

4 Macroeconomic Policy

Macroeconomic Policy Stance Appropriate amid Restructuring

MAS reaffirmed its policy of a modest and gradual appreciation of the S\$NEER policy band in October 2014, which has been in place since April 2012. This policy was assessed to be appropriate for containing inflationary pressures. The monetary policy setting was carefully calibrated to allow some of the relative cost adjustments associated with restructuring to filter through, while ensuring that domestic inflationary pressures do not become entrenched or widespread in the economy.

Meanwhile, fiscal policy has had a more direct bearing on the longer-term structural and social goals for the economy. The measures in Budget 2014 continued to provide support to businesses as they seek to transform their operations and enhance productivity, specifically through greater incentives for small and medium enterprises to adopt infocomm technology, and more tax incentives for firms to undertake R&D activities. In addition, the government continued to set aside significant resources to assist the vulnerable groups in society, such as those with lower incomes, the elderly, and the disabled, with the aim of building a more equitable society. Budget 2014 also sought to recognise the contributions of the pioneer generation to the country, by providing them with additional healthcare benefits for life.

Overall, the continuation of the modest and gradual appreciating path for the exchange rate policy band, together with a slightly expansionary fiscal policy stance, is assessed to be appropriate at this juncture, given the prevailing growth and inflation dynamics in the economy.

4.1 Monetary Policy

S\$NEER Policy Band Kept on Modest and Gradual Appreciation Path

Since the last policy review in April 2014, the global economy has generally improved, albeit unevenly. The Singapore economy is projected to grow at a moderate pace for the rest of 2014 and in 2015, as structural factors will constrain the extent to which the domestic economy benefits from the cyclical uplift in the US. Meanwhile, notwithstanding the fall in CPI-All Items inflation, MAS Core Inflation is likely to remain firm in the near term, given sustained wage pressures amid the tight labour market as well as higher prices of food imported from the region. MAS has assessed that the balance of risks remains tilted towards higher core inflation at this juncture and has decided, therefore, to keep the S\$NEER policy band on a modest and gradual appreciation path in October 2014, with no change to its slope, width or the level at which it is centred.

The monetary policy stance adopted since April 2012 was maintained in April and October this year, in view of continuing inflation risks.

Following growth of 3.9% in 2013, the Singapore economy lost momentum in Q1 2014. Manufacturing and trade-related activities turned sluggish in line with muted demand for Singapore's exports, mainly due to weather-related disruptions in the US and soft patches in China and the Eurozone. Growth in the financial services sector also slowed, as risk aversion rose amid the tapering of asset purchases by the US Federal Reserve and geopolitical stresses in Ukraine. However, beyond the temporary factors weighing on growth, external demand was expected to increase on aggregate, while activity in the domestic-oriented sectors was projected to stay firm. Consequently, the labour market was expected to remain at full employment, and core inflation was anticipated to pick up over the rest of 2014, despite the benign outturn in Q1.

Accordingly, MAS announced in April 2014 that it would keep the S\$NEER policy band on a modest and gradual appreciation path, with no change to its slope, width, or the level at which it was centred. This policy stance was deemed appropriate for containing imported and domestic inflationary pressures and ensuring medium-term price stability.

Although geopolitical risks subsequently intensified in Ukraine in mid-2014, the financial markets were relatively calm. Led by the rebound in the US economy, Singapore's major trading partners continued to experience fairly firm growth on aggregate. However,

despite these benign external conditions, the Singapore economy subsequently lost further momentum, with GDP contracting by 0.1% q-o-q SAAR in Q2 before recovering slightly by 1.2% in Q3 2014. A number of factors will continue to constrain domestic economic activity and the extent to which Singapore's trade-related sectors can ride on the cyclical uplift in external demand over the near term.

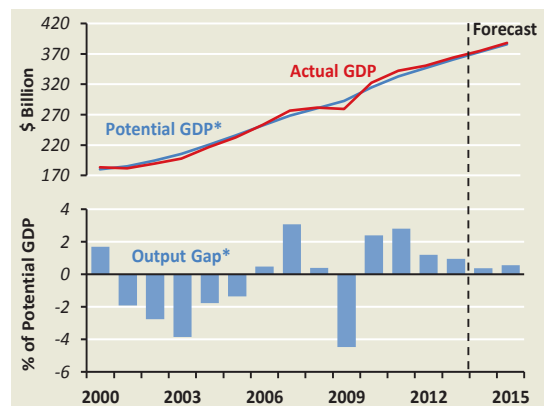
First, supply constraints and falling product prices have prompted some manufacturing firms to reconfigure their operations, weighing on current and future levels of output. Second, the profile of global growth is uneven, and persistent softness in the Eurozone and Chinese economies could further dampen global commodity prices and related wholesale and trade-financing activities. Third, although the domestic-oriented healthcare and education services sectors will see resilient demand, other services facing strong competition and wage increases will experience profit margin squeeze, which will cap the extent to which they can expand output.

On balance, Singapore's GDP is projected to grow by 2.5–3.5% in 2014, and maintain at a broadly similar pace next year. Against the backdrop of high levels of resource utilisation, the output gap should remain slightly positive in 2014 and 2015.¹ (Chart 4.1)

Domestic core inflationary pressures will stay relatively firm, as the tight labour market continues to support wage increases. At the same time, domestic food prices, which have already risen amid the higher cost of food imports from the region due to supply disruptions, could creep up further. Businesses in food-related sectors, and labour-intensive services, where demand remains firm and labour constraints are most binding, are thus likely to pass on the higher costs to consumers. MAS Core Inflation is thus projected to rise gradually into early 2015 before easing in the latter half of the year. For the full year, MAS Core Inflation is forecast at 2–2.5% in 2014 and 2–3% in 2015.

Imputed rentals on owner-occupied accommodation are expected to ease further as more new housing units are completed in the year ahead. Private road transport costs should also moderate in tandem with the expected increase in COE supply, given a larger

Chart 4.1
Real GDP and the Output Gap



* EPG, MAS estimates.

¹ EPG's estimate of Singapore's output gap is derived from a weighted average of three methods—a structural vector autoregression (SVAR) approach using the Blanchard-Quah decomposition, the Friedman variable span smoother and a simple univariate Hodrick-Prescott filter.

number of vehicle de-registrations. Together, these factors will dampen overall inflationary pressures. CPI-All Items inflation is now projected to come in at 1–1.5% in 2014, given the recent weakness in car prices. It is forecast to be 0.5–1.5% in 2015, reflecting also the impact of muted housing rentals.

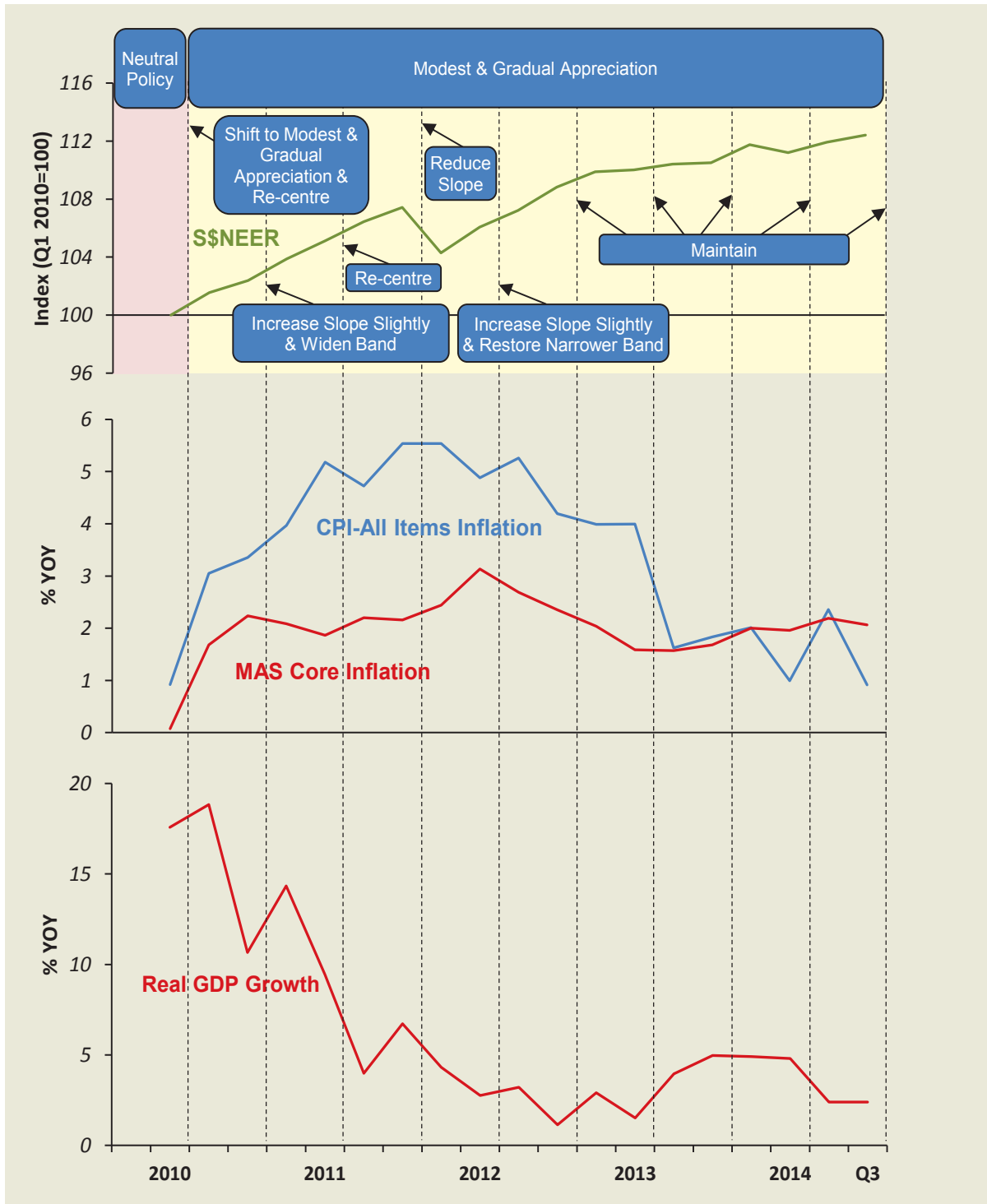
In sum, aggregate demand in Singapore is expected to rise in line with the recovery in the global economy. However, this will be capped by the ongoing restructuring in the domestic economy and the uneven growth in Singapore's major trading partners. In addition, existing constraints on aggregate supply, particularly labour, have resulted in higher business costs. Consequently, the Singapore economy is likely to grow at a moderate pace, while core inflation is expected to stay firm over the next few quarters.

Since the balance of risks remains slightly tilted towards higher core inflation, the prevailing monetary policy stance continues to be optimal in ensuring domestic price stability over the medium term. EPG's model simulations also show that adjusting the monetary policy stance at this juncture—for example, by reducing the slope of the policy band—would compromise price stability over the medium term with little material support given to short-term growth.

MAS therefore announced on 14 October 2014 that it would maintain a modest and gradual appreciation of the S\$NEER policy band, with no change to the slope, width, and level at which it is centred. This policy stance is appropriate for containing price pressures emanating from imported and domestic sources and for anchoring inflation expectations.

Chart 4.2 traces the longer-term evolution of monetary policy in relation to growth and inflation developments in the Singapore economy. As the economy enters a more advanced phase of restructuring in the period ahead, MAS will continue to monitor the impact of external developments and domestic restructuring on growth and inflation in Singapore.

Chart 4.2
Key Macroeconomic Variables and Changes in the Monetary Policy Stance



The S\$NEER has remained on an appreciation path since April 2014.

Since April 2014, the S\$NEER has continued on its modest and gradual appreciation path within the upper half of the exchange rate policy band. (Chart 4.3) Fluctuations in the trade-weighted exchange rate were significantly less during this period compared to Q1 2014.

This has, however, masked sharp swings in the bilateral exchange rates of the S\$. Since the last Monetary Policy Statement in April, the S\$ depreciated by 3.0% against the RMB as the PBOC allowed the currency to strengthen. The S\$ also fell by 1.7% against the US\$ amid the more positive outlook for the US economy and the prospects of an earlier-than-anticipated hike in the US Federal funds rate. In comparison, the S\$ strengthened by 7.6% against the Euro and 4.3% against the Japanese Yen as the ECB and BOJ continued to pursue expansionary unconventional monetary policies to support the tepid recovery in their respective economies. (Chart 4.4)

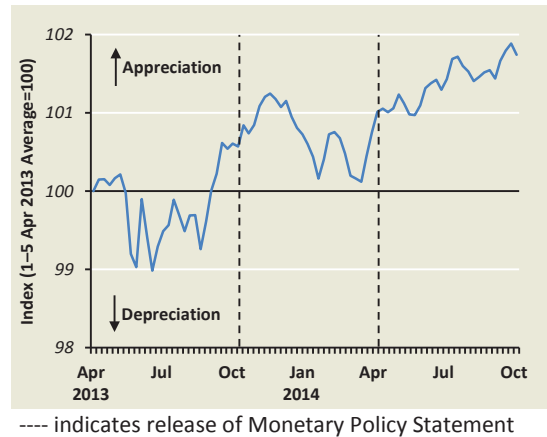
The CPI-deflated S\$REER strengthened since 2010, but depreciated slightly over the past two quarters.

The S\$ real effective exchange rate (S\$REER) is a measure of the prices of goods and services in Singapore relative to its trading partners, expressed in terms of a common exchange rate index, the S\$NEER.

Using the CPI as a deflator, the S\$REER appreciated by 16% between Q1 2010 and Q2 2014 due to the cumulative effects of a S\$NEER appreciation and stronger domestic inflation compared to abroad. (Chart 4.5) The appreciation was most rapid over 2010–12, following the sharp pickup in Singapore’s CPI-All Items inflation amid shortages in the supply of housing and COEs, as well as MAS’ policy of allowing the S\$NEER to strengthen to alleviate inflationary pressures and anchor inflation expectations.

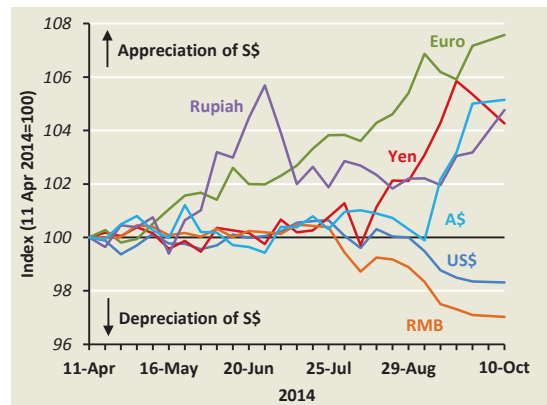
More recently, in Q1 2014, the S\$REER depreciated by 0.3% q-o-q and stayed flat in Q2 largely due to lower inflation in Singapore relative to abroad, as the supply constraints in housing and COEs eased. At the same time, the S\$NEER was, on average, unchanged over this period compared to Q4 2013, as the depreciation in Q1 subsequently reversed in Q2.

**Chart 4.3
S\$NEER**

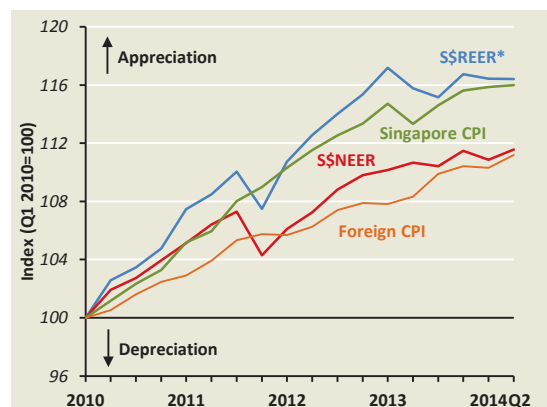


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**Chart 4.4
Singapore’s Bilateral Exchange Rates**



**Chart 4.5
Components of the S\$REER deflated by CPI**



* EPG, MAS estimates.

The depreciation of the S\$REER in H1 2014 was due to the fall in the price of tradable goods in Singapore.

The S\$REER can alternatively be decomposed into the external and internal S\$REER. The external S\$REER is derived by deflating the S\$NEER by the domestic price of tradable goods relative to the foreign price, in terms of a common reference currency. The internal S\$REER refers to the price of non-tradables relative to tradables in the domestic market compared to that abroad.

Since Q1 2010, the external S\$REER has depreciated by 0.2%. (Chart 4.6) While the price of tradables (as proxied by the wholesale price index) in Singapore rose from 2010 to early 2012, it corrected thereafter such that its level at Q2 2014 was barely changed from Q1 2010. Meanwhile, prices of tradables abroad generally rose over the same period. (Chart 4.7) The fall in the relative price of domestic tradables to that abroad was sufficiently large to outweigh the appreciation of the S\$NEER, resulting in the depreciation of the external S\$REER. In comparison, the internal S\$REER has broadly trended upwards, given the increase in the price of non-tradables to tradables in Singapore relative to abroad. This was in turn largely driven by the higher domestic prices of non-tradables.

In H1 2014, the external S\$REER depreciated by 2.3%. With the S\$NEER relatively unchanged, and the price of tradable goods abroad rising only marginally during this period, the depreciation of the external S\$REER was largely on account of the fall in the price of Singapore's tradable goods. This was also the main factor behind the 2.1% appreciation of the internal S\$REER in H1 2014, given that the domestic price of non-tradables rose only modestly and the relative price of non-tradables to tradables abroad was generally stable.

Liquidity conditions tightened from April to September 2014.

Overall liquidity conditions in the economy are captured by changes in the Domestic Liquidity Indicator (DLI), reflecting movements in the S\$NEER and the three-month S\$ SIBOR. Changes in the exchange rate continued to drive domestic liquidity conditions, given that interest rates have remained largely unchanged at low levels amid highly accommodative monetary policies in the advanced economies. (Chart 4.8)

Chart 4.6
External and Internal S\$REER

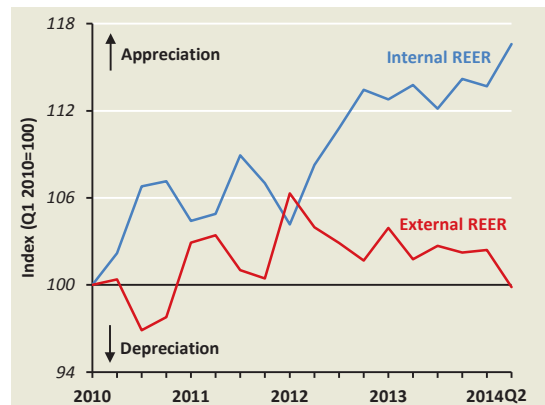


Chart 4.7
Components of the External and Internal S\$REER

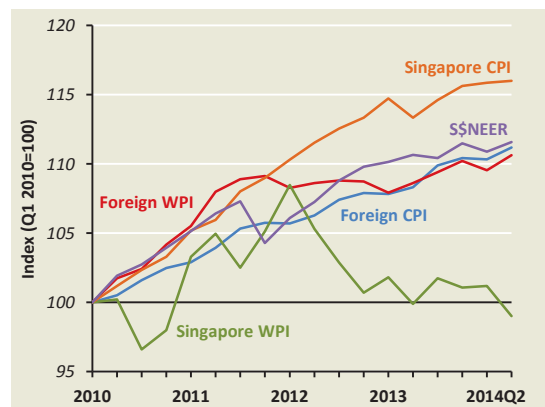
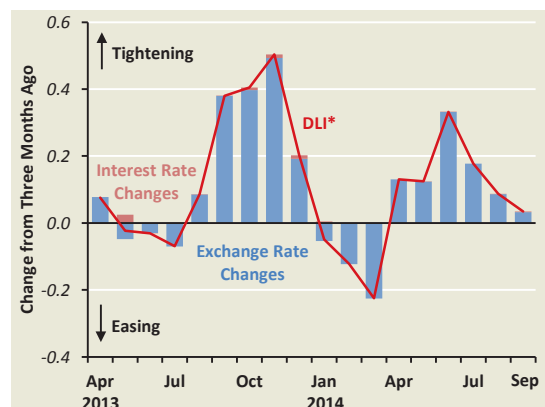


Chart 4.8
Domestic Liquidity Indicator



* EPG, MAS estimates.

Domestic liquidity conditions tightened from Apr–Sep 2014 in line with the broad strengthening of the S\$NEER. However, the extent of tightening has slowed since June given the more modest pace of S\$NEER appreciation.

Domestic interest rates were stable.

The three-month S\$ SIBOR has been at a premium over the three-month US\$ LIBOR since September 2012. (Chart 4.9) Over the first nine months of 2014, both the S\$ SIBOR and US\$ LIBOR remained broadly unchanged, averaging 0.41% and 0.23%, respectively. The interest rate differential thus held steady at 17 bps.

Both savings and fixed deposit rates have also been low. From Jan–Sep 2014, banks were, on average, offering savings deposit rates of 0.12% p.a. and 12-month fixed deposit rates of 0.32% p.a. (Chart 4.10) However, these board rates belie the significantly higher promotional rates² that banks were offering on deposit accounts in recent months, perhaps to attract fresh funds in anticipation of regulatory changes that will come into effect in 2015.³

When the US Federal Reserve begins to normalise the Federal funds rate, the S\$ SIBOR is likely to rise in tandem with US\$ interest rates. EPG’s empirical estimates show that retail deposit rates tend to systematically co-move with the S\$ SIBOR, and are thus also expected to increase over time.⁴ However, changes in the latter can take more than a year to be fully transmitted to the former. In addition, the extent to which a higher S\$ SIBOR is passed through to retail rates varies, with savings deposit rates typically rising by less than fixed deposit rates for a given increase in the S\$ SIBOR. The relationship between S\$ SIBOR and retail deposit rates may, however, be stronger than what the empirical estimates suggest, as the board retail rates used in the estimation do not adequately capture the higher interest rates that banks offer to large corporate depositors or on innovative deposit products.

Chart 4.9
Interbank Rates

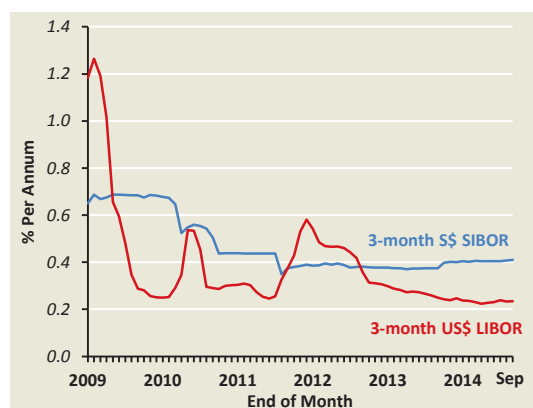
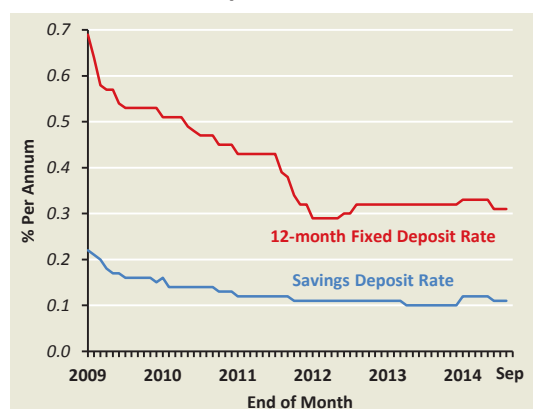


Chart 4.10
Deposit Rates



Note: Each line represents the simple average of the top 10 banks’ deposit rates.

² For example, OCBC was offering up to 3.05% p.a. on the 360 account linked to salary credit, bill payment and credit card usage, while Maybank was offering 1.35% p.a. for new 12-month fixed deposits of S\$50,000 and above.

³ In 2015, banks will have to implement the Basel III Liquidity Coverage Ratio rule requiring them to maintain a stock of high quality liquid assets at least equal to their projected total net cash outflows over the following 30 days, but they can apply a lower “run-off” rate when calculating outflows from stable retail deposits, such as fixed deposits or accounts into which salaries are paid.

⁴ For the methodology used here, see MAS (1999), “Interbank Interest Rate Determination in Singapore and its Linkages to Deposit and Prime Rates”, *MAS Occasional Paper* No. 16.

Money supply and credit growth has slowed.

Mirroring the sluggishness in the Singapore economy, money supply growth eased over the first half of the year. (Chart 4.11) M1 growth fell from 6.9% y-o-y in Q1 2014 to a trough of -0.8% in June due to shrinking demand deposits. (Chart 4.12) Likewise, M2 growth decelerated from a tepid 2.0% y-o-y in Q1 to a trough of -0.1% in May, while changes in M3 were broadly similar. The y-o-y decline in M2 was driven by the steep 8.1% fall in fixed deposits, primarily of non-bank financial institutions. Nevertheless, growth in money aggregates has since turned positive due, in part, to the improvement in the economy as well as banks' competition for fresh deposits.

Anecdotally, there is some evidence to suggest that the trend decline in demand and fixed deposit growth has mostly been driven by portfolio optimisation decisions by firms, including non-bank financial institutions. Given Singapore's relatively modest growth prospects, investors have shifted away from relatively lower-yielding S\$-denominated deposits and other investments towards higher-yielding foreign currency assets.

Growth in outstanding DBU non-bank loans moderated over the course of this year, to 12% y-o-y in August 2014 from 17% as at end-2013. (Chart 4.13) This was largely attributable to softer business loans which, in turn, reflected weaker demand for loans from firms in the external-oriented transport, storage & communications and manufacturing sectors. Meanwhile, the growth in consumer loans continued to ease steadily across all credit sub-segments. This was partly due to the cumulative effects of the macroprudential measures applied to property and motor vehicle loans, as well as the Total Debt Servicing Ratio framework.

Chart 4.11
Money Supply

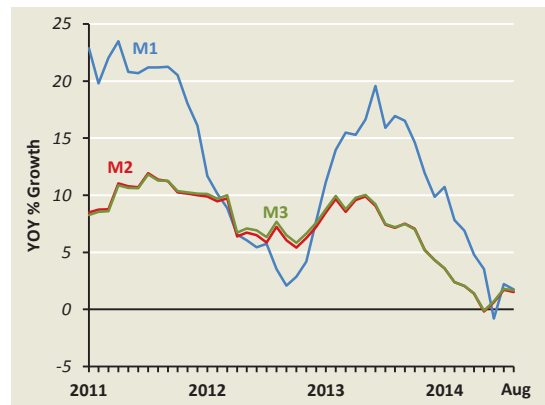


Chart 4.12
Components of the Money Supply

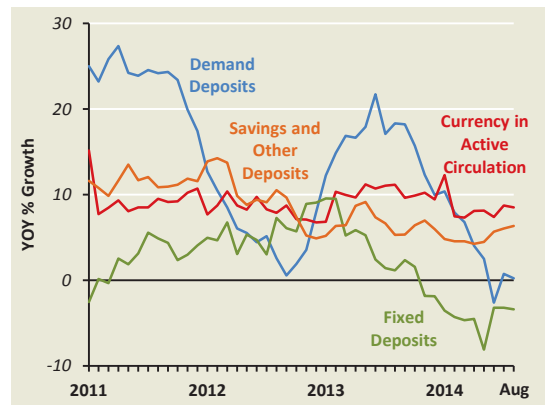
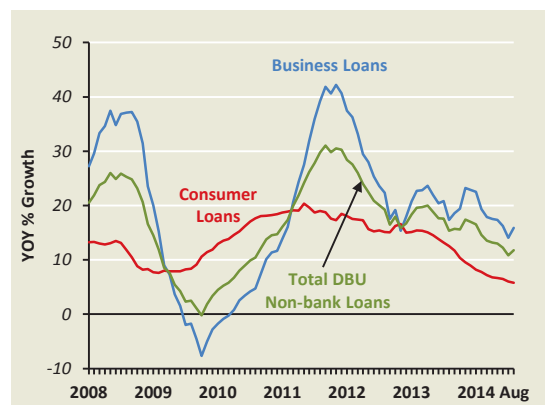


Chart 4.13
DBU Non-bank Loans



4.2 Fiscal Policy⁵

Facilitating Restructuring and Increasing Inclusiveness

Budget 2014 continued to focus on Singapore's restructuring initiatives by further sharpening the incentives for firms to invest and innovate, develop new markets, and reduce their reliance on labour in order to improve labour and total factor productivity. The Budget also placed significant emphasis on strengthening social safety nets and making healthcare affordable for Singaporeans. In particular, the Pioneer Generation Package (PGP) provided substantial benefits to ensure that the healthcare needs of the pioneer generation will be met. Overall, the fiscal policy stance for CY2014 is projected to be mildly expansionary compared to last year.

Budget 2014 reinforced the economic and social strategies set out in previous budgets.

Budget 2014 continued to support the transformation of the Singapore economy, by building on previous initiatives to sharpen firms' incentives to invest in fixed and human capital to enhance productivity and innovation. First, the Productivity and Innovation Credit (PIC) scheme⁶ was extended for another three years, while the introduction of the PIC+ scheme for SMEs increased the expenditure cap on firms' qualifying activities. Generous subsidies were also introduced for SMEs adopting ICT-based productivity solutions and for firms pioneering emerging technology solutions. Second, Budget 2014 sought to go beyond mere capital-deepening towards improving total factor productivity. To this end, the Budget introduced measures to encourage firms to innovate and develop new processes and markets. For example, government financing schemes were enhanced to improve lending to young SMEs and internationalising firms, to help them overcome the financing challenges that they face in expanding. The additional tax deduction on qualifying R&D expenditure was further extended for 10 years to incentivise more research and development.

Budget 2014 made key strides in strengthening social safety nets for the lower-income, elderly, and disabled. For example, lower- and middle-income Singaporean families were provided with higher subsidies at

⁵ This section is based on the calendar year (CY), not the fiscal year.

⁶ The PIC scheme was first introduced in Budget 2010, and provides businesses with 400% tax deductions on up to \$400,000 of qualifying expenditure per Year of Assessment (YA), for investment in each of the six qualifying activities. In lieu of a tax deduction, businesses can opt for a 60% cash payout on qualifying expenditure of up to \$100,000 per YA across the six activities. The six qualifying activities are (i) acquisition/leasing of IT and automation equipment; (ii) training of employees; (iii) acquisition/in-licensing of Intellectual Property Rights (IPRs); (iv) registration of qualifying IPRs; (v) R&D activities; and (vi) design projects approved by the DesignSingapore Council.

specialist outpatient clinics, as well as enhanced financial assistance for pre-school and tertiary education with the objective of improving social mobility. Support for the disabled and their families was also increased, through higher subsidies for early intervention programmes, new public transport subsidies, and enhanced handicapped dependant and parent reliefs. The PGP was the centrepiece of this year's budget, aiming to make healthcare more affordable for Singapore's pioneers⁷ by providing them with significant subsidies for outpatient care and MediShield premiums, as well as additional annual top-ups to their Medisave accounts.

The fiscal stance is expected to be mildly expansionary in 2014.

Taken as a whole, the fiscal policy stance, as represented by the Fiscal Impulse (FI) measure, is expected to be only mildly expansionary in CY2014, coming in at 0.8% of GDP. (Chart 4.14) The FI is a gauge of the initial stimulus to aggregate demand arising from fiscal policy, relative to the previous year. The small expansionary stance projected in 2014 reflects increases in infrastructure expenditure, as well as more transfers to businesses in the second year of the three-year Transition Support Package⁸ that provides temporary relief for firms amid increasing labour costs.

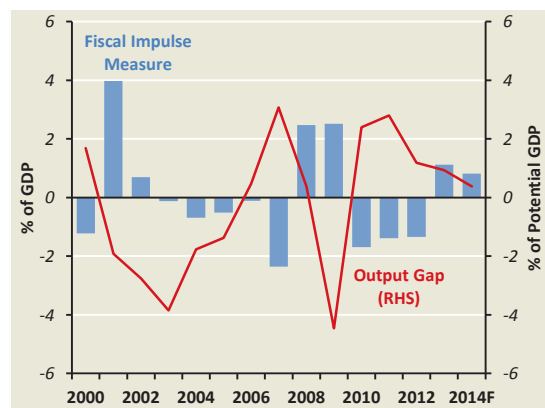
Government operating revenue increased slightly in H1 2014.

The following paragraphs review the government's budgetary position in the first half of CY2014 compared to the same period last year. Operating revenue rose slightly from \$29.1 billion in H1 2013 to \$29.4 billion (15.5% of GDP) in H1 2014. The government collected \$11.6 billion in income taxes, an increase of \$0.3 billion from that collected in the same period last year. The increase was due to statutory boards' contributions in Q1 2014, which is a lumpy revenue item. This offset a slight decline in corporate and personal income tax receipts. Revenue from "other taxes" also increased by about \$0.5 billion, reflecting higher foreign worker levy collections resulting from increases in levy rates. (Chart 4.15) Meanwhile, GST collections showed a

⁷ Defined as those 65 years old or older in 2014 and who had obtained their citizenship before 1987.

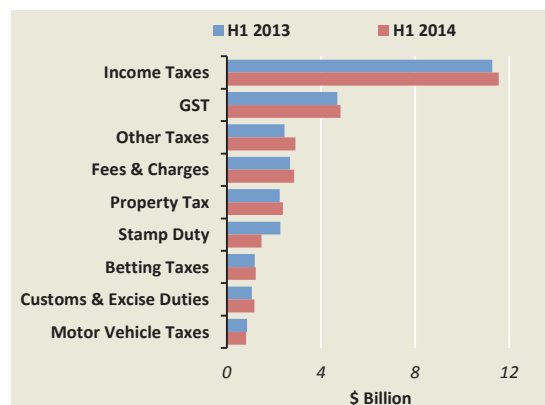
⁸ The three-year Transition Support Package, estimated at \$5.3 billion, comprises the Wage Credit Scheme, corporate income tax rebates, and the PIC Bonus.

Chart 4.14
Fiscal Impulse Measure



Source: EPG, MAS estimates

Chart 4.15
Selected Components of Operating Revenue



smaller increase of \$0.1 billion, as private consumption, especially on discretionary retail items, continued to be sluggish.

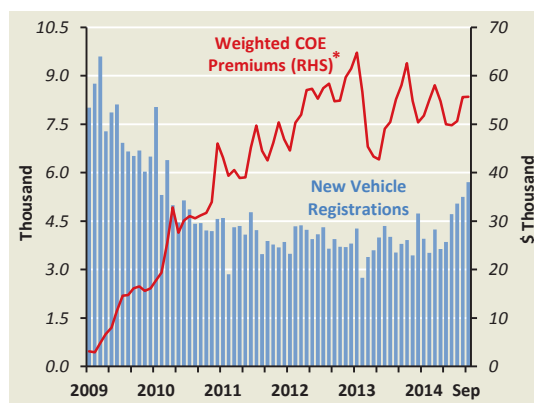
Total operating revenues in H1 2014 were also bolstered by increases in “fees & charges”, which mainly comprise COE receipts. While COE premiums remained relatively stable compared to the same period last year, the number of new vehicle registrations rose, supporting an overall increase in COE receipts. (Chart 4.16)

In comparison, receipts from stamp duty fell by \$0.8 billion, while property taxes rose slightly. The decline in the former was due to a sharp fall in housing transactions, while the latter held fairly steady as house prices moderated only slightly relative to transaction volumes. (Chart 4.17)

There were also increases in both operating and development expenditure.

Total government expenditure rose by \$0.6 billion to \$27.6 billion (14.6% of GDP) in H1 2014, reflecting higher spending on both operating and development items. Operating expenditure, which forms the bulk of total government expenditure, rose slightly from \$20.5 billion in H1 2013 to \$20.7 billion in H1 2014. This was due to higher spending on social and economic development⁹, which offset the decline in spending on security and external relations. (Chart 4.18) The Ministry of Education recorded a \$0.6 billion rise in operating expenses in H1 2014 compared to the same period last year, primarily due to the one-off provision of a seed endowment grant to the Singapore Institute of Technology, as well as higher matching grants for donations to the Institutes of Higher Learning. The Ministry of Health also increased its operating expenditure by \$0.4 billion, due to the expansion of patient subsidies as well as higher manpower costs. Annual healthcare operating expenditure more than doubled over the last five years, from \$2.3 billion (0.8% of GDP) in CY2008 to \$4.8 billion (1.3% of GDP) in CY2013. (Chart 4.19) The upward trajectory of healthcare expenditure is expected to continue into the longer term as Singapore’s population ages, resulting in greater demand for healthcare services.

Chart 4.16
COE Premiums and
New Vehicle Registrations



* Weighted by the COE quota of each category.

Chart 4.17
Residential Price Index and
Property Transaction Volumes

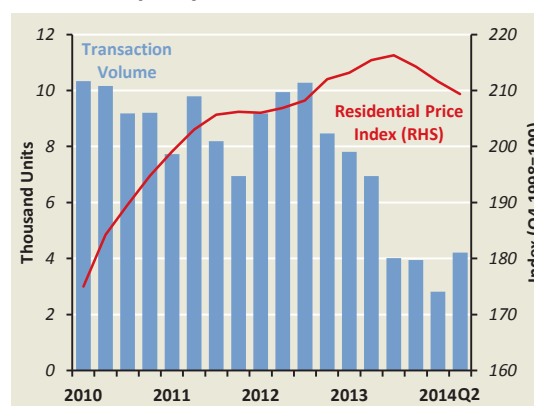
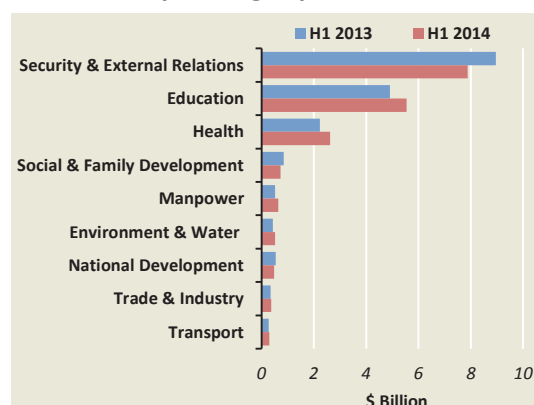


Chart 4.18
Selected Components of
Operating Expenditure



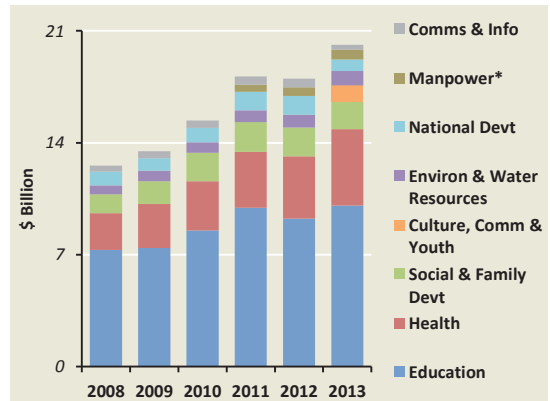
⁹ Social and economic development encompasses spending by the Ministry of Education, Ministry of Health, Ministry of Social and Family Development, Ministry of Culture, Community and Youth, Ministry of Communications and Information, Ministry of Environment and Water Resources, Ministry of National Development, Ministry of Trade and Industry, Ministry of Transport and Ministry of Manpower.

Meanwhile, development expenditure was \$6.9 billion in H1 2014, \$0.3 billion more than in the first half of last year. The bulk of the increase was attributable to the Ministry of Transport, due to rail projects such as the construction of the Downtown Line, the Tuas West Extension, and the Thomson-East Coast Line. (Chart 4.20) The Ministry of Health continued to incur higher development expenses for the construction, re-development and ICT implementation work of major healthcare infrastructure such as Ng Teng Fong General Hospital, Changi General Hospital Integrated Building and Yishun Community Hospital. The Ministry of Communications and Information fulfilled its infrastructure commitments in the Next Generation National Broadband network, as part of the Intelligent Nation 2015 masterplan to develop an advanced infocomm platform island-wide for enterprises and residences.

The government’s basic balance turned slightly negative, largely due to an increase in special transfers to businesses.

As the increase in expenditure exceeded that of operating revenue, the government’s primary balance fell slightly to \$1.7 billion in H1 2014, compared to \$2.0 billion a year ago. Over the same period, special transfers (excluding top-ups to endowment and trust funds) increased by \$1.0 billion. This largely reflected the disbursement of the first tranche of payouts from the Wage Credit Scheme (WCS)¹⁰ in Q1 2014, as well as higher take-up rates for the PIC scheme and disbursement of the PIC Bonus introduced under the Transition Support Package. Accordingly, the basic balance, which is the primary balance less special transfers, turned in a small deficit of \$0.1 billion, reversing the \$1.1 billion surplus in H1 2013. (Chart 4.21)

Chart 4.19
Total Operating Expenditure on Social Development



* Refers to expenditure of the Financial Security for Singaporeans programme, under the Ministry of Manpower.

Chart 4.20
Selected Components of Development Expenditure

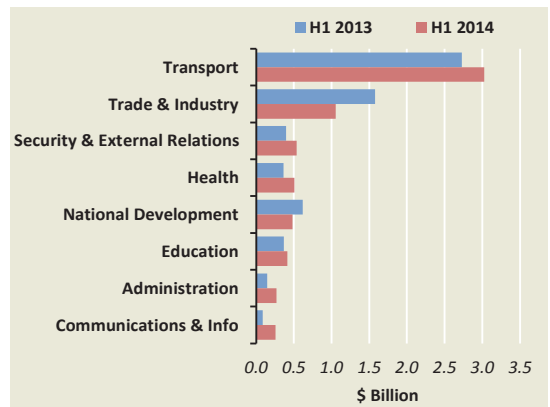
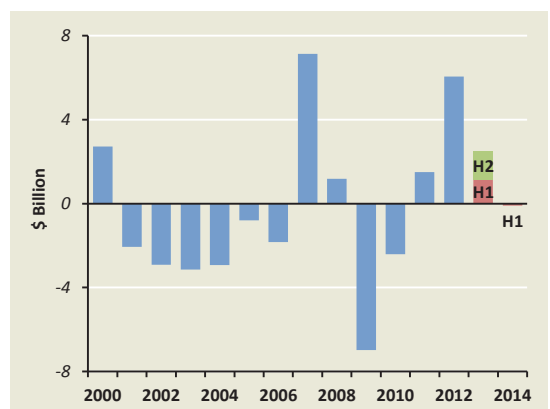


Chart 4.21
Government’s Basic Balance



¹⁰ Under the WCS, the government will co-fund 40% of the annual wage increases for Singaporean employees earning up to a gross monthly wage of \$4,000, from 2013 to 2015, thereby directly reducing firms’ remuneration bills.

Box C

Review of MAS Money Market Operations in FY2013/14^{1/}

This Box reviews MAS' money market operations in FY2013/14. Money market operations are undertaken to manage liquidity within the banking system, and are distinct from the implementation of exchange rate policy. More information may be found in the monograph on "Monetary Policy Operations in Singapore" published in March 2013.

This Box first describes how money market operations are conducted. This is followed by a review of banks' demand for cash balances with MAS and the behaviour of autonomous money market factors in FY2013/14. Finally, the Box examines the composition of money market operations carried out during this period.

Money Market Operations in Singapore

The open-economy trilemma posits that a country that maintains an open capital account cannot simultaneously manage its exchange rate and domestic interest rates. Thus, Singapore's open capital account and exchange rate-centred monetary policy imply that its domestic interest rates and money supply are necessarily endogenous. MAS' money market operations are therefore not targeted at any level of interest rate or money supply; instead, they are aimed at ensuring that there is sufficient liquidity in the banking system to meet banks' demand for reserve and settlement balances.

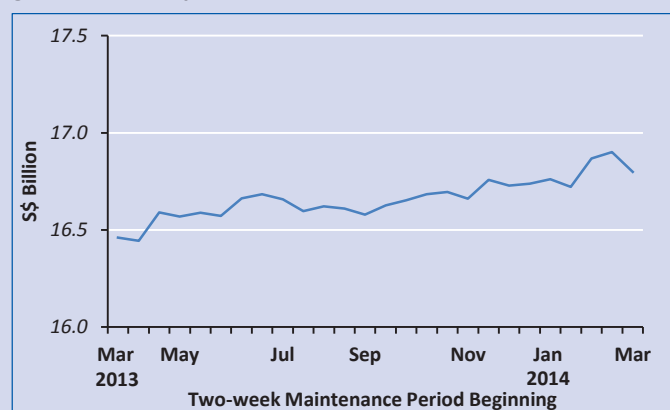
Money market operations are conducted daily by the Monetary & Domestic Markets Management Department at MAS. The amount of liquidity in the banking system is estimated by taking into consideration the banking sector's demand for funds and the net liquidity impact of autonomous money market factors. After carrying out money market transactions, MAS monitors market and liquidity conditions throughout the day.

Banks' Demand for Cash Balances

Banks hold cash balances with MAS to meet reserve requirements and for settlement purposes. Banks in Singapore are required to maintain with MAS a Minimum Cash Balance (MCB) equivalent to 3% of their liabilities base on a two-week average basis. This forms a base demand for cash balances. Banks also hold cash balances for settlement and regulatory purposes. Hence, the total demand for reserve balances could vary across periods as banks hold excess cash balances to make large payments (settlement purposes), or to use as high quality liquid assets (regulatory purposes). Since the financial crisis, there has been a tendency for banks to hold slightly more liquidity in the form of central bank reserves.

In FY2013/14, banks' demand for balances to meet reserve requirements increased, reflecting a growing liabilities base and rising bank intermediation activity. (Chart C1)

Chart C1
Average Reserve Requirements over Two-week Maintenance Periods

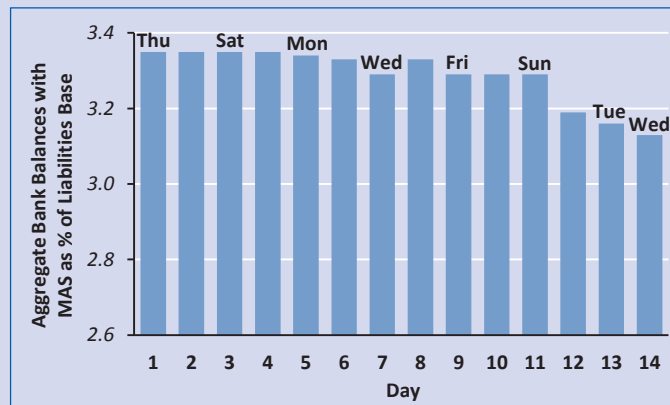


^{1/} This Box is contributed by the Monetary & Domestic Markets Management Department of MAS.

Although banks are required to keep an average MCB ratio of 3% over the two-week maintenance period, their daily effective MCB ratios may fluctuate between 2% and 4% of their liabilities base, allowing them more flexibility in their liquidity management. Hence, there may be day-to-day variations in banks' demand for cash balances with MAS within each maintenance period.

Chart C2 illustrates the daily fluctuations in cash balances within an average maintenance period in FY2013/14. As the chart shows, banks tend to maintain higher cash balances at the start of a maintenance period so as to avoid being caught short of cash towards the end of the period. Hence, the daily cash balances required by the banking system during the last few days of a maintenance period are usually lower.

Chart C2
Daily Effective Cash Balances as % of Liabilities Base over a Typical Two-week Maintenance Period in FY2013/14

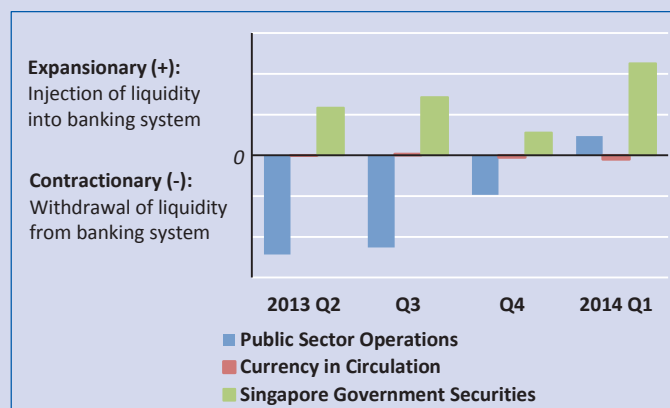


Money Market Factors

Chart C3 shows the liquidity impact of each of the autonomous money market factors, which include (i) public sector operations, (ii) currency in circulation, and (iii) Singapore Government Securities (SGS) and Treasury Bills (T-bills) issuance, redemption and coupon payments, over FY2013/14. Public sector operations include Government's and CPF Board net transfers of funds between their accounts with MAS and their deposits with commercial banks.

In FY2013/14, the liquidity impact of the autonomous money market factors was neutral. The impact of public sector operations was net contractionary, and this was offset by the expansionary impact from SGS and T-bills, arising from the gradual reduction in T-bill issuances over FY2013/14. The liquidity impact of currency in circulation was negligible.

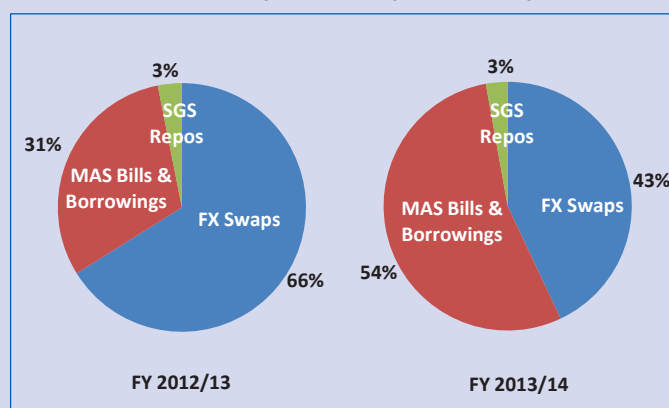
Chart C3
Liquidity Impact of Autonomous Money Market Factors



Composition of Money Market Operations

MAS relied on four instruments to inject liquidity into, and withdraw liquidity from, the banking system in FY2013/14, namely, (i) FX swaps; (ii) SGS repos; (iii) clean lending or borrowing; and (iv) MAS Bills. The total outstanding issuance of MAS Bills has grown to S\$74.4 billion in FY2013/14, up from S\$37.2 billion in FY2012/2013. Correspondingly, the share of FX swaps in the total MMO instruments has fallen to 43% in FY2013/14 from 66% in the preceding financial year. (Chart C4) A substantial amount of FX swaps was accumulated by MAS during 2009–11, when there were strong capital inflows into Singapore amid the exceptional monetary policy easing in the major advanced economies. With the introduction of MAS Bills, MAS has accordingly reduced the amount of FX swaps.^{2/}

Chart C4
Distribution of Money Market Operations by Instrument



^{2/} Nevertheless, FX swaps continue to be a useful instrument for MAS money market operations. In deciding on the size of outstanding FX swaps, MAS would consider the implications for USD funding and SGD liquidity conditions, and the impact arising from capital flows.