4 Macroeconomic Policy

- In April 2021, MAS maintained the zero per cent p.a. rate of appreciation of the S$NEER policy band. An accommodative monetary policy stance remained appropriate as core inflation would stay low. With the narrowing of the negative output gap, core inflation was expected to rise gradually from its current subdued levels but still keep below its historical average. While overall GDP growth will come in at an above-trend pace this year, the sectors worst hit by the crisis will continue to face significant demand shortfalls.

- Budget 2021 was expansionary, extending and building upon the unprecedented fiscal support of the previous year. There was further targeted assistance provided to vulnerable sectors and households amid the continuing drag from the pandemic. The Budget measures also focused on strengthening the resilience of the economy and provided impetus to its structural transformation.

- Taken together, the complementary monetary and fiscal policies this year will help entrench the ongoing recovery, while ensuring price stability and sustainable growth in the medium term.

4.1 Monetary Policy

In October 2020, MAS maintained its monetary policy settings and signalled that an accommodative stance would be appropriate for some time

At the time of the October 2020 policy review, the global economy had posted a strong recovery from the Q2 trough of the crisis, supported by pent-up domestic demand and the partial resumption of in-person activities in many economies. However, beyond the initial recovery in Q3, the pace of expansion was expected to moderate, reflecting in part a renewed pickup in infections that had led to the re-imposition of localised lockdowns in some countries. Uncertainty also remained elevated, stemming from the possibility of a widespread resurgence of the virus, concerns of fading fiscal policy support, and lingering tensions in US-China relations.

The phased reopening of the Singapore economy from June last year, coupled with the boost from the global recovery, had led to a sharp turnaround in GDP growth in Q3 2020. However, the quarterly growth momentum of the economy was expected to ease and stabilise at a more moderate pace in 2021. Activity in the worst-hit travel-related and consumer-facing sectors would continue to be constrained by international travel restrictions and domestic safe-distancing measures. The lingering pockets of weakness in the Singapore economy implied that the negative output gap would only narrow gradually.

The significant labour market slack that had emerged in H1 2020 was expected to take some time to be absorbed and would weigh on wage growth over 2020–21. External sources of inflation were also likely to stay muted in light of the negative output gaps in Singapore's major trading partners. Thus, while the risk of persistent disinflation had receded and core inflation was forecast to rise gradually and turn positive in 2021, underlying inflation was anticipated to stay subdued.

Accordingly, MAS maintained a zero per cent p.a. rate of appreciation of the S$NEER policy band in the October Monetary Policy Statement (MPS). MAS indicated that an accommodative policy stance would be appropriate for some time.

Global growth prospects have since improved and could lift Singapore's GDP growth above 6% in 2021

Broader mobility restrictions were re-imposed in Q4 2020 across several countries following further waves of infections and the emergence of more transmissible strains of COVID-19. These renewed restrictions caused the global recovery momentum to moderate into the early part of this year. However, households and businesses had adapted somewhat to the renewed mobility restrictions, resulting in a considerably smaller impact on economic activity in Q1 2021 compared with Q2 last year. At the same time, breakthroughs in the development of vaccines bolstered confidence that an eventual end to the pandemic was in sight.

Growth prospects for the global economy have improved in recent months. The steady pace of vaccine deployment in many of Singapore's trading partners indicates that a more decisive global recovery could take hold in the second half of this year. Additional fiscal stimulus in some countries, most substantively the US, will also augment the effects of unprecedented macroeconomic stimulus that are still flowing through many economies. These developments have lifted business and consumer confidence and are expected to underpin a firm recovery in global demand. All in, the world economy is forecast to grow at a creditable 6.2% in 2021. However, there will be significant divergences across individual economies, and negative output gaps could persist, including in several countries in Asia.

In tandem with global developments, the sequential pace of growth in the Singapore economy moderated in Q4 2020 and Q1 2021. On a year-ago basis, GDP rose marginally by 0.2% in the first quarter of this year, after three consecutive quarters of decline.

The consolidation of the global recovery over the rest of the year should sustain an above-trend pace of growth in the domestic economy for 2021 as a whole, boosted by activity in the externally-oriented sector. The substantial fiscal injection over Budgets 2020[1] and 2021, and accommodative monetary policy stance will also continue to filter through the economy and support the expansion. However, the prognosis for the worst-hit sectors remains weak. Delays in the reopening of international borders will constrain the recovery in the travel-related sector. The absence of tourist spending and continued need for safe distancing measures will weigh on the performance of the consumer-facing sector, even if improving labour market conditions within Singapore provide some mitigation through increased domestic consumption.

Singapore's GDP growth is likely to exceed 6% this year following the 5.4% contraction in 2020. This outlook, however, is conditional on a sustained and firm expansion in the world economy and a low number of locally transmitted cases. Despite the brighter outlook for

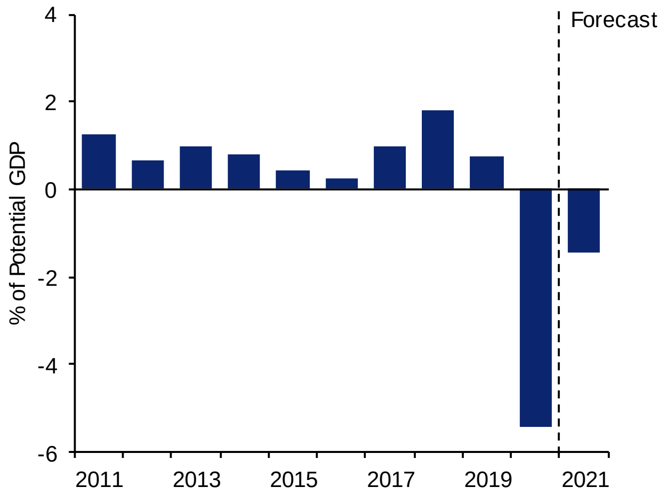
1 Budget 2020 here refers to the four Budgets (Unity, Resilience, Solidarity and Fortitude) and two Ministerial Statements announced by the government in FY2020 collectively.

global GDP growth at this juncture, the possibility of further virus mutations and premature relaxation of social restrictions by governments imply continuing uncertainties ahead.

The COVID-19 pandemic caused a relatively large negative output gap in the domestic economy last year, consistent with the rise in the resident unemployment rate and demand-induced falls in prices and factor costs **(Chart 4.1)**. Against the anticipated economic recovery, the gap will narrow through the course of 2021 but remain negative for the year as a whole.[2] This profile is consistent with expectations that slack in key factor markets will not be fully absorbed.

Chart 4.1 Singapore's significant negative output gap will narrow this year

Output gap



Source: EPG, MAS estimates

Core inflation should rise only gradually as the measured absorption of domestic factor market slack will restrain underlying cost pressures

Labour demand staged a rebound following the reopening of the Singapore economy in Q3 2020, before moderating in Q4. The strong recovery in employment, especially among residents, reflected the suite of fiscal and financial measures that kept businesses and households afloat during the circuit breaker. The labour demand recovery in H2 was driven by the consumption-related sectors, while employment conditions in the still-depressed travel-related sector remained weak. Over 2020 as a whole, the employment adjustment to the COVID-19 shock was borne predominantly by the foreign workforce, which contracted by an unprecedented 195,900 or 13.7%. Conversely, resident employment reversed all of its earlier losses of H1 to expand by 14,900 for the year.

Recent labour market indicators suggest that slack had continued to be absorbed in Q1 2021. The resident unemployment rate eased further to 4.1% in February, down from its peak of 4.8% in September last year. However, this remained above its historical average of 2.9%, even as there are indications of time-related underemployed workers. Overall, labour market conditions should continue to improve gradually over 2021. However, some slack could

[2] There remains a wide confidence interval around the estimates for the economy's output gap owing to considerable uncertainty over the impact of the pandemic on the economy's supply potential.

persist due to job and skills mismatches and lingering underemployment. These factors should moderate wage increases this year.

Both CPI-All Items and MAS Core Inflation turned mildly positive in y-o-y terms in Q1 2021, after the disinflation recorded over the preceding three quarters. In the immediate months ahead, inflation is likely to see a further step-up, reflecting the continued pass-through of higher oil prices, the fading of the disinflationary effects of government subsidies introduced in H1 2020, as well as the low base from the fall in prices in Q2 last year. A similar increase in inflation in the near term is also occurring in the external economies. Already, commodity prices have risen and shown signs of passing through to producer price inflation in several major economies, which could filter to consumer prices with a lag.

The pace of increase in y-o-y inflation in H1 reflects a temporary pickup in the volatility of inflation as prices normalise, and does not clearly represent signs of an acceleration in underlying inflationary pressures. Thus, core inflation is projected to rise at a more gradual pace in the latter half of 2021, following its step-up in H1. External sources of inflation are also expected to stabilise as the pace of global commodity price increases levels off. Global oil prices are forecast to stay around present levels for the rest of the year as surplus oil production capacity provides a buffer against further large price increases. At the same time, negative output gaps in some of Singapore's trading partners will cap the extent of general price increases abroad. Domestic cost pressures should likewise be contained, amid lingering slack in factor markets and demand shortfalls in some parts of the Singapore economy. Improvements in productivity will also moderate effective increases in factor costs, while competition from e-commerce platforms and the continued lack of international tourists are likely to constrain inflation in some components of the core CPI basket.

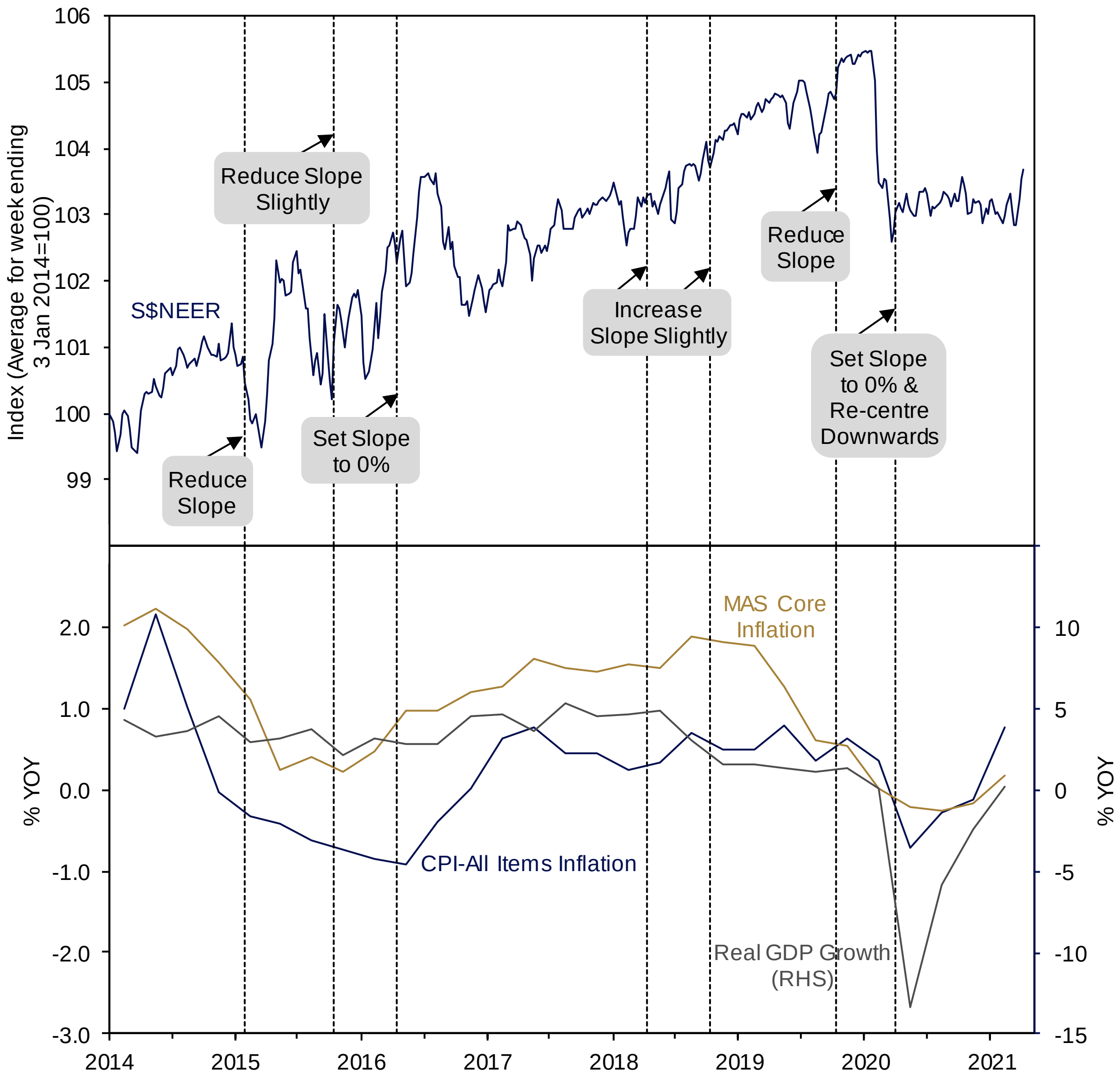
Barring upside shocks to global inflation, MAS Core Inflation is likely to come in at 0–1% in 2021. Meanwhile the forecast range for CPI-All Items inflation in 2021 has been revised up to 0.5–1.5%, from −0.5 to 0.5%, due in part to stronger-than-anticipated outturns in the non-core components of the CPI basket as well as the projected resilient demand for cars amid reduced COE quotas.

In April 2021, MAS maintained the 0% slope of the policy band as an accommodative policy stance remains appropriate

With MAS Core Inflation expected to rise gradually and remain below its historical average in 2021 as a whole, MAS kept the rate of appreciation of the S$NEER policy band at zero per cent p.a. in the April MPS. There was no change to the width of the band or the level at which it was centred. An accommodative monetary policy stance remains appropriate and would support the narrowing of the output gap and ensure price stability in the economy over the medium term. **Chart 4.2** summarises the recent shifts in monetary policy, GDP growth and inflation in the Singapore economy.

Chart 4.2 Key macroeconomic variables and changes to the monetary policy stance

S$NEER, real GDP growth, CPI-All Items inflation and MAS Core Inflation



Source: DOS and EPG, MAS estimates

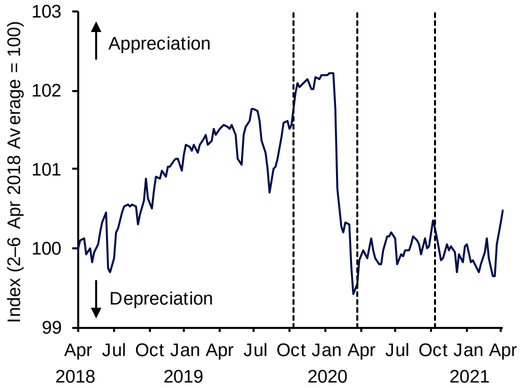
Note: Vertical dashed lines indicate changes to the settings of the S$NEER policy band. For a summary of MAS' past policy decisions, please see www.mas.gov.sg/monetary-policy/past-monetary-policy-decisions.

The S$NEER and S$ interest rates have been broadly stable

Since October 2020, the S$NEER has fluctuated slightly above the mid-point of the policy band **(Chart 4.3)**. Over the last six months, the S$NEER appreciated modestly, as the S$ strengthened against reserve currencies such as the Japanese Yen and US dollar alongside the improvement in global risk sentiment. This more than offset the weakening of the S$ against the currencies of major commodity exporters whose terms of trade had improved **(Chart 4.4)**.

Chart 4.3 The S$NEER fluctuated slightly above the mid-point of the policy band

S$NEER, weekly average

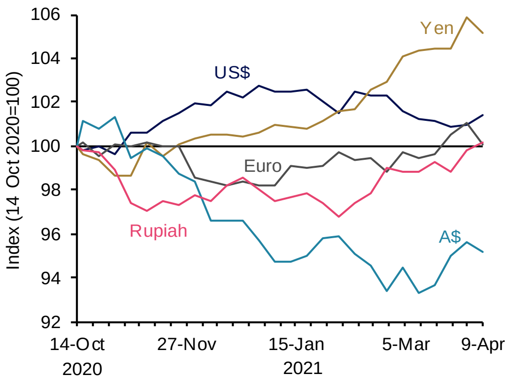


Source: EPG, MAS estimates

Note: Vertical dashed lines indicate the last three releases of the MPS.

Chart 4.4 A pickup in risk sentiment and commodity prices drove bilateral FX movements

Bilateral exchange rates, weekly average



Source: EPG, MAS estimates

Short-term US interest rates have edged down slightly, with the 3-month US$ LIBOR declining to 0.19% as of end-March, from 0.22% in October last year. The US$ Overnight Index Swap (OIS)-LIBOR spread also remained low, reflecting the continuing efforts of central banks to ensure liquid USD funding conditions for market participants. In December 2020, the US Federal Reserve extended the temporary US dollar liquidity swap lines established with a number of foreign central banks, including MAS, to September 2021.

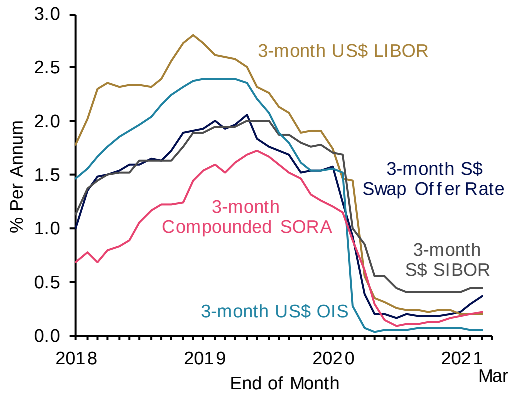
Meanwhile, domestic interest rates have ticked up slightly over the last six months, with the 3-month S$ SIBOR, compounded Singapore Overnight Rate (SORA) and S$ Swap Offer Rate increasing from October 2020 **(Chart 4.5)**. Nevertheless, domestic interest rates continue to be close to their all-time lows.

Given the marginal changes in domestic interest rates, changes in the Domestic Liquidity Indicator (DLI)[3] were mostly driven by developments in the S$NEER over this period. The DLI suggests that monetary conditions eased modestly over the past three months, as the level of the S$NEER was, on average, slightly lower than a quarter ago **(Chart 4.6)**.

3 The DLI captures movements in the S$NEER and the three-month S$ SIBOR.

Chart 4.5 Interest rates continue to be close to their all-time lows

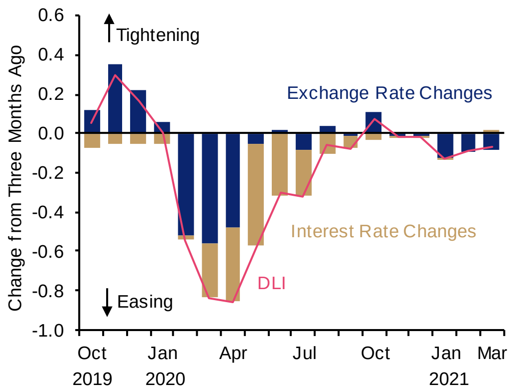
US$ and S$ interest rates, end of month



Source: ABS Benchmarks Administration Co Pte Ltd and ICE Benchmark Administration Ltd

Chart 4.6 Monetary conditions have eased slightly in recent months

Domestic Liquidity Indicator (DLI) and components



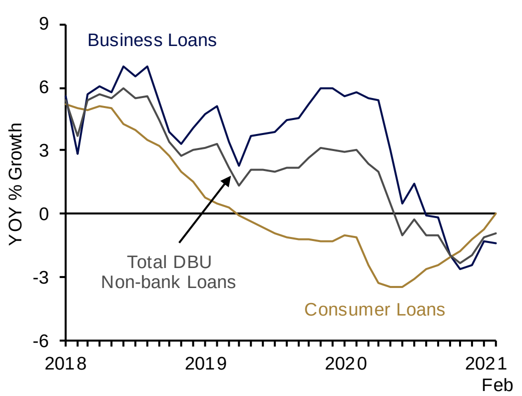
Source: ABS Benchmarks Administration Co Pte Ltd, ICE Benchmark Administration Ltd and EPG, MAS estimates

Credit growth has troughed and tentative signs of a pickup have emerged

Credit growth in y-o-y terms turned negative in H2 last year, reflecting the contraction in economic activity and continued uncertainty amid the pandemic. However, brighter economic prospects over the last six months and low funding costs have likely supported a troughing in the y-o-y pace of decline in the stock of outstanding DBU non-bank loans. Business loans fell at a slower pace in Jan–Feb 2021 as compared to Q4 2020, while consumer loans stopped declining in February **(Chart 4.7)**. An uptick in borrowing by building and construction firms and smaller year-ago contractions in loans to non-bank financial institutions have supported the recent pickup in business credit **(Chart 4.8)**. Meanwhile, housing loans accounted mainly for the turnaround in consumer loans, amid the step-up in property transaction volumes since the second half of 2020.

Chart 4.7 Credit growth turned negative with the economic downturn last year

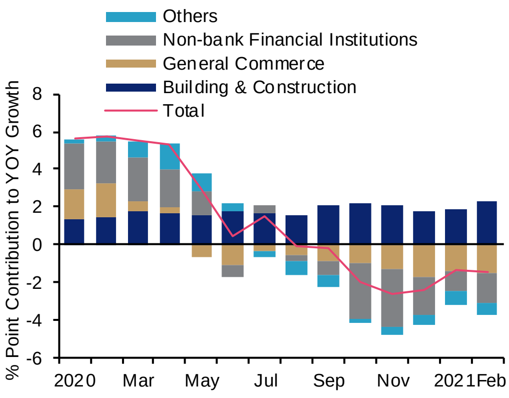
Outstanding stock of DBU non-bank loans



Source: MAS

Chart 4.8 Demand for credit remained muted across most sectors but is gradually recovering

Outstanding stock of DBU non-bank loans by sector



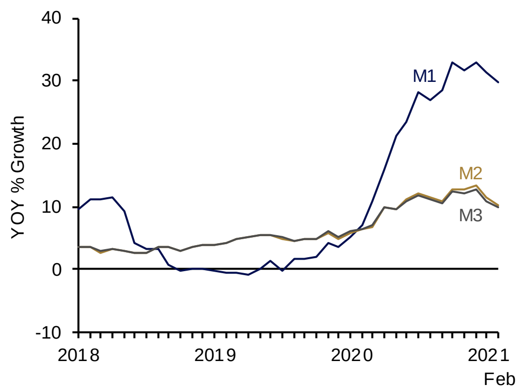
Source: MAS

Money supply growth is moderating while the velocity of money continues to decline

Money supply grew strongly in 2020, with M1 increasing by 33% **(Chart 4.9)**. Growth was driven by a sharp rise in demand deposits in the first nine months of the year, reflecting a combination of curtailed consumption opportunities during the pandemic, higher precautionary balances amid heightened uncertainty, as well as income support by the government for firms and households. After peaking in October, growth in M1 moderated as spending opportunities increased with the further liberalisation of domestic activities, consumer and business confidence improved, and government support was gradually recalibrated. Meanwhile, the broader monetary aggregates, M2 and M3, expanded at a slower pace than M1, as the elevated demand for liquidity and historical lows in interest rates in 2020 led to a preference for demand deposits over fixed deposits **(Chart 4.10)**.

Chart 4.9 Money supply expanded significantly last year

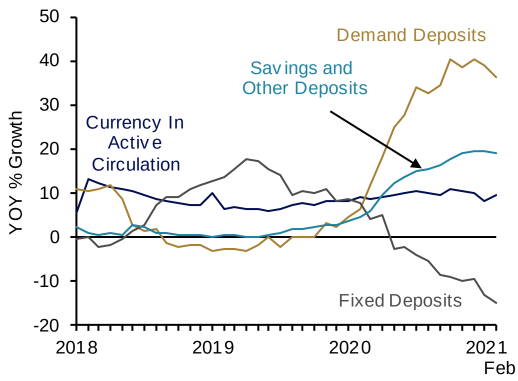
Monetary aggregates



Source: MAS

Chart 4.10 The moderation in growth since Q4 was largely driven by demand deposits

Components of the money supply

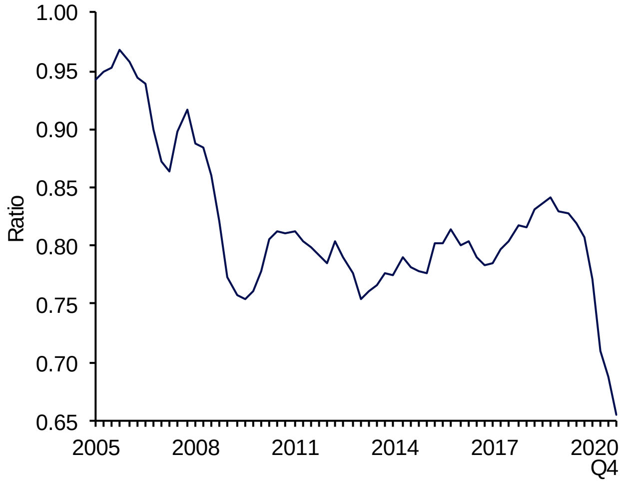


Source: MAS

In comparison, the velocity of money, computed based on a rolling four quarters of nominal GDP and end-of-period M2, fell sharply last year **(Chart 4.11)**. However, it is expected to stabilise and pick up with the normalisation of economic activity in 2021. Money supply is also likely to continue to expand in 2021 alongside the gradual recovery in credit demand, albeit at a more moderate pace than last year. The expansion of money supply should support robust growth in nominal GDP in the coming quarters.

Chart 4.11 The velocity of money declined in 2020

Velocity of money (M2)



Source: EPG, MAS estimates

4.2 Fiscal Policy

Supporting the recovery and transforming the economy

Budget 2021 was delivered at a time of continuing uncertainty, even as the Singapore economy had started recovering gradually from the COVID-19 induced recession of 2020. While the immediate public health and economic crises had eased domestically, the emergence of more infectious strains of the virus and renewed lockdowns in some economies posed risks to the near-term global economic outlook. Looking ahead, the flow-through of considerable macroeconomic policy support, and the progressive deployment of vaccines globally and in Singapore should support a pickup in the growth momentum over 2021.

Against this backdrop, Budget 2021 struck a careful balance between the need to cushion the most vulnerable individuals and sectors from the continuing impact of the pandemic in the short term, and the imperative of securing Singapore's longer-term growth prospects. Budget 2021 remained expansionary, extending the support provided by the unprecedented fiscal injection in the previous year, albeit at a reduced level. The overall fiscal package was also refocussed to facilitate Singapore's transition to a more inclusive, resilient, digital and green economy. While rebalancing its fiscal priorities, the government clearly articulated that current and planned outlays were managed within a framework that ensures the sustainability of public finances, including a fairer distribution across generations.

The Budget directed further support to firms and workers in still-struggling industries

In Budget 2021, the government stepped further away from the broad-based, emergency support provided to firms and households at the height of the pandemic last year, towards assistance directed at those that continue to be adversely affected by the crisis. The more targeted approach began in the August and October 2020 Ministerial Statements, in recognition of the unevenness of the recovery. For example, the August 2020 Ministerial Statement extended the Jobs Support Scheme (JSS) at a reduced level of support[4] for six months to March 2021 for most firms, except those in the more resilient sectors such as biomedical sciences, financial services and ICT, which received only a three-month extension. The scheme was further extended under the COVID-19 Resilience Package (CRP) in Budget 2021 for another six months, but with another step down in subsidy rates[5], and only provided to firms in sectors that were not expected to see a meaningful recovery this year. Besides the JSS, a further $1.2 billion was set aside by the government for sector-specific support packages, with the bulk going to the aviation sector to tide it over the prolonged downturn in international travel and to preserve Singapore's position as an aviation hub post-COVID.

The government's aid for the hardest-hit sectors should be seen in the context of the broader economic gains from assisting temporarily liquidity-constrained businesses to pull

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4 Support levels under the JSS are tiered according to the impact of COVID-19 on the sector and the strength of its subsequent recovery. Under the JSS extension in the August Ministerial Statement, firms in Tier 1, which comprise the worst-hit aviation, aerospace and tourism sectors, received 50% subsidies for wages paid in Sep 2020 – Mar 2021, down from 75% previously. Meanwhile, firms in Tier 2, which includes other badly-hit sectors such as food services, retail and marine & offshore, saw their level of support tapered from 50% to 30%. Support for all other firms was reduced to 10% from 25%.

5 Under the CRP extension, the level of wage support for firms in Tier 1 will be lowered to 30% and 10% in Q2 and Q3 2021, respectively, while that for firms in Tier 2 will be brought down to 10% in Q2, with support ceasing by June.

through the crisis.[6] For example, the gains from preserving the core capabilities of Singapore's aviation sector is likely to be significant as it underpins the economy's value proposition as a well-connected regional and international hub. A permanent loss of the industry's capabilities would have potentially severe consequences for Singapore's economic competitiveness. It could also affect the country's economic resilience given our reliance on regional and global supply chains.

There was continued assistance for vulnerable households and an emphasis on strengthening Singapore's social compact

The impact of COVID-19 has been highly unequal across Singaporean households. In line with global experience, lower-wage and casual workers, and women bore the brunt of labour market adjustment. Households in the bottom 10% of the income distribution experienced a larger decline in real income from work (−6.1%) in 2020, compared to the rest of the 90% (−1.4 to −3.2%). These trends are consistent with the observation that the worst-affected contact-intensive services occupations tend to be lower-paying. Significant government transfers to lower-income households and individuals last year ameliorated the fall in incomes for the most vulnerable.[7] Notably, government intervention was sufficiently large and targeted to significantly reduce Singapore's Gini coefficient, after taxes and transfers, to 0.375 in 2020, from 0.398 in 2019. This level was a new all-time low since the data series began in 2000.

Recognising that disadvantaged households would continue to require support in the near term, Budget 2021 set aside $0.9 billion for a Household Support Package (HSP). Singaporean households living in HDB flats will be given additional rebates for utility bills ($120–200 through the GST Voucher–U-Save Special Payment) and Service & Conservancy Charges (1.5–3.5 months) this year, with those living in smaller properties receiving more. Lower-income Singaporeans will also receive a GST Voucher–Cash Special Payment of $200 each in June 2021 to defray their living expenses. Concomitantly, Budget 2021 devoted resources to improving the range and coverage of social services provided by government agencies. For example, the Community Link initiative by the Ministry of Social and Family Development will be expanded nationwide to provide 14,000 families with children staying in rental housing with holistic support. Measures that encourage philanthropy and volunteerism, such as dollar-for-dollar matching of donations to Tote Board's Enhanced Fund-raising Programme and 250% tax deduction for donations to Institutions of a Public Character (IPCs), were also extended.

More unequal societies have been found to be less resilient to negative economic shocks.[8] Consequently, such initiatives to reinforce Singapore's social compact accrue broader benefits beyond minimising short-term hardship, by strengthening social cohesion and economic flexibility.

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6 Barrero, J M, Bloom, N, Davis, S J (2020), "COVID-19 is also a Reallocation Shock", *NBER Working Paper* No. 27137, May.

7 Government transfers per household member averaged $13,670 among resident households living in 1- and 2-room HDB flats, compared to around $3,800 for those staying in private properties (condominiums, other apartments and landed properties).

8 Ostry, J D, Loungani, P, Berg, A and Stglitz, J E (2019), *Confronting Inequality: How Societies Can Choose Inclusive Growth*, Columbia University Press.

Budget 2021 sought to strengthen Singapore's resilience and medium-term economic prospects

As the economy emerged from the most intense phase of the COVID-19 crisis, the government was able to turn its attention in Budget 2021 towards addressing longer-term priorities. (See **Table 4.2** below for a list of key measures). The adaptation of firms and households to the pandemic has accelerated a number of structural shifts in economic behaviour that were already in evidence pre-COVID, including digitalisation and automation. Further, reconfiguration of global supply chains and adoption of teleworking globally may intensify the competition that local firms and workers face. Budget 2021 set aside $24 billion for structural policies over the next three years to help Singaporean workers and firms emerge stronger in the post-pandemic world.

The first set of measures was aimed at boosting the resilience of the Singapore economy against further outbreaks of COVID-19. Budget 2021 devoted $4.8 billion to public health and safe reopening measures, including the national vaccination programme and the strengthening of testing and contact tracing capabilities.[9] Extensive inoculation would allow a wider range of economic and social activities—including appropriately controlled entry of foreign workers and visitors—to resume without an incommensurate increase in risks to public health. Early vaccinations for frontline workers would place Singapore in a better position to restart our aviation and tourism industries and capture emerging opportunities as the global economy recovers.

The pandemic highlighted some of the vulnerabilities associated with dependence on foreign labour supply. For instance, industries such as food manufacturing reported temporary labour shortages last year as firms were unable to secure new foreign workers, given restrictions on international travel. Budget 2021 announced that the manufacturing S Pass sub-Dependency Ratio Ceiling (DRC)[10] would be lowered from 20% to 15% by 2023. The sub-DRC reduction was also aligned with the government's broader strategy of encouraging firms to strengthen productivity through upskilling and more intensive adoption of technology. This strategy drove a trend of tightening of foreign Work Pass and S Pass quotas in recent budgets, with cuts to DRCs and sub-DRCs in various sectors, including services and construction.

In tandem with the tightening of foreign worker policy, Budget 2021 expanded the Capability Transfer Programme (CTP), a scheme to facilitate foreign-to-local skills transfer. By subsidising the manpower costs of bringing in foreign specialists to train locals, and sending locals on overseas attachments for training, the CTP will help to close existing skills gaps in the resident workforce, eventually reducing the need for some foreign workers. Meanwhile, the SGUnited Jobs and Skills Package received an additional $5.4 billion to extend support to the local workforce in upskilling and accessing employment opportunities. Of this amount, $5.2 billion was allocated to the Jobs Growth Initiative to lengthen the hiring window for new jobs supported by the scheme by seven months to end-September 2021. The government also launched a new Innovation and Enterprise Fellowship Programme to develop local talent in specialised emerging fields such as cybersecurity, artificial intelligence and health technology. Taken together, these initiatives will help to align the resident

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9 The funds set aside for the national vaccination programs and public health measures fall under the CRP and are not part of the $24 billion for structural measures.

10 The S Pass sub-DRC is the maximum permitted ratio of foreign workers on S Pass to the company's total headcount.

workforce's human capital with the profile of jobs that are being created in the economy as firms transform and new growth areas emerge.

Businesses were encouraged to invest, innovate and embrace digitalisation

The second set of structural measures in Budget 2021 sought to promote private investment, innovation and digital transformation. Over the past year, many firms had to adjust their business operations in response to the circumstances created by the pandemic. In many instances, the changes made by companies to meet short-term requirements were congruent with the longer-term tendency towards utilising IT solutions, automating processes and streamlining operations, as well as shifting to online delivery of services and electronic payments to meet the changing needs of consumers. Indeed, nearly 84% of domestic respondents in the Singapore Business Federation's 2020/2021 National Business Survey reported that COVID-19 had accelerated their digital transformation.

While business investment held up last year, uncertainty over the course of COVID-19 and the economic recovery remains elevated, which could discourage firms from further innovating and investing for the longer term. Summers (2020) argued that firms' risk appetites could be structurally lower after the pandemic, causing them to cut back investment and hold on to more financial reserves.[11] Separately, Kozlowski *et al.* (2020) found that extreme adverse events like COVID-19 can cause consumers and firms to permanently revise up their beliefs about the likelihood of economic tail risks, making investment less attractive for them.[12]

The government recognised these potential pressures on businesses and enhanced its risk-sharing arrangements with providers of capital (e.g., the Enterprise Financing Scheme – Venture Debt programme). New grant schemes to encourage investments (e.g., the Emerging Technology Programme) were introduced, while existing ones (e.g., Productivity Solutions Grant and Enterprise Development Grant) were enhanced. These measures should lower the effective hurdle rate of return and make it more palatable for firms to undertake longer-term transformation amid an uncertain outlook.

Budget 2021 also introduced measures aimed at facilitating innovation across "ecosystems" of firms, thereby realising the associated positive externalities. The new Growth and Transformation Scheme for the construction sector, for example, sought to help firms across the value chain digitalise processes in an integrated manner so as to maximise synergies and foster greater overall efficiency. In the absence of coordination, the benefit to the sector would likely have been underestimated by individual firms. In the same spirit of fostering collaboration, including across borders, the government announced enhancements to platforms such as the Open Innovation Platform and Global Innovation Alliance which help to match businesses with potential talent, capital, customers and partners in Singapore and other major global innovation hubs.

The Budget introduced measures to promote sustainable development

Climate change threatens not only economic processes, productive capacity and livelihoods, but also physical security. Singapore is keenly aware of the role of "nature capital" in production and the long-term consequences of its gradual depletion. A key aspect of

[11] Larry Summers on COVID-19 and the Global Economy, Princeton Bendheim Centre for Finance Webinar, 22 May 2020.

[12] Kozlowski, J, Veldkamp, L and Venkateswaran, V (2020), "Scarring Body and Mind: The Long-term Belief-scarring Effects of COVID-19", *Federal Reserve Bank of St. Louis Working Papers* 2020-009A.

sustainable long-term development in Singapore thus revolves around ensuring environmental sustainability. To this end, the Budget announced specific transition measures to give effect to the Singapore Green Plan 2030.

A key thrust of this third set of structural measures was to ensure that economic agents are incentivised to adopt more environmentally-friendly means of work, consumption and transport. These measures aim to alter relative prices to favour cleaner options and to ensure that the costs of pollutive actions are better internalised. For instance, to encourage the adoption of electric vehicles, Budget 2021 adjusted the road tax structure so as to reduce the taxes payable on mass-market electric cars, which are currently higher than internal combustion engine models aimed at a similar market segment. At the same time, it raised petrol duty rates by 10–15 cents per litre. The government also identified up to $19 billion worth of public sector projects to be financed with “green bonds”. These bonds will serve as a benchmark for the S$ green corporate bond market, making it easier for businesses to access “greener” financing.

Over time, as consumer demand for green and sustainable products and services increase, there will be significant profit opportunities and synergies between green businesses and the rest of the economy. In recognition of this growing demand, the government announced plans to introduce an Enterprise Sustainability Programme to support companies, especially SMEs, seeking growth opportunities in the area of green technologies and products.

The government reiterated its commitment to fiscal sustainability and sought a fairer distribution of fiscal burdens across generations

The overall budget deficit is expected to come in at $11 billion (or 2.2% of GDP) in FY2021, following the record $64.9 billion deficit (13.9% of GDP) in FY2020 **(Table 4.1)**. The smaller deficit largely reflects a step-down in special transfers, as emergency financial support to businesses and households was tapered. Meanwhile, the primary deficit is projected to decline slightly from $29.4 billion in FY2020 to $25.7 billion in FY2021, as operating revenue is projected to recover in tandem with economic activity, while total expenditure remains constant as a share of GDP.

The government had obtained permission from the President to draw up to $11 billion from Past Reserves to fund the COVID-19 Resilience Package in Budget 2021. This brought the projected maximum drawdown over FY2020–21 to $53.7 billion.[13]

[13] While the government sought permission from the President to draw up to $52 billion from Past Reserves to fund COVID-related support measures in FY2020, only $42.7 billion was expected to be spent as at 16 February 2021.

Table 4.1 Budget summary

	FY2020 Revised		FY2021 Budgeted	
	$ Billion	% of GDP	$ Billion	% of GDP
Operating Revenue	64.6	13.9	76.6	15.2
Total Expenditure	94.1	20.2	102.3	20.2
Primary Surplus (+) / Deficit (−)	**−29.4**	**−6.3**	**−25.7**	**−5.1**
Less: Special Transfers (excluding top-ups to endowment/trust funds)	36.3	7.8	4.9	1.0
Basic Surplus (+) / Deficit (−)	**−65.7**	**−14.1**	**−30.6**	**−6.0**
Less: Special Transfers (top-ups to endowment/trust funds)	17.3	3.7	-	0.0
Add: Net Investment Returns Contribution	18.1	3.9	19.6	3.9
Budget Surplus (+) / Deficit (−)	**−64.9**	**−13.9**	**−11.0**	**−2.2**

Source: MOF

The government highlighted that the large deficit over the two-year period, and the use of Past Reserves to finance it, was only warranted because of the unprecedented nature of the COVID-19 shock. The government continues to subscribe to the balanced budget principle that recurrent expenditure should be funded by recurrent revenue. Accordingly, the government signalled that the GST rate would need to be raised at some point between 2022–25, so as to meet increasing expenditure in areas such as healthcare and social security.

Besides reiterating its commitment to fiscal sustainability, the government also announced its intention to borrow to finance major, long-term infrastructure development. Recourse to debt financing was deemed preferable on grounds of both equity and efficiency, given that infrastructure investment by its nature generates returns over the long term. Funding the expenditure through bonds issued under a proposed Significant Infrastructure Government Loan Act (SINGA) would more fairly distribute fiscal responsibilities across generations. There are advantages from a balance sheet management perspective in matching long-term assets with long-term liabilities. Further, the government's cost of long-term borrowing remains close to all-time lows and was considered likely to compare favourably with the return on infrastructure investment, particularly after taking into account broader social welfare benefits not captured in the direct rates of return from these projects.[14]

Fiscal policy remains appropriately expansionary in CY2021

MAS estimates that the fiscal stance continues to be *expansionary* in CY2021 after controlling for the impact of the business cycle. The expansionary stance is reflected in a

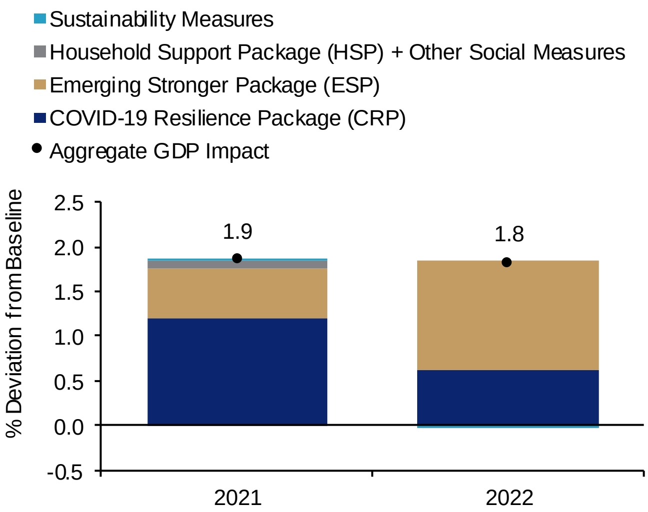
14 Furman and Summers (2020) argue that borrowing by the government to invest in assets that have a return well in excess of the cost of borrowing could not only pay for itself, but also strengthen the sovereign's creditworthiness. Higher future growth attendant on the infrastructure investment may raise the present value of the tax base by more than the present value of the debt incurred, thereby increasing the sovereign's net worth. Furman, J and Summers, L (2020), "A reconsideration of fiscal policy in the era of low interest rates", draft, November.

cyclically-adjusted budget balance (CABB)[15] *deficit* of 6.5% of GDP, implying that there was a discretionary government injection to demand, over and above changes in revenue and spending that arose endogenously from the level of economic activity. However, fiscal policy is less expansionary than in CY2020. The fiscal impulse, which gauges the net fiscal addition to GDP from the year-to-year change in the CABB, is estimated at −3.3% of GDP in CY2021.[16] This moderation in the net fiscal injection into the economy is appropriate in view of the reduced need for support given the expected pickup in economic activity this year.

The fiscal outlays in Budget 2021 were balanced between continued short-term relief and spending towards longer-term economic objectives. Using MAS' Monetary Model of Singapore (MMS), EPG estimated that measures announced in Budget 2021 will lift the level of GDP by 1.9% in 2021 and 1.8% in 2022. While the magnitude of the support to activity is comparable across the two years, the composition differs in line with Budget priorities **(Chart 4.12)**. A large share (70%) of the impact in 2021 comes from the CRP and the HSP, reflecting the need to continue to provide immediate assistance to targeted sectors and households. Moving into 2022, the major contribution will come from medium-term structural transformation policies, that encourage digital transformation and green initiatives.

Chart 4.12 Contribution of Budget 2021 to GDP level

Decomposition of Budget 2021 measures



Source: EPG, MAS estimates

Separately, MAS' MMS was also used to assess the combined macroeconomic impact of the discretionary measures announced across Budgets 2020 and 2021 on calendar-year

[15] Conceptually, the CABB attempts to gauge the discretionary component of fiscal policy, after accounting for the amount of revenues and expenditures that would be commensurate with the economy's position in the business cycle.

[16] These estimates of the CABB and fiscal impulse were derived using 2019 as the (fixed) base year. This approach deviates from MAS' past practices of computing the fiscal impulse using a rolling base year. However, the magnitude of the negative shock to GDP in 2020 from COVID-19, as well as the unprecedented fiscal support, points to the unsuitability of 2020 as a base year for the fiscal impulse calculations. With the pandemic shock occurring in Q2 2020, the bulk of the COVID-related fiscal support were disbursed over Q2 2020 to Q1 2021 (i.e., FY2020). Correspondingly, the fiscal impulse calculated by MAS on a calendar year basis differs substantially from the estimates reported by MOF in its *Analysis of Revenue and Expenditure (Financial Year 2021)*, which are on a fiscal year basis. MAS' estimates for CY2020 (10.3%) is smaller than MOF's for FY2020 (13.0%), but larger for CY2021 (−3.3%) compared to FY2021 (−6.6%).

GDP growth. It is preferable to consider the impact on CY2021 GDP of both Budgets together so that two pertinent factors are taken into account. First, some Budget 2020 measures are only scheduled to be disbursed in CY2021. Second, the nature of spending programmes entails variable lags in the transmission to economic activity. These considerations are particularly relevant in current circumstances because of Budget 2020's emphasis on measures to maintain economic capacity. For example, the effects of business cost relief disbursed in 2020 will extend into 2021, as firms that benefitted from the earlier support are able to subsequently increase their production in line with the recovery in aggregate demand. It should be noted that these effects are distinct from the secondary multiplier effects of public spending after the initial impulse, which are already captured by the modelling of the impact of fiscal policy.

The combined support from both Budgets to real GDP levels in 2021 is estimated to be 6.4%, higher than the 5.6% impact in 2020 (from Budget FY2020 alone). The support for real GDP in 2021 from Budget 2020 alone is estimated to be 4.5%.[17] The progressive opening of the economy over H2 2020 and into 2021 reduced impediments to consumption and investment, thereby allowing fiscal support to translate more strongly to spending and activity. These dynamics underscore the importance of Budget 2020's emphasis on business cost-saving and job-preserving measures that kept the economy's production capabilities intact, allowing the level of output to achieve a higher trajectory upon emergence from the crisis than it would have done without policy support. The shortfall in output by end-2021 relative to the last forecast made before the onset of the pandemic is −3.8%; it is estimated that without fiscal support, the gap would have been −8.4%.

The combined Budgets will also give further impetus to the labour market recovery, with the resident unemployment rate projected to decline at a steady pace from a high of 4.8% last September. In the absence of any fiscal support, MAS estimates that the resident unemployment rate could have risen to around 6% in 2020, and beyond 7% in 2021.

Government support to incomes in Budget 2020 contributed in part to the 13% increase in S$ deposits[18] of resident individuals and non-bank corporates in 2020, the fastest pace since 2009. The rise in saving likely reflects both a precautionary reaction to the increase in economic uncertainty and constraints on households' and firms' ability to make desired purchases due to public health restrictions. Auerbach *et al.* (2020)[19] find that while consumers reallocate their spending across goods and services in the period affected by movement restrictions, they also save a portion of their income for future expenditure when the full range of goods and services becomes available again. In the Singapore context, it is expected that some portion of the excess saving will be drawn down as safe distancing measures are eased further and consumer confidence returns. An element of the increase in deposits may therefore be regarded as "latent" stimulus. This effect was not directly estimated owing to the considerable uncertainties attached to the changes in business and household behaviour. Consequently, the estimates of the macroeconomic impact of the combined Budgets shown above could be larger.

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17 In the October 2020 issue of the *Review*, EPG had estimated that Budget 2020 would boost Singapore's GDP by 4.8% in 2021. Based on the latest information from MOF, the macroeconomic effects of Budget 2020 were re-simulated and the impact on 2021 GDP has been revised downward slightly to 4.5%.

18 DBU non-bank deposits was used as a proxy for S$ deposits.

19 Auerbach, A J, Gorodnichenko, Y and Murphy, D (2020), "Inequality, Fiscal Policy and COVID-19 Restrictions in a Demand-determined Economy", *NBER Working Paper* No. 27366, September.

Table 4.2 Summary of key measures from Budget 2021

KEY BUDGET INITIATIVES IN FY2021
A. SHORT-TERM RELIEF

For Businesses and Workers

A1. Jobs Support Scheme

- Extended by up to six months at lower levels of support for firms in the harder-hit sectors.
- Firms in Tier 1 sectors (aviation, aerospace and tourism) to receive 30% wage support from April to June 2021 and 10% from July to September 2021.
- Firms in Tier 2 sectors (food services, retail, marine & offshore, and arts & entertainment) to receive 10% wage support from April to June 2021.

A2. COVID-19 Recovery Grant

- Targeted assistance for lower- to middle-income employees and self-employed persons who lost their jobs or experienced significant income loss due to the outbreak.

A3. Aviation Support Package

- $870 million to preserve core capabilities and extend cost relief for airlines, ground handlers and cargo agents.

A4. Additional Support for Tourism Sector

- Set aside $200 million in FY2021 to fund SingapoRediscovers Vouchers announced in August 2020.

A5. COVID-19 Driver Relief Fund

- Eligible taxi and private hire car drivers will receive $600 per vehicle per month between January and March 2021 and $450 between April and June 2021.

A6. Arts and Culture Resilience Package and Sports Resilience Package

- $45 million for extensions and enhancements to packages supporting capability development and sector transformation in these sectors.

For Households and Community

A7. Household Support Package

- Additional $200 GST Voucher (GSTV) – Cash Special Payment for lower-income Singaporeans.
- One-off GSTV – U-Save Special Payment of additional 50% of the regular GSTV – U-Save for eligible households.
- Service and Conservancy Charges Rebate of 1.5 to 3.5 months in FY2021 for eligible households.
- Additional $200 top-up to the Child Development Account, Edusave Account or Post-Secondary Education Account per Singaporean child.
- $100 Community Development Council (CDC) vouchers for each Singaporean household for use at participating heartland shops and hawker centres.

A8. Scale-up of Community Link (ComLink)

- Roll out ComLink nationwide over the next two years to support 14,000 families with children who are staying in rental housing.

A9. Inclusive Support Programme Pilot

- Provide early intervention and early childhood services for children with developmental needs.

A10. Change for Charity Grant

- Matching of donations raised for ComChest through businesses from FY2021–25.
- Co-fund one-off development costs to integrate or enhance donation functions on businesses' payment platforms.

A11. Other Schemes to Encourage Philanthropy

- Extend 250% tax deductions for donations to IPCs by two years from 1 January 2022 to 31 December 2023 (inclusive).
- Extend the Business and IPC Partnership Scheme by two years from 1 January 2022 to 31 December 2023 (inclusive).
- Extend Tote Board's Enhanced Fund-raising Programme by a year until end-FY2021.
- Extend dollar-for-dollar matching for donations through ComChest's SHARE as One programme until FY2023.

B. MEASURES TO EMERGE STRONGER

Strengthening Economic Resilience

B1. Public Health and Safe Reopening

- $4.8 billion to maintain contact tracing and test capabilities, as well as safe distancing measures.

B2. Lower S Pass Sub-Dependency Ratio Ceiling (Sub-DRC)

- Manufacturing sector sub-DRC reduced from 20% currently to 18% from 1 January 2022 and 15% from 1 January 2023.

B3. Wage Credit Scheme

- Government to co-fund 15% of wage increments for Singaporeans earning up to $5,000 in 2021.

B4. Second Tranche of SGUnited Jobs and Skills Package ($5.4 billion)

- Extend hiring window for Jobs Growth Incentive (JGI) by seven months to end-September 2021 to support the hiring of 200,000 locals. ($5.2 billion)
- More wage support (of up to 18 months) under the JGI for firms hiring mature workers, persons with disabilities and ex-offenders.
- Extend SGUnited Skills, SGUnited Traineeships and SGUnited Mid-Career Pathways Programmes with recalibrated parameters to provide up to 35,000 traineeship and training opportunities for workers looking to upskill and find new jobs.

B5. Capability Transfer Programme

- Extended to end-September 2024 to facilitate transfer of skills from foreign specialists to locals.

B6. New Innovation and Enterprise Fellowship Programme

- 500 Fellowships to meet talent needs in areas such as cybersecurity, artificial intelligence and health tech.

Investment, Innovation and Digital Transformation

B7. Pilot Corporate Venture Launchpad

- Co-fund new ventures built through pre-qualified venture studios.

B8. Open Innovation Platform

- Facilitate matching of problems faced by companies and public agencies with solution providers, and co-fund prototyping and development.
- New features, e.g., cloud-based Digital Bench for accelerated virtual prototyping and testing.

B9. Enhanced Global Innovation Alliance

- Co-innovation Programme to support up to 70% of qualifying costs for cross-border innovation and partnership projects.

B10. Enterprise Financing Scheme – Venture Debt

- Cap on loan quantum raised to $8 million, from $5 million

B11. Digital Leaders Programme

- Support promising firms in hiring core digital team and in developing and implementing digital transformation roadmaps.

B12. Chief Technology Officer-as-a-Service Initiative

- Provide access to professional IT consultancies to help firms identify and adopt digital solutions

B13. Co-invest in Local Enterprise Funding Platform

- Platform to invest in non-control equity and mezzanine debt of selected large local enterprises which are willing to work with fund managers to pursue next phase of growth.

B14. Emerging Technology Programme

- Co-fund trials and adoption of frontier technologies like artificial intelligence and trust technologies.

B15. Growth and Transformation Scheme for Built Environment Sector

- Digitalise processes and upskill workers throughout the entire value chain.

Sustainable Development

B16. Agri-Food Cluster Transformation Fund

- $60 million to support technology adoption in the agri-food sector.

B17. Encouraging Electric Vehicle (EV) Adoption

- Enhance affordability of EVs through lowering Additional Registration Fee floor to $0 from January 2022 to December 2023.
- Reduce road tax payable for EVs to match internal combustion engine models for similar make.
- Increase EV charging points to 60,000 at public carpark and private premises by 2030.
- $30 million to be utilised for EV-related initiatives over the next five years, e.g., measures to improve charging provisions at private premises.

B18. Higher Petrol Duty

- Raise duty by 15 cents and 10 cents per litre for premium and intermediate grade petrol, respectively.

B19. Rebates to Offset Higher Petrol Duty

- One-year road tax rebate for all motorcycles (60%), taxis and passenger cars using petrol (15%) and goods vehicles and buses using petrol (100%) with effect from 1 August 2021.
- Additional $50 or $80 in cash for motorcycles up to 400cc, depending on engine capacity.
- Additional $360 Petrol Duty rebate for active taxi and private hire car drivers using petrol and petrol-hybrid vehicles.

B20. Green Financing

- Issue up to $19 billion green bonds for public sector infrastructure projects in the coming years.
- Attract green issuers, capital and investors to our financial hub and deepen green bonds market liquidity.

C. FISCAL SUSTAINABILITY

C1. Extend GST Coverage to Imported Low-value Goods

- Overseas supplies to be subjected to the same GST treatment as local supplies from 1 January 2023 to ensure level playing field for local businesses.

C2. Significant Infrastructure Government Loan Act (SINGA)

- Government to issue new bonds under SINGA to finance major, long-term infrastructure, up to a borrowing limit of $90 billion.

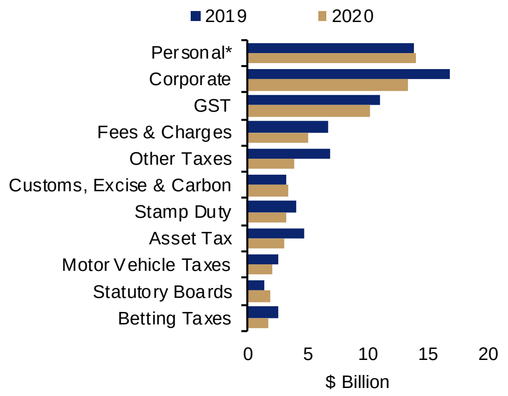
Source: MOF

Government operating revenue contracted sharply in CY2020

In CY2020, government operating revenue fell by a record $13.2 billion to $62.1 billion (13.2% of GDP). Most revenue categories declined, as the endogenous response to the steep contraction in economic activity was reinforced by discretionary government relief measures to cushion the impact of COVID-19 on firms **(Chart 4.13)**. Notably, Corporate Income Tax collection decreased significantly from $16.9 billion to $13.4 billion in 2020, in part due to the rebates and deferments granted under Budget 2020 to ease businesses' cash flows. Likewise, "Other Taxes" shrank from $6.9 billion to $3.9 billion partly reflecting Foreign Worker Levy waivers. The reduction in Asset Taxes was partially on account of the Property Tax rebates for commercial and industrial properties, which landlords were required to pass on to tenants.

Chart 4.13 A weak economy and COVID-19 relief measures led to a drop in operating revenue

Operating revenue by source

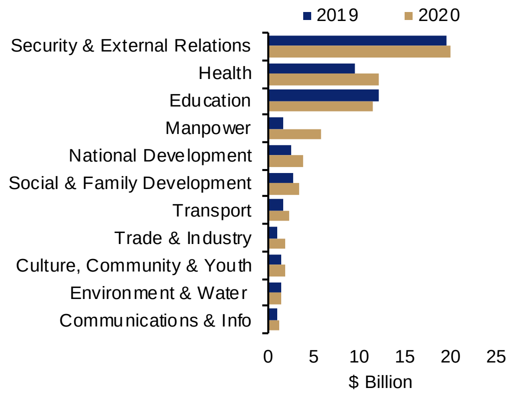


Source: MOF

* Includes withholding tax

Chart 4.14 Operating expenditure was boosted by pandemic-related outlays

Operating expenditure by sector



Source: MOF

COVID-19 led to a surge in operating expenditure while development expenditure fell

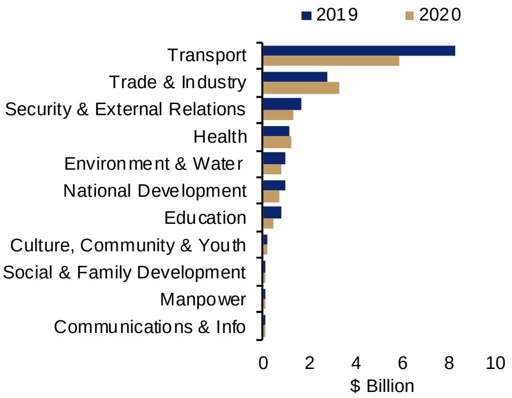
Total government expenditure rose by $7.5 billion to $83.5 billion (17.8% of GDP) in 2020 driven by a sharp rise in operating expenditure, while development expenditure decreased.

Operating expenditure (which includes expenses on manpower, operating grants and subventions to statutory boards and other organisations) amounted to $68.7 billion (14.6% of GDP) in 2020, $10.7 billion higher than 2019. The increase was largely driven by pandemic-related spending. In particular, the Ministry of Manpower saw a $4.1 billion increase in operating expenditure due to efforts to support workers, create jobs and manage the outbreak in foreign worker dormitories **(Chart 4.14)**. Greater demand for healthcare services, as well as higher funding for public and private healthcare facilities under the Healthcare 2020 Masterplan, also led to a $2.5 billion rise in operational outlay by the Ministry of Health. Meanwhile, the Ministry of National Development spent $1.4 billion more in 2020, primarily to address the need for COVID-19-related facilities and works.

Development expenditure, which comprises investment in capital assets such as buildings and roads, fell to $14.9 billion (3.2% of GDP) in 2020, from $18.1 billion in 2019. The reduction in spending was mainly caused by delays in construction projects imposed by public health measures **(Chart 4.15)**. Lower construction spending was partially offset by higher development expenditure from the Ministry of Trade and Industry, in part consisting of spending to strengthen Singapore's supply resilience in response to COVID-19.

Chart 4.15 Development expenditure contracted due to postponements in construction work

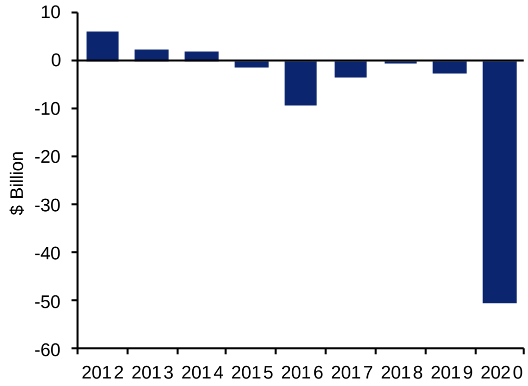
Development expenditure by sector



Source: MOF

Chart 4.16 The basic deficit in CY2020 was the deepest on record

Government basic balance



Source: MOF

The government's primary and basic deficit increased

The sharp decrease in operating revenue and the rise in total expenditure together led to a considerable increase in the primary budget deficit to $21.4 billion (4.6% of GDP) in 2020, compared to $0.7 billion in 2019 **(Table 4.3)**.

Special transfers, excluding top-ups to endowment and trust funds, rose by an unprecedented $27.5 billion to $29.2 billion in 2020, on the back of government support for workers, households and businesses that had been badly affected by COVID-19. Wage subsidies for firms under the JSS and cash transfers to individuals under the Care and Support Package – Cash Payout and Workfare Special Payment accounted for the bulk of the special transfers.

The government's basic balance, which takes into account the primary balance and special transfers to households and firms (not including top-ups to endowment and trust funds), posted a record deficit of $50.6 billion (10.8% of GDP) in 2020, compared to the deficit of $2.5 billion the year before **(Chart 4.16)**.

Table 4.3 Budget summary (calendar-year basis)

	CY2019		CY2020	
	$ Billion	% of GDP	$ Billion	% of GDP
Operating Revenue	75.3	14.7	62.1	13.2
Total Expenditure	76.0	14.9	83.5	17.8
Primary Surplus (+) / Deficit (−)	−0.7	−0.1	−21.4	−4.6
Less: Special Transfers (excluding top-ups to endowment/trust funds)	1.7	0.3	29.2	6.2
Basic Surplus (+) / Deficit (−)	−2.5	−0.5	−50.6	−10.8

Source: MOF