Singapore's Transformation into a Global Financial Hub

Introduction

In the short 50 years since its independence, Singapore has established itself as a leading global financial centre. According to the latest iteration of the Global Financial Centres Index (GFCI) that was published by the think tanks Z/Yen and China Development Institute, Singapore was ranked the 3rd most competitive financial centre in the world.[1] Similarly, Singapore was ranked 2nd in PriceWaterHouseCooper's City of Opportunity index and 6th largest wealth management centre in the world by Deloitte.[2]

This case study will provide an overview of Singapore's emergence and rise to prominence as a leading global financial centre, in the process discussing its key strengths and value propositions as a financial centre. It will examine both the historical factors and policy initiatives that have driven Singapore's successful transformation into a global financial hub.

Historical Development

Singapore's origins as a financial centre can be traced back to its colonial origins, when Sir Stamford Raffles first established a trading post of the British East India Company on the island in 1819. Singapore would subsequently become a British colony of the Straits Settlement in 1826 and a crown colony in 1867. Given its strategic geographical location, Singapore quickly became a major trade entrepôt under the British Empire, as well as a British naval base.

This early emergence of trade and shipping activity was crucial for the formation of financial services in Singapore. In many instances across the world, the emergence of a financial services sector was often predicated upon the existence of thriving trade flows, with financial services associated with trade and shipping activities, such as currency exchange, shipping insurance, and maritime finance giving rise to other related financial services.[3] This was most certainly the case for Singapore.

Indeed, this link between trade and finance is evident in the waterfront location of Singapore's central business district along the Singapore River, where barges used to ply their trade. Strategically located near the warehouses that lined the Singapore River, banks and financiers

[1] Mark Yeandle, "Global Financial Centres Index 20" (London, U.K.: Z/Yen Group and China Development Institute, September 2016).
[2] Dennis Brandes et al., "Deloitte Global Wealth Management Centre Ranking 2015" (Zurich, Switzerland: Deloitte Consulting AG, 2015).
[3] Youssef Cassis, *Capitals of Capital: The Rise and Fall of International Financial Centres 1780-2009* (Cambridge: Cambridge University Press, 2010).

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had easy access to their clients – shipping firms and warehouse owners – who required financing and insurance services.

Statue of Sir Stamford Raffles framed by Singapore's financial centre (Wikipedia Commons)

However, it was only with independence that Singapore's development as a global financial centre took on a more systematic approach, with the government taking active steps towards establishing a financial services industry in Singapore. It was Singapore's then-economic adviser Dr Albert Winsemius who first suggested that Singapore's strategic time zone could allow it to fill in a gap in global trading hours.[4] This led to the establishment of an Asian Dollar Market (ADM) in 1968, which aimed to bridge a gap between the close of American markets and the opening of European markets on the following day.[5]

The ADM would lay the foundation for banking and finance in Singapore, with the Asian Currency Unit (ACU) that was established along with the ADM allowing for the participation of foreign banks and financial institutions in Singapore's financial services sector. As such, the Singapore government has from the start seen the financial services industry not simply as a means for supporting the development of other existing industries, but a growth industry in its own right.[6]

This understanding of the financial services industry as a driver of economic growth derived from Singapore's adherence to the 'developmental state' approach to economic development, under which the state has tended to identify key sectors that could contribute to national

[4] UNDP, *UNDP and the Making of Singapore's Public Service* (Singapore: UNDP Global Centre for Public Service Excellence, 2015), 25.
[5] Ong Chong Tee, "Singapore's Policy of Non-Internationalisation of the Singapore Dollar and the Asian Dollar Market," BIS Papers (Bank for International Settlements, 2003), 96, http://econpapers.repec.org/bookchap/bisbisbpc/15-11.htm.
[6] Manuel F. Montes, "Tokyo, Hong Kong and Singapore as Competing Financial Centres," *Journal of Asian Business* 18, no. 1 (1999): 153–68.

economic growth and enact the appropriate policies for growing these sectors.[7] It was within this context of developmentalism and the economic needs of a newly-independent country that Singapore embarked on the development of a financial services industry that could serve as a driver of economic growth in its own right.[8]

This state-led and development-driven approach to financial sector development would come to (and continues to) drive Singapore's development as a global financial hub. At this early stage of Singapore's development, state intervention was crucial for efforts at market building, such as the establishment development of the ADM.

Institutional Growth

As Singapore's financial services industry grew increasingly complex and internationalised with both the proliferation of domestic financial institutions and the entry of foreign financial institutions, there emerged a growing need for a more consolidated approach to governing and regulating these firms and entities. In response, the Monetary Authority of Singapore Act was enacted in 1971, allowing for the formation of the Monetary Authority of Singapore (MAS), which played dual roles of central bank and financial regulator.[9]

The Stock Exchange of Singapore (SES) was subsequently established in 1973, which allowed companies to raise capital through the equity capital market.[10] The SES was subsequently demutualised and merged with the Singapore International Monetary Exchange to form the Singapore Exchange (SGX), in response to the growing depth and diversity of Singapore's capital markets.[11] The Singapore International Monetary Exchange (SIMEX) would be established in in 1983 and the SESDAQ board, which allowed for listings by smaller companies, in 1987.[12]

[7] Linda Lim, "Singapore's Success: The Myth of the Free Market Economy," *Asian Survey* 23, no. 6 (June 1983): 752–64; W.G. Huff, "The Developmental State, Government, and Singapore's Economic Development since 1960," *World Development* 23, no. 8 (August 1995): 1421–38; Linda Low, "The Singapore Developmental State in the New Economy and Polity," *The Pacific Review* 14, no. 3 (January 1, 2001): 411–41; Linda Low, *The Political Economy of a City-State: Government-Made Singapore* (Oxford: Oxford University Press, 2001); Martin Perry, *Singapore: A Developmental City State* (Chichester: Wiley, 1997).

[8] J.J. Woo, *Business and Politics in Asia's Key Financial Centres - Hong Kong, Singapore and Shanghai*, 1st ed. (Singapore: Springer, 2016); J.J. Woo, *Singapore as an International Financial Centre: History, Politics and Policy* (London: Palgrave Macmillan, 2016).

[9] Monetary Authority of Singapore, "Overview of MAS," *Monetary Authority of Singapore Website,* September 4, 2012, http://www.mas.gov.sg/en/About-MAS/Overview-of-MAS.aspx.

[10] Swee Liang Tan, "The Development of Singapore's Financial Sector: A Review and Some Thoughts on Its Future Prospects," in *The Economic Prospects of Singapore*, ed. Winston T. H Koh and Roberto S. Mariano (Singapore: Pearson Addison-Wesley, 2006), 254.

[11] Monetary Authority of Singapore, "Annual Report 1999/2000" (Singapore: Monetary Authority of Singapore, 2000), 40.

[12] Chwee Huat Tan, *Financial Services and Wealth Management in Singapore*, Updated (Singapore: Singapore University Press, 2011), 17.

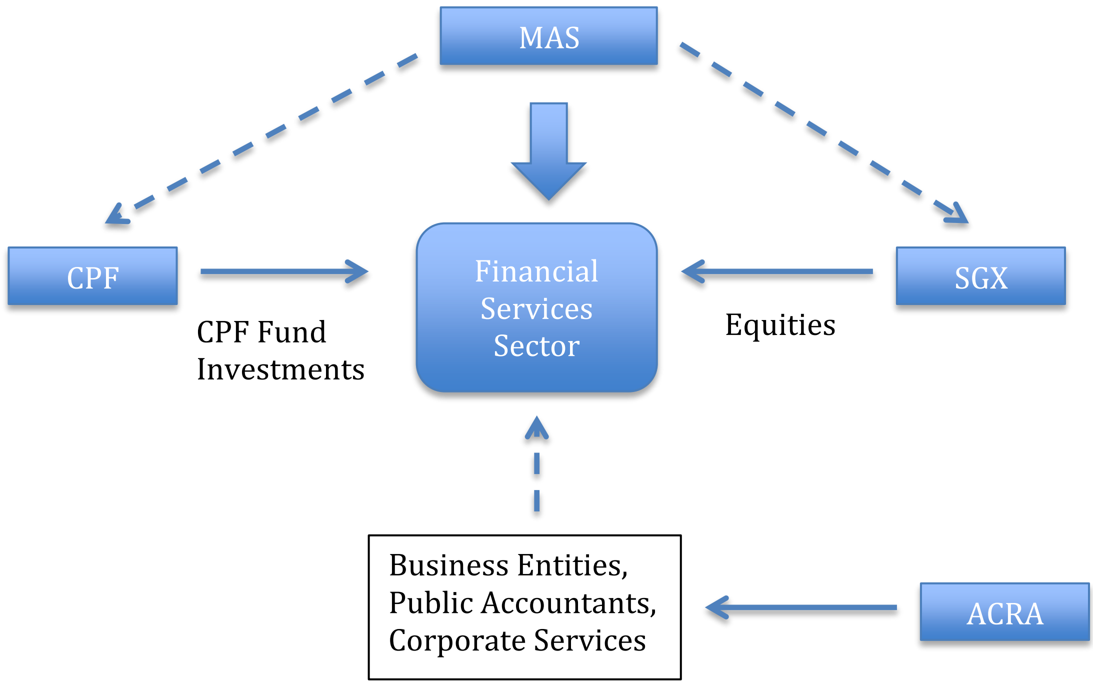
Singapore Exchange Sign (Flickr User Jonathan Choe)

The formation of regulatory organisations such as the MAS and SGX was an institutional response to the rapid growth that was experienced in Singapore's financial services sector during this period. While the growing demand for a larger and more complex array of financial institutions necessitated the introduction of trading platforms such as the SGX, SIMEX, or SASDAQ, there was also a corresponding need for regulatory institutions that could ensure market and systemic amid such financial sector growth.

While the MAS played the role of chief financial regulator, the SGX also had an important regulatory role, especially in terms of regulating its members and ensuring that the trades hosted on its platforms were legitimate. Other institutions that have come to play financial regulatory roles include the Central Provident Fund (CPF) Board, which regulates the reinvestment of funds held in Singapore's mandatory pension funds system, and the Accounting and Corporate Regulatory Authority, which regulates business entities, public accountants, and corporate service providers in Singapore.

The various entities and organisations that are involved in regulating and governing Singapore's financial services are shown in Figure 1 below. As Figure 1 shows, while SGX and the CPF Board are involved in some aspects of financial regulation, their activities, especially as they pertain to Singapore's financial services sector, remain within the purview of the MAS. While ACRA is not directly involved in regulating any part of the financial services industry, it regulates the business entities, public accountants and corporate services providers whose activities often intersect with those of banks and financial institutions.

Figure 1 Financial Policy Entities



Internationalisation, Diversification, and Consolidation

Singapore's financial services industry would experience a further period of internationalisation and diversification through the 1980s and 1990s. This began in the aftermath of the 1984-1985 recession, with the 1985 Economic Review Committee (ERC) identifying 7 areas of growth for Singapore's financial sector, which included risk management, fund management, capital markets, unlisted securities markets, financial and commodity futures, and markets for the financing of third country trading and reinsurance.[13]

However, the identification of these new growth areas were not solely in response to the recession, but an effort on the part of the Singapore government to establish new growth areas in light of growing competition from other financial hubs, which were rapidly liberalizing and deregulating their markets.[14] Global trends of economic liberalization and financial deregulation therefore lent much urgency to Singapore's ongoing efforts to grow and diversify its financial services industry.

While (and as discussed below) financial sector development in Singapore often conformed to a state-driven mandate, the impacts of global trends and events on Singapore's financial policy agenda, such as a global tendency towards economic liberalization, cannot be discounted. It was also during the 1980s that Singapore's asset management industry first emerged. Driven by government incentives and leveraging on the rapid expansion in size and

[13] Donald R. Lessard, "Singapore as an International Financial Centre," in *Offshore Financial Centres*, ed. Richard Roberts, vol. 4, International Financial Centres (Aldershot: Edward Elgar Publishing Limited, 1994), 203.

[14] Kam-Hon Lee and Ilan Vertinsky, "Strategic Adjustment of International Financial Centres (IFCs) in Small Economies: A Comparative Study of Hong Kong and Singapore," *Journal of Business Administration* 17, no. 1–2 (1988): 162.

diversity of Singapore's financial markets, the asset management industry has since become a key growth sector for Singapore.

Aside from internationalisation and diversification, Singapore's financial services industry also experienced a period of consolidation during this period, especially among the city-state's domestic banks. As financial market liberalisation gave rise to increased participation by foreign banks and financial institutions in its financial markets, Singapore's policymakers saw an increasing need to expand the size and capacity of local banks in order to ensure their global competitiveness.[15]

This led to a period of "rationalization" and consolidation as, under the encouragement and advice of the MAS, smaller local banks were merged and the hitherto fragmented brokerage system taken over by local banks.[16] An important result of this was the takeover of the Post Office Savings Bank (POSB) by the state-owned Development Bank of Singapore (DBS) and the merger of the Overseas Union Bank into United Overseas Bank Limited (UOB).

This process of consolidation was not limited to banks or private sector actors. In view of an increasingly diverse and integrated financial sector, the MAS sought to consolidate its policy roles by emphasizing its two 'main thrusts' of financial sector regulation and promotion.[17] This involved significant organisational restructuring in 1997, which resulted in the formation of a Financial Sector Promotion Department that focused on promoting financial activities and developing Singapore as a leading international financial centre.[18]

This led to a consolidation of the MAS's role as lead developmental agency for Singapore's financial services industry, distinct from a similar role played by the Economic Development Board (EDB) for other industries and sectors in the real economy. This separation of roles between the MAS and EDB is relatively unique among proponents of the developmental state approach (where there is typically one lead agency for the entire economy) and was predicated upon the MAS's strong domain knowledge, and the need for such knowledge in leading and promoting financial sector development.[19]

As a consequence of the MAS's role in promoting and developing Singapore's financial services industry, especially by identifying and growing potential growth sectors or markets,

[15] Natasha Hamilton-Hart, *Asian States, Asian Bankers: Central Banking in Southeast Asia* (New York: Cornell University Press, 2002), 97.
[16] Ibid.; Monetary Authority of Singapore, "Liberalising Commercial Banking and Upgrading Local Banks," Statement by the Monetary Authority of Singapore (Singapore: Monetary Authority of Singapore, May 17, 1999).
[17] Monetary Authority of Singapore, "Annual Report 1997/1998" (Singapore: Monetary Authority of Singapore, 1998), 52.
[18] Monetary Authority of Singapore, "MAS' New Organisational Structure," April 3, 1998, http://www.mas.gov.sg/en/News-and-Publications/Press-Releases/1998/MAS-Adopts-New-Organisational-Structure--03-Apr-1998.aspx.
[19] Woo, *Singapore as an International Financial Centre: History, Politics and Policy*.

several financial market sectors have since emerged to become important strengths for Singapore.[20] These are discussed next.

Key Sectors

Several financial sectors or markets have been particularly crucial for Singapore's success and ongoing development as a global financial centre. These sectors represent Singapore's strengths as a global financial centre, as well as the areas that have become particularly attractive to foreign investors and financial institutions.

Banking and Finance

Singapore had a key regional and global role as a major banking hub. According to the MAS, banks in Singapore held a total of US $2 trillion in assets as of 2013.[21] It hosted a total of 126 commercial banks, of which 5 are local banks and 121 are foreign banks.[22] Of these foreign banks, 29 were full banks, 55 are wholesale banks, and 37 are offshore banks.[23] In particular, Singapore's 3 largest local banks, DBS, UOB, and OCBC, have been ranked among the world's strongest and most valuable banking brands.[24]

Further, there are potential economic spillovers from Singapore's banking sector. It has been noted that the banking sector contributed to trade activities, corporate finance, and the building of infrastructure.[25] Singapore's banking sector therefore played a crucial role, not simply as a growth sector in its own right, but in facilitating other financial and economic activities as well. However, Singapore's banking sector has also faced regulatory challenges, especially in terms of money-laundering activities and interest rate manipulation, both of which have prompted strong regulatory responses from the MAS.[26]

Asset Management

Having identified asset management as a key growth sector in the 1980s, Singapore has since emerged to become a leading asset management centre in Asia.[27] In 2015, assets under management (AUM) in Singapore amounted to S$ 2.6 trillion, a 9% growth from the year before.[28] These assets were managed by the 628 registered and licensed fund managers,[29]

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[20] Woo, *Business and Politics in Asia's Key Financial Centres - Hong Kong, Singapore and Shanghai*; Woo, *Singapore as an International Financial Centre: History, Politics and Policy*.

[21] Monetary Authority of Singapore, "Banking Sector," *Monetary Authority of Singapore Website*, November 26, 2016, http://www.mas.gov.sg/Singapore-Financial-Centre/Overview/Asian-Dollar-Market.aspx.

[22] Monetary Authority of Singapore, "Financial Directory," *MASNET*, December 7, 2016, https://masnetsvc.mas.gov.sg/FID.html.

[23] Ibid.

[24] Wong, "3 local banks among top 80 banking brands," *The Straits Times*, February 8, 2016, http://www.straitstimes.com/singapore/3-local-banks-among-top-80-banking-brands.

[25] Monetary Authority of Singapore, "Banking Sector."

[26] Fortune International, "Singapore Fines Two Big Banks Over 1MDB Scandal, Shuts Down Another," *Fortune*, October 11, 2016, http://fortune.com/2016/10/11/1mdb-singapore-dbs-ubs-falcon-bank/; Brooke Masters, "Singapore Punishes 20 Banks in Rate Probe," *Financial Times*, June 14, 2013, https://www.ft.com/content/fed38a0a-d4d5-11e2-b4d7-00144feab7de.

[27] Monetary Authority of Singapore, "Wealth Management and Insurance," November 26, 2016, http://www.mas.gov.sg/Singapore-Financial-Centre/Overview/Wealth-Management-and-Insurance.aspx.

[28] Monetary Authority of Singapore, "2015 Singapore Asset Management Survey: Singapore - Global City, World of Opportunities" (Singapore: Monetary Authority of Singapore, 2015).

some of whom operated within the 270 fund management companies registered in the MAS's financial directory.[30]

More importantly, Singapore was fast emerging to become a leading regional and global asset management centre that played an important role in mediating global flows of private investments. 80% of Singapore's AUMs are sourced from outside the country, with 68% of all AUMs invested in the Asia Pacific area.[31] As the MAS's 2015 Asset Management Survey revealed, Singapore has become a regional hub for institutional investors seeking to access private market opportunities in Asia.[32]

Singapore's emergence as a leading asset management hub was predicated upon its strategic location within a growing region. Indeed, increasing affluence of economic powerhouses such as China and Indonesia and growing numbers of high-net-worth individuals in these countries have driven the rapid growth of Singapore's asset management sector.[33] Like the banking sector however, Singapore's asset management sector have faced regulatory challenges, such as tax evasion, which have required regulatory reform and inter-jurisdictional cooperation between the MAS and other financial regulators.[34]

Capital Markets

Singapore's position as a major financial hub depended on its deep and liquid capital markets, with the markets for bonds, equity capital, foreign exchange and over-the-counter (OTC) derivatives particularly prominent.[35] In terms of bonds, total debt issued in 2015 amounted to S$ 174 billion, comprising both SGD and non-SGD debt, issued by a diverse pool of local and foreign issuers.[36] This diverse range of debt issuances and issuers reflected Singapore's position as an international fixed income hub, with non-SGD debt increasingly crucial in Singapore's role as a multi-currency fixed income hub.[37]

Singapore's equity capital market has been known to be one of the most established in the Asia Pacific region, with close to 800 companies listed on the SGX and average daily

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[29] Ibid.
[30] Monetary Authority of Singapore, "Financial Directory."
[31] Monetary Authority of Singapore, "2015 Singapore Asset Management Survey: Singapore - Global City, World of Opportunities," 4.
[32] Ibid., 10.
[33] Jeremy Grant, "Asian Cities Attract More Overseas Money than Switzerland," *Financial Times*, February 9, 2015, https://www.ft.com/content/aa71828e-b03c-11e4-a2cc-00144feab7de; Aun Long Jek and Danny Tan, "The Growth of Private Wealth Management in Singapore and Hong Kong," *Capital Markets Law Journal* 6, no. 1 (2010): 104–26.
[34] Yvonne Guo and Jun Jie Woo, "Wealth Management for All Seasons," *The Straits Times*, December 3, 2013, http://www.academia.edu/6087604/Wealth_Management_for_All_Seasons.
[35] Monetary Authority of Singapore, "Capital Markets," *Monetary Authority of Singapore Website*, November 26, 2016, http://www.mas.gov.sg/Singapore-Financial-Centre/Overview/Capital-Markets.aspx.
[36] Monetary Authority of Singapore, "Singapore Corporate Debt Market Development 2016" (Singapore: Monetary, 2016).
[37] Ibid.

securities turnover on the SGX exceeding S$ 1.09 billion in 2016.[38] Like its other financial sectors, Singapore's equity capital markets are highly internationalised, with foreign companies making up 40% of listings on the SGX.[39] However, Singapore's equity capital market has been plagued by thin local trade volumes and has been adversely affected by volatility in regional and global markets.[40]

Aside from bonds and stocks, Singapore has also emerged as a key location for the exchange of foreign currency. It has become the largest foreign exchange centre in the Asia Pacific region, and ranks third in the world, behind London and New York. In 2016, average daily trading volume amounted to S$ 705 billion, with Singapore's share of global foreign exchange rising to 7.9%.[41] Singapore's position as a global hub for foreign currency exchange has also been beneficial for its emerging role as an offshore Renminbi (RMB) centre, as China seeks to internationalise its currency.[42]

It should also be noted that Singapore's capital markets were intertwined with its other major financial sectors. For instance, financial institutions accounted for the majority of Singapore's non-SGD denominated debt issuances while fund managers and insurance companies made up one-third of Singapore's long-term debt issues.[43] Financial institutions and private banks also accounted for more than half of investments into SGD debt, while fund managers and financial institutions remained key investors in non-SGD debt issues.[44]

Perhaps most importantly, Singapore's deep and liquid capital markets presented an attractive pool of investment opportunities for financial institutions and retail investors alike. At the same time, it provided a useful foundation for other emerging financial sectors and activities, such as the offshore RMB market, which has become a potential growth sector for Singapore.[45] The presence of a well-established debt and equities market also allowed for the benchmarking of other potential investment instruments, which is especially crucial for Singapore's asset management industry.[46]

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[38] Monetary Authority of Singapore, "Capital Markets"; Wei Han Wong, "Singapore stock market: More uncertainties ahead," *The Straits Times*, December 23, 2016, http://www.straitstimes.com/business/companies-markets/leaving-a-rough-2016-behind-moving-on-to-an-uncertain-new-year.
[39] Monetary Authority of Singapore, "Capital Markets."
[40] Wong, "Singapore stock market."
[41] Yan Min Chia, "Singapore is largest forex centre in Asia, third largest globally," *The Straits Times*, September 1, 2016, http://www.straitstimes.com/business/banking/singapore-is-largest-forex-centre-in-asia-third-largest-globally.
[42] Ibid.; Jeremy Grant and Robert Cookson, "Beijing Move Boosts Singapore Rmb Hopes," *Financial Times*, July 16, 2012, http://www.ft.com/cms/s/0/ec77918a-ceff-11e1-bc0c-00144feabdc0.html#axzz20qW5kWXq.
[43] Monetary Authority of Singapore, "Singapore Corporate Debt Market Development 2016."
[44] Ibid.
[45] Jeremy Grant, "Battle Is on for Offshore Renminbi Market," *Financial Times*, July 29, 2015, http://www.ft.com/intl/cms/s/2/4b9725c8-15d3-11e5-be54-00144feabdc0.html#axzz3qVC6Bp6t; Grant and Cookson, "Beijing Move Boosts Singapore Rmb Hopes"; Chia, "Singapore is largest forex centre in Asia, third largest globally"; Monetary Authority of Singapore, "Regional Gateway for RMB," *MAS Website*, November 26, 2016, http://www.mas.gov.sg/Singapore-Financial-Centre/Overview/Regional-Gateway-for-RMB.aspx.
[46] Woo, *Singapore as an International Financial Centre: History, Politics and Policy*, 32.

Insurance

While Singapore's insurance sector started off servicing domestic business needs, liberalisation of the sector by the MAS in 2000 has since led to the emergence of offshore insurance business and reinsurance activities, facilitating Singapore's role as a regional insurance hub.[47] The sector has since taken off, with Singapore becoming a top insurance and reinsurance hub in Asia[48] and total insurance premiums rising to S$ 3.6 billion in 2015.[49] Much of this growth has been attributed to Asia's continued economic performance, its ageing population, and the increased onset of natural catastrophes.[50]

A total of 182 licensed insurers plied their trade in Singapore, including 80 direct insurers (of which 17 are life insurers, 56 general insurers, and 7 composite insurers) and 31 reinsurers.[51] Aside from market size, the insurance sector has also experienced a considerable extent of diversification, with insurance services offered including general insurance, life insurance, reinsurance, captive insurance, and insurance intermediaries.[52] Many of these services contributed to overall economic growth and/or impacted other financial markets and sectors by intermediating regional insurance business, redistributing risks, and providing risk advisory services.[53]

FinTech

As Singapore's economy digitized through the 2000s, the emergence of high-tech start-ups has given rise, in combination with Singapore's advanced financial sector, to a burgeoning FinTech (Financial Technology) sector. However, the emergence of this FinTech sector is by no means a matter of coincidence. It is strongly associated with the Singapore government's Smart Nation initiative, which aimed to introduce digital and advanced ICT technologies to the city-state's policy processes as well as explore potential industries that may emerge from such technologies.[54]

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[47] Ravi Menon, "Singapore as a Global Insurance Marketplace" (Keynote Address, 12th Singapore International Reinsurance Conference, Singapore, November 6, 2013), http://www.mas.gov.sg/news-and-publications/speeches-and-monetary-policy-statements/speeches/2013/singapore-as-a-global-insurance-marketplace.aspx; Shea Leen Woo, "Easing Taxes to Create Global Insurance Hub," *PwC*, March 24, 2016, http://www.pwc.com/sg/en/budget-2016/sg-budget-2016-in-the-news-20160324bt.html.

[48] InsuranceAsia News, "Singapore Likely to Keep Status as Asia's Top Insurance Hub," March 4, 2016, http://insuranceasianews.com/topics/reinsurance/singapore-likely-to-keep-status-as-asias-top-insurance-hub/.

[49] Channel NewsAsia, "Singapore's General Insurance Industry Saw Premiums Rise to S$3.6b in 2015," *Channel NewsAsia*, March 17, 2016, http://www.channelnewsasia.com/news/business/singapore/singapore-s-general/2610590.html.

[50] Woo, "Easing Taxes to Create Global Insurance Hub."

[51] Monetary Authority of Singapore, "Financial Directory."

[52] Monetary Authority of Singapore, "Types of Institutions: Insurance," November 26, 2016, http://www.mas.gov.sg/singapore-financial-centre/types-of-institutions/insurance.aspx.

[53] Ibid.

[54] Smart Nation Programme Office, "About Smart Nation," 2016, http://www.smartnation.sg/about-smart-nation; Infocomm Development Authority of Singapore, "Singapore Lays Groundwork to Be World's First Smart Nation," News Release (Singapore: Infocomm Development Authority of Singapore, June 18, 2014), http://www.ida.gov.sg/blog/insg/featured/singapore-lays-groundwork-to-be-worlds-first-smart-nation/.

An important component of the Smart Nation initiative is the MAS's goal of establishing a 'smart financial centre', which aimed to leverage on digital technologies for enhancing financial regulations.[55]

According to the consultancy firm EY, Singapore was ranked fourth among the world's top FinTech hubs.[56] It was also generally seen as Asia's top FinTech hub, ahead of close rival Hong Kong.[57]

Value Propositions and Measures of Success

The MAS has identified three major value propositions that continue to underpin Singapore's success as a global financial centre:[58]

- Conducive Pro-Business Environment
- Cost Competitiveness and Business Infrastructure
- Skilled Workforce

Ranked second on the 2017 edition of the World Bank's Ease of Doing Business, Singapore's business-friendly regulations continue to be a major draw for global financial institutions seeking to establish a presence in Asia.[59] These business-friendly regulations were complemented by the MAS's Financial Sector Development Fund, which provided tax incentives and grants to financial institutions to establish or expand their operations in Singapore.[60]

Singapore's second value proposition as a financial hub arose from its cost competitiveness vis-a-vis other financial centres, and its well-developed urban and business infrastructure.[61] While costs of doing business such as wages and rental have steadily risen, office rental in Singapore remained significantly lower than that of leading rival financial centres such as London, New York, Hong Kong, and Tokyo.[62]

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[55] Ravi Menon, "A Smart Financial Centre" (Keynote Address, Global Technology Law Conference 2015, Singapore, June 29, 2015), http://www.mas.gov.sg/news-and-publications/speeches-and-monetary-policy-statements/speeches/2015/a-smart-financial-centre.aspx.

[56] EY, "UK FinTech On the Cutting Edge An Evaluation of the International FinTech Sector" (London, U.K.: EY, 2016).

[57] Chanyaporn Chanjaroen and Darren Boey, "Singapore Is Beating Hong Kong in Asia's Fintech Race," *Bloomberg*, December 7, 2016, https://www.bloomberg.com/news/articles/2016-12-07/with-fintech-rising-hong-kong-singapore-rivalry-gets-new-twist.

[58] Monetary Authority of Singapore, "Value Propositions," November 26, 2016, http://www.mas.gov.sg/singapore-financial-centre/value-propositions.aspx.

[59] World Bank Group, "Doing Business 2017: Equal Opportunity for All" (Washington, D.C.: World Bank, 2017).

[60] Monetary Authority of Singapore, "Setting Up," *MAS Website*, November 26, 2016, http://www.mas.gov.sg/Singapore-Financial-Centre/Value-Propositions/Setting-Up.aspx.

[61] Monetary Authority of Singapore, "Cost Competitive And Excellent Infrastructure," *MAS Website*, November 26, 2016, http://www.mas.gov.sg/Singapore-Financial-Centre/Value-Propositions/Cost-Competitive-And-Excellent-Infrastructure.aspx.

[62] Colliers International, "Global Office Rankings," New Zealand Research Report (Auckland, N.Z.: Coliers International, October 2016).

Singapore's strength as a global financial centre also lay in its well-established set of public infrastructures, including an efficient public transport system, advanced ICT infrastructure, and an extensive network of Free Trade Agreements (FTAs).[63] Furthermore, Singapore's liveability has also proven to be highly attractive for financial sector professionals, which in turn contributed to Singapore's pool of skilled financial sector workforce.[64]

This latter point was particularly crucial for Singapore's successful development as a financial centre, with its skilled workforce being the third, and arguably most crucial, value proposition. Given the technical specificity of the financial services industry and global mobility of major financial institutions, Singapore's relatively large pool of finance professionals has been seen as a 'key reason' for financial institutions to operate in Singapore.[65] In order to ensure the continued availability of such skilled labour, the MAS has introduced initiatives such as the Financial Sector Talent Development scheme, Financial Training Scheme, Institute of Banking and Finance Standards Training Scheme, and Financial Scholarship Programme to facilitate the development of financial sector skills and expertise.[66]

These three value propositions have contributed to Singapore's competitiveness as a global financial hub, with measures of Singapore's competitiveness often related to these propositions, whether directly or indirectly. For instance, the GFCI ranked Singapore highly on the following factors: business environment, financial sector development, human capital, and reputation.[67] These 'factors of competitiveness' can be further delineated into more specific measures, as detailed in **Table 1** below.

Business Environment	**Financial Sector Development**	**Infrastructure**	**Human Capital**	**Reputation**
Political Stability and Rule of Law	Volume and Velocity of Trading	Building and Office Infrastructure	Availability of Skilled Personnel	City Brand and Appeal
Institutional and Regulatory Environment	Availability of Capital	Transport Infrastructure	Education and Development	Level of Innovation
Macroeconomic Environment	Depth and Breadth of Industry Clusters	ICT Infrastructure	Flexible Labour Market and Practices	Attractiveness and Cultural Diversity
Tax and Cost Competitiveness	Employment and Economic Output	Environmental Care and Sustainability	Quality of Life	Comparative Positioning with Other Centres

Table 1 - Factors of Competitiveness (Adapted from Yeandle (2016))

[63] Monetary Authority of Singapore, "Cost Competitive And Excellent Infrastructure."
[64] Jun Jie Woo, "The Politics of Liveability in S'pore, HK," *Today*, February 4, 2015, sec. Commentary, http://www.todayonline.com/commentary/politics-liveability-spore-hk; Jun Jie Woo, "Three Ts behind Singapore's Future as a Leading Financial Centre," *TODAY*, June 26, 2014, http://www.todayonline.com/business/three-ts-behind-singapores-future-leading-financial-centre.
[65] Monetary Authority of Singapore, "Skilled Cosmopolitan Workforce," *MAS Website*, January 11, 2017, http://www.mas.gov.sg/Singapore-Financial-Centre/Value-Propositions/Skilled-Workforce.aspx.
[66] Ibid.
[67] Yeandle, "Global Financial Centres Index 20," 10.

While measures of business environment such as the regulatory and tax system were related to Singapore's pro-business environment, measures of infrastructure and financial sector development can be associated with Singapore's cost competitiveness and business infrastructure, and human capital was related to Singapore's skilled workforce. Reputational measures such as innovation, cultural diversity and city brand were associated with Singapore's overall attractiveness and liveability as a city, which in turn contributed to its attractiveness as a location of residence and employment for global finance professionals.

Key Policy Directions

Having discussed Singapore's historical development as a major financial hub as well as its key strengths and value propositions, this case study will conclude with a brief discussion of the major policy directions that have contributed to Singapore's successful emergence and continued growth as a global financial centre. These policy directions present useful policy lessons for other cities and jurisdictions aiming to establish a thriving financial services industry.

Sectorial Targeting

The government has from the beginning sought to identify specific financial markets or sectors that may have emerged as potential growth sectors, with subsequent policy interventions aimed at growing these sectors. An early example can be found in the ADM. As discussed above, the government had identified a gap in global trading hours. Having established the ADM in 1968, the government also abolished a withholding tax on interest income from non-resident foreign currency deposits in the same year.[68] This was followed by the introduction of a slew of tax and fiscal incentives that sought to expand the ADM by reducing trade and transaction costs and attracting foreign financial institutions.[69]

The asset management sector represents another instance of sectorial targeting, with the government identifying the sector as a potential growth sector in the 1980s and establishing the necessary conditions and infrastructure for the emergence of an asset management sector, such as the provision of tax incentives to fund managers, full internationalization of the Singapore Dollar, and the establishment of a Singapore Dollar Bond market that could act as a benchmark for the fixed income and securities markets.[70] Such efforts at sectorial targeting, or 'niche creation', has also given rise to several of Singapore's other key sectors, such as offshore banking, foreign exchange, and futures and derivatives.[71]

Long-range Policy Planning

This ability to engage in sectorial targeting and niche creation is predicated upon the government's long-term approach to economic and financial policymaking. Such long-term

[68] Zoran Hodjera, "The Asian Currency Market: Singapore as a Regional Financial Center (Le Marche Monetaire d'Asie: Singapour, Place Financiere Regionale) (El Mercado Monetario de Asia: Singapur Como Centro Financiero Regional)," *Staff Papers - International Monetary Fund* 25, no. 2 (June 1978): 223.
[69] Cassis, *Capitals of Capital*, 277.
[70] Woo, *Singapore as an International Financial Centre: History, Politics and Policy*, 69.
[71] Ibid.

policy planning often involves the convening of planning committees focused on mapping out Singapore's long-term economic policy directions, such as the Economic Review Committee or the more recent Committee on the Future Economy. These committees typically comprise policymakers, industry actors, and academic experts.

These economic policy-planning committees have been particularly crucial for identifying potential growth sectors and formulating the policy initiatives necessary for developing these sectors. For instance, the 1987 Economic Review Committee identified fund management, capital markets, reinsurance, and financial and commodity derivatives, among others, as areas of growth for Singapore's financial services industry.[72] As discussed above, these recommendations served as a catalyst for the various policy initiatives that were subsequently implemented to facilitate the growth of Singapore's asset management sector.

Indeed, the various sectors that were identified by the committee in 1987, especially fund management, capital markets, and derivatives, have since emerged to become key drivers of financial sector growth. Similarly, the report of the Committee of on the Future Committee identified FinTech as an emerging sector that Singapore could become a global leader in, with the report recommending the two policy proposals of developing Singapore as a smart financial centre and creating opportunities for efficiency in electronic payments; and strengthening Singapore's ability to finance Asian start-ups and SMEs.[73]

Policy Co-creation

More importantly, these policy-planning committees typically involved the participation of and solicited policy inputs from private sector industry actors as well as other non-state actors such as researchers and independent experts. This participation of non-state actors in the government's policy processes alluded to a third key policy direction: policy co-creation. By incorporating the policy inputs of industry and non-state actors, these processes allowed for the co-creation of policies by state and non-state actors.

More importantly, policy co-creation contributed to greater regulatory compliance, with policymakers incorporating feedback received from industry partners and re-designing their regulations to minimize costs arising from overly-onerous regulations while at the same time, ensuring overall systemic stability.[74] Aside from formal policy planning committees, policy co-creation also occurred through informal and continuous consultative interactions between regulators or policymakers and their industry partners, giving rise to a dense network of 'policy relations' between state and non-state actors.[75]

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[72] Lessard, "Singapore as an International Financial Centre," 203.

[73] Committee on the Future Economy, "Report of the Committee on the Future Economy" (Singapore: Government of Singapore, February 2017), 75.

[74] Woo, *Singapore as an International Financial Centre: History, Politics and Policy*.

[75] J.J. Woo, "Policy Relations and Policy Subsystems: Financial Policy in Hong Kong and Singapore," *International Journal of Public Administration* 38, no. 8 (2015): 553–61; J. J. Woo and M. Howlett, "Explaining Dynamics without Change: A Critical Subsector Approach to Financial Policy Making," *Journal of Asian Public Policy* 8, no. 3 (September 1, 2015): 312–28, doi:10.1080/17516234.2015.1082689.

Hence, while financial policy formulation and implementation in Singapore bore the strong imprint of state planning and direction, there was also a significant extent of industry collaboration, with the result being the co-creation of financial regulations and policies that were geared towards the regulatory goals of ensuring financial market stability and competitiveness but at the same time cognizant of industry interests and constraints, facilitating regulatory compliance by financial institutions. Such policy co-creation has arguably been a major policy approach from the very beginning of Singapore's financial sector policies, with the formulation and establishment of the ADM involving an academic advisor (Dr Albert Winsemius) and an industry partner (Bank of America).

Future Trajectories

While these policy directions have played an important role in driving Singapore's success as a global financial hub, intensifying competition at the upper echelons of the world's leading financial centres and a technologically-driven transformation of the financial services sector pose emerging challenges for Singapore's future development as a financial centre. While the disruptions and instabilities that characterise the financial services sector can render predictions problematic or less than reliable, several potential trajectories and directions of Singapore's development as a global financial hub, based on emerging economic, technological and geopolitical trends, can nonetheless be identified.

First, the growing importance of digital and data technology in the provision of financial services has led to a greater emphasis among policymakers on Singapore's emerging FinTech sector. Given the government's strong support for FinTech start-ups and a raft of subsidies and incentives that were introduced to stimulate the growth of the FinTech sector, observers expect Singapore to become a leading global FinTech hub.[76] However, Singapore's emergence as a FinTech hub is likely to pose threats to its mainstream financial sector, as FinTech start-ups threaten to displace mainstream banks and financial institutions as providers of financial services.[77]

While banks have begun exploring FinTech opportunities, with banks such as DBS beginning to establish in-house FinTech units and labs.[78] Nonetheless, new FinTech firms are likely to gain some market share at the expense of mainstream financial institutions, as Singapore's financial services sector becomes increasingly digitized. This will in turn pose new regulatory and governing challenges for Singapore. An emerging policy implication is the possible use of regulatory technologies, or 'RegTech', that allow regulators to automate some aspects of financial regulation. In short, Singapore's future trajectory as a global financial hub is likely

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[76] Saeed Azhar and Marius Zaharia, "In Race to Be Asia's Fintech Hub, Singapore Leads Hong Kong," *Reuters*, July 3, 2016, http://www.reuters.com/article/us-singapore-fintech-idUSKCN0ZJ10P; Chanjaroen and Boey, "Singapore Is Beating Hong Kong in Asia's Fintech Race"; The Economist, "Singapore Tries to Become a Fintech Hub," *The Economist*, January 14, 2017, http://www.economist.com/news/finance-and-economics/21714384-city-state-wants-fintech-bolsters-not-disrupts-mainstream.
[77] Citi, "Digital Disruption: How FinTech Is Forcing Banks to a Tipping Point," Citi GPS: Global Perspectives & Solutions (New York, N.Y.: Citigroup, March 2016).
[78] Finextra, "ANZ and DBS Open New Labs to Coincide with Singapore Fintech Festival," *Finextra Research*, November 14, 2016, https://www.finextra.com/newsarticle/29756/anz-and-dbs-open-new-labs-to-coincide-with-singapore-fintech-festival.

to involve a significant extent of digitisation, both in terms of financial services delivery and financial regulation.

Secondly, Singapore's financial services industry will most certainly be deeply affected by the inexorable rise of China. As it stands, Singapore has already established itself as a major hub for offshore RMB transactions. As China seeks to internationalise its currency and at the same time expand its participation and influence in the global economy (such as through the establishment of multilateral organisations such as the Asia Infrastructure Investment Bank, or AIIB), Singapore will emerge as a major node through which RMB-denominated investments and financial instruments are traded. Furthermore, Singapore's deep and liquid capital markets, coupled with its highly diverse and internationalised pool of financial institutions and professionals, will allow for a greater extent of RMB-focused financial innovation.

This will mean, in other words, the creation of markets for new RMB-denominated financial instruments. As a corollary, there will also be an increased concentration of Chinese banks and financial institutions operating within Singapore's financial services sector, with the gradual expansion of Singapore's role as a leading offshore RMB hub. Singapore's future trajectories as a global financial hub will therefore be strongly tied to its growing role as a FinTech hub and offshore RMB centre. Indeed, it is not improbable for the city-state to eventually emerge as the top financial centre for these two emerging sectors, if it is able to retain and adapt its existing financial governance model and policy directions, as discussed in this case study, in response to these emerging realities.

References

Azhar, Saeed, and Marius Zaharia. "In Race to Be Asia's Fintech Hub, Singapore Leads Hong Kong." *Reuters*, July 3, 2016. http://www.reuters.com/article/us-singapore-fintech-idUSKCN0ZJ10P.

Brandes, Dennis, Cyrill Fischer, Michael Grampp, Michele Salvi, and Michael Walterman. "Deloitte Global Wealth Management Centre Ranking 2015." Zurich, Switzerland: Deloitte Consulting AG, 2015.

Cassis, Youssef. *Capitals of Capital: The Rise and Fall of International Financial Centres 1780-2009*. Cambridge: Cambridge University Press, 2010.

Chanjaroen, Chanyaporn, and Darren Boey. "Singapore Is Beating Hong Kong in Asia's Fintech Race." *Bloomberg*. December 7, 2016. https://www.bloomberg.com/news/articles/2016-12-07/with-fintech-rising-hong-kong-singapore-rivalry-gets-new-twist.

Channel NewsAsia. "Singapore's General Insurance Industry Saw Premiums Rise to S$3.6b in 2015." *Channel NewsAsia*, March 17, 2016. http://www.channelnewsasia.com/news/business/singapore/singapore-s-general/2610590.html.

Chia, Yan Min. "Singapore is largest forex centre in Asia, third largest globally." *The Straits Times*. September 1, 2016. http://www.straitstimes.com/business/banking/singapore-is-largest-forex-centre-in-asia-third-largest-globally.

Citi. "Digital Disruption: How FinTech Is Forcing Banks to a Tipping Point." Citi GPS: Global Perspectives & Solutions. New York, N.Y.: Citigroup, March 2016.

Colliers International. "Global Office Rankings." New Zealand Research Report. Auckland, N.Z.: Coliers International, October 2016.

Committee on the Future Economy. "Report of the Committee on the Future Economy." Singapore: Government of Singapore, February 2017.

EY. "UK FinTech On the Cutting Edge An Evaluation of the International FinTech Sector." London, U.K.: EY, 2016.

Finextra. "ANZ and DBS Open New Labs to Coincide with Singapore Fintech Festival." *Finextra Research*, November 14, 2016. https://www.finextra.com/newsarticle/29756/anz-and-dbs-open-new-labs-to-coincide-with-singapore-fintech-festival.

Fortune International. "Singapore Fines Two Big Banks Over 1MDB Scandal, Shuts Down Another." *Fortune*, October 11, 2016. http://fortune.com/2016/10/11/1mdb-singapore-dbs-ubs-falcon-bank/.

Grant, Jeremy. "Asian Cities Attract More Overseas Money than Switzerland." *Financial Times*. February 9, 2015. https://www.ft.com/content/aa71828e-b03c-11e4-a2cc-00144feab7de.

———. "Battle Is on for Offshore Renminbi Market." *Financial Times*, July 29, 2015. http://www.ft.com/intl/cms/s/2/4b9725c8-15d3-11e5-be54-00144feabdc0.html#axzz3qVC6Bp6t.

Grant, Jeremy, and Robert Cookson. "Beijing Move Boosts Singapore Rmb Hopes." *Financial Times*, July 16, 2012. http://www.ft.com/cms/s/0/ec77918a-ceff-11e1-bc0c-00144feabdc0.html#axzz20qW5kWXq.

Guo, Yvonne, and Jun Jie Woo. "Wealth Management for All Seasons." *The Straits Times*. December 3, 2013. http://www.academia.edu/6087604/Wealth_Management_for_All_Seasons.

Hamilton-Hart, Natasha. *Asian States, Asian Bankers: Central Banking in Southeast Asia*. New York: Cornell University Press, 2002.
Hodjera, Zoran. "The Asian Currency Market: Singapore as a Regional Financial Center (Le Marche Monetaire d'Asie: Singapour, Place Financiere Regionale) (El Mercado Monetario de Asia: Singapur Como Centro Financiero Regional)." *Staff Papers - International Monetary Fund* 25, no. 2 (June 1978): 221.
Huff, W.G. "The Developmental State, Government, and Singapore's Economic Development since 1960." *World Development* 23, no. 8 (August 1995): 1421–38.
Infocomm Development Authority of Singapore. "Singapore Lays Groundwork to Be World's First Smart Nation." News Release. Singapore: Infocomm Development Authority of Singapore, June 18, 2014. http://www.ida.gov.sg/blog/insg/featured/singapore-lays-groundwork-to-be-worlds-first-smart-nation/.
InsuranceAsia News. "Singapore Likely to Keep Status as Asia's Top Insurance Hub," March 4, 2016. http://insuranceasianews.com/topics/reinsurance/singapore-likely-to-keep-status-as-asias-top-insurance-hub/.
Jek, Aun Long, and Danny Tan. "The Growth of Private Wealth Management in Singapore and Hong Kong." *Capital Markets Law Journal* 6, no. 1 (2010): 104–26.
Lee, Kam-Hon, and Ilan Vertinsky. "Strategic Adjustment of International Financial Centres (IFCs) in Small Economies: A Comparative Study of Hong Kong and Singapore." *Journal of Business Administration* 17, no. 1–2 (1988): 151–72.
Lessard, Donald R. "Singapore as an International Financial Centre." In *Offshore Financial Centres*, edited by Richard Roberts, 4:200–235. International Financial Centres. Aldershot: Edward Elgar Publishing Limited, 1994.
Lim, Linda. "Singapore's Success: The Myth of the Free Market Economy." *Asian Survey* 23, no. 6 (June 1983): 752–64.
Low, Linda. *The Political Economy of a City-State: Government-Made Singapore*. Oxford: Oxford University Press, 2001.
———. "The Singapore Developmental State in the New Economy and Polity." *The Pacific Review* 14, no. 3 (January 1, 2001): 411–41.
Masters, Brooke. "Singapore Punishes 20 Banks in Rate Probe." *Financial Times*, June 14, 2013. https://www.ft.com/content/fed38a0a-d4d5-11e2-b4d7-00144feab7de.
Menon, Ravi. "A Smart Financial Centre." Keynote Address presented at the Global Technology Law Conference 2015, Singapore, June 29, 2015. http://www.mas.gov.sg/news-and-publications/speeches-and-monetary-policy-statements/speeches/2015/a-smart-financial-centre.aspx.
———. "Singapore as a Global Insurance Marketplace." Keynote Address presented at the 12th Singapore International Reinsurance Conference, Singapore, November 6, 2013. http://www.mas.gov.sg/news-and-publications/speeches-and-monetary-policy-statements/speeches/2013/singapore-as-a-global-insurance-marketplace.aspx.
Monetary Authority of Singapore. "2015 Singapore Asset Management Survey: Singapore - Global City, World of Opportunities." Singapore: Monetary Authority of Singapore, 2015.
———. "Annual Report 1997/1998." Singapore: Monetary Authority of Singapore, 1998.
———. "Annual Report 1999/2000." Singapore: Monetary Authority of Singapore, 2000.
———. "Banking Sector." *Monetary Authority of Singapore Website*, November 26, 2016. http://www.mas.gov.sg/Singapore-Financial-Centre/Overview/Asian-Dollar-Market.aspx.

———. “Capital Markets.” *Monetary Authority of Singapore Website*, November 26, 2016. http://www.mas.gov.sg/Singapore-Financial-Centre/Overview/Capital-Markets.aspx.

———. “Cost Competitive And Excellent Infrastructure.” *MAS Website*, November 26, 2016. http://www.mas.gov.sg/Singapore-Financial-Centre/Value-Propositions/Cost-Competitive-And-Excellent-Infrastructure.aspx.

———. “Financial Directory.” *MASNET*, December 7, 2016. https://masnetsvc.mas.gov.sg/FID.html.

———. “Liberalising Commercial Banking and Upgrading Local Banks.” Statement by the Monetary Authority of Singapore. Singapore: Monetary Authority of Singapore, May 17, 1999.

———. “MAS’ New Organisational Structure,” April 3, 1998. http://www.mas.gov.sg/en/News-and-Publications/Press-Releases/1998/MAS-Adopts-New-Organisational-Structure--03-Apr-1998.aspx.

———. “Overview of MAS.” *Monetary Authority of Singapore Website*, September 4, 2012. http://www.mas.gov.sg/en/About-MAS/Overview-of-MAS.aspx.

———. “Regional Gateway for RMB.” *MAS Website*, November 26, 2016. http://www.mas.gov.sg/Singapore-Financial-Centre/Overview/Regional-Gateway-for-RMB.aspx.

———. “Setting Up.” *MAS Website*, November 26, 2016. http://www.mas.gov.sg/Singapore-Financial-Centre/Value-Propositions/Setting-Up.aspx.

———. “Singapore Corporate Debt Market Development 2016.” Singapore: Monetary, 2016.

———. “Skilled Cosmopolitan Workforce.” *MAS Website*, January 11, 2017. http://www.mas.gov.sg/Singapore-Financial-Centre/Value-Propositions/Skilled-Workforce.aspx.

———. “Types of Institutions: Insurance,” November 26, 2016. http://www.mas.gov.sg/singapore-financial-centre/types-of-institutions/insurance.aspx.

———. “Value Propositions,” November 26, 2016. http://www.mas.gov.sg/singapore-financial-centre/value-propositions.aspx.

———. “Wealth Management and Insurance,” November 26, 2016. http://www.mas.gov.sg/Singapore-Financial-Centre/Overview/Wealth-Management-and-Insurance.aspx.

Montes, Manuel F. “Tokyo, Hong Kong and Singapore as Competing Financial Centres.” *Journal of Asian Business* 18, no. 1 (1999): 153–68.

Perry, Martin. *Singapore: A Developmental City State*. Chichester: Wiley, 1997.

Smart Nation Programme Office. “About Smart Nation,” 2016. http://www.smartnation.sg/about-smart-nation.

Tan, Chwee Huat. *Financial Services and Wealth Management in Singapore*. Updated. Singapore: Singapore University Press, 2011.

Tan, Swee Liang. “The Development of Singapore’s Financial Sector: A Review and Some Thoughts on Its Future Prospects.” In *The Economic Prospects of Singapore*, edited by Winston T. H Koh and Roberto S. Mariano, 246–73. Singapore: Pearson Addison-Wesley, 2006.

Tee, Ong Chong. “Singapore’s Policy of Non-Internationalisation of the Singapore Dollar and the Asian Dollar Market.” BIS Papers. Bank for International Settlements, 2003. http://econpapers.repec.org/bookchap/bisbisbpc/15-11.htm.

The Economist. “Singapore Tries to Become a Fintech Hub.” *The Economist*, January 14, 2017. http://www.economist.com/news/finance-and-economics/21714384-city-state-wants-fintech-bolsters-not-disrupts-mainstream.
UNDP. *UNDP and the Making of Singapore’s Public Service*. Singapore: UNDP Global Centre for Public Service Excellence, 2015.
Wong. “3 local banks among top 80 banking brands.” *The Straits Times*. February 8, 2016. http://www.straitstimes.com/singapore/3-local-banks-among-top-80-banking-brands.
Wong, Wei Han. “Singapore stock market: More uncertainties ahead.” *The Straits Times*. December 23, 2016. http://www.straitstimes.com/business/companies-markets/leaving-a-rough-2016-behind-moving-on-to-an-uncertain-new-year.
Woo, J. J., and M. Howlett. “Explaining Dynamics without Change: A Critical Subsector Approach to Financial Policy Making.” *Journal of Asian Public Policy* 8, no. 3 (September 1, 2015): 312–28. doi:10.1080/17516234.2015.1082689.
Woo, J.J. *Business and Politics in Asia’s Key Financial Centres - Hong Kong, Singapore and Shanghai*. 1st ed. Singapore: Springer, 2016.
———. “Policy Relations and Policy Subsystems: Financial Policy in Hong Kong and Singapore.” *International Journal of Public Administration* 38, no. 8 (2015): 553–61.
———. *Singapore as an International Financial Centre: History, Politics and Policy*. London: Palgrave Macmillan, 2016.
Woo, Jun Jie. “The Politics of Liveability in S’pore, HK.” *Today*. February 4, 2015, sec. Commentary. http://www.todayonline.com/commentary/politics-liveability-spore-hk.
———. “Three Ts behind Singapore’s Future as a Leading Financial Centre.” *TODAY*. June 26, 2014. http://www.todayonline.com/business/three-ts-behind-singapores-future-leading-financial-centre.
Woo, Shea Leen. “Easing Taxes to Create Global Insurance Hub.” *PwC*, March 24, 2016. http://www.pwc.com/sg/en/budget-2016/sg-budget-2016-in-the-news-20160324bt.html.
World Bank Group. “Doing Business 2017: Equal Opportunity for All.” Washington, D.C.: World Bank, 2017.
Yeandle, Mark. “Global Financial Centres Index 20.” London, U.K.: Z/Yen Group and China Development Institute, September 2016.