Foreign Currency Exposure and Hedging in Australia

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Abstract

The 2022 Survey of Foreign Currency Exposure confirms that Australian entities' financial positions, in aggregate, are well protected against a depreciation of the Australian dollar. The composition of Australia's foreign currency denominated assets and liabilities means that, overall, Australian entities have a net foreign currency asset position. This has increased over a number of years, largely reflecting an increase in the value of foreign currency equity assets associated with superannuation funds. Meanwhile, the banking sector accounts for a large share of Australia's foreign currency liabilities because of their offshore funding activities. However, the bulk of the banking sector's foreign currency debt liabilities have been hedged. After hedging, the sector has a net foreign currency asset position and no significant currency mismatches, both of which reduce the risks associated with a large depreciation of the Australian dollar.

Introduction

Australia benefits from strong trade and financial linkages with the rest of the world, as well as a flexible exchange rate.[1] Against this background, many Australian businesses have foreign currency denominated assets, liabilities and cash flows. Such exposures facilitate trade but may also be vulnerable to movements in the exchange rate if they are not well managed. For example, a sharp depreciation of the exchange rate would increase the Australian dollar value of unhedged foreign currency liabilities or contractual payments, which could have broader implications for macroeconomic and financial stability. It is therefore important to understand the size and distribution of foreign currency exposures as well as the ways that businesses manage exchange rate risks.

Given the importance of hedging activities for managing exchange rate risks, the Reserve Bank initiated and provides funding for the Australian Bureau of Statistics (ABS) Survey of Foreign Currency Exposure (SFCE). The SFCE measures Australian businesses' foreign currency exposures and the extent to which they are hedged. The first survey was conducted in 2001, with subsequent surveys conducted every four years.[2] This article sets out the key results of the 2022 survey. It examines the effect of hedging activities across different sectors in the economy and highlights the extent to which businesses have managed risks associated with exchange rate movements.

The SFCE captures two key ways that businesses hedge against exchange rate movements. First, there is the use of derivatives – financial instruments that insure against movements in the exchange rate. Second, there are 'natural' hedges. Natural hedges occur when foreign currency exposures are offset by positions or cash flows in the same foreign currency. For example, a resources firm that receives US dollars for the commodities it produces can use these cash flows to pay costs charged in US dollars.

Australia's net foreign liability position translates to a net foreign currency asset position

Australia has a net foreign liability position with the rest of the world because, for much of its history, investment opportunities in Australia have been greater than the domestic pool of savings available to fund that investment. Australia's net foreign liability position averaged around 50 per cent of GDP over the past couple of decades; however, this has declined over recent years to be around 35 per cent of GDP alongside the significant shift to a current account surplus (Graph 1). The key factors behind this shift were the decline in foreign direct investment following the end of the mining boom as well as an increase in purchases of foreign equities by Australian superannuation and investment funds (Adams and Atkin 2022).

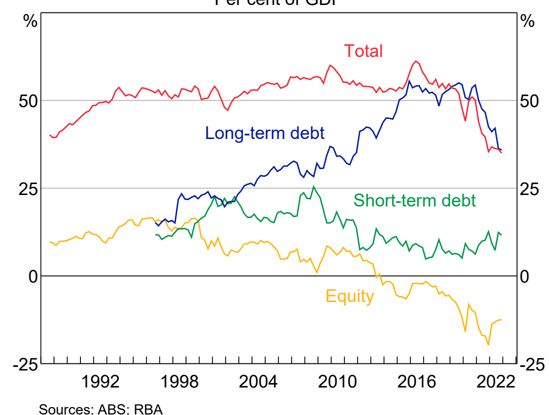
One key feature of Australia's net foreign liability position is that Australia's foreign liabilities are largely denominated in Australian dollars, while Australia's foreign assets are largely denominated in foreign currency terms (Graph 2).[3] As a result, Australia has a net foreign currency *asset* position with the rest of the world. This means that a significant depreciation of the Australian dollar actually increases the Australian dollar value of foreign assets relative to foreign liabilities. In other words, the net foreign liability position declines when there is a depreciation of the Australian dollar. This is true even before hedging of exchange rate risk is taken into account.

Australia's net foreign currency asset position was equivalent to a touch above 85 per cent of GDP as at 31 March 2022 (ABS 2022b). Around three-quarters of Australia's foreign liabilities were denominated in Australian dollars, compared with around 15 per cent of Australia's foreign assets.

Graph 1

Net Foreign Liability Position

Per cent of GDP

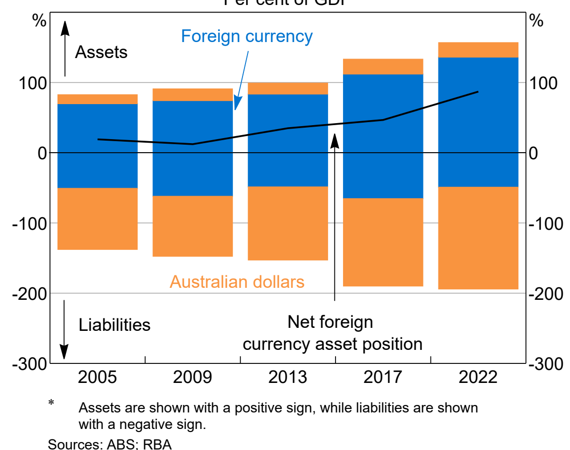


Sources: ABS; RBA

Graph 2

Currency Composition of Australia's External Position*

Per cent of GDP



* Assets are shown with a positive sign, while liabilities are shown with a negative sign.

Sources: ABS; RBA

Between 2017 and 2022, foreign currency assets increased as a share of GDP, largely reflecting an increase in the value of foreign equity assets. This was associated with the accumulation of foreign equities by Australian funds over this period as well as valuation effects associated with these investments, such as increases in the prices of foreign equities and the depreciation of the Australian dollar. Meanwhile, foreign currency liabilities declined as a share of GDP, largely reflecting activities in the banking and non-financial sectors.

What share of foreign currency exposures are hedged?

The share of foreign currency exposures hedged by Australian entities (the hedge ratio) has been little changed since the previous survey at around 35 per cent. This can be broken down into a hedge ratio of around 55 per cent for foreign currency liabilities and slightly less than 30 per cent for foreign currency assets.

By identifying the unhedged component of Australia's foreign currency exposures, the net foreign currency asset position can be translated into a net *effective* foreign currency asset position.[4] Hedging via derivatives resulted in a net *effective* foreign currency asset position equivalent to around 75 per cent of GDP as at the end of March 2022, up from around 50 per cent of GDP at the previous survey (Graph 3).

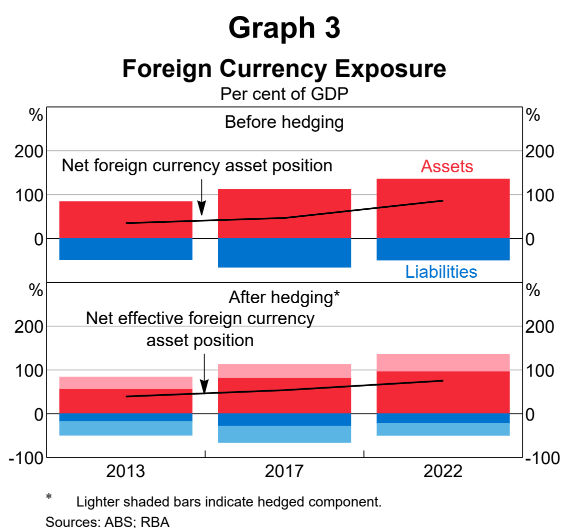
Hedging policies and practices

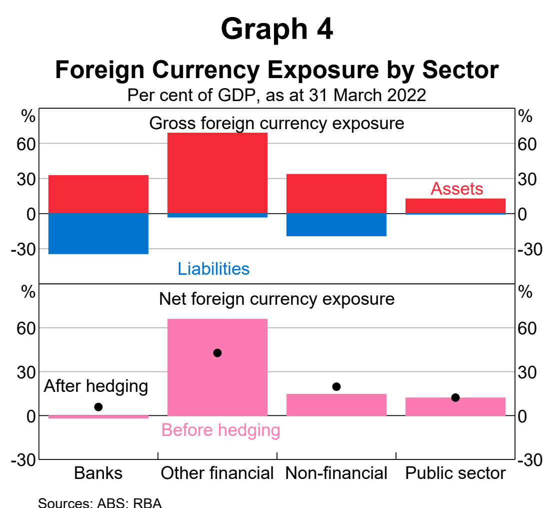
Aversion to risk and exposure minimisation were cited in the ABS survey as common reasons for hedging, and that hedging policies and practices have been little changed over recent years. The ABS reported that the appetite for risk was low among respondents, particularly within the banking sector. Some respondents reported that foreign exchange exposure was managed at the enterprise or Australian subsidiary level, and in some instances hedging strategies were also employed on a security-by-security basis. However, larger organisations tended to apply a broader approach whereby securities were collectively hedged to manage risk. The ABS also noted that, in most cases, there is limited warehousing of foreign exchange risk – that is, taking on foreign currency exposure and leaving it unhedged for a period.

Most sectors of the Australian economy had a net foreign currency asset position as at 31 March 2022 – even before accounting for hedging activities (Graph 4; Appendix A, Table A1). The banking sector was the main exception. The following sections analyse foreign currency exposures and hedging activities across different sectors of the economy.

Banks

Given the significant role of the banking sector in Australia's financial system, it is important to understand how the sector's foreign currency exposures are hedged.[5] Australian banks account for around 60 per cent of Australia's foreign currency liabilities, reflecting their use of offshore markets to





fund both domestic and international operations. Access to these markets enables banks to diversify their funding sources, access deeper and more liquid markets, and borrow for longer terms than are generally available in the domestic market (Bellrose and Norman 2019). Offshore funding is typically denominated in foreign currency, which requires hedging to manage the associated risks.

In 2022, slightly less than 15 per cent of bank funding was sourced from offshore wholesale debt markets, with the vast bulk of this debt denominated in foreign currency. Since the previous survey in 2017, the value of foreign currency denominated liabilities related to the banking sector has decreased, resulting in a narrowing in the sector's net foreign currency liability position before hedging (Graph 5, top panel).[6] This partly reflects a decline in the share of funding sourced from offshore wholesale debt markets by banks over this period because they were able to access low-cost funding domestically, including through the Reserve Bank's Term Funding Facility.

The 2022 SFCE confirmed that the banking sector had a small net effective foreign currency asset position after accounting for hedging via derivatives. Around 70 per cent of foreign currency liabilities were hedged with derivatives in the banking sector, compared with around 50 per cent of foreign currency assets. Given total foreign currency assets and liabilities are around the same size before hedging, this means that the sector's net foreign currency liability position has been fully hedged, in net terms, against the risk of an exchange rate depreciation.

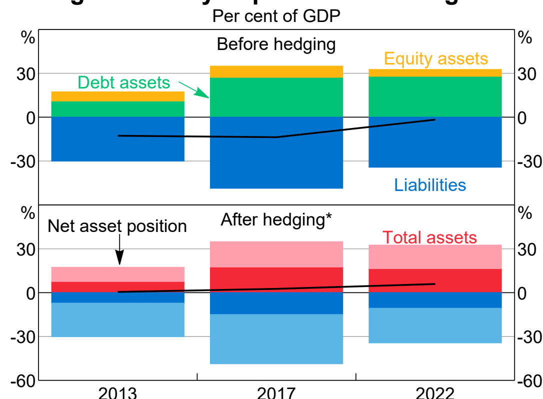
Debt security liabilities – banks issuing bonds offshore – are the main source of foreign currency exposure for the sector, accounting for slightly more than half of the sector's foreign currency liabilities. Similar to the previous survey, the 2022 SFCE showed that around 90 per cent of these liabilities were hedged using derivatives. A breakdown by maturity shows that around 95 per cent of banks' longer term debt securities (those with a residual maturity greater than one year) were hedged with derivatives against foreign currency risk, while around 80 per cent of securities with a residual maturity of less than one year were hedged with derivatives (Graph 6).

The SFCE also indicated that a majority of the derivatives used to hedge against foreign currency risk were matched to the maturities of the underlying debt securities. (Maturity matched hedging of liabilities mitigates the exposure to foreign currency risk for the duration of the underlying security, which reduces rollover risk – that is, the risk that a derivative will expire and a loss will be incurred when replacing it, or that a derivative will not be able to be replaced during periods of stress in financial markets.) The share of foreign currency debt security liabilities that are both hedged and maturity matched declined from around 85 per cent at the time of the previous

Graph 5

Foreign Currency Exposure – Banking Sector

Per cent of GDP



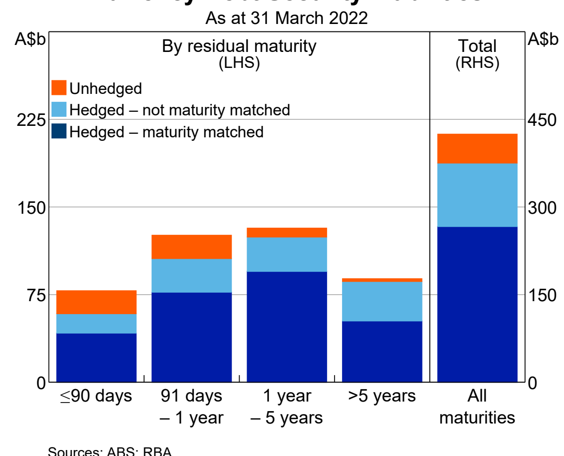
* Lighter shaded bars indicate hedged component.

Sources: ABS; RBA

Graph 6

Banks' Hedging of Foreign Currency Debt Security Liabilities

As at 31 March 2022



Sources: ABS; RBA

survey to slightly below 65 per cent in the 2022 survey. However, the ABS suggested there was not a significant shift in behaviour or an emerging trend to decrease maturity matching across the banking sector.

The SFCE showed that of those liabilities in the banking sector that were not hedged with derivatives, over two-thirds had a natural hedge in place – that is, there was a matching asset in the same foreign currency. Also, the vast majority of unhedged foreign currency liabilities were denominated in US dollars; however, this was offset by a large amount of US dollar denominated assets, such as loans made to non-residents. As a result, after both derivative and natural hedging were taken into account, there were only very small net foreign currency exposures by currency and for the sector as a whole (Graph 7).

Other financial corporations

Other financial corporations include non-bank financial corporations such as superannuation funds, fund managers and insurance corporations.[7] This sector had the largest net foreign currency asset position, largely reflecting holdings of foreign equity assets, particularly by Australia's superannuation funds, as well as fixed-income assets such as government and corporate bonds (Graph 8). Indeed, foreign equities represented nearly half of Australian superannuation funds' total equity holdings, and foreign fixed-income assets represented around 45 per cent of their total fixed-income investments as at 31 March 2022 (APRA 2022b).

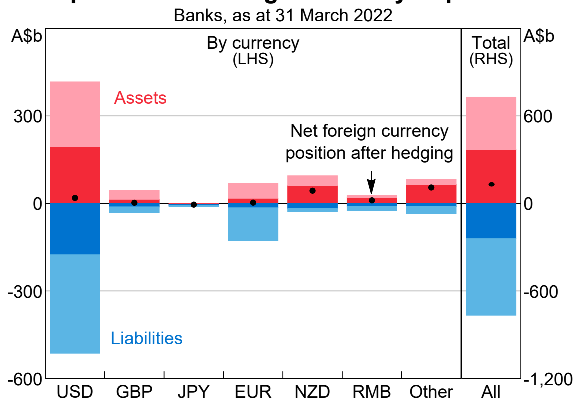
Since the previous survey, foreign currency assets in this sector have increased significantly, owing to an increase in the value of foreign equity assets. This reflects valuation effects as well as the accumulation of foreign equity assets, largely by Australia's superannuation funds that have increased the share of foreign equities in their investment portfolios. Superannuation funds have also increased their holdings of international fixed-income and infrastructure investments since the previous survey. At the end of March 2022, other financial corporations had a net foreign currency asset position equivalent to around 65 per cent of GDP before hedging.

These non-bank financial corporations used derivatives to hedge just over one-third of their foreign currency assets. After accounting for hedging via derivatives, the net effective foreign currency asset position of other financial corporations decreased to be equivalent to almost 45 per cent of GDP. The further internationalisation of investment portfolios in this sector has increased the focus on managing foreign exchange-related risks (NAB 2021). While the SFCE does not provide a breakdown of hedging by type of foreign currency asset, data from the Australian Prudential Regulation Authority show that superannuation funds hedge around 70 per cent of their international debt and unlisted infrastructure investments, but only around 25 per cent of their international equity investments

Graph 7

Composition of Foreign Currency Exposures*

Banks, as at 31 March 2022

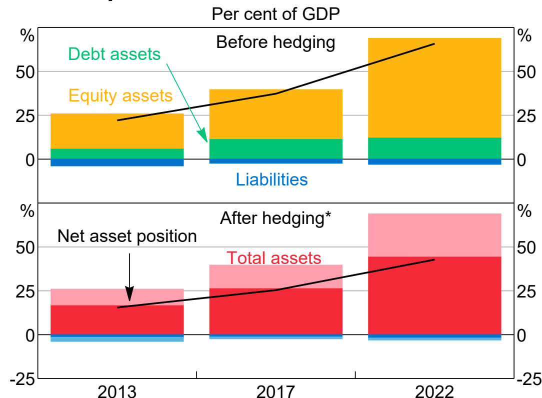


* Lighter shaded bars indicate hedged component.
Sources: ABS; RBA

Graph 8

Foreign Currency Exposure – Other-financial Sector

Per cent of GDP



* Lighter shaded bars indicate hedged component.
Sources: ABS; RBA

(APRA 2022b). Periods of increased risk aversion in global markets are typically associated with declines in foreign equity prices and a depreciation of the Australian dollar (Jacobs 2019). To the extent that these developments coincide, losses on the value of unhedged foreign equity assets are somewhat mitigated because a depreciation of the exchange rate increases the value of these assets in Australian dollar terms, all else being equal.

Risks to the broader financial system from large asset price movements associated with superannuation funds' assets, including from the growing portfolio of hedged and unhedged foreign assets, are not substantial because of the predominance of defined contribution schemes in Australia's superannuation sector.[8] However, superannuation funds are still exposed to liquidity risks associated with margin calls on derivatives used to hedge foreign exchange risks. For example, when the Australian dollar depreciates, the value of these derivatives declines, and superannuation funds are required to make a payment to their counterparties to mitigate risks arising from mark-to-market losses. However, liquidity risks associated with hedging foreign currency assets are at least partly mitigated by the depreciation of the Australian dollar also lifting the Australian dollar value of these underlying assets (RBA 2021). This supports a fund's ability to sell foreign assets to meet margin calls associated with hedging contracts.

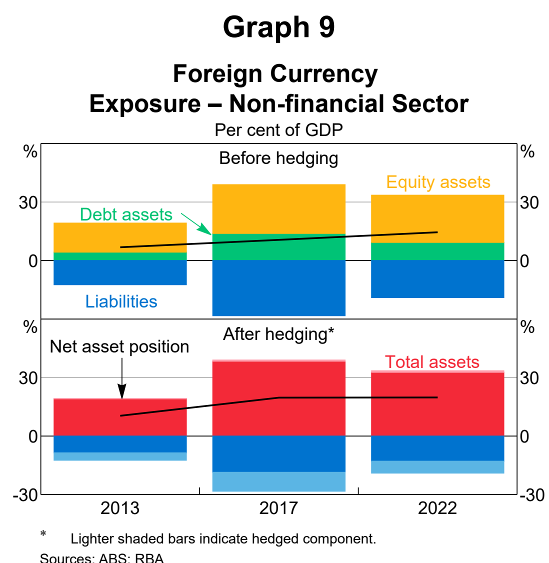
Non-financial corporations

Non-financial corporations had a net foreign currency asset position equivalent to 15 per cent of GDP at the end of March 2022 (Graph 9).[9] The net position consisted of a sizable amount of foreign currency assets, over two-thirds of which were foreign equity assets.[10] However, the sector also had a notable amount of foreign currency liabilities, of which around 85 per cent were either longer term debt securities or loans. After hedging, the non-financial sector had a net foreign currency asset position equivalent to 20 per cent of GDP at the end of March 2022, which is similar in size to the previous survey.

The degree of hedging via derivatives in the non-financial sector has generally been less than in the financial sectors. The 2022 SFCE showed that derivatives were used to hedge only around one-third of their foreign currency liabilities, compared with more than two-thirds in the banking sector, and that only a negligible amount of their foreign currency assets were hedged.

This difference is related to the composition of the sectors' assets and liabilities. The foreign currency equity assets of the sector include the foreign operations of multinational corporations, which are partly matched by foreign currency borrowing in the form of loans and debt securities. In addition, for some non-financial corporations a large share of their revenue is denominated in foreign currency, particularly US dollars – given this is the currency through which they conduct much of their trade – so foreign currency borrowing is matched to these trade payments and revenue streams. For example, a large share of Australia's resource exports are invoiced in US dollars (ABS 2021). Given this, mining companies generally borrow in US dollars so that US dollar payment obligations on their outstanding debt are matched to their US dollar trade receipts.

In addition to the exchange rate risk associated with an entity's balance sheet, exchange rate movements can also affect foreign currency trade payments and receipts. With more than 80 per cent of Australia's exports invoiced in US dollars, it is important to understand the extent to which these



* Lighter shaded bars indicate hedged component.
Sources: ABS; RBA

cash flows are exposed to exchange rate risk. Non-financial corporations represent almost all of Australia's foreign currency trade receipts and payments.[11] At the end of March 2022, non-financial corporations used derivatives to hedge around one-third of their expected foreign currency trade payments and around 4 per cent of their trade receipts (Graph 10). These shares approximately match the hedge ratios for assets and liabilities on the balance sheets of non-financial corporations.

Public sector

The public sector's foreign currency assets and liabilities are relatively small (Appendix A, Table A2). Before hedging, the general government sector – which includes federal, state and local governments – had a net foreign currency asset position equivalent to 9 per cent of GDP. This is up from around 6 per cent of GDP in the previous survey and was mainly driven by an increase in foreign currency assets. Foreign currency equity assets account for around three-quarters of the general government's total foreign currency assets, with the Australian Government's Future Fund holding a sizable share of the general government sector's foreign currency assets. The Future Fund had a net foreign currency asset position, after hedging, of around $80 billion at the end of the 2022 financial year (Future Fund 2022).

The Reserve Bank had a net foreign currency asset position equivalent to 3 per cent of GDP as at 31 March 2022. This exposure reflects the Reserve Bank's holdings of foreign exchange reserves. These are in the form of debt instruments issued by sovereign and supranational entities and foreign currency deposits at other official institutions, such as foreign central banks. The Reserve Bank does not seek to fully eliminate or hedge the foreign exchange exposure associated with these holdings of official reserve assets (RBA 2022).

Derivative holdings

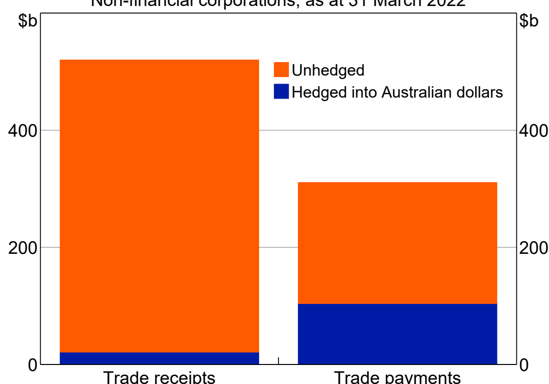
As well as providing information about foreign currency exposures and hedging, the SFCE also contained detailed information on Australian entities' derivative holdings as at the end of March 2022. These are recorded on a notional basis – that is, the total value of the exposure the derivative is covering. Some of these derivatives are used to hedge foreign currency exposures, which have been the focus of much of this article, but the survey also captures derivatives used to gain exposure to particular foreign exchange markets. The survey indicated that Australian entities were positioned such that they had a net long foreign currency position or equivalently a net short Australian dollar position with non-residents on derivative holdings (Graph 11). This means that in net terms Australian residents would profit from a depreciation of the Australian dollar.

By instrument type, swaps (including foreign exchange swaps and cross-currency basis swaps) and foreign exchange forwards continued to

Graph 10

Expected Trade Receipts and Payments in Foreign Currency

Non-financial corporations, as at 31 March 2022

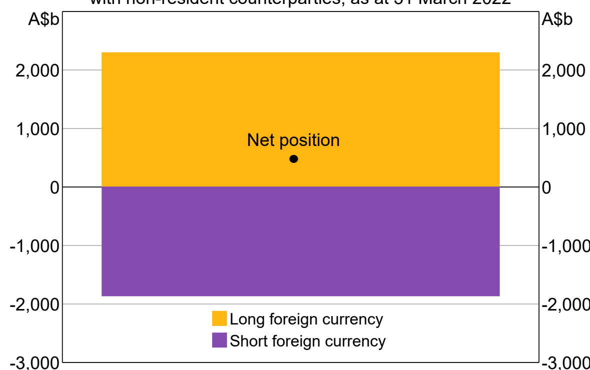


Sources: ABS; RBA

Graph 11

Foreign Currency Derivative Positions*

Notional amount held by residents with non-resident counterparties, as at 31 March 2022



* Derivatives involving the Australian dollar.

Sources: ABS; RBA

account for the vast bulk of the total notional value of foreign exchange derivatives, while futures and options accounted for most of the remaining share. By sector, derivative holdings remain concentrated in the banking sector, which accounted for around 70 per cent of the total value of foreign exchange derivatives involving the Australian dollar and more than 90 per cent of the value of derivatives not involving the Australian dollar as at March 2022.

Summary

Australia has a net foreign liability position, reflecting funds flowing from the rest of the world to Australia over a long period of time because of its high levels of domestic investment relative to savings. There are potential risks associated with foreign liabilities, including exchange rate risk, but these can be managed with various hedging strategies. Australia's foreign liabilities are largely denominated in Australian dollars, and foreign assets are largely denominated in foreign currency, which means that the net liability position translates to a net foreign currency asset position, even before hedging activities are taken into account. As a result, a depreciation of the Australian dollar actually results in a decline in the value of Australia's net foreign liability position.

Hedging activities also reduce the exchange rate risk that comes from borrowing offshore. The banking sector was the only sector that had a net foreign currency liability position before hedging. Banks' debt security liabilities account for more than half of the sector's total foreign currency liabilities, but the vast bulk of these exposures are hedged. In addition, the majority of the derivatives used to hedge exchange rate risk are matched to the maturities of the underlying debt securities. After hedging, the sector had a small net effective foreign currency asset position. Moreover, there are no significant currency mismatches either for the banking sector or for the country as a whole. The 2022 SFCE confirms that the Australian economy overall is well protected from vulnerabilities associated with a depreciation of the exchange rate, despite its net foreign liability position. ✠

Appendix A

Table A1: Private Sector Foreign Currency Exposure

As at 31 March 2022

	Banks		Other financial corporations		Non-financial corporations	
	Before hedging	After hedging	Before hedging	After hedging	Before hedging	After hedging
A$ billion						
Assets	726	369	1,534	997	748	729
Liabilities	764	238	65	42	424	288
Net balance sheet exposure	–38	131	1,469	956	324	441
Per cent of GDP						
Assets	33	17	69	45	34	33
Liabilities	34	11	3	2	19	13
Net balance sheet exposure	–2	6	66	43	15	20

Sources: ABS; RBA

Table A2: Public Sector Foreign Currency Exposure
As at 31 March 2022

	General government		Reserve Bank of Australia	
	Before hedging	After hedging	Before hedging	After hedging
A$ billion				
Assets	217	217	62	62
Liabilities	7	1	4	4
Net balance sheet exposure	210	216	58	58
Per cent of GDP				
Assets	10	10	3	3
Liabilities	0	0	0	0
Net balance sheet exposure	9	10	3	3

Sources: ABS; RBA

Endnotes

[*] The authors are from International Department, and would like to thank the ABS for the preparation and distribution of the SFCE on which this article draws heavily.

[1] For a broader discussion of the benefits of a floating exchange rate in promoting macroeconomic stability in small open economies, see Stevens (2013); Schembri (2019).

[2] For the primary source of information and available data, see ABS (2022a). The results of the previous survey are discussed in Berger-Thomson and Chapman (2017). There was a five-year gap between the 2022 survey and the previous survey, reflecting a delay to the survey being conducted because of the COVID-19 pandemic.

[3] Australia's foreign equity liabilities are recorded by the ABS as Australian dollar denominated liabilities, as the entity is domiciled in Australia and its valuation (market or book) is in Australian dollars.

[4] The net *effective* foreign currency asset position is estimated by taking the net position of unhedged foreign currency assets and liabilities.

[5] APRA's regulation of the Australian banking system covers activities that give rise to foreign exchange risks. APRA's prudential standards require that banks operating in foreign exchange markets have appropriate risk measurement systems in place, and that they hold capital against foreign exchange risks. For more information, see APRA (2022a).

[6] For a discussion of developments in Australian banks' offshore funding over recent years, see Bellrose and Norman (2019); Fitzpatrick, Shaw and Suthakar (2022); Johnson (2022); Carse, Faferko and Fitzpatrick (2023).

[7] A rough calculation using different data sources suggests superannuation funds account for somewhere around half of the sector's foreign currency assets.

[8] Under a defined contribution structure, superannuation funds are liable to pay members' accumulated balances (rather than guaranteeing fixed payments), which means investment losses are passed on to members. This also means that movements in the funds' assets and liabilities are more closely linked than those that have a defined benefit structure.

[9] The SFCE reports the foreign currency exposures and hedging of 'other resident sectors'. However, financial accounts data (ABS 2022c) suggest that non-financial corporations account for most of these sectors' exposures and hedging.

[10] The bulk of these assets reflect direct equity holdings of non-financial corporations, which consist of foreign operations and subsidiaries.

[11] Only foreign currency denominated trade receipts and payments expected over the next four years are included in the survey; those denominated in Australian dollars are not included. Around one-third of Australia's imports are denominated in Australian dollars, as opposed to only 10 per cent of Australia's exports (ABS 2021).

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