INTERNATIONAL MONETARY FUND

IMF Country Report No. 21/156

SINGAPORE

July 2021

2021 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR SINGAPORE

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 2021 Article IV consultation with Singapore, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its July 9, 2021 consideration of the staff report that concluded the Article IV consultation with Singapore.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on July 9, 2021, following discussions that ended on May 11, 2021, 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 June 22, 2021.
- An **Informational Annex** prepared by the IMF staff.
- A **Statement by the Executive Director** for Singapore.

The documents listed below have been or will be separately released.

Selected Issues

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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PRESS RELEASE

PR21/219

IMF Executive Board Concludes 2021 Article IV Consultation with Singapore

FOR IMMEDIATE RELEASE

Washington, DC – July 16, 2021: The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with Singapore.

Singapore entered the COVID-19 pandemic with sizable policy space and robust economic policy frameworks. These have enabled the authorities to mount a coordinated, comprehensive, and sizable policy response, with fiscal policy acting as a first line of defense. As a result, worse outcomes were prevented and real GDP, which contracted by 5.4 percent in 2020, registered 1.3 percent year-on-year growth in 2021Q1, led by a strong manufacturing sector performance. Labor market conditions were supported by the wide-ranging policy initiatives, and unemployment declined to 2.9 percent in April 2021 from its peak of 3.5 percent in September 2020. Inflation, which had turned negative in 2020, registered 2.1 percent year-on-year in April. Policy support helped banks maintain strong liquidity and capital buffers. The current account surplus was resilient through the crisis and registered 17.6 percent of GDP in 2020.

Singapore's economic recovery is expected to remain on track in 2021. Activity is expected to accelerate in 2021H2 as vaccines become more widely available, bringing annual growth to 6 percent in 2021. The recovery is expected to be led by manufacturing and modern services, as hard-hit sectors such as aviation and tourism related industries improve more gradually. Inflation is expected to be contained given remaining slack in the labor market. With the recovery in domestic demand, the current account surplus is expected to decline to 15.5 percent of GDP in 2021. Over the medium term, growth should converge to 2.5 percent with the current account surplus declining and MAS core inflation stabilizing at 2 percent. The outlook is subject to unusually high uncertainty, with balanced risks stemming mostly in the near term from the unknown trajectory of the pandemic globally and locally, as well as the path for vaccines. Additional risks include volatile global financial conditions, threats to globalization and trade, and the uncertain impact of the pandemic on the corporate sector.

Executive Board Assessment[2]

Executive Directors welcomed the large and comprehensive policy response to the pandemic and ensuing economic crisis. Following a record contraction in 2020, the Singaporean economy is expected to recover this year. Nevertheless, significant uncertainty continues to cloud the outlook. Directors agreed that macroeconomic policies should remain supportive in

[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] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.IMF.org/external/np/sec/misc/qualifiers.htm.

the near term while efforts should continue to facilitate a transition toward a greener, smarter, and more inclusive economy over time.

Directors generally agreed that the fiscal response in 2021, with more targeted support, is in line with the recovering economy. Should downside risks materialize, Directors recommended using the ample fiscal space as the first line of defense to prevent a set-back in the recovery. They acknowledged that the authorities' plan to borrow for major infrastructure projects would generate benefits across several generations.

Directors noted that Singapore's external position remained substantially stronger than warranted by fundamentals in 2020, although some acknowledged the need to interpret the external sector assessment with caution given uncertainty surrounding the pandemic. They considered that higher government spending to address long-term challenges, along with the expected drawdown of household savings, should contribute to external rebalancing over time. In this context, they encouraged the authorities to quantify the costs of addressing challenges such as population aging, climate change, digitalization, and future pandemics, with a view to guiding future plans for revenue mobilization.

Directors supported maintaining the accommodative, data-dependent monetary policy stance until the recovery is fully entrenched. They welcomed the monetary authority's liquidity and credit support measures, which have ensured proper market functioning. Given pockets of risks remaining in the financial sector, Directors recommended continued supervisory vigilance, including a close monitoring of nonperforming loans in real estate markets and banks' foreign currency risk. They also encouraged the authorities to continue to strengthen US dollar liquidity among domestic systemically important banks (D-SIBs). Directors looked forward to further progress in enhancing the effectiveness of the AML/CFT framework and in implementing the 2019 FSSA recommendations.

Directors welcomed ongoing initiatives to facilitate economic transition post-pandemic. They noted that the authorities' focus on labor reskilling and training would help facilitate resource reallocation to high-growth sectors. The plans to accelerate digitalization, innovation, and climate-resilient infrastructure investment should help sustain medium-term economic growth.

Table 1. Singapore: Selected Economic and Financial Indicators, 2015–22

Nominal GDP (2020): US$340 billion
Population (2020): 5.69 million
GDP per capita (2020): US$59,819
Main goods exports (2020, percent of total non-oil goods exports): machinery & transport equip. (59.8 percent); chemical products (15.8 percent); and misc. manufactured articles (10.6 percent).
Top three destinations for goods exports (2020, percent of gross goods exports): China (13.7 percent); Hong Kong SAR (12.4 percent); and USA (10.5 percent).

							Projections	
	2015	2016	2017	2018	2019	2020	2021	2022
Growth (percentage change)								
Real GDP	3.0	3.3	4.5	3.5	1.3	-5.4	6.0	3.1
Total domestic demand 1/	0.4	5.5	6.0	1.2	1.7	-10.7	5.3	3.1
Final domestic demand 1/	4.4	2.3	3.9	0.8	2.6	-10.2	5.4	3.1
Consumption	5.9	3.4	3.1	3.8	3.3	-8.4	5.1	3.0
Private consumption	5.2	3.3	3.1	4.0	3.3	-14.1	5.6	3.1
Gross capital formation 1/	-8.6	9.5	11.1	-3.0	-1.1	-14.9	5.6	3.3
Gross fixed investment	2.0	0.5	5.4	-4.3	1.2	-13.7	6.0	3.4
Change in inventories (contribution to GDP growth, percentage points) 1/	-3.0	2.3	1.6	0.3	-0.6	-0.5	0.0	0.0
Net exports (contribution to GDP growth, percentage points) 1/	3.6	-0.3	0.9	2.4	-0.1	3.1	2.5	1.0
Saving and investment (percent of GDP)								
Gross national saving	44.0	44.0	44.6	40.4	38.9	40.2	39.1	38.7
Gross domestic investment	25.4	26.5	27.3	25.0	24.7	22.6	23.5	23.8
Inflation and unemployment (period average, percent)								
CPI inflation	-0.5	-0.5	0.6	0.4	0.6	-0.2	1.4	1.4
CPI inflation, excluding food and energy 2/	-0.5	-0.5	-0.7	-0.1	0.4	-0.3	1.3	1.1
MAS core inflation 2/	0.5	0.9	1.5	1.7	1.0	-0.2	0.8	1.4
Unemployment rate	1.9	2.1	2.2	2.1	2.3	3.0	2.7	2.5
Central government finances (percent of GDP) 3/								
Revenue	17.3	18.5	18.9	17.9	17.9	17.7	18.7	18.6
Expenditure	14.0	15.0	14.0	13.8	14.1	23.4	21.1	17.2
Net lending/borrowing	3.3	3.5	4.9	4.1	3.8	-5.7	-2.4	1.4
Net lending/borrowing, excluding nonproduced assets	-0.3	0.7	1.8	1.2	1.5	-7.4	-4.5	-0.9
Primary balance 4/	-2.5	-2.5	-1.4	-2.0	-1.9	-11.1	-8.4	-4.3
Money and credit (end of period, percent change)								
Broad money (M2)	4.0	8.4	4.2	5.1	4.4	10.7	7.0	4.5
Credit to private sector	2.5	5.5	3.3	4.8	3.0	1.4	6.0	3.1
Three-month S$ SIBOR rate (percent)	1.2	1.0	1.5	1.9	1.8	0.4	…	…
Balance of payments (US$ billions)								
Current account balance	57.6	56.0	59.3	57.9	53.4	59.8	59.1	59.8
(In percent of GDP)	18.7	17.6	17.3	15.4	14.3	17.6	15.5	14.9
Goods balance	92.6	90.0	101.0	101.6	96.8	93.6	103.3	108.2
Exports, f.o.b.	396.2	373.2	416.4	458.9	441.3	411.6	465.7	488.3
Imports, f.o.b.	-303.7	-283.2	-315.4	-357.4	-344.5	-318.0	-362.4	-380.1
Financial account balance 5/	52.4	56.9	34.2	45.4	61.8	-14.4	33.0	48.3
Overall balance 5/	1.1	-1.8	27.4	12.5	-8.4	74.9	26.1	11.5
Gross official reserves (US$ billions)	247.7	246.6	279.9	287.7	279.5	362.3	390.8	407.5
(In months of imports) 6/	6.7	6.0	6.0	6.2	6.8	7.8	7.9	8.0
Singapore dollar/U.S. dollar exchange rate (period average)	1.37	1.38	1.38	1.35	1.36	1.38	…	…
Nominal effective exchange rate (percentage change) 7/	-0.9	1.9	0.0	1.0	1.4	-1.2	…	…
Real effective exchange rate (percentage change) 7/	-2.7	-0.2	-1.2	-0.6	0.2	-2.6	…	…
Memorandum items:								
Nominal GDP (in billions of Singapore Dollars)	423.4	440.4	474.1	507.1	510.7	469.1	502.1	524.7
Growth (%)	6.1	4.0	7.7	7.0	0.7	-8.2	7.0	4.5

Sources: Data provided by the Singapore authorities; and IMF staff estimates and projections.
Note: Date and forecasts as of June 8, 2021
1/ Approximation based on available data.
2/ IMF staff estimates, showing projections from 2021. MAS core inflation excludes the costs of accommodation and private transport.
3/ IMF staff estimates on a calendar year basis following GFSM 2014.
4/ Net lending/borrowing excluding net investment return contribution (NIRC).
5/ Following the BPM6 sign convention, a positive entry implies net outflows.
6/ In months of following year's imports of goods and services.
7/ Increase is an appreciation.

INTERNATIONAL MONETARY FUND

SINGAPORE

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION

June 22, 2021

KEY ISSUES

Context

Singapore entered the COVID-19 pandemic with sizable policy space and robust economic policy frameworks, yet facing longer-term challenges. The economy has been severely impacted by the pandemic, but a bold, comprehensive, and coordinated policy package has helped cushion the economic fallout. Following a record contraction in the first half of 2020, activity has rebounded, and growth is projected to strengthen to 6 percent in 2021, underpinned by a recovery in domestic demand and a positive contribution from net exports. The uncertainty surrounding the outlook is larger than usual.

Economic Policy Recommendations

- As the recovery proceeds, the authorities' shift from broad emergency relief to more targeted fiscal and financial relief and policies to support post-pandemic priorities is appropriate. In view of the substantial uncertainty, targeted policy support should remain in place until the recovery is firmly entrenched.
- Monetary policy is appropriately accommodative under the baseline scenario and should remain data dependent going forward.
- The financial sector remains healthy but vigilant financial supervision is called for. The authorities should continue to enhance their strong system oversight and remain watchful as smaller corporates may face challenges due to the crisis.
- Should downside risks materialize, Singapore's ample fiscal buffers can be drawn upon to cushion the economic impact, with fiscal policy continuing to be the first line of defense.
- A quantification of spending needs to address medium- and long-term challenges—including from aging, climate change, and technological development—would help in assessing the need to use the existing fiscal space and to raise additional revenue.
- Achieving sustained growth post-pandemic would call for accelerated digitalization, intensified re-skilling of workers displaced by technology shifts, and investment in climate-resilient infrastructure. The authorities' efforts to transition towards a smarter, greener, and more inclusive economy post-pandemic are welcome.

Approved By
Odd Per Brekk (APD) and Anna Ilyina (SPR)

Mission meetings were held virtually during April 27–May 11, 2021. The mission team comprised: Nada Choueiri (Head), Tidiane Kinda, Dan Nyberg, Abdul Mannan, Jiae Yoo (all APD), Natalia Novikova (Resident Representative), and Han Teng Chua (Economist in Singapore office). David Ong and Selene Yoe (OED) joined the mission. Alisara Mahasandana (Executive Director) and Firman Mochtar (Alternate Executive Director) joined the concluding meeting. Kaustubh Chahande and Justin Flinner (both APD) assisted in the preparation of this report. Data used in this report for staff analyses are as of June 8, 2021, unless otherwise noted.

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APPENDICES

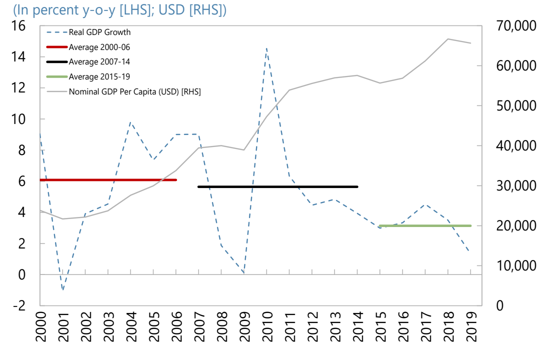
PRE-COVID-19 LANDSCAPE: STRENGTHS AND CHALLENGES

1. **Singapore entered the pandemic with sizable policy buffers and robust policy frameworks.** Fiscal prudence and strong compliance with the balanced budget rule have led to the accumulation of large net public sector assets. Monetary policy credibility, first-rate financial sector regulation and supervision, and a resilient financial sector have been additional sources of strength. More broadly, economic policy institutions and frameworks are strong. These features enable the authorities to manage domestic and external shocks.

2. **Singapore was also facing important longer-term challenges.** The pace of economic expansion had moderated as growth averaged 3.6 percent during 2012-19, compared with 7.3 percent during 2002-07.[1] This reflected in part declining productivity growth, especially in domestic-oriented sectors. More recently, the tech cycle downturn and global trade tensions had weighed on Singapore's export-oriented economy, resulting in growth as low as 1.3 percent in 2019. Aging, technological shifts, and climate change also presented longer-term challenges.

SGP: Real GDP Growth

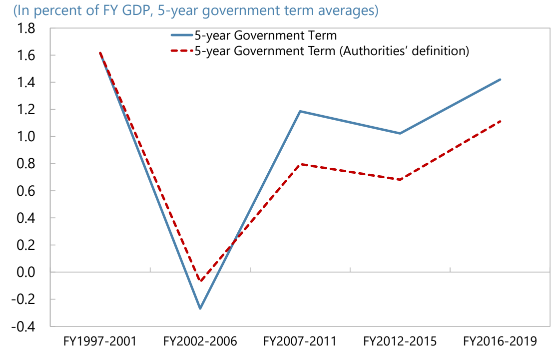
(In percent y-o-y [LHS]; USD [RHS])



Sources: SGP Dept. of Statistics, CEIC Data, and IMF staff calculations.

SGP Fiscal Balance

(In percent of FY GDP, 5-year government term averages)



Sources: SGP Dept. of Statistics; and IMF staff calculations.

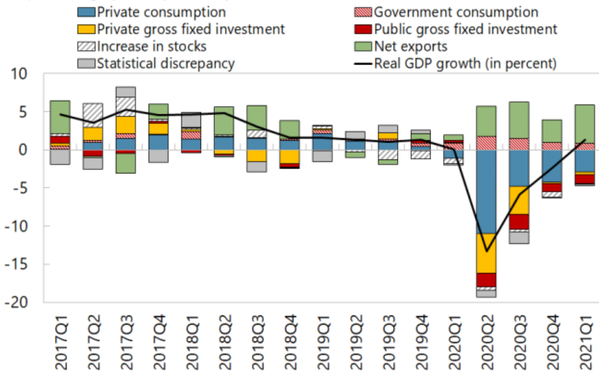
RECENT DEVELOPMENTS: A SEVERE IMPACT OF THE COVID-19 CRISIS CUSHIONED BY POLICY SUPPORT

3. **The economic impact of the pandemic has been severe but uneven**. While the first COVID-19 cases were registered in January 2020, the virus spread worsened in 2020Q2, leading to strict containment measures (Box 1). Consequently, real GDP contracted by a record 13.3 percent year-on-year in 2020Q2. As the health crisis began to ease and restrictions were partly relaxed, the economy rebounded, also helped by an exceptionally strong policy response. Overall, real GDP contracted by 5.4 percent in 2020 (Figure 1). Tourism, consumer-facing services, and construction

[1] GDP per capita more than doubled during this period, from less than US$24,000 in 2000 to above US$65,000 in 2019.

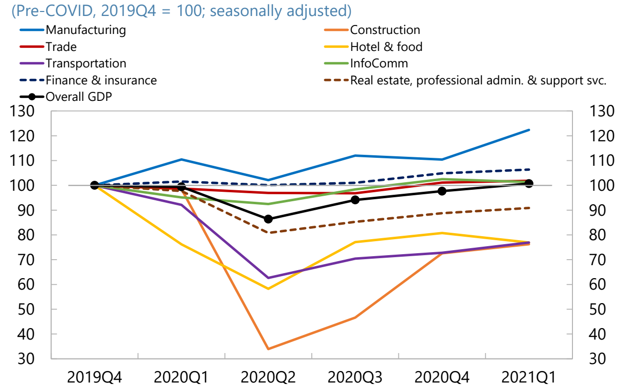
were the hardest hit sectors, while manufacturing, information & communication, and finance & insurance industries proved relatively resilient. On the demand side,

Singapore: Contributions to Real GDP Growth
(In percentage points; year-on-year)



Sources: CEIC Data Co. LTD. and IMF staff calculations.

Output Level in 2020-2021 vs. Pre-COVID
(Pre-COVID, 2019Q4 = 100; seasonally adjusted)

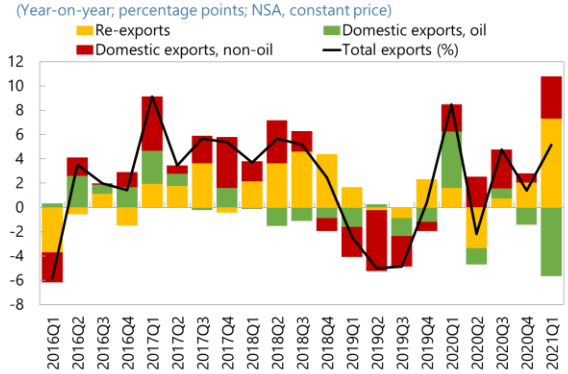


Source: Haver, IMF staff calculations

external demand for goods provided some support while service exports and domestic demand contracted sharply—particularly private consumption which remained weak in 2020H2, reflecting subdued consumer sentiment and lingering health risks (Appendix I and Chapter 1 of *Selected Issues*). The recovery firmed up in 2021Q1, with growth reaching 1.3 percent year-on-year , led by strong manufacturing sector performance.

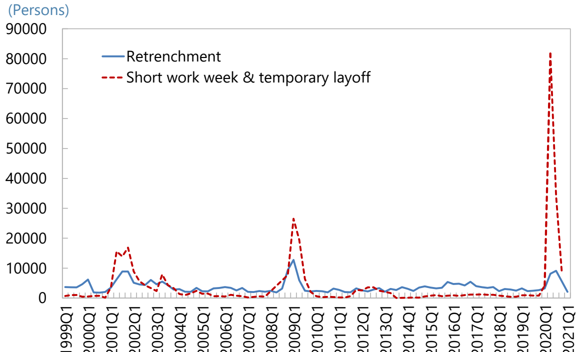
4. Goods exports have increased after a sharp drop in 2020Q2. While goods imports slowed, goods exports increased in 2020, led by a pickup in non-oil domestic exports (NODX), especially non-monetary gold, specialized machinery, and electronics. NODX to the U.S., Japan, and Korea grew in 2020, while NODX to China declined. The strong growth of NODX has continued in 2021, reaching 11.3 percent year-on year in real terms in the first quarter. Services trade declined sharply in 2020 driven

Singapore: Contribution to Goods Exports Growth
(Year-on-year; percentage points; NSA, constant price)



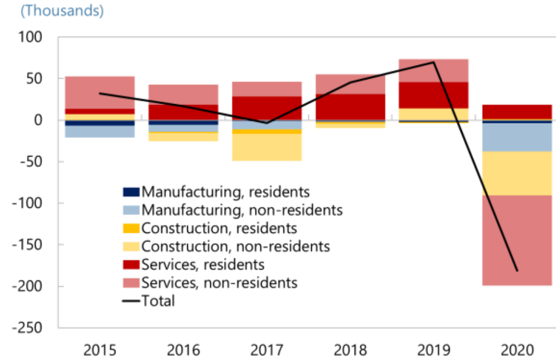
Sources: Haver Analytics and IMF staff calculations.

Singapore: Temporary Adjustment and Retrenchment
(Persons)



Sources: Haver Analytics.

Employment Changes by Sector and Residential Status
(Thousands)



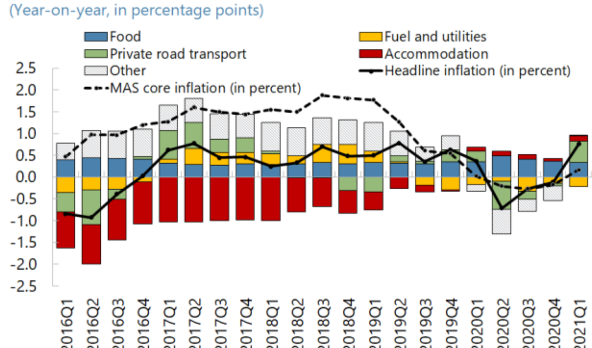
Sources: Singapore Ministry of Manpower

by travel and transport services, with a sharper decline in imports than in exports, and remained subdued in 2021Q1.

5. The labor market has been hard hit but is recovering. In 2020, retrenchments rose to 12.8 per 1,000 employees from 5.1 in 2019 but remained lower than in previous major recessions, as firms relied more on flexible working arrangements (Figure 2).[2] Total employment fell by 181,000 over the same period, led by the service sector. Non-resident employment accounted for the decline, while resident employment increased, helped by large support measures such as wage subsidies under the Jobs Support Scheme (JSS) that encouraged employers to retain local employees and the Jobs Growth Incentive that supported employers to expand local hiring (Appendix II and Chapter 2 of *Selected Issues*). Employment growth (excluding migrant domestic workers) turned positive in 2021Q1, with the net increase in total employment level by 4,800, and the number of retrenchments fell to pre-pandemic levels. Unemployment has steadily declined from its peak of 3.5 percent in September 2020 to 2.9 percent in April 2021 but remained elevated (3.3 percent at end-2020 compared to 2.3 percent at end-2019).

6. Inflation has turned positive in 2021, after deflation in 2020. Both MAS core and headline average inflation recorded -0.2 percent in 2020, as a significant output gap opened.[3] MAS core inflation turned negative in February 2020, reflecting lower fuel, retail, and services prices, and remained subdued through end-2020. Headline inflation, however, recovered to zero at end-2020, due to rising private transport and accommodation costs. Inflation picked up in 2021 with MAS core inflation increasing to 0.6 percent in April, reflecting higher services inflation and a smaller decline in retail and fuel prices. Headline inflation reached 2.1 percent in April, reflecting higher private transport costs, and continued increase in accommodation costs.

Singapore: Contributions to Headline and MAS Core Inflation
(Year-on-year, in percentage points)



Sources: Haver Analytics; and IMF staff calculations.

7. The authorities have mounted an appropriately strong, comprehensive, and coordinated policy response to cushion the impact of the pandemic. Support came primarily through a substantial fiscal package (about S$97.3 billion, or 20.7 percent of GDP) in FY2020, deployed in multiple stages and mostly financed through drawdowns of government reserves. Above-the-line measures (about 16 percent of GDP) supported healthcare and mitigated economic and social hardship through assistance to businesses, workers, and households. MAS helped

[2]Retrenchment refers to the termination of permanent employees due to redundancy and early termination of term contract employees due to redundancy. The incidence of retrenchment recorded 16.7 and 14.2 per 1,000 employees during SARS (in 2003) and the global financial crisis (in 2009), respectively.

[3] MAS includes food and energy items in core inflation but excludes the costs of accommodation and private road transport as the latter largely reflect administered prices.

through monetary policy easing and liquidity provision (see below), as well as a broad financial sector package that included opt-in moratoria on loan repayments, extension of payment terms for trade finance facilities, additional financing for working capital, and regulatory and supervisory flexibility (Appendix III).

Singapore: Key Policy Responses to the COVID-19 Pandemic in 2020

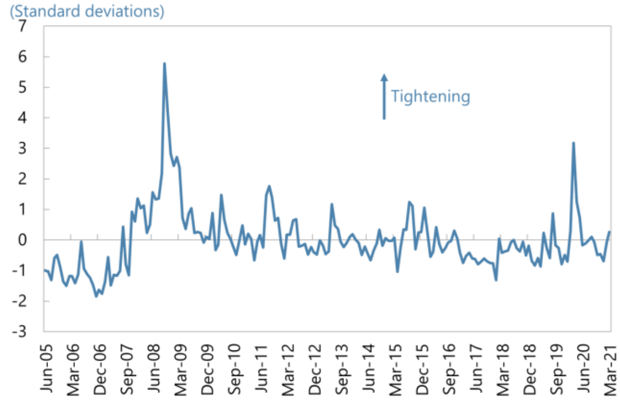
List of Measures	Estimated size (in percent of GDP)
Fiscal	
Emergency public health measures to fight COVID-19	2.9
Support for jobs, workers, businesses	15.6
Wage subsidies under the Jobs Support Scheme	*5.7*
Loan capital (below-the-line measure)	*4.7*
Support to households	2.1
Care and Support Package (CSP) and Solidarity Payment	*1.2*
Monetary	
Monetary policy easing (zero percent NEER appreciation)	
Financial	
MAS/Federal Reserve US$60bn swap line	
Special financial relief programme	
Enhanced government loan schemes for corporates	
Cap on domestic bank dividend distribution to 60 percent of FY2019 level	

Sources: Data provided by the Ministry of Finance; and IMF staff estimates.

8. **The unprecedented fiscal response has led to the largest budget deficit in Singapore's history**. As government spending rose substantially in FY2020, tax revenues declined by 0.9 percent of GDP and were only partially offset by larger contributions from net investment returns (0.5 percent of GDP).[4] Consequently, from a surplus of 1.7 percent of GDP in FY2019, the overall fiscal balance excluding land sales turned to a deficit of 10.4 percent of GDP in FY2020[5], imparting a 12 percent of GDP fiscal impulse in FY2020[6] (or, on calendar basis, 10 percent of GDP fiscal impulse in 2020) and adding an estimated 5 percentage points to growth in 2020.[7]

9. **MAS's policy response has helped stabilize financial conditions**. Financial conditions tightened sharply in March-April 2020 but have since normalized, supported by domestic, as well as global, central bank policy measures (Figure 3). MAS eased monetary policy at end-March 2020 in response to deteriorating macroeconomic conditions and a weakening outlook; it has maintained a zero percent appreciation rate of the nominal effective exchange rate (S$NEER) since then, while providing liquidity through money market operations. Interest rates and government bond yields declined to record-low levels in 2020.

Singapore Financial Conditions Index
(Standard deviations)



Sources: Bloomberg, CEIC, Haver, and IMF Staff Calculations

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[4] Fiscal year 2020 corresponds to April 1, 2020 to March 31, 2021. The IMF staff projection for GDP (for instance S$ 470.6 billion in FY2020) is used to calculate the authorities' budgetary accounts in percent of GDP.

[5] Land sales represent the transformation of non-financial assets into financial assets and do not constitute a change in total government net worth, therefore they are not included in the fiscal aggregate in this report. The overall balance including land sales is estimated at -8.9 percent of GDP in FY2020.

[6] The fiscal impulse measured as the change in the cyclically adjusted overall balance (excluding land sales) amounts to an estimated 11.5 percent of potential GDP in FY2020.

[7] The difference between the announced above-the-line measures (about 16 percent of GDP) and the estimated fiscal impulse (about 12 percent of GDP) reflects the reallocation of some budgetary spending to the COVID-19 policy response package and budgetary execution in FY2020. The estimated growth impact of the fiscal impulse assumes a multiplier of 0.5.

10. The role of Singapore as a regional financial hub was not disrupted by the pandemic. Cross-border interbank markets have been resilient during the pandemic, although the global economic slowdown entailed a moderation of trade finance volumes and net financing to the region. The MAS-Federal Reserve US$60bn swap line, announced in March 2020 and subsequently extended through end-December 2021, has played a critical role in boosting confidence and stabilizing USD funding markets and lending to businesses both in Singapore and in the region. The non-bank financial sector, including asset managers, has weathered the pandemic shock well.

11. Policy support has helped banks maintain strong buffers. Total regulatory capital to risk-weighted assets stood at 17.8 percent in 2021Q1 (up from 16.8 percent in 2020Q1), substantially above the 10 percent regulatory minimum. Supported by government measures, asset quality of local banks held up, with NPLs at 1.5 percent of total non-bank loans in 2021Q1 (down from 1.6 percent in 2020Q1). Banks' liquidity indicators improved, with non-bank deposits increasing by 4 percent year-on-year in 2021Q1 (following a 9.9 percent year-on-year increase in 2020) driven by precautionary saving and safe-haven motives. Private sector non-bank credit growth was broadly unchanged in the year to March 2021, upheld by government relief measures to facilitate credit supply (Appendix III). The foreign currency loan-to-deposit ratio declined to 112 percent at end-2021Q1 from 119 percent at end-2020Q1, while the domestic currency loan-to-deposit ratio declined to 77 percent in 2021Q1 from 80 percent in 2020Q1, reflecting both higher US$ deposits and lower trade-related financing during the pandemic (Figure 4). In 2021Q1, large domestic banks reported robust earnings growth, alongside healthy and stable asset quality, and strong balance sheet fundamentals in terms of capital, funding, and liquidity.

12. Debt-related risks in the corporate sector have risen. Singapore's non-financial corporate sector maintained healthy liquidity buffers before the pandemic, with the median cash ratio at 39 percent as of end-2019.[8] The cash ratio increased further to 43 percent in 2020Q2, as many corporates enhanced their liquidity buffers through short-term borrowing. This short-term debt, together with a drop in GDP, drove corporate debt up to 169 percent of GDP in 2020Q2 (156 percent at end-2019). As profitability has deteriorated with the pandemic, corporate debt service capacity has weakened, with the share of debt-at-risk doubling to 28 percent in 2020Q2 (Box 2). While this suggests elevated debt-related risks at the trough of the crisis, corporate earnings are expected to improve with the economic recovery. Corporate debt rollover risks, measured by the share of short-term debt to total debt, decreased to 38 percent in 2020Q4 from 43 percent in 2019Q4.

13. The housing market has been stable during the pandemic, while the commercial real estate market has been more adversely impacted. Private house prices and transactions have held up; following a 2.2 percent increase in 2020, house prices further increased by 6.6 percent in 2021Q1 (year-on-year), while household mortgage loan NPLs remained stable at ½ percent of the bank's mortgage book in 2020 (Figure 5). The economic downturn, however, has reduced demand for commercial space, and by end-2021Q1 prices for office and retail space had declined by 9.5 percent and 4.6 percent respectively. Vacancy rates for retail space edged up from 8.0 percent in

[8] The cash ratio is defined as cash and cash equivalent divided by current liabilities.

2020Q1 to 8.5 percent in 2021Q1, and for office space from 11.0 percent to 11.9 percent during the same period, although these have come down from peak levels in 2020.[9]

14. Singapore's external position was substantially stronger than warranted by fundamentals in 2020. The current account (CA) surplus rose to 17.6 percent of GDP (14.3 percent in 2019), led by a large decline in services imports, a narrower oil trade deficit, and a decrease in net payments of primary income related to the COVID-19 shock (Figure 6). IMF staff assesses the CA gap at 1.2 to 7.2 percent of GDP (Appendix IV). The main drivers of Singapore's external position have been its financial center status and saving motives related to rapid aging (Figure 7 and 8). The substantial increase in government spending in response to the crisis has helped reduce public saving, as has been the case in peer countries. Over the medium term, higher government spending directed to infrastructure, aging-related outlays, climate change, and the push towards digitalization should help move Singapore towards external balance. Consistent with the estimated CA imbalance, the 2020 real effective exchange rate is assessed to be undervalued by 2.5 to 14.5 percent, having depreciated by 2.6 percent year-on-year.

15. Economic policies have been broadly consistent with past Fund advice. The authorities' response to the COVID crisis was in line with Fund advice that fiscal policy should be the first line of defense against downside risks materializing. Monetary policy remained data dependent and was significantly eased in response to the deceleration in inflation. In recent years, government expenditure had increased to accommodate healthcare and other aging-related spending, transportation infrastructure, innovation, and targeted benefits to promote workers' skills acquisition and reduce inequality (Figure 9). The budget has increasingly benefited from contributions from the net investment returns on government assets. As confirmed by the 2019 Financial System Stability Assessment (FSSA), Singapore's strong oversight underpins a resilient financial sector that is well-positioned to support the post-pandemic economic recovery.

OUTLOOK: A RECOVERY WITH HEIGHTENED UNCERTAINTY AND BALANCED RISKS

16. Singapore's recovery is on track. Activity is expected to accelerate in 2021H2 as vaccines become more widely available, bringing annual growth to 6 percent in 2021. Recovery in hard-hit sectors, such as aviation and tourism-related industries, however, is likely to be more gradual compared to manufacturing or modern services. Labor shortages are expected to weigh on the construction sector. A recovery in domestic demand will likely underpin growth, alongside a positive contribution from net exports. Inflation is expected to pick up as domestic demand recovers but to remain contained given the remaining slack in the labor market. The CA surplus is projected to decline to 15.5 percent of GDP as the recovery in domestic demand drives up imports, even as

[9] Vacancy rates for retail and office space reached recent peaks of 9.6 percent and 12.1 percent respectively in 2020Q2.

exports continue to rise. Over the medium term, growth should converge to 2.5 percent, with the CA surplus declining and MAS core inflation stabilizing at 2 percent.

17. The outlook is highly uncertain, but risks are balanced. Near term developments critically depend on the local, regional, and global path of the pandemic, which is hard to predict given the threat of new infections, limited information about new strains and effectiveness of vaccines against them. Vaccine hesitancy could also hinder the path to recovery. A prolonged pandemic would delay economic normalization, undermining growth prospects (Appendix V). Tighter or more volatile global financial conditions could lead to sharp asset price declines and a rise in credit spreads, while threats to globalization and trade would weigh on Singapore's exports and growth. Increased corporate sector vulnerabilities, including weakened debt service capacity due to the pandemic, and the banking sector's large exposure to the real estate market, are also sources of risk. On the upside, faster-than anticipated global vaccine rollout and pandemic containment, as well as increased confidence in the recovery, could further boost growth. A stronger-than-projected impact of the recovery in the U.S. and in Europe on Singapore could also further support growth. While it remains muted, domestic inflation should be closely watched in the context of rising inflation in trading partners and global commodity prices.

Authorities' Views

18. The authorities broadly agreed with staff's assessment of the outlook. They expect real GDP growth at 6 percent or above in 2021, barring a serious outbreak of infections domestically or globally, as the recovery consolidates over the year supported by domestic and external demand. COVID-19 will likely continue to have disparate impacts across sectors. Strong momentum in manufacturing, led by electronics, would be sustained in 2021, even as hard-hit sectors such as aviation and travel-related industries remain affected by travel restrictions. Substantial policy stimulus, both domestically and in major trading partners, has helped alleviate adverse effects of the pandemic and will continue supporting recovery prospects. The labor market is expected to continue its recovery, even though slack could persist in some sectors in 2021. Inflation is picking up, but the pace would ease in the second half of the year, as the base effects fade and global commodity inflation moderates.

19. The authorities concurred that the outlook is subject to unusually high uncertainty. A stronger-than-expected global electronics cycle and manufacturing performance could further boost growth. So would faster than expected containment of the pandemic through global vaccination efforts and other measures. However, the recovery could be thwarted, in case a strong resurgence of the virus necessitates a significant tightening of containment measures. The uneven impact of the pandemic will be a risk to the broader recovery in employment and corporate profits.

20. The authorities noted that Singapore's financial sector has remained resilient during the crisis. They emphasized that the financial sector entered the pandemic from a position of strength and has maintained strong capital and liquidity buffers and good asset quality throughout the crisis. Decisive fiscal, monetary, and financial policy measures have helped ease financial conditions and facilitate the flow of credit to businesses and households. The balance sheets of corporates, households, and banks have remained resilient following the onset of the COVID-19 pandemic. The banking sector's strong capital and liquidity positions are a source of strength and a robust base for banks to continue supporting the economy's demand for credit during the recovery.

21. The authorities continue to disagree with the external balance assessment and emphasized the unusually high uncertainty around the assessment due to the pandemic. Large shocks such as the COVID-19 pandemic in 2020 make the assessment even more challenging than usual. The authorities noted staff's assessment that the policy gap had all but dissipated in 2020. They considered the fact that the gap is almost entirely accounted for by the residuals as underscoring the large uncertainty around the model assessment and the need for further work to fully understand the impact of COVID-19 on the CA. In their view, Singapore's CA balance reflects its role as a regional financial hub, and its saving-investment gap is largely driven by the household and government sectors. High household saving reflects the high share of prime working age population actively saving for retirement, a factor which will decline as the population ages rapidly, as well as social norms such as strong bequest motives. Government saving has already come down and continues to reflect prudent and efficient management of fiscal policy. The authorities view that government assets abroad are necessary given expected sizeable and growing expenditure pressures over the medium term, associated with aging, infrastructure investment, climate change, and the likely increase in the frequency of large magnitude shocks.

POLICIES TO SUSTAIN THE RECOVERY: TARGETED SUPPORT AND CLOSE MONITORING OF RISKS

A. Near-Term Policy Mix

22. Considering the uneven recovery and significant uncertainty, near-term policies need to focus on the appropriate fiscal, monetary, and financial policy mix to secure a broad-based and durable recovery and manage risks:

- Under the baseline, as the economy recovers, the authorities' shift from broad emergency assistance to targeted fiscal and financial relief and policies to support post-pandemic priorities, in the context of accommodative monetary policy, is appropriate. This strategy aims at allowing the economy to operate as close-to-normal as possible under pandemic circumstances.

- The exit strategy from targeted fiscal and financial measures should continue to be aligned with the breadth and pace of the recovery while facilitating resource reallocation across sectors. The uneven sectoral impact of the pandemic will likely necessitate continued targeted support to affected individuals and hard-hit, but solvent sectors, while facilitating the restructuring of non-viable corporates.

- Should downside risks materialize, Singapore has ample fiscal space to deploy policy support. Fiscal policy, which can best target affected sectors and households, should continue to play the role of first line of defense without recourse to additional monetary policy accommodation, barring large adverse shocks. Financial sector support should remain targeted to adversely affected sectors and be time-bound.

B. Fiscal Policy

23. The reduced fiscal deficit in 2021, accompanied with the shift toward targeted relief and post-pandemic priorities, is in line with the recovering economy. The FY2021 budget includes a S$11bn (2.2 percent of GDP) COVID-19 Resilience Package aimed at extending some measures from the preceding year.[10] The package includes: public health care measures to support a safe reopening of the economy; targeted support to workers and businesses, in particular some extension of wage subsidies under the JSS with a lower level of wage support; targeted support to the hardest hit sectors; and skills upgrade and job creation initiatives to facilitate resource reallocation across sectors.[11] The FY2021 budget also supports the transition towards a greener, digital, and more inclusive economy (see below). As the recovery proceeds, the shift from broad emergency relief to more targeted support is appropriate. The reduction in the fiscal deficit in FY2021, following an unprecedent fiscal expansion in FY2020, is consistent with the speed at which the output gap is closing. After widening by 12 percent of GDP in FY2020, the overall deficit is projected to decline by 7.8 percent of GDP to 2.6 percent of GDP in FY2021,[12] mostly due to lower special transfers, in particular reduced wage subsidies under the JSS.

Singapore: Composition of the COVID-19 Resilience Package in the FY2021 Budget

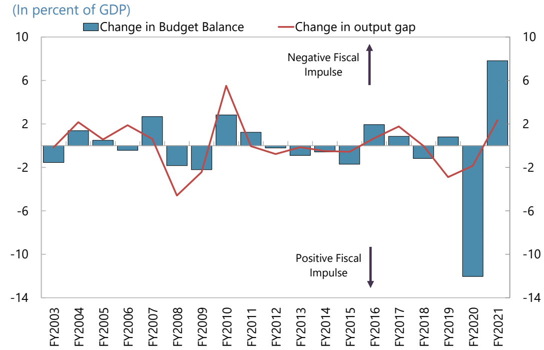
List of Measures	Estimated size (in percent of GDP)
Public health and safe reopening	1.0
including COVID-19 testing, vaccination, and tracing	
Support for jobs, workers, businesses	1.1
Wage subsidies under the Jobs Support Scheme	0.6
SGUnited Jobs and Skills package, including Jobs Growth Incentive	*0.3*
Support to hardest hit sectors (e.g. aviation and tourism)	0.2
Support to households	0.1
COVID-19 Support Grant/Recovery Grant	0.1
Total	2.2

Sources: Data provided by the Ministry of Finance; and IMF staff estimates.

Notes: Numbers may not sum up due to rounding.

Change in Budget Balance

(In percent of GDP)



Sources: IMF *World Economic Outlook* and IMF Staff Calculations

[10] To mitigate the economic impact of tightened social distancing measures associated with the return to Phase-2 (Heightened Alert), the government announced some additional measures totaling S$800 million (0.2 percent of GDP) on May 28, 2021, to support impacted workers, businesses, and individuals. Financed through budgetary reallocation within the FY2021 budget, the measures include enhanced support under the JSS, additional cash payout to eligible individuals and workers, and rental relief.

[11] A S$900 million (0.2 percent of GDP) Household Support Package not included in the COVID-19 Resilience Package aims to provide continued support for families, including through one-off cash transfers.

[12] The structural primary deficit is expected to decline by 7.3 percent of potential GDP in FY2021, following a widening of 12.2 percent of GDP in FY2020.

24. Singapore retains ample fiscal space to provide additional support if needed in the future (Appendix VI). With the trajectory of the recovery still highly uncertain, a derailment cannot be ruled out. Should downside risks materialize, the authorities should have contingency plans ready to deploy additional resources towards targeted economic support. While the size and composition of these plans would depend on the magnitude of the downside risks and their specific nature, a key element would be to ensure adequate support to the most vulnerable, including through the JSS and social assistance. The fiscal measures announced in May in response to the tightened social distancing measures, including temporary additional assistance under the JSS and a one-off payout to affected individuals and businesses, illustrate the authorities' readiness to provide further support as needed.

25. The pace of budget adjustment needs to be aligned with the breadth and pace of the recovery and account for spending needed to address medium- and long-term challenges. These challenges include (1) an increase in spending needs due to the rapidly aging population, in particular on healthcare; (2) fundamental threats including climate change given Singapore's low-lying areas; (3) the risk of future pandemics and the associated asymmetric, large economic impacts; (4) lumpiness in the spending needed to rejuvenate public housing and infrastructure (such as rail lines as well as water, drainage, and sewage systems); and (5) the need to raise productivity and help ease transition costs for firms and workers as Singapore embraces technological change and structural transformation. A quantification of the cost of these challenges and risks would be needed to better assess their implications for the fiscal stance, plans for government borrowing, and revenue mobilization needs, including the plan to hike the Goods and Services Tax (GST) rate between 2022 and 2025.

26. The authorities' plans to fund new major long-term infrastructure projects through borrowing is appropriate. The government plans to issue new bonds under the Significant Infrastructure Government Loan Act (SINGA) to finance major long-term infrastructure projects, such as new rail lines, water management facilities and infrastructure to protect against rising sea levels. A limit of S$90bn under SINGA is based on the pipeline of projects over the next 15 years. The borrowings under SINGA would entail a significant shift in policy from the long-standing approach of not using proceeds from central government borrowing for budget financing. Scaling up infrastructure spending financed through debt is appropriate, considering low sovereign borrowing costs, the potential role of government paper in deepening debt markets, and the boost that government green bonds could provide to the authorities' green finance objectives. [13]

Authorities' Views

27. The authorities emphasized that fiscal policy has been front and center in their response to the pandemic. They countered the crisis with a large and comprehensive fiscal package to stabilize the economy and prevent scarring, illustrating the country's readiness to tap on its sizeable fiscal reserves in the presence of large shocks. The authorities have shifted from broad

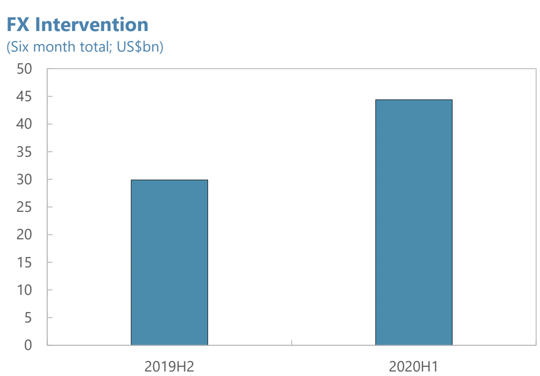
[13] As part of the broad borrowing plan, the government plans to issue S$19 billion of green bonds over the next few years.

emergency relief to targeted support and active labor market policies such as training and re-skilling to facilitate labor reallocation to growing sectors and support the recovery. As fiscal policy remains the first line of defense, the authorities stand ready to deploy additional targeted fiscal support, commensurate with the size of the shock and its macroeconomic implications.

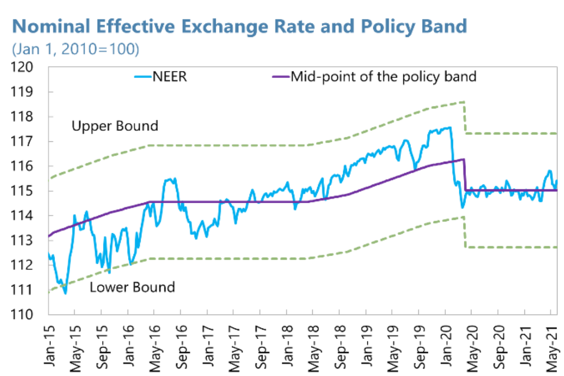
28. The authorities reiterated the need to maintain large fiscal reserves to preserve intergenerational equity and in view of medium-term spending pressures. They indicated that preserving a steady stream of income through contributions from net investment returns to supplement the budget across generations is important for maintaining intergenerational equity. In addition, the authorities reaffirmed their plans to raise the GST between 2022 and 2025 and indicated that they are also considering increases in other taxes to ensure sufficient fiscal space to meet future spending needs and large shocks. The authorities plan to issue bonds under SINGA to finance major infrastructure projects, including green bonds for select projects, in line with their fiscal principle to finance current spending with current revenue and use borrowing only for major investments that benefits multiple generations.

C. Monetary and Financial Sector Policies

29. The accommodative monetary policy stance is appropriate. Since 1981, MAS has operated a basket, band, and crawl exchange rate-based monetary policy framework in which the S$NEER is managed against an undisclosed basket of currencies—a framework that has, as intended, helped deliver price stability.[14] Since the April 2020 policy easing, and in the face of weak inflation and negative output gap, MAS has appropriately maintained a zero percent per annum rate of appreciation of the policy band and an unchanged width of the band. With sustained inflows, this policy required FX reserve purchases to the tune of US$44 billion in 2020H1, up from US$30 billion in 2019H2.[15] Monetary policy should remain data dependent. With the output gap still negative and inflationary pressures muted, an accommodative monetary policy stance is called for until the recovery is firmly entrenched.



Sources: Haver Analytics



Sources: MAS, CEIC Data, and IMF staff calculations.

[14] See CR 19/233.

[15] The MAS started disclosing its foreign exchange (FX) intervention operations aggregated over a six-month period with a 3-months lag in April 2020.

30. The authorities have made progress in implementing the 2019 FSSA recommendations, particularly in strengthening cyber resilience, payment system oversight, and US dollar liquidity among D-SIBs (Appendix VII). Efforts in these and other areas should continue. While the MAS/Federal Reserve US$ swap line was critical in supporting US$ liquidity during the peak of the crisis, MAS should continue to strengthen US dollar liquidity among D-SIBs and work with banks to ensure they actively monitor and prudently manage their foreign currency risk. MAS continues to work on enhancing operational readiness of the resolution framework and on formalizing its supervisory expectation on banks' management of material outsourcing risk.

31. Systemic banks are expected to remain solvent in the face of COVID-related shocks. The impact of the pandemic may become more prolonged than assumed in IMF staff's baseline macro framework. In 2020H2, MAS conducted a stress test incorporating COVID shock scenarios for D-SIBs, which assumed continued disruptions to economic activity in 2021 due to delays in vaccine deployment alongside a global resurgence in virus outbreaks (the shocks are broadly similar in size to the 2019 FSSA stress tests). The results showed that all D-SIBs would remain solvent, with their aggregate common equity (CET1) capital ratios well above MAS' minimum regulatory requirements. Still, commercial banks are likely to face continued challenging operating conditions until the pandemic is under control. In this context, dividend distribution limits should be considered in the context of updated stress tests to ensure strong capital and liquidity buffers amidst elevated uncertainty about the trajectory of the pandemic.[16] .

32. Financial support measures should remain targeted to adversely impacted sectors and gradually withdrawn as the recovery broadens. The government's policy response has provided adequate, temporary, and increasingly targeted, support to corporates. However, pockets of risks remain for smaller firms (which tend to be financially weaker) and firms in domestically oriented or travel-related services, which have been hardest hit by the pandemic. Against the background of a possible increase in economic distress, the authorities have taken welcome temporary measures to amend the insolvency framework and raised the thresholds for bankruptcy and lengthening the statutory period for debtors to respond to creditor demands. The authorities have also temporarily simplified the insolvency and debt restructuring procedures for micro and small enterprises. Once the recovery is broadly entrenched, a gradual withdrawal of support, complemented with continued skills upgrade and job placement initiatives in growing sectors (see below), will facilitate necessary resource reallocation across sectors, while the insolvency framework will address non-viable companies. Financial indicators to consider when calibrating the withdrawal of support could include the evolution of banks' lending standards, sectoral credit growth, and indicators of corporate financial health.

33. Continued careful monitoring of real estate markets and associated financial stability risks is called for. Corporate real estate related debt and household mortgages capture a substantial share of domestic systemically important banks' assets. The outlook for the commercial

[16] In July 2020, MAS called on Singapore-headquartered locally incorporated banks to cap their total dividends per share for FY2020 at 60 percent of FY2019 levels to pre-emptively bolster their resilience and capacity to lend.

real estate sector is expected to remain uncertain, with elevated vacancy rates and lower rents, as demand for commercial spaces has been affected by the pandemic. Lower commercial property prices could negatively impact the quality of bank exposures as collateral values fall, raising financial stability risks, although most (around 84 percent) loans collateralized on commercial real estate have a loan-to-value (LTV) ratios of less than 80 percent, limiting potential loan losses to the banks. In this context, supervisory vigilance is needed to monitor related NPLs and their impact on bank balance sheets. The residential real estate has weathered the pandemic well so far with sustained demand from both domestic and foreign buyers (especially in the higher end of the market). Large price swings, however, remain a significant risk given Singapore's internationally attractive market, with strong structural foreign demand. With mortgages representing three-quarters of household debt, sudden or large property price fluctuations could pose a systemic risk to the financial sector through potential bank losses, possibly threatening the confidence enjoyed by Singapore as a large global financial center. The Additional Buyer's Stamp Duty (ABSD), whose rates have remained unchanged since 2018, is an important tool in the authorities' view to address this risk. As the ABSD is a residency-based capital flow management measure and macroprudential measure (CFM/MPM), staff recommends eliminating the residency-based differentiation by phasing out the measure once systemic risks from the housing market dissipate.

34. The authorities should continue to enhance the effectiveness of the AML/CFT framework. They have taken steps to improve the beneficial ownership regime through the establishment of a central non-public register in 2020. The effectiveness of the register would be further strengthened by ensuring that greater accuracy of the beneficial ownership information is maintained. The authorities use a range of tools including data analytics and intelligence to identify suspicious activities at the transactional or customer level. Given Singapore's role as a financial hub, additional gathering and analysis of cross-border data on corridors, inflows and outflows would support systemic analysis of financial flows and enhance further AML/CFT risk-based supervision. Considering rising virtual assets (VA) activities and reported ML/TF cases involving VA, the authorities should continue to develop related ML/TF risk assessments and supervisory activities, including ongoing efforts to raise awareness of AML/CFT requirements amongst Digital Payment Token Service Providers.

35. The authorities are making good progress towards introducing a new short-term benchmark interest rate. Given the anticipated discontinuation of LIBOR in June 2023, MAS had established an industry-led Steering Committee in 2019 to guide the transition to a robust new interest benchmark—the Singapore Overnight Rate Average (SORA)—underpinned by transactions in a deep and liquid overnight interbank funding market. The transition to SORA would be aligned with that in other major financial centers, allowing smooth participation of global institutions in the Singapore market. Over the past year, adoption of SORA has broadened significantly. Local banks have launched business and retail SORA property loan products. SORA-based commercial loans have also been issued to large corporates. Trading in SORA derivatives has also increased, supported by MAS' launch of daily derivatives auctions for price discovery. Looking ahead, the Steering Committee is focused on encouraging full transition to the new benchmark rate in new exposures, and MAS will expand its SORA floating rate notes program to longer tenors to help develop a robust SORA curve, with a view to achieve substantial transition to SORA by end-2021.

Authorities' Views

36. The authorities broadly agreed with staff's assessment of monetary and financial policies. In response to the COVID pandemic shock, the authorities moved quickly to an accommodative monetary policy stance, complementing the fiscal and financial sector measures. In view of muted inflationary pressures, the monetary policy stance is expected to remain accommodative in the near term. On financial sector policy, MAS has ensured ample liquidity in the banking sector and worked with the government to maintain the flow of credit to households and SMEs during the pandemic. The MAS-FED USD swap line, announced in March 2020, helped to normalize USD funding conditions in Singapore and the region by boosting market confidence. In view of the elevated macroeconomic uncertainty, the authorities noted safe-haven capital inflows to Singapore, which have resulted in a build-up of FX reserves. To enhance resilience to FX shocks, the domestic banking groups have continued to strengthen their USD liquidity management. MAS will closely monitor banking sector resilience, including through updated stress tests, and any extension of dividend restrictions would give due consideration to the uncertainties associated with the pandemic. The authorities continue to strengthen financial sector resilience, including by implementing the 2019 FSSA recommendations, with a particular focus on stronger cyber resilience, payment system oversight, and US dollar liquidity among D-SIBs.

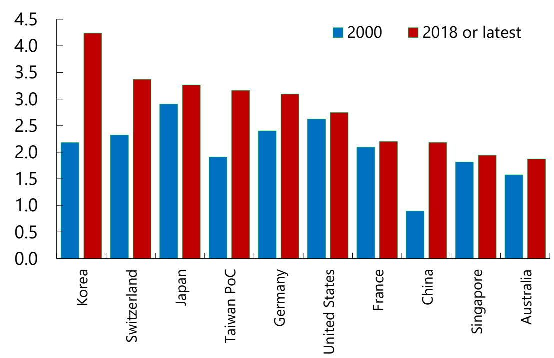
37. In the authorities' assessment, corporate and household balance sheet risks remain manageable. Corporate balance sheets were relatively resilient entering 2020, amid elevated but stable debt levels. The COVID-19 pandemic led to a fall in earnings and a rise in debt, worsening leverage risk. However, most firms should be able to withstand short-term pressures on their financial positions. Firm liquidity has improved following their efforts to bolster cash buffers. Smaller firms that tend to be financially weaker, and those in the domestically oriented and travel-related services impacted by COVID-19 remain vulnerable. However, support from the government, MAS, and the financial industry eased cashflow pressures across industries and provided continued access to financing. Household balance sheets were relatively healthy at the onset of the COVID-19 pandemic owing to accumulated financial buffers, and the household debt servicing burden remains manageable under stress. Demand conditions in the residential real estate sector have remained resilient during the pandemic, including nonresident demand (which accelerated recently). Against this background, the Additional Buyer's Stamp Duty remains a critical tool to manage systemic risk in the residential real estate market. The authorities will remain highly vigilant and continue to monitor developments in the real estate markets closely. The authorities will continue to build on the important recent steps to enhance the AML/CFT framework and are committed to sustained improvement of the risk-based assessment, including through a broad range of tools and data analytics.

BEYOND THE PANDEMIC: SUPPORT FOR A SMARTER, GREENER, AND MORE INCLUSIVE ECONOMY

38. **Sustained economic growth post-pandemic will require policies that raise productivity and safeguard sustainability.** The authorities' plan to accelerate transformation towards a digital and green economy, while facilitating capital and labor reallocation to high growth sectors and reskilling of the workforce in response to technology shifts, is appropriate. Plans to invest in climate-resilient infrastructure are also welcome.

39. **The government's planned digital adaptation would help boost productivity.** The pandemic and associated safe distancing measures have accelerated the digital revolution, as evidenced by the unprecedented growth of e-commerce. The authorities have been implementing various initiatives in this area, some of which are outlined in the FY2021 budget. These include programs to increase the scale and speed of digital innovation; opportunities to co-fund costs of trials and adoption of frontier technologies (5G, Artificial Intelligence and trust technologies); and platforms to enable businesses to plug into global and regional supply chains. Staff analysis (Appendix VIII and Chapter 3 of *Selected Issues*) shows that Singapore has scope for a further sizeable expansion of digital commerce and research and development, which would help the country further reap the benefits of a digital economy, notably through higher productivity growth, support economic recovery and accelerate economic transformation.

R&D Expenditure
(Percent of GDP)



Sources: World Bank; OECD Statistics; and IMF staff calculations.

40. **The MAS's efforts to expand digital innovation in the financial sector are expected to increase efficiency and promote inclusion. Recent and planned steps in this area include:**

- Selecting successful applicants for two digital full banks and two digital wholesale bank licenses. The new digital banks, expected to commence operations from 2022, would help enhance financial inclusion, including through new technologies that help reach under-served segments of the market.

- Expanding the scope of the Payment Services Act (through amendments in January 2021) to include Digital Payment Token (DPT) dealing and exchange activities, including custodial wallet services and activities facilitating the transfer of DPT.

- Allowing non-bank financial institutions in Singapore to have direct access to PayNow and FAST, which will enable e-wallet users to make fund transfers between bank accounts and across different e-wallets.

- Enhancing cross border collaboration on real-time payments. In this vein, MAS is pioneering a link with the Bank of Thailand to respective national retail fast payments (launched at end-April 2021). The system will allow to reduce time for international transfers to minutes instead of the current one-to-two days.

- Increasing e-payments use through enhanced digital financial literacy and IT skills among the vulnerable part of the population; public awareness campaigns and scaling up the payments infrastructure common standards to provide interoperability and competition among providers of e-payments solutions (Appendix IX and Chapter 4 of *Selected Issues*).

41. The authorities' focus on reskilling, training, and restructuring should help facilitate resource reallocation to high-growth sectors. The crisis has prompted large declines in employment in certain sectors, some of which may not recover post-pandemic. As this transformation is still unfolding, ensuring continued reskilling and training and facilitating restructuring will support capital and labor reallocation to high growth sectors while ensuring inclusiveness. The authorities have implemented policies to facilitate a reallocation of capital resources through efficient and predictable insolvency regimes and to support displaced workers through training and reskilling. The latter include programs to expand employment opportunities in growing sectors through wage subsidies (the Jobs Growth Incentive), as well as programs providing company-hosted traineeships and industry-relevant work experience with potential for employment, as well as skills training, for recent graduates and mid-career workers (the SGUnited Traineeships, the SGUnited Mid-Career Pathways, and SGUnited Skills programs).

42. Adjustment to climate change is an imperative for a resilient and prosperous future. Singapore is significantly exposed to climate change risks. It is especially vulnerable to rising sea levels due to its geography. More frequent and severe weather events are also a risk. The authorities' efforts to address climate challenges span the following areas:

- Singapore has committed to reduce carbon emissions. In March 2020, Singapore updated its earlier climate pledge submitted in July 2015 under the Paris Climate Agreement. The enhanced 2030 Nationally Determined Contribution (NDC) provided clarity on an absolute peak emissions target of 65MtCO2e around 2030, and also expanded its scope to include a seventh greenhouse gas, NF3, within this peak emissions ceiling. Singapore has also submitted its Long-Term Low-Emissions Development Strategy (LEDS) aspiring to halve emissions from its peak to 33MtCO2e by 2050, with a view to achieving net zero emissions as soon as viable in the second half of the century. These targets are guiding principles for Singapore's climate strategy.

- The authorities have prioritized climate adaption and mitigation measures outlined in the Singapore Green Plan 2030. This plan, launched in February 2021, aims to transform Singapore's economy and society to respond to the challenges presented by climate change (Box 3). Green initiatives in the FY2021 budget to back this strategy include supporting electric vehicles through an expansion of charging points and higher petrol duty rates. To fund investment in climate-resilient infrastructure, the authorities have started provisioning under a new Coastal and Flood Protection Fund and may also rely on borrowing for large infrastructure projects such as sea walls.

- MAS is promoting robust environmental risk management and disclosures among financial institutions and listed entities and is supporting the creation of a green finance ecosystem in Singapore (Appendix X and Chapter 5 of Selected Issues). The Green Finance Action Plan (GFAP) includes: preparation for inclusion of climate-related risks in annual stress tests and development of related guidelines of risk management and disclosures; grant schemes that help to defray costs associated with the issuance of sustainable debt; the development of a green finance taxonomy; and capacity building efforts, and allocating US$2 billion to the Green Investments Program to grow green funds and deepen green investment capabilities in Singapore. MAS works closely with stakeholders to implement initiatives under the GFAP. These efforts should encourage incorporation of climate and sustainability considerations in private sector strategies, which is key in shifting the sector's investment priorities.

Authorities' Views

43. The authorities are committed to accelerate the transformation towards a digital, green, and more inclusive economy to sustain growth post-pandemic. The pandemic has accelerated digital adoption and innovation in various sectors, including through enhanced support to encourage digital adoption in SMEs and reskilling programs to facilitate adjustment to technology shifts. Underpinned by a strong regulatory and supervisory framework, continued financial sector innovation is an integral part of the authorities' efforts to support higher medium-term growth. MAS continues to support Fintech and e-payments innovations, including through its recent pioneering enhancements of the payments infrastructure to provide seamless cross-border payment options to retail customers. Singapore's climate change strategy reflects the country's enhanced carbon emission targets and rests on several pillars of mitigation and adaptation measures, including a review of its post-2023 carbon tax trajectory that will be announced in 2022. At the same time, acknowledging the pivotal role of the financial system in channeling capital and resources towards more sustainable activities, MAS has launched the Green Finance Action Plan aimed at strengthening financial sector resilience to environmental risks and developing a green finance ecosystem in Singapore that supports more green finance solutions, research, training, and the use of FinTech to deliver trusted and efficient green flows.

STAFF APPRAISAL

44. The authorities' bold, comprehensive, and coordinated economic policy response has cushioned the impact of the COVID-19 pandemic. Drawing on sizable buffers pre-pandemic, the fiscal, monetary, and financial policy response to the pandemic has helped to protect lives and livelihoods and preserve macro-financial and external stability during a major global downturn. The economy rebounded following a record contraction in 2020Q2, supported by the strong policy response and a gradual relaxation of containment measures as the health crisis began to subside. Developments in 2020 suggest that Singapore's external position remains substantially stronger than warranted by fundamentals.

45. **Macroeconomic policies should remain supportive until the recovery is broadly entrenched**. The current policy mix is appropriate. The substantial uncertainty around the outlook suggests that targeted fiscal and financial policy support should remain in place until the recovery is broadly entrenched. Should downside risks materialize, fiscal policy should continue to be the first line of defense and Singapore has ample fiscal space to deploy additional policy support.

46. **The calibration and targeting of fiscal policy in 2021 are in line with the recovering economy**. As the recovery proceeds, the shift from broad emergency relief to more targeted fiscal support to businesses and households still impacted by the pandemic is appropriate. Combined with enhanced reskilling and programs to expand employment opportunities in growing sectors, this would also facilitate resource reallocation across sectors.

47. **The authorities' plan to borrow for major infrastructure projects that will benefit several generations is appropriate**. In addition to low sovereign borrowing costs, scaling up infrastructure spending for major projects through government bonds, including green bonds, under SINGA will further deepen Singapore's debt market and support the authorities' objective to develop green finance.

48. **A quantification of government spending needs to address medium- and long-term challenges would help determine the need to raise additional revenue.** Sizeable future expenditure pressures stem from an aging population, the need to rejuvenate aging infrastructure, climate change, programs to help firms and workers adapt to technological change, and the risk of more frequent large shocks. A quantification of the combined cost of these challenges and risks would help in assessing the level of desired assets over the medium term, along with its implications for the fiscal stance, plans for government borrowing, and revenue mobilization needs, including the plan to hike the GST rate between 2022 and 2025. Higher government spending over the medium-term could also support external rebalancing, given significant leakages through trade and remittances.

49. **The accommodative monetary policy stance is appropriate**. Going forward, monetary policy should remain data dependent. Given the negative output gap and muted inflationary pressures, monetary policy should remain accommodative until the recovery is firmly entrenched.

50. **The financial sector is healthy but financial supervision should remain vigilant**. The banking sector has weathered the pandemic well, helped by MAS liquidity and credit support measures. However, supervisory vigilance is called for as commercial banks are likely to face challenging operating conditions in the near term. While the authorities have provided adequate, temporary, and increasingly targeted, support to corporates, pockets of risks remain for smaller firms and firms in sectors hardest hit by the pandemic. The authorities' enhancements to the insolvency and debt resolution procedures are welcome. Continued close monitoring of real estate NPLs, particularly in the commercial segment, is important. The authorities have made progress in implementing the 2019 FSSA recommendations, particularly in strengthening cyber resilience, payment system oversight, and US dollar liquidity among D-SIBs, but continued monitoring of bank foreign currency risk remains essential.

51. The authorities' efforts to transition towards a digital, greener, and more inclusive economy should continue and would help achieve sustained growth post-pandemic. The government has launched several programs in these areas to accelerate digitalization and innovation, support investment in climate-resilient infrastructure, and enhance intensified training and re-skilling. Expanding these initiatives and strengthening the uptake of existing programs would help boost productivity, prepare for a more climate-resilient and prosperous future, and mitigate exclusions from technological innovation and population aging.

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

Box 1. The COVID-19 Pandemic in Singapore

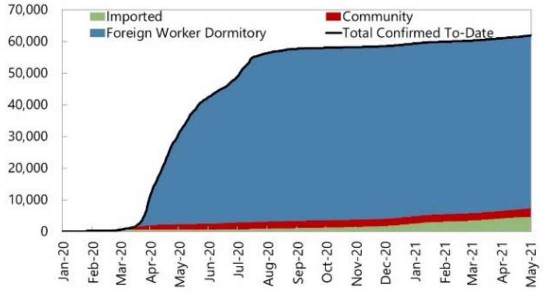
Singapore confirmed its first COVID-19 case on January 23, 2020. A multi-ministry taskforce was set up on January 22 and initiated measures such as contact tracing, early detection through surveillance, and travel restrictions. The Disease Outbreak Response System Condition level was raised to orange from yellow on February 7. Precautionary safe distancing measures were announced – cancelling large-scale events, encouraging work from home arrangements, and suspending inter-school and external activities. Further safe distancing measures were imposed in March and international borders were closed to all short-term visitors for both entry and transit from March 24. Overall infections rose to 926 as of end-March and the first three deaths were recorded.

A circuit breaker (CB) was implemented from April 7 to June 1, 2020 to contain the virus. Workplaces except for essential services were closed. Masks were mandated outside of homes and public and private gatherings of any size were banned. By mid-April, mobility had declined to 60 percent below the levels in the first two months of 2020. Daily cases surged to a high of around 1.4 thousand on April 20 due to the virus spread within workers' dormitories. To contain this spread, movement was restricted while testing, health monitoring, and on-site medical services were ramped up. Total confirmed cases reached around 44 thousand in end-June, dominated by dormitory infections.

Singapore's 3-phase reopening began from June 2, 2020. Phase 1 reopened low risk services and encouraged people to only leave homes for essential activities. Travelers were allowed to transit through Singapore. Phase 2 started on June 19 amid low single-digit community cases. The entire economy almost reopened, subject to safe distancing measures – capacity caps on businesses such as retail and food services and limited gathering of five people. Phase 3 began on December 28, easing restrictions further, as various milestones were reached – widespread adherence to safe management measures, adequate testing capacity, and use of contact tracing apps. Daily cases were largely imported. In late-April 2021, amid a spike in regional infection rates, daily community cases rose to low double-digits. By mid-May, total active cases stood at around 400. To reduce transmission, Singapore has shifted to Phase 2-Heightened Alert, implementing a mild tightening of local measures and border restrictions, including on foreign workers.

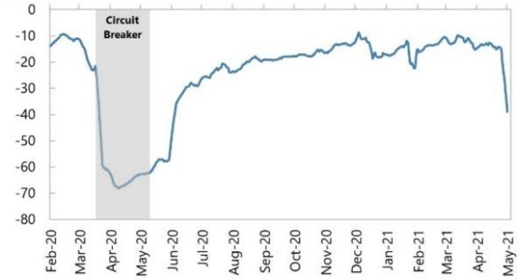
Singapore launched inoculations on December 30, 2020. Frontline and essential workers have been vaccinated. Vaccinations have rolled out to the elderly and mid-age groups, and those aged below 45 by June. The authorities plan to vaccinate the whole population within 2021.

Singapore COVID-19 Cases
(Number)



Sources: CEIC, Ministry of Health, IMF staff

Singapore Google Mobility Retail & Recreation Trend
(LHS: 7-Day Moving Average, Percent from Baseline - Median Value during the 5-week period from Jan 3 - Feb 6, 2020)



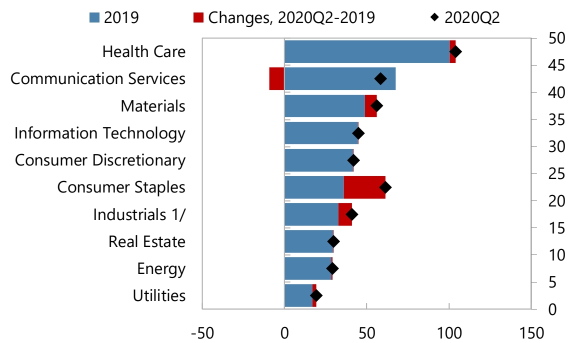
Sources: CEIC, IMF staff

Box 2. Impact of COVID-19 on Non-Financial Corporate Vulnerabilities

Singapore's non-financial corporate sector maintains healthy liquidity buffers, albeit with significant variability across industries. The median cash ratio (cash and cash equivalent divided by current liabilities) of Singaporean corporates stood at 39 percent as of end-2019.[1] While this overall level was the highest among ASEAN-5 economies, the level varied widely across firms, ranging from 16 percent for firms in the utilities sector to 100 percent in the healthcare sector. As of end-2019, about 1/3 of firms were carrying cash buffer less than two months' worth of cost of goods sold (COGS); about 11 percent of firms are estimated to have had cash buffer less than two months' worth of the fixed portion of COGS, indicating relatively thin cash buffers in some firms to weather the crisis.[2] In the first half of 2020, however, many corporates have enhanced their cash positions through the bond market and bank financing. This led to improved cash ratios in some industries in 2020Q2 and onward.

Singapore: Cash Ratio

(Cash and cash equivalents/current liabilities in percent)

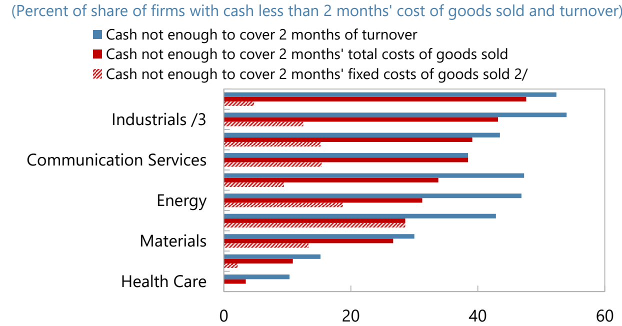


Sources: S&P Global Market Intelligence; and IMF staff estimates

1/ Industrials include construction, transport, and heavy machinery & equipment.

Singapore: Firms with Low Cash Buffers, 2019 1/

(Percent of share of firms with cash less than 2 months' cost of goods sold and turnover)



Sources: S&P Global Market Intelligence; the Monetary Authority of Singapore and IMF staff estimates

1/ Cash and cash equivalent.

2/ Based on industry-specific assumptions about the share of fixed COGS estimated by the MAS, to reflect different cost structures across industries.

3/ Industrials include construction, transport, and heavy machinery & equipment.

Potential solvency risks are elevated amid weakened debt service capacity. Debt service capacity, measured by the interest coverage ratio (ICR, measured as earnings before interest and tax, divided by interest payments), was declining already before the pandemic due to deteriorating profitability. The share of debt owed by firms generating earnings barely enough to cover interest payments (i.e., ICR<1) was about 14 percent as of end-2019. This share increased to 28 percent in 2020Q2, as many firms across different industries saw a decline in profitability as well as increased leverage. The increase of the share of debt-at-risk was substantial especially in the communication services, industrials, and consumer discretionary sectors. While this suggests elevated solvency risks at the trough of the crisis, corporate earnings are expected to improve with the economic recovery. The debt maturity profile has remained relatively healthy, with the share of short-term debt declining to 38 percent by 2020Q4 from 43 percent in 2019Q4, after a temporary increase in 2020Q2.

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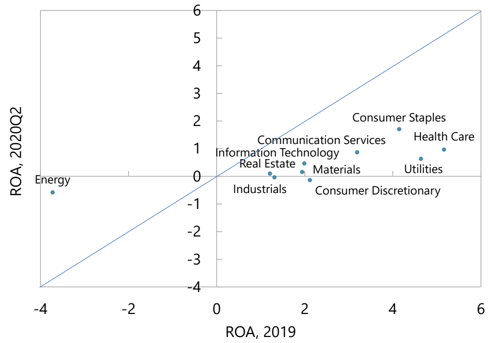
[1] The dataset used in this analysis is constructed from S&P's Capital IQ database and comprises 453 nonfinancial firms in Singapore as of end-2019. The sample is biased toward larger firms (the median asset size in the sample of USD 91 mil. and minimum at 0.8 mil., as of end-2019). MAS study found that SMEs generally have weaker cash position and are less able to face severe strains than larger corporates (MAS, Financial Stability Review, 2020).

[2] This assumes varying shares of fixed component in COGS by industry, estimated by MAS based on an analysis performed at the onset of COVID-19. The share ranges from 25 percent in the case of materials and 70 percent in the airline industry, reflecting different cost structures across industries.

Box 2. Impact of COVID-19 on Non-Financial Corporate Vulnerabilities (concluded)

Singapore: Profitability, 2019 vs. 2020Q2

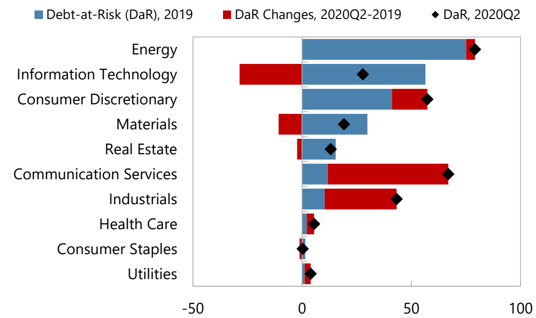
(Return on assets = EBIT (t) to total assets (t-1) in percent)



Sources: S&P Global Market Intelligence; and IMF staff estimates

Singapore: Debt-at-Risk, 2019 vs. 2020Q2

(Percent share of debts owed by firms with interest coverage ratio below one)



Sources: S&P Global Market Intelligence; and IMF staff estimates

Box 3. Singapore's Climate Strategy

In February 2021, the government launched the Singapore Green Plan 2030 spearheaded by five ministries. The program seeks to rally collective action to tackle climate change through five pillars: (1) creating a greener city and encouraging sustainable practices in the public and private sectors; (2) using cleaner energy (e.g. electric vehicles, solar deployment, green energy imports) and increasing energy efficiency to lower carbon emissions; (3) making sustainability a way of life, including saving resources, reducing waste and green efforts by schools; (4) promoting jobs, investments and R&D in the green economy, as well as developing as a carbon services hub and being a leading center for green finance; and (5) proactive infrastructure planning to address risks to the coastlines from rising sea level and safeguarding food security.

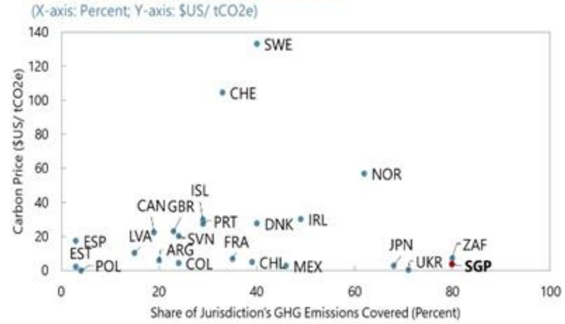
Five Pillars of Singapore Green Plan 2030: Selected Initiatives

City in Nature	• Set aside 50% more land – around 200 hectares – for nature parks. Every household will live within a 10-minute walk of a park. • Plant one million more trees across our island.
Energy Reset	• Quadruple solar energy deployment by 2025, including roof tops of HDB. • Green 80% of all buildings by 2030. • Target 60k electric vehicle charging by 2030, from 28k previously.
Sustainable Living	• Strengthen green efforts in schools – At least 20% of schools to be carbon neutral by 2030. • Encourage green commutes – 75% of trips during peak period to be on public transport by 2030; expand rail network.
Green Economy	• Help local firms adopt sustainability practices through new Enterprise Sustainability Program. • Develop into a carbon services hub; Review carbon tax by 2023. • Be a leading center for Green Finance in Asia and Globally.
Resilient Future	• Proactive infrastructure planning to address risks to the coastlines from rising sea level. • Increase local food production to safeguard food security.

Source: Singapore Green Plan 2030 Website

Singapore had started tackling climate change pre-pandemic. In 2019, in order to encourage energy efficiency, a carbon tax of S$5 (US$4) per ton of CO_2-equivalent was adopted, applied to largest emitters covering about 80 percent of Singapore's carbon emissions. The post-2023 carbon tax level and trajectory are being reviewed. Singapore's earlier plans envisaged to increase the carbon tax level to between S$10 and S$15 per ton of CO_2-equivalent by 2030. Other prior measures comprise limiting the number of cars, increasing fuel excises and solar usage, enhancing infrastructure investment in drainage and elevating critical infrastructure such as train stations, and requiring Green Mark Certification for all new buildings.

Carbon Taxes in Selected Countries
(X-axis: Percent; Y-axis: $US/ tCO2e)



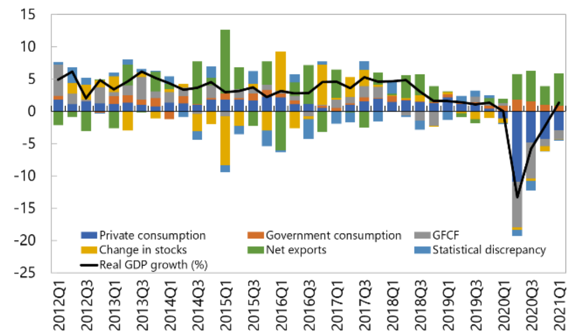
Source: World Bank Carbon Pricing Dashboard, November 2020
Note: SGP is reviewing its carbon tax rate by 2023, with plans to increase the rate. Some countries adopt other carbon pricing schemes and are not included.

Figure 1. Singapore: Real Sector Developments

The economy contracted at a record 5.4 percent in 2020 amid COVID-19, largely led by the fall in investment and private consumption.

Contribution to Real GDP Growth by Expenditure

(In percentage points, y-o-y)

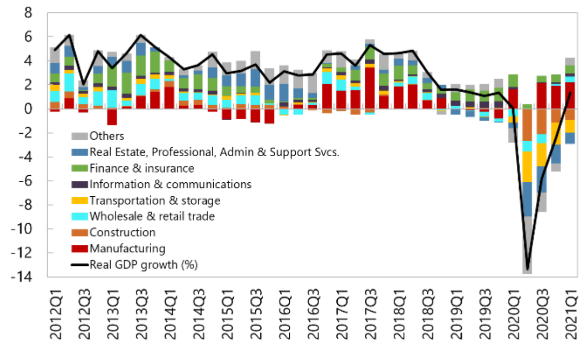


Sources: CEIC Data Company Ltd.; and IMF staff calculations.

The contraction affected most industries, except for manufacturing and finance.

Contribution to Real GDP Growth by Industry

(In percentage points, y-o-y)

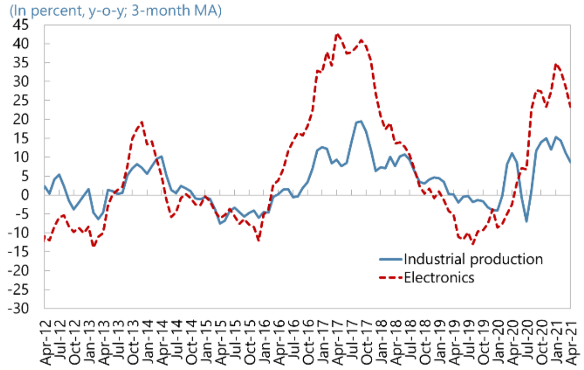


Sources: CEIC Data Company Ltd.; and IMF staff calculations.

Strong growth in the manufacturing sector was supported by upturn of the global electronics cycle and the surge in pharmaceutical output.

Industrial Production

(In percent, y-o-y; 3-month MA)

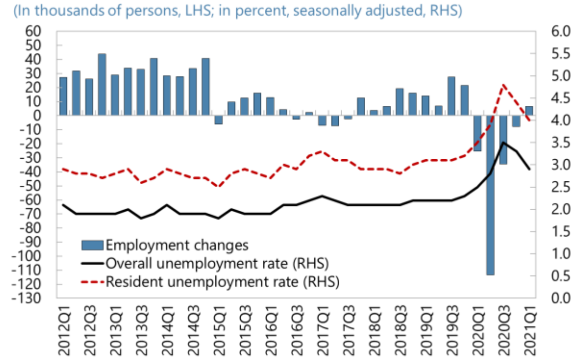


Sources: Haver Analytics; and IMF staff calculations.

The sharp slowdown in economic activity weighed heavily on labor markets, with unemployment surging to a record high in Q3.

Employment and Unemployment

(In thousands of persons, LHS; in percent, seasonally adjusted, RHS)

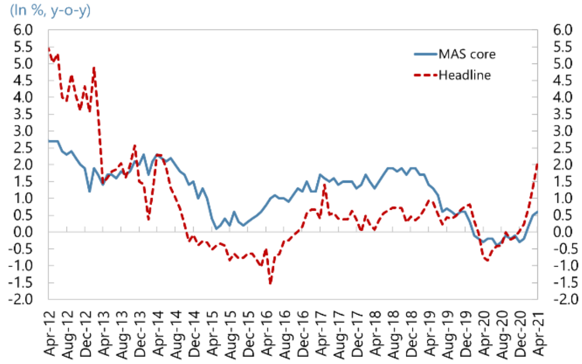


Sources: CEIC Data Co. Ltd.; and IMF staff calculations.

Both the headline and the official measures of core inflation turned negative in early 2020 but started a gradual recovery in H2, as external inflation and domestic spending picked up.

Singapore: Consumer Price Inflation

(In %, y-o-y)

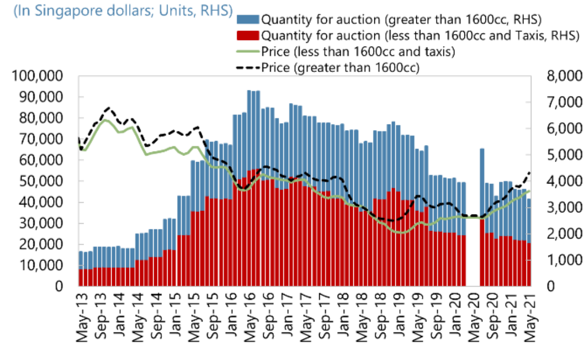


Sources: CEIC Data Co. Ltd.; and IMF staff calculations.

The prices of cars and car ownership certificates rose in H2 as bidding resumed in July following the COVID19-related suspension, supporting the recovery of headline inflation.

Car Certificates of Ownership, Price and Quantity

(In Singapore dollars; Units, RHS)

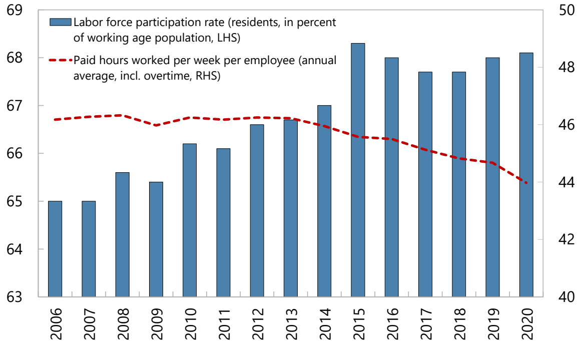


Note: Data not released for Apr-Jun 2020. Sources: CEIC Data Co. Ltd.; and IMF staff calculations.

Figure 2. Singapore: Labor Market Developments

Residents' labor force participation held steady in 2020.

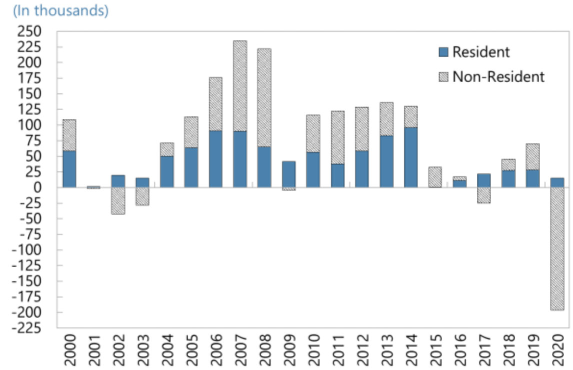
Labor Force Participation Rate and Hours Worked 1/



Sources: Singapore, Ministry of Manpower; and IMF staff calculations.
1/ Labor force participation data are as of mid-year.

Total employment contracted sharply in 2020, led by the contraction of non-resident employment.

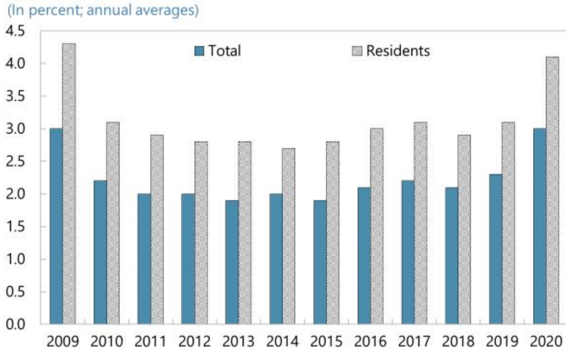
Change in Employment by Residency
(In thousands)



Source: Singapore, Ministry of Manpower.

The average unemployment rate rose in 2020 but remained below its Global Financial Crisis peak.

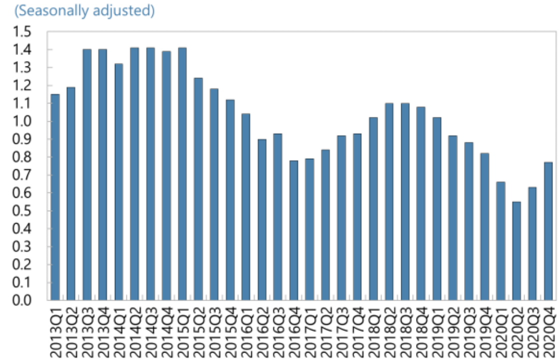
Unemployment Rate: Total and Residents
(In percent; annual averages)



Source: Singapore Ministry of Manpower.

Labor market slack became evident in 2020, with significantly fewer jobs available relative to job seekers.

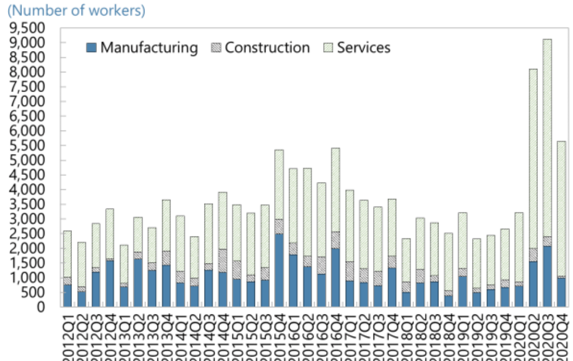
Job Vacancy to Unemployed Persons Ratio
(Seasonally adjusted)



Sources: Singapore Ministry of Manpower, and CEIC.

The number of retrenched workers soared in 2020, with the service sector bearing the brunt of the COVID-19 shock.

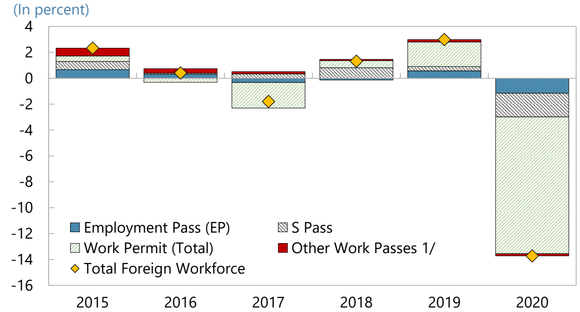
Retrenchment by Sector
(Number of workers)



Source: Singapore, Ministry of Manpower.

The contraction in the foreign workforce was broad based but was largest for semi-skilled Work Permit holders.

Contributions to Change in Total Foreign Workforce
(In percent)

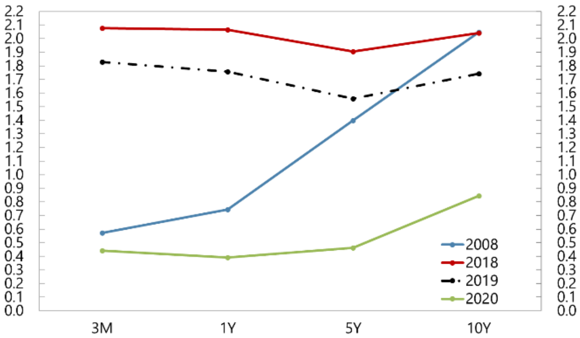


Sources: Singapore, Ministry of Manpower; and IMF staff calculations.
Note: 1/ "Other Work Passes" includes Letter of Consent (LOC), pre-approved Letter Of Consent (PLOC), Training Employment Pass (TEP) and Training Work Permit (TWP). Pre-approved Letter Of Consent (PLOC) was included in 'Other Work Passes' from January 2019 onwards.

Figure 3. Singapore: Monetary and Financial Sector Developments

The yield curve has shifted down…

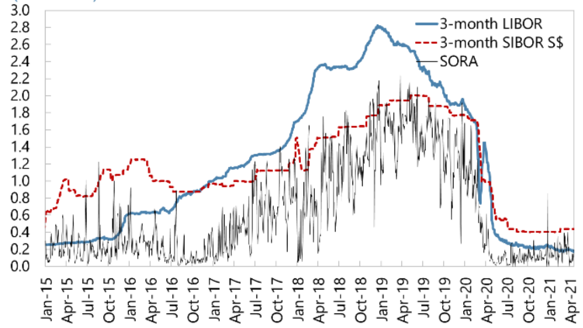
Government Bond Yields
(In Percent, End of Period)



Source: Bloomberg L.P.

…and with the decline in global rates, money market rates in Singapore have moved lower.

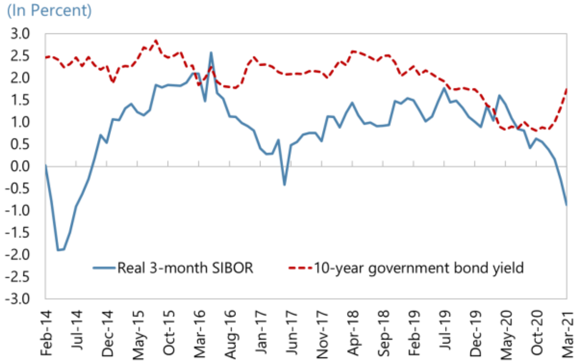
Interest Rates
(In Percent)



Source: Bloomberg L.P.
Note: Latest observation is April 23, 2021.

The government bond yields are lower.

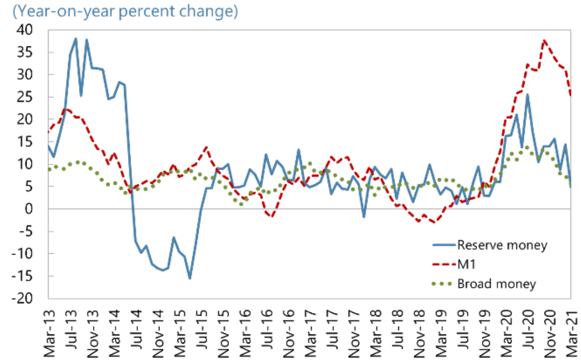
Real Interest Rate and Nominal Government Bond Yield
(In Percent)



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

Broad money growth has increased, partly owing to higher deposits

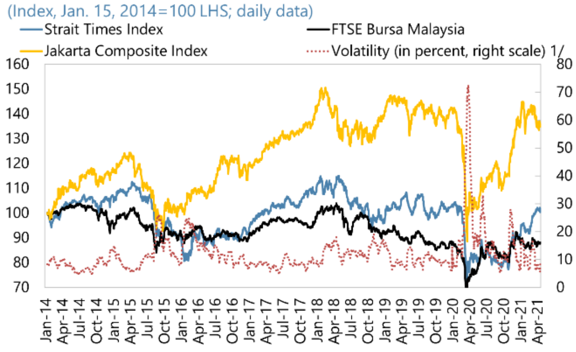
Monetary Aggregates
(Year-on-year percent change)



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

The Singapore stock market fell sharply in the initial phase of the pandemic, but has recovered to pre-pandemic levels

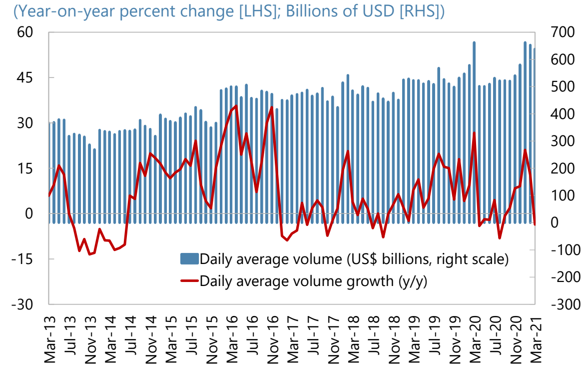
Stock Market Indexes and Volatility
(Index, Jan. 15, 2014=100 LHS; daily data)



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

The foreign exchange market turnover spiked in April 2020 and remains on an upward trend.

Foreign Exchange Market Turnover
(Year-on-year percent change [LHS]; Billions of USD [RHS])



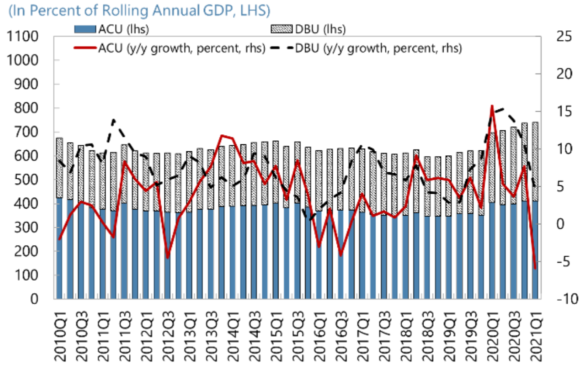
Source: CEIC Data Co. Ltd.

Figure 4. Singapore: Banking Sector Developments

Banking sector assets as share of GDP increased owing to lower GDP in 2020.

Banking Sector, Combined Assets

(In Percent of Rolling Annual GDP, LHS)

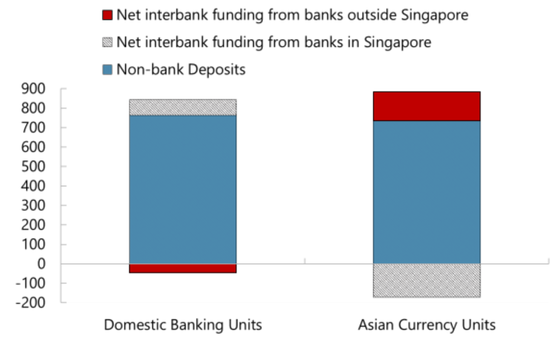


Sources: CEIC Data Company Ltd.; and IMF staff calculations.

Non-bank deposits are the largest funding sources for banks.

Funding Structure of the Banking System, 2020

(In billions of Singapore dollars)

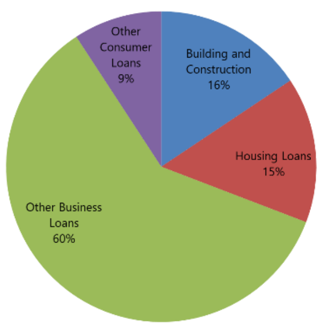


Sources: Haver Analytics, and IMF staff calculations.

Property-market related loans (housing loans and loans to the building and construction sectors) account for about 30 percent of total domestic non-bank loans.

Loans to Non-Banks by Sector, December 2020

(In Percent of Total)

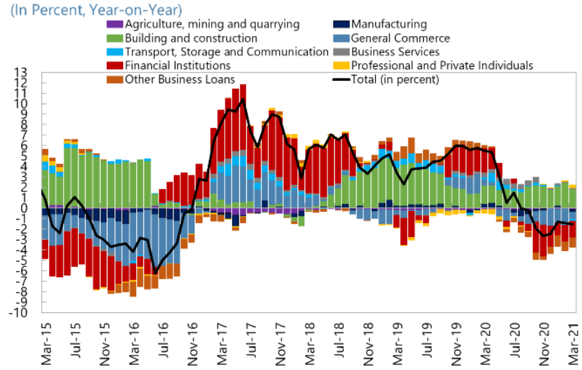


Sources: CEIC Data Co. Ltd.; and IMF staff calculations.

The growth rate of business loans has declined, driven by general commerce and transport sectors.

Contribution of Domestic Bank Loan to Business by Sector

(In Percent, Year-on-Year)

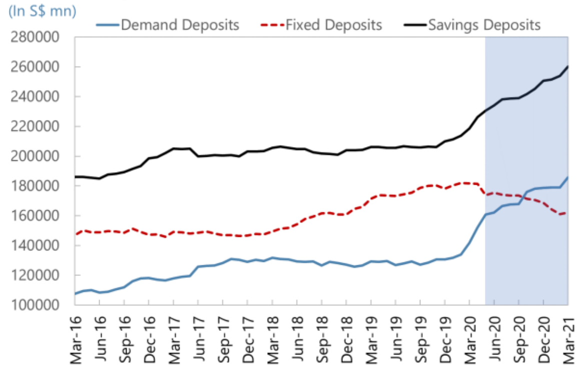


Sources: CEIC Data Co. Ltd.; and IMF staff calculations.

Deposits have increased strongly in the wake of the pandemic, with a shift from fixed to demand and savings deposits.

Resident Deposits

(In S$ mn)

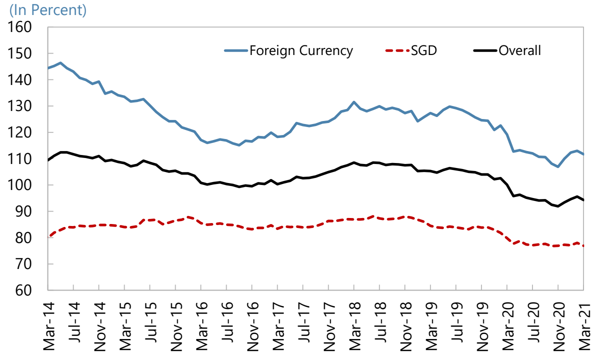


Sources: Monetary Authority of Singapore

The banking sector's foreign currency loan-to-deposit ratio continued to decline in 2020.

Loan to Deposit Ratio by Currency 1/

(In Percent)



Source: Monetary Authority of Singapore.

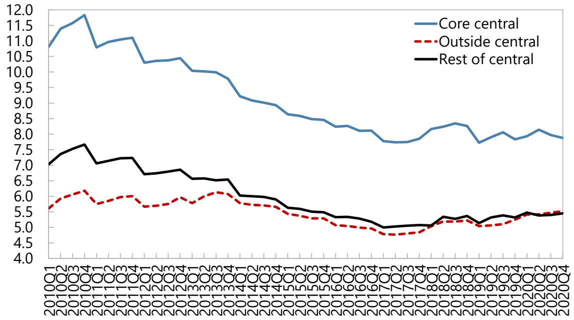
1/ This covers loans extended by the banking sector, excluding interbank lending.

Figure 5. Singapore: Housing Market Developments

The house price-to-income ratio remained broadly stable

Housing Price-to-Income Ratio

(Price per sq. ft of non-landed units in each region, as a share of overall annual household income at the 71st-80th percentile)

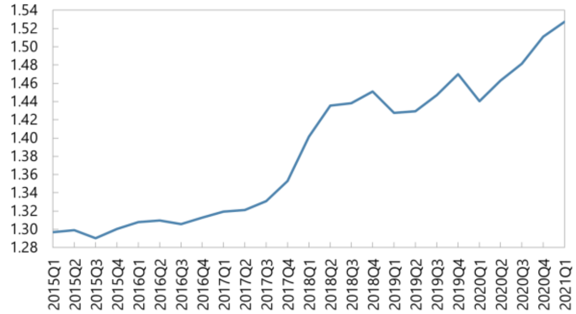


Sources: CEIC Data Co. LTD., and IMF staff calculations.

The house price-to-rent ratio has increased.

House Price to Rent Ratio

(Index; 2009Q1=100)

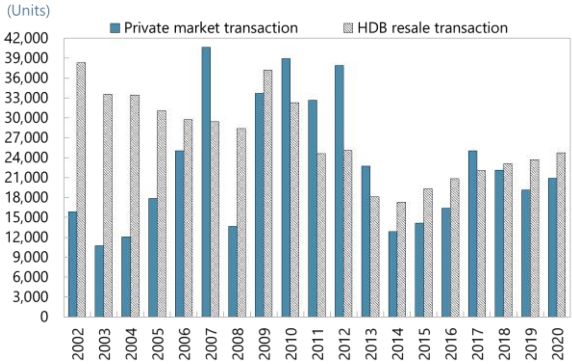


Sources: CEIC Data Co., Ltd.; and IMF staff calculations.
Note: Data refer to Private Residential Housing.

Private market transactions remain resilient….

Private and Public Residential Transaction

(Units)

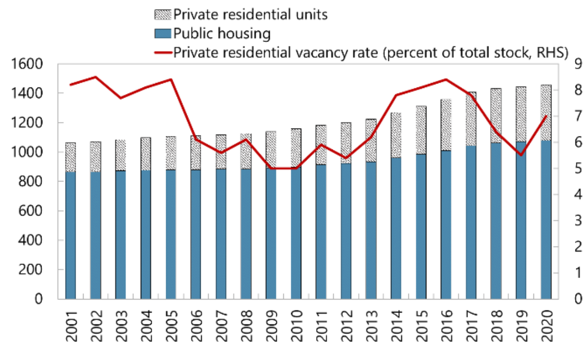


Sources: CEIC Data Co. Ltd. and IMF staff calculations.

…and the vacancy ratio in the private market has further decreased.

Housing Stock and Vacancy

(Thousands of units; Percent of total stock)

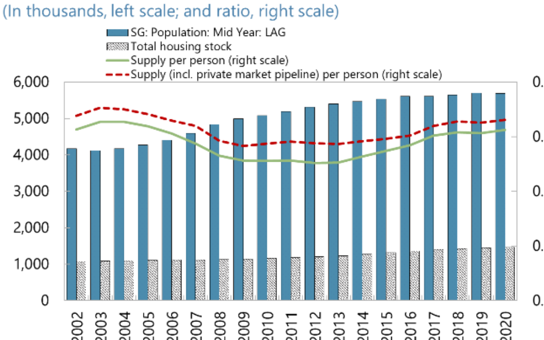


Sources: CEIC Data Co. Ltd., and IMF staff calculations.

Housing supply per capita remains stable…

Housing Supply and Population

(In thousands, left scale; and ratio, right scale)

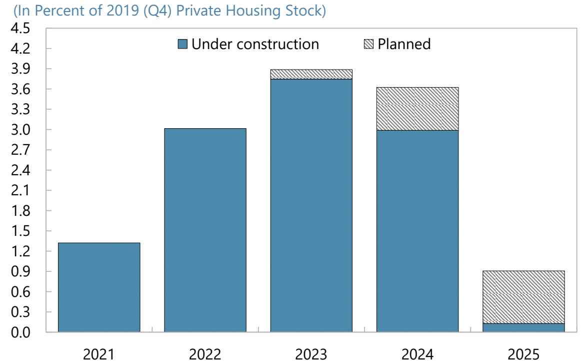


Sources: CEIC Data Co. Ltd.; and IMF staff calculations.
Note: Public housing stock for 2019 is an estimate assuming no changes from 2018.

and supply is expected to increase in the coming years.

Upcoming Private Residential Supply Pipeline, 2021

(In Percent of 2019 (Q4) Private Housing Stock)



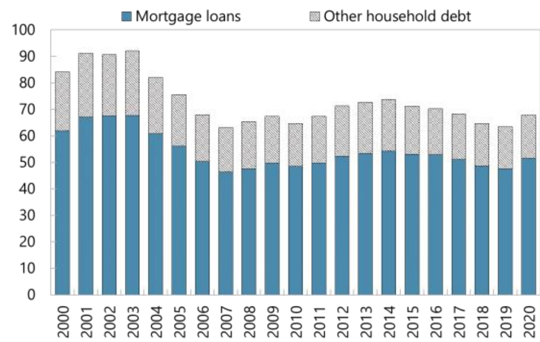
Source: Singapore Urban Redevelopment Authority (URA); and IMF staff calculations.

Figure 5. Singapore: Housing Market Developments (Concluded)

Household debts, including housing loans, have declined since 2015, but increased in 2020 owing to lower GDP.

Household Debt

(In Percent of GDP)

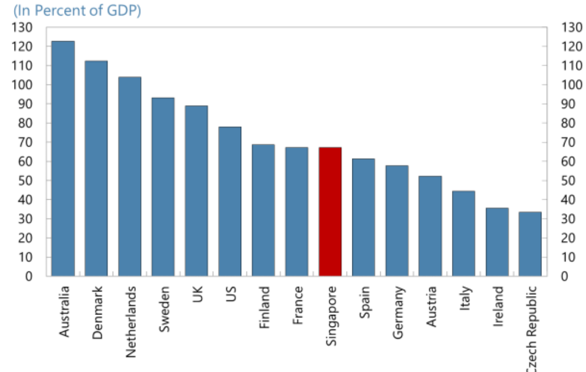


Sources: Haver Analytics, and IMF staff calculations.

the household debt-to-GDP ratio remains elevated

Household Debt, 2020Q3

(In Percent of GDP)



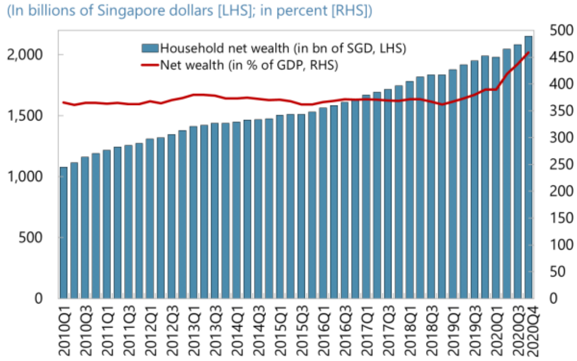
Sources: Bank for International Settlements, and Monetary Authority of Singapore.

… households' balance sheets are strong with their total net worth standing at nearly 450 percent of GDP …

… and liquid financial assets are enough to cover current debt outstanding in aggregate.

Household Net Wealth

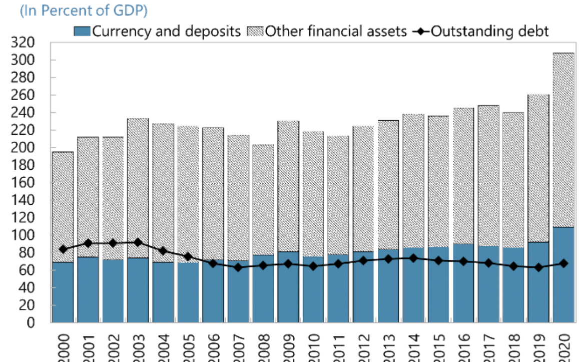
(In billions of Singapore dollars [LHS]; in percent [RHS])



Sources: Singapore, Department of Statistics; and IMF staff calculations.

Household Financial Wealth and Debt Outstanding

(In Percent of GDP)



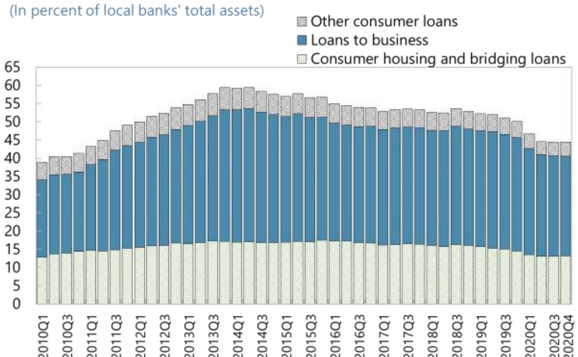
Sources: Haver Analytics; and IMF staff calculations.

Banks' exposure to private housing loans has slightly declined

The quality of housing loans remains strong, with a declining average loan-to-value (LTV) ratio.

Local Banks' Loans by Type of Borrowers

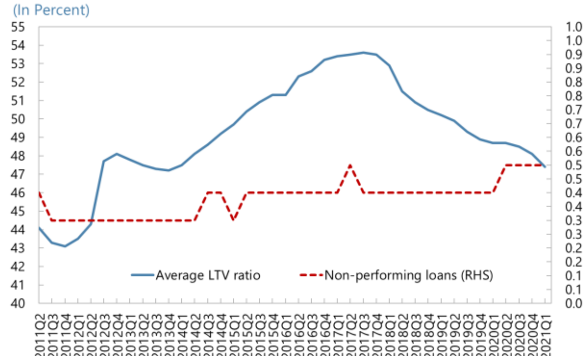
(In percent of local banks' total assets)



Sources: Haver Analytics; and IMF staff calculations.

Housing Loans

(In Percent)

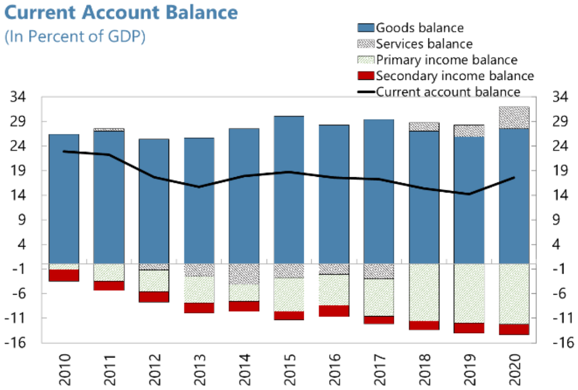


Sources: 2017 Financial Stability Review, Monetary Authority of Singapore; CEIC Data Co. Ltd.

Figure 6. Singapore: External Sector

The current account (CA) surplus increased to 17.6 percent of GDP in 2020, led by a large decline in service imports.

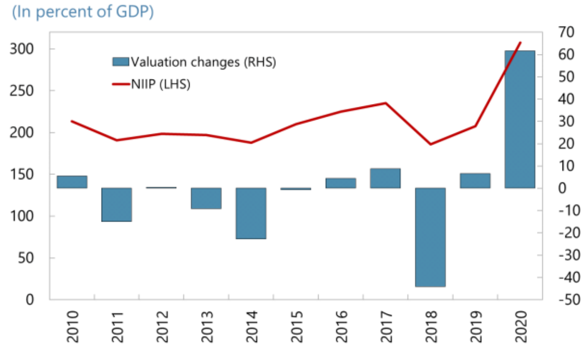
Current Account Balance
(In Percent of GDP)



Source: Haver Analytics.

The net international investment position (NIIP) increased to 308 percent of GDP in 2020, led by positive valuation effects as well as the CA surplus.

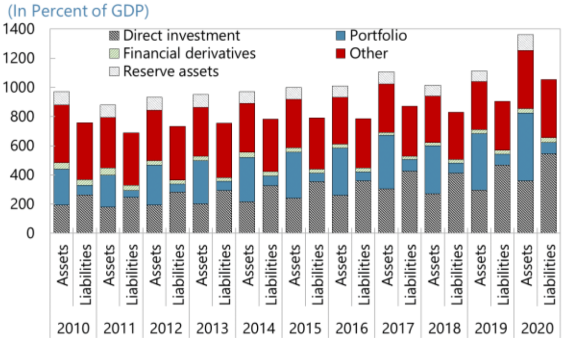
NIIP and Valuation Changes
(In percent of GDP)



Sources: Singapore, Department of Statistics; CEIC Data Co. Ltd.; and IMF staff calculations.
Note: Ratio to GDP is based on US dollar values.

Singapore has a net asset position in portfolio investment and a net liability position in FDI holdings.

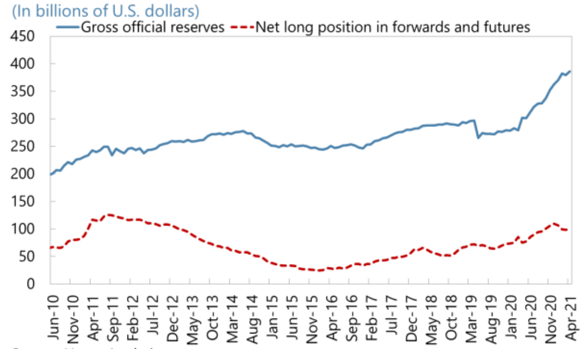
International Investment Position
(In Percent of GDP)



Sources: Singapore, Department of Statistics; Haver Analytics; and IMF staff calculations.
Note: Ratio to GDP is based on US dollar values.

Gross official reserves increased in 2020.

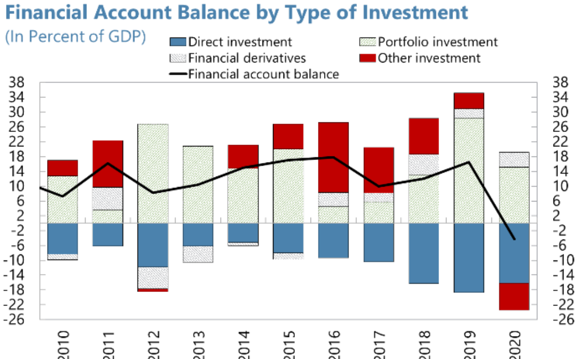
Central Bank: Gross Official Reserves and Net Foreign Currency Position in Forwards and Futures
(In billions of U.S. dollars)



Source: Haver Analytics.

The financial account recorded net capital inflows in 2020, reflecting lower net outflows of portfolio investment and a shift in "other investment" to a net inflow position.

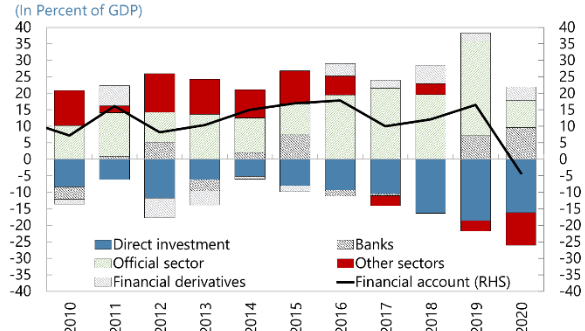
Financial Account Balance by Type of Investment
(In Percent of GDP)



Sources: CEIC Data Co. Ltd.; and IMF Staff calculations.
Note: Under the BPM6 methodology, a negative entry implies net inflows.

The financial outflows from official sector narrowed significantly in 2020.

Financial Account Net Flows by Sector
(In Percent of GDP)

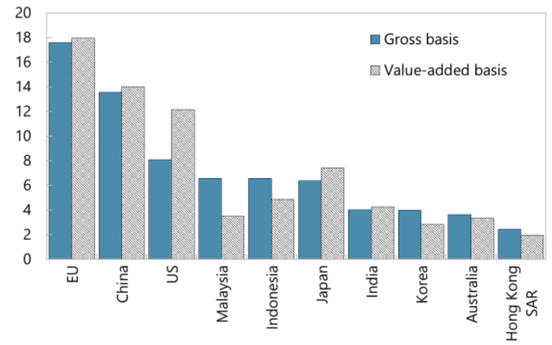


Sources: CEIC Data Co. Ltd.; and IMF staff calculations.
Note: Under the BPM6 methodology, a negative entry implies net inflows.

Figure 7. Singapore: Spillovers

Singapore depends mainly on foreign final demand from the EU, China, and the US, while Malaysia and Indonesia are important partners in the region.

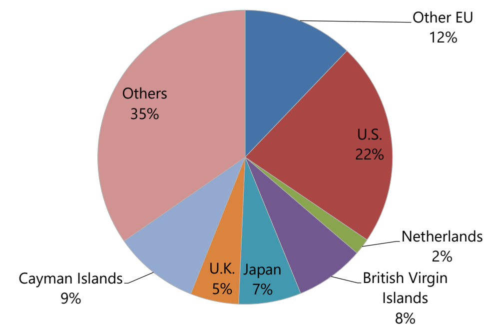
Value Added in Foreign Final Demand versus Gross Exports
(In Percent of total, 2015)



Source: OECD-WTO, *Trade in Value Added (TiVA)* database.

FDI stocks are also dominated by Europe and the US and are mainly concentrated in the finance and insurance sector.

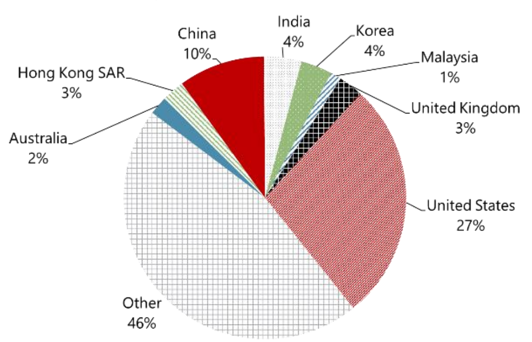
FDI to Singapore by Source Country
(In Percent of Total Stock, End 2019)



Sources: Singapore, Department of Statistics; and IMF staff calculations.

Singapore has large portfolio assets, which would make its external balance sheet vulnerable to shocks in the US and several regional economies such as China and India.

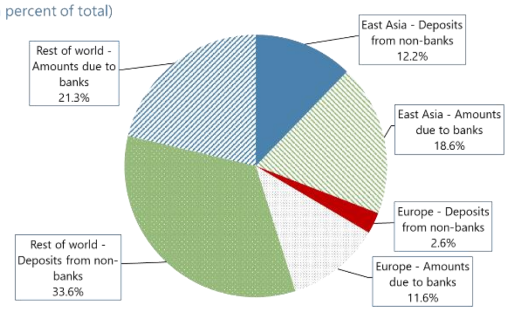
Composition of Singapore's Portfolio Investment Assets
(In Percent of Total, 2019)



Source: IMF, *Coordinated Portfolio Investment Survey (CPIS)*.

Major sources of funding for Singapore's financial center include East Asian and European banks.

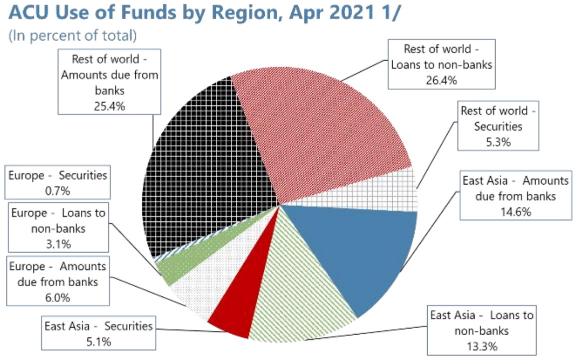
ACU Funding Sources by Region, Apr 2021 1/
(In percent of total)



Source: Monetary Authority of Singapore, *Monthly Statistical Bulletin*.
1/ East Asia Consists of China, Hong Kong SAR, Japan, South Korea, Taiwan POC, and ASEAN (excluding Singapore).

East Asia is a major user of funds and likely to experience outward spillovers from Singapore, in the event of a banking sector stress in Singapore.

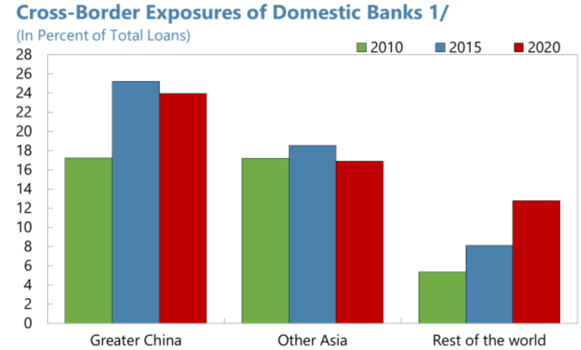
ACU Use of Funds by Region, Apr 2021 1/
(In percent of total)



Source: Monetary Authority of Singapore, *Monthly Statistical Bulletin*.
1/ East Asia Consists of China, Hong Kong SAR, Japan, South Korea, Taiwan POC, and ASEAN (excluding Singapore).

Cross-border exposures of domestic banks to Greater China and other Asian economies remain near their post-GFC highs, exposing Singapore to the risk of regional spillover.

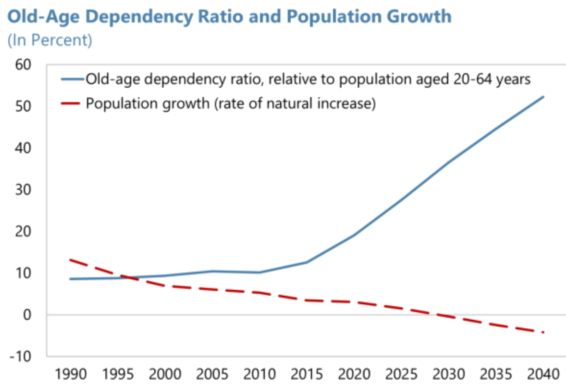
Cross-Border Exposures of Domestic Banks 1/
(In Percent of Total Loans)



Sources: Banks' financial reports and annual reports; and IMF staff estimates.
1/ Classification varies by bank. OCBC, location of credit risk; DBS, location of borrower incorporation; and UOB, booking location.

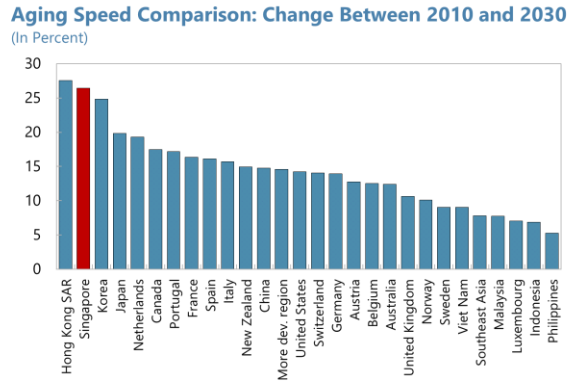
Figure 8. Singapore: Demographic Transition

Old-age dependency is projected to increase significantly in the medium to long term.



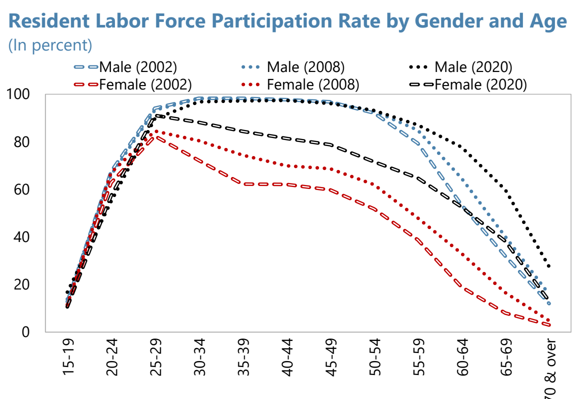
Source: United Nations, World Population Prospects, 2019.

Singapore's aging speeds is among the highest in the region and advanced economies across the world.



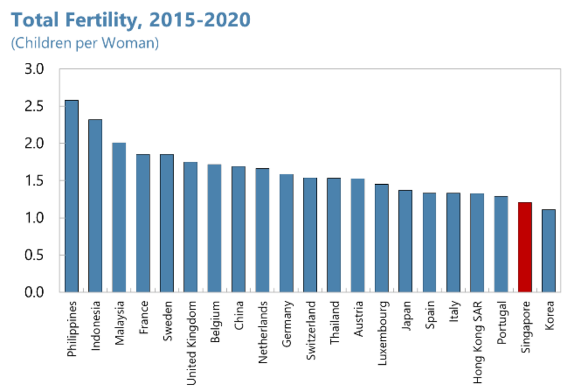
Source: United Nations, World Population Prospects, 2019.

While the labor force participation rate has risen in recent years particularly for the elderly and women in prime working age, there is scope for further rise for prime working age women.



Source: Singapore, Ministry of Manpower.

The average number of children per woman is among the lowest in the world.

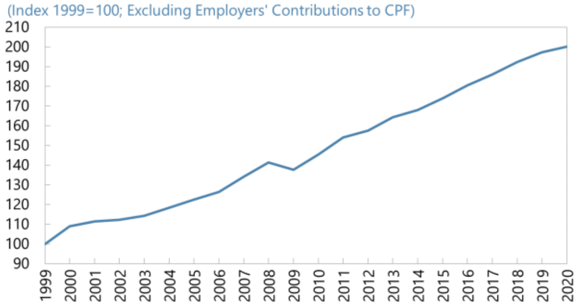


Source: United Nations, World Population Prospects, 2019.

Figure 9. Singapore: Social and Equality Indicators

Average monthly earnings continue to increase steadily.

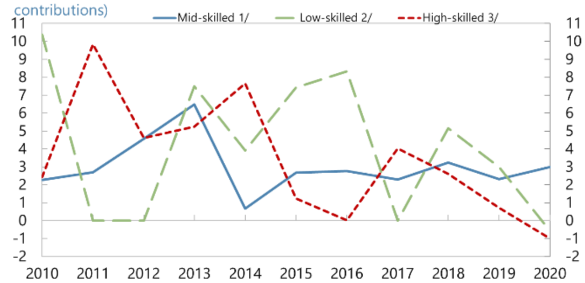
SGP: Average Monthly Earnings 1/
(Index 1999=100; Excluding Employers' Contributions to CPF)



Sources: Haver Analytics; and IMF staff calculations.
1/ Refers to all remuneration received before deduction of employee Central Provident Fund (CPF) contributions & personal income tax. It comprises basic wages, overtime pay, commissions, allowances & bonuses but exclude employer CPF contributions. Data cover full-time & part-time employees who have CPF contributions. They exclude identifiable self-employed persons who have made CPF contribution.

Median wages for high-skilled workers continued to decline 2020, while median wages for mid- and low-skilled workers held up.

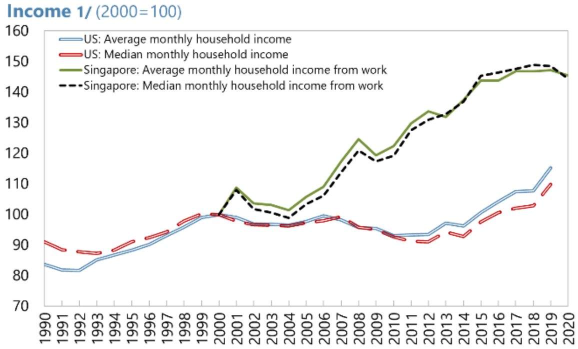
Weighted Gross Monthly Median Wages
(In Y-o-Y percent change; Full-time employed residents, excl. employer's CPF contributions)



Sources: Singapore, Ministry of Manpower; and IMF staff calculations.
1/ Mid-skilled comprises clerical support workers; sales and service workers; craftsmen; plant and machine operators; and assemblers.
2/ Low-skilled comprises cleaners; laborers; and related workers.
3/ High-skilled comprises managers and administrators; working proprietors; professionals; and technicians.

Median household income declined in 2020.

The U.S. and Singapore: Mean and Median Real Household Income 1/ (2000=100)



Sources: Singapore, Department of Statistics; Haver Analytics; and IMF staff calculations.
1/ For Singapore data on resident households and includes contributions from employers to CPF.

While largely stagnant during 2000–10, real incomes of lower income groups have increased at a faster pace in the last decade.

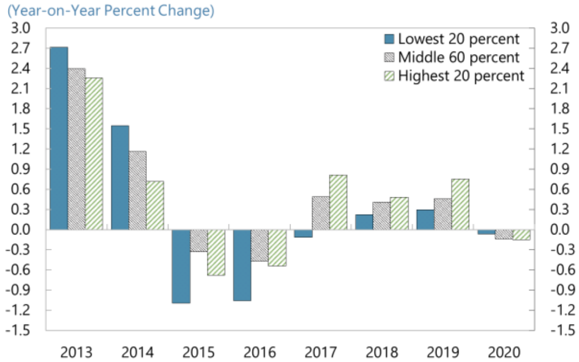
Average Monthly Real Household Income by Decile 1/

			Cumulative Change (in percent)		
Decile	2000	2020	2000–2020	2000–2010	2010–2020
Total	1,735	2,999	72.9	33.0	30.0
1st-10th	315	399	26.8	-2.4	29.9
11th-20th	537	814	51.5	10.9	36.6
21st-30th	720	1,202	66.9	22.9	35.8
31st-40th	911	1,557	70.9	25.8	35.9
41st-50th	1,119	1,944	73.7	27.4	36.4
51st-60th	1,366	2,391	75.0	28.3	36.4
61st-70th	1,669	2,943	76.3	30.0	35.6
71st-80th	2,093	3,714	77.4	31.9	34.5
81st-90th	2,821	5,297	87.8	41.4	32.7
91st-100th	5,801	10,575	82.3	50.2	21.4
Memo:					
Top dec/bottom dec	18.4	26.5			

1/ Income from work per household member in employed households in 2000 prices. Household income from work includes employer CPF contributions. Deflated by CPI for the respective income group (lowest 20 percent, middle 60 percent, top 20 percent).

Inflation turned negative in all income group in 2020, helping real income.

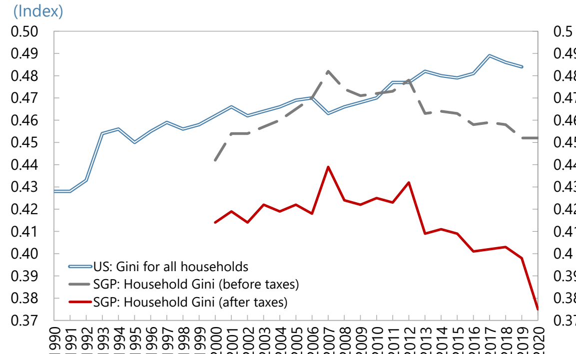
Inflation by Income Group
(Year-on-Year Percent Change)



Sources: Singapore, Department of Statistics; and IMF staff calculations.

Government policies (taxes and benefit payments) have contributed to a reduction in inequality in 2020.

United States and Singapore: Gini
(Index)



Sources: Singapore, Department of Statistics; and Haver Analytics.

Table 1. Singapore: Selected Economic and Financial Indicators, 2015–22

Nominal GDP (2020): US$340 billion
Population (2020): 5.69 million
GDP per capita (2020): US$59,819
Main goods exports (2020, percent of total non-oil goods exports): machinery & transport equip. (59.8 percent); chemical products (15.8 percent); and misc. manufactured articles (10.6 percent).
Top three destinations for goods exports (2020, percent of gross goods exports): China (13.7 percent); Hong Kong SAR (12.4 percent); and USA (10.5 percent).

							Projections	
	2015	2016	2017	2018	2019	2020	2021	2022
Growth (percentage change)								
Real GDP	3.0	3.3	4.5	3.5	1.3	-5.4	6.0	3.1
Total domestic demand 1/	0.4	5.5	6.0	1.2	1.7	-10.7	5.3	3.1
Final domestic demand 1/	4.4	2.3	3.9	0.8	2.6	-10.2	5.4	3.1
Consumption	5.9	3.4	3.1	3.8	3.3	-8.4	5.1	3.0
Private consumption	5.2	3.3	3.1	4.0	3.3	-14.1	5.6	3.1
Gross capital formation 1/	-8.6	9.5	11.1	-3.0	-1.1	-14.9	5.6	3.3
Gross fixed investment	2.0	0.5	5.4	-4.3	1.2	-13.7	6.0	3.4
Change in inventories (contribution to GDP growth, percentage points) 1/	-3.0	2.3	1.6	0.3	-0.6	-0.5	0.0	0.0
Net exports (contribution to GDP growth, percentage points) 1/	3.6	-0.3	0.9	2.4	-0.1	3.1	2.5	1.0
Saving and investment (percent of GDP)								
Gross national saving	44.0	44.0	44.6	40.4	38.9	40.2	39.1	38.7
Gross domestic investment	25.4	26.5	27.3	25.0	24.7	22.6	23.5	23.8
Inflation and unemployment (period average, percent)								
CPI inflation	-0.5	-0.5	0.6	0.4	0.6	-0.2	1.4	1.4
CPI inflation, excluding food and energy 2/	-0.5	-0.5	-0.7	-0.1	0.4	-0.3	1.3	1.1
MAS core inflation 2/	0.5	0.9	1.5	1.7	1.0	-0.2	0.8	1.4
Unemployment rate	1.9	2.1	2.2	2.1	2.3	3.0	2.7	2.5
Central government finances (percent of GDP) 3/								
Revenue	17.3	18.5	18.9	17.9	17.9	17.7	18.7	18.6
Expenditure	14.0	15.0	14.0	13.8	14.1	23.4	21.1	17.2
Net lending/borrowing	3.3	3.5	4.9	4.1	3.8	-5.7	-2.4	1.4
Net lending/borrowing, excluding nonproduced assets	-0.3	0.7	1.8	1.2	1.5	-7.4	-4.5	-0.9
Primary balance 4/	-2.5	-2.5	-1.4	-2.0	-1.9	-11.1	-8.4	-4.3
Money and credit (end of period, percent change)								
Broad money (M2)	4.0	8.4	4.2	5.1	4.4	10.7	5.0	4.5
Credit to private sector	2.5	5.5	3.3	4.8	3.0	1.4	6.0	3.1
Three-month S$ SIBOR rate (percent)	1.2	1.0	1.5	1.9	1.8	0.4	...	...
Balance of payments (US$ billions)								
Current account balance	57.6	56.0	59.3	57.9	53.4	59.8	59.1	59.8
(In percent of GDP)	18.7	17.6	17.3	15.4	14.3	17.6	15.5	14.9
Goods balance	92.6	90.0	101.0	101.6	96.8	93.6	103.3	108.2
Exports, f.o.b.	396.2	373.2	416.4	458.9	441.3	411.6	465.7	488.3
Imports, f.o.b.	-303.7	-283.2	-315.4	-357.4	-344.5	-318.0	-362.4	-380.1
Financial account balance 5/	52.4	56.9	34.2	45.4	61.8	-14.4	33.0	48.3
Overall balance 5/	1.1	-1.8	27.4	12.5	-8.4	74.9	26.1	11.5
Gross official reserves (US$ billions)	247.7	246.6	279.9	287.7	279.5	362.3	390.8	407.5
(In months of imports) 6/	6.7	6.0	6.0	6.2	6.8	7.8	7.9	8.0
Singapore dollar/U.S. dollar exchange rate (period average)	1.37	1.38	1.38	1.35	1.36	1.38	...	...
Nominal effective exchange rate (percentage change) 7/	-0.9	1.9	0.0	1.0	1.4	-1.2	...	...
Real effective exchange rate (percentage change) 7/	-2.7	-0.2	-1.2	-0.6	0.2	-2.6	...	...
Memorandum items:								
Nominal GDP (in billions of Singapore Dollars)	423.4	440.4	474.1	507.1	510.7	469.1	502.1	524.7
Growth (%)	6.1	4.0	7.7	7.0	0.7	-8.2	7.0	4.5

Sources: Data provided by the Singapore authorities; and IMF staff estimates and projections.
Note: Date and forecasts as of June 8, 2021
1/ Approximation based on available data.
2/ IMF staff estimates, showing projections from 2021. MAS core inflation excludes the costs of accommodation and private transport.
3/ IMF staff estimates on a calendar year basis following GFSM 2014.
4/ Net lending/borrowing excluding net investment return contribution (NIRC).
5/ Following the BPM6 sign convention, a positive entry implies net outflows.
6/ In months of following year's imports of goods and services.
7/ Increase is an appreciation.

Table 2. Singapore: Balance of Payments, 2015–22 1/

	2015	2016	2017	2018	2019	2020	Projections 2021	2022
	(In billions of U.S. dollars)							
Current account balance	57.6	56.0	59.3	57.9	53.4	59.8	59.1	59.8
Goods balance	92.6	90.0	101.0	101.6	96.8	93.6	103.3	108.2
Exports, f.o.b.	396.2	373.2	416.4	458.9	441.3	411.6	465.7	488.3
Imports, f.o.b.	-303.7	-283.2	-315.4	-357.4	-344.5	-318.0	-362.4	-380.1
Services balance	-8.5	-6.6	-10.3	6.6	9.0	14.9	9.0	7.7
Exports	153.2	151.9	171.0	206.7	217.2	187.6	203.8	218.1
Imports	-161.7	-158.5	-181.2	-200.1	-208.2	-172.7	-194.7	-210.4
Primary income balance	-21.0	-20.2	-26.1	-43.6	-44.7	-41.6	-45.5	-47.6
Receipts	71.7	78.2	98.9	108.8	109.0	99.4	111.6	115.8
Payments	-92.7	-98.4	-125.0	-152.4	-153.7	-140.9	-157.1	-163.4
Secondary income balance	-5.5	-7.2	-5.3	-6.7	-7.7	-7.2	-7.7	-8.4
Financial account (net)	52.4	56.9	34.2	45.4	61.8	-14.4	33.0	48.3
Direct investment	-24.6	-29.8	-35.9	-61.1	-69.9	-55.1	-60.3	-63.6
Assets	45.2	38.2	64.9	22.0	50.6	32.4	37.1	41.0
Liabilities	69.8	67.9	100.8	83.1	120.4	87.4	97.4	104.6
Portfolio investment	61.7	14.5	19.7	49.0	106.4	51.5	35.6	52.0
Assets	55.4	25.9	41.3	35.0	110.7	51.3	35.4	51.8
Liabilities	-6.2	11.5	21.6	-14.1	4.2	-0.2	-0.1	-0.2
Other investment and financial derivatives	15.3	72.2	50.4	57.4	25.2	-10.8	57.7	59.9
Net errors and omissions	-4.1	-0.9	2.4	0.0	0.0	0.7	0.0	0.0
Overall balance	1.1	-1.8	27.4	12.5	-8.4	74.9	26.1	11.5
Memorandum items:								
Current account as percent of GDP	18.7	17.6	17.3	15.4	14.3	17.6	15.5	14.9
Goods balance as percent of GDP	30.1	28.2	29.4	27.0	25.9	27.5	27.1	26.9
Re-exports as percent of GDP	60.0	55.2	53.9	54.1	55.0	59.9	…	…
Net international investment position								
In billions of U.S. dollars	647	717	807	699	777	1047	…	…
In percent of GDP	210	225	235	186	208	308	…	…

Sources: Monetary Authority of Singapore, *Economic Survey of Singapore*; and IMF 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 official presentation has adopted the sign convention for assets and liabilities in line with BPM6 manual.

Table 3. Singapore: Monetary Survey, 2015–22 1/

	2015	2016	2017	2018	2019	2020	Projections 2021	2022
	(In billions of Singapore dollars, end of period)							
Net foreign assets	502	506	534	556	578	724	758	773
Monetary authorities	353	353	372	390	374	472	506	521
Banks	149	153	162	166	204	252	252	252
Domestic credit	823	864	898	950	996	1019	1063	1093
Claims on resident private sector	702	741	765	802	826	837	887	915
Claims on central government	121	123	133	148	170	182	176	179
Other items (net)	-573	-556	-584	-614	-643	-712	-718	-713
M2	751	814	848	892	931	1031	1104	1153
M1	279	294	315	311	326	437	467	488
Quasi-money	472	520	533	581	605	595	636	665
	(Annual percentage change)							
Domestic credit	2.9	5.0	4.0	5.7	4.8	2.3	4.3	2.8
Claims on private sector	2.5	5.5	3.3	4.8	3.0	1.4	6.0	3.1
M2	4.0	8.4	4.2	5.1	4.4	10.7	7.0	4.5
	(Contribution to M2 growth, in percentage points)							
Net foreign assets	6.1	0.6	3.5	2.6	2.4	15.7	3.3	1.4
Domestic credit (net)	3.2	5.5	4.2	6.1	5.1	2.5	4.3	2.7
Claims on private sector	2.4	5.1	3.0	4.4	2.7	1.2	4.8	2.5
Claims on central government (net)	0.8	0.4	1.2	1.7	2.5	1.3	-0.6	0.2
Other items (net)	-5.2	2.3	-3.5	-3.5	-3.2	-7.5	-0.6	0.4
Memorandum items:								
Total loans to nonbanks (in billions of Singapore dollars) 2/	1,149	1,155	1,248	1,314	1,370	1,354	…	…
To residents 3/	671	704	725	763	786	793	…	…
Total loans to nonbanks (annual percentage change) 2/	0.0	0.5	8.0	5.3	4.2	-1.2	…	…
To residents (annual percentage change) 3/	4.0	5.0	2.9	5.3	3.0	0.8	…	…

Sources: Monetary Authority of Singapore; and IMF staff estimates.

1/ Based on domestic banking units (DBUs) and Asian currency units (ACUs).
2/ Total loans of DBUs and ACUs to both residents and nonresidents.
3/ For ACUs, data are converted to Singapore dollar using end-of-period exchange rate.

Table 4. Singapore: Indicators of Vulnerability, 2015–20

	2015	2016	2017	2018	2019	2020
Financial sector indicators						
Broad money (M2, percent change, y/y, end of period)	4.0	8.4	4.2	5.1	4.4	10.7
Private sector credit (percent change, y/y, end of period)	2.5	5.5	3.3	4.8	3.0	1.4
Credit to the property sector (percent change, y/y, end of period) 1/	8.2	3.1	2.3	5.9	1.0	2.4
Share of property sector credit in total nonbank credit (percent, end of period) 1/	50.7	50.8	49.2	50.6	49.6	51.8
Credit rating of local banks (S&P) 2/	AA-	AA-	AA-	AA-	AA-	AA-
Three-month S$ SIBOR (percent, end of period)	1.2	1.0	1.5	1.9	1.8	0.4
NPL ratio (local banks, percent, latest available) 3/ 4/	1.1	1.4	1.6	1.5	1.5	1.6
Capital adequacy ratio of local banks (percent, latest available) 4/	15.9	16.5	17.1	16.8	17.0	16.7
Asset market indicators (end of period)						
Stock prices (percent change, y/y)	-14.3	-0.1	18.3	-9.9	5.0	-11.8
P/E ratio	12.7	13.9	15.5	13.5	14.4	13.3
Stock prices of the finance sector (percent change, y/y)	-12.8	1.1	30.0	-8.7	10.2	-9.1
Real estate prices (percent change, y/y)						
Private residential (4-quarter average)	-3.9	-3.1	-1.1	7.8	2.3	1.6
Private residential (end of period)	-3.7	-3.1	1.1	7.9	2.7	2.2
External indicators						
Current account balance (US$ billion)	57.6	56.0	59.3	57.9	53.4	59.8
In percent of GDP	18.7	17.6	17.3	15.4	14.3	17.6
Gross official reserves (US$ billion, end of period)	247.7	246.6	279.9	287.7	279.5	362.3
In months of next year's imports of goods and services	6.7	6.0	6.0	6.2	6.8	7.8
Real effective exchange rate (index, 2010=100, end of period)	108.3	108.1	106.8	106.2	106.5	103.7

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/ Data for 2020 are as of end-June.

Table 5. Singapore: Medium-Term Scenario, 2015–25

	2015	2016	2017	2018	2019	2020	Projections 2021	2022	2023	2024	2025
Real growth (percent change)											
GDP	3.0	3.3	4.5	3.5	1.3	-5.4	6.0	3.1	2.7	2.6	2.5
Total domestic demand 1/	0.4	5.5	6.0	1.2	1.7	-10.7	5.3	3.1	3.3	3.7	3.4
(Contribution to GDP growth, in percent) 1/	0.3	4.0	4.5	0.9	1.3	-7.9	3.7	2.1	2.3	2.6	2.4
Final domestic demand 1/	4.4	2.3	3.9	0.8	2.6	-10.2	5.4	3.1	3.3	3.7	3.4
Consumption	5.9	3.4	3.1	3.8	3.3	-8.4	5.1	3.0	2.9	2.7	2.8
Private	5.2	3.3	3.1	4.0	3.3	-14.1	5.6	3.1	2.8	2.8	2.8
Public	8.9	3.8	3.1	3.2	3.4	12.6	3.7	2.5	3.0	2.5	2.8
Gross capital formation 1/	-8.6	9.5	11.1	-3.0	-1.1	-14.9	5.6	3.3	4.1	5.6	4.5
Gross fixed investment	2.0	0.5	5.4	-4.3	1.2	-13.7	6.0	3.4	4.3	5.8	4.7
Private	0.1	-2.3	7.0	-4.3	1.1	-11.2	4.8	-1.7	3.2	6.7	5.2
Public	10.8	12.5	-0.8	-4.3	1.5	-24.2	12.9	25.9	8.2	2.8	3.1
Change in inventories 2/	-3.0	2.3	1.6	0.3	-0.6	-0.5	0.0	0.0	0.0	0.0	0.0
Net exports 2/	3.6	-0.3	0.9	2.4	-0.1	3.1	2.5	1.0	0.4	0.1	0.1
Saving and investment (percent of GDP)											
Gross national savings	44.0	44.0	44.6	40.4	38.9	40.2	39.1	38.7	38.6	39.0	39.0
Government 3/	4.2	5.3	6.0	5.5	5.3	-3.6	-0.3	4.2	5.1	5.2	4.8
Private and other	39.8	38.7	38.5	34.9	33.6	43.8	39.4	34.5	33.5	33.7	34.3
Gross capital formation	25.4	26.5	27.3	25.0	24.7	22.6	23.5	23.8	24.1	24.7	25.0
Government 4/	5.1	5.4	4.7	4.2	4.3	3.6	3.9	4.8	5.1	5.1	5.1
Private and other	20.2	21.1	22.6	20.8	20.3	19.0	19.6	19.0	19.1	19.6	19.9
Inflation and unemployment (period average, percent)											
CPI inflation	-0.5	-0.5	0.6	0.4	0.6	-0.2	1.4	1.4	1.5	1.5	1.5
CPI inflation, excluding food and energy 5/	-0.5	-0.5	-0.7	-0.1	0.4	-0.3	1.3	1.1	1.8	1.7	1.5
MAS Core inflation 5/	0.5	0.9	1.5	1.7	1.0	-0.2	0.8	1.4	1.6	1.8	2.0
Unemployment rate	1.9	2.1	2.2	2.1	2.3	3.0	2.7	2.5	2.4	2.3	2.2
Central government (percent of GDP) 6/											
Revenue 7/	17.3	18.5	18.9	17.9	17.9	17.7	18.7	18.6	18.1	17.7	17.5
Expenditure	14.0	15.0	14.0	13.8	14.1	23.4	21.1	17.2	16.0	15.4	15.7
Net lending/borrowing	3.3	3.5	4.9	4.1	3.8	-5.7	-2.4	1.4	2.1	2.3	1.8
Net lending/borrowing, excluding nonproduced assets	-0.3	0.7	1.8	1.2	1.5	-7.4	-4.5	-0.9	-0.2	-0.1	-0.5
Primary balance 8/	-2.5	-2.5	-1.4	-2.0	-1.9	-11.1	-8.4	-4.3	-3.2	-2.6	-2.8
Merchandise trade (percent change)											
Export volume	4.2	0.0	7.0	4.0	-1.5	0.4	6.0	4.6	3.2	2.9	2.9
Import volume	4.2	-1.2	5.1	5.2	-1.6	-0.7	6.9	5.1	3.3	3.3	3.3
Terms of trade	5.4	-0.2	-1.6	-1.6	-0.3	-0.1	0.1	0.4	0.5	0.5	0.4
Balance of payments (percent of GDP)											
Current account balance	18.7	17.6	17.3	15.4	14.3	17.6	15.5	14.9	14.4	14.3	14.0
Balance on goods and services	27.3	26.2	26.4	28.8	28.3	31.9	29.5	28.8	28.4	28.0	27.7
Balance on primary and secondary income	-8.6	-8.6	-9.2	-13.4	-14.0	-14.3	-14.0	-13.9	-13.9	-13.7	-13.7
Gross official reserves (US$ billions)	248	247	280	288	279	362	391	408	424	439	454
In months of imports 9/	6.7	6.0	6.0	6.2	6.8	7.8	7.9	8.0	8.0	7.9	7.8

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

1/ Approximation based on available data.
2/ Contribution to GDP growth.
3/ Based on fiscal accounts data.
4/ Based on national accounts data.
5/ IMF staff estimates, showing projections from 2021. MAS core inflation excludes the costs of accommodation and private road transport.
6/ IMF staff estimates on a calendar year basis following GFSM 2014.
7/ Does not include announced increase in goods and services tax from 7 to 9 percent sometime in 2021-2025.
8/ Net lending/borrowing excluding nonproduced assets minus net investment return contribution (NIRC).
9/ In months of next year's imports of goods and services.

Table 6. Singapore: Summary of Government Operations and Stock Positions, FY2015–FY2021 1/

	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021 11/ Proj.
I. Statement of government operations							
			(In billions of Singapore dollars)				
Revenue	73.8	84.8	90.6	90.2	91.5	82.7	96.2
Taxes	55.6	58.7	66.4	66.2	67.6	58.6	70.0
Other revenue	18.1	26.1	24.3	24.0	23.8	24.2	26.2
Of which: Net investment returns contribution (NIRC)	8.9	14.6	14.7	16.4	17.0	18.1	19.6
Expense	56.3	58.9	61.1	63.3	64.4	113.9	87.3
Compensation of employees	8.0	8.3	8.9	9.2	8.9	9.0	9.8
Use of goods and services	17.5	18.4	18.9	19.6	20.3	26.6	25.9
Interest							
Expense not elsewhere classified 2/	30.8	32.2	33.4	34.5	35.2	78.4	51.6
Grants, subventions & capital injections to organizations	9.4	10.6	12.6	13.0	13.4	19.7	22.1
Transfers 2/	21.4	21.6	20.8	21.4	21.8	58.6	29.5
Gross operating balance	17.5	25.9	29.5	26.8	27.0	-31.2	8.9
Net acquisition of nonfinancial assets, excluding nonproduced as	20.8	20.7	19.7	22.4	18.6	17.7	21.8
Of which: Development expenditure	19.4	18.9	18.0	20.3	16.7	16.4	19.9
Net lending/borrowing, excluding nonproduced assets 3/	**-3.3**	**5.3**	**9.7**	**4.4**	**8.5**	**-48.8**	**-12.9**
Net acquisition of nonproduced assets (land)	-15.5	-11.2	-15.7	-14.5	-11.3	-7.1	-11.8
Net lending/borrowing	12.2	16.5	25.5	18.9	19.7	-41.8	-1.2
			(In percent of GDP)				
Revenue	17.3	18.9	18.9	17.6	18.0	17.6	19.0
Taxes	13.1	13.0	13.8	12.9	13.3	12.4	13.9
Other revenue	4.2	5.8	5.1	4.7	4.7	5.1	5.2
Of which: NIRC	2.1	3.2	3.1	3.2	3.3	3.9	3.9
Expense 2/	13.2	13.1	12.7	12.4	12.7	24.2	17.3
Gross operating balance	4.1	5.8	6.1	5.2	5.3	-6.6	1.8
Net acquisition of nonfinancial assets, excluding nonproduced as	4.9	4.6	4.1	4.4	3.7	3.8	4.3
Of which: Development expenditure	4.5	4.2	3.7	4.0	3.3	3.5	3.9
Net lending/borrowing, excluding nonproduced assets 3/	**-0.8**	**1.2**	**2.0**	**0.9**	**1.7**	**-10.4**	**-2.6**
Net acquisition of nonproduced assets (land)	-3.6	-2.5	-3.3	-2.8	-2.2	-1.5	-2.3
Net lending/borrowing	2.9	3.7	5.3	3.7	3.9	-8.9	-0.2
Memorandum items:							
Cyclically-adjusted overall balance (percent of potential GDP) 4/	-0.7	1.2	1.8	0.6	1.8	-9.6	-2.4
Primary balance 5/	-2.9	-2.4	-1.1	-2.3	-1.7	-14.2	-6.4
Structural primary balance (percent of potential GDP) 6/	-2.7	-2.3	-2.3	-2.9	-1.8	-13.8	-6.6
Expenditures on social development 7/	7.3	7.5	7.6	7.0	7.3	10.0	9.8
Spending from Endowment and Trust Funds	0.9	0.9	0.7	0.8	0.8	1.0	...
Authorities' budgetary accounts 8/							
Operating revenue (1)	15.2	15.3	15.8	14.4	14.6	13.7	15.2
Total expenditure (2)	15.8	15.8	15.3	15.2	14.8	20.0	20.3
Primary fiscal balance (3)=(1)-(2)	-0.6	-0.5	0.5	-0.8	-0.2	-6.3	-5.1
Special transfers (excl. transfers to endowment funds) (4)	1.0	0.6	0.4	0.3	0.3	7.7	1.0
Basic balance (5)=(3)-(4)	-1.6	-1.1	0.0	-1.1	-0.5	-14.0	-6.1
Transfers to Endowment and Trust Funds (6)	1.4	0.8	0.8	1.4	2.7	3.7	0.0
NIRC (7)	2.1	3.2	3.1	3.2	3.3	3.9	3.9
Overall balance (8)=(5)-(6)+(7)	-0.9	1.4	2.3	0.7	0.2	-13.8	-2.2
II. Stock positions							
			(In billions of Singapore dollars, unless otherwise indicated)				
Gross financial assets 9/	941	997	1,088	1,174	1,349	1,307	...
Gross debt 10/	436	479	517	562	656	729	...
Gross debt (in percent of GDP) 10/	102	107	108	110	129	155	...
Government deposits at the Monetary Authority of Singapore	124	79	65	41	44	70	...
Memorandum item:							
Nominal GDP (fiscal year)	426	450	480	512	509	471	505

Sources: Data provided by the Ministry of Finance; and IMF staff estimates and projections.

1/ The financial year begins on 1 April of the current year and ends on 31 March of the following year. Table presentation is based on GFSM 2014.
2/ Includes spending from government endowment and trust funds.
3/ This fiscal aggregate is used in policy discussions with the authorities. Proceeds from land sales do not affect the fiscal stance to the extent that the private sector is receiving an equivalent asset in return. They also do not affect total net worth for the government or for the private sector.
4/ Cyclically adjusted net lending/borrowing excluding nonproduced assets.
5/ Net lending/borrowing excluding nonproduced assets minus net investment return contribution (NIRC).
6/ Cyclically adjusted net lending/borrowing excluding nonproduced assets minus NIRC and Monetary Authority of Singapore (MAS) contributions.
7/ Includes development and operating expenditure on education, health, national development, environment and water resources, culture, community and youth, social and family development, communications and information, and manpower (financial security). Does not include social spending from government endowment and trust funds.
8/ The authorities' budgetary accounts are based on Singapore's Constitutional rules governing the protection of Past Reserves. It includes the net investment returns contribution, which reflects the amount of investment returns that is taken into the Budget. It excludes receipts such as proceeds from land sales and the remaining part of investment income that accrues to past reserves and cannot be used to fund government expenditures without the approval of the President. While such receipts are not reflected in the overall balance, the information is presented annually to Parliament and included in Budget documents.
9/ Gross asset stock figures are as at the end of March for each year as reported in the "Statement of Assets and Liabilities" in the budget document.
10/ Debt is issued to deepen the domestic debt market, to meet the investment needs of the Central Provident Fund, and to provide individuals a long-term savings option.
11/ The IMF staff projection for GDP is used to calculate the authorities' budgetary accounts in percent of GDP.

Table 7. Singapore: Financial Soundness Indicators—Local Banking Sector, 2017–20Q2 1/

	2017	2018	2019	2020 Q2
	(End of period; in percent)			
Capital adequacy ratio				
Regulatory capital to risk-weighted assets	17.1	16.8	17.0	16.7
Regulatory tier I capital to risk-weighted assets	15.4	14.9	15.3	14.9
Shareholders' equity to assets	9.3	9.2	9.3	8.9
Asset quality				
NPLs to nonbank loans	1.6	1.5	1.5	1.6
Total provisions to NPLs	84.8	75.9	76.2	91.3
Specific provisions to NPLs	40.8	39.5	38.9	41.8
Loan concentrations (in percent of total loans)				
Bank loans	14.7	13.0	12.5	12.7
Nonbank loans	85.3	87.0	87.5	87.3
Of which:				
Manufacturing loans	6.8	7.5	7.2	8.3
Building and construction loans	16.4	19.3	21.2	21.9
Housing loans	21.7	20.8	19.9	19.1
Loans to professionals and private individuals	9.2	9.0	9.2	8.3
Loans to nonbank financial institutions	7.9	7.0	7.4	7.3
Profitability				
After tax return on assets	1.0	1.0	1.1	0.7
After tax return on equity	10.4	10.2	11.2	7.7
Net interest margin	1.8	1.8	1.8	1.6
Non-interest income to total income	37.7	30.1	35.7	39.1
Liquidity 2/				
Overall non-bank loans to deposits ratio (LTD)	...	88.5	88.0	86.1
Domestic currency non-bank LTD	...	90.3	88.8	81.4
USD non-bank LTD	...	75.8	69.0	68.7

Source: Monetary Authority of Singapore.

1/ The data relates to local banking groups' global operations.

2/ End of period

Table 8. Singapore: International Investment Position, 2015–20

	2015	2016	2017	2018	2019	2020
	(In billions of U.S. Dollars) 1/					
External assets	3,080	3,218	3,798	3,821	4,168	4,628
Direct investment	740	831	1,041	1,018	1,103	1,221
Portfolio investment	968	1,029	1,265	1,235	1,457	1,581
Equity securities	490	520	657	623	756	842
Debt securities	479	509	609	612	701	739
Other investment and financial derivatives	1,123	1,111	1,212	1,280	1,329	1,464
Reserve assets	248	246	280	287	279	362
External liabilities	2,433	2,501	2,991	3,121	3,391	3,581
Direct investment	1,092	1,145	1,466	1,549	1,751	1,855
Portfolio investment	175	199	271	260	276	261
Equity securities	144	156	213	196	205	192
Debt securities	31	44	58	64	70	69
Other investment and financial derivatives	1,166	1,156	1,254	1,312	1,364	1,464
Net international investment position	647	717	807	699	777	1,047
	(In percent of GDP) 1/					
External assets	1000	1010	1106	1016	1113	1361
Direct investment	240	261	303	271	295	359
Portfolio investment	314	323	369	329	389	465
Equity securities	159	163	191	166	202	248
Debt securities	155	160	177	163	187	217
Other investment and financial derivatives	365	349	353	340	355	431
Reserve assets	81	77	81	76	75	107
External liabilities	790	785	871	830	906	1053
Direct investment	354	359	427	412	468	546
Portfolio investment	57	63	79	69	74	77
Equity securities	47	49	62	52	55	56
Debt securities	10	14	17	17	19	20
Other investment and financial derivatives	378	363	365	349	364	431
Net international investment position	210	225	235	186	208	308

Sources: Singapore, Department of Statistics; and IMF staff calculations.
1/ IMF staff estimates using official data published in national currency.

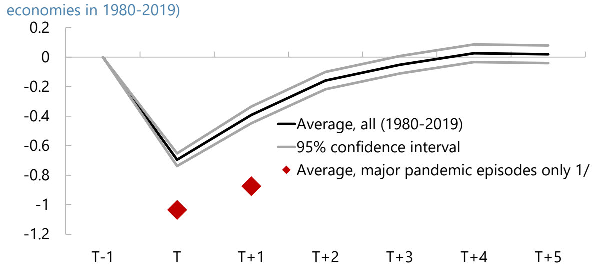
Appendix I. Household Consumption Dynamics Around Shocks[1]

Private consumption in Singapore collapsed in 2020 amid the COVID-19 pandemic. Experience suggests that the crisis could have a lingering impact on consumption. However, high savings in Singapore, as well as policy support for households, can buffer consumption compression during the recession and the recovery phase.

1. **Consumption declines more sharply in pandemic years than in economic recessions.** Historically, on average among advanced economies in 1980-2018, each 1 ppt decline in GDP growth was associated with a decline in consumption growth by about 1 ppt during major pandemic years, compared to about 0.7 ppt decline during ordinary economic slowdowns. The stronger contraction in consumption during pandemics reflects the impact of containment measures which limit spending opportunities, as well as heightened health risks which further weigh on consumer sentiment. Moreover, pandemics with higher infection and mortality rates are associated with a sharper decline in consumption. It is therefore not surprising that, given the severe health risks of COVID-19, private consumption in Singapore contracted by a record 14 percent in 2020.

Consumption Growth, Associated with GDP Growth Fall

(Average changes in the real consumption growth rate associated with the 1 ppt fall in real GDP in year T; impulse responses in year T to T+5; average among advanced economies in 1980-2019)



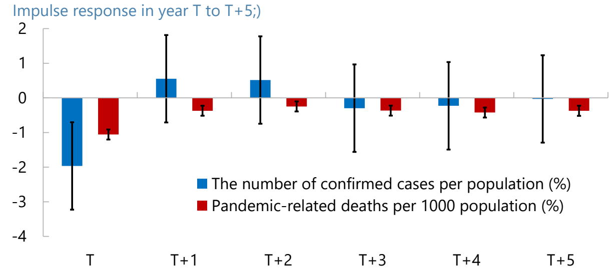
Source: IMF staff estimates

Note: Based on the estimation of impulse responses of annual consumption growth to GDP growth, both in real terms, controlling for up to two lags of both variables, country and year fixed effects, using local projections.

1/ Showing the estimates using the same method but by limiting the sample only to past major pandemic episodes (SARS, H1N1, MERS, Ebola, and Zika)

Consumption Growth by the Severity of Pandemics

(Average changes in the real consumption growth, associated with 1 ppt increase in the percent of cases-to-population and related deaths per 1000 population in year T; Impulse response in year T to T+5;)



Source: IMF staff estimates

Note: Based on the estimation of impulse responses of annual consumption growth over the year T~T+5 to the measures of the severity of pandemic-related health risks (number of cases per population and deaths per 1,000 population, in %) in the pandemic year T, controlling for up to two lags of consumption growth and the respective pandemic severity measure, country and year fixed effects, using local projections. Past major pandemic episodes in 1980-2019 include SARS, H1N1, MERS, Ebola, and Zika. The bars show point estimates for each year, and the vertical lines around the bars showing the 95% confidence bands.

2. **The recovery in consumption tends to be more sluggish than the recovery in income.** The dampening effect of recessions tends to weigh on consumption growth for prolonged periods. After the initial decline, the impulse response of consumption growth to a GDP growth shock remains negative for a couple more years. This likely reflects the sluggish recovery in consumer confidence, which tends to lag the pickup in business confidence as seen following the global financial crisis as well as recently in 2020. Given the remaining uncertainties and lingering health risks, the recovery in consumption growth going forward could be also gradual.

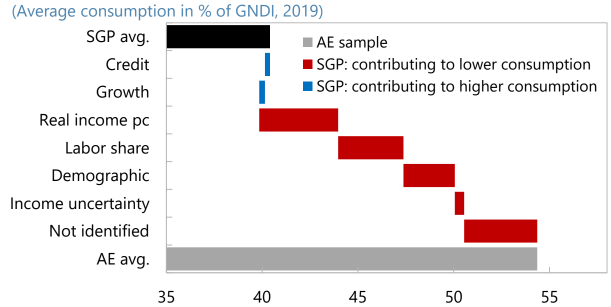
3. **Singapore has on average a relatively low share of consumption in national income and a high saving rate.** A regression analysis reveals a few structural factors that affect Singapore's

[1] Prepared by Jiae Yoo (APD). See Chapter 1 of *Selected Issues* for additional details.

consumption level. First, Singapore pays a significant share of its national income to compensate foreign factors of production and has a low labor share in income. Consumption as a share of national income thus likely underestimates Singaporean household's propensity to consume. Second, Singapore has a per capita income and purchasing power among the highest in the world, which is usually associated with a low consumption share in income. Third, Singapore's population is young and aging rapidly. It has more room to withhold current consumption and more needs to save for old-age consumption. Additionally, comparing the household expenditure survey results of Singapore to those of countries with high consumption shares (the U.S. and the U.K. were chosen for this analysis) indicates that the difference is driven by the fact that Singaporean households spend significantly less on housing and transportation. This likely reflects Singapore's policies to keep these costs affordable by making public housing and transportation widely available. There are other social factors that may affect consumption, though difficult to quantify, such as a strong bequest motive.

Singapore: Consumption Share, Relative to Peer Average

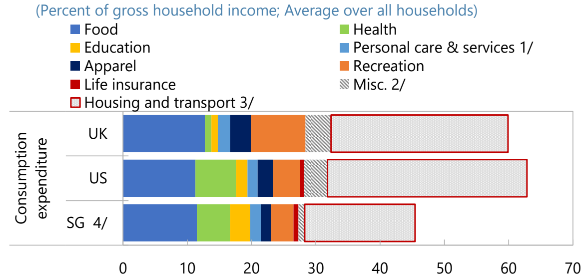
(Average consumption in % of GNDI, 2019)



Source: IMF staff estimates
Note: Based on an estimated relationship between consumption rates and its major determinants among AEs, 1980-2019. The colored bars show the contribution of each category: Income uncertainty=forecast uncertainty of real GDP growth pc; Demographics=old age dependency ratio & aging speed; the share of labor compensation in GDP; Real GDP per capita in PPP international currency in logs; Credit = credit-to-GDP & real deposit rates.

Consumption Expenditure, 2018

(Percent of gross household income; Average over all households)



Sources: Singapore HES 2017/18; U.S. CEX 2018; U.K. LCF 2018; IMF staff calculations
1/ Sum of personal care and household personal/household services (e.g., child/elderly care)
2/ Misc. in US-CEX include cash contributions to outside the household, e.g., alimony & childcare support, and religious, charitable & political contributions.
3/ Not including the imputed rental for owned dwellings for SG and the mortgage payments & taxes on the owned dwellings for US
4/ SGP-total, based on income excluding employer CPF contributions

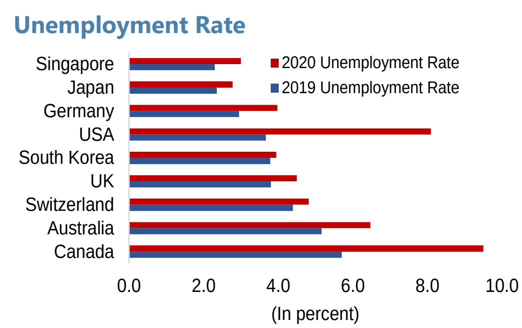
4. **Structural factors that normally drive higher saving rates in Singapore could help mitigate consumption compression during crises.** First, cross-economy analysis suggests that, in crises, consumption declines less for economies with higher income, such as Singapore. Second, in terms of demographics, consumption compression is greater in economies with a younger population; however, the compression is smaller in a faster-aging population as saving motives for retirement become less salient during a crisis. For Singapore's young and fast-aging population, staff analysis suggests that the net effect of demographics is to alleviate consumption compression during crises.

5. **Consumption compression can be further mitigated by policy support.** Consumption collapsed in 2020 despite sizable fiscal support, due to restrictions that limited spending opportunities and heightened uncertainties. The recovery in consumption is likely to be gradual. However, measures to support consumption, such as income subsidies or cash grants, may gain more traction as restrictions are eased and households feel more secure about their income prospects. Continued support for job creation in the recovery phase and a robust labor market overall will support the recovery in the near term and boost consumption level over the medium- to long-term.

Appendix II. Labor Market Policy Responses to the COVID-19 Crisis[1]

Singapore has deployed multiple programs to address the adverse impact of the COVID-19 health crisis on businesses and labor market conditions. In the beginning of the pandemic government measures concentrated on preserving jobs. At the later stage, measures provided support for employment generation and upskilling of workers. The programs have been largely tilted towards low-income residents and have resulted in an increase in employment among resident workers.

1. **Singapore's labor market is characterized by a low unemployment rate, a high share of non-resident workers, and reliance on active labor market policies.** Before the pandemic, the overall unemployment rate was stable and low for many years, a little above 2 percent. However, unemployment increased significantly during the pandemic; the overall rate of unemployment peaked at 3.5 percent in September 2020, surpassing the level observed during the global financial crisis. Overall, employment in the manufacturing sector declined by 37,800 in 2020, whereas construction and services sectors saw declines of 51,800 and 91,100 respectively. Non-resident workers have been more vulnerable to the pandemic than their resident counterparts: they faced a higher retrenchment rate. Self-employed people such as taxi and private hire car drivers, freelancers, vendors, and direct sellers have also been severely impacted by the pandemic. However, in terms of labor market outcomes during the crisis, Singapore still fares relatively well from a cross-country perspective.



2. **The government has deployed a comprehensive set of labor market measures to cushion the impact of the pandemic.** To help employers retain their resident employees, the government implemented a wage support program, mostly through the Jobs Support Scheme (JSS). With a total budget of S$30 bn (6.3 percent of GDP) in FY2020 and FY2021, the JSS is the largest labor market measure. The government has also provided an enhanced Wage Credit Scheme (WCS) to support wage increases. The workers who lost their job or income were initially supported through the Temporary Relief Fund and later through the COVID-19 Support Grant (CSG) and the COVID-19 Recovery Grant (CRG). The Courage Fund has provided support for lower-income households impacted by COVID-19. The Workfare Income Supplement (WIS) scheme has provided both cash grant and top-ups to retirement savings, in support of low-income workers. In addition, Progressive Wage Models, with a schedule of wage floors for specific sectors (cleaning, security, and landscape) have helped protect wages in these sectors. The Self-employed Persons (SEPs) Income Relief Scheme and Training Support Scheme have provided support to self-employed persons whose incomes have been affected by the pandemic. Besides, a waiver of the Foreign Workers Levy (FWL) and additional rebate payment have supported employers' adjustment of operations in a COVID-19 environment.

[1] Prepared by Abdul Mannan (APD). See Chapter 2 of *Selected Issues* for additional details.

The SGUnited Jobs and Skills (SGUJS) package was introduced in May 2020 to curate close to 100,000 jobs and skills opportunities, of which more than 40,000 were jobs, and the remaining were company-hosted traineeships and attachments as well as training opportunities. To encourage employers to expand local hiring, the government introduced the Jobs Growth Incentive (JGI) in August 2020 and set aside a total of S$6.2 billion (S$1 billion in FY2020 and S$5.2 billion in FY2021) for this program. The government increased JSS support between May 16, 2021 and June 13, 2021 and provided a new COVID-19 Recovery Grant (Temporary) payout between May 16, 2021 and June 30, 2021 for some sectors affected by the tightened social distancing measures with the move to Phase 2 (Heightened Alert).

3. **Singapore's comprehensive approach to labor market policies has proved effective, including during a major shock such as the COVID-19 pandemic.** In particular, the programs have helped keep the unemployment rate low and have provided appropriate support to most affected sectors and lower income people. As such, the programs have been well-targeted and progressive.

Table 1. Singapore: Summary of Labor Market Policy Measures During COVID-19

Support to	Support for	Supports and Duration
Employer	Wage Increase	**Enhanced Wage Credit Scheme (WCS)** (2019, 2020, and 2021)
	Job Retention	**Jobs Support Scheme (JSS)** (Oct. 2019 to Sept. 2021)
	Employers' adjustment of operations to COVID requirements	**Foreign Worker Levy (FWL) rebates and waivers** (April 2020 to Dec 2021)
Employee	Support in case of job/income loss	**COVID-19 Support Grant** (May 2020 to Dec 2020)
Self -employed	Additional Support for Self-employed	**SEP Income Relief Scheme (SIRS)** (April 2020 to Dec 2020)
		SEP Training Support Scheme (April 2020 to Dec 2020)
Both Employee and Self-employed	Support in case of job/income loss	**Temporary Relief Fund** (April 2020)
	Support in case of job/income loss	**COVID-19 Recovery Grant (CRG)** (Jan-Dec 2021)
	Support to low income people	**Enhanced Workfare Special Payment** (2020 and 2021)
	Support in case of COVID-19 Contraction	**Courage Fund** (Started at April 2020, end date not declared)
New Employment	Salaries for new hires co-paid	**Incentives for new hiring** (April-Aug 2020)
		Jobs Growth Incentive (JGI) (Sept 2020 to Sept 2021)
	Jobs, traineeships, attachments and skills training opportunities	**SGUnited Jobs and Skills Package** (May 2020 to Mar 2022)

Appendix III. COVID Pandemic Support Measures[1]

To mitigate the economic fallout from the COVID-19 pandemic, the authorities have responded with comprehensive support measures targeting households and corporates, spanning fiscal, monetary, and financial sector support.

A. Fiscal Measures in Response to the Pandemic

1. **The authorities have responded with a bold and comprehensive fiscal package in 2020 to cushion the impact of the pandemic**. The stimulus package, deployed through the initial budget, 3 supplementary budgets, and ministerial announcements, is estimated at S$97.3 billion (20.7 percent of GDP) and financed partly through a drawdown of government reserves. It comprised about 16 percent of GDP (S$75.3 billion) in above-the-line measures and capital set aside for loans (a below the line measure) of 4.7 percent of GDP (S$ 22 billion). Main measures in the stimulus package include:[2]

- ***Health care spending*** of S$13.8 billion (2.9 percent of GDP) to help contain the outbreak, including for COVID-19 testing, contact tracing, clinical management, vaccination and therapeutics, and isolation facilities.[3]

- ***Support for businesses*** amounts to an *estimated* S$51.5 billion (10.9 percent of GDP (excluding loan capital). The Jobs Support Scheme—wage subsidies—is the largest component of this support.[4] The supplementary budgets incorporated targeted support to low-wage workers and sector specific measures to support aviation, tourism, transportation, and the arts. Other measures include cash payouts, tax benefits and loan subsidies.

- ***Support to households*** amounts to an *estimated* S$10 billion (2.1 percent of GDP). This includes an upfront Solidarity payment of S$600 in cash to all adults in April 2020, with additional cash payouts in June of between S$300-$600 per person, plus S$300 for each parent of young children (S$5.8 billion or 1.2 percent of GDP). The supplementary budgets introduced measures to support jobseekers and unemployed, including a new COVID-19 Support Grant of up to S$800 per month for 6 months (through December 2020) for low and middle-income jobseekers. Other targeted transfers were included for low-income households and seniors.

- ***Loan capital*** of about S$22 billion (4.7 percent of GDP) was set aside to help businesses and individuals facing cash flow challenges with loan obligations.

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[1] Prepared by Tidiane Kinda and Dan Nyberg (APD).

[2] The appendix presents indicative estimates of the costs of the different measures as the supplementary budgets did not provide detailed cost figures.

[3] This includes measures for public health and clinical management.

[4] The JSS announced in 2020 has co-funded between 10 percent to 75 percent of a gross monthly wage paid to each local employee for a period of up to 17 months, covering wages of October 2019 to March 2021 (excluding January 2020). Sectors that are more severely affected by travel restrictions and safe distancing measures because of COVID-19 have received higher JSS support.

2. **In 2021, the authorities continue to provide near-term relief while laying out medium-term strategies**. The FY2021 budget includes a S$11 billion (2.2 percent of GDP) COVID-19 Resilience Package aimed at providing continued near-term public health response and relief. Main measures in the COVID-19 Resilience Package include (Table 1):

- ***Public health care measures*** for testing, contact tracing, vaccination, and safe reopening.
- ***Support for firms and workers***, including an extension of the *Jobs Support Scheme (JSS)* with a lower level of wage support, as the authorities shift from job retention to moving workers into growth areas. The JSS was extended by 6 months for Tier 1 sectors (aviation, aerospace, tourism), which will receive two supplemental payouts in September and December 2021. The JSS is extended by 3 months for Tier 2 sectors (retail, arts & culture, food services, built environment) with one additional payout in September 2021. To facilitate labor force reallocation to growth areas, the authorities increased funding to the SGUnited Jobs and Skills Package (inclusive of Jobs Growth Incentive[5]). Other support includes the *COVID-19 Recovery Grant* to continue support for jobless workers or those with significant income loss.
- ***Targeted support to impacted sectors***, including (i) cost assistance to the aviation sector, (ii) *SingapoRediscovers* vouchers for domestic tourism, *Driver Relief Fund* for land transport, and support for arts, culture, sports.

Composition of COVID-19 Packages in FY2020 and FY2021 Budgets

List of Measures	2020		2021	
	S$, billion	Percent of GDP	S$, billion	Percent of GDP
Emergency public health measures to fight COVID-19	13.8	2.9	4.8	1.0
(includes COVID-19 testing, clinical management, tracing, vaccination and therapeutics, isolation facilities)				
Support for Jobs, Workers, Businesses	73.5	15.6	5.8	1.1
Jobs Support Scheme	26.9	5.7	2.9	0.6
Enhanced Wage Credit Scheme (WCS)	1.1	0.2		0.0
SGUnited Jobs and Skills package (inclusive of the Jobs Growth Incentive)	1.0	0.2	1.5	0.3
Foreign Worker Levy Rebate	2.3	0.5		0.0
Property Tax Rebate	1.8	0.4		0.0
Rental Relief	1.8	0.4		0.0
Government Rental Waiver	0.7	0.1		0.0
Sector-specific support (e.g. Aviation, Land Transport, Construction)	3.2	0.7		0.0
Others (e.g. financing schemes, deferment of income tax payments) 1/	34.7	7.4		0.0
Support to Households	10.0	2.1	0.4	0.1
Care and Support Package (CSP) and Solidarity Payment	5.8	1.2		0.0
Solidarity Utilities Credit	0.1	0.0		0.0
Temporary Relief Fund	0.2	0.0		0.0
Self-Employed Person Income Relief Scheme (SIRS)	2.0	0.4		0.0
COVID-19 Support Grant/Recovery Grant	0.8	0.2	0.4	0.1
Others (e.g. Grants to CDCs, Solidarity Payment)	1.1	0.2		0.0
Total 2/	**97.3**	**20.7**	**11.0**	**2.2**

1/ This comprises $22 billion of loan capital.
2/ Contingencies funds, which were increased from S$3 billion to S$15 billion in FY2020, to cater for unexpected urgent cashflow needs are not included in the table.

[5] The Jobs Growth Incentive support employers to accelerate their hiring of local workers, to create good, long-term jobs for locals.

3. **The government announced additional measures in May 2021 to mitigate the economic impact of the return to Phase-2 (Heightened Alert).** The measures, announced on May 28, 2021 and financed through reallocation from development expenditure within the FY2021 budget, amounted to S$800 million (0.2 percent of GDP) to provide additional support to impacted workers, businesses, and individuals. These include enhanced support under JSS to selected sectors (food and beverage, retail, art, sport, and entertainment); additional cash payout to eligible individuals and workers (COVID-19 Recovery Grant-Temporary payout and additional payout to taxi and private hire car drivers), and rental support for qualifying tenants of commercial properties.

B. Financial Sector Support Measures to Individuals and SMEs

4. **MAS and the financial industry announced several packages to help individuals and SMEs with loan and insurance commitments.** The relief for individuals and SMEs under the Special Financial Relief Programme (SFRP) was announced on March 31, 2020 and included measures provided on an opt-in basis, as cashflow circumstances differ. The program allowed to:

- *Defer Repayment of Residential Property Loans.* Individuals with residential property loans could apply to their respective bank or finance company to defer either (i) principal payments or (ii) both principal and interest payments until December 31, 2020. Interest accrued only on the deferred principal amount; no interest was to be charged on the deferred interest payments. Lenders approved the request for deferment as long as the individual was not in arrears for more than 90 days as at April 6, 2020. Individuals did not need to demonstrate any impact from COVID-19 to obtain the deferment. Borrowers were not subject to TDSR when they apply to defer either their principal payment or both principal and interest payments for their residential mortgages. This relief applied to residential property purchase loans and mortgage equity withdrawals, including those under Debt Reduction Plans, and extended to both owner-occupied (Housing Development Board and private) and investment properties. Interest would accrue only on the deferred principal amount.

- Lower *Interest on Personal Unsecured Credit.* Individuals with unsecured credit facilities from banks or other credit card issuers could apply to their respective lenders to convert their outstanding balances to term loans at a reduced rate of interest, capped at 8 percent (compared to the 26 percent typically charged on credit cards). This option was available to all individuals who suffered a loss of 25 percent or more of their monthly income after February 1, 2020 and at risk of incurring substantial arrears until December 31, 2020.

- Defer *Premium Payments for Life and Health Insurance.* Individuals with life and health insurance policies could apply to their insurers to defer premium payments for up to six months while maintaining insurance coverage during this period.

- Apply for flexible *Instalment Plans for General Insurance.* Individuals and corporates, including SMEs, holding general insurance policies, such as for property and vehicles, could request an instalment payment plan while maintaining insurance protection.

- *Defer principal payments on SMEs' secured term loans* up to 31 December 2020, subject to lenders' assessment of the quality of the SMEs' security. SMEs could also extend the tenure of their loans by up to the corresponding principal deferment period. This relief was available to SMEs that continued to pay interest and were in good standing with their lenders.

5. **A second package, announced on April 30, 2020, broadened the support initiatives to a range of debt obligations, including student debt, motor vehicle loans, and commercial property.** Also, the second package loosened the Total Debt Servicing Ratio requirement for the refinancing of investment property loans.

6. **The extension of financial sector support was more targeted.** MAS and the financial industry collaborated and announced in October 2020 a series of additional measures under the Extended Support Scheme to help individuals and SMEs address continued cashflow difficulties (Appendix Table 1). The extended measures would allow some borrowers to defer part of their loan repayments temporarily. For instance, individual borrowers who are able to furnish proof of income impact would be able to make reduced monthly instalments pegged at 60 percent of the usual monthly instalments (from 100 percent under the previous measures) on their property loans for a period of up to nine months from take-up, though not beyond December 2021. SME borrowers could also apply to defer 80 percent (from 100 percent previously) of principal repayment for either three or six months (depending on the sector in which the applicant operated in, with more affected sectors given six months) from January 2021 onwards under the Extended Support Scheme.

7. **There was strong take-up for debt moratoriums.** Individual borrowers applied for moratoriums of approximately S$29 billion of property (mortgage) loans as of December 2020. The property loan amounts subject to moratorium constitute about 14.1 percent of total outstanding property loans. As of December 2020, more than 6,500 applications involving more than S$9.5 billion of SME loans were approved under the first round of measures. As of February 2021, more than 1,300 applications involving more than S$3.8 billion of SME loans were approved under the Extended Support Scheme.

C. Government Support Measures to Corporates and SMEs

8. **The Singaporean authorities have responded with various relief measures to facilitate credit supply to SMEs and mitigate the economic fallout from the crisis:**

- The government enhanced its risk share proportion and loan quantum for loans extended to corporates by FIs under the Enterprise Singapore (ESG) Temporary Bridging Loan Programme and SME Working Capital loan scheme (ESG schemes, see below and Appendix Table 2 for details).

- A new MAS SGD facility was introduced to complement the ESG schemes by providing a low-cost source of funding to FIs to facilitate lending to SMEs under the government loan schemes. For existing loans, SMEs and retail borrowers facing temporary cashflow pressures could apply for assistance under the SFRP for selected loan types from March 2020 to December 2020.

9. **Take-up of Government Loan Support to SMEs.** There was strong take-up for the various credit relief measures. As of Q3 2020, about S$14.5 billion of loans disbursed to some 18,000 firms, were approved under the ESG schemes. The take-up rate of loans under the ESG schemes was strong especially during the "Circuit Breaker" period from April to June but has since moderated from July.

Table 1. Singapore: Financial Sector Credit Support Measures

Special Financial Relief Programme Measures (In effect from April to December 2020)	• Individual borrowers can choose to defer repayment of principal or both principal and interest for residential property, renovation and education loans. • Individual borrowers can choose to defer payment of principal for commercial and industrial property loans. • Eligible individual borrowers can choose to convert their outstanding balances from revolving unsecured credit facilities to term loans with effective interest rate capped at 8 percent. • SME borrowers can choose to defer payment of principal for secured term loans.
Extended Support Scheme for Individuals (In effect from January 2021)	• Eligible individual borrowers can apply to make reduced instalments pegged at 60 percent of monthly instalment for property loans for up to nine months, but not beyond December 2021. • Loan tenure extension of property loans for up to three years granted on a case-by-case basis. • Loan tenure extension of up to three years on renovation and student loans. • Eligible individual borrowers can choose to convert their outstanding balances from revolving unsecured credit facilities to term loans with effective interest rate capped at 8 percent. (This measure was in effect prior to January 2021, and the application period was extended to June 30, 2021).
Extended Support Scheme for SMEs (In effect from January 2021)	Extended Support Scheme — Standardized • SME borrowers in more affected sectors (Tier 1 and 2) can apply to defer 80 percent of principal repayment for six months from January 1, 2021 to June 30, 2021. • SMEs in all other sectors can apply to defer 80 percent of principal repayment for three months from January 1, 2021 to March 31, 2021. • Tier 1 and Tier 2 sectors include aviation and aerospace, tourism, hospitality, conventions and exhibitions, built environment, licensed food shops and food stalls (including hawker stalls), qualifying retail outlets, arts and entertainment, land transport, and marine and offshore. Extended Support Scheme — Customized • The scheme facilitates customized restructuring assistance for SME borrowers with credit facilities across multiple lenders.

Table 2. Singapore – Government Loan Support Initiatives for SMEs

	Temporary Bridging Loan Programme (March 2020-March 31, 2021)	SME Working Capital (April 8-March 31, 2021)	SME Trade Loan (April 8-March 31, 2021)
Maximum Loan	S$5 million	S$1 million/borrower	S$10 million / borrower group
Eligibility	Companies must be registered and physically present in Singapore, with at least 30 percent local ownership.	Group revenue of S$100 mn or up to 200 employees. Companies must be registered and physically present in Singapore, with at least 30 percent local ownership.	Group revenue of S$500 mn. Companies must be registered and physically present in Singapore, with at least 30 percent local ownership.
Maximum Repayment Period	5 years	5 years	1 year
Risk Share	The Government will retain 90 percent risk share. Borrower is responsible to repay 100 percent of the loan amount. Standard recovery procedure will be followed before claim can be made against Enterprise Singapore for the unrecovered amount in proportion to risk-share.	Government risk-share increased to 90 percent (from 50 percent and 70 percent for young companies). Borrower is responsible to repay 100 percent of the loan amount. Standard recovery procedure will be followed before claim can be made against Enterprise Singapore for the unrecovered amount in proportion to risk-share.	Government risk-share increased to 90 percent. Borrower is responsible to repay 100 percent of the loan amount. Standard recovery procedure will be followed before claim can be made against Enterprise Singapore for the unrecovered amount in proportion to risk-share.
Interest rate	Capped at 5 percent p.a.	Subject to participating financial institutions assessment of risks involved.	Subject to participating financial institutions assessment of risks involved.
Extension and modification	Program extended by six months (from April 1 to September 2021). 70 percent government risk share (down from 90 percent previously). Maximum loan quantum of S$3 million per borrower (down from S$5 million previously).		

D. Support to the Financial Sector: Regulatory and Supervisory Measures

10. **MAS has adjusted selected regulatory requirements and supervisory programs to enable financial institutions (FIs) to focus on dealing with issues related to the COVID-19 pandemic:**

- ***Drawing on capital buffers.*** As banks in Singapore have healthy capital buffers, MAS has encouraged them to utilize their capital buffers as appropriate to support their lending activities, emphasizing that sustaining lending activities should take priority over discretionary distributions. The release of capital buffers should not be used to finance share buybacks during this period. Banks were allowed to recognize more of their regulatory loss allowance reserves as capital.[6] This relief will apply until September 30, 2021 and may be extended if necessary.

- ***Drawing on liquidity buffers.*** MAS has also reiterated that banks may utilize their substantial liquidity buffers as necessary to meet liquidity demands. The Net Stable Funding Ratio requirement was adjusted. The required stable funding factor for loans to non-financial corporates, retail customers and small business customers, that are maturing in less than six months, has been halved from 50 percent to 25 percent. The relief will apply until September 30, 2021 and may be extended if necessary.

[6] MAS has allowed the full recognition of regulatory loss allowance reserves (RLAR) as Tier 2 capital. RLAR forms part of banks' loss allowances, which were granted only limited recognition as Tier 2 capital prior to the relief.

- ***Setting accounting loan loss allowances.*** MAS has engaged FIs and accounting professionals on how accounting standard IFRS(I) 9 should be applied to determine the level of loan loss allowances required on impaired financial assets under the challenging circumstances resulting from the COVID-19 pandemic. Given the heightened uncertainty, MAS provided guidance to the FIs that they should consider the extraordinary measures taken by the government to bolster economic resilience in assessing COVID-19's impact on future economic conditions and the consequent level of accounting loan loss allowances required. Additionally, MAS explained that FIs were not expected to maintain higher accounting loan loss allowances solely because the borrowers have taken up the COVID-19 relief measures. Instead, FIs should assess the borrower's ability to make full repayment based on the revised loan terms as well as its creditworthiness in the long term.

11. **The insolvency framework in Singapore was temporarily amended to address economic distress during the COVID pandemic.** Part 3 of the COVID Temporary Measures Act (2020) – passed on April 7, 2020 – offered a temporary six-month relief to businesses and individuals who were affected by the COVID-19 pandemic. Measures included temporary modifications to raise the aggregate debt amount threshold and extend the minimum period for non-satisfaction of any statutory demand. For individuals, the Act raised the threshold for bankruptcy[7] from S$15,000 to S$60,000; and for businesses raised the threshold for insolvency[8] from S$10,000 to S$100,000. The Act also lengthened the statutory period for debtors to respond to a statutory demand from creditors to 6 months (instead of 21 days). These temporary revisions expired on October 19, 2020.

12. **The authorities have also simplified insolvency and restructuring procedures for micro and small companies.** A temporary Simplified Insolvency Programme (SIP) was announced by Singapore's Ministry of Law on October 5, 2020 and came into effect on January 29, 2021[9] for six months[10]. The program seeks to provide faster and lower-cost proceedings for those eligible [11] to either restructure their debts or wind up.

[7] Under the Bankruptcy Act and the Insolvency, Restructuring and Dissolution Act of 2018 ("IRDA")

[8] Under the Companies Act, IRDA and the Limited Liability Partnerships Act

[9] By way of an amendment to the IRDA which took effect on 29 January 2021
[10] Subject to extensions by the Minister of Law

[11] Micro and small companies are defined as companies with (a) an annual sales turnover which does not exceed S$10 million; (b) not more than 30 employees; (c) not more than 50 creditors; (d) liabilities (including contingent and prospective liabilities) which do not exceed S$2 million. For simplified winding up only, the value of realizable assets (not including any asset that is subject to a security arrangement) does not exceed S$50,000. To be eligible for the SIP, a company must also not be involved in any ongoing restructuring or winding up proceedings.

Appendix IV. External Sector Assessment

Overall Assessment: *The external position in 2020 was substantially stronger than what is consistent with fundamentals and desirable policies.* The assessment is subject to a wide range of uncertainty, reflecting Singapore's very open economy and status as a global trading and financial center.

Potential Policy Responses: A sizable fiscal policy response to the COVID-19 pandemic has helped reduce external imbalances in 2020, and expected execution of major infrastructure projects should contribute to further reduction of external imbalances in the near term. Over the medium term, Singapore's economy will be undergoing structural transformation in light of a rapidly aging population and its transition to a new digital economy, while facing challenges linked to climate change. Higher public investment addressing these issues, including spending on health care and investments in physical infrastructure and human capital, would help keep CA imbalances moderate over the medium term by lowering net public saving. Structural reforms are also necessary to improve productivity.

Foreign Asset and Liability Position and Trajectory	**Background.** The NIIP stood at 308 percent of GDP in 2020, up from 208 percent of GDP in 2019 as well as the average level of 212 percent of GDP in 2015-2019. Gross assets and liabilities are high, reflecting Singapore's status as a financial center. About half of foreign liabilities is in FDI, and about a quarter is in the form of currency and deposits. The CA surplus has been a main driver since the global financial crisis, but valuation effects were material in some years. CA and growth projections imply that the NIIP will rise over the medium term. The large positive NIIP in part reflects the accumulation of assets for old-age consumption, which is expected to be gradually unwound over the long term. **Assessment.** Large gross non-FDI liabilities (508 percent of GDP in 2020)—predominantly cross-border deposit taking by foreign bank branches—present some risks, but these are mitigated by large gross asset positions, banks' large short-term external assets, and the authorities' close monitoring of banks' liquidity risk profiles. Singapore has large official reserves and other official liquid assets.

2020 (% GDP)	NIIP: 307.8	Gross Assets: 1361.2	Debt. Assets: 617.0	Gross Liab.: 1053.4	Debt Liab.: 417.6

Current Account	**Background.** The CA surplus was 17.6 percent of GDP in 2020, up from 14.3 percent in 2019. This rise is led by a large decline in service imports, a narrower oil trade deficit, and a decrease in net payments of primary income related to the COVID-19 shock. The CA balance is slightly higher than the average of 16.6 percent since 2015 and significantly lower than the post-global-financial-crisis peak of 22.9 percent in 2010. Singapore's large CA balance reflects a strong goods balance and small surplus in the services balance that is partly offset by a deficit in the income account balance.[1] Structural factors and policies that boost savings, such as Singapore's status as a financial center, consecutive fiscal surpluses in most years, and the rapid pace of aging—combined with a mandatory defined-contribution pension program (whose assets were about 98.5 percent of GDP in 2020), as well as relatively high productivity—are the main drivers of Singapore's strong external position. The CA surplus is projected to narrow over the medium term on the back of increased infrastructure and social spending. In 2020, public saving decreased with a sizable fiscal expansion in response to the pandemic, while private saving increased. **Assessment.** Guided by the EBA framework, staff assesses the 2020 CA gap to be in the range of 1.2-7.2 percent of GDP.[2] The identified policy gaps narrowed significantly to close to zero in 2020 reflecting the sizable fiscal package and an increase in health care expenditure.

2020 (% GDP)	CA: 17.6	Cycl. Adj. CA: 16.9	EBA Norm: —	EBA Gap: —	COVID-19 Adj.: -1.8	Other Adj.: —	Staff Gap: 4.2

Real Exchange Rate	**Background.** The REER depreciated by 2.6 percent in 2020 reflecting the depreciation of the NEER by 1.2 percent. This followed a depreciation of the REER by 0.3 percent and an appreciation of the NEER by 2.4 percent, both cumulative, between 2017 and 2019. As of April 2021, the REER had appreciated by 0.2 percent relative to 2020 average. **Assessment.** Consistent with the staff CA gap, staff assesses the REER to be undervalued in the range of 2.5 to 14.5 percent, with a midpoint of 8.5 percent in 2020 (applying an estimated elasticity of 0.5).
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Singapore has an open capital account. As a trade and financial center in Asia, changes in market sentiment can affect Singapore significantly. Increased risk aversion in the region, for instance, may lead to inflows to Singapore given its status as a regional safe haven, whereas global stress may lead to outflows. The financial account balance reflects in part reinvestment abroad of income from official foreign assets, as well as sizable net inward FDI and smaller but more volatile net bank-related flows. In 2020, the capital and financial account switched to inflows of 4.2 percent of GDP from outflows of 16.5 percent in 2019 (outflows ranged from 10 to 18 percent in 2015–19). This reflected lower net outflows of portfolio investment led by resident banks switching from net outflow position in 2019 to a net inflow position in 2020, as well as "other investment" turning from net outflow to net inflow among domestic non-banks. **Assessment.** The unusual capital inflows in 2020 are likely to be transitory reflecting regional safe-haven flows and are likely to turn to outflows as the effect of pandemic subsides in the following years.
FX Intervention and Reserves Level	**Background.** With the NEER as the intermediate monetary policy target, intervention is undertaken to achieve inflation and output objectives. As a financial center, prudential motives call for a larger NIIP buffer. Official reserves held by the MAS reached US$362 billion (106.6 percent of GDP) in 2020. Aggregate data on foreign exchange intervention operations has been published since April 2020. **Assessment.** In addition to FX reserves held by the MAS, Singapore also has access to other official foreign assets managed by Temasek and GIC.[3] The current level of official external assets appears adequate, even after considering prudential motives, and there is no clear case for further accumulation for precautionary purposes.

[1] Singapore has a negative income balance despite its large positive NIIP position, reflecting lower rates of return on its foreign assets relative to returns on its foreign liabilities, possibly due to the fact that the composition of Singapore's assets is tilted toward safer assets with lower returns.

[2] Nonstandard factors make a quantitative assessment of Singapore's external position difficult and subject to significant uncertainty. Singapore is not included in the EBA sample because it is an outlier along several dimensions. One possibility, though with drawbacks, is to use EBA estimated coefficients and apply them to Singapore. Following that approach the CA norm is estimated to be about 14.8 percent of GDP in 2020 (including the multilateral consistency adjustment). However, the EBA gap is understated for two reasons and adjustments are needed. First, a downward adjustment of 1.4 percentage points is made to the EBA's implied contribution of public health expenditures to the norm to account for the fact that Singapore's health expenditure is appropriate given its high efficiency, even though its desirable, as well as current, public health expenditure is significantly lower than other EBA countries. Second, a downward adjustment of 2.5 percentage points to the norm is made to better account for the effect of different NFA components on the CA. Adjusting for these factors, the staff-estimated CA gap is about 4.2 percent of GDP, to which the fiscal policy gap contributes about 0.5 percent of GDP and public health spending and the credit gap both about -0.2 percent of GDP.

[3] The reserves-to-GDP ratio is also larger than in most other financial centers, but this may reflect in part that most other financial centers are in reserve-currency countries or currency unions. External assets managed by the government's investment corporation and wealth fund (GIC and Temasek) amount to at least 70 percent of GDP.

Appendix V. Risk Assessment Matrix 1/

	Sources of Risk	Likelihood and Transmission	Expected Impact of Risk	Recommended Policy Response
External/Conjunctural	**Unexpected shifts in the COVID-19 pandemic**	**Medium** **Asynchronous progress**. Limited access to, and longer-than-expected deployment of, vaccines in some countries—combined with dwindling policy space—prompt a reassessment of their growth prospects. **Prolonged pandemic.** The disease proves harder to eradicate (e.g., due to new virus strains, short effectiveness of vaccines, or widespread unwillingness to take them), requiring costly containment efforts and prompting persistent behavioral changes rendering many activities unviable. **Faster containment.** Pandemic is contained faster than expected due to the rapid production and distribution of vaccines, boosting confidence and economic activity.	**High**	Fiscal policy remains the first line of defense and there is substantial space should short-term risks materialize. There is also space to ease monetary policy should inflation further decline. On the macro-financial side, the response would include continued but temporary and targeted support, while maintaining prudent risks assessments, and continued enhancements to the insolvency regime.
External/Conjunctural	**Sharp rise in global risk premia exposes financial and fiscal vulnerabilities**	**Medium** A reassessment of market fundamentals (e.g., in response to adverse COVID-19 developments) triggers a widespread risk-off event. Risk asset prices fall sharply and volatility spikes, leading to significant losses in major non-bank financial institutions. Higher risk premia generate financing difficulties for leveraged firms (including those operating in unviable activities) and households, and a wave of bankruptcies erode banks' capital buffers. Financing difficulties extend to sovereigns with excessive public debt, leading to cascading debt defaults.	**Medium to High**	Policy responses include maintaining prudent risk management practices and adequate liquidity and capital buffers, as recommended in the 2019 FSSA. Maintain close links with home country supervisors. Recalibrate macro-prudential policies to mitigate financial sector stress. In an extreme event, the strong official reserve position could provide an additional cushion. Maintain swap lines with other central banks as a complement.
External/Structural	**Higher frequency and severity of natural disasters related to climate change**	**Medium** Increasing frequency of natural disasters cause severe economic damage to smaller economies susceptible to disruptions and accelerate emigration from these economies (medium probability). A sequence of severe events in large economies reduces global GDP and prompts a recalculation of risk and growth prospects. Disasters hitting key infrastructure or disrupting trade raise commodity price levels and volatility (low probability).	**Low to Medium**	Implement climate change mitigation strategies. Enhance preparedness, collect data and collaboration among agencies engaged in mitigating climate change.
External/Structural	**Accelerating de-globalization**	**Medium** Despite renewed efforts to reach multilateral solutions to existing tensions, geopolitical competition leads to further fragmentation. Reshoring and less trade reduce potential growth.	**High**	Continue to implement structural reforms to transform Singapore into a knowledge-based innovation-driven economy. Should domestic demand weaken substantially, use temporary and targeted fiscal stimulus, loosen monetary policy, including re-centering the NEER band if the shock is large, and recalibrate macro-prudential policy as necessary, while maintaining financial stability.
External/Structural	**Oversupply and volatility in the oil market**	**Medium** Higher supply (due to, e.g., OPEC+ disagreements) and lower demand (including due to a slower global recovery from COVID-19) lead to renewed weakness in energy prices. Uncertainty about production cuts, prospects for the shale gas industry, and the pace of demand recovery lead to bouts of volatility.	**Medium**	As a trading hub and center for oil services, Singapore experienced higher NPLs in exposed sectors when oil prices declined in 2014-16. Policy responses include maintaining adequate capitalization, risk management and liquidity buffers.
External/Structural	**Cyber-attacks**	Cyber-attacks on critical infrastructure, institutions, and financial systems trigger systemic financial instability or widespread disruptions in socio-economic activities and remote work arrangements.	**Medium t**	Continue to assess the adequacy of IT risk management practices and prepare a contingency plan. Coordinate with global financial regulators. Should disruptions take place, provide temporary and targeted emergency liquidity support and/or fiscal support to ensure a functional banking system.
Domestic	**Disorderly correction in property prices**	**Low** Decline in collateral values and wealth effects could trigger a fall in economic activity and bank lending with adverse feedback effects on household indebtedness and property prices	**Medium**	Adjust macro-prudential policies while safeguarding financial stability. Use targeted assistance measures to households whose debt servicing capacity is adversely affected.
Domestic	**Low growth in productivity and investment**	**Medium** Sharp increase in unit labor costs and loss of competitiveness. Tighter immigration policy may reduce competitiveness and profitability and provide disincentives to invest in some sectors. Higher than expected transitional costs such as high frictional unemployment can have long-term effects on growth.	**Medium**	Adjust foreign worker policies to relax tightness in labor markets. Provide targeted and temporary fiscal stimulus in areas of education and skills training to help reduce frictional unemployment.

1/ The Risk Assessment Matrix (RAM) shows events that could materially alter IMF staff's baseline path (the scenario most likely to materialize in the view of the mission). The relative likelihood is staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff's views on the source of risks and overall level of concern as of the time of discussions with the authorities. Nonmutually exclusive risks may interact and materialize jointly.

Appendix VI. Public Debt Sustainability Analysis

Singapore's public debt is sustainable and large public financial assets are important risk mitigating factors. The unprecedently large fiscal support in response to the COVID-19 pandemic and associated widening of the fiscal deficit did not lead to a substantial accumulation of debt as the fiscal measures were financed through a drawdown of public reserves.

1. **Background.** Singapore is a low scrutiny country in the debt sustainability analysis (DSA) framework for market access countries. Public debt stood at about 129 percent of GDP as of end of FY2019. All debt is held domestically and issued in local currency.

2. **Debt accumulation in Singapore is unrelated to deficit financing.** Fiscal policy in Singapore is anchored by a fiscal rule enshrined in the Constitution. The rule mandates a balanced budget over the 5-year political cycle. Strong compliance with the rule has led to sustained fiscal surpluses and the buildup of large net assets.[1] At present, the issuance of government debt securities is unrelated to the Government's fiscal needs. The Singapore Government issues domestic, local-currency debt securities to deepen the domestic debt market, to meet the investment needs of the Central Provident Fund (CPF),[2] and to provide individual investors with a long-term saving option that offers safe returns.[3] Following the Government Securities Act, together with the Constitutional balanced budget rule, borrowing proceeds are not used to fund government expenditures, therefore all the proceeds from the Government's borrowing are invested.

3. **Macro-fiscal assumptions.** Central government net lending/borrowing shifted from a surplus of 1.7 percent of GDP in FY2019 to a deficit of 10.4 percent of GDP in FY2020, reflecting unprecedented fiscal measures to cushion the economic fallout from the pandemic. Under staff's baseline projections, it is expected to gradually return to a balanced budget as the economy recovers. Staff's baseline currently does not include the proposal of raising the Goods and Services Tax (GST) rate between 2022 and 2025.

[1] The Government's gross assets are mainly managed by GIC Private Limited (total amount is undisclosed, but well over US$100 billion or 21 percent of GDP). The government also places deposits with the MAS (8.7 percent of GDP as of March 31, 2020). In addition, the Government is the sole equity shareholder of Temasek Holdings. Temasek's portfolio was S$306 billion as of March 31, 2020 (65 percent of GDP).

[2] The Central Provident Fund (CPF) is a comprehensive social security system that enables working Singapore Citizens and Permanent Residents to set aside funds for retirement. It also addresses healthcare, home ownership, family protection, and asset enhancement. The CPF is financed by mandatory payroll contributions from employers (17 percent) and employees (20 percent). Over the last 5 years, contributions to CPF have amounted to 7.8 percent of GDP and withdrawals to 4.2 percent, on average. The CPF balance as of March 31, 2020 was about 84 percent of GDP.

[3] The government issues three types of debt securities: (1) Singapore Government Securities (SGS), marketable debt instruments issued primarily to provide a robust government yield curve for the pricing of private debt securities and to foster the growth of an active secondary market to enable efficient risk management; (2) Special Singapore Government Securities (SSGS), non-marketable bonds primarily issued to the CPF Board with a guaranteed floor on interest rates; and (3) Singapore Saving Bonds (SSB), non-tradable securities introduced in 2015 where principal and interest payments interest (linked to long-term SGS rates) are guaranteed by the government.

4. **Data coverage.** Consistent with the data on government debt reported by the authorities, the fiscal assumptions in this DSA are based on the central government debt.

5. **Debt level is projected to moderate following a spike in 2020.** Debt-to-GDP ratio increased to 155 percent of GDP in 2020, mainly reflecting the interest-growth differential as the economy contracted. The debt level is projected to moderate to 138 percent of GDP in 2021, alongside the economic recovery. The large fiscal support during the pandemic was financed through a drawdown of public reserves. Over the medium-term, the debt-to-GDP ratio is projected to increase gradually to about 144 percent of GDP by 2026, reflecting the modest rise in investment needs by the CPF as employment growth slows in line with population aging. Gross financing needs (GFN) are expected to average about 22 percent of GDP per annum in the medium term.

6. **A high level of financial assets mitigates the risks associated with public debt.** The projected GFN, mostly driven by the CPF's investment needs, are expected to be mirrored one-for-one with an accumulation of assets by the government. Moreover, under the Net Investment Returns (NIR) framework, only up to 50 percent of the long-term expected returns earned on net assets (i.e. assets net of interest costs and liabilities) can be used as budget revenue.[4] This contributes to asset buildup and helps deliver a sustainable revenue stream.

[4] The Net Investment Returns Contribution (NIRC) to the budget comprises up to 50 percent of the expected long-term real returns on the net assets invested by GIC, MAS and Temasek, and up to 50 percent of the investment income from the remaining assets.

Figure 1. Singapore Public Sector Debt Sustainability Analysis (DSA) – Baseline Scenario

(in percent of GDP unless otherwise indicated)

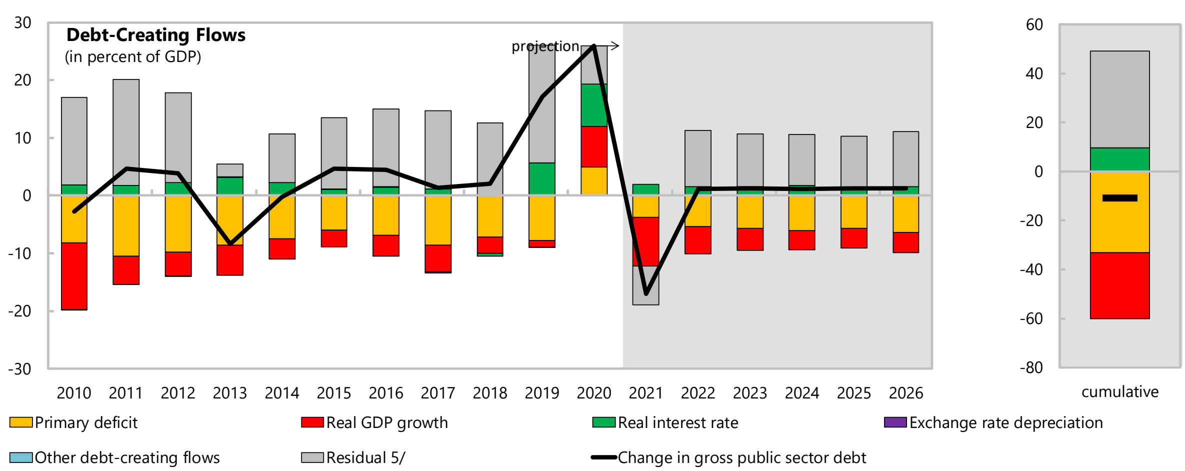
Debt, Economic and Market Indicators [1/]

	Actual			Projections					
	2010-2018 [2/]	2019	2020	2021	2022	2023	2024	2025	2026
Nominal gross public debt	105.1	129.0	154.9	137.9	139.0	140.2	141.4	142.6	143.9
Public gross financing needs	9.0	14.2	29.2	23.3	20.7	20.8	21.0	22.1	21.8
Real GDP growth (in percent)	5.0	1.0	-5.1	5.8	3.6	2.8	2.4	2.5	2.5
Inflation (GDP deflator, in percent)	1.3	-1.5	-2.5	1.4	1.4	1.5	1.5	1.9	1.9
Nominal GDP growth (in percent)	6.3	-0.6	-7.5	7.3	5.0	4.4	4.0	4.5	4.5
Effective interest rate (in percent) [4/]	3.0	3.5	2.8	2.8	2.6	2.7	2.8	3.0	3.1

As of June 03, 2021		
Sovereign Spreads		
EMBIG (bp) 3/		3
5Y CDS (bp)		N/A
Ratings	Foreign	Local
Moody's	Aaa	Aaa
S&Ps	AAA	AAA
Fitch	AAA	AAA

Contribution to Changes in Public Debt

	Actual			Projections							
	2010-2018	2019	2020	2021	2022	2023	2024	2025	2026	cumulative	debt-stabilizing primary balance [11/]
Change in gross public sector debt	1.1	17.1	25.9	-17.0	1.2	1.2	1.2	1.2	1.2	-11.0	
Identified debt-creating flows	-11.3	-3.2	19.3	-10.3	-8.6	-8.0	-7.7	-7.7	-8.3	-50.5	
Primary deficit [5/]	-8.1	-7.8	4.9	-3.8	-5.4	-5.7	-6.1	-5.6	-6.4	-33.1	...
Revenue and grants	17.5	18.0	17.6	19.0	18.5	18.0	17.6	17.4	17.3	107.8	
Primary (noninterest) expenditure	9.3	10.2	22.5	15.3	13.1	12.3	11.5	11.8	10.8	74.7	
Automatic debt dynamics [6/]	-3.2	4.6	14.4	-6.5	-3.2	-2.2	-1.5	-2.0	-1.9	-17.4	
Interest rate/growth differential [7/]	-3.2	4.6	14.4	-6.5	-3.2	-2.2	-1.5	-2.0	-1.9	-17.4	
Of which: real interest rate	1.6	5.7	7.3	1.9	1.5	1.5	1.7	1.4	1.5	9.6	
Of which: real GDP growth	-4.8	-1.1	7.1	-8.4	-4.7	-3.8	-3.3	-3.4	-3.4	-27.0	
Exchange rate depreciation [8/]	0.0	0.0	0.0	...	...	...	...	...	...	...	
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes [9/ 10/]	12.4	20.3	6.6	-6.7	9.7	9.1	8.9	8.9	9.6	39.5	



Source: IMF staff.

1/ Public sector is defined as central government.

2/ Based on available data.

3/ Long-term bond spread over U.S. bonds.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Primary balance is defined here as net lending/borrowing minus interest payments.

6/ Derived as [(r - π(1+g) - g + ae(1+r)]/(1+g+π+gπ)) times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

7/ The real interest rate contribution is derived from the numerator in footnote 5 as r - π (1+g) and the real growth contribution as -g.

8/ The exchange rate contribution is derived from the numerator in footnote 5 as ae(1+r).

9/ Includes debt accumulation unrelated to government's fiscal needs. Domestic debt securities are issued to meet investment needs of Central Provident Fund, to deepen domestic debt market, and provide long-term savings option.

10/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

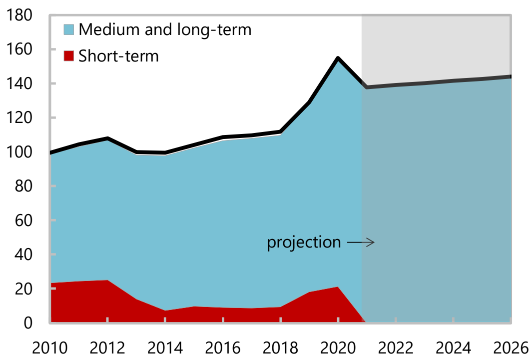
11/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Figure 2. Singapore Public DSA Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

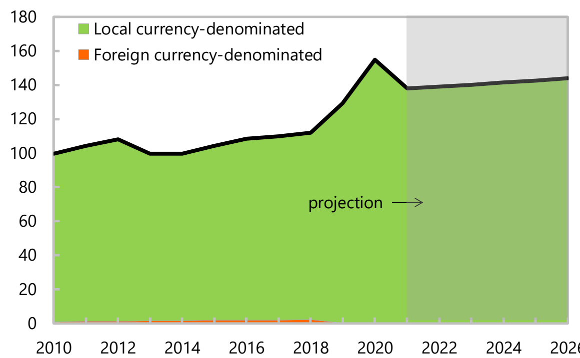
By Maturity

(in percent of GDP)



By Currency

(in percent of GDP)

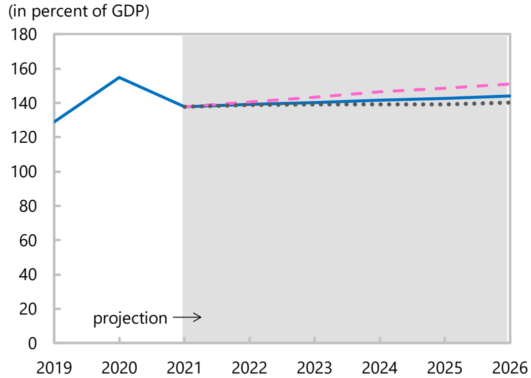


Alternative Scenarios

Baseline   Historical   Constant Primary Balance

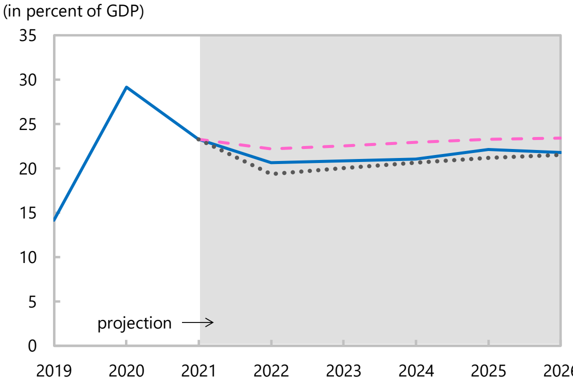
Gross Nominal Public Debt

(in percent of GDP)



Public Gross Financing Needs

(in percent of GDP)



Underlying Assumptions

(in percent)

Baseline Scenario	2021	2022	2023	2024	2025	2026
Real GDP growth	5.8	3.6	2.8	2.4	2.5	2.5
Inflation	1.4	1.4	1.5	1.5	1.9	1.9
Primary Balance	3.8	5.4	5.7	6.1	5.6	6.4
Effective interest rate	2.8	2.6	2.7	2.8	3.0	3.1
Constant Primary Balance Scenario						
Real GDP growth	5.8	3.6	2.8	2.4	2.5	2.5
Inflation	1.4	1.4	1.5	1.5	1.9	1.9
Primary Balance	3.8	3.8	3.8	3.8	3.8	3.8
Effective interest rate	2.8	2.6	2.7	2.8	2.9	3.0

Historical Scenario	2021	2022	2023	2024	2025	2026
Real GDP growth	5.8	2.8	2.8	2.8	2.8	2.8
Inflation	1.4	1.4	1.5	1.5	1.9	1.9
Primary Balance	3.8	6.8	6.8	6.8	6.8	6.8
Effective interest rate	2.8	2.6	3.0	3.3	3.7	4.0

Source: IMF staff.

Appendix VII. Status of Main Recommendations of the 2019 FSSA

No.	Recommendations of 2019 FSSA	Time*	Authorities' Status Update (as of April 29, 2021)
1.	The MAS should strengthen U.S. dollar liquidity among D-SIBs.	MT	**Ongoing.** MAS has continued to engage banks to strengthen their foreign currency liquidity management. Following a review in 2019/20, MAS made bank-specific recommendations and shared industry sound practices, for example methodologies for estimating FX swap capacity. When the USD Commercial Paper (CP) market experienced funding tightness in Q2 2020, prudent risk management practices like laddering CP maturities helped banks ensure sufficient liquidity during that period. For the DSIBs, the proportion of more stable USD funding sources (e.g., non-bank deposits and debt issuance) has increased from 67 percent in December 2018 to 72 percent in March 2021 reflecting DSIBs' continuous efforts to garner more non-bank deposits. MAS continues to emphasize the importance of growing a stable USD funding base and monitors the banks' USD funding profile through regular engagements, as well as the tracking of additional USD liquidity indicators.
2.	Establish a core staff within the MAS Resolution Unit (RSU) dedicated to resolution work and over time, transfer resolution planning to the RSU.	I	**Not implemented**. After careful consideration, the authorities will not implement this recommendation. RSU comprises staff from the policy, legal and supervisory departments who have operational responsibilities within their department as well as RSU. This structure allows MAS to leverage on the deep expertise and institutional knowledge of staff across departments when undertaking resolution work. MAS continues to keep the RSU adequately staffed and trained.
3.	Expand the scope of bail-in to include senior unsecured debt securities.	MT	**Not implemented.** After careful consideration, the authorities will not implement this recommendation. The regime needs to be seen in the context of existing high regulatory standards as the first line of defense, such as Singapore's capital requirements that are two percentage points higher than the Basel capital standards, as well as close and intensive supervisory oversight. The existing design reflects a balanced trade-off between having broader bail-in scope which would increase the loss-absorbing capacity of a bank, versus the higher impact of possible contagion to the financial system and balance sheet of households. Given that the bail-in tool is relatively untested, MAS' preference is to have a narrower scope (i.e. confined to subordinated unsecured debt securities and equities).
4.	Continue to develop guidelines and playbooks for the new resolution tools. Staff should be trained, and processes tested.	I	**Ongoing.** To enhance operational readiness, MAS: • Conducted an ***internal crisis simulation*** exercise in May 2019, where the failure of a D-SIB was simulated. The objective of the exercise was to test procedural familiarity and role clarity within MAS. • Updated the "***Handbook on Management of Distressed Banks***" ("Handbook") in 2020 to clarify regulatory requirements in liquidity stress scenarios. • Organized ***two runs of training*** (October 2019 and February 2020) conducted by an external consultant for staff, which covered the areas of choice of resolution strategy, strategy execution and resolvability assessment. MAS will continue to update guidelines and playbooks for resolution tools developed and reflect the latest policy developments. The "Handbook" and "Guidance on Resolution Tools"[1] will be further updated once progress has been made in the following areas, with the aim to complete in 2021: • Valuation – Study issues around the use of independent valuers to perform valuation in resolution, and work with potential valuers to develop the valuation approach[2] for D-SIBs. • Resolution Fund Trustee and Bank Holding Company – Consider the possible set up of a bank holding company to hold the distressed bank's assets, as well as a trustee to administer the resolution fund in the event of a resolution. MAS is preparing preliminary proposals and consulting the relevant stakeholders. • Bail-in execution – Develop exchange mechanics based on FSB's practices paper on bail-in execution.
5.	The MAS should formalize and clarify that it may require pre-notification of material outsourcing arrangements where the MAS is not satisfied that a bank has managed its outsourcing risk adequately.	MT	**Ongoing.** MAS plans to issue the revised Outsourcing Guidelines in the second half of 2021 which will formalize and clarify the expectation that MAS may require pre-notification of material outsourcing arrangements where MAS is not satisfied that a bank has managed its outsourcing risk adequately.

No.	Recommendations of 2019 FSSA	Time*	Authorities' Status Update (as of April 29, 2021)
6.	Devote more resources to the oversight and supervision of the payments systems.	NT	**Completed.** From 2019, MAS allocated an additional 40 percent of dedicated resources to the oversight and supervision of payment systems. In addition, the Payments and Infrastructure Division has expanded to become the Payments Department in 2020, in charge of supervising both payment services and payment systems.
7.	Enhance the cyber resiliency of the central bank and MEPS+ by: (i) clarifying the role of Chief Cyber Security Officer; and (ii) continuing to strengthen its cybersecurity resiliency.	I	(i) **Completed.** The role of the Chief Cyber Security Officer (CCSO) has been clarified. The CCSO will now assume the role of an independent second line of defense to challenge MAS Information Technology Department / Data & Technology Architecture Department on matters relating to MAS' technology risk and cyber resilience. A new CCSO office that is independent from the FI technology risk supervisory divisions has been set up to assist the CCSO to perform the independent assurance role. (ii) **Ongoing.** MAS has completed various cybersecurity initiatives such as Netflow, Database Activity Monitoring and Endpoint Detection & Response to enhance the protection of MAS' critical systems. In addition, MAS has embarked on a cybersecurity transformation roadmap to strengthen its cybersecurity resiliency on an ongoing basis. This would include implementing new measures (e.g. Data Loss Prevention, User Behavioral Analytics).
8.	Develop a cyber network map that takes into account both financial linkages and Information and Communications Technology connections and use it for cyber risk surveillance.	MT	**Completed.** MAS has mapped a snapshot of the cyber interconnections of financial institutions (FIs) in Singapore, taking into account the financial importance and linkages between each entity. The cyber map integrates the following information: • Cyber interconnections of key financial institutions spanning banks, insurers, payment service providers, capital market services licensees and financial market infrastructure providers, including connections to other key financial institutions and to third-party service providers; and • Each entity's relative financial importance, through a financial measure of the potential financial impact to the banking system if an entity fails due to a cyber incident, which is used to prioritize between nodes. The map is used to: (i) Identify key nodes to inform and prioritize cyber risk surveillance efforts; (ii). engage FIs on outsourcing, third-party and supply chain risk management practices for key service providers; and (iii) reach out to fellow regulators on means to engage key service providers that are common to many FIs globally. For example, MAS has been engaging FSB to address concentration risks posed by major cloud service providers such as Amazon, Google and Microsoft by proposing the setting up of a Cloud Oversight Forum formed by global financial regulators.

* "I-Immediate" is within one year; "NT-near-term" is 1–3 years; "MT-medium-term" is 3–5 years.
Source: Fund staff and the authorities' self-assessment.

[1] The Handbook provides a reference guide to MAS supervisors in dealing with a distressed bank (which includes a bank that is showing signs of distress and not just one whose viability is threatened). The approach to dealing with a distressed bank is underpinned by MAS' Crisis Management Framework for Banking, which defines four stages (green, yellow, orange or red) corresponding to the financial condition of a bank. The Handbook sets out the possible corrective actions that supervisors could take and guidance on for example, the type of information to gather from the distressed bank, the required monitoring and surveillance of the bank etc. As the distressed bank becomes non-viable, there is a need to consider taking resolution actions to resolve the non-viable bank. Supervisors and the RSU can then refer to the Guidance on Resolution Tools, which sets out the considerations and operational steps for the use of the different resolution tools, actions, and powers available to MAS.

[2] The valuation approach that MAS is developing would entail setting out (1) capabilities that banks should possess in terms of MIS and technological infrastructure, to support the timely provision of valuation data; and (2) expectations on the valuation models and methodologies to be adopted by banks, that is consistent with their resolution strategy.

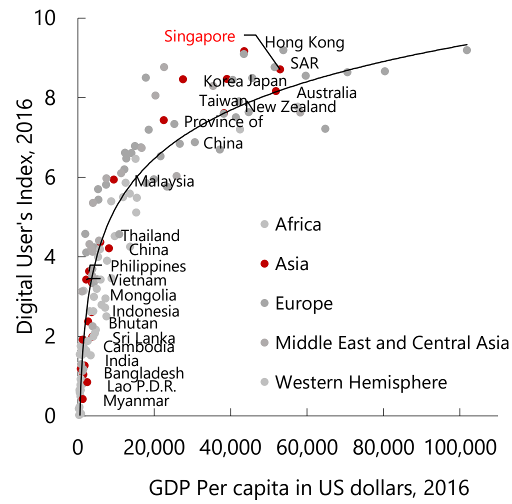
Appendix VIII. The Digital Economy: A Potential New Engine for Productivity Growth[1]

The COVID-19 pandemic has accelerated the digital revolution. Singapore has scope for a further sizeable expansion of e-commerce and research and development (R&D), which could support higher productivity growth and accelerate economic transformation.

1. **Singapore is at the forefront of digital usage**. The digital user's index, which captures various aspects of mobile and internet usage, highlights Singapore's high digital usage compared to other Asian countries and among peer advanced economies. Singapore has also become one of the top global users of industrial robots, with its robot density increasing from about 1 operating robot per 1,000 employees in 2008 to 45 operating robots per 1,000 employees in 2018.

GDP per Capita and Digital Usage

(Index 0–10)



Sources: IMF,World Economic Outlook; World Economic Forum; and IMF staff calculations.

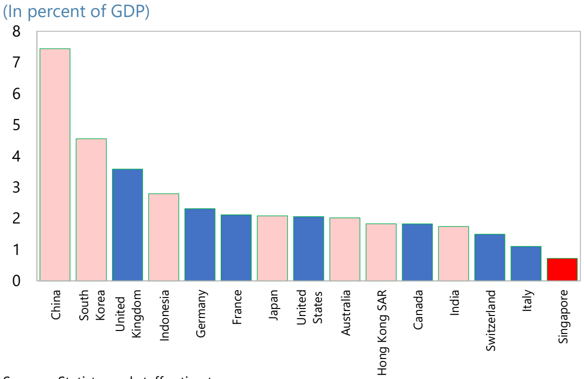
2. **Singapore still has scope to expand e-commerce and R&D, two key elements of digitalization**. From about 0.3 percent of GDP in 2017, e-commerce sales more than doubled to about 0.7 percent of GDP in 2020. Boosted by social distancing during the pandemic, e-sales surged by 32 percent in 2020, one of the fastest growth rates among peers in Asia and advanced economies. Despite the rapid growth, e-commerce in Singapore remained under 1 percent of GDP in 2020, well-below the level in peer economies. Singapore's share of "triadic" patent families, that is all patent applications filed in Japan, Europe, and the United States, is low compared to peers. Consistent with low patent filling, Singapore's R&D expenditure increased only modestly in recent decades, contrasting with the rapid growth and higher spending levels in R&D observed in many economies such as Korea, Switzerland, and Taiwan Province of China between 2000 and 2018.

3. **Boosting e-commerce and R&D would support productivity growth, the nascent recovery, and transformation towards a smarter economy.** A sector-level cross-country empirical analysis covering advanced economies, including Singapore, shows that a larger share of e-commerce to GDP, higher business R&D spending, or a higher robot density are associated higher labor productivity growth. As such, further digitalization of commerce and greater innovation, two areas where Singapore has room for expansion, have the potential to boost aggregate productivity growth and presents an opportunity to lift medium-term growth prospects.

[1] Prepared by Tidiane Kinda (APD), with research assistance from Kaustubh Chahande (APD). See Chapter 3 of *Selected Issues* for additional details.

E-sales Across Selected Economies, 2020

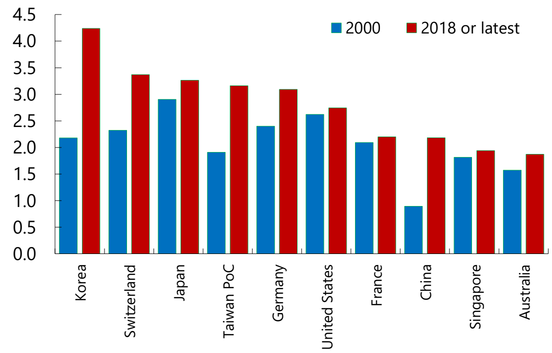
(In percent of GDP)



Sources: Statista; and staff estimates.

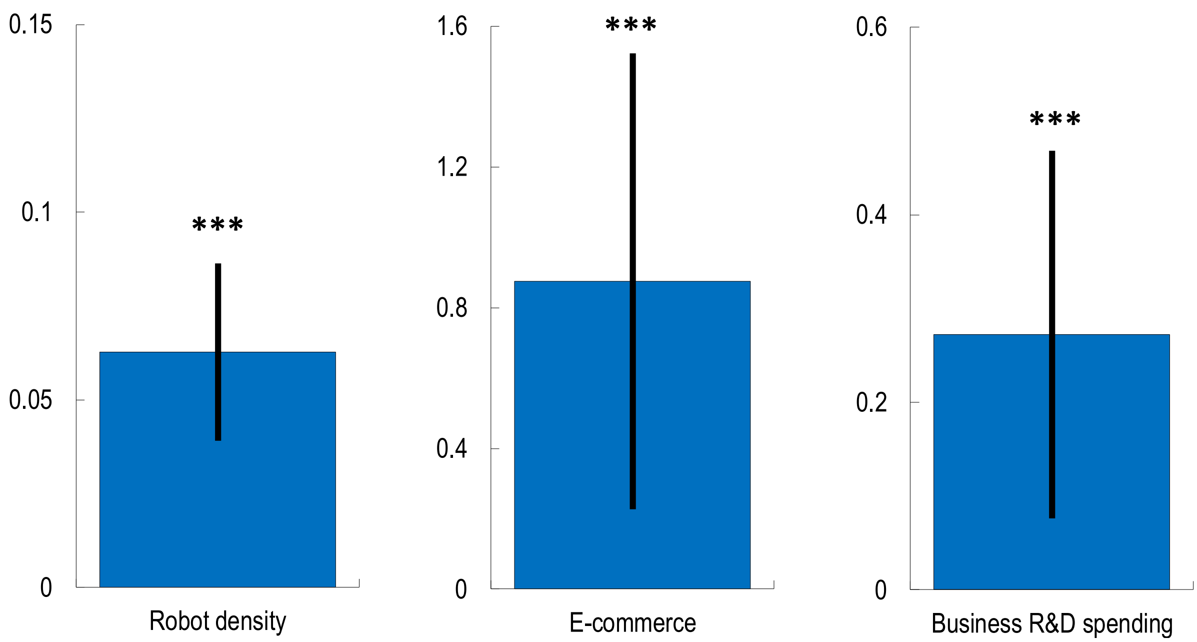
R&D Expenditure

(Percent of GDP)



Sources: World Bank; OECD Statistics; and IMF staff calculations.

Estimation Results: Digitalization, Innovation, and Labor Productivity Growth 1/



Source: Author's estimates.

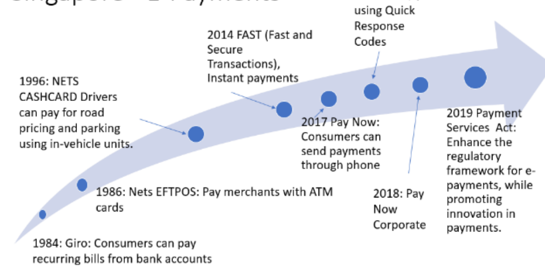
1/ These figures illustrate coefficients and confidence intervals from three sector-level cross-country estimations of the potential effect of digitalization and innovation on labor productivity growth controlling for sectoral inward FDI, openness to trade, and cross country-industry and time fixed effects. The error bars refer to the 95 percent confidence intervals around the estimated coefficients. ** p<0.05; *** p<0.01.

Appendix IX. E-Payments During the COVID-19 Pandemic and Beyond[1]

The use of e-payments in Singapore has continued to grow strongly during the COVID-19 pandemic, reflecting the ease of use and convenience during movement restrictions. Despite the increased use of e-payments, however, cash use remains relatively high and entrenched. There is scope to build a financially inclusive payments infrastructure, while ensuring data privacy, competition, and innovation.

1. **The infrastructure for e-payments in Singapore has developed over time**. The use of e-payments has accelerated over the past five years. The Fast and Secure Transfers (FAST) instant payment was introduced in 2014 enabling real-time electronic funds transfer in Singapore dollars. PayNow – a peer-to-peer transfer service running on top the FAST system – was introduced in 2017 and enables instant digital payments between accounts using mobile numbers, national identification numbers, or a unique entity number.

Singapore - E-Payments

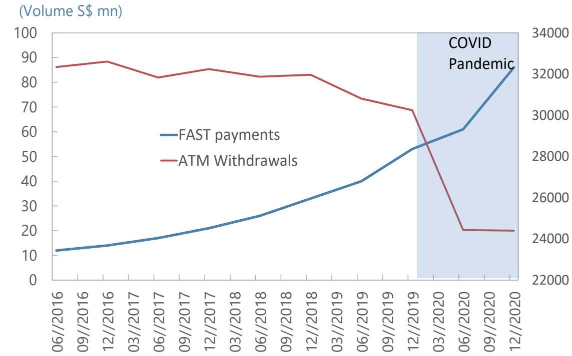


Source: MAS

2. **The use of real-time e-payments increased sharply during the pandemic, while ATM withdrawals declined.** Despite the economic contraction in 2020, the growth rate of FAST e-payments increased by 60 percent. At the same time, the volume of cash withdrawals per month in Singapore has fallen sharply owing to movement restrictions.

Singapore - FAST Payments and ATM Withdrawals

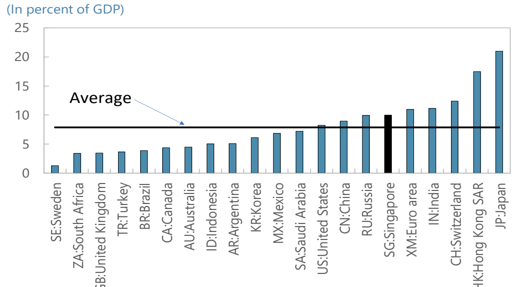
(Volume S$ mn)



3. **Despite the recent growth in e-payments, cash use remains entrenched in Singapore** (chart). An empirical analysis to explain cash in circulation in a sample of advanced and emerging market economies shows that the average age of the population is positively related to the demand for cash and GDP per capita is a significant explanatory variable. Measures of digitalization, the interest rate (the cost of holding cash) and macroeconomic uncertainty are not significant explanatory variables.

Cash in Circulation, 2019

(In percent of GDP)



Sources: BIS CPMI

4. **The government aims to increase the use of e-payments.** To further enhance the e-payments infrastructure, policies include: (i) building an inclusive e-payment infrastructure to ensure vulnerable segments of the population have access to e-payments services; (ii) introducing common standards to provide interoperability and competition; and (iii) collaboration among policy makers, both domestically and internationally.

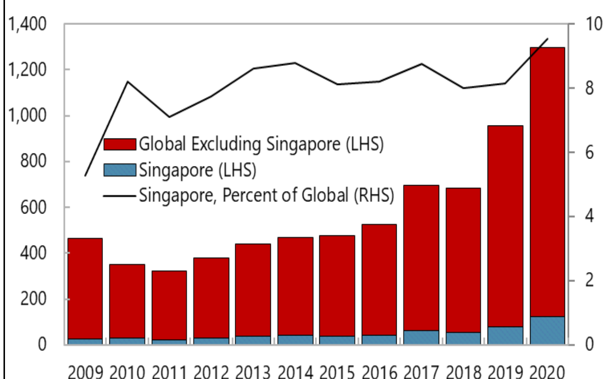
[1] Prepared by Dan Nyberg, Asia and Pacific Department. See Chapter 4 of *Selected Issues* for additional details.

Appendix X. Green Finance[1]

The green finance market is growing rapidly in Singapore. The Monetary Authority of Singapore (MAS) and the private sector are taking initiatives to mainstream green financial solutions to support Asia's response to climate risks.

1. **Sustainable investing and green debt issuances have grown rapidly over the past few years with Singapore accounting for about half of cumulative ASEAN green bond and loan issuances.** Assets of global ESG-listed funds rose to around US$1.3 trillion in 2020, almost four times higher than a decade ago. Singapore's share of the global sustainable fund market increased to 9.6 percent in 2020 from 8.2 percent in 2010. Global green debt issuances meanwhile grew cumulatively to US$2.2 trillion in 2020, compared with around US$31 billion in 2012. Over the same period, green debt issued by Asia Pacific (APAC) and ASEAN increased to around US$433 billion and US$56 billion, respectively, from US$6 billion and US$1 billion. Singapore accounted for 55 percent of ASEAN issuances, and its share relative to global green debt issuances stood at around 1.4 percent in 2020.

Assets of ESG-Listed Funds
(LHS: Billions of US dollars; RHS: Percent)



Sources: Bloomberg, IMF staff calculation

APAC Sustainable Debt Total Issuances
(Billions of US dollars)

Sources: BloombergNEF, IMF staff calculation
Note: Issuances include green bonds, green loans, social bonds, sustainability bond, sustainability-linked bond, sustainability-linked loan

2. **There are increasing efforts by both regulators and market participants to integrate climate considerations in risk assessments, financing decisions and disclosure practices.** MAS is leading efforts to make Singapore a green finance hub. It supports the development of green finance, both through its Green Finance Action Plan and participation in various international fora. The former includes among others development of environmental risk management guidelines for financial institutions and stress tests for climate change-related risks, and grant schemes to help defray costs with validating green and sustainable bond and loan credentials. Private sector initiatives focus on standards and guidelines, including mandatory sustainability reporting for companies listed on the Singapore Exchange and development of a green and transition taxonomy. Singaporean banks are taking steps to assess the financial impact of environmental risk, while also are increasingly incorporating sustainability and climate change considerations in their lending strategies.

[1] Prepared by Jochen Markus Schmittmann (APD), Han Teng Chua and Natalia Novikova (Singapore Resident Representative Office). See Chapter 5 of *Selected Issues* for additional details.

3. **The growing green finance market provides an opportunity for Singapore to support climate-friendly capital allocation.** As a well-developed financial hub, Singapore is already attracting a good proportion of green finance related flows in Asia. The MAS can facilitate these trends by enforcing prudent climate risk management and disclosure, while supporting the development of green and sustainable finance solutions. The private sector has a key role to play in shifting investment priorities, which require incorporating climate and sustainability considerations in its strategies.

INTERNATIONAL MONETARY FUND

SINGAPORE

June 22, 2021

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

Prepared By | Asia and Pacific Department

CONTENTS

FUND RELATIONS

(As of May 31, 2021)

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

General Resources Account

	SDR Millions	Percent of Quota
Quota	3,891.90	100.00
Fund holdings of currency (exchange rate)	2,834.30	72.83
Reserve tranche position	1,059.13	27.21
Lending to the Fund:		
New Arrangements to Borrow	18.59	

SDR Department

	SDR Millions	Percent of Allocation
Net cumulative allocation	744.21	100.00
Holdings	768.41	103.25

Outstanding Purchases and Loans: None.

Financial Arrangements: None.

Projected Payments to the Fund: None.

Exchange Arrangement

Singapore's de jure exchange rate arrangement is "other managed." Since February 2020, the Singapore dollar has stabilized within a 2 percent band against the nominal effective exchange rate. Therefore, the de facto exchange rate arrangement was reclassified to "stabilized" from "crawl-like", effective February 14, 2020. 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, except for restrictions maintained solely for the preservation of national or international security, which have been notified to the Fund in accordance with the procedures set forth in Executive Board decision 144-(52/51). 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.

Article IV Consultation

Singapore is on the 12-month consultation cycle. The 2019 Article IV consultation discussions were held during May 2–May 14, 2019, in Singapore and the Executive Board concluded the consultation on July 15, 2019 (IMF Country Report No. 19/233).

FSAP Participation

The FSAP Update involved two missions: October 29–November 14, 2018, and February 13–27, 2019. The findings were presented in the Financial System Sustainability Assessment (IMF Country Report No. 13/325).

Technical Assistance: None.

Resident Representative: Ms. Natalia Novikova has been posted in Singapore since October 2020.

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, monetary, and fiscal areas.	
National Accounts: The Singapore Department of Statistics has recently made improvements to its methodology. In May 2019, it benchmarked the GDP reference year from 2010 to 2015, moved estimation from a five-yearly fixed base approach to an annually reweighted chained volume measurement, and updated methods of estimating insurance output and goods sent to/received from abroad for processing, in line with principles of the 2008 System of National Accounts. **Price Statistics**: In 2020 the CPI was updated to the index reference period of 2019, using expenditure weights from the Household Expenditure Survey conducted between October 2017 and September 2018. The updated CPI includes indexes for 91 detailed consumption categories, compared to the 8 detailed categories that were previously available. Export and import price indexes and PPIs for industrial activities are disseminated monthly, while PPIs for services activities are disseminated quarterly.	
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 are not published.	
Monetary Statistics: The Monetary Authority of Singapore does not report monetary statistics in IMF's standardized report forms (SRFs), which were introduced in 2004 to collect sectoral balance sheets of the financial corporations broken down by financial instruments, counterparty sector, and currency of denomination of the financial instruments. The Monetary Authority of Singapore reports data on several series and indicators of the Financial Access Survey (FAS), including the two indicators (commercial bank branches per 100,000 adults and ATMs per 100,000 adults) adopted by the UN to monitor Target 8.10 of the Sustainable Development Goals (SDGs).	
Financial Soundness Indicators: Singapore reports 12 core and 7 encouraged Financial Soundness Indicators (FSIs) for Deposit Takers on a quarterly basis as per the Financial Soundness Indicators Compilation Guide. The data as well as the accompanying meta data are available in the IMF's FSI website.	
External Sector Statistics: Balance of Payments and international investment position data are compiled according to the 6th edition of the *Balance of Payments and International Investment Position Manual (BPM6)*. Data on Singapore's international investment position (IIP) is not provided on a disaggregated sectoral basis as suggested by the BPM6. Singapore participates in the IMF's Coordinated Direct Investment Survey (CDIS) reporting data on inward investment. It also participates in the IMF's Coordinated Portfolio Investment Survey (CPIS) reporting the core table (Table 1) only. It also reports the Reserves Data Template to the IMF monthly.	
II. Data Standards and Quality	
Singapore subscribes to SDDS. 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 8, 2021)

	Date of Latest Observation	Date Received	Frequency of Data[1]	Frequency of Reporting[1]	Frequency of Publication[1]
Exchange rates	6/8/21	6/8/21	D	D	D
International reserve assets and reserve liabilities of the Monetary Authorities[2]	4/2021	6/2021	M	M	M
Reserve/base money	4/2021	6/2021	M	M	M
Broad money	4/2021	6/2021	M	M	M
Central bank balance sheet	4/2021	6/2021	M	M	M
Consolidated balance sheet of the banking system	4/2021	6/2021	M	M	M
Interest rates[3]	5/2021	6/2021	M	M	M
Consumer price index	4/2021	5/2021	M	M	M
Revenue, expenditure, balance and composition of financing[4]—general government[5]	2020	5/2021	A	A	A
Revenue, expenditure, balance and composition of financing[4]—central government	2020	5/2021	M	M	M
Stocks of central government and central government-guaranteed debt[6]	2021:Q1	5/2021	Q	Q	Q
External current account balance	2021:Q1	5/2021	Q	Q	Q
Exports and imports of goods and services	2021:Q1	5/2021	Q	Q	Q
GDP/GNP	2021:Q1	5/2021	Q	Q	Q
Gross external debt[7]	2020:Q4	3/2021	Q	Q	Q
Net international investment position	2020:Q4	3/2021	Q	Q	Q

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

Statement by Rosemary Lim, Executive Director for Singapore, David Ong, Senior Advisor to the Executive Director, and Selene Yoe, Advisor to the Executive Director
July 9, 2021

1 Introduction

1.1 The Singapore authorities would like to thank the Article IV team for a constructive 2021 Consultation. The authorities welcome the team's acknowledgement and support for Singapore's policy responses in the challenging global COVID-19 environment.

2 Recent Economic Developments and Outlook

2.1 The Singapore economy has been on a recovery path since the depths of the COVID-led recession in Q2 2020. GDP grew by 3.1% q-o-q SA in Q1 2021, following the 3.8% expansion recorded in Q4 2020, underpinned by continued growth in the trade-related industries. The economy is estimated to have recouped the output lost from Q4 2019 to the trough of Q2 2020. Since the Article IV mission in early May, some clusters of community infections had emerged which required a tightening of domestic restrictions, especially in mask-off settings such as dining-in. A temporary setback to the recovery of certain segments of the economy is expected, such as consumer-facing retail, food & beverage and land transport services. Further border restrictions, necessitated by the emergence of the more transmissible Delta variant in many regional economies, would also exacerbate the near-term ongoing labour crunch in the foreign labour-dependent construction and marine & offshore engineering industries. Nevertheless, the adverse impact on the economy from these measures would be significantly less than during the circuit-breaker in Q2 2020 as most businesses remain in operation and have adapted their processes, as have consumer behaviour towards increased online spending, for example.

2.2 With the gradual easing of restrictions from mid-June, the economy should see a recovery in the second half of this year amid firming global demand and further progress in the domestic vaccination programme. However, there will be continued disparities in performance across sectors. Strong momentum in manufacturing, led by electronics, is expected to be sustained in 2021, but hard-hit sectors such as the travel-related industries will remain below pre-COVID levels.

2.3 As of end June 2021, the authorities have administered more than 5 million doses of the COVID-19 vaccine, with more than 2 million individuals (37% of Singapore's total population) having completed the full vaccination regime. The vaccination programme will be accelerated with the aim of covering two-thirds of the population by August 2021, which will facilitate the further, progressive re-opening of Singapore and resumption of economic activities. The government is also preparing the country for the transition to when COVID-19 would become endemic by ramping up testing and tracing, so that the re-imposition of strict mobility restriction measures can be avoided.

2.4 Singapore's official GDP growth forecast for 2021 was maintained at 4–6% in late May, amid heightened near-term uncertainty as the domestic COVID-19 situation had deteriorated and restrictions were tightened at that time. Nevertheless, given the strong outturn in the first quarter of 2021, it is plausible for full year GDP growth to exceed the upper end of this forecast range. This is however conditional on community infections stabilising in the second half of the year with a gradual easing of current restrictions, as well as strengthening of external demand conditions.

2.5 MAS Core Inflation returned to mild positive territory in Q1 2021 and rose further to 0.7% in April–May. The recovery in inflation partly reflected the rebound in global oil prices which fed through to higher electricity and gas costs. It was also driven by a modest increase in services inflation as demand recovered, alongside the pick-up in resident employment to above its pre- COVID level by Q1. Meanwhile, CPI-All Items inflation reached 2.2% in April-May as tight supply for cars and higher petrol prices led to sharper increases in private transportation cost.

2.6 Headline inflation is expected to ease in the second half of this year. Core inflation will continue to rise gradually but still stay below its long-term historical average this year. Surplus oil production capacity globally should cap further large price increases in oil prices, while lingering negative output gaps in some of Singapore's key trading partners should keep imported inflation contained. On the domestic front, wage growth is expected to be subdued as slack in the labour market will take time to be fully absorbed. The core inflation measure is expected to come in at 0– 1% this year.

3 Macroeconomic Policies

3.1 Singapore's macroeconomic policy mix has been carefully formulated to take into account the ongoing uncertainties in the economic environment, so as to secure price stability and sustained growth in the medium term. The authorities welcome Staff's broad concurrence with the macroeconomic policy stance.

Monetary Policy

3.2 MAS continued with its accommodative monetary policy stance in April 2021. The exchange rate policy band was maintained at a zero percent rate of appreciation and the width of the band and level at which it was centred was kept unchanged. Singapore's economic recovery was expected to remain uneven and incomplete, even as prospects for the global economy gradually improves. The path of the pandemic both domestically and abroad is still uncertain, while underlying inflation in the economy is only rising gradually from low levels. Although the risk of persistent disinflation has receded, core inflation remains below its historical average, and the current policy stance remains appropriate for now. The policy band also provides the flexibility to accommodate orderly movements of the exchange rate in response to near-term economic uncertainty.

Fiscal Policy

3.3 Fiscal policy played a key role in mitigating the impact of COVID-19 on businesses, workers and households. This was enabled by successive terms of prudent accumulation and management of reserves during normal times, which afforded Singapore the necessary resources to mount a quick and decisive response to a worldwide crisis once again.

3.4 Budget 2021 struck a careful balance between the need to cushion the most vulnerable households and sectors from the continuing impact of the pandemic and the imperative of securing Singapore's longer-term growth. The government has adjusted its response away from the broad- based emergency support measures introduced at the height of the pandemic last year, to targeted assistance. These include extending the Jobs Support Scheme and sector specific support packages, as well as providing cash transfers and temporary unemployment benefits to support still-struggling households and individuals. At the same time, a sizeable share of Budget 2021 has been allocated tosupporting investments in both physical and human capital to build a more resilient, digital, innovative and greener post-COVID Singapore economy.

3.5 The fiscal policy stance is estimated to remain expansionary this (calendar) year. Combinedwith the disbursements and effects of Budget 2020 that are still flowing through the economy, fiscal policy will be a key factor supporting the economic recovery this year. Even as fiscal policy is re- focused on medium- to long-term restructuring, the authorities stand ready to provide quick support should economic conditions take an unexpected and significant turn for the worse. Thus, following Singapore's entry into Phase 2 (Heightened Alert) and Phase 3 (Heightened Alert) from 16 May to 13 June and from 14 June onwards respectively, enhanced targeted support measures have been introduced for firms in directly affected sectors. There was also some tapering of support to take into account adaptation by firms.

3.6 The government will continue to review its fiscal position and plan for necessary revenue measures. In the medium- to long-term, healthcare spending alone would already raise government expenditure by 0.8%-point of GDP in 2026–30, in addition to further pressure on other social spending as well as security needs.[1] These increases in recurrent expenditure would need to be met by recurrent revenues. For the anticipated hump of development expenditure, the government will borrow for and capitalise major, long-term infrastructure assets. This will spread the lumpy fiscal cost equitably over several generations of users.

Financial Sector Policies

3.7 Corporate and household balance sheets were relatively resilient entering 2020. While the COVID-19 pandemic led to a fall in corporate earnings and household incomes, corporate and household balance sheet risks as well as debt servicing burdens remain manageable. The private residential property market was characterised by healthy demand-supply conditions going into COVID-19 crisis, given the earlier rounds of macroprudential measures. As for commercial property, prices for office and retail space have worsened year-on-year on the back of reduced demand from the economic downturn. Nonetheless, vacancy rates have moderated from the peak levels in 2020, suggesting some signs of recovery.

3.8 The authorities agree with Staff's observation that the decisive fiscal and financial policy measures have helped ease financial conditions and facilitated the flow of credit to businesses and households. Firms have maintained healthy liquidity buffers even though corporate debt levels have risen. Refinancing risks have also decreased, with earnings expected to improve alongside the gradual pick-up in economic activity. Further, Staff acknowledged that the housing market has weathered the pandemic well, notwithstanding

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[1] In Budget 2021, the government estimated that healthcare spending would raise expenditure by 0.5%-point of GDP over FY2021–25 and another 0.3%-point of GDP for FY2026–30. The government had also explained in Budget 2018 that annual security spending will increase by 0.2%-point of GDP to meet rising threats. Overall development expenditure is expected to be around 5% of GDP annually in the next 15 years, compared to the baseline or average development expenditure of 3.7%.

significant risks of large price swings. The authorities are of the view that existing macroprudential measures (including the Additional Buyer's Stamp Duty) remain important tools to address these risks.

4 Medium-Term Issues

4.1 Beyond the cyclical responses, the authorities continue to take steps to ensure that the economy is ready to confront opportunities and challenges posed by technological advancements, demographic shifts and climate change, and that businesses and workers are equipped with deep and future-ready capabilities. A post-COVID economy will see a more concerted shift from physical to digital modes of transactions, as well as towards a focus on intangible assets such as knowledge, networks and data. Singapore's high degree of connectivity and pool of skilled workers underpin its relevance in the global supply and production chains. The authorities continue to support businesses in fostering greater innovation and competitiveness as well as deepening global and regional partnerships including through the regional collaboration in innovation platforms and infrastructure investments.

4.2 Singapore's population census 2020 revealed a rapidly aging population with its share of residents aged 65 and over rising from 9.0% in 2010 to 15.2% in 2020. The old-age dependency ratio almost doubled over the same period to 23.4 and will increase further, with the total fertility rate remaining low at 1.1. The government's expenditure on healthcare will continue to outstrip GDP growth as population ageing intensifies. This increased pressure on government resources also reflects infrastructure spending on climate change adaptation and enhancements to the public transportation network which are being ramped up. As the increase in household savings, which are estimated to account for the largest proportion of the Singapore's savings-investment balance, also begins to taper, all these factors will contribute to the anticipated medium-term adjustments in the country's external balance position.

4.3 Active labour market policies that encourage labour market participation and increase the efficiency of job-worker matches have been a core part of the government's response over the past year. Indeed, the COVID-19 crisis had accelerated structural changes in the employment landscape. The emphasis has accordingly been on programmes to equip workers with the skills relevant to the changing needs of industry. Beyond short-term support provided by the JSS and SGUnited Jobs and Skills Package, other initiatives have been focused on developing skills and encouraging creativity of the workforce. One such initiative is the Innovation & Enterprise Fellowship Programme which aims to support the development of leaders in innovation and enterprise to meet the needs of deep technology areas such as cybersecurity, artificial intelligence and health technology. The authorities welcome the Staff's useful documentation and characterisation of Singapore's comprehensive labour market policies in this year's Selected Issues Papers.

4.4 The authorities are keenly aware of the intensifying risk posed by climate change, and that a coordinated global response is required. A series of steps have been taken to ensure sustainable development, including the restructuring of the diesel tax in 2017, introduction of a carbon tax in 2019 and enhancement of Singapore's 2030 Nationally Determined Contribution[2], as well as setting out of aspirational emissions goals under the Long-Term Low-

[2] Under the Paris Agreement, each country is requested to outline and communicate their post-2020 climate actions, known as their NDCs, to the UN Framework Convention on Climate Change (UNFCCC).

Emissions Development Strategy in 2020. Further efforts are directed to ensure long-term sustainability, including infrastructure development, changes to tax structures to discourage the use of internal combustion vehicles, and research and development in building more sustainable and liveable environments.

4.5 To support Singapore's and the region's transition to lower carbon economies, MAS has also undertaken efforts to grow and mainstream green finance. Singapore's green finance markets have seen healthy growth, accounting for about 40% of ASEAN green loan originations and bond issuances in 2020. Initiatives under the Green Finance Action Plan include strengthening financial sector resilience to environmental risks, developing green and sustainable solutions tailored for Asia's needs, enhancing reliability and comparability of sustainability-related disclosures, building knowledge and capabilities in sustainable finance, and harnessing technology to enable trusted and efficient finance flows.

5 Final Remarks

5.1 Amid elevated uncertainties over the evolution of the COVID-19 pandemic and the path to recovery, the Singapore authorities will carefully monitor both global and domestic developments, and assess how these could impinge on internal balance encompassing both macroeconomic and financial stability. The authorities stand ready to undertake appropriate policy responses should conditions deteriorate more sharply than anticipated. Even with the focus on the economic recovery, the authorities remain committed to longer-term domestic restructuring, which will enable Singapore to embrace new economic opportunities.

5.2 Finally, the authorities are pleased to inform the Executive Board that they agree to the publication of the 2021 Singapore Article IV Consultation Report.