveness and integration of its on-site and off-site functions, and amends its approach, as needed.</b>
Description and findings re EC1	<p>MAS' risk-based approach encompasses both on-site and off-site supervision. All banks are subject to a base level of off-site supervision and inspection.</p> <p>MAS' off-site supervision involves ongoing monitoring of the bank's financial soundness and risk indicators, developments in its businesses and home countries, as well as trends in the banking sector. Supervisors also review regulatory returns and audit reports, and conduct regular meetings with the bank's management, auditors and foreign supervisors. Concerns impacting the bank's safety and soundness are followed up in a timely manner.</p> <p>Banks are required under sections 43 and 44A of the BA to provide their books, information, and facilities that may be required by supervisors for an inspection. During inspections, supervisors adopt a risk-focused approach to assess banks' financial soundness as well as the effectiveness of their governance, internal controls and risk management processes. Inspection procedures follow a top-down approach, focusing on the robustness of banks' policies and processes. There is transaction testing to verify that policies, procedures and controls are adhered to on the ground. Supervisors also ascertain if the banks' information systems are reliable and if regulatory requirements are complied with. Where process and control weaknesses are identified, supervisors assess the implications for the institution as a whole, seek to identify common themes and focus on key recommendations that target the root causes of these weaknesses.</p>

<sup>8</sup> On-site work is used as a tool to provide independent verification that adequate policies, procedures and controls exist at banks, determine that information reported by banks is reliable, obtain additional information on the bank and its related companies needed for the assessment of the condition of the bank, monitor the bank's follow-up on supervisory concerns, etc.

<sup>9</sup> Off-site work is used as a tool to regularly review and analyze the financial condition of banks, follow up on matters requiring further attention, identify and evaluate developing risks and help identify the priorities, scope of further off-site and on-site work, etc.



	<p>The proportion of on- and off-site supervision for each bank is determined by the bank's business activities and supervisory bucket (see CP8 EC1). The intensity of supervision is stepped up from Bucket 4 to Bucket 1. In general, there is greater reliance on off-site supervision for banks in Buckets 3 and 4, which are inspected over a longer cycle.</p> <p>MAS regularly reviews the effectiveness of its supervisory approach and processes. There is a dedicated division, Supervisory Methodologies, Transactions and Analytics Division (SMTA), responsible for developing and enhancing supervisory methodologies and practices, and promoting consistency in standards across divisions and departments. For example, MAS' CRAFT was the result of SMTA's work to harmonize the different risk assessment frameworks used by supervisory departments covering the respective banking, insurance and capital markets sectors. Special project teams are also set up periodically to review and recommend changes to MAS' supervisory methodologies and standards, taking into account industry and international supervisory developments.</p>
<b>EC2</b>	<b>The supervisor has a coherent process for planning and executing on-site and off-site activities. There are policies and processes to ensure that such activities are conducted on a thorough and consistent basis with clear responsibilities, objectives and outputs, and that there is effective coordination and information sharing between the on-site and off-site functions.</b>
Description and findings re EC2	<p>Supervisory teams are responsible for both the on-site and off-site supervision of the portfolio of banks they oversee.</p> <p>The scope of on-site and off-site supervisory activities for banks is primarily driven by supervisory concerns that are identified from the CRAFT assessments and guided by a supervisory plan for each bank. The risk assessment also provides the basis for determining the scope of inspections. Significant activities that are assessed to be of higher risk or have inadequate risk management and controls are subject to greater scrutiny during inspections. The supervisory plan for each bank serves to systemically set out the key areas of supervisory work and the corresponding supervisory tools, as well as facilitate the tracking of resolution of supervisory concerns.</p> <p>There are policies on the conduct of inspections and procedural manuals to guide supervisors in carrying out the on-site work. Inspection findings and supervisors' recommendations are communicated to the bank via an inspection report which is also sent to the head office and home regulator in the case of foreign banks.</p> <p>As part of off-site supervisory follow-up, supervisors track the bank's progress in remediating inspection findings and takes regulatory actions against the bank for breaches of prudential rules and legal requirements. The outcomes from inspections and off-site monitoring are taken into consideration at the next annual CRAFT assessment of the bank.</p>
<b>EC3</b>	<b>The supervisor uses a variety of information to regularly review and assess the</b>

	<p><b>safety and soundness of banks, the evaluation of material risks, and the identification of necessary corrective actions and supervisory actions. This includes information, such as prudential reports, statistical returns, information on a bank’s related entities, and publicly available information. The supervisor determines that information provided by banks is reliable and obtains, as necessary, additional information on the banks and their related entities.</b></p>
Description and findings re EC3	<p>Supervisors use a variety of information to supervise and assess the risks of banks. The information that supervisors review off-site is related in CP10 EC1.</p> <p>Information on the effectiveness of the bank’s risk management and governance obtained from inspections is taken into account in determining off-site supervision, for instance, when reviewing applications for regulatory approvals, determining prudential conditions to be imposed and subsequent CRAFT assessments.</p> <p>Supervisors also obtain information from the banks on an ad-hoc basis (via surveys or questionnaires) should there be concerns in a particular area. Under section 26 of the BA, banks are required to furnish such information as MAS may require for the proper discharge of its supervisory functions. MAS may take action against banks which fail or neglect to furnish any information required by MAS.</p> <p>Statistical returns submitted by banks are subject to data validation checks to detect data anomalies, particularly vis-à-vis the bank’s own past trends and its peer banks (see CP9 EC12 for details). During inspections, supervisors ascertain whether the banks’ information systems and regulatory reporting processes are reliable. Further, external auditors, as part of their annual audit of the bank’s accounting systems and internal controls, are required to highlight in their audit report any weakness pertaining to regulatory reporting by banks. Any director or executive officer of a bank who fails to take all reasonable steps to secure the accuracy and correctness of statements submitted under the BA or any applicable laws is guilty of an offense.</p>
EC4	<p><b>The supervisor uses a variety of tools to regularly review and assess the safety and soundness of banks and the banking system, such as:</b></p> <ul style="list-style-type: none"> <li><b>(a) analysis of financial statements and accounts;</b></li> <li><b>(b) business model analysis;</b></li> <li><b>(c) horizontal peer reviews;</b></li> <li><b>(d) review of the outcome of stress tests undertaken by the bank; and</b></li> <li><b>(e) analysis of corporate governance, including risk management and internal control systems.</b></li> </ul> <p><b>The supervisor communicates its findings to the bank as appropriate and requires the bank to take action to mitigate any particular vulnerabilities that have the potential to affect its safety and soundness. The supervisor uses its analysis to determine follow-up work required, if any.</b></p>

Description and findings re EC4	<p>MAS assesses the safety and soundness of banks and the banking system in Singapore in several ways. The tools used are complementary and enhance the understanding of the risks of banks and the robustness of supervision.</p> <p>First, supervisors perform a comprehensive risk assessment of banks with CRAFT that draws upon all off- and on-site supervisory work. CRAFT takes an activity-based approach to conduct risk assessment of individual banks, using information gathered from both on-site and off-site supervisory activities. The risk assessment takes into account the bank's business model, strategy and key activities, and assesses the inherent risks (i.e. credit/asset, liquidity, market, operational, technology, market conduct, and legal, reputational and regulatory risks) of each business activity, taking into account the control factors (i.e. risk management systems and controls, operational management, internal audit and compliance) that are put in place to manage and control them. The oversight and governance arrangements (Board, senior management and head office/parent company oversight) and financial strength factors (capital, earnings and parental support) are also assessed at the institution level.</p> <p>To ensure consistency in ratings, comparison of peer banks (i.e. banks with similar business activities and risk profiles or banks from the same geographical region or country) are carried out as part of the risk assessment, and a panel of experienced supervisors review, discuss and approve the banks' risk ratings. Post approval, supervisors hold a meeting with the bank's Board and/or senior management to communicate the risk ratings and the underlying issues of supervisory concern with a view to impressing upon the bank the corrective actions that it should promptly take to address those concerns.</p> <p>To monitor the financial position of banks on an ongoing basis, MAS has instituted a monitoring indicators framework that encompasses regular review of banks' financial statements and accounts, statistical returns, as well as surveillance of micro-prudential, bank-specific indicators. MAS has also developed a Credit Risk Analytics (CRAY) tool to help supervisors of larger banks analyze the asset quality of their banks given that credit risk is a major risk component in many banks. The probability of default (PD) and the PD distribution are used as main credit risk indicators under CRAY. For both tools, peer comparison is an important element. Common indicators across peer banks are monitored and analyzed to pick up anomalies. CRAY allows comparison of asset quality across banks within a peer group and also with the industry. Through the review of these indicators and their trends, potential problems are highlighted for supervisory attention and follow-up. Other than credit risk, supervisors monitor liquidity and market risks of banks. A compilation of market indicators, including credit default swap spreads and equity prices, of major banks are monitored to detect signs of concern.</p> <p>On a half yearly basis, MAS requires banks to submit information of their top 100</p>
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	<p>borrowers, which will include loan details, such as amount outstanding, collateral value, loan grading and level of provisioning (if any). Credit facilities extended to common borrowers are compared for grading and provisioning differences. Supervisors then follow up to understand reasons for outliers (e.g., a bank assigning a better grading or lower provisioning to a common obligor, compared to other banks), and require banks to reclassify loans and increase specific provisions where warranted.</p> <p>Supervisors factor the results of MAS' regular industry-wide stress tests (IWST) in their assessments of the banks' safety and soundness. Bottom-up stress tests can reveal areas of vulnerability in terms of banks' exposures and risk management practices, while top-down stress tests provide a benchmark to compare the results of bottom-up stress tests. Top-down stress tests also allow for assessment of inter-linkages (e.g., interbank and macro-financial linkages). Supervisors review the stress test results of their banks from the IWST as well as other internal stress tests undertaken by the banks (e.g., see CP15 EC13 for supervisors' review of the internal capital adequacy assessment process of the locally-incorporated banks). As part of the review, supervisors challenge banks on their approaches and assumptions, with a view to encouraging good stress testing practices. The stress tests are used as a pre-emptive supervisory tool to encourage financial institutions to have appropriate capital planning processes and/or risk mitigation plans across a range of stressed conditions.</p> <p>In addition, the results are used to assess the robustness of banks' stress testing methodologies, for instance, by comparing the degree of conservatism exercised by different banks in the stress testing of common corporate borrowers. MAS also conducts an independent top-down stress tests on the key banks using an econometric modeling approach as another way to validate the robustness of the bottom-up IWST performed by banks.</p> <p>MAS makes use of surveys and questionnaires to gather information on specific themes in the banking system which are of concern. These include surveys on banks' property exposures, lending to small and medium-sized enterprises and credit conditions. Where the issues identified involve bank-specific practices, supervisors will follow up with the banks concerned. In cases where there are more prevalent system-level issues, MAS will either issue new prudential rules or revise existing ones to mitigate the concerns.</p>
EC5	<p><b>The supervisor, in conjunction with other relevant authorities, seeks to identify, assess and mitigate any emerging risks across banks and to the banking system as a whole, potentially including conducting supervisory stress tests (on individual banks or system-wide). The supervisor communicates its findings as appropriate to either banks or the industry and requires banks to take action to mitigate any particular vulnerabilities that have the potential to affect the stability of the banking system, where appropriate. The supervisor uses its analysis to determine follow-up work required, if any.</b></p>

Description and findings re EC5	<p>MAS is an integrated supervisor and central bank. The conduct of integrated supervision of financial services and financial stability surveillance are explicitly mandated functions of MAS.</p> <p>MAS' Management Financial Stability Committee (FSC) is the forum where the functions responsible for macroprudential surveillance, financial supervision, prudential and market conduct policy, markets and monetary policy come together to share information and analyses to identify and assess financial system risks, and discuss macroprudential and financial stability issues. The FSC also discusses coordination of MAS' policies with policies of other Government agencies, as well as communication strategies of the different policies. The wide representation of functions facilitates comprehensive discussions and assessments of risks across banks and to the banking system as a whole. For example, to mitigate risks in the housing market, MAS has actively pursued a policy of capping loan-to-value (LTV) ratios to address credit or leverage growth risks by encouraging financial prudence among borrowers and by creating a buffer against asset price correction for lenders. The LTV policy also tempers credit-driven asset price inflation. Other property-related measures by MAS include changes in the minimum cash down payment, discontinuation of the Interest Absorption Scheme and interest-only loans, and restriction on the loan tenure for residential properties. Where necessary, non-prudential instruments that involve other government agencies have been employed to target systemic risks. In the case of the property market, the employment of a suite of measures that include transaction taxes and housing supply reflects the whole-of-government response, to target the specific segments causing risks. In addition, MAS' active participation in various international forums on financial stability such as those under the auspices of the Financial Stability Board enables MAS to be aware of emerging risks elsewhere which may have a bearing on Singapore.</p> <p>To carry out its macroprudential surveillance mandate, MAS conducts regular stress-tests of financial institutions to assess the resilience of the financial system under plausible stressed macroeconomic and financial scenarios. Credit, market, liquidity and interbank contagion risks are covered in these stress tests (see CP9 EC4 for details on the industry-wide stress tests). Supervisors have required banks to take corrective actions to address specific concerns arising from these stress tests.</p> <p>MAS publishes an annual Financial Stability Review to inform the public and financial sector stakeholders of key financial stability risks and vulnerabilities both internationally and domestically. Where appropriate, such assessments are further conveyed in keynote speeches, direct communications, or via supervisory guidance to regulated financial institutions.</p>
<b>EC6</b>	<b>The supervisor evaluates the work of the bank's internal audit function, and determines whether, and to what extent, it may rely on the internal auditors' work to identify areas of potential risk.</b>
Description and	Supervisors assess the adequacy and effectiveness of the bank's internal audit

findings re EC6	<p>function as part of the risk assessment of banks. The assessment includes the internal audit function's independence and authority, experience and qualification, audit methodology and coverage, quality of audit reports, escalation of issues and follow-up of audit findings.</p> <p>Where the internal audit function has been rated poorly in the bank's risk assessment (e.g., due to insufficient coverage or incompetent internal auditors), supervisors will raise the supervisory concern with the bank's management or head office and require the bank to improve the quality of its internal audit function. In such cases, supervisors do not place reliance on internal auditors to identify areas of potential risk. However, supervisors will still take into account relevant findings identified by internal audit.</p>
<b>EC7</b>	<p><b>The supervisor maintains sufficiently frequent contacts as appropriate with the bank's Board, non-executive Board members and senior and middle management (including heads of individual business units and control functions) to develop an understanding of and assess matters such as strategy, group structure, corporate governance, performance, capital adequacy, liquidity, asset quality, risk management systems and internal controls. Where necessary, the supervisor challenges the bank's Board and senior management on the assumptions made in setting strategies and business models.</b></p>
Description and findings re EC7	<p>Supervisors proactively engage the bank's Board, senior management, business heads, internal auditors, risk managers and other bank staff to keep abreast of the bank's developments, business plans and strategy, and enhancements made to risk management systems and controls.</p> <p>MAS meets each locally-incorporated bank's Board and senior management annually to convey its risk assessment and supervisory concerns. These meetings are followed by private sessions with the non-executive directors, without the presence of management, to discuss more sensitive issues such as CEO and senior management performance and succession planning. There is a separate annual forum where MAS' and the bank's senior management exchange views on industry developments, policy issues and bank specific updates.</p> <p>In addition, supervisors meet frequently with the key bank personnel of locally-incorporated banks. For example, supervisors meet the chief financial officer of the bank every quarter ahead of their earnings release to review the financial performance and risk profile of the group. Supervisors also regularly meet the chief risk officer, chief internal auditor, chief compliance officer, heads of businesses and key operations and support functions, as well as key management members of their significant overseas subsidiaries.</p> <p>MAS meets with the foreign bank's senior management (based in Singapore) annually to convey its risk assessment and supervisory concerns, as well as to discuss their business plans, strategy and other bank-specific issues. For large foreign banks, other than regular meetings with foreign supervisors and the bank personnel from the</p>

	<p>Singapore entity (such as the head of compliance, internal audit and heads of individual business units and control functions), there are also meetings between MAS and the bank's head office senior management (e.g., chief executive officer, regional or business heads) when they are in Singapore for bank's business (e.g., local board or management meetings).</p> <p>During meetings with the bank, supervisors provide effective challenge to the bank's business plans, annual budgets, internal risk limits for respective businesses and other pertinent issues. Further, supervisors have queried banks on the robustness of their new product approval processes and whether they have the requisite expertise before launching new products or embarking on new businesses. Supervisors also initiate ad-hoc meetings with the bank's middle management, including the respective risk management function heads, on issues such as stress test results, state of control environment and rectification of inspection findings.</p>
<b>EC8</b>	<p><b>The supervisor communicates to the bank the findings of its on- and off-site supervisory analyses in a timely manner by means of written reports or through discussions or meetings with the bank's management. The supervisor meets with the bank's senior management and the Board to discuss the results of supervisory examinations and the external audits, as appropriate. The supervisor also meets separately with the bank's independent Board members, as necessary.</b></p>
Description and findings re EC8	<p>From off-site monitoring, supervisors highlight issues of concern to banks as and when they are identified. Supervisors may communicate issues through phone calls, emails, or face-to-face meetings. Depending on the nature of the issue, the supervisor may require the bank to furnish more information or take corrective actions to address the issue.</p> <p>Upon completion of an inspection, supervisors meet with the bank's management on a timely basis to discuss key findings from the inspection and the actions to be taken by the bank to address the findings. The findings are documented via comment sheets that are issued to the bank to allow the management to respond to issues raised. This is followed by the issuance of a formal inspection report which sets out the implications of the findings for the bank as a whole, the common themes and the key recommendations to address the root causes of control weaknesses. A copy of the inspection report is sent to the bank's head office and home regulator in the case of foreign banks.</p> <p>In addition, supervisors meet with the bank's Board and/or senior management to disclose the bank's risk ratings on an annual basis. As part of the disclosure, supervisory concerns over the bank's risks or its risk management systems and controls are reiterated and emphasized to the bank's management. For locally-incorporated banks, supervisors meet separately with the chairman of the Board-level committees or independent Board members if needed.</p>
<b>EC9</b>	<p><b>The supervisor undertakes appropriate and timely follow-up to check that banks</b></p>



	<b>have addressed supervisory concerns or implemented requirements communicated to them. This includes early escalation to the appropriate level of the supervisory authority and to the bank's Board if action points are not addressed in an adequate or timely manner.</b>
Description and findings re EC9	<p>Supervisors closely monitor and ensure that banks take effective remedial actions to address their concerns on a timely basis.</p> <p>The supervisory concerns identified as part of the risk assessment of the bank are conveyed to the bank's Board and/or senior management as part of the risk rating disclosure, to impress upon them the corrective actions that should be promptly taken to address those concerns. These issues highlighted also drive the scope of on- and off-site supervisory activities, including follow-up actions outlined in the supervisory plan.</p> <p>As for inspection findings, the bank is typically required to submit its remedial plan progress within one month from the date of the issuance of the inspection report. Thereafter, supervisors follow up with the bank on the remediation of the inspection findings until they are satisfactorily addressed. If there are significant control weaknesses, the bank is required to provide quarterly status updates on the implementation of its remedial actions. More frequent updates may be required for severe weaknesses. Since the inspection report is provided to the bank's head office and home regulator, MAS, where necessary, will work with the head office and/or home regulator to ensure that there is appropriate oversight of the bank as it addresses the issues of concern. In addition, supervisors leverage on the work of external and internal auditors who, in their regular audits, help to ensure that findings from MAS' inspections are promptly and satisfactorily rectified by the bank.</p> <p>In exceptional cases where severe control weaknesses are identified, supervisors will promptly take measures such as directing the bank to engage an external expert to conduct an independent review of the areas of concerns. In the case of a locally-incorporated bank, supervisors will additionally require the bank to table MAS' inspection report to its Board so that the Board can ensure that the bank rectifies the control weaknesses in a timely manner.</p> <p>Internally, serious issues of supervisory concern (e.g., those which require a direction to the bank to take any action) may be escalated by the department head to the Assistant Managing Director or Deputy Managing Director. Where supervisory decisions have wider policy implications, such issues may be discussed at the Management Financial Supervision Committee meeting or a higher decision-making forum like the Executive Committee or Chairman's Meeting.</p>
<b>EC10</b>	<b>The supervisor requires banks to notify it in advance of any substantive changes in their activities, structure and overall condition, or as soon as they become aware of any material adverse developments, including breach of legal or prudential requirements.</b>



Description and findings re EC10	<p>Under the BA, for banks' opening of new places of business (section 12), change in control of shareholdings (section 15A to 15C), conduct of certain non-financial businesses (section 30), and all major acquisitions/investments (section 32), prior approval has to be sought from or notification given to MAS. Banks are also required under section 48 of the BA to inform MAS if they are, or are likely to be unable to meet their obligations, insolvent, or about to suspend payments.</p> <p>Further, as a licensing condition for foreign banks, the bank is required to provide notice to MAS of any changes or proposed changes in ownership or control over the bank within seven days of the bank becoming aware of the change or proposed change. The bank is also required to inform MAS of any material adverse developments, including any breach of legal and prudential requirements.</p> <p>Under MAS' <i>Guidelines on Outsourcing</i>, a bank is to notify MAS when: (i) it is planning or has entered into material outsourcing; (ii) there are any adverse development arising in outsourcing that could significantly affect the bank; or (iii) the service provider breach any legal or regulatory requirements.</p> <p>Under the Securities And Futures (Licensing And Conduct Of Business) Regulations, banks conducting the following regulated activities are required to inform MAS prior to the commencement of regulated activities, which include:</p> <ul style="list-style-type: none"> <li>(i) Dealing in securities;</li> <li>(ii) Trading in futures contracts;</li> <li>(iii) Leveraged foreign exchange trading;</li> <li>(iv) Advising on corporate finance;</li> <li>(v) Fund management;</li> <li>(vi) Securities financing; and</li> <li>(vii) Providing custodial services for securities.</li> </ul> <p>In practice, a bank proposing to introduce a substantive new business line or financial instrument will engage MAS in advance under our "no surprise rule," to minimize an adverse finding when the new business/instrument is reviewed during our CRAFT process and/or inspection and/or when the bank seeks expedited approval for the new business/instrument. The bank has to demonstrate that it has carried out the necessary due diligence to understand the new business/instrument and that it has the capability and capacity to manage the risks arising from the business/instrument on an ongoing basis.</p> <p>Under MAS Notice 609 on Auditors' Reports and Additional Information to be Submitted with Annual Accounts, banks are required to ensure that their external audit report furnished to MAS highlight any non-compliance with the Banking Act, Companies Act, Notices to Banks, guidelines, and circulars issued by MAS, or any other relevant law and regulations. The external auditors of banks are required to</p>
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	immediately inform MAS if, in the course of an audit, they discover serious offenses or irregularities that jeopardize the interests of the bank's creditors and depositors (section 58(8) of the BA).
<b>EC11</b>	<b>The supervisor may make use of independent third parties, such as auditors, provided there is a clear and detailed mandate for the work. However, the supervisor cannot outsource its prudential responsibilities to third parties. When using third parties, the supervisor assesses whether the output can be relied upon to the degree intended and takes into consideration the biases that may influence third parties.</b>
Description and findings re EC11	<p>MAS does not outsource its prudential responsibilities to third parties. However, supervisors may direct the bank to appoint third-party professionals such as external audit firms or independent consultants to undertake specific work where it is appropriate to do so.</p> <p>For example, supervisors may direct the bank to engage an external auditor or consultant to perform special reviews of internal controls where it is assessed that an independent party is better placed to do this compared to the bank. Before the bank engages the third party, supervisors typically make an assessment of whether the third party is sufficiently independent and has the necessary expertise to perform the work. Supervisors also consider whether the scope of work is adequate and clearly defined.</p> <p>MAS may conduct joint inspections with another foreign supervisory authority and takes into account the inspection work performed by its foreign counterpart.</p>
<b>EC12</b>	<b>The supervisor has an adequate information system which facilitates the processing, monitoring and analysis of prudential information. The system aids the identification of areas requiring follow-up action.</b>
Description and findings re EC12	<p>MAS uses a variety of in-house and external applications, databases and research tools to support supervisory and macro-prudential surveillance work. In addition, as part of the MAS' IT strategy master plan, MAS is currently embarking on a major initiative to modernize its IT infrastructure across the organization. One of the objectives of this initiative is to further leverage on IT to help supervisors in information gathering, analysis, tracking and storage of all matters related to the institutions that they supervise.</p> <p>MAS' supervision of banks is currently supported by the Banking Supervision System (BSS) which was developed in-house using Lotus Notes Database Designer software together with some Java applets/scripts for a customized web-based interface. BSS serves as an information portal providing access to groups of information. It not only serves as a quick management information system tool, but its collaborative sharing of information enables supervisors to access comprehensive institution-specific information for inspection pre-planning, monitoring a bank's performance and tracking outstanding issues identified from previous inspections.</p>

	<p>Both qualitative and quantitative data are available in BSS. Qualitative information includes organizational profile, supervisory plans for the institution and internal risk ratings. Inspection reports, findings requiring follow-up and financial news gathered on the institution or country are also uploaded onto the BSS for monitoring purposes. To gather the latest financial news and information on the banks and their home countries, supervisors make use of external databases such as Fitch Research, Moody's Banks Global and S&amp;P Ratings Direct. As for quantitative information, key statistical reports or tables are accessible through the BSS and are regularly updated in the system.</p> <p>To process quantitative information, regular returns submitted electronically via MASNET by banks are first checked and validated by statistical staff, using Business Objects and Microsoft Excel which are programmed with in-built checks to perform data validation for each institution. Business Objects is an integrated query, reporting and analysis tool which allows the financial information to be manipulated into customized tables or charts for peer comparisons, trend and other forms of analysis. More sophisticated analyses of financial data, including interbank network simulation and stress tests, are also carried out using econometric or statistical software such as Eviews and Matlab for macroprudential monitoring and analyses by MAS' MSD.</p> <p>Business Objects is further used to generate financial and analytical reports containing micro-prudential and bank-specific indicators (collectively referred to as "Monitoring Indicators") to support supervisors' off-site monitoring work. These financial and analytical reports are hosted on the Banking Analysis and Reports Teamsite (BARS) which is linked to the BSS and serves as a "one-stop area" for supervisors to access the various monitoring indicators' reports for analytical purposes.</p> <p>BARS also hosts CRAY which is developed using Microsoft Excel to help supervisors of larger banks to analyze the asset quality of their banks. BARS has online templates for the documentation of supervisors' assessments and follow-up actions, as well as simple workflows for the approval and escalation process. It also serves as a platform for supervisors to share and discuss trends and observations (including peer bank reviews) and other market developments through online forums and discussion boards.</p>
<b>Additional criteria</b>	
<b>AC1</b>	<b>The supervisor has a framework for periodic independent review, for example by an internal audit function or third party assessor, of the adequacy and effectiveness of the range of its available supervisory tools and their use, and makes changes as appropriate.</b>
Description and findings re AC1	MAS has an Internal Audit Department (IAD) which conducts financial, operational and information systems audits of MAS' operations, including the supervisory function. With respect to the supervisory function, IAD performs independent checks for compliance with internal policies, guidelines, laws and regulations, and the

	<p>consistency in the application of the framework. IAD also benchmark MAS' supervisory framework and processes against international best practices, where applicable and evaluate the security and integrity of information systems supporting the function. Upon completion of each audit, IAD makes recommendations to departments to address any audit findings and also tracks and follows up on the implementation of its recommendations. The highlights of the audits conducted are also presented to MAS' Audit Committee and management for their information.</p> <p>IAD uses a risk-based approach taking into account factors such as impact, inherent risk and control environment, to determine the audit frequency of the supervisory function. The last audits of the risk-impact bucketing framework, on-site and off-site processes for banks were conducted in 2011, 2010 and 2012, respectively.</p>
<b>Assessment of Principle 9</b>	<b>Compliant</b>
Comments	<p>MAS uses a wide range of tools and techniques in its risk-based supervision to monitor, analyze and review the safety and soundness of individual banks and the banking system. All banks are subject to a base-level of off-site supervision and on-site inspection. The supervisory intensity is stepped up for more systemically-important or riskier banks, according to MAS' risk-based methodology.</p> <p>Banks' policies and practices are subjected to close continuous off-site monitoring, which is supplemented by periodic on-site inspections. MAS uses primarily its own staff to conduct supervisory tasks. However, in certain situations, MAS may require a bank to obtain a report from an external expert assessing or verifying compliance with certain requirements to correct a weakness in the bank's operations or policies.</p> <p>The supervisory process is structured around operational "divisions" to perform the functions of off-site and on-site supervision. The supervisory process is complemented with risk specialists who support the work of the operational divisions. This structure provides continuous monitoring and updated knowledge of each institution and banking group. It also facilitates regular and informed dialogues with banks' management, making clear to banks the MAS officers responsible at each step of the supervisory process.</p> <p>MAS' supervisory practices adhere to the notion that effective on-site work should be based on first-hand experience gained through MAS independent verification (whether conducted by own supervisors or through external experts hired by the banks and approved by the supervisors; findings of the experts are provided to the supervisors). According to this, MAS is well positioned to gain sound knowledge of banks' valuation of exposures and liabilities, risks and processes. Analysis of the bank's financial position, on and off-balance sheet, and profit and losses by supervisors is a vital activity for determining the risk profile of each institution.</p>

<b>Principle 10</b>	<b>Supervisory reporting.</b> The supervisor collects, reviews and analyzes prudential reports and statistical returns <sup>10</sup> from banks on both a solo and a consolidated basis, and independently verifies these reports through either on-site examinations or use of external experts.
<b>Essential criteria</b>	
<b>EC1</b>	<b>The supervisor has the power to require banks to submit information, on both a solo and a consolidated basis, on their financial condition, performance, and risks, on demand and at regular intervals. These reports provide information such as on- and off-balance sheet assets and liabilities, profit and loss, capital adequacy, liquidity, large exposures, risk concentrations (including by economic sector, geography and currency), asset quality, loan loss provisioning, related party transactions, interest rate risk, and market risk.</b>
Description and findings re EC1	<p>Section 26 of the BA requires every bank, including foreign branches to furnish information (including returns) at such time and in such manner as supervisors may reasonably require for the proper discharge of their functions. Further, section 36 of the BA gives supervisors the power to require banks to aggregate their assets, liabilities, profits or losses with those of their related corporations and companies in which the banks have major stakes. Regular returns submitted to supervisors include:</p> <ul style="list-style-type: none"> <li>• Monthly data on assets, liabilities and off-balance sheet items, profit and loss, analysis of deposits and interbank exposures, loan and asset concentrations, capital, reserves, interest rate risk and market risk (MAS Notice 610 on <i>Submission of Statistics and Returns</i>);</li> <li>• Monthly data on liquidity positions (MAS Notice 613 on <i>Minimum Liquid Assets</i>);</li> <li>• Quarterly returns on related party transactions, including information on exposure limits, gross and net exposure amounts, and amounts of credit facilities which are unsecured (MAS Notice 639A on <i>Exposures and Credit Facilities to Related Concerns</i>);</li> <li>• Semi-annual data on banks' top 100 borrowers, including the classification, collateral and provision for each borrower; and</li> <li>• Annual financial statements including detailed balance sheets and income statements of the Singapore branch, and in the case of a locally-incorporated bank, that of the bank and the banking group, as well as details of individual classified loans and investments (MAS Notice 609 on <i>Auditors' Reports and Additional Information to be Submitted with Annual Accounts</i>).</li> </ul>

<sup>10</sup> In the context of this Principle, “prudential reports and statistical returns” are distinct from and in addition to required accounting reports. The former are addressed by this Principle, and the latter are addressed in Principle 27.

	<ul style="list-style-type: none"> <li>• Internal and external audit reports, including the long form report; and</li> </ul> <p>MAS conducts surveys on an ad-hoc basis to gather information on specific themes in the banking system which are of concern. These include surveys on banks' property exposures, lending to small and medium-sized enterprises and credit conditions.</p> <p>The locally-incorporated banks submit additional information to supervisors such as monthly data on regional exposures and non-performing loans on a solo and group basis, monthly/quarterly data on capital adequacy ratios, monthly indicators on the bank's overseas branches, semi-annual interim financial statements, including details of individual classified loans and investments on a solo and group basis, global consolidated financial information, information on major activities, management structure and control systems of each overseas branch/subsidiary, authority limits issued to overseas entities, and information on the system for monitoring the operations of overseas entities.</p> <p>Locally-incorporated banks also submit to supervisors their monthly internal management reports on key risk updates and risk management controls, which include detailed analysis on each risk type and concentrations. On a quarterly basis, each bank submits to supervisors its internal earnings pack, which is tabled to its Board and contains more detailed information on financial performance, compared to its published financial results. Supervisors meet with the chief financial officer of each bank every quarter, ahead of its earnings release to discuss the financial performance, business strategies and risk profile of the banking group. Further, Part XI of MAS Notice 637 on <i>Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore</i> specifies the minimum disclosure requirements for a bank in relation to its capital adequacy, with a view to enhancing market discipline (Pillar 3).</p> <p>Section 55 of the BA provides supervisors the power to issue directions or impose requirements on or relating to the operations or activities of, or standards to be maintained by a bank.</p>
EC2	<p><b>The supervisor provides reporting instructions that clearly describe the accounting standards to be used in preparing supervisory reports. Such standards are based on accounting principles and rules that are widely accepted internationally.</b></p>
Description and findings re EC2	<p>The accounting standards adopted by the banks are based on the Singapore Statements of Accounting Standards (SAS) and the Singapore Standards of Auditing (SSA) as well as the Generally Accepted Accounting Principles and the Generally Accepted Auditing Standards. The SAS and SSA follow the International Accounting Standards and the International Auditing Standards respectively.</p> <p>Section 201(19) of the CA prescribes the principles and norms regarding the</p>

	<p>consolidation of accounts, the accounting techniques and the minimum information to be disclosed by banks.</p> <p>MAS Notice 608 on <i>Disclosure in Financial Statements</i> requires banks to comply with the requirements set out in the Companies Act, including the disclosure requirements specified therein. MAS Notice 609 on <i>Auditors' Reports and Additional Information to be Submitted with Annual Accounts</i> requires banks to provide financial statements which are audited by external auditors, and to furnish a copy of the auditors' long form report, which shall include findings and recommendations on the banks' accounting system, internal controls, quality of loans and advances and other assets, as well as non-compliance with the BA, CA, notices, guidelines and circulars issued by MAS, and other relevant laws and regulations. The banks in Singapore are audited by the "big-4" international accounting firms. MAS Notice 610 on <i>Submission of Statistics and Returns</i> stipulates that the information reported should be prepared based on the accounting policies adopted by the bank in providing financial statements under MAS Notices 608 and 609.</p>
EC3	<p><b>The supervisor requires banks to have sound governance structures and control processes for methodologies that produce valuations. The measurement of fair values maximizes the use of relevant and reliable inputs and are consistently applied for risk management and reporting purposes. The valuation framework and control procedures are subject to adequate independent validation and verification, either internally or by an external expert. The supervisor assesses whether the valuation used for regulatory purposes is reliable and prudent. Where the supervisor determines that valuations are not sufficiently prudent, the supervisor requires the bank to make adjustments to its reporting for capital adequacy or regulatory reporting purposes.</b></p>
Description and findings re EC3	<p>Annex 8N of MAS Notice 637 sets out the requirements for valuing positions in financial instruments and commodities for the purpose of calculating credit and market risk capital requirements. These requirements include the following:</p> <ul style="list-style-type: none"> <li>• The bank shall have in place a clear and delineated governance structure that will facilitate the setting, implementation and review of its policies and procedures on valuation;</li> <li>• Senior management of the bank shall establish and maintain adequate policies, systems and controls that will give the Board and supervisors the confidence that its valuation methodologies are robust and reliable;</li> <li>• The bank shall mark-to-market using readily available close out prices that are sourced independently; the bank shall mark-to-market on a regular and consistent basis; the more prudent side of bid and offer should be used; the bank should maximize the use of relevant observable inputs when estimating fair value using a valuation technique;</li> <li>• Market prices and model inputs used for marking-to-market and marking-to-</li> </ul>

model respectively shall be regularly verified for appropriateness and accuracy; and

- The bank shall ensure that its internal auditors or external auditors conduct reviews of its independent price verification procedures and control processes on an annual basis.

Further requirements on valuation policies and procedures in relation to market risk capital adequacy are set out in Annex 10A of MAS 637, which sets out MAS' requirements on the ICAAP of a bank. If supervisors are not satisfied with the outcomes from its review, supervisors may, among other things, require the bank to: (i) take action to improve its risk management processes; (ii) maintain additional capital; and/or (iii) apply internal limits, strengthen the level of provisions and reserves, or improve internal controls.

In accordance with MAS' *Guidelines on Risk Management Practices—Market Risk*, which are applicable to all banks, a bank should adopt the following practices with regard to valuation:

- The bank should ensure that its treasury and financial derivative valuation processes are robust and independent of its trading function; models and supporting statistical analyses used in valuations should be appropriate, consistently applied, have reasonable assumptions, and validated before deployment; staff involved in the validation process should be adequately qualified and independent of the trading and model development functions; models and analyses should be periodically reviewed to ascertain the accuracy of valuation;
- In measuring its market risk, the bank should use a risk management system that is able to measure current exposures through marked-to-market or marked-to-model pricing; the system should be able to accommodate new valuation methodologies; and
- Market risk measurement models and assumptions should be regularly evaluated and independently validated to verify the accuracy of valuation.

In accordance with MAS' *Guidelines on Risk Management Practices—Credit Risk*, a bank should adopt the following practices with regard to valuation:

- The value of collateral should be updated periodically to account for changes in market conditions; where the collateral is property or shares, the bank should undertake more frequent valuations in adverse market conditions; if the facility is backed by an inventory or goods purportedly on the obligor's premises, appropriate inspections should be conducted to verify the existence and valuation of the collateral; and
- As provisions are dependent on the recoverable value of collateral it holds, the bank should obtain appropriate valuations of collateral; the bank should have a reliable and timely collateral valuation system; the valuation system should include factors such as the legal enforceability of claims on collateral, ease of realization of collateral and market conditions; where appropriate, the bank should apply a haircut



	to the estimated net realizable value of collateral or use the forced sale value of the collateral to provide more realistic estimates.
<b>EC4</b>	<b>The supervisor collects and analyzes information from banks at a frequency commensurate with the nature of the information requested, and the risk profile and systemic importance of the bank.</b>
Description and findings re EC4	<p>The frequency of collection and analyses of information from banks depends on the nature of the information as well as the risk profile and systemic importance of individual banks. Information such as organizational charts are required to be submitted only annually, while information on assets, liabilities and off-balance sheet items are required to be furnished by banks on a monthly basis. Problem banks are required to submit additional information at more frequent intervals to facilitate close monitoring.</p> <p>Banks of higher systemic importance, e.g., locally-incorporated banks, are subject to increased supervisory intensity and supervisors collect additional data in the form of regulatory reports, surveys and ad-hoc information requests. The additional data collated are more granular than the regular returns that are applicable to all banks in Singapore. During periods of stress, supervisors may increase the frequency of reporting, for instance, at the height of the global financial crisis, cash flow reports were collected from banks daily to monitor liquidity profiles.</p>
<b>EC5</b>	<b>In order to make meaningful comparisons between banks and banking groups, the supervisor collects data from all banks and all relevant entities covered by consolidated supervision on a comparable basis and related to the same dates (stock data) and periods (flow data).</b>
Description and findings re EC5	<p>MAS collects and reviews data from locally-incorporated banks on both a solo and a consolidated basis. The data templates are the same and relate to the same dates and periods. These include data on exposures and non-performing assets, capital adequacy and related party exposures.</p> <p>Similarly, across banks, MAS sets common cut-off dates and reporting periods for the statistical returns that are submitted. Detailed notes on the completion of the returns are issued to ensure consistency and comparability of the data collected. For instance, MAS Notice 610 requires banks to submit monthly statements of assets and liabilities and returns on foreign exchange business transacted. The Notice also requires banks to submit quarterly returns on classified exposures and collateral values of housing loans.</p>
<b>EC6</b>	<b>The supervisor has the power to request and receive any relevant information from banks, as well as any entities in the wider group, irrespective of their activities, where the supervisor believes that it is material to the condition of the bank or banking group, or to the assessment of the risks of the bank or banking group or is needed to support resolution planning. This includes internal management information.</b>
Description and findings re EC6	Pursuant to section 26 of the BA, banks are required to furnish information supervisors require for the proper discharge of supervisory functions. Supervisors

	<p>have access to all bank records as well as to the Board, senior management and staff of banks.</p> <p>Banks are also required to provide supervisors access to their books as well as any information and facilities that may be required for the purpose of an inspection or investigation under section 44A of the BA.</p> <p>Section 36 of the BA gives supervisors the power to require banks to aggregate their assets, liabilities, profits or losses with those of their related corporations and companies in which the banks have major stakes (see CP12 EC2 for details).</p> <p>Under section 55N of the BA, MAS has the power to require a person to furnish, within the period and in the manner specified by MAS, any information that MAS may reasonably require for the discharge of his duties or functions.</p>
<b>EC7</b>	<b>The supervisor has the power to access<sup>11</sup> all bank records for the furtherance of supervisory work. The supervisor also has similar access to the bank's Board, management and staff, when required.</b>
Description and findings re EC7	<p>Under section 43 of the BA, supervisors have the power to inspect the books of each bank in Singapore and of any branch, agency or office outside Singapore opened by a locally-incorporated bank. Under section 44 of the BA, supervisors have the power to make an investigation of the books of any bank in Singapore if it has reason to believe that any bank is carrying on its business in a manner likely to be detrimental to the interests of its depositors and other creditors, has insufficient assets to cover its liabilities to the public or is contravening the provisions of the BA. Banks are also required to provide supervisors access to any information and facilities that may be required for the purpose of an inspection or investigation under section 44A of the BA.</p> <p>Supervisors have access to all bank records as well as to the Board, senior management and staff of banks. Banks are required under section 26 of the BA to furnish information supervisors require for the proper discharge of supervisory functions.</p>
<b>EC8</b>	<b>The supervisor has a means of enforcing compliance with the requirement that the information be submitted on a timely and accurate basis. The supervisor determines the appropriate level of the bank's senior management is responsible for the accuracy of supervisory returns, imposes sanctions for misreporting and persistent errors, and requires that inaccurate information be amended.</b>
Description and findings re EC8	Section 26 of the BA requires every bank to furnish supervisors information (including returns) at such time and in such manner as supervisors may reasonably require for the proper discharge of their functions. Further, supervisors have the

<sup>11</sup> Please refer to Principle 1, Essential Criterion 5.

	<p>power to require statements submitted by banks to be accompanied by a certificate of an external auditor regarding the accuracy of the furnished information. Senior management is also required to sign off when furnishing important information such as annual statutory returns. External auditors are required to highlight to supervisors any inaccuracies in the bank's accounts during their annual audits. Under section 58 of the BA, supervisors have the power to require the bank's external auditors to verify the accuracy of any other information submitted to MAS.</p> <p>Banks that fail or neglect to furnish any information required by supervisors are guilty of an offense and may be fined. Banks' directors and executive officers are guilty of an offense under section 66 of the BA if they fail to take all reasonable steps to secure the accuracy and correctness of statements submitted under the BA or any applicable laws. Offenders may be fined or imprisoned.</p> <p>When there is any misreporting or errors either discovered by supervisors or flagged out by the banks, supervisors require the banks to amend the information and resubmit the affected returns, and/or take other regulatory actions as appropriate, e.g., issuing formal warning or requiring banks to conduct independent verification of the accuracy of its returns.</p>
<b>EC9</b>	<p><b>The supervisor utilizes policies and procedures to determine the validity and integrity of supervisory information. This includes a program for the periodic verification of supervisory returns by means either of the supervisor's own staff or of external experts.</b></p>
Description and findings re EC9	<p>For data submitted electronically via MASNET, MAS' statistical staff performs data validation for each financial institution using automated in-built checks to detect data anomalies, particularly vis-à-vis the institution's own past trends and vis-à-vis peer institutions. The statistical staff verifies these data anomalies with the relevant financial institutions and the supervisors overseeing those institutions. Reflecting the importance that MAS places on data accuracy, a considerable amount of the statistical staff's time is dedicated to data checking in each data collection cycle.</p> <p>In addition, MAS has an EPIC system that supports the administration and operations of manual and ad-hoc external surveys, which are not presently handled via MASNET. Banks are able to download files uploaded by MAS via an URL link emailed to them and submit their responses to MAS via the system. MAS also receives supervisory information from banks via encrypted emails.</p> <p>Further, during inspections, supervisors ascertain that banks keep adequate and proper records and that the returns submitted are accurate. Key returns such as the annual statutory returns (which include the balance sheet and profit and loss account for the Singapore operations, as well as details on classified assets) are audited by external auditors. External and internal auditors of banks generally also verify the accuracy of regulatory returns that are submitted to MAS. Under section 26 of the BA, supervisors have the power to require statements (including returns) submitted</p>

	<p>by banks to be accompanied by a certificate of an external auditor regarding the accuracy of the furnished information.</p> <p>For the locally-incorporated banks, the external auditors evaluate the computational accuracy of their CAR. Supervisors also review the internal audit and external audit findings on the banks' capital computation processes to ensure that there are no major deficiencies in processes that materially affect the CAR computation. The robustness of the banks' capital and CAR calculations are also reviewed as part of the supervisory validation performed prior to the adoption of the internal ratings based approach by the banks.</p>
<b>EC10</b>	<p><b>The supervisor clearly defines and documents the roles and responsibilities of external experts, including the scope of the work, when they are appointed to conduct supervisory tasks. The supervisor assesses the suitability of experts for the designated task(s) and the quality of the work and takes into consideration conflicts of interest that could influence the output/recommendations by external experts. External experts may be utilized for routine validation or to examine specific aspects of banks' operations.</b></p>
Description and findings re EC10	<p>MAS does not normally engage external experts to perform supervisory tasks, including on-site examinations. On-site inspection team comprises MAS' bank supervisors and risk specialists where appropriate.</p> <p>Supervisors may direct a bank to engage an external expert to perform a special review of its internal controls if supervisors assess that an independent party is better placed to do this compared to the bank. Before the bank engages the third party, supervisors typically make an assessment of whether the third party has the necessary expertise or is sufficiently independent to perform the work. Supervisors also consider whether the scope of work is adequate and clearly defined.</p> <p>Section 58 of the BA gives supervisors the power to require external auditors to submit additional information in relation to the audit, to enlarge or extend the scope of the audit of the business and affairs of the bank, and to carry out a specific examination or establish a specific procedure. Supervisors will clearly define the roles and responsibilities of the auditors in such cases. External auditors have been asked to conduct examinations on specific areas of concern to supervisors, for instance, in response to alleged misconduct by a bank, its management or employees.</p>
<b>EC11</b>	<p><b>The supervisor requires that external experts bring to its attention promptly any material shortcomings identified during the course of any work undertaken by them for supervisory purposes.</b></p>
Description and findings re EC11	<p>Under Section 58 of the BA, external auditors are required to immediately inform supervisors of any findings in the course of the performance of their duties as auditors of banks on serious breaches or non-observances of the provisions of the BA or if a criminal offense involving fraud or dishonesty has been committed, or if serious irregularities have occurred, including irregularities that jeopardize the security of the creditors.</p>

	Supervisors hold regular meetings with external auditors on matters relating to individual banks. Supervisors also meet with the “big 4” international accounting firms at least once a year to discuss the broader industry-level issues.
<b>EC12</b>	<b>The supervisor has a process in place to periodically review the information collected to determine that it satisfies a supervisory need.</b>
Description and findings re EC12	Supervisors perform a major review on all regular returns every five to seven years or more frequently, where necessary, for the purpose of determining if the returns satisfy its supervisory needs, streamlining and updating requirements as well as improving the clarity of instructions. MAS also periodically reviews the relevance of the surveys that it conducts and refines them in terms of the information requested.
<b>Assessment of Principle 10</b>	<b>Compliant</b>
Comments	<p>Banks routinely furnish information that MAS requires to carry out its supervisory functions. This information may be as frequent as daily in some cases. Supervisors review these returns and other information submitted to assess banks’ financial soundness and compliance with relevant laws and regulations.</p> <p>To improve data quality while easing the burden on banks, MAS has developed MASNET and EPIC, which facilitate the submission of information by electronic means. The practice of submitting internal management information to MAS is also a common avenue for banks’ supervisory reporting.</p> <p>As part of the supervisory process of analyzing banks’ prudent credit risk policies and processes, banks’ semi-annual submission of detailed information on their top 100 borrowers is a powerful monitoring tool. MAS’ credit risk off-site monitoring could benefit, however, from MAS’ access to more detailed data from banks to permit the analysis of credit risk with a greater level of granularity and frequency. MAS may wish to assess whether current credit reporting should be supplemented by more granular and timely information of credit risk. This might benefit not only its off-site monitoring, but also its financial stability surveillance, and impact studies of new regulations.</p>
<b>Principle 11</b>	<b>Corrective and sanctioning powers of supervisors.</b> The supervisor acts at an early stage to address unsafe and unsound practices or activities that could pose risks to banks or to the banking system. The supervisor has at its disposal an adequate range of supervisory tools to bring about timely corrective actions. This includes the ability to revoke the banking license or to recommend its revocation.
<b>Essential criteria</b>	
<b>EC1</b>	<b>The supervisor raises supervisory concerns with the bank’s management or, where appropriate, the bank’s Board, at an early stage, and requires that these concerns be addressed in a timely manner. Where the supervisor requires the bank to take significant corrective actions, these are addressed in a written document to the bank’s Board. The supervisor requires the bank to submit</b>

	<p><b>regular written progress reports and checks that corrective actions are completed satisfactorily. The supervisor follows through conclusively and in a timely manner on matters that are identified.</b></p>
Description and findings re EC1	<p>Supervisors identify supervisory concerns with a bank at an early stage through supervisory activities, which include off-site surveillance, on-site examinations, reviews of internal/external audit reports and returns submitted by banks, regular contact with the bank's management/Board, foreign supervisors and auditors as well as the use of market information.</p> <p>MAS' supervisory concerns are classified into three categories: (i) emerging risks; (ii) weaknesses in risk management systems/controls or governance structure; and (iii) regulatory breaches. The supervisory tools to address these concerns can be broadly categorized into diagnostic tools, which are used to identify and monitor risks in the bank; and remedial tools, which are used to mitigate risks and remedy shortcomings. The choice of the appropriate supervisory tools to use is guided by the category which the supervisory concern falls within, as follows:</p> <p><u>Emerging risks</u></p> <ul style="list-style-type: none"> <li>• Possible diagnostic tools: focus on area of concern when reviewing returns and reports; information gathering on area of concern</li> <li>• Possible remedial tools: communicate concerns to relevant stakeholders e.g., Board and senior management/head office</li> </ul> <p><u>Weaknesses in risk management systems/controls</u></p> <ul style="list-style-type: none"> <li>• Possible diagnostic tools: conduct an inspection to look at area of concern; leverage on internal and external auditors to conduct reviews of area of concern</li> <li>• Possible remedial tools: follow up with bank or require bank to commission internal or external auditors to review the implementation of rectification actions; direct the bank to implement rectification actions; communicate concerns to Board and senior management/head office/home supervisors</li> </ul> <p><u>Regulatory breaches</u></p> <ul style="list-style-type: none"> <li>• Possible remedial tools: issue supervisory warning/reprimand; composition of offenses; remove directors/officers of bank; issue direction to restrict business; impose restricting conditions in existing license; revoke license</li> </ul> <p>Where concerns are significant, they are communicated to the bank's senior management and Board via comment sheets or formal letters. Following an on-site examination, supervisors issue an inspection report detailing all findings in the comment sheets to the bank, its head office and parent supervisor within three months. The bank is required to provide regular status updates on the corrective actions taken. Supervisors will follow up with the bank to ensure that all remedial</p>

	actions are taken promptly.
<b>EC2</b>	<b>The supervisor has available an appropriate range of supervisory tools for use when, in the supervisor’s judgment, a bank is not complying with laws, regulations or supervisory actions, is engaged in unsafe or unsound practices or in activities that could pose risks to the bank or the banking system, or when the interests of depositors are otherwise threatened.</b>
Description and findings re EC2	<p>MAS considers that consequences for regulatory breaches and unsafe practices should be clear and proportionate to the risks posed to the regulatory objects of MAS. MAS uses a varied enforcement toolkit with sanctions that span warnings, private or public reprimands, administrative fines, imposition of supervisory conditions, license suspensions or revocations, compositions, civil penalties, criminal fines and custodial terms.</p> <p>For example, banks that contravene any provision of the BA will be guilty of an offense. For technical violations, MAS requires the bank concerned to provide an assurance that the breach will not recur. For violations such as breach of minimum liquidity, cash balance or asset maintenance requirements, banks may be required to pay a financial penalty or composition fine (sections 38, 39 and 40 of the BA respectively). MAS has issued administrative fines for violations of minimum liquidity and cash balance requirements. MAS has also warned or reprimanded banks for errors in their regulatory returns.</p> <p>The external auditors of banks are required to verify and confirm that timely remedial actions have been taken by the banks. If there are concerns that a bank is engaged in unsafe or unsound practices or in activities that could pose risks to the bank or the banking system, MAS may impose additional conditions, or vary or revoke any existing conditions of the license of the bank (section 7 of the BA), require the bank in Singapore to maintain capital funds above the minimum prescribed under the BA having regard to the risks arising from the bank’s activities (section 10 of the BA), maintain a higher amount of liquid assets (section 38 of the BA) or maintain a higher amount of assets in Singapore to meet its liabilities (section 40 of the BA).</p> <p>In extreme circumstances (e.g., where the bank is carrying on its business in a manner likely to be detrimental to depositors’ interests or has insufficient assets to cover its liabilities to its depositors, or has contravened any provision of the BA), MAS may, under section 20 of the BA, revoke the license of the bank or, under section 49 of the BA, require the bank to take any action or to do or not to do any act or thing in relation to its business, appoint one or more persons to advise the bank on the proper conduct of its business, assume or appoint one or more persons to assume control of and manage the business of the bank.</p>
<b>EC3</b>	<b>The supervisor has the power to act where a bank falls below established regulatory threshold requirements, including prescribed regulatory ratios or measurements. The supervisor also has the power to intervene at an early stage to require a bank to take action to prevent it from reaching its regulatory</b>

	<b>threshold requirements. The supervisor has a range of options to address such scenarios.</b>
Description and findings re EC3	<p>Supervisors monitor whether established regulatory threshold requirements are being met and will take action when a bank falls below the requirements. Under the BA, MAS has powers to: restrict or suspend the operations of a bank that fails to meet capital requirements (section 10); and impose a financial penalty for failure to comply with minimum liquid assets requirements (section 38) or minimum cash balance requirements (section 39) or asset maintenance requirements (section 40). MAS may also revoke a bank's license if it contravenes the provisions of the BA (section 20).</p> <p>Under section 49 of the BA, where a bank: (i) is or is likely to become insolvent, or is likely to become unable to meet its obligations; (ii) is carrying on its business in a manner likely to be detrimental to the interests of its depositors or its creditors; (iii) has contravened any of the provisions of the BA; or (iv) has failed to comply with any condition attached to its license, MAS may: (i) require the bank concerned immediately to take any action or not to do any act or thing whatsoever in relation to its business; (ii) appoint one or more persons as statutory adviser to advise the bank on the proper management of its business, or (iii) to assume control of and manage the business of the bank or appoint one or more persons as statutory manager to do so. In addition, MAS may issue notices to give directions or impose requirements on or relating to the operations or activities of, or the standards to be maintained, by the bank if MAS considers it to be necessary, e.g., to prevent a bank from reaching its regulatory threshold requirements.</p>
<b>EC4</b>	<b>The supervisor has available a broad range of possible measures to address, at an early stage, such scenarios as described in EC2 above. These measures include the ability to require a bank to take timely corrective action or to impose sanctions expeditiously. In practice, the range of measures is applied in accordance with the gravity of a situation. The supervisor provides clear prudential objectives or sets out the actions to be taken, which may include restricting the current activities of the bank, imposing more stringent prudential limits and requirements, withholding approval of new activities or acquisitions, restricting or suspending payments to shareholders or share repurchases, restricting asset transfers, barring individuals from the banking sector, replacing or restricting the powers of managers, Board members or controlling owners, facilitating a takeover by or merger with a healthier institution, providing for the interim management of the bank, and revoking or recommending the revocation of the banking license.</b>
Description and findings re EC4	MAS has available a broad range of measures, which can be applied in accordance with the gravity of the situation and at an early stage, where appropriate, when serious concerns are identified. In addition to the measures outlined under EC3, MAS may, if it appears to be necessary or expedient in the public interest or in the interest of depositors or the financial system in Singapore, give directions or impose requirements on or relating to the operations or activities of, or the standards to be maintained by a bank or class of banks in Singapore (section 55 of the BA). MAS may



	<p>also require the bank to maintain capital funds above the minimum prescribed under the BA having regard to the risks arising from the bank's activities (section 10 of the BA), maintain a higher amount of liquid assets (section 38 of the BA) or maintain a higher amount of assets in Singapore to meet its liabilities (section 40 of the BA).</p> <p>For example, in cases where banks had failed to address weaknesses in their asset quality or risk management controls, MAS had withheld approval for their proposed new or expansion of activities, and imposed higher prudential requirements on those banks to address its supervisory concerns.</p> <p>In a more serious case where supervisors assessed that a particular bank branch could be threatened by insolvency and could become unable to meet its obligations, MAS had required the branch to hold adequate amount of assets to meet its obligations. The branch was also instructed to inform MAS of its plans prior to making certain transactions. Conditions imposed on the branch were tightened when MAS' monitoring revealed deterioration in the bank's condition.</p> <p>Under section 49 of the BA, where MAS is of the opinion that a bank: (i) is carrying on its business in a manner likely to be detrimental to the interests of its depositors or its creditors; (ii) is or is likely to become insolvent, or is likely to become unable to meet its obligations; (iii) has contravened any of the provisions of the BA; or (iv) has failed to comply with any condition attached to its license; or where MAS considers it in the public interest to do so, MAS may: (i) require a bank concerned immediately to take any action or not to do any act or thing whatsoever in relation to its business; (ii) appoint one or more persons as statutory adviser to advise the bank on the proper management of its business, or (iii) to assume control of and manage the business of the bank or appoint one or more persons as statutory manager to do so.</p> <p>Under section 54 of the BA, MAS may, if it considers it to be in the interests of the depositors of a bank, make an order prohibiting that bank from carrying on banking business or from doing or performing any act or function connected with banking business. Section 54A of the BA also empowers MAS to make an application to the Court for the winding up of the bank where MAS has exercised any power under section 49 of the BA. Under sections 55A to 55C of the BA, MAS' approval is required for a voluntary transfer of the whole or part of a bank's business to a transferee which is licensed to carry on banking business in Singapore.</p> <p>For any action taken, MAS will set out the grounds for taking the action and where necessary, the corrective actions that the bank will be required to take.</p>
<b>EC5</b>	<b>The supervisor applies sanctions not only to the bank but, when and if necessary, also to management and/or the Board, or individuals therein.</b>
Description and findings re EC5	Section 66 of the BA stipulates that any director or executive officer of a bank in Singapore may be fined or imprisoned if he fails to take all reasonable steps to secure compliance by the bank with any provision of the BA or any other written law

	<p>applicable to the bank. Section 66 of the BA also provides that any person who furnishes any false or misleading information or document to the Minister in charge of MAS or to MAS, or who does not use due care to ensure that the information is not false or misleading, may be fined or imprisoned.</p> <p>In addition, section 67 of the BA stipulates that any director, executive officer, trustee, auditor, employee or agent of any bank in Singapore who: (i) willfully makes a false entry; (ii) wilfully omits to make an entry; or (iii) willfully alters, abstracts, conceals or destroys an entry in any book of record or in any report, slip, document or statement of the business, affairs, transactions, conditions, assets or accounts of that bank, may be fined or imprisoned.</p> <p>MAS' Banking (CG) Regulations 2005 provide supervisors the power to direct a locally-incorporated bank to remove key executive officers (including CEO, chief financial officer and chief risk officer) if they have: (i) willfully contravened or willfully caused the bank to contravene any provision of the BA; (ii) failed to secure the compliance of the bank with any provision of the BA; or (iii) failed to discharge any of the duties of their office (regulation 18A).</p> <p>Section 49 of the BA provides MAS the power to require a bank to take any action in relation to its business, including the removal of a director, where MAS is of the opinion that the bank: (i) is carrying on its business in a manner likely to be detrimental to the interests of its depositors or its creditors; (ii) is or is likely to become insolvent, or is likely to become unable to meet its obligations; (iii) has contravened any of the provisions of the BA; or (iv) has failed to comply with any condition attached to its license; or where MAS considers it in the public interest to do so.</p> <p>Section 59 of the Financial Advisers Act (Chapter 110) (FAA) provides MAS the power to make a prohibition order against a representative of a bank. For example, MAS had prohibited an individual who was a representative of a bank from providing any financial advisory service for six months. The bank representative had recommended structured notes on the basis that the clients had understood the features of the product. However, the clients' education, employment status and investment background did not support this conclusion.</p>
<b>EC6</b>	<b>The supervisor has the power to take corrective actions, including ring-fencing of the bank from the actions of parent companies, subsidiaries, parallel-owned banking structures and other related entities in matters that could impair the safety and soundness of the bank or the banking system.</b>
Description and findings re EC6	MAS is able to take corrective actions, including ring-fencing of the bank, under section 49 of the BA as it empowers MAS to: (i) require a bank concerned immediately to take any action or not to do any act or thing whatsoever in relation to its business; (ii) appoint one or more persons as statutory adviser to advise the bank on the proper management of its business, or (iii) to assume control of and manage

	<p>the business of the bank or appoint one or more persons as statutory manager to do so, where MAS is of the opinion that a bank – (i) is carrying on its business in a manner likely to be detrimental to the interests of its depositors or its creditors; (ii) is or is likely to become insolvent, or is likely to become unable to meet its obligations; (iii) has contravened any of the provisions of the BA; or (iv) has failed to comply with any condition attached to its license; or where MAS considers it in the public interest to do so.</p> <p>Under section 55 of the BA, MAS may, if it appears to be necessary or expedient in the public interest or in the interest of depositors or the financial system in Singapore, give directions or impose requirements on or relating to the operations or activities of, or the standards to be maintained by a bank or class of banks in Singapore. To mitigate risks associated with parallel-owned banking structures (e.g., diversion of a bank’s resources, conflicts of interest and affiliate transactions), MAS had, pursuant to section 55 of the BA, directed a bank to comply with certain requirements, including limits on the bank’s exposures to entities in its parallel-owned banking organizations.</p>
<b>EC7</b>	<p><b>The supervisor cooperates and collaborates with relevant authorities in deciding when and how to effect the orderly resolution of a problem bank situation (which could include closure, or assisting in restructuring, or merger with a stronger institution).</b></p>
Description and findings re EC7	<p>As the resolution authority, MAS has primary responsibility for exercising the resolution powers under the resolution regime to effect the orderly resolution of a distressed bank.</p> <p>The resolution strategies under the bank resolution regime in the BA include:</p> <p>(a) <b>Winding up a bank including a Singapore branch of a bank that is incorporated elsewhere (section 54A of the BA, read with Part X of the CA))</b></p> <p>MAS has the power to apply to the Singapore court to wind up a bank provided that certain grounds have been satisfied. As an illustration, these grounds include the exercise by MAS of any power set out in section 49(2) of the BA; the bank is unable to pay its debts; the bank is carrying on or has carried on banking business in Singapore in contravention of the provisions of the BA.</p> <p>(b) <b>Taking control of a bank including a Singapore branch of a bank that is incorporated elsewhere (section 49 of the BA)</b></p> <p>MAS or the statutory manager appointed by MAS may assume control of a bank under certain circumstances including the following:</p> <p>(i) The bank informs MAS that it is or is likely to become insolvent, or that it</p>

	<p>is or is likely to become unable to meet its obligations, or that it has suspended or is about to suspend payments;</p> <p>(ii) The bank becomes unable to meet its obligations, or is insolvent, or suspends payment; or</p> <p>(iii) MAS is of the opinion that the bank: (A) is carrying on business in a manner likely to be detrimental to the interests of its depositors or its creditors; (B) is or is likely to become insolvent, or that it is or is likely to become unable to meet its obligations, or that it is about to suspend payments; (C) has contravened any of the provisions of the BA; or (D) has failed to comply with any condition attached to its license.</p> <p>(c) <b>Transfer and disposition of business of a bank including a Singapore branch of a bank that is incorporated elsewhere (sections 55E to 55G of the BA)</b></p> <p><i>Compulsory transfer of business (sections 55E to 55G of the BA)</i></p> <p>The Minister in charge of MAS (the "Minister") is empowered to approve a determination by MAS (based on conditions and criteria set out in section 55E(1) of the BA) that the whole or any part of the business of a bank in Singapore (transferor) shall be transferred to another bank in Singapore or a company which has applied for or will be applying or a license to carry on banking business in Singapore (transferee).</p> <p>(d) <b>Transfer of shares in a bank (sections 55H to 55J of the BA)</b></p> <p>The Minister is empowered to transfer the shares of a bank incorporated in Singapore which are held by a person (transferor) to another person (transferee) in certain circumstances.</p> <p>The Minister will decide whether to transfer the shares if MAS makes a determination (based on conditions and criteria that are set out in section 55I(1) of the BA) that such shares ought to be transferred.</p> <p>(e) <b>Restructuring of share capital of a bank (sections 55K to 55M of the BA)</b></p> <p>(i) <i>Cancelling the whole or any part of the share capital of a bank incorporated in Singapore</i></p> <p>The Minister is empowered to restructure the share capital of a bank incorporated in Singapore, in certain circumstances by cancelling the whole or any part of the share capital of the bank which is not paid up or</p>
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	<p>if the paid-up capital is lost or unrepresented by available assets of the bank.</p> <p>The Minister will decide whether to restructure the share capital if MAS makes a determination (based on conditions and criteria set out in section 55L(1) of the BA) that the share capital ought to be restructured.</p> <p>(ii) <i>Requiring a bank incorporated in Singapore to issue new shares</i></p> <p>In addition, the Minister is empowered to restructure the share capital of a bank incorporated in Singapore by requiring the bank to issue new shares to specified subscribers.</p> <p>The Minister will decide whether to restructure the share capital if MAS makes a determination (based on the conditions and criteria that are set out in section 55L(2) of BA) that the share capital ought to be restructured.</p> <p>(f) <b>Prohibit a bank (including a bank branch) from carrying on banking business or from doing or performing any act or function connected with banking business or any aspect thereof or apply to the court for orders to stay certain proceedings with respect to a bank</b></p> <p>This includes orders to stay winding up proceedings or execution or distress proceedings against the property of the bank (section 54 of the BA).</p> <p>For the purposes of sub-paragraphs (c), (d) and (e) above, while the Minister may give an opportunity to be heard to parties affected by his actions, the Minister does not need the consent of such affected parties (including shareholders or creditors) to take the necessary action of transferring the shares or business of the bank or restructuring the capital of the bank.</p> <p>In a recent amendment to the MAS Act through the MAS (Amendment) Bill 2013 which was passed by Parliament in March 2013, MAS' resolution powers were further enhanced. The following powers were included as part of MAS' powers:</p> <ul style="list-style-type: none"> <li>• any direction issued to a bank, which has not been revoked by MAS, continues to be in force notwithstanding the bank surrendering its license;</li> <li>• MAS is empowered to issue directions to a person who is no longer licensed as a bank by MAS;</li> <li>• MAS is vested with the power to issue directions to a non-regulated entity that is incorporated or established in Singapore. This power applies where the entity</li> </ul>
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	<p>belongs to a group of companies of which a bank licensed by MAS is part of and where the entity is significant to the business of such a group;</p> <ul style="list-style-type: none"> <li>• MAS may apply to the Court to claw back the salary, remuneration or benefits given to a director or executive officer under certain circumstances, for example where the director or executive officer has failed to discharge his duties;</li> </ul> <p style="margin-left: 40px;">(iii) MAS may share information with a domestic authority or foreign resolution authority if the information is necessary in the resolution of a bank.</p> <p>The resolution regime envisages and provides for MAS to commit to achieving cooperative solutions with foreign resolution authorities, wherever possible, and taking intervention actions either individually or in the financial system, where such actions are consistent with MAS' objectives of fostering a sound and reputable financial center. MAS' resolution powers can be exercised in relation to the Singapore branch of a bank that is incorporated elsewhere to support a resolution carried out by a foreign home authority.</p>
<b>Additional criteria</b>	
<b>AC1</b>	<b>Laws or regulations guard against the supervisor unduly delaying appropriate corrective actions.</b>
Description and findings re AC1	<p>The laws and regulations pertaining to financial institutions in Singapore require the supervisory authority to take prompt and appropriate corrective actions. For example, section 55 of the BA empowers MAS to give directions or impose requirements on the operations, activities or standards to be maintained by a bank or banks, where it appears to MAS to be necessary or expedient in the public interest, or in the interest of depositors or the financial system in Singapore, to do so. It follows that where MAS fails to exercise its supervisory powers in taking prompt and corrective actions in the circumstances set out in section 55 of the BA, MAS is answerable to Parliament and the public for failing to do so. In addition, section 22 of the MAS Act grants immunity to MAS and its officers from legal suits so long as they act in good faith. This mitigates the concern that MAS may be restrained in taking prompt corrective actions in the face of potential lawsuits by financial institutions or depositors. Nonetheless, this does not imply that MAS can act arbitrarily. As mentioned, MAS has to act in good faith and abide by the usual due process of the law. For example, in cases of revocation of licenses, the due process of the law for fair hearing for the aggrieved party is abided. This, however, does not prevent MAS from taking immediate action to suspend the license of the party concerned pending the outcome of the hearing.</p> <p>Section 7 of the MAS Act states that the MAS Board shall furnish the Minister in charge of MAS (the "Minister") with such information as the Minister may require in respect of the duties and functions of MAS. MAS is ultimately accountable to</p>

	<p>Parliament through the Minister. The Minister will also have to answer any parliamentary questions posed by Members of Parliament on any subject related to MAS' operations in Parliament, including questions relating to any undue delays by MAS in taking corrective actions. In addition, section 34 of the MAS Act requires MAS, within 6 months from the close of its financial year, to transmit to the President, cause to present to Parliament and also publish a report by the MAS Board on the performance of the functions and duties of MAS.</p> <p>MAS has taken early intervention actions such as requiring banks to promptly rectify their risk management control weaknesses and system glitches. MAS has also analyzed the causes of significant system outages and taken supervisory actions in a timely manner. For example, following the outage of a bank's online and branch banking services on September 13, 2011, MAS reprimanded the bank on October 31, 2011 and directed it to adopt certain remedial measures, pursuant to section 55 of the BA. Following this incident, MAS also required other banks to review whether they had similar information technology deficiencies.</p>
<b>AC2</b>	<b>When taking formal corrective action in relation to a bank, the supervisor informs the supervisor of non-bank related financial entities of its actions and, where appropriate, coordinates its actions with them.</b>
Description and findings re AC2	MAS is the integrated supervisor of financial institutions across banking, insurance and capital markets sectors in Singapore. MAS supervisory departments cooperate closely, share relevant information and coordinate supervisory activities. Sharing of information on formal corrective action in relation to a bank and coordination of actions between the various departments take place at the MFSC meeting (a weekly senior management decision-making forum on matters relating to supervision and regulation of the financial sector).
<b>Assessment of Principle 11</b>	<b>Largely compliant</b>
Comments	<p>MAS has the full range of traditional supervisory powers to address unsafe and unsound practices or activities for application to locally incorporated banks. Governance arrangements at the branch level, however, are different than for incorporated banks and some of the supervisory instruments such as higher capital requirements are not available. This poses a challenge for Singapore given the importance of foreign branches, which hold significantly more assets than domestically incorporated banks. MAS has sought to offset these disadvantages by imposing high asset maintenance and liquidity requirements on weak foreign branches and by working with the head office and home supervisor of the foreign branch when it has supervisory concerns. MAS states that for serious issues, this approach will often result in an inspection team being sent to the branch by the home supervisor and/or the home office taking action including replacing weak staff in the branch.</p> <p>MAS has the power to require a bank or foreign branch to cease certain business</p>

	<p>activities and may impose higher prudential reserves requirements. It can replace officers and senior management and appoint a “statutory advisor or manager” either to oversee the management of the bank or be put in charge of running the bank.</p> <p>The mission has not identified any barriers to the MAS taking resolution actions vis-à-vis branches although any such actions are always more difficult given the possible impact of such actions on the foreign parent and its home jurisdiction.</p> <p>Because MAS is an integrated supervisor within the central bank, supervisory communications across the financial sectors are seamless.</p> <p>MAS’ approach is often to try moral suasion to effect change when an issue arises that is not a clear violation of a law or regulation and when there are no safety and soundness issues. While this approach of raising concerns with management and the board usually achieves the desired outcome in an efficient manner, such an approach might sometimes have the disadvantage of not sending clear signals to the industry of MAS disapproval of certain practices. Where a bank has not complied with the relevant laws and regulations, however, or is engaged in unsafe or unsound practices, MAS will take enforcement actions ranging from warnings, reprimands and fines to the imposition of supervisory conditions and license suspensions or revocations.</p> <p>MAS may revoke or suspend licenses on its own, with ex-post judicial review. MAS staff operate under an immunity clause that protects them from legal suit so long as they are operating in accordance with their official mandate.</p>
<b>Principle 12</b>	<b>Consolidated supervision.</b> An essential element of banking supervision is that the supervisor supervises the banking group on a consolidated basis, adequately monitoring and, as appropriate, applying prudential standards to all aspects of the business conducted by the banking group worldwide.
<b>Essential criteria</b>	
<b>EC1</b>	<b>The supervisor understands the overall structure of the banking group and is familiar with all the material activities (including non-banking activities) conducted by entities in the wider group, both domestic and cross-border. The supervisor understands and assesses how group-wide risks are managed and takes action when risks arising from the banking group and other entities in the wider group, in particular contagion and reputation risks, may jeopardize the safety and soundness of the bank and the banking system.</b>
Description and findings re EC1	MAS supervises locally-incorporated banking groups on both a solo and a group-wide basis, taking into account their domestic and cross-border operations. MAS’ consolidated supervision extends to the banking group’s insurance, securities and fund management activities as well as its foreign branches and subsidiaries. In addition, MAS imposes certain restrictions on a bank’s activities, including prohibiting a bank from conducting non-financial business (unless allowed under section 30 of the BA) and from acquiring or holding equity investments in a single company which



	<p>exceeds in the aggregate of 2 percent of its capital funds (section 31 of the BA). Group-wide supervision allows MAS to assess the impact of a bank's affiliation with its related group entities and the impact they may have on its safety and soundness.</p> <p>In practice, supervisors require local banking groups to be structured in a coherent manner that are transparent to both supervisors and the banks' creditors and customers so that the totality of risks can be properly assessed. Supervisors monitor and understand the banking group's structure and material activities through: (i) inspections; (ii) review of host supervisors' reports, internal/external auditors' reports and regulatory returns and internal risk reports from the group; (iii) regular engagements with the bank's Board and senior management, host supervisors and auditors; (iv) use of market information; and (v) review of the bank's application for opening a place of business, i.e. branch, agency or office outside Singapore (section 12 of the BA) or acquiring or holding (directly or indirectly) a major stake in any company (section 32 of the BA).</p> <p>As a home supervisor, MAS assesses the risks across the banking group through the CRAFT. CRAFT adopts a risk-based supervision approach that seeks to identify and address potential risks of significant activities that may affect the safety and soundness of the banking group. Supervisors take into consideration the behavior of the banking group, which affects its overall financial condition and may have contagion impact on its customers and counterparties, as well as the banking system.</p> <p>As part of the CRAFT assessment, supervisors identify inherent risks of a bank on both a solo and a group-wide basis in the areas of credit, liquidity, market, operational, technology, market conduct, and legal, reputational and regulatory risks. Supervisors also assess the adequacy of control factors to mitigate such risks in determining the overall net risk of the banking group.</p>
<b>EC2</b>	<p><b>The supervisor imposes prudential standards and collects and analyzes financial and other information on a consolidated basis for the banking group, covering areas such as capital adequacy, liquidity, large exposures, exposures to related parties, lending limits and group structure.</b></p>
Description and findings re EC2	<p>MAS imposes prudential standards on and supervises the local banking groups on a consolidated basis, including the collection and analysis of financial and other information.</p> <p>Pursuant to section 36 of the BA, local banking groups are required to comply with risk-based capital requirements (section 10), large exposure limits (section 29), equity investment limits (section 31), investment in major stake entities (section 32), immovable property limits (section 33), property sector exposure caps (section 35) and recommendations made by supervisors to banks concerning credits and investments (section 42), as well as to ensure adequate provision for non-performing assets (section 23) on both a solo and a consolidated basis. Under section 55 of the BA/MAS Notice 643, MAS has also imposed requirements for related party</p>

	<p>transactions.</p> <p>Under section 26 of the BA, MAS Notices issued pursuant to the BA and supervisory arrangements, supervisors require the local banking groups to submit information essential for effective consolidated supervision. This includes: (i) global consolidated financial information (including that of non-bank subsidiaries); (ii) annual business plans and information on the major activities, management structure and control systems of each foreign branch/banking subsidiary; (iii) authority limits issued to the foreign branch/banking subsidiary; (iv) systems for monitoring the operations of foreign branches/banking subsidiaries; and (v) internal risk reports. Supervisors review the information submitted to assess the banking groups' financial soundness and compliance with the relevant laws and regulations.</p> <p>Under section 27 of the BA and MAS 639A on Exposures and Credit Facilities to Related Concerns, banks are required to submit a quarterly statement to supervisors showing the particulars of all credit facilities granted to its related parties. The information enables supervisors to assess if any loans to related parties have been granted to the detriment of the depositors' interest.</p>
<b>EC3</b>	<p><b>The supervisor reviews whether the oversight of a bank's foreign operations by management (of the parent bank or head office and, where relevant, the holding company) is adequate having regard to their risk profile and systemic importance and there is no hindrance in host countries for the parent bank to have access to all the material information from their foreign branches and subsidiaries. The supervisor also determines that banks' policies and processes require the local management of any cross-border operations to have the necessary expertise to manage those operations in a safe and sound manner, and in compliance with supervisory and regulatory requirements. The home supervisor takes into account the effectiveness of supervision conducted in the host countries in which its banks have material operations.</b></p>
Description and findings re EC3	<p>As part of the annual CRAFT assessment of the locally-incorporated banks, supervisors review whether the Board and senior management of the banking group have maintained adequate oversight of the group's foreign operations and ensured that it has an effective group-wide risk management process, to identify, evaluate and manage all material risks on a timely basis. In line with the risk-based supervisory approach, supervisors identify operations that are of higher risk and determine whether management's oversight is commensurate with the bank's risk profile. Supervisors assess the adequacy of management's oversight of the bank's foreign operations through regular meetings with the bank's management, foreign supervisors and internal and external auditors, and through inspections. Supervisors also review the bank's compliance reports, which highlight regulatory breaches on a consolidated basis, internal and external audit reports on the foreign operations and management minutes. Supervisors also assess the quality of management at head office and foreign operations and the management's knowledge of the foreign jurisdiction and practices. Such assessments are taken into consideration in</p>

	<p>determining the quality and effectiveness of the Board and senior management on a 4-point scale (strong, medium strong, medium weak and weak). The rating and areas of supervisory concern are disclosed to the Board and senior management annually.</p> <p>During engagements with the locally-incorporated bank and external auditors, supervisors regularly determine whether the bank faces any impediment in accessing material information from its foreign branches and subsidiaries for risk management purposes. The locally-incorporated banks generally do not face hindrance in accessing material information from their foreign branches and subsidiaries for data collation and risk management purposes.</p> <p>Under MAS' <i>Guidelines on Fit and Proper Criteria</i>, the bank should satisfy supervisors that it has in place appropriate recruitment policies and adequate internal control systems and procedures that will reasonably ensure that its employees (including staff in foreign branches and subsidiaries) meet the fit and proper criteria, which includes the persons' competency and capability. Supervisors also assess whether the local management of cross-border operations have the necessary expertise and ensure compliance with the respective laws and regulations. In practice, local banking groups report to MAS all incidents of fraud or severe misconduct, including those in their foreign banking operations.</p> <p>MAS may leverage, to the extent feasible, on the work of host supervisors to achieve supervisory outcomes effectively and efficiently. MAS is more likely to rely on a host supervisor's work if the effectiveness and intensity of its supervision are strong. These may be assessed through MAS' interactions with the host supervisor via supervisory colleges, correspondences and other engagements. Other relevant considerations will be the host supervisor's level of cooperation (e.g., willingness to share information), compliance with international standards and its reputation and track record (e.g., in handling errant banks and banking crises/problems).</p>
<b>EC4</b>	<p><b>The home supervisor visits the foreign offices periodically, the location and frequency being determined by the risk profile and systemic importance of the foreign operation. The supervisor meets the host supervisors during these visits. The supervisor has a policy for assessing whether it needs to conduct on-site examinations of a bank's foreign operations, or require additional reporting, and has the power and resources to take those steps as and when appropriate.</b></p>
Description and findings re EC4	<p>As the home supervisor, MAS conducts on-site inspections of local banking groups' overseas branches and subsidiaries. The frequency and scope of these inspections are based on the following factors: (i) the materiality of the foreign office to the operations of the group; (ii) the relative importance of the foreign office to Singapore and the host country; (iii) the quality of host supervision; and (iv) complexity of the foreign operations and whether major weaknesses are reported in audit and host supervisory reports. In practice, supervisors inspect the major foreign branches/subsidiaries of the local banking groups at least once in three years, and in between, conduct supervisory visits and other meetings annually. It is MAS' practice</p>

	<p>to meet with host supervisors during such visits for an update on the foreign entity and to discuss key supervisory issues. MAS has also conducted joint inspections with host supervisors.</p> <p>MAS' power to perform inspections of any branch, agency or office outside Singapore opened by a locally-incorporated bank is given under section 43 of the BA. Under section 44A of the BA, the bank shall produce its books and provide such other information or facilities as supervisors may require for the conduct of the inspection. Supervisors have other powers under the BA to require additional reporting or information to assess that the bank is not in contravention of the BA provisions (sections 26 and 36).</p> <p>MAS has also established bilateral supervisory MoUs with several host supervisors of local banking groups, which allow for mutual exchange of information to facilitate consolidated supervision.</p> <p>MAS performs on-site examinations for new IRBA applications and approvals for IRBA adoption. As part of the review of banks' adoption of IRBA for credit risks, supervisors assess whether an on-site review of a foreign entity's processes is required, taking into account the materiality of the portfolio and whether the rating process is aligned with the head office.</p>
<b>EC5</b>	<p><b>The supervisor reviews the main activities of parent companies, and of companies affiliated with the parent companies, that have a material impact on the safety and soundness of the bank and the banking group, and takes appropriate supervisory action.</b></p>
Description and findings re EC5	<p>None of the local banking groups are subsidiaries of non-bank conglomerates. As an integrated supervisor, MAS supervises banking groups on a consolidated basis looking at the activities of both the parent company and all of its material affiliates. Any entity that wishes to become a controller of local banking groups will need to satisfy the criteria under section 15C of the BA and obtain the approval of the Minister in charge of MAS. MAS has to be satisfied that: (i) the person is fit and proper; and (ii) having regard to the likely influence of the person, the business of the bank will be or will continue to be conducted prudently and the provisions of the BA will be or will continue to be complied with in relation to such business. The Minister must also be satisfied that it is in the national interest to approve the application (see CP6 EC2 for details). In practice, supervisors will determine, amongst others, the activities of the corporate owner and that of its related entities, and assess the risk of financial contagion to the local banking group.</p> <p>Pursuant to section 15C of the BA, MAS can vary or impose additional conditions of approval on an existing controller of a local banking group. In the extreme case, MAS also has the power to object and/or make directions to an existing controller if MAS is satisfied that the controller ceases to be fit and proper, or the local banking group is no longer likely to conduct its business prudently or to comply with the rules under</p>

	the influence of the controller, amongst other provisions.
<b>EC6</b>	<p><b>The supervisor limits the range of activities the consolidated group may conduct and the locations in which activities can be conducted (including the closing of foreign offices) if it determines that:</b></p> <p><b>(a) the safety and soundness of the bank and banking group is compromised because the activities expose the bank or banking group to excessive risk and/or are not properly managed;</b></p> <p><b>(b) the supervision by other supervisors is not adequate relative to the risks the activities present; and/or</b></p> <p><b>(c) the exercise of effective supervision on a consolidated basis is hindered.</b></p>
Description and findings re EC6	<p>In 2000, MAS introduced a policy to separate the financial and non-financial businesses of banks. As set out in the MAS monograph on <i>Tenets of Effective Regulation</i>, the intent of this “anti-commingling policy” is to limit the risks posed by non-financial activities to the soundness of banks. Such risks may arise from contagion from non-financial activities or non-arms-length transactions between banks and their non-bank affiliates.</p> <p>Section 30 of the BA stipulates that no bank in Singapore shall carry on any business except for:</p> <ul style="list-style-type: none"> <li>(i) banking business;</li> <li>(ii) any business the conduct of which is regulated or authorized by MAS under any other written law;</li> <li>(iii) any business which is incidental to the business which the bank may carry on under (i) or (ii);</li> <li>(iv) any business or class of business as MAS may prescribe (under Part IX of the Banking Regulations 2001), subject to such conditions as may be prescribed; or</li> <li>(v) any other business as MAS may approve, subject to such conditions as MAS may impose.</li> </ul> <p>MAS does not normally allow the local banking groups to carry out non-financial activities unless allowed under section 30 of the BA.</p> <p>Locally-incorporated banks are required to seek MAS’ approval under section 32 of the BA to acquire or hold (directly or indirectly) major stakes in any company. This includes holdings in subsidiaries, which are incorporated in foreign locations. As part of the approval granted, supervisors consider the activities which the subsidiary conducts and has the power to revoke its approval if assessed to be necessary.</p> <p>Under section 12 of the BA, a local banking group shall require MAS’ approval to open a new place of business or change the location of an existing place of business in Singapore, or open a new branch, agency or office in any place outside Singapore. Supervisors will evaluate the risks the foreign entity may pose to the banking group. If approval is granted, conditions may be imposed to mitigate the risks arising from</p>

	<p>the bank's operations. Supervisors monitor the risks of such activities through MAS' supervisory process and based on information received from the bank and market information.</p> <p>In determining whether to allow a local banking group to establish a new office or to acquire a major stake entity in a new location, MAS will take into account, amongst other factors, whether the new office or entity and its activities are subject to host supervision. MAS reserves the power to revoke its approval and to require the foreign branch to cease operation where warranted.</p> <p>Under section 49 of the BA, if a bank is unable to meet its obligations or is (or is likely to become) insolvent, has contravened any provision of the BA, or if it is in the public interest to do so, MAS may require the bank to take any action or to do or not to do any act or thing in relation to its business, appoint one or more persons to advise the bank on the proper management of its business, assume or appoint one or more persons to assume control of and manage the business of the bank.</p>
<b>EC7</b>	<b>In addition to supervising on a consolidated basis, the responsible supervisor supervises individual banks in the group. The responsible supervisor supervises each bank on a stand-alone basis and understands its relationship with other members of the group.</b>
Description and findings re EC7	In addition to consolidated supervision, MAS supervises each bank on a stand-alone basis based on its risk profile and systemic importance, and understands its relationship with other entities in the banking group. MAS collects and reviews financial information and risk reports on both a solo and a consolidated basis. MAS also monitors intra-group/related party transactions pursuant to sections 27 and 29 of the BA. In addition, the group's internal and external auditors should audit each bank on a stand-alone basis.
<b>Additional criteria</b>	
<b>AC1</b>	<b>For countries which allow corporate ownership of banks, the supervisor has the power to establish and enforce fit and proper standards for owners and senior management of parent companies.</b>
Description and findings re AC1	<p>Pursuant to section 15C of the BA, MAS assesses whether a prospective controller of a financial holding company is a fit and proper person (see CP12 EC5). MAS' fit and proper standards are established in the <i>Guidelines on Fit and Proper Criteria</i>.</p> <p>Under regulation 30 of the Banking (Corporate Governance) Regulations 2005, the Board Nominating Committee of a financial holding company (FHC) shall assess that each director and key senior management such as the CEO, chief financial officer and chief risk officer is fit and proper for the office. Regulation 35 sets out that in determining whether to approve a proposed appointment, MAS shall have regard to whether the person is a fit and proper person to hold the office. In practice, when reviewing the application, supervisors conduct independent screening of the person with other regulators and agencies. Such screening is re-performed when MAS</p>

	processes an application for the re-appointment of the person.
<b>Assessment of Principle 12</b>	<b>Compliant</b>
Comments	<p>The MAS fully meets the principle that it supervises each banking group on a consolidated basis. It undertakes intensive supervision of locally incorporated banks on both a solo and group-wide basis, and performs risk assessments of each bank on a standalone and consolidated basis. It also monitors intra-group and related party transactions. It requires the management and board of the parent bank to monitor and exercise effective oversight of the bank's foreign operations.</p> <p>MAS examines major foreign branches and subsidiaries of locally incorporated banks on average once every three years and conducts supervisory visits and meetings at least annually. It regularly engages with host supervisors responsible for the supervision of the foreign operations of locally incorporated banks and has established bilateral supervisory relationships with several host supervisors that enable the mutual exchange of information. This in turn facilitates consolidated supervision. Moreover, because responsibility for the supervision and regulation of the insurance, and securities sectors is organized under MAS, there is a seamless exchange of information regarding the non-bank activities of the banking group.</p>
<b>Principle 13</b>	<b>Home-host relationships.</b> Home and host supervisors of cross-border banking groups share information and cooperate for effective supervision of the group and group entities, and effective handling of crisis situations. Supervisors require the local operations of foreign banks to be conducted to the same standards as those required of domestic banks.
<b>Essential criteria</b>	
<b>EC1</b>	<b>The home supervisor establishes bank-specific supervisory colleges for banking groups with material cross-border operations to enhance its effective oversight, taking into account the risk profile and systemic importance of the banking group and the corresponding needs of its supervisors. In its broadest sense, the host supervisor who has a relevant subsidiary or a significant branch in its jurisdiction and who, therefore, has a shared interest in the effective supervisory oversight of the banking group, is included in the college. The structure of the college reflects the nature of the banking group and the needs of its supervisors.</b>
Description and findings re EC1	<p>MAS hosts supervisory college meetings for the Singapore-incorporated banking groups involving supervisors in the region where the banks have sizeable or strategic operations. These meetings provide a platform for home and host supervisors to exchange information, discuss supervisory issues and coordinate the cross-border supervision of the local banking groups.</p> <p>MAS hosted the most recent colleges for the local banking groups in April 2012. In organizing the supervisory colleges, MAS has benchmarked against BCBS' <i>Good practice principles on supervisory colleges</i>, and will continue to review the college</p>



	<p>structure periodically so that it remains appropriate for each banking group and meets the needs of its supervisors. The key objectives were to provide a platform for supervisors to share their risk assessments of the local banking groups in their respective jurisdictions, help supervisors develop a better understanding of the risk profile of the banking group, and formulate appropriate supervisory plans to address any shortcomings. During the colleges, a session was allocated for senior management of the local banking groups to provide an overview of their group's business strategies, risk outlook, and risk management and controls. MAS followed up with supervisory letters to the individual local banking groups and their host supervisors after the college, and engaged the former on their action plans to address the supervisory concerns raised at the colleges.</p>
<b>EC2</b>	<p><b>Home and host supervisors share appropriate information on a timely basis in line with their respective roles and responsibilities, both bilaterally and through colleges. This includes information both on the material risks and risk management practices of the banking group and on the supervisors' assessments of the safety and soundness of the relevant entity under their jurisdiction. Informal or formal arrangements (such as memoranda of understanding) are in place to enable the exchange of confidential information.</b></p>
Description and findings re EC2	<p>In addition to the sharing of information at supervisory colleges for the local banking groups (see EC1 above), there are regular meetings across various levels of seniority between MAS and foreign supervisors, including bilateral meetings, supervisory roundtables and regional groupings. MAS has established bilateral supervisory MoUs with several host supervisors of the local banking groups, which allow for mutual exchange of information to facilitate consolidated supervision. For supervisory colleges it hosted, MAS has, with reference to BCBS' <i>Good practice principles on supervisory colleges</i>, requested host supervisors attending the colleges to sign college-specific confidentiality agreements. This is to facilitate the sharing of appropriate information with respect to the principal risks and risk management practices of each banking group.</p> <p>MAS notifies host supervisors when there are plans to inspect overseas branches or subsidiaries of the local banking groups, and schedules meetings with the host supervisory teams during such visits. MAS shares inspection reports on the overseas operations with host supervisors upon completion of such inspections. In turn, MAS receives inspection reports or supervisory assessments from host supervisors with regard to the local banking groups' operations in their jurisdictions, or through the local banking groups. Contact information of respective supervisory teams in host jurisdictions are maintained and updated to facilitate exchange of information or supervisory cooperation on any ad-hoc supervisory matters on the local banking groups.</p> <p>In its capacity as host supervisor for foreign banks operating in Singapore, MAS shares inspection reports on them with their respective head offices and home supervisors. MAS also actively participates in supervisory colleges and crisis CMG meetings hosted by the respective home supervisors for foreign banks with larger or</p>



	more complex activities in Singapore. For instance, MAS is participating in the cross-border CMG meetings of six globally systemic banks. MAS has also established bilateral supervisory MoUs and informal arrangements with home supervisors to facilitate cross-border cooperation and exchange of information.
<b>EC3</b>	<b>Home and host supervisors coordinate and plan supervisory activities or undertake collaborative work if common areas of interest are identified in order to improve the effectiveness and efficiency of supervision of cross-border banking groups.</b>
Description and findings re EC3	<p>During the supervisory colleges for the local banking groups, supervisors share their supervisory plans for the entities within the group and this facilitates the coordination of supervisory activities for common areas of interest. On an ongoing basis, MAS maintains regular dialogues with foreign supervisors through email/phone correspondences, official letters and ad-hoc meetings.</p> <p>As a further elaboration from EC2, MAS periodically conducts inspections of overseas subsidiaries or branches of the local banking groups, and welcomes host supervisors to join in these inspections. For instance, MAS and host supervisors have conducted joint supervisory validations of the Basel II IRBA systems used in the major foreign subsidiaries of the local banking groups, as well as non-IRBA related on-site inspections of internal controls and risk management systems.</p> <p>There are similar arrangements in place in MAS' role as host supervisor. MAS shares its supervisory plan for the relevant banks at colleges that it participates in as host supervisor. MAS also takes into account plans by home supervisors to visit the Singapore operations of their domestic banks in MAS' supervisory plan. MAS will arrange to meet the on-site teams when they are here to share supervisory information and assessment of the Singapore operations, and may also request to participate in discussions between the home supervisors and the foreign banks.</p> <p>These arrangements have helped strengthen the effectiveness and efficiency of MAS' consolidated supervision of local banking groups and oversight of large international players that are systemic in Singapore's banking system.</p>
<b>EC4</b>	<b>The home supervisor develops an agreed communication strategy with the relevant host supervisors. The scope and nature of the strategy reflects the risk profile and systemic importance of the cross-border operations of the bank or banking group. Home and host supervisors also agree on the communication of views and outcomes of joint activities and college meetings to banks, where appropriate, to ensure consistency of messages on group-wide issues.</b>
Description and findings re EC4	MAS has established a range of communication channels with the relevant host supervisors of the Singapore-incorporated banking groups, taking into consideration the risk profile and systemic importance of the cross-border operations. On an ongoing basis, MAS maintains regular dialogues with foreign supervisors through email and phone correspondences, official letters and ad-hoc meetings.

	<p>As a follow-up to the supervisory colleges of the local banking groups, MAS has written to the banks to highlight the common issues raised by host supervisors during the meetings and encourage the banks to engage the relevant host supervisors on the issues. MAS has also written to the host supervisors to provide a summary of the common issues raised and the banks' remedial actions, particularly in response to issues raised by individual supervisors. This is to ensure the consistency of messages conveyed to the bank on group-wide issues.</p> <p>As for joint activities conducted such as the supervisory validations of the Basel II IRBA systems used in the major foreign subsidiaries of the local banking groups, MAS and the relevant host supervisor have issued joint reports to the banking group to set out their findings and recommendations. Several banks commented on the usefulness of such feedback.</p>
<b>EC5</b>	<p><b>Where appropriate, due to the bank's risk profile and systemic importance, the home supervisor, working with its national resolution authorities, develops a framework for cross-border crisis cooperation and coordination among the relevant home and host authorities. The relevant authorities share information on crisis preparations from an early stage in a way that does not materially compromise the prospect of a successful resolution and subject to the application of rules on confidentiality.</b></p>
Description and findings re EC5	<p>MAS is both the supervisor and the resolution authority. MAS is working towards a multilateral sharing arrangement amongst EMEAP-WGBS members on resolution planning information, via a resolution planning survey to be completed and shared amongst the member countries. MAS will also be engaging host supervisors bilaterally on bank-specific resolution issues such as the systemic importance and relevance of the Singapore operations in the host jurisdictions and their financial systems. These inputs will inform the formulation of resolution plans for the local banking groups.</p> <p>MAS has arrangements with host supervisors to update one another on supervisory contacts and facilitate communication on an ongoing basis, including cooperation in handling crises where relevant. Such an exchange facilitates consolidated supervision and enhances cooperation among supervisors to support effective supervision and crisis preparedness of the local banking groups.</p>
<b>EC6</b>	<p><b>Where appropriate, due to the bank's risk profile and systemic importance, the home supervisor, working with its national resolution authorities and relevant host authorities, develops a group resolution plan. The relevant authorities share any information necessary for the development and maintenance of a credible resolution plan. Supervisors also alert and consult relevant authorities and supervisors (both home and host) promptly when taking any recovery and resolution measures.</b></p>
Description and findings re EC6	<p>To strengthen the process for recovery and resolution planning, MAS has required the local banking groups to submit their recovery plans. They are also required to submit detailed information such as their critical functions and cross-border inter-</p>

	<p>dependencies, as well as to identify critical business activities or functions within the group, including an assessment of the feasibility of separating or isolating critical business activities or functions under a restructuring or resolution scenario, to facilitate the development of a resolution plan. MAS has engaged the local banking groups as part of an iterative process to formulate MAS' rules on recovery and resolution planning.</p> <p>MAS also engages key host supervisors of the local banking groups to understand their crisis management and resolution regimes, and systemic relevance of the local banking groups' operations in host countries. As mentioned in EC 5 above, MAS is working towards a multilateral sharing arrangement amongst EMEAP-WGBS members on resolution planning. MAS will subsequently engage host supervisors bilaterally on bank-specific resolution issues such as the systemic importance and relevance of the Singapore operations in the host jurisdictions and their financial systems.</p> <p>For foreign banks, MAS takes into account any recovery and resolution planning work undertaken by the home authority such as those for globally systemic banks as part of their CMG. It is MAS' policy to ensure a high level of cooperation and understanding between MAS and other supervisors and resolution authorities for cross-border resolution. During times of crisis, MAS will step up the level of engagement, particularly with supervisors or resolution authorities of banks in distress. MAS will also work with the home authority to implement a global resolution strategy such as through the CMG of a globally systemic bank.</p>
<b>EC7</b>	<b>The host supervisor's national laws or regulations require that the cross-border operations of foreign banks are subject to prudential, inspection and regulatory reporting requirements similar to those for domestic banks.</b>
Description and findings re EC7	<p>A foreign bank in Singapore, be it a branch or subsidiary, is subject to prudential, inspection and regulatory reporting requirements that are similar to those for the Singapore-incorporated banks. Foreign banks have to comply similarly with prudential requirements under the BA such as the large exposures limit (section 29), equity investment limit (section 31), restrictions on investments in companies undertaking non-financial businesses (section 32), immovable property limit (section 33) and property sector exposure limit (section 35).</p> <p>Under section 43 of the BA, foreign banks in Singapore are subject to inspections by MAS, the frequency of which is determined by supervisors' assessment of their impact and risk (see CP8 EC1). Similar to the regulatory reporting requirements for Singapore-incorporated banks, foreign banks are required to submit the whole range of regular returns, including their statement of assets and liabilities that include off-balance sheet items (MAS Notice 610), minimum cash balance (MAS Notice 658), minimum liquid assets (MAS Notice 613), and exposures to single counterparty groups (MAS Notice 639A), as well as details on their top 100 borrowers.</p>
<b>EC8</b>	<b>The home supervisor is given on-site access to local offices and subsidiaries of a</b>

	<b>banking group in order to facilitate their assessment of the group’s safety and soundness and compliance with customer due diligence requirements. The home supervisor informs host supervisors of intended visits to local offices and subsidiaries of banking groups.</b>
Description and findings re EC8	<p>Under section 45 of the BA, in relation to a bank incorporated outside Singapore or a foreign-owned bank incorporated in Singapore, a home supervisor may, with the prior approval of MAS, conduct an inspection of any branch or office of that bank in Singapore. The following conditions shall be satisfied: (i) the inspection is required by the home supervisor for the sole purpose of carrying out its supervisory functions; (ii) the home supervisor is prohibited by its domestic laws from disclosing information obtained by it in the course of the inspection to any other person or the home supervisor gives a written undertaking to MAS to maintain the confidentiality of the information obtained; and (iii) the home supervisor has given a written undertaking to MAS to comply with the provisions of the BA and such conditions as MAS may impose. MAS has approved all on-site examination requests of home supervisors.</p> <p>Before visiting a foreign office or subsidiary of a Singapore-incorporated banking group, MAS similarly seeks approval from or notifies the host supervisor, depending on the latter’s requirement. As highlighted in previous ECs, it is MAS’ practice to meet the host supervisor for an update on the foreign entity and to discuss key supervisory issues. Following the visit, MAS shares the inspection report or supervisory letter with the host supervisor.</p>
<b>EC9</b>	<b>The host supervisor supervises booking offices in a manner consistent with internationally agreed standards. The supervisor does not permit shell banks or the continued operation of shell banks.</b>
Description and findings re EC9	<p>MAS has a strict bank licensing and admission regime, and prohibits shell banks from operating in Singapore. In processing new banking license applications, MAS takes into consideration a bank’s proposed business plans and staffing. As a matter of policy, MAS will only admit banks that will generate real economic activities or value in their Singapore operations. MAS looks to the exercise of consolidated oversight by its head office or parent bank and home supervisor, but at the same time also requires foreign banks operating in Singapore to have a local management team that MAS holds accountable for the local operations. The responsibilities for the local chief executive officer and management of foreign banks are set out in MAS Notice 622A on <i>Appointment of Chief Executives of Branches of Banks incorporated outside of Singapore</i>.</p> <p>Where foreign banks use their Singapore entities as booking offices for certain transactions, MAS ensures that these activities are in addition to and complement their activities and businesses that are originated locally. The balance sheet, exposures and positions of the Singapore operations are subject to a common set of prudential requirements and limits, regardless of whether they are originated here or elsewhere. As part of its ongoing supervision, MAS also assesses the effectiveness of</p>

	risk controls with respect to offshore transactions booked in the Singapore operations, and hold the local management teams accountable for them.
<b>EC10</b>	<b>A supervisor that takes consequential action on the basis of information received from another supervisor consults with that supervisor, to the extent possible, before taking such action.</b>
Description and findings re EC10	Information received by MAS from foreign supervisors in the course of its supervision is treated as confidential. In the event that MAS needs to take consequential action on the basis of such information, MAS will consult with the foreign supervisor, as appropriate, before taking such action.
<b>Assessment of Principle 13</b>	<b>Compliant</b>
Comments	The MAS fully meets the principle that it share information with home and host supervisors of cross-border banking groups and that it apply the same regulatory and supervisory standards to the local operations of foreign banks that it applies to locally incorporated banks. Through its active involvement on the Basel Committee, regional supervisory groups, supervisory colleges and crisis management groups, it has established itself internationally as a strong and credible supervisor, which has in turn fostered constructive engagements with foreign supervisors. It is in regular communication with foreign supervisors and routinely shares its examination reports with the home supervisors of foreign banks operating in Singapore and in turn, receives inspection reports from host supervisors regarding the foreign operations of Singapore banks. It is presently working with supervisors in the region on a multilateral sharing arrangement on resolution planning information. MAS is requesting locally incorporated banks to develop recovery and resolution plans, although they are not yet completed.
<b>PRUDENTIAL REGULATIONS AND REQUIREMENTS</b>	
<b>Principle 14</b>	<b>Corporate governance.</b> The supervisor determines that banks and banking groups have robust corporate governance policies and processes covering, for example, strategic direction, group and organizational structure, control environment, responsibilities of the banks' Boards and senior management, and compensation. These policies and processes are commensurate with the risk profile and systemic importance of the bank.
<b>Essential criteria</b>	
<b>EC1</b>	<b>Laws, regulations or the supervisor establish the responsibilities of a bank's Board and senior management with respect to corporate governance to ensure there is effective control over the bank's entire business. The supervisor provides guidance to banks and banking groups on expectations for sound corporate governance.</b>
Description and findings re EC1	MAS' <i>Guidelines on Risk Management Practices—Board and Senior Management</i> (Board and Management Guidelines), which apply to all banks, set out the corporate governance roles of Board and senior management as they pertain to risk management. The Board is responsible for overseeing the governance of risk in the

bank. The Board should ensure that senior management maintains a sound system of risk management and internal controls to safeguard stakeholders' interests and the bank's assets, and should determine the nature and extent of the significant risks that the Board is willing to take in achieving its strategic objectives. The senior management bears the general executive responsibility for the day-to-day conduct of business and affairs of the bank. It is responsible for creating an accountability framework for the staff, but should be cognizant that it is ultimately accountable to the Board for the performance of the bank.

Under the 2005 CG Regulations, MAS requires a locally-incorporated bank to establish a Board and Board committees such as Nominating Committee, Remuneration Committee, Audit Committee and Risk Management Committee. The responsibilities of the Board are set out in MAS' *Guidelines on Corporate Governance for Banks, Financial Holding Companies and Direct Insurers which are incorporated in Singapore* (CG Guidelines). The Board is chiefly responsible for setting corporate strategy, reviewing managerial performance and maximizing returns for shareholders at an acceptable level of risk, while preventing conflicts of interest and balancing competing demands on the bank. The CG Regulations set out the responsibilities of each Board committee. See examples below:

- The Nominating Committee shall identify the candidates and review all nominations for the appointment of directors, members of each board committee and key executive officers such as the chief executive officer, chief financial officer and chief risk officer, using criteria set out in the CG Regulations (regulation 13);
- The Remuneration Committee shall recommend a framework for determining the remuneration of directors and executive officers of the bank (regulation 16);
- The Audit Committee shall be responsible for the adequacy of external and internal audit functions of the bank, including reviewing the scope and results of audits carried out in respect of the operations of the bank and the independence and objectivity of the bank's external auditors (regulation 17); and
- The Risk Management Committee shall be responsible for overseeing the establishment and the operation of an independent risk management system for managing risks on an enterprise-wide basis, and the adequacy of the risk management function of the bank, including ensuring that it is sufficiently resourced to monitor risk by the various risk categories and that it has appropriate independent reporting lines (regulation 17A).

The CG Guidelines set out the supervisory expectations for sound corporate governance, and provide guidance on the responsibilities of the Board, its committees and senior management. For instance, Principle 1 of the CG Guidelines

	provides guidance on the need for an effective Board to lead and control the bank and that management remains accountable to the Board. Principle 17 of the CG Guidelines sets out that the chief risk officer should have a reporting line to the Board and his role should be distinct from other executive functions and business line responsibilities.
<b>EC2</b>	<b>The supervisor regularly assesses a bank's corporate governance policies and practices, and their implementation, and determines that the bank has robust corporate governance policies and processes commensurate with its risk profile and systemic importance. The supervisor requires banks and banking groups to correct deficiencies in a timely manner.</b>
Description and findings re EC2	<p>From inspections and off-site reviews, supervisors assess whether a bank (including foreign banks) has adequate and effective corporate governance policies and practices that are commensurate with the risk profile, size and complexity of its operations. Supervisors also determine the degree to which the bank has implemented these policies and maintained adequate risk oversight of its business activities. For deficiencies noted in the bank's policies and practices, supervisors will require the bank to take effective remedial actions on a timely basis.</p> <p>Supervisors review a locally-incorporated bank's submission of its ICAAP which includes its risk governance processes and frameworks, as well as internal audit reports relating to ICAAP, stress testing frameworks and processes, and risk management and internal controls. Supervisors also review the bank's self-assessment against the CG Regulations and CG Guidelines to identify areas for improvement. Where the bank's existing practices fall short of supervisory expectations, it is required to provide information on its plans to address these deficiencies.</p> <p>Supervisors meet the locally-incorporated banks' Board committees, including the Nominating, Audit and Risk Management Committees, annually to discuss key issues. Supervisors also review minutes of the Board and Board committee meetings to assess the robustness of discussions and to ensure issues are adequately escalated in a timely manner.</p> <p>These off-site and on-site assessments are taken into consideration in supervisors' assessment of a bank as a whole under MAS' CRAFT. Supervisors assess the strength of the Board and management's oversight functions as part of assessing the overall net risk of the bank. Supervisors will meet the bank's Board/senior management to disclose the CRAFT ratings and convey their supervisory observations and concerns.</p>
<b>EC3</b>	<b>The supervisor determines that governance structures and processes for nominating and appointing Board members are appropriate for the bank and across the banking group. Board membership includes experienced non-executive members, where appropriate. Commensurate with the risk profile and systemic importance, Board structures include audit, risk oversight and remuneration committees with experienced non-executive members.</b>
Description and	MAS' Board and Management Guidelines (applicable to all banks) set out that the



findings re EC3	<p>Board should comprise members who collectively bring a balance of expertise, skills, experience and perspectives. There should be a strong element of independence on the Board with no concentration of power in any particular member or a group of members of the Board.</p> <p>MAS requires a locally-incorporated bank to establish a Nominating Committee, Remuneration Committee, Audit Committee and Risk Management Committee. The committees' responsibilities are set out in the CG Regulations (see CP14 EC1).</p> <p>Under the CG Regulations, MAS' prior approval is required for the appointment of all directors, chairman of the board of directors, members of the Nominating Committee, chief executive officer, deputy chief executive officer, chief financial officer and chief risk officer. In approving the appointment or re-appointment of a person for such a position, supervisors will review the deliberations of the Nominating Committee and conduct independent screening with other regulators and agencies, to assess whether he/she is fit and proper to hold the office.</p> <p>The CG Regulations set out the composition requirements for the Board and Board committees. For instance, at least a majority of the directors on the Board are required to be independent directors. The CG Regulations also set out the criteria for a director to be considered independent. Regulation 2(1) defines an independent director to be one who: (i) is independent from any management and business relationship with the bank; (ii) is independent from substantial shareholders of the bank; and (iii) has not served on the board of the bank for a continuous period of nine years or longer.</p> <p>In assessing the suitability of a candidate for a bank directorship, MAS requires the Nominating Committee to ensure that the proposed candidate is a fit and proper person and is qualified for the office, taking into account various factors, including the person's track record, age, experience, capabilities, skills and independence status.</p> <p>In assessing the continued suitability of existing directors, MAS requires the Nominating Committee to determine, at least annually, whether each director remains fit and proper and qualified for the office and to reassess their independence status. Each term of directorship is for a maximum period of three years. The bank is required to seek MAS' prior approval for each appointment and re-appointment of directors.</p>
<b>EC4</b>	<b>Board members are suitably qualified, effective and exercise their "duty of care" and "duty of loyalty."</b>
Description and findings re EC 4	Under regulation 13 of the CG Regulations, the Nominating Committee is required to assess whether a proposed candidate for directorship is qualified for the office, taking into account the candidate's track record, age, experience, capabilities, skills and such other relevant factors as may be determined by the Nominating



	<p>Committee. The CG Guidelines provide further guidance on the type of expertise and experience that will enable the Board committees to discharge their responsibilities.</p> <p>Under section 157 of the CA, a director is required to act honestly and use reasonable diligence in the discharge of the duties of his office. Further, the CG Guidelines set out that all directors must objectively take decisions in the interests of the company.</p> <p>The CG Guidelines provide further guidance that each director should receive appropriate training (including his duties as a director and how to discharge those duties) when he is first appointed to the Board. The Nominating Committee is responsible for developing a framework to identify the skills that the Board collectively needs in order to discharge their responsibilities effectively, taking into account the complexity of the institution's risk profile, business operations and future business strategy. The Board should also develop a continuous professional development program for all directors to ensure that they are equipped with the appropriate skills and knowledge to perform their roles on the Board and Board Committees effectively. Such programs may include providing the directors with a detailed overview and risk profile of the bank's significant or new business lines and an update on regulatory developments in jurisdictions that the bank has a presence in.</p> <p>To reinforce the responsibilities of bank boards, the MAS Academy in consultation with the Nominating Committees of the locally-incorporated banks, has organized a Bank Directors' Program. The series of seminars covered topics such as lessons from the global financial crisis, effectiveness of Boards, supervisory expectations of Boards and risk management. Speakers included a number of former heads of supervision from developed jurisdictions.</p>
<b>EC5</b>	<p><b>The supervisor determines that the bank's Board approves and oversees implementation of the bank's strategic direction, risk appetite<sup>12</sup> and strategy, and related policies, establishes and communicates corporate culture and values (e.g., through a code of conduct), and establishes conflicts of interest policies and a strong control environment.</b></p>
Description and findings re EC5	<p>Under the Board and Management Guidelines, the Board has the ultimate responsibility to: (i) approve and oversee implementation of the bank's overall strategic direction, risk appetite and strategy, and related policies; (ii) establish and communicate corporate culture and values (e.g., through a code of conduct); and (iii) establish conflicts of interest policies and a strong control environment.</p>

<sup>12</sup> "Risk appetite" reflects the level of aggregate risk that the bank's Board is willing to assume and manage in the pursuit of the bank's business objectives. Risk appetite may include both quantitative and qualitative elements, as appropriate, and encompass a range of measures. For the purposes of this document, the terms "risk appetite" and "risk tolerance" are treated synonymously.

	<p>Under MAS Notice 637 on <i>Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore</i>, the Board is required to define the bank's risk appetite and establish an acceptable level of risks that the bank may take, as well as the capital strategy of the bank. The Board shall review and approve the bank's target level and composition of capital, and the process for setting and monitoring such targets at least annually, to ensure congruence between the risk profile and the capital adequacy of the bank. The bank's senior management is required to, amongst others: (i) establish robust policies and procedures to identify, measure and report all material risks; (ii) establish a method for monitoring compliance with internal policies on risk assessment; (iii) institute a strong internal control culture throughout the bank; and (iv) communicate the internal controls and written policies and procedures throughout the bank.</p> <p>The CG Guidelines provide further guidance that the Board should set out clearly the roles, responsibilities, accountability and reporting relationships of senior management and ensure that the delegation of authority from the Board to the senior management is formal and clear. The Board is also tasked to set corporate values that promote a high level of professional conduct of the business. These values should emphasize, amongst others, integrity, honesty and proper conduct at all times, both with respect to internal dealings and external transactions, including situations where there are potential conflicts of interest. Such values should discourage excessive risk taking activities, promote open discussions and encourage issues to be raised upwards within the organization where appropriate. The Board should oversee the establishment of policies to strengthen the values of the bank.</p> <p>In supervising a bank (including foreign banks), supervisors take into account the implementation of the Board and Management Guidelines in assessing the quality of Board and senior management oversight. During on-site examinations or as part of the annual off-site review of banks' ICAAP, supervisors determine that the Board approves and regularly reviews the bank's risk appetite statement and framework. Supervisors assess the control environment and strength of Board and senior management's oversight over the strategic direction, risk appetite and related policies. Supervisors also review the link between risk appetite, strategic objectives, capital planning and operational budget planning.</p>
<b>EC6</b>	<b>The supervisor determines that the bank's Board, except where required otherwise by laws or regulations, has established fit and proper standards in selecting senior management, maintains plans for succession, and actively and critically oversees senior management's execution of Board strategies, including monitoring senior management's performance against standards established for them.</b>
Description and findings re EC6	MAS' Board and Management Guidelines provide that the Board should establish fit and proper standards in appointing senior management and ensure adequate succession planning to promote smooth management transition and minimize

	<p>operational disruptions arising from changes in key personnel. While the Board may delegate to senior management the authority to run the bank's day-to-day operations, the Board bears the overall responsibility for ensuring that the bank's operations comply with Board approved policies, applicable laws and regulations, and are consistent with the industry's sound and prudent practices.</p> <p>Under the CG Regulations, the Board Nominating Committee is responsible for identifying and reviewing all nominations for the appointment of key executive officers, in particular, the CEO, deputy CEO, chief financial officer and chief risk officer, and assessing whether the candidates are fit and proper to hold office. MAS' <i>Guidelines on Fit and Proper Criteria</i> apply to key executive officers of a bank. The bank should satisfy MAS that it has in place appropriate recruitment policies and adequate internal control systems and procedures that will reasonably ensure that its employees meet the fit and proper criteria.</p> <p>Regulation 16(3) of the CG Regulations requires the Remuneration Committee to ensure that the remuneration package of each executive officer of the bank is aligned to the job functions, sensitive to the time horizon of risks and linked to corporate and individual performance. As set out in the CG Guidelines, the Board is responsible for reviewing management performance and the appointment and removal of senior management of the bank.</p> <p>The CG Guidelines set out MAS' expectations for the Board to carry out succession planning for itself and the CEO to ensure continuity of leadership.</p> <p>Supervisors determine that the above requirements and supervisory expectations are met from inspections and off-site reviews. Supervisors review the minutes of the Board and Board committees to determine that the directors: (i) constructively challenge and help develop proposals on strategy; and (ii) review the performance of management in meeting agreed goals and objectives and monitor the reporting of performance. This assessment is incorporated in MAS' CRAFT, where supervisors assess the strength of the Board and management's oversight functions as part of assessing the overall net risk of the bank (see CP14 EC2).</p>
<b>EC7</b>	<p><b>The supervisor determines that the bank's Board actively oversees the design and operation of the bank's and banking group's compensation system, and that it has appropriate incentives, which are aligned with prudent risk taking. The compensation system, and related performance standards, are consistent with long-term objectives and financial soundness of the bank and is rectified if there are deficiencies.</b></p>
Description and findings re EC7	<p>MAS' Board and Management Guidelines provide that the Board should oversee the design and operation of the bank's remuneration policies and ensure that they: (i) are in line with long-term strategic objectives, financial soundness and corporate values of the bank; (ii) do not give rise to conflicts between the objectives of the bank and the individual interests of directors and senior management; and (iii) do</p>

	<p>not create incentives for excessive risk taking behavior.</p> <p>Regulation 16(3) of the CG Regulations requires locally-incorporated banks to establish a Board Remuneration Committee (RC) to oversee the compensation system. The RC is responsible for recommending a framework for determining the remuneration of the directors and executive officers of the bank. The RC shall ensure that the remuneration of each executive officer of the bank is: (i) aligned with the risks that the bank undertakes in its business that is relevant to the specific job function undertaken by the executive officer; (ii) sensitive to the time horizon of risks that the bank is exposed to which includes ensuring that variable compensation payments shall not be finalized over short periods of time when risks are realized over long periods of time; and (iii) linked to his/her personal performance, the performance of his/her specific job function as a whole and the overall performance of the bank. The RC is required to review the remuneration practices of the bank annually to ensure that they operated as intended in line with the remuneration framework.</p> <p>In supervising a bank, supervisors take into account the bank's implementation of the Board and Management Guidelines. Supervisors review the terms of reference of the RC to ensure that its responsibilities include the oversight of the design of the bank's and banking group's compensation system, and related performance standards that are consistent with its long term objectives and financial soundness. Supervisors also review minutes of the RC's meetings and relevant Board meetings proceedings to assess the adequacy of oversight over the bank and banking group's compensation system. In addition, supervisors review the bank's self-assessment against the CG Regulations and CG Guidelines to identify areas for improvement in the compensation framework. Where the bank's existing practices fall short of supervisory expectations, it is required to provide information on its plans to address the deficiencies.</p>
<b>EC8</b>	<p><b>The supervisor determines that the bank's Board and senior management know and understand the bank's and banking group's operational structure and its risks, including those arising from the use of structures that impede transparency (e.g., special-purpose or related structures). The supervisor determines that risks are effectively managed and mitigated, where appropriate.</b></p>
Description and findings re EC8	<p>MAS' Board and Management Guidelines and the CG Guidelines set out that the Board should discuss and approve the organizational structure of the bank. This includes ensuring that adequate corporate governance frameworks and systems are in place across the bank. The CG Guidelines state that the Board should refrain from setting up complex structures given the inherent risks of such structures. On an ongoing basis, the Board should be provided with a detailed overview and risk profile of the bank's significant or new business lines and an update on regulatory developments in jurisdictions in which the bank has a presence.</p>

	During inspections and off-site reviews, supervisors review the minutes of Board and senior management meetings to assess their understanding of the bank's risk profile and the robustness of their discussions and that they receive adequate and timely information, including updates on key regulatory changes. Supervisors also assess the Board and senior management's familiarity with the bank's operational structure and risk management systems and controls through regular meetings and on-site examinations. Where deficiencies or key risks are highlighted, the Board and senior management are required to take effective mitigating actions promptly.
<b>EC9</b>	<b>The supervisor has the power to require changes in the composition of the bank's Board if it believes that any individuals are not fulfilling their duties related to the satisfaction of these criteria.</b>
Description and findings re EC9	Under section 54B of the BA, where MAS is satisfied that a director has failed to discharge any of the duties of his office, amongst other provisions, MAS may direct the removal of the director from office if it is assessed to be necessary in the public interest or for the protection of depositors of the bank. In most instances where the problem is less serious in nature, MAS has been successful in implementing remedial actions through moral suasion, e.g., the individual director agrees to address specific problems or the director agrees to step down.
<b>Additional criteria</b>	
<b>AC1</b>	<b>Laws, regulations or the supervisor require banks to notify the supervisor as soon as they become aware of any material and bona fide information that may negatively affect the fitness and propriety of a bank's Board member or a member of the senior management.</b>
Description and findings re AC1	MAS' Board and Management Guidelines provide that the Board and senior management of a bank should notify MAS in advance of any substantive changes in the bank's business activities, structure and overall condition, or as soon as they become aware of any material adverse developments. This includes material information that may negatively affect the fitness and propriety of a Board member or a member of senior management.  As a condition to the approval of the appointment or reappointment of a Board member or key executive officer, the bank is required to notify the supervisors as soon as it is aware of any material information that may negatively affect the fitness and proprietary of the appointee to hold office.
<b>Assessment of Principle 14</b>	<b>Compliant</b>
Comments	The MAS fully meets the principle that banks and banking groups under its supervision have robust and effective corporate governance policies and processes. According to one bank interviewed, some of the governance requirements applied at the foreign branch level of a global systemically important bank were subsequently adopted by the head office and applied across the entire bank. MAS' supervisors regularly meet with the chairs of the relevant committees, and regularly review board

	minutes. The Nominating Committee is required to annually assess the suitability of directors and MAS will transmit any concerns it has regarding the quality of board members to the Chair of the Nominating Committee.
<b>Principle 15</b>	<b>Risk management process.</b> The supervisor determines that banks have a comprehensive risk management process (including effective Board and senior management oversight) to identify, measure, evaluate, monitor, report and control or mitigate all material risks on a timely basis and to assess the adequacy of their capital and liquidity in relation to their risk profile and market and macroeconomic conditions. This extends to development and review of contingency arrangements (including robust and credible recovery plans where warranted) that take into account the specific circumstances of the bank. The risk management process is commensurate with the risk profile and systemic importance of the bank.
<b>Essential criteria</b>	
<b>EC1</b>	<p><b>The supervisor determines that banks have appropriate risk management strategies that have been approved by the banks' Boards and that the Boards set a suitable risk appetite to define the level of risk the banks are willing to assume or tolerate. The supervisor also determines that the Board ensures that:</b></p> <ul style="list-style-type: none"> <li><b>(a) a sound risk management culture is established throughout the bank;</b></li> <li><b>(b) policies and processes are developed for risk-taking, that are consistent with the risk management strategy and the established risk appetite;</b></li> <li><b>(c) uncertainties attached to risk measurement are recognized;</b></li> <li><b>(d) appropriate limits are established that are consistent with the bank's risk appetite, risk profile and capital strength, and that are understood by, and regularly communicated to, relevant staff; and</b></li> <li><b>(e) senior management takes the steps necessary to monitor and control all material risks consistent with the approved strategies and risk appetite.</b></li> </ul>
Description and findings re EC1	<p>MAS' <i>Guidelines on Risk Management Practices—Objectives and Scope</i> (Risk Management Guidelines) emphasizes the importance of all banks having sound risk management processes and operating procedures that integrate prudent risk limits with appropriate risk measurement, monitoring and reporting. It is further elaborated in the MAS' <i>Guidelines on Risk Management Practices—Internal Controls</i> (Internal Controls Guidelines) that a bank should have comprehensive policies, approved by the Board, for prudent management of significant risks arising from its business activities and operations. Under the <i>Guidelines on Risk Management Practices—Board and Senior Management Oversight</i> (Board and Management Guidelines), MAS sets out that the Board and senior management of a bank play pivotal roles in ensuring a culture and an environment of sound risk management. Senior management is also held responsible for creating an accountability framework for the bank's staff.</p> <p>In addition, Part X of MAS Notice 637 on <i>Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore</i> sets out the responsibilities of a locally-</p>

	<p>incorporated bank's Board in relation to the bank's risk management strategies and risk appetite. The Board shall define the bank's risk appetite and establish an acceptable level of risks that the bank may take, as well as the capital strategy of the bank. The Board shall ensure that senior management:</p> <p>(a) Institutes a strong internal control culture throughout the bank, including the adoption of written policies and procedures (paragraph 10.2.5(f)).</p> <p>(b) Establishes robust policies and procedures to identify, measure and report all material risks, and evaluates the level and trend of material risks and their effect on capital levels (paragraphs 10.2.8(a) and (b)).</p> <p>(c) Evaluates the sensitivity and reasonableness of key assumptions used in the capital assessment and measurement system (paragraph 10.2.8(c)), and the bank shall hold capital for uncertainties in the precision of risk measures and volatility of exposures (paragraph 10.2.17).</p> <p>(d) Ensures that the bank's risk management framework includes detailed policies that set specific firm-wide prudential limits on the banks' activities, which are consistent with its risk taking appetite and capacity (paragraph 10.2.5(d)); and communicates the internal controls and written policies and procedures throughout the Reporting Bank (paragraph 10.2.5(g)).</p> <p>(e) Establishes frameworks for assessing the categories of risks facing the bank and develops systems for relating these risks to the capital level of the bank (paragraph 10.2.5(c)).</p> <p>Supervisors assess the adequacy of a bank's risk management strategies, controls, policies and processes through inspections, continuous off-site supervision, and external and internal audit reports.</p>
EC2	<p><b>The supervisor requires banks to have comprehensive risk management policies and processes to identify, measure, evaluate, monitor, report and control or mitigate all material risks. The supervisor determines that these processes are adequate:</b></p> <p>(a) <b>to provide a comprehensive "bank-wide" view of risk across all material risk types;</b></p> <p>(b) <b>for the risk profile and systemic importance of the bank; and</b></p> <p>(c) <b>to assess risks arising from the macroeconomic environment affecting the markets in which the bank operates and to incorporate such assessments into the bank's risk management process.</b></p>
Description and findings re EC2	MAS' Risk Management Guidelines emphasize the presence of sound risk management processes and operating procedures that integrate prudent risk limits



with appropriate risk measurement, monitoring, and reporting, as one of four cornerstones of effective risk management and sound internal controls for all banks. In addition, under Part X of MAS Notice 637, a locally-incorporated bank's senior management shall establish robust policies and procedures to identify, measure and report all material risks, and evaluate the level and trend of material risks and their effect on capital levels (paragraphs 10.2.8(a) and (b)). The bank shall have a comprehensive risk management framework for each risk category, which sets out clearly the policies and procedures of the bank for the identification, assessment, monitoring and control or mitigation of each material risk (Annex 10A, paragraph 2.1(a)).

(a) MAS' Risk Management Guidelines set out all banks are to consider the potential inter-linkages of risk types in their risk management approach and have an integrated "enterprise-wide" perspective of their risk exposures, encompassing the individual business lines and business units. Under Part X of MAS Notice 637, a locally-incorporated bank is required to ensure that its ICAAP identifies and assesses all material risks, including: (i) credit, market and operational risks, captured under Pillar 1; (ii) risks not fully captured under Pillar 1 (e.g., credit concentration risk); (iii) risks that are not taken into account by Pillar 1 (e.g., interest rate risk in the banking book, liquidity risk, business risk, reputational risk, strategic risk and concentration risk); and (iv) external factors outside the direct control of the bank, including changes in regulations, accounting rules and the economic environment (e.g., business cycle effects) (paragraph 10.2.10). In addition, the bank shall ensure that appropriate members of senior management bring together the perspectives of the key business and control functions to achieve an understanding of risk exposures on a firm-wide basis and develop an integrated bank-wide perspective on risk (Annex 10A, paragraph 2.2).

(b) MAS' Risk Management Guidelines set out that the sophistication of processes, systems and internal controls for risk management is expected to vary according to the nature, size, and complexity of the business activities of the bank. Senior management should review periodically the adequacy and appropriateness of the bank's policies and procedures, and risk management processes. Part X of MAS Notice 637 states that senior management is responsible for developing a risk management framework and ensuring that the formality and sophistication of the risk management processes are appropriate in light of the risk profile and business strategy of a bank (paragraph 10.2.7).

(c) MAS' Board and Management Guidelines set out that the bank's risk management strategies, policies, processes and limits should be regularly reviewed and appropriately adjusted to reflect changing risk appetites, risk profiles, capital strength, and market and macroeconomic conditions. Under Part X of MAS Notice 637, the bank's ICAAP shall be a forward-looking process capable of timely response to changes in the risk profile and business strategies of a bank, as well as its external environment (paragraph 10.2.2(a)). The bank shall incorporate changes in its risk



	<p>profile (e.g., due to changes in the operating environment) into its risk assessments on a timely basis (paragraph 10.2.14(c)). In addition, the bank is required to conduct regular stress testing (see CP15 EC 13 for details).</p> <p>Under MAS Notice 622A on <i>Appointment of Chief Executives of Branches of Banks incorporated outside of Singapore</i>, the chief executive and deputy chief executive of the branch in Singapore are held responsible for ensuring the prudent and professional management of the branch and its compliance with all laws and regulations. Their responsibilities include establishing and ensuring compliance with sound written policies on all operational areas and ensuring adequate risk management systems and sound internal controls for the branch's activities and operations.</p> <p>Supervisors review a bank's compliance with these requirements and the adequacy of its risk management processes during inspections, off-site reviews or as part of a review of the bank's ICAAP. Supervisors assess whether the bank's risk management processes are commensurate with its risk profile and systemic importance, when considering the assessment rating of a bank following an inspection and in MAS' CRAFT. Supervisors also determine that the bank assesses risks arising from the macroeconomic environment affecting the markets in which it operates and incorporates such assessments into its risk management process.</p>
EC3	<p><b>The supervisor determines that risk management strategies, policies, processes and limits are:</b></p> <ul style="list-style-type: none"> <li><b>(a) properly documented;</b></li> <li><b>(b) regularly reviewed and appropriately adjusted to reflect changing risk appetites, risk profiles and market and macroeconomic conditions; and</b></li> <li><b>(c) communicated within the bank</b></li> </ul> <p><b>The supervisor determines that exceptions to established policies, processes and limits receive the prompt attention of, and authorization by, the appropriate level of management and the bank's Board where necessary.</b></p>
Description and findings re EC3	<p>Under MAS' Board and Management Guidelines, all banks' risk management strategies, policies, processes and limits are to be properly documented and communicated within the bank. They should be regularly reviewed to reflect changing risk appetites, risk profiles, capital strength, and market and macroeconomic conditions.</p> <p>Further, for locally-incorporated banks, under Part X of MAS Notice 637:</p> <ul style="list-style-type: none"> <li>(a) The bank's risk management framework for each risk category shall set out clearly the policies and procedures of the bank for the identification, assessment, monitoring and control or mitigation of each material risk, and be adequately</li> </ul>

	<p>documented (Annex 10A, paragraph 2.1(a)).</p> <p>(b) The bank is required to implement a process for reviewing the policies, procedures and limits and for updating them as appropriate (Annex 10A, paragraph 2.1(a)). The bank shall perform regular reviews of its ICAAP to ensure that all the risks identified continue to be relevant and accounted for, and that new risks are incorporated into the ICAAP on a timely basis. The bank is also expected to make adjustments to its ICAAP in light of changes in its operating profile or operating environment (paragraph 10.2.13).</p> <p>(c) The bank is required to ensure that senior management communicates the internal controls and written policies and procedures throughout the bank (paragraph 10.2.5(g)). In addition, the bank shall ensure regular monitoring of risk exposures and regular reporting of significant risk concerns to the Board. The bank is also required to have in place procedures for reporting deviations from established policies to the Board or senior management, as appropriate (Annex 10A, paragraph 2.1(d)).</p> <p>For foreign banks, under MAS Notice 622A, the responsibilities of a chief executive and deputy chief executive of a branch in Singapore include establishing and ensuring compliance with sound written policies on all operational areas; establishing in writing the limits of the discretionary powers of each officer, committee, sub-committee and such other grouping; and ensuring adequate risk management systems and sound internal controls for the branch's activities and operations.</p> <p>During inspections and off-site reviews, supervisors review the bank's risk management strategies, policies, procedures and limits, to determine that they are robust, properly documented and regularly reviewed by the bank to ensure that they remain valid and appropriate. Supervisors also determine whether these documents are easily accessible by the relevant staff and effectively communicated.</p> <p>For exceptions to policies, processes and limits, supervisors assesses that there is an effective escalation process in place, such that limit breaches and other exceptions are promptly reported to the appropriate level of management or Board.</p>
<b>EC4</b>	<p><b>The supervisor determines that the bank's Board and senior management obtain sufficient information on, and understand, the nature and level of risk being taken by the bank and how this risk relates to adequate levels of capital and liquidity. The supervisor also determines that the Board and senior management regularly review and understand the implications and limitations (including the risk measurement uncertainties) of the risk management information that they receive.</b></p>
Description and findings re EC4	MAS' Board and Management Guidelines set out that it is the responsibility of a bank's Board to oversee that senior management has in place processes to ensure

	<p>that the bank maintains adequate levels of capital and liquidity to support the risk exposures that may arise from its business activities. In this regard, there should be mechanisms to inform the Board and senior management of significant changes in the bank's activities that will warrant a review of the adequacy of capital and liquidity supporting these activities. The Board and senior management are to regularly review and understand the limitations of the risk management information that they receive.</p> <p>Under Part X of MAS Notice 637, a locally-incorporated bank shall ensure that its Board and senior management understand the nature and level of risks being taken by the bank, and put in place appropriate risk management processes to mitigate the risks. The bank shall maintain adequate capital beyond the regulatory minimum to support such risks (paragraph 10.2.4). The bank's senior management shall also evaluate the sensitivity and reasonableness of key assumptions used in the capital assessment and measurement system (paragraph 10.2.8(c)), and the bank shall hold capital for uncertainties in the precision of risk measures and volatility of exposures (paragraph 10.2.17).</p> <p>During inspections and as part of off-site supervision, supervisors review information such as minutes of Board and senior management meetings (including the assets-liabilities committee (ALCO)), management reports and key risk indicators (including capital and liquidity levels). Through such review and discussions with the bank's management, supervisors determine that the bank's Board and/or senior management have obtained adequate information on all material risks facing the bank. The bank's Board and/or senior management should also regularly review and be aware of any limitations of the bank's risk management system and any uncertainties attached to risk management.</p>
<b>EC5</b>	<p><b>The supervisor determines that banks have an appropriate internal process for assessing their overall capital and liquidity adequacy in relation to their risk appetite and risk profile. The supervisor reviews and evaluates banks' internal capital and liquidity adequacy assessments and strategies.</b></p>
Description and findings re EC5	<p>As set out in EC4, MAS' Board and Management Guidelines set out that a bank should have in place processes to ensure that it maintains adequate levels of capital and liquidity to support the risk exposures that may arise from its business activities. Part X of MAS Notice 637 requires a locally-incorporated bank to develop its own ICAAP and maintain capital levels that are commensurate with its risk profile and control environment (paragraph 10.1.1). The bank shall conduct annual independent review of the ICAAP for robustness and integrity (paragraph 10.2.8(f)).</p> <p>Annex 10A of MAS Notice 637 requires a bank to have in place a liquidity strategy, which sets out specific liquidity management policies, such as the composition of assets and liabilities, the approach to managing liquidity across currencies and locations, the use of specific financial instruments and the liquidity and marketability of assets. The bank shall also have adequate information systems for measuring,</p>

	<p>monitoring, controlling and reporting liquidity risk, including liquidity risks from complex products and contingent commitments (paragraph 7.1).</p> <p>Supervisors review and assess the ICAAP of a bank, compliance of the bank with the requirements in MAS Notice 637 and the adequacy of capital maintained by the bank. The supervisory review includes the evaluation of the bank's ICAAP and strategies, as well as the bank's ability to monitor and ensure compliance with regulatory capital adequacy ratios (paragraphs 10.3.1 and 10.3.2 of Part X of MAS Notice 637). (See CP15, EC1 and EC2 for specific areas that supervisors pay attention to and the ICAAP assessment process.)</p> <p>During inspections and off-site reviews, supervisors determine that a bank has appropriate policies and processes for assessing that its overall capital and liquidity adequacy are commensurate with the bank's risk profile and systemic importance. Through the review of such policies and procedures and discussions with the bank, supervisors assess, amongst other things, whether the bank has developed and implemented sound strategy, policies and practices to assess and manage the bank's capital and liquidity adequacy in relation to its risk tolerance. Senior management should also closely monitor current trends and potential market developments and make appropriate and timely changes to the bank's capital and liquidity strategies where warranted.</p>
<b>EC6</b>	<p><b>Where banks use models to measure components of risk, the supervisor determines that:</b></p> <ul style="list-style-type: none"> <li><b>(a) banks comply with supervisory standards on their use;</b></li> <li><b>(b) the banks' Boards and senior management understand the limitations and uncertainties relating to the output of the models and the risk inherent in their use; and</b></li> <li><b>(c) banks perform regular and independent validation and testing of the models</b></li> </ul> <p><b>The supervisor assesses whether the model outputs appear reasonable as a reflection of the risks assumed.</b></p>
Description and findings re EC6	<p>Under MAS' Board and Management Guidelines, where models are used to measure components of risk, a bank's Board and senior management are to ensure that the models are validated and tested regularly by an independent party. They should also understand the limitations and uncertainties relating to the output of the models and the risks inherent in their use.</p> <p>(a) Paragraph 10.3.2 of Part X of MAS Notice 637 sets out that supervisory review includes the assessment of whether a locally-incorporated bank complies with the minimum standards, qualifying criteria and requirements, including risk management standards and disclosure requirements, set out in this Notice for the</p>

	<p>use of internal methodologies, credit risk mitigation techniques and securitizations to be recognized for regulatory capital purposes, on an ongoing basis.</p> <p>(b) Supervisors hold senior management responsible for evaluating the sensitivity and reasonableness of key assumptions used in the capital assessment and measurement system (paragraph 10.2.8(c)), and the bank shall hold capital for uncertainties in the precision of risk measures and volatility of exposures (paragraph 10.2.17). In the bank's adoption of the advanced approaches for the computation of regulatory capital for credit, market and operational risks, the bank shall ensure that the Board and senior management reviews and approves all important aspects relating to the advanced approach framework such as the systems, estimates of risk parameters, and stress tests of the bank. The bank shall also inform the Board of any significant exceptions from established policies and procedures, or weaknesses in respect of the use of the advanced approaches (paragraphs 2.1 and 2.2, Annex 7AB of Part VII, paragraphs 9.5.47 and 9.5.53, Division 5 of Part IX, and paragraphs 8.3.22, 8.3.26 and 8.3.27, Part VIII, MAS Notice 637).</p> <p>(c) Under paragraph 10.2.19 of Part X of MAS Notice 637, the bank shall ensure that the systems for assessing the risks to which it is exposed and for relating those risks to its capital level are reviewed independently by persons other than those responsible for the design or implementation of the ICAAP (the same applies to the validation of the bank's internal models used in the advanced approaches for credit, market, and operational risk capital computation for internal ratings-based approach ("IRBA") models for credit risk as set out in paragraph 2.5(c) of Annex 7AB of MAS Notice 637, for internal models approach for market risk (IMA) as set out in paragraph 8.3.29 of Part VIII of MAS Notice 637, and for advanced measurement approach models for operational risk (AMA) as set out in paragraphs 9.5.28 to 9.5.37 of Part IX of MAS Notice 637). The bank is required to conduct a high level review at least annually.</p> <p>Supervisors assess a bank's compliance with these requirements and the bank's model outputs during inspections, off-site reviews, or as part of a review of the bank's ICAAP or IRBA application. Amongst other things, supervisors review the minutes of Board and senior management meetings to determine that they understand the use of the models along with its limitations and uncertainties. Supervisors also review the independent validation process to ensure that models used for risk management are independently validated. This includes the front office and back office control functions, valuation parameters, algorithms, and assumptions used in their models. Supervisors also review the validation approaches/results of the bank to ensure robustness and compliance.</p>
<b>EC7</b>	<p><b>The supervisor determines that banks have information systems that are adequate (both under normal circumstances and in periods of stress) for measuring, assessing and reporting on the size, composition and quality of exposures on a bank-wide basis across all risk types, products and</b></p>

	<p><b>counterparties. The supervisor also determines that these reports reflect the bank's risk profile and capital and liquidity needs, and are provided on a timely basis to the bank's Board and senior management in a form suitable for their use.</b></p>
Description and findings re EC7	<p>MAS' Internal Controls Guidelines set out that all banks are to have adequate management information systems (MIS) for effective management and control of all aspects of its operations. The sophistication of a bank's MIS should be commensurate with the complexity and diversity of its operations. The MIS should also be sufficiently flexible to cope with various contingencies and have the capability to monitor compliance with the bank's established policies, procedures and limits. When market conditions dictate, more frequent reports should be made to update the Board and senior management on the changes in the bank's risk profile.</p> <p>Under Annex 10A of MAS Notice 637, a locally-incorporated bank shall have appropriate MIS at the business and bank-wide level to enable proactive management of risk. The bank shall ensure that the Board and senior management are responsible for implementing MIS that are capable of providing regular, accurate and timely information on the bank's aggregate risk profile, as well as the main assumptions used for risk aggregation. The bank shall ensure that the MIS are adaptable and responsive to changes in its underlying risk assumptions and incorporate multiple perspectives of risk exposure to account for uncertainties in risk measurement. The bank shall ensure that the relevant information concerning its risk profile includes all risk exposures, including those that are off-balance sheet. The bank shall also ensure that the MIS are sufficiently flexible to allow for aggregation of exposures and risk measures across business lines, and support forward-looking bank-wide scenario analyses that capture management's interpretation of evolving market conditions and stressed conditions (paragraph 2.3). Such requirements of a bank's MIS are similarly set out in MAS' Internal Controls Guidelines.</p> <p>During inspections, supervisors conduct a walkthrough of the bank's key MIS to assess their capabilities and limitations. Supervisors also assess the adequacy of the bank's MIS based on regular off-site reviews of its internal management reports, which include information on the bank's risk profile, as well as capital and liquidity adequacy. Supervisors also have a view of the flexibility of the bank's MIS to respond to ad-hoc data requests from MAS. Supervisors determine from the bank's management reports and the minutes of relevant management discussions whether information has been adequately provided to the bank's Board and senior management on a timely basis.</p>
EC8	<p><b>The supervisor determines that banks have adequate policies and processes to ensure that the banks' Boards and senior management understand the risks inherent in new products, material modifications to existing products, and major management initiatives (such as changes in systems, processes, business model and major acquisitions). The supervisor determines that the Boards and</b></p>

	<p><b>senior management are able to monitor and manage these risks on an ongoing basis. The supervisor also determines that the bank's policies and processes require the undertaking of any major activities of this nature to be approved by their Board or a specific committee of the Board.</b></p>
Description and findings re EC8	<p>MAS' Internal Controls Guidelines set out that all banks should have a new product policy to ensure that the risks inherent in new business lines or activities are properly assessed. The new product policy should provide for the proper review and authorization of variations to existing products. The Board or appropriate level of management should approve such variations. The policy should be updated when market conditions warrant it, when major assumptions have changed, or when there are regulatory changes.</p> <p>Under Part X of MAS Notice 637, a locally-incorporated bank shall incorporate changes in its risk profile into its risk assessments on a timely basis. These changes may result from the introduction of new products or activities, changes in business volumes, or changes in the operating environment (paragraph 10.2.14). Further, with respect to new or complex products and activities, the bank shall ensure that senior management understands the underlying assumptions regarding business models, valuation and risk management practices and evaluate the potential risk exposure if those assumptions fail. The bank shall also ensure that the Board and senior management is responsible for identifying and reviewing the changes in bank-wide risks arising from these potential new products or activities and ensuring that the infrastructure and internal controls necessary to manage the related risks are in place, before the bank embarks on introducing new products or activities. In the review, the bank shall also consider the possible difficulty in valuing the new products and how they might perform in a stressed economic environment (paragraph 2.1a of Annex 10A). Such requirements of a bank's new product policy and approval process are similarly set out in MAS' Internal Controls Guidelines.</p> <p>The bank shall ensure that the Board and senior management understand the nature and level of risks being taken by the bank, and put in place appropriate risk management processes to mitigate the risks (paragraph 10.2.4). In addition, a bank is required to ensure regular monitoring of risk exposures and regular reporting of significant risk concerns to the Board (Annex 10A, paragraph 2.1(d)). Under paragraph 10.2.8, a bank shall ensure that senior management, at a minimum:</p> <ul style="list-style-type: none"> <li>• establishes robust policies and procedures to identify, measure and report all material risks;</li> <li>• evaluates the level and trend of material risks and their effect on capital levels;</li> <li>• determines if the bank holds sufficient capital against the risks facing the bank;</li> <li>• assesses future capital needs based on the risk profile of the bank and make</li> </ul>

	<p>necessary adjustments to its strategic plan; and</p> <ul style="list-style-type: none"> <li>• subjects the ICAAP to annual independent review for robustness and integrity.</li> </ul> <p>During inspections and off-site reviews, supervisors review the adequacy of the bank's policies, including its new product approval policy and governance framework for changes to its systems and processes. Supervisors also assess that the bank has put in place appropriate organizational structures and control mechanisms for the Board and senior management to understand, approve, monitor and manage new risks to which the bank is exposed.</p>
<b>EC9</b>	<p><b>The supervisor determines that banks have risk management functions covering all material risks with sufficient resources, independence, authority and access to the banks' Boards to perform their duties effectively. The supervisor determines that their duties are clearly segregated from risk-taking functions in the bank and that they report on risk exposures directly to the Board and senior management. The supervisor also determines that the risk management function is subject to regular review by the internal audit function.</b></p>
Description and findings re EC9	<p>MAS' Risk Management Guidelines emphasize the presence of competent personnel in the risk management function, as one of four cornerstones of effective risk management and sound internal controls for all banks. MAS' Board and Management Guidelines set out that a bank's risk management function should be adequately resourced and independent, with clearly delineated authority and responsibilities. The risk management function should have direct access to the Board and senior management to perform its duties effectively.</p> <p>Under the MAS' <i>Guidelines on Corporate Governance for Banks, Financial Holding Companies and Direct Insurers which are incorporated in Singapore</i> (CG Guidelines), the bank's Board should ensure that the risk management functions have adequate resources and are staffed by an appropriate number of experienced and qualified employees who are sufficiently independent to perform their duties objectively. The risk management functions should have appropriate reporting lines that are, independent of business lines. The chief risk officer (CRO) should have a direct reporting line to the Board and have the right to seek information and explanations from senior management. The CRO and risk management function should also have access to consolidated information and relevant affiliates and subsidiaries.</p> <p>The CG Guidelines set out that the bank internal auditor's responsibilities should include evaluating the reliability, adequacy and effectiveness of the internal controls and risk management processes of the bank. In this regard, the internal auditor should assess if business and risk management units are operating according to the risk appetite framework, and provide feedback on how the bank's risk appetite framework compares to best practices. The internal auditor's overall opinion of internal controls relating to the risk governance framework should be provided to</p>



	<p>the AC or the Board annually. Such responsibilities of a bank's internal auditor are similarly set out in MAS' Internal Controls Guidelines.</p> <p>During inspections and off-site reviews, supervisors assess that the bank's risk management functions adequately cover all material risks and that there is clear segregation of duties from the business units. Supervisors also determine that these functions report the bank's exposures and other risk updates directly to the Board and/or senior management. Supervisors also review the bank's internal audit's reports on the risk management functions and will follow up with the bank where warranted.</p>
<b>EC10</b>	<b>The supervisor requires larger and more complex banks to have a dedicated risk management unit overseen by a CRO or equivalent function. If the CRO of a bank is removed from his/her position for any reason, this should be done with the prior approval of the Board and generally should be disclosed publicly. The bank should also discuss the reasons for such removal with its supervisor.</b>
Description and findings re EC10	<p>Under regulation 18 of the Banking (Corporate Governance) Regulations 2005, a locally-incorporated bank is required to obtain MAS' prior approval for the appointment of a CRO. Under the CG Guidelines, the role of the CRO should be distinct from other executive functions and business line responsibilities, and there should be no "double hatting." The three locally-incorporated banks each have a dedicated risk management unit overseen by a CRO, who provides oversight of the major risk types on a group-wide basis.</p> <p>Under the CG Guidelines, the bank's Board should approve the resignation or dismissal of the CRO. The Board should disclose the resignation or dismissal of the CRO publicly. The bank should discuss the reasons for the removal or resignation of the CRO with MAS. Similar requirements are set out in MAS' <i>Guidelines on Risk Management Practices—Board and Senior Management Oversight</i>.</p>
<b>EC11</b>	<b>The supervisor issues standards related to, in particular, credit risk, market risk, liquidity risk, interest rate risk in the banking book and operational risk.</b>
Description and findings re EC11	<p>MAS has issued requirements and standards for the major risk types as follows:</p> <p><b>Credit risk</b></p> <ul style="list-style-type: none"> <li>• MAS Notice 612 on Credit Files, Grading and Provisioning</li> <li>• MAS Notice 637 (Part VII, X and XI)</li> <li>• Guidelines on Risk Management Practices—Credit Risk</li> </ul> <p><b>Market risk</b></p> <ul style="list-style-type: none"> <li>• MAS Notice 637 (Part VIII, X and XI)</li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Guidelines on Risk Management Practices—Market Risk</i></li> </ul> <p><b>Liquidity risk</b></p> <ul style="list-style-type: none"> <li>• MAS Notice 613 on Minimum Liquid Assets</li> <li>• MAS Notice 758 on Minimum Cash Balances</li> <li>• <i>Guidelines on Risk Management Practices—Liquidity Risk</i></li> </ul> <p><b>Interest rate risk in the banking book</b></p> <ul style="list-style-type: none"> <li>• MAS Notice 637 (Part X and XI)</li> <li>• <i>Guidelines on Risk Management Practices—Market Risk</i></li> </ul> <p><b>Operational risk</b></p> <ul style="list-style-type: none"> <li>• MAS Notice 637 (Part IX, X and XI)</li> <li>• <i>Guidelines on Risk Management Practices—Internal Controls, Business Continuity Management and Outsourcing</i></li> </ul> <p><b>Technology risk</b></p> <ul style="list-style-type: none"> <li>• <i>Guidelines on Risk Management Practices—Internet Banking and Technology Risk Management</i></li> </ul>
<b>EC12</b>	<p><b>The supervisor requires banks to have appropriate contingency arrangements, as an integral part of their risk management process, to address risks that may materialize and actions to be taken in stress conditions (including those that will pose a serious risk to their viability). If warranted by its risk profile and systemic importance, the contingency arrangements include robust and credible recovery plans that take into account the specific circumstances of the bank. The supervisor, working with resolution authorities as appropriate, assesses the adequacy of banks’ contingency arrangements in the light of their risk profile and systemic importance (including reviewing any recovery plans) and their likely feasibility during periods of stress. The supervisor seeks improvements if deficiencies are identified.</b></p>
Description and findings re EC12	<p>Under Part X of MAS Notice 637, a locally-incorporated bank is required to: (i) make allowances for unexpected events, including putting in place contingency plans for raising additional capital (paragraph 10.2.16); (ii) have contingency plans that address the strategy for handling liquidity crises and include procedures for making up cash flow shortfalls in emergency situations (paragraph 7.1(f) of Annex 10A); and incorporate risks that arise from reputational risk into its risk management processes and appropriately address these risks in its ICAAP and liquidity contingency plans (paragraph 8.2 of Annex 10A). The bank’s stress testing is intended to, amongst other things, facilitate the development of risk mitigation or contingency plans across a range of stress conditions (paragraph 10.1(g) of Annex 10A).</p>

	<p>Generally, as part of their review of banks' stress test results (including MAS' annual industry-wide stress test), supervisors challenge banks on their approaches and assumptions, with a view to encouraging good stress testing practices. The stress test results are also used as a pre-emptive supervisory tool to encourage financial institutions to have appropriate contingency arrangements, including capital planning processes, contingency funding plans and/or risk mitigation plans. Supervisors have required banks to take corrective actions to address specific concerns arising from these stress tests.</p> <p>Supervisors also review the business continuity preparedness of banks. The reviews focus on the bank's key mission critical activities such as dealing activities, clearing and settlement operations, and payment services to ensure that their recovery strategies and recovery time objectives (for both business functions and IT) can be met. In a disruption scenario, the bank should continue to meet regulatory requirements, and manage its exposure, risks and any outstanding business obligations. These activities are important to mitigate the scenarios of wide-area disruptions and total loss of people and process. The bank's business continuity management plans should be commensurate with the scale, nature and complexity of its activities (see CP 25 EC 4 for details of supervisors' review of banks' business continuity plans).</p> <p>To strengthen the process for recovery and resolution planning, MAS has required several systemically important banks, both locally-incorporated banks and foreign banks, to submit their recovery plans. The banks are also required to submit detailed information such as their organizational structure, critical functions, cross-border inter-dependencies, as well as identify critical business activities or functions performed in Singapore or the countries in which the bank has geographical reach, including an assessment of the feasibility of separating or isolating the critical business activities or functions in a restructuring or resolution scenario, to facilitate the development of a resolution plan.</p> <p>MAS has engaged the banks as part of an iterative process to formulate MAS' rules on recovery and resolution planning. Where structural complexity is identified as an impediment which may hamper implementation of resolution measures, MAS has the powers to require a bank to take steps to simplify or restructure their existing business and organizational structures or take other measures to improve the resolvability of the bank, similar to those for newly admitted banks. For foreign banks, MAS takes into account any recovery and resolution planning work being undertaken by their home authority such as those for globally systemic banks.</p>
<b>EC13</b>	<p><b>The supervisor requires banks to have forward-looking stress testing programs, commensurate with their risk profile and systemic importance, as an integral part of their risk management process. The supervisor regularly assesses a bank's stress testing program and determines that it captures material sources of risk and adopts plausible adverse scenarios. The supervisor also determines</b></p>

	<p><b>that the bank integrates the results into its decision-making, risk management processes (including contingency arrangements) and the assessment of its capital and liquidity levels. Where appropriate, the scope of the supervisor’s assessment includes the extent to which the stress testing program:</b></p> <ul style="list-style-type: none"> <li><b>(a) promotes risk identification and control, on a bank-wide basis</b></li> <li><b>(b) adopts suitably severe assumptions and seeks to address feedback effects and system-wide interaction between risks;</b></li> <li><b>(c) benefits from the active involvement of the Board and senior management; and</b></li> <li><b>(d) is appropriately documented and regularly maintained and updated.</b></li> </ul> <p><b>The supervisor requires corrective action if material deficiencies are identified in a bank’s stress testing program or if the results of stress tests are not adequately taken into consideration in the bank’s decision-making process.</b></p>
Description and findings re EC13	<p>Banks in Singapore conduct stress tests on a regular basis. In addition, MAS conducts an annual IWST, which includes a liquidity risk stress test to assess banks’ ability to withstand adverse financial and economic shocks, and to evaluate the potential impact on Singapore’s financial stability (see CP9 EC4 for details). Among other things, the stress test results are used to assess the robustness of banks’ stress testing methodologies, for instance, by comparing the degree of conservatism exercised by different banks in the stress testing of common corporate borrowers.</p> <p>As part of their review of stress test results, supervisors challenge banks on their approaches and assumptions, with a view to encouraging good stress testing practices. The stress test results are also used as a pre-emptive supervisory tool to encourage financial institutions to have appropriate contingency arrangements, including capital planning processes and/or risk mitigation plans across a range of stressed conditions. Supervisors have required banks to take corrective actions to address specific concerns arising from these stress tests. During inspections, supervisors also evaluate the robustness and adequacy of banks’ stress-testing framework and systems, and require banks to address any weaknesses or deficiencies.</p> <p>In addition, under Annex 7AB of MAS Notice 637, a locally-incorporated bank adopting the IRBA shall have in place sound and comprehensive stress testing processes for use in the assessment of its capital adequacy. The bank is required to conduct credit risk stress tests to assess the effect of a mild recession scenario (i.e. two consecutive quarters of zero growth) on its IRBA minimum capital requirements at least semi-annually (Pillar 1 Credit Stress Test). The stress test results and management actions (if needed) are submitted to supervisors for review.</p> <p>Annex 10A of MAS Notice 637 sets out MAS’ requirements on a bank’s annual stress</p>

	<p>test under its ICAAP (Pillar 2 Capital Stress Test). The bank is required to perform a careful analysis of its capital instruments and their potential performance during times of stress, including their ability to absorb losses and support ongoing business operations. The bank shall also examine its future capital resources and capital requirements under adverse scenarios. In particular, the bank shall consider the results of forward-looking stress testing when evaluating the adequacy of a bank's capital buffer. The bank shall assess capital adequacy under stressed conditions against a variety of capital ratios, including regulatory ratios, as well as ratios based on the bank's internal definition of capital resources. In addition, the bank shall consider the possibility that a crisis impairs the ability of even very healthy banks to raise funds at reasonable cost.</p> <p>Under Annex 7AB of MAS Notice 637, the bank shall ensure that senior management establishes comprehensive and adequate written policies and procedures, to be approved by the Board, on its stress test processes. The bank shall ensure that the documentation includes the objectives, techniques, assumptions, reporting requirements, remedial actions, responsibilities and lines of authority for its stress tests.</p> <p>For both the Pillar 1 and Pillar 2 stress tests, the bank's Board and senior management shall exercise effective oversight over its stress test process. Board and senior management's involvement in setting stress testing objectives, defining scenarios, discussing the results of stress tests, assessing potential actions and decision-making is critical in ensuring the appropriate use of stress testing in banks' risk governance and capital planning. The bank shall also ensure that senior management takes an active interest in the development and operation of stress testing. The results of stress tests should contribute to strategic decision-making and foster internal debate regarding assumptions, such as the cost, risk and speed with which new capital could be raised or that positions could be hedged or sold (Annexes 7AB and 10A).</p> <p>Supervisors review the bank's Pillar 1 and Pillar 2 stress testing approaches, including scenario-setting, stress translation and generation of stress results, and determine that the stress testing frameworks are subject to independent verification within the bank.</p>
<b>EC14</b>	<b>The supervisor assesses whether banks appropriately account for risks (including liquidity impacts) in their internal pricing, performance measurement and new product approval process for all significant business activities.</b>
Description and findings re EC14	Under MAS' <i>Guidelines on Risk Management Practices—Internal Controls</i> , a bank is to have a new product policy to ensure that the risks inherent in new business lines or activities are properly assessed. Proposals on new products, business lines or activities should be accompanied by a product program document that includes: (i) an analysis of the risks that may arise from these activities, and details of any risk

	<p>management procedures and systems established, including procedures for identifying, measuring, monitoring and controlling risks; (ii) an evaluation of the impact of the proposed activities on the bank's overall financial condition and capital level; and (iii) a recommendation on the appropriate structure and staffing for the key risk control functions.</p> <p>During inspections and off-site reviews, supervisors assess whether a bank appropriately accounts for risk in its internal pricing, remuneration and new product approval process and complies with the above requirements.</p> <p>Under Part VII of MAS Notice 637, a locally-incorporated bank shall ensure that the internal ratings and estimates of IRBA parameters are used pervasively and play an essential role in internal capital allocations and pricing (paragraph 2.7). A bank shall also appropriately price the costs, benefits and risks of liquidity into the internal pricing, performance measurement and new product approval process of all significant business activities (paragraph 7.1(c) of Annex 10A).</p> <p>Part XI of MAS Notice 637 requires the bank to provide qualitative and quantitative disclosures in relation to its remuneration practices and articulate how such practices support its overall risk management framework.</p> <p>For new products, the bank shall include all internal stakeholders relevant to risk measurement, risk control, and the assignment and verification of valuations of financial instruments as part of the approval process (paragraph 4.14 of Annex 10A of MAS Notice 637). The bank shall also identify any interest rate risk embedded in new products and activities, and ensure that there are adequate policies and procedures to properly monitor and control these products prior to their introduction (paragraph 5.6 of Annex 10A).</p>
<b>Additional criteria</b>	
<b>AC1</b>	<b>The supervisor requires banks to have appropriate policies and processes for assessing other material risks not directly addressed in the subsequent principles, such as reputational and strategic risks.</b>
Description and findings re AC1	<p>MAS' Board and Management Guidelines set out that that all banks' risk management policies and processes should provide a comprehensive "institution-wide" view of their exposures to material risks such as credit, market, underwriting, liquidity, country and transfer, interest rate, legal, compliance, fraud, reputational, strategic, regulatory and operational risks.</p> <p>Part X of MAS Notice 637 requires a bank's senior management to establish robust policies and procedures to identify, measure and report all material risks, and evaluate the level and trend of material risks and their effect on capital levels (paragraphs 10.2.8(a) and (b)). Such material risks include reputational and strategic risks, and external factors outside the direct control of the bank, including changes</p>

	in regulations and accounting rules (paragraph 10.2.10). (See CP15, EC2 for details.)
<b>Assessment of Principle 15</b>	<b>Compliant</b>
Comments	<p>The MAS does an outstanding job of encouraging banks to adopt strong risk management systems that are commensurate with their risks and is in full compliance with both the essential and additional criteria. MAS approach to risk management is facilitated in part by the local banking structure—only three locally incorporated banking groups and a foreign subsidiary. The conservative approach of MAS also limits the risky activities that can be conducted in Singapore.</p> <p>Strict limits are applied to the retail activities of the numerous foreign branches operating in Singapore. One outcome is that only nine foreign branches hold QFB privileges. A number of these branches serve as the regional hubs for the parent bank for the risk management and internal audit functions, which provides greater assurances regarding the quality of risk management in these local branches. Branches are required to appoint chief executives and deputy chief executives who are held accountable by MAS for ensuring adequate risk management processes.</p> <p>MAS regularly asks for and reviews internally-generated risk management reports produced for management and the board, which allows it both to understand the risks facing the bank as well as to assess the quality of the bank’s analysis and stress testing, the reporting procedures, the governance and effectiveness of the risk management committees, and the quality of the follow-up. While MAS has set minimum capital requirements that exceed what is required under Basel III, it is conscious of the need to avoid undercutting the robustness of risk assessments under Pillar II and therefore monitors banks’ ICAAP to ensure that capital charges are generated above the MAS minimum capital requirements, on the basis of the riskiness of individual banks’ activities.</p>
<b>Principle 16</b>	<b>Capital adequacy.</b> The supervisor sets prudent and appropriate capital adequacy requirements for banks that reflect the risks undertaken by, and presented by, a bank in the context of the markets and macroeconomic conditions in which it operates. The supervisor defines the components of capital, bearing in mind their ability to absorb losses. At least for internationally active banks, capital requirements are not less than the applicable Basel standards.
<b>Essential criteria</b>	
<b>EC 1</b>	<b>Laws, regulations or the supervisor require banks to calculate and consistently observe prescribed capital requirements, including thresholds by reference to which a bank might be subject to supervisory action. Laws, regulations or the supervisor define the qualifying components of capital, ensuring that emphasis is given to those elements of capital permanently available to absorb losses on a going concern basis.</b>
Description and findings re EC1	Pursuant to section 10 of the BA, banks are required to maintain capital funds in Singapore and in such a manner as required by the MAS, including minimum CAR

	<p>requirements. MAS has powers to restrict or suspend the operations of a bank if it fails to comply with these requirements.</p> <p>MAS Notice 637 on <i>Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore</i> establishes the minimum capital requirements, including the minimum CAR on a solo and a group-wide basis and the methodology for calculating these ratios. The Notice also defines the qualifying components of capital to ensure that emphasis is given to those elements of capital available to absorb losses, after taking into account the operating legal framework and other considerations. From January 1, 2013, MAS has applied higher standards for qualifying components of capital in accordance with Basel III, prior to which, Basel II capital standards had applied. The capital computation rules in MAS Notice 637 comply with the requirements under Basel capital framework set out under Basel II, II.5 and III.</p>
<b>EC2</b>	<b>At least for internationally active banks, the definition of capital, the risk coverage, the method of calculation and thresholds for the prescribed requirements are not lower than those established in the applicable Basel standards.</b>
Description and findings re EC2	<p>The locally-incorporated banks are required to meet capital adequacy requirements that are higher than the Basel III global capital standards. From January 1, 2015, MAS will require these banks to meet a minimum Common Equity Tier 1 (CET1) CAR of 6.5 percent, Tier 1 CAR of 8 percent and Total CAR of 10 percent. These standards are higher than the Basel III minimum requirements of 4.5 percent, 6 percent and 8 percent for CET1 CAR, Tier 1 CAR and Total CAR, respectively.</p> <p>MAS has also required the locally-incorporated banks to meet Basel III minimum capital adequacy requirements from January 1, 2013, two years ahead of the BCBS' January 1, 2015 timeline. This means that the banks are required to meet a minimum CET1 CAR of 4.5 percent and Tier 1 CAR of 6 percent. MAS' existing requirement for Total CAR remains unchanged at 10 percent.</p> <p>In line with Basel III requirements, MAS will introduce a capital conservation buffer of 2.5 percent above the minimum capital adequacy requirement. This will be met fully with CET1 capital and phased in on January 1 each year, from 2016 to 2019 (an increment of 0.625 percent each year). Including the capital conservation buffer, locally-incorporated banks will be required to meet a CET1 CAR of 9 percent, which is higher than the Basel III requirement of 7 percent. The banks may also be required to meet a countercyclical buffer within a range of 0 to 2.5 percent, comprised of CET1 capital, which will be phased in on January 1 each year, from 2016 and 2019.</p> <p>MAS' definition of capital (Part VI of MAS Notice 637), the risk coverage (credit, market and operational risks as set out in Parts VII, VIII and IX, respectively) and the method of calculation (Part IV) are compliant with the requirements set out in the applicable Basel standards.</p>



	<p>The BCBS has assessed Singapore’s capital regulations as being compliant with the capital standards under the Basel framework, in its Regulatory Consistency Assessment Program Report of Singapore, published in March 2013. The assessment concluded that Singapore has put in place national regulations in accordance with the capital standards under the Basel framework. The assessment of Singapore’s capital regulations was undertaken from July 2012 to March 2013, under BCBS’ Regulatory Consistency Assessment Program. The assessment found that Singapore’s regulations were “compliant” in 12 out of the 14 components assessed. While two components were assessed as “largely compliant,” the deviations were not considered by the assessment team to be material.</p> <p>In addition to MAS’ higher minimum CAR requirements, MAS has imposed capital requirements that are stricter than the requirements under the Basel framework in some areas, for example:</p> <ul style="list-style-type: none"> <li>• MAS requires deferred tax assets that rely on the future profitability of the bank to be realized, and all intangible assets (including mortgage servicing rights) to be fully deducted from CET1 capital, whereas the Basel framework permits limited recognition of such items in CET1 capital;</li> <li>• MAS requires a bank to meet Basel 1 capital floors on both Tier 1 and total capital levels, whereas the Basel framework imposes the Basel I capital floors on the total capital level;</li> <li>• MAS does not allow netting of on-balance sheet assets and liabilities (e.g., loans and deposits) in the calculation of credit risk capital requirements;</li> <li>• MAS does not recognize unrated debt securities issued by banks as eligible financial collateral; and</li> <li>• For the adoption of the IRBA for credit risk, MAS requires a bank, in addition to the requirements under the Basel framework, to adopt a parallel run for at least one year prior to its adoption of the IRBA, and to perform capital calculations based on both the IRBA and the standardized approach during the parallel run.</li> </ul>
<b>EC3</b>	<p><b>The supervisor has the power to impose a specific capital charge and/or limits on all material risk exposures, if warranted, including in respect of risks that the supervisor considers not to have been adequately transferred or mitigated through transactions (e.g., securitization transactions) entered into by the bank. Both on-balance sheet and off-balance sheet risks are included in the calculation of prescribed capital requirements.</b></p>
Description and findings re EC3	<p>Pursuant to section 10(3) of the BA, MAS may vary the CAR applicable to a bank, having regard to the risk arising from its activities and other such factors as MAS may consider relevant. Under the supervisory review process set out in Part X of MAS</p>

	<p>Notice 637, which is aligned with requirements in Pillar 2 of the Basel capital standards, MAS may require the bank to hold additional capital and apply other supervisory measures if necessary (paragraph 10.3.3).</p> <p>MAS Notice 637 requires the inclusion of on-balance sheet and off-balance sheet risks in the calculation of credit risk weighted assets (paragraph 7.1.2 of Part VII) and market risk weighted assets (paragraph 8.1.1 of Part VIII).</p>
<b>EC4</b>	<p><b>The prescribed capital requirements reflect the risk profile and systemic importance of banks in the context of the markets and macroeconomic conditions in which they operate and constrain the build-up of leverage in banks and the banking sector. Laws and regulations in a particular jurisdiction may set higher overall capital adequacy standards than the applicable Basel requirements.</b></p>
Description and findings re EC4	<p>The prescribed capital requirements on locally-incorporated banks have been set higher than Basel III minimum requirements because each of the locally-incorporated banks is systemically important in Singapore and has a substantial retail presence. While they remained strong throughout the global financial crisis, the higher capital requirements will further strengthen their ability to operate under stress conditions and will help protect depositors, reduce risks to the economy and safeguard financial stability.</p> <p>Section 10(3) of the BA allows MAS to vary the CAR applicable to a bank, having regard to the risk arising from its activities and other such factors as MAS may consider relevant (see CP16 EC3).</p>
<b>EC5</b>	<p><b>The use of banks' internal assessments of risk as inputs to the calculation of regulatory capital is approved by the supervisor. If the supervisor approves such use:</b></p> <ul style="list-style-type: none"> <li><b>(a) such assessments adhere to rigorous qualifying standards;</b></li> <li><b>(b) any cessation of such use, or any material modification of the bank's processes and models for producing such internal assessments, are subject to the approval of the supervisor;</b></li> <li><b>(c) the supervisor has the capacity to evaluate a bank's internal assessment process in order to determine that the relevant qualifying standards are met and that the bank's internal assessments can be relied upon as a reasonable reflection of the risks undertaken;</b></li> <li><b>(d) the supervisor has the power to impose conditions on its approvals if the supervisor considers it prudent to do so; and</b></li> <li><b>(e) if a bank does not continue to meet the qualifying standards or the conditions imposed by the supervisor on an ongoing basis, the supervisor has the power to revoke its approval.</b></li> </ul>
Description and findings re EC5	<p>The locally-incorporated banks have adopted the internal ratings-based approach for credit risk. Specifically, they have adopted the advanced internal ratings-based</p>

approach (A-IRBA) for retail exposures and the foundation internal ratings-based approach (F-IRBA) for wholesale exposures. For the A-IRBA, the bank uses internal estimates for PD, loss given default (LGD) and EAD for computation of credit risk RWA. For the F-IRBA, the bank estimates the PD risk parameter and applies the supervisory prescribed LGD and EAD for the computation of credit risk RWA. The banks are on the standardized approach for the computation of regulatory capital for market and operational risks.

(a) MAS Notice 637 requires a locally-incorporated bank to seek prior regulatory approval for the use of internal assessments of risk as inputs to the calculation of regulatory capital. In assessing a bank's application and readiness to adopt the advanced approaches for capital computation, i.e. the internal ratings-based approach (IRBA) for credit risk, AMA and IMA for market risk, where internal assessments of risk generated from internal models are used for capital computation, supervisors perform both on-site and off-site reviews to review the bank's internal processes against MAS Notice 637 requirements, including the internal validation conducted by the bank, the reasonableness of assumptions used in deriving risk estimates and the historical data used. As part of the review, supervisors also assess whether periodic stress tests are performed as required under MAS Notice 637, including the adequacy of scenarios applied and remedial actions taken to address weaknesses highlighted from the stress test results. Following the review, the supervisors' assessment and recommendations are subject to an internal process of peer comparison and effective challenge by other experienced supervisors, before approval is sought from a senior management committee.

(b) A bank that has been approved to adopt an advanced approach shall continue to use the advanced approach and any cessation of its use is subject to MAS' approval. For instance, if a bank that has adopted the IRBA intends to adopt the standardized approach instead, it may be allowed to do so only in exceptional circumstances, such as divestiture of a large fraction of the bank's credit-related business, subject to MAS' approval (paragraph 7.4.13A of Part VII of MAS Notice 637). In the event that a bank intends to make a material change to its IRBA processes and models, the bank shall inform MAS no less than 3 months prior to the expected date of implementation of the material change and MAS has the power to direct the bank to seek approval for such change (paragraph 7.4.13). Supervisors assess the reasonableness of the modifications, and may require the bank to hold back its implementation until the concerns are addressed. Further, for IRBA-approved systems, the bank is required to submit annually a list of all changes made to its models or credit processes.

(c) MAS has risk specialists who work with the supervisors to review a bank's internal assessment models and processes to ensure that the bank meets the requirements set out in MAS Notice 637. This is performed through on-site and off-site supervisory validations. Before approving the bank's adoption of an advanced

	<p>approach, MAS requires the bank to conduct a parallel run recognized by the MAS, where the bank shall calculate its CAR requirements using both the advanced approach and the prevailing capital requirements that are applicable to the bank. MAS recognizes a parallel run only if it is based on systems assessed by MAS to be sufficiently satisfactory for the parallel run. During this process, MAS assesses if the bank's advanced approach can be relied upon as a reasonable reflection of the risks undertaken. MAS also evaluates the readiness of the bank to adopt the advanced approach in order to reach a decision, towards the end of the recognized parallel run, on whether to grant or withhold approval for the bank to adopt the advanced approach. MAS may withhold the approval of the bank's advanced approach if during the recognized parallel run, it becomes aware of information that materially affects its assessment of the readiness of the bank to adopt the advanced approach, or if any outstanding issue identified prior to the start of the parallel run has not been addressed. MAS may also require the bank to extend the parallel run to allow more time for the bank to take corrective actions (see Division 4 of Part VII and Division 5 of Part IX of MAS Notice 637).</p> <p>(d) Under MAS Notice 637, MAS may grant approval for a bank to adopt an advanced approach, subject to such conditions or restrictions as MAS may impose (paragraphs 7.4.10, 8.3.12 and 9.5.15).</p> <p>(e) Under MAS Notice 637, MAS may suspend or revoke its approval for a bank to adopt the advanced approach, subject the bank to higher bank-specific capital requirements pursuant to section 10(3) of the BA, or take any other actions if amongst other things, (i) the bank has not fulfilled any of the conditions or restrictions imposed by MAS; or (ii) MAS is not satisfied that the bank is in compliance with the requirements set out in the Notice, or that the risk management process and system of the bank are adequate to support the advanced approach (paragraphs 7.4.12, 8.3.15 and 9.5.20).</p>
<b>EC6</b>	<p><b>The supervisor has the power to require banks to adopt a forward-looking approach to capital management (including the conduct of appropriate stress testing). The supervisor has the power to require banks:</b></p> <p><b>(a) to set capital levels and manage available capital in anticipation of possible events or changes in market conditions that could have an adverse effect; and</b></p> <p><b>(b) to have in place feasible contingency arrangements to maintain or strengthen capital positions in times of stress, as appropriate in the light of the risk profile and systemic importance of the bank.</b></p>
Description and findings re EC6	<p>Part X of MAS Notice 637 sets out the requirements for a bank to have an ICAAP for determining the adequacy of its capital to support all risks to which it is exposed. The bank is required to ensure that its ICAAP takes into account the current stage of the business cycle of the bank and is a forward-looking process capable of timely</p>

	<p>response to changes in the risk profile and business strategies of the bank, as well as its external environment (paragraph 10.2.2).</p> <p>Under Annex 7AB of MAS Notice 637, MAS has the power to require a bank to conduct credit risk stress tests to assess the effect of a mild recession scenario (i.e. two consecutive quarters of zero growth) on its IRBA minimum capital requirements at least semi-annually (Pillar 1 Credit Stress Test).</p> <p>As set out in Part X of MAS Notice 637, the bank is required to maintain an appropriate level of capital above Pillar 1 requirements, so that all risks of the bank, including on- and off-balance sheet, are adequately covered (paragraph 10.1.3). This will help ensure that the bank is able to operate effectively through a severe and prolonged period of financial market stress or an adverse credit cycle. Annex 10A of MAS Notice 637 sets out MAS' requirements on a bank's annual stress test (Pillar 2 Capital Stress Test) under its ICAAP (see CP15 EC 13 for details of the Pillar 1 and Pillar 2 stress tests).</p> <p>MAS also conducts an annual industry-wide stress test to assess banks' ability to withstand adverse financial and economic shocks, and to evaluate the potential impact on Singapore's financial stability (see CP9 EC4 for details).</p> <p>(a) Pursuant to section 10(3) of the BA, MAS may vary the CAR applicable to a bank, having regard to the risk arising from its activities and other such factors as MAS may consider relevant. In addition, under Annex 10A of MAS Notice 637, a bank shall ensure that it has sufficient capital to meet the regulatory capital requirements under Pillar 1 and to cover the results of its credit and market risk stress tests performed. To the extent that this is not met, MAS will take appropriate action, which may include instructing the bank to take action to lower the risks which it assumes or maintain additional capital or provisions, or both, so that existing capital resources can cover the Pillar 1 capital requirements (paragraph 10.5).</p> <p>Under Part X of MAS Notice 637, if MAS is not satisfied with the outcomes from its review of a bank's ICAAP, MAS may: (i) require the bank to take action to lower the risks which it assumes; (ii) require the bank to maintain additional capital; (iii) restrict the payment of dividends by the bank; (iv) require the bank to implement a satisfactory capital adequacy restoration plan, including plans to correct capital shortfalls in subsidiaries that are financial institutions regulated by MAS or financial services regulatory authorities outside Singapore; and (v) apply other supervisory measures to address the heightened risk or risk management deficiencies of the bank (e.g., intensifying supervisory monitoring of the bank or requiring the bank to strengthen risk management, apply internal limits, strengthen the level of provisions and reserves, or improve internal controls) (paragraph 10.3.3).</p> <p>(b) Under Annex 7AB of MAS Notice 637, the bank shall ensure that senior</p>
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	management is actively involved in, amongst other things, drawing up plans for remedial actions in response to the Pillar 1 Credit Stress Test results. These include the steps that the bank can take to manage its risk (including hedging and asset sales) and conserve capital (paragraph 6.3). As part of MAS' ICAAP requirements, a bank is required to make allowances for unexpected events, including putting in place contingency plans for raising additional capital (paragraph 10.2.16 of Part X).
<b>Additional criteria</b>	
<b>AC1</b>	<b>For non-internationally active banks, capital requirements, including the definition of capital, the risk coverage, the method of calculation, the scope of application and the capital required, are broadly consistent with the principles of the applicable Basel standards relevant to internationally active banks.</b>
Description and findings re AC1	<p>MAS Notice 1111 on <i>Risk Based Capital Adequacy Requirements for Merchant Banks Incorporated in Singapore</i> sets out the minimum capital requirements, including minimum capital adequacy ratios on a solo and group-wide basis, as well as the methodology for determining these ratios.</p> <p>Merchant banks are required to maintain a Tier 1 CAR of at least 6 percent and total CAR of at least 8 percent, which is on par with the Basel III minimum requirements. MAS' definition of capital (part VI of MAS Notice 1111), the risk coverage (credit, market and operational risks as set out in Parts VII, VIII and IX, respectively), the method of calculation (Part IV) and the scope of application (Part III) are broadly consistent with the applicable Basel standards. Paragraph 4.1.5 of MAS Notice 1111 empowers MAS to vary the Tier 1 CAR or Total CAR applicable to a merchant bank, if MAS considers it appropriate.</p> <p>Finance companies are required to maintain a CAR of at least 12 percent. The finance companies hold their capital in the form of common equity. While the method of calculation is based on the Basel I capital framework, this is appropriate to address the risks of finance companies given the focus of finance companies on lending to retail customers and smaller corporates. For lending to unrated corporates, the risk weight is 100% under both Basel I and the Standardized Approach in Basel II. For residential mortgages and lending to retail customers, Basel I's risk weights are higher than those under Basel II.</p> <p>Section 7A of the Finance Companies Act (Chapter 108) empowers MAS to require finance companies to maintain capital funds in proportion to its total assets or to every category of assets at ratios determined by MAS. MAS can require a finance company to maintain a CAR of at least 12 percent or any other percentage as determined by MAS.</p>
<b>AC2</b>	<b>The supervisor requires adequate distribution of capital within different entities of a banking group according to the allocation of risks.</b>
Description and	Part X of MAS Notice 637 requires a bank to ensure that every subsidiary (including

findings re AC2	subsidiaries that are excluded from consolidation at a group level), which is a financial institution regulated by MAS or a financial services regulatory authority outside Singapore, complies with the regulatory capital requirements imposed on that subsidiary by MAS or the financial services regulatory authority of the subsidiary, and that such subsidiary is adequately capitalized at all times (paragraph 10.2.9).
<b>Assessment of Principle 16</b>	<b>Compliant</b>
Comments	<p>The MAS has traditionally established capital regimes that equal or exceed the minimum standards adopted on a global basis and is in full compliance with all essential and additional criteria. Singapore voluntarily underwent a Regulatory Consistency Assessment during the 2012–13 period by the Basel Committee regarding its adoption of Basel III standards and its overall capital regime was found to be in line with the requirements of the Basel framework.</p> <p>While the higher capital requirements imposed by MAS may have in some respects put locally incorporated banks at an apparent competitive disadvantage vis-à-vis more leveraged foreign competitors, Singapore has chosen, as a financial center, to adopt a very conservative approach to regulation.</p>
<b>Principle 17</b>	<b>Credit risk.</b> The supervisor determines that banks have an adequate credit risk management process that takes into account their risk appetite, risk profile and market and macroeconomic conditions. This includes prudent policies and processes to identify, measure, evaluate, monitor, report and control or mitigate credit risk (including counterparty credit risk) on a timely basis. The full credit lifecycle is covered including credit underwriting, credit evaluation, and the ongoing management of the bank's loan and investment portfolios.
<b>Essential criteria</b>	
<b>EC1</b>	<b>Laws, regulations or the supervisor require banks to have appropriate credit risk management processes that provide a comprehensive bank-wide view of credit risk exposures. The supervisor determines that the processes are consistent with the risk appetite, risk profile, systemic importance and capital strength of the bank, take into account market and macroeconomic conditions and result in prudent standards of credit underwriting, evaluation, administration and monitoring.</b>
Description and findings re EC1	Banks are required to adopt a holistic approach to assessing credit risk and ensure that credit risk management is part of an integrated approach to the management of all financial risks. This includes the development of a credit risk strategy which considers factors such as the bank's overall risk appetite and profile, adequacy of capital and the overall macroeconomic environment. Details of MAS' requirements on the bank's credit risk management processes are set out in Parts VII and X of MAS Notice 637 on <i>Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore</i> , MAS Notice 612 on <i>Credit Files, Grading and Provisioning</i> and MAS' <i>Guidelines on Risk Management Practices—Credit Risk</i> (Credit Risk Guidelines).



	<p>During an inspection, supervisors assess the bank’s credit risk management systems and processes, management oversight and internal controls to determine that these are commensurate with the risk profile, size and complexity of the bank’s operations. In particular, supervisors assess the credit policies and processes of the bank to determine that they meet prudent standards of credit underwriting, evaluation, administration and monitoring. Supervisors also examine the credit granting criteria, approval authority structures, credit exposure limits and various controls within the credit process to ensure that these are clearly established and well-implemented. In addition, supervisors review credit files to assess the bank’s loan grading standards. For deficiencies noted in the bank’s credit policies and processes, supervisors require the bank to take effective remedial actions promptly. Key findings from the inspection are documented on comment sheets which are issued to the bank to allow the management to respond to issues raised. This is followed by an issuance of a formal inspection report to the bank which takes into account the bank’s responses to the comment sheets.</p> <p>In response to the buoyant residential property market and in tandem with several rounds of cooling measures, MAS conducted a horizontal review of all the major banks in the residential property loans market to assess their credit underwriting standards and compliance with MAS Notice 632 on <i>Residential Property Loans</i>. Supervisors found that a few banks had granted credit facilities based on a borrower’s net worth and liquid assets such as deposits, instead of an assessment of the borrower’s debt servicing capacity (based on the person’s regular income streams and debt obligations). These banks were required to take immediate actions to rectify their lending practices.</p>
<b>EC2</b>	<p><b>The supervisor determines that a bank’s Board approves, and regularly reviews, the credit risk management strategy and significant policies and processes for assuming, identifying, measuring, evaluating, monitoring, reporting and controlling or mitigating credit risk (including counterparty credit risk and associated potential future exposure) and that these are consistent with the risk appetite set by the Board. The supervisor also determines that senior management implements the credit risk strategy approved by the Board and develops the aforementioned policies and processes.</b></p>
Description and findings re EC2	<p>MAS’ <i>Guidelines on Risk Management Practices—Board and Senior Management</i> (Board and Management Guidelines) set out that a bank’s risk management strategies, policies, processes and limits should be regularly reviewed and appropriately adjusted to reflect changing risk appetites, risk profiles, capital strength, and market and macroeconomic conditions. Under Part X of MAS Notice 637, a bank’s Board is required to define the bank’s risk appetite and establish an acceptable level of risks that the bank may take, as well as the capital strategy of the bank. The Board shall review and approve the bank’s target level and composition of capital, and the process for setting and monitoring such targets at least annually, to ensure congruence between the risk profile and the capital adequacy of the bank.</p>



	<p>The bank's senior management is required to, amongst others: (i) develop a risk management framework and ensure that the formality and sophistication of the risk management processes are appropriate in light of the risk profile and business strategy of the bank; (ii) establish robust policies and procedures to identify, measure and report all material risks (including counterparty credit risk); (iii) establish a method for monitoring compliance with internal policies on risk assessment; (iv) institute a strong internal control culture throughout the bank, including the adoption of written policies and procedures; and (v) communicate the internal controls and written policies and procedures throughout the bank (paragraphs 10.2.5 to 10.2.7). MAS' Credit Risk Guidelines and <i>Code of Corporate Governance</i> sets out similar requirements on a bank's Board and senior management.</p> <p>Under MAS Notice 622A on <i>Appointment of Chief Executives of Branches of Banks incorporated outside of Singapore</i>, chief executives are required to establish sound written policies for all operational areas (including lending and investment activities), establish the limits of discretionary powers of each officer, committee, sub-committee for the purpose of lending and investing, and ensure that risk management systems and sound internal controls are in place for the bank's activities and operations.</p> <p>During inspections, supervisors determine that the Board approves and regularly reviews the credit risk strategy and significant credit risk policies of the bank and determines that the credit strategy reflects the bank's tolerance for risk. For a foreign bank branch, supervisors determine that the branch's credit risk strategy and policies are approved and reviewed regularly by the appropriate level of authority at the branch/head office, and are within the parameters of the group's credit risk strategy and policies approved by the Board. Supervisors also assess whether the credit risk strategy is effectively implemented through bank staff's adherence to written policies and processes. This is carried out through transaction testing, with a view to determining that credit policies are implemented through appropriate procedures and communicated throughout the organization. Supervisors will comment on deficiencies noted in the bank's credit policies and procedures and the timeliness of reviews by Board and senior management.</p> <p>Going forward, MAS inspections of the quality of banks' credit risk systems will benefit from greater first-hand knowledge of banks' credit exposure quality and the adequacy of loan loss provisioning. In this regard, it is important to distinguish between objectives of the work conducted by external auditors, within the framework of the audit of financial statements, from the work of on-site inspections, within the framework of identifying and addressing prudential concerns.</p>
<b>EC3</b>	<b>The supervisor requires, and regularly determines, that such policies and processes establish an appropriate and properly controlled credit risk</b>

	<p><b>environment, including:</b></p> <ul style="list-style-type: none"> <li><b>(a) a well documented and effectively implemented strategy and sound policies and processes for assuming credit risk, without undue reliance on external credit assessments;</b></li> <li><b>(b) well defined criteria and policies and processes for approving new exposures (including prudent underwriting standards) as well as for renewing and refinancing existing exposures, and identifying the appropriate approval authority for the size and complexity of the exposures;</b></li> <li><b>(c) effective credit administration policies and processes, including continued analysis of a borrower’s ability and willingness to repay under the terms of the debt (including review of the performance of underlying assets in the case of securitization exposures); monitoring of documentation, legal covenants, contractual requirements, collateral and other forms of credit risk mitigation; and an appropriate asset grading or classification system;</b></li> <li><b>(d) effective information systems for accurate and timely identification, aggregation and reporting of credit risk exposures to the bank’s Board and senior management on an ongoing basis;</b></li> <li><b>(e) prudent and appropriate credit limits, consistent with the bank’s risk appetite, risk profile and capital strength, which are understood by, and regularly communicated to, relevant staff;</b></li> <li><b>(f) exception tracking and reporting processes that ensure prompt action at the appropriate level of the bank’s senior management or Board where necessary; and</b></li> <li><b>(g) effective controls (including in respect of the quality, reliability and relevancy of data and in respect of validation procedures) around the use of models to identify and measure credit risk and set limits.</b></li> </ul>
Description and findings re EC3	<p>Supervisors require banks to establish adequate credit risk management policies and processes to govern their credit granting activities. Procedural manuals should contain the necessary operational steps and processes for executing the relevant credit risk controls and should be periodically reviewed and updated to take into account new activities, lending approaches and changes in systems.</p> <p>During inspections, supervisors cover the various aspects of the credit lifecycle, with a view to ensuring that policies and processes are comprehensive and result in a properly controlled credit risk environment. These include:</p> <ul style="list-style-type: none"> <li>• Credit granting/evaluation—Supervisors require banks to implement prudent procedures for approving or renewing credit facilities to customers meeting the prescribed credit acceptance criteria, without placing undue reliance on the customers’ external credit ratings. Supervisors carry out transaction testing of</li> </ul>

	<p>credit appraisals to determine that detailed analysis of borrowers' financial position and debt servicing capability is performed and that the bank has a thorough understanding of the purpose of the credit and evaluated the value of the collateral pledged.</p> <ul style="list-style-type: none"> <li>• Credit approval authority structures and limits—Supervisors require banks to establish and comply with a clear and appropriate credit approval authority structure approved by the Board. The credit approval authority should be suitably delegated and commensurate with the size and complexity of credit facilities granted. Credit exposure limits should be prudently set and based on the credit strength of the obligor and the institutions' risk appetite.</li> <li>• Credit monitoring and administration—Supervisors require banks to have in place a system for periodically monitoring the conditions of individual credits through key indicators of credit condition (e.g., the borrower's financial position, conduct of account, adherence to loan covenants and collateral valuation), such that problem or deteriorating credits are identified, reported to the appropriate level of senior management or Board in a timely manner, and adequate provisions are maintained. Banks are required, at the minimum, to categorize its credit facilities into five credit grades: (i) pass; (ii) special mention; (iii) substandard; (iv) doubtful; and (v) loss. Supervisors assess the effectiveness of the bank's credit monitoring and administration policies through transaction testing of the bank's credit reviews and credit administration procedures, which cover documentation, loan disbursement, tracking of repayments and maintenance of credit files.</li> <li>• MIS—Supervisors require banks to have in place credit MIS that measure and monitor the overall composition and quality of various credit portfolios, whether on- or off-balance sheet. The MIS should have the capability to support portfolio management, through monitoring aggregate exposures to a particular borrower, group of borrowers, industry or country. Supervisors review the timeliness, frequency and adequacy of key reports for management's action during inspections or off-site reviews.</li> <li>• Use of models— Under MAS Notice 637, locally-incorporated banks on the IRBA are required to have systems, processes and controls to calculate credit risk-weighted assets (RWA) accurately. Such systems, processes and controls are subject to internal audit at least annually. The banks are also required to perform internal validation of its rating systems at least annually. As part of the supervisory validation, supervisors review the reasonableness of assumptions built into the bank's credit models and systems as well as procedures for ensuring the integrity of data and reports generated using such models.</li> </ul> <p>Where weaknesses and deficiencies are observed, supervisors require banks to</p>
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	address them promptly.
<b>EC4</b>	<b>The supervisor determines that banks have policies and processes to monitor the total indebtedness of entities to which they extend credit and any risk factors that may result in default including significant unhedged foreign exchange risk.</b>
Description and findings re EC4	<p>Supervisors require banks to have adequate MIS that captures credit risk inherent in all on- and off-balance sheet activities. The MIS should be able to aggregate all such credit exposures to a single borrower and also aggregate exposures to groups of accounts under common ownership or control, or those with strong connecting links. Such data should be aggregated in an accurate and timely manner, and monitored as part of the bank's credit risk management process.</p> <p>During inspections, supervisors verify that banks identify and monitor key indicators of credit conditions through periodic credit reviews. This includes the monitoring of the borrower's financial position, including outstanding indebtedness, conduct of account, adherence to loan covenants, collateral valuation, borrowing from other financial institutions as well as the borrower's ability to obtain the foreign exchange necessary to service its cross-border debt.</p>
<b>EC5</b>	<b>The supervisor requires that banks make credit decisions free of conflicts of interest and on an arm's length basis.</b>
Description and findings re EC5	Section 28 of the BA requires every director of a bank to declare to the Board his interest in a credit facility from the bank or any conflict of interest.
<b>EC6</b>	<b>The supervisor requires that the credit policy prescribes that major credit risk exposures exceeding a certain amount or percentage of the bank's capital are to be decided by the bank's Board or senior management. The same applies to credit risk exposures that are especially risky or otherwise not in line with the mainstream of the bank's activities.</b>
Description and findings re EC6	<p>Under MAS' <i>Credit Risk Guidelines</i>, a bank's credit policy should include the roles and responsibilities of units and staff involved in the granting, maintenance and management of credit; the delegation of credit authority to various levels of management and staff; and the management of concentration risk, including limits and portfolio monitoring. Banks should stipulate credit approval limits by amount, type of facility, industry, country and/or geographical area, and spell out the requirements for Board, management committee or senior management's approval of credit exceeding prescribed limits in their credit policies. Similarly, banks' investment policies should stipulate the range of permissible products and tenure, trading authorities, permissible counterparties, and stipulate the approval authorities for any departure from policy.</p> <p>During inspections and off-site reviews, supervisors assess banks' credit and investment policies, and require banks to address any deficiencies noted. Supervisors have also required banks to reduce the credit approving limits of senior management if the limits are deemed to be too high.</p>

<b>EC7</b>	<b>The supervisor has full access to information in the credit and investment portfolios and to the bank officers involved in assuming, managing, controlling and reporting on credit risk.</b>
Description and findings re EC7	Banks are required to provide MAS: (i) all information that it requires to carry out its supervisory functions; (ii) access to their books, accounts and documents; and (iii) such other information as may be required for the purposes of inspection or investigation (sections 26 and 44A, BA). In addition to regulatory returns, supervisors have access to banks' internal management risk reports and may collect additional information on specific portfolio exposures on an ad-hoc basis. Supervisors also have full access to the bank officers involved in credit functions.
<b>EC8</b>	<b>The supervisor requires banks to include their credit risk exposures into their stress testing programs for risk management purposes.</b>
Description and findings re EC8	Banks are required to perform adequate credit stress testing to determine their potential exposure to credit risk arising from adverse market conditions. Senior management should be involved in designing the stress tests, and the stress scenarios should reflect specific risk characteristics of the bank's portfolios and take into consideration prevailing market conditions. In addition, MAS conducts regular industry-wide stress tests of financial institutions, which cover banks' credit risk exposures (see CP 9 EC 4 for details on the industry-wide stress tests). Senior management is expected to review the stress test results and formulate appropriate contingency plans and actions (including hedging and asset sales) where the results exceed accepted tolerance levels. During inspections, supervisors ascertain whether credit stress testing has been periodically performed, including the review of contingency plans formulated following the stress tests. Supervisors will comment if deficiencies are noted in banks' stress testing policies or processes. Locally-incorporated banks are required under MAS Notice 637 to conduct credit risk stress tests at least semi-annually and the ICAAP stress testing annually.
<b>Assessment of Principle 17</b>	<b>Largely compliant</b>
Comments	<p>As in most banking systems, credit risk is the most relevant risk in the banking system in Singapore. Moreover, current macroeconomic conditions in Singapore indicate an economy in its expansionary part of the credit cycle. NPLs are at historical low levels in several sectors and interest rates have been pushed down as a consequence of central bank easing actions in a number of countries around the world. The seeds for banking crises are often planted during such good periods, as demonstrated by the recent global financial crisis. Vulnerable credits remain hidden in performing credit portfolios. Compliance with this principle, therefore, is critical, and minor deficiencies have to be highlighted and addressed.</p> <p>MAS is fully aware of the vulnerabilities that current developments on credit risk entail for the financial system, and monitors them carefully as illustrated in recent issues of MAS Financial Stability Reports. Also, MAS has developed an intensive and intrusive approach to risk-based supervision that provides flexibility to its supervisory</p>

	<p>actions. Therefore, areas identified under this principle for strengthening the assessment of credit risk management in the banks are intended to enhance the current approach and are not meant to imply that the team has serious concerns on the basis of this mission.</p> <p>The philosophy of MAS is to place significant emphasis on holding bank management accountable for the quality of underwriting and credit quality, and on its on- and off-site reviews of the bank’s adequacy of its credit risk management systems and processes. MAS also carefully monitors credit developments in Singapore. While the team fully endorses MAS’ philosophy of viewing bank management, bank risk management systems, and prudent internal risk cultures, etc, as the first line of defense against weak loan and asset portfolios, it believes that even more attention to this area is warranted, given the high risks.</p> <p>To fully meet the objectives of this principle in terms of supervisory verification of banks’ prudential policies and processes to identify, measure, and report credit risk on a timely basis, the team recommends that MAS increase its attention to on-site inspections of credit risk. For the major banks, MAS should establish an on-site multiyear supervisory cycle to review all sectors of banks’ credit exposures according to their CRAFT analyses. Special attention should be given to borrowers’ ability to repay, particularly under stressed economic and financial circumstances, and to loan restructurings that might mask borrowers’ weaknesses. The inspections do not need to be lengthy exercises but should include a review of a sample of credit files, which according to the nature of the portfolios, provides a reasonable assurance of the quality of banks’ credit exposures.</p> <p>Since 2009, the authorities have implemented a series of “cooling” measures to rein in the credit expansion, slow the rise in housing prices, and reduce the risk associated with lending against real estate and autos. MAS has also imposed limits on banks’ exposure to the property market. It is not yet clear, however, whether the MAS actions have been effective in achieving the desired outcomes—full assessment has to be deferred to a future evaluation.</p> <p>Moreover, in view of the level of risk and current macroeconomic conditions, MAS should ensure that resources assigned to determine banks’ management of loan and investment portfolios are commensurate with the level and impact of credit risk. MAS’ assessment of the quality of banks’ own credit risk systems might benefit from greater first-hand knowledge by MAS of banks’ credit exposure quality and the adequacy of loan loss provisioning for prudential purposes.</p>
<b>Principle 18</b>	<b>Problem assets, provisions and reserves.</b> The supervisor determines that banks have adequate policies and processes for the early identification and management of problem assets, and the maintenance of adequate provisions and reserves.
<b>Essential criteria</b>	

<b>EC1</b>	<b>Laws, regulations or the supervisor require banks to formulate policies and processes for identifying and managing problem assets. In addition, laws, regulations or the supervisor require regular review by banks of their problem assets (at an individual level or at a portfolio level for assets with homogenous characteristics) and asset classification, provisioning and write-offs.</b>
Description and findings re EC1	<p>Supervisors require banks to have policies and processes, based on diligent credit monitoring and loan grading, to identify and manage problem assets at an early stage. Paragraph 4.1 of MAS Notice 612 on <i>Credit Files, Grading and Provisioning</i> requires banks to maintain proper credit files on all borrowers and conduct regular and systematic reviews of all credit facilities and grade them, in accordance with the characteristics set out under the Notice into five categories—Pass, Special Mention, Substandard, Doubtful and Loss (the last three being classified grades). Facilities deemed to be of higher risk or showing signs of deterioration are to be placed on a shorter review cycle. Supervisors require banks to classify loans if the borrower’s ability to repay the loan from his normal sources of income is in doubt (e.g., bad account conduct, weak financials, restructuring of contract terms, or where principal and interest payments are in arrears for 3 months or more). Section 23 of the BA stipulates that banks have to make adequate provisions for bad and doubtful debts before any profit and loss is declared and to ensure that provision is adequate.</p> <p>During inspections, supervisors assess whether banks have sound policies and processes for identifying and managing problem assets. These include loan review and grading methodology, loan provisioning, writing off bad debts and suspension of interest on delinquent loans, reporting of classified loans and watchlist monitoring, and remedial actions for special mention and classified accounts (such as more frequent reviews, reducing and capping limits or outstanding amounts, drawing up specific action plans, using a watchlist and formal reporting to management or head office).</p>
<b>EC2</b>	<b>The supervisor determines the adequacy of a bank’s policies and processes for grading and classifying its assets and establishing appropriate and robust provisioning levels. The reviews supporting the supervisor’s opinion may be conducted by external experts, with the supervisor reviewing the work of the external experts to determine the adequacy of the bank’s policies and processes.</b>
Description and findings re EC2	<p>During inspections, supervisors evaluate the adequacy of banks’ policies and processes for grading and classifying its assets and establishing appropriate and robust provisioning levels. Such policies and processes are assessed against regulatory requirements and guidelines. Paragraph 6.2.1 of MAS Notice 612 requires banks to have in place sound loan loss estimation methodologies that will yield timely and prudent estimates of the amount of impairment provision required for each loan that is assessed by the bank to be impaired.</p> <p>During inspections, supervisors review the characteristics of the credit facilities against descriptions of the credit grades (set out in paragraph 4.2 of MAS Notice</p>



	<p>612), to determine whether an appropriate credit grading and corresponding provisions (where required) has been assigned by the bank. Where supervisors assess the credit grading to be incorrect or provisions inadequate, they will follow up on the areas of weakness in the banks' credit review systems and provisioning methodology, and require the banks to increase their provisions to cover the shortfalls.</p> <p>Under MAS Notice 609 on <i>Auditors' Reports and Additional Information to be Submitted with Annual Accounts</i>, external auditors are required to assess and confirm whether anything came to their notice that caused or led them to believe that adequate provision had not been made for known material doubtful debts and for any material impairment of other assets. They are also required to highlight findings and recommendations on the bank's internal controls, quality of loans and advances or any areas of weakness in the auditor's long-form report. Supervisors require banks to submit details of their classified loans together with their annual accounts for review. Supervisors have required banks to reclassify loans and increase specific provisions where warranted.</p>
<b>EC3</b>	<b>The supervisor determines that the bank's system for classification and provisioning takes into account off-balance sheet exposures.</b>
Description and findings re EC3	Paragraphs 4.1 and 6 of MAS Notice 612 require that off-balance sheet exposures to obligors (includes both counterparties and issuers) are included as part of the overall credit exposure and subject to the same classification, monitoring and provisioning policies as on-balance sheet exposures. During inspections, supervisors determine that this has been carried out in practice and that banks have credit management information systems that measure the credit risk inherent in all on- and off-balance sheet activities.
<b>EC4</b>	<b>The supervisor determines that banks have appropriate policies and processes to ensure that provisions and write-offs are timely and reflect realistic repayment and recovery expectations, taking into account market and macroeconomic conditions.</b>
Description and findings re EC4	<p>Paragraph 4 of MAS Notice 612 requires banks to maintain proper credit files on all borrowers, conduct regular and systematic reviews of credit facilities and to grade them, in accordance with the characteristics set out under the Notice into five categories—Pass, Special Mention, Substandard, Doubtful and Loss (the last three being classified grades). Facilities deemed to be of higher risk or showing signs of deterioration should be placed on a shorter review cycle. During inspections, supervisors determine if the frequency of reviews is adequate for the timely identification of credit problems and management actions.</p> <p>Paragraph 6.1.5 of MAS Notice 612 requires banks to be circumspect and prudent in determining the level of collective and individual provisions to be maintained, such that they are sufficient to absorb credit losses inherent in its entire loan portfolio. The level of provisions should also reflect realistic repayment and recovery expectations from the obligor. Supervisors assess the adequacy of provisions during inspections.</p>



	<p>On a half yearly basis, MAS requires banks to submit information of their top 100 borrowers, which will include loan details, such as amount outstanding, collateral value, loan grading and level of provisioning (if any). Credit facilities extended to common borrowers are compared for grading and provisioning differences. Supervisors follow up with banks to understand reasons for outliers (e.g., a bank assigning a better grading or lower provisioning to a common obligor, compared to other banks), and require banks to reclassify loans and increase specific provisions where warranted.</p> <p>Developments in market and macroeconomic conditions, such as weaknesses or volatilities in particular geographies or industry sectors, are also monitored to assess their potential impact on the asset quality of banks. Where supervisors assess the credit grading to be incorrect or provisions inadequate, they will require banks to reclassify the credit, increase provisions and follow-up on areas of identified weakness in the banks' credit review systems and provisioning methodology.</p>
<b>EC5</b>	<p><b>The supervisor determines that banks have appropriate policies and processes, and organizational resources for the early identification of deteriorating assets, for ongoing oversight of problem assets, and for collecting on past due obligations. For portfolios of credit exposures with homogeneous characteristics, the exposures are classified when payments are contractually in arrears for a minimum number of days (e.g., 30, 60, 90 days). The supervisor tests banks' treatment of assets with a view to identifying any material circumvention of the classification and provisioning standards (e.g., rescheduling, refinancing or reclassification of loans).</b></p>
Description and findings re EC5	<p>As part of ongoing supervision, supervisors assess whether the bank's policies and procedures are adequate, clear and adhere to the requirements set out in MAS Notice 612 such as the following:</p> <ul style="list-style-type: none"> <li>• Paragraph 4.3 requires banks to classify a loan where repayment of principal or interest is outstanding for 90 days or more;</li> <li>• Paragraph 4.2 requires consumer loans past due for 120 days or more but less than 180 days to be classified as Doubtful; and loans past due for 180 days or more are required to be classified as Loss; and</li> <li>• Paragraphs 4.5 and 4.6 require restructured credit facilities to be placed on an appropriate classified grade depending on its assessment of the financial condition of the borrower and the ability of the borrower to repay based on the restructured terms. A bank may restore a classified credit facility to unclassified status only when there are reasonable grounds for the bank to conclude that the borrower will be able to service all future principal and interest payments on the credit facility in accordance with the restructured terms.</li> </ul> <p>Through inspections and off-site reviews (including review of internal/external audit</p>

	<p>reports), supervisors conduct transaction testing to assess compliance with classification and provisioning requirements. Supervisors also assess (i) whether banks have adequate resources to provide independent management of non-performing assets; (ii) that proper and effective actions are taken to recover past due loans to protect the banks' interests; and (iii) that management is informed on a timely basis and monitors the recovery of these loans.</p> <p>Supervisors also assess whether banks have adequate resources to provide independent management of non-performing assets, that proper and effective actions are taken to recover past due loans to protect the banks' interests, and that management is informed on a timely basis and monitors the recovery of these loans.</p>
<b>EC6</b>	<b>The supervisor obtains information on a regular basis, and in relevant detail, or has full access to information concerning the classification of assets and provisioning. The supervisor requires banks to have adequate documentation to support their classification and provisioning levels.</b>
Description and findings re EC6	<p>On a quarterly basis, banks submit to supervisors the details of their total outstanding exposures by the five credit grading categories—Pass, Special Mention, Substandard, Doubtful and Loss. Details include a breakdown (within each credit grading) into actual and contingent outstanding, proportion secured and specific provision set aside. Locally-incorporated banks are required to submit such information monthly on a group-wide basis.</p> <p>In addition, banks are required under MAS Notice 609 Appendix 1 to submit annual aggregate level information on their loans and receivables according to the classified grades, both at amortized cost and at fair value, with the associated impairment losses. The locally-incorporated banks also submit information on asset quality and impairment allowance at aggregate level to supervisors for review as part of their update on quarterly financial performance. Supervisors review the submissions and require banks to submit specific loan details where warranted.</p> <p>On a half-yearly basis, banks submit details of their top 100 borrowers. This includes the borrower's name, outstanding amount, type and value of collateral, loan grading and provision made.</p>
<b>EC7</b>	<b>The supervisor assesses whether the classification of the assets and the provisioning is adequate for prudential purposes. If asset classifications are inaccurate or provisions are deemed to be inadequate for prudential purposes (e.g., if the supervisor considers existing or anticipated deterioration in asset quality to be of concern or if the provisions do not fully reflect losses expected to be incurred), the supervisor has the power to require the bank to adjust its classifications of individual assets, increase its levels of provisioning, reserves or capital and, if necessary, impose other remedial measures.</b>
Description and findings re EC7	MAS has powers under section 49 of the BA to direct banks to strengthen their lending practices and policies. Supervisors have required banks to increase provisions for problem loans following inspections or off-site reviews (see CP18 EC4).

	<p>MAS is also empowered under section 10 of the BA to require banks in Singapore to maintain capital funds above the minimum prescribed under the BA until they have rectified their weaknesses. It is also MAS' practice to keep parent banks and regulators of foreign bank branches informed of deficiencies noted in the Singapore branches' operations, such as weaknesses noted during inspections or off-site review. These are conveyed through inspection reports, at fora such as supervisory colleges or through dialogue with relevant regulators in the course of supervisory work where necessary.</p>
<b>EC8</b>	<p><b>The supervisor requires banks to have appropriate mechanisms in place for regularly assessing the value of risk mitigants, including guarantees, credit derivatives and collateral. The valuation of collateral reflects the net realizable value, taking into account prevailing market conditions.</b></p>
Description and findings re EC8	<p>Under MAS' <i>Guidelines on Risk Management Practices—Credit Risk</i> (Credit Risk Guidelines), all banks are to have in place a system for monitoring the condition of individual credits, including assessing the value of risk mitigants such as collateral. Banks should have a reliable and timely collateral valuation system, which should include factors such as the legal enforceability of claims on collateral, ease of realization of collateral and current market conditions. For example, where the collateral is property or shares, the bank should undertake more frequent valuations in adverse market conditions. Where appropriate, the bank should apply a haircut to the estimated net realizable value of collateral or use the forced sale value of the collateral to provide more realistic estimates.</p> <p>Paragraph 3 of MAS Notice 612 requires banks to maintain credit files that contain periodic reports on the extent of facilities utilized, appraisal of security, financial standing of customers and guarantors, customer's performance towards financial obligations, etc.</p> <p>During inspections, supervisors assess the adequacy of the policies and processes and determine if they have been carried out in practice, including whether (i) the bank's in-house valuation unit is independent of the business function; (ii) the bank's panel of external valuers is regularly reviewed; (iii) the bank conducts regular benchmarking of valuations with property price data from public databases.</p>
<b>EC9</b>	<p><b>Laws, regulations or the supervisor establish criteria for assets to be:</b></p> <p><b>(a) identified as a problem asset (e.g., a loan is identified as a problem asset when there is reason to believe that all amounts due, including principal and interest, will not be collected in accordance with the contractual terms of the loan agreement); and</b></p> <p><b>(b) reclassified as performing (e.g., a loan is reclassified as performing when all arrears have been cleared and the loan has been brought fully current, repayments have been made in a timely manner over a continuous</b></p>

	<b>repayment period and continued collection, in accordance with the contractual terms, is expected).</b>
Description and findings re EC9	<p>Paragraphs 4 and 5 of MAS Notice 612 set out criteria for assets to be:</p> <p>(a) Identified as a problem asset. A loan should be classified if the borrower's ability to repay the loan from his normal sources of income is in doubt. The bank should, at the minimum, classify every credit facility where the principal or interest or both is past due for more than 90 days or where the credit facility exhibits weaknesses as set out within the description of the classified grades in the Notice (e.g., bad account conduct, weak financials, restructuring of contract terms, or where principal and interest payments are in arrears for 90 days or more).</p> <p>(b) Reclassified as performing. A bank may restore a classified credit facility to unclassified status when: (i) the bank has received repayment of the past due principal and interest and the bank expects repayment of the remaining principal and interest in accordance with the terms of the credit facility; or (ii) in the case of a restructured credit facility, there are reasonable grounds for the bank to conclude that the borrower will be able to service all future principal and interest payments on the credit facility in accordance with the restructured terms. On (ii), a restructured credit facility shall, at the minimum, remain classified unless the borrower has complied fully with the restructured terms and has serviced all principal and interest payments continuously for either a period of 6 months in the case of credit facilities with monthly repayments; or a period of 1 year in the case of a credit facility with quarterly or semi-annual repayments. For a restructured credit facility with repayments of principal and interest on an annual or longer basis, a bank shall only upgrade that credit facility if the borrower has complied fully with the restructured terms and demonstrated the ability to repay after the end of one repayment period.</p> <p>Upgrading of any credit facility must be supported by a credit assessment of repayment capability, cash flows and financial position of the borrower.</p>
<b>EC10</b>	<b>The supervisor determines that the bank's Board obtains timely and appropriate information on the condition of the bank's asset portfolio, including classification of assets, the level of provisions and reserves and major problem assets. The information includes, at a minimum, summary results of the latest asset review process, comparative trends in the overall quality of problem assets, and measurements of existing or anticipated deterioration in asset quality and losses expected to be incurred.</b>
Description and findings re EC10	A bank's Board is to be fully aware of and understand the credit risk inherent in the institution's spectrum of activities, including the condition of the bank's asset portfolio. As part of off-site reviews and during inspections, supervisors assess the extent of Board oversight over the condition of the bank's asset portfolio. Relevant documentation, including information received by the Board and the minutes of

	meeting, are obtained and reviewed for the adequacy of information presented, issues discussed and level of participation and timeliness of management actions, where required. For branches of banks which are incorporated outside of Singapore, supervisors assess the adequacy of oversight and accountability of branch's senior management over the branch's asset portfolio, including reviewing whether the information has been escalated and the decisions taken are within the appropriate authority level delegated by the Board.
<b>EC11</b>	<b>The supervisor requires that valuation, classification and provisioning, at least for significant exposures, are conducted on an individual item basis. For this purpose, supervisors require banks to set an appropriate threshold for the purpose of identifying significant exposures and to regularly review the level of the threshold.</b>
Description and findings re EC11	Under MAS Notice 612, banks are required to value, grade and make adequate specific provisions on a loan-by-loan basis except for homogeneous loans below a certain materiality threshold. Homogeneous loans (such as housing loans, consumer loans and credit card receivables) may be pooled together and provided for collectively as a group, taking into account the historical loss experience on such loans. As part of their systematic credit review processes, banks are required to clearly establish the portfolio types or size of the loan that will warrant an individual assessment. Supervisors assess that the banks' practices are appropriate and regularly reviewed.
<b>EC12</b>	<b>The supervisor regularly assesses any trends and concentrations in risk and risk build-up across the banking sector in relation to banks' problem assets and takes into account any observed concentration in the risk mitigation strategies adopted by banks and the potential effect on the efficacy of the mitigant in reducing loss. The supervisor considers the adequacy of provisions and reserves at the bank and banking system level in the light of this assessment.</b>
Description and findings re EC12	On a quarterly basis, MAS collects and monitors the proportion of problem assets across the banking sector and identifies trends in the build-up of problem assets, such as in particular countries or industries if any. Where such trends are identified, MAS engages individual banks to understand their risk mitigation strategies. Locally-incorporated banks are required to submit monthly data on problem assets, with a breakdown by industry and country levels. In addition, MAS has a CRAY tool to help supervisors of larger banks analyze the asset quality of their banks given that credit risk is a major risk component in many banks. The PD and the PD distribution are used as main credit risk indicators under CRAY. For both tools, peer comparison is an important element. Common indicators across peer banks are monitored and analyzed to pick up anomalies (see details of CRAY in CP9 EC4).  MAS conducts IWST annually for banks which are systemically important in Singapore to simulate the impact of a common stress scenario on the bank's asset quality, earnings performance and capital adequacy. The results of the stress tests are analyzed for trends such as a build-up in problem assets in particular industries or borrower groups (e.g., sovereigns, large corporates, small and medium sized

	<p>companies and retail). The adequacy of provisions is considered at the individual bank level.</p> <p>From such analyses, concentration risk of exposures to particular sectors and borrowers are identified for further analysis and assessment. For instance, with the prevalence of property collateral as a risk mitigant in banks' loan books, property market stress is a key element in such stress tests to assess the effectiveness of property collateral as a risk mitigant (this is further examined during inspections conducted by supervisors). As part of the IWST, or more frequently when there are adverse developments in the market, MAS collects data on counterparty credit risk from OTC derivative transactions, amongst other sources. Using such data, MAS assesses the concentration in exposures to various counterparties and engage banks to discuss management of their exposures.</p> <p>Surveys are also conducted to monitor the trends and risk concentrations in the banking sector. For instance, MAS conducts an annual survey on banks' lending to small and medium-sized enterprises, which includes information on the percentage of loans that is secured and the types of collaterals pledged. MAS has also conducted a survey on banks' project financing activities and this included information on the banks' use of risk mitigation instruments in managing such loans.</p>
<b>Assessment of Principle 18</b>	<b>Compliant</b>
Comments	<p>During inspections, supervisors assess that banks have established and adhered to adequate policies and processes for evaluating the quality of assets and the adequacy of loan loss provisions and reserves. MAS also assesses that banks regularly review and update these policies and practices. This principle is rated as fully compliant. As mentioned in CP17, however, MAS supervision of banks' credit risk management process and the assessment of the quality of their loan loss provisioning would benefit from greater emphasis and supervisory efforts to gain first-hand knowledge of the actual quality of banks' credit exposures and loan loss provisioning.</p>
<b>Principle 19</b>	<b>Concentration risk and large exposure limits.</b> The supervisor determines that banks have adequate policies and processes to identify, measure, evaluate, monitor, report and control or mitigate concentrations of risk on a timely basis. Supervisors set prudential limits to restrict bank exposures to single counterparties or groups of connected counterparties.
<b>Essential criteria</b>	
<b>EC1</b>	<b>Laws, regulations or the supervisor require banks to have policies and processes that provide a comprehensive bank-wide view of significant sources of concentration risk. Exposures arising from off-balance sheet as well as on-balance sheet items and from contingent liabilities are captured.</b>
Description and findings re EC1	<p>A bank is required under sections 29, 31, 33 and 35 of the BA, MAS Notice 639 on <i>Exposures to Single Counterparty Groups</i>, MAS Notice 637 on <i>Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore</i> and MAS' <i>Guidelines on Risk Management Practices—Credit Risk</i> (Credit Risk Guidelines) to have a bank-wide</p>

	<p>view of significant sources of concentration risk arising from its on- and off-balance sheet exposures.</p> <p><u>Sections 29, 31, 33 and 35 of BA, MAS Notice 639, MAS Notice 637</u></p> <ul style="list-style-type: none"> <li>• <i>Concentrations to single counterparty group:</i> Under section 29 of the BA and MAS Notice 639, a bank is required to ensure that its aggregated exposures to a single counterparty (or group of connected counterparties) do not exceed 25 percent of the bank's capital funds. A group of persons (i) who are financially dependent on one another, or (ii) where one person controls every other person in that group, must also be treated as a single counterparty for the purposes of determining aggregated exposure to the bank. A bank is also required to ensure that the aggregate of its substantial exposures (defined as those which exceed 10 percent of the bank's capital funds) do not exceed 50 percent of the bank's total exposures. "Exposures" is defined in the Fifth Schedule of the BA as the maximum loss that a bank may incur as a result of the failure of a counterparty of its obligations. In this regard, the computation of exposures comprises both on- and off-balance sheet exposures.</li> <li>• <i>Limits on equity investments, indexes or investment funds:</i> Under section 31 of the BA and paragraph 16 of MAS Notice 639, a bank is not allowed to acquire or hold any equity investment in a single company or make investments in any index or investment fund that exceeds 2 percent of the its capital funds, respectively.</li> <li>• <i>Limits on immovable property:</i> Under section 33 of the BA, a bank is not allowed to acquire or hold interests in or rights over immovable property that exceeds 20 percent of its capital funds.</li> <li>• <i>Limits on exposure to immovable property sector:</i> Under section 35 of the BA, a bank is not allowed to have property sector exposures exceeding 35 percent of its total eligible assets.</li> </ul> <p>Under Annex 10A of MAS Notice 637, for its concentration risk management program, a bank shall, amongst other things, ensure that the senior management is responsible for developing policies and procedures for identifying, measuring, monitoring and controlling concentration risk in a timely manner. The Board shall also review and endorse the risk management framework for concentration risk proposed by the bank's management (paragraph 3.10).</p> <p><u>Credit Risk Guidelines</u></p> <p>Under MAS' Credit Risk Guidelines, a bank should consider, as part of its overall credit risk management strategy, the portfolio mix that balances its willingness to bear concentration risk with sufficient diversification. Apart from setting of exposure limits for single obligors and groups of related obligors, the bank should establish</p>
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	appropriate limits to monitor and control concentration risks at a portfolio level to certain industries or economic sectors, individual country or group of countries with inter-related economies and specific type of credit product and collateral. The concentration limits set should be consistent with prudent practices and regulatory requirements, adequate for the nature and complexity of the bank's activities and documented in the bank's policies which are approved by the Board. Apart from concentration limits, policies should also provide guidance on other aspects on concentration risk management, such as portfolio monitoring and stress testing.
<b>EC2</b>	<b>The supervisor determines that a bank's information systems identify and aggregate on a timely basis, and facilitate active management of, exposures creating risk concentrations and large exposure to single counterparties or groups of connected counterparties.</b>
Description and findings re EC2	<p>Under MAS' <i>Guidelines on Risk Management Practices—Internal Controls</i> and Credit Risk Guidelines, and Annex 10A of MAS Notice 637, a bank is expected to be able to identify and aggregate similar risk exposures across the bank, including across legal entities, asset types (e.g., loans, derivatives, structured products and off-balance sheet exposures), risk areas (e.g., exposures in the banking book and trading book) and geographic regions, through its risk management processes and MIS (paragraph 3.8).</p> <p>As part of ongoing supervision, supervisors evaluate a bank's credit risk strategy and assess the adequacy and effectiveness of the bank's MIS to support the accurate and timely identification, aggregation and monitoring of its credit exposures on a portfolio basis. In particular, supervisors assess the extent to which MIS are relied upon to aggregate exposures creating risk concentrations and whether it is commensurate with the size and complexity of the bank's operations. Supervisors also assess whether risk concentrations are brought to the attention of senior management on a timely basis for their information and action where warranted.</p> <p>Where manual processes are relied upon to aggregate and monitor exposures creating risk concentrations, supervisors assess the accuracy and timeliness in which such reports are escalated to the appropriate authority levels.</p> <p>Supervisors have required banks to implement or enhance their MIS, where existing systems or manual processes are inadequate for accurate and timely reporting of exposures.</p>
<b>EC3</b>	<b>The supervisor determines that a bank's risk management policies and processes establish thresholds for acceptable concentrations of risk, reflecting the bank's risk appetite, risk profile and capital strength, which are understood by, and regularly communicated to, relevant staff. The supervisor also determines that the bank's policies and processes require all material concentrations to be regularly reviewed and reported to the bank's Board.</b>
Description and findings re EC3	Under Part X of MAS Notice 637 and MAS' Risk Management Guidelines, a bank is to ensure that its senior management is responsible for developing policies and



	<p>procedures for identifying, measuring, monitoring and controlling concentration risk in a timely manner. This shall be done at both the solo and group levels (where applicable), and be commensurate with the overall risk appetite and strategic initiatives of bank. The bank shall regularly apprise the Board of the risk exposure and vulnerability of the bank to risk concentrations. Further, the bank shall establish internal limits that are reasonable in relation to its capital (where applicable), total assets or, where adequate measures exist, its overall risk level. The bank shall also ensure that its senior management communicates the internal controls and written policies and procedures to the relevant staff.</p> <p>During inspections and off-site reviews, supervisors determine that the bank's policies and procedures establish exposure limits on single counterparties and groups of connected counterparties, which are in compliance with prudential limits and within the bank's risk profile and appetite. Supervisors assess whether credit policies setting out such thresholds are communicated to and understood by relevant staff and implemented through appropriate procedures. Policies and procedures should also be periodically revised to take into account changing internal and external circumstances. Supervisors review management reports and evaluate whether all material concentrations have been regularly reported and reviewed by the bank's Board or senior management. Supervisors also assess whether appropriate and timely measures have been taken by bank's Board or senior management to mitigate undue concentration risks where required, such as pricing for additional risk, increasing capital or reserves, and through loan sales and participation.</p> <p>On a quarterly basis, banks are required to report single counterparty group exposures which will otherwise have exceeded the limits, if not for meeting the conditions which allow them to be excluded from single counterparty group limits (e.g., financially independent entities).</p>
<b>EC4</b>	<b>The supervisor regularly obtains information that enables concentrations within a bank's portfolio, including sectoral, geographical and currency exposures, to be reviewed.</b>
Description and findings re EC4	<p>Banks are required under MAS Notice 610 on <i>Submission on Statistics and Returns</i> to submit monthly reports on various measures of concentration. These include industry and country classification of their non-bank loans and investments. Information on loan size and type (e.g., syndicated loans and term loans) are also reported to MAS monthly. On a half yearly basis, MAS requires banks to submit information of their top 100 borrowers to assess their large credit exposures and asset quality. The information will include loan details of borrowers, such as amount outstanding, collateral value, loan grading and level of provisioning (if any).</p> <p>Supervisors regularly review for concentration risk in the banks' loan and investment portfolios as part of their periodic review of monitoring indicators, annual review of banks' accounts, and during inspections. In their periodic risk assessments of banks,</p>

	<p>supervisors assess the level and trends in concentration risk in determining a bank's inherent credit risk. As part of such assessments, supervisors review the bank's concentration to top counterparties, industry sectors, geographies and currencies and assess the impact of the level and trends in concentrations on its credit risk profile. Where material changes in concentration within a bank's portfolio are observed, supervisors follow up with the banks to understand the reasons and risk mitigation strategies adopted.</p>
<b>EC5</b>	<p><b>In respect of credit exposure to single counterparties or groups of connected counterparties, laws or regulations explicitly define, or the supervisor has the power to define, a "group of connected counterparties" to reflect actual risk exposure. The supervisor may exercise discretion in applying this definition on a case by case basis.</b></p>
Description and findings re EC5	<p>Under section 29(1) of the BA, MAS may by notice in writing, impose such requirements as may be necessary for the purposes of limiting the exposure of a bank to a single counterparty or group of connected counterparties (defined as a single counterparty group), including the substantial shareholder group, financial group, and director group of the bank. The definitions of substantial shareholder group, financial group and director group are set out in the Fifth Schedule of the BA.</p> <p>MAS Notice 639 is issued pursuant to section 29(1) of the BA and sets out the limits on a bank's exposure to a single counterparty group. Paragraph 8 of MAS Notice 639 stipulates that MAS may exercise discretion on a case by case basis to require aggregation of exposures which may not be included in a single counterparty group, where MAS is of the view that such exposures pose a single risk to the bank.</p>
<b>EC6</b>	<p><b>Laws, regulations or the supervisor set prudent and appropriate requirements to control and constrain large credit exposures to a single counterparty or a group of connected counterparties. "Exposures" for this purpose include all claims and transactions (including those giving rise to counterparty credit risk exposure), on-balance sheet as well as off-balance sheet. The supervisor determines that senior management monitors these limits and that they are not exceeded on a solo or consolidated basis.</b></p>
Description and findings re EC6	<p>MAS Notice 639 sets out limits on large exposures and substantial exposures to single counterparty groups. These limits are applied at solo and consolidated levels. "Exposures" is defined in the Fifth Schedule of the BA as the maximum loss that a bank may incur as a result of the failure of a counterparty of its obligations. In this regard, the computation of exposures comprises both on- and off-balance sheet exposures. Examples on the computation of exposures are provided in Appendix 3 of MAS Notice 639. (See CP 19 EC1 and AC1 for further details.)</p> <p>Supervisors determine during credit risk inspections that concentrations limits are monitored by senior management and are not exceeded.</p>
<b>EC7</b>	<p><b>The supervisor requires banks to include the impact of significant risk concentrations into their stress testing programs for risk management purposes.</b></p>

Description and findings re EC7	<p>Under the Credit Risk Guidelines, banks should conduct stress tests to assess the risk in a particular market segment under adverse conditions, with a view of identifying individual or groups of obligors with positions that are vulnerable to extreme or one-way directional market movements. Arising from the stress tests, appropriate measures should be taken to mitigate undue concentration risk such as pricing for additional risk, unwinding of positions, increasing capital or reserves, securitization and credit risk hedging. Banks should also consider their stress test results in their overall limit setting and monitoring.</p> <p>Part X of MAS Notice 637 requires a locally-incorporated bank to perform periodic scenario analysis and stress testing of material risk concentrations and analyze the results, to identify potential changes in key risk factors such as economic cycles, interest rate movements, liquidity and market conditions, and to assess the ability of the bank to withstand such changes. The bank shall also ensure that the scenarios consider possible concentrations arising from contractual and non-contractual contingent claims. Stress testing can also help to identify concentrations in the portfolios or different exposures of the bank, as seemingly uncorrelated exposures during normal market conditions may become correlated under stressed conditions.</p>
<b>Additional criteria</b>	
<b>AC1</b>	<p><b>In respect of credit exposure to single counterparties or groups of connected counterparties, banks are required to adhere to the following:</b></p> <p><b>(a) ten per cent or more of a bank’s capital is defined as a large exposure; and</b></p> <p><b>(b) twenty-five per cent of a bank’s capital is the limit for an individual large exposure to a private sector non-bank counterparty or a group of connected counterparties.</b></p> <p><b>Minor deviations from these limits may be acceptable, especially if explicitly temporary or related to very small or specialized banks.</b></p>
Description and findings re AC1	<p>MAS Notice 639 sets out the following:</p> <p>(a) A bank is not allowed to have substantial exposures (defined as exceeding 10 percent of the bank’s capital funds) to any single counterparty group, which in aggregate, exceeds 50 percent of the bank’s total exposures.</p> <p>(b) A bank is not allowed to have aggregated exposures to a single counterparty group that exceed 25 percent of the bank’s capital funds.</p> <p>In addition, MAS is empowered under section 29(1) of the BA to prescribe lower limits on exposures to any person or class of persons. There has not been a case that warrants the exercise of this power.</p>
<b>Assessment of Principle 19</b>	<b>Compliant</b>
Comments	MAS imposes relatively conservative limits on equity investments in a single company

	<p>or investment fund (2 percent of capital), on real estate holdings (aggregate limit of 20 percent of capital) and property exposure (aggregate limit of 35 percent of total assets). MAS requires banks to maintain a list of large exposures both to single and connected counterparties and to submit this information on a semi-annual basis; banks and branches are required to report their top 100 borrowers to MAS in a report that includes financial information on the borrower and the loan classification assigned by the bank. This information is then analyzed to identify system wide exposures across the banks and branches and to identify disparities in bank's classifications of similar borrowers. In addition, MAS' guidelines require banks to establish appropriate limits to monitor and control concentration risks at a portfolio level to certain industries or economic sectors, individual country or group of countries with inter-related economies and specific type of credit product and collateral.</p> <p>While the initiatives described above are excellent, their effectiveness may be tempered somewhat by relatively high exposure limit of 25 percent of capital to any one counterparty (according to current international benchmarks, see AC1) and an overall limit that large exposures in aggregate may not exceed 50 percent of the bank's total exposures. The team understands that while this was initially done largely to accommodate small foreign branches that are niche players (e.g., specializing in shipping loans) with only a limited number of targeted borrowers, and that other jurisdictions have established large aggregate limits as well, it could be inferred that MAS policy is that it is acceptable for major banks and foreign branches to also utilize these limits. In fact, analysis by MAS demonstrates that major banks and foreign branches have not made such large loans. While such large exposure loans in banks might be acceptable in banking systems comprised of a broad number of diversified banks, the authorities may wish to analyze whether adopting a formal policy allowing systemically important banks and branches to make such loans sends the right signal. (MAS staff has informed the team that they would object if any of the major banks or foreign branches chose to fully utilize these limits.)</p> <p>It is the team's recommendation that MAS revisit this policy once the Basel Committee finishes its work on concentration risk to ensure that the MAS policy remains at least as conservative as any new global standard. Because MAS has in effect adopted the current Basel standard on concentrations, but is not in practice allowing the major banks and branches to fully utilize these limits, the team has assessed this principle as compliant.</p>
<b>Principle 20</b>	<p><b>Transactions with related parties.</b> In order to prevent abuses arising in transactions with related parties and to address the risk of conflict of interest, the supervisor requires banks to enter into any transactions with related parties on an arm's length basis; to monitor these transactions; to take appropriate steps to control or mitigate the risks; and to write off exposures to related parties in accordance with standard policies and processes.</p>

Essential criteria	
<b>EC1</b>	<b>Laws or regulations provide, or the supervisor has the power to prescribe, a comprehensive definition of “related parties.” This considers the parties identified in the footnote to the principle. The supervisor may exercise discretion in applying this definition on a case by case basis.</b>
Description and findings re EC1	<p>Section 27(1) of the BA provides a list of persons or entities that are deemed to be related to the bank. These are as follows:</p> <ul style="list-style-type: none"> <li>(a) any person in a director group of the bank;</li> <li>(b) any firm or limited liability partnership of which the bank is a partner, a manager, an agent, a guarantor or a surety;</li> <li>(c) any company of which any of the directors of the bank is a director or an agent;</li> <li>(d) any company of which the bank or any of its officers (other than directors), employees or other persons who receive remuneration from the bank (other than for professional services rendered to the bank) is a director, an executive officer, an agent, a guarantor or a surety;</li> <li>(e) certain officers (other than directors), employees or other persons who receive remuneration from the bank (other than for professional services rendered to the bank);</li> <li>(f) in the case of a bank incorporated in Singapore, any person in a substantial shareholder group of the bank;</li> <li>(g) any person in the financial group of the bank;</li> <li>(h) any related corporation of the bank;</li> <li>(i) any individual in whom, or any firm, limited liability partnership or company in which, any of the directors of the bank has an interest, directly or indirectly, as declared under section 28 other than the credit facilities or exposures particulars of which have already been supplied under this subsection; and</li> <li>(j) such other person or class of persons as may be prescribed.</li> </ul> <p>The definitions of “associate,” “affiliate,” “director,” “director group,” “financial group” and “substantial shareholder group” are set out in the Fifth Schedule of the BA. In particular, the terms “director” and “substantial shareholder” (in the case where the substantial shareholder is an individual) include the spouse, parent and child of the director and substantial shareholder of the bank and they are also deemed to be related to the bank.</p> <p>Section 27(1)(j) of the BA allows MAS to exercise discretion in prescribing such other person or class of persons as a related party.</p>
<b>EC2</b>	<b>Laws, regulations or the supervisor require that transactions with related parties are not undertaken on more favorable terms (e.g., in credit assessment, tenor, interest rates, fees, amortization schedules, requirement for collateral) than corresponding transactions with non-related counterparties.</b>
Description and	Section 28 of the BA requires every director of a bank to declare to the Board his

findings re EC2	<p>interest in a credit facility from the bank or any conflict of interest. The bank is to ensure that all related party transactions are undertaken on an arm's length basis. The terms and conditions of such transactions should not be more favorable than transactions with non-related parties under similar circumstances.</p> <p>Banks are required to submit a quarterly statement to supervisors showing the particulars of all credit facilities granted to its related parties or staff. If it appears that any loans to related parties have been granted to the detriment of the depositors' interest, supervisors have the power to require the bank to secure repayment, prohibit the bank from granting further facilities or impose further restrictions (section 27 of the BA and MAS Notice 639A on <i>Exposures and Credit Facilities to Related Concerns</i>).</p> <p>As part of the supervisory process, supervisors review loans to related parties to ensure that such loans are granted at arm's length and are subject to proper credit assessment and independent approval. Supervisors also review minutes of the relevant Board and senior management meetings where such loans are approved. Supervisors will comment on any non-compliance with MAS regulations. In addition, external auditors may review related party transactions during their audits, to ensure that they are undertaken on terms that are consistent with non-related party transactions.</p> <p>In addition, a bank that is listed on the Singapore Exchange Limited (SGX) is required to make immediate announcements of any interested person transactions if the transactions amount to three percent or more of the value of its latest audited net tangible assets. The announcements should also include a statement that the bank's Audit Committee is of the view that the transactions are on normal commercial terms and the terms are not prejudicial to the interests of the bank and its minority shareholders (Chapter 9 of SGX Listing Rules on Interested Person Transactions).</p>
<b>EC3</b>	<p><b>The supervisor requires that transactions with related parties and the write-off of related-party exposures exceeding specified amounts or otherwise posing special risks are subject to prior approval by the bank's Board. The supervisor requires that Board members with conflicts of interest are excluded from the approval process of granting and managing related party transactions.</b></p>
Description and findings re EC3	<p>Section 28 of the BA requires every director of a bank to declare to the Board his interest in a credit facility from the bank or any conflict of interest. A bank is to ensure that the Board or senior management is not involved in the decision making process for credits to companies and individuals related to them. To this end, the Board and senior management must declare their interests and abstain from the decision making process. Material credit transactions with related parties should be subject to the approval of the Board (excluding Board members with potential conflicts of interest). Where necessary, such transactions should also be disclosed to the public as part of the bank's financial reporting program. Directors, senior management and other interested parties should not override the established credit</p>

	<p>granting and monitoring processes of the bank to approve the granting of credit facilities to related companies and individuals (MAS' <i>Guidelines on Risk Management Practices—Credit Risk</i> (Credit Risk Guidelines)).</p> <p>In addition, under MAS' <i>Guidelines on Corporate Governance for Banks, Financial Holding Companies and Direct Insurers which are incorporated in Singapore</i> (CG Guidelines), the bank's Audit Committee is to review all material related party transactions and ensure that the terms and conditions of such transactions are not more favorable than transactions with non-related parties under similar circumstances. Supervisor review minutes of the Audit Committee's deliberations during inspections or as part of off-site review.</p> <p>Under MAS Notice 639 on <i>Exposures to Single Counterparty Groups</i>, banks are not permitted to grant unsecured credit facilities (other than credit card and charge card facilities) to any director group (excluding companies in which bank directors are executive officers) which, in the aggregate, exceeds S\$5,000. The aggregate unsecured credit facilities (other than credit card and charge card facilities) which may be granted to companies in which bank directors are executive officers cannot exceed S\$5,000 unless otherwise approved by the bank's board of directors or such persons as may be authorized by the board. In such a case, the bank's aggregate unsecured credit facilities (other than credit card and charge card facilities) to any director group shall not exceed 2percent of the bank's capital. Further, MAS' approval is required to write off loans to related parties (MAS Notice 606 on <i>Provision For and Writing Off of Bad Debts</i>).</p> <p>MAS is enhancing the oversight of such transactions to better address the risks of conflicts of interest and for alignment with international best practices and has issued MAS Notice 643 on <i>Transactions with Related Parties</i>, which shall take effect on July 1, 2014. The Notice formalizes existing MAS' expectations of banks when dealing with related parties, as set out in MAS' <i>Guidelines on Risk Management Practice— Board and Senior Management</i> and <i>Credit Risk</i>, and the <i>CG Guidelines</i>.</p> <p>Supervisors review loans to related parties to ensure that such loans are granted at arm's length and are subject to proper credit assessment and independent approval. Supervisors also review the bank's policy and governance process for the granting and monitoring of such loans. Supervisors will comment on any non-compliance with MAS regulations.</p> <p>A bank that is listed on SGX is required to obtain shareholder approval for any interested person transactions that amount to 5 percent or more of the values of their latest audited net tangible assets (an interested person refers to a director, CEO, controlling shareholder, or their associates). The interested person and any associate of the interested person must abstain from voting on such transactions. In addition, the bank is required to make immediate announcements of any interested</p>
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	<p>person transactions if the transactions amount to 3 percent or more of the value of its latest audited net tangible assets. The announcements should also include a statement that the bank's Audit Committee is of the view that the transactions are on normal commercial terms and the terms are not prejudicial to the interests of the bank and its minority shareholders. The bank also has to disclose the aggregate value of interested person transactions entered into during the financial year in its annual report (Chapter 9 of SGX Listing Rules on Interested Person Transactions).</p>
<b>EC4</b>	<p><b>The supervisor determines that banks have policies and processes to prevent persons benefiting from the transaction and/or persons related to such a person from being part of the process of granting and managing the transaction.</b></p>
Description and findings re EC4	<p>During off-site reviews and inspections, supervisors determine that the bank has adequate policies and processes in place to address the risk of conflicts of interest. Supervisors also review loans to related parties to ensure that such loans are granted at arms' length and subject to proper credit assessment and independent approval.</p> <p>Section 27(3) of the BA gives MAS the power to take corrective action if it appears that the exposure of the bank to any person is to the detriment of the interests of the depositors of the bank. MAS may require the bank to secure repayment, prohibit the bank from granting further facilities, or impose restrictions on further exposures.</p>
<b>EC5</b>	<p><b>Laws or regulations set, or the supervisor has the power to set on a general or case by case basis, limits for exposures to related parties, to deduct such exposures from capital when assessing capital adequacy, or to require collateralization of such exposures. When limits are set on aggregate exposures to related parties, those are at least as strict as those for single counterparties or groups of connected counterparties.</b></p>
Description and findings re EC5	<p>Section 29(2) of the BA allows MAS to specify the limit on any exposure, specify the method of measuring any exposure or vary any limit in a particular case. For instance, under MAS Notice 639, banks are not permitted to grant unsecured credit facilities (other than credit card and charge card facilities) to any director group (excluding companies in which bank directors are executive officers) which, in the aggregate, exceeds S\$5,000. The aggregate unsecured credit facilities (other than credit card and charge card facilities) which may be granted to companies in which bank directors are executive officers cannot exceed S\$5,000 unless otherwise approved by the bank's board of directors or such persons as may be authorized by the board. In such a case, the bank's aggregate unsecured credit facilities (other than credit card and charge card facilities) to any director group shall not exceed 2 percent of the bank's capital.</p> <p>Under MAS Notice 639, the definition of single counterparty group includes related parties such as directors and substantial shareholders. Hence, the large exposure and substantial exposure limits imposed on single counterparties are applied to related parties (see CP19 AC1 for details).</p>



	Further, MAS may require a bank to aggregate any of its exposures if supervisors are of the view that these exposures pose a single risk to the bank, and MAS may set lower limits on exposures to related parties.
<b>EC6</b>	<b>The supervisor determines that banks have policies and processes to identify individual exposures to and transactions with related parties as well as the total amount of exposures, and to monitor and report on them through an independent credit review or audit process. The supervisor determines that exceptions to policies, processes and limits are reported to the appropriate level of the bank's senior management and, if necessary, to the Board, for timely action. The supervisor also determines that senior management monitors related party transactions on an ongoing basis, and that the Board also provides oversight of these transactions.</b>
Description and findings re EC6	<p>During off-site reviews and inspections, supervisors review banks' policies and procedures on the identification and reporting of related parties' transactions. Supervisors also assess that the bank has an independent credit monitoring process for the extension of all loans, including loans to related parties. Any exceptions to the credit policies and processes have to be escalated to the appropriate management or Board approving authority for approval. Banks' internal auditors and external auditors review these policies and processes as part of their audits of banks' credit approval and review processes.</p> <p>Pursuant to section 27(1) of the BA, every bank in Singapore shall submit a quarterly statement showing as at the end of that quarter all the credit facilities from and all the exposures of the bank to a list of related parties. The statement shall in the case of a locally-incorporated bank, be brought up and read at the next Board of directors meeting after it is prepared. In the case of a bank incorporated outside Singapore, the statement shall be submitted to the head office of the bank.</p>
<b>EC7</b>	<b>The supervisor obtains and reviews information on aggregate exposures to related parties.</b>
Description and findings re EC7	Section 27 of the BA requires every bank in Singapore to submit to MAS a quarterly statement showing as at the end of that quarter all the credit facilities from and all the exposures of the bank to related parties. Supervisors review the information submitted, which includes exposure limits, gross and net exposure amounts as well as amounts of credit facilities which are unsecured. The details of the submission are specified in MAS Notice 639A on <i>Exposures and Credit Facilities to Related Concerns</i> .
<b>Assessment of Principle 20</b>	<b>Compliant</b>
Comments	MAS' regulations and monitoring on a bank's transactions with related parties require banks to ensure that such transactions are conducted on an arm's length basis and that the relevant terms and conditions are not more favorable than transactions with non-related parties under similar circumstances. Material credit transactions with related parties are subject to the approval of the bank's Board (excluding Board members with potential conflicts of interest). Senior management are required to provide oversight of the policies and processes to identify and

	address the risk of conflicts of interest.
<b>Principle 21</b>	<b>Country and transfer risks.</b> The supervisor determines that banks have adequate policies and processes to identify, measure, evaluate, monitor, report and control or mitigate country risk and transfer risk in their international lending and investment activities on a timely basis.
<b>Essential criteria</b>	
<b>EC1</b>	<b>The supervisor determines that a bank’s policies and processes give due regard to the identification, measurement, evaluation, monitoring, reporting and control or mitigation of country risk and transfer risk. The supervisor also determines that the processes are consistent with the risk profile, systemic importance and risk appetite of the bank, take into account market and macroeconomic conditions and provide a comprehensive bank-wide view of country and transfer risk exposure. Exposures (including, where relevant, intra-group exposures) are identified, monitored and managed on a regional and an individual country basis (in addition to the end-borrower/end-counterparty basis). Banks are required to monitor and evaluate developments in country risk and in transfer risk and apply appropriate countermeasures.</b>
Description and findings re EC1	<p>Under MAS’ <i>Guidelines on Risk Management Practices—Credit Risk</i> (Credit Risk Guidelines), a bank that grants credit internationally should have adequate policies and procedures for identifying, measuring, monitoring, and controlling country risk and transfer risk in its international lending and investment activities. Monitoring of country risk factors should include the potential for default of foreign private sector obligors arising from country-specific economic, social and political factors. A bank should also assess an obligor’s ability to obtain foreign exchange to service cross-currency debt and honors its contracts across jurisdictions. During inspections, supervisors determine if a bank has established and implemented policies and processes with regard to the identification, measurement, evaluation, monitoring, reporting and control or mitigation of country risk and transfer risk.</p> <p>A bank is to monitor country risk by tracking internal and external country risk ratings and economic, social and political developments of the relevant countries. Risk exposures should be aggregated for all business activities that involve elements of country risk. Country risk limits could be managed centrally by the head office or allocated to different branches or business lines. Country risk should also be considered at the individual transaction level. When assessing an application for credit extension, the institution should take into consideration its existing exposure to a particular country.</p> <p>Appropriate measures should be taken when adverse developments occur in a particular country. These measures include closer analysis of the obligor’s capacity to repay, provisioning and preparation of contingency plans if the country risk continues to deteriorate.</p> <p>In addition, under Part X of MAS Notice 637 on <i>Risk Based Capital Adequacy</i></p>

	<p><i>Requirements for Banks Incorporated in Singapore</i>, a locally-incorporated bank shall ensure that it has in place a sound risk management framework and a robust ICAAP, and set capital targets that are consistent with its overall risk profile and operating environment. This includes defining the risk appetite and establishing an acceptable level of risks that the bank may take, as well as the capital strategy of the bank. Annex 10A of MAS Notice 637 provides that a bank shall, at a minimum, cover country and transfer risks, amongst other things, in its credit risk assessment for the purpose of capital adequacy (paragraph 3.1(d)).</p>
<b>EC2</b>	<p><b>The supervisor determines that banks' strategies, policies and processes for the management of country and transfer risks have been approved by the banks' Boards and that the Boards oversee management in a way that ensures that these policies and processes are implemented effectively and fully integrated into the banks' overall risk management process.</b></p>
Description and findings re EC2	<p>Under the Credit Risk Guidelines, banks are to consider country risk at the individual transaction level. When assessing an application for credit extension, the bank should take into consideration its existing exposure to a particular country. Significant country risk should be assessed and highlighted in credit proposals submitted to management for approval.</p> <p>The bank is to adopt a risk management structure that is commensurate with its size and the nature of its activities. The organizational structure should facilitate effective management oversight and execution of credit risk management and control processes. A senior management committee should be formed to oversee the credit risk management framework, which should cover areas such as approval of business and credit risk strategy (including country and transfer risks, and concentration risks), review of credit portfolio and profile, approval of credit policy, delegation of credit approving authority and evaluation of the credit processes.</p> <p>During inspections, supervisors assess the bank's strategies, policies and processes for the management of country and transfer risks. This includes assessing if the delegation of approving authority for country limits and exceptions is appropriate.</p> <p>Further, under Part X of MAS Notice 637, the Board and senior management of a locally-incorporated bank are responsible for ensuring a sound risk management framework and processes to mitigate risks, including country and transfer risk, taken on by the bank. Senior management are required to perform an analysis of the current and future capital requirements of the bank in relation to its strategic objectives; establish frameworks for assessing the categories of risks facing the bank and develop systems for relating these risks to the capital level of the bank; ensure that the risk management framework includes detailed policies that set specific firm-wide prudential limits on the bank's activities which are consistent with its risk taking appetite and capacity; establish a method for monitoring compliance with internal policies on risk assessment; and institute a strong internal control culture throughout the bank, including the adoption of written policies and procedures</p>

	(paragraph 10.2.5).
<b>EC3</b>	<b>The supervisor determines that banks have information systems, risk management systems and internal control systems that accurately aggregate, monitor and report country exposures on a timely basis; and ensure adherence to established country exposure limits.</b>
Description and findings re EC3	<p>As part of ongoing supervision of a bank, supervisors determine the adequacy of its credit risk management framework. This includes assessing the adequacy of the bank's processes on limit setting, approval, monitoring and reporting, and escalation of limit triggers and breaches of country and transfer risks. In addition, supervisors assess if country limits are reviewed periodically. Supervisors also determine that exposures are aggregated for monitoring within overall limits, across other activities that could contribute to risk, such as trade financing, capital market and treasury activities.</p> <p>Under Annex 10A of MAS Notice 637, a locally-incorporated bank's Board and senior management are responsible for implementing MIS that are capable of providing regular, accurate and timely information on the bank's aggregate risk profile, as well as the main assumptions used for risk aggregation. The bank shall ensure that the MIS are adaptable and responsive to changes in the bank's underlying risk assumptions. The bank shall also ensure that the MIS are able to aggregate exposures and risk measures across business lines, support customized identification of concentrations and emerging risks, and capture limit breaches. Further, the Credit Risk Guidelines set out that a bank should ensure that its country exposures are reported and monitored against limits.</p>
<b>EC4</b>	<p><b>There is supervisory oversight of the setting of appropriate provisions against country risk and transfer risk. There are different international practices that are all acceptable as long as they lead to risk-based results. These include:</b></p> <p><b>(a) The supervisor (or some other official authority) decides on appropriate minimum provisioning by regularly setting fixed percentages for exposures to each country taking into account prevailing conditions. The supervisor reviews minimum provisioning levels where appropriate.</b></p> <p><b>(b) The supervisor (or some other official authority) regularly sets percentage ranges for each country, taking into account prevailing conditions and the banks may decide, within these ranges, which provisioning to apply for the individual exposures. The supervisor reviews percentage ranges for provisioning purposes where appropriate.</b></p> <p><b>(c) The bank itself (or some other body such as the national bankers association) sets percentages or guidelines or even decides for each individual loan on the appropriate provisioning. The adequacy of the provisioning will then be judged by the external auditor and/or by the supervisor.</b></p>
Description and	MAS adopts practice (c). Under MAS Notice 612, banks are required to review,

findings re EC4	<p>grade and make adequate specific provisions on a loan-by-loan basis except for homogeneous loans below a certain materiality threshold. Homogeneous loans may be pooled together and provided for collectively as a group, taking into account the historical loss experience on such loans. As part of their systematic credit review processes, banks are required to clearly establish the portfolio types or size of the loan that will warrant an individual assessment. During inspections, supervisors assess that the banks' practices are appropriate and regularly reviewed. Supervisors also review credit propositions to assess if credit grading and provisions set aside are appropriate. Country and transfer risks are a component of this assessment. Supervisors also determine whether country exposure is reflected and assessed in the credit proposition.</p> <p>Under MAS Notice 609 on <i>Auditors' Reports and Additional Information to be Submitted with Annual Accounts</i>, external auditors are required, as part of their annual audits, to assess and confirm if there is any matter that caused or led them to believe that adequate provision had not been made for known material doubtful debts and for any material impairment of other assts. They are also required to highlight findings and recommendations on the bank's internal controls, quality of loans and advances or any areas of weakness in the auditor's long form report.</p>
<b>EC5</b>	<b>The supervisor requires banks to include appropriate scenarios into their stress testing programs to reflect country and transfer risk analysis for risk management purposes.</b>
Description and findings re EC5	<p>As part of ongoing supervision of a bank, supervisors determine whether it performs periodic reviews of industry trends and the susceptibility of its credit to external factors under adverse scenarios. Supervisors determine whether the bank's stress tests include appropriate scenarios relating to country risk and transfer risks. Supervisors also review contingency plans formulated following the stress tests.</p> <p>Under Annex 10A of MAS Notice 637, a locally-incorporated bank shall consider risks arising from concentrations that are based on common risk factors, including exposures to counterparties in the same geographic region. The bank shall perform periodic scenario analysis and stress testing of material risk concentrations and analyze the results, to identify potential changes in key risk factors such as economic cycles, interest rate movements, liquidity and market conditions and to assess the ability of the bank to withstand such changes (paragraph 3.10(g)).</p>
<b>EC6</b>	<b>The supervisor regularly obtains and reviews sufficient information on a timely basis on the country risk and transfer risk of banks. The supervisor also has the power to obtain additional information, as needed (e.g., in crisis situations).</b>
Description and findings re EC6	<p>Banks are required to submit regulatory returns under MAS Notice 610 on <i>Submission of Statistics and Returns</i>, where information on loans, interbank indebtedness and investments classified by country are collected on a monthly basis and classified exposures by country are collected on a quarterly basis. Supervisors review these returns to identify significant changes in exposures and will follow up with the bank where warranted.</p>

	<p>Under section 26 of the BA, banks are required to furnish to MAS such information (including returns) as required by MAS. Supervisors obtain additional information from banks relating to country and transfer risks where necessary.</p> <p>Given the deterioration in the fiscal and macroeconomic environment in certain countries since the global financial crisis, MAS has stepped up its collection of more granular information and analysis of banks' country and transfer risk exposures, and has engaged banks with significant exposures to those countries on the adequacy of their monitoring and management of the risks. Where credit quality has deteriorated, MAS has ensured that the banks appropriately classify weak borrowers and set aside adequate provisions, or where they lack the resources to do so, that the credits are transferred to their head office for management.</p>
<b>Assessment of Principle 21</b>	<b>Compliant</b>
Comments	Country and transfer risk can be considered relevant risks for the locally incorporated banks in Singapore. MAS' requirements on country and transfer risk management are in place and assessed by supervisors during inspections or as part of a review of the bank's ICAAP. MAS has a dedicated team of credit risk specialists, who support the bank supervisors in their work.
<b>Principle 22</b>	<b>Market risk.</b> The supervisor determines that banks have an adequate market risk management process that takes into account their risk appetite, risk profile, and market and macroeconomic conditions and the risk of a significant deterioration in market liquidity. This includes prudent policies and processes to identify, measure, evaluate, monitor, report and control or mitigate market risks on a timely basis.
<b>Essential criteria</b>	
<b>EC1</b>	<b>Laws, regulations or the supervisor require banks to have appropriate market risk management processes that provide a comprehensive bank-wide view of market risk exposure. The supervisor determines that these processes are consistent with the risk appetite, risk profile, systemic importance and capital strength of the bank; take into account market and macroeconomic conditions and the risk of a significant deterioration in market liquidity; and clearly articulate the roles and responsibilities for identification, measuring, monitoring and control of market risk.</b>
Description and findings re EC1	Supervisors require banks to implement sound risk management policies and procedures and market risk management is one dimension of sound overall risk management. MAS' requirements on market risk management are documented in <i>MAS' Guidelines on Risk Management Practices—Market Risk</i> (Market Risk Guidelines). Under the guidelines, a bank should develop a sound and well-informed strategy to manage market risk. Further, the Guidelines set out detailed expectations on the bank's market risk management policies and procedures, risk measurement, monitoring and controls.

	<p>Applying a risk-based approach in both on-site and off-site work, supervisors determine that the bank: (i) establishes policies, procedures and risk limits that are commensurate with the its risk profile and characteristics; (ii) identifies and assesses market, macroeconomic, and market liquidity risks; (iii) clearly delineates responsibilities, monitors and reports compliance with limits; and (iv) identifies weaknesses and any deviations from the bank's policies and procedures, amongst other things.</p> <p>Under MAS' CRAFT, supervisors assess the market risk profile of the banks and the corresponding controls in place to manage those risks. Supervisors also regularly engage home regulators, internal auditors and external auditors, as part of their assessment of the bank's market risk processes.</p> <p>Separately, Part VIII of MAS Notice 637 on <i>Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore</i> sets out the roles of the Board, senior management and independent risk management unit, as well as requirements on the bank's risk management process and system, risk identification, risk measurement, model validation, risk monitoring, risk control and incremental risk, in respect of locally-incorporated banks.</p>
<b>EC2</b>	<p><b>The supervisor determines that banks' strategies, policies and processes for the management of market risk have been approved by the banks' Boards and that the Boards oversee management in a way that ensures that these policies and processes are implemented effectively and fully integrated into the banks' overall risk management process.</b></p>
Description and findings re EC2	<p>Under the Market Risk Guidelines, the bank's Board and senior management should periodically review the bank's market risk strategy, taking into consideration its financial performance and market developments. The bank's market risk policies should be approved by the Board, and any changes and exceptions to these policies similarly require the Board's approval. The policies should clearly prescribe how market risk is measured and communicated to the Board. The Board should ensure that senior management has the requisite skills to manage the market risks arising from the bank's business activities and senior management is expected to fully understand the risks involved in the bank's activities. Senior management should exercise active oversight to ensure the continuing effectiveness of the market risk management process and system, and regard market risk control as an essential aspect of the business, to which significant resources need to be devoted.</p> <p>During inspections, supervisors determine whether the Board and senior management have approved the policies relating to the evaluation and management of market risk. Supervisors review minutes of the Board and other relevant management committee meetings, as well as the agenda, issues discussed and level of participation from the Board and senior management. Supervisors also review the bank's risk-management reports and determine that the reports highlight positions, limits, and excesses in a manner that is commensurate with the bank's</p>



	<p>trading activity. Supervisors check that these reports are submitted to senior management for review.</p> <p>As part of MAS' CRAFT, supervisors assess the adequacy of Board and senior management oversight. Supervisors take into consideration their observations during inspections and also their interactions with the bank's management during regular meetings.</p>
<b>EC3</b>	<p><b>The supervisor determines that the bank's policies and processes establish an appropriate and properly controlled market risk environment including:</b></p> <ul style="list-style-type: none"> <li><b>(a) effective information systems for accurate and timely identification, aggregation, monitoring and reporting of market risk exposure to the bank's Board and senior management;</b></li> <li><b>(b) appropriate market risk limits consistent with the bank's risk appetite, risk profile and capital strength, and with the management's ability to manage market risk and which are understood by, and regularly communicated to, relevant staff;</b></li> <li><b>(c) exception tracking and reporting processes that ensure prompt action at the appropriate level of the bank's senior management or Board, where necessary;</b></li> <li><b>(d) effective controls around the use of models to identify and measure market risk, and set limits; and</b></li> <li><b>(e) sound policies and processes for allocation of exposures to the trading book.</b></li> </ul>
Description and findings re EC3	<p>During inspections, supervisors determine that banks establish a sound and comprehensive market risk management process, which should comprise an appropriate management information system. The risk management system should be commensurate with the scope, size, and complexity of an institution's trading activities and the market risks assumed. It should also enable the various market risk exposures to be accurately and adequately identified, measured, monitored, and controlled. All significant risks should be measured and aggregated on an institution-wide basis for reporting to Board and senior management.</p> <p>The bank should set limits for market risk that are consistent with the maximum exposures authorized by the Board and senior management. Risk limits for business units should be established, where appropriate, and approved and periodically reviewed by the Board and senior management. During inspections, supervisors check the adherence to these limits. Supervisors also confirm that policies and procedures address the frequency of review of the limit structure; identify the authority to set and change limits; and ensure that limits are set by personnel independent of the trading activity and that limits are understood by the relevant staff.</p>



	<p>The bank's compliance with the limits set should be monitored by a unit independent of the risk-taking activities. There should be procedures in place that prescribe the course of action for limit excesses. These actions should include investigating the reasons for the excesses, reporting the incidents to management, and seeking approval from the Board or senior management. These procedures should also prescribe the actions required for the approval of temporary excesses and limit increases. During inspections, supervisors review market risk limit exceptions to evaluate the identification and approval of exceptions, and whether exceptions are communicated to management in a timely manner.</p> <p>Models should be based on accepted financial concepts and market risk measurement techniques. Banks should regularly evaluate market risk measurement models and assumptions to ensure that they provide reasonable estimates of market risk. In these reviews, the models should be independently validated, back-tested, and re-calibrated where necessary. Board and senior management should be cognizant of the strengths and limitations of the institution's market risk measurement systems, in order to determine the appropriate risk limits. They should also ensure that the material limitations of the models are well understood and provided for.</p> <p>The bank should allocate to the trading book any position in a financial instrument or commodity that is held with trading intent or to hedge other positions held in the trading book.</p>
EC4	<p><b>The supervisor determines that there are systems and controls to ensure that banks' marked-to-market positions are revalued frequently. The supervisor also determines that all transactions are captured on a timely basis and that the valuation process uses consistent and prudent practices, and reliable market data verified by a function independent of the relevant risk-taking business units (or, in the absence of market prices, internal or industry-accepted models). To the extent that the bank relies on modeling for the purposes of valuation, the bank is required to ensure that the model is validated by a function independent of the relevant risk-taking businesses units. The supervisor requires banks to establish and maintain policies and processes for considering valuation adjustments for positions that otherwise cannot be prudently valued, including concentrated, less liquid, and stale positions.</b></p>
Description and findings re EC4	<p>Under MAS' Market Risk Guidelines, a bank's systems should be able to measure current exposures through marked-to-market or marked-to-model pricing, as well as potential market risks. The bank's systems should provide information on the outstanding positions and unrealized profit or loss as well as, to the extent practicable, the accrued profit or loss on a daily basis. Banks that are active in treasury and financial derivatives should have systems that are able to monitor trading positions, market movements and credit exposures daily (preferably on a</p>

	<p>real-time basis). Banks should have a screening process in place to ensure the integrity of data fed into the risk management system. Data used should be appropriate, accurate, complete, timely, and sourced independently of the position-taking units.</p> <p>Supervisors expect banks to have treasury and financial derivative valuation processes that are robust and independent of its trading function. Models and supporting statistical analyses used in valuations and stress tests should be appropriate, consistently applied and based on reasonable assumptions. These models should be validated before deployment and staff involved in the validation process should be adequately qualified and independent of the trading and model development functions.</p> <p>During inspections, supervisors conduct walkthroughs of the systems and controls to satisfy themselves that there are frequent revaluations of marked-to-market positions; transactions are captured on a timely fashion; and market data and models are verified by parties independent of risk-taking units. Supervisors also assess that the bank has in place policies and procedures to value positions where there are no readily observable market prices. Supervisors also determine that there is documentation supporting the derivation of illiquid product values for which independent quotes are not available or reliable.</p>
<b>EC5</b>	<p><b>The supervisor determines that banks hold appropriate levels of capital against unexpected losses and make appropriate valuation adjustments for uncertainties in determining the fair value of assets and liabilities.</b></p>
Description and findings re EC5	<p>Under MAS' Market Risk Guidelines, MAS expects a bank to set aside adequate market risk capital with consideration to the level of market risk the bank is prepared to assume. The bank should have in place a process by which significant changes in the scope of its activities will trigger an analysis of the adequacy of capital supporting the activities. The bank is encouraged to have an internal capital allocation system that meaningfully links identification, monitoring and evaluation of market risks to economic capital.</p> <p>In addition, under MAS Notice 637, a locally-incorporated bank shall, in its assessment of the adequacy of the capital it maintains for market risk, base its assessment, at a minimum, on both value-at-risk (VaR) modeling and appropriate stress testing. The bank shall also assess the market concentration risk these instruments might pose and the impact of market illiquidity of such instruments under stressful market scenarios. The bank shall maintain sufficient capital to meet the regulatory capital requirements under Pillar 1 and to cover the results of its market risk stress tests. Supervisors shall consider whether the bank has sufficient capital for these purposes, where required, taking into account the nature and scale of the bank's trading activities, and any other relevant factors such as valuation adjustments made by the bank. In particular, on valuation, the bank is required to have the capacity to produce valuations using alternative methods in the event that</p>

	primary inputs and approaches become unreliable, unavailable or not relevant due to market discontinuities or illiquidity.
<b>EC6</b>	<b>The supervisor requires banks to include market risk exposure into their stress testing programs for risk management purposes.</b>
Description and findings re EC6	<p>Under the Market Risk Guidelines, all banks should perform scenario analysis or stress testing, which should be both qualitative and quantitative, in the management of market risk. Market risk stress testing is also an integral part of the annual industry-wide stress test conducted by MAS.</p> <p>MAS Notice 637 requires a locally-incorporated bank to supplement its VaR model with stress tests (e.g., factor shocks or integrated scenarios, whether historic or hypothetical). In its internal capital adequacy assessment process, the bank shall demonstrate that it has adequate capital to not only meet the regulatory capital requirements under Pillar 1, but also to withstand a range of severe but plausible market shocks. The bank shall ensure that the market shocks applied in the stress tests reflect the nature of portfolios and the time it will take to hedge or manage risks under severe market conditions.</p>
<b>Assessment of Principle 22</b>	<b>Compliant</b>
Comments	MAS has issued Market Risk Guidelines and market risk regulatory requirements in relation to regulatory capital. MAS has a dedicated team of market risk specialists who support the bank supervisors in their work. These specialists are involved in inspections and focus on raising market risk management standards across banks. During inspections, supervisors conduct walkthroughs of the systems and controls to satisfy themselves about the integrity of banks' market risk policies and processes.
<b>Principle 23</b>	<b>Interest rate risk in the banking book.</b> The supervisor determines that banks have adequate systems to identify, measure, evaluate, monitor, report and control or mitigate interest rate risk in the banking book on a timely basis. These systems take into account the bank's risk appetite, risk profile and market and macroeconomic conditions.
<b>Essential criteria</b>	
<b>EC1</b>	<b>Laws, regulations or the supervisor require banks to have an appropriate interest rate risk strategy and interest rate risk management framework that provides a comprehensive bank-wide view of interest rate risk. This includes policies and processes to identify, measure, evaluate, monitor, report and control or mitigate material sources of interest rate risk. The supervisor determines that the bank's strategy, policies and processes are consistent with the risk appetite, risk profile and systemic importance of the bank, take into account market and macroeconomic conditions, and are regularly reviewed and appropriately adjusted, where necessary, with the bank's changing risk profile and market developments.</b>
Description and findings re EC1	Under the MAS' <i>Guidelines on Risk Management Practices—Market Risk</i> (Market Risk Guidelines), a bank should develop a sound and well informed strategy to manage

	<p>market risk, which includes movements in interest rates. The bank should establish sound and comprehensive risk management process to govern market risk including an appropriate management information system to control, monitor and report interest rate risks. The risk management system should be able to quantify risk exposures and monitor changes in market risk factors, including movements in interest rates.</p> <p>During inspections, supervisors assess whether the bank's interest rate risk strategy has been approved by the Board and/or senior management. As part of the annual off-site review of the bank's ICAAP, supervisors determine whether the capital held is commensurate with the bank's interest rate risk in the banking book (IRRBB). In this regard, supervisors assess a bank's strategy, policy and procedures and control systems for consistency with the bank's risk appetite statement and framework. Supervisors also review the link between banks' Pillar II Stress Testing and its risk appetite and profile, and ensure there are adequate policies, procedures and control systems to proactively manage IRRBB, taking into account market and macroeconomic conditions and stress tests results.</p> <p>Under Annex 10A of MAS Notice 637 on <i>Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore</i>, a locally-incorporated bank is required to identify and assess on a timely basis material sources of interest rate risk associated with its assets, liabilities and off-balance sheet positions in the banking book. The bank shall have strategies and policies on the management of interest rate risk that are approved by the Board. As part of the sound management of interest rate risk, the Board shall be kept informed of interest rate risk exposures to facilitate its risk oversight and to ensure senior management has taken steps to control these risks within the approved strategies and policies (paragraph 5.6).</p> <p>Senior Management is required to ensure that a framework and comprehensive policies and procedures are in place to manage the level of interest rate risk assumed by the bank. Policies and procedures of the bank shall be clearly defined and consistent with the nature and complexity of activities. The bank shall ensure that risks taken are controlled and within appropriate policies and limits, approved by the Board. The bank shall also have regular monitoring and reporting of interest rate risk levels to ensure compliance with approved limits.</p>
<b>EC2</b>	<p><b>The supervisor determines that a bank's strategy, policies and processes for the management of interest rate risk have been approved, and are regularly reviewed, by the bank's Board. The supervisor also determines that senior management ensures that the strategy, policies and processes are developed and implemented effectively.</b></p>
Description and findings re EC2	<p>As part of ongoing supervision of a bank, supervisors review IRRBB policies with a view to assessing the adequacy and effectiveness of Board and senior management oversight, as well as the adequacy of controls to effectively manage the level of IRRBB. Supervisors also assess the quality and adequacy of management's oversight</p>

	<p>of the level of interest rates, shape of yield curve and basis risk, etc.</p> <p>Under Annex 10A of MAS Notice 637, the Board of a locally-incorporated bank is required to approve strategies and policies with respect to IRRBB. The Board shall be regularly informed of interest rate risk exposures to facilitate their oversight of IRRBB and ensure senior management takes steps to monitor and control the risk within the bank's approved strategies and policies. Senior management is to ensure that a framework and comprehensive policies and procedures are in place to effectively manage the level of interest rate risk assumed by the bank (paragraph 5.6).</p> <p>As part of their on-site and off-site review of the bank's ICAAP, supervisors assess whether the bank holds capital that is commensurate with the level of IRRBB through the evaluation of exposure to IRRBB, processes for identifying, measuring and controlling risk, as well as process for determining capital requirement. As part of the review, supervisors review the bank's ICAAP submissions and minutes of Board and senior management meetings to assess the extent and effectiveness of their oversight.</p>
EC3	<p><b>The supervisor determines that banks' policies and processes establish an appropriate and properly controlled interest rate risk environment including:</b></p> <ul style="list-style-type: none"> <li><b>(a) comprehensive and appropriate interest rate risk measurement systems;</b></li> <li><b>(b) regular review, and independent (internal or external) validation, of any models used by the functions tasked with managing interest rate risk (including review of key model assumptions);</b></li> <li><b>(c) appropriate limits, approved by the banks' Boards and senior management, that reflect the banks' risk appetite, risk profile and capital strength, and are understood by, and regularly communicated to, relevant staff;</b></li> <li><b>(d) effective exception tracking and reporting processes which ensure prompt action at the appropriate level of the banks' senior management or Boards where necessary; and</b></li> <li><b>(e) effective information systems for accurate and timely identification, aggregation, monitoring and reporting of interest rate risk exposure to the banks' Boards and senior management.</b></li> </ul>
Description and findings re EC3	<p>As part of ongoing supervision of a bank, supervisors evaluate the adequacy of risk/valuation models used in the measurement of interest rate risk. Supervisors also assess that interest rate risks of all interest rate sensitive products have been captured. Banks are expected to establish appropriate risk measurement systems and adequate MIS to identify, measure, monitor and report on a comprehensive basis its exposure to IRRBB.</p> <p>Under Annex 10A of MAS Notice 637, the Board of a locally-incorporated bank is responsible for approving strategies and policies with respect to the management of</p>

	<p>IRRBB. Senior Management is responsible for ensuring comprehensive policies and procedures are in place to effectively manage the level of IRRBB as approved by the Board (paragraph 5.6).</p> <p>The bank is required to identify and assess on a timely basis material sources of interest rate risks associated with assets, liabilities and off-balance sheet positions in the banking book. Interest rate sensitive positions shall be measured based on accurate and meaningful assumptions and scenarios, as well as generally accepted financial concepts and risk measurement techniques. These risk measurement systems shall be integrated with risk management practices of the bank and output of measurement systems shall be used in characterizing the level of interest rate risk to both the Board and senior management. The internal control systems of the bank shall be subject to regular independent reviews to determine their continued effectiveness. Appropriate enhancements and revisions to internal controls shall be made where necessary.</p> <p>As part of on-site Pillar II ICAAP reviews, supervisors assess banks' risk measurement and monitoring functions, to ensure the adequacy and effectiveness of internal information systems and control functions in monitoring and reporting of interest rate exposures to the Board and senior management. Supervisors also determine that the bank, as part of its governance process, performs independent reviews on its material models and assumptions on a regular basis. Supervisors also review the bank's internal escalation process for breaches to pre-determined limits as well as exceptions to pre-determined tolerances to ensure reasonableness of triggers requiring management's attention.</p>
<b>EC4</b>	<b>The supervisor requires banks to include appropriate scenarios into their stress testing programs to measure their vulnerability to loss under adverse interest rate movements.</b>
Description and findings re EC4	<p>Under the Market Risk Guidelines, a bank should, where appropriate, include regular scenario analysis and stress tests in its market risk management process to assess the impact of adverse changes in market risk factors, including interest rate risks on its holdings and financial condition. Scenario analysis and stress tests should be both quantitative and qualitative, and as far as possible be conducted on an institution-wide basis, taking into account the effects of market volatilities, historical correlations and assumptions in stressed market conditions, to assess vulnerabilities in a worst case scenario.</p> <p>In the annual industry-wide stress test, MAS specifies different interest rate scenarios, including a variety of changes in the sovereign yield curve and interest rate swap curve for major currencies. To ensure that the results are robust, supervisors challenge the banks' underlying assumptions and review their stress test methodologies. Supervisors also assess the stress test results at both the individual bank and industry level, and require banks to take mitigating measures where warranted.</p>

	<p>Annex 10A of MAS Notice 637 sets out standardized interest rate shocks which draw guidance from BCBS' <i>Principles for the management and supervision of interest rate risk</i>. The Notice requires locally-incorporated banks to satisfy themselves on the appropriateness of the magnitude of the standardized interest rate shocks required. The bank shall subject its positions to an appropriate level of shock if the market condition or historical observations warrant it (paragraphs 5.8 to 5.10).</p> <p>The bank is required to perform simulations such as tilting and inversions of the yield curve, in addition to applying appropriate shocks across the yield curve to determine the impact on its economic value. The bank is also required to assess the impact of interest rate shocks on non-interest income and capital levels, where there are changes to the interest rate environment.</p>
<b>Additional criteria</b>	
<b>AC1</b>	<b>The supervisor obtains from banks the results of their internal interest rate risk measurement systems, expressed in terms of the threat to economic value, including using a standardized interest rate shock on the banking book.</b>
Description and findings re AC1	<p>Through on-site and off-site reviews, supervisors request for management reports such as quarterly Group Audit reports or ALCO packs which may include the monitoring and assessment of IRRBB. Through these reports and engagements with the bank, supervisors get a sense of changes to economic value as a result of changes to the interest rate. Under Annex 10A of MAS Notice 637, banks are required to notify and engage MAS where the impact of IRRBB on its economic value relative to capital is material.</p> <p>During inspections, in reviewing interest rate risks, supervisors review banks' interest rate risk management policies and procedures. These include ascertaining the basis and reasonableness of assumptions and estimates in coming up with interest rate scenarios. For ICAAP inspections, supervisors also review the results of the standardized interest rate shock (change in EVE as a result in 200 basis point shifts in the yield curve) or scenarios on the banking book to assess the impact on economic value as a result of the standardized shock, as well as the ratio of change in economic value to the sum of Tier 1 and Tier 2 capital, to facilitate comparison across banks in assessing the level of inherent IRRBB of each bank.</p>
<b>AC2</b>	<b>The supervisor assesses whether the internal capital measurement systems of banks adequately capture interest rate risk in the banking book.</b>
Description and findings re AC2	<p>As part of Pillar II ICAAP review, supervisors assess whether the bank holds capital which is commensurate with the level of IRRBB. As part of this assessment, supervisors evaluate banks' methodology for determining capital requirements in relation to IRRBB. Supervisors also compare the amount of capital set aside for IRRBB amongst peer banks bearing in mind the risk profile, internal stress test results as well as stress test results resulting from the standardized interest rate shocks. Under Annex 10A of MAS Notice 637, where supervisors have assessed that a bank</p>

	is not holding capital commensurate with its level of interest rate risk, the bank will be required to reduce its risk, hold additional capital or both.
<b>Assessment of Principle 23</b>	<b>Compliant</b>
Comments	MAS fully meets the principle that it ensure banks have adequate systems commensurate with their risk profile to manage and to control or mitigate interest rate risk. Banks are required to identify sources of interest rate risk and to adopt policies, strategies and limits on interest rate risk exposure, which are regularly reviewed by the Board. Banks routinely run robust stress tests to measure their interest rate exposures and this information, which is provided to management on a monthly basis and the bank's board each quarter, is shared with MAS. As part of MAS' review of the locally incorporated banks' internal capital adequacy process, supervisors determine that the bank's internal assessment of its capital needs is commensurate with the banks' level of interest rate risk.

<b>Principle 24</b>	<b>Liquidity risk.</b> The supervisor sets prudent and appropriate liquidity requirements (which can include either quantitative or qualitative requirements or both) for banks that reflect the liquidity needs of the bank. The supervisor determines that banks have a strategy that enables prudent management of liquidity risk and compliance with liquidity requirements. The strategy takes into account the bank's risk profile as well as market and macroeconomic conditions and includes prudent policies and processes, consistent with the bank's risk appetite, to identify, measure, evaluate, monitor, report and control or mitigate liquidity risk over an appropriate set of time horizons. At least for internationally active banks, liquidity requirements are not lower than the applicable Basel standards.
<b>Essential criteria</b>	
<b>EC1</b>	<b>Laws, regulations or the supervisor require banks to consistently observe prescribed liquidity requirements including thresholds by reference to which a bank is subject to supervisory action. At least for internationally active banks, the prescribed requirements are not lower than, and the supervisor uses a range of liquidity monitoring tools no less extensive than, those prescribed in the applicable Basel standards.</b>
Description and findings re EC1	Sections 38 and 39 of the BA require locally-incorporated banks and branches of foreign banks to maintain minimum cash balances (MCB) and minimum liquid assets (MLA). The specific requirements are articulated in MAS Notice 758 on <i>Minimum Cash Balances</i> and MAS Notice 613 on <i>Minimum Liquid Assets</i> which imposes MCB and MLA of 3 percent and 16 percent of the bank's qualifying liabilities respectively. The definitions for liquid assets and qualifying liabilities, as well as the computations for the maintenance of MCB and MLA are also provided in MAS Notices 758 and 613. Banks that fail to comply with the requirements of sections 38 or 39 of the BA shall be liable to pay a financial penalty.



	<p>Supervisors use a range of liquidity monitoring tools to assess the liquidity risk of banks in Singapore. Monthly data is received from all banks on contractual maturity mismatches, top non-bank and interbank depositors (to assess concentration of funding), liability and deposit mix, as well as liquid assets (available, unencumbered assets) held by the banks. During the annual IWST, MAS collects data on Liquidity Coverage Ratio (LCR) by significant currency from participating banks. In addition, MAS has instituted daily market-related monitoring and surveillance tools to track equity prices and credit default spreads of key financial institutions, sovereigns, as well as oil prices, key market indices, FX rates and yield curves.</p> <p>MAS supports the Basel III liquidity standards and will implement them in accordance with the timeline of the Basel Committee. As part of the Basel III liquidity policy review, MAS initiated a liquidity data collection exercise in August 2012, which covered all banks in Singapore. The data required is based on the monitoring metrics in the report, <i>Basel III: International framework for liquidity risk measurement, standards and monitoring</i>, and includes information on LCR by significant currency and a granular breakdown of selected liquid assets.</p>
<b>EC2</b>	<b>The prescribed liquidity requirements reflect the liquidity risk profile of banks (including on- and off-balance sheet risks) in the context of the markets and macroeconomic conditions in which they operate.</b>
Description and findings re EC2	<p>MAS Notice 613 requires banks to hold a minimum level of liquid assets, set as a ratio to their qualifying liabilities (the "MLA ratio"). Qualifying liabilities include both on- and off-balance sheet liabilities such as undrawn commitments and net liabilities of the bank due to other banks within one month.</p> <p>The MLA requirement is calibrated in a proportionate manner, taking into account the risk profile, governance, controls and risk management capability of each institution. For most banks, a general methodology will apply where banks are required to maintain an MLA ratio of 16 percent. Banks may, however, apply to comply with the bank-specific framework. These banks are subject to a rigorous on-site review process to assess eight elements of their liquidity risk management policies and practices (viz. liquidity policy and management oversight, maturity mismatch analysis, scenario analysis, contingency funding plan, diversification and stability of liabilities, access to interbank and other wholesale markets, management of liquidity in individual currencies, and intra-group liquidity management) to assess if they qualify for the bank-specific framework. The MLA requirement of such banks is the amount computed using a cash flow volatility formula, subject to a floor of 5 percent of the bank's qualifying liabilities and a cap of between 10 percent and 15 percent of its qualifying liabilities. The specific MLA cap assigned to the bank depends on the strength and robustness of the bank's liquidity risk management as assessed by supervisors. There are currently nine banks on the bank-specific framework.</p>
<b>EC3</b>	<b>The supervisor determines that banks have a robust liquidity management framework that requires the banks to maintain sufficient liquidity to withstand a range of stress events, and includes appropriate policies and processes for</b>

	<p><b>managing liquidity risk that have been approved by the banks' Boards. The supervisor also determines that these policies and processes provide a comprehensive bank-wide view of liquidity risk and are consistent with the banks' risk profile and systemic importance.</b></p>
Description and findings re EC3	<p>MAS relies on the following channels to assess the adequacy of liquidity risk management framework as well as policies and processes of all banks in Singapore:</p> <p>(i) MAS' <i>Guidelines on Risk Management Practices—Liquidity Risk</i> (Liquidity Risk Guidelines)—Under the guidelines, a bank is to have a robust liquidity management framework that requires maintaining sufficient liquidity to withstand a range of stress events. This includes appropriate policies and processes for managing liquidity risk that have been approved by the Board or senior management. These policies and processes should provide a comprehensive institution-wide view of liquidity risk and should be consistent with the bank's risk profile. The guidelines and a circular issued by MAS in June 2008 encourage all banks in Singapore to adopt the liquidity risk management practices set out in BCBS' <i>Principles for Sound Liquidity Risk Management and Supervision</i>. These principles have been incorporated in MAS' supervisory process for liquidity risk.</p> <p>(ii) Inspections—Supervisors conduct thematic liquidity inspections on an on-going basis to assess the extent which banks have implemented the liquidity principles and these examinations are supported by MAS' dedicated team of liquidity risk specialists.</p> <p>During inspections, supervisors review information such as liquidity risk policies and procedures, Board and committee minutes, management reports, key risk indicators, as well as perform sample testing in order to assess the robustness of the bank's liquidity risk management framework. The framework should ensure that the bank maintains sufficient liquidity to withstand a prolonged period of stress and a range of liquidity stress scenarios. Supervisors confirm that the Board has articulated a liquidity risk tolerance that is appropriate for the bank's business strategy and role in the financial system, and review and approve the liquidity strategy, policies and practices at least annually. Supervisors also evaluate that the liquidity risk policies and practices provide a comprehensive bank-wide view of liquidity risk and are consistent with the bank's risk profile and systemic importance. The Board is expected to oversee and ensure that senior management translates the strategy into clear guidance and operating standards, to manage and monitor liquidity risks across the banking group and at each entity on an ongoing basis.</p> <p>(iii) Off-site Reviews—As part of the assessment of the bank's liquidity risk processes, supervisors monitor the bank's compliance with regulatory limits (viz. MCB and MLA) and review monthly statistical reports on the bank's liabilities, deposits, funding positions, liquid assets and contractual mismatches (i.e. data from MAS Notice 613 and MAS 610 on <i>Submission of Statistics and Returns</i>). Supervisors also regularly engage the bank's internal and external auditors as well as home supervisor (in the</p>

	<p>case of a foreign bank), on issues concerning the bank's liquidity risk management, as well as review external and internal audit reports and follow up with the bank's management on the rectification of deficiencies noted.</p> <p>Under MAS' CRAFT, supervisors assess the liquidity risk profile of the bank and the corresponding controls in place to manage the risk. Liquidity risk is rated based upon, but not limited to, an assessment of the bank's composition and concentration of liabilities, composition and concentration of assets, and ability to raise liquidity. For locally-incorporated banks, formal guidance on the Pillar 2 treatment for liquidity risk is issued in Part X of MAS Notice 637 on <i>Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore</i>. Liquidity risk is also discussed under Section 7 of Annex 10A of the Notice, which sets out MAS' requirements for a bank to adopt sound liquidity risk management practices that are commensurate with its size and sophistication, and with the risk and complexity of its activities. The bank is required to manage its liquidity risk and maintain sufficient liquidity to withstand a range of stress events and to weather prolonged periods of financial market stress and illiquidity. The bank's Board is also required to approve the strategy and significant policies relating to liquidity risk management.</p> <p>The above requirements on liquidity risk are taken into consideration by supervisors during MAS' ICAAP review, which involves, amongst others, a review of the ICAAP documentation of the bank, discussions with bank management and on-site examinations.</p>
EC4	<p><b>The supervisor determines that banks' liquidity strategy, policies and processes establish an appropriate and properly controlled liquidity risk environment including:</b></p> <ul style="list-style-type: none"> <li><b>(a) clear articulation of an overall liquidity risk appetite that is appropriate for the banks' business and their role in the financial system and that is approved by the banks' Boards;</b></li> <li><b>(b) sound day-to-day, and where appropriate intraday, liquidity risk management practices;</b></li> <li><b>(c) effective information systems to enable active identification, aggregation, monitoring and control of liquidity risk exposures and funding needs (including active management of collateral positions) bank-wide;</b></li> <li><b>(d) adequate oversight by the banks' Boards in ensuring that management effectively implements policies and processes for the management of liquidity risk in a manner consistent with the banks' liquidity risk appetite; and</b></li> <li><b>(e) regular review by the banks' Boards (at least annually) and appropriate adjustment of the banks' strategy, policies and processes for the management of liquidity risk in the light of the banks' changing risk profile and external developments in the markets and macroeconomic</b></li> </ul>

	<b>conditions in which they operate.</b>
Description and findings re EC4	<p>MAS' Liquidity Risk Guidelines set out its supervisory expectations for all banks in Singapore in terms of their liquidity risk strategies, policies and procedures. In addition, the locally-incorporated banks have to comply with the liquidity risk management requirements set out in MAS Notice 637. Banks are assessed against the relevant requirements during inspections.</p> <p>(a) During inspections, supervisors check that the bank's liquidity risk tolerance is clearly articulated and approved by the bank's Board. The bank's liquidity risk tolerance should define the level of liquidity risk that the bank is willing to assume and could be quantified in terms of the level of unmitigated funding liquidity risk the bank decides to take under normal and stressed business conditions. Supervisors further assess the appropriateness of the bank's risk tolerance in light of the bank's business strategy, role in the financial system, financial condition and funding capacity.</p> <p>Paragraph 7.1(b) of Annex 10A of MAS Notice 637 specifies that the Board shall determine a liquidity risk appetite that is communicated throughout the bank and is reflected in the liquidity risk strategy and policies.</p> <p>(b) Through the review of liquidity risk policies and procedures and discussions with the bank, supervisors determine that senior management has developed sound strategy, policies and practices to manage liquidity risk in accordance with the risk tolerance. The liquidity risk strategy should include the approach to intraday liquidity management to ensure that the bank meets its payment and settlement obligations on a timely basis under both normal and stressed conditions.</p> <p>Paragraphs 7.1(b) and (c) of Annex 10A of MAS Notice 637 requires senior management to take the necessary steps to monitor and control liquidity risk, including putting in place appropriate policies and procedures, and setting and reviewing limits on the size of liquidity positions over particular time horizons. The bank's management of intraday liquidity risk shall also be considered as a crucial part of liquidity risk management.</p> <p>(c) The bank's management information systems are reviewed during inspections to ascertain that they are reliable and provide the Board, senior management and other appropriate personnel with timely and forward-looking information on the bank's liquidity positions. Supervisors verify that the systems have the ability to calculate liquidity positions in all of the currencies in which the bank conducts business—both on a subsidiary/branch basis and on an aggregate group basis. Systems should also be able to manage and monitor the bank's intraday positions and net funding requirements. In addition, supervisors ensure that the bank is capable of monitoring and calculating all collateral positions by legal entity and by currency exposure, as well as shifts between intraday and</p>

	<p>overnight or term collateral usage.</p> <p>Under paragraph 7.1(c) of Annex 10A of MAS Notice 637, a bank shall maintain adequate information systems for measuring, monitoring, controlling and reporting liquidity risk, and provide reports on a timely basis to the Board, senior management and other appropriate personnel. The bank shall be able to control its liquidity risk exposure and funding needs, within and across legal entities, business lines and currencies, and also be able to calculate and manage its collateral positions.</p> <p>(d) During inspections, supervisors determine that the Board is responsible for ensuring that senior management has translated the liquidity risk strategy into clear guidance and operating standards and that liquidity risk is managed in accordance with the bank's risk tolerance. Through discussions with bank management and review of Board committees' and ALCO's minutes, supervisors verify that the Board regularly reviews reports on the liquidity position of the bank and is informed of new or emerging liquidity concerns in a timely manner. The Board should further ensure that senior management takes appropriate remedial actions to address the concerns.</p> <p>Paragraph 7.1(b) of Annex 10A of MAS Notice 637 states that the Board shall determine the risk appetite of the bank for liquidity risk that is communicated throughout the bank and is reflected in the strategy and policies that are set to manage liquidity risk. The Board shall approve the strategy and significant policies related to the management of liquidity risk. Senior management shall take the necessary steps to monitor and control liquidity risk, including putting in place appropriate policies and procedures. The bank shall also inform the Board regularly of its liquidity situation.</p> <p>e) During inspections, supervisors determine that the Board reviews and approves the liquidity risk management strategy, policies and practices at least annually. Senior management is expected to continuously review information on the bank's liquidity developments and report to the Board on a regular basis. Senior management should also closely monitor current trends and potential market developments and make appropriate and timely changes to the liquidity strategy as needed.</p> <p>Paragraph 7.1(b) of Annex 10A of MAS Notice 637 stipulates that the bank's Board shall approve the strategy and significant policies related to the management of liquidity risk. The Board shall also be informed regularly of the liquidity situation of the bank as well as any material changes in the current or prospective liquidity position of the bank.</p>
<b>EC5</b>	<b>The supervisor requires banks to establish, and regularly review, funding</b>

	<p><b>strategies and policies and processes for the ongoing measurement and monitoring of funding requirements and the effective management of funding risk. The policies and processes include consideration of how other risks (e.g., credit, market, operational and reputation risk) may impact the bank's overall liquidity strategy, and include:</b></p> <ul style="list-style-type: none"> <li><b>(a) an analysis of funding requirements under alternative scenarios;</b></li> <li><b>(b) the maintenance of a cushion of high quality, unencumbered, liquid assets that can be used, without impediment, to obtain funding in times of stress;</b></li> <li><b>(c) diversification in the sources (including counterparties, instruments, currencies and markets) and tenor of funding, and regular review of concentration limits;</b></li> <li><b>(d) regular efforts to establish and maintain relationships with liability holders; and</b></li> <li><b>(e) regular assessment of the capacity to sell assets.</b></li> </ul>
Description and findings re EC5	<p><i>[Note: The description below is organized in such a way that each section begins with general requirements that apply to all banks followed by specific requirements for locally-incorporated banks.]</i></p> <p>MAS' Liquidity Risk Guidelines set out its requirements on the measurement and management of liquidity risk for all banks. MAS has also set out in a circular issued in June 2008 that banks should review the BCBS' <i>Principles for Sound Liquidity Risk Management and Supervision</i>, with a view to embedding the Principles into its liquidity risk management framework. The banks' Board and senior management are responsible for establishing sound and robust liquidity risk management policies and control systems. MAS will continue to assess the adequacy of banks' liquidity risk management practices and internal control systems and processes in light of the size, nature of business and complexity of activities.</p> <p>Through off-site review of reports and inspections, supervisors evaluate that the bank has established a funding strategy that provides effective diversification in the sources and tenor of funding. Senior management should regularly review the funding strategy in light of any changes in the internal or external environments. Supervisors also assess senior management's and the Board's understanding of the close links between funding liquidity risk and market liquidity risk, as well as how other risks, including credit, market, operational and reputational risks affect the bank's overall liquidity risk strategy.</p> <p>Under paragraph 2.1 of Annex 10A of MAS Notice 637, a locally-incorporated bank shall implement a process for reviewing its risk management policies, procedures and limits and updating them as appropriate. Paragraph 7.1 stipulates that the bank shall have in place a liquidity strategy that sets out specific liquidity management policies,</p>

such as the composition of assets and liabilities, the approach to managing liquidity across currencies and locations, the use of specific financial instruments, and the liquidity and marketability of assets. The bank shall also maintain adequate information systems to measure and control funding requirements. In addition, the bank's liquidity policies and processes shall consider how other risks (e.g., credit, market, operational and reputation risks) may impact the overall liquidity strategy.

- (a) During inspections, supervisors verify that banks perform stress tests or scenario analyses on a regular basis in order to identify and quantify exposures to possible future liquidity stresses, and analyze possible impacts on the bank's cash flows, liquidity position, profitability and solvency. The bank should also analyze its funding requirements under alternative scenarios.

Paragraph 7.1(d) of Annex 10A of MAS Notice 637 requires a locally-incorporated bank to conduct analyses of net funding requirements under alternative scenarios. The assumptions utilized in managing liquidity shall be reviewed frequently to determine whether they continue to be valid.

- (b) Besides verifying that the bank has maintained a cushion of high quality liquid assets during inspections, supervisors also ensure that there are no legal, regulatory or operational impediments to using the bank's liquidity cushions to obtain funding.

Under paragraph 7.1(f) of Annex 10A of MAS Notice 637, a locally-incorporated bank shall maintain a liquidity cushion, made up of unencumbered, high quality liquid assets, to protect against liquidity stress events, including potential losses of unsecured and typically available secured funding sources. Paragraph 7.1(c) requires the bank to be able to control liquidity risk exposure and funding needs, taking into account any legal, regulatory and operational limitations to transferability of liquidity.

- (c) During inspections, supervisors assess that banks have diversified available funding sources in the short-, medium- and long-term. The desired diversification should include limits by nature of depositor and counterparty (retail and wholesale), secured versus unsecured market funding, instrument type, securitization vehicle, currency, and geographic market. As a general liquidity management practice, banks are expected to limit concentration in any one particular funding source. Supervisors ensure that the banks review these limits periodically, or as and when market conditions warrant a review.

Paragraph 7.1(e) of Annex 10A of MAS Notice 637 specifies that a locally-incorporated bank shall ensure a diversification of funding tenor and sources to manage its liquidity risk. In this respect, the bank needs to examine the level of reliance on particular sources, nature of the provider of funds and geographic



	<p>market. Under paragraph 7.1(b), senior management is required to take the necessary steps to monitor and control liquidity risk, including setting and reviewing limits on the size of liquidity positions over particular time horizons.</p> <p>(d) During inspections, supervisors look out for the frequency of contact and frequency of use of a funding source as two possible indicators of the strength of a funding relationship. Paragraph 7.1(e) of Annex 10A of MAS Notice 637 requires a locally-incorporated bank to periodically review its efforts to establish and maintain relationships with liability holders to maintain the diversification of liabilities. This is taken into account by supervisors who assess whether the bank has identified and built strong relationships with current and potential investors, including the central bank, where appropriate, in order to promote effective diversification of funding sources.</p> <p>(e) During inspections, supervisors evaluate whether the bank's market access is being actively managed, monitored and tested by the appropriate staff and whether the bank maintains an active presence in markets relevant to its funding strategy. The supervisors' assessment takes into account the bank's ongoing commitment and investment in adequate and appropriate infrastructures, processes and information collection, as well as whether the bank has full knowledge of the legal framework governing potential asset sales and ensured that its documentation is reliable and legally robust. For instance, the inclusion of loan-sale clauses in loan documentation and the regular use of some asset-sales markets may help enhance the bank's ability to execute asset sales with various counterparties in times of stress.</p> <p>Paragraph 7.1(e) of Annex 10A of MAS Notice 637 sets out that a locally-incorporated bank needs to periodically review its efforts to sell assets. Maintaining market access (including developing markets for asset sales) is critical for effective liquidity risk management, as it affects both the ability to raise new funds and to liquidate assets.</p>
EC6	<p><b>The supervisor determines that banks have robust liquidity contingency funding plans to handle liquidity problems. The supervisor determines that the bank's contingency funding plan is formally articulated, adequately documented and sets out the bank's strategy for addressing liquidity shortfalls in a range of stress environments without placing reliance on lender of last resort (LOLR) support. The supervisor also determines that the bank's contingency funding plan establishes clear lines of responsibility, includes clear communication plans (including communication with the supervisor) and is regularly tested and updated to ensure it is operationally robust. The supervisor assesses whether, in the light of the bank's risk profile and systemic importance, the bank's contingency funding plan is feasible and requires the bank to address any deficiencies.</b></p>



Description and findings re EC6	<p>Under MAS' Liquidity Risk Guidelines, banks are to have in place robust contingency funding plans (CFP). When conducting on-site evaluation of a bank's CFP, supervisors verify that the bank has established a plan that clearly sets out the strategies for addressing liquidity shortfalls in emergency situations, without placing reliance on LOLR support. The CFP should outline policies to manage a range of stress environments, establish clear lines of responsibility, include clear invocation and escalation procedures and be regularly tested and updated to ensure that it is operationally robust. Supervisors evaluate that the CFP is feasible and commensurate with the bank's complexity, risk profile, scope of operations and role in the financial system.</p> <p>Deficiencies noted in the bank's CFP and recommendations to rectify the deficiencies are discussed with senior management and, if necessary, the Board. The observations and management's responses are detailed in formal inspection reports or supervisory letters issued to the bank. For foreign banks, these reports or letters are also sent to their Head Offices and home supervisors.</p> <p>MAS' requirements on CFP for locally-incorporated banks are set out in Paragraph 7.1(f) of Annex 10A of MAS Notice 637 which requires banks to have contingency plans that address the strategy for handling liquidity crises and include procedures for making up cash flow shortfalls in emergency situations.</p>
<b>EC7</b>	<p><b>The supervisor requires banks to include a variety of short-term and protracted bank-specific and market-wide liquidity stress scenarios (individually and in combination), using conservative and regularly reviewed assumptions, into their stress testing programs for risk management purposes. The supervisor determines that the results of the stress tests are used by the bank to adjust its liquidity risk management strategies, policies and positions and to develop effective contingency funding plans.</b></p>
Description and findings re EC7	<p>The adequacy of banks' liquidity stress testing processes are assessed through the following channels:</p> <p>(i) MAS' Liquidity Risk Guidelines set out MAS' expectations for all banks in the areas of liquidity stress testing and scenario analysis. MAS' circulars issued in 2008 and 2009 encourage banks to adopt the stress testing practices set out in BCBS' <i>Principles for Sound Liquidity Risk Management and Supervision</i> and <i>Principles for Sound Stress Testing Practices and Supervision</i>.</p> <p>(ii) Stress Tests—MAS conducts annual IWST to assess banks' ability to withstand adverse financial and economic shocks, and to evaluate the potential impact on Singapore's financial stability. Liquidity risk stress tests are part of IWST and banks are requested to use stress scenarios that have been developed by MAS through its ongoing financial surveillance operations, risk assessments by international organizations and exchanges with industry players. There are three scenarios used in</p>

	<p>the liquidity stress tests, namely the Basel III scenario, a combined bank-specific and general market liquidity stress scenario, and a reverse stress test scenario. To ensure that the results are robust, supervisors engage banks to challenge their underlying assumptions and review their stress test methodologies.</p> <p>(iii) Inspections—During inspections, supervisors verify that the bank conduct stress tests on a regular basis for a variety of short-term and protracted institution-specific and market-wide stress scenarios (individually and in combination) to identify sources of potential liquidity strain and to ensure that current exposures remain in accordance with a bank’s established liquidity risk tolerance. The bank is expected to take a conservative approach when setting stress testing assumptions and consider rigorous and challenging stress scenarios, even in times when markets are highly liquid. The scenario designs should be subject to regular reviews to ensure that the nature and severity of the tested scenarios remain appropriate and relevant to the bank. By reviewing the stress test results and the bank’s follow-up actions, supervisors determine that the bank has integrated the results of the stress testing process into its strategic planning process and day-to-day risk management practices. The bank is expected to use stress test outcomes to adjust liquidity risk management strategies, policies and positions and to develop effective CFPs.</p> <p>Under paragraph 7.1(h) of Annex 10A of MAS Notice 637, a locally-incorporated bank shall perform stress tests or scenario analyses on a regular basis in order to identify and quantify its exposures to possible future liquidity stresses and analyze possible impacts on the bank’s cash flows, currency mismatches, liquidity positions, profitability and solvency. The bank shall include a variety of short-term and protracted bank-specific and market-wide liquidity stress scenarios (individually and in combination). It shall also use conservative assumptions in stress test scenarios and regularly review the assumptions. Senior management is further required to discuss the results of these stress tests, and take mitigating actions to limit the bank’s exposures, build up a liquidity cushion, and adjust its liquidity profile to fit its risk tolerance. The bank is required to use the results of stress tests conducted to shape its CFP.</p>
EC8	<p><b>The supervisor identifies those banks carrying out significant foreign currency liquidity transformation. Where a bank’s foreign currency business is significant, or the bank has significant exposure in a given currency, the supervisor requires the bank to undertake separate analysis of its strategy and monitor its liquidity needs separately for each such significant currency. This includes the use of stress testing to determine the appropriateness of mismatches in that currency and, where appropriate, the setting and regular review of limits on the size of its cash flow mismatches for foreign currencies in aggregate and for each significant currency individually. In such cases, the supervisor also monitors the bank’s liquidity needs in each significant currency, and evaluates the bank’s ability to transfer liquidity from one currency to another across jurisdictions and legal entities.</b></p>

Description and findings re EC8	<p>Through the annual industry-wide stress tests and 2012 liquidity data collection exercise, supervisors identify banks carrying out significant foreign currency liquidity transformation and monitor banks' liquidity needs in each significant currency.</p> <p>MAS' Liquidity Risk Guidelines and circular issued in June 2008 encourage all banks to adopt adequate foreign currency risk management practices, including those set out in BCBS' <i>Principles for Sound Liquidity Risk Management and Supervision</i>.</p> <p>During inspections, supervisors determine that the bank assesses its significant foreign currency risks by undertaking separate analysis of its strategy and monitor its liquidity needs separately for each significant currency. The bank also uses stress testing to determine the appropriateness of its currency mismatches. Supervisors ensure that the bank, where appropriate, set and regularly review limits on the size of its cash flow mismatches over particular time horizons for foreign currencies in aggregate and for each significant individual currency in which it operates. The bank should reach a judgment on which currencies should be subject to individual limits and regularly review the approach. Supervisors also evaluate that the size of the bank's foreign currency mismatches take into account its ability to transfer a liquidity surplus from one currency to another, and across jurisdictions and legal entities.</p> <p>In addition, under paragraphs 7.1(g) and (h) of Annex 10A of MAS Notice 637, a locally-incorporated bank is required to measure, monitor and control its liquidity positions in the major currencies in which it is active. In addition to assessing its aggregate foreign currency liquidity needs and the acceptable mismatch in combination with its domestic currency commitments, the bank shall also undertake separate analysis of its strategy for each currency individually. This includes the use of stress testing to determine the appropriateness of currency mismatches. Where appropriate, the bank shall set and regularly review limits on the size of its cash flow mismatches over particular time horizons for foreign currencies in aggregate and for each significant individual currency in which the bank operates.</p>
<b>Additional criteria</b>	
<b>AC1</b>	<p><b>The supervisor determines that banks' levels of encumbered balance-sheet assets are managed within acceptable limits to mitigate the risks posed by excessive levels of encumbrance in terms of the impact on the banks' cost of funding and the implications for the sustainability of their long-term liquidity position. The supervisor requires banks to commit to adequate disclosure and to set appropriate limits to mitigate identified risks.</b></p>
Description and findings re AC1	<p>MAS' Liquidity Risk Guidelines provide guidance for banks on asset encumbrance. During inspections, supervisors assess the bank's level of pledged balance-sheet assets and require the bank to set appropriate limits to mitigate risks posed by excessive levels of encumbrance in terms of the impact on the bank's funding costs and the implications for the sustainability of its long-term liquidity position.</p> <p>MAS Notice 608 requires all banks to disclose in their financial statements, assets</p>

	<p>pledged to third parties as security for liabilities, together with the aggregate amount of the related secured liabilities.</p> <p>In March 2012, MAS has published a consultation paper on covered bonds issuance, proposing that locally-incorporated banks may issue covered bonds subject to the aggregate value of assets in the cover pool being capped at a defined value of the total assets of the bank. This will keep risks contained while allowing the bank to tap an additional source of longer-term funding. The bank is required to notify MAS prior to the issuance of covered bonds, and appoint an independent cover pool monitor. The cover pool monitor shall certify annually to MAS that the bank has complied with the proposed 2 percent cap and other regulatory requirements on covered bonds.</p>
<b>Assessment of Principle 24</b>	<b>Compliant</b>
Comments	<p>The MAS carefully monitors liquidity risk in locally incorporated banks and foreign bank branches. The MAS requires banks and branches to measure and monitor their liquidity positions in the major currencies and during inspections, undertake analyses to ensure that the banks have effective processes in place.</p> <p>Monthly data is received from all banks on maturity mismatches and each bank's internal management risk report is shared with the MAS. In early 2000, the MAS imposed liquidity requirements on local banks that were more stringent than what Basel adopted in 2012 through the LCR.</p> <p>Local banks' funding is primarily based on retail deposits (around 80 percent of liabilities). Because of the high savings rate in Singapore, the local banks and foreign branches active in the local retail deposit market all have excess liquidity. They all face the same challenge of how safely to deploy their excess S\$ deposit funds.</p> <p>The MAS, however, also is responsible for the supervision of a number of foreign branches that may operate in foreign currencies (primarily US\$). For locally-incorporated banks with branches and subsidiaries in neighboring Asian countries, foreign assets are funded with locally raised deposits to eliminate the FX risk.</p> <p>The nature of the foreign branch operations and the potential reliance on the home office for funding makes liquidity risk an area of vulnerability. Foreign branches have been required to reduce their liquidity risk through matched funding. For longer-dated assets, the branches have issued medium-term notes.</p> <p>The MAS may wish to consider requiring banks and branches with large foreign currency exposures to hold liquidity on a separate currency basis in line with what has been MAS' prudent practice for the SGD although the team recognizes the challenge of identifying safe foreign currency assets in which to hold these funds.</p>

<b>Principle 25</b>	<b>Operational risk.</b> The supervisor determines that banks have an adequate operational risk management framework that takes into account their risk appetite, risk profile and market and macroeconomic conditions. This includes prudent policies and processes to identify, assess, evaluate, monitor, report and control or mitigate operational risk <sup>13</sup> on a timely basis.
<b>Essential criteria</b>	
<b>EC1</b>	<b>Law, regulations or the supervisor require banks to have appropriate operational risk management strategies, policies and processes to identify, assess, evaluate, monitor, report and control or mitigate operational risk. The supervisor determines that the bank’s strategy, policies and processes are consistent with the bank’s risk profile, systemic importance, risk appetite and capital strength, take into account market and macroeconomic conditions, and address all major aspects of operational risk prevalent in the businesses of the bank on a bank-wide basis (including periods when operational risk could increase).</b>
Description and findings re EC1	<p>MAS has issued guidelines and circulars to all banks in Singapore covering the areas of business continuity management, technology risk management and outsourcing, to promote sound operational risk management and security practices. See CP25, EC 4, 5 and 8 for details. Under MAS’ Operational Risk Guidelines, banks should take into account applicable industry standards such as BCBS’ <i>Principles for the Sound Management of Operational Risk</i>, where appropriate. In addition, banks should establish sound and appropriate operational risk management strategies, policies and processes which are consistent with the bank’s risk profile, risk appetite and capital strength, and take into account market and macroeconomic conditions.</p> <p>The robustness of all banks’ operational risk management framework and processes are assessed by supervisors through inspections and off-site reviews.</p> <p>During inspections, supervisors review information such as operational risk-related policies and procedures, Board and management committee minutes, management/incident reports and key risk indicators. Supervisors also conduct transaction testing to evaluate that the bank’s strategy, policies and processes are consistent with its risk profile, systemic importance, risk appetite and capital strength, take into account market and macroeconomic conditions, and address all major aspects of operational risk prevalent in the businesses of the bank on a bank-wide basis (including periods when operational risk could increase).</p> <p>As part of ongoing off-site review, supervisors regularly engage internal and external auditors as well as home supervisor (in the case of a foreign bank), on issues</p>

<sup>13</sup> The Committee has defined operational risk as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. The definition includes legal risk but excludes strategic and reputational risk.

concerning the bank's operational risk management, as well as review external and internal audit reports and follow up with the bank's management on the rectification of deficiencies noted.

Under MAS' CRAFT, supervisors assess the operational risk profile of the bank and the corresponding controls in place to manage the risk. Operational risk is rated based upon, but not limited to, an assessment of a bank's risk of loss arising from inadequate or inappropriate management of personnel; inadequate internal controls, processes and information systems; organizational changes; as well as inadequate or complex organizational structures and interdependencies.

The following requirements are imposed on locally-incorporated banks:

(i) Pillar 1 Capital Requirements—MAS Notice 637 on *Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore* imposes Pillar 1 operational risk capital requirements on locally-incorporated banks. Currently, the three local banks are using the Standardized Approach to Operational Risk (SA(OR)) to calculate their operational risk capital requirements. Part IX of MAS Notice 637 requires a bank using the SA(OR) to have an operational risk management function that develops strategies to identify, assess, monitor, control and mitigate operational risk, and also to codify bank-level policies and procedures concerning operational risk management and controls.

Supervisors have the power to impose additional capital requirements on banks to direct the adequate management of operational risks. In July 2010, MAS took supervisory action against a bank for the service outage of its online and branch banking systems which caused significant inconvenience to the bank's customers. MAS required the bank to apply a multiplier of 1.2 times to its RWA for operational risk, which translates to the bank setting aside an additional amount of approximately S\$230 million in regulatory capital on a group basis.

(ii) Pillar 2 Supervisory Review Process—The Pillar 2 treatment for operational risk is set out in part X of MAS Notice 637, which holds senior management responsible for developing a risk management framework that is appropriate in light of the risk profile and business strategy of the bank and integrating the ICAAP with the capital planning and management processes of the bank. The requirements on operational risk management are set out in Section 6 of Annex 10A. Under paragraph 6.1, a bank should adopt the practices set out in BCBS' *Sound Practices for the Management and Supervision of Operational Risk*." Section 6.3 requires a bank to have a comprehensive bank-wide operational risk management framework that takes into account its appetite and tolerance for operational risk. Further, the bank shall set out clearly the policies and procedures for the identification, assessment, monitoring, and control and mitigation of operational risk inherent in all material products, activities, processes and systems.

	<p>The above requirements on operational risk are taken into consideration by supervisors during the ICAAP review, which involves, amongst others, a review of the ICAAP documentation of the bank, discussions with bank management and on-site examinations.</p>
<b>EC2</b>	<p><b>The supervisor requires banks' strategies, policies and processes for the management of operational risk (including the banks' risk appetite for operational risk) to be approved and regularly reviewed by the banks' Boards. The supervisor also requires that the Board oversees management in ensuring that these policies and processes are implemented effectively.</b></p>
Description and findings re EC2	<p>MAS' Operational Risk Guidelines set out that the bank's operational risk strategies, policies and processes should be approved and subject to regular review by the Board. The Board is responsible for ensuring that these policies and processes are implemented effectively by management and fully integrated into the bank's overall risk management process.</p> <p>During inspections, supervisors review management reports, Board and committee minutes to verify that the bank's operational risk management strategies, policies and processes have been approved and regularly reviewed by the Board. Supervisors' assessment includes an evaluation of the Board's oversight of management's effectiveness in implementing the operational risk management policies.</p> <p>Under Part IX of MAS Notice 637, a locally-incorporated bank using the SA(OR) is required to ensure that its Board is actively involved in the oversight of the operational risk management framework. This includes ensuring that the operational risk management function: (i) develops strategies to identify, assess, monitor, control and mitigate operational risk; (ii) codifies bank-level policies and procedures concerning operational risk management and controls; and (iii) designs and implements the operational risk assessment methodology and operational risk-reporting system of the bank.</p> <p>Part X of MAS Notice 637 states that the ultimate responsibility for ensuring a sound risk management framework resides with the Board. The Board shall define the bank's risk appetite and establish an acceptable level of risks that the bank may take. More specifically, the Board and senior management are required under paragraph 6.2 of Annex 10A of MAS Notice 637 to be familiar with major aspects of the bank's operational risk, and be responsible for the effective implementation of the operational risk management framework, including the approval and regular review of the risk management framework, taking into consideration the bank's appetite and tolerance for operational risk. In addition, the bank is required to continually monitor operational risk exposures, and to report significant operational risk concerns and deviations from the established policies to the Board.</p>

<b>EC3</b>	<b>The supervisor determines that the approved strategy and significant policies and processes for the management of operational risk are implemented effectively by management and fully integrated into the bank’s overall risk management process.</b>
Description and findings re EC3	As part of off-site reviews and inspections of the robustness of the banks’ operational risk management framework and processes, supervisors periodically obtain and review information such as operational risk-related policy and procedural documents, management/incident reports, audit reports and key risk indicators. Supervisors also conduct transaction testing on-site to determine that the approved strategy and significant policies and processes for the management of operational risk are effectively implemented and fully integrated into the bank’s overall risk management process.
<b>EC4</b>	<b>The supervisor reviews the quality and comprehensiveness of the bank’s disaster recovery and business continuity plans to assess their feasibility in scenarios of severe business disruption which might plausibly affect the bank. In so doing, the supervisor determines that the bank is able to operate as a going concern and minimize losses, including those that may arise from disturbances to payment and settlement systems, in the event of severe business disruption.</b>
Description and findings re EC4	<p>MAS has issued the following guidelines and circulars that provide sound principles and serve as standards on business continuity and disaster recovery to all banks:</p> <ul style="list-style-type: none"> <li>• Guidelines on Risk Management Practices—Business Continuity Management (BCM);</li> <li>• Circular on Further Guidance on BCM (focus on security and pandemic events);</li> <li>• Internet Banking and Technology Risk Management Guidelines; and</li> <li>• Circular on Information Systems Reliability, Resiliency and Recoverability.</li> </ul> <p>Under MAS’ <i>Guidelines on Outsourcing</i>, banks should ensure that their disaster recovery and business continuity capabilities are not compromised by outsourcing.</p> <p>Banks should meet with the above guidelines and circulars, while taking into account the diverse activities and markets they are engaged in. Supervisors review the bank’s processes and documentation to gain assurance that there are sufficient measures to cope with operational disruptions.</p> <p>In reviewing the business continuity preparedness of banks, supervisors focus on the bank’s key mission critical activities such as dealing activities, clearing and settlement operations, and payment services to ensure that their recovery strategies and recovery time objectives (for both business functions and IT) can be met. In a disruption scenario, the bank should continue to meet regulatory requirements, and manage its exposure, risks and any outstanding business obligations. These activities are important to mitigate the scenarios of wide-area disruptions and total loss of</p>



	<p>people and processes (concentration risk). The bank's BCM plans should be commensurate with the scale, nature and complexity of its activities.</p> <p>Supervisors review the bank's extent of implementation of the required contingencies for the various payment and settlement systems that it participates in, viz. MAS Electronic Payment System (MEPS+) [SGD RTGS and SGS], Cheque Clearing System (CCS) [S\$ and US\$] and eGIRO. Supervisors also review the bank's participation in industry tests conducted for payment and settlement systems to ensure that the bank can continue to fulfill its obligations in the various contingencies.</p> <p>MAS emphasizes the importance of financial institutions' BCM by conducting periodic industry-wide exercises (IWE). The scenarios for IWEs were designed to simulate severe business disruptions to financial institutions which will test and strengthen the financial sector's crisis management skills, provide an opportunity to exercise business continuity plans with external dependencies and the communication processes and coordination with authorities and government agencies. The previous IWE (Exercise Raffles III), which was conducted on September 15, 2011, featured a scenario of physical and cyber terrorism and involved more than 4,000 executives and senior management from 137 banks, finance companies, insurance firms, securities and broking houses, the Singapore Exchange, as well as financial market infrastructure providers.</p>
<b>EC5</b>	<p><b>The supervisor determines that banks have established appropriate information technology policies and processes to identify, assess, monitor and manage technology risks. The supervisor also determines that banks have appropriate and sound information technology infrastructure to meet their current and projected business requirements (under normal circumstances and in periods of stress), which ensures data and system integrity, security and availability and supports integrated and comprehensive risk management.</b></p>
Description and findings re EC5	<p>MAS assesses the adequacy of all banks' information technology risk management framework through several channels:</p> <p>(i) Technology Risk Management Guidelines—MAS has issued extensive supervisory guidance to banks in the form of guidelines and circulars to promote sound technology risk management and IT security best practices. MAS' <i>Internet Banking and Technology Risk Management (IBTRM) Guidelines</i> is constantly being updated to espouse the adoption of sound processes in managing technology risks and the implementation of security practices in banks. The IBTRM Guidelines require banks to establish a sound and robust technology risk management framework; strengthen system and data security, integrity, reliability, resiliency, availability and recoverability; as well as deploy strong two-factor authentication to protect customer data, transactions and systems. The guidelines also emphasize the importance of establishing a technology risk management framework that manage risks in a proactive and effective manner.</p>

	<p>MAS takes appropriate supervisory action against banks which fail to meet with MAS' regulatory requirements and standards. For instance, MAS imposed additional capital requirements on a bank in July 2010 for its failure to adequately manage its outsourced IT systems, networks, operations and infrastructure, resulting in a widespread system outage on July 5, 2010. In September 2011, MAS reprimanded another bank for failing to adopt sound IT practices as set out in the IBTRM Guidelines, which led to a disruption of the bank's online and branch banking systems on September 13, 2011. The bank was directed to conduct a thorough review and remediation of its systems and processes to prevent a recurrence.</p> <p>(ii) Inspections—MAS has a dedicated team of technology risk specialists to conduct technology risk supervision and inspections. The requirements of the IBTRM Guidelines and other supervisory guidance issued by MAS are incorporated into the inspection work programs. During inspections, the specialist teams assess the adequacy of the bank's IT governance, technology risk management, IT policies, processes and internal controls. The specialist teams also assess the robustness of the bank's infrastructure, such as data centers, in ensuring data and system integrity, security, availability, and supporting integrated and comprehensive risk management.</p> <p>(iii) Supervisory Rating of Technology Risk—Under MAS' CRAFT, supervisors assess and rate the technology risk profile of banks by determining the inherent IT risks and the quality of internal control systems to curb the attendant risks.</p>
EC6	<p><b>The supervisor determines that banks have appropriate and effective information systems to:</b></p> <p><b>(a) monitor operational risk;</b></p> <p><b>(b) compile and analyze operational risk data; and</b></p> <p><b>(c) facilitate appropriate reporting mechanisms at the banks' Boards, senior management and business line levels that support proactive management of operational risk.</b></p>
Description and findings re EC6	<p>Under MAS' Operational Risk Guidelines, all banks are to establish appropriate and effective information systems to monitor and analyze operational risk. The <i>Guidelines on Risk Management Practices—Internal Control</i> set out MAS' expectations for a bank to have adequate MIS for effective management and control of all aspects of its operations. The bank's risk exposures should be reported to the Board and senior management using a common framework for measuring and limiting risks.</p> <p>During inspections, supervisors review the bank's MIS to ensure that MAS' regulatory requirements and expectations are met. Supervisors also review the relevant MIS reports, as well as internal and external audit reports to determine the effectiveness of the bank's MIS in managing operational risk pro-actively.</p> <p>Under Part IX of MAS Notice 637, the locally-incorporated banks, which are using the</p>

	SA(OR), are required to design and implement an operating risk-reporting system that can systematically track relevant operational risk data including material losses by business line. There shall be regular reporting of operational risk exposures, including material operational losses, to business unit management, senior management and the Board.
<b>EC7</b>	<b>The supervisor requires that banks have appropriate reporting mechanisms to keep the supervisor apprised of developments affecting operational risk at banks in their jurisdictions.</b>
Description and findings re EC7	<p>This requirement is stipulated in MAS' Operational Risk Guidelines, which apply to all banks. MAS relies on a combination of required regulatory reporting by banks as well as on-site and off-site supervision to keep apprised of developments affecting operational risk at banks in their jurisdictions. For locally-incorporated banks, this requirement is stipulated in paragraph 6.6 of Annex 10A of MAS Notice 637.</p> <p>MAS' Circular on <i>Further Guidance on Business Continuity Management</i> sets out that a bank should inform MAS immediately of the occurrence of an emergency where business operations are or will be severely disrupted, as well as once its contingency plan has been activated. MAS has provided banks with a situation report template and this reporting mechanism has been exercised in previous IWEs.</p> <p>All banks are required under MAS Notice 634 on conditions for outsourcing to notify MAS about all outsourcing arrangements that entail the disclosure of customer information. Further, under MAS' <i>Guidelines on Outsourcing</i>, banks should notify MAS when it is planning or has entered into material outsourcing, or plan to vary such outsourcing.</p> <p>Besides regulatory reporting, through off-site reviews and inspections, supervisors periodically obtain and review information such as operational risk related policies and procedures, management/incident reports, audit reports and key risk indicators. Monthly surveillance is also performed on the bank's performance trends in various financial indicators, which can directly or indirectly point to developments in the bank's operational risk.</p>
<b>EC8</b>	<p><b>The supervisor determines that banks have established appropriate policies and processes to assess, manage and monitor outsourced activities. The outsourcing risk management program covers:</b></p> <ul style="list-style-type: none"> <li><b>(a) conducting appropriate due diligence for selecting potential service providers;</b></li> <li><b>(b) structuring the outsourcing arrangement;</b></li> <li><b>(c) managing and monitoring the risks associated with the outsourcing arrangement;</b></li> <li><b>(d) ensuring an effective control environment; and</b></li> </ul>

	<p><b>(e) establishing viable contingency planning.</b></p> <p><b>Outsourcing policies and processes require the bank to have comprehensive contracts and/or service level agreements with a clear allocation of responsibilities between the outsourcing provider and the bank.</b></p>
Description and findings re EC8	<p>MAS has issued outsourcing regulations and guidelines to banks such as MAS Notice 634, <i>Guidelines on Outsourcing</i>, IBTRM Guidelines and Circular on Information Technology Outsourcing.</p> <p>Banks should conduct pre- and post-outsourcing implementation reviews and review their outsourcing arrangements periodically to ensure that they comply with MAS' regulatory requirements and expectations, as well as their internal outsourcing risk management policies and procedures. Banks should notify MAS about all material outsourcing arrangements. Furthermore, prior to making any IT outsourcing commitment involving sensitive data (e.g., customer data), banks should consult MAS and may be required to submit the MAS Technology Questionnaire for Outsourcing to MAS.</p> <p>The following paragraphs in MAS' <i>Guidelines on Outsourcing</i> provides guidance on the areas to be covered by the bank's outsourcing risk management program:</p> <p>(a) Paragraph 6.3 states that in considering, renegotiating or renewing an outsourcing arrangement, a bank should subject the service provider to appropriate due diligence to assess its capability to employ a high standard of care in performing the service and comply with its obligations under the outsourcing agreement.</p> <p>(b) Paragraph 6.4 stipulates that contractual terms and conditions governing relationships, functions, obligations and responsibilities of the contracting parties in the outsourcing should be carefully and properly defined in written agreements.</p> <p>(c) Under paragraph 6.2, the Board and senior management should be fully aware of and understand the risks in an outsourcing and their impact on the institution. A framework for systematic risk evaluation should be established. Such evaluations should be performed when a bank is planning to enter into an outsourcing arrangement, and also re-performed periodically on existing arrangements, as part of the outsourcing approval and strategic planning or review processes of the institution.</p> <p>(d) Paragraph 6.7 sets out expectations for a bank to establish a structure for the management and control of outsourcing, taking into account the nature, scope and complexity of the outsourced activity. Paragraph 6.8 also requires a bank to periodically commission independent audit and expert assessments on the security and control environment of the service provider.</p>

	<p>(e) Paragraph 6.6 specifies that a bank should ensure that its business continuity preparedness is not compromised by outsourcing. It is expected to adopt the sound practices and standards contained in MAS' BCM, in evaluating the impact of outsourcing on its risk profile and for effective BCM on an ongoing basis.</p> <p>During inspections, supervisors review the extent of activities of the key mission critical functions outsourced to service providers and the business continuity plans of these service providers. Supervisors also examine the tests conducted to validate the recovery of the outsourced activities within the bank's stated recovery time.</p> <p>Paragraph 6.4 sets out that contractual terms and conditions governing relationships, functions, obligations and responsibilities of the contracting parties in the outsourcing should be carefully and properly defined in written agreements. The detail in these agreements should be appropriate for the nature and materiality of the arrangement. They should also be vetted by a competent authority.</p> <p>The above are taken into consideration during supervisors' on-site assessment of a bank's outsourcing framework.</p>
<b>Additional criteria</b>	
<b>AC1</b>	<p><b>The supervisor regularly identifies any common points of exposure to operational risk or potential vulnerability (e.g., outsourcing of key operations by many banks to a common service provider or disruption to outsourcing providers of payment and settlement activities).</b></p>
Description and findings re AC1	<p>MAS Notice 634 requires banks to notify MAS about all outsourcing arrangements involving the disclosure of customer information. Further, under the Guidelines on Outsourcing, banks should notify MAS about all material outsourcing arrangements.</p> <p>MAS' Circular on Information Technology Outsourcing further specifies that banks are expected to consult MAS before making any IT outsourcing commitment involving sensitive data (e.g., customer data). As part of the consultation, banks may be required to submit the MAS Technology Questionnaire for Outsourcing to MAS.</p> <p>MAS has also compiled information on IT outsourcing arrangements to facilitate MAS' monitoring of the extent of IT outsourcing by banks and the identification of potential concentration to a common service provider.</p> <p>Under the Financial District Security Program, which is a public-private partnership between the financial industry and MAS, critical outsourcing providers that provide services such as telecommunications, power, data centers, business recovery sites, have been identified. The reliance of banks on common telecommunication service</p>

	<p>providers was also observed during the industry-wide exercise conducted by MAS in 2011.</p> <p>Through the above means, supervisors regularly identify and assess any common points of exposure to operational risk or potential vulnerability.</p>
<b>Assessment of Principle 25</b>	<b>Compliant</b>
Comments	<p>MAS holds banks accountable for putting into place effective operational risk frameworks and practices that have the full support of management and are routinely monitored and assessed by the various audit functions and management. Reports of deficiencies are tracked to ensure that they are accurate, timely, brought to the attention of management, and addressed. Operational risk frameworks are adapted to the specific needs of the banks and include IT, outsourcing, and business continuity. MAS is fully compliant on this principle.</p>
<b>Principle 26</b>	<p><b>Internal control and audit.</b> The supervisor determines that banks have adequate internal control frameworks to establish and maintain a properly controlled operating environment for the conduct of their business taking into account their risk profile. These include clear arrangements for delegating authority and responsibility; separation of the functions that involve committing the bank, paying away its funds, and accounting for its assets and liabilities; reconciliation of these processes; safeguarding the bank's assets; and appropriate independent internal audit and compliance functions to test adherence to these controls as well as applicable laws and regulations.</p>
<b>Essential criteria</b>	
<b>EC1</b>	<p><b>Laws, regulations or the supervisor require banks to have internal control frameworks that are adequate to establish a properly controlled operating environment for the conduct of their business, taking into account their risk profile. These controls are the responsibility of the bank's Board and/or senior management and deal with organizational structure, accounting policies and processes, checks and balances, and the safeguarding of assets and investments (including measures for the prevention and early detection and reporting of misuse such as fraud, embezzlement, unauthorized trading and computer intrusion). More specifically, these controls address:</b></p> <p>(a) <b>organizational structure: definitions of duties and responsibilities, including clear delegation of authority (e.g., clear loan approval limits), decision-making policies and processes, separation of critical functions (e.g., business origination, payments, reconciliation, risk management, accounting, audit and compliance);</b></p> <p>(b) <b>accounting policies and processes: reconciliation of accounts, control lists, information for management;</b></p> <p>(c) <b>checks and balances (or "four eyes principle"): segregation of duties, cross-</b></p>

	<p style="text-align: center;"><b>checking, dual control of assets, double signatures; and</b></p> <p><b>(d) safeguarding assets and investments: including physical control and computer access.</b></p>
Description and findings re EC1	<p>The Banking (Corporate Governance) Regulations 2005 (CG Regulations) require a locally-incorporated bank to establish Board and Board committees, and set out the responsibilities of each Board Committee (see CP14 EC1 for details). In particular, the Audit Committee is responsible for the adequacy of external and internal audit functions of the bank, including reviewing the scope and results of audits carried out in respect of the operations of the bank and the independence and objectivity of the bank's external auditors (Regulation 17). The Risk Management Committee is responsible for overseeing the establishment and the operation of an independent risk management system for managing risks on an enterprise-wide basis, and the adequacy of the risk management function of the bank, including ensuring that it is sufficiently resourced to monitor risk by the various risk categories and that it has appropriate independent reporting lines (Regulation 17A).</p> <p><i>MAS' Guidelines on Corporate Governance for Banks, Financial Holding Companies and Direct Insurers which are incorporated in Singapore</i> (CG Guidelines) set out that the Board has the responsibility to establish a framework of prudent and effective controls which enables risk to be assessed and managed. The Board should ensure that the management maintains a sound system of internal controls to safeguard the shareholders' investments and the bank's assets (Principle 12) and that the bank has a robust risk management system to identify, measure, monitor, control and report its risks (Principle 17).</p> <p>(a) Under the CG Guidelines, the Board should set out clearly the role, responsibilities, accountability and reporting relationships of senior management (Principle 1). There should be formal and clear delegation of authority from the Board to senior management. There should also be a clear division of responsibilities at the top of the company, to ensure a balance of power and authority (Principle 3).</p> <p>(b) Section 199 of the CA requires every company and the directors and managers thereof to keep proper accounting records that sufficiently explain the transactions and financial position of the company. Under <i>MAS' Guidelines on Risk Management Practices—Internal Controls</i> (Internal Controls Guidelines), a bank should maintain adequate controls over its accounting and other record-keeping processes for both on- and off-balance sheet assets and liabilities. There should also be adequate documentation and records of transactions for audit trail purposes.</p> <p>Under MAS Notice 622A on <i>Appointment of Chief Executives of Branches of Banks incorporated outside of Singapore</i>, the chief executive and deputy chief executive of</p>

	<p>the branch in Singapore are responsible for ensuring the prudent and professional management of the branch and its compliance with all laws and regulations. Their responsibilities include establishing and ensuring compliance with sound written policies on all operational areas and ensuring adequate risk management systems and sound internal controls for the branch's activities and operations.</p> <p>Both sets of Guidelines set out that the bank should have adequate MIS for effective management and control of all aspects of its operations. The bank should consider key elements such as timeliness, accuracy, consistency, completeness and relevance when developing its MIS. The MIS should also be sufficiently flexible to cope with various contingencies and have the capability to monitor compliance with the bank's established policies, procedures and limits.</p> <p>(c) Under MAS' Internal Controls Guidelines, staff responsible for accounting and record-keeping functions should be independent of front-office activities. Further, the bank should ensure that there is adequate segregation of duties to guard against the risk of unauthorized transactions, fraudulent activities and manipulation of data for personal gain or for concealment of irregularities or financial losses. The bank should also conduct periodic reviews of the responsibilities of key personnel to minimize areas of potential conflict of interest, and ensure that there are independent checks for proper segregation of duties.</p> <p>(d) MAS' Internal Controls Guidelines provide that a bank should ensure that there is adequate physical security for its place of business and cash-in-transit. Access to sensitive areas such as the dealing room, computer room and funds transfer area should be granted strictly on a need-to basis to minimize the risk of unauthorized transactions, fraud or disruption to operations. Items such as test keys, MEPS smart cards, master IDs for SWIFT, cash and securities, should be subject to dual control. Their access should be restricted to authorized personnel and recorded for proper accountability. Fireproof safes and safe deposit vaults should be used for the storage and safe custody of assets such as cash and securities.</p>
<b>EC2</b>	<p><b>The supervisor determines that there is an appropriate balance in the skills and resources of the back office, control functions and operational management relative to the business origination units. The supervisor also determines that the staff of the back office and control functions have sufficient expertise and authority within the organization (and, where appropriate, in the case of control functions, sufficient access to the bank's Board) to be an effective check and balance to the business origination units.</b></p>
Description and findings re EC2	<p>During inspections and off-site reviews, supervisors determine whether the Board and senior management have established risk management and control processes, as well as provided staffing resources that are commensurate with the level of the bank's activities. Supervisors also assess the adequacy, stature and robustness of back office and control functions in providing effective challenge to front office activities. For</p>



	<p>instance, supervisors determine whether the market risk control structure and function are commensurate with the volume and complexity of the trading activities. Supervisors consider factors like the types, complexity and trading volume of instruments and markets traded to determine whether there is an appropriate balance in the skills and resources between the back and front offices.</p> <p>Under the CG Regulations, a locally-incorporated bank is required to seek supervisors' prior approval for the appointment of the chief risk officer (Regulation 18). Supervisors assess whether the candidate is a fit and proper person to hold office. The CG Guidelines provide that the chief risk officer should have a reporting line to the Board and his role should be distinct from other executive functions and business line responsibilities (Principle 17).</p> <p>Under MAS' Internal Controls Guidelines, a bank should ensure that individuals considered for employment are adequately screened for experience, professional capabilities, honesty and integrity. Supervisors assess the expertise and experience of key personnel in areas including risk management and operations.</p> <p>Supervisors determine whether back office and control functions serve as an effective check on the front office. For instance, supervisors review the reporting lines in the credit administration and control functions, and assess whether these functions report to management independent of marketing operations. Supervisors also review the composition of the credit or loan committee to determine if there is balanced representation of credit marketing and credit control.</p>
<b>EC3</b>	<p><b>The supervisor determines that banks have an adequately staffed, permanent and independent compliance function that assists senior management in managing effectively the compliance risks faced by the bank. The supervisor determines that staff within the compliance function are suitably trained, have relevant experience and have sufficient authority within the bank to perform their role effectively. The supervisor determines that the bank's Board exercises oversight of the management of the compliance function.</b></p>
Description and findings re EC3	<p>Under MAS' Internal Controls Guidelines, a bank should affirm the importance of the compliance function by appointing senior personnel, or an appropriate unit, to oversee compliance issues. Compliance officers should be equipped with the necessary skills and expertise, commensurate with the complexity of the bank's products and activities.</p> <p>During inspections and off-site reviews, supervisors determine whether the compliance function and processes are adequate in ensuring sound business practices and adherence to rules and regulations.</p> <p>Under MAS' CRAFT, supervisors assess the effectiveness of the compliance function in providing independent oversight of the management of the bank's compliance with all laws, regulations, codes of conduct, and standards of good practice relevant to the activities of the bank in the jurisdictions in which it operates. Supervisors also assess</p>

	<p>the adequacy, stature and effectiveness of the compliance function in the bank. For instance, supervisors determine whether compliance personnel monitoring capital market transactions are sufficiently trained and knowledgeable about legal and regulatory requirements. There should also be established processes to seek expert opinion from legal or compliance functions when in doubt. Supervisors also evaluate the independence of the compliance function. Any instances of non-compliance with the applicable laws and regulations should be escalated to appropriate management on a timely basis for further action.</p> <p>Under the CG Guidelines, the Board should comment on the adequacy of the bank's internal controls, including financial, operational and compliance controls, and risk management systems in the bank's annual report (Principle 12).</p>
<b>EC4</b>	<p><b>The supervisor determines that banks have an independent, permanent and effective internal audit function charged with:</b></p> <p><b>(a) assessing whether existing policies, processes and internal controls (including risk management, compliance and corporate governance processes) are effective, appropriate and remain sufficient for the bank's business; and</b></p> <p><b>(b) ensuring that policies and processes are complied with.</b></p>
Description and findings re EC4	<p>The CG Regulations require a locally-incorporated bank to establish a Board-level Audit Committee, which is responsible for the adequacy of external and internal audit functions of the bank, including reviewing the scope and results of audits carried out in respect of the operations of the bank (Regulation 17).</p> <p>The CG Guidelines provide that the Audit Committee should review the adequacy of the bank's internal financial controls, operational and compliance controls, and risk management policies and systems established by management (Principle 12). The Audit Committee should ensure that a review of the effectiveness of the bank's internal controls is conducted at least annually.</p> <p>During inspections and off-site reviews, supervisors determine whether the internal audit function evaluates the reliability, adequacy and effectiveness of the bank's internal controls and risk management processes and ensure that the bank's internal controls result in prompt and accurate recording of transactions and proper safeguarding of assets. In addition, internal auditors should determine whether the bank's staff adhere to established policies and procedures, and ensure that management takes the appropriate steps to address control deficiencies.</p> <p>Under MAS' CRAFT, supervisors assess the internal audit function based upon, but not limited to its effectiveness in providing independent assurance of the bank's adherence to its risk management, control, and governance processes.</p> <p>Based on inspections and off-site reviews, supervisors are generally satisfied with the</p>

	<p>quality of banks' internal audit functions. There are some banks with internal audit function that has room for improvement, and these tend to be due to inadequate experience or expertise in specialized business lines of the banks. Where there are concerns with the effectiveness of an internal audit function, supervisors convey these concerns to the banks, including to the Audit Committees for the locally-incorporated banks and to the head offices for foreign bank branches, to ensure adequate oversight of the bank's effort to strengthen the quality of its internal audit.</p>
<b>EC5</b>	<p><b>The supervisor determines that the internal audit function:</b></p> <ul style="list-style-type: none"> <li><b>(a) has sufficient resources, and staff that are suitably trained and have relevant experience to understand and evaluate the business they are auditing;</b></li> <li><b>(b) has appropriate independence with reporting lines to the bank's Board or to an audit committee of the Board, and has status within the bank to ensure that senior management reacts to and acts upon its recommendations;</b></li> <li><b>(c) is kept informed in a timely manner of any material changes made to the bank's risk management strategy, policies or processes;</b></li> <li><b>(d) has full access to and communication with any member of staff as well as full access to records, files or data of the bank and its affiliates, whenever relevant to the performance of its duties;</b></li> <li><b>(e) employs a methodology that identifies the material risks run by the bank;</b></li> <li><b>(f) prepares an audit plan, which is reviewed regularly, based on its own risk assessment and allocates its resources accordingly; and</b></li> <li><b>(g) has the authority to assess any outsourced functions.</b></li> </ul>
Description and findings re EC5	<p>During inspections and off-site reviews, supervisors assess the internal auditors' educational and professional experience by reviewing resumes and noting the level of education attained; significant work experience, especially in bank audits, including specialized areas such as capital markets and information systems; any certification as a certified bank auditor, certified internal auditor, certified information systems auditor or certified public accountant; and membership in professional associations.</p> <p>Supervisors review the internal auditors' performance evaluations and determine how identified strengths and weaknesses in supervisory, technical or interpersonal skills or abilities affect the quality of the internal audit function, where warranted.</p> <p>Supervisors review the reporting structure of the internal audit function. For locally-incorporated banks, the internal auditors should report directly to the Board-level Audit Committee, although they may also report administratively to the chief executive officer. Audit findings pertaining to issues which audit committee members, directly or indirectly, have interests in should be reported directly to the Board.</p>

	<p>In the case of the Singapore branch of a foreign bank, where there is a local internal audit department, the department should be supervised directly by the head office's internal audit department. Most of the banks with QFB privileges in Singapore have a local internal audit function. Where there is no separate internal audit department at the Singapore branch, the head office's internal audit department should conduct internal audits of the Singapore branch. Supervisors expect the head office's internal auditors to audit the Singapore branch at least once every 12 to 18 months. Banks with larger and more complex operations tend to be subject to several audits a year, covering different aspects of the branch's operations.</p> <p>Foreign bank branches may adopt either of the above structures as long as the internal audit functions ultimately report directly to the Audit Committee and retain their independence from the bank's management.</p> <p>Supervisors review both internal and external audit reports and engage management to identify any significant changes in the bank's business strategy or activities that could affect the audit function.</p> <p>Internal auditors must have the power to act on their own initiative in all departments and functions of the bank, to communicate directly with any bank personnel, and to gain access to all records, files or data necessary for the proper conduct of the audit.</p> <p>Supervisors review the work plan of the internal auditors and determine whether there is adequate coverage and internal risk assessment provided for all areas of the bank's operations. For instance, supervisors review whether the scope and frequency of internal audits have been increased when significant weaknesses are found or where there are significant changes to the risk oversight process, product lines, modeling methodologies, internal controls or risk profile. Supervisors assess whether the audit cycle scope and frequency are adequate and whether the work plan is adhered to.</p> <p>Under the <i>Guidelines on Outsourcing</i>, the bank should take steps to ensure that outsourcing agreements with the service provider include clauses that allow the bank to conduct audits on the service provider, whether by its internal or external auditors, or by agents appointed by the bank; and obtain copies of any report and finding made on the service provider in conjunction with the service performed for the bank.</p> <p>Supervisors review audit reports and other information maintained by the bank such as outsourcing vendor engagement letters, to determine whether banks have met the above requirements in their arrangements with the service providers.</p>
<b>Assessment of Principle 26</b>	<b>Compliant</b>

Comments	MAS puts a high priority on ensuring that banks and foreign branches have effective and timely internal control functions that are independent of management and staffed with competent individuals with access to the required resources. MAS is assessed as fully compliant on this principle. Compliance officers in banks reported that it is not unusual to have daily phone calls from MAS staff inquiring about compliance and control issues. In addition to ensuring that all of the essential and additional criteria are met for local banks, foreign branches are also required to have an internal audit function (which all of the major branches have) or be subject to internal audits by the home office. Where weaknesses in branches are identified, the head office and home office supervisors are notified, which typically results in a prompt solution to the identified problem.
<b>Principle 27</b>	<b>Financial reporting and external audit.</b> The supervisor determines that banks and banking groups maintain adequate and reliable records, prepare financial statements in accordance with accounting policies and practices that are widely accepted internationally and annually publish information that fairly reflects their financial condition and performance and bears an independent external auditor's opinion. The supervisor also determines that banks and parent companies of banking groups have adequate governance and oversight of the external audit function.
<b>Essential criteria</b>	
<b>EC1</b>	<b>The supervisor holds the bank's Board and management responsible for ensuring that financial statements are prepared in accordance with accounting policies and practices that are widely accepted internationally and that these are supported by recordkeeping systems in order to produce adequate and reliable data.</b>
Description and findings re EC1	<p>Section 201 of the CA requires directors to present at the annual general meeting a profit and loss account that complies with the requirements of the FRSs and gives a true and fair view of the company's profit and loss for the period. Under section 373 of the CA, foreign banks operating as branches in Singapore are required to lodge with the Accounting and Corporate Regulatory Authority (ACRA) a copy of their duly audited financial statements which comply with the FRSs. The FRSs are promulgated by the Accounting Standards Council and are closely modeled after the International Financial Reporting Standards (IFRS).</p> <p>Section 199 of the CA requires the directors and managers of every company to keep accounting and other records that will sufficiently explain the transactions and financial position of the company and enable true and fair financial statements to be prepared from time to time. They are also required to keep those records, for a minimum period of five years, in such manner as to enable them to be conveniently and properly audited.</p> <p>The Banking (Corporate Governance) Regulations 2005 require the locally incorporated banks to establish a Board-level Audit Committee. The responsibilities of the bank's Board and senior management in relation to the bank's financial</p>

	<p>statements are set out in MAS' <i>Guidelines on Corporate Governance for Banks, Financial Holding Companies and Direct Insurers which are incorporated in Singapore</i> (CG Guidelines). The Board-level Audit Committee should review significant financial reporting issues and judgments so as to ensure the integrity of the financial statements of the bank and any announcements relating to the bank's financial performance.</p> <p>Section 26 of the BA requires every bank to send to MAS a copy of its latest audited financial statements not later than three months after the close of its financial year. Locally-incorporated banks are required to furnish its interim profit and loss account for every half-year or such other intervals as determined by MAS. Under section 66 of the BA, directors and executive officers of a bank in Singapore are responsible for taking all reasonable steps to secure compliance by the bank with any provision of the BA or any other written law applicable to banks in Singapore.</p> <p>Under MAS Notice 622A on <i>Appointment of Chief Executives of Branches of Banks incorporated outside of Singapore</i>, the chief executive and deputy chief executive of the branch in Singapore are responsible for ensuring the prudent and professional management of the branch and its compliance with the BA, the CA and any other relevant laws and regulations. Their responsibilities include establishing and ensuring compliance with sound written policies on all operational areas, including accounting, internal control and internal auditing, as well as ensuring sound internal controls for the branch's operations.</p>
EC2	<p><b>The supervisor holds the bank's Board and management responsible for ensuring that the financial statements issued annually to the public bear an independent external auditor's opinion as a result of an audit conducted in accordance with internationally accepted auditing practices and standards.</b></p>
Description and findings re EC2	<p>Section 25(2) of the BA requires every bank to publish in newspapers a copy of its latest audited balance sheet and profit and loss accounting within 5 months after the close of each financial year. Pursuant to this section, MAS Notice 607 on <i>Publication of Financial Statements</i> was issued to require banks to include a copy of the auditors' report when publishing its financial statements. Banks shall make available a complete set of audited financial statements, list of bank directors and list of subsidiaries, on a timely basis, to members of the public upon request and shall disclose in the publication the means by which these can be obtained.</p> <p>Section 205 of the CA and MAS Notice 615 on <i>Appointment and Rotation of Auditors</i> require banks to appoint auditors annually, subject to MAS' approval under section 58 of the BA.</p> <p>As a matter of practice, auditors comply with the Singapore Standards on Auditing (SSA) in carrying out an audit. Auditors are subject to a Practice Monitoring Program that ascertains their compliance with Singapore accounting and auditing standards in discharging their duties (see CP27 EC4). The SSA is issued by the Institute of Certified</p>

	<p>Public Accountants of Singapore (ICPAS) and is based on the International Standards on Auditing. The Auditing and Assurance Standards Committee (AASC) assists ICPAS in its role to develop auditing and assurance standards, which are adopted by ACRA, the national regulator of business entities and public accountants in Singapore. AASC recommends SSA approved by the ICPAS Council to the Public Accountants Oversight Committee (PAOC), who assists ACRA in discharging its functions. Through PAOC, ACRA undertakes oversight of the process followed by ICPAS in developing and issuing the standards.</p>
<b>EC3</b>	<p><b>The supervisor determines that banks use valuation practices consistent with accounting standards widely accepted internationally. The supervisor also determines that the framework, structure and processes for fair value estimation are subject to independent verification and validation, and that banks document any significant differences between the valuations used for financial reporting purposes and for regulatory purposes.</b></p>
Description and findings re EC3	<p>In reviewing the audited financial statements of banks, supervisors determine whether banks are compliant with the FRSs. FRS 39 on <i>Financial Instruments: Recognition and Measurement</i> prescribes the principles for recognizing and measuring financial assets and financial instruments. Requirements for disclosing information about these financial instruments are contained in FRS 107 on <i>Financial Instruments: Disclosures</i>.</p> <p>For specific provisions, banks adhere to impairment and provisioning requirements under FRS 39 on Financial Instruments: Recognition and Measurement. For collective impairment provisions (CIP), MAS Notice 612 makes modification to allow maintenance of a CIP that is not less than one percent of the loans and receivables, net of collaterals and after deducting any individual impairment provisions that have been made. Banks have confirmed that the one percent CIP maintained is more conservative than what is required under the FRS 39 incurred loss impairment model.</p> <p>This modification is generally reflected in the audit opinion as follows: "In our opinion, the consolidated financial statements of the Group and the financial statements of the Bank are properly drawn up in accordance with the provisions of the Act and Singapore Financial Reporting Standards, including the modification of the requirements of FRS 39 Financial Instruments: Recognition and Measurement in respect of loan loss provisioning by Notice to Banks No. 612 'Credit Files, Grading and Provisioning' issued by the Monetary Authority of Singapore, to give a true and fair view of the state of affairs of the Group and of the Bank as at XX December 201X, the results and changes in equity of the Group and of the Bank and cash flows of the Group for the year ended on that date."</p> <p>During inspections, supervisors review banks' valuation practices and assess, amongst other things, whether they use consistent pricing assumptions and methodologies; whether there are effective controls and processes for valuation to be independently verified; and if any adjustments to the profit or loss account due to changes in revaluation estimates are clearly recorded and reported to management. Where</p>



	<p>valuations are based on model outputs, MAS will review the models for their robustness, including assumptions, backtesting results and governance arrangements.</p> <p>MAS Notice 609 on <i>Auditors' Reports and Additional Information to be Submitted with Annual Accounts</i> requires external auditors to report, in the long form report, any findings or recommendations on banks' accounting system, internal controls, adequacy of provisions for impaired assets and asset quality. In reviewing the banks' long form reports, supervisors determine whether their valuation practices are appropriate and sound. On areas where management's judgment is critical (e.g., valuation techniques and estimates for valuation parameters), supervisors engage the external auditors to understand their evaluation of the reasonableness of management's judgment for those areas.</p>
<b>EC4</b>	<b>Laws or regulations set, or the supervisor has the power to establish the scope of external audits of banks and the standards to be followed in performing such audits. These require the use of a risk and materiality based approach in planning and performing the external audit.</b>
Description and findings re EC4	<p>Section 207(3) of the CA sets out a list of duties of auditors in relation to their reports on company accounts. In discharging such duties, auditors comply with the SSA in carrying out an audit. SSA 320 on <i>Audit Materiality</i> requires auditors to consider materiality and its relationship with audit risk when conducting an audit.</p> <p>Section 58(5) of the BA empowers MAS to impose a duty on an external auditor to enlarge or extend the scope of the external audit of the business and affairs of banks.</p> <p>Auditors are governed under the Accountants Act (Chapter 2) (AA), which is administered by ACRA. ACRA has in place a Practice Monitoring Program to ascertain whether public accountants have complied with Singapore accounting and auditing standards, methods, procedures and other requirements in discharging their duties. Section 5 of the AA empowers PAOC to require public accountants to undergo the Practice Monitoring Program as a condition to be in practice or reject the application for registration. PAOC is also empowered to institute disciplinary proceedings for complaints against or any professional misconduct on the part of any public accountant or firm.</p>
<b>EC5</b>	<b>Supervisory guidelines or local auditing standards determine that audits cover areas such as the loan portfolio, loan loss provisions, non-performing assets, asset valuations, trading and other securities activities, derivatives, asset securitizations, consolidation of and other involvement with off-balance sheet vehicles and the adequacy of internal controls over financial reporting.</b>
Description and findings re EC5	<p>Banks are required to prepare their financial statements in accordance with the FRSs. The Accounting Standards Council has issued FRSs on the measurement of financial instruments, provisions, contingent liabilities and consolidated financial statements. Under section 207 of the CA, auditors are required to state in the auditors' report whether in their opinion the accounts of the bank are in compliance with the FRSs. MAS Notice 609 requires every bank to furnish to MAS a copy of the auditors' long form report and supplementary report. The long form report includes any findings</p>



	and recommendations on the bank's accounting system, internal controls, quality of loans and advances and other assets, non-compliance with the relevant laws and regulations or any other areas of weaknesses. The supplementary report contains the auditors' comments relating to the bank's write-offs, adequacy of provisions and asset impairment, and any non-compliance with the relevant laws or regulations. MAS Notice 609 also requires banks to furnish to MAS information including the classification and valuation of loans and receivables, securities and other financial assets and financial liabilities in a prescribed format (under Appendix I) and certified by the auditors.
<b>EC6</b>	<b>The supervisor has the power to reject and rescind the appointment of an external auditor who is deemed to have inadequate expertise or independence, or is not subject to or does not adhere to established professional standards.</b>
Description and findings re EC6	Under section 58 of the BA, MAS approves bank auditors on an annual basis. MAS has the authority not to approve an auditor for a bank unless the auditor is able to demonstrate that it will meet the conditions in the discharge of its duties as may be determined by MAS. Supervisors assess such applications taking into account, inter alia, findings from MAS' review of the bank and the views of the bank's Audit Committee in respect of the quality of the external audit.
<b>EC7</b>	<b>The supervisor determines that banks rotate their external auditors (either the firm or individuals within the firm) from time to time.</b>
Description and findings re EC7	<p>The local banks are listed on the SGX, and are in compliance with the requirement under the SGX Listing Manual for listed companies to rotate audit partners every five years.</p> <p>In addition to the above, MAS Notice 615 requires banks to submit annually, for MAS' approval, the name of the auditor they propose to appoint or re-appoint. Under this Notice, locally-incorporated banks shall not, except with the prior written approval of MAS, appoint the same audit firm for more than 5 consecutive financial years.</p> <p>Given that banks were devoting substantial amount of time and resources towards heightened vigilance during the global financial crisis, MAS had, in 2008, temporarily suspended the requirement for the three locally-incorporated banks to change their audit firms after five years so as to minimize the disruption that could arise when appointing a new audit firm. MAS is of the view that banks will benefit from some degree of audit continuity during those challenging times. The three local banks continue to be required to submit annually for MAS' approval, the name of the external auditor they propose to appoint or reappoint for each financial year. MAS has carried out a detailed review of the audit firm rotation policy, taking into account its previous experience with the audit rotation policy as well as international guidance and practices. MAS intends to re-introduce the requirement and will be consulting the industry in due course.</p> <p>For foreign banks in Singapore, supervisors determine whether banks rotate their audit firm or audit engagement partners from time to time, particularly when</p>

	supervisors observe a drop in audit quality by the external auditor (e.g., when it is unable to uncover the internal control lapses noted during MAS inspections).
<b>EC8</b>	<b>The supervisor meets periodically with external audit firms to discuss issues of common interest relating to bank operations.</b>
Description and findings re EC8	<p>Supervisors conduct regular meetings with the external auditors of individual banks. Depending on the complexity of the activities undertaken by the bank, the frequency of these meetings range from once a year to once every quarter. Audit plans, audit finding and updates are discussed during these meetings. Other ad-hoc contacts with external auditors via telecommunications or emails are made on an ad-hoc basis in relation to specific issues that arise, for example, when errors are noted in regulatory submissions by the banks.</p> <p>Supervisors also have regular meetings with the external auditors as a group together with representatives from the banks through the industry working committee. The practitioners will discuss relevant bank accounting or auditing issues during the meetings. Supervisors are updated of: (i) external auditors' key concerns, areas of focus for the financial period and views on the impact of changes to the banks' organization structure and management; (ii) accounting rule changes, impact to the banks and the challenges faced by the banks in implementation; and (iii) views on the banks' overseas operations and quality of the management oversight. The supervisors may also take the opportunity to request the external auditors to follow up on certain supervisory concerns as part of the audit.</p>
<b>EC9</b>	<b>The supervisor requires the external auditor, directly or through the bank, to report to the supervisor matters of material significance, for example failure to comply with the licensing criteria or breaches of banking or other laws, significant deficiencies and control weaknesses in the bank's financial reporting process or other matters that they believe are likely to be of material significance to the functions of the supervisor. Laws or regulations provide that auditors who make any such reports in good faith cannot be held liable for breach of a duty of confidentiality.</b>
Description and findings re EC9	<p>Section 58(8) of the BA requires the external auditor to report to MAS if he is satisfied that:</p> <ul style="list-style-type: none"> <li>(a) there has been a serious breach or non-observance of the provisions of the BA or that otherwise a criminal offense involving fraud or dishonesty has been committed;</li> <li>(b) losses have been incurred which reduce the capital funds of the bank by 50 percent;</li> <li>(c) serious irregularities have occurred, including irregularities that jeopardize the security of the creditors; or</li> <li>(d) he is unable to confirm that the claims of creditors are still covered by the assets.</li> </ul> <p>In addition, under MAS Notice 609, the external auditor's long form report shall include its findings and comments on the bank's accounting system, internal controls,</p>

	<p>asset quality, non-compliance with the relevant laws and regulations or any other areas of weaknesses (see CP27 EC5).</p> <p>Given the statutory duty of disclosure of external auditors under the BA and MAS Notice 609, the law protects the external auditor from being held liable for breach of confidentiality in making a report through the bank to MAS.</p> <p>Separately, section 207(9) of the CA requires the external auditor to report to ACRA if he is satisfied that there has been a breach or non-observance of any of the provisions of the Act and the circumstances are such that the matter has not been or will not be adequately dealt with. The auditor will keep MAS informed of any such report.</p> <p>The auditor is also required to report to the Minister any serious offense involving fraud or dishonesty that he has reason to believe is committed against the company by officers or employees of the company (section 207(9A), CA). Under section 207(9B) of the CA, no duty to which an auditor may be subject shall be regarded as having been contravened by reason of his reporting the matter in good faith. The auditor will keep MAS informed of any such report.</p>
<b>Additional criteria</b>	
<b>AC1</b>	<b>The supervisor has the power to access external auditors' working papers, where necessary.</b>
Description and findings re AC1	<p>Section 58(5) of the BA empowers MAS to obtain from the external auditors any additional information in relation to their audit of banks.</p> <p>ACRA, in discharging its responsibilities as the national regulator of business entities and public accountants, similarly has the power to access external auditors' working papers.</p>
<b>Assessment of Principle 27</b>	<b>Compliant</b>
Comments	<p>MAS holds local banks' and foreign branches' management fully accountable for producing timely and accurate financial reports and holds banks' external auditors fully accountable for verifying that the process and reports produced by the banks complies with MAS requirements and FRS, as modified by MAS Notice 612 for the recognition of loan loss provisioning, which can be considered more conservative than the incurred loss measurement model under FRS 39 on Financial Instruments: Recognition and Measurement. Banks' external auditors express qualified opinions in response to such a modification.</p> <p>MAS works closely with the external auditors to identify weaknesses in banks reporting systems and has the authority to enlarge or extend the scope of an external audit. Under Singapore law, the auditor has a duty to report to the MAS any breach or non-</p>

	observance of the BA and any serious irregularities or material capital shortfalls. MAS receives a detailed long form report from the external auditor provided to the bank's management as part of the annual audit. It successfully holds auditors to a high standard through its power to revoke an audit firm partner or entire firm's authorization to conduct further bank audits in Singapore.
<b>Principle 28</b>	<b>Disclosure and transparency. The supervisor determines that banks and banking groups regularly publish information on a consolidated and, where appropriate, solo basis that is easily accessible and fairly reflects their financial condition, performance, risk exposures, risk management strategies and corporate governance policies and processes.</b>
Essential criteria	
EC1	Laws, regulations or the supervisor require periodic public disclosures of information by banks on a consolidated and, where appropriate, solo basis that adequately reflect the bank's true financial condition and performance, and adhere to standards promoting comparability, relevance, reliability and timeliness of the information disclosed.
Description and findings re EC1	<p>Section 199 of the CA requires every company to keep proper accounting records that will enable the preparation of true and fair financial statements. Section 201 of the CA requires directors to present at the annual general meeting a profit and loss account that complies with the requirements of the FRSs and gives a true and fair view of the company's profit and loss for the period.</p> <p>Under section 373 of the CA, foreign bank branches in Singapore are required to lodge with the ACRA a copy of their duly audited financial statements which comply with the FRSs. The financial statements are available to the public at a nominal fee.</p> <p>The FRSs are promulgated by the Accounting Standards Council and are closely modeled after the IFRS. FRS 1 on Presentation of Financial Statements requires entities to achieve a fair presentation by compliance with applicable FRSs. Under paragraph 17(b) of FRS 1, a fair presentation provides information that is relevant, reliable, comparable and understandable.</p> <p>Under MAS Notice 609 on Auditors' Reports and Additional Information to be Submitted with Annual Accounts, every bank shall furnish to MAS a set of its audited financial statements not later than 3 months after the close of its financial year. In addition, locally-incorporated banks are required to submit consolidated financial statements and separate financial statements of any company in which the bank holds 20 percent or more of the issued share capital.</p> <p>Part XI of MAS Notice 637 on Risk Based CAR for Banks Incorporated in Singapore sets out the minimum level of public disclosures that is made available to market participants to assist them in forming an opinion on the scope of application, risk profile and capital adequacy of a bank. These disclosure requirements are consistent with the Basel III Capital Framework Pillar 3 requirements and provide a consistent</p>

	<p>framework that enhances comparability. The bank is required to make public qualitative and quantitative disclosures on areas such as their capital instruments, risk weighted assets, capital adequacy and risk exposures. The bank shall take all reasonable steps to ensure the accuracy and correctness of all disclosure items required, and assess the appropriateness (e.g., validation and frequency) of its disclosures.</p> <p>Section 25 of the BA requires every bank to publish in newspapers within 5 months of the financial year-end its latest audited balance sheet and profit and loss account. These, together with a copy of the auditors' report, shall be exhibited in each of the bank's offices and branches in Singapore.</p> <p>Further, banks that are listed on the SGX are required to announce their financial statements for each of the first three quarters not later than 45 days after the quarter-end. These banks are also required to announce their financial statements for the full financial year not later than 60 days after the year-end (Chapter 7 of SGX Listing Rules on Continuing Obligations).</p>
EC2	<p>The supervisor determines that the required disclosures include both qualitative and quantitative information on a bank's financial performance, financial position, risk management strategies and practices, risk exposures, aggregate exposures to related parties, transactions with related parties, accounting policies, and basic business, management, governance and remuneration. The scope and content of information provided and the level of disaggregation and detail is commensurate with the risk profile and systemic importance of the bank.</p>
Description and findings re EC2	<p>MAS Notice 608 on Disclosure in Financial Statements prescribes the minimum information that banks have to disclose in its balance sheet, profit or loss account, cash flow statement, or notes to the financial statements. Banks are required to disclose information on its off-balance sheet items, accounting policies, capital adequacy ratio, analyses of loans, deposits, total assets and total income, as well as a financial review covering subjects such as business description, analyses of results and risk management.</p> <p>Part XI of MAS Notice 637 requires a bank to describe its risk management objectives and policies for areas including capital, credit risk, market risk, operational risk, interest rate risk in the banking book and remuneration. The description for each area shall include: (i) its strategies and processes; (ii) the structure and organization of the relevant risk management function; (iii) the scope and nature of risk reporting and measurement systems; and (iv) its policies for hedging and mitigating risk, and processes for monitoring the continuing effectiveness of such policies. The disclosure requirements in MAS Notice 637 are consistent with the Basel III Capital Framework Pillar 3 requirements.</p> <p>Guidance for best corporate governance practices are set out in MAS' Guidelines on</p>

	<p>Corporate Governance for Banks, Financial Holding Companies and Direct Insurers which are incorporated in Singapore (CG Guidelines). In relation to disclosure on remuneration, the CG Guidelines provide that a locally-incorporated bank should clearly disclose its remuneration policies, level and mix of remuneration, and the procedure for setting remuneration in its annual report. The bank should also provide disclosure in relation to its remuneration policies to enable investors to understand the link between remuneration paid to directors and key executives, and performance.</p> <p>A bank that is listed on SGX is required to make immediate announcements of any interested person transactions if the transactions amount to three percent or more of the value of its latest audited net tangible assets. The announcements should also include a statement that the bank's Audit Committee is of the view that the transactions are on normal commercial terms and the terms are not prejudicial to the interests of the bank and its minority shareholders. The bank also has to disclose the aggregate value of interested person transactions entered into during the financial year in its annual report. (Chapter 9 of SGX Listing Rules on Interested Person Transactions; see CP20 EC3 for details.)</p> <p>As part of off-site supervision, supervisors determine from the auditors' report whether banks' financial statements have been drawn up in accordance with the CA and FRSs. Supervisors also review the banks' financial statements and annual reports, and in the case of locally-incorporated banks, supervisors meet with the chief financial officer of each bank every quarter, ahead of its earnings release to discuss the financial performance, business strategies and risk profile of the banking group.</p>
EC3	Laws, regulations or the supervisor require banks to disclose all material entities in the group structure.
Description and findings re EC3	<p>Section 201 of the CA requires locally-incorporated banks to prepare their accounts in accordance with FRSs, while section 373 imposes similar requirements on foreign bank branches.</p> <p>FRS 24 on Related Party Disclosures requires the disclosure of relationship between a parent and its subsidiaries, and in situations where control exists, irrespective of whether there have been transactions between them. In addition, with effect from January 1, 2014, FRS 112 on Disclosure of Interests in Other Entities will require an entity to disclose information about its interests in subsidiaries, joint arrangements and associates, and structured entities that are not controlled by the entity.</p> <p>Section 25 of the BA requires every bank to exhibit at each of its branches its latest audited financial statements and auditors' report, as well as the names of all the bank's subsidiaries.</p> <p>Where a bank is the subsidiary of another corporation at its financial year-end, section 201(10) of the CA requires the bank to state the name of its ultimate holding company in the financial statements.</p>

EC4	The supervisor or another government agency effectively reviews and enforces compliance with disclosure standards.
Description and findings re EC4	<p>ACRA monitors and enforces compliance of FRSs by companies. Amongst other functions, ACRA is responsible for administering and providing public access to a repository of documents and information relating to business entities and public accountants. Section 7 of the Accounting and Corporate Regulatory Authority Act (Chapter 2A) confers upon ACRA the power to take any actions for the purpose of discharging its functions. This includes the power to prescribe, regulate or implement measures and standards on any matter related to its functions.</p> <p>While ACRA monitors and enforces the compliance of FRSs by companies, MAS determines that banks meet the requirements set out in MAS' notices. For instance, supervisors review banks' financial statements and annual reports for their compliance with MAS Notice 608.</p>
EC5	The supervisor or other relevant bodies regularly publishes information on the banking system in aggregate to facilitate public understanding of the banking system and the exercise of market discipline. Such information includes aggregate data on balance sheet indicators and statistical parameters that reflect the principal aspects of banks' operations (balance sheet structure, capital ratios, income earning capacity, and risk profiles).
Description and findings re EC5	<p>MAS publishes on its website a Monthly Statistical Bulletin, which contains detailed aggregate statistics on banks' assets and liabilities  <a href="http://www.mas.gov.sg/Statistics/Monthly-Statistical-Bulletin.aspx">http://www.mas.gov.sg/Statistics/Monthly-Statistical-Bulletin.aspx</a>.</p> <p>On an annual basis, MAS publishes a FSR, which aims to contribute to a better understanding among market participants, analysts and the public of issues affecting Singapore's financial system. The FSR analyzes the banking sector in Singapore, substantiated with statistics on financial soundness indicators relating to capital adequacy, profitability, loan concentrations, liquidity and asset quality.</p>
<b>Additional criteria</b>	
AC1	The disclosure requirements imposed promote disclosure of information that will help in understanding a bank's risk exposures during a financial reporting period, for example on average exposures or turnover during the reporting period.
Description and findings re AC1	The CA, FRSs and MAS Notices 608, 609 and 637 stipulate minimum disclosure requirements in banks' financial statements. These requirements entail information that enables users of financial statements to understand banks' financial position and performance, including their risk exposures and concentration. For instance, Part XI of MAS Notice 637 requires a bank to disclose its total gross credit exposures and average gross credit exposures over the reporting period, broken down by major types of credit exposure. The bank is also required to disclose its geographic and industry distribution of credit exposures, as well as residual contractual maturity, all broken

	down by major types of credit exposure (paragraph 11.3.8).
<b>Assessment of Principle 28</b>	<b>Compliant</b>
Comments	The quarterly and annual disclosures by banks incorporated in Singapore and the reports periodically published by the MAS fully meet the principle of full disclosure and transparency. The Accounting and Corporate Regulatory Authority, a separate body, monitors and enforces compliance with FRS and MAS requires banks to disclose their financial position and their credit exposures, broken down by geography and industry, and residual contractual maturity.
<b>Principle 29</b>	<b>Abuse of financial services.</b> The supervisor determines that banks have adequate policies and processes, including strict customer due diligence (CDD) rules to promote high ethical and professional standards in the financial sector and prevent the bank from being used, intentionally or unintentionally, for criminal activities.
<b>Essential criteria</b>	
<b>EC1</b>	<b>Laws or regulations establish the duties, responsibilities and powers of the supervisor related to the supervision of banks' internal controls and enforcement of the relevant laws and regulations regarding criminal activities.</b>
Description and findings re EC1	<p>As a member of the FATF, Singapore actively contributes to the development of FATF Recommendations and operates a rigorous regime against money laundering and financing of terrorism and other related threats to the integrity of the international financial system in line with the FATF Recommendations. Singapore also adopts the Basel Committee's Statement of Principles on <i>Prevention of Criminal Use of the Banking System for the Purpose of Money-Laundering</i>. In addition, MAS participates in the AML/CFT Expert Group under the BCBS, to shape international standards in this area.</p> <p>The functions of MAS are set out under section 4 of the MAS Act. One of MAS' functions is to conduct integrated supervision of financial services and financial stability surveillance. Sections 43 and 44 of the BA empower MAS to conduct inspections and special investigations of any bank in Singapore and any overseas operations of a locally-incorporated bank to carry out its function as a banking supervisor.</p> <p>Sections 27A and 27B of the MAS Act empower MAS to issue to financial institutions any directions or regulations necessary for the prevention of money laundering or financing of terrorism, or for the discharge of measures in accordance with decisions taken by the Security Council of the United Nations. Directions and regulations issued include MAS (Anti-terrorism Measures) Regulations 2002, MAS (Sanctions and Freezing of Assets of Persons—Iran) Regulations 2007 and MAS (Sanctions and Freezing of Assets of Persons—Libya) Regulations 2011, amongst others. A financial institution that fails to comply with the regulations is liable on conviction to a fine not exceeding \$1 million, and may be liable for a further fine of \$100,000 for every day which the offense continues after conviction. MAS Notice 626 on <i>Prevention of Money</i></p>



	<p><i>Laundering and Countering the Financing of Terrorism</i> is a legally enforceable notice issued pursuant to section 27B of the MAS Act, and sets out the obligations of a bank to take measures to mitigate the risk of the banking system of Singapore being used for money laundering or terrorist financing. MAS has issued <i>Guidelines to MAS Notice 626 on Prevention of Money Laundering and Countering the Financing of Terrorism</i> to provide guidance to banks on some of the requirements in the Notice.</p> <p>MAS is responsible for the supervision of banks' internal controls and their compliance with the above MAS' laws and regulations. A MAS-wide AML/CFT peer group facilitates sharing of inspection methods, best practices, AML/CFT compliance, off-site supervision practices and understanding of the new FATF Recommendations. The peer group interacts with supervision staff regularly to discuss the effectiveness of AML/CFT measures put in place by financial institutions, as well as the penalty framework and the prescription of inspection cycles for AML/CFT. Regular internal training courses on AML/CFT are also organized for supervisory and policy teams. These range from talks by CAD of the Singapore Police Force, the Financial Intelligence Unit (FIU) and internal briefing sessions on AML/CFT supervision, the penalty framework as well as on the FATF Recommendations. To supplement the internal training, officers are sent for external training courses which include, amongst others, FATF assessor training programs, AML/CFT courses by the International Monetary Fund-Singapore Training Institute, the U.S. Federal Reserve and Office of the Comptroller of the Currency, as well as the Asia/Pacific Group on Money Laundering.</p> <p>The Ministry of Home Affairs (MHA) is responsible for maintaining general law and order as well as internal security. It also has responsibility for the wider Singapore AML/CFT legislation—namely, the Corruption, Drug Trafficking and Other Serious Crimes (Confiscation of Benefits) Act (Chapter 65A) (CDSA) and Terrorism (Suppression of Financing) Act (Chapter 325) (TSOFA). The Commercial Affairs Department (CAD), overseen by MHA, investigates the laundering of proceeds from serious crimes and is given such powers under the CDSA and TSOFA. The Suspicious Transaction Reporting Office (STRO), which is the central agency for receiving, analyzing and disseminating suspicious transaction reports, resides within CAD. As Commercial Affairs Officers, STRO officers are deemed enforcement officers and are given police powers under section 64 of the Police Force Act (Chapter 235).</p>
<b>EC2</b>	<b>The supervisor determines that banks have adequate policies and processes that promote high ethical and professional standards and prevent the bank from being used, intentionally or unintentionally, for criminal activities. This includes the prevention and detection of criminal activity, and reporting of such suspected activities to the appropriate authorities.</b>
Description and findings re EC2	Paragraph 12 of MAS Notice 626 requires banks to develop and implement internal policies, procedures and controls to help prevent money laundering and terrorist financing. Amongst other things, the policies, procedures and controls shall encompass those on CDD, record retention, detection of suspicious transactions and

	<p>obligation to make suspicious transaction reports. Paragraph 11.2 of MAS Notice 626 requires banks to submit reports on suspicious transactions (including attempted transactions) to the STRO and extend a copy to MAS for information.</p> <p>Supervisors determine whether banks are compliant with the above requirements through inspections and off-site reviews of banks' policies. Supervisors also review internal and external auditors' assessment on the adequacy of banks' AML/CFT policies and processes. To enhance the assessment of banks' compliance with AML/CFT regulations, supervisors conduct thematic and regular AML inspections of financial institutions using a risk-based approach.</p>
<b>EC3</b>	<b>In addition to reporting to the financial intelligence unit or other designated authorities, banks report to the banking supervisor suspicious activities and incidents of fraud when such activities/incidents are material to the safety, soundness or reputation of the bank.</b>
Description and findings re EC3	Under MAS Notice 641 on <i>Reporting of Suspicious Activities and Incidents of Fraud</i> , a bank is required to report to MAS suspicious activities and incidents of fraud where such activities or incidents are material to the safety, soundness or reputation of the bank. For incidents of fraud, a bank should lodge a police report and submit to MAS a copy of the report. Where the bank has not lodged a police report, it should notify MAS of the reasons for its decision. In both cases, the bank shall lodge a report in a prescribed format to MAS after the discovery of the activity or incident by the bank.
<b>EC4</b>	<b>If the supervisor becomes aware of any additional suspicious transactions, it informs the financial intelligence unit and, if applicable, other designated authority of such transactions. In addition, the supervisor, directly or indirectly, shares information related to suspected or actual criminal activities with relevant authorities.</b>
Description and findings re EC4	In the event that supervisors discover cases of additional suspicious transactions, for instance, through inspections or information channels that banks are not privy to, supervisors will pass on the information to CAD for further investigation.
<b>EC5</b>	<b>The supervisor determines that banks establish CDD policies and processes that are well documented and communicated to all relevant staff. The supervisor also determines that such policies and processes are integrated into the bank's overall risk management and there are appropriate steps to identify, assess, monitor, manage and mitigate risks of money laundering and the financing of terrorism with respect to customers, countries and regions, as well as to products, services, transactions and delivery channels on an ongoing basis. The CDD management program, on a group-wide basis, has as its essential elements:</b> <ul style="list-style-type: none"> <li><b>(a) a customer acceptance policy that identifies business relationships that the bank will not accept based on identified risks;</b></li> <li><b>(b) a customer identification, verification and due diligence program on an ongoing basis; this encompasses verification of beneficial ownership, understanding the purpose and nature of the business relationship, and</b></li> </ul>

	<p><b>risk-based reviews to ensure that records are updated and relevant;</b></p> <p><b>(c) policies and processes to monitor and recognize unusual or potentially suspicious transactions;</b></p> <p><b>(d) enhanced due diligence on high-risk accounts (e.g., escalation to the bank’s senior management level of decisions on entering into business relationships with these accounts or maintaining such relationships when an existing relationship becomes high-risk);</b></p> <p><b>(e) enhanced due diligence on politically exposed persons (including, among other things, escalation to the bank’s senior management level of decisions on entering into business relationships with these persons); and</b></p> <p><b>(f) clear rules on what records must be kept on CDD and individual transactions and their retention period. Such records have at least a five year retention period.</b></p>
Description and findings re EC5	<p>During inspections, supervisors review policies and procedures to ascertain if a bank has in place comprehensive measures to prevent money laundering and terrorist financing. The policies and procedures should be communicated to all relevant staff and adequate for the nature, complexity and scope of the bank’s activities. Supervisors assess the CDD policies of a bank in the following areas, amongst other things:</p> <p>(a) Assess if customer acceptance policies clearly define the types of customers deemed acceptable or unacceptable to the bank. The policies should take into account factors, amongst others, the customer’s country of origin, political position and source of wealth (as required under paragraphs 4, 6.2, 6.3 and 6.4 of MAS Notice 626).</p> <p>(b) Determine if CDD policies are adequate to facilitate effective due diligence for all clients, including beneficial owners (as required under paragraph 4.15 of MAS Notice 626). The policy should explicitly prohibit transactions with customers who fail to provide evidence of their identity (as required under paragraph 4.4 of MAS Notice 626). Supervisors also assess whether banks keep customer identification information up-to-date and relevant by undertaking regular reviews of existing records based on risks (relevant requirements under paragraphs 4.20 to 4.24 of MAS Notice 626). CDD policies should clearly delineate accountability and appropriate approving authority in areas such as acceptance of new customers, exceptions to customer acceptance policies and waiver of documentation requirements. Supervisors also assess if the bank monitors the conduct of customers’ accounts on an ongoing basis and scrutinizes transactions undertaken to ensure that they are consistent with the bank’s knowledge of the customer, its business and risk profile, and where appropriate, the source of funds (as required under paragraph 4.21 of MAS Notice 626).</p>

	<p>(c) Determine if the bank has well-defined guidelines and procedures for investigating, reporting and acting on suspicious transactions. Supervisors also ascertain the accuracy, timeliness and usefulness of management reports prepared for the surveillance of possible money laundering activities and terrorism financing, and review whether systems and parameters used in reporting suspicious activities are effective and appropriate given the bank's business. Supervisors also assess if the bank has paid special attention to all complex or unusually large transactions that have no apparent or visible economic or lawful purpose (as required under paragraph 4.22 of MAS Notice 626).</p> <p>(d) Determine if customer acceptance policies require more extensive due diligence for higher risk customers and those who have been refused banking facilities by other financial institutions. Supervisors also determine if senior management's approval is obtained for establishing banking relationship with high risk customers and if banks enquire on source of funds and source of wealth of such clients (as required under paragraph 6 of MAS Notice 626).</p> <p>(e) Ascertain if the bank has adequate policies, procedures and processes to identify politically exposed persons (PEPs). Decisions to enter into business relationships with PEPs should be approved by senior management (as required under paragraph 6 of MAS Notice 626).</p> <p>(f) Review the document retention policy to ascertain whether it stipulates that the minimum period of retention for financial transaction documents is five years, in line with the requirements under CDSA. Also, CDD documents have to be kept for five years after account closure or longer if there is ongoing investigation or litigation.</p>
<b>EC6</b>	<p><b>The supervisor determines that banks have in addition to normal due diligence, specific policies and processes regarding correspondent banking. Such policies and processes include:</b></p> <p><b>(a) gathering sufficient information about their respondent banks to understand fully the nature of their business and customer base, and how they are supervised; and</b></p> <p><b>(b) not establishing or continuing correspondent relationships with those that do not have adequate controls against criminal activities or that are not effectively supervised by the relevant authorities, or with those banks that are considered to be shell banks.</b></p>
Description and findings re EC6	Supervisors determine if a bank has in place policies and procedures relating to correspondent banking. Supervisors also assess during inspections the rigor with which the policies are integrated in the bank's overall risk management practices, which should address minimally the following:

	<p>(a) Review if the bank has gathered adequate information on respondent banks to understand the nature of the respondent bank's business and its money laundering prevention and detection efforts (as required under paragraph 8.3 of MAS Notice 626). Banks should conduct due diligence and assess the level of perceived risk associated with each respondent bank. Factors that should be considered include the purpose of the account, whether the account is available to third parties, and the adequacy of AML/CFT controls in the respondent bank. Banks should also assess whether the anti-money laundering regime that the respondent bank operates under is of a standard equivalent to that of FATF.</p> <p>(b) Banks should not establish correspondent banking relationships with banks that do not have adequate controls against criminal activities or that are not effectively supervised by the relevant authorities, or a shell bank (as required under paragraph 8.6 of MAS Notice 626). Banks should also be alert to the risk that correspondent accounts might be used directly by third parties to transact business on their own behalf, e.g., payable-through accounts (refer to relevant requirements under paragraph 8.4 of MAS Notice 626).</p>
<b>EC7</b>	<b>The supervisor determines that banks have sufficient controls and systems to prevent, identify and report potential abuses of financial services, including money laundering and the financing of terrorism.</b>
Description and findings re EC7	<p>MAS conducts regular inspections and review reports of internal and external auditors to determine whether banks have adequate controls and systems to prevent, identify and report possible abuses of financial services such as suspicious acts of money laundering, terrorism financing and incidents of fraud.</p> <p>Supervisors also regularly require banks to submit self-assessment questionnaires to evaluate their AML/CFT controls, processes and systems, as well as compliance with AML/CFT regulations. These self- assessment questionnaires are sent to banks on average, once every two years and more frequently, if necessary. Supervisors also assess banks' compliance with relevant laws and regulations, including MAS Notice 626 (see CP29 EC9 for details).</p>
<b>EC8</b>	<b>The supervisor has adequate powers to take action against a bank that does not comply with its obligations related to relevant laws and regulations regarding criminal activities.</b>
Description and findings re EC8	<p>Sections 27A and 27B of the MAS Act empower MAS to issue to financial institutions any directions or regulations necessary for the prevention of money laundering or financing of terrorism, or for the discharge of measures in accordance with decisions taken by the Security Council of the United Nations. Financial institutions that fail to comply with these regulations are liable on conviction to a fine not exceeding \$1 million, and may be liable for a further fine of \$100,000 for every day which the offense continues after conviction.</p> <p>Section 41A of the MAS Act empowers MAS to compound any offense under the MAS</p>

	<p>Act by collecting from the offender a sum of money up to half of the maximum fine prescribed for that offense. The same section allows MAS to make regulations to prescribe the offenses which may be compounded.</p> <p>Under section 7 of the BA, MAS may impose additional conditions, or vary or revoke any existing conditions of the license of the bank. In extreme circumstances (e.g., where the bank is carrying on its business in a manner deemed detrimental to its depositors' interests), MAS may revoke the license of the bank (section 20 of the BA). (See CP11 EC2 for the range of supervisory actions MAS may take against a bank.)</p>
<b>EC9</b>	<p><b>The supervisor determines that banks have:</b></p> <p><b>(a) requirements for internal audit and/or external experts to independently evaluate the relevant risk management policies, processes and controls. The supervisor has access to their reports;</b></p> <p><b>(b) established policies and processes to designate compliance officers at the banks' management level, and appoint a relevant dedicated officer to whom potential abuses of the banks' financial services (including suspicious transactions) are reported;</b></p> <p><b>(c) adequate screening policies and processes to ensure high ethical and professional standards when hiring staff; or when entering into an agency or outsourcing relationship; and</b></p> <p><b>(d) ongoing training programs for their staff, including on CDD and methods to monitor and detect criminal and suspicious activities.</b></p>
Description and findings re EC9	<ul style="list-style-type: none"> <li>• During inspections and off-site reviews, supervisors determine if a bank's internal audit assesses the effectiveness of the bank's AML/CFT measures, as well as systems and controls, in preventing, identifying and reporting non-compliance with the relevant laws and regulations. Supervisors also review whether audit findings are escalated to the appropriate level of management and followed up by internal audit to ensure that rectifications are made.</li> <li>• Under MAS Notice 609 on <i>Auditors' Reports and Additional Information to be Submitted with Annual Accounts</i>, banks are required to furnish to MAS a copy of external auditors' long form report. The report shall include any findings and recommendations on the bank's internal controls and non-compliance with the relevant laws and regulations, as well as any comments on other areas of weaknesses. Supervisors review the long form reports and monitor the rectification of the deficiencies through follow-up with the bank's internal and external auditors.</li> <li>• Supervisors determine if a bank has appointed one or more senior persons, or an appropriate unit (typically the compliance function), to advise management and staff on the issuance and enforcement of in-house instructions to prevent money laundering, including personnel training, suspicious transactions reporting and</li> </ul>

	<p>generally all questions pertaining to the prevention of money laundering. Supervisors assess the independence, expertise and adequacy of resources of money laundering prevention functions, typically compliance, in discharging their responsibilities.</p> <ul style="list-style-type: none"> <li>• During off-site reviews and inspections, supervisors assess that a bank has in place screening procedures to ensure high standards when hiring employees (as required under paragraph 12.11 of MAS Notice 626). Supervisors also determine if the bank is compliant with the following: <ul style="list-style-type: none"> <li>• MAS' <i>Guidelines on Fit and Proper Criteria and Guidelines on Risk Management Practices—Internal Controls</i> (Internal Controls Guidelines) set out that a bank is to ensure that its employees meet the fit and proper criteria and that individuals considered for employment are adequately screened for experience, professional capabilities, honesty and integrity. Screening should include background employment checks to assess character, integrity and track record.</li> <li>• MAS' <i>Guidelines on Outsourcing</i>, which provides that a bank should undertake due diligence to assess a service provider when considering to outsource any functions, enter into, renegotiate or renew an outsourcing arrangement. The due diligence should involve an evaluation of all available information about the service provider, such as its experience, competence, business reputation, security and internal controls.</li> </ul> </li> <li>• MAS ascertains whether a bank has taken appropriate steps to ensure that its employees (whether in Singapore or overseas) are regularly and adequately trained on relevant areas relating to AML/CFT (as required under paragraph 12.12 of MAS Notice 626). Particular attention is given to the frequency of refresher courses, monitoring of staff attendance at training sessions and the escalation process for dealing with absentees. Supervisors also review AML/CFT training programs to assess the frequency, scope and quality of training provided.</li> </ul>
<b>EC10</b>	<p><b>The supervisor determines that banks have and follow clear policies and processes for staff to report any problems related to the abuse of the banks' financial services to either local management or the relevant dedicated officer or to both. The supervisor also determines that banks have and utilize adequate management information systems to provide the banks' Boards, management and the dedicated officers with timely and appropriate information on such activities.</b></p>
Description and findings re EC10	<p>Under MAS Notice 626, a bank shall develop appropriate compliance management arrangements, including at least, the appointment of a management level officer as the AML/CFT compliance officer. The bank shall also ensure that the AML/CFT compliance officer, as well as any other persons appointed to assist him, has timely access to all customer records and other relevant information which they require to</p>



	<p>discharge their functions (paragraph 12). In addition, the bank is required to establish internally a single reference point to whom all staff are instructed to promptly refer all suspicious transactions, for possible referral to the Suspicious Transaction Reporting Office (paragraph 11).</p> <p>During inspections, supervisors review banks' policies, AML/CFT framework and records of STRs to determine whether banks are compliant with the above requirements. Supervisors also evaluate the adequacy and effectiveness of banks' operational risk management on the prevention of money laundering and terrorist financing. For instance, supervisors ascertain whether a bank's management information system provides timely, accurate and adequate information to enable it to identify suspicious transactions.</p> <p>Supervisors also assess the adequacy of reports to senior management on a bank's AML/CFT compliance framework, including number of STRs reported, significant weaknesses in AML/CFT controls, launch of new IT platforms to monitor suspicious transactions, significant changes in regulations and other pertinent risk issues.</p>
<b>EC11</b>	<b>Laws provide that a member of a bank's staff who reports suspicious activity in good faith either internally or directly to the relevant authority cannot be held liable.</b>
Description and findings re EC11	Section 39 of the CDSA provides that a person shall report knowledge or suspicion of any criminal activity to a Suspicious Transaction Reporting Officer as soon as practicable after it comes to the person's attention. Where a person discloses in good faith to the officer, the disclosure shall not be treated as a breach of any restriction upon the disclosure imposed by law, contract or rules of professional conduct and he shall not be liable for any loss arising out of the disclosure or any act or omission in consequence of the disclosure.
<b>EC12</b>	<b>The supervisor, directly or indirectly, cooperates with the relevant domestic and foreign financial sector supervisory authorities or shares with them information related to suspected or actual criminal activities where this information is for supervisory purposes.</b>
Description and findings re EC12	<p>MAS is Singapore's central bank and financial services regulator. As an integrated regulator, it has supervisory responsibility over financial institutions such as banks, insurance companies and capital markets services licensees.</p> <p>Singapore utilizes a multi-agency AML/CFT strategy involving law enforcement, policy makers, regulators and the private sector. This effort is led by a high-level Steering Committee established in 1999. The Steering Committee, which comprises the Permanent Secretary of the MHA, Permanent Secretary of the MOF and Managing Director of MAS, leads the national effort to develop and implement Singapore's AML/CFT regime. The Steering Committee is supported by the working-level Inter-Agency Committee (IAC), which is comprised of 15 agencies and departments. To ensure a coordinated effort in combating terrorism (including terrorist financing), members of the IAC are also represented on the Inter-Ministry Committee on</p>



	<p>Terrorism, which was established in 2001. The IAC meets several times a year (formally or informally) and corresponds very frequently over email to coordinate and improve Singapore's AML/CFT regime. This forum provides the opportunity for sharing of information, including those related to suspected or actual criminal activities, and coordination of policy decisions and implementation issues across the relevant authorities. Part of the IAC's work is to get agencies actively involved in managing and mitigating new money laundering and financing of terrorism threats. The IAC also proposes recommendations to the high-level Steering Committee for policy directions.</p> <p>Further, the Mutual Assistance in Criminal Matters Act (Chapter 190A) (MACMA) allows Singapore to provide mutual legal assistance to other jurisdictions, in relation to criminal investigations or criminal proceedings for offenses that are covered under the Act. The Attorney General's Chambers (AGC) processes the requests for mutual legal assistance. Section 22(2) of MACMA provides for AGC to obtain an order from the High Court for requests of mutual legal assistance in relation to protected information held by a financial institution. Assistance that may be provided includes the production or seizure of information, documents or evidence.</p> <p>All reports on AML/CFT inspections are shared with the home supervisory authorities of foreign banks operating in Singapore, besides their head offices. Where requests for investigation into specific accounts are received from foreign supervisory authorities, these are forwarded to CAD for their investigation, with the consent of the foreign supervisory authorities, as CAD is the financial investigation authority, while MAS is responsible for the supervision of financial institutions.</p>
<b>EC13</b>	<p><b>Unless done by another authority, the supervisor has in-house resources with specialist expertise for addressing criminal activities. In this case, the supervisor regularly provides information on risks of money laundering and the financing of terrorism to the banks.</b></p>
Description and findings re EC13	<p>CAD is the principal commercial and financial crime investigation and enforcement agency in Singapore. It is equipped with its own investigative and intelligence resources in the Singapore Police Force. CAD has three investigative specialist divisions, namely the Commercial Crime Division, Corporate Fraud Division and Securities and Maritime Fraud Division. The Financial Investigation Division is another division, which is the main authority for the enforcement of Singapore's AML/CFT regime. The Suspicious Transaction Reporting Office resides within this division.</p> <p>CAD publishes and distributes to financial institutions annually a compilation of case highlights during each financial year. Other than issuing notices, MAS also issues guidelines to provide guidance on compliance with AML/CFT regulations and has published numerous examples of suspicious transactions. MAS also announces on its website updates to statements issued by the FATF.</p>
<b>Assessment of Principle 29</b>	<b>Compliant</b>

Comments	<p>MAS has established a strict regime to prevent, identify and report possible abuses of financial services such as suspicious acts of money laundering, terrorism financing and incidents of fraud. MAS assesses whether banks are compliant with these requirements through inspections and off-site reviews. MAS will be amending its notices and guidelines in line with the latest FATF standards. The Association of Banks in Singapore (ABS) has also issued its guidelines on AML/CFT to set out the industry's best practices. The Private Banking Industry Group has established guidance to help the industry identify potential money laundering involving tax-illicit funds.</p> <p>Singapore is a member of both the FATF and of the APG. It was last assessed against the AML/CFT standard in 2008 by a joint team of the FATF and the APG. Assessors found that, overall, AML/CFT preventative measures for the financial sector, as well as the supervisory framework for banks generally met a high level of compliance with the standard. They also noted an overall sound implementation of the AML/CFT framework by banks and the MAS. Singapore was therefore rated highly on most of the FATF Recommendations that are relevant under this principle. In light of the high ratings, Singapore was not required to provide the FATF with detailed updates.</p>
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## RECOMMENDED ACTIONS

28. Table 4 below lists the suggested actions for improving compliance with the BCPs and the effectiveness of regulatory and supervisory frameworks. Recommendations are proposed on a prioritized basis.

Table 4. Singapore: Recommended Actions to Improve Compliance with the Basel Core Principles	
Reference Principle	Recommended Action
1. Responsibilities, objectives and powers	<p>In the absence of shifting development out of MAS (and hence, removing it from MAS mandate), authorities should consider ways to more clearly insulate the role of prudential supervision from the developmental mandate, by articulating that the developmental mandate of MAS is clearly subordinate to prudential supervision.</p> <p>The establishment of effective check and balances should also accompany such subordination to make it clear, that in the event of a conflict between prudential supervision and steps to make Singapore more attractive to foreign financial firms, prudential supervision will always be the priority.</p>
2. Independence, accountability, resourcing and legal protection for supervisors	<p>The authorities should consider changing the composition of the board appointments, so that the majority of board members are independent of government (i.e. neither political appointments such as ministers nor senior members of government.)</p> <p>The authorities should also consider establishing effective check and balances at the highest possible level of binding force to ensure MAS' ability and willingness to act, as a supervisory authority, and to guard against any bias for inaction or delay due to external pressures or inappropriate political objectives.</p>
11. Corrective and sanctioning powers of supervisors	<p>MAS should continue to work closely with the home supervisors of the major foreign branches to ensure it has access to current information on the risks and financial health of the parent company and cooperative arrangements in place to address any problems in the institution. It should also continue to encourage the conversion of foreign branches with major retail operations to domestically incorporated subsidiaries.</p>
17. Credit risk	<p>The MAS should ensure that resources assigned to assess banks' management of loan and investment portfolios, as set out in their CRAFT analyses, are commensurate with the level and potential systemic consequences of credit risk.</p>

	<p>Also, the MAS should increase its attention to on-site inspections of credit risk. For the major banks, MAS should establish an on-site multiyear supervisory cycle to review all sectors of banks' credit exposures according to their CRAFT analyses. Special attention should be given to borrowers' ability to repay under stressed economic and financial circumstances, and to loan restructurings that might mask borrowers' weaknesses. The inspections do not need to be lengthy exercises but should include a review of a sample of credit files, sufficient to provide a reasonable assurance of banks' quality of their credit exposures.</p>
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## AUTHORITIES' RESPONSE TO THE ASSESSMENT

**29. MAS welcomes the positive assessment of Singapore's implementation of the BCPs and wishes to express its appreciation to the IMF and its assessors for the constructive dialogue and the assessment.**

**30. We note the assessors' observations on the existing safeguards, their recommendations on how MAS' operational independence could be further strengthened, and their finding that there had been no instance where MAS' operational independence was compromised.** We also note the assessors' comments on the potential for conflict between MAS' prudential supervision and developmental functions, and their finding that there had been no instance where prudential supervision was compromised by the developmental function. We reiterate our position that MAS has operational autonomy in the exercise of its powers and functions, and that prudential supervision objectives are not compromised by the development function. MAS will review the assessors' recommendations, and make changes, where necessary, to ensure that it continues to maintain operational independence and that prudential supervision is not compromised by the developmental function.

**31. MAS recognizes that foreign bank branches have a significant presence in Singapore and hence supervises them in the same manner as locally-incorporated banks.** MAS participates in the supervisory colleges of all the major foreign banks in Singapore and will continue to strengthen information sharing and cooperative arrangements with the home supervisor of the major foreign banks in Singapore. To achieve its supervisory objectives, MAS requires cooperation from these home supervisors and looks forward to working closely with them. MAS is working with QFBs that have a significant retail presence to locally incorporate their retail operations. New QFBs under future FTAs will also have to incorporate their retail operations.

MAS concurs with IMF's observation that the Singapore economy is currently at the expansionary part of the credit cycle. MAS conducts onsite credit inspections of the major banks in Singapore on a regular basis. In addition, the buoyant property market and the potential rise in interest rates that could pose problems for overleveraged borrowers had led MAS to conduct thematic residential mortgage inspections in late 2012. In recognition of the growing trade finance activities among the major banks, MAS also inspected their trade finance operations in 2012 and 2013. These regular

onsite credit inspections and thematic reviews complement our already intrusive supervisory stance, which includes offsite monitoring of their credit risk management approaches and portfolio quality. MAS looks to increase the frequency or intensity of our supervisory engagements with the major banks in the area of credit risk, taking into account the prevailing conditions in the macroeconomic environment.

**32. Notwithstanding the IMF's overall assessment that Singapore shows a very high level of compliance with the BCP and its implementation, MAS will continue to strengthen our supervisory framework to further promote the safety and soundness of the banking sector in Singapore.**