

# EUROPEAN ECONOMIC UPDATE

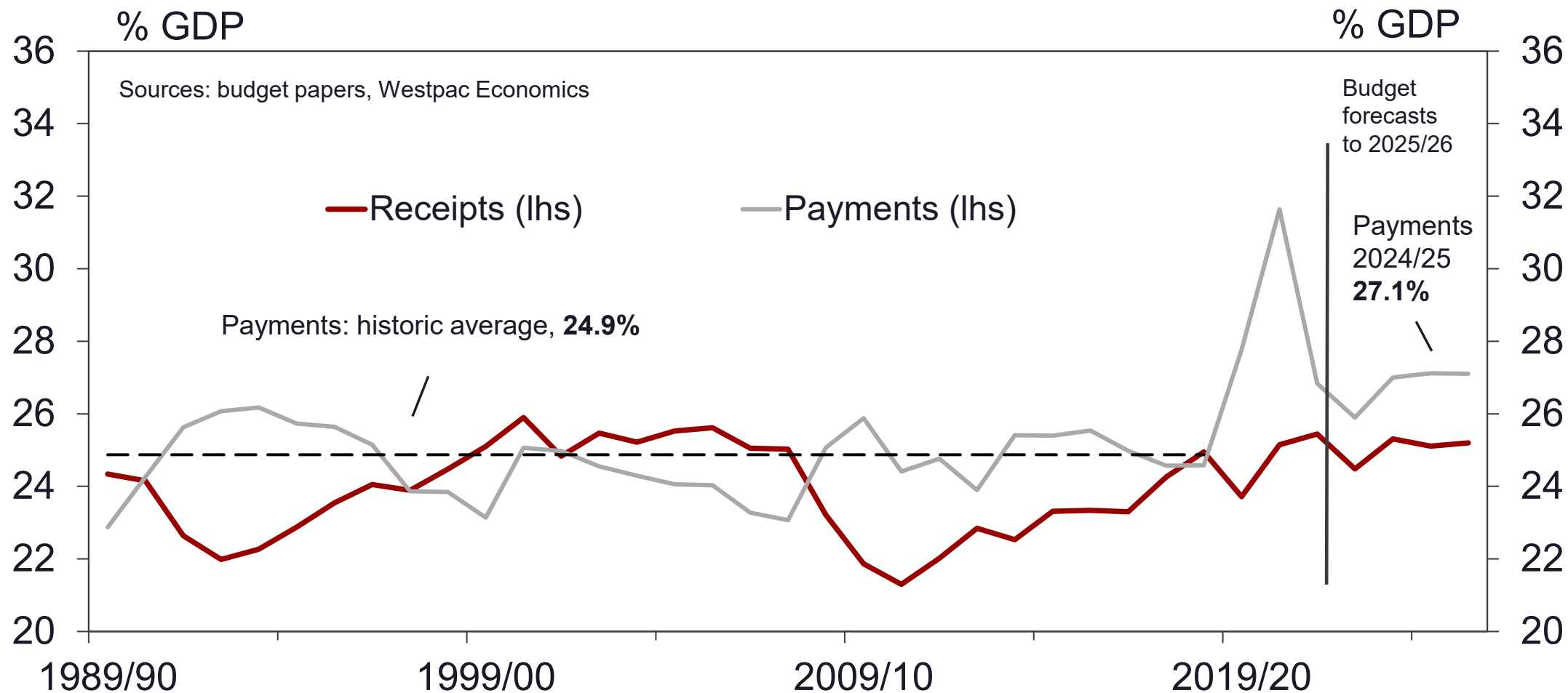
**Presented by Westpac Chief Economist, Bill Evans**

Westpac Institutional Bank

December 2022

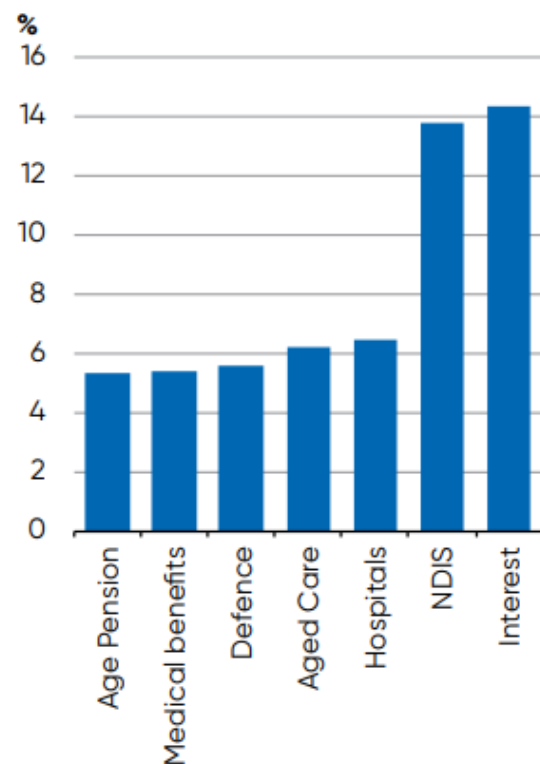


# Federal Budget: receipts and payments



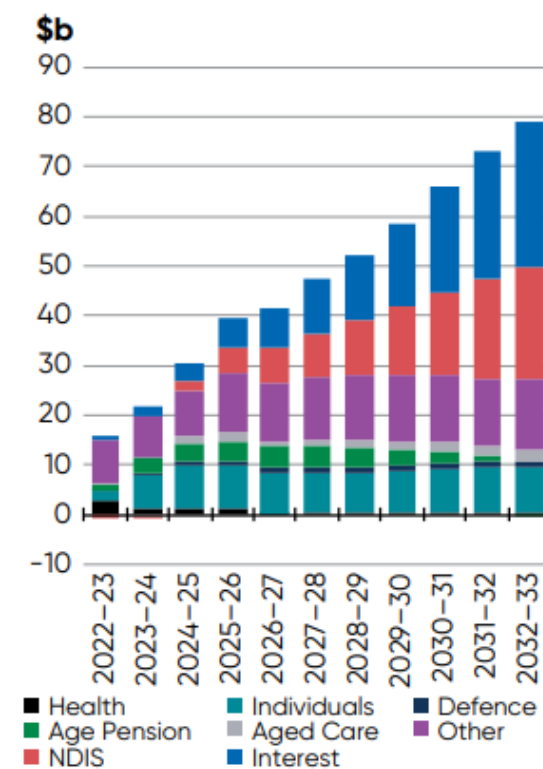
# Structural pressures on the Budget

Average annual growth in major payments, 2022-23 to 2032-33



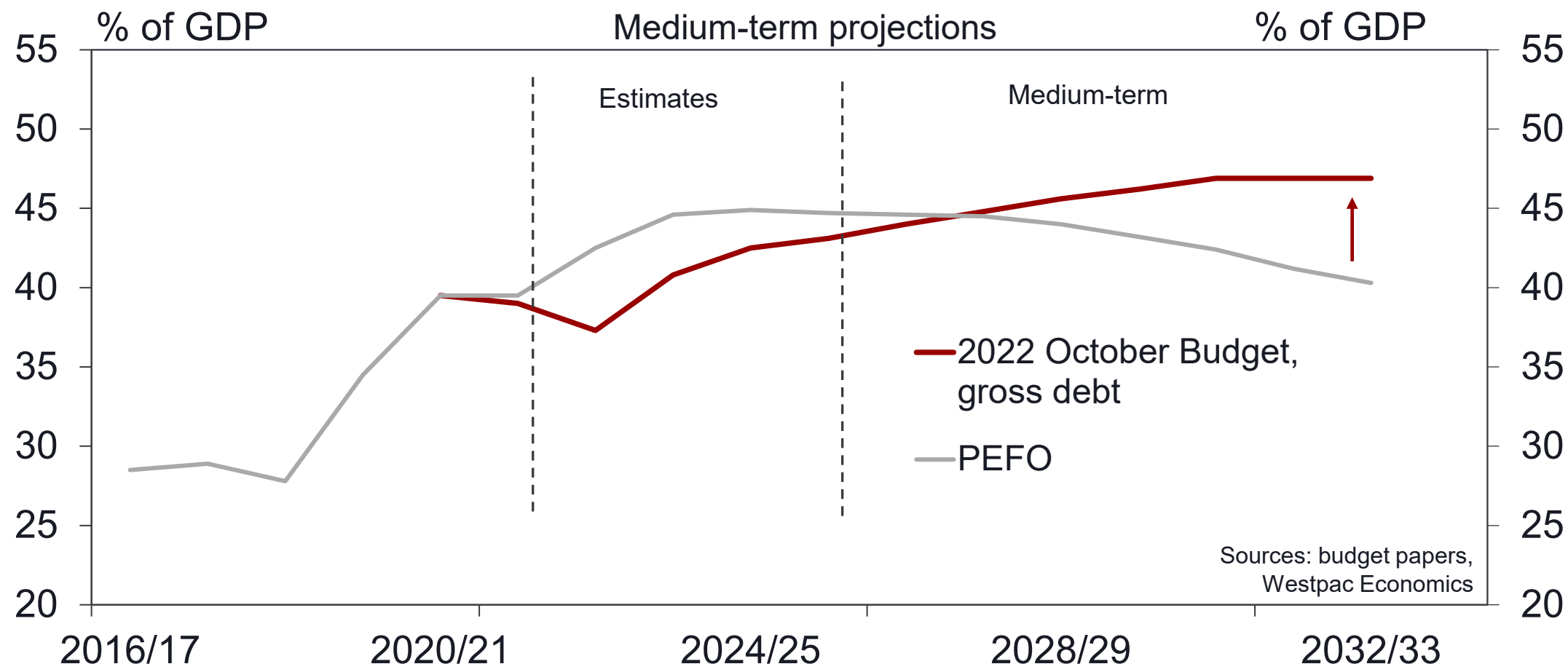
Source: Treasury

Revisions to major payments since pre-election estimates, 2022-23 to 2032-33

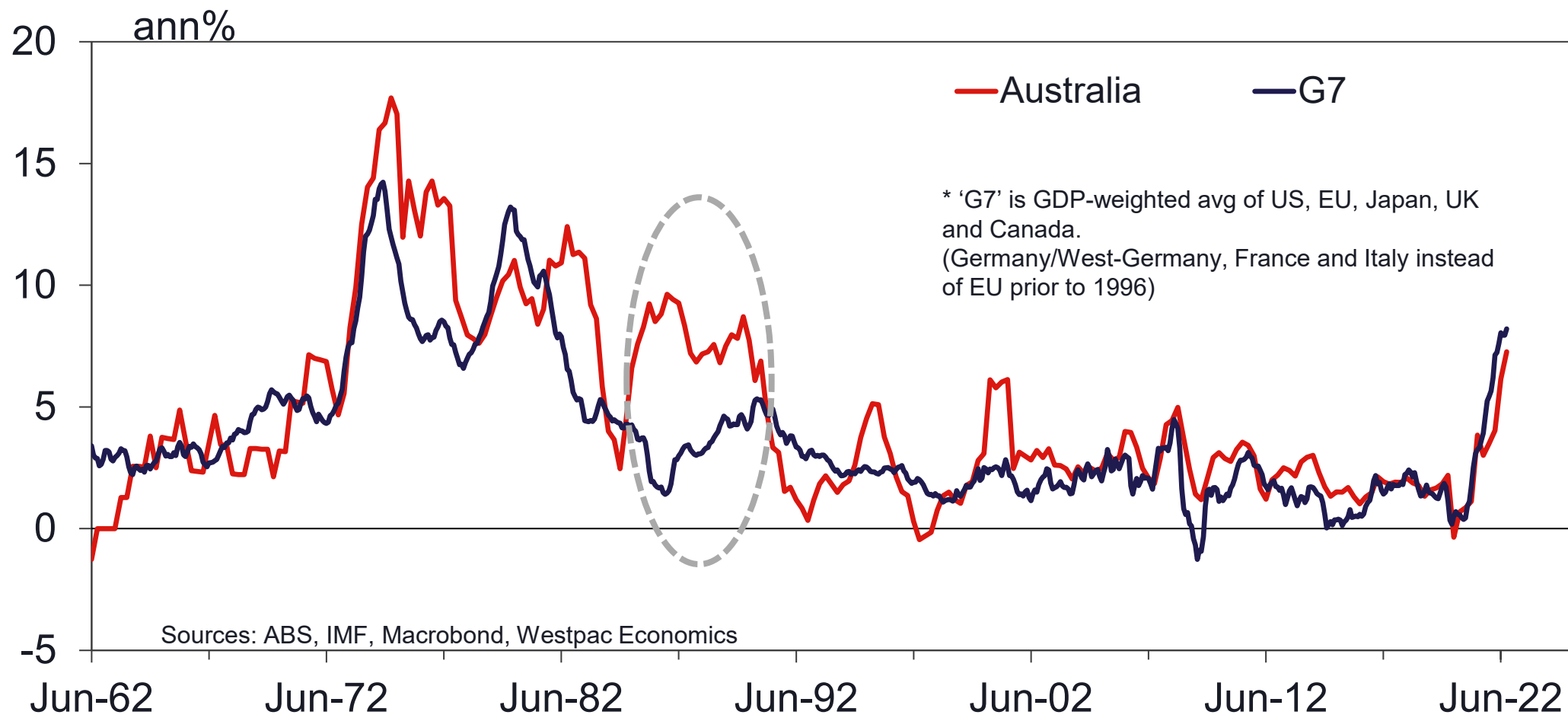


Source: Treasury

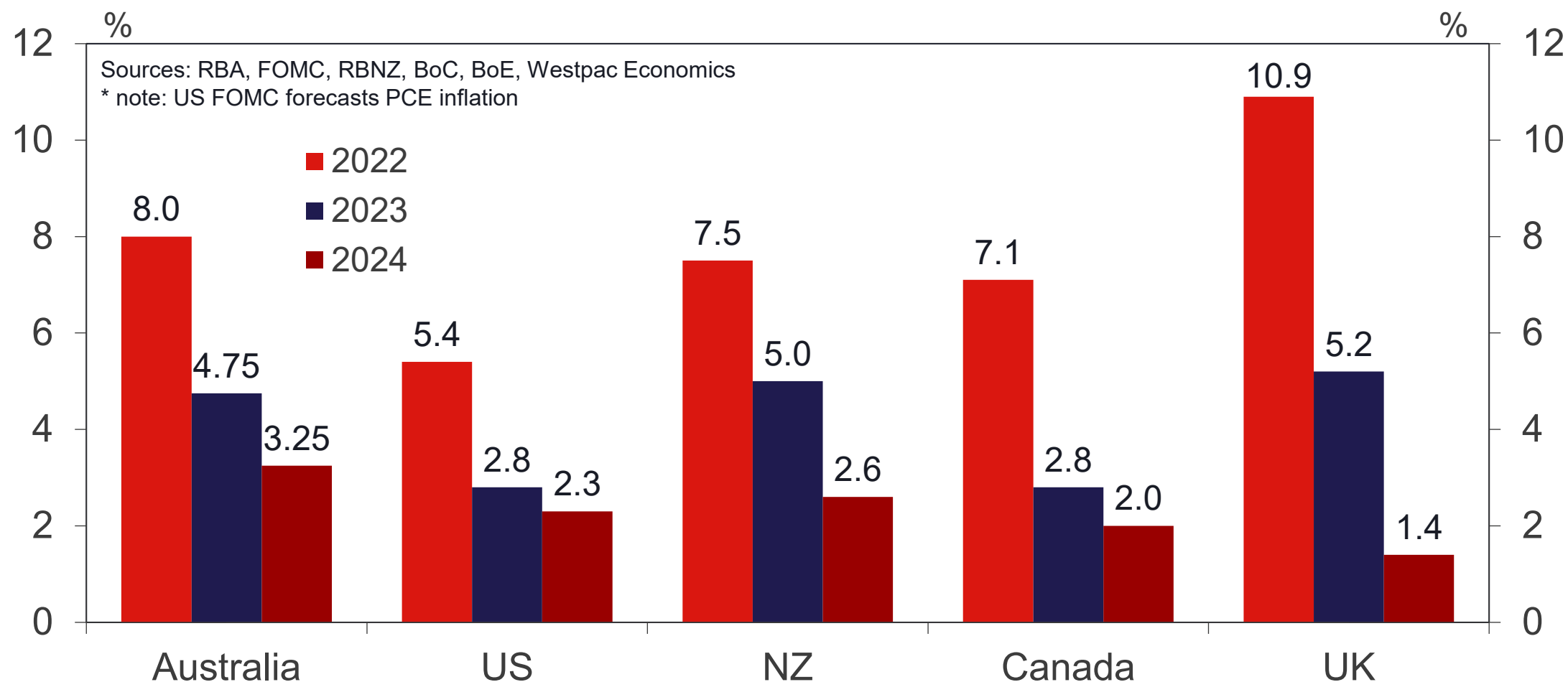
# Public gross debt projections



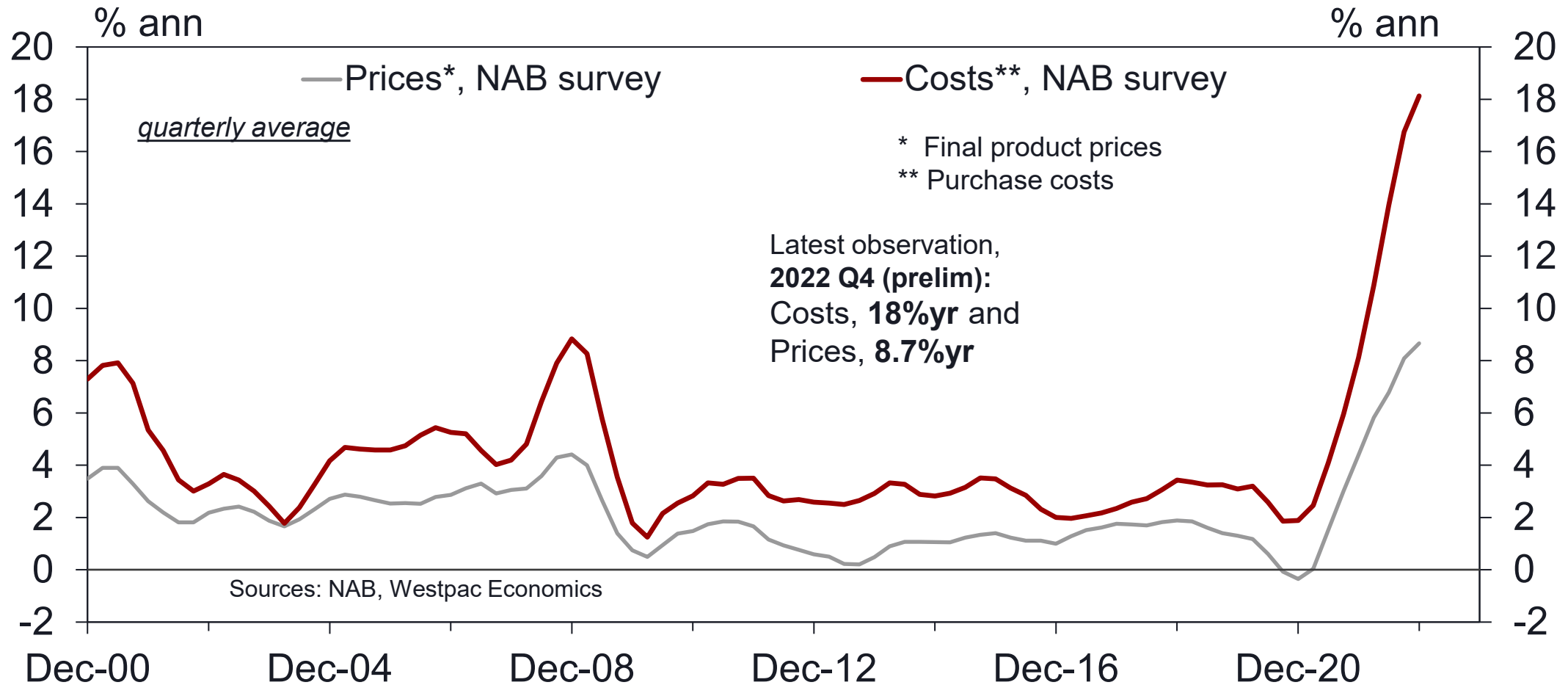
# Inflation: long history: G7 challenge



# Central bank inflation forecasts – RBA; 3 years outside target band



# Spiralling costs leading to price pressures

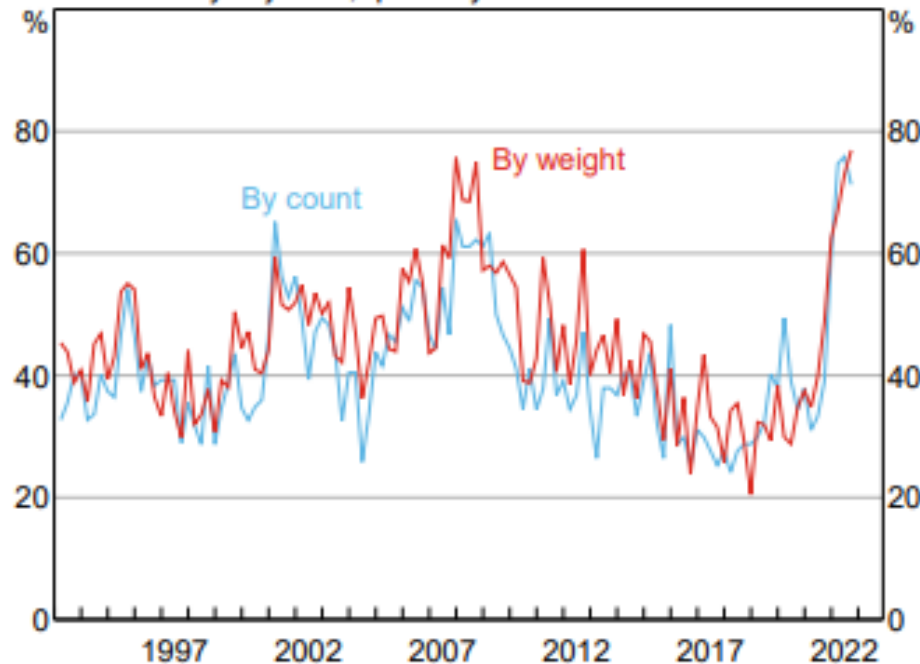


# CPI items rising by more than 3 per cent\*

**Graph 4.3**

**CPI Items Rising by More than 3 Per Cent\***

Seasonally adjusted, quarterly increase at annualised rate

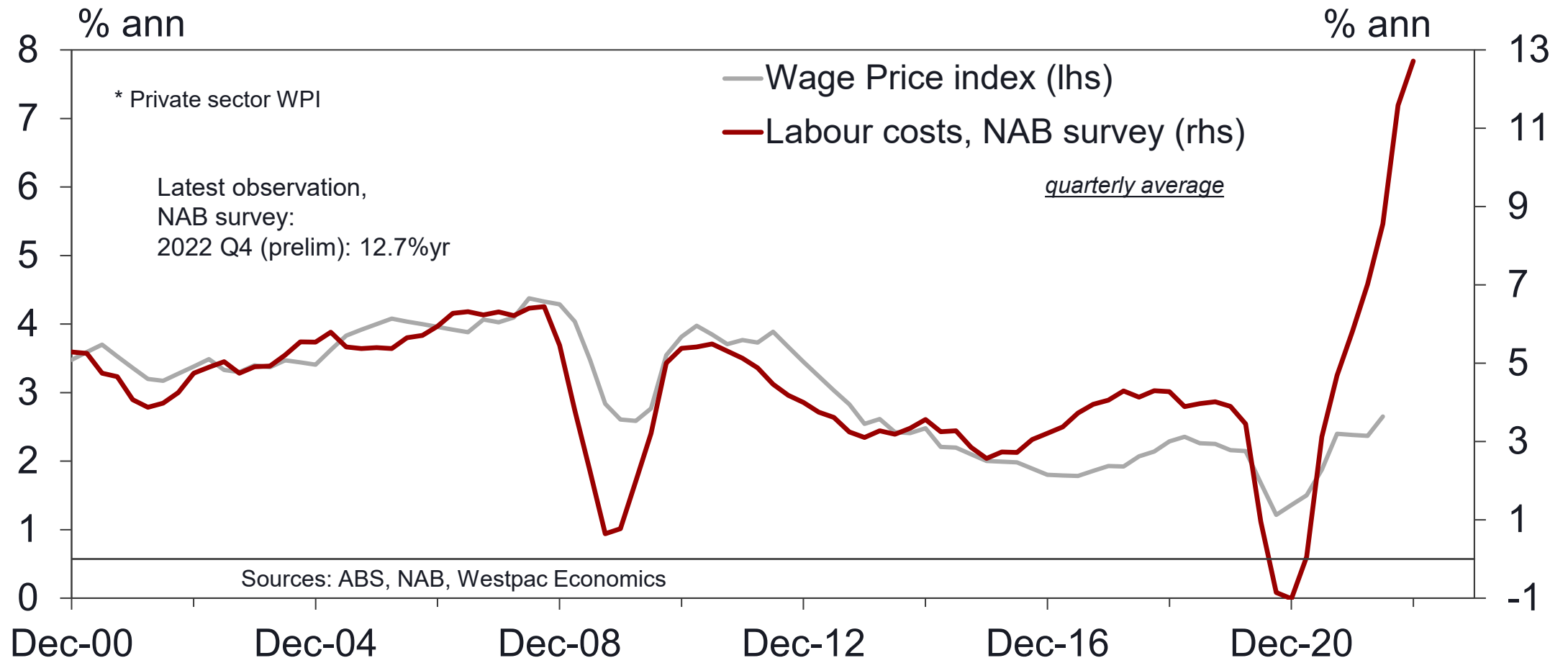


\* Adjusted for the tax changes of 1999–2000.

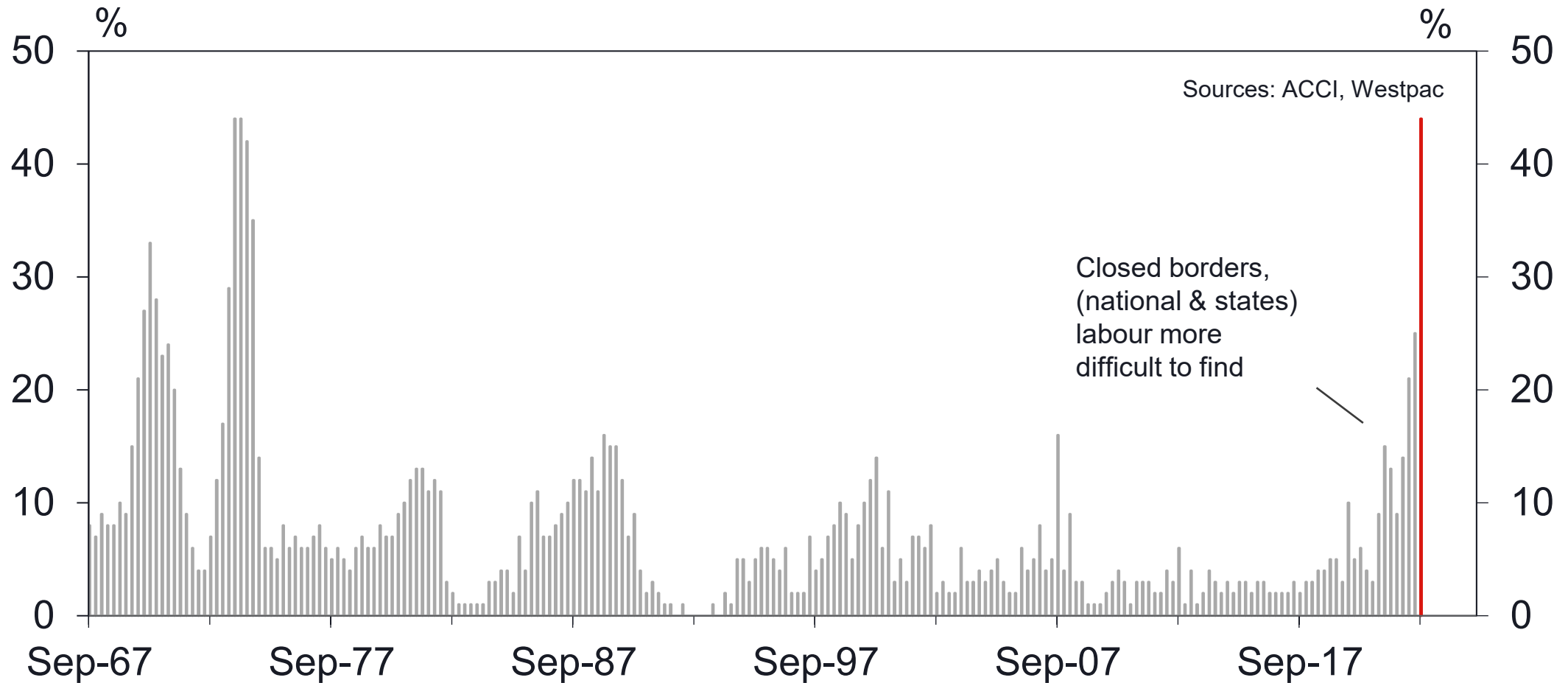
Sources: ABS; RBA



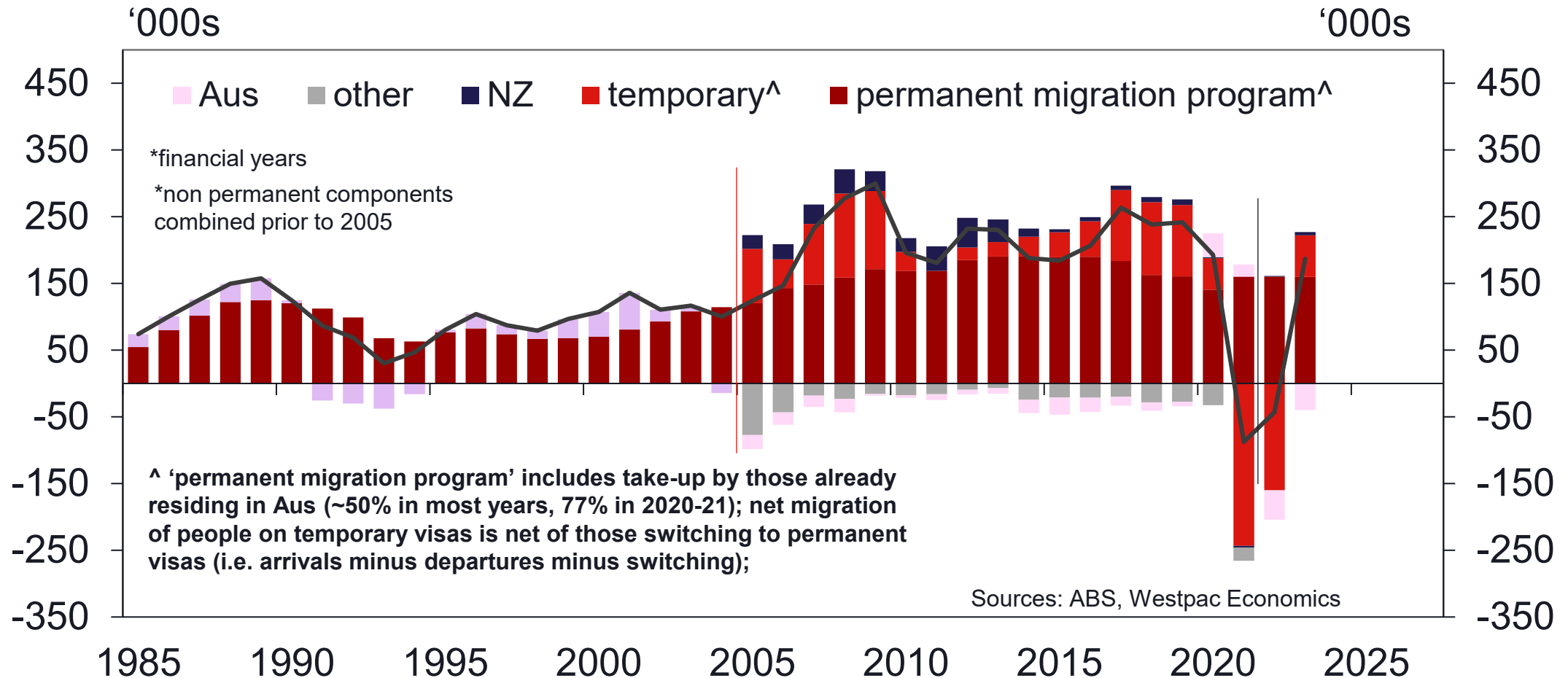
# Labour costs: significant pressures



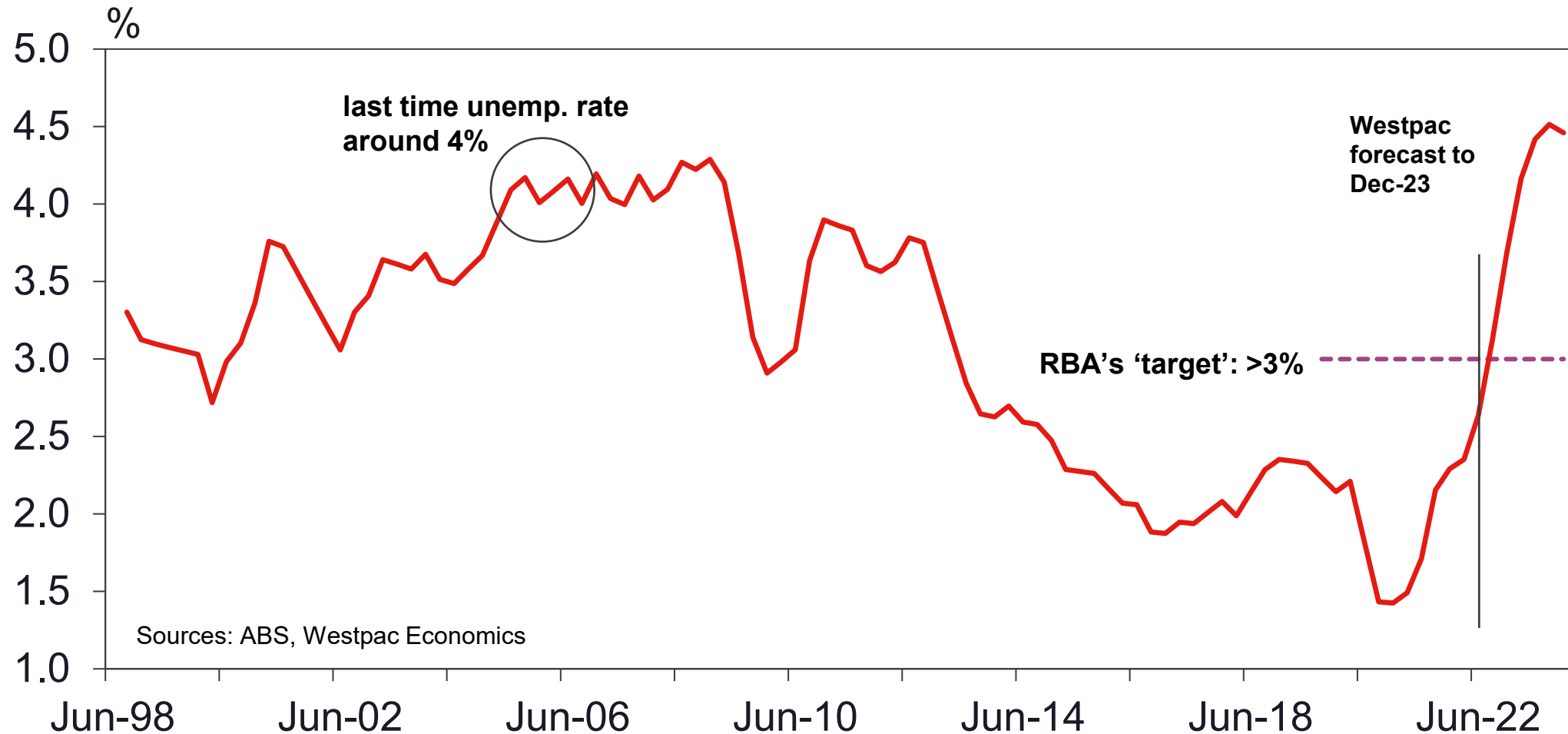
# Labour: “single factor” most limiting production



# Net migration: 240,000 (2019) to -130,000 (2021 and 2022)



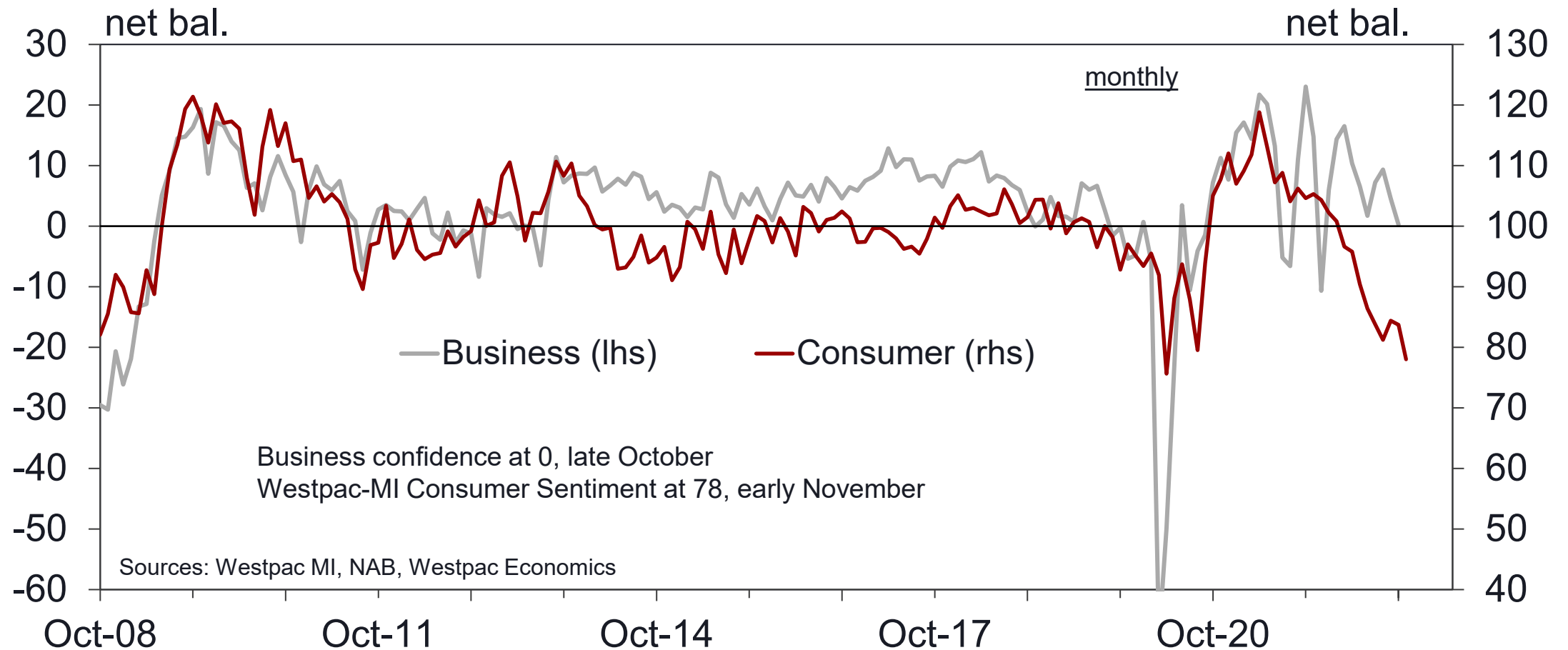
# Wages growth: key to RBA outlook – 4.5% peak, at least



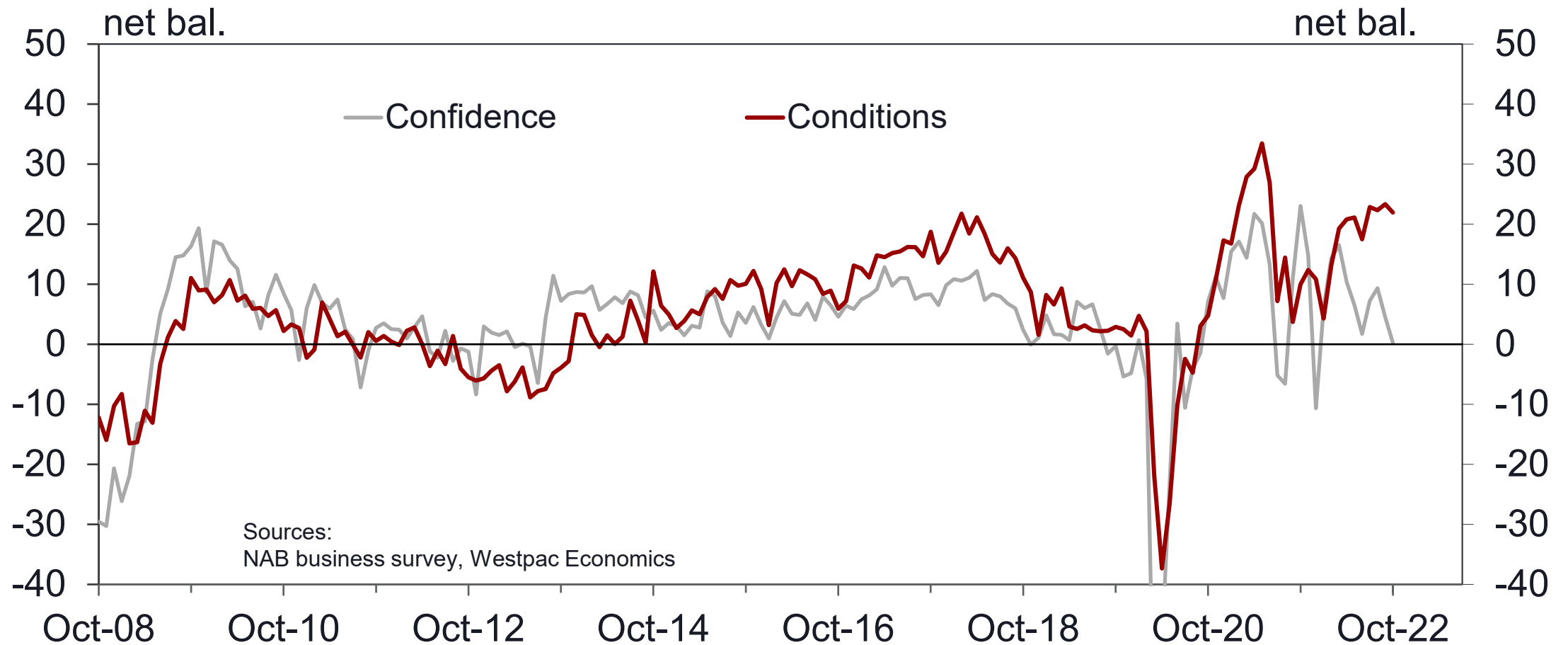
# Australian wages lagging US wages – but outlook is strong



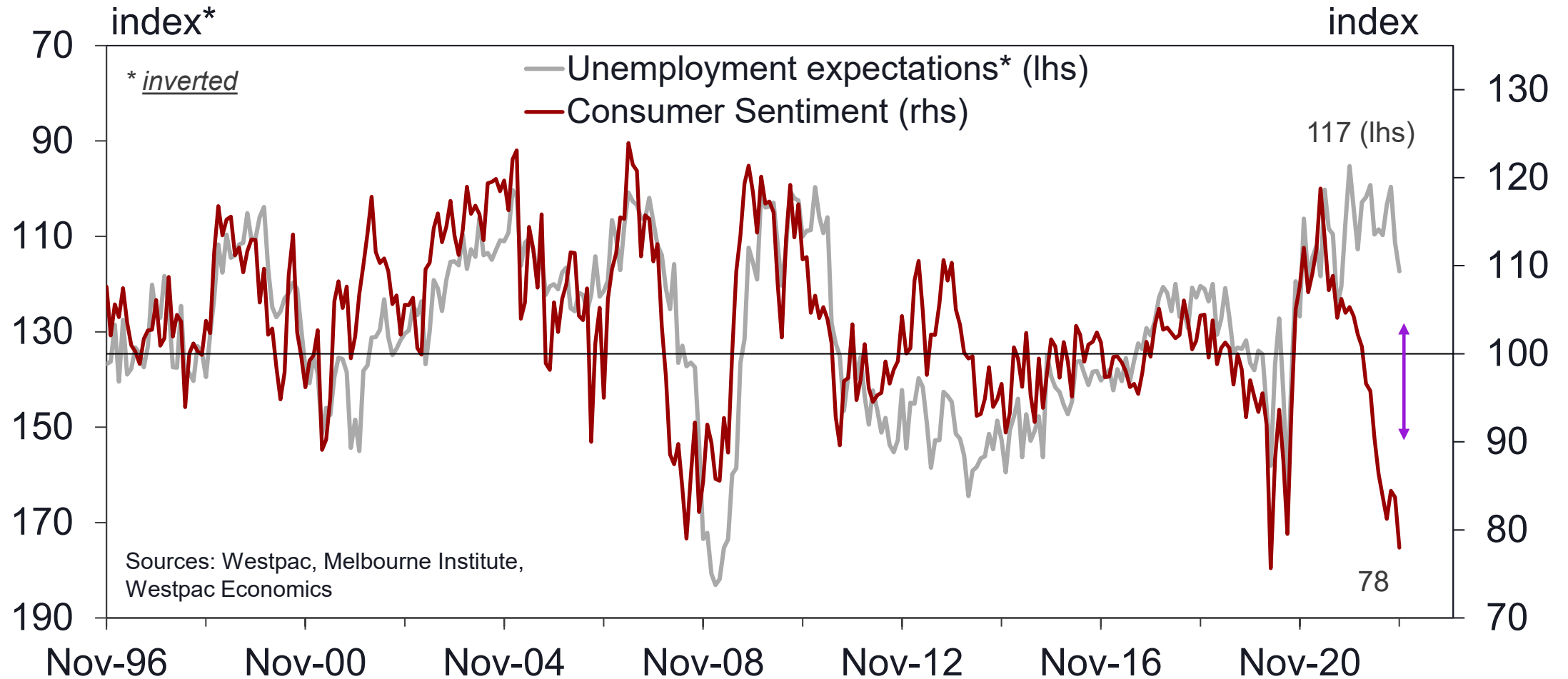
# Confidence: consumers and businesses



# Business conditions and confidence



# Consumers: Sentiment & Unemployment ' expectations – differ

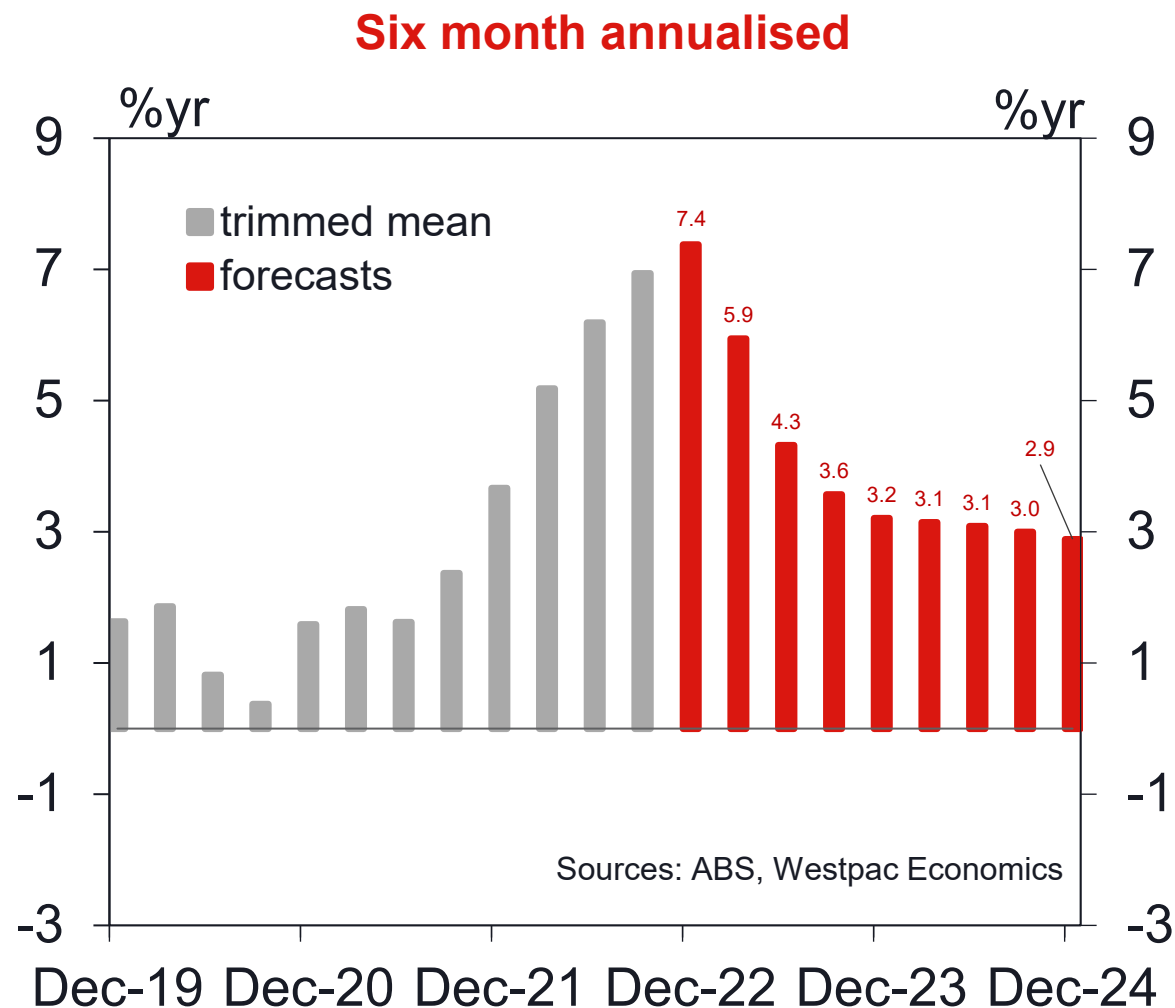
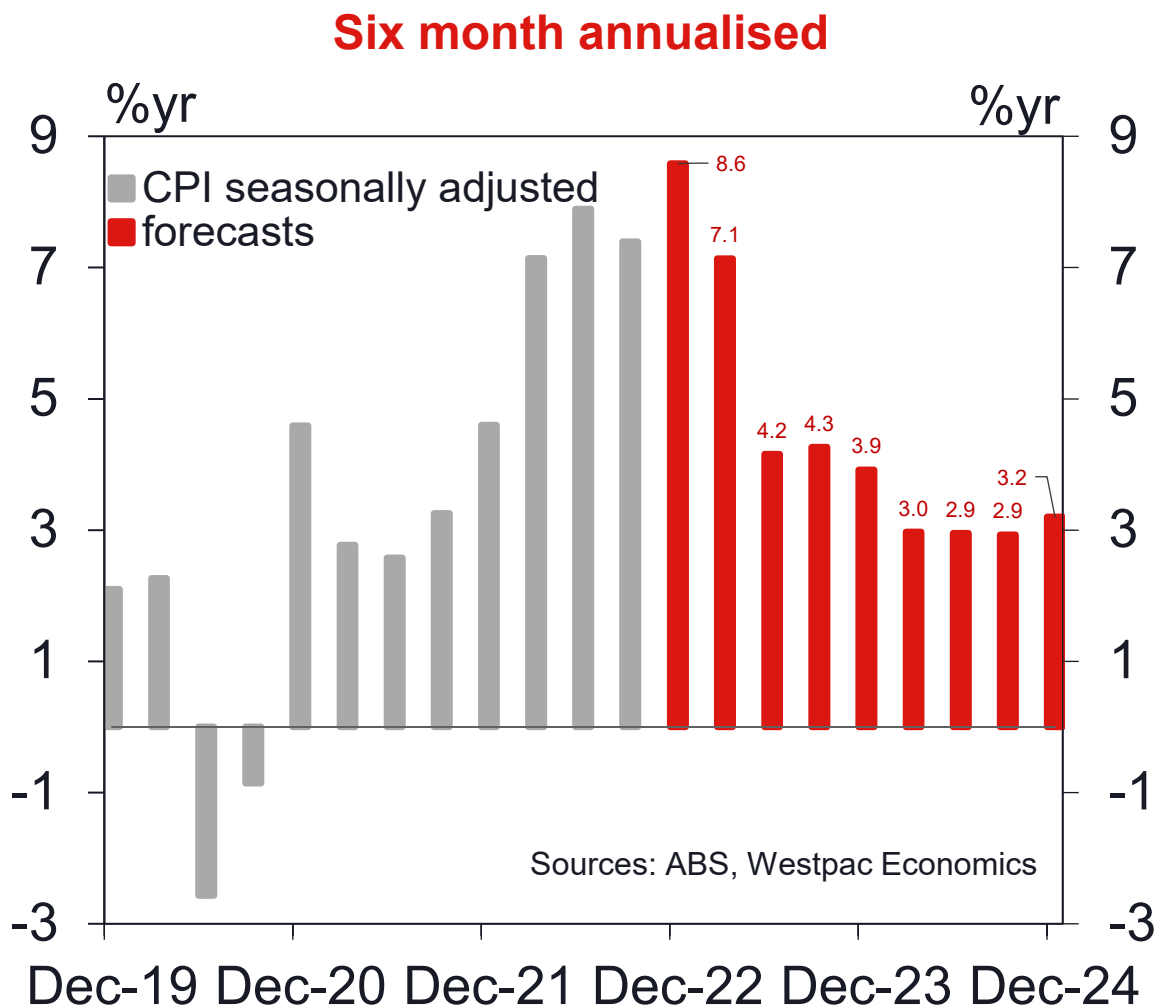




# Savings ratio – boosted spend by \$7 bn ; \$260 bn in savings



# The pace of inflation moderates though 2023



# Financial and Economic Forecasts

	End-2022	2023	2024
GDP (%pa)	3.4	1.0	2.0
Unemployment rate (%)	3.3	4.5	5.2
Inflation (%pa)	7.9	4.1	3.0
Dwelling prices (%pa)	-6.0	-8.0	2.0
Wages growth (%pa)	3.25	4.5	3.6
Cash rate (%)	3.10	3.85	2.85

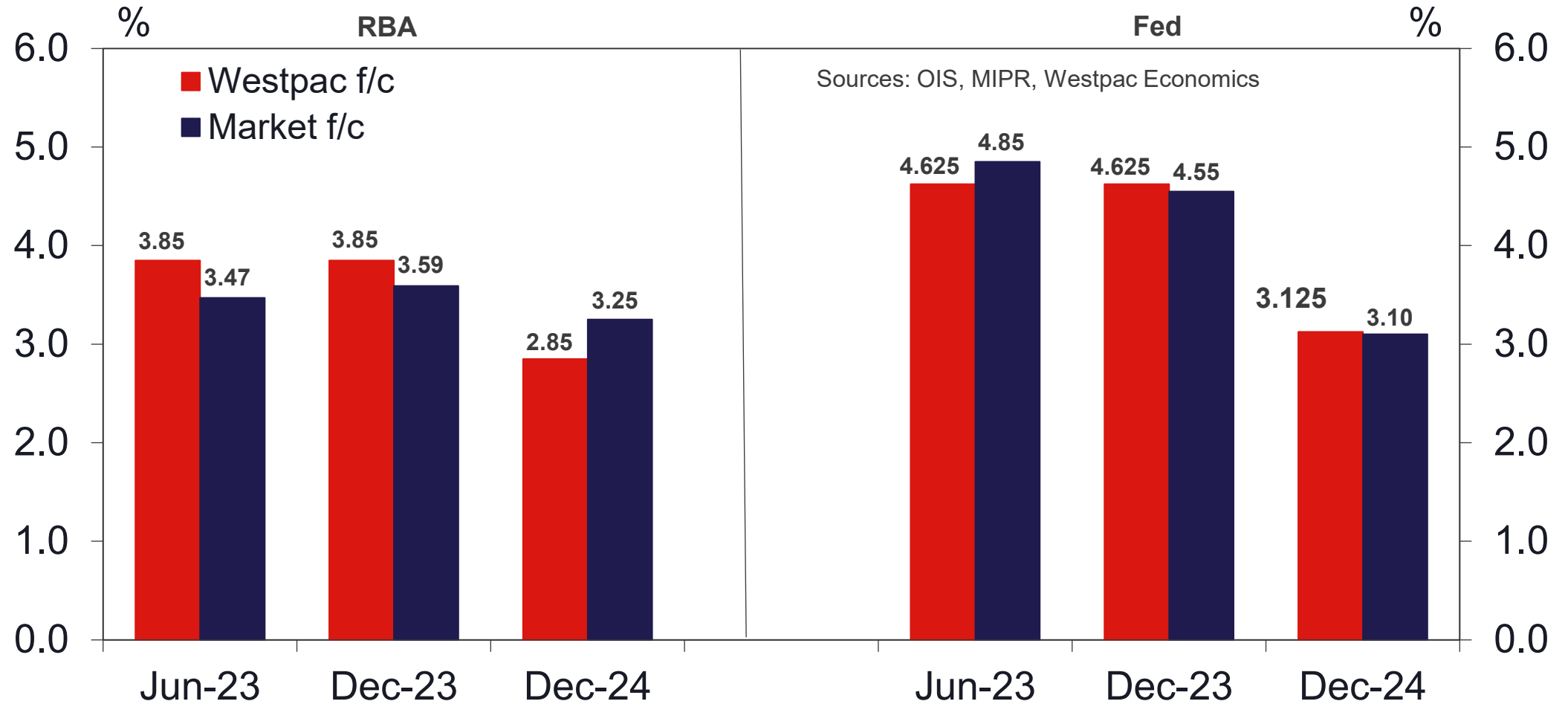
Sources: Westpac Economics

# Detailed Forecasts – bond rates up; then lower in 2023 and 2024

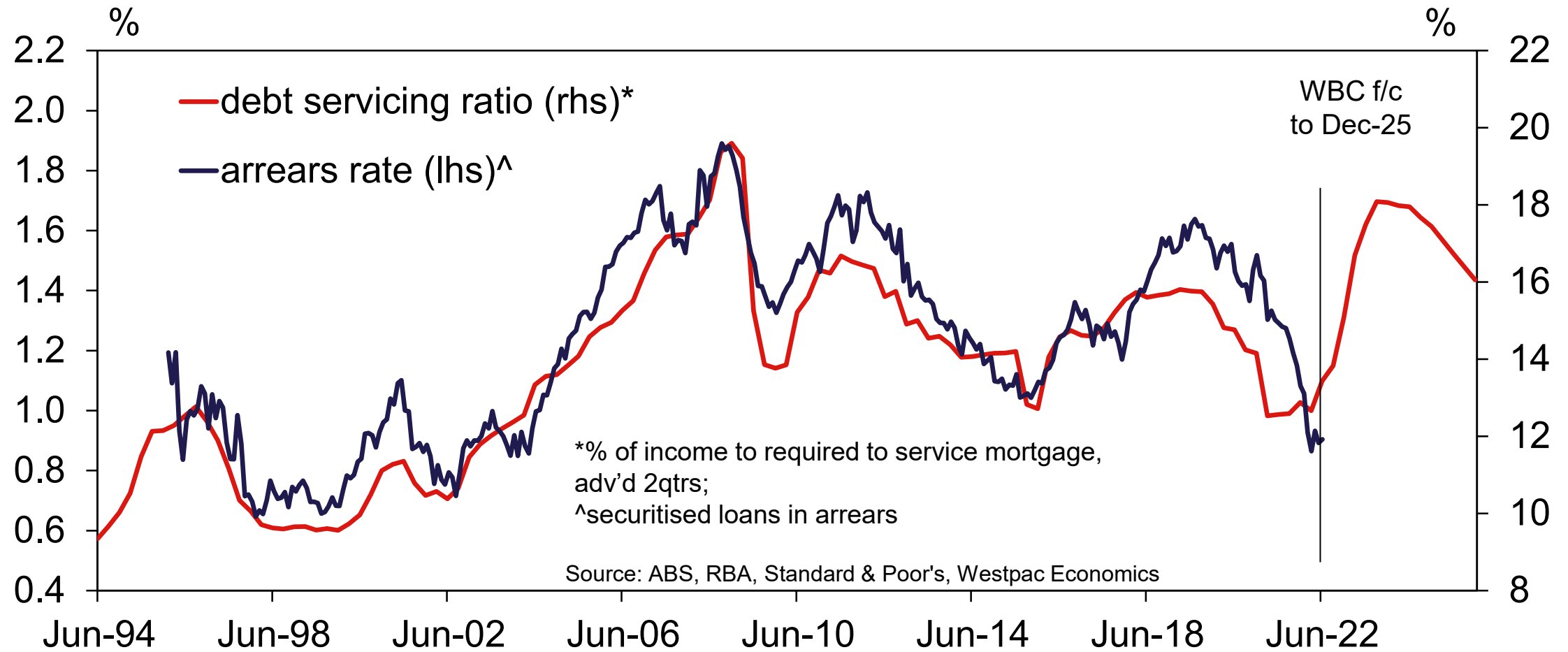
	Latest (2/12)	Jun-23	Dec-23	Dec-24
RBA Cash	2.85	3.85	3.85	2.85
3yr swap rate	3.56	3.85	3.60	3.40
AU10yr bond	3.39	3.60	3.20	2.50
Fed Funds	3.875	4.625	4.625	3.125
US 10yr bond	3.54	3.80	3.40	2.50
AUD/USD	0.68	0.70	0.74	0.77

Sources: Bloomberg, Westpac Economics

# Market Expectations for RBA & US Fed – December 2



# Household debt servicing ratio vs arrears

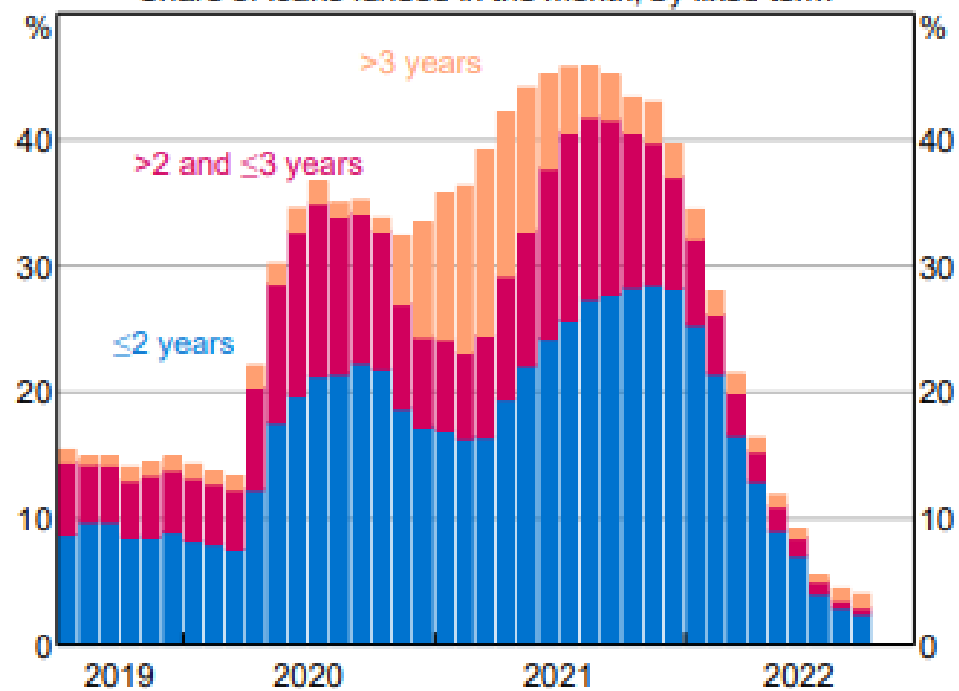


# Fixed-rate housing loans – switch to higher rates in 2023

**Graph 3.22**

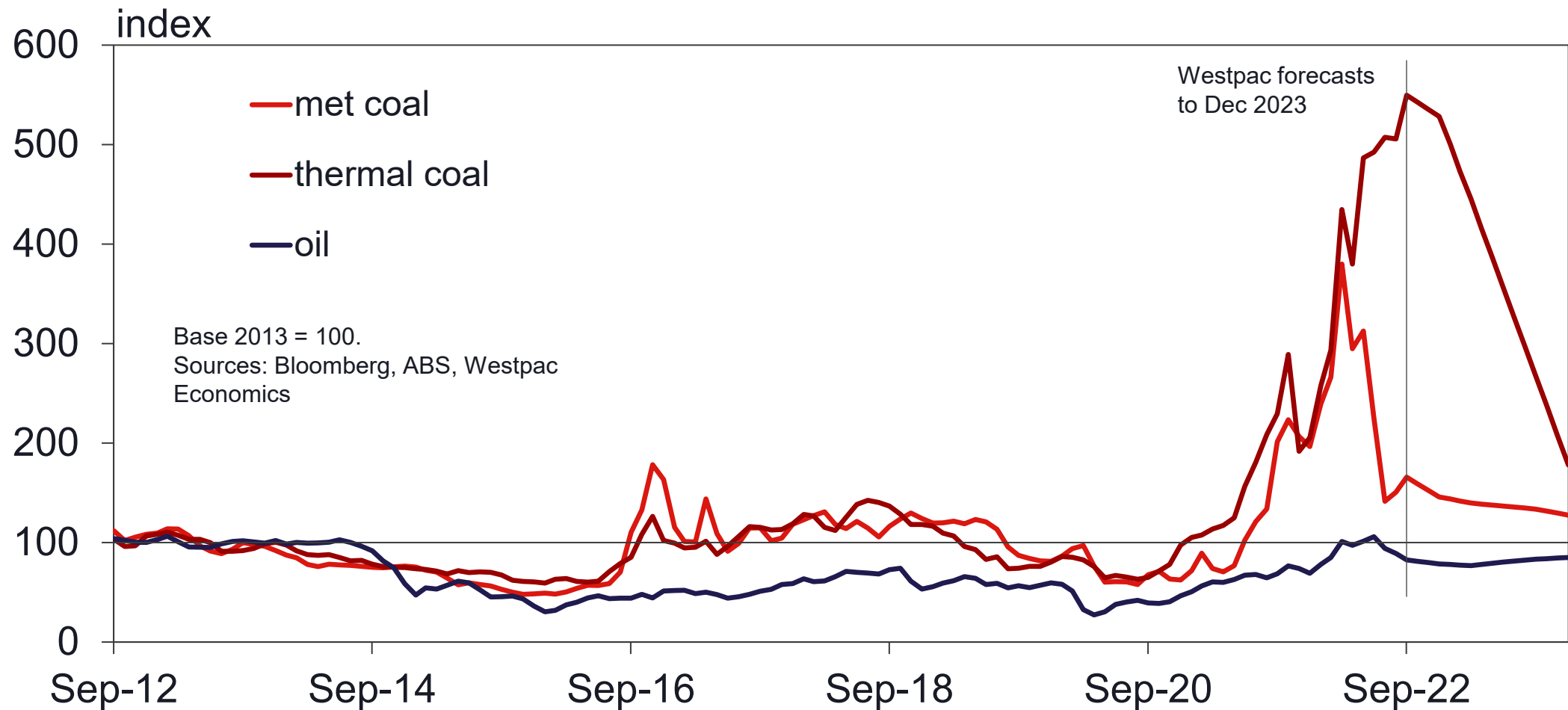
## Fixed-rate Housing Loans

Share of loans funded in the month; by fixed term



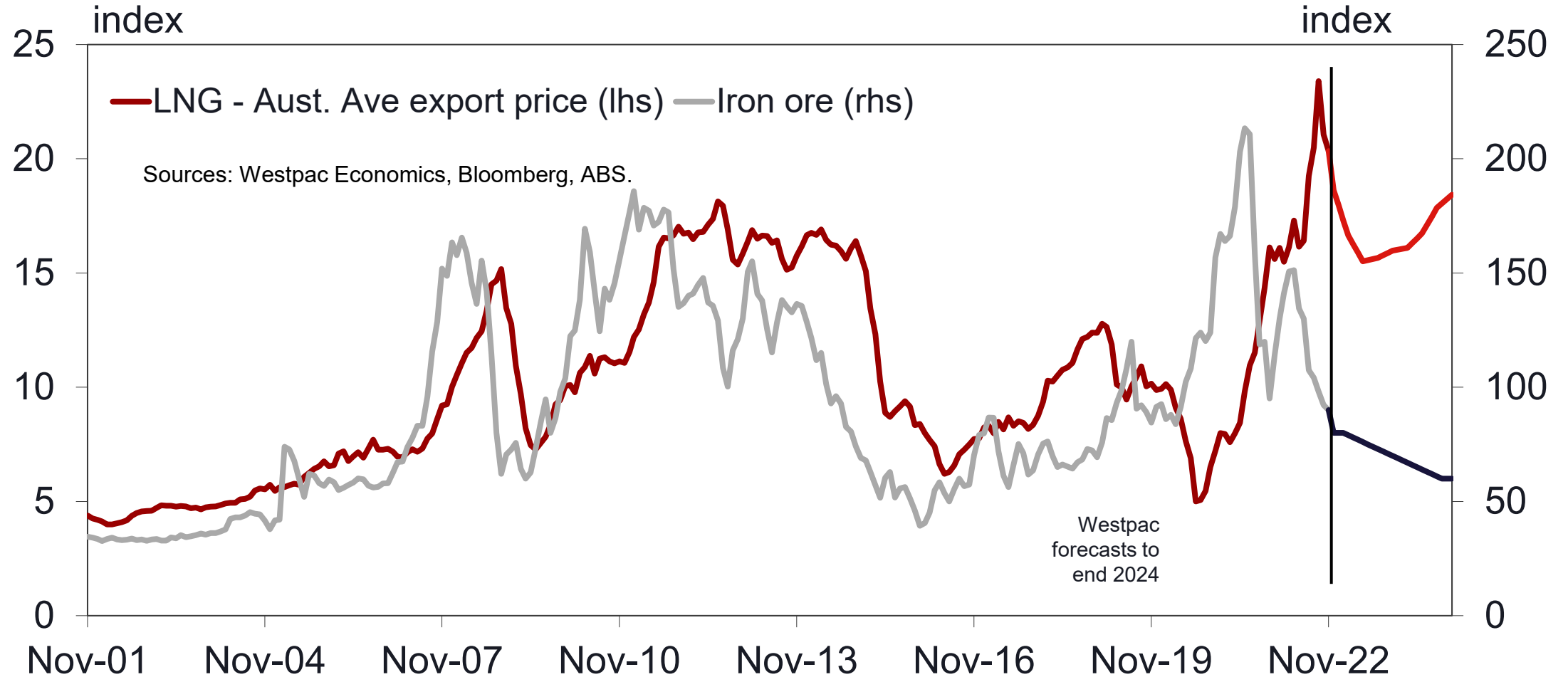
Sources: APRA; RBA

# Australian commodity prices – coal boom

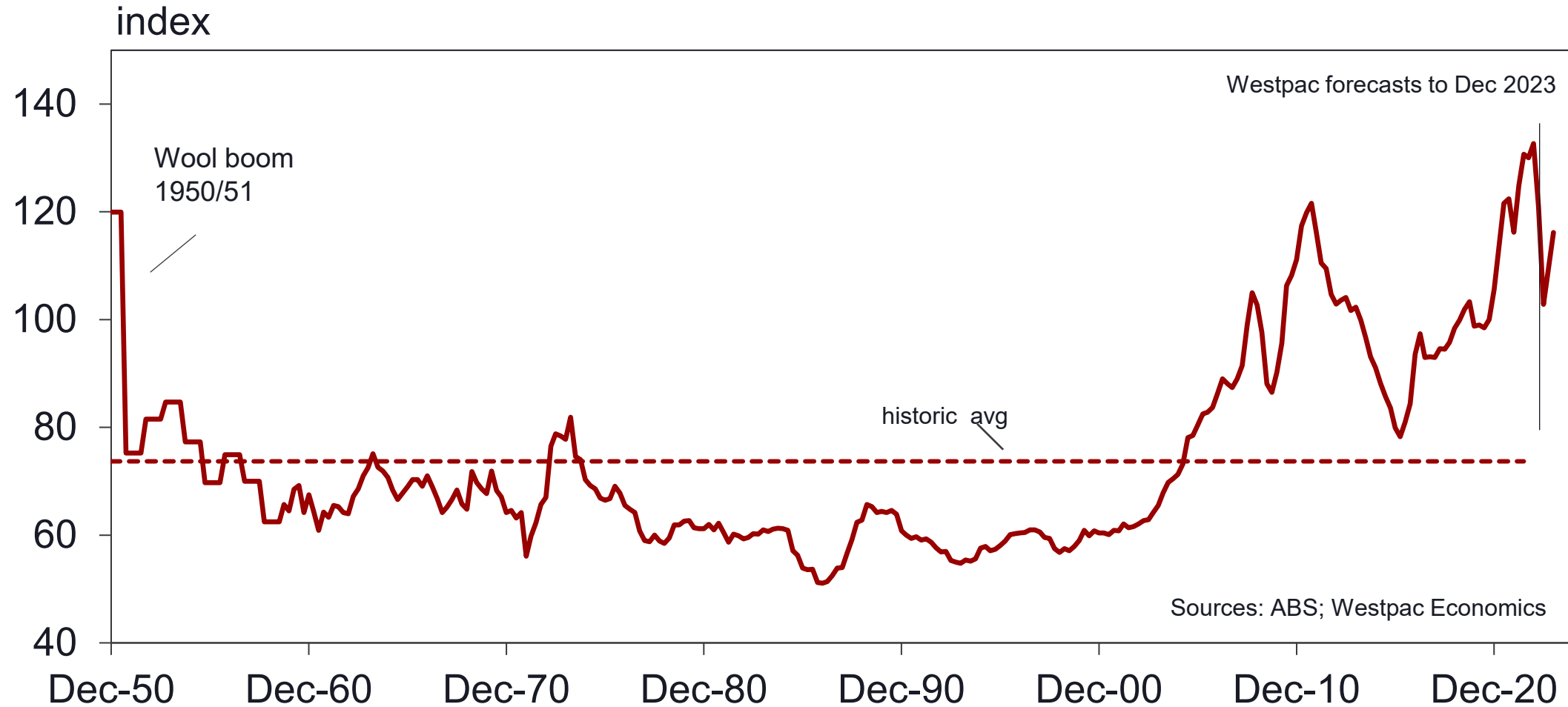




# Commodity prices – US\$; iron ore to trend down



# Terms of trade: riding high (77% above long-term average)



# Conclusion

- Three stages of Great Inflation: supply; war; inflation psychology takes hold.
- Material and labour shortages at extreme levels – not seen since 70's; labour should ease by 2024; demand and supply shock slowdown key to easing in inflation.
- RBA cash rate to rise quickly in 2022 – 3.10% by year's end; peak at 3.85% by May.
- High household debt will limit rate increases but offset by high savings – higher peak Debt Servicing Ratio than previous two peaks.
- With tight labour market (unemployment rate falls to 3.3%), inflation control relies on slowing interest sensitive sectors.
- Bond rates to fall in 2023 – as FOMC and RBA go on hold and markets look to cuts.
- Risk to economy is wage/price spiral; firms also identify scope; RBA should be nervous.
- Falling house prices in 2022 and 2023 – national; down 16% – SYD/MEL 18%.
- Border opening unlikely to see replacement of Covid losses in workforce.
- Central banks have erred with money printing during Covid – government support enough.

# Conclusion

- Inflation must ease globally in 2023 to take pressure off central banks and avoid wage/price spiral.
- US inflation structure and cycle conducive to earlier falls in inflation.
- Bond rates volatile but near peak; but progress towards much lower yields will be bumpy.
- Biggest risk to outlook is if inflation is much stickier than currently expected particularly precluding FOMC from cutting rates when US consumer flat lines in 2024 and RBA from easing rates in 2024 (RBA forecast of 4.7% inflation in 2023 and 3.2% in 2024 is risky).
- 2023 will mark the weakest consumer spending growth in US since GFC.
- China's prospects are still uncertain, current conditions in property markets are parlous – stimulatory policy (credit boost; lower rates); easing of restrictions on property and technology; zero Covid still cause for considerable caution as virus still spreads.
- AUD to benefit from easing of “risk aversion” in 2023 as inflation falls; US FED and China's patchy recovery will hold AUD back for the remainder of 2022.

# Disclaimer

## Things you should know

Westpac Institutional Bank is a division of Westpac Banking Corporation ABN 33 007 457 141 ('Westpac').

## Disclaimer

This material contains general commentary, and market colour. The material does not constitute investment advice. Certain types of transactions, including those involving futures, options and high yield securities give rise to substantial risk and are not suitable for all investors. We recommend that you seek your own independent legal or financial advice before proceeding with any investment decision. This information has been prepared without taking account of your objectives, financial situation or needs. This material may contain material provided by third parties. While such material is published with the necessary permission none of Westpac or its related entities accepts any responsibility for the accuracy or completeness of any such material. Although we have made every effort to ensure the information is free from error, none of Westpac or its related entities warrants the accuracy, adequacy or completeness of the information, or otherwise endorses it in any way. Except where contrary to law, Westpac and its related entities intend by this notice to exclude liability for the information. The information is subject to change without notice and none of Westpac or its related entities is under any obligation to update the information or correct any inaccuracy which may become apparent at a later date. The information contained in this material does not constitute an offer, a solicitation of an offer, or an inducement to subscribe for, purchase or sell any financial instrument or to enter a legally binding contract. Past performance is not a reliable indicator of future performance. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The ultimate outcomes may differ substantially from these forecasts.

## Country disclosures

*Australia:* Westpac holds an Australian Financial Services Licence (No. 233714). This material is provided to you solely for your own use and in your capacity as a client of Westpac.

For XYLO Foreign Exchange clients: This information is provided to you solely for your own use and is not to be distributed to any third parties. XYLO Foreign Exchange is a division of Westpac Banking Corporation ABN 33 007 457 141 and Australian credit licence 233714. Information is current as at date shown on the publication. This information has been prepared without taking account of your objectives, financial situation or needs. Because of this you should, before acting on this information, consider its appropriateness, having regard to your objectives, financial situation or needs. XYLO Foreign Exchange's combined Financial Services Guide and Product Disclosure Statement can be obtained by calling XYLO Foreign Exchange on 1300 995 639, or by emailing [customer care@XYLO.com.au](mailto:customer care@XYLO.com.au).

*New Zealand:* In New Zealand, Westpac Institutional Bank refers to the brand under which products and services are provided by either Westpac or Westpac New Zealand Limited ("WNZL"). Any product or service made available by WNZL does not represent an offer from Westpac or any of its subsidiaries (other than WNZL). Neither Westpac nor its other subsidiaries guarantee or otherwise support the performance of WNZL in respect of any such product. The current disclosure statements for the New Zealand branch of Westpac and WNZL can be obtained at the internet address [www.westpac.co.nz](http://www.westpac.co.nz). For further information please refer to the Product Disclosure Statement (available from your Relationship Manager) for any product for which a Product Disclosure Statement is required, or applicable customer agreement.

China, Hong Kong, Singapore and India: This material has been prepared and issued for distribution in Singapore to institutional investors, accredited investors and expert investors (as defined in the applicable Singapore laws and regulations) only. Recipients in Singapore of this material should contact Westpac Singapore Branch in respect of any matters arising from, or in connection with, this material. Westpac Singapore Branch holds a wholesale banking licence and is subject to supervision by the Monetary Authority of Singapore. Westpac Hong Kong Branch holds a banking license and is subject to supervision by the Hong Kong Monetary Authority. Westpac Hong Kong branch also holds a license issued by the Hong Kong Securities and Futures Commission (SFC) for Type 1 and Type 4 regulated activities. This material is intended only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance. Westpac Shanghai and Beijing Branches hold banking licenses and are subject to supervision by the China Banking Regulatory Commission (CBRC). Westpac Mumbai Branch holds a banking license from Reserve Bank of India (RBI) and subject to regulation and supervision by the RBI

UK: The contents of this communication, which have been prepared by and are the sole responsibility of Westpac Banking Corporation London and Westpac Europe Limited. Westpac (a) has its principal place of business in the United Kingdom at Camomile Court, 23 Camomile Street, London EC3A 7LL, and is registered at Cardiff in the UK (as Branch No. BR00106), and (b) authorised and regulated by the Australian Prudential Regulation Authority in Australia. Westpac is authorised in the United Kingdom by the Prudential Regulation Authority. Westpac is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. Westpac Europe Limited is a company registered in England (number 05660023) and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

This communication is being made only to and is directed at (a) persons who have professional experience in matters relating to investments who fall within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order") or (b) high net worth entities, and other persons to whom it may otherwise lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). Any person who is not a relevant person should not act or rely on this communication or any of its contents. The investments to which this communication relates are only available to and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such investments will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely upon this communication or any of its contents. In the same way, the information contained in this communication is intended for "eligible counterparties" and "professional clients" as defined by the rules of the Financial Conduct Authority and is not intended for "retail clients". With this in mind, Westpac expressly prohibits you from passing on the information in this communication to any third party. In particular this communication and, in each case, any copies thereof may not be taken, transmitted or distributed, directly or indirectly into any restricted jurisdiction. This communication is made in compliance with the Market Abuse Regulation (Regulation(EU) 596/2014).



# Disclaimer continued

The material may contain investment recommendations, including information recommending an investment strategy. Reasonable steps have been taken to ensure that the material is presented in a clear, accurate and objective manner. Investment Recommendations for Financial Instruments covered by MAR are made in compliance with Article 20 MAR. Westpac does not apply MAR Investment Recommendation requirements to Spot Foreign Exchange which is out of scope for MAR.

Unless otherwise indicated, there are no planned updates to this Investment Recommendation at the time of publication. Westpac has no obligation to update, modify or amend this Investment Recommendation or to notify the recipients of this Investment Recommendation should any information, including opinion, forecast or estimate set out in this Investment Recommendation change or subsequently become inaccurate.

Westpac will from time to time dispose of and acquire financial instruments of companies covered in this Investment Recommendation as principal and act as a market maker or liquidity provider in such financial instruments.

Westpac does not have any proprietary positions in equity shares of issuers that are the subject of an investment recommendation.

Westpac may have provided investment banking services to the issuer in the course of the past 12 months.

Westpac does not permit any issuer to see or comment on any investment recommendation prior to its completion and distribution.

Individuals who produce investment recommendations are not permitted to undertake any transactions in any financial instruments or derivatives in relation to the issuers covered by the investment recommendations they produce.

Westpac has implemented policies and procedures, which are designed to ensure conflicts of interests are managed consistently and appropriately, and to treat clients fairly.

The following arrangements have been adopted for the avoidance and prevention of conflicts in interests associated with the provision of investment recommendations.

- i. Chinese Wall/Cell arrangements;
- ii. physical separation of various Business/Support Units;
- iii. Strict and well defined wall/cell crossing procedures;
- iv. a "need to know" policy;
- v. documented and well defined procedures for dealing with conflicts of interest;
- vi. reasonable steps by Compliance to ensure that the Chinese Wall/Cell arrangements remain effective and that such arrangements are adequately monitored.

U.S.: Westpac operates in the United States of America as a federally licensed branch, regulated by the Office of the Comptroller of the Currency. Westpac is also registered with the US Commodity Futures Trading Commission ("CFTC") as a Swap Dealer, but is neither registered as, or affiliated with, a Futures Commission Merchant registered with the US CFTC. Westpac Capital Markets, LLC ('WCM'), a wholly-owned subsidiary of Westpac, is a broker-dealer registered under the U.S. Securities Exchange Act of 1934 ('the Exchange Act') and member of the Financial Industry Regulatory Authority ('FINRA'). This communication is provided for distribution to U.S. institutional investors in reliance on the exemption from registration provided by Rule 15a-6 under the Exchange Act and is not subject to all of the independence and disclosure standards applicable to debt research reports prepared for retail investors in the United States. WCM is the U.S. distributor of this communication and accepts responsibility for the contents of this communication. All disclaimers set out with respect to Westpac apply equally to WCM. If you would like to speak to someone regarding any security mentioned herein, please contact WCM on +1 212 389 1269. All disclaimers set out with respect to Westpac apply equally to WCM.

Investing in any non-U.S. securities or related financial instruments mentioned in this communication may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the SEC in the United States. Information on such non-U.S. securities or related financial instruments may be limited. Non-U.S. companies may not be subject to audit and reporting standards and regulatory requirements comparable to those in effect in the United States. The value of any investment or income from any securities or related derivative instruments denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related derivative instruments.

The author of this communication is employed by Westpac and is not registered or qualified as a research analyst, representative, or associated person under the rules of FINRA, any other U.S. self-regulatory organisation, or the laws, rules or regulations of any State. Unless otherwise specifically stated, the views expressed herein are solely those of the author and may differ from the information, views or analysis expressed by Westpac and/or its affiliates.

# A\$ RATES MARKET THEMES

**Damien McColough**

Westpac Institutional Bank

December 2022

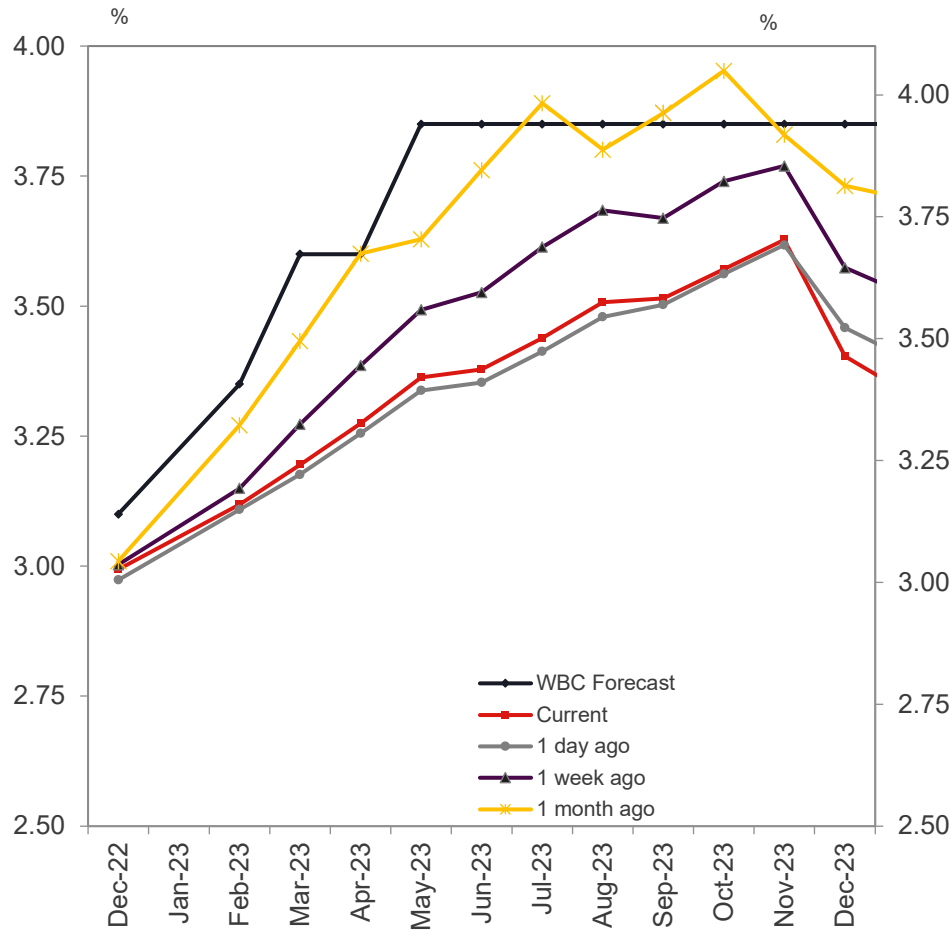




# RBA pricing has been pared back considerably

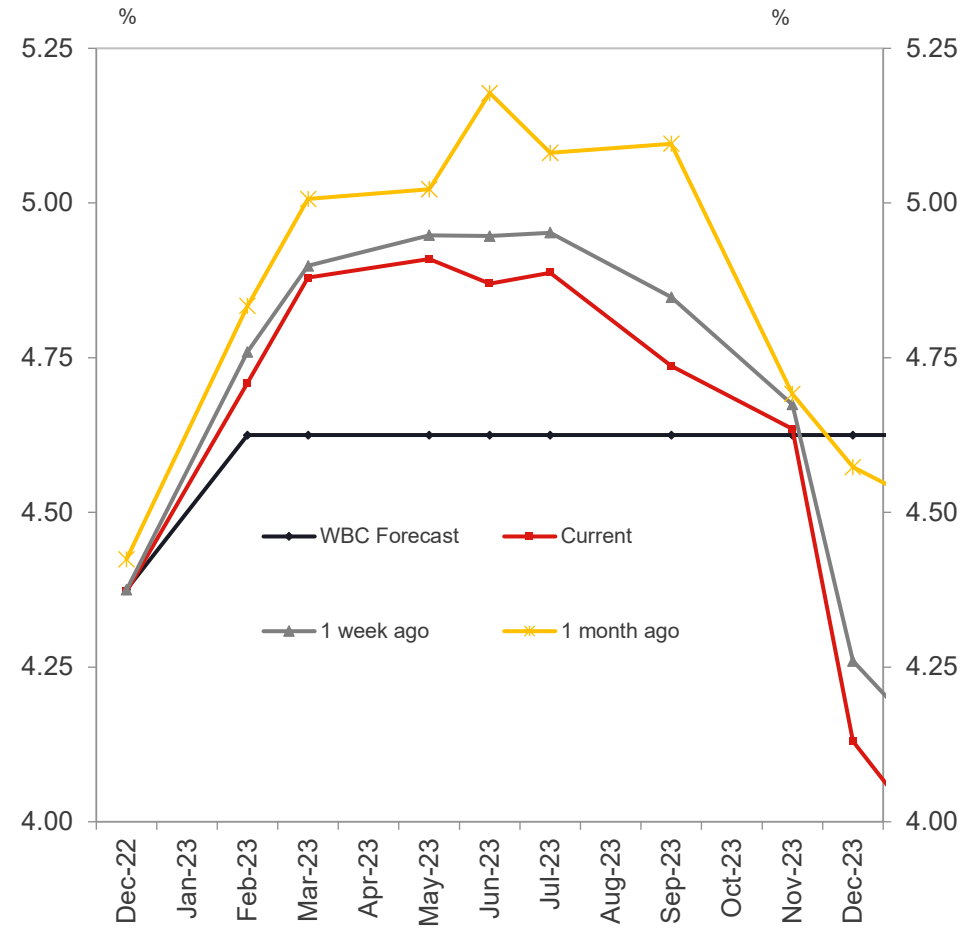
... with the peak further out into 2023 than we expect

## RBA Market Pricing



Source: Bloomberg; Westpac

## Fed Market Pricing



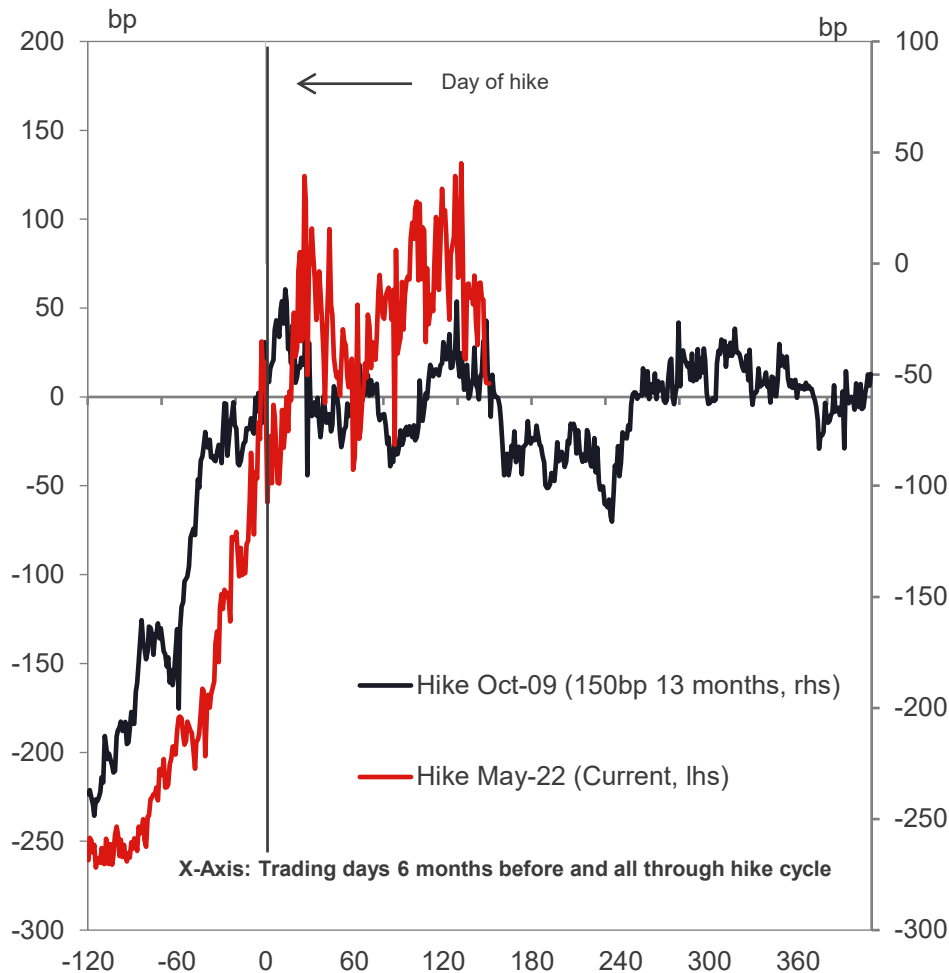
Source: Bloomberg; Westpac



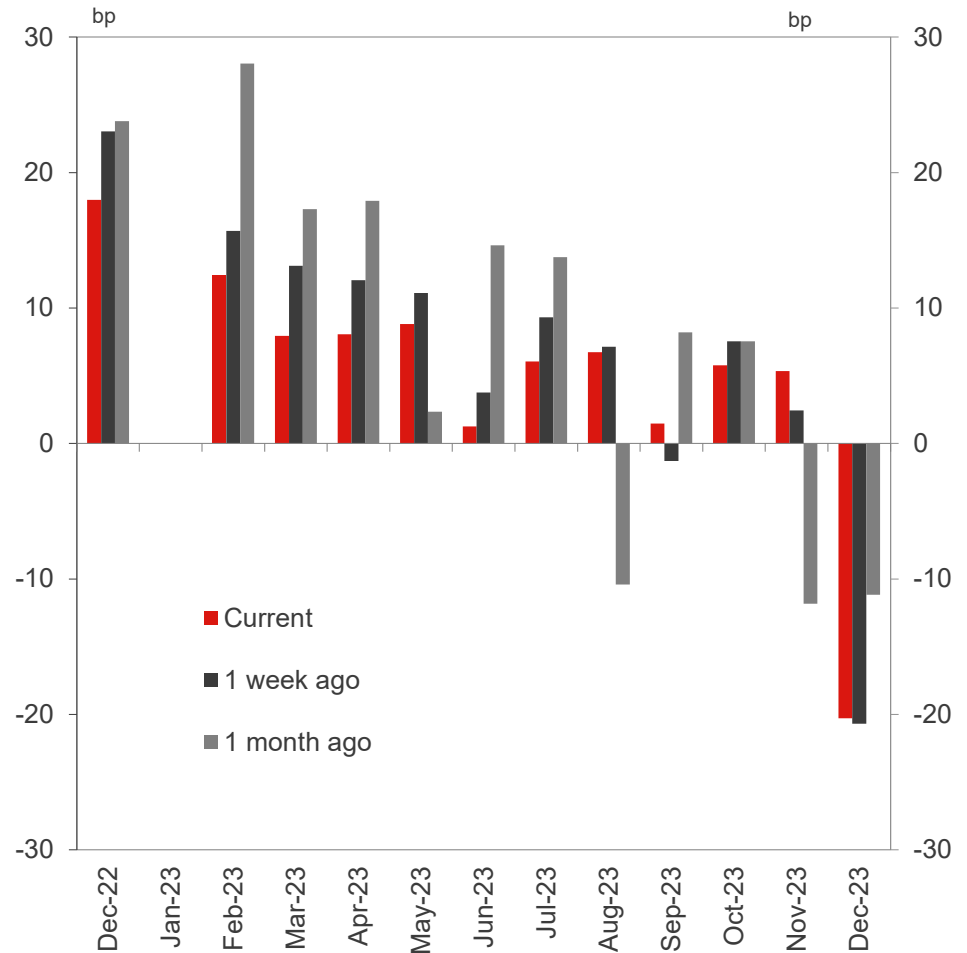
# Pricing is unlikely to significantly re-price near term ...

... but there will likely be an opportunity to fade valuations in the ne year.

**Change in 1yr forward RBA Cash during tightening cycles**   **Evolution of OIS Implied changes per RBA meeting**



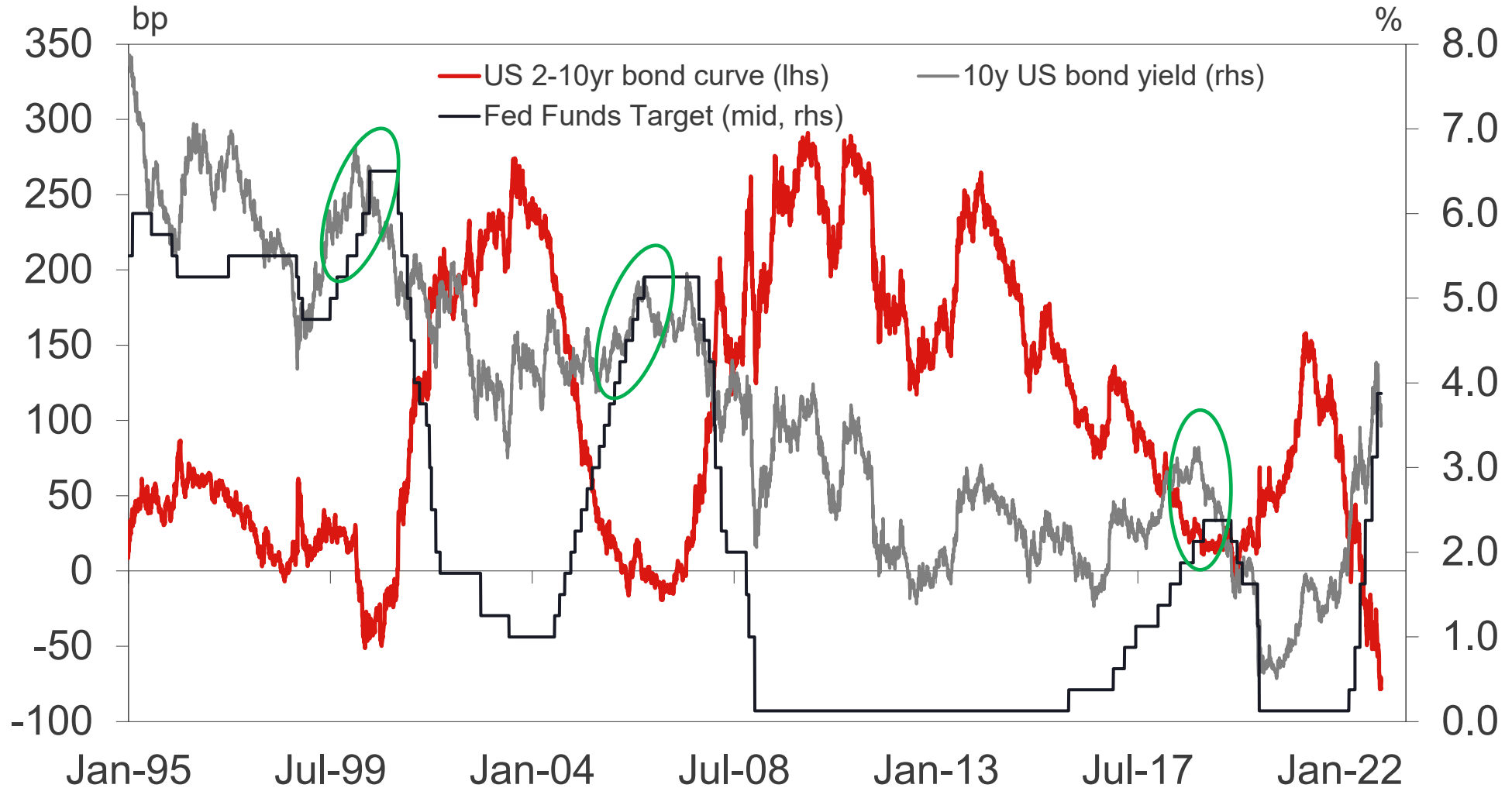
Source: Bloomberg; Westpac



Source: Bloomberg; Westpac

# Will heavy inversion shift 10yr end of cycle behaviour?

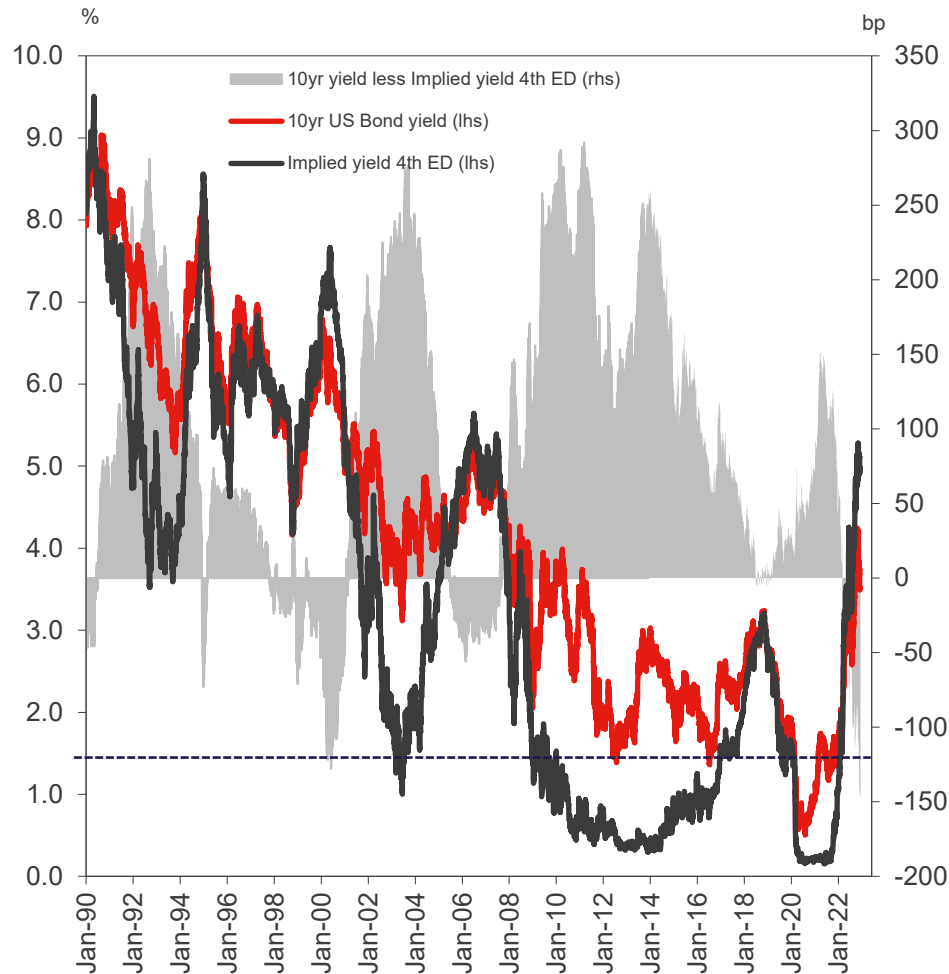
US 2-10yr bond curve vs 2yr & 10yr bond yields



Source: Bloomberg; Westpac

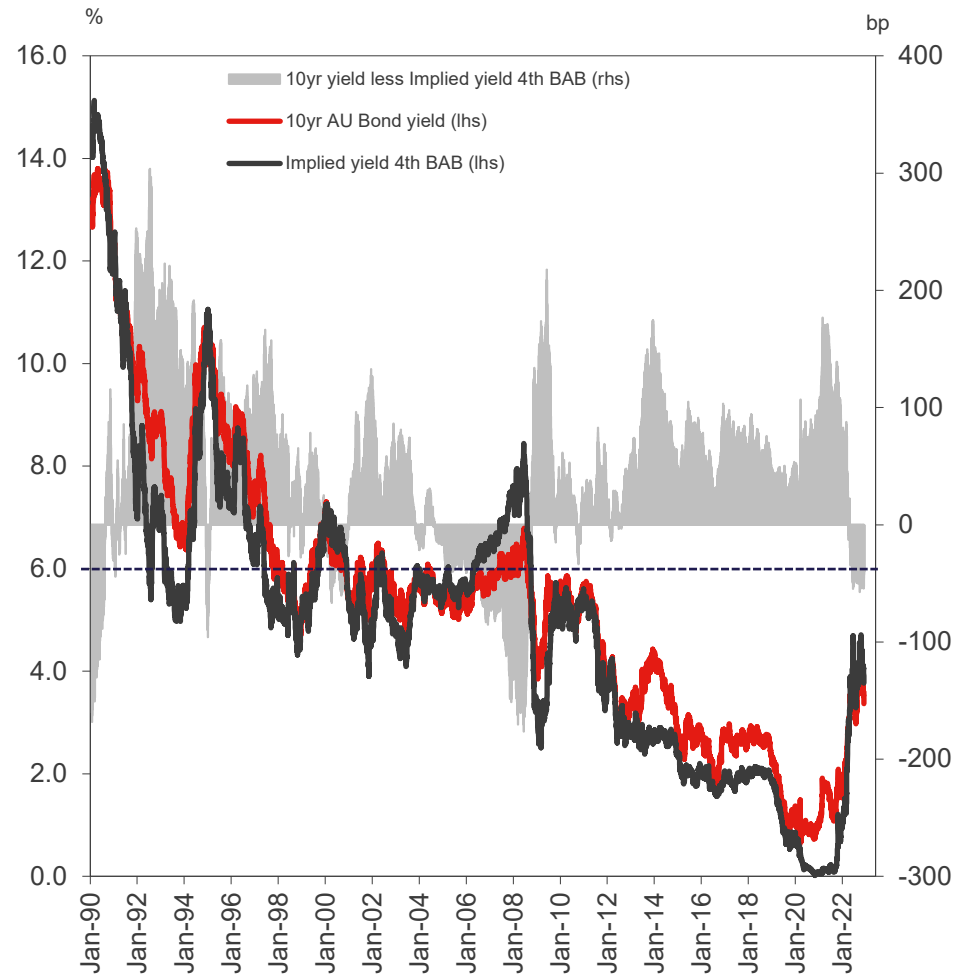
# How low can US 10yr yields go?

US 10yr bond yields vs implied yield ED4



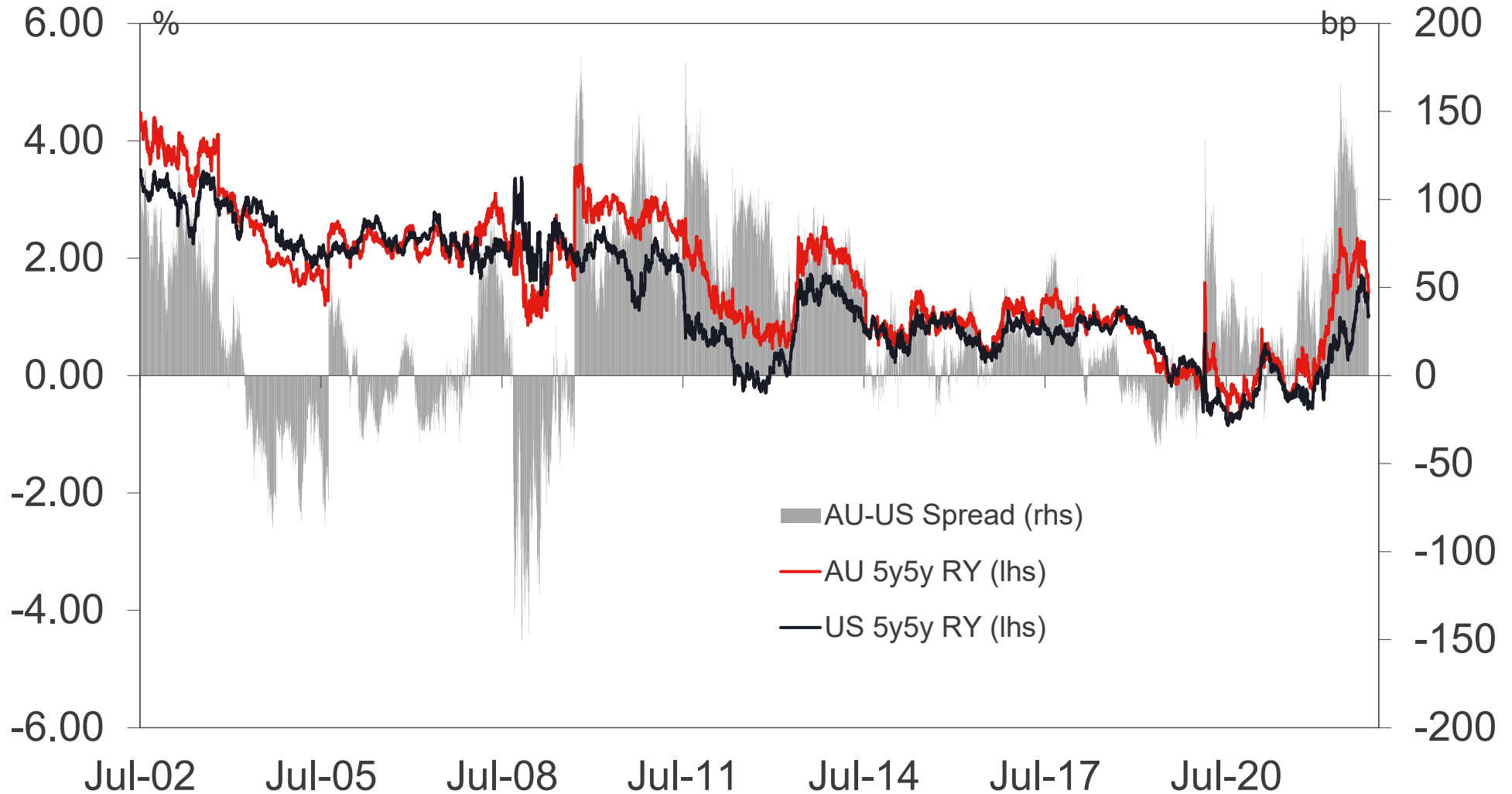
Source: Bloomberg, Westpac

AU 10yr bond yields vs implied yield 4<sup>th</sup> BAB future



Source: Bloomberg, Westpac

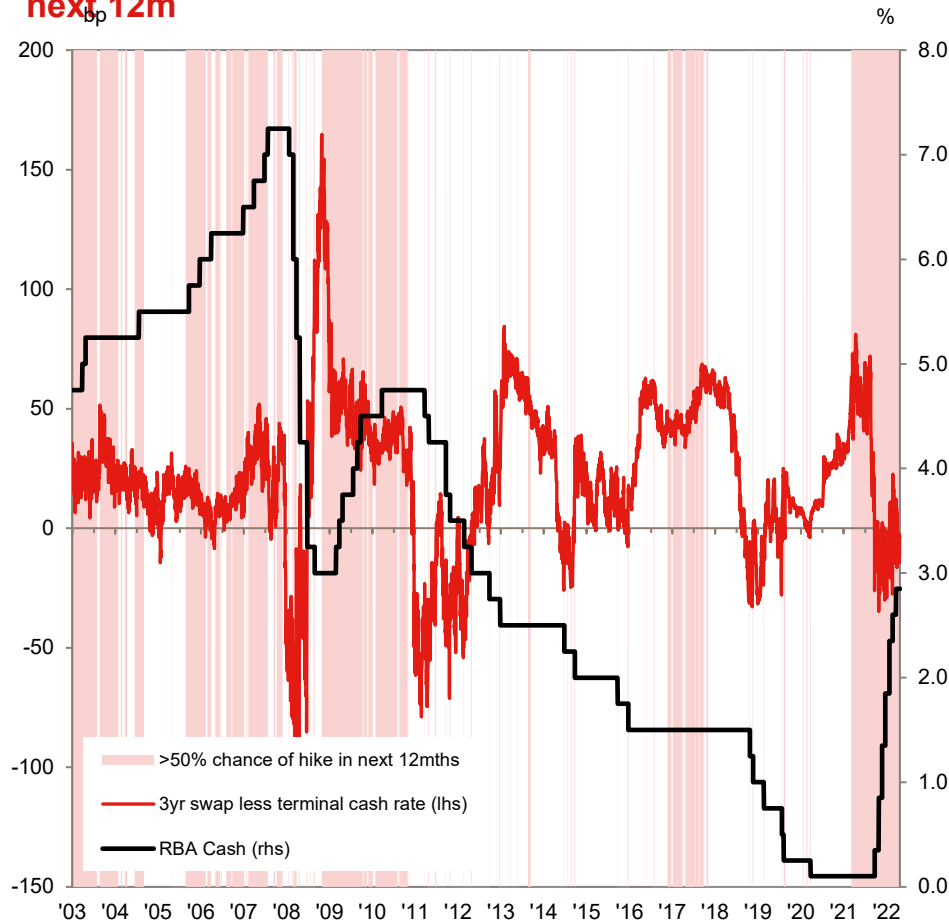
# Long end real yields appear to have peaked?



Source: Bloomberg; Westpac

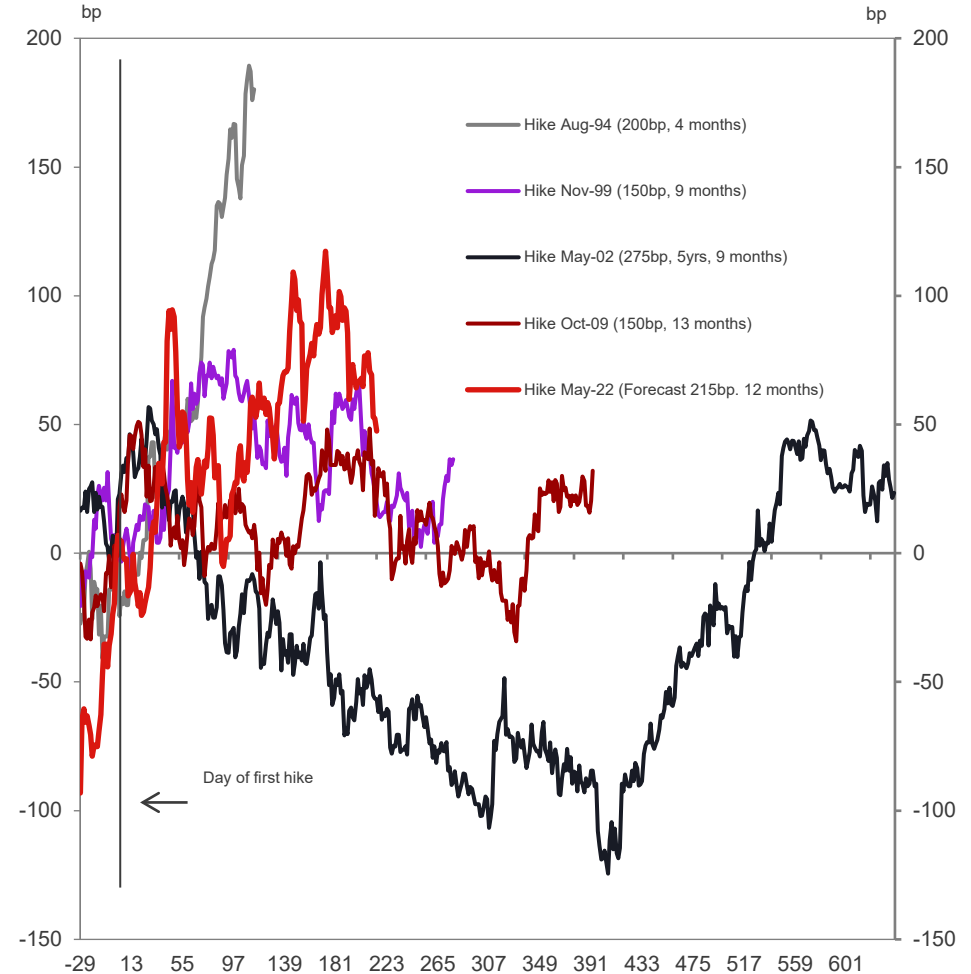
# Have we reached a turning point in the cycle?

## AU 3yr swap less Terminal; >50% chance of rate hike next 12m



Source: Bloomberg; Westpac

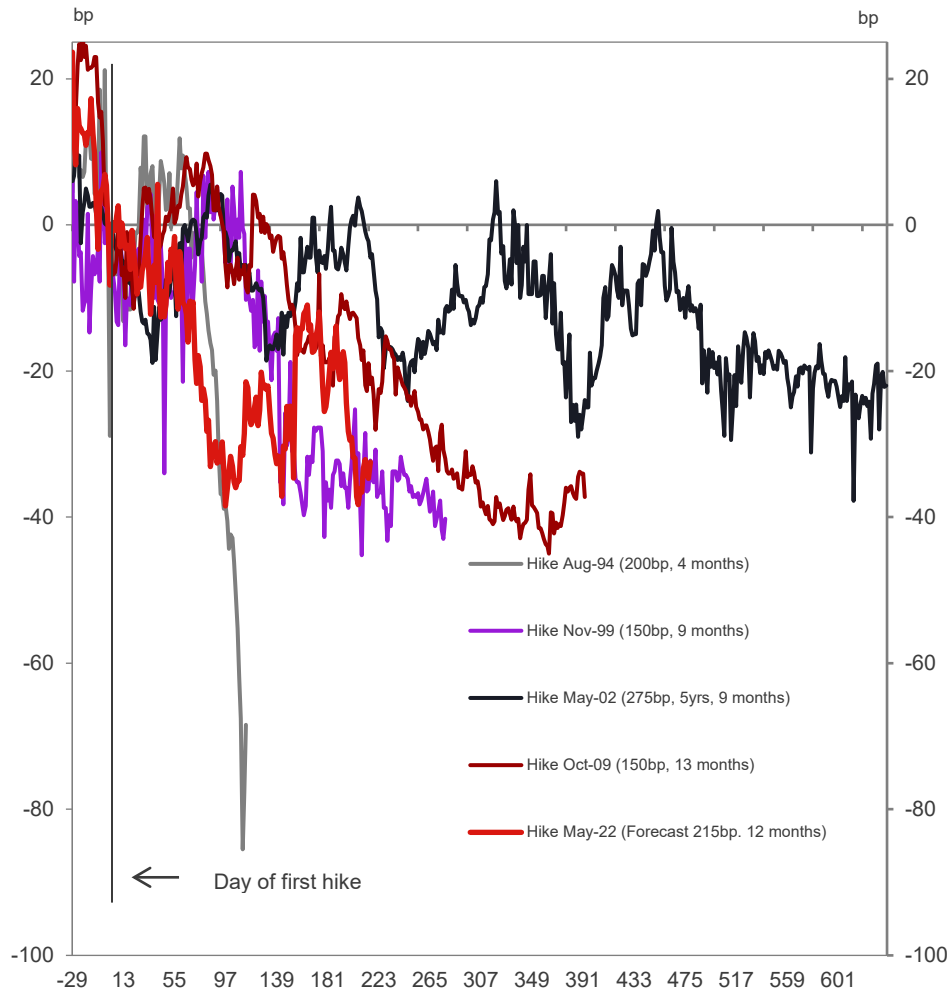
## AU 2yr swap rate evolution



Source: Bloomberg; Westpac

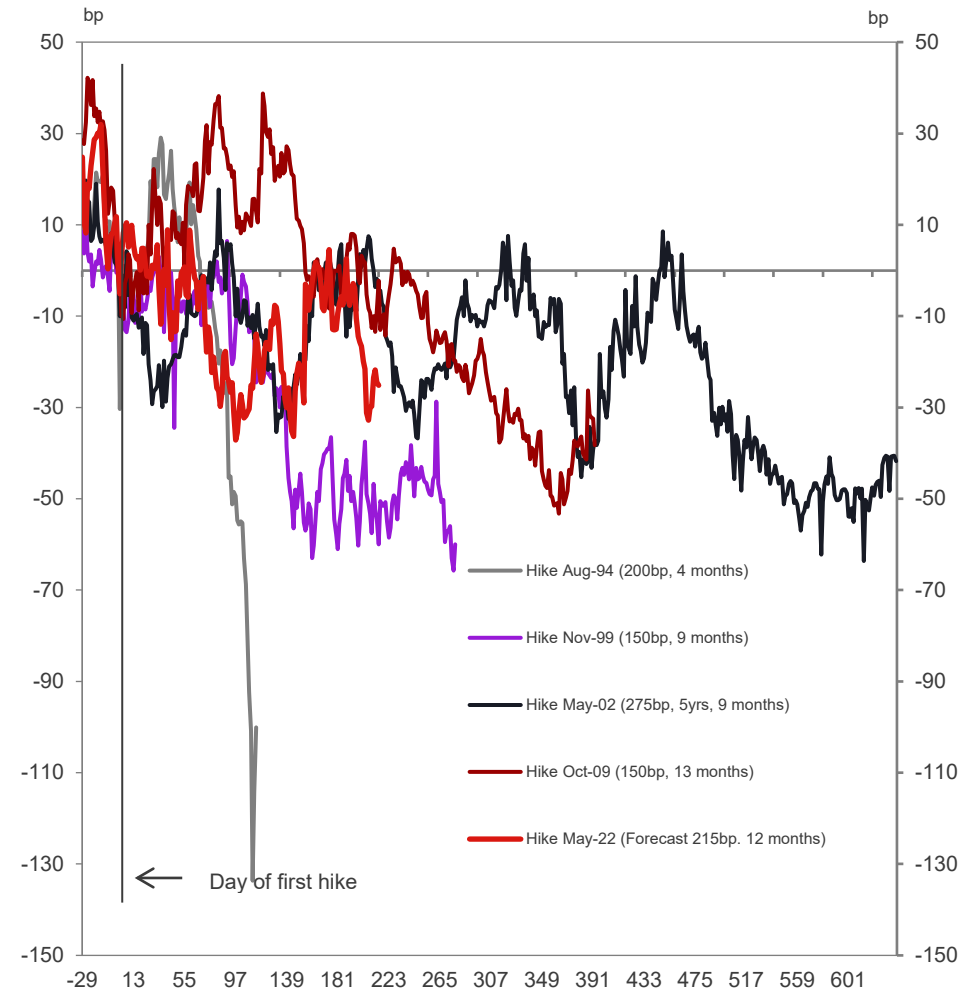
# The curve is evolving similar to previous RBA hike cycles... and has further to flatten.

AU 2-5yr curve evolution



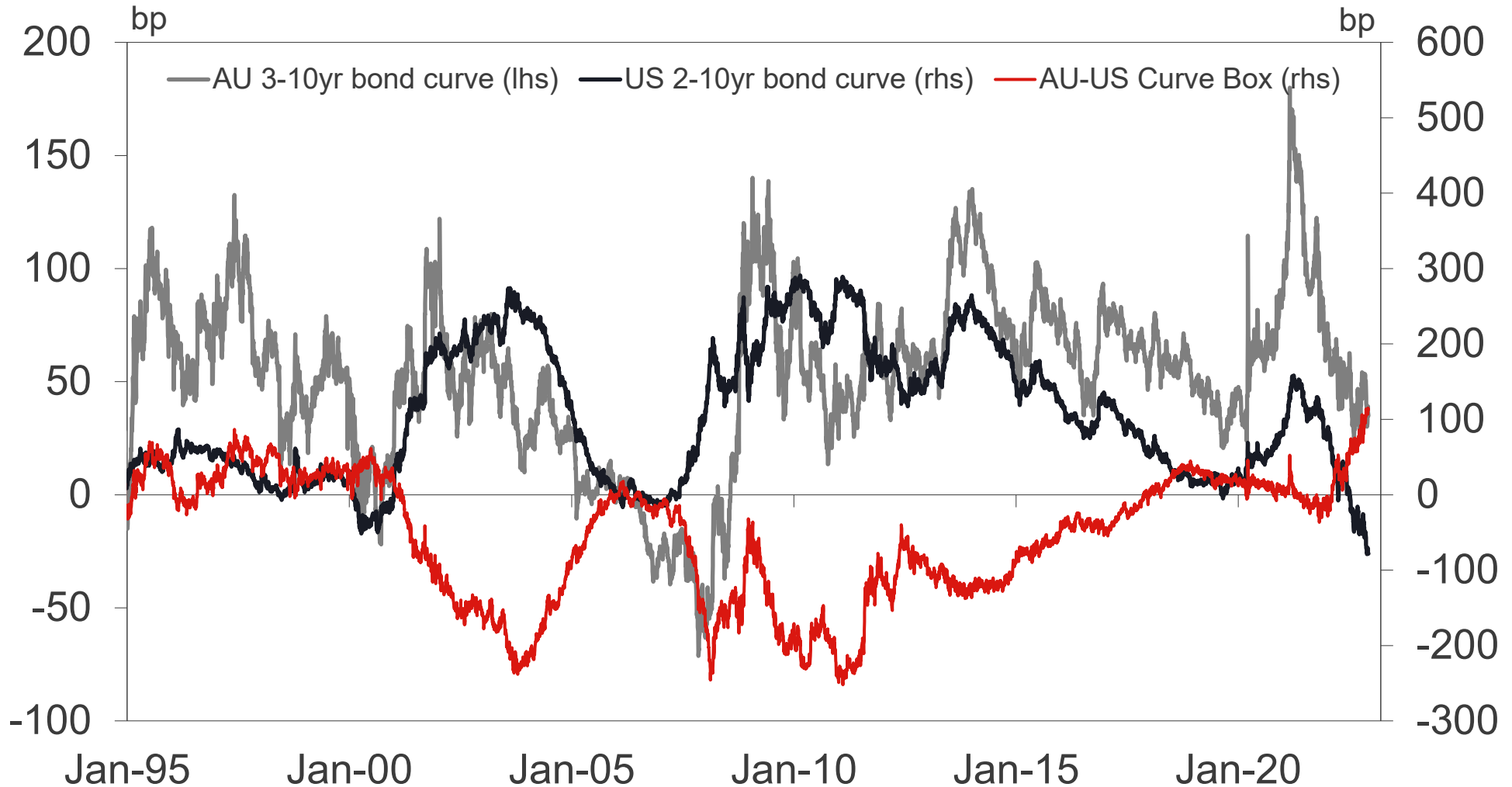
Source: Bloomberg; Westpac

AU 2-10yr curve evolution



Source: Bloomberg; Westpac

# AU 3-10yr bond curve remains historically steep relative to the US... but that is understandable

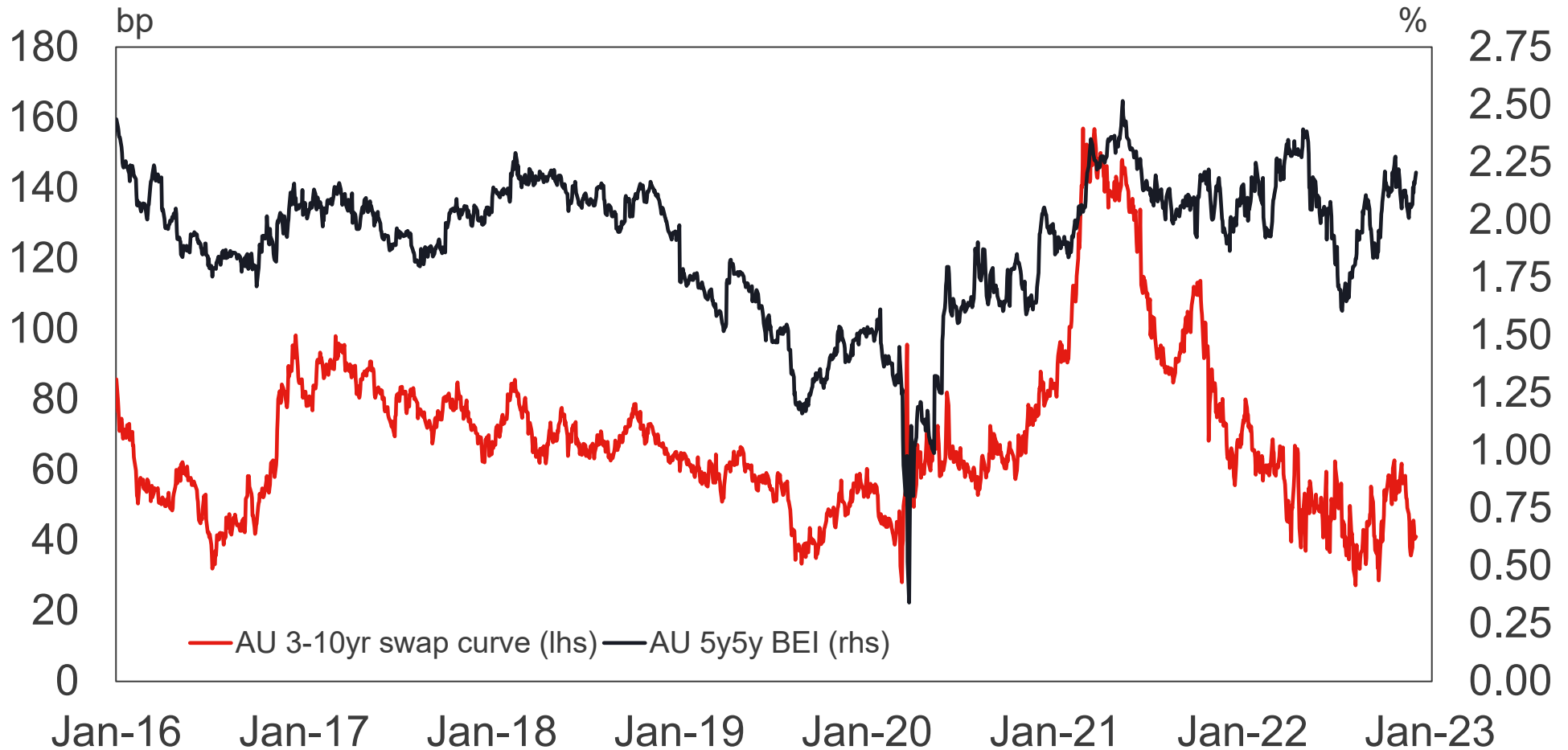


Source: Bloomberg; Westpac

# Inflation expectations remain well anchored ...

... Which will remain supportive of flatter curves.

3-10yr swap curve vs 5y5y BEI

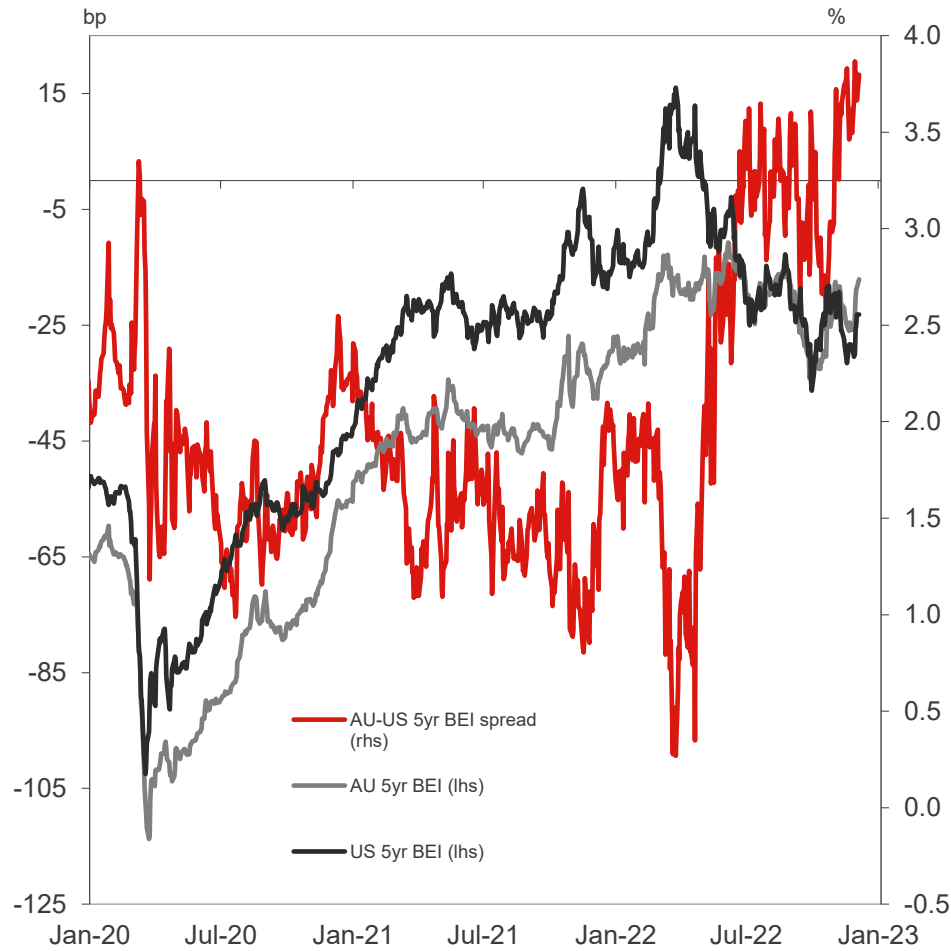


Source: Bloomberg, Westpac Strategy Group



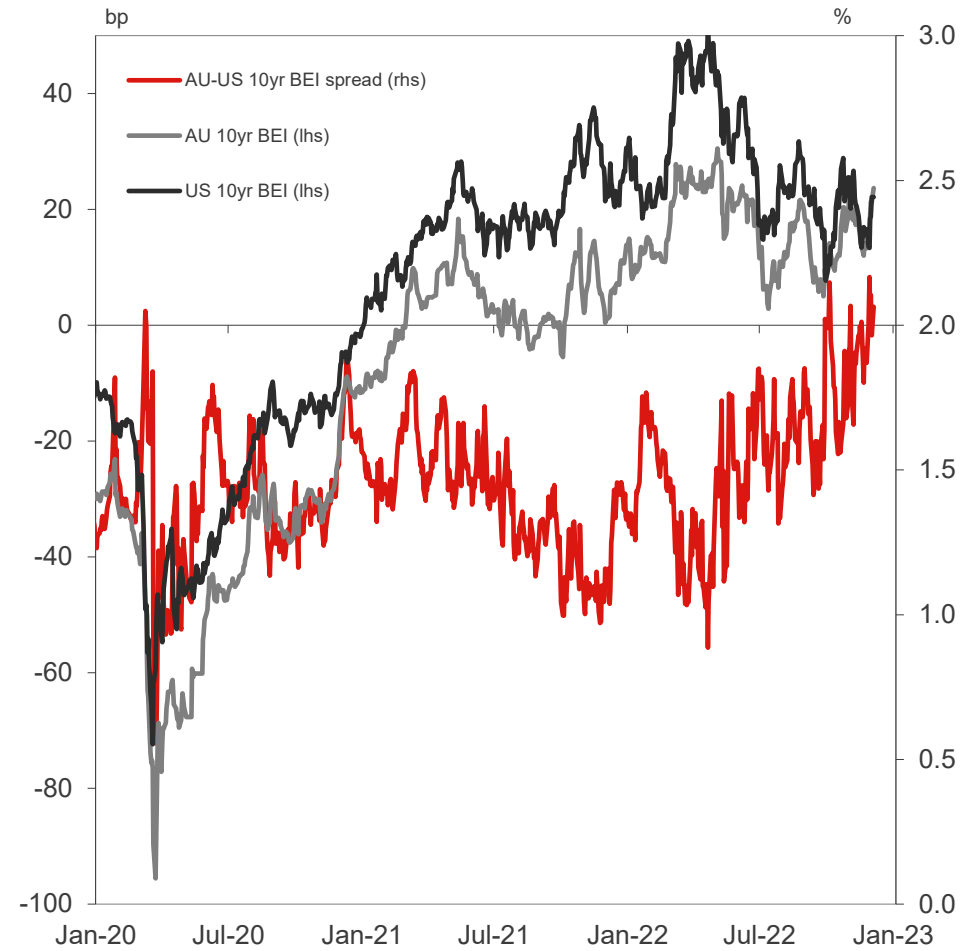
# .. But can AU BEIs move significantly above the US?

## AU & US 5yr BEI and spreads



Source: Bloomberg; Westpac

## AU & US 10yr BEI and spreads

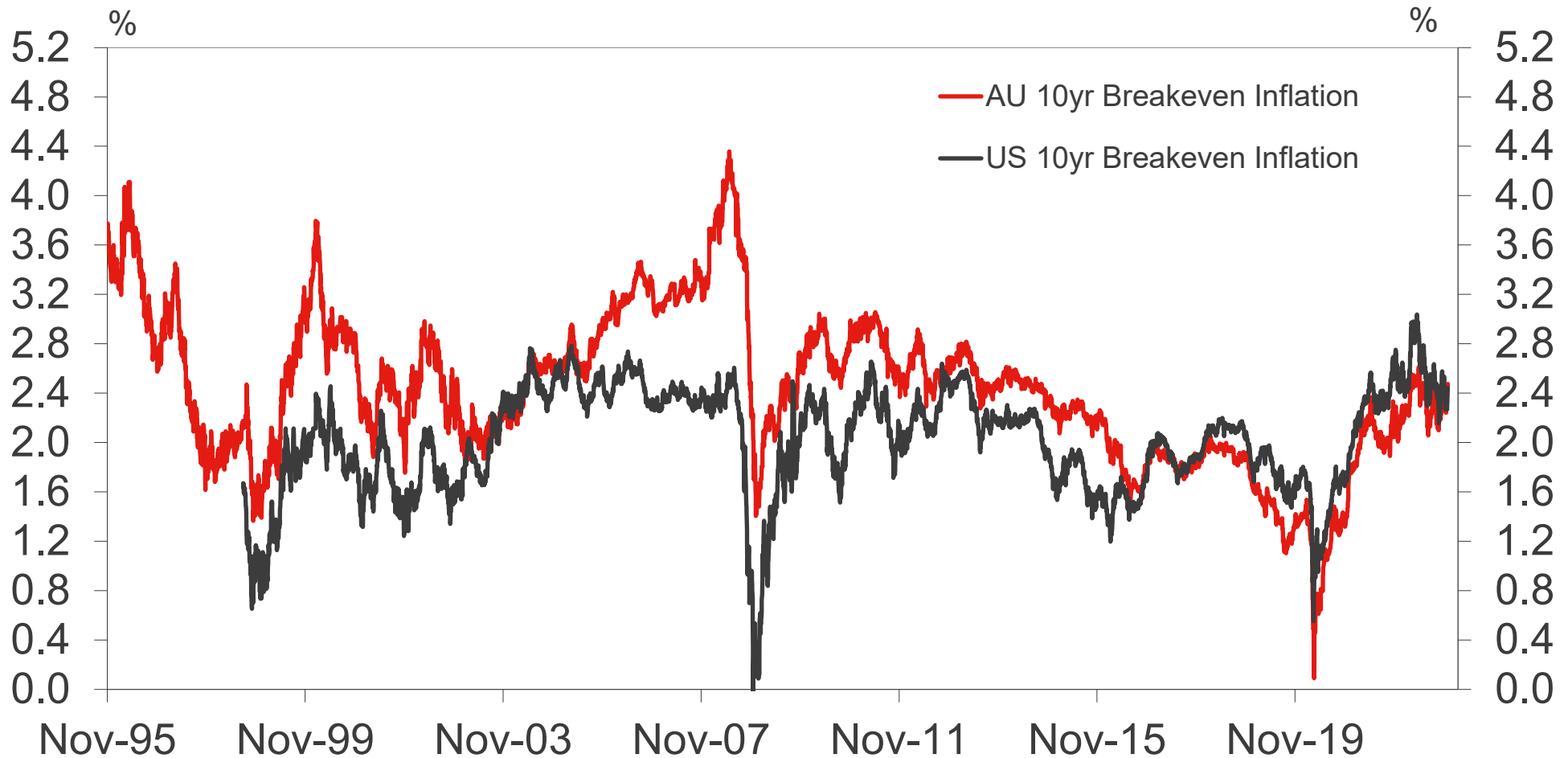


Source: Bloomberg; Westpac



# AU traded inflation expectations remain contained...

## AU 10yr BEI vs US 10yr BEI

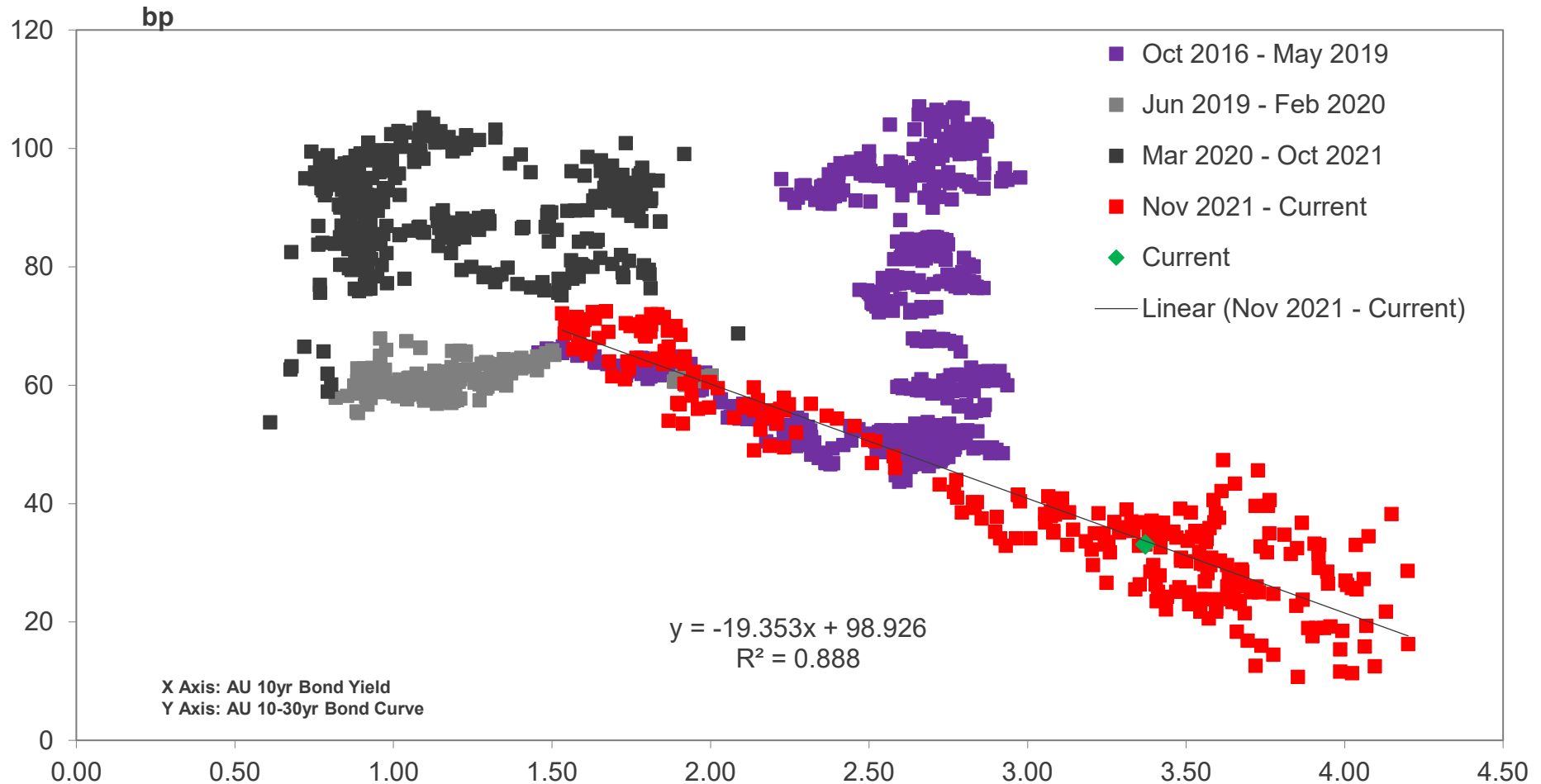


Source: Bloomberg, Westpac



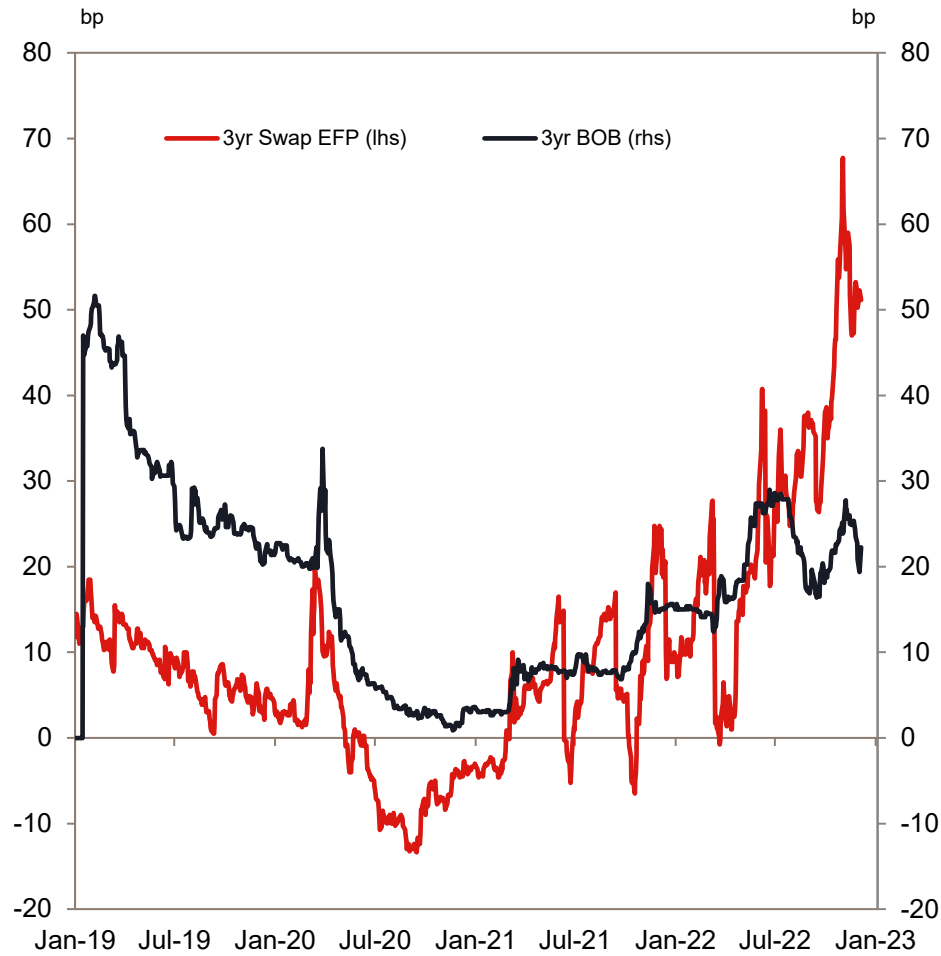
# AU 10-30yr bond curve correctly priced relative to outright level

Relationship between 10-30yr curve & 10yr bond yield



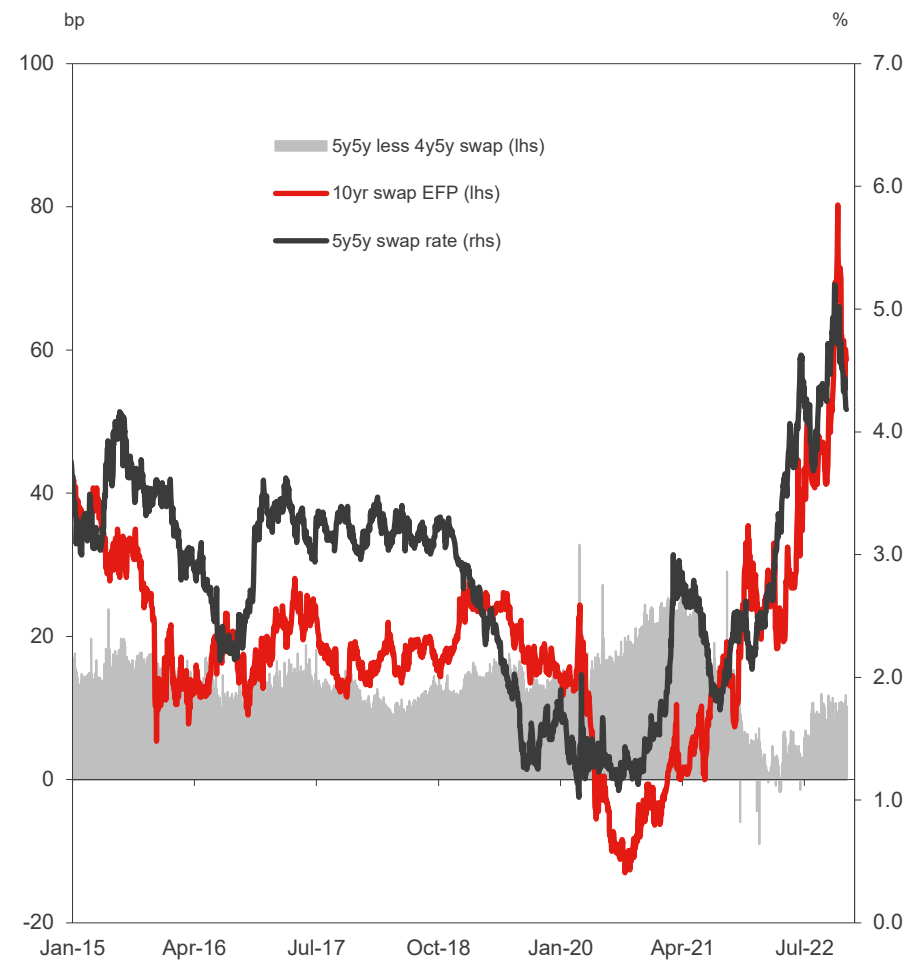
# Have we seen the peak in AU swap spreads?

## 3yr EFP versus BOB



Source: Bloomberg; Westpac

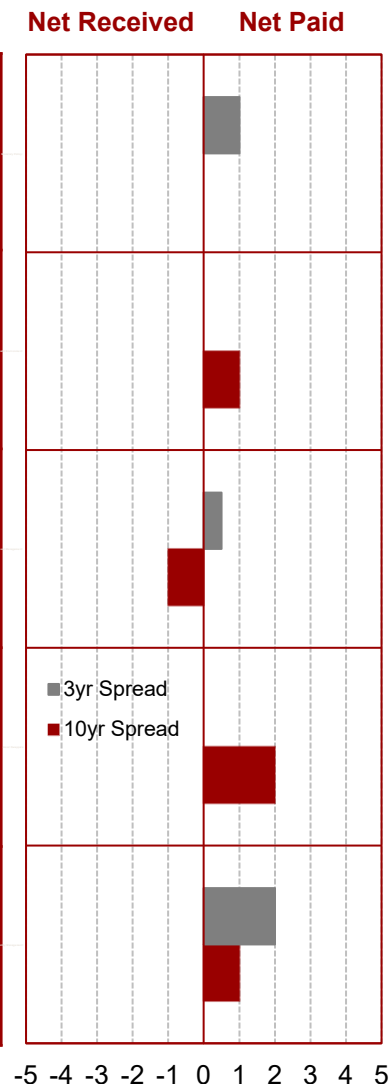
## 10yr swap spread vs 5y5y



Source: Bloomberg; Westpac

# Swap Spread Checklist – Part 1

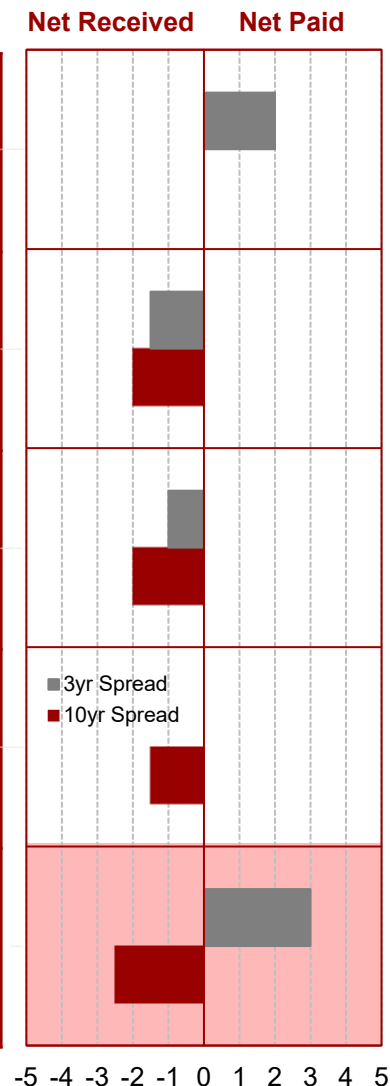
<b>Monetary Policy:</b>	<ul style="list-style-type: none"> <li>We expect the RBA to deliver 100bp more tightening before it pauses for an extended period.</li> <li>However the risks in our view is that they will move into “tweak” mode as they have in previous cycles when they had their cash target someone near an equilibrium level.</li> <li>That will underwrite a “higher for longer” expectation and bias swap spreads wider, everything else equal.</li> </ul> <p style="text-align: right;"><b>Spread Impact: Wider</b></p>
<b>Global Credit Environment:</b>	<ul style="list-style-type: none"> <li>Global credit spreads have narrowed significantly over the past couple of months, suggesting that we are through the worst of credit cycle. Whether that is true or not will likely come down to central bank and other policymaker’s ability to manufacture a soft-landing in 2023. So we are not fully out of the woods just yet.</li> <li>While, given post-GFC reforms, the historical link between credit spreads and swap spreads is not as strong as it once was, elevated credit concerns, even if they have declined somewhat are still unlikely to supportive of narrower swap spreads.</li> <li>Indeed, historically, rather than selling down physical paper, investor have chosen to pay swap as a hedge. That could increase toward the end of the cycle to head tail risks.</li> </ul> <p style="text-align: right;"><b>Spread impact: Wider</b></p>
<b>Bank Balance Sheet Management:</b>	<ul style="list-style-type: none"> <li>Household savings, and therefore deposits, remain strong, which suggests that there will be a natural offset to the increased mortgage paying ahead of the RBA tightening cycle (refer below).</li> <li>Deposit growth will also limit the need for other funding sources, but the market is increasingly focused on swap related activity that could arise from smoothing of funding needs around Term Funding Facility (TFF) maturities.</li> <li>Hedging of AUD senior unsecured fixed rate paper, which has potential to increase, is a potential receive side flow.</li> </ul> <p style="text-align: right;"><b>Spread Impact: Narrower</b></p>
<b>Asset Swappers</b>	<ul style="list-style-type: none"> <li>Payside flows emanating from asset swapping of longer bonds, largely from bank accrual books and by other investors for RV purposes, has been a major driver of the surge wider in swap spreads over recent months.</li> <li>There is clearly a tactical aspect to this flow. That is, as swap spreads have been narrowing recently asset swappers have been more likely to delay the payside of the transaction in the hope of better future levels.</li> <li>From an ADI perspective this is an ongoing structural flow.</li> </ul> <p style="text-align: right;"><b>Spread Impact: Wider</b></p>
<b>Corporate Liability Management:</b>	<ul style="list-style-type: none"> <li>The RBA tightening has seen ongoing significant payside from this sector, who had been historically under hedged in recent years for sensible reasons. The first RBA cycle in a decade changed the equation.</li> <li>So, will there be an ongoing “supply” of payside from this sector. In our view, the greater amount of discretionary hedging has likely been undertaken. However that does not imply that there will be no participation from this sector going forward.</li> <li>We expect that bond market rallies will continue to be paid into, shorter hedges to get over the “hump” of the tightening are likely to remain popular and a significantly flatter curve could evokesome “blend and extend” payside as well.</li> </ul> <p style="text-align: right;"><b>Spread Impact: Wider</b></p>



# A “0” means “Receive-side” and “Pay-side” influences net out.

# Swap Spread Checklist – Part 2

<b>Household Mortgage Management:</b>	<ul style="list-style-type: none"> <li>Households were well prepared for the RBA tightening cycle, taking advantage of the historically low fixed rates available at the peak of the pandemic-related unconventional monetary policy settings.</li> <li>Most of these “pre-emptive” fixed rate mortgages will mature in the next 6 months or so. The big question is what this sector will do at that time. Will they elect to pay variable rates or will the “pain” of the surge in their monthly costs encourage another wave of fixed rate mortgages on the fear that rates could go even higher? That is what happened at the top of previous RBA hike cycles. The jump up to fixed rates would probably limit this, however should they drop below variable then a move of this kind is likely.</li> </ul> <p><b>Spread Impact: Wider</b></p>
<b>Speculative Flow:</b>	<ul style="list-style-type: none"> <li>After many months of very few receive-side flows, there has been some renewed interest over the last few weeks. That is providing hope that some of the disenchantment with the RBA from its YCC exist and recent communication strategy which has impacted liquidity might be closer to being resolved.</li> <li>That has manifested itself in narrow basis spreads across the term structure and product space.</li> <li>Should the RBA pause its cycle and the market's enter a range trading environment we would expect flows from this cohort to increase.</li> </ul> <p><b>Spread Impact: Narrower</b></p>
<b>Swap Relative Value:</b>	<ul style="list-style-type: none"> <li>As mentioned above, basis spreads have narrowed (e.g. 3m BBSW is flat to OIS) and 1y1y has fallen significantly in recent weeks, taking away some of the carry opportunities that were available not so long ago.</li> <li>Even so, there are some attractive opportunities in cross market swap spread space, including a relatively wide AU-US 5y5y cross market narrowing opportunity.</li> </ul> <p><b>Spread Impact: Narrower</b></p>
<b>ACGB Bond Issuance &amp; “Free Float”</b>	<ul style="list-style-type: none"> <li>The Commonwealth budget is benefitting from the windfalls arising out of historically high commodity prices relative to conservative budget forecasts. That delivered a \$30+ billion benefit last year and is on track to deliver a similar windfall this year. The resulting improved deficit position will reduce bond issuance, however the ALP government's first budget still projected significant future issuance.</li> <li>That is a narrowing influence medium term. That is offset near term by the distortion at the front end of the curve caused by the RBA's majority ownership of the YCC bonds and high ownership of QE bonds.</li> </ul> <p><b>Spread Impact: Neutral / Narrower</b></p>
<b>Summary:</b>	<p>As the RBA continues to move further into its tightening cycle so the balance of risks for swap spreads has shifted significantly, and now we are favouring further narrowing at the long end of the spread curve. That reflects the balance of risks, although we acknowledge that this is a very subjective process and it would be rare for either end of the swap curve to shift in different directions for any length of time.</p>

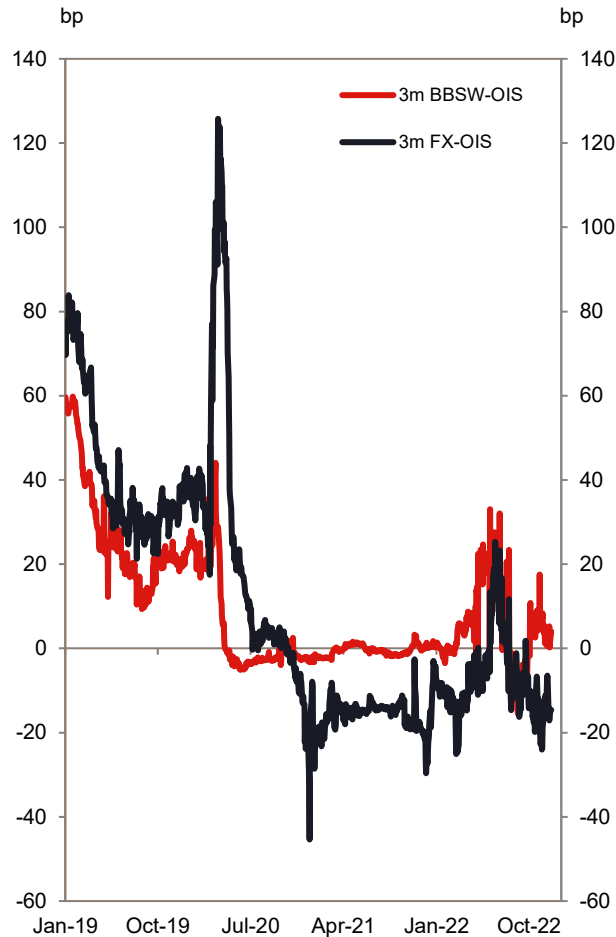


# A “0” means “Receive-side” and “Pay-side” influences net out.

# Will 3m BBSW-OIS move inverse?

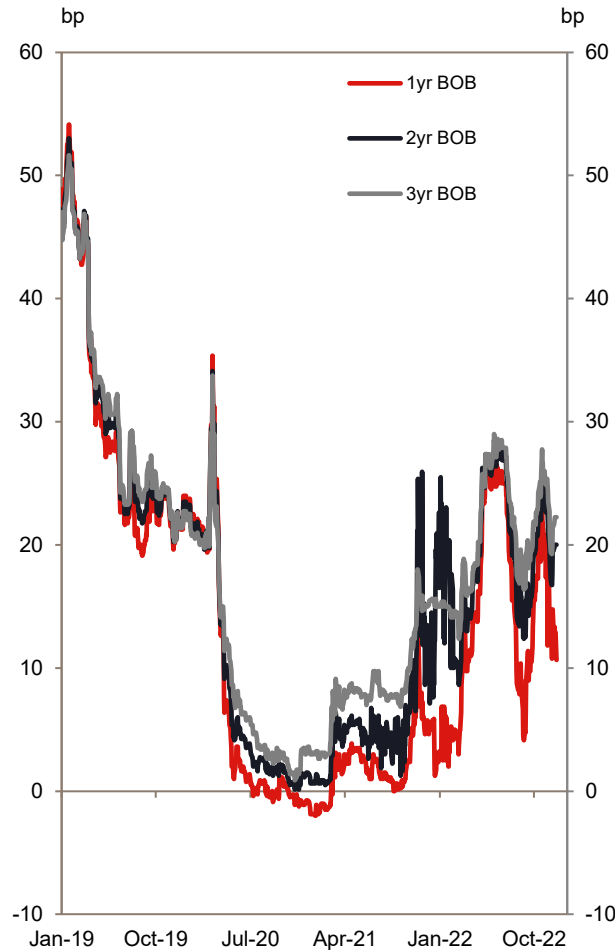
It is flat and as year end approaches we would expect spreads to continue to perform.

## Spot 3m Funding Spreads



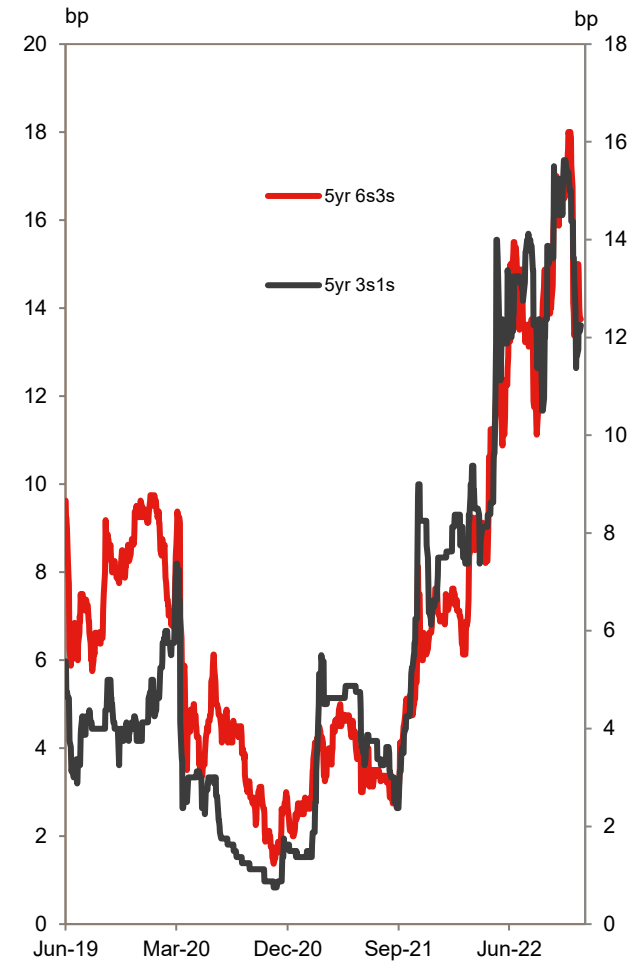
Source: Bloomberg; Westpac

## BOB Spread evolution



Source: Bloomberg; Westpac

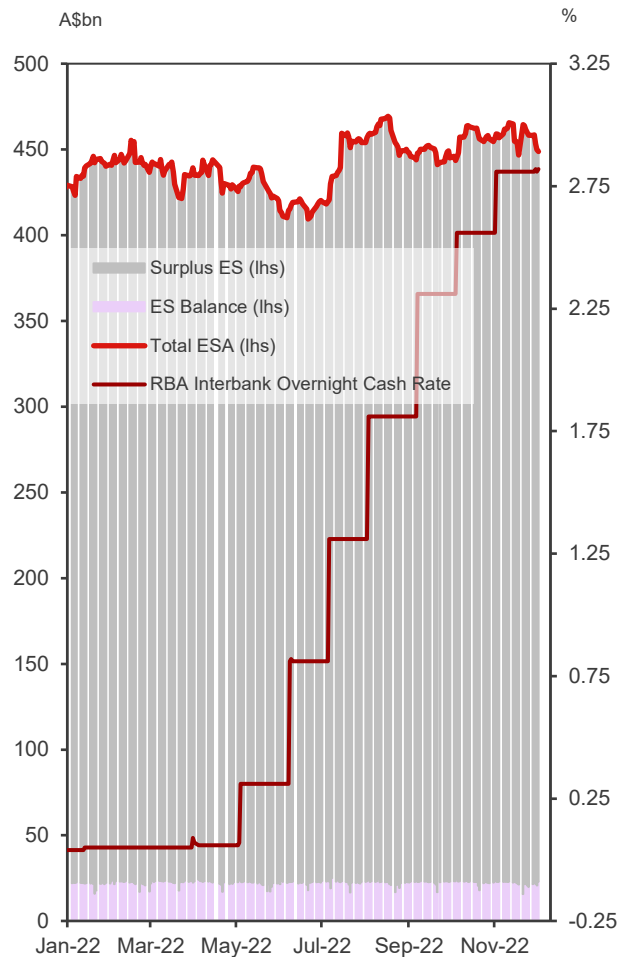
## 5yr Tenor Basis



Source: Bloomberg; Westpac

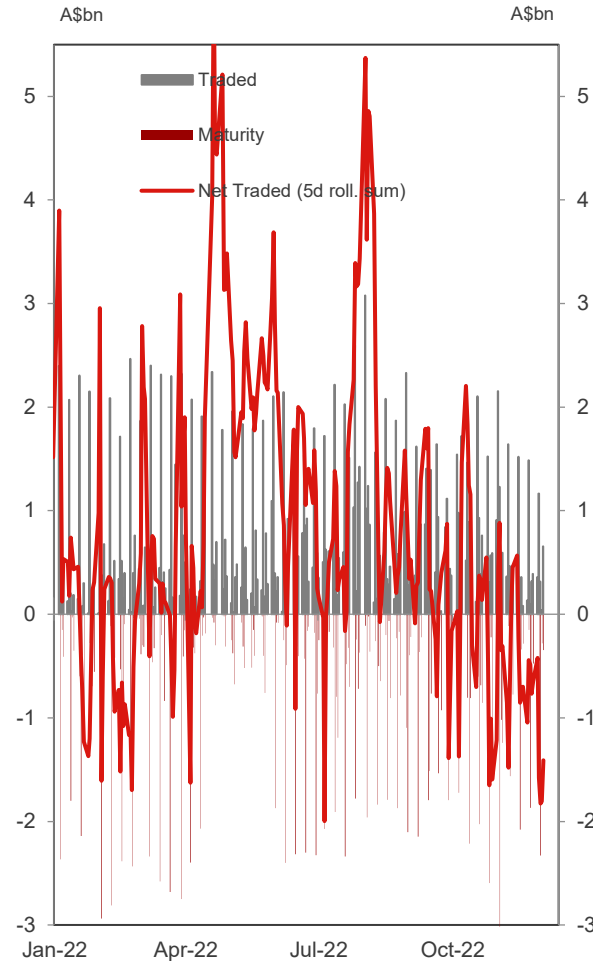
# Excess liquidity will remain for many months.

## ESA Balances vs Cash rate



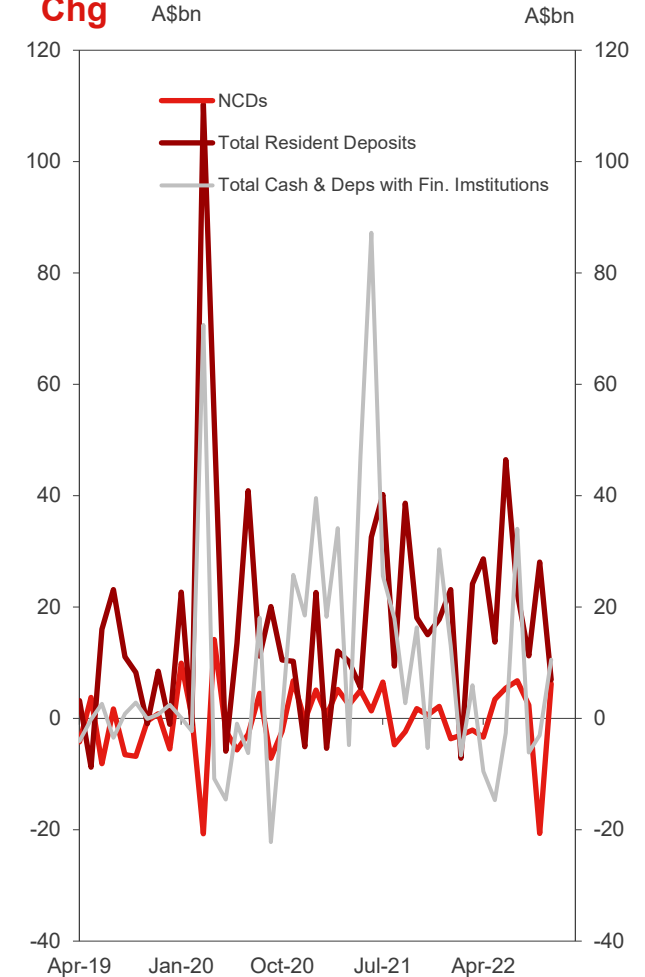
Source: Bloomberg; Westpac

## Net Trades behind 3m BBSW



Source: Bloomberg; Westpac

## ADI NCD issuance volumes – Month Chg



Source: Bloomberg; Westpac



# How has 2022 corporate payside evolved?

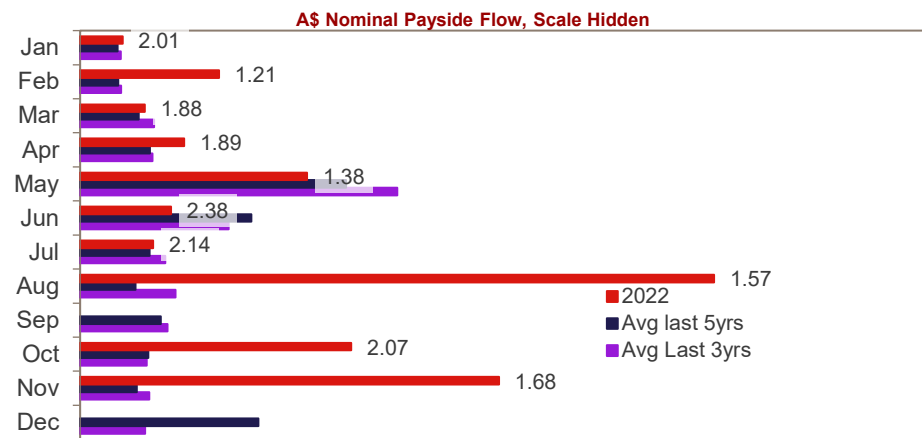


Source: Bloomberg; Westpac

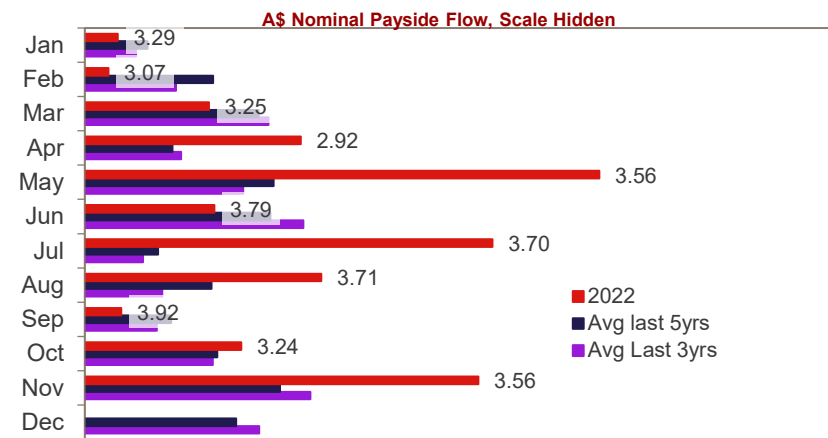
# Corporate payside flows breakdown

## Nominal flows by maturity

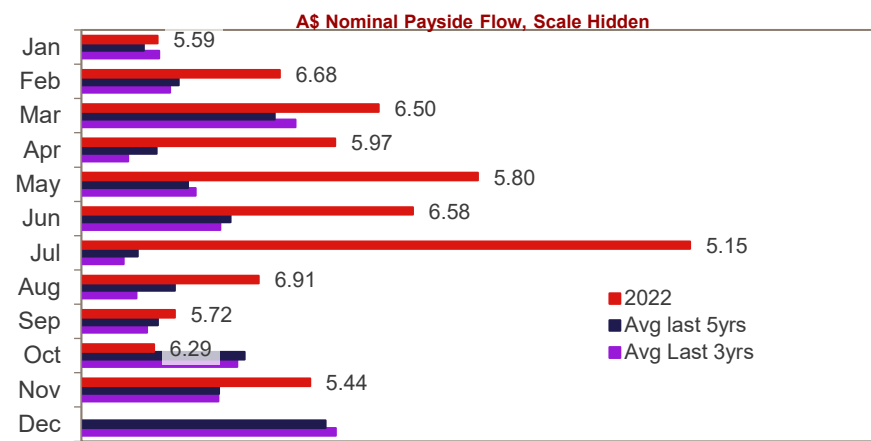
<2yr\*



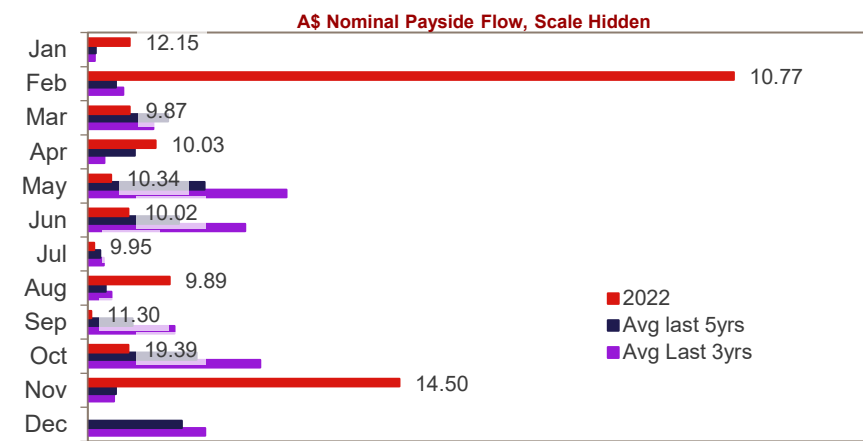
2-5yr\*



5-10yr\*



>10yr\*



Source: Westpac

\*Data labels reflect the 2022 weighted average maturity for each month

# Projected Gross Issuance & Outstandings

## Commonwealth & Semi-Government Programmes

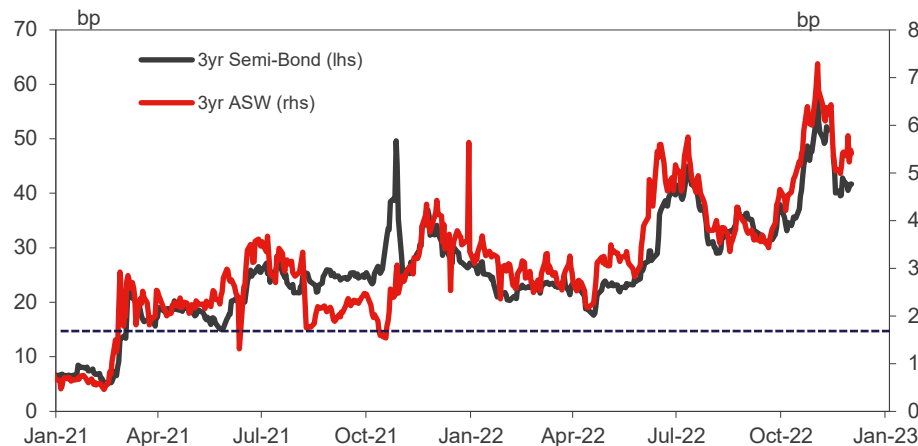
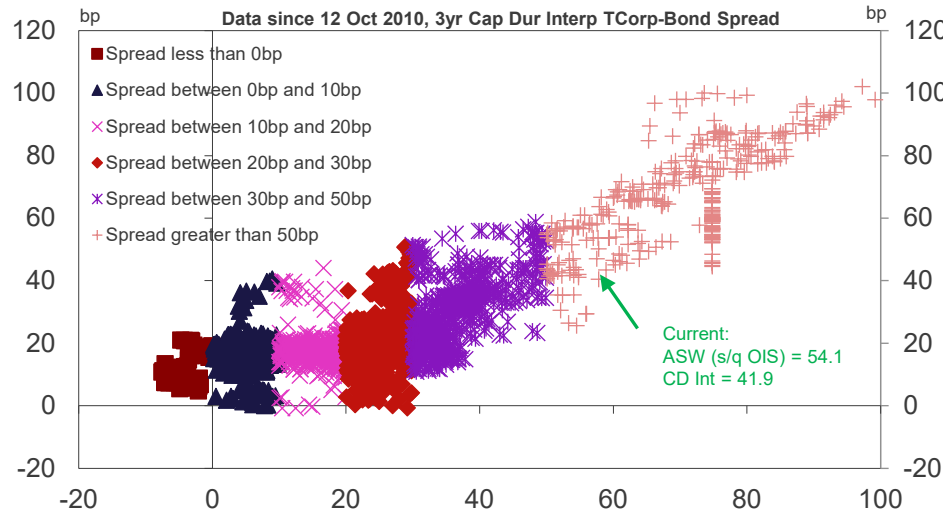
### AGS & Semi Gross Borrowing Task & Projected Outstandings

A\$bn	FY23		FY24		FY25		FY26		
	Gross Issuance	Total FV end FY23	Gross Issuance	Total FV end FY24	Gross Issuance	Total FV end FY25	Gross Issuance	Total FV, end FY26	Gross Issuance
	BGT 2023		BGT 2023		BGT 2023		BGT 2023		4yr Total
AGS	97.5	965	113	1078	168	1246	152	1398	530.5
NSW	24.0	137.6	30.4	168.0	28.4	196.4	31.1	227.5	113.9
TCV	15.7	129.0	32.1	161.1	29.5	190.6	25.0	225.6	112.3
QTC	14.4	132.0	18.5	150.5	17.7	168.2	18.4	186.6	69.0
WAT	5.1	52.1	6.9	59.0	7.4	66.4	7.6	74.0	27.0
SAF	6.6	34.6	6.2	40.8	5.9	46.7	5.1	51.8	23.8
TAS	2.25	9.5	2.6	12.1	1.5	13.6	2.0	15.6	8.35
ACT	2.0	9.2	2.2	11.4	2.0	13.4	1.5	14.9	7.7
NTT	1.5	9.8	1.4	11.2	1.0	12.2	0.8	13.0	4.7
Total Semi	71.6	513.8	100.3	614.1	93.4	707.5	91.5	809.0	367

Source: State Borrowing Authorities; State Budget Papers; Amounts in red have been announced by the borrower; Amounts in black are Westpac calculations.

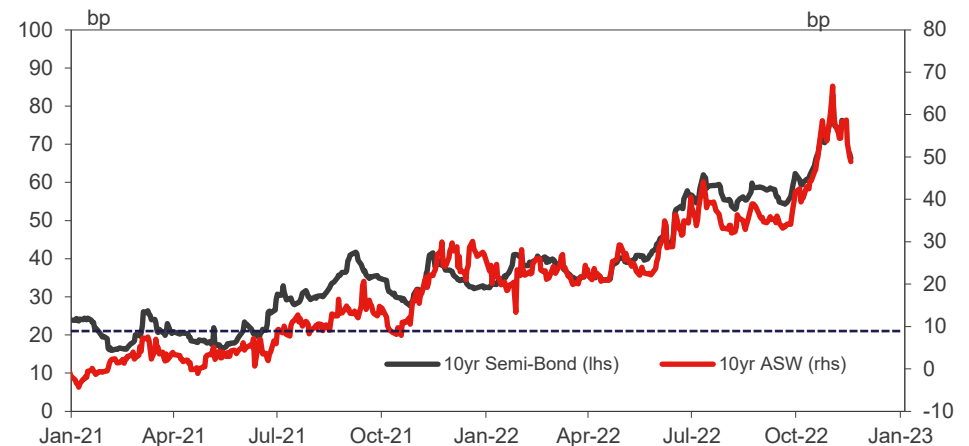
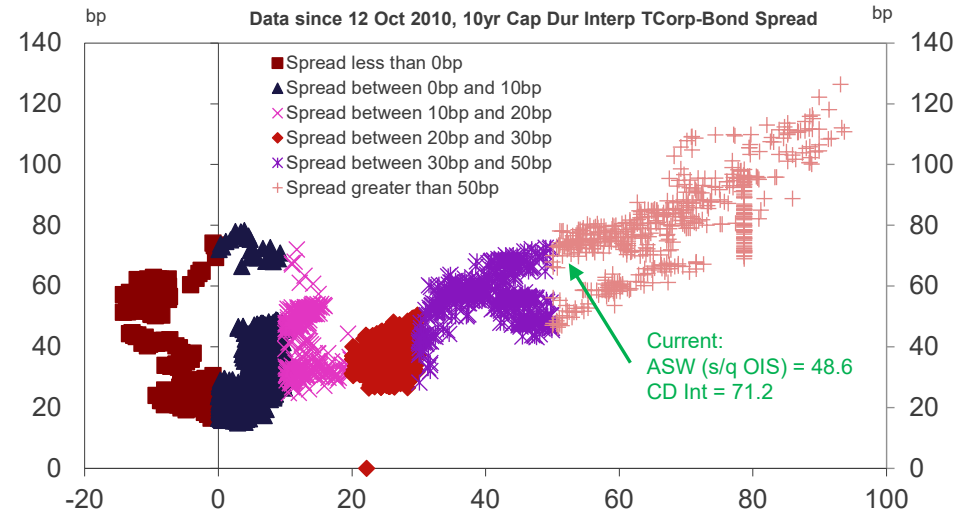
# Semi-Bond relationship with Swap-Bond spread

## 3yr Semi-Bond vs Swap Spreads



Source: Bloomberg, Westpac

## 10yr Semi-Bond vs Swap Spreads

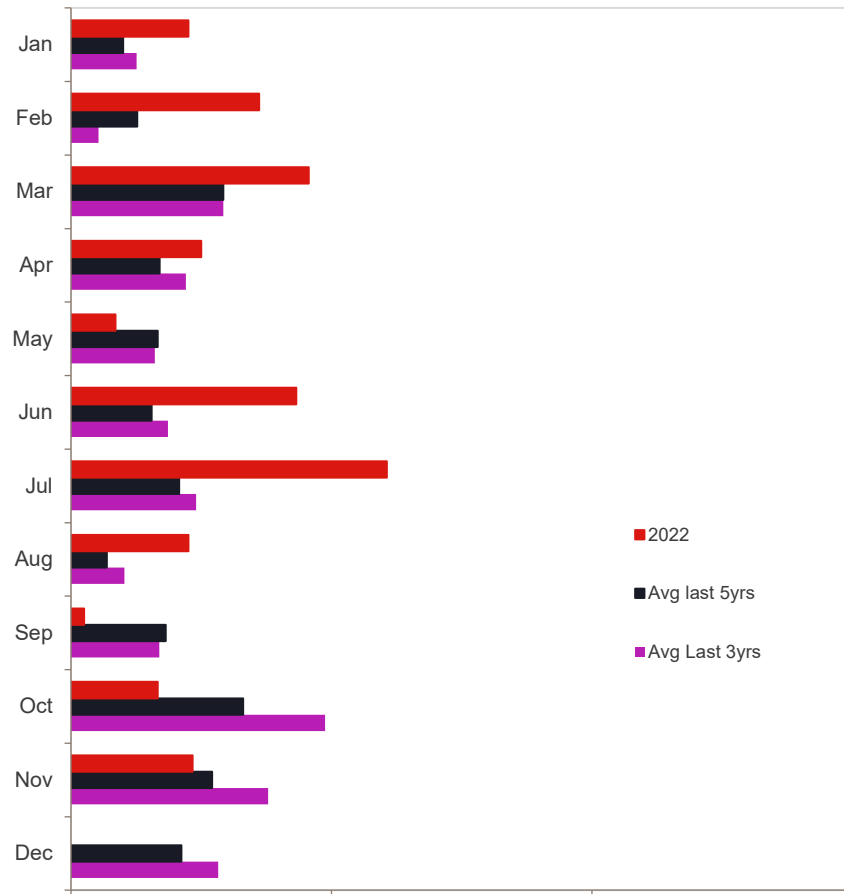


Source: Bloomberg, Westpac

# WBC flows shows surge HQLA purchases slowing

## WBC Flows: ADI Nominal gross ACGB Purchases

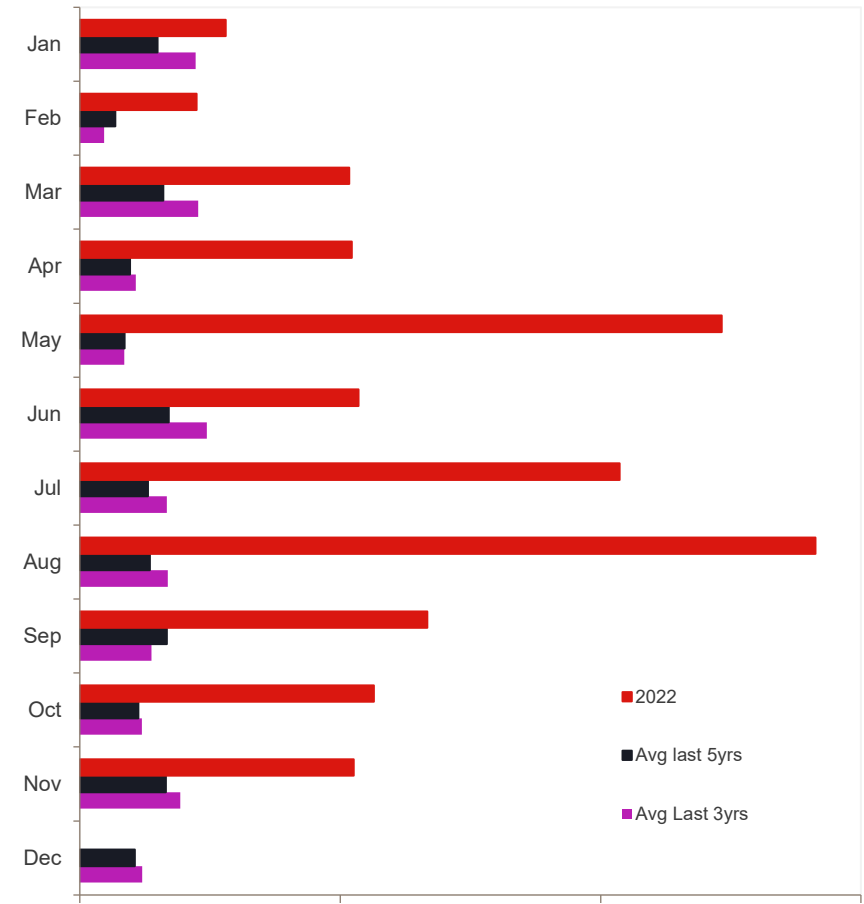
A\$ Nominal Buyside Flow, Scale Hidden\*



Source: Westpac

## WBC Flows: ADI Nominal Gross Semi Purchases

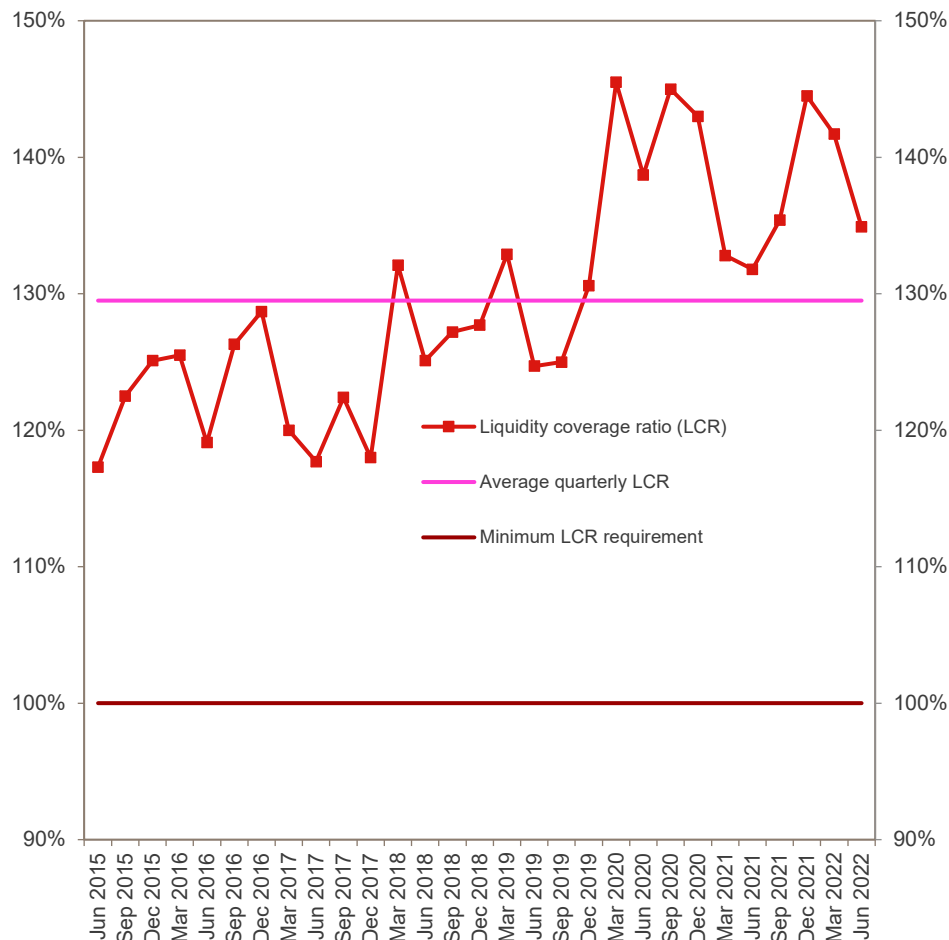
A\$ Nominal Buyside Flow, Scale Hidden\*



\* Horizontal value scales are the same for both charts. Therefore they are directly comparable.

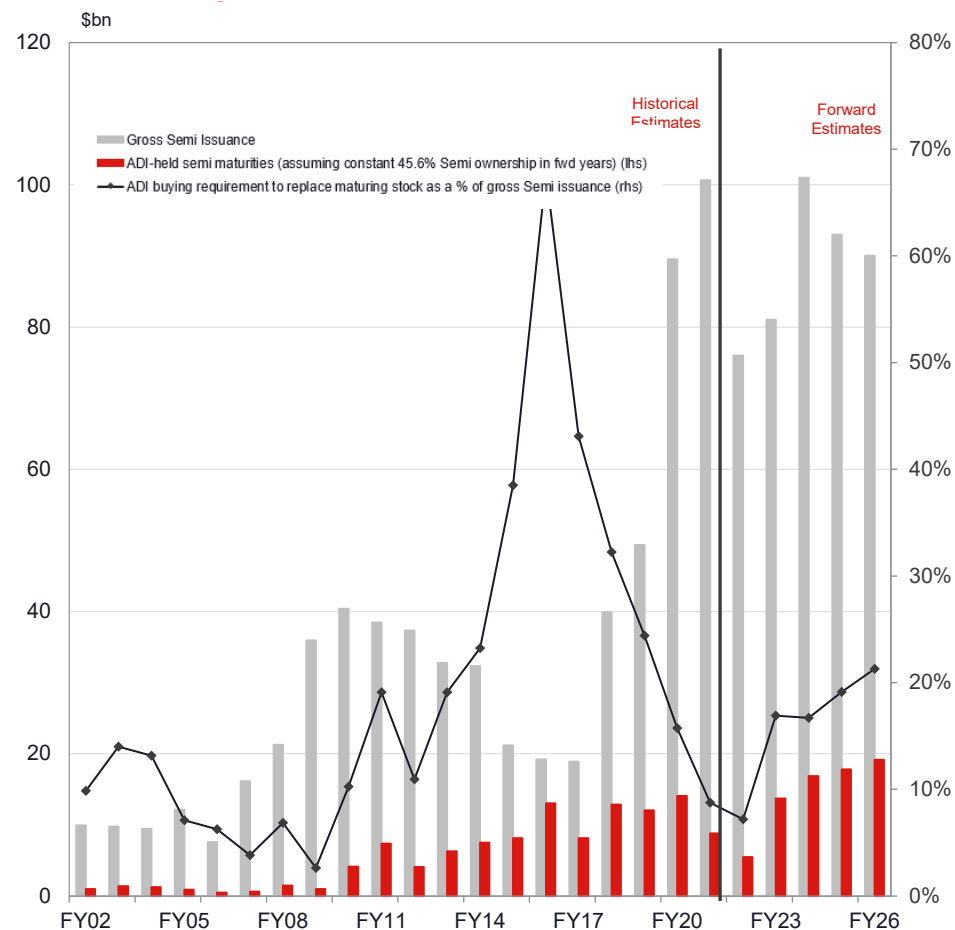
# HQLA demand remains a key focus

## The average qtrly LCR “buffer” has been 129%



Source: State Borrowing Tasks; APRA, Westpac

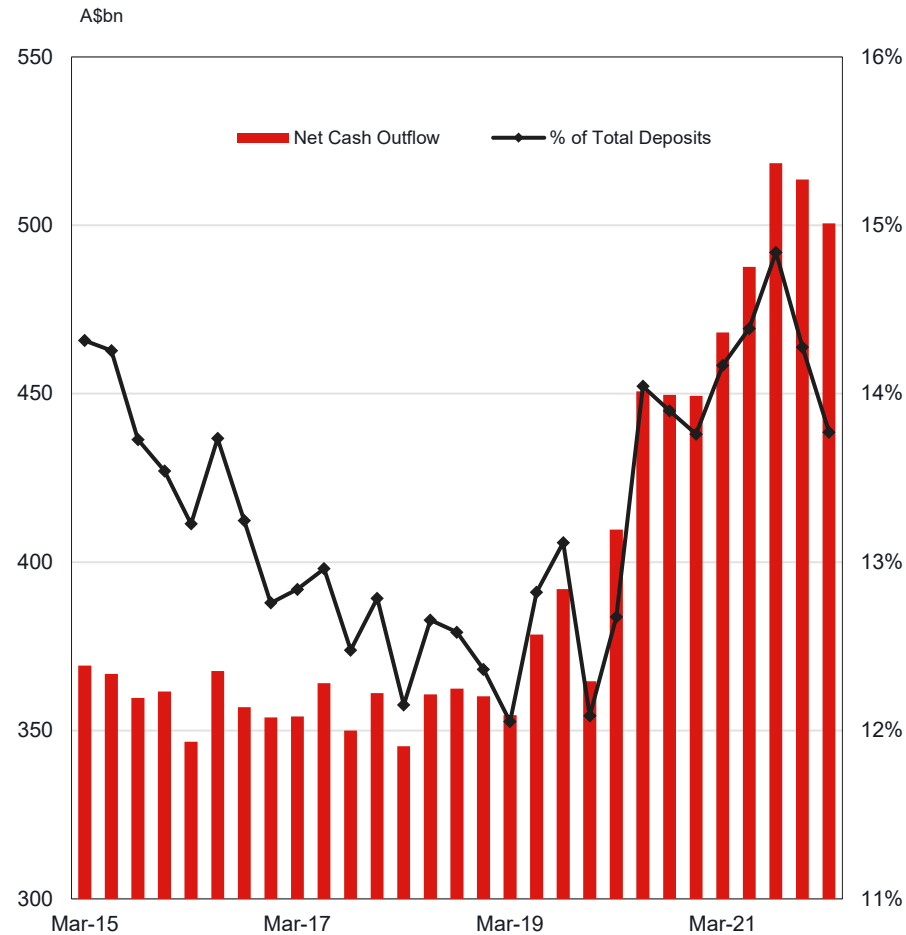
## What do ADIs need to buy to replace HQLA



Source: State Borrowing Tasks; APRA, Westpac

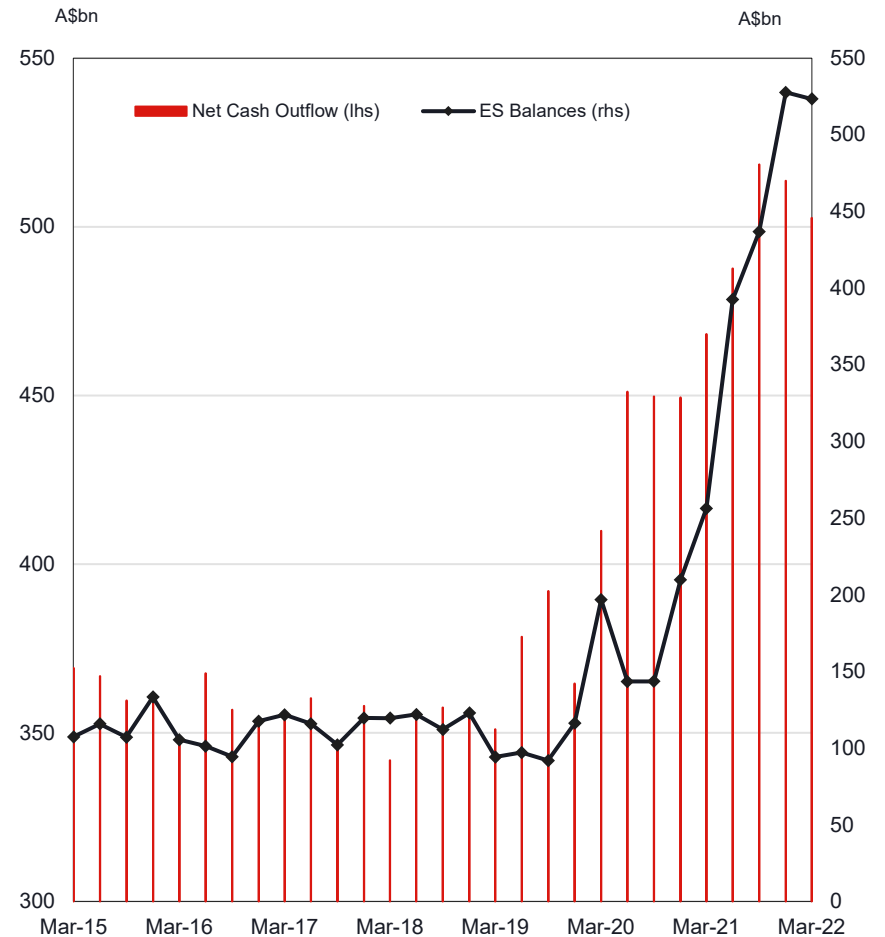
# HQLA demand remains a key focus

## NCO Growth as a % of Total System Deposits



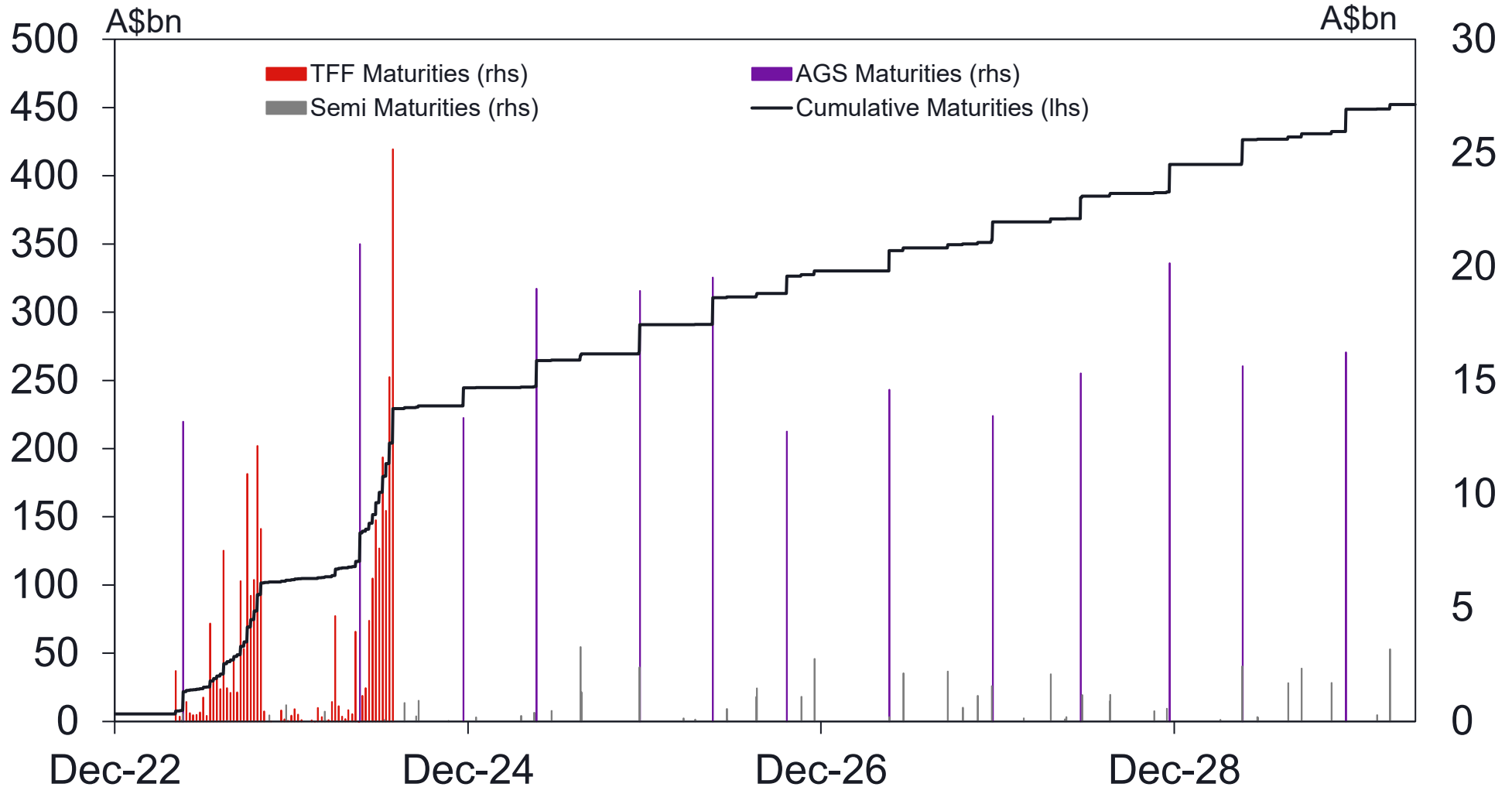
Source: APRA; Westpac:

## NCO Growth vs ES Balances



Source: APRA; Westpac:

# RBA Balance Sheet Run-Off

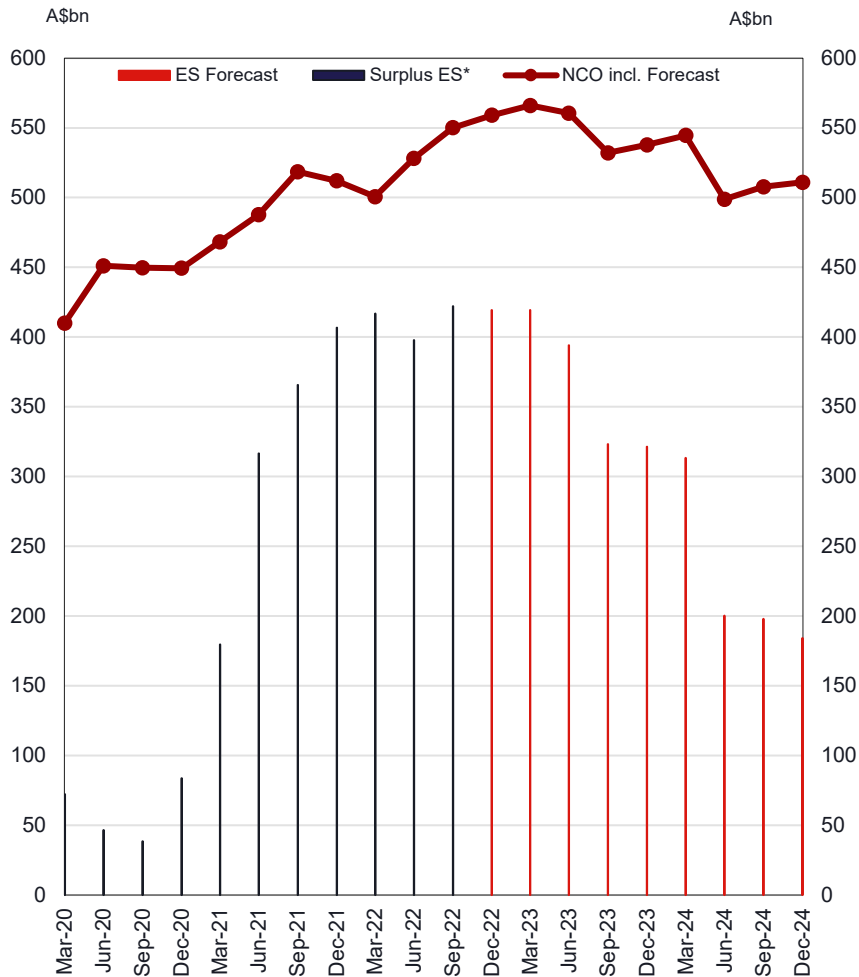


Source: RBA, Bloomberg, Westpac Strategy Group



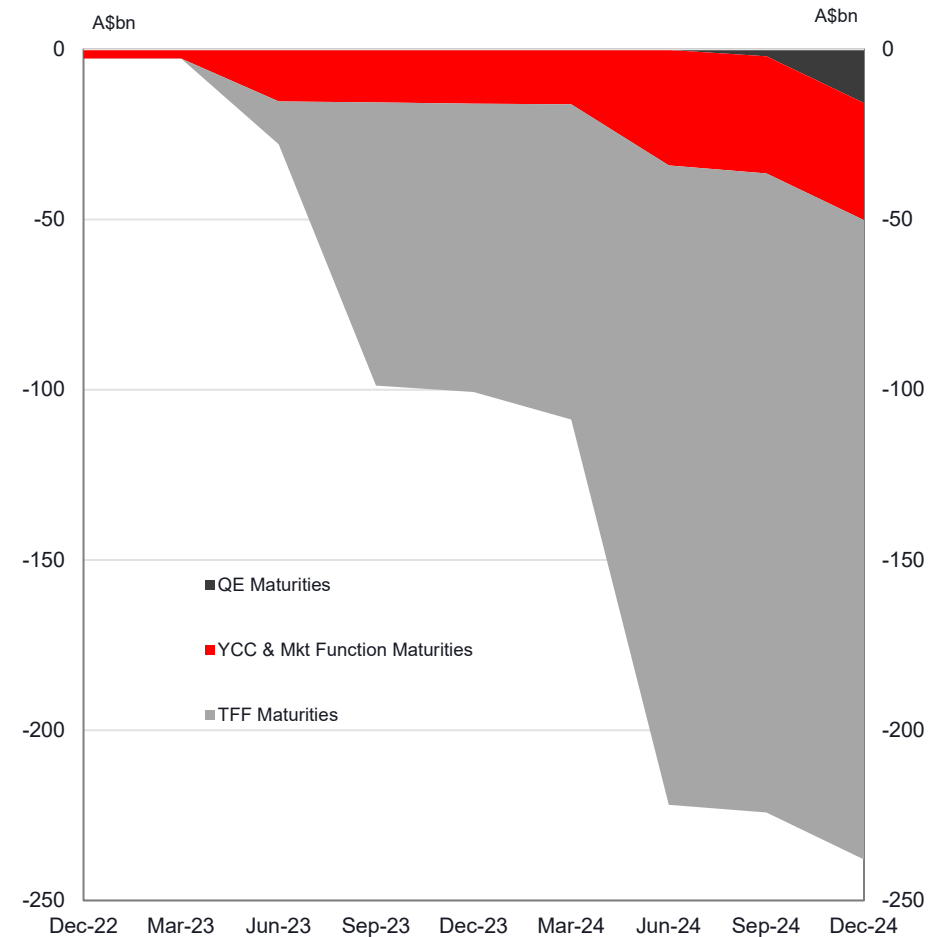
# LCR - Relationship b/w NCOs & ES Balance is key

## NCO Growth vs ES Balance Forecast



Source: APRA; Westpac:

## ES Rundown – Forecast Breakdown



Source: APRA; Westpac:

\*Data from RBA Balance Sheet

# Stylised ADI Demand Evolution

	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24
<b>Net Cash Outflow (NCO, \$)</b>	<b>512</b>	<b>501</b>	<b>528</b>	<b>550</b>	<b>559</b>	<b>566</b>	<b>560</b>	<b>532</b>	<b>538</b>	<b>545</b>	<b>499</b>	<b>508</b>	<b>511</b>
NCO Change / ES Change Qtr (%)				50	50	50	50	50	50	50	50	50	50
NCO Change due to ES Change Qtr (\$)				12	-1	0	-13	-35	-1	-4	-57	-1	-7
Annual Balance Sheet Growth (%)				8	8	5	5	5	5	8	8	8	8
NCO Change due to Bal. Sheet growth Qtr (\$)				10	10	7	7	7	7	11	11	10	10
NCO Change per Qtr (%)				4	2	1	-1	-5	1	1	-8	2	1
Total NCO Change per Qtr (\$)				22	9	7	-6	-28	6	7	-46	9	3
Buffer above 100% LCR (%)	45	42	35	38	35	34	33	32	31	30	30	30	30
Buffer above 100% LCR (\$)	230	212	184	209	196	192	185	170	167	163	150	152	153
Buffer Change per Qtr (\$)		-19	-28	25	-13	-3	-7	-15	-4	-3	-14	3	1
LCR incl. Buffer (\$)	742	712	712	759	755	758	745	702	705	708	648	660	664
LCR incl. Buffer change per Qtr (\$)			0	47	-4	4	-13	-43	2	3	-59	11	4
<b>LCR incl. Buffer consisting of (\$)</b>													
<b>CLF Holdings</b>	102	98	65	25	0								
- Decline per Qtr (%)		0	0	61	100								
- % of LCR incl. Buffer	14	14	9	3	0								
- Total change per Qtr (\$)		-4	-32	-40	-25								
<b>HQLA holdings</b>	<b>648</b>	<b>615</b>	<b>647</b>	<b>734</b>	<b>755</b>	<b>758</b>	<b>745</b>	<b>702</b>	<b>705</b>	<b>708</b>	<b>648</b>	<b>660</b>	<b>664</b>
- % of LCR incl. Buffer	87	86	91	97	100	100	100	100	100	100	100	100	100
- Total change per Qtr (\$)		-33	32	87	21	4	-13	-43	2	3	-59	11	4
<b>Of which:</b>													
<b>- ES (\$)</b>	<b>407</b>	<b>417</b>	<b>398</b>	<b>422</b>	<b>419</b>	<b>419</b>	<b>394</b>	<b>323</b>	<b>321</b>	<b>313</b>	<b>200</b>	<b>198</b>	<b>184</b>
- ES (% of LCR incl. Buffer)	55	59	56	56	56	55	53	46	46	44	31	30	28
- ES (% of HQLA)	63	68	62	58	56	55	53	46	46	44	31	30	28
<b>- ACGBs (\$)</b>	<b>64</b>	<b>63</b>	<b>72</b>	<b>87</b>	<b>106</b>	<b>106</b>	<b>112</b>	<b>119</b>	<b>120</b>	<b>124</b>	<b>139</b>	<b>145</b>	<b>149</b>
- ACGBs (% of LCR incl. Buffer)	9	9	10	12	14	14	15	17	17	18	22	22	23
- ACGBs (% of HQLA)	10	10	11	12	14	14	15	17	17	18	22	22	23
<b>- SEMIs (\$)</b>	<b>177</b>	<b>168</b>	<b>196</b>	<b>224</b>	<b>230</b>	<b>233</b>	<b>240</b>	<b>260</b>	<b>263</b>	<b>271</b>	<b>309</b>	<b>317</b>	<b>331</b>
- SEMIs (% of LCR incl. Buffer)	24	24	25	30	30	31	32	37	37	38	48	48	50
- SEMIs (% of HQLA)	27	27	30	31	30	31	32	37	37	38	48	48	50
- SEMI / ACGB Ratio	2.75	2.68	2.72	2.57	2.17	2.19	2.14	2.18	2.20	2.19	2.22	2.18	2.21

Source: APRA; Westpac

# Stylised ADI Demand Evolution

There are many possible variables that enter the calculation of the LCR, with each component crucial to the mix of outcomes that will drive future ADI demand for HQLA securities. To provide a high level example of how this demand could evolve below we outline a stylised evolution of potential ADI demand for semis under a number of assumptions.

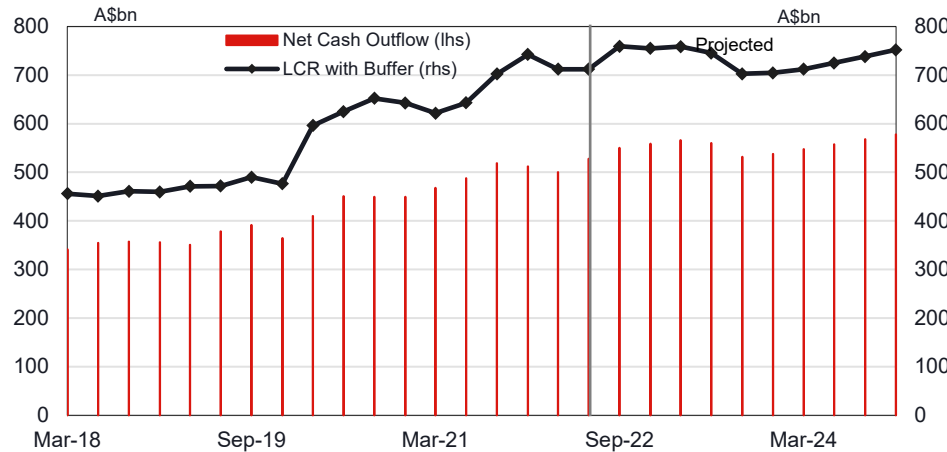
The table shows semi demand rising throughout the period, from 26% of the total HQLA portfolio as of 31 March 2021 to 38% by December 2023. That corresponds with an increase in Semi holdings from \$177bn to \$244bn over the period. We project ACGB demand to increase too, rising from 10% of HQLA holdings to 17% by the end of our projection period. As is well known, the main driver of the shifting mix will be the decline in surplus ES balances, which is most influential in 3Q2023, and our view that NCOs have peaked. The charts on the page over provide a visual on the main shifts in this “forecast” over the projection period.

In undertaking this process, we made the following assumptions:

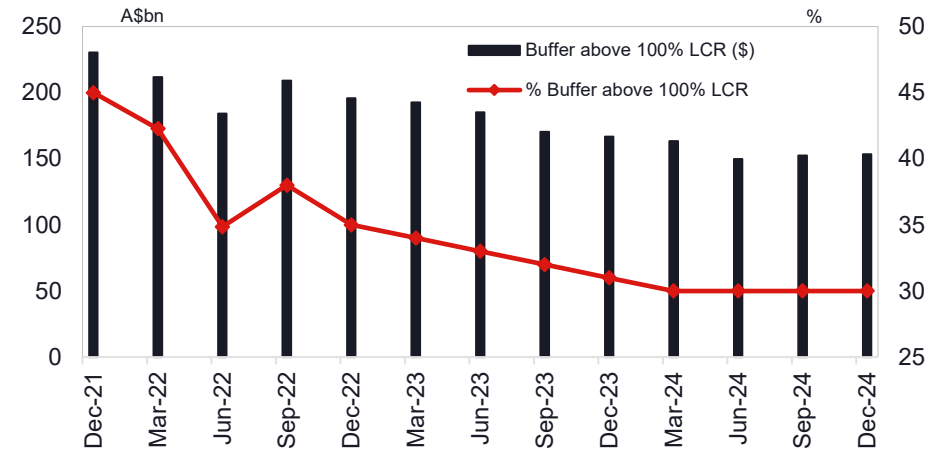
- Our starting point data is from APRA’s Quarterly ADI Performance statistics as at 30 June 2022.
- NCOs change is the net of: 50% of the decline in surplus ES balances each quarter against increasing at the same pace as balance sheet growth.
- ES balances decline at the pace of the current maturity profile for the RBA balance sheet (refer chart next page).
- Balance sheet growth averages 7.5%p.a. in 2022, falling to 5%p.a in 2023, lifting to 8% in 2024.
- LCR buffer falls back toward long term average level (130%) linearly over the period.
- ACGBs rise from their current record low % of HQLA portfolio (10%) to around 18%.
- The ratio of Semis to ACGBs in the HQLA portfolio moves from 2.7% to 2.2%, just above the LT avg level (1.9%).
- CLF steps down in discrete jumps to \$0bn by Dec 22 from its \$102bn level on 1 Jan\*.

# Stylised ADI Demand Evolution

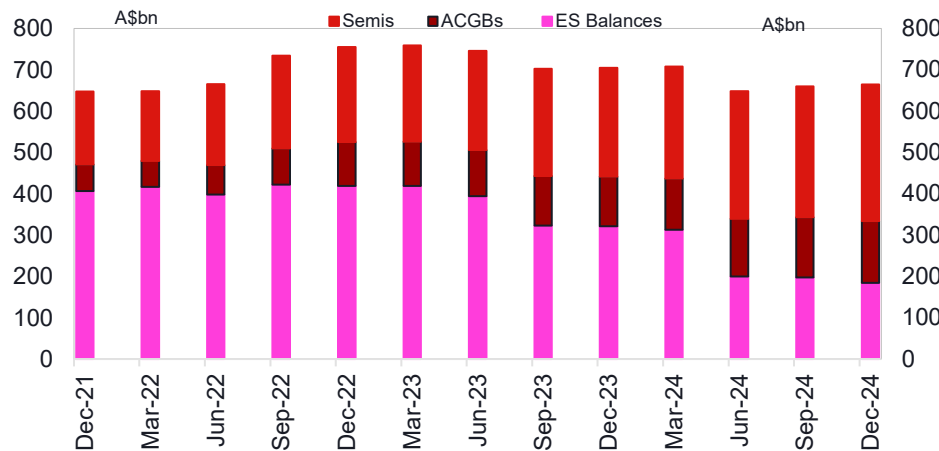
## Historical & Projected NCO & LCR evolution



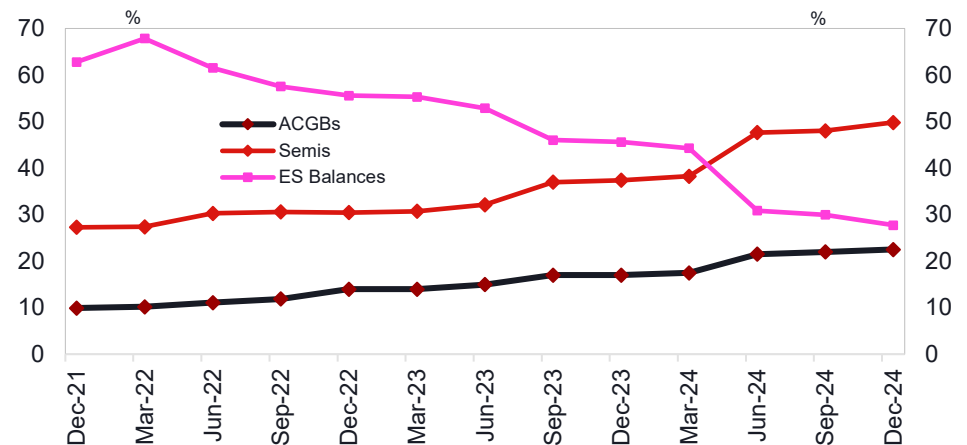
## Projected LCR Buffer



## Projected HQLA breakdown (A\$bn)



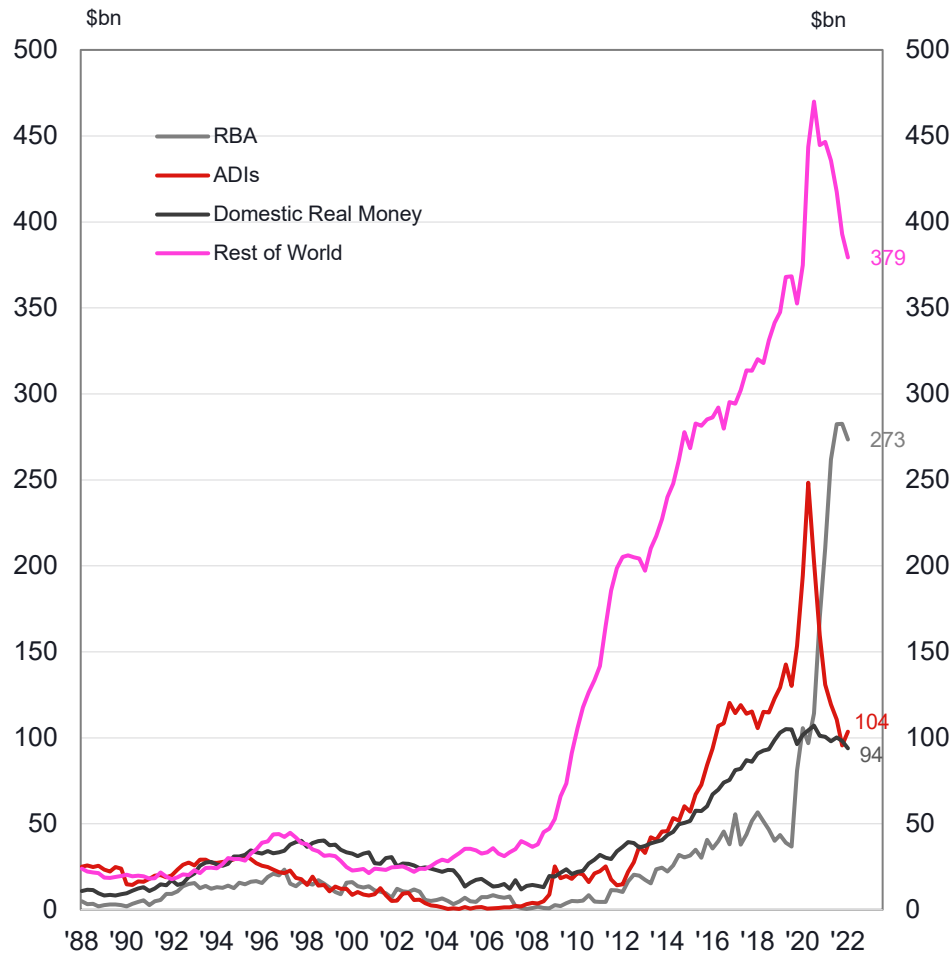
## Projected HQLA breakdown (% of HQLA)



Source for all charts: APRA; Westpac

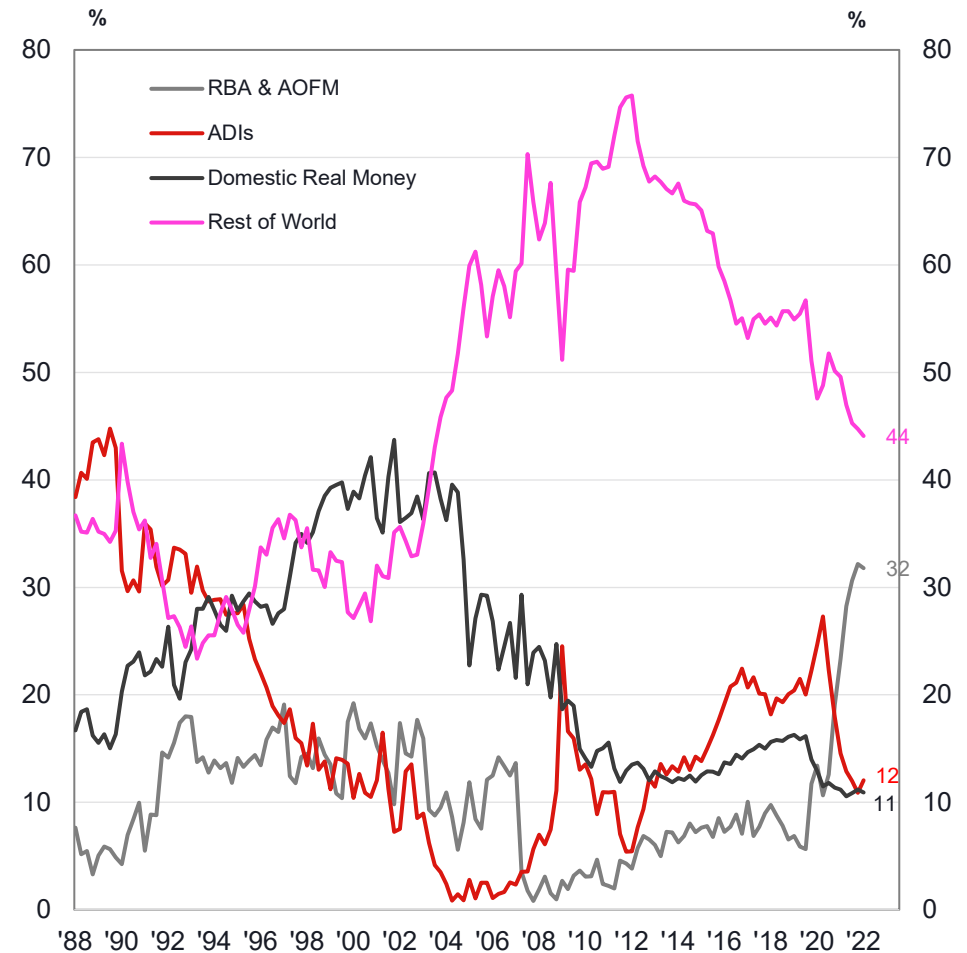
# ACGB Ownership Profile

ACGB Ownership Profile – Billions (\$A, MV)



Source: ABS, Westpac; Latest data as at 2Q2022

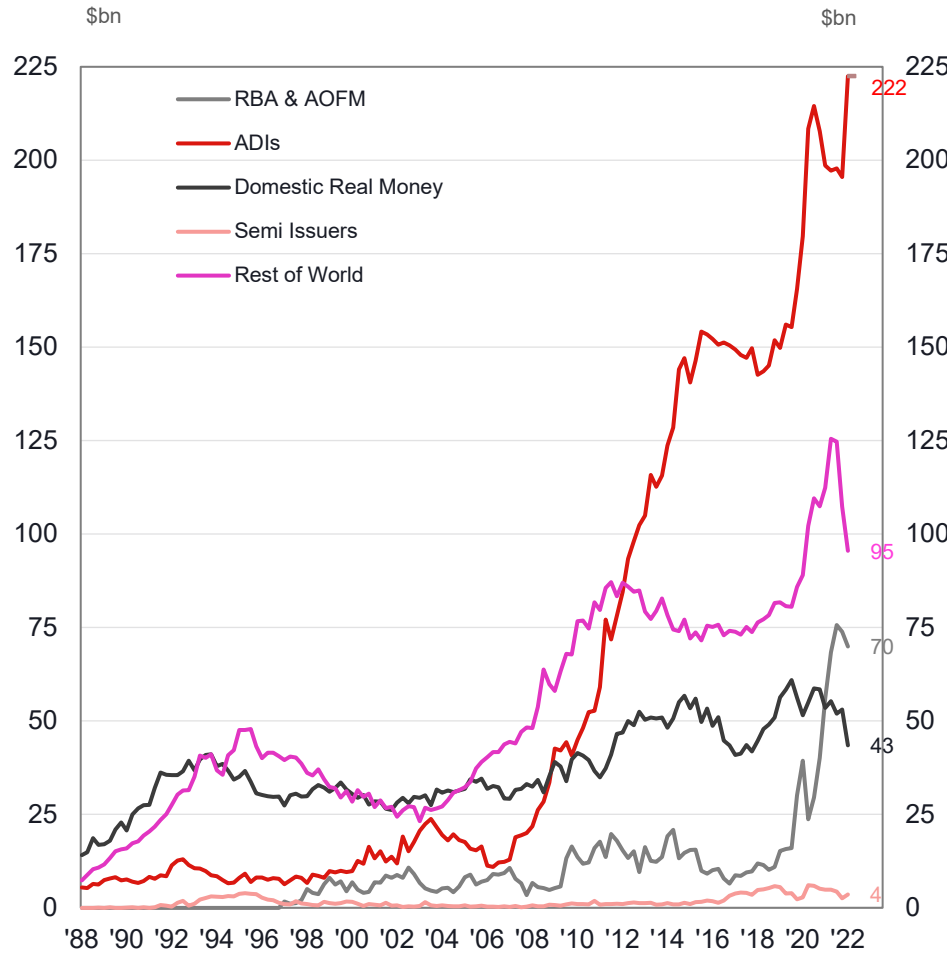
ACGB Ownership Profile - % of Total



Source: ABS, Westpac; Latest data as at 2Q2022

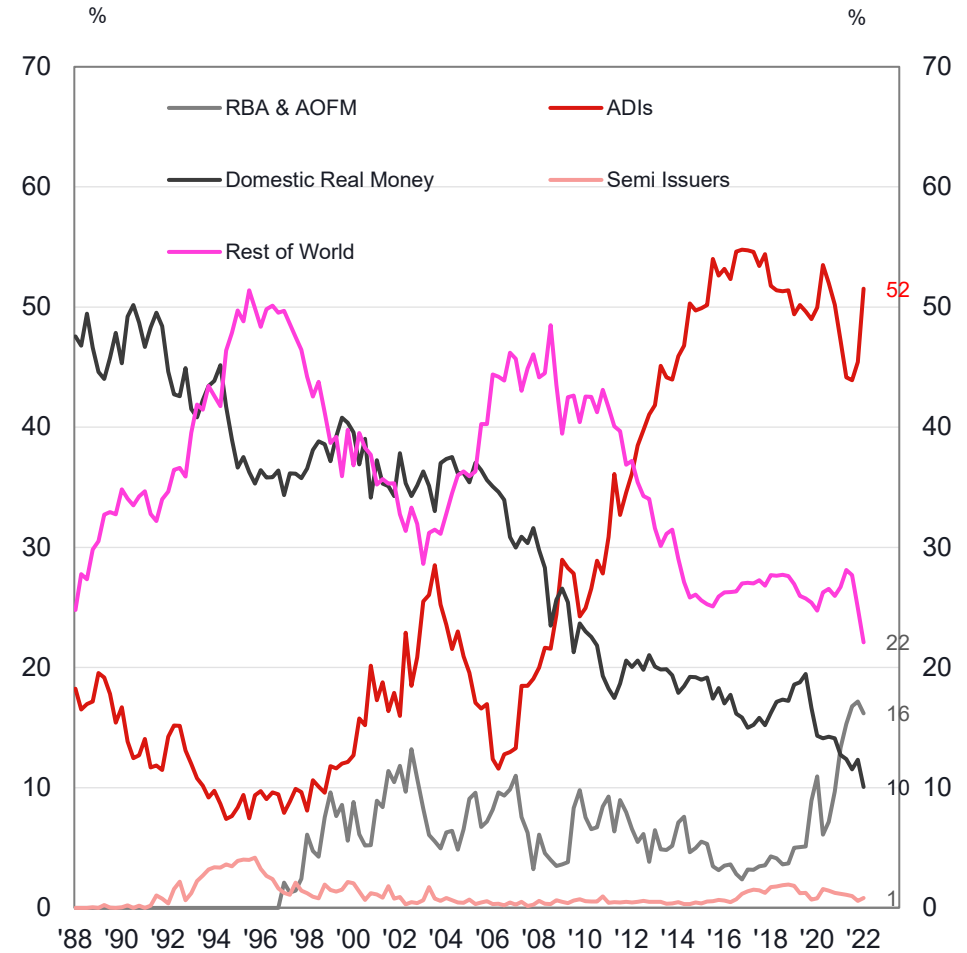
# SEMI Ownership Profile

## SEMI Ownership Profile – Billions (\$A, MV)



Source: ABS, Westpac ; Latest data as at 2Q2022

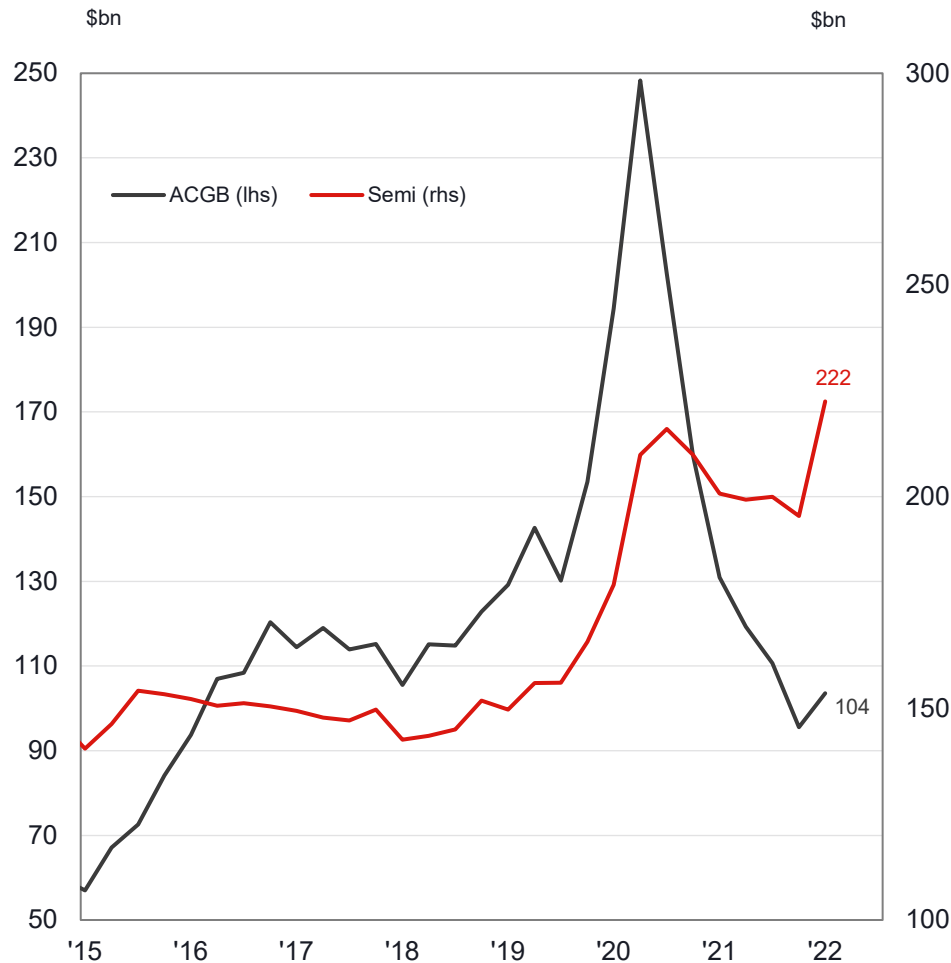
## SEMI Ownership Profile - % of Total



Source: ABS, Westpac ; Latest data as at 3Q2021

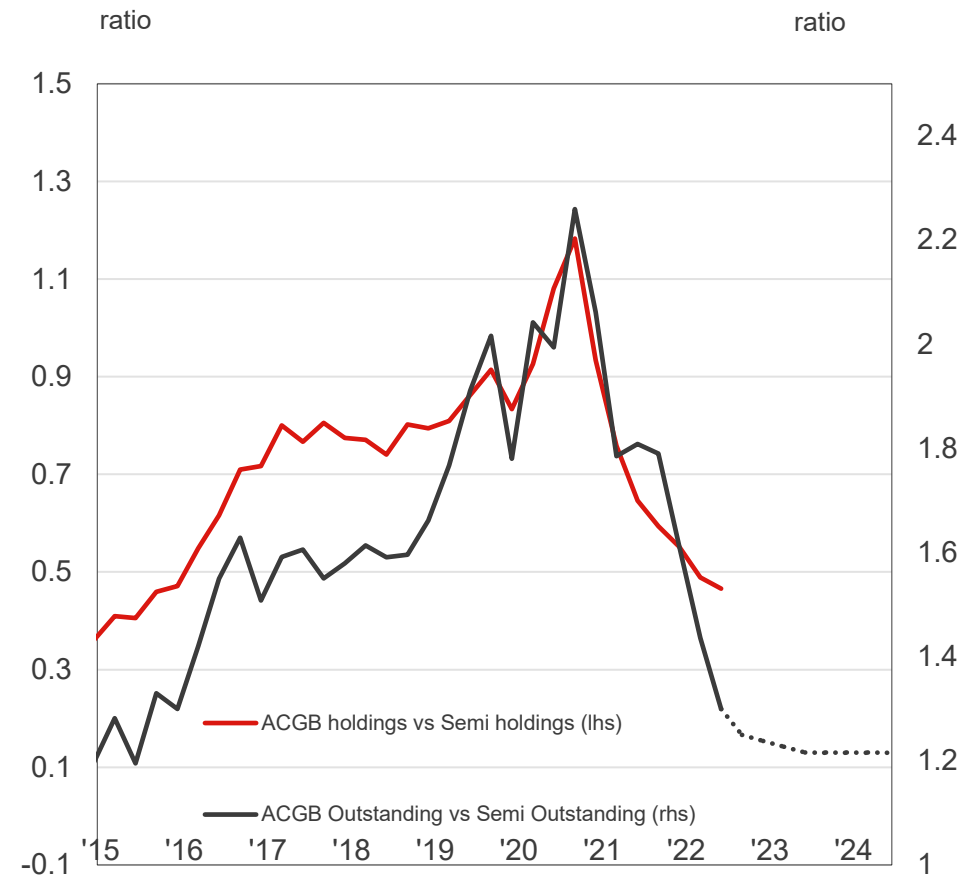
# ADI Semi holdings have surged as supply begets demand.

ADI holdings of ACGB & Semis\*



Source: RBA, ABS, Westpac Latest data as at 2Q2022

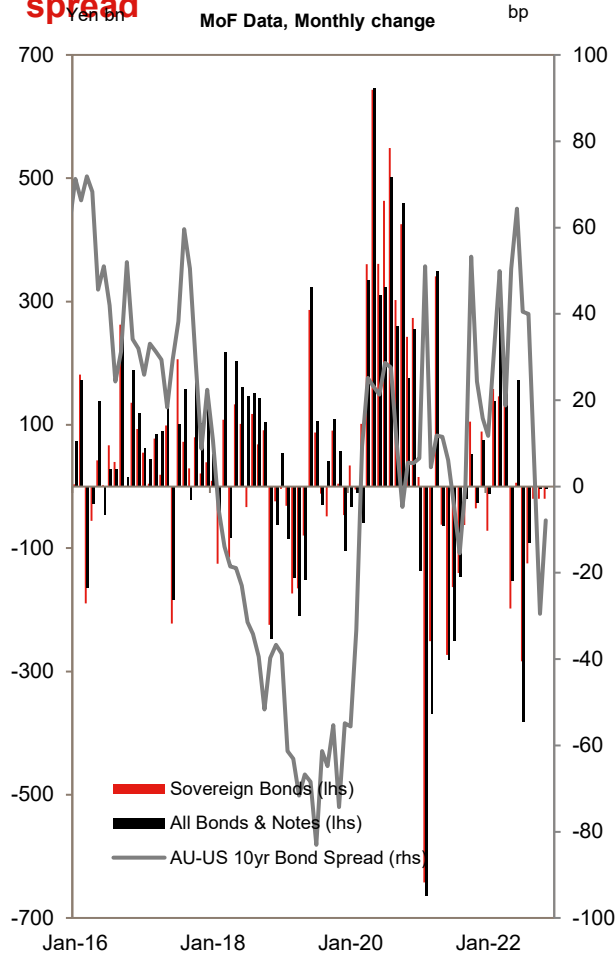
ADI holdings vs ACGB & Semi Outstandings\*



\*Market value

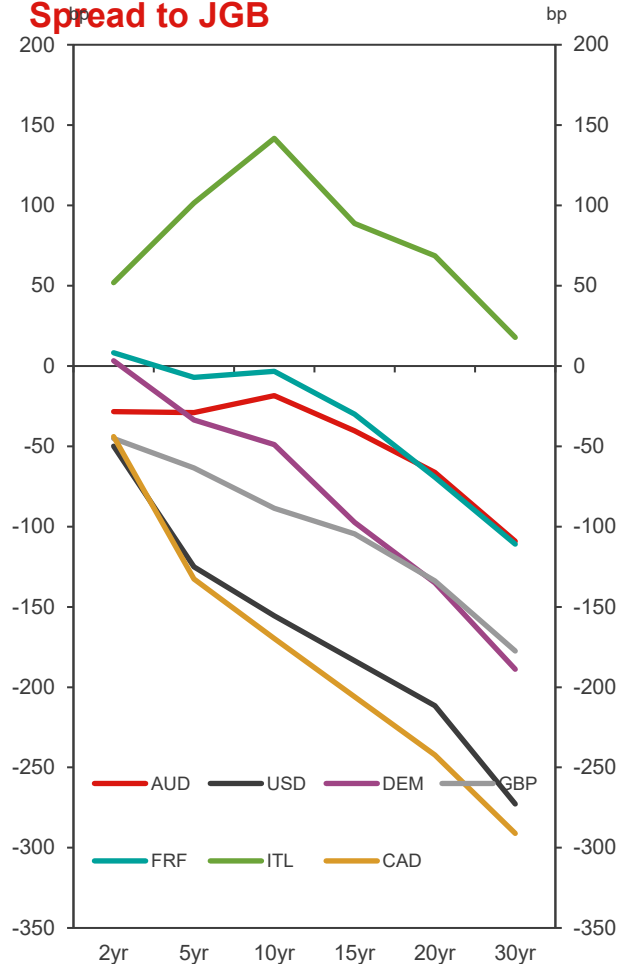
# Japanese FX-hedged yields remain a deterrent

**Monthly flow vs AU-US 10yr bond spread**



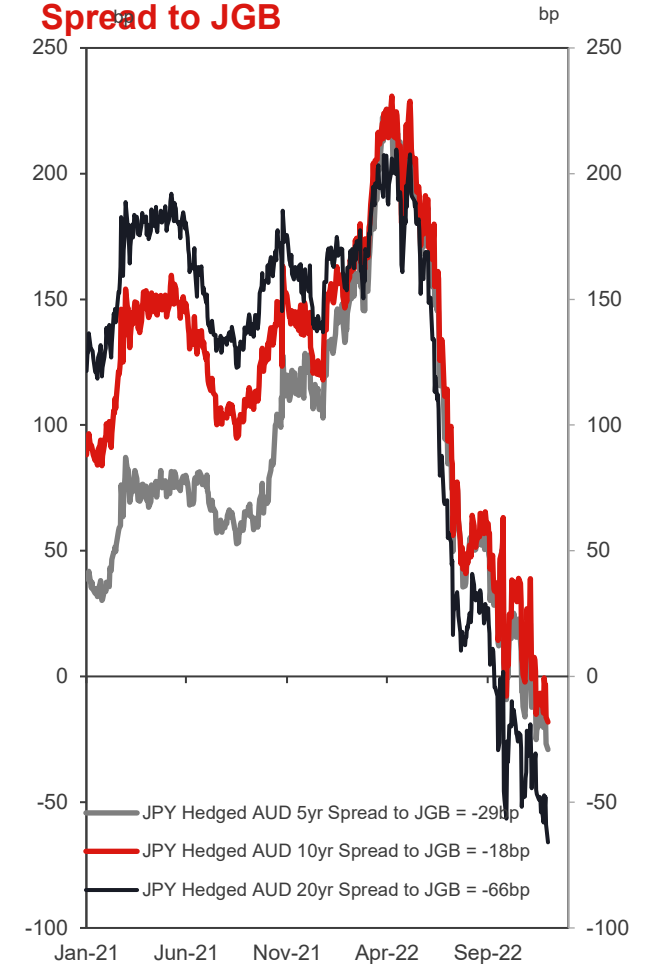
Source: MoF, Bloomberg, Westpac

**JPY-Hedged Sovereign Curves – Spread to JGB**



Source: Bloomberg, Westpac

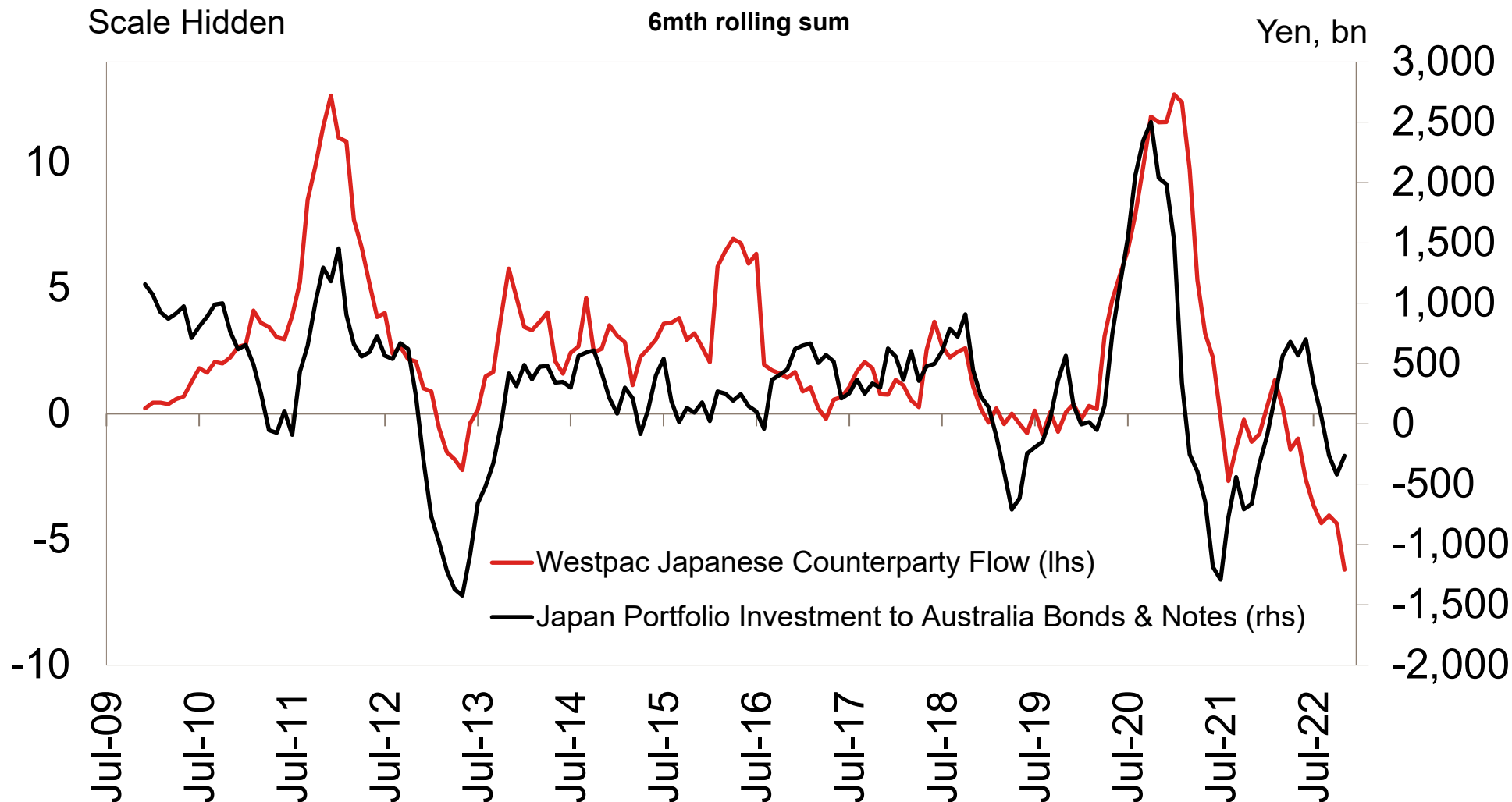
**JPY Hedged AU Bond Yields: Spread to JGB**



Source: Bloomberg, Westpac



# WBC Japanese Flows vs Monthly MoF data

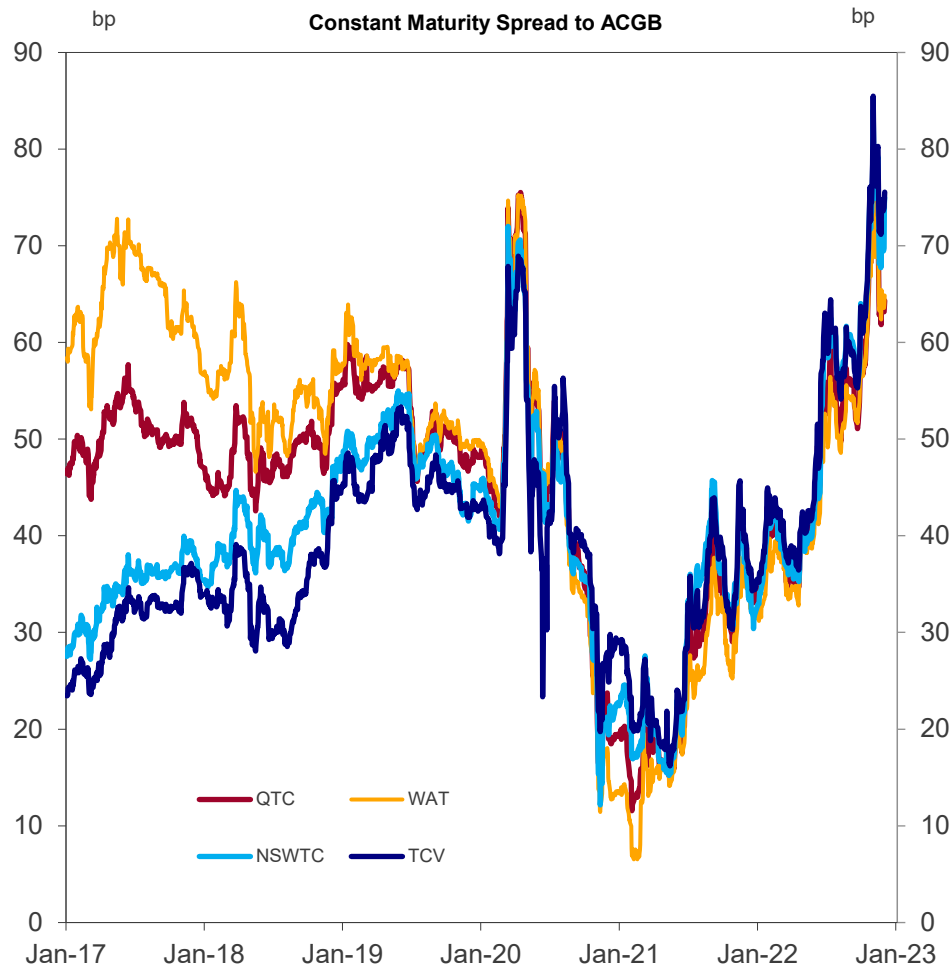


Source: MoF; Bloomberg; Westpac



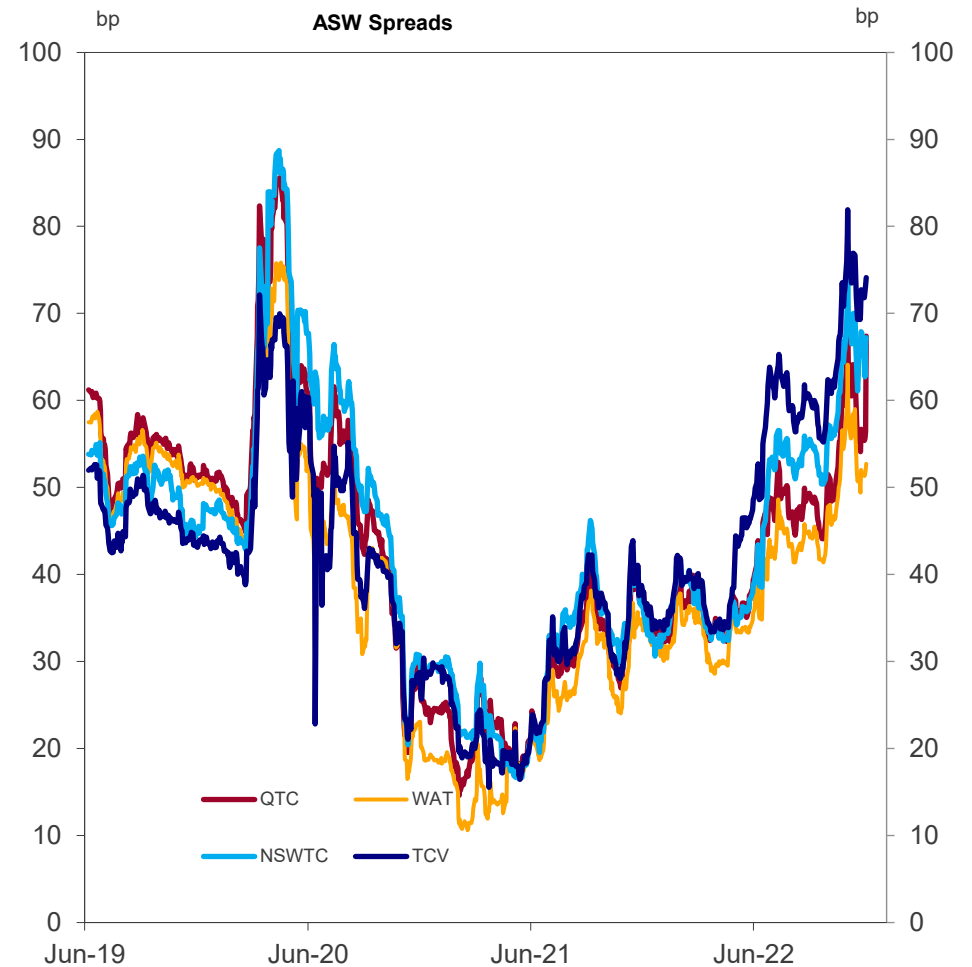
# Have semi-spreads peaked?

## 10yr Semi-Bond Spreads



Source: Westpac

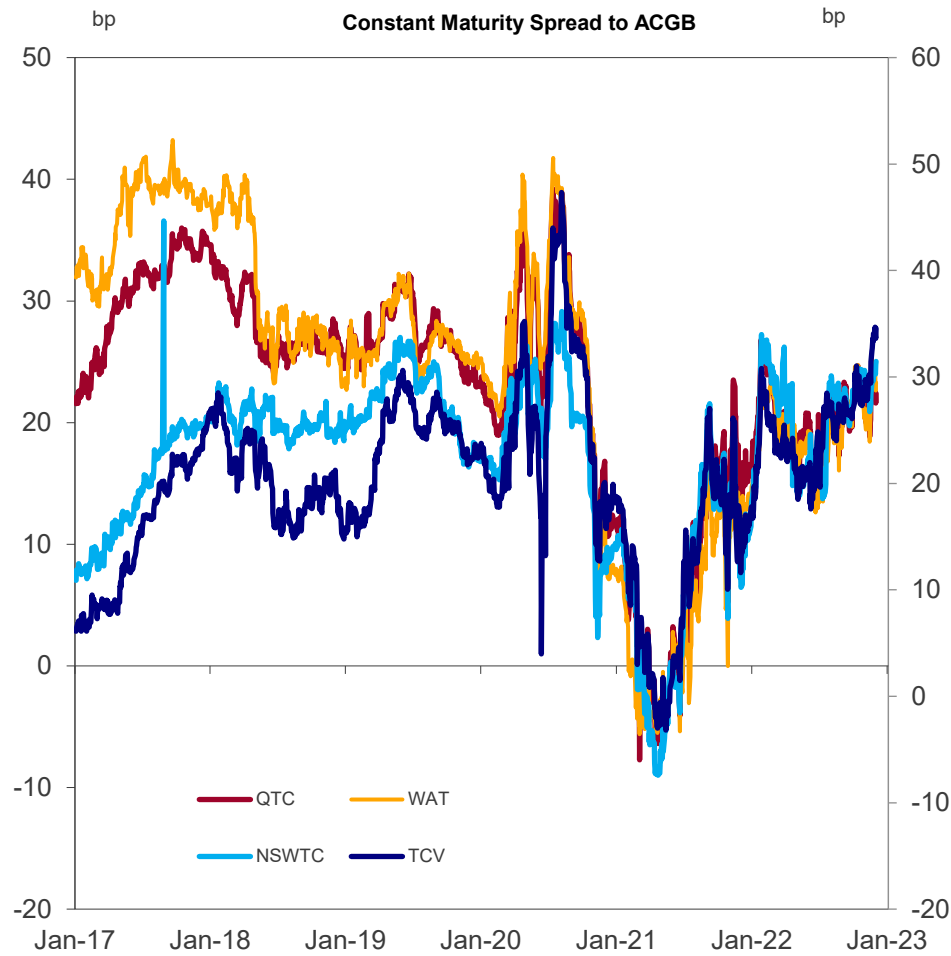
## 10yr Semi-Swap Spreads (ASW)



Source: Westpac

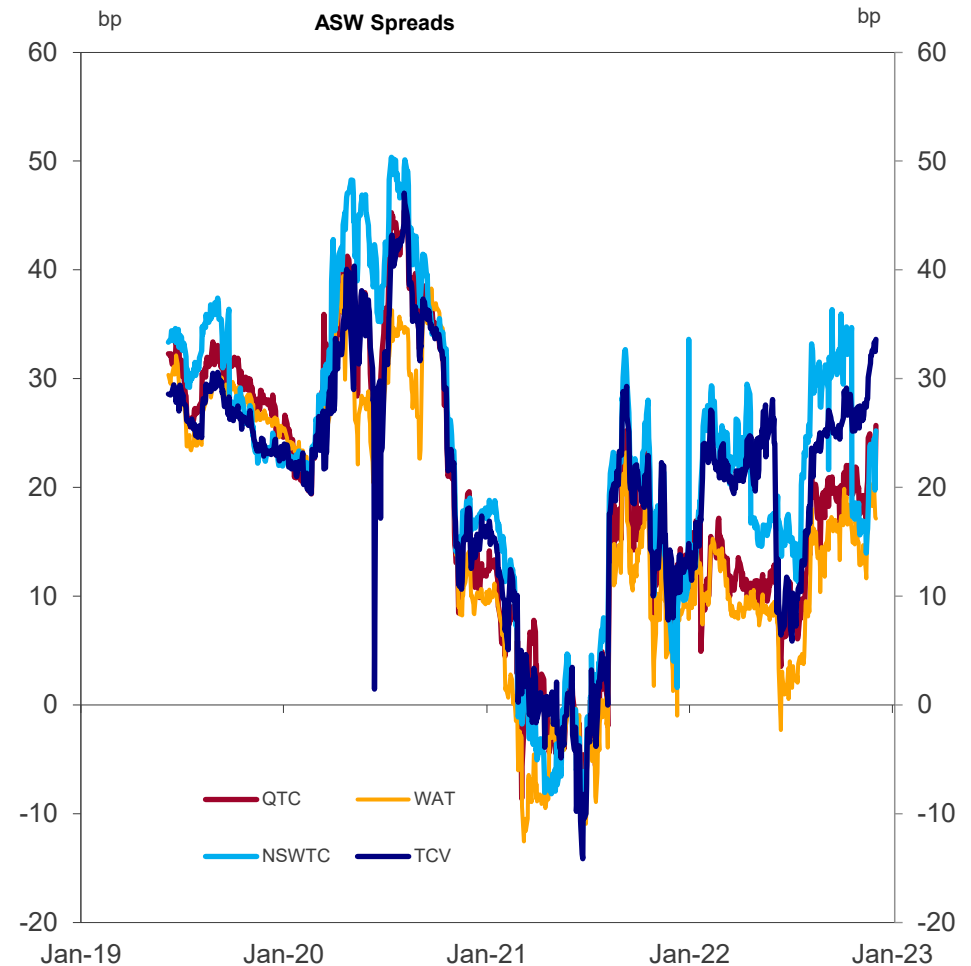
# Will we start to see more idiosyncratic differentiation

## 3-10yr Semi-Bond Box



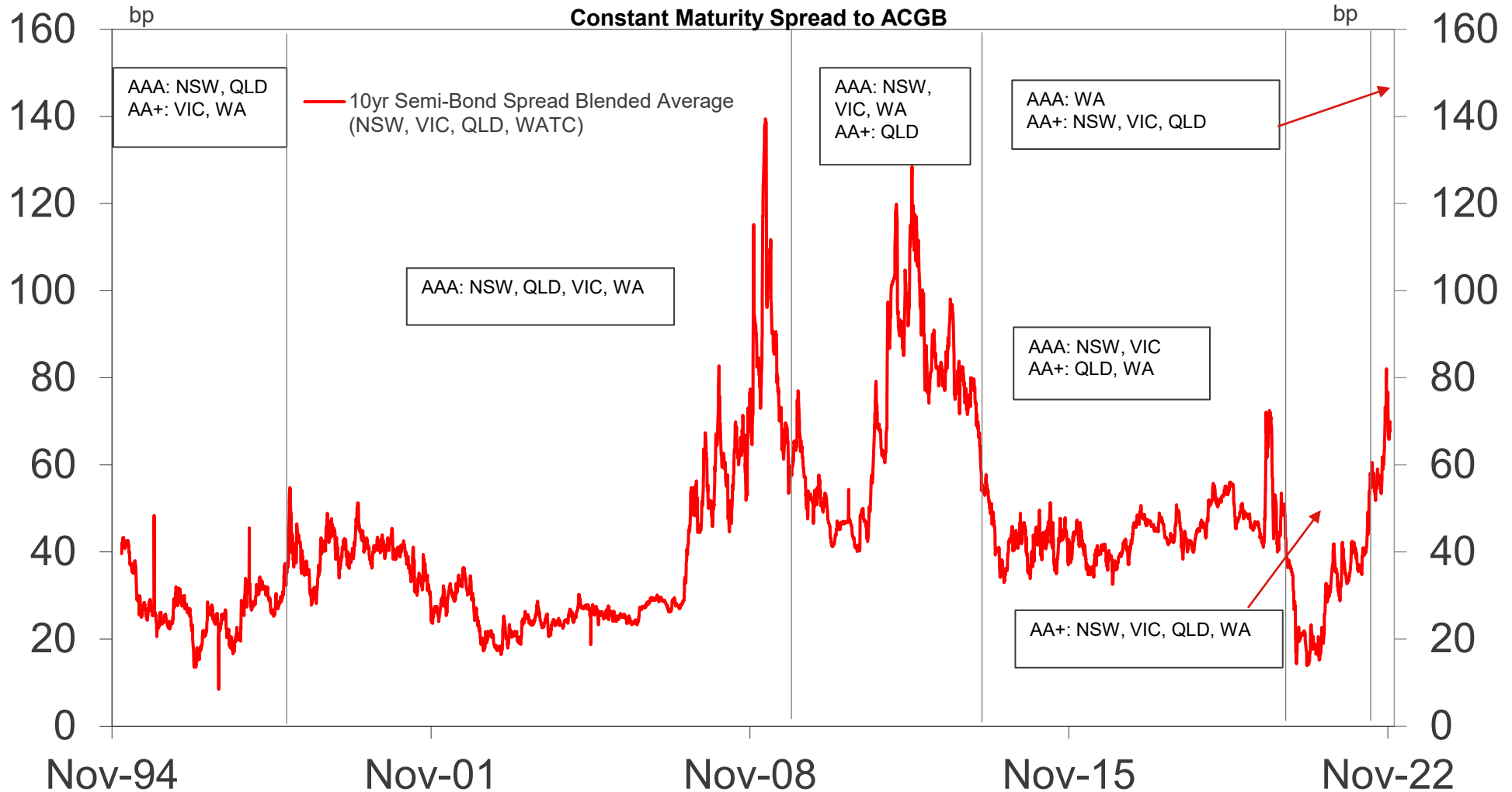
Source: Westpac

## 3-10yr Semi-Swap Spreads Box (ASW)



Source: Westpac

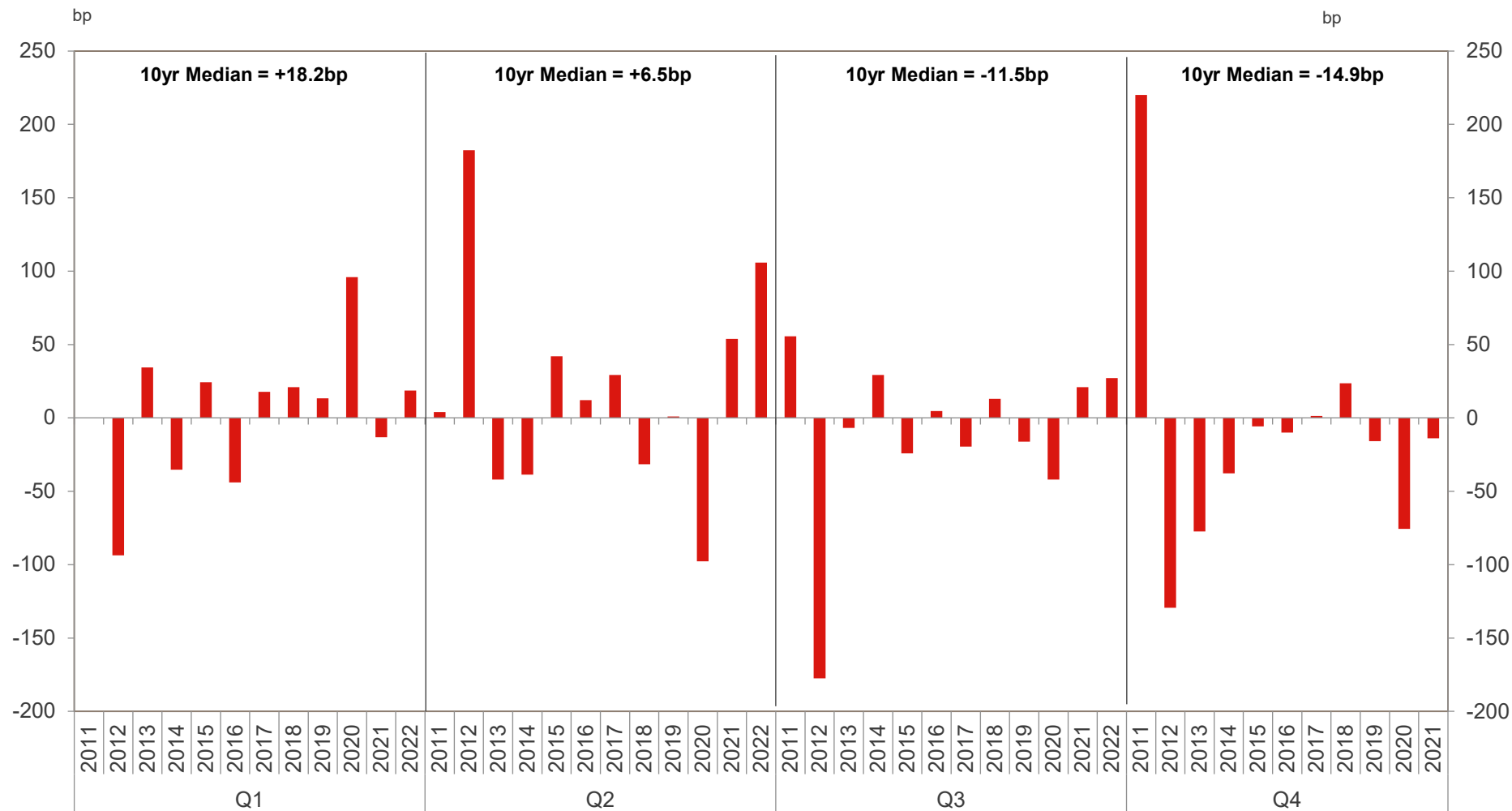
# 10yr Semi-Bond Spreads – Blended Averages



Source: Westpac

# Quarterly 10yr Semi-Bond Spread Changes

All States Aggregate – 4<sup>th</sup> quarter has the best median performance over last decade

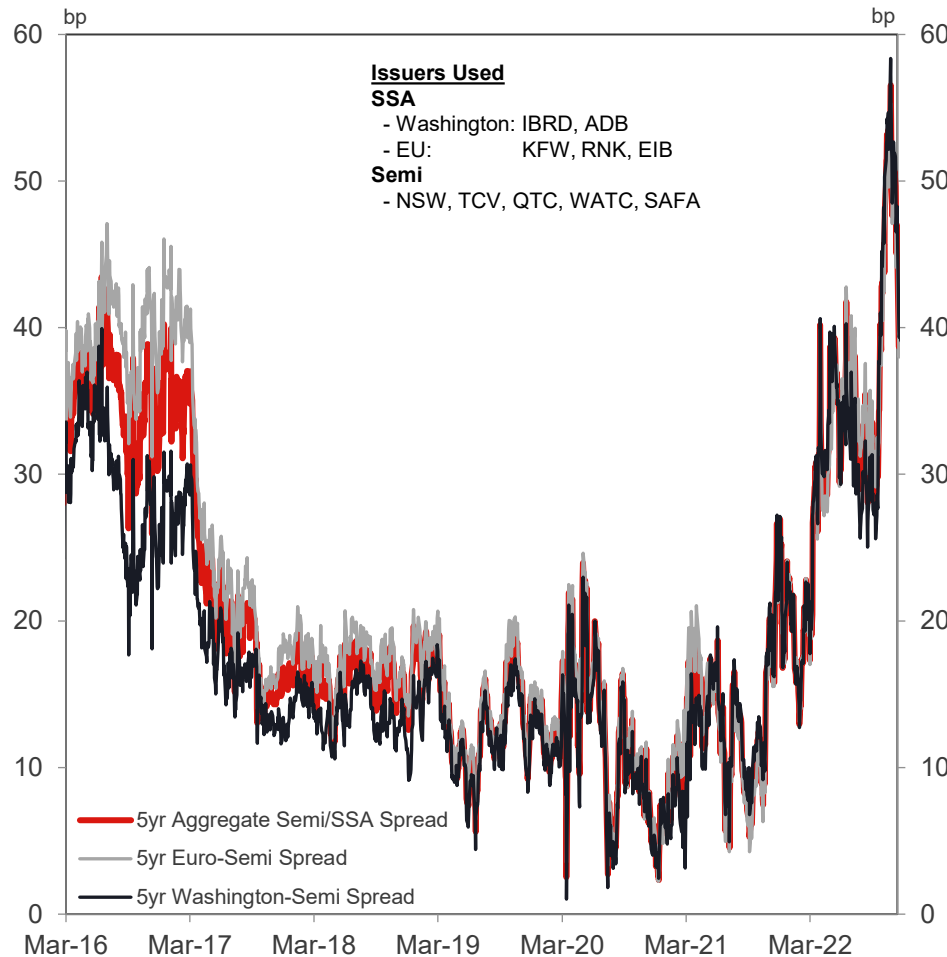


Source: Westpac

# Semi-SSA spreads remain wide ...

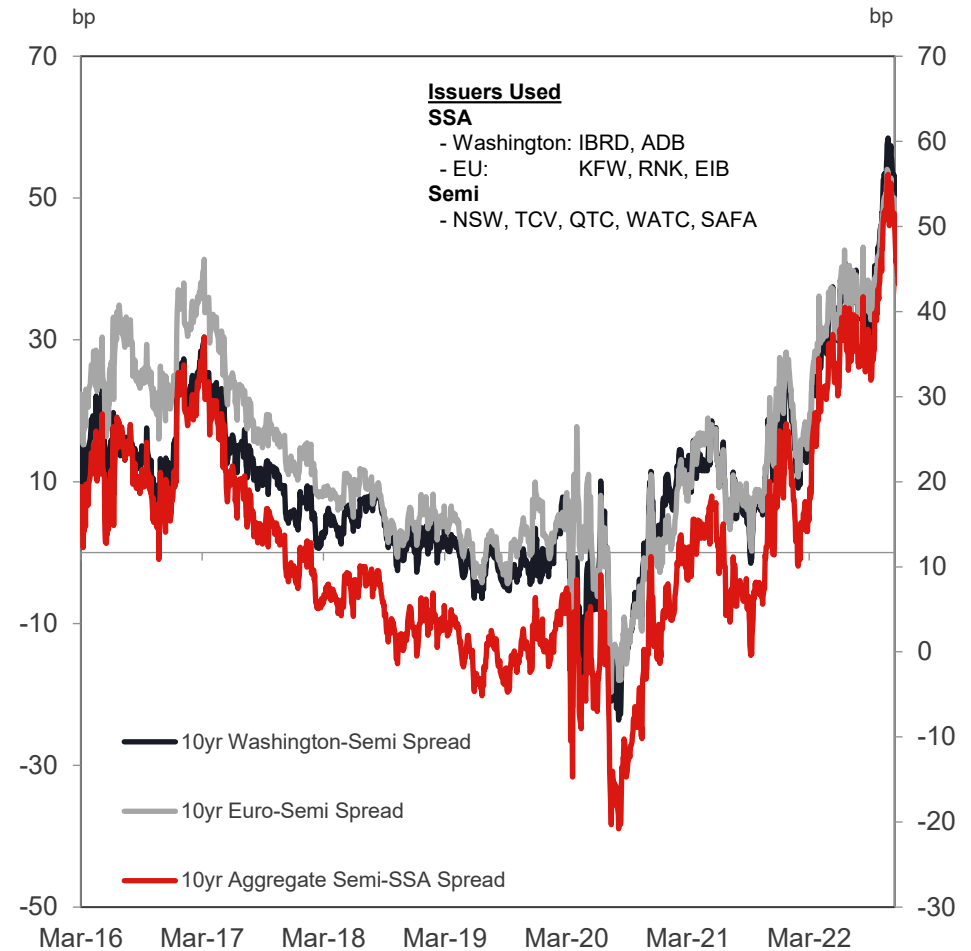
... but it is difficult in this environment to assess what the SSA illiquidity discount should be.

## Benchmark 5yr SSA-Semi Spreads



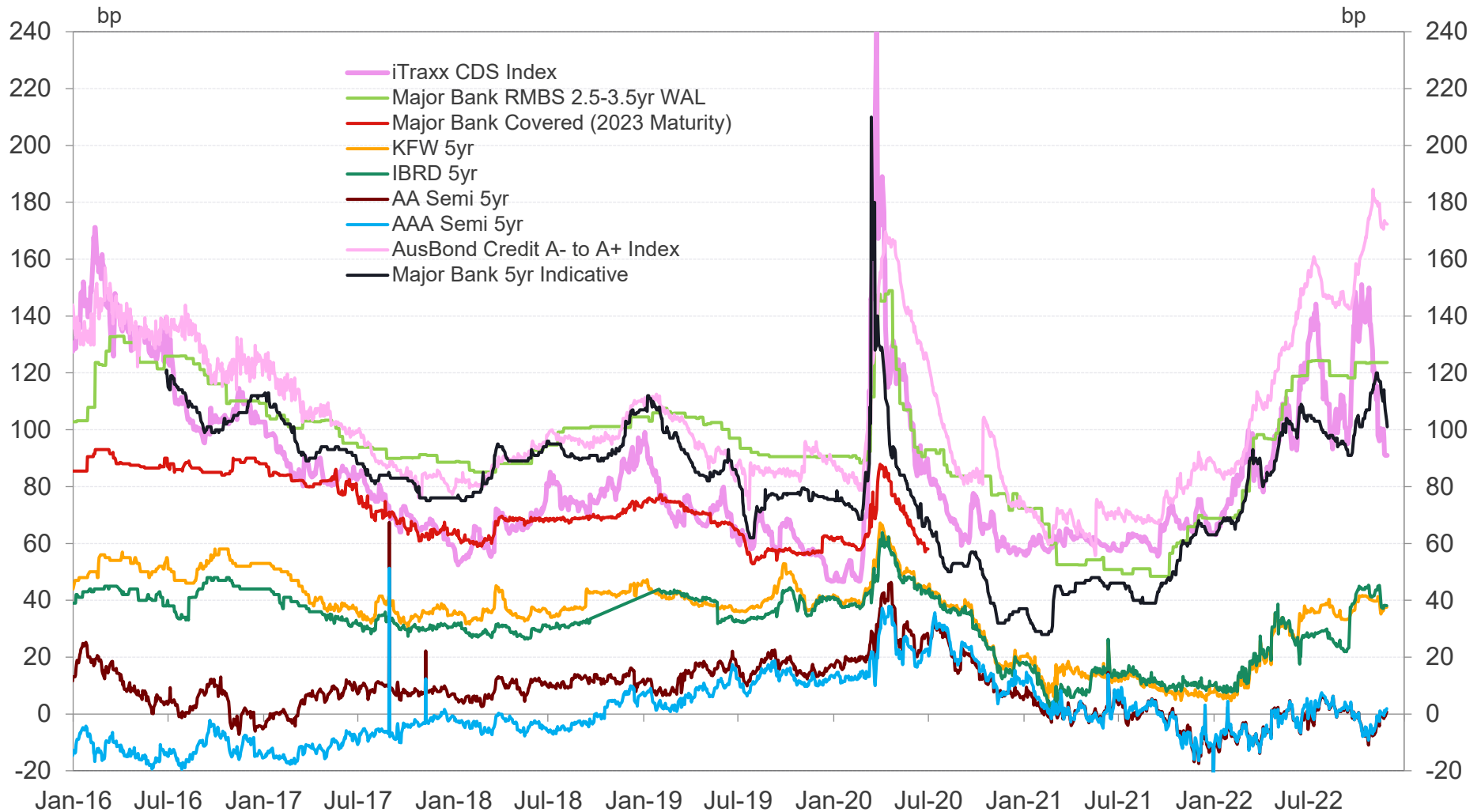
Source: Bloomberg, Westpac

## Benchmark 10yr SSA-Semi Spreads



Source: Bloomberg, Westpac

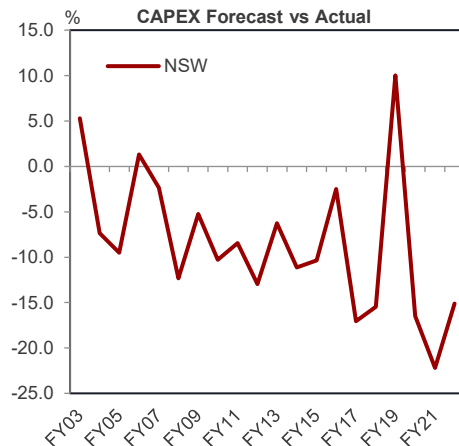
# Credit Fan – 5yr ASW spreads



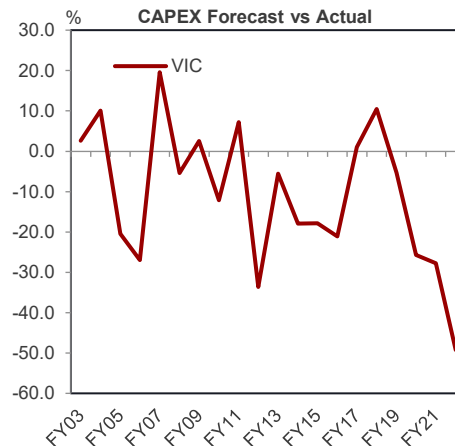
Source: Bloomberg; Westpac

# Semi Budgets – CAPEX spending vs actual

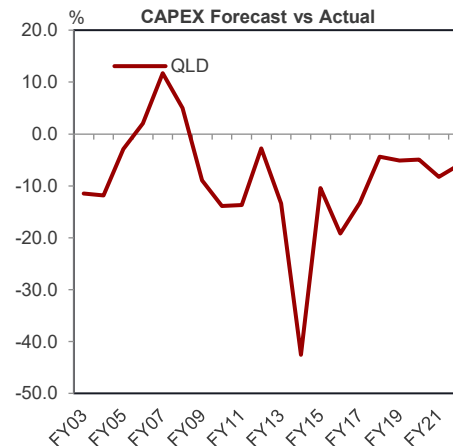
## New South Wales



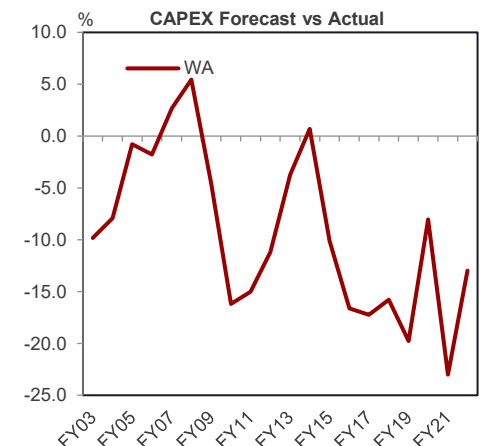
## Victoria



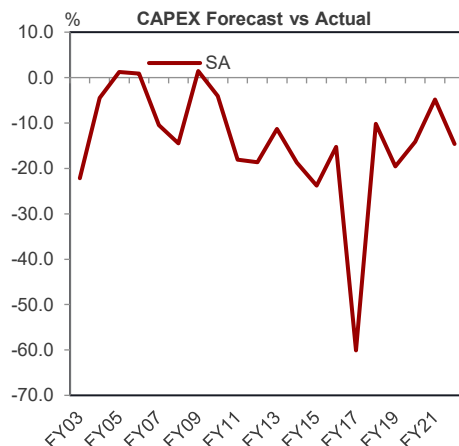
## Queensland



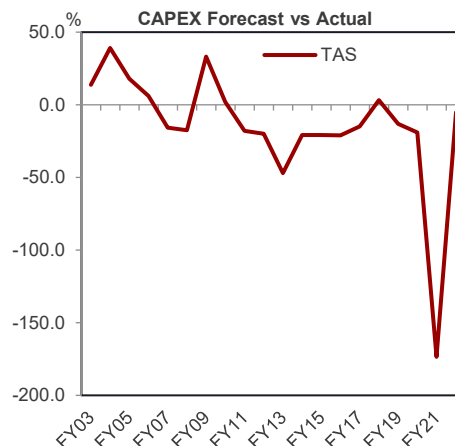
## Western Australia



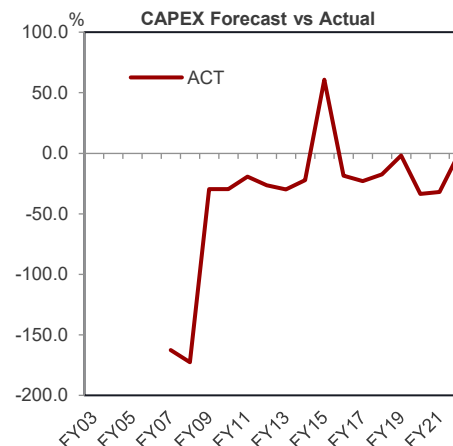
## South Australia



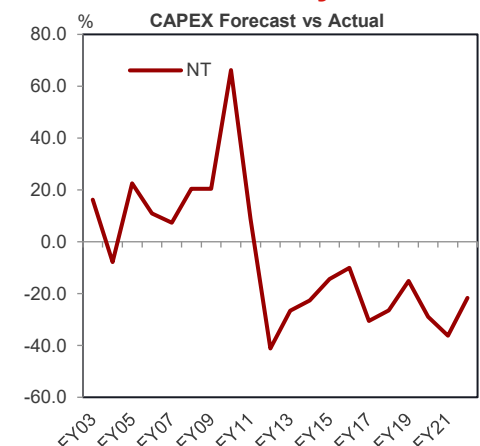
## Tasmania



## Australian Capital Territory



## Northern Territory



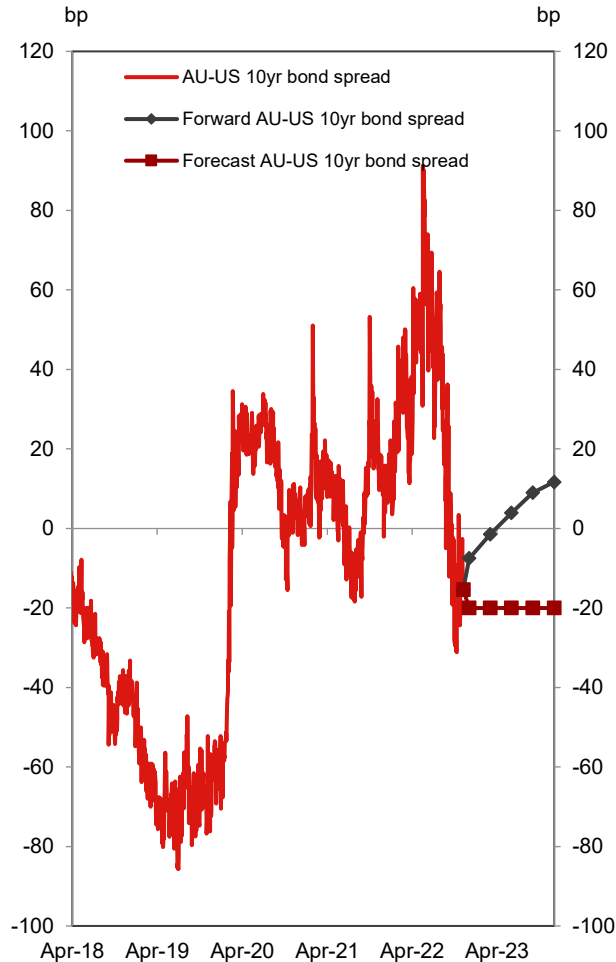
Sources: State Government Budget Updates, Westpac

\*FY2022-23 Budgets not yet released



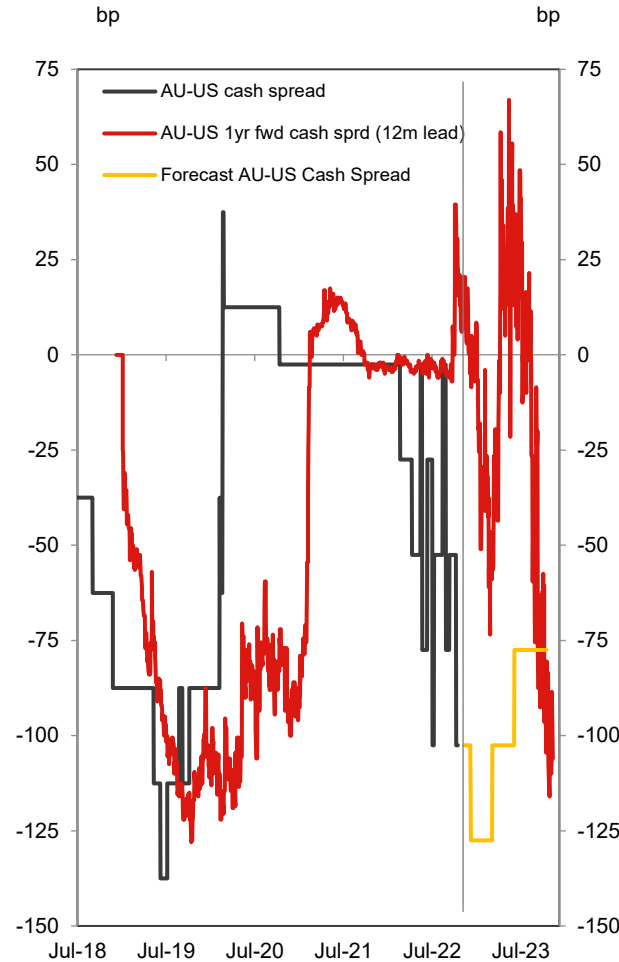
# A case can be made for a materially inverse AU-US 10yr

## AU-US 10yr Bond Spread



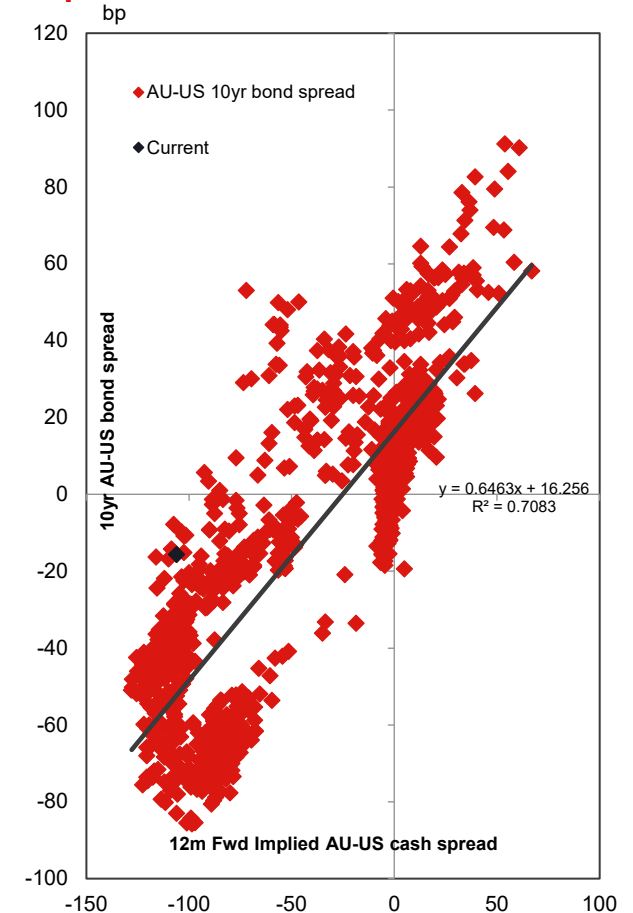
Source: Bloomberg, Westpac

## Cash Spread Fwds vs Forecasts



Source: Bloomberg, Westpac

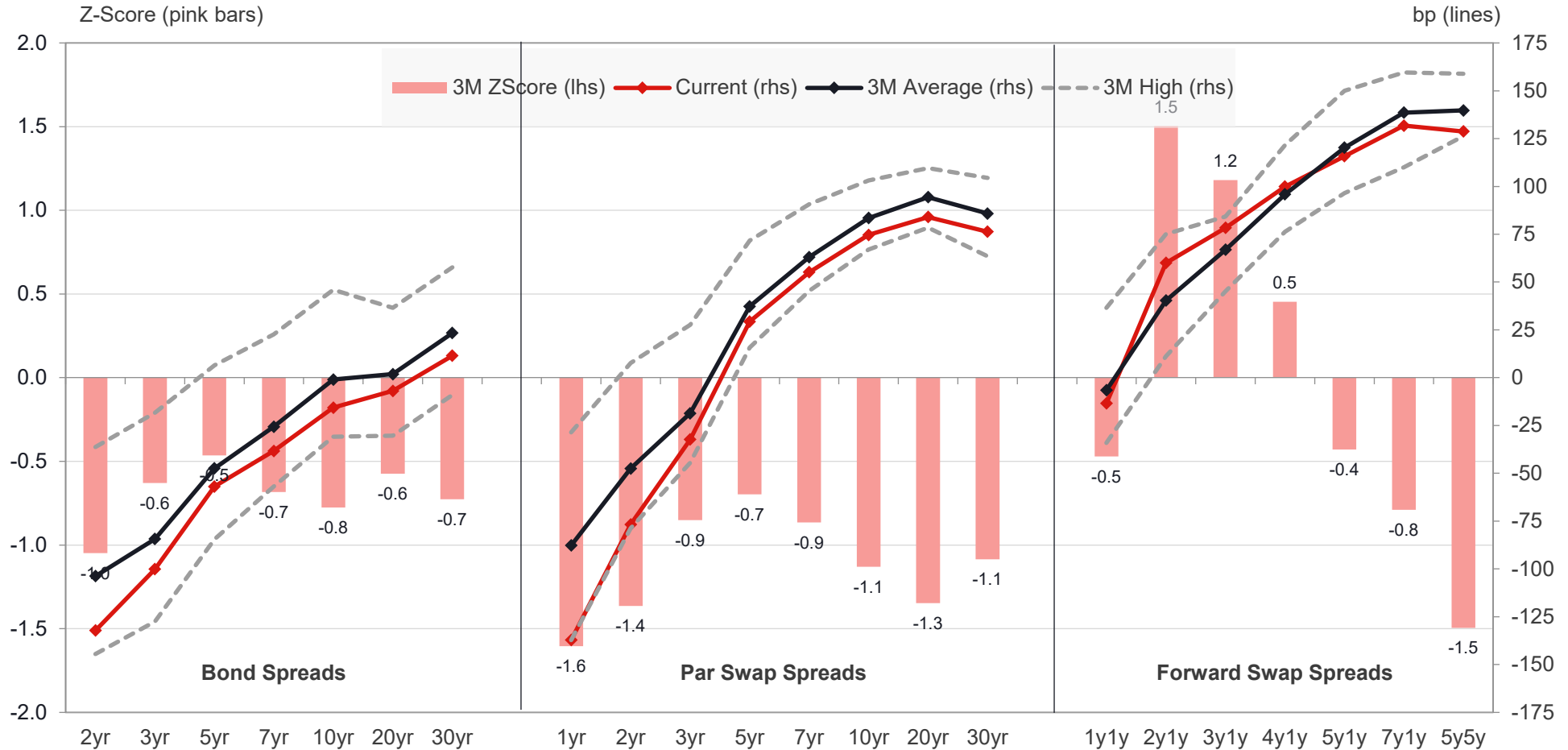
## AU-US 10yr Bond v 12m Fwd Cash Spreads



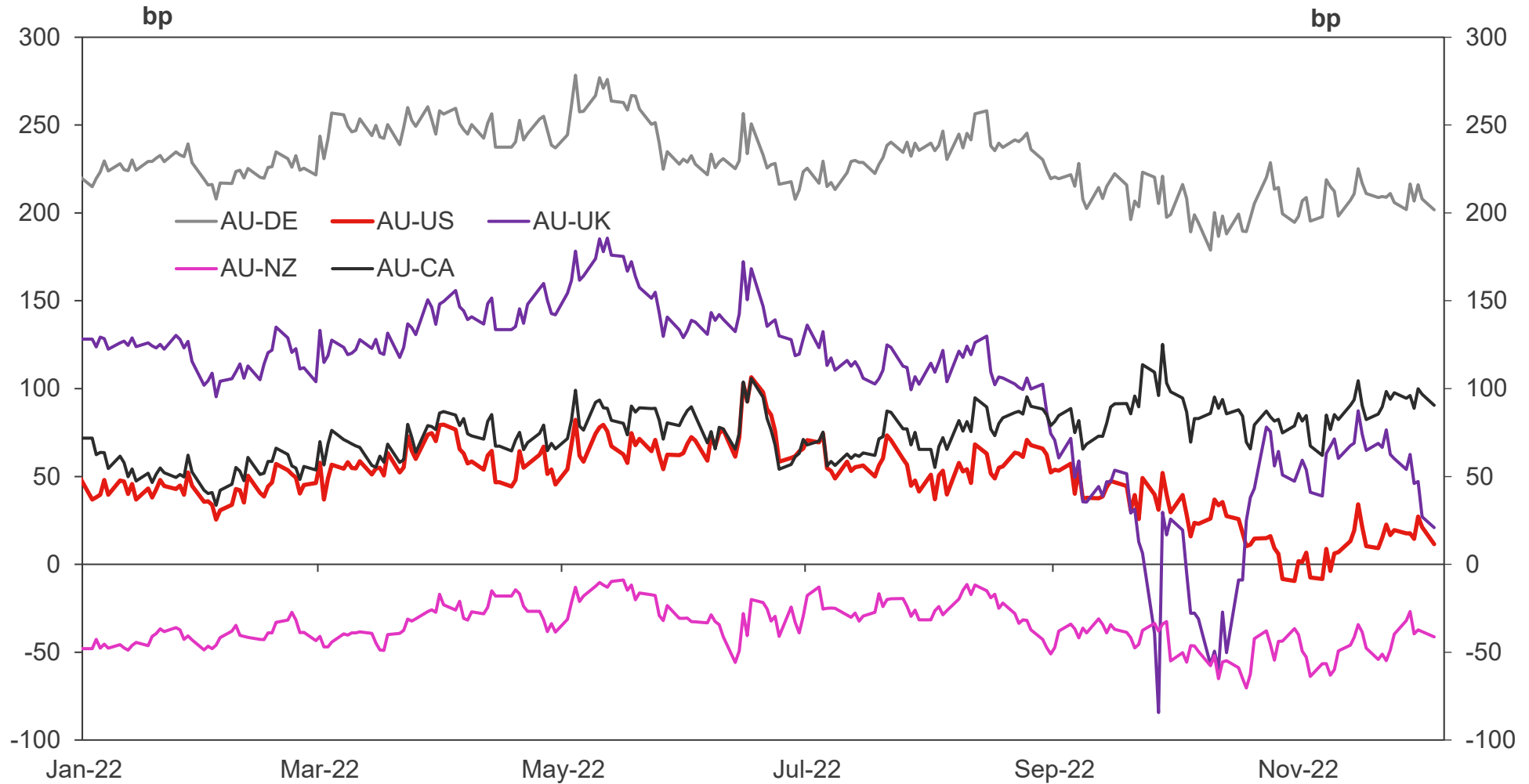
Source: Bloomberg, Westpac

# Where is the AU-US cross market opportunity?

## AU-US Bond & Swap Spreads



# AU vs Global 30yr Bond Spreads



Source: Bloomberg, Westpac

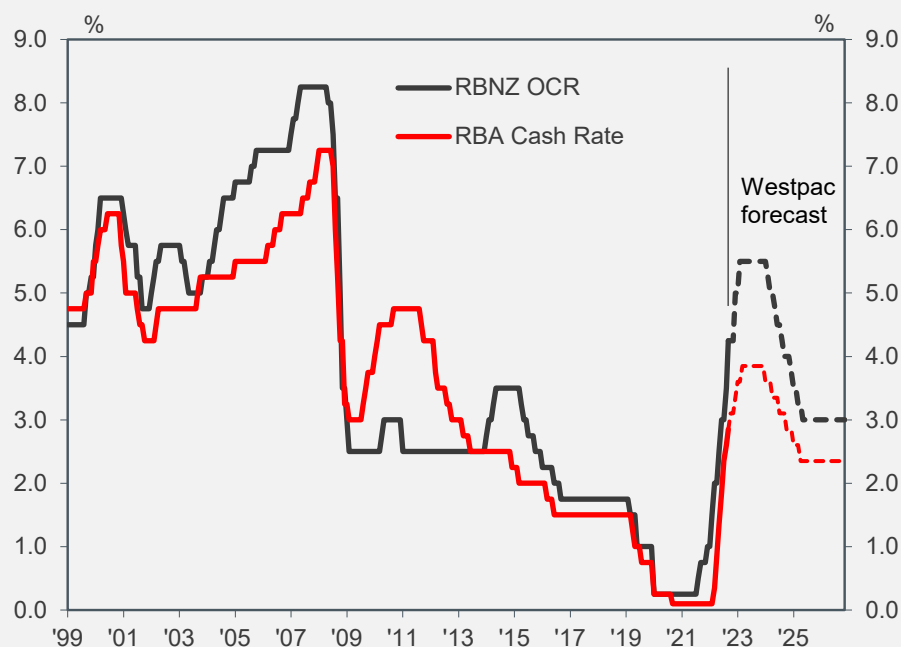
# RBNZ vs RBA

## RBNZ-RBA cash rate spread is expected to widen to a near record



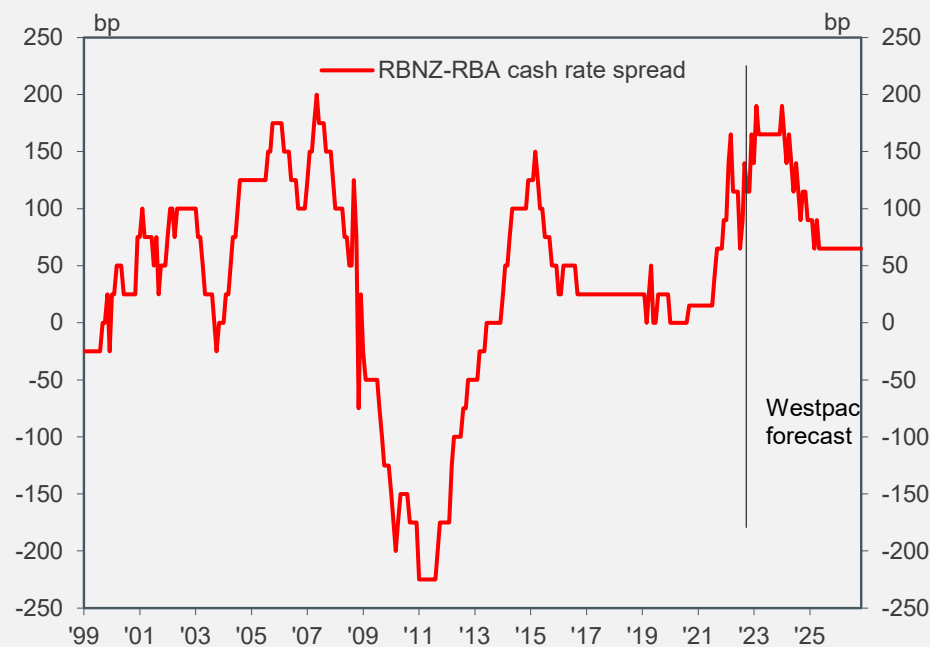
In the wake of the November meetings for the RBNZ and RBA, where the former delivered a hawkish surprise and caused markets to elevate their expectation of the peak OCR to 5.5%, while the latter delivered a dovish surprise (by hiking by 25bp rather than 50bp) and signalled a more gradual path towards its peak (which Westpac expects to be 3.85%), the contrast between the two stances has become even starker. Based on Westpac's forecasts for the respective cash rates, the spread between the two could reach 190bp in April 2023, and that would be the widest since the record of 200bp in 2007 (second chart below). From early 2024, we expect this spread to decline sharply to around 65bp. Given this, we explore market pricing for these two paths and consider potential trading opportunities.

### Westpac forecasts for RBNZ and RBA



Source: Bloomberg, Westpac

### RBNZ-RBA cash rate spread



Source: Bloomberg, Westpac

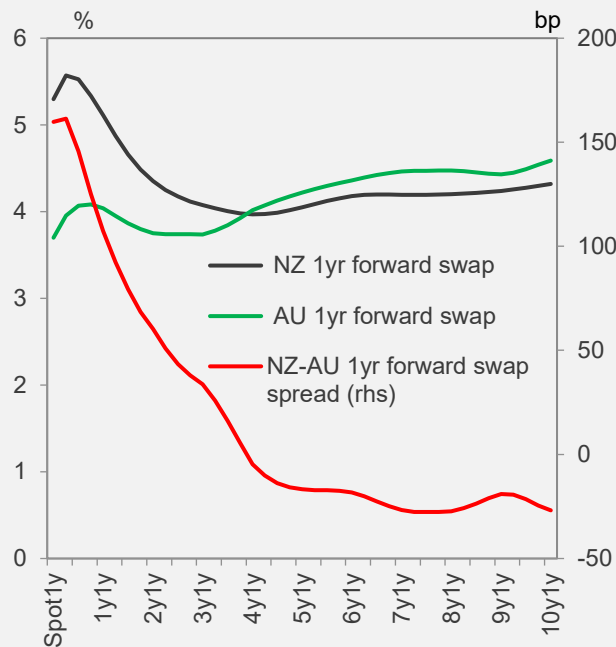
# NZ-AU swap spreads

Market pricing for spreads is below that implied by Westpac's RBNZ & RBA forecasts

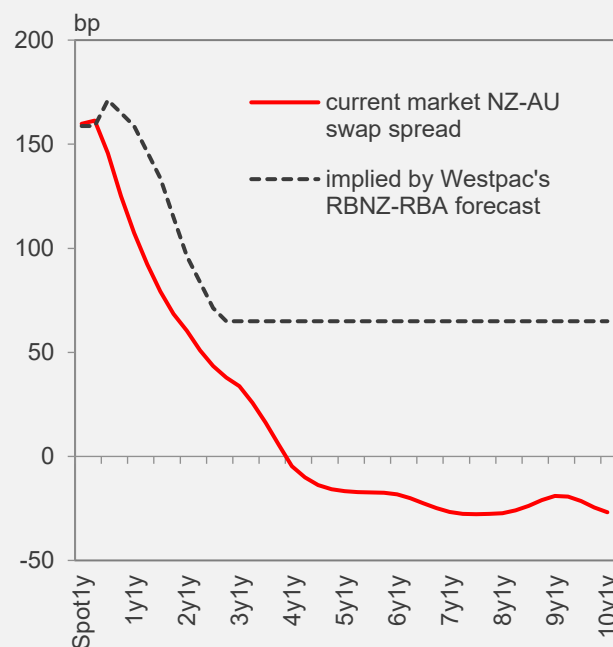


An inspection of the 1yr swap forwards for NZ and AU (first chart) shows that NZ markets have priced a decline, probably due to the aggressive RBNZ tightening path which is expected to cause a recession, which the RBA's more gradual approach is seen as less disturbing to the economy. The net result is an extremely inverted 1yr forward spread curve. A comparable 1yr forward spread curve based on Westpac's cash rate forecasts is shown in the second chart. The two are in line at the 3m1y point, but beyond that the market is slightly below Westpac out to 3y1y but significantly below thereafter. Looking at spreads from a historical perspective (third chart), we see that the 5y5y is near the range low but shorter spreads are near the high. The 3m1y at 145bp is at a high since April, is relatively the closest among 1yr forward spreads to its record high of 200bp, is in line with Westpac's cash rate forecasts (rather than below), and would be worthy of consideration as a receive NZ-AU trade in the 155bp-165bp zone which marked the post-GFC high.

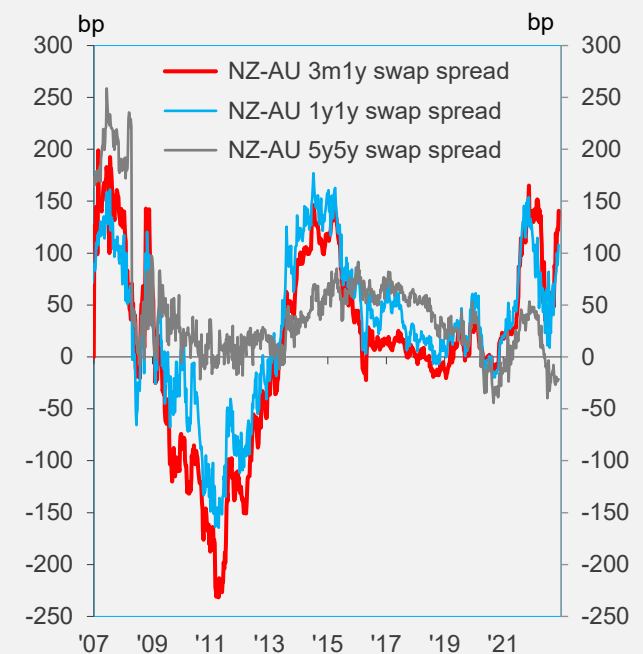
## NZ-AU spread curve extremely inverted



## NZ-AU spreads are below WBC forecasts



## NZ-AU 3m1y potentially near a peak



Source: RBNZ, Bloomberg, Westpac

Source: Bloomberg, Westpac

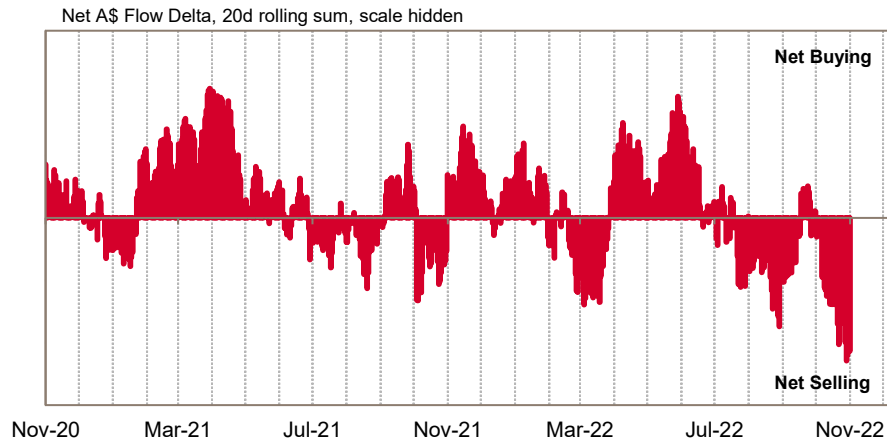
Source: Bloomberg, Westpac



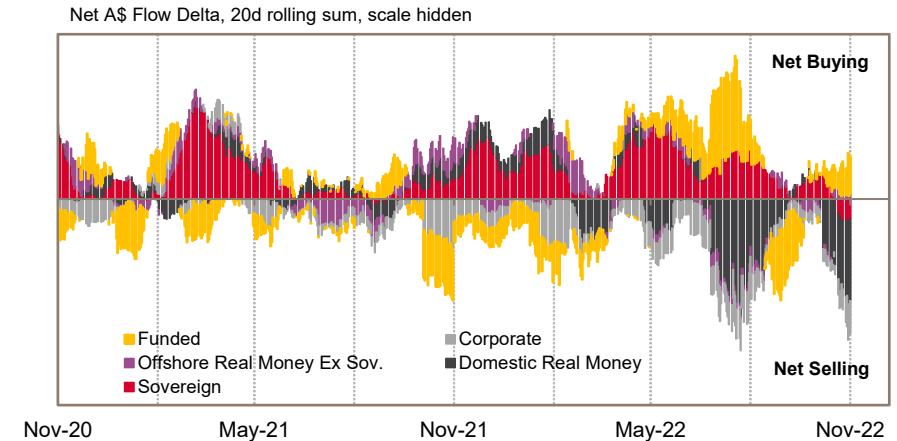
# A\$ net 20day delta accelerates into sell-side territory

Swap payers returned after rate hike slowdown talks saw markets rally to attractive levels.

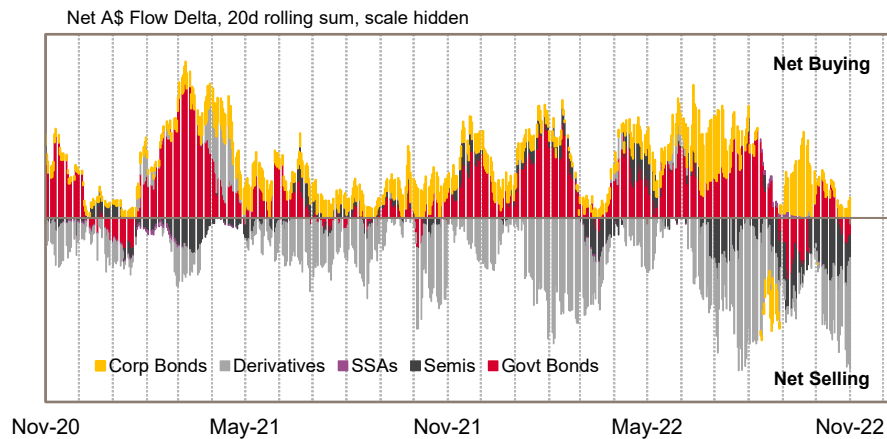
## All Flows – All Securities, Mkt Participants & Maturities



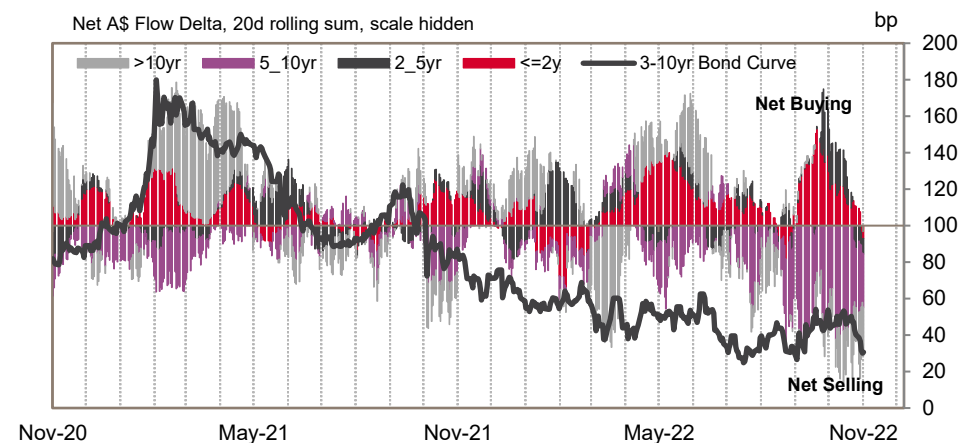
## All Flows by Market Participant



## All Flows by Product Class



## All Flows by Maturity vs 3-10yr Bond Curve



Source: Westpac

# Important Disclaimers

## Things you should know

Westpac Institutional Bank is a division of Westpac Banking Corporation ABN 33 007 457 141 ("Westpac").

## Disclaimer

This material contains general commentary, and market colour. The material does not constitute investment advice. Certain types of transactions, including those involving futures, options and high yield securities give rise to substantial risk and are not suitable for all investors. We recommend that you seek your own independent legal or financial advice before proceeding with any investment decision. This information has been prepared without taking account of your objectives, financial situation or needs. This material may contain material provided by third parties. While such material is published with the necessary permission none of Westpac or its related entities accepts any responsibility for the accuracy or completeness of any such material. Although we have made every effort to ensure the information is free from error, none of Westpac or its related entities warrants the accuracy, adequacy or completeness of the information, or otherwise endorses it in any way. Except where contrary to law, Westpac and its related entities intend by this notice to exclude liability for the information. The information is subject to change without notice and none of Westpac or its related entities is under any obligation to update the information or correct any inaccuracy which may become apparent at a later date. The information contained in this material does not constitute an offer, a solicitation of an offer, or an inducement to subscribe for, purchase or sell any financial instrument or to enter a legally binding contract. Past performance is not a reliable indicator of future performance. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The ultimate outcomes may differ substantially from these forecasts.

## Country disclosures

**Australia:** Westpac holds an Australian Financial Services Licence (No. 233714). This material is provided to you solely for your own use and in your capacity as a client of Westpac. For XYLO Foreign Exchange clients: This information is provided to you solely for your own use and is not to be distributed to any third parties. XYLO Foreign Exchange is a division of Westpac Banking Corporation ABN 33 007 457 141 and Australian credit licence 233714. Information is current as at date shown on the publication. This information has been prepared without taking account of your objectives, financial situation or needs. Because of this you should, before acting on this information, consider its appropriateness, having regard to your objectives, financial situation or needs. XYLO Foreign Exchange's combined Financial Services Guide and Product Disclosure Statement can be obtained by calling XYLO Foreign Exchange on 1300 995 639, or by emailing [customer@XYLO.com.au](mailto:customer@XYLO.com.au).

**New Zealand:** In New Zealand, Westpac Institutional Bank refers to the brand under which products and services are provided by either Westpac or Westpac New Zealand Limited ("WNZL"). Any product or service made available by WNZL does not represent an offer from Westpac or any of its subsidiaries (other than WNZL). Neither Westpac nor its other subsidiaries guarantee or otherwise support the performance of WNZL in respect of any such product. The current disclosure statements for the New Zealand branch of Westpac and WNZL can be obtained at the internet address [www.westpac.co.nz](http://www.westpac.co.nz). For further information please refer to the Product Disclosure Statement (available from your Relationship Manager) for any product for which a Product Disclosure Statement is required, or applicable customer agreement. Download the Westpac NZ QFE Group Financial Advisers Act 2008 Disclosure Statement at [www.westpac.co.nz](http://www.westpac.co.nz).

**China, Hong Kong, Singapore and India:** This material has been prepared and issued for distribution in Singapore to institutional investors, accredited investors and expert investors (as defined in the applicable Singapore laws and regulations) only. Recipients in Singapore of this material should contact Westpac Singapore Branch in respect of any matters arising from, or in connection with, this material. Westpac Singapore Branch holds a wholesale banking licence and is subject to supervision by the Monetary Authority of Singapore. Westpac Hong Kong Branch holds a banking licence and is subject to supervision by the Hong Kong Monetary Authority. Westpac Hong Kong branch also holds a license issued by the Hong Kong Securities and Futures Commission (SFC) for Type 1 and Type 4 regulated activities. This material is intended only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance. Westpac Shanghai and Beijing Branches hold banking licenses and are subject to supervision by the China Banking and Insurance Regulatory Commission (CBIRC). Westpac Mumbai Branch holds a banking license from Reserve Bank of India (RBI) and subject to regulation and supervision by the RBI.

**UK:** The contents of this communication, which have been prepared by and are the sole responsibility of Westpac Banking Corporation London and Westpac Europe Limited. Westpac (a) has its principal place of business in the United Kingdom at Camomile Court, 23 Camomile Street, London EC3A 7LL, and is registered at Cardiff in the UK (as Branch No. BR00106), and (b) authorised and regulated by the Australian Prudential Regulation Authority in Australia. Westpac is authorised in the United Kingdom by the Prudential Regulation Authority. Westpac is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. Westpac Europe Limited is a company registered in England (number 05660023) and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority.

This communication is being made only to and is directed at (a) persons who have professional experience in matters relating to investments who fall within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order") or (b) high net

worth entities, and other persons to whom it may otherwise lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). Any person who is not a relevant person should not act or rely on this communication or any of its contents. The investments to which this communication relates are only available to and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such investments will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely upon this communication or any of its contents. In the same way, the information contained in this communication is intended for "eligible counterparties" and "professional clients" as defined by the rules of the Financial Conduct Authority and is not intended for "retail clients". With this in mind, Westpac expressly prohibits you from passing on the information in this communication to any third party. In particular this communication and, in each case, any copies thereof may not be taken, transmitted or distributed, directly or indirectly into any restricted jurisdiction. This communication is made in compliance with the Market Abuse Regulation (Regulation(EU) 596/2014).

The material may contain investment recommendations, including information recommending an investment strategy. Reasonable steps have been taken to ensure that the material is presented in a clear, accurate and objective manner. Investment Recommendations for Financial Instruments covered by MAR are made in compliance with Article 20 MAR. Westpac does not apply MAR Investment Recommendation requirements to Spot Foreign Exchange which is out of scope for MAR.

Unless otherwise indicated, there are no planned updates to this Investment Recommendation at the time of publication. Westpac has no obligation to update, modify or amend this Investment Recommendation or to notify the recipients of this Investment Recommendation should any information, including opinion, forecast or estimate set out in this Investment Recommendation change or subsequently become inaccurate.

Westpac will from time to time dispose of and acquire financial instruments of companies covered in this Investment Recommendation as principal and act as a market maker or liquidity provider in such financial instruments.

Westpac does not have any proprietary positions in equity shares of issuers that are the subject of an investment recommendation.

Westpac may have provided investment banking services to the issuer in the course of the past 12 months.

Westpac does not permit any issuer to see or comment on any investment recommendation prior to its completion and distribution.

Individuals who produce investment recommendations are not permitted to undertake any transactions in any financial instruments or derivatives in relation to the issuers covered by the investment recommendations they produce.

Westpac has implemented policies and procedures, which are designed to ensure conflicts of interests are managed consistently and appropriately, and to treat clients fairly.

The following arrangements have been adopted for the avoidance and prevention of conflicts in interests associated with the provision of investment recommendations.

- i. Chinese Wall/Cell arrangements;
- ii. physical separation of various Business/Support Units;
- iii. Strict and well defined wall/cell crossing procedures;
- iv. a "need to know" policy;
- v. documented and well defined procedures for dealing with conflicts of interest;
- vi. reasonable steps by Compliance to ensure that the Chinese Wall/Cell arrangements remain effective and that such arrangements are adequately monitored.

**U.S.:** Westpac operates in the United States of America as a federally licensed branch, regulated by the Office of the Comptroller of the Currency. Westpac is also registered with the US Commodity Futures Trading Commission ("CFTC") as a Swap Dealer, but is neither registered as, or affiliated with, a Futures Commission Merchant registered with the US CFTC. Westpac Capital Markets, LLC ("WCM"), a wholly-owned subsidiary of Westpac, is a broker-dealer registered under the U.S. Securities Exchange Act of 1934 ("the Exchange Act") and member of the Financial Industry Regulatory Authority ("FINRA"). This communication is provided for distribution to U.S. institutional investors in reliance on the exemption from registration provided by Rule 15a-6 under the Exchange Act and is not subject to all of the independence and disclosure standards applicable to debt research reports prepared for retail investors in the United States. WCM is the U.S. distributor of this communication and accepts responsibility for the contents of this communication. All disclaimers set out with respect to Westpac apply equally to WCM. If you would like to speak to someone regarding any security mentioned herein, please contact WCM on +1 212 389 1269. All disclaimers set out with respect to Westpac apply equally to WCM.

Investing in any non-U.S. securities or related financial instruments mentioned in this communication may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the SEC in the United States. Information on such non-U.S. securities or related financial instruments may be limited. Non-U.S. companies may not subject to audit and reporting standards and regulatory requirements comparable to those in effect in the United States. The value of any investment or income from any securities or related derivative instruments denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related derivative instruments.

The author of this communication is employed by Westpac and is not registered or qualified as a research analyst, representative, or associated person under the rules of FINRA, any other U.S. self-regulatory organisation, or the laws, rules or regulations of any State. Unless otherwise specifically stated, the views expressed herein are solely those of the author and may differ from the information, views or analysis expressed by Westpac and/or its affiliate.

