

# Foreign Ownership of agency MBS

Prepared by: State Street Global Advisors and Urban Institute's Housing Finance Policy Center  
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## RESEARCH REPORT<sup>1</sup>

Overseas investors have historically been, and continue to be, a reliable source of demand for agency mortgage-backed securities (MBS), i.e., those issued by Ginnie Mae, Fannie Mae or Freddie Mac, and guaranteed (either explicitly or implicitly) by the United States government. Foreign demand for agency MBS is broad-based, covering all six inhabited continents and nearly 200 countries and territories, although the vast majority, over 90 percent of foreign-owned agency MBS is held by just ten countries.

This paper discusses trends in foreign-owned agency MBS, the nations that have been the biggest buyers, how ownership patterns have evolved over time, and likely reasons for these shifts. The main source of data on foreign ownership of agency MBS is the US Department of Treasury's International Capital (TIC) reporting system<sup>2</sup>. TIC reports cross-border securities investment flows between U.S. and foreign entities once every year, typically in April or May. This data is collected through a survey of US-resident issuers and custodians that issue securities to, or hold them on behalf of foreign-resident clients. The TIC report covers a wide range of securities in addition to MBS. This includes US Treasury securities, corporate and municipal debt, equities, and agency debt. Data on agency MBS flows is available 2003 onwards. This paper incorporates most recent TIC data, released in April 2020 and reported as of June 2019. It is important to note that TIC data for agency MBS is not broken out separately for Fannie Mae, Freddie Mac and Ginnie Mae. Accordingly, this analysis covers all three agencies in aggregate.

### Overall foreign demand for agency MBS

For the first time, foreign ownership of agency MBS exceeded \$1 trillion in 2019. It stood at \$1.08 trillion in June 2019 compared to \$953 billion as of June 2018. This represents a year over year increase of \$123 billion. Foreign demand for agency MBS has increased substantially over the long term as shown in Figure 1. Foreign ownership has increased even when measured as a share of total agency MBS outstanding. Additionally, most of this increase came from 2003 to 2008, with relatively less growth from 2009 to 2019.

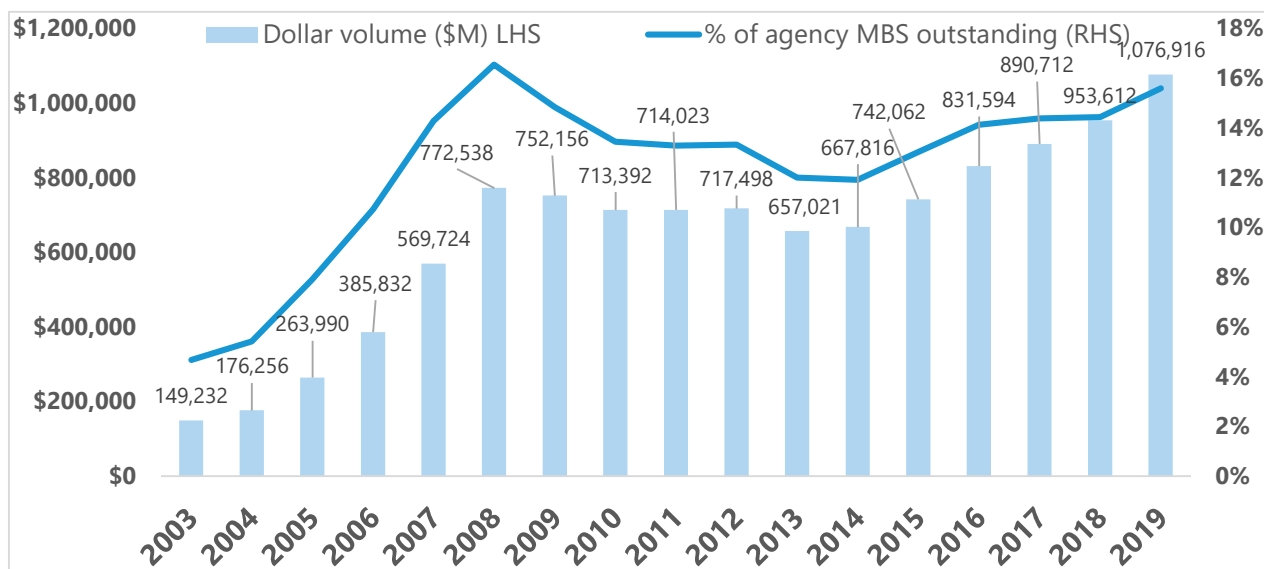
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<sup>1</sup> Authored by Karan Kaul and Laurie Goodman at the Urban Institute. All statements and opinions contained herein are those of the authors. See last page for detailed information on the authors and important disclosures.  
Revised in June 2020 to incorporate updated TIC data released in April 2020.

<sup>2</sup> See <https://www.treasury.gov/resource-center/data-chart-center/tic/Pages/index.aspx>

FIGURE 1

### Agency MBS Owned by Foreign Entities



Source: Urban Institute calculations based on US Treasury International Capital and SIFMA data.

Even though the volume of agency MBS owned by foreign investors is large at \$1.08 trillion, it represents 15.6 percent of the \$6.9 trillion in total outstanding. This share is up marginally from 14.4 percent the prior year. Thus the overwhelming majority of agency MBS, 84.4 percent, is owned by domestic entities. It is very likely that the foreign ownership share varies from Ginnie Mae to Fannie Mae to Freddie Mac. This is because Ginnie Mae securities have the explicit full-faith and credit guaranty in statute, while securities from Fannie Mae and Freddie Mac have an implicit guaranty that the United States, as a matter of policy, chose to honor during the financial crisis. We expect that Ginnie Mae securities, with their explicit full-faith and credit guaranty of the United States have greater appeal to foreign investors than Fannie Mae or Freddie Mac securities, which are implicitly guaranteed.

### Largest foreign owners of agency MBS

TIC data tracks foreign MBS ownership by country. This provides more detailed insight into the ownership pattern across nations. A look at country level holdings shows that foreign ownership of agency MBS has remained highly concentrated within a handful of countries (figure 2) for a long time and that the concentration has increased. Currently, 91 percent of foreign-owned agency MBS is owned by just 10 countries. This is up from 80 percent in 2003, but has remained very stable during the last 10 years. Among the agency MBS that is foreign-owned, as of June 2019, 72.5 percent was held by just three nations – Japan, Taiwan, and China. Their combined share has increased since 2003 but has remained stable since 2014. Collectively Asian countries<sup>3</sup> held 80.4 percent of all foreign held MBS, with Europe owning 11.9 percent as of June 2019<sup>4</sup>. Latin America, Canada, Africa, Carrabean, Australia and others own the remaining 7.5 percent (Figure 3).

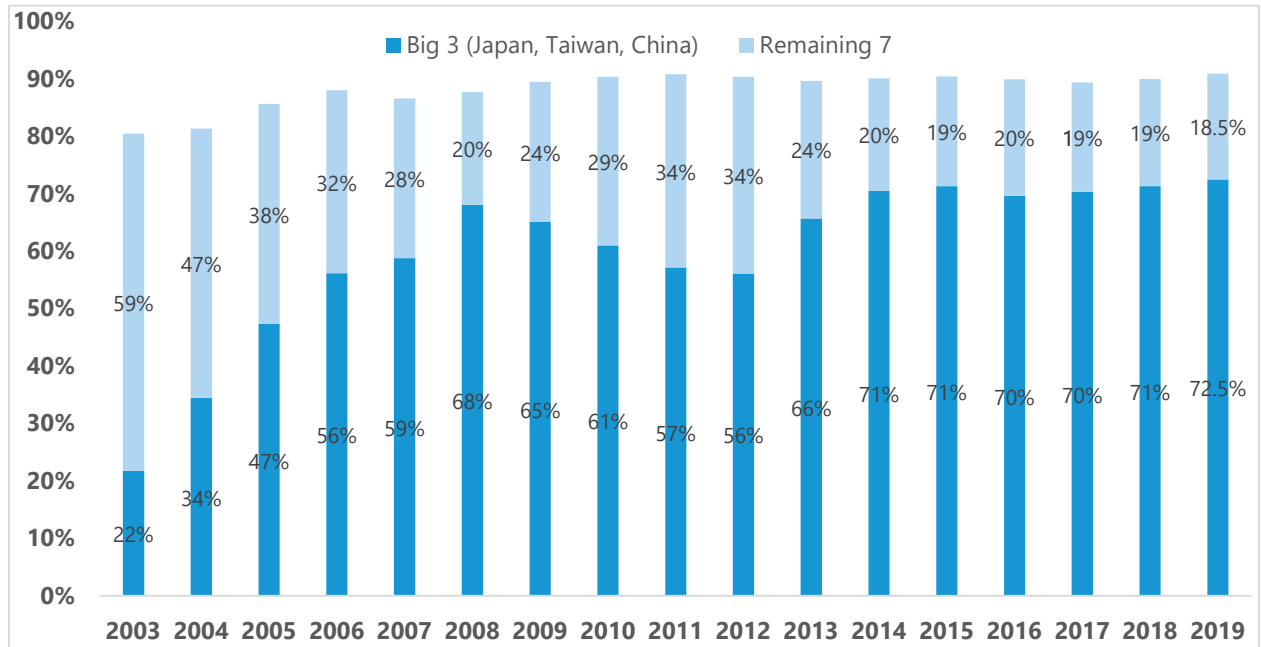
<sup>3</sup> Other large Asian holders of agency MBS include Malaysia, Hong Kong, Saudi Arabia, Singapore, Indonesia and Kuwait. Also see page 46 of [https://www.ginniemae.gov/data\\_and\\_reports/reporting/Documents/global\\_market\\_analysis\\_apr19.pdf](https://www.ginniemae.gov/data_and_reports/reporting/Documents/global_market_analysis_apr19.pdf) for recent estimates of agency MBS holdings by country.

<sup>4</sup> Foreign investors report encountering regulatory hurdles in Europe that make holding Ginnie Mae MBS costlier than holding similarly situated (i.e. zero credit risk) investments. Specifically, there have been instances where European regulators have assigned credit risk ratings to MBS that do not recognize that Ginnie Mae securities have no credit risk. This treats Ginnie Mae securities in a different way than the BASEL framework, which assigns Ginnie Mae securities a 0 percent risk weighting.

FIGURE 2

**Foreign Ownership of Agency MBS is Highly Concentrated**

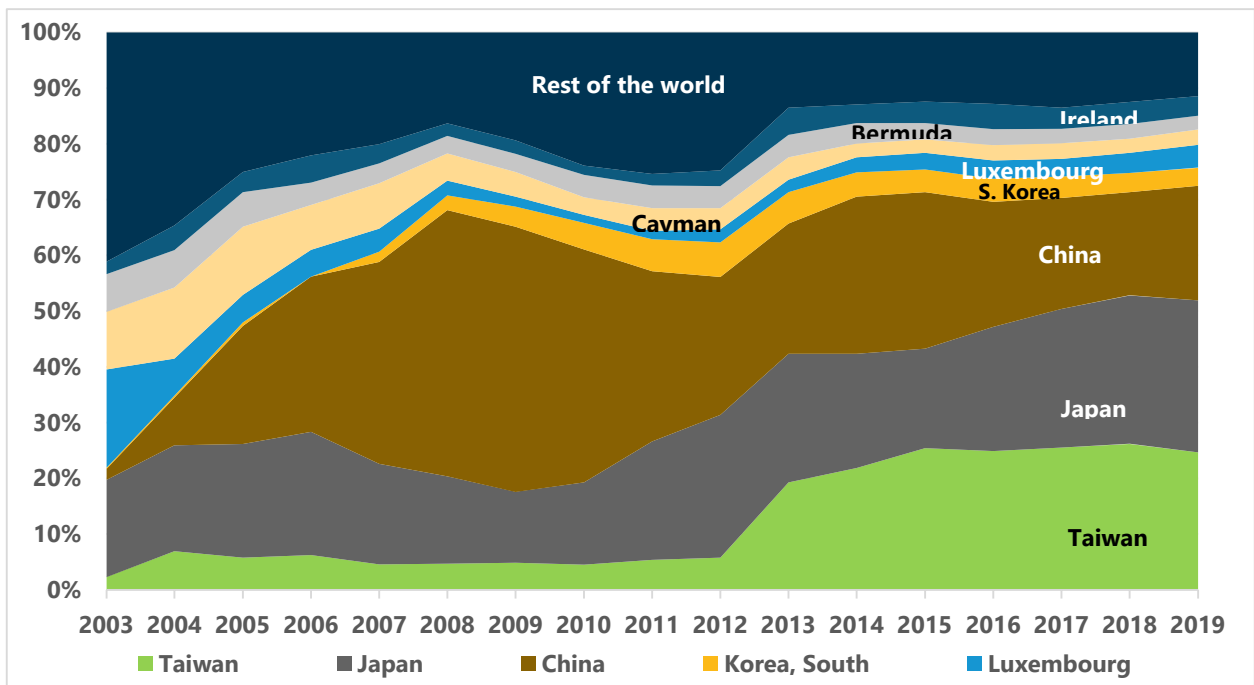
Percentage of foreign MBS held by the top 10 countries, broken out by big 3 (China, Japan and Taiwan) and Remaining 7



Source: Urban Institute calculations based on US Treasury International Capital data.

FIGURE 3

**Foreign ownership of outstanding agency MBS by country share**



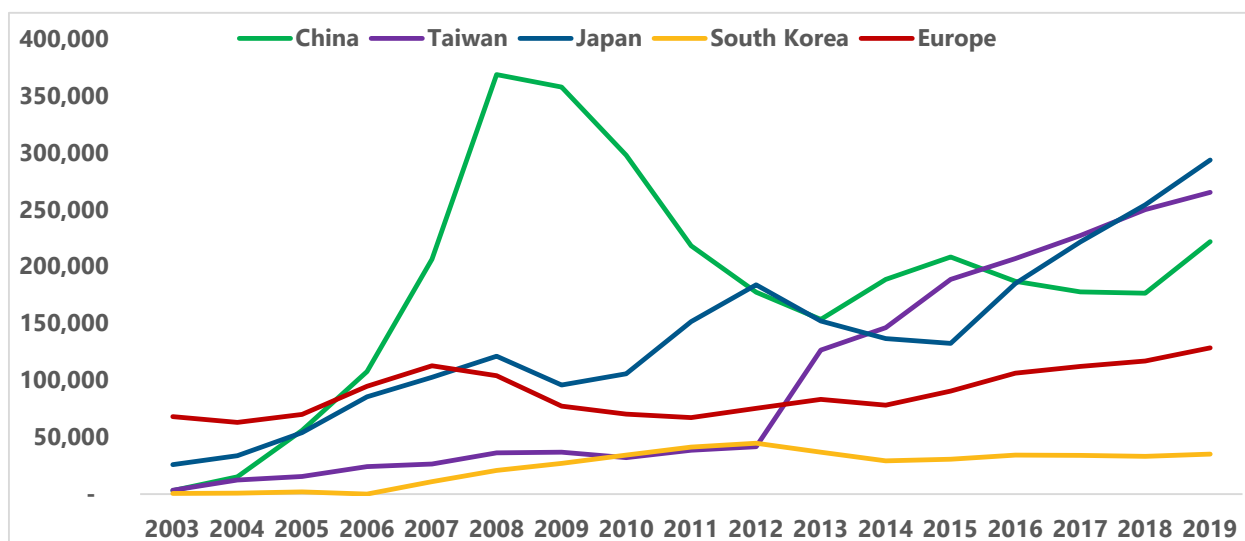
Source: Urban Institute calculations based on US Treasury International Capital data.

## Changes in the foreign ownership pattern

As figure 3 shows, the biggest driver of foreign demand in the early 2000s was China, whose rising current account balance and growing foreign exchange reserves fueled its overseas investments, including in agency MBS. In 2003, China owned under \$3 billion, or 2 percent of all foreign-owned agency MBS. At its peak in 2008, it held as much as \$368 billion, or 48 percent. With its growth rate slowing post-2010, China's ownership share declined to 20.6 percent in June 2019, although it increased on a year over year basis, from 18.5 percent in June 2018. In dollar terms, China held \$221.7 billion in June 2020 compared to \$176.3 billion in June 2018 (figure 4).

FIGURE 4

### Agency MBS held by China, Japan and Taiwan, South Korea (USD Millions)



Source: Urban Institute calculations based on US Treasury International Capital data.

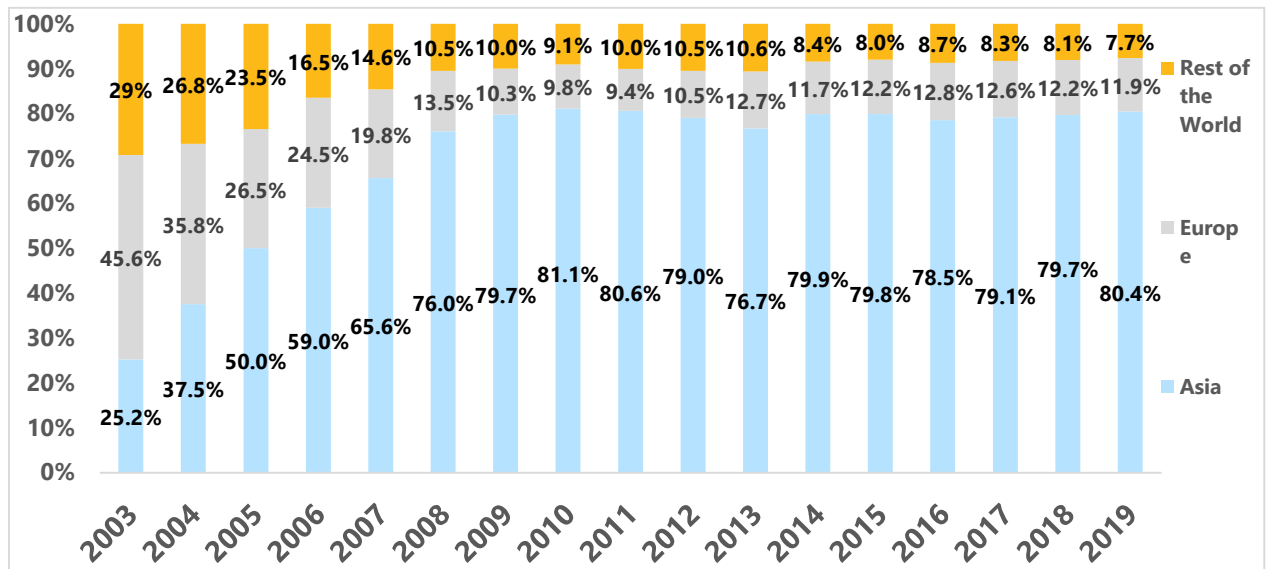
As China has stepped back, other Asian nations have stepped forward. Both Taiwan and Japan increased their agency MBS purchases post 2010. Taiwan's holdings increased steadily from \$3.5 billion in 2003 to \$41 billion in 2012. But just one year later in 2013, its holdings more than tripled to \$126 billion. Strong growth has continued thereafter with Taiwan's holdings reaching \$265 billion in 2019, up from \$250 billion in 2018. Taiwan has held more agency MBS than China since 2016.

Japan's holdings have also increased over time; however its rise has been more gradual than Taiwan's. Japan increased its agency MBS holdings from \$26 billion in 2003 to \$293 billion in 2019, thus becoming the largest foreign owner of agency MBS with a 27.3 percent share. Another Asian nation that has slowly increased its purchases of agency MBS in the last decade is South Korea, although its holdings are relatively small (\$35 billion in 2019). Lastly, after declining during the financial crisis, Europe's agency MBS ownership level has recovered, reaching \$128.3 billion in June 2019, slightly higher than \$116.8 billion in June 2018.

Growing demand from Japan and Taiwan, even as China has pulled back has meant that Asia's share of agency MBS ownership has continued to remain very high, hovering around 80 percent over the last decade (figure 5). At the same time, Europe's share - after shrinking from 46 percent in 2003 to under 10 percent in 2011 - saw a modest increase to 11.9 percent in 2019.

FIGURE 5

Foreign Ownership of agency MBS by Region



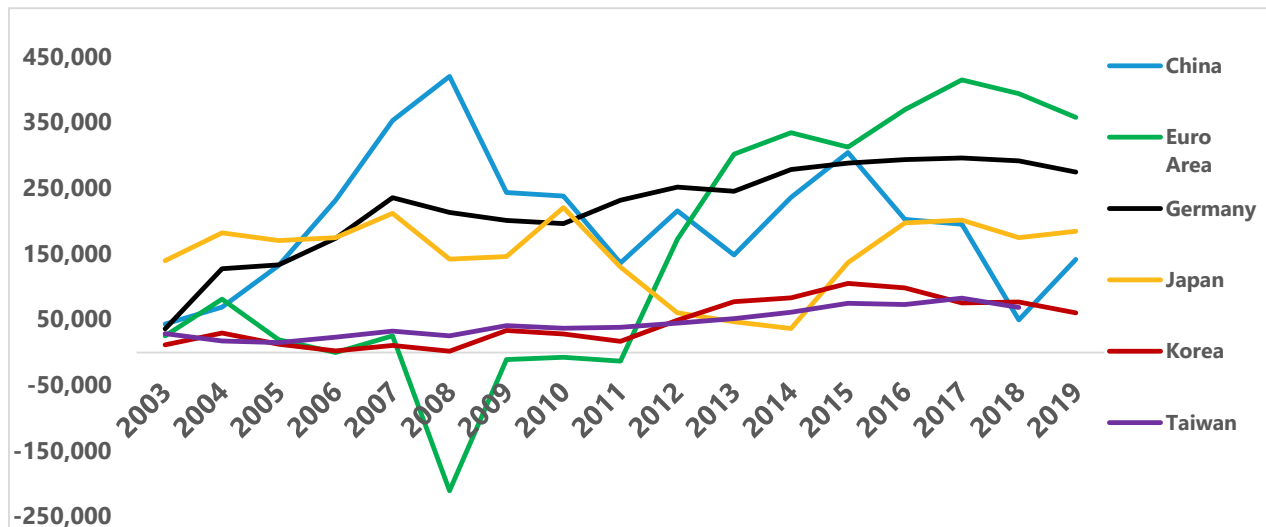
Source: Urban Institute calculations based on US Treasury International Capital data.

Drivers of shift in foreign demand

The most significant shift in foreign ownership of agency MBS in the last 16 years has been the rise of Asia. As the Chinese economy grew during the 2000s, its current account balance (CAB) and foreign exchange reserves swelled. Huge trade surpluses with the US and low levels of domestic consumer spending left China flush with cash.

FIGURE 6

Current Account Balance, USD Millions



Source: International Monetary Fund. **Note:** Taiwan's CAB is no longer available from IMF.

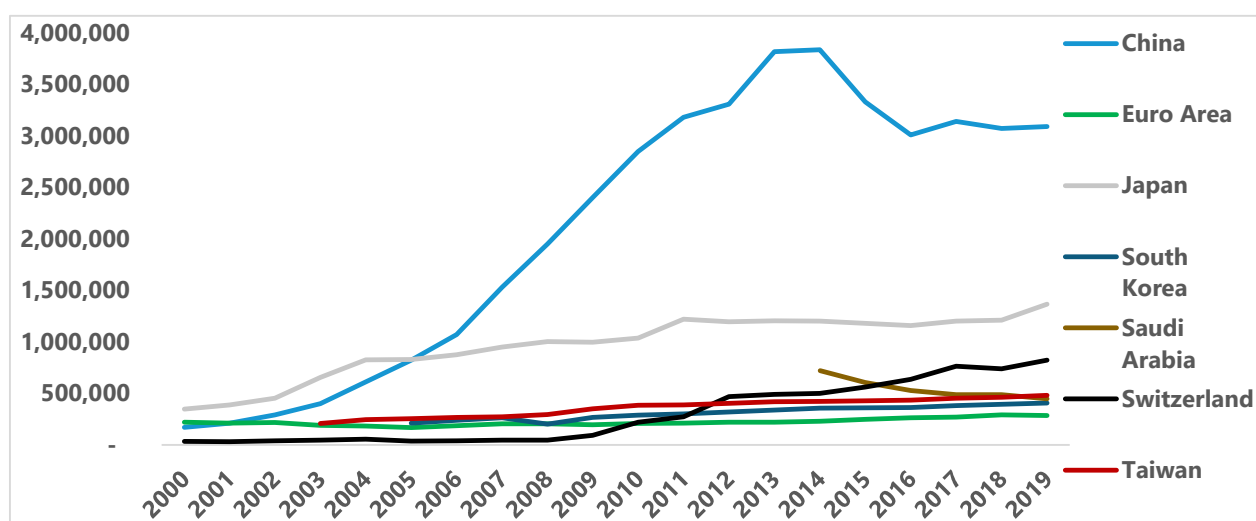
With China's growth slowing, its CAB has shrunk from its 2008 peak of \$420 billion to \$141 billion in 2018. On the other hand, Taiwan and Japan have seen their current account balances increase since the Great Recession, allowing

them to increase their holdings of agency MBS. Europe's CAB remained very low until 2011, even becoming negative in 2008 and 2009 because of the global financial meltdown. Since then, EU has seen a very strong recovery, with a 2019 CAB of \$358 billion (figure 6).

Europe's growing CAB has not yet translated into a significant increase in its agency MBS holdings. The most likely reason is that Europe's foreign exchange reserves remain low at \$283 billion in 2019 (figure 7) as well as EU regulatory capital requirements that make it expensive to hold MBS. China's foreign exchange reserves currently stand at over \$3 trillion, accumulated over a decade of large trade surpluses. Japan, Taiwan and South Korea also hold significant foreign exchange reserves worth \$1.36 trillion, \$481 billion, and \$407 billion respectively, which have contributed to increases in their MBS holdings. Figure 7 also shows trends in foreign exchange reserves of Switzerland and Saudi Arabia – two nations that hold large foreign reserves but very little agency MBS.

FIGURE 7

**Foreign Exchange Reserves, USD Millions**



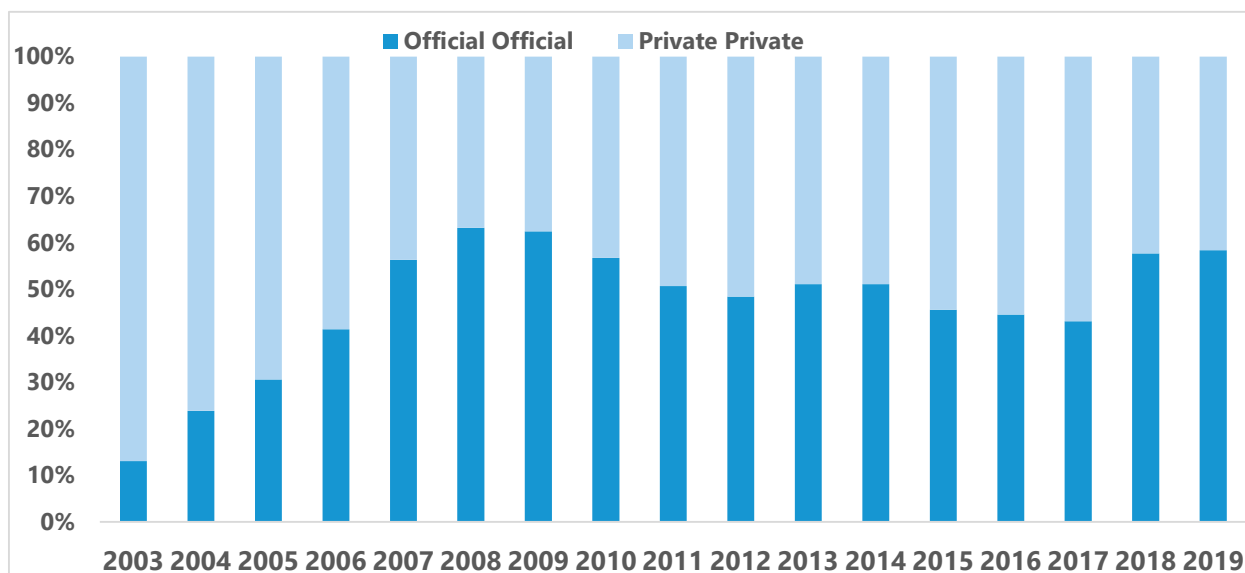
Source: International Monetary Fund

**Official vs. private entity MBS holdings**

Another shift in the foreign ownership of agency MBS is from official institutions to private entities. Official institutions includes governments, government institutions, foreign central banks and government-owned investment funds such as sovereign wealth funds. According to TIC data, in the early 2000s, the overwhelming majority of foreign-owned MBS (87 percent) was held by private entities, while only 13 percent was held by official institutions (figure 8). By 2010, official institutions had increased their share to well over 60 percent, predominantly driven by the growth in China's official holdings. With China's retreat, the official share declined to about 58.3 percent in 2019. With a bigger share of foreign owned MBS held by official institutions today than in early 2000s, foreign demand for MBS should remain more sensitive to movements in trade surpluses and foreign exchange reserves.

FIGURE 8

**Foreign Ownership of agency MBS by Owner Type**



Source: Urban Institute calculations based on US Treasury International Capital data.

**Future of foreign ownership of agency MBS**

**Overall foreign ownership share:** As discussed earlier, foreign ownership of agency MBS has increased over time, currently standing 15.6 percent. The year over year growth in the volume of MBS that is foreign-owned has exceeded the annual growth in agency MBS outstanding in 11 out of the last 16 years since 2004. Even as foreign growth has moderated significantly post-crisis (Table 1), it outpaces the growth rate for MBS outstanding. Between June 2018 and June 2019, total agency MBS outstanding grew by 4.6 percent compared to 12.9 percent for foreign-owned MBS. If this trend remains in place, the share of MBS owned by foreign entities will continue to rise in the coming years, although the rate of increase will be much slower than witnessed in booming mid-2000s.

TABLE 1

**Annual Growth Rates for agency MBS Outstanding and Foreign Owned**

	agency MBS outstanding	foreign owned agency MBS
2004	2.1%	18.1%
2005	2.5%	49.8%
2006	7.7%	46.2%
2007	10.9%	47.7%
2008	17.0%	35.6%
2009	8.6%	-2.6%
2010	4.7%	-5.2%

2011	1.2%	0.1%
2012	0.2%	0.5%
2013	1.7%	-8.4%
2014	2.4%	1.6%
2015	1.6%	11.1%
2016	3.3%	12.1%
2017	5.2%	7.1%
2018	6.7%	7.1%
2019	4.6%	12.9%

**Source:** Urban Institute calculations based on US Treasury International Capital data. Note: All calculations based on USD amounts

**Region/Country level holdings:** As discussed previously, the vast majority (80.4 percent) of foreign-owned agency MBS is held by Asian nations. This level has remained quite stable during the last 8 years. Additionally, with its large foreign exchange reserves, Asian dominance is likely to continue for the foreseeable future. At the same time, as the EU region's trade surplus and forex reserves grow, one can expect EU's holdings of agency MBS to grow modestly. Recent increases in Europe's ownership share are likely driven by private entities as opposed to by official institutions. About 72 percent of agency MBS owned by Europe is held by just three countries – Luxembourg, Ireland and Switzerland. All three are major financial centers that attract significant overseas investment either because they have favorable tax regimes (Luxembourg and Ireland) or because they specialize in offering trust and custodial services to global clients (Switzerland). This suggests that future growth in EU's ownership of agency MBS will likely be driven by private entities, partially impacted by enhanced regulatory capital requirements that make it expensive to hold MBS.

**Buying capacity:** Another factor that could affect future foreign holdings is the ratio of agency MBS owned to foreign exchange reserves for each country. Table 2 shows this ratio by country.

TABLE 2

**Agency MBS Owned as a Percentage of Foreign Exchange Reserves, by Country**

	China	Taiwan	Japan	S Korea	Euro	Saudi Arabia	Switzerland
2003	0.7%	1.7%	4.0%		36.3%		10.8%
2004	2.5%	5.0%	4.1%		34.9%		9.1%
2005	6.8%	6.0%	6.5%	0.8%	41.8%		10.3%
2006	10.0%	9.0%	9.8%	0.0%	51.5%		10.5%
2007	13.5%	9.7%	10.8%	4.1%	55.5%		14.7%



<b>2008</b>	18.9%	12.4%	12.1%	10.3%	51.5%		0.0%
<b>2009</b>	14.9%	10.5%	9.6%	10.1%	39.7%		0.0%
<b>2010</b>	10.4%	8.4%	10.2%	11.9%	33.9%		2.4%
<b>2011</b>	6.9%	9.9%	12.4%	13.8%	32.2%		2.3%
<b>2012</b>	5.4%	10.3%	15.4%	14.0%	34.3%		1.6%
<b>2013</b>	4.0%	30.3%	12.6%	10.9%	38.0%		1.8%
<b>2014</b>	4.9%	34.8%	11.4%	8.2%	34.2%	0.0%	2.0%
<b>2015</b>	6.3%	44.2%	11.2%	8.4%	36.8%	0.9%	2.0%
<b>2016</b>	6.2%	47.7%	16.0%	9.5%	40.7%	1.3%	1.8%
<b>2017</b>	5.7%	50.3%	18.4%	8.9%	41.7%	1.0%	1.8%
<b>2018</b>	5.7%	54.1%	21.0%	8.4%	40.3%	0.6%	1.5%
<b>2019</b>	7.2%	55.1%	21.5%	8.6%	45.3%	1.1%	1.2%

**Source:** Urban Institute calculations based on US Treasury International Capital data **Note:** Some cells are empty because underlying data are unavailable; All calculations are based on USD amounts

China's current agency MBS holdings of \$221.7 billion comprise 7.2 percent of its \$3 trillion in foreign exchange reserves. Japan's \$293 billion comprise 21.5 percent of its \$1.4 trillion in forex reserves, while South Korea's holdings comprise 8.6 percent of its reserves. This suggests all three have room to grow their official holdings. In contrast, Taiwan and Europe have both invested a much larger portion of their forex reserves (55.1 percent and 45.3 percent respectively) in agency MBS, suggesting relatively less flexibility in growing their official holdings. This could be a limiting factor for future Taiwanese and European demand for agency MBS.

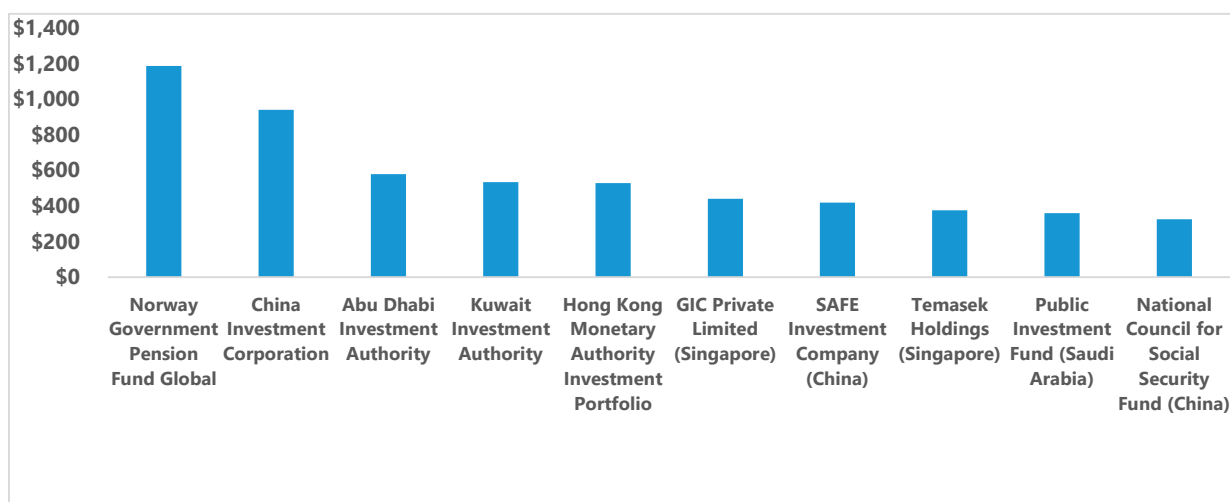
At the other end of the spectrum are Switzerland and Saudi Arabia – two nations with significant forex reserves, \$824 billion and \$448 billion respectively, but very little agency MBS, \$10.1 billion and \$4.9 billion respectively, representing less than 2 percent of forex reserves for each. Note that Saudi Arabia's holdings increased by 75 percent compared to June 2018, but are well below the June 2016 level of \$6.8 billion.

**Sovereign Wealth Funds:** Sovereign wealth funds (SWFs) could be another source of demand for agency MBS. SWF holdings are classified as official and are included in the official numbers for TIC reporting. SWFs have witnessed a tremendous increase in assets under management in recent decades. Currently SWFs manage a total of \$8.2 trillion in assets globally<sup>5</sup> across equities, fixed income, real estate and alternative investments. About 69 percent of global SWF assets are held by the 10 largest funds.

<sup>5</sup> <https://www.swfinstitute.org/sovereign-wealth-fund-rankings/>

FIGURE 9

**Top 10 Sovereign Wealth Funds by Assets Under Management (USD Billions)**



Source: Sovereign Wealth Fund Institute

A high level analysis of the biggest SWFs shows that their allocation to securitized mortgage products tends to be very low. The largest SWF in the world, Norway's Government Pension Fund currently invests a total of \$308 billion in fixed income assets globally (representing 26% of its \$1,187 billion under management). Of this \$308 billion, about \$125 billion is invested in US fixed income assets, almost entirely in US treasuries and corporate bonds. Only a miniscule portion of the Fund is invested in US securitized assets, none of which is agency MBS.

Similarly, China Investment Corporation, with total assets under management of \$941 billion<sup>6</sup> invests an even smaller share of its assets (15.2%) in fixed income investments globally. About 23% of this (i.e. 3.5%) is invested in securitized products globally. Abu Dhabi Investment Authority, the third largest SWF invests only a small portion of its portfolio in fixed income assets<sup>7</sup>.

SWFs tend to be more yield driven and have higher appetite for risk, which explains lower fixed income allocations. At the same time, given their sizable assets, even a small increase in agency MBS allocation could provide significant demand. While a full fledged analysis of MBS holdings of SWFs is beyond the scope of this paper, these numbers suggest SWFs are a potential source of future demand.

**Conclusion**

Foreign entities are a stable and an important source of demand for agency mortgage-backed securities. For several years, the volume of agency MBS owned by foreign entities has grown at a faster rate than the volume of total agency MBS outstanding. If this trend remains in place, the foreign owned share of agency MBS will continue to rise. Foreign demand helps diversify the investor base for agency MBS, attract capital into the US housing market and facilitate lower mortgage rates for US homebuyers. Currently the overwhelming majority of foreign-owned agency MBS, about 80 percent, is held by Asia, primarily Japan, Taiwan and China.

The growth of Asia's holdings in the early 2000s, especially China's rise, fundamentally altered the foreign ownership pattern of agency MBS. Despite China's pullback in recent years, foreign ownership of agency MBS has grown

<sup>6</sup> <http://www.china-inv.cn/chinainven/xhtml/Media/2018EN.pdf>

<sup>7</sup> [http://www.sovereignwealthcenter.com/fund/1/Abu-Dhabi-Investment-Authority.html#.WbA-YrJ94\\_k](http://www.sovereignwealthcenter.com/fund/1/Abu-Dhabi-Investment-Authority.html#.WbA-YrJ94_k)

*because Japan and Taiwan, and to a lesser extent South Korea and Europe have all increased their presence. Latest TIC data presented in this report confirm this trend. As a result, foreign-owned share of agency MBS outstanding has continued to rise steadily.*

## About the Authors

**Karan Kaul** is a senior research associate in the Housing Finance Policy Center at the Urban Institute. He publishes innovative, data-driven research on complex, high-impact policy issues to improve the US mortgage finance system. A strategic thinker and thought leader with 11 years of experience in mortgage capital markets, Kaul has published over 100 research articles on such topics as mortgage servicing reforms, efficient access to credit, benefits of alternative credit scoring, Qualified Mortgage Rule, and single-family rentals. He has advocated for sound industry practices, efficient regulation, and adequate consumer protection to make the US housing finance system work for all Americans.

Kaul is the lead researcher on the Mortgage Servicing Collaborative and regularly speaks at housing conferences. Before joining Urban, he spent five years at Freddie Mac as a senior strategist analyzing the business impact of post-crisis regulatory reforms. He holds a bachelor's degree in electrical engineering and a master's degree in business administration from the University of Maryland, College Park.

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Goodman serves on the board of directors of MFA Financial, Arch Capital Group Ltd., and DBRS Inc. and is an adviser to Amherst Capital Management. She has published more than 200 journal articles and has coauthored and coedited five books. Goodman has a BA in mathematics from the University of Pennsylvania and an AM and PhD in economics from Stanford University.

# Disclosure

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