INTERNATIONAL MONETARY FUND

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SINGAPORE

2012 ARTICLE IV CONSULTATION

August 2012

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2012 Article IV consultation with Singapore, the following documents have been released and are included in this package:

- **Staff Report** for the 2012 Article IV consultation, prepared by a staff team of the IMF, following discussions that ended on May 25, 2012, with the officials of Singapore on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on July 12, 2012. The views expressed in the staff report are those of the staff team and do not necessarily reflect the views of the Executive Board of the IMF.
- **Informational Annex** prepared by the IMF.
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International Monetary Fund
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INTERNATIONAL MONETARY FUND

SINGAPORE

STAFF REPORT FOR THE 2012 ARTICLE IV CONSULTATION

July 12, 2012

KEY ISSUES

Context. The Singapore economy had a stellar performance following the global crisis, but now faces a less supportive external environment and vexing domestic challenges: growth is slowing on weak external demand; inflation remains elevated amid low global interest rates and buoyant asset prices and labor costs; labor productivity has slowed; and income inequality is rising.

Outlook and risks. Against tepid world demand, domestic growth is expected to weaken in 2012 and recover just modestly in 2013, while inflation will remain around 4½ percent. Significant downside risks from shocks abroad would hit growth through trade and financial channels. However, Singapore has ample buffers and policy room to dampen the impact.

Impact of government's productivity push. The authorities expect slower foreign worker inflows and inducements for technology upgrading and training to generate higher real wages and faster medium-term productivity growth. In the near term, potential growth will slow, and frictional unemployment and inflation will increase.

Contain inflation expectations. Inflation should be permitted to increase temporarily to accommodate relative price changes from the structurally tighter labor market. To anchor expectations, the current restrictive monetary and fiscal policy stance should continue to be supported by macroprudential measures to contain asset prices.

Financial sector risks. Sizable capital and liquidity buffers and proactive prudential oversight underpin financial sector strength. However, continued vigilance is needed over funding risks from European bank deleveraging; currency and maturity risks from rapid local bank expansion into Asia; and risks from high exposure to real estate.

External sector assessment. Singapore's external position is stronger than warranted by fundamentals. Tighter foreign worker inflows and increased public spending on infrastructure and social safety nets, along with rapid population aging and appropriate adjustments in other countries, should help narrow the large current account surplus.

Approved By
Jerald Schiff and Thomas Dorsey

Staff team: Jerald Schiff (Head), Rachel van Elkan, Rodrigo Cubero, Zeiad Abdel-Rahman (all APD), and Ravi Balakrishnan and Jeanne Gobat (both Resident Representatives). The mission met with Monetary Authority of Singapore (MAS) Managing Director Menon, officials from MAS, the Ministry of Finance, and other government agencies, and representatives from the financial sector and academia. Mr. Chia (Executive Director) attended the official meetings.
Mission Dates: May 18–25, 2012

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BACKGROUND

A. The economy has fared well in the post-Lehman period

1. **Following a drop of 9 percent during 2008-early 2009, output recovered strongly**. In Q1:2012, GDP stood about 18 percent above the pre-crisis level. Reflecting its role as host to numerous export-oriented hi-tech multinationals—and consistent with its ranking among the globally most-competitive countries—Singapore's recovery was initially led by net exports.[1] More recently, as world demand began to slow, causing Singapore's growth to also moderate, fixed investment has been the main driver. Nonetheless, growth averaged nearly 10 percent during 2010–11 and resident unemployment is at an historic low of 3 percent.

2. **Despite frequent bouts of global volatility, Singapore's large financial sector has remained resilient**. The banking system—centerpiece of the large financial sector that serves as a regional center and has strong links to global markets—is large at nearly seven times GDP by assets. The financial sector contributes about 12 percent to annual GDP. Global reallocation of financial flows to Asia since the onset of the financial crisis, the relative resilience of Singapore's financial institutions during the crisis, as well as robust domestic and regional economies have propelled the sector. Notwithstanding rapid credit growth in recent years, financial soundness indicators for the big 3 domestic banks (about one third of the sector by assets) remain strong, with high capital adequacy and earnings ratios, and all three banks carry high investment ratings.

3. **Household and corporate sector balance sheets are robust**. Households' net asset positions are buttressed by a high saving rate, reflecting in part mandatory contributions to the Central Provident Fund (CPF) and large housing wealth (accounting for about 50 percent of total household assets at current prices). And while gross debt rose quickly in 2011, ratios of aggregate household debt to assets and to GDP remain low at 15¼ percent and 70 percent, respectively, and below their holdings of cash and deposits.[2] Corporate balance sheets are also strong, with the overall leverage ratio for publicly-listed firms around 30 percent. Moreover, simulations by the authorities indicate earnings would exceed interest payments even if interest rates were to rise by 300 bps.[3]

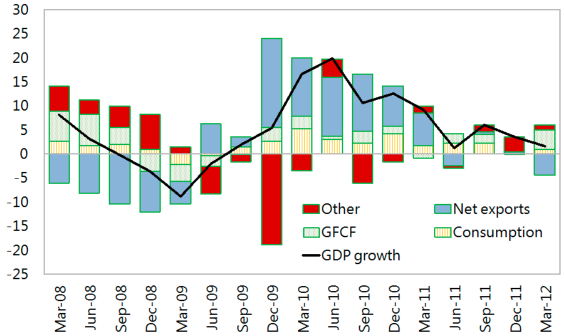
[1] Singapore ranks second on the World Economic Forum (WEF)'s *2011–12 Global Competitiveness Index*.

[2] Information on the distribution of assets and liabilities across households is not available.

[3] Based on earnings before interest and taxes. Interest cover is especially high in the property sector, despite its higher debt load.

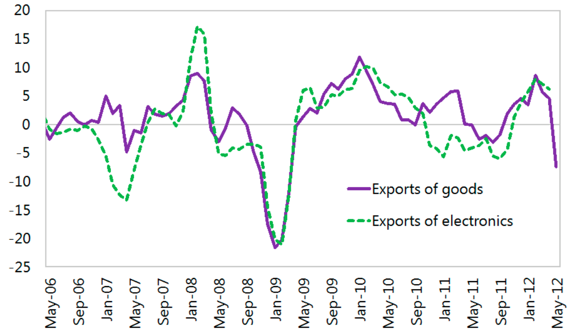
Figure 1. Singapore: Real Sector

Contributions to Growth
(In percent, year-on-year)



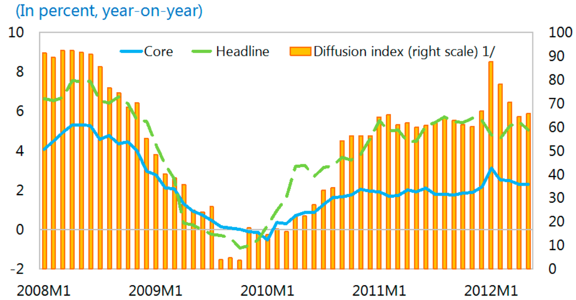
Sources: CEIC Data Company Ltd; and IMF staff calculations.

Exports
(Quarter-on-quarter growth of 3mma sa)



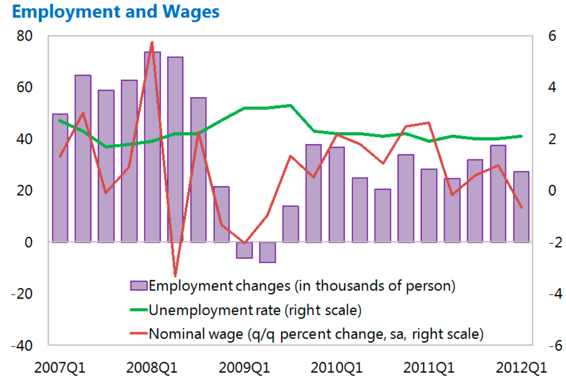
Sources: CEIC Data Co. Ltd.; and IMF staff estimates.

Inflation
(In percent, year-on-year)



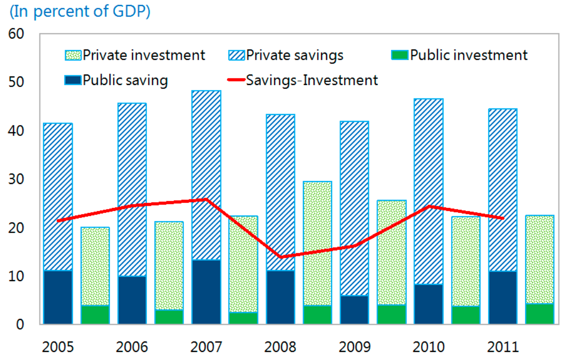
Sources: CEIC Data Company Ltd.; and IMF staff calculations.
1/ Share in the overall CPI basket of components for which y-o-y inflation exceeds 3 percent.

Employment and Wages



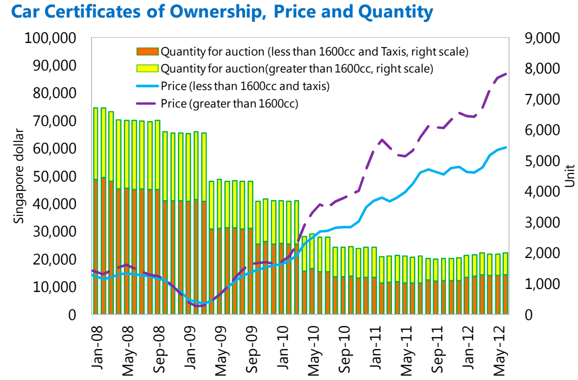
Sources: CEIC Data Co. Ltd.; and IMF staff estimates.

Saving and Investment
(In percent of GDP)



Sources: CEIC Data Company Ltd.; and IMF staff calculations.

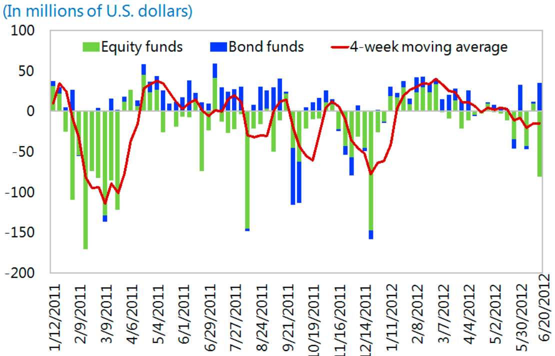
Car Certificates of Ownership, Price and Quantity



Source: CEIC Data Company Ltd.

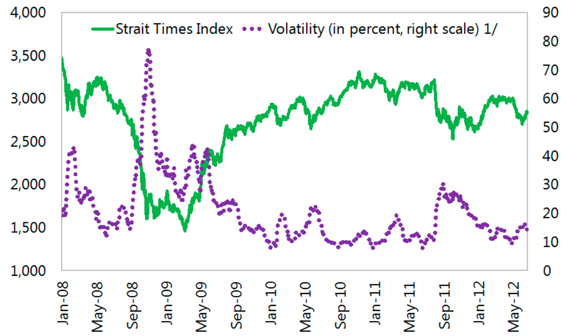
Figure 2. Singapore: Financial Markets

Singapore: Equity and Bond Funds—Weekly Net Flows, 2011–12
(In millions of U.S. dollars)



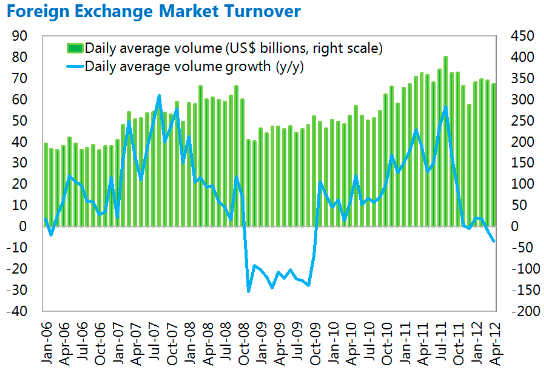
Source: EPFR.

Stock Market Index with Volatility



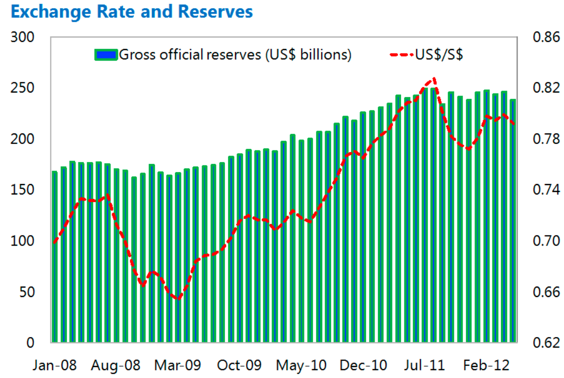
Sources: Bloomberg LP.
1/ Standard deviation of 1 year moving average of daily equity price change in log levels.

Foreign Exchange Market Turnover



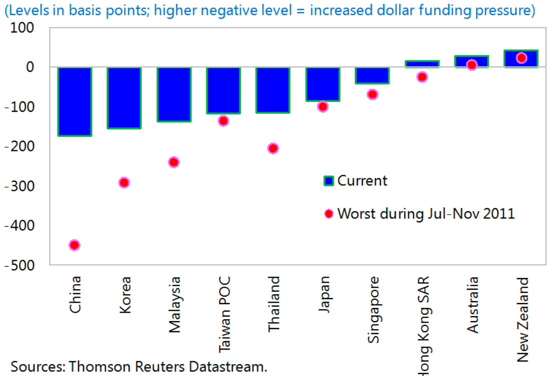
Source: CEIC Data Co. Ltd.

Exchange Rate and Reserves



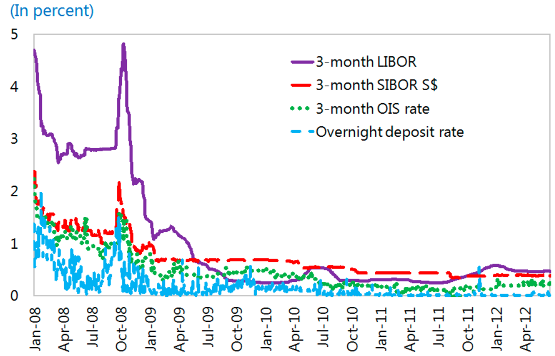
Source: CEIC Data Company Ltd.

U.S. Dollar - Local Currency Basis Swap Spreads (5-year)
(Levels in basis points; higher negative level = increased dollar funding pressure)



Sources: Thomson Reuters Datastream.

Interest Rates
(In percent)



Sources: Bloomberg L.P.

4. **These favorable outcomes are due in no small measure to an entrenched framework of prudent macroeconomic and financial policies**. This includes persistent fiscal surpluses and a large stock of public sector external assets,[4] a track record of low inflation under an exchange rate based monetary policy, and proactive and comprehensive oversight of the financial sector. Sound policies, combined with political stability and an effective rule of law, have made Singapore a safe haven for regional and international investors. However, if excessive, these flows could bring their own policy complications.

B. However, new challenges have emerged

5. **House price and consumer price inflation have risen in recent years**. Demand for housing by locals and foreigners has been buoyed by negative real interest rates and Singapore's status as a regional safe haven. As a result, prices of private houses have risen by a cumulative 55 percent since the 2009 trough, although they recently leveled off in response to the authorities' policy measures and weaker sentiment throughout the region. Headline inflation at the consumer level has ratcheted up from less than 2 percent prior to the global financial crisis to around 5 percent since mid 2011 (Box 1), on large contributions from imputed rent on owner-occupied housing (fueled in turn by rising house prices) and steep increases in the cost of vehicle ownership permits (COEs) on tight supply. But core inflation (which excludes accommodation and private transport costs), has also picked up, pointing to broader-based price pressures that are likely due to rising unit labor costs and pass-through of higher business costs for transport and real estate.[5]

6. **The previous growth model has been difficult to maintain**. Singapore's economy has long relied on very large inflows of foreign workers, allowing rapid labor force growth despite slow growth of the domestic working-age population (Box 2). While this fueled strong economic growth, it also contributed to congestion, strains on public services and infrastructure, and slow overall growth of factor productivity.[6]

[4] Government outstanding gross debt of about 100 percent of GDP is issued to develop local-currency capital markets and to provide an investment vehicle for the CPF, the mandatory defined-contribution saving scheme. Gross assets are larger than gross debt.

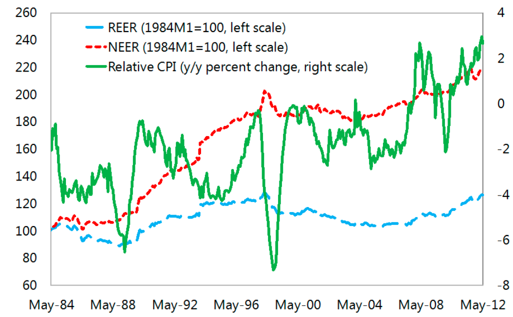
[5] Consistent with this, increases in nontradable prices (notably for education and healthcare services) have also accelerated.

[6] This is especially the case in labor-intensive sectors such as construction and food and beverage. This is also consistent with the WEF's assessment that Singapore should do more to encourage adoption of the latest technologies and enhance the sophistication of its companies.

Box 1. Singapore: A Long View of Real Exchange Rate and Inflation Trends

Despite a doubling of Singapore's NEER since the early 1980s, and the fact that the CPI-based real effective exchange rate (REER) shares a similar low-frequency cycle, the REER has appreciated by only 20 percentage points on a cumulative basis over the period. This modest real appreciation contrasts with the predictions of the Balassa-Samuelson hypothesis that suggests that countries with large productivity gains in the tradable sector (relative to the nontradable sector and partners) should expect large increases in their CPI-based REER.

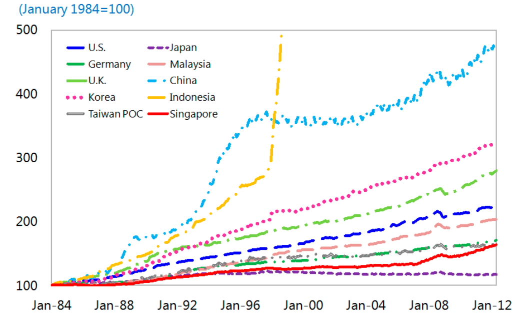
Effective Exchange Rates



Sources: IMF, Information Notice System; and staff calculations.

The very limited real appreciation reflects consistently-lower inflation in Singapore than in all its trading partners and competitors, with the exception of Japan.

Consumer Price Index
(January 1984=100)



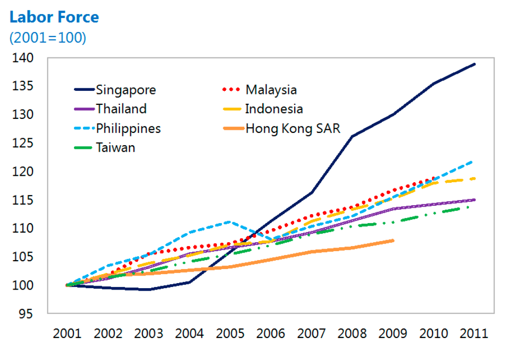
Sources: CEIC Data Company; and Haver Analytics.

Following a 20 percent increase since 2005, the REER is approaching its previous historical peak, seen in the aftermath of the Asian financial crisis. This increase reflects a faster pace of NEER appreciation and higher inflation in Singapore than in most other countries.

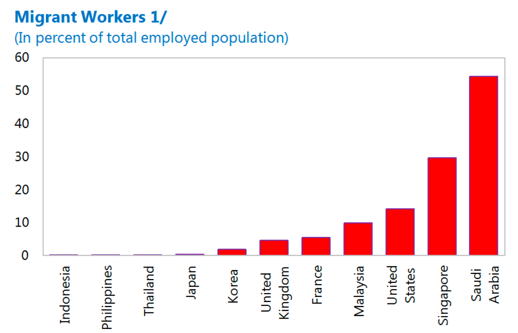
7. **As in many countries, income inequality has risen**. At more than US$50,000 in 2011, average per capita income is high. However, income dispersion is wide. According to Boston Consulting Group, Singapore has the highest proportion of households (15½ percent in 2010) with US$1 million or more in liquid assets. On the other hand, incomes of the lowest decile of households stagnated during the previous decade. As a result, the Gini coefficient rose rapidly in the early part of the 2000s. While it has moderated recently and is somewhat lower once net government benefits and employers' CPF contributions are included, it remains among the highest in Asia. Singapore's high degree of openness to trade and labor flows in the context of skill-biased technological

Box 2. Singapore: Macroeconomic Implications of Reliance on Foreign Workers

Background. To overcome domestic constraints on labor supply, Singapore has relied on large inflows of nonresident foreign workers (NRFWs), who now account for about one-third of the labor force (including highly-skilled permanent residents, the share rises to 40 percent). This is one of the highest shares in the world, with the exception of the Gulf countries. As a result, and despite slow growth of the local working-age population, Singapore's total labor force was among the fastest-growing in Asia during the past decade. NRFWs are regulated through a system of levies and quotas (dependency ratio ceilings) differentiated by skill level and sector of activity, with less-skilled workers subject to higher levies and stricter rules. As a share of employment, NRFWs have a very large presence in manufacturing and construction, but in absolute numbers, their presence is greatest in services (nearly half the total number, and thought to be predominantly in hospitality, domestic service, and retail).



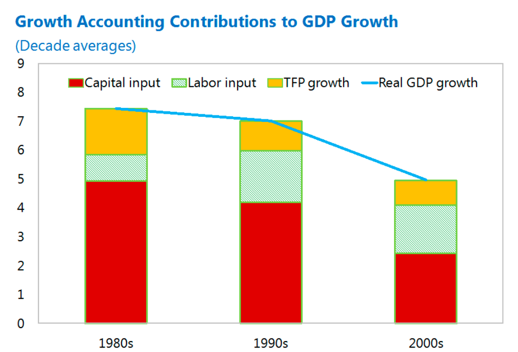
Sources: CEIC Data Company Ltd; and Haver Analytics.



Source: International Labor Organization.
1/ Based on latest available data.

Macroeconomic Implications.

- *Low productivity*. The contribution of total factor productivity to GDP growth declined steadily during the previous two decades, while labor's contribution to growth increased sharply. This may reflect that the large number of less-skilled workers obviated the need for efficiency-enhancing technologies and practices.



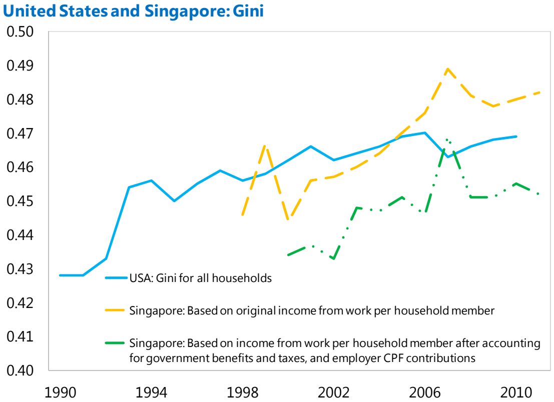
Source: Singstat Time Series.

- *Expand the wage distribution*. International competition for highly-educated professionals has aligned wages for foreigners and locals at the top-end of the income scale with those in other advanced economies. Meanwhile, recourse to the deep pool of less-skilled workers within Asia is thought to have pulled down the lower-end of Singapore's wage distribution toward levels prevailing in source countries. Also, given the very large pool of less-skilled workers, the supply of this type of labor in Singapore is likely to be highly elastic, suggesting that wages for workers in these segments may not be very responsive to domestic conditions.

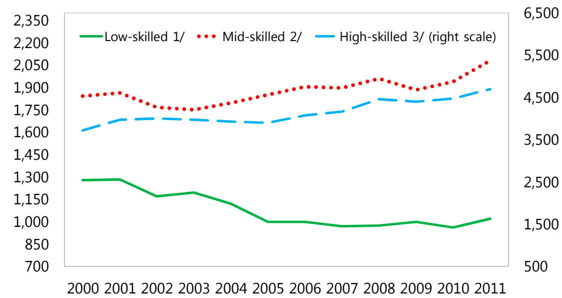
- *Subdue inflation and real appreciation*. Absorption of large numbers of less-skilled FWs in the nontradable sector restrained real unit labor costs, despite sizable wage increases in tradable sectors accompanied by large productivity gains. As a result, the path of the CPI-based real exchange rate was dampened.

Figure 3. Singapore: Social and Equality Indicators

United States and Singapore: Gini



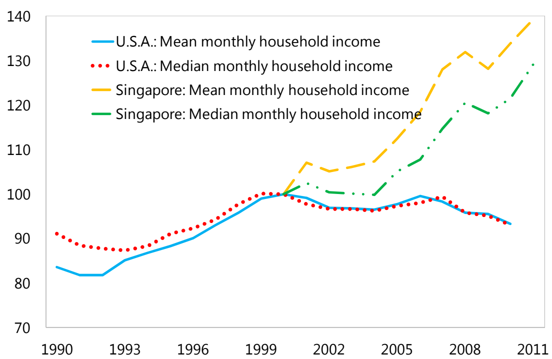
Weighted Gross Monthly Median Wages



Source: Singapore Department of Statistics.
1/ Low-skilled comprises of cleaners, labourers and related workers.
2/ Mid-skilled comprises of clerical & service workers, shop sales workers, production & craftsmen, plant/machine operators & assemblers.
3/ High-skilled comprises of managers, professionals, technicians.

United States and Singapore: Mean and Median Household Income

(2000=100)



Average Monthly Real Household Income by Decile 1/

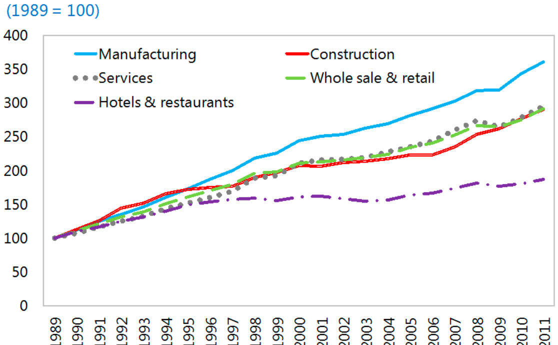
(1995 total = 100)

Decile	1995	2011	Cumulative Change (in percent) 1995–2011	2000–2011	2000–2006	2006–2011
Total	100.0	177.7	77.7	38.1	19.1	15.9
1st-10th	21.3	25.6	20.1	7.7	-3.4	11.6
11th-20th	34.4	46.9	36.3	16.8	2.0	14.5
21st-30th	45.1	68.4	51.7	26.4	9.1	15.9
31st-40th	56.6	87.4	54.6	28.5	10.8	15.9
41st-50th	68.9	108.6	57.7	31.1	12.9	16.2
51st-60th	82.8	132.5	60.1	31.5	13.8	15.5
61st-70th	99.2	164.0	65.3	33.4	15.3	15.6
71st-80th	123.0	208.9	69.9	35.6	18.1	14.8
81st-90th	155.7	300.9	93.2	45.1	26.9	14.4
91st-100th	304.1	687.3	126.0	58.8	33.3	19.1
Memo:						
Top dec/bottom dec	14.3	26.8				

1/ Income from work per household member in employed households. For 1995–2006, deflated by CPI for the respective income group (lowest 20 percent, middle 60 percent, top 20 percent). Thereafter, all incomes are deflated by headline inflation.

Average Nominal Monthly Earnings

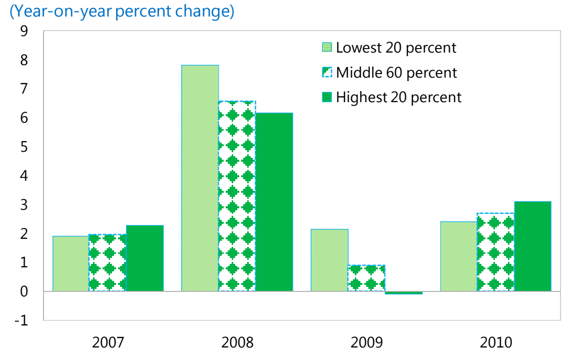
(1989 = 100)



Sources: Haver Analytics; and IMF Staff estimates

Inflation by Income Group

(Year-on-year percent change)



Sources: *Yearbook of Statistics of Singapore*.

change may have contributed to rising income inequality through a skill premium.[7] Growing inequality, and rising living costs and house prices were prominent issues during the May 2011 general election campaign, which saw the governing People's Action Party securing its lowest-ever share of the popular vote (60 percent).

NEAR-TERM OUTLOOK AND RISKS

Balance sheet repair in advanced economies and lingering risk aversion are contributing to a subdued growth baseline, and downside risks are elevated.

8. **Against the baseline of tepid global demand, the Singapore economy is projected to slow in 2012**. Following a strong outturn in Q1:2012 (10 percent, q/q s.a.a.r.), reflecting global restocking and recovery from regional supply disruptions, Singapore's high-frequency indicators have since moderated sharply, alongside weakening global activity and resurgent financial strains. Consistent with the current WEO baseline of temperate global demand during the remainder of 2012 and in 2013, domestic demand is projected to be the primary near-term driver of Singapore's growth, underpinned by low unemployment and negative real interest rates. As a result, staff projects annual growth to slip from about 5 percent in 2011 to just below 3 percent in 2012, and to pick up modestly to near 3½ percent in 2013. The current account surplus is expected to narrow slightly, to about 21 percent of GDP, as weaker net exports are largely offset by better terms of trade.

9. **Under this baseline, consumer price inflation is projected to remain elevated**. Core inflation will be fueled by wage pressures from more limited inflows of foreign workers (staff's baseline incorporates the effects of the authorities' policies in this area) amid a modestly positive output gap and an already tight labor market. Moreover, persistent increases in imputed rent[8] and a limited number of car permits available for auction will continue to pressure headline inflation. Staff projects inflation to average 4½ percent in 2012 (slightly down from the highs of 2011, largely on base effects), and remain broadly unchanged in 2013, with core around 3−3½ percent in both years.

[7] See "Growing Inequality in OECD Countries: What Drives It and How Can Policy Tackle It?," OECD (2011) for a discussion of the factors that have contributed to the global rise in inequality.

[8] While house price increases have recently eased, the impact on inflation will be lagged as imputed rent is based on existing rental contracts, which are renewed on a rolling basis.

10. **With several economic flashpoints abroad now looming, downside risks for the Singapore economy are large** (Appendix I). With trade in goods and services more than three times GDP, activity is very sensitive to cycles in world demand and swings in global sentiment. While severe global financial stress would trigger outflows from Singapore, a more contained event could conceivably induce safe-haven inflows into Singapore, cushioning the impact on growth, but possibly at the cost of reigniting domestic credit growth and real-estate prices. On the other hand, the trade channel would be unambiguously negative. Therefore, despite minimal direct exposure to peripheral euro area assets and little reliance on funding from euro area banks, an extreme euro event could impact Singapore on a scale similar to the Lehman episode. A combination of downside scenarios (significant escalation of the euro crisis, sharp slowdown in emerging markets, including China, and the U.S. fiscal cliff) remains an extreme—but plausible—tail risk for Singapore.

Authorities' Views

11. **The authorities broadly concurred with staff's views on the near-term outlook**. In light of the strong expansion in the first quarter of 2012, they expected growth for the year to come in at 1−3 percent. This would be underpinned on the supply side by robust expansion of services with a domestic or regional orientation (including tourism and finance), while manufacturing activity would be more sluggish. The authorities expect core inflation to remain elevated, with tight resource constraints pushing up prices, particularly in labor-intensive services, and with headline inflation also fueled by persistent increases in private transport and accommodation costs. For 2012, they are projecting headline inflation to be within 3½−4½ percent, with core inflation in the range of 2½−3 percent.

12. **The authorities consider developments in Europe the main risk to the outlook**. Because the situation in the euro area has unfolded gradually, they noted that market participants have had time to build buffers and reduce positions, with the result that the global credit crunch would unlikely be as severe as in late 2008-early 2009. While seen as a low probability event, the authorities consider a protracted period of depressed growth as most worrisome. A sharp slowdown in China would also be problematic through trade and tourism channels, but the authorities view a soft landing as their base case.

MACROECONOMIC IMPLICATIONS OF THE AUTHORITIES' PRODUCTIVITY PUSH

In 2010, the government initiated a program to reinvigorate labor productivity, which had grown much more slowly during 2000–10 than in previous decades.

13. **Productivity strategy**. The 2010 report by the Economic Strategies Committee identified growth through skills and innovation as the most suitable approach to deliver sustainable and inclusive economic development. Implementing this strategy entails the following elements:

- **Managing the dependence on foreign workers**. Since 2010, the authorities have raised in a series of steps the levies firms pay on their nonresident foreign workers. In addition, the 2012 Budget lowered the ceiling on the share of nonresident foreign workers permitted in each firm ("dependency ratio").[9] Firms have until June 2014 to comply with these new quotas for their existing foreign workers, but are not allowed to bring in additional foreign workers beyond the new ceilings from July 2012. This tightening will affect mostly low-skilled foreigners and small, labor-intensive firms. The levies and quotas are intended to bring the growth rate of foreign workers into line with the much slower increase in the resident labor force, keeping the economy-wide foreign worker share around the current one third. While higher levies appear not to have dampened demand for foreign workers,[10] the authorities expect that lowering quotas will be more effective. They also anticipate that the resulting tighter labor market will raise real wages and that, in turn, will support productivity gains by encouraging investment in physical and human capital, as well as other labor-saving techniques.

- **Complementary policies**. Numerous supporting programs have been adopted to incentivize companies—especially SMEs—to upgrade technology and employees' skills, and to encourage workers to seek additional training. These include rebates and tax relief for firms for purchasing productivity-enhancing capital goods and for various skill-upgrading programs, and subsidies and/or stipends for workers participating in numerous government-organized specialized training programs targeting the employed and the unemployed.

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[9] The dependency ratio was reduced from 65 percent to 60 percent for manufacturing firms and from 50 percent to 45 percent for service-sector firms.

[10] This may reflect that levies were insufficiently high to offset the cost advantage for employers of not having to contribute, in the case of foreign employees, to the Central Provident Fund (CPF, Singapore's mandatory defined-contribution pension scheme). Also, to the extent that employers have monopsony power, at least part of the levies could be passed on to workers in the form of lower net wages, thereby mitigating the impact on employment costs.

14. **Amid a tight labor market, these policies will have wide-ranging macroeconomic effects**. Achieving the anticipated productivity gains will be critical to the long-term success of the strategy; however, these gains may not fully offset the effect on potential growth from the much-slower labor force expansion under the new policy. The timing of the productivity gains will also be key, with important macroeconomic effects taking place during the transition:

- During the transition, real and nominal wages—especially for lower-skilled employees—will rise as the rate of increase in the labor supply is curtailed. With productivity gains occurring only with a lag, potential growth will be scaled down and unit labor costs will increase. Therefore, the output gap will be larger than otherwise and, despite weak aggregate demand, core inflation will remain elevated.[11] The current account surplus will narrow as higher wages and prices of domestic goods raise demand for imports and weaken demand for exports.

- Over the longer term, higher real wages and policies to support training, automation, and efficiency can be expected to boost capital accumulation and total factor productivity. This will lead to some recovery in potential growth (although it is likely to remain below the level achieved under the previous labor-intensive growth model) and moderation of unit labor costs. Thus, the output gap will narrow and core inflation will subside. Nonetheless, compared with the counterfactual where the labor force continues to grow rapidly, the level of the real exchange rate will be permanently more appreciated, helping to narrow the current account surplus.[12]

15. **Policies should aim to contain the costs of transitioning to the new growth model**.

- Only a modest number of firms and workers are likely to be directly impacted by the tighter quotas on foreign workers. However, owing to the resulting increase in wages, the effects will be felt more broadly, with an increase in frictional unemployment as firms with relatively more elastic demand for labor shed workers to firms whose labor demand is less elastic. The size and duration of frictional unemployment will depend on how much wages increase (which will tend to be larger when unemployment is low, as at present), the efficiency of job search by laid-off workers, and how quickly productivity gains are achieved.

[11] However, headline inflation moderates in the near term on slowing real estate price growth.

[12] Because most foreign workers are treated as residents for balance of payments purposes, their compensation is not recorded in the primary income balance of the current account. Only money they remit abroad is it recorded (as a transfer outflow in the secondary income account). Despite the large share of foreign workers in the labor force, related current account outflows were a modest 4.7 percent of GDP in 2011. With the share of foreign workers to be kept broadly constant under the new policy, the sum of income and transfers is forecast to moderate by only 0.2 percentage points of GDP (to 4.5 percent of GDP) by 2015, and to stabilize at that level thereafter.

- Provided they are well targeted, the authorities' complementary measures promoting upgrading of skills and technology will facilitate firms' and workers' adjustment to the higher wage setting. Consideration could also be given to introducing a modest, means-tested and publicly-funded unemployment protection scheme, with benefits ideally linked to job search and/or training. This would enhance efficiency by encouraging workers to seek alternative employment better suited to their skill set, while also limiting the social cost of transitioning to the new growth model. Introducing a publicly-funded pension system for the elderly poor would help cushion the social impact on older workers laid off in the restructuring.

Authorities' Views

16. **The authorities concurred with staff's assessment of the economic effects and transition costs of the new growth model**. Slowing the intake of foreign workers was seen as necessary to alleviate overcrowding and consistent with the focus on productivity-driven growth, which will concurrently support sustainable wage growth, in particular for lower-income Singaporeans. This is also expected to better align the skills of labor force entrants with Singapore's innovation-based economy. They noted the sizable productivity gap relative to other advanced economies, especially in the labor-intensive sectors. Closing this gap over a decade was seen as delivering productivity growth of 2–3 percent per year, significantly higher than the rate of the previous decade. While slower labor force growth would dampen potential GDP growth to 3–5 percent, productivity improvements would contribute a larger proportion of GDP growth and support wage growth.

17. **The authorities have put in place measures to help companies and workers adjust, as well as to mitigate transition costs, and are prepared to consider further measures if necessary; however, they are not in favor of institutionalizing publicly-funded unemployment and old-age pension benefits, as called for by staff**. The authorities instead emphasize education, skills upgrading, and job creation to ensure that the number of unemployed workers remains low, thereby preserving resources for helping unemployed workers train and find jobs quickly. As for old-age pension benefits, the authorities highlighted that the Workfare Income Supplement bolstered pension savings, while existing policies to promote home ownership and encourage the

elderly to move into smaller homes so as to monetize part of their housing assets provides an additional nest-egg in retirement. There are also schemes to provide additional financial assistance to unemployed workers and the elderly, but these are not granted automatically and must be applied for. The authorities thus see their approach as one that targets resources where they are most needed and provides assistance in a manner that avoids reliance.

SAFEGUARDING MACROECONOMIC AND FINANCIAL STABILITY AMID ABUNDANT REGIONAL LIQUIDITY

A. Macroeconomic Policies

Macro policies confront the challenge of containing inflation expectations while accommodating the authorities' productivity push against a backdrop of loose international monetary conditions.

18. **Context**. A restrictive policy stance is appropriate during the next few years under the baseline scenario of a positive output gap. However, some temporary increase in core inflation should be allowed to accommodate the increase in relative prices (in the context of downward price rigidity) coming from the tighter foreign worker policy in order to signal resource scarcity and stimulate behavioral shifts.[13] Nonetheless, given the risk of second round effects through entrenchment of higher inflation expectations, it is essential that other sources of inflation, including from real estate and transport costs, be forcefully tackled through macroprudential policy and more predictable supply of housing and car permits in order to limit speculative behavior. In the near term, fiscal policy should contribute to the restrictive policy stance in order to ease the burden on monetary policy in the context of ample global liquidity.

[13] If, on the other hand, inflation was not permitted to rise in response to the labor supply shock and at a time of broad-based price pressures and tight factor markets, this would require compressing aggregate demand below the now-lower level of potential output. The permissible increase in core inflation (relative to the counterfactual of no change in the foreign worker policy) depends on the marginal contribution of unit labor cost increases to inflation in the absence of an offsetting monetary policy response.

19. **Monetary policy**. The authorities' April 2012 decision to tighten by modestly increasing the pace of NEER appreciation (to around 2.5−3 percent per annum) and narrowing the band reverses the loosening introduced at the time of the global financial turmoil of late 2011 (Box 3).[14] In view of the subdued outlook for demand, and despite the tighter labor supply conditions that will restrict potential output, this policy stance is sufficient to keep the output gap contained while limiting second round inflation effects. However, upside risks to inflation will remain in a setting of loose global monetary conditions and domestic supply constraints on housing and car permits. Calibrating monetary policy would be more challenging if tightening (through faster appreciation) were to attract additional yield-seeking inflows that fuel asset prices and subsequently spill over to generalized inflation.[15] The authorities' approach of complementing monetary policy with macroprudential tools is therefore appropriate, and consideration should also be given to more active use of liquidity-absorbing instruments.

20. **Fiscal policy**. The FY 2012 Budget appropriately entails a slightly restrictive fiscal stance (a negative impulse of ⅓ percent of GDP). In addition, the Budget contains several new spending initiatives in support of the authorities' productivity push and to strengthen the social safety net for the poor (including new permanent income support payments and expanded subsidies for healthcare and education). Over the medium term, a permanently looser structural fiscal stance is warranted to help narrow the current account surplus and to accommodate further expansion of the social safety net to reduce inequality. Some increase in spending will come endogenously as rapid population aging raises demand for public spending. The government's intention to increase spending over the medium term is therefore a positive step, provided it is not offset by higher structural operating revenue.[16]

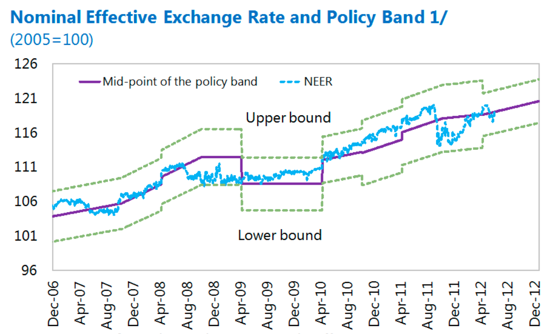
[14] With the exchange rate close to the middle of the band (and still weaker than in August 2011), the decision did not immediately impact the exchange rate. However, relative to the counterfactual, a steeper slope—combined with the narrower band—implies a more appreciated future exchange rate path.

[15] Monetary tightening is more likely to lead to additional inflows when: (i) the tightening is not synchronized with other countries in the region; and (ii) (as is currently the case) when nominal interest rates are very close to the zero bound, thereby limiting scope for the uncovered interest rate parity-implied decline in the nominal interest rate.

[16] Given the tendency to run budget surpluses (based on standard fiscal accounting conventions), there is room to increase spending without raising taxes while still adhering to the fiscal rule that requires avoiding a cumulative deficit over the term of any one government.

Box 3. Singapore's Monetary Policy Framework

Features. Since 1981, monetary policy has focused on managing the nominal effective exchange rate (NEER) using a basket-band-crawl (BBC) approach, with the primary objective of "maintaining price stability conducive to sustainable growth of the economy." The key parameters of the framework—none of which are publicly disclosed—are: (i) the *basket* (a trade-weighted set of currencies); (ii) the *band width* within which the NEER is allowed to fluctuate; and (iii) the *crawl or slope* (the rate by which the band's limits and mid-point change—typically appreciate—over time).

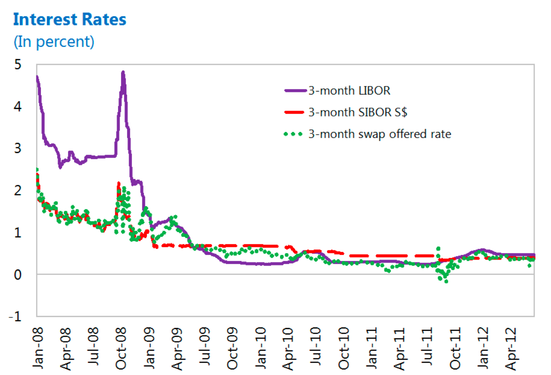


Sources: IMF, *Information Notice System*; and staff estimates.
1/ Mid-point, lower and upper bounds of the policy band are staff estimates.

Policy adjustment. Monetary policy decisions are typically taken bi-annually, in April and October. However, off-cycle decisions can be made at any time. Policy changes are effected by altering the slope, width, and/or center of the band. For instance, a policy tightening might entail steepening the slope and/or re-centering the band in the direction of more appreciation. On the other hand, widening (narrowing) the band is done to allow more (less) flexibility in times of heightened volatility (relative calm). The MAS's public statement accompanying its policy decision describes in qualitative terms the changes to the BBC parameters (e.g., increase the pace of appreciation of the band," "narrow the band," "re-center the band upwards"), but the specific magnitudes are not revealed.

Implementation. Exchange rate policy is implemented through sales and purchases of U.S. dollars (US$) in the spot and forward FX markets. Intervention occurs not only at the edges of the band, but also in the interior, for example, to reduce exchange rate volatility. Some FX intervention is sterilized through cross-currency swaps (a combination of spot and forward FX transactions). More generally, the MAS manages S$ liquidity using standing facilities, as well as collateralized and uncollateralized money market operations (lending/borrowing in the interbank market, sales/purchases of government paper and MAS bills, and repos/reverse repos).

Benefits. In Singapore's small and highly-open economy, the exchange rate has a significant influence on inflation and growth. This occurs through: (i) the direct effect on import prices, and hence near-term inflation; and (ii) changing the price of domestically-produced goods and services relative to those produced abroad that, in turn, affects domestic and external demand for products made in Singapore, and hence activity and inflation over the medium term. Ultimately, the framework should be assessed based on Singapore's inflation and growth performance: between 1981 and 2008, CPI inflation averaged less than 2 percent (although it has been higher more recently), while real GDP growth averaged 7 percent. Unemployment has also been low.



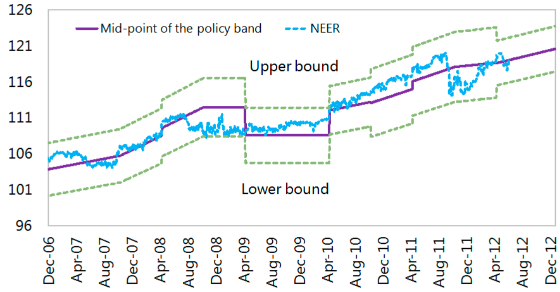
Sources: Bloomberg L.P.

Possible shortcomings. Consistent with the monetary policy trilemma, in the context of an open capital account, targeting an exchange rate path implies ceding control of interest rates. Hence, S$ interest rates are largely determined by US$ interest rates and investor expectations of future changes in the Singapore dollar. Therefore, with US$ LIBOR rates currently close to the zero bound, short-term S$ interest rates are at historical lows, and the swap-offer rate (SOR, the cost of synthetically borrowing S$ by borrowing US$ and swapping into S$) even turned negative on occasion in 2011 when the MAS increased the pace of appreciation. Thus, tightening monetary policy by steepening the slope of the exchange rate band may reduce domestic interest rates and could stimulate interest-sensitive demand, including for assets.[1/] To offset this effect, macroprudential measures are used to moderate demand for real estate and credit.

[1] Similarly, note that under an interest rate-based monetary policy, tightening by raising the interest rate is expected to lead to faster subsequent depreciation, thereby mitigating some of the initial tightening brought by the higher interest rate.

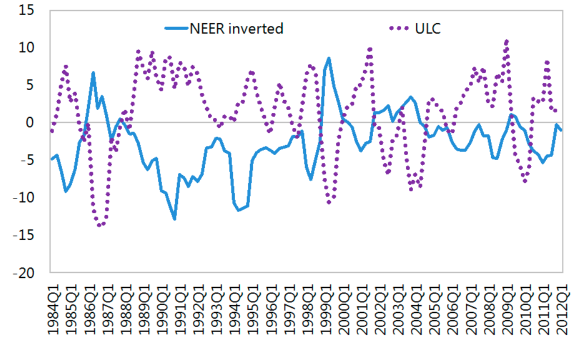
Figure 4. Singapore: Monetary Policy

Nominal Effective Exchange Rate and Policy Band 1/
(2005=100)



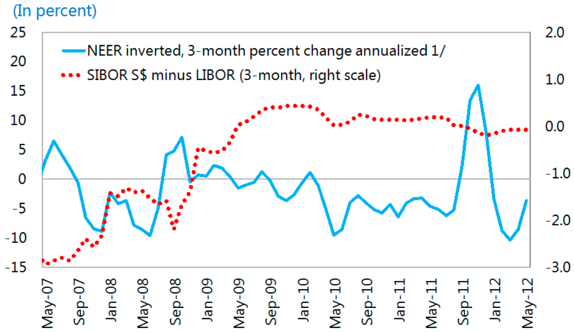
Sources: IMF, *Information Notice System*; and staff estimates.
1/ Mid-point, lower and upper bounds of the policy band are staff estimates.

NEER and ULC Indices
(Year-on-year percent change)



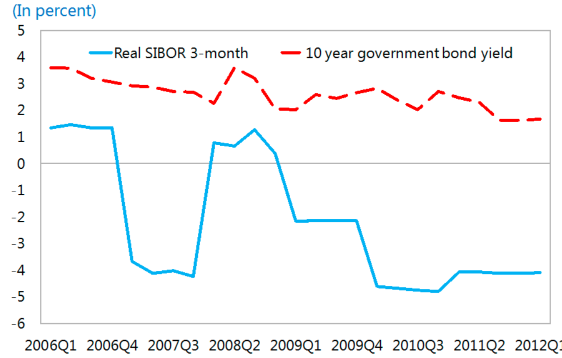
Sources: Singapore Department of Statistics ;CEIC Data Co., Ltd.; and IMF Staff estimates.

Interest Rates and NEER
(In percent)



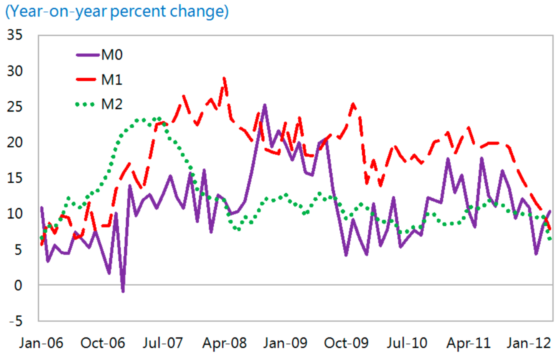
Sources: CEIC Data Co. Ltd.; Bloomberg LP; and IMF, APDCORE database.
1/ Positive change implies depreciation.

Real Interest Rate and Government Bond Yield
(In percent)



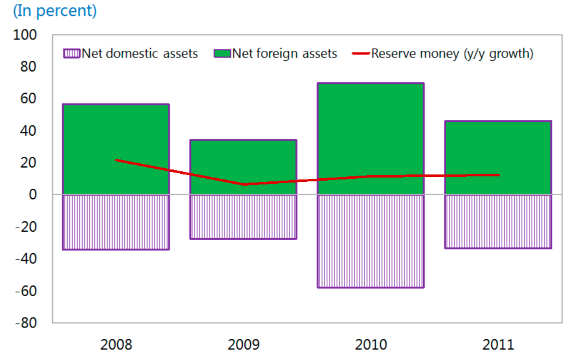
Sources: Bloomberg LP; and CEIC Data Company Ltd; and IMF staff estimates.

Monetary Aggregates
(Year-on-year percent change)



Sources: CEIC Data Company Ltd.

Contribution to Reserve Money Growth
(In percent)



Sources: CEIC Data Company Ltd.

Authorities' Views

21. **The authorities were in broad agreement with staff's views on macroeconomic policies**. They intend to temper—but not fully offset—the inflationary impact of the tighter foreign worker policy. They concurred that the low global interest rate setting has made policymaking more challenging and, in response, the MAS has reacted more quickly and decisively to inflation pressures. Nonetheless, monetary policy decisions remain focused on delivering the desired growth and inflation combination, and are not subsumed by capital flow considerations, which are managed with macroprudential tools. However, they noted that the 2010 introduction of short-term MAS bills was in part motivated by the need to sterilize capital inflows. On fiscal policy, they noted the Budget's focus was not on short-term demand management, but on achieving longer-term structural goals of enhancing productivity growth, reducing transition costs, and strengthening social safety nets. To complement the numerous initiatives introduced in the 2012 Budget, the government will be increasing fiscal spending by 1−2 percentage points of GDP over the next five years (including doubling health expenditure, partly an endogenous response to population aging, as well as significant increases on education, housing and transport infrastructure). The government expects to have sufficient revenues to fund the expenditure growth for the next five years, but new sources of revenue may be needed beyond that.

B. Financial Sector

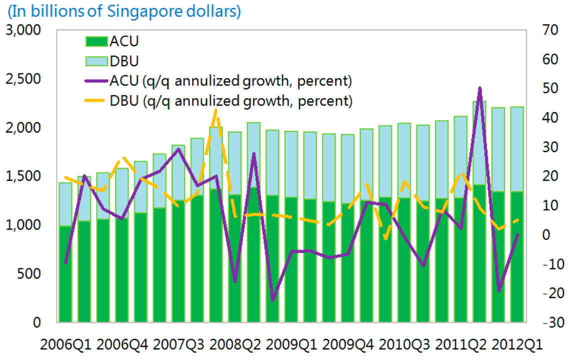
Despite important strengths in the financial sector, vigilance is warranted to deal with remaining domestic and cross-border risks. An FSAP Update is scheduled for 2013.

22. **Property market**. Real estate prices have stabilized since late 2011 following several rounds of macroprudential measures and weakening local and regional sentiment (Text Table 1).

- The large and variable share of foreign and corporate purchasers of housing indicates the importance of external factors and capital inflows in the demand for, and prices of, Singapore real estate (Appendix II). The imposition of additional stamp duty for foreigners and corporates on the full price of the residential property, and at both buying and selling legs, appears to have been effective at dampening foreign demand and stabilizing prices, as evidenced by the sharp drop in foreign buyers so far in 2012, particularly from China. However, a similar trend was also apparent in Hong Kong SAR, suggesting that external factors were also at play.

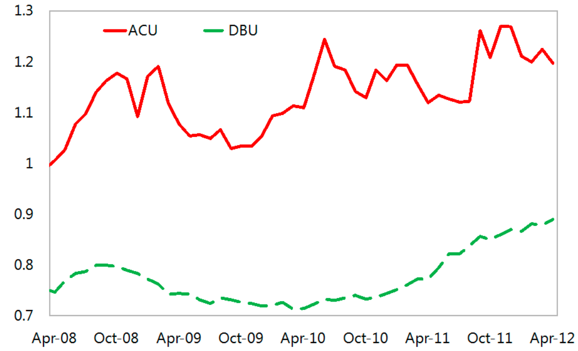
Figure 5. Singapore: Banking Sector 1/

Banking Sector: Combined Assets
(In billions of Singapore dollars)



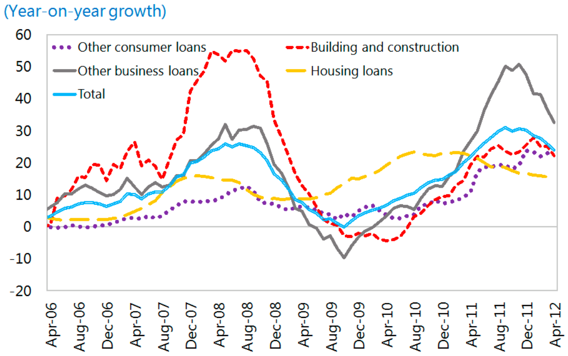
Sources: CEIC Data Company Ltd.

Banking Sector: Loan to Deposit Ratio



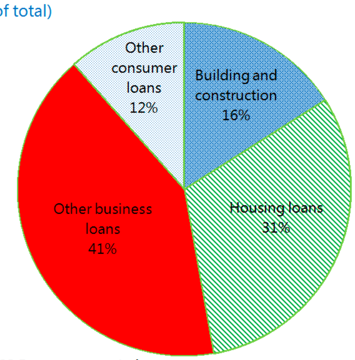
Sources: CEIC Data Company Ltd.

DBU Loans and Advances by Sector
(Year-on-year growth)



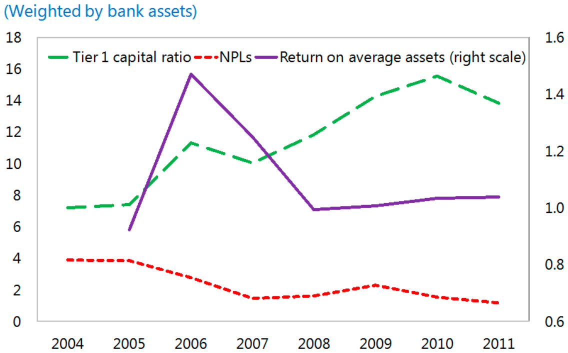
Sources: CEIC Data Co. Ltd; and IMF staff estimates.

DBU Loans and Advances by Sector
(In percent of total)



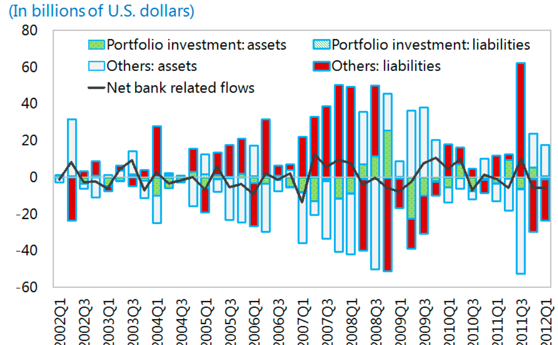
Source: CEIC Data company Ltd.

Domestic Banks: Tier 1 Capital Ratio, NPLs, and Return on Assets
(Weighted by bank assets)



Sources: Bankscope; and IMF staff estimates.

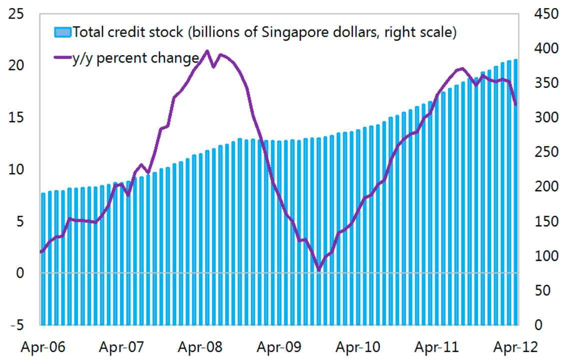
Gross Bank-Related Financial Account Flows
(In billions of U.S. dollars)



Sources: CEIC Data Company Ltd.

Figure 5. Singapore: Banking Sector (Concluded) 1/

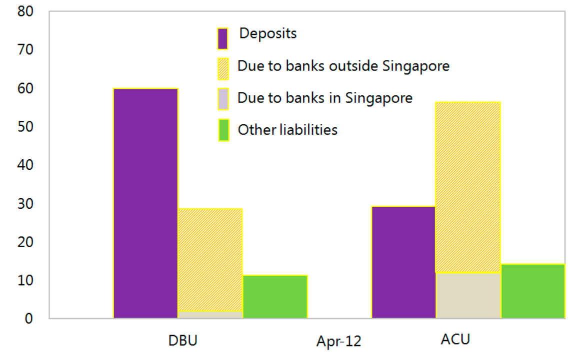
Credit to the Private Sector



Source: CEIC Data Company Ltd.

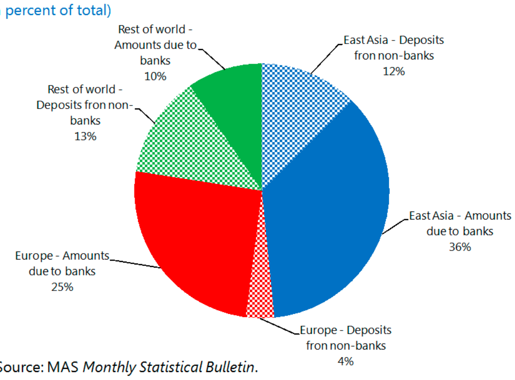
Funding Structure of the Banking System

(In percent of total liabilities)



ACU Funding Sources by Region, March 2012

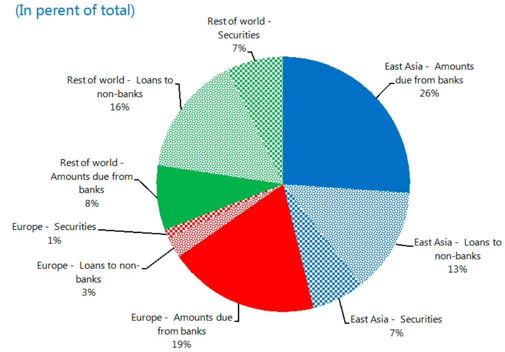
(In percent of total)



Source: MAS *Monthly Statistical Bulletin*.

ACU Use of Funds by Region, March 2012

(In perent of total)



Source: MAS *Monthly Statistical Bulletin*.

1/ Asian currency unit (ACU) banking books are for non-Singapore dollar transactions, while domestic banking unit (DBU) books may include transactions in Singapore dollars and other currencies. Historically, ACU and DBU were analogous to offshore and domestic banks, respectively. More recently, banks with full banking licenses could maintain both DBU and ACU books, and DBU books are not restricted to Singapore dollar activities. Thus, while the ACU-DBU distinction has become blurred, and an alternative classification would be more economically relevant, data are available only according to the ACU and DBU classification.

Text Table 1. Singapore: Property Market Measures

Date	Measure
September 2009	The *interest absorption scheme* (allowing some deferment of principal payments) and *interest-only housing loans* for private residential projects were disallowed.
February 2010	*Loan-to-value (LtV) ceilings* were lowered to 80 percent from 90 percent for all housing loans provided by banks (including for HDB flats). A *seller's stamp duty (SSD)* was introduced on private residential properties sold within one year of purchase at the rate of 1 percent for the first S$180,000, 2 percent for the next S$180,000, and 3 percent for the remaining balance.
August 2010	*LtV ceilings* were reduced from 80 percent to 70 percent for buyers with at least one existing mortgaged property.. The *SSD* was extended to sales within three years of purchase, with rates depending on the holding period (3 percent if sold within one year of purchase, 2 percent within the 2nd year after purchase, and 1 percent within the 3rd year after purchase). For buyers with at least one existing mortgaged property, the *minimum cash payment not sourced from CPF savings* was increased from 5 percent to 10 percent of the purchase price.
January 2011	The *SSD* was extended to sales within four years of purchase, with the rates raised to 16 percent, 12 percent, 8 percent, and 4 percent correspondingly. *LtV ceilings* were lowered to 60 percent for individuals with at least one existing mortgaged property and to 50 percent for corporates.
December 2011	An *additional buyer's stamp duty* on residential property purchases was imposed (in addition to the existing duty of up to 3 percent). The rate is 10 percent for foreigners and corporate entities buying any residential property, 3 percent for permanent residents buying their second or subsequent property or for Singapore citizens buying their third or subsequent property.
2009-present	*Supply of public housing and land* sold to private developers has been increased.

- With resident households accounting for the majority of buyers of private and resale public housing, real estate poses a concentration risk for banks and resident households. Property-related loans account for about 40 percent of total loans of Singapore's big 3 banks, and half of household wealth consists of property. While the loan-to-value (LtV) ratio of bank mortgages averages 42 percent (well below the regulatory limit of 80 percent for first properties and 60 percent for subsequent properties), this reflects in large part the automatic adjustment of LtVs on the mortgage stock to increases in the house price index but does, nonetheless, provide banks a sizable buffer in the event of house price declines. Housing affordability—as given by the debt servicing ratio (DSR) on bank-provided mortgages—has been supported by historically-low interest rates (currently 1⅓–2 percent). However, the recent surge in "shoe box" apartments may be seen as a way to further increase affordability. Recent stress tests by banks and the MAS suggest banks are buffered against a spike in interest rates and unemployment. However, staff expects that mortgage quality is likely to be more vulnerable to a prolonged rise in unemployment and fall in real wages.

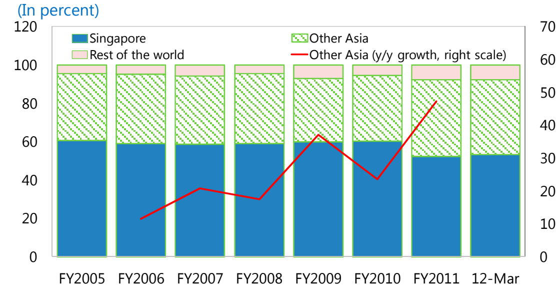
- If house prices were to reaccelerate, additional macroprudential measures should be introduced that target demand at its source. In the case of externally-driven demand, which tends to be foreign financed, a further temporary increase in stamp duties on businesses' and foreigners' real estate purchases and sales could subdue demand. On the other hand, in the case of local demand that more typically depends on bank credit, household debt to income limits may be effective. In addition, higher risk weights on mortgage loans, together with dynamic provisioning of real estate loans or a countercyclical housing-sector capital buffer, would strengthen banks' resilience to house price volatility.

23. **Regional credit expansion**. While lending to residents by the big 3 Singapore banks has slowed, their foreign-currency loans to borrowers elsewhere in the region, especially China, have grown rapidly (although it eased in recent months) (Box 4). Most of these external loans are trade-finance related, denominated in U.S. dollars (US$), and with a maturity of 6 months or less. These loans are funded mainly from banks' ample Singapore dollar (S$) deposit base, which they swap mainly into US$. As a result, local banks' non-Singapore dollar loan-to-deposit (LtD) ratio has increased to about 125 percent. To reduce overreliance on the foreign-currency swap market and limit duration mismatch, at the urging of the MAS, banks have issued short- and longer-term US$-denominated debt in the capital markets. As domestic banks further expand their presence in regional trade-related finance, this process should continue. While trade finance is typically collateralized, lending to new markets may entail additional counterparty and settlement risk.

Box 4. Singapore Banks' Regional Expansion

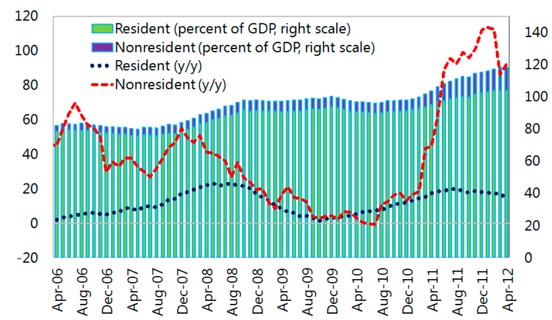
Background. In recent years, Singapore's three large locally-incorporated banks—DBS, OCBC, and UOB—have actively increased their footprint in the region, particularly in China. Part of this reflects acquisition of foreign banks and organic growth by subsidiaries and branches abroad, funded largely by deposit collection in host countries' currencies.[1/] But the regionalization has more recently entailed direct cross-border lending by the Singapore-based parent. Notwithstanding rapid credit growth to Singapore citizens, averaging 16 percent per annum during 2010–11, loans to customers outside Singapore grew at a much faster 80 percent.[2/] As a result, the share of loans to nonresidents in banks' total customer loans rose from 9 percent at end-2009 to 19 percent at end-2011. Most of this credit is denominated in U.S. dollars.

Big 3 Singapore Incorporated Banks: Customer Loans by Booking Location 1/
(In percent)



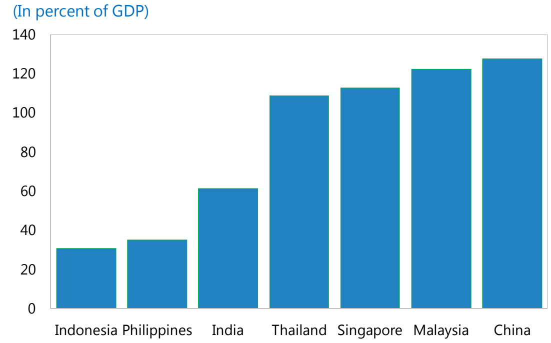
Sources: Bloomberg LP; and IMF staff estimates.
1/ Based on weighted average of consolidated bank-group data for DBS, UOB, OCBC, using bank shares in total customer loans as weights. Data for UOB only available from 2009.

DBU Loans and Advances by Borrowers' Residence
(In percent)



Sources: CEIC Data Co. Ltd; and IMF staff estimates.

Credit to Private Sector, 2011
(In percent of GDP)



Source: CEIC Data Company Ltd.

Drivers. Several factors have motivated this growing regionalization:

- *Mature domestic credit market and relatively under-banked neighbors*. Loans to Singapore residents are relatively high at 120 percent of GDP (including HDB mortgage loans), and net interest margins have been compressed on strong competition to below 1.9 percentage points, making further credit penetration of the Singapore market less profitable. By contrast, other countries in the region (particularly China and Indonesia) have less-developed credit markets along with dynamic economies. Greater focus on emerging Asia also serves as a risk diversification strategy, although interconnectedness among these economies is rising.
- *Trade interconnectedness*. Growing trade linkages within ASEAN, and between ASEAN and East Asia (notably China), has increased demand for trade financing. According to Fitch Ratings, the recent boom in Singapore banks' cross-border lending has been driven by short-term (typically 180 days), collateralized, U.S. dollar-denominated trade financing to top-tier and state-owned enterprises in China.
- *Singapore banks' excess liquidity and European bank deleveraging*. Singapore banks hold excess liquidity buffers of more than 9 percent of qualifying liabilities (equivalent to S$50 billion), mostly in Singapore dollars. At the same time, the scaling back by European banks from trade finance within Asia has provided an opportunity for Singapore banks and others to increase their market share in the region.
- *Monetary policy tightening in China*. Tighter administrative limits on loan growth in China during 2010–11 caused credit demand from Chinese corporates to spill over to banks abroad. In addition, market sources indicate that part of the U.S. dollar-denominated trade credit activity was a form of carry trade that provided the borrower a short US$ position secured against an RMB-denominated asset. This allowed the borrower to benefit from the interest differential and expected appreciation gains on the renminbi. Changing economic conditions have recently reduced the attractiveness of this arbitrage play.

1/ See Fitch Ratings, *"Singapore Banks: Becoming Regional Players,"* Special Report, May 2012.
2/ This is approximated by domestic banking units' loans and advances to nonresidents.

24. **Financial sector's exposure to Europe**. Euro area banks' involvement in Singapore banking activity (directly, or via the interbank market) is limited, although euro area banks provide 7 percent of loans to Singapore nonbanks (reduced by half from 2008).[17] However, European banks more broadly—including Swiss and UK banks—play a considerably larger role, primarily in the offshore segment, where branches of foreign banks are key players. Since the onset of the global financial crisis, European interbank lending to Singapore offshore banks has increased considerably, but recent deleveraging pressure has resulted in a nearly 18 percent decline since September 2011. In the event of renewed euro area turbulence that spills over to other European banks, further deleveraging from Singapore is possible, even though European banks are likely to want to preserve their presence in Asia. Going forward, funding conditions at foreign bank branches and at the consolidated group level will require continued close monitoring and coordination with home supervisors.

Authorities' Views

25. **While continuing to closely monitor and respond preemptively to financial sector developments, the authorities consider that financial sector risks are contained**.

- The stability of local banks is reinforced by their stable funding base, with nonbank deposits accounting for 80 percent of total funding. Moreover, local banks are well capitalized and are in a strong position to meet the Basel III capital requirements. In fact, local banks will be required to meet these minimum capital requirements by the start of 2013, two years ahead of the Basel Committee on Banking Supervision's timeline.

- The authorities noted that real estate exposure for the entire banking system (domestically oriented and offshore banks) remains stable and low, at 28 percent of loans to nonbanks. Excluding residential mortgage loans extended for owner-occupied property (representing about 44 percent of total real estate exposure), which carries a lower risk profile, real estate exposure of the banking system is about 15 percent of loans to nonbanks. The MAS estimates that the mortgage DSR would remain in line with international benchmarks at 35–40 percent even under a severe stress scenario in which interest rates rise above 7 percent. Nonetheless, the authorities are committed to adopting, if needed, additional measures to promote a stable and sustainable property market.

[17] Euro area exposure accounts for less than 6 percent of Singapore banking system assets (of which the euro periphery is less than ½ percent of total assets). The euro area supplies about 7½ percent of Singapore banks' total funding. However, euro area banks are large players in Singapore's over-the-counter derivatives market, being counterparties to 14 percent of contracts (with other European banks accounting for an additional 26 percent).

- On credit expansion to the region, the authorities noted this reflects Singapore's role as an intermediary in ASEAN-China trade. Banks' direct exposures are mainly to large, reputable Singapore or multinational corporates, with credits generally well collateralized. The MAS is engaging closely with the banks on their management of U.S. dollar liquidity risk.

- Regarding risks from European bank deleveraging, the authorities stressed that they continue to monitor very closely euro area banks and the financial positions of their local branches, including the level of funding from Head Office and liquidity positions. The MAS has the authority to impose additional prudential requirements on the foreign banks in Singapore (e.g., require branches to maintain assets against their liabilities by an appropriate margin).

C. Policies to Mitigate the Effects of Downside Events

Singapore has large buffers and significant policy room to dampen the immediate and longer-term effects of a sharp global slowdown or financial turmoil.

26. As in 2008–09, the response should focus on preserving the private sector's economic and financial infrastructure to facilitate a rapid recovery when demand subsequently resumes, while providing an adequate social safety net:

- The exchange rate-based monetary policy and large stock of reserves provide flexibility. Various forms of domestic- and foreign-currency liquidity support may be used to reduce financial market stress.

- A structural fiscal loosening should focus on preserving employment and access to credit (particularly for SMEs), and providing temporary income support to poorer households.

- In the event of extreme global financial stress, adequate legal and fiscal scope exists for a broad set of crisis-management measures to support financial stability.

Authorities' Views

27. **The authorities reiterated their view, expressed during the previous consultation, that they have ample policy space and instruments to address the impact of negative shocks**. They noted their response would be carefully tailored and calibrated to the specific unfolding circumstances, and hence may not necessarily duplicate their 2008–09 measures.

EXTERNAL SECTOR ASSESSMENT

28. **Background**. Singapore has consistently run a current account surplus of 20 percent of GDP or more, reflecting an even-stronger trade balance. In addition, Singapore has a large positive net IIP position (268 percent of GDP), despite a sizable stock of inward FDI, owing to considerable official foreign assets held in the form of central bank reserves and in two sovereign wealth funds (Text table 2). The very large, short-term gross non-FDI liabilities of more than 450 percent of GDP could nonetheless pose some vulnerability, although this is mitigated by large official reserve holdings (95 percent of GDP) and other official liquid foreign assets.

29. **Assessment**. Singapore is a very small, very open economy that serves as a regional financial center. The resulting vulnerability to global cycles warrants large reserve buffers to prevent disruptive adjustments in times of heightened volatility. Indeed, Singapore's top sovereign investment rating is predicated in part on its exceptionally strong external finances. Nonetheless, current levels appear adequate, and there is no clear case for further reserve accumulation for precautionary purposes. More generally, from a multilateral perspective, the external position appears overly strong, with the real effective exchange rate around 0−15 percent weaker than warranted by medium-term fundamentals (including rapid population aging) and desirable policies.[18] In addition to the strength induced by large fiscal deficits in major advanced economies, the strong external position is driven by structural factors and policies that boost the private and public saving rates.

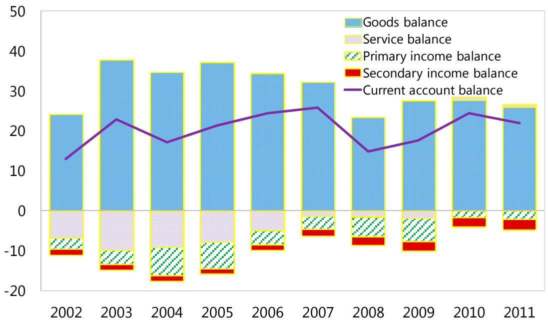
30. **Adjustment involves policy changes domestically and abroad**. Part of the needed adjustment could come from fiscal consolidation in advanced economies. In addition, increased public spending that is not compensated with higher tax revenue, and higher real wages for lower income segments with higher marginal propensities to consume (as a result of slower inflows of foreign workers) would help moderate the current account and slow accumulation of foreign assets. Aging will also contribute to narrowing the current account over the longer run,[19] as would a more even distribution of consumption across generations.

[18] This numerical range is based on Fund staff analysis in the Pilot External Sector Report (IMF Policy Paper, July 2, 2012, http://www.imf.org/external/np/pp/eng/2012/070212.pdf), and thus is preliminary.

[19] Among a sample of 51 advanced and emerging market economies, Singapore has the highest projected aging speed, defined as the expected change in the old-age dependency ratio over the next 20 years, according to the U.S. Census Bureau.

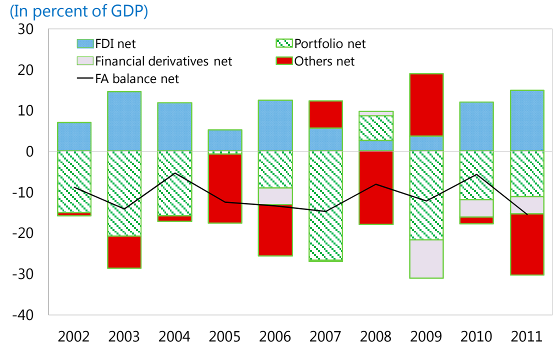
Figure 6. Singapore: External Sector

Current Account Balance
(In percent of GDP)



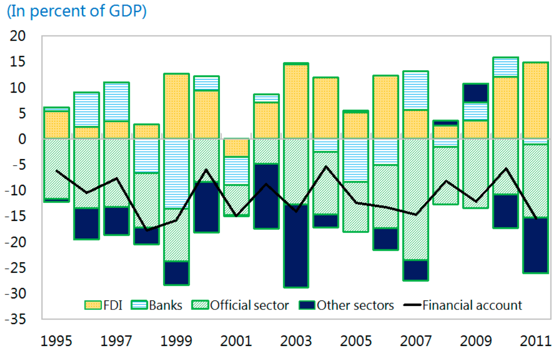
Sources: CEIC Data Company Ltd.

Financial Account Balance by Investment
(In percent of GDP)



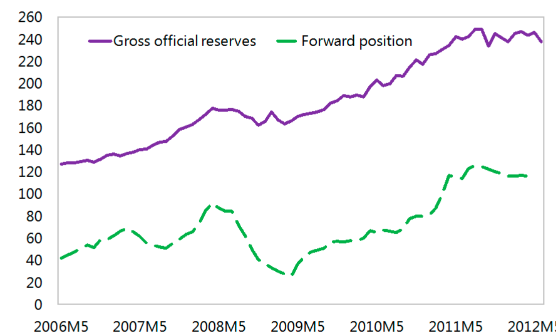
Sources: CEIC Data Company Ltd.

Financial Account by Sector: Net
(In percent of GDP)



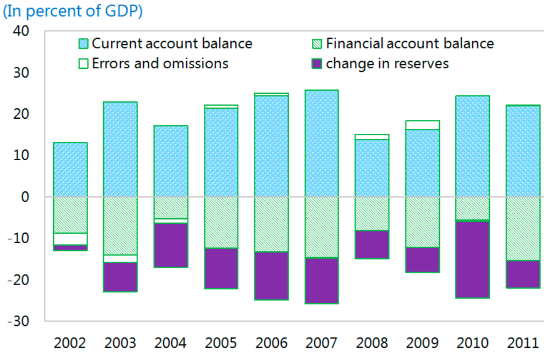
Sources: CEIC Data Company Ltd.

Gross Official Reserves and Forward Position
(In billions of U.S. dollars)



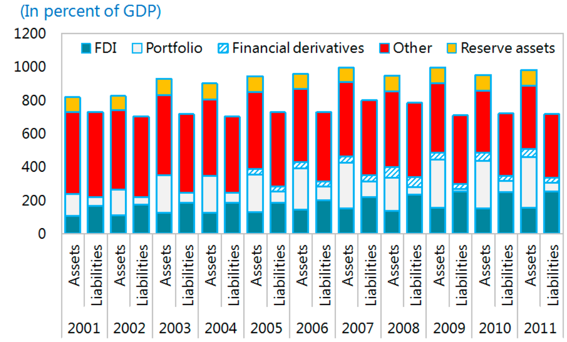
Sources: CEIC Data Co. Ltd; and IMF, *International Financial Statistics* database.

Balance of Payments
(In percent of GDP)



Sources: CEIC Data Company Ltd.

International Investment Position
(In percent of GDP)



Sources: Singapore, Department of Statistics; CEIC Data Company Ltd.; and Fund staff calculations.

Text Table 2. Singapore: External Sector Assessment

	Singapore	Overall assessment
Current account	**Background. The sustained** large surplus of 20 percent of GDP or more (and around 25 percent of GDP cyclically adjusted) reflects an even stronger goods balance, that is partially offset by remittance outflows and a negative income balance (with the latter resulting from income payments on the large stock of inward FDI minus income receipts, including from official-sector assets held abroad). The current account surplus reflects the high rate of private and public sector saving as well as Singapore's status as a financial center. **Assessment.** A range of estimates suggest a current account surplus that is stronger than the level consistent with medium-term fundamentals and desirable policies. While non-standard factors (see real exchange rate assessment below) make a quantitative assessment of the current account difficult a sizable structural decline (on the order of 4 percent of GDP)[1/] appears appropriate. The cyclically-adjusted balance is expected to moderate over the medium term as aging-related and social spending increase and plans to slow absorption of foreign workers are implemented.	The external position appears to be stronger than what is consistent with medium-term fundamentals and desirable policies. In addition to the strength induced by large fiscal deficits in major advanced economies, the strong external position is driven by structural factors and policies that boost the private and public saving rate. **Potential policy responses** From a multilateral perspective, and consistent with the authorities' plans, increased public spending, a more-even distribution of consumption across generations, and recourse to slower foreign worker inflows would help to moderate the current account and slow accumulation of foreign assets.
Real exchange rate	**Background**. The 15 percent real effective exchange rate (REER) appreciation since 2005 has returned the REER to the level of 1998. **Assessment**. While non-standard factors (Singapore is a very small very open economy that serves as a regional financial center) make quantitative assessment difficult, the real exchange rate appears around 0-15 percent weaker than warranted by medium-term fundamentals (including rapid population aging) and desirable policies.[1/]	
Capital account: flows and measures	**Background**. The financial account deficit tends to co-move with the global financial cycle (i.e. outflows are larger when financial activity is strong). This reflects in part reinvestment abroad of income from the official sector's foreign assets. Capital flows also encompass large inward FDI and broadly offsetting foreign borrowing and reinvestment abroad by off-shore banks. **Assessment**. The financial account is likely to remain in deficit as long as income from NFA (recorded in the current account) is reinvested abroad.	
FX intervention and reserves	**Assessment**. With the nominal effective exchange rate as the intermediate target, intervention is undertaken as required to achieve monetary policy's inflation and output goals. Official reserves cover 50 percent of short-term external debt (at an original maturity basis), but are much higher than thresholds for other traditional adequacy metrics. At end-2011 reserves were also a larger share of GDP than in other financial centers, but this may reflect in part that most other financial centers are located in reserve-currency countries. While non standard factors warrant generous reserve buffers, current levels appear adequate and there is no clear case for further reserve accumulation for precautionary purposes.	
Foreign asset and liability position	**Background.** Available data indicate that as of 2011, net IIP stood at 268 percent of GDP, rising 70 percentage points of GDP since 2007. **Assessment.** The international investment position is not a major source of risk. Very large short-term gross non-FDI liabilities of 466 percent of GDP could nonetheless pose some vulnerability, although this is mitigated by large official reserve holdings (95 percent of GDP) and other official liquid foreign assets.	

1/ This numerical estimate is based on Fund staff analysis in the Pilot External Sector Report (IMF Policy Paper, July 2, 2012, http://www.imf.org/external/np/pp/eng/2012/070212.pdf), and thus is preliminary.

Authorities' Views

31. **The authorities concurred with the staff's assessment of the external sector and the broad direction of needed policy changes.** They agreed that the current account surplus will likely narrow over the medium term, and expect the real exchange rate to continue to appreciate in line with fundamentals and policy changes, including the shift to the new growth model.

32. **However, the authorities questioned the staff's estimates of the valuation of the real effective exchange rate (REER)**. The wide range of the estimated REER gap indicates a high degree of imprecision associated with the quantitative assessments. The estimates also differed significantly from year to year, even though underlying medium-term factors behind the projections have not changed fundamentally.

STAFF APPRAISAL

33. **Singapore's GDP growth is expected to weaken in 2012, even as inflation remains elevated**. The strong global growth impulse seen earlier this year has given way to tepid world demand. Meanwhile, Singapore's low unemployment rate and negative real interest rates are expected to sustain domestic demand. Under the benign global baseline scenario, growth is forecast to soften this year to just below 3 percent, with a moderate increase in 2013. Nonetheless, inflation is expected to remain under pressure from the tight labor market and lagged effects of higher prices for vehicle permits and real estate on consumer prices.

34. **External downside risks loom large**. Given Singapore's pronounced trade and financial openness, the impact of further euro area turmoil, abrupt fiscal tightening in the U.S., and/or a severe slowdown in China would be substantial. However, a more contained event could induce safe-haven inflows into Singapore, cushioning the impact on growth, but possibly at the cost of reigniting domestic credit growth and real estate prices.

35. **The government's policies to increase labor productivity could have important macroeconomic effects**. Slower foreign worker inflows will boost real wages and, if complemented with well-targeted incentives for technology and skills upgrading, should with time support productivity growth. The authorities also see these policies as essential to alleviate overcrowding. In the near term, the strategy is expected to reduce potential growth and increase frictional unemployment. It will also push up inflation and contribute to a permanently more appreciated real exchange rate and narrower current account surplus. If prices and unemployment rise more sharply than expected, consideration could be given to lengthening the phase-in of the tighter limits on foreign worker inflows. A means-tested, publicly-funded system of unemployment and old-age

pension benefits could enhance the efficiency of job search and reduce the social costs of the transition.

36. **Policymakers confront the challenge of containing inflation expectations amid a testing environment**. The tightening of monetary policy in April 2012 and the FY 2012 Budget's moderately-restrictive stance are appropriate under the baseline scenario to keep the output gap contained as potential growth moderates. However, inflation should be permitted to rise temporarily to accommodate the increase in relative prices of labor-intensive products resulting from the tighter labor market conditions. To prevent inflation expectations from rising, other sources of inflation—including from transport costs, credit growth and asset prices—should be forcefully tackled, including through continued recourse to macroprudential tools. Consideration could also be given to further absorbing liquidity.

37. **Singapore has ample policy space and large buffers to mitigate the effects a steeper global growth slowdown or financial turmoil**. As in 2008−09, the response should focus on preserving the private sector's economic and financial infrastructure to facilitate a rapid recovery when demand subsequently resumes, while providing an adequate social safety net.

38. **Singapore's dynamic financial sector has important strengths, but extensive cross-border linkages and large exposure to domestic real property pose risks**. Sizable deleveraging by European banks from Singapore since mid-2011 has not created visible strains, but close monitoring of funding conditions at foreign bank branches should continue. Rapid outward expansion by domestic banks into the region entails currency and duration risk, and banks should continue to build up and lengthen their on-balance sheet U.S. dollar funding. Real estate poses a concentration risk. While an escalating series of macroprudential measures, combined with deteriorating regional sentiment, halted the rise in house prices in late 2011, a prolonged period of high unemployment or fall in real wages could impair credit quality. Additional targeted macroprudential measures are called for if property prices reaccelerate.

39. **From a multilateral perspective, Singapore's external position is stronger than warranted by fundamentals**. In addition to appropriate adjustments in other countries, achieving a more balanced external position in Singapore calls for raising private and public spending and a more even distribution of consumption across generations. Rapid population aging, tighter restrictions on foreign workers, and the government's plan to increase social and infrastructure spending over the medium term will help support this rebalancing.

40. It is proposed that the next Article IV consultation with Singapore be held on the standard 12-month cycle.

Table 1. Singapore: Selected Economic and Financial Indicators, 2007–13

Nominal GDP (2011): US$260 billion
Main exports (percent of total domestic exports): Electronic products (20%); chemical products (17.2%)
GDP per capita (2011): US$50,122
Population (June 2011): 5.2 million
Unemployment rate: 2.0 percent

						Proj.	
	2007	2008	2009	2010	2011	2012	2013
Growth (percentage change)							
Real GDP	8.9	1.7	-1.0	14.8	4.9	2.9	3.4
Total domestic demand	9.1	11.6	-7.0	6.9	5.4	3.4	4.3
Consumption	5.9	3.9	0.9	7.4	3.4	3.0	4.0
Private consumption	6.8	3.3	0.1	6.5	4.1	3.8	4.5
Gross capital formation	16.4	27.4	-20.1	5.8	9.7	4.3	5.1
Saving and investment (percent of GDP)							
Gross national saving	48.1	43.3	41.8	46.5	44.4	44.3	44.3
Gross domestic investment	22.3	29.4	25.5	22.1	22.4	22.8	23.0
Inflation and unemployment (period average, percent)							
CPI inflation	2.1	6.6	0.6	2.8	5.2	4.5	4.5
Core CPI inflation	2.2	5.7	0.0	1.5	2.2	3.0	3.5
Unemployment rate	2.1	2.2	3.0	2.2	2.0	2.1	2.1
Central government budget (percent of GDP) 1/							
Revenue	23.1	24.3	19.6	21.0	24.1	23.3	23.0
Expenditure	12.4	16.4	18.3	15.5	16.8	17.6	17.8
Overall balance	10.7	7.9	1.3	5.5	7.3	5.8	5.2
Primary balance 2/	0.3	-1.7	-3.6	-1.9	-1.1	-0.7	-0.7
Money and credit (end of period, percentage change)							
Broad money (M3)	14.1	11.6	10.6	8.3	10.1	...	...
Lending to nonbanking sector	19.9	16.6	3.4	14.7	30.3	...	...
Three-month interbank rate(percent)	2.4	1.0	0.7	0.4	0.4	...	...
Balance of payments 3/ (US$ billions)							
Current account balance	45.8	26.3	30.1	55.5	57.0	58.9	61.8
(In percent of GDP)	(25.8)	(13.9)	(16.2)	(24.4)	(21.9)	(21.5)	(21.3)
Trade balance	57.1	41.7	47.3	63.1	67.4	69.7	72.9
Exports, f.o.b.	312.7	354.9	288.4	371.1	429.3	439.4	449.1
Imports, f.o.b.	-255.7	-313.2	-241.1	-308.0	-361.9	-369.6	-376.2
Financial account balance	-26.2	-15.5	-22.7	-12.9	-40.0	-46.9	-48.1
Overall balance	19.4	13.1	11.3	42.2	17.1	12.0	13.7
Gross official reserves (US$ billions)	163.0	174.2	187.8	225.8	237.7	249.7	263.4
(Months of imports) 4/	(4.8)	(6.4)	(5.5)	(5.7)	(5.9)	(6.0)	(6.1)
Exchange rate (period average)	1.51	1.41	1.45	1.36	1.26	...	...

Sources: Data provided by the Singapore authorities; and Fund staff estimates and projections.

1/ On a calendar year basis.
2/ Overall balance excluding investment income, capital revenue, interest payments, and net lending.
3/ The authorities recently migrated to the *Balance of Payments Manual 6* (BPM6), which resulted in some balance of payments data revisions.
4/ In months of following year's imports of goods and services.

Table 2. Singapore: Balance of Payments, 2007–13 1/

(In billions of U.S. dollars)

	2007	2008	2009	2010	2011	Proj. 2012	Proj. 2013
Current account balance	45.8	26.3	30.1	55.5	57.0	58.9	61.8
Trade balance	57.1	41.7	47.3	63.1	67.4	69.7	72.9
Exports, f.o.b.	312.7	354.9	288.4	371.1	429.3	439.4	449.1
Imports, f.o.b.	-255.7	-313.2	-241.1	-308.0	-361.9	-369.6	-376.2
Services balance	-2.5	-2.7	-3.2	1.5	1.8	2.0	2.2
Exports	73.8	88.1	80.2	100.0	113.6	117.9	124.1
Imports	-76.4	-90.7	-83.4	-98.5	-111.7	-115.9	-121.8
Primary income balance	-5.7	-8.9	-9.9	-4.0	-5.6	-5.9	-6.2
Receipts	58.2	47.6	46.1	62.0	68.0	71.7	76.2
Payments	-63.9	-56.5	-56.0	-65.9	-73.6	-77.6	-82.3
Secondary income balance	-3.0	-3.7	-4.0	-5.2	-6.7	-6.9	-7.1
Capital and financial account balance	-26.2	-15.5	-22.7	-12.9	-40.0	-46.9	-48.1
Capital account (net)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account (net)	-26.2	-15.5	-22.7	-12.9	-40.0	-46.9	-48.1
Direct investment	10.0	5.0	6.7	27.4	38.8	40.8	43.0
Assets	-36.9	-6.8	-17.7	-21.2	-25.2	-27.8	-30.7
Liabilities	46.9	11.8	24.4	48.6	64.0	68.6	73.6
Portfolio investment	-47.4	11.6	-40.2	-26.9	-28.7	-33.8	-34.7
Assets	-65.9	26.2	-41.4	-28.1	-22.8	-26.7	-27.5
Liabilities	18.5	-14.6	1.2	1.2	-6.0	-7.0	-7.2
Other investment	11.8	-34.0	28.4	-3.8	-39.0	-54.0	-56.4
Net errors and omissions	-0.2	2.2	3.9	-0.4	0.1	0.0	0.0
Overall balance	19.4	13.1	11.3	42.2	17.1	12.0	13.7
Memorandum items:							
Current account as percent of GDP	25.8	13.9	16.2	24.4	21.9	21.5	21.3
Trade balance as percent of GDP	32.1	21.9	25.5	27.7	26.0	25.5	25.1
Net international investment position							
In billions of U.S. dollars	369.0	304.9	472.2	561.2	674.0	…	…
In percent of GDP	198.7	163.3	245.4	233.1	268.3	…	…

Sources: Monetary Authority of Singapore, *Economic Survey of Singapore*; and staff estimates and projections.

1/ Data for the current account balance, the capital and financial account balance, and net errors and omissions are converted to U.S. dollars from the official presentation in Singapore dollars using period-average exchange rates. The authorities recently migrated to the Balance of Payments Manual 6 (BPM6), which resulted in some balance of payments data revisions.

Table 3. Singapore: Monetary Survey, 2009–12

	2009				2010				2011				2012
	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.
	(In billions of Singapore dollars, end of period)												
Net foreign assets	275.5	294.6	301.4	295.2	293.8	292.9	303.8	305.0	308.5	309.1	289.4	296.7	300.8
Monetary authorities	252.4	249.9	253.5	261.3	273.3	277.3	279.7	286.6	292.0	294.2	301.9	305.1	303.0
Banks	23.2	44.7	47.8	33.9	20.5	15.6	24.1	18.4	16.5	14.9	-12.5	-8.4	-2.2
Domestic credit	346.8	353.2	359.8	362.2	372.7	379.4	389.4	402.5	414.3	441.3	454.7	466.1	482.0
Claims on private sector	266.4	267.0	270.0	273.5	279.0	287.1	299.4	310.2	322.0	341.1	356.0	367.9	381.3
Nonbank lending	270.7	272.2	275.9	281.3	286.3	296.6	309.4	322.7	343.4	374.3	405.4	420.5	432.6
Claims on central government	80.4	86.2	89.8	88.7	93.6	92.3	90.0	92.3	92.3	100.2	98.7	98.2	100.7
Other items (net) 1/	-273.1	-291.5	-299.9	-286.3	-286.4	-289.9	-302.4	-304.4	-309.5	-326.9	-309.3	-319.4	-329.3
M3	357.9	364.4	368.9	378.5	387.1	389.5	397.8	410.1	420.4	430.8	442.6	451.7	462.5
M2	349.3	356.3	361.3	371.1	380.0	382.5	390.8	403.1	413.3	423.5	434.8	443.4	453.5
	(Annual percentage change)												
Domestic credit	9.7	8.2	8.3	6.0	7.5	7.4	8.2	11.1	11.2	16.3	16.8	15.8	16.3
Claims on private sector	8.7	5.0	2.0	2.0	4.7	7.5	10.9	13.4	15.4	18.8	18.9	18.6	18.4
Nonbank lending	8.6	4.2	1.1	3.4	5.8	9.0	12.1	14.7	19.9	26.2	31.1	30.3	26.0
M3	10.9	12.1	10.5	10.6	8.2	6.9	7.8	8.3	8.6	10.6	11.3	10.1	10.0
M2	11.5	12.9	11.3	11.3	8.8	7.3	8.1	8.6	8.7	10.7	11.3	10.0	9.7
	(Contribution to M3 growth, in percent)												
Net foreign assets	6.8	12.9	13.0	9.2	5.1	-0.5	0.7	2.6	3.8	4.2	-3.6	-2.0	-1.8
Domestic credit (net)	9.5	8.2	8.3	6.0	7.2	7.2	8.0	10.6	10.7	15.9	16.4	15.5	16.1
Claims on private sector	6.6	3.9	1.6	1.6	3.5	5.5	8.0	9.7	11.1	13.9	14.2	14.1	14.1
Claims on central government (net)	2.9	4.3	6.7	4.4	3.7	1.7	0.1	1.0	-0.3	2.0	2.2	1.4	2.0
Other items (net) 1/	-5.4	-9.0	-10.7	-4.6	-4.2	0.2	-0.9	-4.9	-6.0	-9.4	-1.5	-3.4	-4.3

Sources: IMF, *International Financial Statistics*; and CEIC Data Co., Ltd.

1/ Including other nonbank financial institutions.

Table 4. Singapore: Indicators of Vulnerability, 2007–12

	2007	2008	2009	2010	2011	2012 Mar.
Financial sector indicators						
Broad money (M3, percent change, y/y)	14.1	11.6	10.6	8.3	10.1	10.0
Private sector credit (percent change, y/y)	16.9	15.2	2.0	13.4	18.6	18.4
Credit to the property sector (percent change, y/y)	23.4	17.1	8.3	18.2	19.5	18.6
Share of property sector credit in total nonbank credit (percent) 1/	47.4	47.6	49.9	51.4	47.2	47.3
Credit rating of local banks (S&P) 2/	A+/AA-	A+/AA-	A+/AA-	A+/AA-	A+/AA-	AA-
Three-month interbank rate (percent, end-year)	2.4	1.0	0.7	0.4	0.4	0.4
NPL ratio (local banks, percent) 3/ 4/	1.5	1.7	2.4	1.6	1.2	....
Capital adequacy ratio of local banks (percent) 4/	13.5	14.7	17.3	18.6	16.2	....
Asset market indicators						
Stock prices (percent change, y/y)	18.7	-49.2	64.5	10.1	-17.0	-3.1
P/E ratio	18.0	6.2	19.3	19.0	10.3	12.0
Stock prices of the finance sector (percent change, y/y)	9.6	-51.4	75.1	2.4	-23.4	-5.7
Real estate prices (percent change, y/y) 5/						
Private residential	23.6	12.3	-14.1	25.4	9.5	6.9
Office space	28.1	10.3	-20.0	8.6	18.8	15.2
External indicators						
Current account balance (US$ billion)	45.8	26.3	30.1	55.5	57.0	....
(In percent of GDP)	25.8	13.9	16.2	24.4	21.9	....
Gross official reserves (US$ billion)	163.0	174.2	187.8	225.8	237.7	243.6
(In month of next year's imports of goods and services)	4.8	6.4	5.5	5.7	5.9	6.0
Real exchange rate (end of period, 2005=100)	104.5	109.0	107.3	114.4	117.1	120.9

Sources: Data provided by the Singapore authorities; and IMF, *Information Notice System*.

1/ For domestic banking units (DBU).
2/ Ratings of the three major local banks.
3/ In percent of global nonbank loans.
4/ the number for 2011 is as of September.
5/ The underlying price indices are computed based on the Laspeyres method and are 4-quarter moving averages.

Table 5. Singapore: Summary of Central Government Operations and Stock Positions, 2007/08–2012/13 1/

	2007/08	2008/09	2009/10	2010/11	2011/12		2012/13
					Budget	Prel.	Budget
I. Statement of government operations							
	(In millions of Singapore dollar)						
Revenue	65,736	64,306	50,807	69,794	64,618	81,864	73,948
Taxes	36,630	37,709	36,617	41,848	43,426	45,726	48,222
Social contributions	0	0	0	0	0	0	0
Grants	0	0	0	0	0	0	0
Other revenue 2/	29,106	26,598	14,190	27,946	21,191	36,138	25,726
Expenditure	33,030	47,051	52,141	45,978	61,966	57,978	60,629
Expense	25,304	35,976	38,088	32,268	48,817	44,408	46,169
Compensation of employees	4,736	4,677	4,765	5,857	5,751	5,719	6,039
Use of goods and services	15,503	16,949	15,584	15,400	17,654	16,572	17,534
Interest	45	25	25	0	0	0	0
Expense not elsewhere classified	5,020	14,325	17,715	11,012	25,413	22,116	22,596
Grants, subventions & capital injections to organisations	4,211	4,868	5,493	5,986	6,246	6,775	6,974
Transfers	5,582	10,350	10,749	8,865	11,659	11,527	10,103
Other expense	-4,773	-894	1,473	-3,840	7,508	3,814	5,519
Net acquisition of nonfinancial assets	7,727	11,075	14,053	13,710	13,149	13,570	14,460
Development expenditure	7,030	9,357	10,982	12,068	11,198	11,673	12,828
Land-related expenditure	697	1,718	3,071	1,643	1,950	1,897	1,631
Gross operating balance	40,433	28,330	12,718	37,525	15,800	37,456	27,779
Net lending/borrowing	32,706	17,255	-1,334	23,815	2,651	23,886	13,319
Net acquisition of financial assets	...	...	...	...	...	...	...
Net incurrence of liabilities	...	...	...	...	...	...	...
	(In percent of GDP)						
Revenue	24.1	24.4	18.0	22.0	19.6	24.8	21.4
Taxes	13.4	14.3	13.0	13.2	13.2	13.9	14.0
Other revenue 2/	10.7	10.1	5.0	8.8	6.4	11.0	7.4
Expenditure	12.1	17.9	18.5	14.5	18.8	17.6	17.5
Expense	9.3	13.6	13.5	10.2	14.8	13.5	13.4
Net acquisition of nonfinancial assets	2.8	4.2	5.0	4.3	4.0	4.1	4.2
Gross operating balance	14.7	10.7	4.5	11.8	4.8	11.4	8.0
Net lending/borrowing	12.0	6.5	-0.5	7.5	0.8	7.2	3.9
Memorandum item:							
Land sales (in millions of Singapore dollar)	13,000	7,675	4,013	14,496	7,116	18,386	12,851
II. Stock positions	2007	2008	2009	2010	2011		
Gross debt 3/							
In millions of Singapore dollar	234,093	255,465	291,502	321,182	354,023		
In percent of GDP	87	95	108	104	108		

Sources: Data provided by the Singapore authorities; and IMF staff estimates.

1/ Fiscal year runs from April 1 through March 31. The presentation of the table is based on GFSM 2001.
2/ Includes revenue from land sales.
3/ Gross debt stock figures are as at the end of the calendar year. Government debt is issued to develop domestic capital markets and to provide an investment vehicle for the mandatory saving scheme. Gross government assets are larger than gross debt.

Table 6. Singapore: Medium-Term Scenario, 2007–17

						Proj.					
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Real growth (percent change)											
GDP	8.9	1.7	-1.0	14.8	4.9	2.9	3.4	3.6	3.7	3.8	3.9
Total domestic demand	9.1	11.6	-7.0	6.9	5.4	3.4	4.3	4.7	5.0	5.1	5.2
Final domestic demand	9.5	6.9	-0.5	7.3	3.4	3.2	4.2	4.6	4.9	5.0	5.2
Consumption	5.9	3.9	0.9	7.4	3.4	3.0	4.0	4.4	4.8	5.0	5.3
Private	6.8	3.3	0.1	6.5	4.1	3.8	4.5	4.8	5.0	5.2	5.5
Public	2.6	6.4	3.6	11.0	0.9	0.2	1.9	2.8	3.9	4.1	4.1
Gross capital formation	16.4	27.4	-20.1	5.8	9.7	4.3	5.1	5.3	5.3	5.4	5.2
Private	19.8	27.0	-22.7	4.4	8.1	4.5	4.7	4.8	4.9	4.9	5.0
Public	-4.2	31.1	-1.2	14.1	18.3	3.0	7.0	7.6	7.6	7.5	6.2
Net exports /1	4.5	-8.3	5.4	11.1	1.2	0.6	0.4	0.4	0.3	0.2	0.2
Saving and investment (percent of GDP)											
Gross national savings	48.1	43.3	41.8	46.5	44.4	44.3	44.3	43.7	43.1	42.3	41.6
Central government 2/	13.5	11.8	6.1	10.0	11.5	9.9	9.5	9.4	9.3	9.1	9.0
Private and other	34.7	31.5	35.7	36.5	32.9	34.4	34.8	34.3	33.8	33.2	32.6
Gross capital formation	22.3	29.4	25.5	22.1	22.4	22.8	23.0	23.4	23.8	24.2	24.5
Central government 3/	2.7	3.6	4.5	4.1	4.2	4.2	4.3	4.4	4.6	4.7	4.8
Private and other	19.6	25.8	21.1	18.1	18.3	18.6	18.7	19.0	19.2	19.5	19.7
Inflation and unemployment											
(period average, percent)											
CPI inflation	2.1	6.6	0.6	2.8	5.2	4.5	4.5	4.0	3.0	2.8	2.5
Core CPI inflation	2.2	5.7	0.0	1.5	2.2	3.0	3.5	3.5	3.0	2.8	2.5
Unemployment rate	2.1	2.2	3.0	2.2	2.0	2.1	2.1	2.1	2.1	2.1	2.1
Output gap	5.2	1.9	-3.3	2.2	1.9	0.4	0.3	0.5	0.4	0.3	0.2
Central government (percent of GDP) 4/											
Revenue	23.1	24.3	19.6	21.0	24.1	23.3	23.0	23.1	23.1	23.1	23.1
Expenditure	12.4	16.4	18.3	15.5	16.8	17.6	17.8	18.1	18.4	18.7	18.9
Overall balance	10.7	7.9	1.3	5.5	7.3	5.8	5.2	5.0	4.7	4.4	4.2
Primary balance 5/	0.3	-1.7	-3.6	-1.9	-1.1	-0.7	-0.7	-1.0	-1.3	-1.6	-1.8
Merchandise trade (percent change)											
Export volume	6.6	3.7	9.9	19.9	3.0	3.1	3.8	4.2	4.3	4.4	4.3
Import volume	7.0	10.3	-14.8	18.4	3.3	3.4	4.0	4.4	4.6	4.8	5.0
Terms of trade	0.9	-1.5	-0.1	-0.5	-1.2	0.5	0.7	0.3	0.1	0.2	0.1
Balance of payments 6/ (percent of GDP)											
Current account balance	25.8	13.9	16.2	24.4	21.9	21.5	21.3	20.3	19.3	18.1	17.1
Balance on goods and services	30.7	20.5	23.7	28.4	26.7	26.2	25.9	24.9	23.8	22.7	21.6
Balance on primary and secondary income	-4.9	-6.7	-7.5	-4.0	-4.7	-4.7	-4.6	-4.6	-4.5	-4.5	-4.5
Gross official reserves (US$ billions)	163.0	174.2	187.8	225.8	237.7	249.7	263.4	271.6	279.8	288.0	296.4
(In months of imports) 7/	(4.8)	(6.4)	(5.5)	(5.7)	(5.9)	(6.0)	(6.1)	(6.0)	(5.9)	(5.8)	(5.8)

Sources: Data provided by the Singapore authorities; and staff estimates and projections.

1/ Contribution to GDP growth.

2/ Based on budget data.

3/ Based on national accounts data.

4/ On a calendar year basis.

5/ Overall balance excluding investment income, capital revenue, interest payments, and net lending.

6/ The authorities recently migrated to the Balance of Payments Manual 6 (BPM6), which resulted in some balance of payments data revisions.

7/ In months of next year's imports of goods and services.

Table 7. Singapore: Financial Soundness Indicators—Local Banking Sector, 2006–11

	2006	2007	2008	2009	2010	2011		
						Mar.	Jun.	Sep.
	(In percent)							
Capital adequacy ratio								
Regulatory capital to risk-weighted assets	15.4	13.5	14.7	17.3	18.6	17.8	17.4	16.2
Regulatory tier I capital to risk-weighted assets	11.2	9.8	11.5	14.1	15.5	14.7	14.3	13.5
Shareholders' equity to assets	9.6	9.2	8.3	9.9	9.5	9.4	9.2	8.6
Asset quality								
NPLs to nonbank loans	2.8	1.5	1.7	2.4	1.6	1.5	1.3	1.2
Total provisions to NPLs	89.5	113.6	108.5	90.8	110.9	116.6	126.4	129.5
Specific provisions to NPLs	41.3	39.3	43.4	40.0	40.5	40.7	42.2	41.2
Loan concentrations (in percent of total loans)								
Bank loans	22.8	16.2	13.8	14.1	12.2	13.3	13.0	14.0
Nonbank loans	77.2	83.8	86.2	85.9	87.8	86.7	87.0	86.0
Of which:								
Manufacturing loans	8.4	9.2	9.2	8.3	8.1	7.8	8.1	7.9
Building and construction loans	9.5	11.4	13.2	12.4	12.0	12.0	11.6	11.5
Housing loans	21.0	20.6	20.3	22.2	23.2	22.4	21.5	20.6
Loans to professionals and private	8.7	8.6	8.5	8.7	8.6	8.4	8.4	7.9
Loans to nonbank financial institutions	10.5	12.3	11.7	11.2	11.7	11.4	10.9	10.9
Profitability								
After tax return on assets	1.4	1.3	1.0	1.1	1.2	1.2	1.1	1.1
After tax return on equity	13.7	12.9	10.7	10.8	12.2	12.1	11.8	11.2
Net interest margin	2.1	2.1	2.2	2.2	2.0	1.9	1.9	1.9
Non-interest income to total income	42.6	39.1	32.2	34.9	40.6	41.8	39.6	38.2
Liquidity								
Liquid DBU assets to total DBU assets	9.8	10.1	9.9	10.3	9.3	9.3	9.2	9.3
Liquid DBU assets to total DBU liabilities	10.6	10.8	10.8	11.2	10.1	10.1	10.0	10.0

Source: Monetary Authority of Singapore.

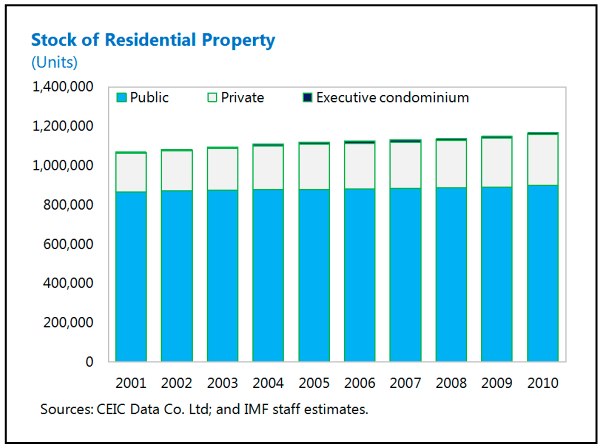
Appendix I: Singapore—Risk Assessment Matrix 1/

Shock	Likelihood	Transmission Channels	Vulnerability	Impact
Strong intensification of the euro area crisis	Medium	Trade channel: lower global growth, particularly in advanced economies	Direct and indirect exports to advanced economies are about one fourth of total. Exports are over 210 percent of GDP, and trade related sectors account for over 50 percent of GDP.	*High*. A 1 percentage point decline in G-3 final demand reduces Singapore's growth by about 2.3 percentage points.
		Financial channel: Deleveraging by European banks; heightened risk aversion with capital outflows and increased volatility.	Financial sector generates 12 percent of GDP. Exposure to Europe is limited for onshore banks; but significant for offshore banking (about 15 percent of assets and 18 percent of liabilities). Singapore also hosts large currency and interest rate OTC derivative markets, in which European banks are important counterparties.	*Medium to high*. Impact depends on the extent of escalation. If less severe, Singapore could even see safe-haven inflows. Financial institutions' own liquidity buffers provide a significant first line of defense. In an extreme event, the strong official reserve position provides and additional cushion.
A marked slowdown in China	Low	Direct and intraregional trade linkages	China is a key link in the regional supply chain. Singapore's exports are driven by Chinese exports (with an elasticity of 1.8) rather than Chinese domestic demand (April 2012 REO).	*Medium to high* (depending on the extent to which Chinese export-oriented sectors are affected).
		Tourism	China is Singapore's second largest source of tourists. Total gross tourism revenue in 2011 was equivalent to 7 percent of GDP. Tourism revenue and tourist from China have risen in recent years.	*Medium*.
		Financial channel	Domestic banks have actively expanded lending to Chinese corporates, but total amounts are still relatively modest. Some of Singapore's major offshore banks are likely to have significant exposure to China.	*Low to medium*.
Combination of shocks to global growth (escalation of crisis in euro area; hard landing in China; renewed slowdown in the US, possibly from abrupt fiscal consolidation)	Low	Protracted stagnation of global growth	Very high degree of trade openness (see above on the trade channel from an intensification of the euro area crisis).	*High*. The elasticity of Singapore's growth with respect to global growth is estimated at 1.8. A prolonged global slump would lead to a sharp decline in exports and domestic demand, and an increase in unemployment. Firms may reduce capacity, leading to a fall in potential output.

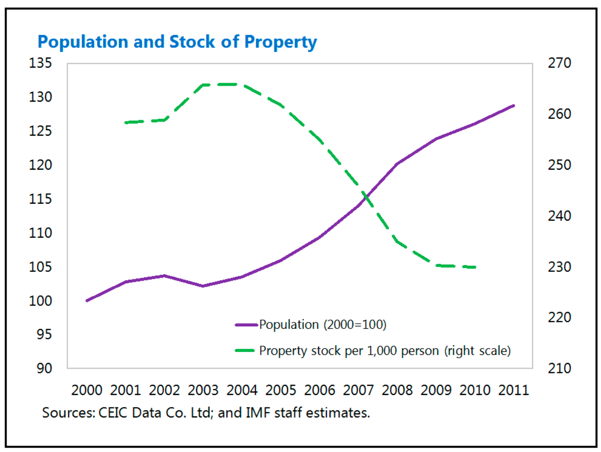
1/ The RAM shows events that could materially alter the baseline path—the scenario most likely to materialize in the view of the staff.

Appendix II: Singapore—Housing Market Structure and Developments

Singapore's home ownership rate, at 89 percent, is the highest in the world. The majority of households (about 80 percent) live in owner-occupied flats built by the public sector's Housing Development Board (HDB), which offers subsidized flats for sale at government-determined prices under strict eligibility conditions (citizenship, marital status, age, income). HDB flats must typically be held for a minimum period (currently five years) before they can be sold in the secondary market. HDB also provides loans to qualifying households (with a stock of 13 percent of GDP), with the interest rate linked to the yield on individuals' savings in their Central Provident Fund accounts, although buyers may choose to obtain a bank mortgage.



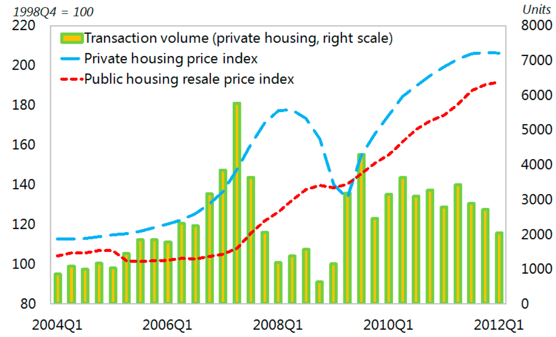
The government can affect the supply (and hence price) of housing in the private-built market by adjusting the amount of land released for private development through the Government Land Sales Program. In general, land availability for private housing (as well as supply of new HDB flats) is adjusted with the goal of maintaining property price stability.[1]



[1] See Lum Sau Kim, "The Impact of Land Supply and Public Housing Provision on the Private Housing Market in Singapore," National University of Singapore IRES Working Paper Series, April 2011.

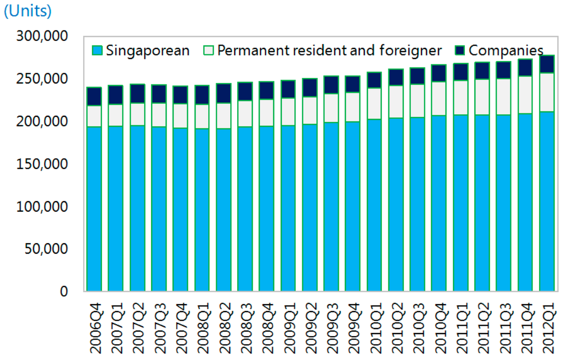
Prices of private-built and HDB resale housing tend to co-move, although the former appear to be more cyclically sensitive.[2] The similarity of longer-term price trends reflects that both types of housing are fairly close substitutes for citizens. However, only Singapore citizens (and in some cases permanent residents) may own HDB flats.[3] Thus, the price of private-built housing is likely to be more responsive to external economic cycles than is the price of resale HDB flats.

Residential Property Prices and Transaction Volume



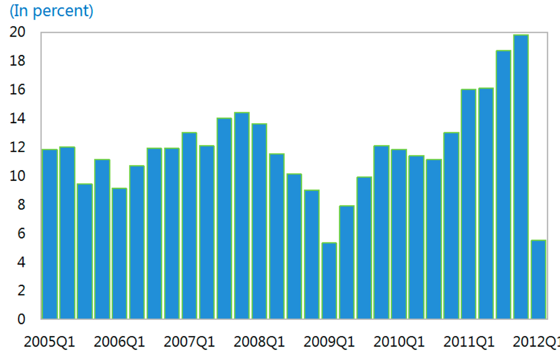
Sources: CEIC Data Co. Ltd; and IMF staff estimates.

Private Residential Ownership
(Units)



Source: CEIC Data Co. Ltd.

Foreign Buyers' Share of Private Property Transactions
(In percent)



Source: Realis Transaction Database, URA.

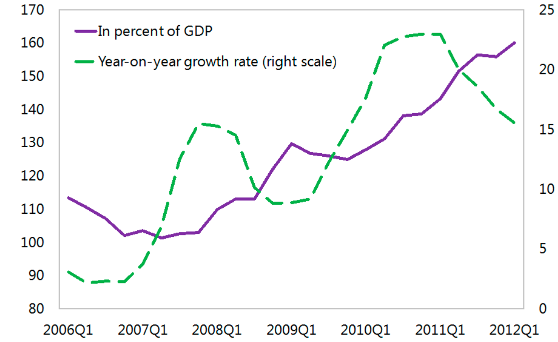
That foreign buyers may have considerable influence on the price of Singapore housing is evident in their ownership share. Nearly one quarter of privately-built residential properties is owned by permanent residents, foreigners, or companies (whose beneficial owners may be non-Singaporean). This share has risen steadily, from less than 20 percent in 2006. Foreigners' (excluding companies) share of transactions increased sharply in recent years, from around 11½ percent in early 2010 to 20 percent in late 2011.

Housing prices increased rapidly since 2008, reflecting historically low interest rates and ready access to credit, favorable domestic economic prospects, supply that failed to keep pace with the rapidly growing number of resident households, and foreign investor demand on account of Singapore's appeal as a investment destination. In fact, prices of private housing were closely synchronized with the share of foreign buyers of property.

[2] Data on prices of new HDB housing is not available.

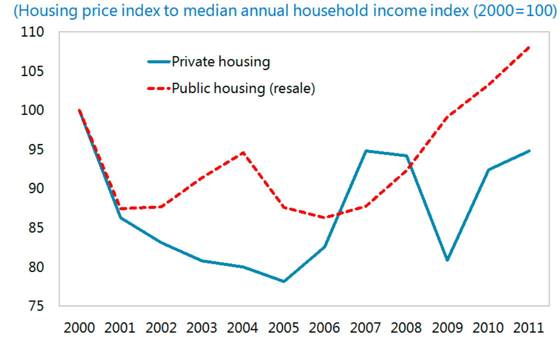
[3] However, a non-citizen or permanent resident may own an HDB flat jointly with a Singapore citizen of the same nuclear family.

Alongside the rapid increase in house prices and transactions, real estate-related bank loans increased, and now account for about 40 percent of total bank loans to nonbank residents. Loan-to-value (LtV) ratios on the stock of bank mortgages have moderated, reflecting the rise in house values in the case of existing loans, as well as the MAS-mandated increase in the minimum required down payment.



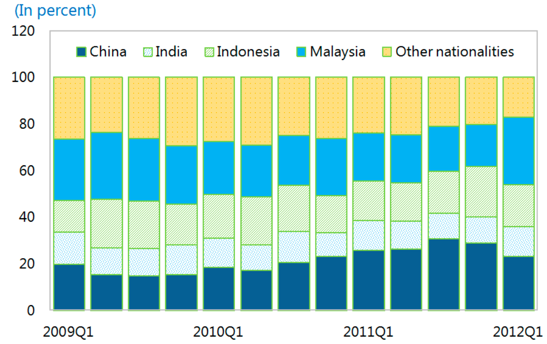
Sources: CEIC Data Company Ltd.

Indicators of housing affordability are mixed. House prices have risen more quickly than median incomes, especially for HDB resale housing. In addition, the tighter LtV ceilings raise the bar on qualifying for a housing loan. On the other hand, all-time low mortgage interest rates (about 70 percent of which are at floating rates, currently between 1⅓ percent and 2 percent) have reduced debt servicing costs.



Sources: CEIC Data Co. Ltd; Statistics Singapore; and IMF staff estimates.

Following successive rounds of policy tightening, together with external factors, home prices have remained flat since end-2011, while the volume of transactions has declined noticeably. In particular, the share of foreign buyers collapsed in Q1:2012 to 5½ percent as a result of new macroprudential measures targeting foreigners and weakening external investment sentiment, with buyers from China falling by nearly 50 percent. The more-than-proportionate decline in purchases by Mainland Chinese may reflect the impact of the economic slowdown in China. Transactions in the luxury market have also fallen. However, the share in total transactions of "shoe box" apartments (with an area of less than 50 square meters) doubled in Q1:2012 to close to 20 percent. While this may reflect the characteristics of new supply coming on-stream, demand for such housing is strong, possibly because of the reduced affordability of standard-size units.



Source: Realis Transaction Database, URA.

INTERNATIONAL MONETARY FUND

SINGAPORE

STAFF REPORT FOR THE 2012 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

July 12, 2012

Prepared By Asia and Pacific Department

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II. STATISTICAL ISSUES ____ 4

ANNEX I: SINGAPORE—FUND RELATIONS

(As of May 31, 2012)

I. Membership Status: Joined August 3, 1966; Article VIII

II. General Resources Account

	SDR Millions	Percent of Quota
Quota	1,408.00	100.00
Fund holdings of currency	952.54	67.65
Reserve position in Fund	455.72	32.37
Lending to the Fund:		
New Arrangement to Borrow	130.30	

III. SDR Department

	SDR Millions	Percent of Allocation
Net cumulative allocation	744.21	100.00
Holdings	868.25	116.67

IV. Outstanding Purchases and Loans: None

V. Financial Arrangements: None

VI. Projected Payments to the Fund: None.

VII. Exchange Arrangement

Singapore's exchange rate is classified as "other managed." The Monetary Authority of Singapore (MAS) monitors its value against an undisclosed basket of currencies and intervenes in the market to maintain this value within an undisclosed target band. The U.S. dollar is the intervention currency. Singapore has accepted the obligations of Article VIII, Sections 2, 3, and 4 and maintains an exchange rate system free of restrictions on the making of payments and transfers for current international transactions. Singapore maintains restrictions on Singapore dollar credit facilities to, and bond and equity issuance by, nonresident financial institutions. Singapore-dollar proceeds obtained by nonresident financial entities (such as banks, merchant banks, finance companies, and hedge funds) from loans exceeding S$5 million, or any amount for equity listings or bond issuance to finance activities outside Singapore must be swapped or converted into foreign currency upon draw-down. Financial institutions are prohibited from extending Singapore-dollar credit facilities in excess of S$5 million to nonresident financial entities if there is reason to believe that the Singapore-dollar proceeds may be used for Singapore-dollar currency speculation.

VIII. Article IV Consultation

Singapore is on the 12-month consultation cycle. The 2011 Article IV consultation discussions were held during November 14−21, 2011; the Executive Board discussed the staff report (IMF Country Report No. 12/42) and concluded the consultation on February 8, 2012.

IX. FSAP Participation

The FSAP was undertaken in conjunction with the 2003 Article IV consultation. The FSSA was published as IMF Country Report No. 04/104. An FSAP update is scheduled for 2013.

X. Technical Assistance: None

XI. Resident Representative: Mr. Ravi Balakrishnan; Ms. Jeanne Gobat

ANNEX II: SINGAPORE—STATISTICAL ISSUES

I. Assessment of Data Adequacy for Surveillance	
General: Data provision is broadly adequate for surveillance. While the authorities have continued to expand the range of publicly available data, dissemination of more disaggregated data would enhance the basis for macroeconomic policy analysis, particularly in the external and fiscal areas.	
National accounts: The Singapore Department of Statistics (DOS) has made improvements in data sources and methodology. The reconciliation of various national accounts estimates was conducted in 2006, resulting in lower statistical discrepancies. (DOS) has completed the rebasing of the Singapore's national accounts to reference year 2005. **Price statistics**: DOS has completed the rebasing of the Consumer Price Index (CPI) to base year 2009. The CPI is rebased once every five years to reflect the latest consumption pattern and composition of goods and services consumed by resident households.	
Government finance statistics: Information on government assets held abroad is neither published nor provided to the Fund. The government publishes annually partial information on the interest and dividends on these assets. Debt service payments on domestic debt made from the extra budgetary Government Securities Fund are published on an annual basis. Data on the financial position of the consolidated public sector is not published.	
Monetary statistics: The Monetary Authority of Singapore has not submitted the standardized report forms (SRFs) for monetary statistics introduced in October 2004. The SRFs provide for accounting data to be broken down by instrument, sector, and currency.	
Balance of payments: In February 2012, the DOS concluded the migration of the balance of payments accounts to the 6th edition of the Balance of Payments Manual. The main changes relative to the 5th edition include: reclassification of repairs on goods and goods for processing to services (from goods); reclassification of merchanting to goods (from services); and treating banks' Asian Currency Unit (ACU) as residents (previously they were regarded as nonresidents, and hence their transactions were excluded from the balance of payments). Data on Singapore's international investment position (IIP) is not provided on a disaggregated sectoral basis as suggested by the *Balance of Payments Manual*. Also, the IIP position does not include all net foreign assets held by Singapore's Government Investment Corporation, although all associated flows are included in the balance of payments data. The authorities reconfirmed their commitment to fully report the IIP data to the Fund by 2014.	
II. Data Standards and Quality	
Singapore provides data on a timely basis and meets all the SDDS specifications. These include the coverage, periodicity, and timeliness of the data; and the dissemination of advance release calendars; quarterly certification of the metadata posted on the Fund's Dissemination Standards Bulletin Board; and provision of information to allow users to assess data quality.	No data ROSC is available.

Singapore—Table of Common Indicators Required for Surveillance

(As of June 13, 2012)

	Date of Latest Observation	Date Received	Frequency of Data[6]	Frequency of Reporting[6]	Frequency of Publication[6]
Exchange rates	6/13/12	6/13/12	D	D	D
International reserve assets and reserve liabilities of the Monetary Authorities[1]	5/2012	6/2012	M	M	M
Reserve/base money	4/2012	5/2012	M	M	M
Broad money	4/2012	5/2012	M	M	M
Central bank balance sheet	4/2012	6/2012	M	M	M
Consolidated balance sheet of the banking system	4/2012	6/2012	M	M	M
Interest rates[2]	6/13/12	6/13/12	D	D	D
Consumer price index	4/2012	5/2012	M	M	M
Revenue, expenditure, balance and composition of financing[3]—general government[4]	.	.	.	.	.
Revenue, expenditure, balance and composition of financing[3]—central government	4/2012	5/2012	M	M	M
Stocks of central government and central government-guaranteed debt[5]	.	.	.	.	.
External current account balance	2012:Q1	5/2012	Q	Q	Q
Exports and imports of goods and services	5/2012	6/2012	M	M	M
GDP/GNP	2012:Q1	5/2012	Q	Q	Q
Gross external debt[7]	2011:Q4	3/2012	Q	Q	Q
Net international investment position[8]	2010	2011	A	A	A

[1] Includes reserve assets pledged or otherwise encumbered as well as net derivative positions.
[2] Both market-based and officially determined, including discount rates, money market rates, rates on treasury bills, notes, and bonds.
[3] Foreign, domestic bank, and domestic nonbank financing.
[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.
[5] Including currency and maturity composition.
[6] Daily (D); weekly (W); monthly (M); quarterly (Q); annually (A); irregular (I); and not available (NA).
[7] Official external debt is zero.
[8] The reported number does not include the net foreign asset position of the Government of Singapore's Investment Corporation.

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IMF Executive Board Concludes 2012 Article IV Consultation with Singapore

On July 30, 2012, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with Singapore, and considered and endorsed the staff appraisal without a meeting on a lapse-of-time basis.[2]

Background

Singapore's growth performance over the past year has been driven by global and regional events. Thus, a poor second half of 2011, reflecting deteriorating global activity as well as regional supply disruptions from natural disasters, was followed by a strong bounce back in the first quarter of 2012, as the easing of supply disruptions propelled manufacturing exports. More recently, the Singaporean economy is softening again on the back of weaker global demand and heightened international financial strains. All along, domestic demand has remained resilient, buoyed by a strong labor market and low interest rates, while the output gap remains positive.

Headline inflation has fluctuated around an elevated path since early 2011, propped up mainly by accommodation and private road transport costs. Core inflation, which excludes those two components, picked up earlier this year, reflecting wage cost pressures amid a tight labor market, but has eased recently, mainly on account of lower oil prices.

Global financial turbulence has over the past year continued to cause volatility in domestic equity and currency markets. There has also been significant deleveraging by European banks

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

[2] The Executive Board takes decisions under its lapse-of-time procedure when the Board agrees that a proposal can be considered without convening formal discussions.

operating in Singapore, although the impact on funding has been offset by local and other foreign banks. Overall, the local banking sector remains profitable and well capitalized. Credit growth has eased, although the rapid expansion in foreign-currency lending to the rest of the region by the large local banks has led to an increase in their U.S. dollar and overall loan-to-deposit ratios. Housing prices and transaction volumes have moderated, particularly in the private housing market, but local banks' exposure to real estate is high.

Singapore's external position remains strong, with the current account surplus remaining broadly unchanged at about 21½ percent of GDP, and a large positive international investment position reflecting large official foreign assets.

Executive Board Assessment

In concluding the 2012 Article IV Consultation with Singapore, Executive Directors endorsed the staff appraisal as follows:

Singapore's GDP growth is expected to weaken in 2012, even as inflation remains elevated. The strong global growth impulse seen earlier this year has given way to tepid world demand. Meanwhile, Singapore's low unemployment rate and negative real interest rates are expected to sustain domestic demand. Under the benign global baseline scenario, growth is forecast to soften this year to just below 3 percent, with a moderate increase in 2013. Nonetheless, inflation is expected to remain under pressure from the tight labor market and lagged effects of higher prices for vehicle permits and real estate on consumer prices.

External downside risks loom large. Given Singapore's pronounced trade and financial openness, the impact of further euro area turmoil, abrupt fiscal tightening in the United States, and/or a severe slowdown in China would be substantial. However, a more contained event could induce safe-haven inflows into Singapore, cushioning the impact on growth, but possibly at the cost of reigniting domestic credit growth and real estate prices.

The government's policies to increase labor productivity could have important macroeconomic effects. Slower foreign worker inflows will boost real wages and, if complemented with well-targeted incentives for technology and skills upgrading, should with time support productivity growth. The authorities also see these policies as essential to alleviate overcrowding. In the near term, the strategy is expected to reduce potential growth and increase frictional unemployment. It will also push up inflation and contribute to a permanently more appreciated real exchange rate and narrower current account surplus. If prices and unemployment rise more sharply than expected, consideration could be given to lengthening the phase-in of the tighter limits on foreign worker inflows. Enhanced and targeted social safety nets could improve the efficiency of job search and reduce the social costs of the transition.

Policymakers confront the challenge of containing inflation expectations amid a testing environment. The tightening of monetary policy in April 2012 and the FY 2012 Budget's moderately-restrictive stance are appropriate under the baseline scenario to keep the output gap contained as potential growth moderates. However, inflation should be permitted to rise temporarily to accommodate the increase in relative prices of labor-intensive products resulting from the tighter labor market conditions. To prevent inflation expectations from rising, other sources of inflation—including from transport costs, credit growth and asset prices—should be forcefully tackled, including through continued recourse to macroprudential tools. Consideration could also be given to further absorbing liquidity.

Singapore has ample policy space and large buffers to mitigate the effects a steeper global growth slowdown or financial turmoil. As in 2008−09, the response should focus on preserving the private sector's economic and financial infrastructure to facilitate a rapid recovery when demand subsequently resumes, while providing an adequate social safety net.

Singapore's dynamic financial sector has important strengths, but extensive cross-border linkages and large exposure to domestic real property pose risks. Sizable deleveraging by European banks from Singapore since mid-2011 has not created visible strains, but close monitoring of funding conditions at foreign bank branches should continue. Rapid outward expansion by domestic banks into the region entails currency and duration risk, and banks should continue to build up and lengthen their on-balance sheet U.S. dollar funding. Real estate poses a concentration risk. While an escalating series of macroprudential measures, combined with deteriorating regional sentiment, halted the rise in house prices in late 2011, a prolonged period of high unemployment or fall in real wages could impair credit quality. Additional targeted macroprudential measures are called for if property prices reaccelerate.

From a multilateral perspective, Singapore's external position is stronger than warranted by fundamentals. In addition to appropriate adjustments in other countries, achieving a more balanced external position in Singapore calls for raising private and public spending and a more even distribution of consumption across generations. Rapid population aging, tighter restrictions on foreign worker inflows, and the government's plan to increase social and infrastructure spending over the medium term will help support this rebalancing.

Singapore: Selected Economic and Financial Indicators, 2007–13

	2007	2008	2009	2010	2011	Proj. 2012	Proj. 2013
Growth (percentage change)							
Real GDP	8.9	1.7	-1.0	14.8	4.9	2.9	3.4
Total domestic demand	9.1	11.6	-7.0	6.9	5.4	3.4	4.3
Consumption	5.9	3.9	0.9	7.4	3.4	3.0	4.0
Private consumption	6.8	3.3	0.1	6.5	4.1	3.8	4.5
Gross capital formation	16.4	27.4	-20.1	5.8	9.7	4.3	5.1
Saving and investment (percent of GDP)							
Gross national saving	48.1	43.3	41.8	46.5	44.4	44.3	44.3
Gross domestic investment	22.3	29.4	25.5	22.1	22.4	22.8	23.0
Inflation and unemployment (period average, percent)							
CPI inflation	2.1	6.6	0.6	2.8	5.2	4.5	4.5
Core CPI inflation	2.2	5.7	0.0	1.5	2.2	3.0	3.5
Unemployment rate	2.1	2.2	3.0	2.2	2.0	2.1	2.1
Central government budget (percent of GDP) 1/							
Revenue	23.1	24.3	19.6	21.0	24.1	23.3	23.0
Expenditure	12.4	16.4	18.3	15.5	16.8	17.6	17.8
Overall balance	10.7	7.9	1.3	5.5	7.3	5.8	5.2
Primary balance 2/	0.3	-1.7	-3.6	-1.9	-1.1	-0.7	-0.7
Money and credit (end of period, percentage change)							
Broad money (M3)	14.1	11.6	10.6	8.3	10.1	...	...
Lending to nonbanking sector	19.9	16.6	3.4	14.7	30.3	...	...
Three-month interbank rate(percent)	2.4	1.0	0.7	0.4	0.4	…	…
Balance of payments 3/ (US$ billions)							
Current account balance	45.8	26.3	30.1	55.5	57.0	58.9	61.8
(In percent of GDP)	(25.8)	(13.9)	(16.2)	(24.4)	(21.9)	(21.5)	(21.3)
Trade balance	57.1	41.7	47.3	63.1	67.4	69.7	72.9
Exports, f.o.b.	312.7	354.9	288.4	371.1	429.3	439.4	449.1
Imports, f.o.b.	-255.7	-313.2	-241.1	-308.0	-361.9	-369.6	-376.2
Financial account balance	-26.2	-15.5	-22.7	-12.9	-40.0	-46.9	-48.1
Overall balance	19.4	13.1	11.3	42.2	17.1	12.0	13.7
Gross official reserves (US$ billions)	163.0	174.2	187.8	225.8	237.7	249.7	263.4
(Months of imports) 4/	(4.8)	(6.4)	(5.5)	(5.7)	(5.9)	(6.0)	(6.1)
Exchange rate (period average)	1.51	1.41	1.45	1.36	1.26	...	...

Sources: Data provided by the Singapore authorities; and IMF staff estimates and projections.
1/ On a calendar year basis.
2/ Overall balance excluding investment income, capital revenue, interest payments, and net lending.
3/ The authorities recently migrated to the *Balance of Payments Manual 6* (BPM6), which resulted in some balance of payments data revisions.
4/ In months of following year's imports of goods and services.