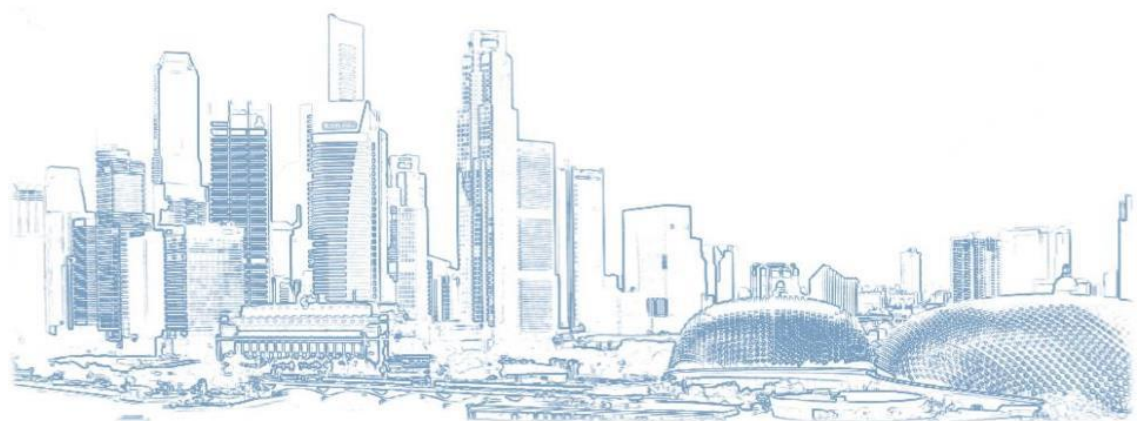


Economics Explorer Series

Monetary Authority of Singapore

1



MONETARY AUTHORITY OF SINGAPORE

A brief history of MAS, its roles and functions as well as its organisation structure.

Brief History of MAS

Prior to 1971, the various monetary functions associated with a central bank were performed by several government departments and agencies in Singapore. As the country progressed, the demands of an increasingly complex monetary and banking environment necessitated a re-organisation and consolidation of functions, in order to facilitate the development of more dynamic and coherent policies on monetary and financial matters. In 1970, Parliament passed the Monetary Authority of Singapore Act, by which MAS came into being with the necessary powers to carry out its functions.

MAS officially began operations on 1 January 1971, with the authority acting as a banker to and financial agent of the Singapore government. MAS was also entrusted with the mandate to promote monetary stability, and formulate credit and exchange rate policies conducive to the growth of the economy. In 1977, the government decided to bring the regulation of the insurance industry under the wing of MAS. The regulatory functions under the Securities Industry Act (1973) were also transferred to MAS in 1984. Following its merger with the Board of Commissioners of Currency, Singapore (BCCS) on 1 October 2002, MAS further assumed the function of currency issuance.

Currency Issuance

The Board of Commissioners of Currency, Singapore (BCCS) was established as the sole currency issuing authority in Singapore by the enactment of the Currency Act on 7 April 1967. BCCS issued the first Singapore currency, the “Orchid” series notes, on 12 June 1967 under a currency board system that had three main features: it fixed the exchange rate between the Singapore dollar and a specified foreign currency, allowed domestic notes and coins to be fully convertible at the relevant fixed exchange rate, and backed the Singapore currency fully by foreign assets or gold. In June 1973, the Singapore dollar was allowed to float and Singapore began to evolve from the currency board system. At present, only one feature of the system remains – the full backing of the currency-in-circulation by external assets, as required under the Currency Act.

By 2001, confidence in the Singapore dollar had become sufficiently entrenched that the need to divorce the central bank from the function of issuing currency was no longer seen as relevant. On 1 October 2002, BCCS merged with MAS, making MAS a full-fledged central bank. The merger increased efficiency and eliminated duplicate functions without compromising the objective of managing the currency and maintaining confidence in the Singapore dollar. All currency in circulation continued to be backed at least 100 per cent by external assets. Today, MAS is the sole authority that issues Singapore notes and coins.

Through these expansions over the years, MAS today carries out the roles that are played by multiple organisations in other countries. It is a unique organisation in having a number of key functions under one roof.

Main Functions of MAS

MAS' mission is two-fold: to promote sustained non-inflationary economic growth, and a sound and progressive financial centre.

To carry out this mission, MAS performs four core functions:

1. To **conduct monetary policy**. MAS aims to maintain price stability conducive to sustained economic growth.
2. To **manage the official foreign reserves** of Singapore. MAS seeks to ensure prudent and effective management of the reserves.
3. To **supervise the financial sector**. MAS seeks to ensure systemic financial stability, keep financial institutions sound and protect consumers.
4. To **develop the financial sector**. MAS promotes Singapore as an internationally competitive financial centre.

Monetary Policy

In conducting monetary policy, MAS aims to “maintain price stability conducive to sustainable growth of the economy”.

The importance of price stability, which in practice means low and stable inflation, stems from theoretical considerations as well as empirical evidence that it is a necessary condition for sustainable economic growth. When there is price stability, movements in the relative prices of goods and services can serve as clear signals to consumers, businesses and the government to help them allocate resources efficiently. Price stability also encourages saving and investment as it prevents the value of assets from being eroded by unexpected inflation.

Since 1981, Singapore's monetary policy has been centred on using the exchange rate to ensure that inflation remains low and stable over the medium term. This is because the exchange rate is the most effective tool for controlling inflation, given the small size and the openness of the Singapore economy. (See box below and *Economics Explorer* No. 2)

MAS does not manage the Singapore dollar (S\$) exchange rate against the US dollar or any other single foreign currency. Instead, the S\$ exchange rate is managed against a basket of currencies of Singapore's major trading partners. This trade-weighted exchange rate is also known as the S\$ nominal effective exchange rate (S\$NEER). MAS periodically reviews and revises the composition of the basket, to take into account changes in Singapore's trade patterns. The S\$NEER is allowed to fluctuate within a policy band, which helps to accommodate short-term fluctuations in the foreign exchange market and provides MAS some flexibility in managing the S\$NEER. The parameters of the S\$NEER policy band – its crawl (or rate of appreciation), the level at which it is centred, and the width of the policy band – are reviewed every six months to ensure that the broad trajectory of the S\$NEER, as established by the band, remains consistent with underlying economic conditions.

The Exchange Rate-centred Monetary Policy Framework

The choice of an exchange rate-centred monetary policy is influenced by Singapore's small size and high degree of openness to trade flows. Singapore's lack of natural resources means that the country has to import even the most basic daily essentials. In fact, out of every \$1 spent in Singapore, 40 cents go to imports. In addition, because of its small size, Singapore is a price-taker in world markets. This in turn implies that domestic prices are very much influenced by foreign prices. Foreign price increases in food commodities for example, will lead to higher domestic prices of non-cooked and cooked food, which can be mitigated by an appreciation in the exchange rate.

Besides its direct impact on the price of imports, the exchange rate can also affect domestic costs and price pressures indirectly. Changes in the exchange rate will, in the short run and in the presence of cost and price rigidities, have an impact on real aggregate demand. In turn, this will affect the demand for domestic resources, especially labour. For example, a weaker exchange rate can lead in the short term to stronger aggregate demand for Singapore's goods and services. However, given the supply constraints of land and labour in a small country like Singapore, an increase in the demand for factors of production would raise domestic wages and other business costs. This would cause inflation to increase, thus compromising price stability, and erode any temporary gains in competitiveness from the weaker exchange rate.

Reserve and Monetary Management

As the central bank of Singapore, MAS manages the country's Official Foreign Reserves (OFR). OFR is held to maintain confidence in Singapore's exchange rate-based monetary policy framework, and support the proper functioning of financial

markets, thus ensuring macroeconomic stability. Specifically, they are used:

- For intervention in foreign exchange markets to implement the monetary policy stance; and
- To meet balance of payments financing needs in a crisis.

The reserves allow MAS to lean against exchange rate pressures that drive the S\$NEER away from a level consistent with domestic price stability. They also provide important buffers for the significant short-term external liabilities in Singapore's international banking system arising from its position as a global financial centre.

Subject to providing for the two needs listed above, MAS also seeks to achieve good, sustainable returns over the long term. To achieve this, the foreign assets underlying OFR are invested prudently in a well-diversified portfolio. The portfolio is spread across advanced and emerging market economies, with investment-grade bonds in the advanced economies comprising the largest allocation. Diversification across markets, assets and currencies helps to enhance the resilience of MAS' portfolio to varying market conditions.

To manage liquidity in the banking system, MAS conducts money market operations (MMO). In addition to providing a sufficient amount of liquidity in the banking system to meet banks' demand for precautionary and settlement balances, the objective of MMOs is also to mitigate interest rate volatility, even as MAS does not target any level of domestic interest rates, given its exchange rate policy framework.

As the fiscal agent to the government, MAS issues Singapore Government Securities (SGS) and administers the issuance programme on behalf of the Singapore government. SGS comprise SGS Bonds, Treasury Bills and Singapore Savings Bonds (SSB). SGS Bonds and Treasury Bills are issued to provide a robust government yield curve for the pricing of private debt securities, foster the growth of an active secondary market for efficient risk management, and encourage issuers and investors to participate in the Singapore bond market. SSB are a special type of Government Securities issued for individual investors, as a safe way to save for the long term while providing the flexibility to exit at any time.

Financial Sector Supervision

A sound and progressive financial sector is a vital part of any modern economy. Apart from its direct and significant contribution to gross domestic product, the financial sector intermediates between savers and borrowers, mobilises and allocates financial resources efficiently, thereby enhancing economic growth and job creation. In addition to the key objective of maintaining financial stability, MAS seeks to promote a sound and progressive financial sector as a means to ensure success and resilience of the Singapore economy. MAS does this through both financial supervision and developmental initiatives (elaborated in the next section on “Financial Sector Development”).

MAS supervises the banking and insurance industries as well as the capital markets and payment systems. To fulfil the mission of promoting a sound and progressive financial sector, MAS seeks to achieve the following objectives of financial supervision:

(a) Stable financial system

Stability provides the basis for participants to trade in the financial markets and use the services of financial institutions with confidence. It is important for central banks to mitigate financial risks as financial crises have been shown to entail not only immediate but also persistent economic costs in terms of losses in output and employment. Following the global financial crisis in 2007, which arose from correlated exposures to credit and asset price bubbles, central banks including MAS have adopted macroprudential policies to address systemic risks to financial stability.

(b) Safe and sound intermediaries

The focus of much of MAS’ supervision is on the safety and soundness of financial intermediaries. The distress or collapse of key financial institutions, especially large banks, can have potentially damaging consequences for systemic stability and the economy. MAS actively encourages financial institutions to identify, monitor and mitigate the risks facing them. It is also deepening its data analytics capabilities, to enhance the effectiveness of its supervision, and to be able to understand and derive insights from a wealth of data.

Combating Money Laundering/Terrorism Financing and Cyber-attacks

A large amount of funds flows through Singapore's financial system, given its role as an international financial and business centre. Like any global hub, this openness brings with it risks related to money laundering and other financial crimes, as criminals become increasingly sophisticated at complex, cross-border schemes to mask illicit flows. MAS' supervision seeks to strengthen the effectiveness of financial institutions' anti-money laundering/combating the financing of terrorism (AML/CFT) controls in detecting and deterring illicit financial activities. This supervisory oversight helps to bolster the financial sector's defences against serious criminal abuses that could undermine confidence, thereby contributing to securing the safety and soundness of the Singapore financial system.

As financial services increasingly migrate to digital and online platforms, cyber risks will mount accordingly. To fully harness the benefits of digital technology, MAS recognises the need to build robust cyber defences and have in place effective response and remediation plans to deal with cyber-attacks. To ensure that Singapore's financial institutions remain resilient and do not succumb to cyber-attacks, MAS has intensified its cyber security efforts on various fronts, namely: (1) regulation and guidance; (2) supervision; (3) surveillance and information-sharing; and (4) competency and capability development. As part of these efforts, MAS works closely with partners and key stakeholders in the industry, the rest of government as well as global regulatory counterparts.

(c) Safe and efficient infrastructure and payment systems

Financial infrastructure refers to the platforms that provide the services and facilities underpinning financial market activities, such as exchanges, clearing houses, and payment and settlement systems. These platforms are important nodes and their safe operations preserve stability in the financial system.

MAS also supervises critical payment system operators, settlement institutions and payment system participants. Payment systems are important pipelines through which financial transactions in the economy flow. They facilitate the circulation of money and settlement of economic transactions, and an efficient payment system infrastructure is crucial to the smooth functioning of the economy.

In addition to oversight responsibilities, MAS operates a real-time gross settlement system, the MAS Electronic Payment System (MEPS+), which allows banks to pay Singapore dollars to one another. MEPS+ is also used for the safekeeping and settlement of Singapore Government Securities (SGS) and MAS Bills.

(d) Fair, efficient and transparent markets

A fair market is characterised by proper trading practices, fair access to market facilities and information, and structures that

do not tilt the playing field in favour of some market users over others. MAS seeks to deter, detect and penalise market rigging, market manipulation, insider trading, fraud, deceit and other unfair trading conduct. An efficient market is one where price formation and discovery is reliable. This requires market-sensitive information to be disseminated in a timely and organised manner. A transparent market is one where information about trading is made publicly available on a real-time basis.

Enforcement

MAS will take the appropriate enforcement action against entities and individuals who breach laws and regulations administered by MAS. It targets wrongdoers who attempt to abuse Singapore's financial system for illicit purposes. Through the use of deterrent sanctions, enforcement also shapes the behaviour of stakeholders and participants in the financial industry by deterring others from engaging in similar misconduct.

MAS is committed to administering an enforcement regime that fosters high standards of professional conduct and to delivering fair and robust enforcement outcomes to deter misconduct and preserve investor confidence. MAS' enforcement approach has three aims: (i) early detection and rectification of breaches of law and misconduct; (ii) effective deterrence; and (iii) shaping business and market conduct.

MAS works closely with other law enforcement agencies and stakeholders, including the Commercial Affairs Department, the Attorney-General's Chambers and the Self-Regulatory Organisations, to ensure that breaches of MAS-administered laws and regulations are swiftly detected, thoroughly investigated and effectively addressed.

(e) Transparent and fair-dealing intermediaries and offerors

Market intermediaries are expected to uphold high professional standards when dealing with customers. Offerors are required to make full, prompt and continuing disclosure of material information, to help ensure market transparency and equip investors with the necessary knowledge to make informed decisions.

(f) Well-informed and empowered consumers

Consumers must be self-reliant when managing their financial affairs. Education can equip consumers with the knowledge and skills to determine their financial needs and identify products suitable for themselves. MAS helps consumers make informed financial decisions in two ways.

First, equip them with the financial capabilities to manage their money and plan ahead for their financial well-being. MoneySENSE, the national financial education programme, offers a variety of platforms, including a website, Facebook page and Instagram interactions, to collaborate with many partners to engage consumers from all walks of life, at all income and education levels. This initiative is complemented by the Institute for Financial Literacy, as well as My Money seminars that further reach out to the public.

Second, MAS requires financial institutions to provide consumers with the information and disclosures that will help them learn about a product so as to make a decision on whether it will suit their needs. MAS also regulates the provision of financial advice and has established dispute resolution processes for consumers.

Approach to Supervision

The financial industry worldwide is changing rapidly. Falling regulatory barriers, advances in information technology and a wave of mergers among financial institutions are integrating financial markets. To thrive as a financial hub, MAS needs to foster an environment to quicken the pace of market development and innovation while maintaining financial stability.

MAS' approach to supervision is guided by the following four key principles:

- (i) **Risk-focused** – MAS emphasises risk-focused supervision rather than “one-size-fits-all” regulation, whereby it can give stronger institutions the flexibility to develop and innovate while maintaining stricter controls on weaker ones.
- (ii) **Stakeholder-reliant** – MAS seeks to reinforce the responsibility of the board and management of the financial institutions, and works closely with other relevant stakeholders in the financial sector to complement its supervision.
- (iii) **Disclosure-based** – MAS has put in place a regulatory framework that facilitates timely, accurate and meaningful disclosure of material information by financial institutions, which allows consumers to make well-informed financial decisions.
- (iv) **Supportive of enterprise** – MAS aims to strike a balance between robust and effective supervision, and maintaining a dynamic and efficient financial system. It also adopts a consultative approach to regulating the industry, by actively seeking feedback from market participants and the wider public.

Financial Sector Development

In addition to supervising financial institutions, MAS is responsible for the development and promotion of Singapore as an international financial centre. Since 1971, it has implemented various policies to encourage the growth of Singapore as a financial centre. These policy measures include the abolition of all exchange controls, development of the Asian Dollar Market, and a liberal yet selective policy for the entry of international institutions to engage in offshore banking activities.

In just over four decades, Singapore has established a thriving financial centre, serving not only its domestic economy but also the wider Asia-Pacific region. Singapore's financial centre offers a broad range of financial services including banking, insurance, asset management, investment banking and treasury services. Singapore provides financial institutions a conducive pro-business environment, robust infrastructure, cost-competitiveness and a highly-skilled and cosmopolitan workforce. Reflecting these strengths, Singapore now has the largest foreign exchange market in Asia and is the largest reinsurance hub in the region as well. It is also a leading Pan-Asian asset management centre with S\$2.6 trillion of assets under management.

Financial Technology (FinTech)

MAS seeks to create a Smart Financial Centre where technology is used pervasively in the financial industry to increase efficiency, create opportunities, allow for better management of risks, and improve lives. FinTech, which involves using technology to devise new financial services and products, is key in building a Smart Financial Centre. FinTech is transforming financial services across a broad spectrum of business models such as electronic payments, digital advisory services, and more.

MAS aims to provide regulation conducive to innovation, while ensuring that the system remains stable, key players are sound, and consumer interests are safeguarded. While MAS must be alert to potential risks, regulation should not stifle innovation. It encourages FinTech experimentation through the Regulatory Sandbox, so that promising innovations can be tested in the market within a well-defined space and duration, with appropriate safeguards to maintain the overall safety and soundness of the financial system.

MAS also aims to promote greater adoption of electronic payments by providing efficient and interoperable infrastructure, and streamlining and updating regulation through a new Payment Services Bill.

In October 2017, MAS released the [Industry Transformation Map \(ITM\)](#) for financial services, a collaborative partnership between the government and the industry. The ITM maps out Singapore's vision to be a leading global financial centre in Asia – one that connects global markets, supports Asia's development and serves Singapore's economy – and outlines growth strategies by business lines, programmes for upgrading skills, and an agenda for continuous innovation and technology adoption.

MAS' Organisation Structure

MAS is governed by a Board of Directors, which is made up of the Chairman, Deputy Chairman, Managing Director, and other members. All directors on the Board are appointed by the President of Singapore.

Board Committees

Chairman's Meeting

The Chairman's Meeting makes decisions on major changes to the regulatory framework and supervisory policies. The Meeting also approves major changes to policies and strategies relating to financial centre development, international and regional relations, and payment and settlement systems operated by MAS.

Monetary and Investment Policy Meeting

The Monetary and Investment Policy Meeting (MIPM) deliberates and decides on issues relating to the formulation and implementation of monetary policy with the objective of maintaining price stability for sustainable economic growth. The Meeting also oversees the investment of MAS' reserves.

Audit Committee

The Audit Committee provides an independent assessment of MAS' internal controls and financial reporting process. The Committee also reviews the efforts of MAS' internal and external auditors.

Risk Committee

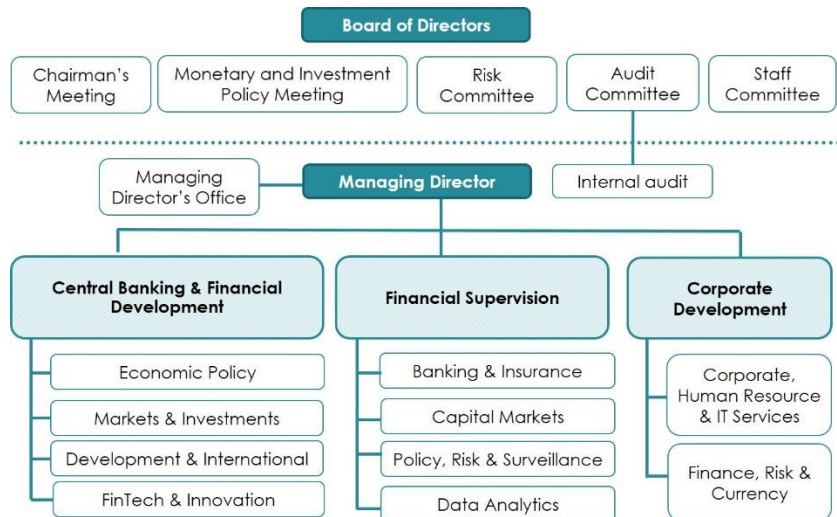
The Risk Committee provides oversight and guidance on the management of risks faced by MAS. The Committee oversees the MAS-wide risk management framework, and reviews MAS' risk management policies and the processes for reporting of risks.

Staff Committee

The Staff Committee approves the appointment, promotion and compensation of senior management staff. The Committee also approves key personnel policies, including overall pay policy.

The Managing Director (MD) is entrusted with MAS' day-to-day operations and administration. The MD is assisted by a Management Committee, comprising Deputy Managing Directors, Group Heads and Department Heads.

Figure 1: MAS' Organisation Chart



An introduction to MAS' groups and departments can be found here: <http://www.mas.gov.sg/About-MAS/Overview/Groups-and-Departments.aspx>

Economics Explorer Series

The *Economics Explorer Series* aims to provide an accessible introduction to inflation and monetary policy, and the central bank.

1. The Monetary Authority of Singapore
2. Inflation
3. Monetary Policy and the Economy

All issues of the *Economics Explorer Series* can be downloaded from the MAS website at www.mas.gov.sg.

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