Recent Developments in the Semi-government Bond Market

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Abstract

The market for Australian state and territory government bonds is often referred to as the market for 'semis'. Semi-government bonds are a key source of government funding and they form an important share of high-quality liquid assets in the Australian financial system. The COVID-19 pandemic, and state and territory government policies implemented in response, increased the size of the semi-government bond market significantly. During this period, there have also been compositional changes in the types of issuance and investors of semis. This article explores recent trends in the issuance, ownership and pricing of semi-government bonds.

Introduction

The market for Australian state and territory government long-term debt, commonly referred to as the semi-government bond (semis) market, plays an important role in the Australian financial system. Semis are issued by state and territory treasury corporations to fund their respective governments and other eligible public entities, including to cover budget deficits and infrastructure investment. Banks hold semis as an asset to meet their liquidity needs. In particular, semis qualify as high-quality liquid assets (HQLA) under Australia's prudential liquidity standards so they can be used to help banks meet their regulatory liquidity requirements. The size and structure of the semis market has changed considerably over recent years following fiscal and monetary policy responses to the COVID-19 pandemic. This article explores trends in the semis market with respect to issuance values, ownership and pricing, and briefly covers the outlook for supply of semis over the coming years.

Trends in issuance

Issuance

The semis market has grown considerably over the past decade. The stock of semis outstanding has increased by over $350 billion since 2010 to a

record $550 billion in 2023 (Graph 1). Semis outstanding grew moderately from 2013 to 2019, reflecting relatively low state and territory government funding needs. The policy responses to the pandemic led to considerable growth in the semis market, similar to the experience during the global financial crisis (Lancaster and Dowling 2011).

Annual net issuance of semis was close to zero in the years prior to the pandemic, increasing to over $50 billion since 2020 (Graph 2). Semis outstanding increased particularly rapidly during the pandemic, with $130 billion in net issuance between March 2020 and December 2021. State and territory government funding needs rose alongside increased spending and a decline in revenue associated with a slowdown in economic activity. Semis issuance has remained elevated since then as there has been only a gradual reduction in state and territory government budget deficits, mainly reflecting ongoing infrastructure spending.

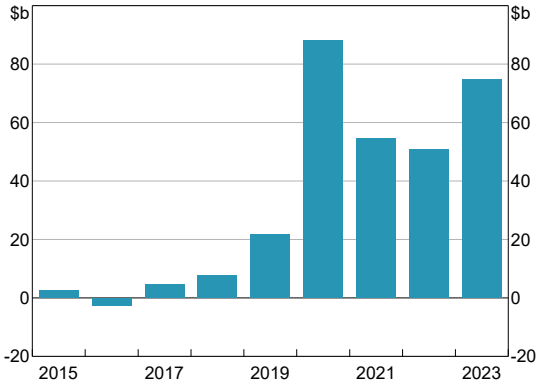
Trends in semis issuance are driven by the largest issuers – Victoria, New South Wales and Queensland. Issuance by these three states collectively account for over 75 per cent of the stock of semis outstanding (Graph 3). Historically, Queensland was the largest semis issuer, accounting for around one-third of semis outstanding, reflecting strong investment in state infrastructure assets (Lancaster and Dowling 2011). Since 2020, however, Victoria and New South Wales have become the largest issuers in the market. Growth in total semis outstanding during the pandemic was primarily driven by the requirements of Victoria and New South Wales, where relatively weaker economic activity reduced revenues, and governments responded with larger stimulus programs. By contrast, Queensland and Western Australia's share of semis outstanding fell during the pandemic. Issuance from the remaining state and territory issuers has remained steady at around 10 per cent of semis outstanding over the past decade.

Despite the recent increase in semis issuance, the semis market remains smaller than the market for Australian Government debt. The stock of semis outstanding is around 60 per cent of the stock of Australian Government Securities (AGS) outstanding (Graph 4). AGS outstanding increased rapidly during the pandemic, exceeding net semis issuance by

Graph 2

Net Issuance of Semi-government Bonds

Annual*



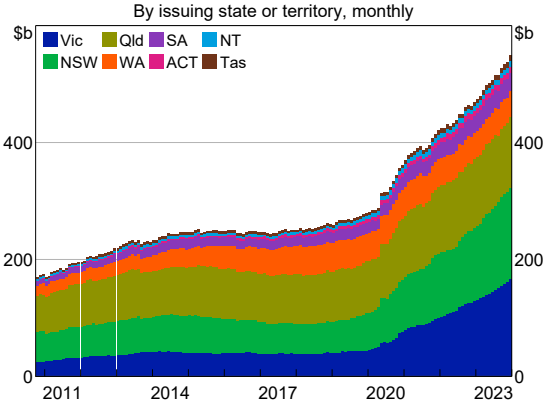
* 2023 data as at 30 November 2023.

Sources: RBA; State and territory treasury corporations.

Graph 1

Semi-government Bonds Outstanding*

By issuing state or territory, monthly



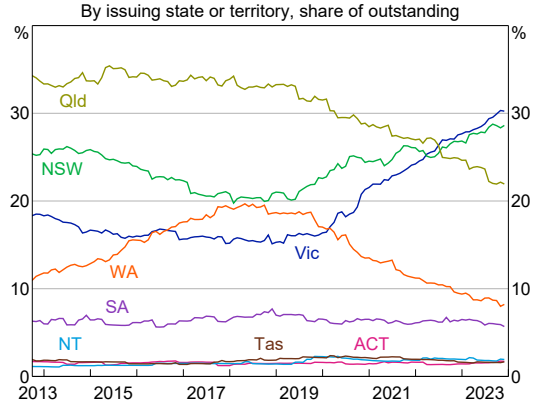
* Data as at 30 November 2023.

Sources: RBA; State and territory treasury corporations.

Graph 3

Semi-government Bonds Outstanding*

By issuing state or territory, share of outstanding



* Data as at 30 November 2023.

Sources: RBA; State and territory treasury corporations.

over $90 billion in the 2020/21 financial year. However, net issuance of AGS has subsequently declined, in contrast with semis net issuance that remains near record highs. Lower AGS issuance reflects stronger-than-expected revenues and lower spending requirements in the near term, which resulted in a budget surplus in 2022/23 (Treasury 2023).

Characteristics of issuance

Semis are typically issued in the domestic market, at long-term tenors and with fixed coupon rates. Almost all semis are issued domestically, with offshore issuance accounting for less than 2 per cent of semis outstanding.[1] Treasury corporations also prefer to issue fixed-rate semis with a term to maturity of over five years to match state and territory funding requirements, including for infrastructure projects, and to manage refinancing risk (Graph 5). Despite these preferences, state and territory treasury corporations have diversified the type of bonds issued since 2020 in response to investor preferences, as seen in increased floating rate and sustainable issuance.

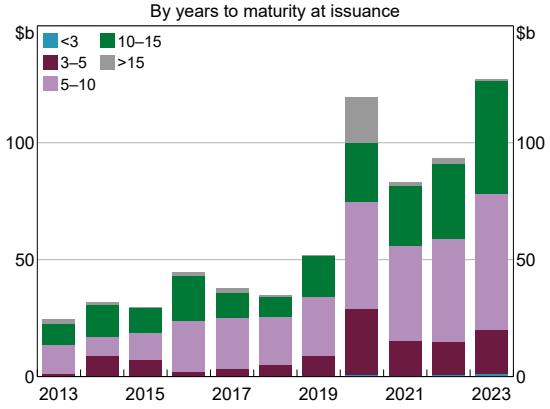
Floating-rate issuance has increased since 2020 but it remains a relatively small proportion of semis outstanding (Graph 6). Unlike fixed coupon securities, the interest rate paid on floating-rate semis varies according to movements in an underlying benchmark interest rate. The most common benchmark in the semis market is the three-month bank bill swap rate (BBSW), although South Australia uses the cash rate. The volume-weighted average time to maturity at issuance of floating-rate semis is six years, compared with over 12 years for fixed-rate issuance.

A recent development in Australian fixed-income markets is the growth of sustainable issuance (Armour, Hunt and Lwin 2023). There is no universal definition of sustainable bonds. Broadly speaking, sustainable bonds are issued to fund projects that promote environmental or social objectives. Issuance of sustainable semis has grown rapidly since the first sustainable bond was issued in 2016, although they still represent a small share of the semis market (Graph 7). The four largest state treasury corporations have issued around $30 billion across 12 sustainable bond lines to date. The largest sustainable semis issuer is Queensland,

Graph 5

Gross Issuance of Semi-government Bonds

By years to maturity at issuance

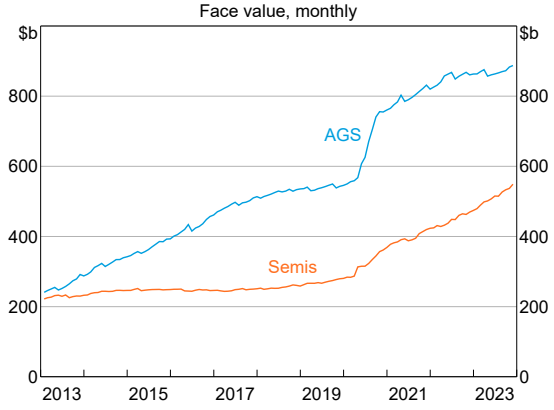


Source: Bloomberg.

Graph 4

Australian Government Debt Outstanding*

Face value, monthly



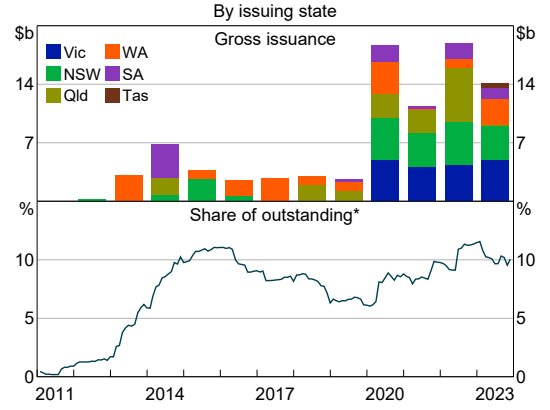
* Excludes short-term debt. Data as at 30 November 2023.

Sources: AOFM; RBA; State and territory treasury corporations.

Graph 6

Semi-government Floating-rate Bonds

By issuing state



* Data as at 30 November 2023.

Sources: Bloomberg; RBA; State and territory treasury corporations.

which has issued $11 billion, followed by New South Wales ($10 billion), Victoria ($8 billion) and Western Australia ($2 billion). State treasury corporations issued a record $10 billion in sustainable bonds in 2023, with market participants expecting continued issuance in the coming years. However, because the funding raised from sustainable bonds must be earmarked for specific sustainable projects, the size of the sustainable semis market is constrained by the pipeline of suitable projects.

Trends in ownership

Banks

Ownership of semis by domestic banks increased in the lead up to the introduction of the liquidity coverage ratio (LCR) in 2015 (RBA and APRA 2010). Since then, Australian banks have been the largest investor by some margin, holding around 40–50 per cent of semis outstanding (Graph 8). Banks subject to the LCR (LCR banks), which account for a large portion of the banking system, are required to hold HQLA sufficient to cover their estimated net cash outflows during a 30-day period of stress.[2] Semis and AGS are the main Australian dollar securities classified by the Australian Prudential Regulation Authority as HQLA for LCR purposes, though Exchange Settlement (ES) balances at the Reserve Bank are also HQLA.[3]

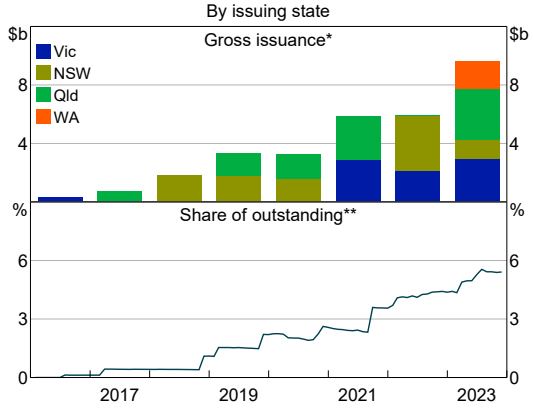
LCR banks typically prefer to hold semis over AGS to meet their HQLA requirements because they trade at higher yields and so offer higher returns than AGS. When they purchase debt securities such as semis, banks take on interest rate risk. Australian banks typically hedge the interest rate risk associated with fixed-rate securities to match their floating-rate liabilities such as bank bills or deposit funding. Also, some semis are floating rate whereas AGS are all fixed rate.[4] Banks find floating-rate semis particularly attractive as they do not require separate hedging for interest rate risk,[5] which is reflected in the high allocation of floating-rate issuance to banks. The recent increase in floating-rate issuance partly reflects semis issuers diversifying their issuance plans in response to investor preferences, including those of banks.

LCR banks' preference for semis is reflected in their high holdings of these securities relative to AGS (Graph 9). LCR banks have held more semis than AGS since the introduction of the LCR. Between 2015 and 2020, semis comprised around two-thirds of LCR banks' Australian government securities holdings for LCR purposes. Consistent with these preferences, banks sold significantly less semis than AGS during the operation of the Reserve Bank's Bond Purchase Program (BPP) from late 2020 to early 2022. In part, this reflects the BPP being more heavily weighted to AGS than semis. More recently, LCR banks have continued to increase their holdings of HQLA securities, largely driven by acquiring more semis. This partly reflects the Committed Liquidity Facility being reduced to zero and maturity of the Term Funding Facility, both of

Graph 7

Sustainable Semi-government Bonds

By issuing state

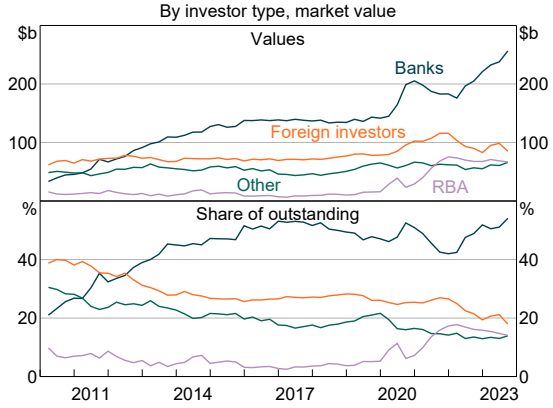


* Includes taps of bond lines.
** Data as at 30 November 2023.
Sources: Bloomberg; State treasury corporations.

Graph 8

Semi-government Bond Holdings*

By investor type, market value



* Data as at 30 September 2023.
Sources: ABS; RBA.

which have increased banks' demand for HQLA securities (Rustia, Schwartz and Stenner 2024).

Foreign investors

Foreign investors' holdings of semis has declined from around 40 per cent of the market in 2010 to around 20 per cent, alongside a decline in offshore issuance and an increase in the outstanding stock of semis. Nonetheless, foreign investors remain an important source of demand for semis, particularly certain types of issuance, such as sustainable bond lines. Strong demand for sustainable semis is likely to reflect an increasing number of investors that are climate conscious or have portfolio mandates with responsible investing requirements. Foreign investors hold a much lower share of the semis market compared with their share of the AGS market (currently around 50 per cent of AGS outstanding). This could reflect foreign investors' risk and liquidity preferences. For example, the semis market is smaller and less liquid than the AGS market (discussed below).

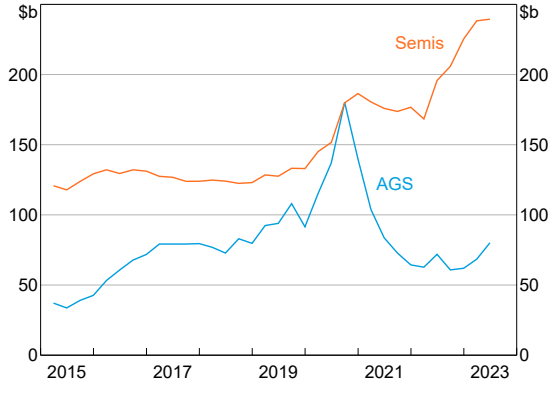
Reserve Bank of Australia

Before the pandemic, the Reserve Bank held a relatively small portfolio of semis for its liquidity operations. Outright semis holdings typically fluctuated between $2 billion and $5 billion in the decade prior to 2020 and were generally less than 3 per cent of semis outstanding. The Bank's bond purchases during the pandemic increased its outright holdings of semis; the Bank purchased around $11 billion of semis to support market functioning and $57 billion under the BPP (Finlay, Xiang and Titkov 2022). These purchases resulted in the Bank's outright semis holdings peaking in early February 2022 at around $68 billion, or 16 per cent of outstanding semis; currently, the Bank holds around $65 billion of semis, or about 12 per cent of the market outstanding. These holdings have maturities out to 2033.

Graph 9

Australian Government Securities Holdings

LCR banks' liquid assets, quarterly



Sources: APRA; RBA.

Pricing and liquidity

Bond pricing is often expressed in terms of the difference, or 'spread', between a bond's yield and a benchmark rate of comparable maturity. Bond spreads reflect perceptions of credit and liquidity risk for which investors seek compensation. Semis are generally considered very low credit risk due to government guarantees from respective state and territory governments, with all governments rated AA or above, reflecting strong fiscal positions. In comparison, AGS are guaranteed by the Australian Government and are therefore considered to have minimal credit risk (Finlay and Chambers 2008).

Semis market liquidity has improved since 2010, alongside strong growth in the size of the market. One measure of the improved liquidity has been an increase in the number of individual semis bond lines with more than $5 billion outstanding. Larger bond lines tend to have higher turnover (Armour, Berkelmans and Bristow 2023). Semis have also become more readily available and traded in the Australian repo market (Bergmann, Connolly and Muscatello 2019). Nonetheless, the semis bond lines are not as large as AGS and the overall market is not as large as the AGS market: the semis market is around 60 per cent of the size of the AGS market (Graph 4); and semis are traded less frequently than AGS (i.e. they have lower turnover) in the secondary market and the Australian repo market (Bergmann, Connolly and Muscatello 2019; Armour, Berkelmans and Bristow 2023). This has contributed to semis pricing at a positive spread to AGS (Graph 10).

The Reserve Bank's response to the pandemic

The COVID-19 pandemic resulted in semis spreads to AGS increasing as liquidity conditions deteriorated in March 2020. For example, the five-year semis spread to AGS increased by around

20 basis points and bid-offer spreads in the outright market widened by over 30 basis points for some issuers. A widening in semis spreads to AGS is common during periods of market stress as investors seek to increase their holdings of AGS, which are more liquid and perceived by investors to have lower risk. Similarly, liquidity declined as the market became increasingly one-sided, with investors trying to liquidate their holdings alongside a large increase in issuance (Finlay, Seibold and Xiang 2020).

The Bank announced that it would buy AGS and semis in March 2020 with the aim of improving market functioning. These purchases reduced the imbalance of supply and demand and resulted in higher levels of activity and lower transactions costs. One indicator of this is bid-offer spreads, which returned to be close to pre-pandemic levels within a few months (Finlay, Seibold and Xiang 2020). Similarly, the BPP announced in November 2020 involved the purchase of semis and AGS to ease financial conditions by lowering longer term interest rates. The BPP announcement lowered semis spreads to AGS by around 5–10 basis points and led to semis trading at their tightest spread to AGS in at least 15 years (Finlay, Xiang and Titkov 2022). Since the end of the BPP, semi spreads have risen to be back around pre-pandemic levels alongside strong semis issuance.

Variation across issuers

The liquidity and pricing of semis varies by issuer, typically reflecting differences in supply. The bonds of smaller issuers with fewer semis outstanding are generally less liquid. This can be seen when comparing the three smallest issuers that each have around $10 billion outstanding (Northern Territory, Tasmania and Australian Capital Territory) with the three largest issuers that each have over $100 billion outstanding (Victoria, New South Wales and Queensland). Semis issued by these smaller issuers often trade with wider bid-ask spreads and have lower turnover ratios (Graph 11). To compensate investors for this liquidity risk, semis issued by these issuers typically trade at wider spreads to AGS (Graph 10). Large issuance, by the semis sector or individual states and territories, may also lead to wider spreads as compensation for potential higher credit risk and to attract additional buyers. For example, larger borrowing programs since the pandemic in New South Wales and Victoria relative to Western Australia have been associated with NSW and Victorian semis trading at higher yields than WA semis (Graph 10).

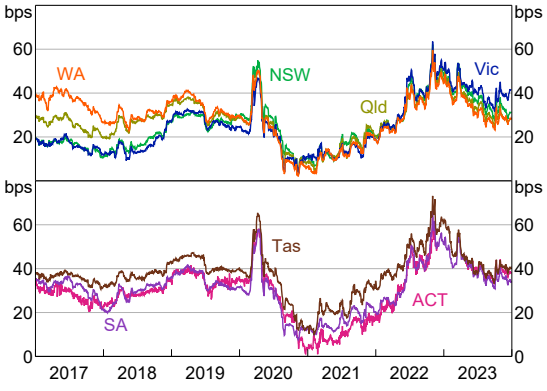
Outlook for semis

Issuance of semis in coming years is expected to remain sizeable by historical standards (Graph 12). The latest forecasts from the state and territory treasury corporations suggest over $50 billion in net semis issuance for the 2023/24 financial year. New

Graph 10

Semi-government Bond Spreads to AGS

5-year, by issuing state or territory



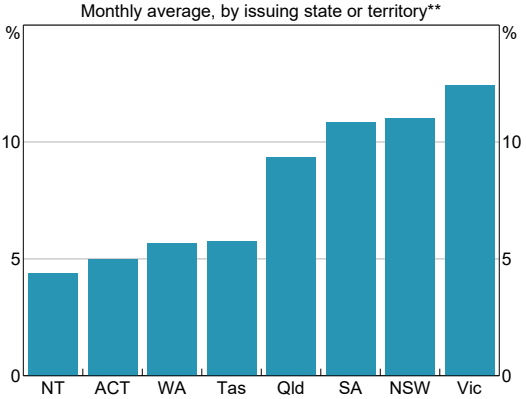
* Data unavailable for Northern Territory.

Sources: Bloomberg; RBA.

Graph 11

Semi-government Bond Turnover Ratios*

Monthly average, by issuing state or territory**



* Amount bought or sold as a share of outstanding, excludes transactions involving the issuer.

** For data starting post-November 2021.

Sources: ASX Information Services; RBA; State and territory treasury corporations.

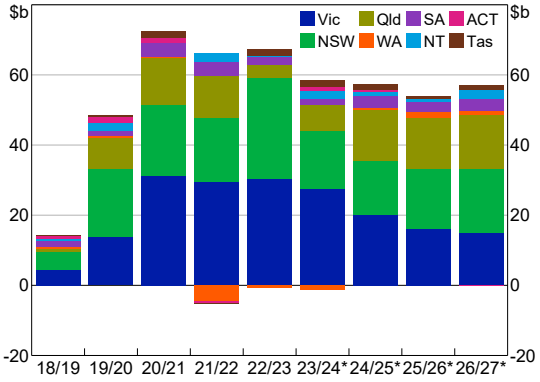
South Wales, Victoria and Queensland are likely to account for over 80 per cent of total issuance, in line with recent years. Large infrastructure pipelines are expected to keep net semis issuance high in the coming years. State and territory governments are collectively budgeting over $350 billion in infrastructure investment until 2026/27, and accordingly most governments are projecting to run budget deficits out until the end of 2026/27.[6] That said, state and territory borrowing requirements could decline, for example, if infrastructure investment is delayed or revised, or revenues are stronger than expected.

The state and territories' borrowing task is also large when compared with that of the Australian Government (Graph 13). There have only been a few occasions when the states and territories issued more than the Australian Government. However, net issuance of semis exceeded AGS issuance last financial year by roughly $70 billion and on the outlooks provided by the relevant issuing authorities is expected to remain above AGS issuance over the next few years. Although issuance of semis will exceed that of AGS in the near term, on these projections the market will remain smaller than the AGS market.

Graph 12

Net Issuance of Semi-government Bonds*

By issuing state or territory



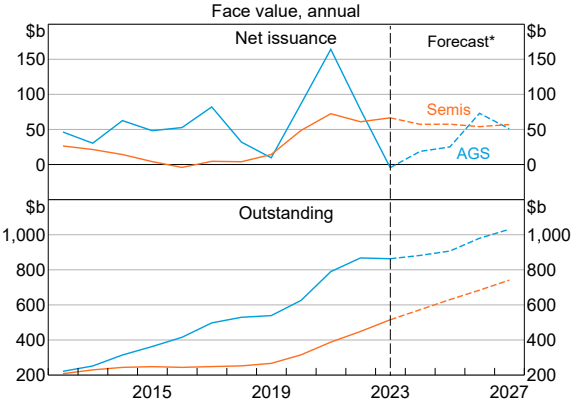
* From latest borrowing program updates.

Sources: RBA; State and territory treasury corporations.

Graph 13

Australian Government Debt*

Face value, annual



* From issuing authorities' latest borrowing program updates. Excludes short-term debt.

Sources: AOFM; RBA; State and territory treasury corporations.

Endnotes

[*] The authors are from Domestic Markets Department.

[1] Offshore issuance has declined over the past decade. Tax changes in 2008 made offshore issuance less favourable to foreign investors. See Lancaster and Dowling (2011).

[2] See RBA (2015).

[3] Debt securities of the Export Finance and Insurance Corporation and Housing Australia (previously National Housing Finance and Investment Corporation) are also considered HQLA for the purposes of the LCR requirement in Australia (APRA 2021).

[4] The cash flows of Treasury Indexed Bonds vary with inflation, but the interest rate is fixed. For more information, see AOFM (undated).

[5] Floating-rate bonds do not have much interest rate risk because the bondholder is compensated through an increase (decrease) in coupon income as short-term rates rise (fall). Conversely, the coupon rate on fixed-rate bonds is fixed and does not change in response to market rates, resulting in the overall value of the bond changing to reflect this.

[6] From 2023–24 state and territory budgets.

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