RECENT ACTIVITY IN SHADOW BANK LENDING TO THE DOMESTIC PROPERTY MARKET

As domestic banks have tightened lending standards over the past two years, non-regulated entities have become more active in lending to parts of the property market. The available evidence suggests non-bank mortgage lending is growing only slightly faster than banks' lending and is still a much smaller segment of the market. Similarly, non-bank lending to property developers – which is more difficult to measure – is growing faster than banks' lending, but is still a small share of that market and has only partly filled the gap created by banks' pullback. There are several factors constraining shadow bank lending to the property market including limits around banks' provision of warehouse financing, restricted access to debt funding and the time needed to scale up lending operations.

Banks and other authorised deposit-taking institutions (ADIs) have tightened standards for lending to residential and development property markets over the past two years. For residential mortgages, this has been driven by APRA's directive to improve underwriting standards, with ASIC's reviews of practices in certain segments also contributing.[1] Many banks have also, of their own volition, pulled back from lending against foreign income due to some cases of fraud. Domestic bank lending for property development has tightened following a reassessment of the associated risk, in part prompted by supervisory attention. The tightening has been widespread, though the extent has varied considerably by location.

Alternative providers, including foreign banks and non-ADIs ('shadow banks') have increased lending to some areas of the property sector as the domestic ADIs have pulled back. If this increase in lending by non-ADIs is happening in sufficient scale it would raise several concerns:

- Non-ADIs are not subject to the same underwriting standards as ADIs;
- Lending by the sector can indirectly affect bank asset quality if it (temporarily) inflates asset values or causes ADIs to weaken underwriting standards;
- Such 'leakage' diminishes the effectiveness of macroprudential restrictions imposed on ADIs; and
- There is less visibility on their activities, given reporting requirements are much less onerous.

Non-ADIs that may extend credit to the property market

There are several finance vehicles that fall outside the prudential framework but which may provide finance to home buyers or developers. The most prominent are:

1. Registered Financial Corporations (RFCs) – non-ADIs whose principal business is to intermediate debt finance. These entities are not regulated by APRA, but must be registered with APRA if their assets exceed $5 million and must report regularly if their assets exceed $50 million.[2] RFCs lend to both households and businesses.
2. Wholesale Funders (WSFs) – non-ADIs that are primarily funded by securitisation. WSFs are not regulated by APRA and only report asset data to APRA on a voluntary basis.[3] These firms predominantly provide residential mortgage finance, given the difficulty of securitising riskier loans.[4]
3. Funds managers and other providers of mezzanine debt – some firms offer funds with a mandate to lend to property developers. This category could also include wealthy individuals forming syndicates, trusts and super funds. There is no systematic reporting regime for these firms.
4. Private equity (PE) firms – PE firms often have a broad investment mandate and have been reported to be lending to developers (and, in some cases, to foreign buyers of apartments).

In addition, liaison indicates that property developers sometimes offer a form of bridging (or 'vendor') finance to customers that are unable to obtain bank finance, in order to ensure settlement occurs. This type of activity has increased of late, typically by developers with larger balance sheets. However, it appears this type of financing remains limited and developers are reluctant to expand in this way.

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1 A chronology of housing markets measures by CFR agencies is detailed in D17/101331.

2 The onus of determining if an RFC is large enough to report is on the RFC. FS is working with APRA to check on some entities that do not report but may be extending credit.

3 Following a push by APRA over the past year, there has been a significant increase in the number of voluntary reporters. APRA is also pursuing legislative reform to make WSF registerable.

4 Some prominent examples of WSFs are Resimac and Pepper. Prominent RFC's include Firstmac and Liberty.

What do the data imply about non-ADI lending to the property market?

Residential mortgage lending

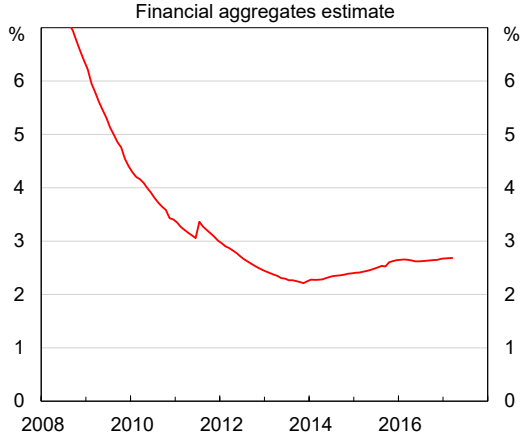
There are two ways to approximate how much credit is being extended by non-ADIs to home buyers:

1. Use APRA data on the assets of RFCs and WSFs: this approach does not capture all entities, but coverage has improved over the past year due to APRA's efforts to capture the largest entities. Nevertheless, concerns remain.
2. Use issuance data and the RBA's Securitisation database to track RMBS, the main liability used to fund loans extended by WSFs: this approach assumes that the vast majority of non-ADI mortgages are securitised (and that this share is relatively stable over time). While this assumption is restrictive, ABS data on all securitisation vehicles (including bank-owned vehicles) provide some support: asset-backed securities have consistently accounted for over 90 per cent of securitisers' liabilities since 2007.

The asset data are shown in Graph 1 (courtesy of Ben Jackman, IMS). There are two key messages from these data. The first is the small scale of non-ADI lenders (noting this is a lower bound) – less than 3 per cent of outstanding mortgages are funded by non-ADIs. The second is that non-ADIs' market share has not grown over the past year, though did rise over 2015 after banks tightened prudential standards. These data can be complemented by APRA data on RFC housing loan approvals. These data show a rise in RFC's share of *new* credit extension, but their share of new approvals is less than their estimated share of credit outstanding (Graph 3 below). Some part of this could be because the approvals data capture fewer RFCs.

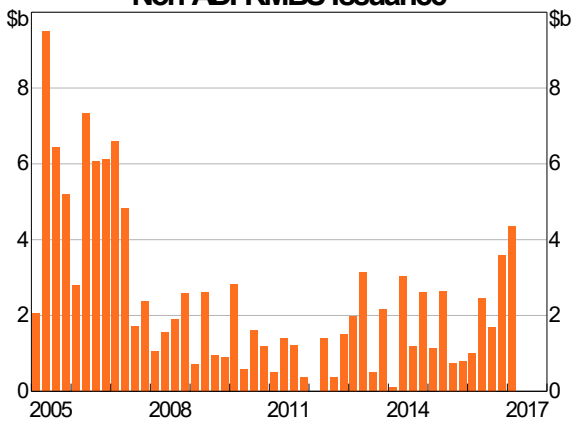
Data on the liabilities of non-ADIs provides a similar perspective, but imply a slightly smaller non-ADI sector. SMS estimates that the stock of outstanding RMBS issued by non-ADIs is only $19 billion – just over 1 per cent of housing credit outstanding. (This figure is likely to be understated a little.) Issuance of RMBS by non-ADIs has increased in the past six months (Graph 2), but it remains a fraction of new housing loan approvals each quarter (less than 4 per cent). Moreover, a significant part of the recent increase is likely to reflect firms reducing their stock of warehoused loans as demand for RMBS recovered from the unfavourable conditions in early 2016.

Graph 1
Non-ADI Share of Housing Credit
Financial aggregates estimate



Sources: APRA; RBA

Graph 2
Non-ADI RMBS Issuance



Source: RBA

Mortgage lending to those relying on non-resident income

Banks have also pulled-back from lending to borrowers who rely on non-resident income over the past year. Some foreign bank branches (generally with close ties with the borrower's home country) have partly filled this space, and there are reports of domestic non-bank lenders (such as private equity or managed funds) also providing additional finance. For example, domestic property and investment services firm, Ausin, has very recently secured funding from US private equity firm Blackstone to extend to customers who cannot source funding from the banks.[5] However, there are no data to accurately track the scale of this type of lending and it is almost certainly no more than a couple of percent of total housing loans.

5 See AFR article.

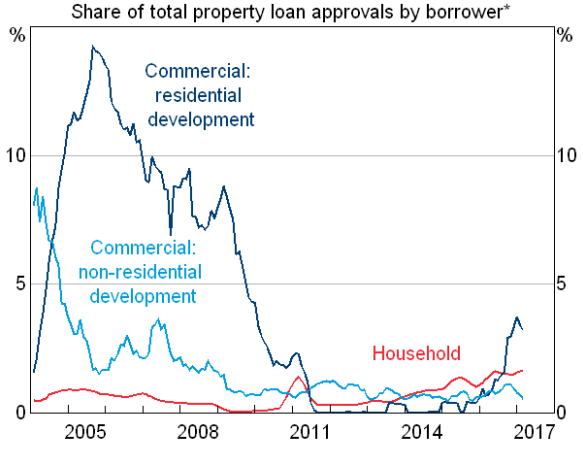
Property development lending

Assessing non-bank lending for property development is more challenging compared with residential mortgages because there are more channels to distribute loans, and these loans are subject to less regulation (e.g. there are no responsible lending rules). Developments loans are also much larger than residential mortgages. It is also likely that while some sources of data point to a recent increase in non-ADI lending, loans approved or pledged in the past year are yet to be fully drawn down.

An additional complexity with monitoring lending to developers is that it can be either senior or junior debt. Development financing has typically involved up to 70 per cent of senior lending being provided by banks. Developers then often use mezzanine finance to increase leverage of the project, with this usually sourced from non-banks. Compared with senior finance, this form of debt has a junior claim on cash flows and thus attracts a higher interest rate, but does not share in the profits like an equity claim.[6]

Data on property loans approved by RFCs are collected by APRA. These data show approvals have picked-up sharply as a share of loan approvals to residential property developers since early 2016 (Graph 3). Despite this, RFCs' share of that market is still very small at just over 3 per cent.

Graph 3
RFC Property Loan Approvals
Share of total property loan approvals by borrower*



* Six month rolling average
Sources: APRA; RBA

Data on non-RFC funding to property developers are more scant. An upper bound can be formed from various ABS data, but these estimates likely include a large amount of non-development lending:

- Managed funds' loans & placements to non-financial corporations: the stock is estimated to have remained around $30 billion over the past couple of years and only a small portion is likely to be for development. These figures include lending by superannuation funds; this amounted to only $430 million in drawn exposures at the end of 2016 (much smaller than equity exposures to the sector), but liaison suggests this may grow significantly over the coming year.
- PE firms: total assets in 2015–16 were only $10 billion, and almost all of these are recorded as securities (either equity or debt), which is unlikely to include exposures to development projects.

Since the data on lending to developers by companies (other than RFC's) is scant, liaison information can be useful. The key messages from this are:[7]

- Developers are sourcing alternative financing from both reporting RFCs and managed funds; these firms have histories of providing mezzanine finance but have increased their activity and moved into providing senior debt as banks have pulled back.
- The alternative market appears to be most established in Melbourne, where there is still strong conviction among developers about the outlook but the pull back by major banks has been relatively pronounced (particularly in inner Melbourne).
- The funding for these firms has historically been sourced from wealthy individuals or families, other developers or construction firms. Of late, there has been some funding from a range of institutional investors (super funds, foreign pension funds, hedge funds and PE firms).
- Deal characteristics vary widely, but non-ADIs often impose weaker conditions for senior debt than banks while charging higher interest rates. Meanwhile, typical interest rates on higher credit risk

6 For a more detailed outline of how property development finance can be structured see Read (2017).
7 See D17/134587 (restricted) for additional liaison information on non-bank lending to the property market.

lending such as mezzanine debt are reported to be 15-20 per cent, having increased from the low teens prior to the tightening in liquidity by the major banks.

- The growth in such finance has not offset the pull-back by banks (as evidenced both by perceptions of the availability of finance and its cost rising).

What capacity is there for this lending to grow?

There are some key constraints on the ability of non-ADIs to expand their presence rapidly:

1. Warehouse funding of mortgages

It often takes non-ADIs around a year to originate enough mortgages to create a securitisation of sufficient scale. During this time, they typically rely on warehouse funding from the major banks (which is repaid when the loans are sold). It is unlikely that banks would be willing to substantially increase such financing.

The reported data on credit limits and credit extended under warehouse funding arrangements are unfortunately of insufficient quality to be informative about the size of such facilities.[9] However, conversations with APRA suggest that the growth rate in reported securitisation exposures is more useful.[10] These exposures have risen only a little over the past year.

Incoming APRA securitisation regulations will also increase the cost to banks of providing warehouse funding, by requiring them to hold more capital against it. In addition, APRA has stated that it will monitor growth in banks' warehouse funding of other lenders, to ensure these don't grow at a materially faster rate than banks' own mortgage books nor that lending standards for such loans are materially weaker than its expectations for prudentially regulated entities.

2. Ability to leverage

ADIs are able to scale up lending quickly because of both the money multiplier process (as credit is extended by the banking system it creates additional deposit funding for the system) and their access to short-term wholesale funding (STWF) markets. In contrast, there is no money multiplier process operating for funds loaned by the non-ADI sector and the sector has limited access to STWF. The main sources of funding – RMBS and equity – are more difficult to scale up quickly.

3. Staffing

While non-ADI distribution networks are very scalable, processing loan applications is less scalable. Non-bank lenders would need to adjust their staffing broadly in line with loan origination volumes and this may take months to occur. The complexity involved in assessing non-residential deals also requires specialist skills, but there are some examples of staff transferring from banks to non-ADIs.

Assessment

Non-ADIs have increased their share of mortgage lending to households over the past two years, as banks' underwriting standards have tightened. However, their share of the market remains very small and there are clear constraints – particularly around funding – to this increasing rapidly. Non-ADIs share of lending to property development appears to have increased more rapidly over the past year, although the data are of lesser quality. Importantly, non-ADIs do not appear to have been able to offset the pull-back in lending by banks. Many of the investors backing such lending have been involved in the market for some time. To the extent that they are providing mezzanine finance and demanding relatively attractive returns for this, the financial stability concerns may be less (as the high rates suggest they are aware of the risks and the provision of senior finance by banks means an APRA-regulated entity is performing due diligence on the project). In contrast, moves by such lenders into the provision of senior debt warrants closer attention.

Michael Gishkariany, David Norman and Tom Rosewall / Australian Financial System and Regional & Industry Analysis / 5 May 2017
(With invaluable comments and assistance from IMS, HBC and DM)

9 To the extent these data can be trusted, they show that all securitisers (including those owned by ADIs) have less than $10 billion in unused RMBS facility limits.

10 Such exposures are broader than warehouse facilities. In particular, they include the junior tranches of ABS if they are retained by banks and any derivative or swap arrangements entered into with SPVs.

From: YAP, Calvin
Sent: Friday, 23 June 2017 12:41 PM
To: GISHKARIANY, Michael
Cc: NORMAN, David
Subject: RE: FinTech outline (2).docx [SEC=UNCLASSIFIED]

Thanks Gish,

You have made a number of good points which I will add to the note. I have also been building up some more details on the individual players in Australia, which I've added to the non-ADI tracking sheet (I've also moved this to TRIM: D17/214451)

Just in response to a few of your questions:

- Crowdfunding is excluded because it doesn't involve debt, and has different risks. The CCAF surveys include equity-based, reward-based, donation-based and profit sharing crowdfunding, which are all very different models to P2P lending. I've subtracted these categories from totals where possible.
- The conflict of interest arises where the provider approves loans but passes on credit risk to investors (similar to misaligned incentives in securitisation). There is an incentive to lower credit standards to increase origination revenue since they don't bear the cost of bad debts, although this would only work in the short-run.
- Most P2P platforms in Australia are currently only available to institutional investors which explains the high share of institutional funding. You are right that retail share is likely to increase as the industry develops and investors get access. In the US, retail investors fund around 50% of P2P consumer loans, while in China it is predominantly funded by retail investors.
- Banks could be funding these players because they target different segments of the market which would otherwise find it difficult to obtain loans (for example, Westpac refers businesses that are not eligible for loans to Prospa). Banks are likely to find it difficult to compete directly in this space due to legacy systems and capital/regulatory requirements (although NAB is attempting to with QuickBiz). As you suggest, banks may also be motivated by desire to keep abreast of tech developments, and they have also invested in a range of non-lending FinTech companies.

Calvin

From: GISHKARIANY, Michael
Sent: Friday, 23 June 2017 10:31 AM
To: YAP, Calvin
Cc: NORMAN, David
Subject: FinTech outline (2).docx [SEC=UNCLASSIFIED]

Hi Calvin,

This looks to be very good shape. I have put through some comments (looks like a lot but not much in substance) and only have minor suggestions to the structure.
I think this will be a very informative note.

Happy to discuss at any time suitable

Cheers,
Gish

Outline: FinTech Credit

1. Introduction/overview

Define scope of this note as FinTech credit: "credit activity facilitated by electronic platforms" (BIS WG definition). This includes marketplace/P2P lenders where borrowers are matched directly with lenders, but also balance sheet lending and invoice trading through electronic platforms. Exclude equity/reward/donation-based crowdfunding which involves different risks.

- Concerned with FS implications, payments implications covered by previous PY work.
- Data sources are limited – providers are in non-regulated sectors, hence we are reliant on voluntarily reported data. Two main sources:
  - ASIC's survey of marketplace lending providers conducted in November 2016, covering 2016 FY. Survey responses from nine entities.
  - Asia-Pacific Alternative Finance Benchmarking Report, produced by the Cambridge Centre for Alternative Finance (CCAF) and USyd Business School. Wider coverage: 14-33 surveyed platforms in Australia. First report released in March 2016 (covering 2013-15), next update due in Q2 2017. There are also equivalent reports for other regions.
- FinTech credit lending makes up a very small share of lending, but this has the potential to increase to a larger share as it has in countries where it is more established.
- Benefits include credit provision to underserviced market segments (e.g. small businesses), more efficient credit assessment processes, greater diversification of funding sources for the economy.
- FS risks: banks' direct linkages are limited, however, as FinTech market share grows this could place downward pressure on bank profitability and put pressure on banks to reduce credit standards. Questions around quality of loans written by FinTechs (particularly given misaligned incentives), as well as potential procyclicality of FinTech credit provision.

2. FinTech Credit in Australia

- FinTech lending represents a tiny portion of market, but with rapid growth over the past few years (need to provide context with overall lending volumes).

Lending Volumes (A$m)

	2013	**2014**	**2015**	**2016FY**
CCAF/USyd	13	65	373	
ASIC				156

- There are conflicting data on the types of lending. According to the CCAF/USyd survey, business credit dominates (primarily balance sheet business lending and invoice trading). ASIC finds the reverse. Differences likely due to types of lenders responding and different categorisations.

	CCAF/USyd	ASIC
Consumer	16%	83%
Business	84%*	17%

* Includes invoice trading

- In Australia, balance sheet lending is the predominant business model. According to CCAF/USyd study, 82% of lending is balance sheet lending or invoice trading. ASIC reports that "in most cases" the investor does not directly enter into a contract with the borrower (loan contract is between the provider and the borrower).
- Both surveys point to high levels of institutional funding in Australia. Contrasts with most other markets where retail investors make up larger share of funding (most P2P platforms in Australia are currently only available to institutional investors). ASIC respondents reported a number of equity investors in their business, including banks, credit unions and other institutions. Only two respondents indicated that they securitise loans, although may be more in future.

Commented [CY1]: Xpress Super offering RateSetter investment option https://www.bankingday.com/nl06_news_selected.php?act=2&nav=13&selkey=22598&utm_source=daily+email&utm_medium=email&utm_campaign=Daily+Email+Article+Link

Types of Investors	CCAF/USyd	ASIC
Retail	21%	22%
Wholesale	79%	65%
Trustee		13%

- If FinTech lending continues to grow rapidly in Australia, it could become a significant part of certain segments of the market. FinTech lending is much more established overseas, particularly in the US, the UK and China.
  - Lending Club is the largest provider of personal loans in America. According to Lending Club, 24% of all personal loans in the US were provided on a marketplace lending platform.
  - Dutch mortgages: major three banks new mortgage lending share has fallen below 50% due to entrants of new non-bank players

Fintech volumes per capita (US$)	
US	107.3
UK	73.8
China	74.5
New Zealand	59.4
Australia	14.4
Canada	9.3

3. Financial Stability Risks

Direct Linkages to Banks

- Banks' direct exposures are limited due to small size of FinTech industry. Banks provide some funding to online lending platforms - reports that lenders have had difficulties finding retail funding for loans, and that institutional investors have made up some of the shortfall. No data on bank exposures, but some reported examples include:
  - NAB providing $200m warehouse funding to zipMoney
  - Listed P2P lender DirectMoney receiving funding from Macquarie
  - Auswide Bank offering $60m in personal loans via P2P lender MoneyPlace, owns 20% stake
- Bank have equity investments or partnerships with some of these platforms:
  - Westpac has equity stake in Society One through venture capital manager Reinventure Group, and a distribution partnership with Prospa (receives a referral fee)
  - NAB Ventures invests $50m in FinTech, and has launched its own product, QuickBiz Loan

FinTech Impact on Credit Standards

- Concerns around the credit quality of FinTech loans given the focus on speed and convenience. The simplified credit evaluation process may miss important information, and is untested through the cycle. Note: will check out a few major players to see how long an application takes and the information required.
- Some data from ASIC survey: 96% of loans unsecured, platforms expect default rate of 2.53%, arrears represent 3.15% of total loans outstanding. Around 80% of loans at rates between 8-15%.
- Credit quality concerns are compounded by the misaligned incentives of these platforms, to the extent that credit risk is passed on to investors (similar to misaligned incentives in securitisation). ASIC survey: 83% of revenue derived from origination, although this partly reflects strong growth relative to small outstanding loan book.
- Banks may adopt FinTech credit evaluation processes, particularly if they lose market share (NAB QuickBiz is one example). This would be beneficial if this causes banks to introduce more efficient processes, but there is a risk that credit quality will be negatively affected.

FinTech Impact on Bank Profitability

- As FinTechs become a larger share of the market they could also affect bank profitability. These lenders benefit from regulatory arbitrage – while not a new problem, technology increases reach of platforms and speed at which they can expand without physical branch networks (i.e. low barriers to entry). This also potentially reduces the effectiveness of macro prudential measures.
- Less of an issue if FinTech lenders target underserviced segments, however, if they compete directly with banks then this could put downward pressure on lending rates. For example, if FinTech lenders expand in mortgage markets as in the Netherlands, profit impact could be substantial. Note: need detail on importance of different types of lending to bank profits. Might also be worth trying to find examples of the rates charged by these platforms.
- There are claims that strong competition in the US have driven down returns – e.g. Orchard US consumer marketplace lending index returns down to 3.95% last year from 8.71% in 2014.

Credit Availability through the Cycle

- Lower concentration of credit in the banking sector might be beneficial. FinTech platforms are less interconnected than banks, and generally do not entail maturity mismatch (there is a liquidity/maturity mismatch from platforms with inappropriate investment guarantees, however, according to ASIC survey guarantees appear to be limited in Australia).
- Concerns that FinTech credit may be prone to pro-cyclical credit provision. Platforms are reliant on investor confidence and hence subject to investor herding and swings in credit risk appetite.
- Potential triggers for a pullback in credit provision include a significant event of fraud or misconduct affecting the reputation of the industry (e.g. Lending Club governance scandal)

4. Conclusion

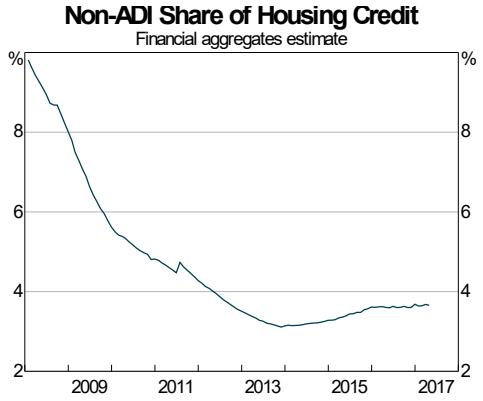
BUDGET MEASURES BRIEFING NON-ADI LENDING CONTRIBUTION

Non-ADI lending to property:

- Non-bank **mortgage lending** is growing only slightly faster than banks' lending and is estimated to be less than 4 per cent of outstanding mortgages.
- Non-bank lending to residential **property developers** – which is more difficult to measure – is estimated to be growing faster than banks' lending, but is still a small share of that market and has only partly filled the gap created by banks' pullback.

Non-bank lenders are constrained by their reliance on bank warehouse funding and/or securitisation markets.

- APRA is monitoring the growth in banks' warehouse funding of other lenders, and the lending standards of loans held within warehouses. Incoming **APRA securitisation regulations** will increase the cost of providing warehouse funding through higher capital requirements.



BRIEFING: NEW APRA POWERS OVER NON-ADI LENDERS – 18 JULY 2017

Summary

- Public consultation on the Government's draft non-ADI lenders legislation and explanatory memorandum opened on Monday 17 July. The consultation period will close on 14 August 2017.
- The proposed changes to the *Banking Act 1959* will give APRA rule-making powers over non-ADI lending activity that poses a risk to financial stability. The changes to the *Financial Sector (Collection of Data) Act 2001 (*FSCODA) aim to capture all non-ADI lenders engaged in material lending activity.
- The draft FSCODA changes should significantly improve the regulators' (and our) ability to monitor lending activity in the shadow banking sector, and are designed to be robust to innovation in the financial system. APRA's new rule-making powers will be a useful safeguard should shadow bank lending to the housing sector materially increase.

Background

In the May Budget, the Government announced new measures to reinforce APRA's macroprudential powers, firstly by inserting an objects clause in the Banking Act that would make explicit APRA's ability to take action on systemic risk grounds (including based on geographic concerns), and secondly by giving APRA powers over non-ADIs for financial stability purposes.[1] The legislation to be introduced next week addresses the second measure; the objects measure will be progressed on a slightly later timeframe.

Draft changes to the *Banking Act 1959*

APRA will be able to make rules relating to the lending activity of non-ADI lenders, where "APRA considers that an activity or activities engaged in by one or more non-ADI lenders in relation to lending finance materially contribute to risks of instability in the Australian financial system".

- In making its rules, APRA will be able to vary requirements by non-ADI lenders, either individually or as a class. Given ASIC's regulatory role with respect to non-ADI lenders, APRA will be required to consult with ASIC to ensure that rules are appropriately targeted and coordinated across regulators.
- Lending finance will be defined as "any of the following: (a) the lending of money, with or without security; b) the carrying out of activities, whether directly or indirectly, that result in the funding or originating of loans or other financing".
- APRA will be provided with powers of direction over non-ADI lenders; failure to comply will be an offence with penalties (including Court-administered penalties under the *Crimes Act 1914).*

Draft changes to FSCODA

At present significant loopholes exist, which mean that some large non-ADI lenders (including wholesale funders, brokers, managed funds and investment banks) are not required to report their activities to the regulators. Changes to the FSCODA and the Banking Act seek to bring all entities who engage in material lending activity into the net[2]:

- the proposed reporting threshold will be $50 million in lending and/or Australian assets;
- the FSCODA test will apply to the group i.e. bringing off balance sheet activity into scope;
- the broader concept of finance will include companies that facilitate the 'provision of finance', bringing brokers and managed funds into scope.[3]

As well, APRA will be able to make determinations relating to specific corporations, or classes of corporations, to bring them into the FSCODA net. This is an important safeguard given the dynamic nature of the financial system and practical difficulties of crafting legislation to cover all material non-ADI lenders.

Lamorna Rogers
Acting in Senior Manager
Households Businesses & Credit
Financial Stability Department
18 July 2017

1 See: Restricted Briefing FS and DM: Budget 2017/18 - Changes to Regulator Tools to Address Housing Risks (May 2017).
2 Given constitutional limitations to Commonwealth powers, doubt remains as to whether all trust structures would be in scope.
3 'Finance' is intended to cover a wider variety of lending than the concept of 'credit', including repos and mezzanine finance.

BUDGET MEASURES

APRA powers to address systemic risk:

- Government has initiated a public consultation on its non-ADI lenders legislation; ends on 14 August.
  - Changes to the *Banking Act 1959* will give APRA rule-making powers over non-ADI lenders and lending activity that 'materially contribute to risks of financial instability.'
    - Treasurer has clarified this is a 'reserve' APRA power.
  - Changes to the *Financial Sector (Collection of Data) Act 2001 (*FSCODA) aim to capture all non-ADI lenders engaged in material lending activity.
    - Should significantly improve regulators' (and our) ability to monitor lending activity in the shadow banking sector.
- Background on non-ADI lending to property:
  - non-ADI residential **mortgage lending** growing slightly faster than ADI lending (≈ <4 % of outstanding mortgages).
  - Non-ADI lending to residential **property developers** growing faster than banks' lending but still small share; only partly filled the gap as banks have pulled back from this market.
  - Non-ADI lenders **constrained** by reliance on banks for warehouse funding, limited access to debt financing.
    - APRA is monitoring the growth in banks' warehouse funding and the lending standards of warehoused loans
    - Incoming **APRA securitisation regulations** will increase the cost of providing warehouse funding through higher capital requirements.
- A new objects clause will later be inserted in the *Banking Act* to clarify APRA's powers to take prudential action to address systemic risk, including where the risk is located in one region e.g. Sydney.

Bank culture and accountability. APRA given strengthened powers to:

- Dismiss executives and directors if their behaviour falls short of expectations, strengthening the existing requirement that senior executives are 'fit and proper'.
- Impost new civil penalties (of up to $200m) to ensure ADIs conduct their business in accordance with expectations.
- Limit ADI executives' incentive remuneration such that a minimum of 40 per cent of executives' variable remuneration is deferred for at least four years (60 per cent for senior executives).

Dispute resolution:

- Establishment of the Australian Financial Complaints Authority (AFCA). This will be a 'one-stop-shop' for free and timely external dispute resolution for consumers, replacing the Financial Ombudsman Service, the Credit and Investments Ombudsman and the Superannuation Complaints Tribunal. The AFCA will be industry funded, consistent with the current funding arrangement for the three bodies.

APRA funding:

- $4.2 million over four years to help implement the accountability measures.
- An additional $28.6 million over four years to enhance APRA's oversight of bank culture and corporate governance and "update its infrastructure and tools".
- A further $2.6 million of funding to exercise new powers over lenders outside the traditional banking industry.

Financial Stability Department
2 August 2017

RESERVE BANK
OF AUSTRALIA

Shadow Bank Property Lending

Calvin Yap

Australian Financial System

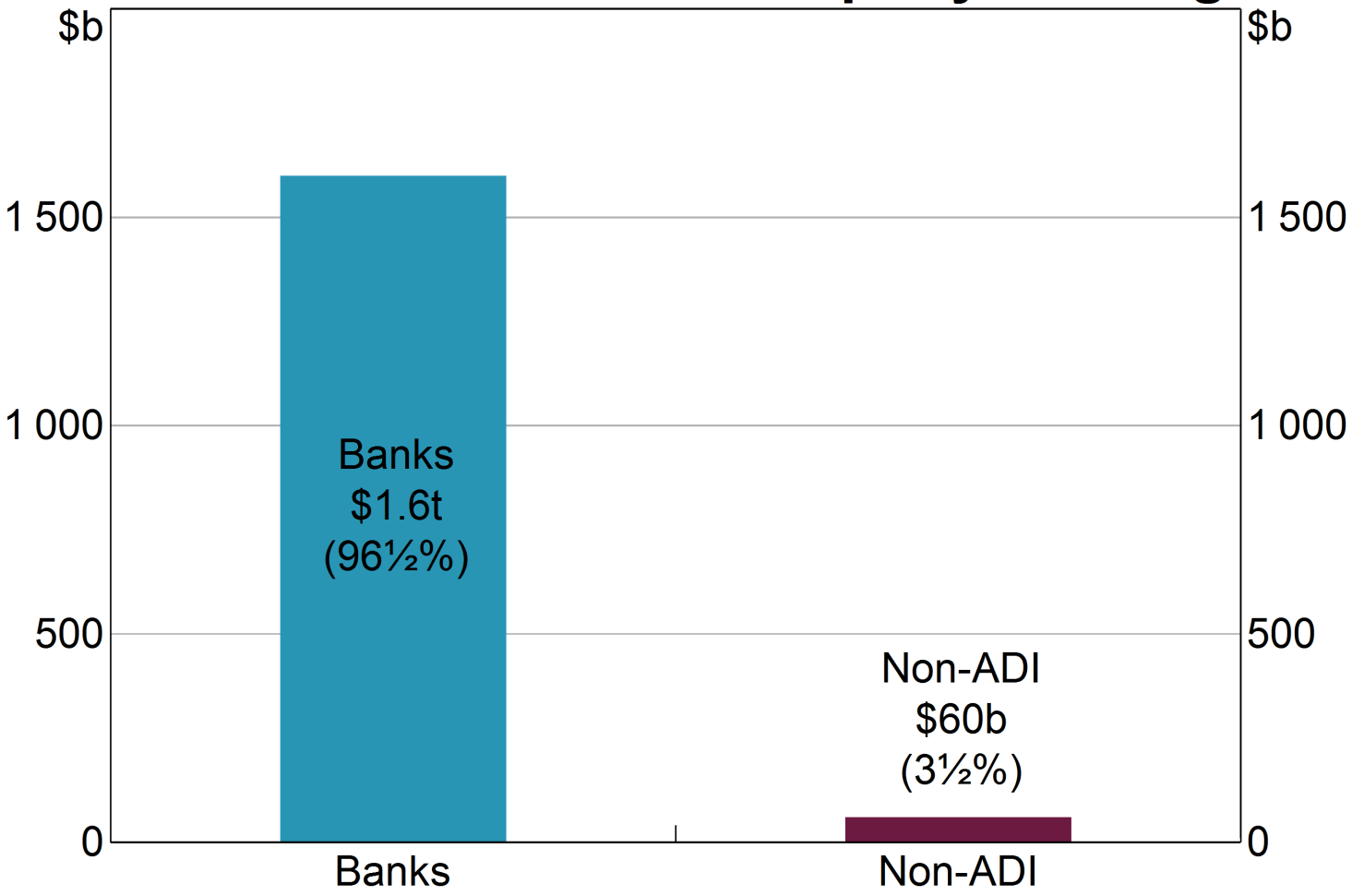
RESERVE BANK
OF AUSTRALIA

Non-bank Sources of Finance

- **Registered Financial Corporations (RFCs):** non-ADIs whose principal business is to intermediate debt finance
- **Wholesale funders:** non-ADIs primarily funded by securitisation
- **Other:** managed funds, private equity, property developers

RESERVE BANK
OF AUSTRALIA

Estimates of Non-ADI Property Lending



Sources: APRA; RBA

RESERVE BANK
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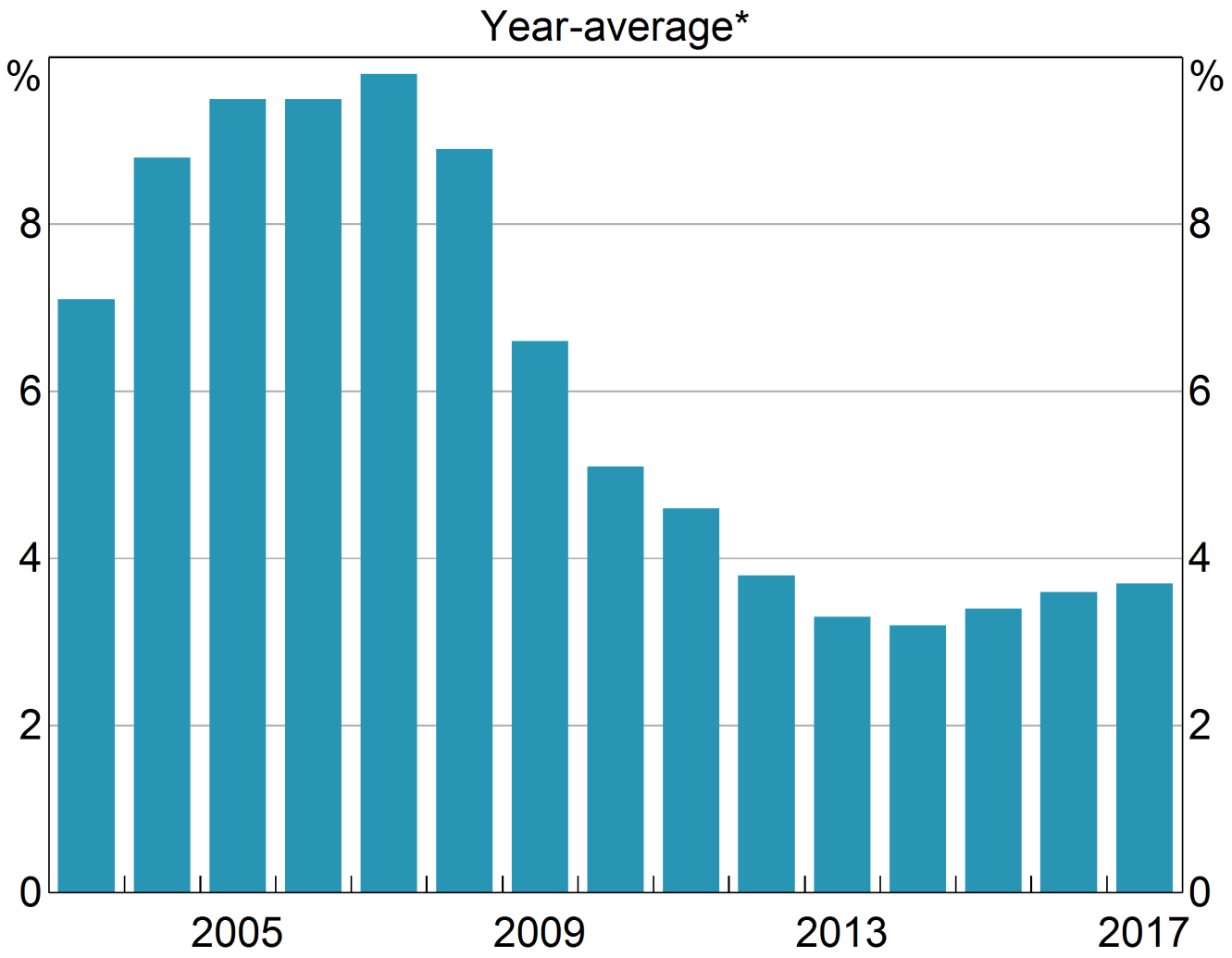
Estimated Shadow Bank Share of Housing Credit

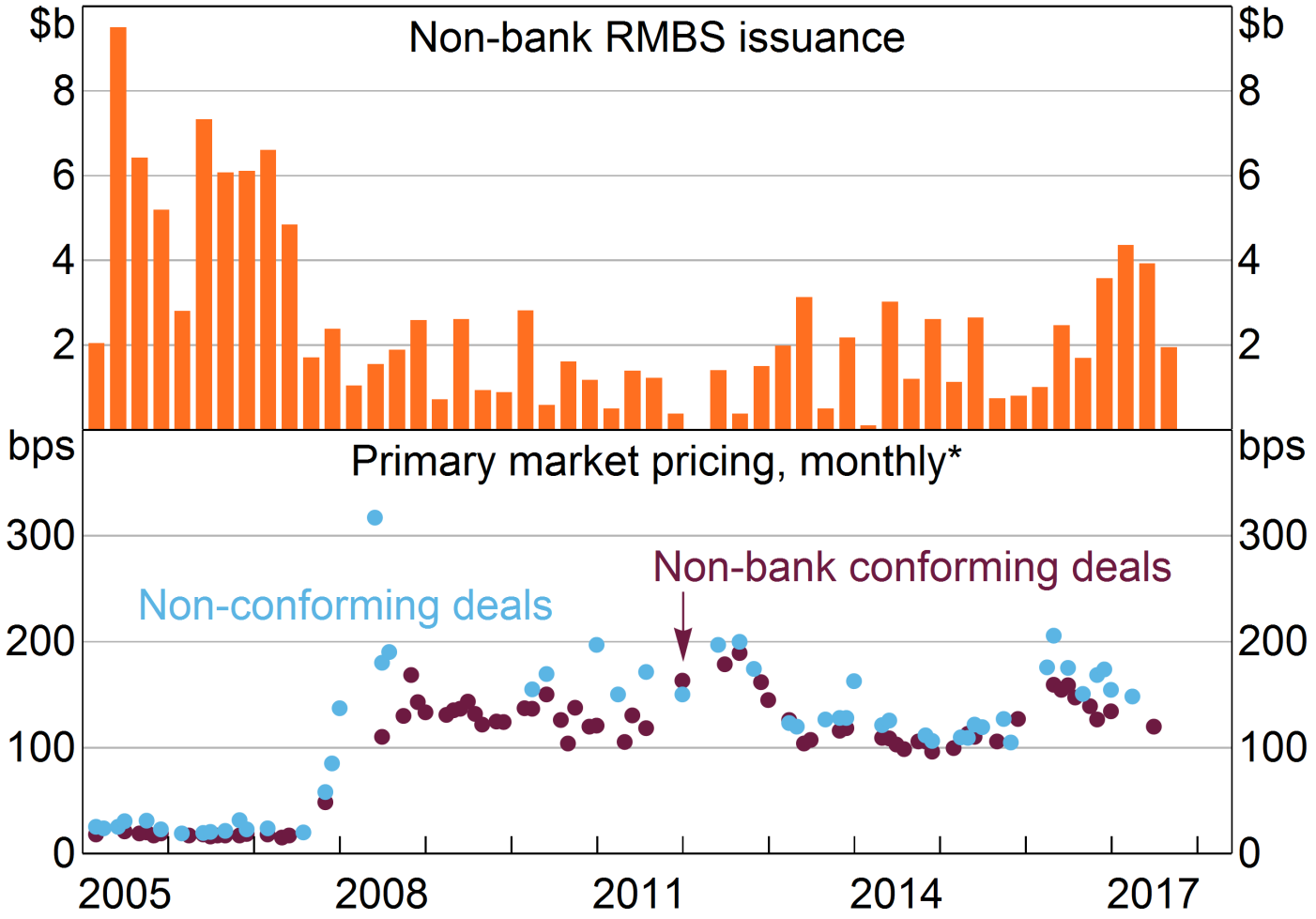


* 2017 is year-to-date average

Sources: APRA; RBA

RESERVE BANK
OF AUSTRALIA

Residential Mortgage Backed Securities



* Face-value weighted monthly average of the primary market spread to bank bill swap rate for AAA rated notes

Source: RBA

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Constraints to Growth

- Warehouse funding of mortgages
- Funding costs
- APRA's new powers over non-bank lenders

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Potential Future Funding Models

- International Institutional Investors
- Super funds
- Fintech

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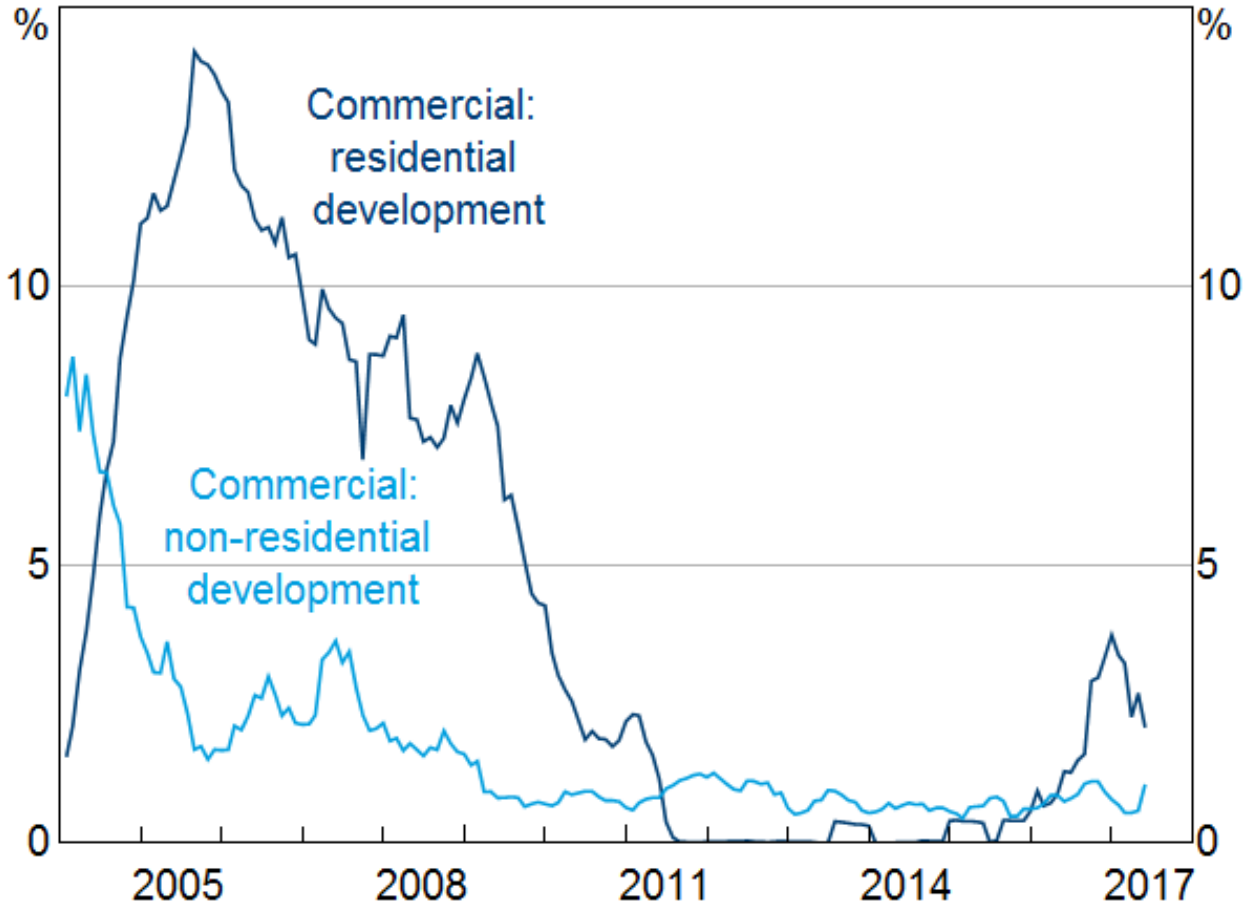
Spares

RESERVE BANK
OF AUSTRALIA

RFC Property Loan Approvals

Share of total property loan approvals by borrower*



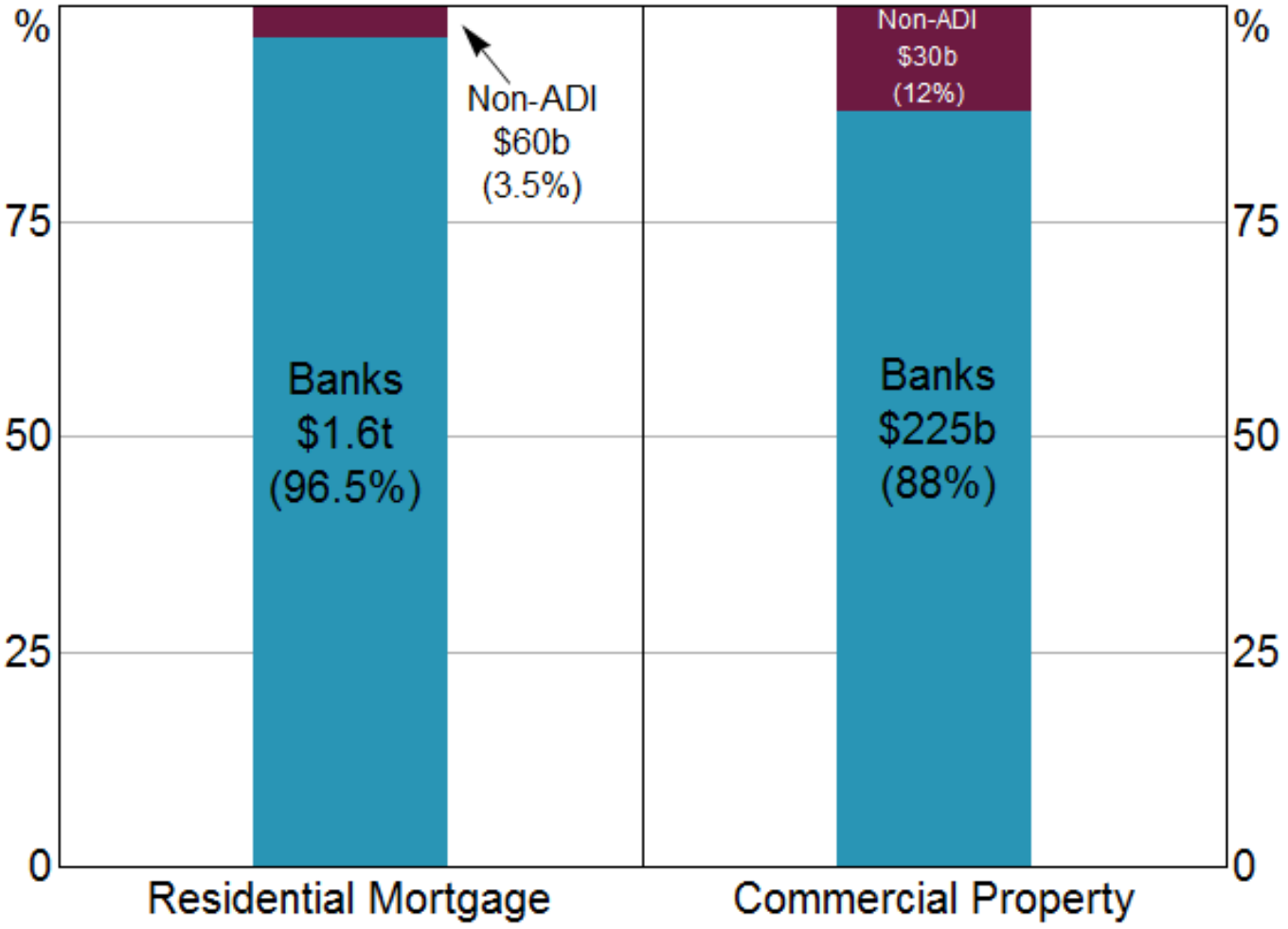
* Six month rolling average

Sources: APRA; RBA

RESERVE BANK
OF AUSTRALIA

Estimates of Non-ADI Lending to Property

Share of total lending as at 31 March 2017



BRIEF – HOUSING AND MORTGAGE MARKET DEVELOPMENTS – 1 SEPTEMBER 2017

The available evidence suggests that the non-ADI share of property lending has increased only slightly over recent years, and remains small.

- DM estimates that **shadow banks'** share of housing credit is just a few percentage points.
- factors constraining the growth of shadow bank housing lending: cost and availability of warehouse financing from banks;, the inability to access deposit funding; the relatively elevated cost of RMBS issuance and limited investor appetite for high risk RMBS. Regulatory constraints: APRA expectations re warehousing and forthcoming non-ADI lender legislation.

Households Businesses & Credit
Financial Stability Department
1 September 2017

From: @au.gt.com>
Sent: Friday, 22 September 2017 7:26 PM
To: ROSEWALL, Tom; NORMAN, David
Cc:
Subject: Grant Thornton Shadow Banking Panel - Run Sheet
Attachments: M - Shadow Banking Run Sheet - 170921.docx; A. RBA - 1503.pdf; B. FSB - 160510.pdf; C. Treasury Laws Amendment (Non-ADI Lenders Rules).pdf

Dear all

Thank for your time and agreeing to sit on our panel. As mentioned, attached is a run sheet with the proposed questions for you to prepare ahead of time. If your interested I have also attached some background research / reading.

Separately, I have asked my PA to try to see if we can find 30 mins with each panel (by city) between now and the actual day to do a quick dry run.

Please look out for a calendar invite / request for available time slots. It will be reasonably close to the actual event in light of the fact I am about to head off on annual leave for the next 10 days.

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Sydney NSW 2000
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Memorandum

Grant Thornton Australia Limited

To: Panel Members

Cc:

From:

Subject: **Bankers Bootcamp 2017 - Panel Discussion on Shadow Banking Run Sheet**

Date: 22 September 2017

1. Introduction of panel members (SJ)

- An introduction of each of the panel members will be provided. No need for bios – I will introduce name, title and your organisation given our time restrictions.

Role	Bris - 5/10/17	Syd - 10/10/17	Melb - 12/10/17	Perth - 17/10/17
Facilitator				
Banker				
Alternate Lender				
RBA		David Norman (RBA)	Tom Rosewall (RBA)	
Lawyer				

2. Topic to be introduced (SJ)

- The panel discussion will focus on Shadow Banking and whether it is perceived as a threat or an opportunity in the market given the positive impact the capital can have whilst also having the potential to impact the financial stability of the economy with increasing leverage into borrows who may not be able to afford it.

3. Defining the Topic (SJ)

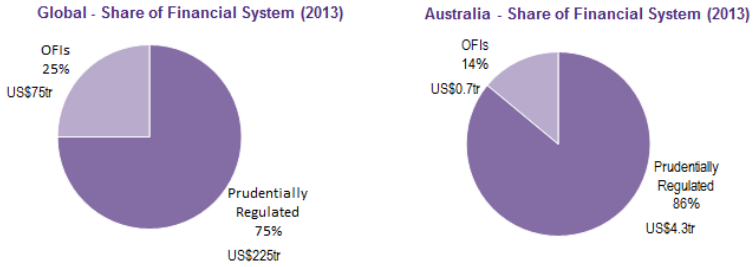
- The discussion on shadow banking will focus on corporate lending by alternate funders and intermediaries who perform bank-like activities but are not regulated as a bank.
- As the focus is on corporate lending, the discussion on shadow banking will exclude funders who provide home loans, peer to peer lending and payday lenders.

4. Key themes

- The key themes that we seek to explore during the panel discussion are:
  a. Whether the alternate lenders are having a positive effect by increasing liquidity in the market and allowing capital constrained businesses to flourish, or are they adding unnecessary leverage and increasing risk in our market (with the potential to lead to a significant fallout should there be another downturn).
  b. Is there a level playing field between the alternate lenders and regulated banks? The current regulatory framework allows non-bank lenders to have a lot more flexibility in how they can attract business and structure deals which raises the issue of whether there should there be greater regulation and oversight of non-bank lenders.
  c. As this shadow banking market continues to grow, is it expected that there will be a convergence of banks and non-bank lenders chasing the same deal? If so, how should banks respond to the threat?

5. Scene setting

- Other Financial Intermediaries (OFIs) have a relatively small share of the market in Australia compared to global statistics.



- The main intermediary within Prudentially Regulated organisations are Banks, which hold 55% of the financial systems assets in Australia compared to only c.44% globally. Accordingly, the banks play a stronger role in Australia compared to other countries globally and their share of the Australian financial system has been growing since 2002.
- Despite the banks being dominant in Australia, the OFIs in Australia have grown at a substantial rate of 10% p.a. or more for the past few years (as has the OFI market in China, Germany and Indonesia).
- With the relative size of shadow banking overseas being much larger and with the growth seen in Australia, this suggests that non-bank lending is here for the long term with the potential to grow significantly.
- However, growth may be curtailed with it being announced in this year's budget that Treasury is looking to impose greater regulation upon non-bank lenders by increasing APRA's regulatory power over non-ADIs.

(As set out in Section 7, we have attached some background research including the draft legislation).

6. Questions (All)

The below questions are to provide some insight into the direction of the discussion. We encourage all panel members to provide comment and discussion where they feel appropriate and as such the below is only intended as a guide.

AL = Alternate Lender	L = Lawyer (Brisbane and Perth only)
B = Banker	RBA = Reserve Bank of Australia (Sydney and Melbourne only)

#	Panel Member	Question
1	AL	What do you say to those who feel that the risk underwriting and approach of non-bank lenders is destabilising and opportunistic? In particular, providing very expensive capital to borrowers who on one view can least afford it.
2	B	At the moment, you don't compete for the same deals. But as this source of alternate capital continues to grow could you see a convergence in the deals both parties will be willing to underwrite?
3	L (Bris/Per)	In terms of how a bank documents a new loan agreement, what are some of the obvious differences with the terms / conditions that an alternate lender may seek in their docs by contrast.
4	RBA (Syd/Mel)	From a macroeconomic perspective, do you think the increased liquidity is a positive for our economy or does it simply add unsustainable leverage making businesses more vulnerable to a downturn/GFC?
5	B	Enforcement or receivership has become a dirty word within banks given the heightened media/political scrutiny. We know how important protecting the Bank's brand is. How has this scrutiny impacted the bank's approach to 'zombie companies'? Has this scrutiny played into the hand of alternate lenders in the corporate space?
6	AL	On one view, given banks willingness to support but usually without fresh capital in stressed business, this has led to a number of 'zombie companies' out there. Can you give us an example around how the capital you deploy could address situations such as this? As part of your answer, if you can please summarise the three key things you look for in a deal
7	L (Bris/Per)	Where a borrower starts to falter, what are the differences in how a bank versus an alternate lender may seek to rely on their docs to drive an outcome.
8	RBA (Syd/Mel)	Following the GFC and several G20 summits, the Financial Stability Board (FSB) has been given a mandate on monitoring and making recommendations for regulatory changes on shadow banking. Given the relatively small scale of shadow banking in Australia compared to the US and Europe, how have the FSB developments impacted upon policy locally and how real is the risk to financial stability considered in the Australian market?
9	L	An exposure draft has been released by Treasury following the budget. At present the legislative reforms appear to be focused on "providing APRA with the power to make rules relating to the lending activities of non-ADI lenders, where APRA has identified material risk of instability in the Australian economy". What do you thing the impact of these legislative amendments will be on non-bank lenders?
10.	B	As a banker currently exposed to a strict credit and regulatory environment, what level of regulation would you like to see and is realistic to be imposed on non-ADI lenders to try and level the playing field?
10	AL	Do you expect regulation to significantly change your operations and the shadow banking market in the short term and long term?
11	RBA (Syd/Mel)	With Asian markets experiencing some of the strongest growth in loans from shadow banks in recent years (OFI loans have increased by at least 10% p.a. in China, Indonesia, Korea), what are your thoughts on the stability of the region and any knock on impact in Australia?

12	All (close out)	Do you see a future for alternate lenders, bankers and the restructuring professionals working more closely to execute on innovative solutions to help to help capital constrained borrowers?
Spare Questions (should time permit/in the absence of audience questions)		
13	AL	Aside from commercial loans, alternate lenders are typically not able to provide a full range of products to meet their client's needs. How supportive or challenging have you found the banks with these other 'transactional' services once an alternate lender is involved?
14	RBA (Syd/Mel)	The proposed reforms are also expected to improve APRA's ability to collect data from non-ADI lenders. How critical is this ability to enable adequate monitoring of financial risks in the market?
15	B	Does the structural environment of banks (compared to alternate lenders) result in lost opportunities with clients, particularly in a period where many clients are looking for innovation? (i.e. do you believe there is sufficient time, expertise, resources etc to understand and adapt to a clients business and implement/support a restructure).
16	AL	How does the typical due diligence for a new lend vary between a bank and an alternate lender? (key metrics that may differ, need for due diligence and independent pre-lend reviews, timing to complete)

Resources

For your benefit we have attached some back ground research/material in relation to the topic of Shadow Banking:

- RBA Bulletin – Shadow Banking – International and Domestic Developments - March 2015 (**Appendix A**)

- Exposure Draft Explanatory Material, Treasury Laws Amendment (Non-ADI Lender Rules) Bill 2017 (**Appendix C**)

Shadow Banking – International and Domestic Developments

Josef Manalo, Kate McLoughlin and Carl Schwartz*

One of the lessons from the global financial crisis is that systemic risk to the financial system can arise from outside the regular banking system, in so-called 'shadow banking'. This article reviews post-crisis international and domestic trends in shadow banking, and regulatory efforts to better understand and address potential risks that may arise. In Australia, systemic risks arising from shadow banking appear limited given its relatively small size and minimal links to the banking system, but it remains an area for regulators to monitor and better understand.

Background and International Regulatory Developments

The Financial Stability Board (FSB) defines shadow banking as credit intermediation involving entities and activities (fully or partially) outside the regular banking system (FSB 2013). Such intermediation can support economic activity by providing additional funding sources for the economy, including for riskier market segments that may find it relatively difficult to access bank funding.

However, these activities can pose risks to financial stability, which became clear during the global financial crisis. In a number of countries, a range of incentive problems in securitisation and structured finance markets undermined lending standards and asset quality. A general lack of transparency concealed an associated build-up in leverage and maturity mismatch, and the extent of linkages back to the banking system. When asset quality problems materialised, investors withdrew or tightened the conditions on short-term funding. This prompted financial difficulties in investment vehicles such as money market funds (MMFs) and led to some destabilising asset 'fire sales'. In the aftermath, credit intermediation in many countries was significantly curtailed, both through the shadow banking system and the banking system given various interlinkages.

* The authors are from Financial Stability Department.

Addressing shadow banking risks has therefore been a core part of the international post-crisis regulatory response. As reported to the G20 Leaders' Summit in Brisbane in November 2014, the FSB has adopted a two-pronged strategy to transform shadow banking into resilient market-based financing (FSB 2014a).

First, the FSB has developed a system-wide international monitoring framework to increase oversight of shadow banking for potential risks. The data generated through this increased monitoring and the refinement of measurement concepts to focus more closely on risk are discussed in the section below.

Second, the FSB has worked with the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions to improve oversight and regulation across five areas:

- mitigating the risks posed by banks' interactions with shadow banking entities
- reducing the susceptibility of MMFs to runs
- assessing and mitigating risks posed by shadow banking entities other than MMFs
- improving transparency and aligning incentives in securitisation
- dampening procyclicality and other financial stability risks in securities financing transactions.

Policy development potentially affecting non-bank finance remains under consideration in a number of areas: for example, a recent international focus is to better understand the potential for systemic risk arising from the asset management industry, and possible risk mitigants. However, with a large number of shadow banking policy recommendations from the five workstreams listed above now released, the focus is appropriately shifting to implementation by national authorities and peer review of these actions.

Since the crisis, Australian regulators have taken a number of actions and completed reviews of various aspects of the shadow banking sector. In particular:

- Council of Financial Regulators (CFR) agencies regularly conduct reviews of shadow banking risks; since 2010, the Reserve Bank has reported annually to the CFR on high-level developments in shadow banking and the Australian Securities and Investments Commission has conducted a number of targeted reviews covering possible systemic risk outside the banking sector.[1]
- In April 2014, the Australian Prudential Regulation Authority (APRA) released a discussion paper on its proposals to simplify the prudential framework for securitisation for authorised deposit-taking institutions (ADIs). One of the objectives of the proposals was to ensure that any new prudential regime incorporates the lessons from the crisis, including those specifically associated with agency risk, complexity and mismatched funding structures.
- In November 2014, APRA released final changes relating to the Exemption Order under the *Banking Act 1959* that applies to registered financial corporations (RFCs). The changes are designed to strengthen the regulation of finance companies that issue debentures to retail clients, by making a clearer distinction between products offered by RFCs and those offered by ADIs.

With international reforms now largely finalised, CFR agencies are considering their potential application to Australia. Areas of interest and potential collaboration among the agencies include the following:

- The FSB's framework for managing risks from shadow banking entities other than MMFs, which sets out risks on an 'economic-function' basis and proposes tools for possible action. National authorities' use of this framework will be reviewed by peers in 2015.
- The FSB's information sharing process, which seeks to address some of the data shortcomings in measuring and assessing risks from shadow banking.
- FSB recommendations to strengthen regulation of securities financing transactions, such as the regulatory framework for minimum haircuts, and data collection and aggregation standards.
- BCBS rules that address risks arising from banks' links with shadow banks, such as its framework for banks' equity investments in funds, as well as its large exposures framework, which deals with exposures to single counterparties or groups of connected counterparties (including shadow banks). APRA intends to consult in due course on proposals to appropriately implement these reforms in Australia.

To ensure that any policy actions are proportionate to the risks, the Australian authorities will closely examine how these newly developed risk assessment methods and international standards should apply in Australia. These steps, and any necessary actions arising, will also help to assure the international regulatory community that risks are being addressed appropriately, thereby limiting the risks of spillovers to the international financial system and promoting a level playing field.

1 Public reporting by agencies on these topics includes RBA (2012) and ASIC (2013).

International and Domestic Shadow Banking Trends

Part of the FSB's post-crisis response has been to conduct annual monitoring exercises to assess global trends and risks in the shadow banking system.[2] These exercises mainly focus on trends in the asset size of 'other financial intermediaries' (OFIs) in FSB members' economies, a residual measure of total domestic financial system assets that excludes the assets of banks, insurers, pension funds and public financial institutions. This broad approach aims to capture all non-prudentially regulated entities where shadow banking risks could arise. The FSB acknowledges, however, that this broad measure is likely to capture some assets that are unrelated to credit intermediation, and so work is ongoing to refine a more risk-oriented narrow measure of shadow banking (discussed further below).

According to the most recent exercise, at the end of 2013, the absolute size of the shadow banking sector on the broad measure basis was larger than it was prior to the crisis, though its size relative to the global financial system and GDP remained below pre-crisis levels (FSB 2014b; Table 1). Growth rates in the assets of shadow banking entities have been subdued overall relative to pre-crisis rates, though they have picked up a little in recent years in some FSB member economies, particularly in emerging markets.[3]

Relatively strong growth in shadow banking in emerging markets in part reflects stronger economic growth and the smaller base for some of these markets. Argentina, China, India, Russia, South Africa and Turkey have all experienced strong growth, with the Chinese shadow banking sector a particular focus internationally given the broader rise in borrowing in China and China's growing importance in the global economy (IMF 2014). Despite relatively subdued growth overall in recent years, advanced economies continue to account for the vast majority of shadow banking assets. Notably, the OFI sector in the United States, which was a particular source of instability during the crisis, has fallen substantially as a share of US financial system assets.

Using the broad measure, 'OFIs', Australia's shadow banking sector is small relative to the global average, and has declined since the crisis, both in terms of its share of domestic financial system assets and compared with the size of the economy. Banks' share of total Australian financial system assets has

Table 1: Other Financial Intermediaries[(a)]

	Global[(b)]		Australia	
	2007	2013	2007	2013
Size (US$tr)	62	75	0.8	0.7
Share of financial system (per cent)	26	25	21	14
Size relative to economy (per cent of GDP)	123	120	80	53
Growth in preceding years (per cent)[(c)]	18[(c)]	3[(d)]	13[(c)]	–2[(d),(e)]

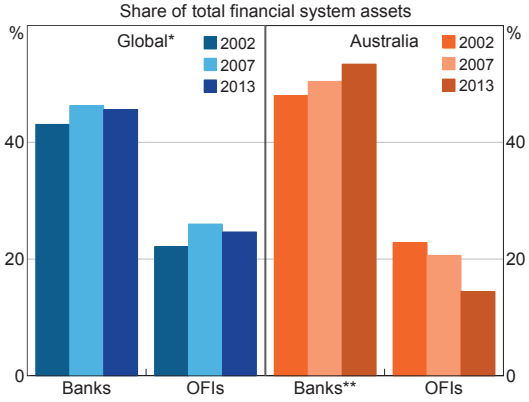
(a) Financial intermediaries excluding banks, pension funds, insurers and public financial institutions; measured at December
(b) The 'global' measure includes 20 non-euro area jurisdictions and the euro area as a whole
(c) Compound annual growth rate 2003–07
(d) Compound annual growth rate 2008–13
(e) The FSB reports positive growth in Australia for 2013, but this reflects exchange rate movements; the growth rates for Australia are calculated using assets measured in Australian dollars
Sources: FSB; RBA

2 The 'global' report includes data from FSB member economies as well as some data on the euro area as a whole. The FSB estimates that this covers around 90 per cent of global financial system assets. Most of the broad measures of the size of the global shadow banking market reflect aggregates for 20 non-euro area jurisdictions plus the euro area as a whole.

3 Large variation in global growth rates was apparent in 2013. Major advanced economies in the euro area saw negligible or negative annual growth in the assets of OFIs, while Argentina and China saw the strongest growth among reporting jurisdictions at 50 and 34 per cent, respectively.

increased since 2007, reflecting substantial growth in banks' total assets and little change in OFIs' total assets (Graph 1). The strong post-crisis growth in the banking sector in Australia relative to international peers partly reflects efforts to repair banking sector balance sheets in some of these other countries. Also, during the crisis, Australian banks acquired some of the non-bank credit providers reliant on securitisation. Consequently, some structured finance vehicles' (SFV) assets – principally assets underlying residential mortgage-backed securities (RMBS) of (non-bank) mortgage originators – that were previously classified as 'non-bank assets' are now funded on banks' balance sheets and thus subject to prudential scrutiny.

Graph 1
Bank and OFI Assets
Share of total financial system assets



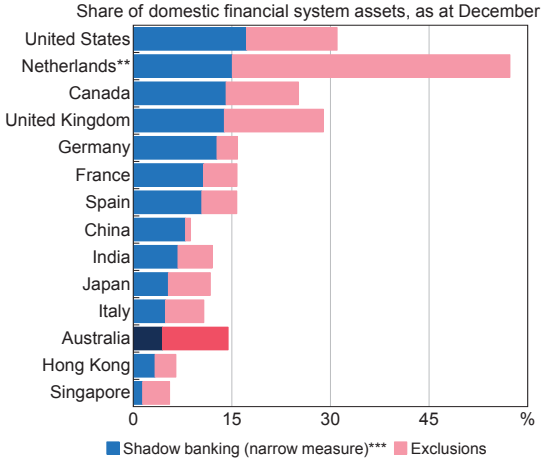
* 'Global' includes 20 non-euro area jurisdictions and the euro area as a whole

** For Australia, 'banks' is authorised deposit-taking institutions (ADIs)

Sources: FSB; RBA

The FSB has also begun publishing a narrower measure of 'shadow banking', which endeavours to isolate OFIs' assets relating to *credit* intermediation. The FSB considers this 'narrow measure' to be more relevant to financial stability, but the measure is considered a work in progress, partly due to lack of data. Under the narrow measure, the global shadow banking sector is considerably smaller than under the broad measure (Graph 2), but appears

Graph 2
Other Financial Intermediaries*
Share of domestic financial system assets, as at December 2013



* Financial assets of all non-prudentially regulated financial institutions; selected countries

** 'Special financial institutions' account for two-thirds of Netherlands' OFI assets; most of these are part of non-financial groups and are not involved in credit intermediation outside of the group

*** Narrow measure of shadow banking excludes self-securitisation, subsidiaries of prudentially regulated banking groups, equity funds and equity real estate investment trusts

Source: FSB

similar to its pre-crisis size.[4] Around three-quarters of global assets excluded by the narrow measure are assets held in equity funds (with no direct link to credit intermediation), or are part of consolidated banking groups and therefore subject to prudential regulation.

Narrowly defined, Australia's shadow banking sector looks even smaller on an international comparison. The main exclusions from the broad measure are: self-securitisation, which is, by definition, bank-owned and therefore within the prudential net; and equity real estate investment trusts (REITs) and equity funds, which are not bank-like credit intermediation.[5] The sector's share of the Australian

4 The measures are not strictly comparable on a global aggregate basis in that the broad measure captures 20 non-euro area jurisdictions and the euro area as a whole, whereas the narrow measure captures 23 reporting jurisdictions. The time series for the narrow measure is currently subject to review, with a number of jurisdictions having changed their methodology in 2013.

5 Self-securitisation (or retained securitisation) is securitisation solely for the purpose of using the securities created as collateral with the central bank in order to obtain funding, with no intent to sell them to third-party investors. All securities issued by the SFV are owned by the originating bank and remain on its balance sheet.

financial system is also well below pre-crisis peaks on the narrow measure, having fallen over most of the past seven years (Table 2).[6] A contributing factor is that a number of finance companies and money market corporations (MMCs) – which are the OFI entities most readily considered to be shadow banks in Australia due to their credit intermediation activities – have scaled back their activities or exited the industry over recent years. The 'other investment funds' industry – which includes mortgage REITs and cash management trusts (the domestic equivalent of MMFs) – has also contracted since the crisis.[7] Investors may have reduced their demand because they now better recognise the credit and liquidity risks posed by these products. Another driver may be that bank deposits have become more competitively priced than in the past, as well as now being government guaranteed, up to a limit, under the Financial Claims Scheme.

A key lesson from the crisis for regulators globally was that distress in the shadow banking system may be transmitted throughout the broader domestic and international financial system via direct and indirect linkages. In terms of funding interdependencies within the Australian financial system, banks' funding from, and lending to, the OFI sector is quite low and has declined in recent years. Banks' funding from, and lending to, finance companies and money market corporations are equivalent to less than 1 per cent of banking system assets, having fallen over recent years (Graph 3).

Table 2: Australian Financial Sector Composition by Entity Type[a]
Share of financial system assets, per cent

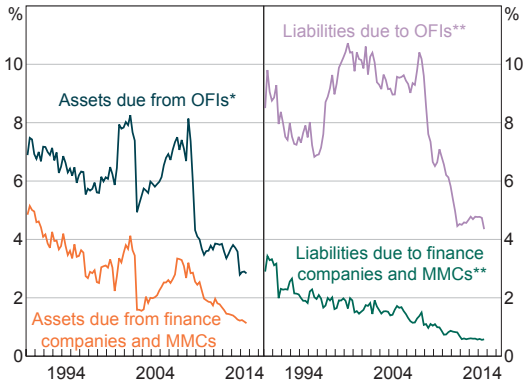
	December 2002	December 2007	September 2014
Total prudentially regulated	**76**	**79**	**85**
Banks, credit unions and building societies (ADIs)	49	52	55
Superannuation funds[b]	23	24	27
Insurers	4	3	3
OFIs (shadow banking broad measure)	**24**	**21**	**15**
Structured finance vehicles	6	6	7
Finance companies	4	3	2
Money market corporations	4	2	1
Cash management trusts (MMFs)	1	1	0
Other investment funds[c]	8	9	5
Shadow banking (narrow measure)	**11**	**10**	**4**
Excludes			
– Self-securitisation	0	0	5
– Equity REITs	3	4	2
– Equity funds	4	4	2
– Prudentially consolidated assets[d]	6[e]	4	2

(a) Excludes central bank assets; totals may not equal the sum of components due to rounding effects
(b) Includes self-managed superannuation funds that are regulated by the Australian Taxation Office
(c) Includes equity funds, bond funds and equity and mortgage REITs
(d) Assets that are consolidated as part of a prudentially regulated banking group
(e) Estimate based on data from March 2003
Sources: ABS; APRA; FSB; RBA

6 More detail on post-crisis developments in the shadow banking sector can be found in Schwartz and Carr (2013).

7 Mortgage REITs generate revenue from holding property-related debt. In contrast, equity REITs invest in and own physical properties.

Graph 3
Banks' Connections to OFIs
Per cent of banks' total assets



* Excludes self-securitisation
** Includes equity funding
Sources: ABS; APRA; RBA

Securitisation and Repo Financing in Australia

Financing activities in securitisation and repo markets have been a particular focus of regulators in the wake of the crisis. These activities span banking and shadow banking markets, though the use of these methods for financing by shadow banks is of particular interest from a risk perspective.[8] Whereas banks are subject to a well-developed system of prudential regulation and other safeguards, the shadow banking system is typically subject to less stringent oversight. As a result, shadow banks are often more reliant on these secured funding methods than prudentially regulated institutions to meet the credit risk tolerance of investors, and are more susceptible to funding pressure if credit concerns arise. This section briefly looks at the securitisation and repo markets in Australia, with a focus on risks arising from their use in the shadow banking sector.

8 The International Monetary Fund reviewed various approaches to measuring shadow banking and highlights the different advantages and drawbacks of each approach. One issue their analysis highlights is that some shadow banking activities may be liabilities of a consolidated banking group (and therefore largely outside the remit of the FSB's shadow banking measure), thus emphasising the importance of comprehensive prudential supervision. Securitisation and repo arrangements are discussed in their analysis; see IMF (2014).

Securitisation

Securitisation, the practice of transforming pools of non-tradable assets into securities that can be traded in financial markets, is a form of non-traditional credit intermediation used by banks and shadow banks. The crisis highlighted numerous examples where securitisation activity resulted in misaligned incentives, often aggravated by opacity and complexity. For example, in the United States a number of banks relaxed their lending standards as securitisation enabled them to transfer credit risk to investors in securitisation products. As became evident during the financial crisis, reliance on securitisation for funding can also expose financial institutions to liquidity pressures when there is a sudden flight to perceived quality, particularly for non-prudentially regulated institutions. In a number of cases, these risks flowed back to the banking system and broader financial system through various interlinkages.

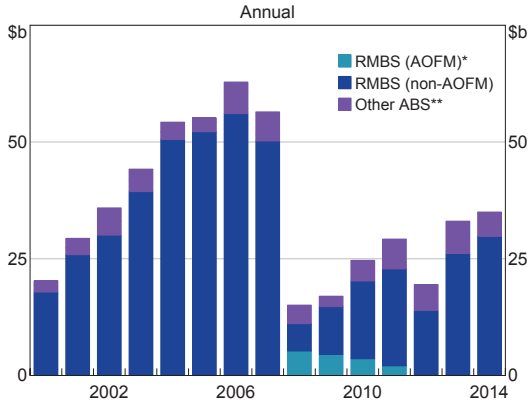
In Australia, non-ADI mortgage originators are the largest non-prudentially regulated issuers of securitised funding. Securitisation activity by mortgage originators can also involve some risk to the banking system via banks providing:

- warehouse facilities, which allow mortgage originators to fund mortgages until they have originated a sufficient amount to issue new securities
- liquidity facilities, which enable structured finance vehicles to meet senior expenses and interest payments on notes in case of a temporary shortfall in income
- a variety of swaps, including interest rate swaps, exchange rate swaps and, most importantly, basis swaps (which convert the variable-rate mortgage interest payments from the collateral pool to floating-rate interest payments linked to money market reference rates).

However, the scale of mortgage originators' activities is quite small, and much reduced since the crisis. Though asset quality of the Australian securitisation

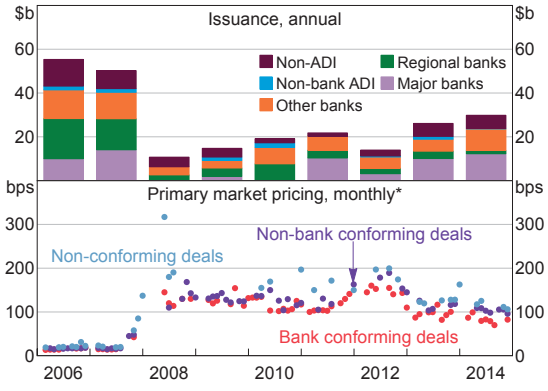
market held up well throughout the crisis, there was a sharp post-crisis fall in overall issuance of asset-backed securities (ABS) (Graph 4) as investors avoided the asset class, and mortgage originators' issuance of RMBS declined markedly (Graph 5). Outstanding RMBS issued by mortgage originators accounted for around 1 per cent of Australian mortgages at December 2014, down from 4 per cent at September 2007. Over this period, broader reliance on RMBS has also declined: the share of outstanding Australian residential mortgages funded through securitisation was 8 per cent at December 2014, compared with a peak of 23 per cent at September 2007. RMBS issuance has picked up somewhat in recent years as spreads have narrowed, although the increase has been led by the banking sector; issuance by the major banks in 2014 was on par with their issuance prior to the global financial crisis.

Graph 4
Issuance of Australian ABS



* Deals supported by Australian Office of Financial Management purchases
** Includes commercial mortgage-backed securities and other asset-backed securities
Source: RBA

Graph 5
Australian RMBS



* Face-value weighted monthly average of the primary market spread to bank bill rate
Source: RBA

Given securitisation is connected to both the banking system and the housing market, Australian regulators remain alert to potential risks from this activity. Since the crisis, APRA has used its liquidity framework to limit funding risks to the banking sector. If implemented, APRA's proposed reforms to the prudential framework for securitisation should help reduce complexity in issuance by regulated lenders, as well as better align their incentives with those of RMBS investors. APRA has also proposed to limit the concessional capital treatment on warehouse facilities to those of up to one year in duration, which if implemented should encourage banks to hold sufficient capital to cover rollover risks associated with funding warehouse facilities.

Repurchase agreement activity

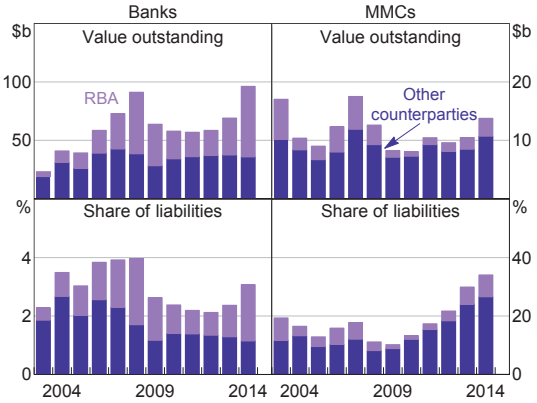
Repurchase agreements, or repos, are contracts in which the issuing party agrees to sell securities to a counterparty and buy them back in the future at a specified price, thereby providing collateral against the funding obtained. Once again, the crisis highlighted a number of risks arising from this form of financing, including the build-up in leverage and subsequent funding pressures faced by US shadow banking entities – particularly broker-dealers, such as Lehman Brothers.

Using securities lending and repos, entities outside the banking system could potentially create significant system-wide leverage and maturity transformation that is not readily apparent to investors or regulators. In normal times, investors may consider these secured liabilities safe and liquid, but they may be vulnerable to runs in periods of stress if investors worry about the underlying

counterparty risk and/or uncertainty about the underlying value of the collateral. These fears can be compounded if: the underlying collateral is of low credit quality; 'haircuts' offering protection from falls in collateral value are too low given volatility; and there is uncertainty about whether the underlying collateral will be returned, given the practice of recycling collateral through a chain of repo agreements – a process known as 'rehypothecation'. Resulting forced sales of assets whose values are already under pressure can accelerate an adverse feedback loop, in which all firms with similar assets suffer mark-to-market losses, which in turn can lead to more fire sales.

As with securitisation, the bulk of repo activity in Australia is within the prudentially regulated sector. Banks dominate the sector, with a large share of these liabilities with the Reserve Bank rather than private counterparties. Repos are a relatively small source of funding for banks, constituting around 3 per cent of total liabilities (Graph 6). These exposures are subject to regulatory scrutiny as part of APRA's overall prudential liquidity requirements. Another factor supportive of repo funding stability is that the vast majority of repo transactions in Australia use high-quality Commonwealth or state government bonds as collateral. The high quality of the collateral pool, which contrasts with some countries where riskier forms of collateral are more prevalent, reduces the potential for credit quality fears and disruptive fire sales into illiquid markets.

Graph 6
Gross Repo Liabilities
Domestic books, annual average



Sources: APRA; RBA

Outside the prudentially regulated sector, MMCs are a major user of repo funding. MMCs operate with higher leverage than banks and are relatively more reliant on repo funding. As explained above, however, size is a factor limiting the systemic importance of these MMCs: they account for less than 1 per cent of the overall financial system and have limited connections with the banking system. In comparison, prior to the financial crisis, US broker-dealers – the closest equivalent to MMCs and heavy users of repo financing – accounted for 5 per cent of US financial system assets.

Consistent with the international reform effort, however, risks from repos are being actively considered by Australian regulators. In March, the Bank published a consultation paper seeking views on the costs and benefits of a potential central counterparty for clearing repos in Australia (RBA 2015). And a CFR working group on shadow banking is, among other aspects, evaluating the case for implementing international standards on securities financing transactions.

Conclusion

Addressing shadow banking risks remains one of the core post-crisis reform areas of international regulators. The FSB's aim is to subject shadow banking to appropriate oversight and regulation to address bank-like risks to financial stability, while not inhibiting sustainable non-bank financing activity that does not pose such risks. One motivation is to ensure that regulatory reforms in the prudentially regulated sector do not result in systemic risks migrating 'into the shadows'.

The Australian shadow banking sector remains relatively small by international standards, and this should limit potential systemic risk. However, data in this sector are not comprehensive, and there is some potential for aggregate data to mask concentrations and interlinkages that could be problematic in a stressed environment. Australian regulators will remain engaged with international regulatory work in assessing risks and considering safeguards. In line with the FSB's overall objective, regulators need to strike a balance so that the regulatory approach should be proportionate to financial stability risks, focusing on those activities that are material to the financial system.

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TREASURY LAWS AMENDMENT (NON-ADI LENDER RULES) BILL 2017

EXPOSURE DRAFT EXPLANATORY MATERIALS

Table of contents

Glossary

The following abbreviations and acronyms are used throughout this explanatory memorandum.

Abbreviation	*Definition*
ADIs	Authorised Deposit-taking Institutions
APRA	Australian Prudential Regulation Authority
APRA Act	*Australian Prudential Regulation Authority Act 1998*
ASIC	Australian Securities and Investments Commission
FSCODA	*Financial Sector (Collection of Data) Act 2001*
non-ADI lenders	Entities that engage in the provision of finance that are not Authorised Deposit-taking Institutions
CFR	Council of Financial Regulators (APRA, ASIC, Treasury and the RBA)
RBA	Reserve Bank of Australia

Chapter 1
Promoting financial stability

Outline of chapter

1.1 This Bill will promote financial stability through strengthening the Australian Prudential Regulation Authority's (APRA) ability to respond to developments in non-ADI lending that pose a risk to financial stability.

Context of amendments

1.2 Under the *Banking Act 1959* (Banking Act), a body corporate that wishes to carry on 'banking business' in Australia may only do so if APRA has granted an authority to the body corporate for the purpose of carrying on that business. Once authorised by APRA, the body corporate is an authorised deposit-taking institution (ADI) and is subject to APRA's prudential requirements and ongoing supervision.

1.3 There are other entities who, like ADIs, provide finance for various purposes within Australia, but are not considered to be conducting 'banking business' as they do not take deposits. Given there are no depositors to protect, these entities are not required to be licensed as ADIs and prudentially regulated by APRA. These non-ADI lenders currently only have to report data to APRA in certain circumstances.

1.4 However, the protection of depositors is only one component of APRA's regulatory responsibilities. When APRA makes Prudential Standards under the Banking Act, APRA is also expected to have regard to the stability of the Australian financial system.

1.5 Under current law, APRA has significant powers with which to address the financial stability risks posed by the lending activities of ADIs. For example, concerns in recent years about residential mortgage lending have led APRA to take specific prudential actions to reinforce sound residential mortgage lending practices by ADIs.

1.6 APRA currently has no such ability with respect to non-ADI lenders. This gap potentially undermines APRA's ability to promote

financial stability, as lending practices that APRA has curtailed or prohibited for ADIs may continue to be pursued by non-ADI lenders.

1.7 To address this gap, APRA will be given new rule making powers which apply to non-ADI lenders. These new powers will allow APRA to make rules relating to the lending activities of non-ADI lenders, where APRA has identified material risks of instability in the Australian financial system.

1.8 These powers are narrow when compared to APRA's powers over ADIs. This is an appropriate outcome, given there are no depositors to protect in non-ADI lenders. When exercising these powers, APRA will have to consider efficiency, competition, contestability and competitive neutrality consistent with section 8 of the *Australian Prudential Regulation Authority Act 1998* (APRA Act).

1.9 A separate but related issue is APRA's ability to collect data from registrable corporations under *Financial Sector (Collection of Data) Act 2001* (FSCODA). The current definition of registrable corporation in section 7 of the FSCODA has limited APRA's ability to collect data, as corporations which engage in material lending activity are occasionally technically not required to register. This has inhibited the ability of APRA and the Council of Financial Regulators (CFR) to properly monitor the financial stability implications of the non-ADI lender sector.

1.10 APRA's ability to collect data from non-ADI lenders will be improved by an alteration of the definition of registrable corporations in FSCODA. The new definition will seek to capture entities who engage in material lending activity, irrespective of whether it is their primary business.

Summary of new law

1.11 A new power will be provided to APRA to make rules with respect to lending finance by non-ADI lenders, for the purpose of addressing financial stability risks. APRA will also be provided a power to issue directions to a non-ADI lender, in the case that it has, or is likely to, contravene a rule. Appropriate directions powers and penalties will also be introduced for a non-ADI lender that does, or fails to do, an act that results in the contravention of a direction from APRA.

1.12 It is important to note that these powers do not equate to ongoing regulation by APRA of non-ADI lenders. APRA will not prudentially regulate and supervise non-ADI lenders as it does ADIs.

Comparison of key features of new law and current law

New law	*Current law*
The Banking Act will be amended to include new definitions of non-ADI lender, non-ADI lender rule and lending finance at subsection 5(1).	Non-ADI lenders are not currently defined in the Banking Act.
New Part IIB will be inserted into the Banking Act to further define non-ADI lenders and create a power for APRA to make rules and issue directions with respect to non-ADI lenders.	No equivalent in the current law.
Section 38C will be inserted into the Banking Act to provide APRA with the ability to make non-ADI lender rules. New section 38C is broadly modelled on section 11AF of the Banking Act to provide internal consistency within the Act.	No equivalent in the current law.
Section 38E will be inserted into the Banking Act providing APRA with the power to issue directions in certain circumstances. New section 38E is broadly modelled on section 11CA of the Banking Act to provide internal consistency within the Act.	No equivalent in the current law.
Section 38F creates an offence should a non-ADI lender contravene a direction provided to it under section 38E. New section 38F is broadly modelled on section 11CG of the Banking Act to provide internal consistency within the Act.	No equivalent in the current law.
Further consequential amendments will be made to the Banking Act to ensure the changes made by this Schedule are carried through the Act.	No equivalent in the current law.
Consequential amendments to the *Financial Sector (Collection of Data) Act 2001* (FSCODA) to broaden APRA's ability to gather data from all relevant non-ADI lenders.	The FSCODA currently enables APRA to collect limited data from certain non-ADI lenders.

As a result of these amendments, corporations whose business activities in Australia include the provision of finance, or have been identified as a class of corporations specified in a determination made by APRA, will become registrable corporations for the purposes of the FSCODA. This will widen the class of registrable corporations under the FSCODA and will ensure that all non-ADI lenders, within specified parameters, are captured by these amendments. Corporations which are not considered to be registrable corporations for the purposes of the FSCODA will include those corporations: whose sum of assets in Australia, consisting of debts due to the corporation resulting from transactions entered into in the course of the provision of finance by the corporation, does not exceed $50,000,000 (or any greater or lesser amount as prescribed by regulations); and whose sum of the values of the principal amounts outstanding on loans or other financing, as entered into in a financial year, does not exceed $50,000,000 (or any other amount as prescribed by regulations).	Currently, the scope of registrable corporations is significantly narrower. Under the current law a corporation is a registrable corporation if it satisfies any of these three tests: First, the sole or principal activities of a corporation must relate to the provision of finance by the corporation. Secondly, the sum of the values of the assets of the corporation consisting of the debts due to the corporation which exist as a result of the provision of finance by the corporation exceed 50% or any greater or lesser percentage, as prescribed by regulations. Finally, if a corporation engages in the provisions of finance, whether as its sole of principal business in Australia, and the debts due to the corporation exceed $25,000,000 or any greater or lesser amount as prescribed by regulations, then the corporation will be a registrable corporation.

Detailed explanation of new law

1.13 Schedule 1 creates new definitions in the Banking Act to clarify the application of the provisions relating to non-ADI lenders.

1.14 Non-ADI lenders are defined by reference to the concept of registrable corporations contained in section 7 of the FSCODA. This ensures that corporations which are engaged in the provision of finance, lending of money and origination of loans or other financing are captured by the new regime. While APRA does not have regulatory responsibility for non-ADI lenders, these changes will ensure that APRA is able to make rules relating to the lending activities of non-ADI lenders. The role of non-ADI lenders in the mortgage and personal finance markets has been identified as a potential risk to financial stability in these markets and

enabling APRA to monitor non-ADI lending practices will enhance the overall stability of the financial system. ***[Item 1, subsection 5(1) and item 2, Part IIB, Division 1, section 38B of the Banking Act]***

1.15 In order to ensure that the activities of non-ADI lenders are appropriately captured under this new regime, further definitions have been added to the Banking Act including 'lending finance'. This definition makes it clear that conduct of a non-ADI lender relating to lending finance including the lending of money, with or without security or any other activities which either directly or indirectly result in the funding or originating of loans or other financing, which has the ability to cause or promote instability in the financial system, will be captured by this regime. These changes give APRA authority to make rules concerning the lending activities of non-ADI lenders where those activities may materially affect financial stability. ***[Item 1, subsection 5(1) of the Banking Act]***

1.16 The Banking Act will be amended to provide APRA with powers to make rules for non-ADI lenders. The new rule making powers will extend and enhance APRA's ability to promote the stability of the financial system. These rules close a gap which may occur when APRA restricts the lending activities of ADIs, but is unable to affect the activities of non-ADI lenders. ***[Item 2, Part IIB, Division 2 of the Banking Act]***

1.17 The rule making powers for non-ADI lenders include the ability to impose different requirements to be complied with by all non-ADI lenders or by a specified class of non-ADI lenders or by one or more specified non-ADI lenders. This will provide APRA with the flexibility to make rules that focus on the particular area of the non-ADI lender industry that is engaging in practices which threaten the stability of the financial system. ***[Item 2, subsections 38C(1) (2) and (3) of the Banking Act]***

1.18 APRA will have the ability to exercise powers and discretions under rules made by it, including but not limited to discretions to approve, impose, adjust or exclude specific requirements in relation to one or more specified non-ADI lenders. Rules made by APRA under this provision may be varied or revoked from time to time, as determined by APRA and must be made in writing. ***[Item 2, subsections 38C(4), (5) and (6) of the Banking Act]***

1.19 Where rules apply to a class or classes of non-ADI lenders, the rules will be legislative instruments. ***[Item 2, Division 2, subsection 38C(1)and subsection 38C(12) of the Banking Act]***

1.20 However, APRA's new rule making powers for non-ADI lenders are not intended to relate to lending matters which are properly the responsibility of the Australian Securities and Investments Commission (ASIC), such as responsible lending obligations. APRA is required to

consult with ASIC before making any non-ADI lender rules, to ensure that any such rules are targeted appropriately, cognisant of any interaction with the various regulatory regimes for which ASIC is responsible. This acknowledges the role ASIC has in regulating non-ADI lenders that hold either an Australian financial services license or a credit license as granted by ASIC. It will ensure that the work of APRA and ASIC in this area is consistent. ***[Item 2, subsection 38C(9) of the Banking Act]***

1.21 In addition to the power to make rules with respect to non-ADI lenders, APRA may give a body corporate that is a non-ADI lender a direction if APRA has reason to believe that the non-ADI lender has contravened, or is likely to contravene, a rule made under Part IIB of the Banking Act. This directions power provides APRA with the ability to seek compliance with the whole or part of a relevant rule as well as directing that a non-ADI lender do, or refrain from doing, anything in respect of finance lending, as defined in section 5(1) of the Banking Act. ***[Item 2, section 38E of the Banking Act]***

1.22 Part IV of the Banking Act will apply to decisions made by APRA in relation to individual non-ADI lenders under this new Part IIB of the Banking Act. This will provide non-ADI lenders with the ability to seek reconsideration or review of APRA decisions in the same manner ADIs can seek review or reconsideration of certain actions taken by APRA under the Banking Act. ***[Item 2, subsection 38C(14) and 38E(9) of the Banking Act]***

1.23 An offence provision will be inserted into Part IIB of the Banking Act to apply where a non-ADI lender, or an officer of a non-ADI lender does, or fails to do, an act which results in contravention of the direction given under section 38E. In the case of contravention of section 38E, penalties will apply for non-compliance. ***[Item 2, section 38F of the Banking Act]***

1.24 Further consequential amendments are made to the Banking Act to ensure internal consistency upon the introduction of these new provisions. ***[Items 3 and 4, subparagraph 65A(1)(a)(i) and paragraph 65A(4)(a) of the Banking Act]***

Consequential amendments

1.25 Schedule 2 provides consequential amendments to the FSCODA to ensure that it applies to non-ADI lenders, as regulated in new Part IIB of the Banking Act. These amendments include updates to the definition of registrable corporations which widens the class of corporations which must be registered under the FSCODA. By widening the class of corporations FSCODA applies to, these amendments will ensure that non-

ADI lenders are included for the purposes of registering under the FSCODA, which will enable collection of information relevant to the exercise of APRA's new powers under Part IIB of the Banking Act. ***[Items 1 and 2, subsection 7(1) and paragraphs 7(1)(a), (b) and (c) of the Financial Sector (Collection of Data) Act 2001]***

1.26 In addition, APRA will have a power to make a determination in writing to specify a corporation, or a class of corporations, for the purposes of the FSCODA. Such a determination will enable any corporations which are not captured by the widening of the class of registrable corporations in section 7 of the FSCODA to be specified by APRA. Full coverage of the non-ADI lender market is the intended consequence of these amendments. ***[Item 3, subsection 7(1A) of the Financial Sector (Collection of Data) Act 2001]***

1.27 Where such determinations apply to a class or classes of corporations, the determinations will be legislative instruments. ***[Item 3, subsection 7(1C) of the Financial Sector (Collection of Data) Act 2001]***

1.28 However, where the determination applies only to a particular corporation rather than a class of corporations (or classes thereof), the determination is not a legislative instrument for the purposes of the *Legislation Act 2003.* Subsection 7(1B) is included to provide clarity as to which type of determination will be a legislative instrument. ***[Item 3, subsection 7(1B) of the Financial Sector (Collection of Data) Act 2001]***

1.29 Certain classes of corporation are excluded from the definition of registrable corporations under the FSCODA. As a result of these changes to the Banking Act and FSCODA, a further class of entities will be specifically excluded from being characterised as registrable corporations.

1.30 In particular, new subsection 7(2A) will clarify that where a corporation has assets, consisting of debts due as a result of the provision of finance, and principal amounts outstanding on loans or other financing, which do not exceed $50,000,000 or any greater or lesser amount as prescribed by regulations, such a corporation is not a registrable corporation for the purposes of the FSCODA. This provision is designed to ensure that corporations with a stock of debt on their books, and a flow of debt through their books, which does not exceed $50,000,000, will not be registrable corporations for the purposes of the FSCODA. ***[Item 6, subsection 7(2A) of the Financial Sector (Collection of Data) Act 2001]***

1.31 The calculation of the value of loans or other financing is to be done on a financial year basis. So in determining whether a corporation is a registrable corporation, if that corporation had less than $50,000,000 in loans outstanding on 30 June in the relevant year and less than $50,000,000 in assets consisting of debts due to the corporation as a result

of transactions entered into in the course of provision of finance, that corporation is not a registrable corporation for the purposes of the FSCODA. ***[Item 6, subsection 7(2A) of the Financial Sector (Collection of Data) Act 2001]***

1.32 In addition to the specified classes of corporations which are not included as registrable corporations by operation of subsection 7(2A) of the FSCODA, APRA is provided with a power to make determinations specifying a class or classes of corporations. Such determinations are legislative instruments for the purposes of the *Legislation Act 20013*. However, subsection 7(2C) clarifies that a determination applying to a specific corporation or corporations will not be a legislative instrument. ***[Item 6, subsections 7(2B), (2C) and (2D of the Financial Sector (Collection of Data) Act 2001]***

1.33 Section 31 of the FSCODA will be amended to provide that a determination by APRA not to exempt an organisation taken under paragraphs 7(1A)(a) and 7(2B)(a) (which are not legislative instruments) are reviewable decisions. ***[Item 8, section 31 of the Financial Sector (Collection of Data) Act 2001]***

1.34 Section 32 of the FSCODA will be updated to reflect the definition of provision of finance to clarify that it includes the carrying out of activities, whether directly or indirectly, that result in the funding or originating of loans or other financing. This addition ensures the internal consistency within the FSCODA and carries through the concept of provision of finance which is central to the definition of non-ADI. Additionally, it is intended to capture corporations that provide finance indirectly, such as through interposed corporations or trusts. ***[Item 9, paragraph 32(1)(aa) of the Financial Sector (Collection of Data) Act 2001]***

1.35 The provision of finance for the sole purpose of intra-group activities between related corporations has been specifically excluded from the definition of provision of finance. The intention is to specifically exclude corporations that provide finance via intra-group activities in amounts which otherwise render the corporation as a registrable corporation under the FSCODA. ***[Item 10, paragraph 32(1A) (b) of the Financial Sector (Collection of Data) Act 2001]***

1.36 Similarly, the provision of financial advice is specifically excluded from the operation of the new provisions. It is not intended that entities whose activities are limited to the provision of financial advice would be covered by the non-ADI lender regime. ***[Item 10, paragraph 32(1A) (a) of the Financial Sector (Collection of Data) Act 2001]***

1.37 Other consequential amendments have been made to the FSCODA to ensure consistency with these amendments. ***[Items 4, 5, and 7 paragraphs 7(2)(h), 7(2)(i) and subsection 7(3) of the Financial Sector (Collection of Data) Act 2001]***

Application and transitional provisions

1.38 The provisions of this Bill apply from the date of Royal Assent.

FS BRIEF: UPDATE ON NEW APRA POWERS OVER NON-ADI LENDERS AND NEW OBJECTS FOR BANKING ACT– 19 OCTOBER 2017

Summary

- The draft legislation has now been introduced to the house (see also explanatory memorandum).
- Compared to the consultation draft, the main changes to the *Banking Act 1959* clarify that APRA's rule making powers over non-ADIs are only intended as reserve powers, and add various constraints around the use and oversight of these powers. In addition to ASIC, the Council of Financial Regulators is expected to play a role (not previously signalled). As well, a new objects provision has been added.
- There has been little substantive change to the *Financial Sector (Collection of Data) Act 2001 (*FSCODA) draft.[1]
- While APRA would be able to immediately make non-ADI rules once the legislation is passed, it is not expected to do so. Non-ADI lenders will need to register with APRA first, after which APRA will make the necessary reporting standards. Following this, non-ADIs will begin providing data to APRA.

Background

In the May 2017 Budget, the Government announced measures to reinforce APRA's macroprudential powers, including a new Banking Act objects clause and powers over non-ADIs.[2] Public consultation on the non-ADI measures ran for 1 month over July and August; this note focuses on the key consequent changes.

Non-ADI rules and reporting

Consultation results

The explanatory memorandum states that majority of public submissions generally supported the data collection component of the measure, but raised concerns with the nature of the rulemaking and directions powers to be given by APRA, including that:

- The draft legislation did not reflect the 'reserve power' intent of Government, as there was insufficient limitation on how and when APRA may use the power. Some stakeholders expressed concerns about the effect on investors and their access to funding.
- The class of entities which could be subject to rules was too broad, as was the class of entities that might be required to register and report data.
- The directions power was not appropriately limited in scope to the breach of the rule itself.

Main changes to the Banking Act 1959

APRA will have the power to make rules relating to the lending activity of non-ADI lenders, where "APRA considers that the provision of finance by one or more non-ADI lenders materially contributes to risks of instability in the Australian financial system".

- When exercising its new powers, APRA will have to consider efficiency, competition, contestability and competitive neutrality.
- The amended legislation contains various provisions that constrain APRA's rule-making powers, including a requirement to consult before making non-ADI rules "in all but extreme time-critical circumstances", notification requirements, and sunset clauses. The scope of the directions power has been limited to activities that are the subject of a rule.
- The explanatory memorandum sets out expectations regarding evaluation and oversight of the policy:
  - Evaluation of the policy is expected to occur through i) assessment by APRA and the Council of Financial Regulators ii) feedback from non-ADI lenders and iii) through Parliamentary processes. The success of a rule should be measured on whether it reduces risks to financial stability, which is intended to be gauged from the data collected by APRA.
  - Oversight of the need for a rule is to be provided by the Council of Financial Regulators.

1 See: Restricted briefing D17/247983 for description of key FSCODA changes (July 2017).
2 See: Restricted Briefing FS and DM: Budget 2017/18 - Changes to Regulator Tools to Address Housing Risks (May 2017).

New objects provisions in the Banking Act

These specify that the main objects of the Act are "to protect the interests of depositors in ADIs in ways that are consistent with the continued development of a viable, competitive and innovative banking industry" and "to promote financial system stability in Australia". They also make explicit APRA's ability to take action to address risks to financial system stability in Australia, including systemic risks that are geographic or sectoral. The objects provisions do not apply to some of the legacy RBA-related parts of the Banking Act, such as foreign exchange regulation and gold.

Lamorna Rogers
Acting in Senior Manager
Households Businesses & Credit
Financial Stability Department
19 October 2017

FINANCIAL STABILITY IMPLICATIONS OF FINTECH CREDIT IN AUSTRALIA

Fintech lenders currently account for a very small share of overall lending in Australia, but have grown at a rapid pace over the past few years. Most of this lending is to businesses, and unlike other countries is mainly 'balance sheet' (not 'marketplace') lending and has a high level of institutional (including bank) funding. Fintech lending is mostly unsecured, typically with interest rates in excess of 10 per cent (though with considerable variation). Financial stability risks from this activity are limited given the small size of the industry, but there is already some evidence that a few banks are lowering their lending standards in order to remain competitive. There is also a risk that banks are funding such lenders as a way to avoid regulation, although other motivations seem much more relevant. If the fintech sector becomes large, it could also increase the pro-cyclicality of credit availability, given balance sheet lenders fund themselves from short term and arguably flighty investors and are relatively unconstrained by capital requirements.

Introduction

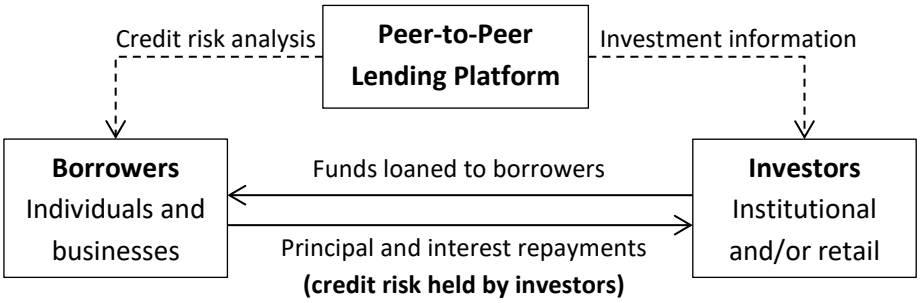
Fintech is a broad term which encompasses technological innovation in the provision of financial services, including lending, crowdfunding, payments services and investment management. From a financial stability perspective, we are most interested in technology-based platforms that facilitate credit activity (fintech credit). These platforms represent a small but fast growing subset of the shadow banking system, as technological advances have led to the development of new models of credit provision and increased the reach and scalability of non-bank lenders. This note describes the state of the fintech credit industry in Australia and evaluates the financial stability implications of the growth of this sector.[1]

Fintech Credit Business Models

The fintech credit industry includes a wide variety of players, and there is considerable overlap between fintech and 'regular' shadow banking. Fintech credit is characterised by a heavy reliance on automated processes and online distribution, with limited physical presence. Fintech lenders typically market themselves based on their ability to rapidly and conveniently approve loans, because of processes that may allow loan application and document verification to be completed entirely online. Many of these lenders also target customers unable to access bank finance, although not necessarily.

The most prominent fintech credit model is peer-to-peer lending (also known as marketplace lending). This involves credit provision by directly matching borrowers with investors, thus bypassing the traditional intermediation process undertaken by banks and other financial institutions (Figure 1). Peer-to-peer lending platforms undertake a credit risk assessment of borrowers and match these with investors according to their investment preferences. Importantly, borrower credit risk is borne by the investor in this model. Interest rates charged to borrowers may either be set by the platform based on a credit risk assessment, or determined by investors through some form of bidding process. A similar approach also used in Australia is for a platform to package loans into managed investment funds or securitisation structures, rather than directly matching borrowers with investors; in this approach borrower credit risk is still transferred to the investor.

Figure 1: Stylised Peer-to-Peer Lending Model



Source: adapted from BIS (2017).

1 For a discussion of the payments policy considerations of fintech, see Francis (2017). For this note, we do not consider equity and rewards-based crowdfunding since this does not involve credit provision.

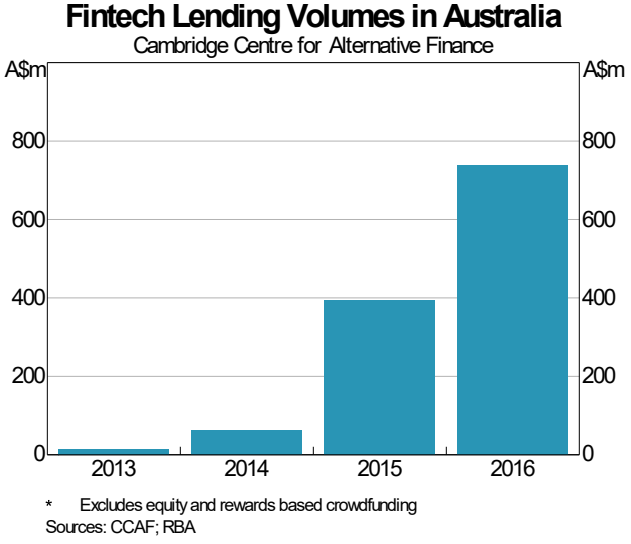
A very different approach is where 'balance sheet lenders' adopt a more traditional debt intermediation role, originating and retaining loans (and credit risk) on their balance sheet. In these instances the innovation is purely around the loan origination interface. A fourth style of fintech is invoice trading platforms, which allow businesses to sell invoices at a discount to obtain immediate liquidity.

Fintech Credit in Australia

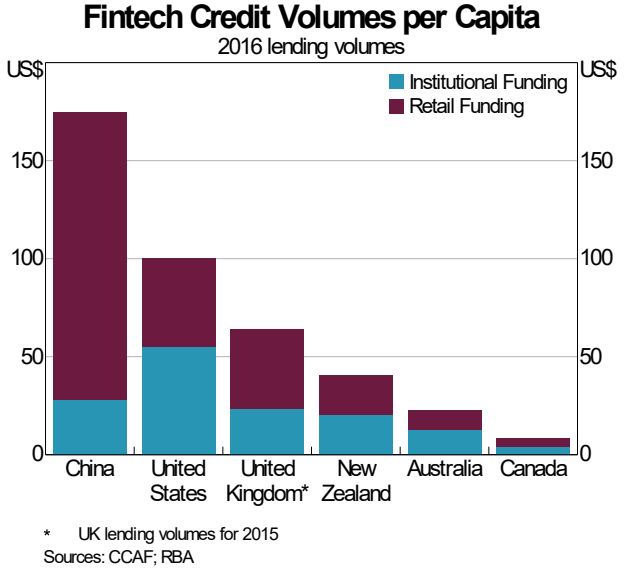
Fintech credit makes up a very small proportion of overall lending volumes in Australia, but has grown rapidly over the past few years. There are limited data on the sector as most fintech credit providers are non-ADIs with minimal reporting requirements.[2] We use two main sources of voluntarily reported industry data: the Asia-Pacific Alternative Finance benchmarking report produced by the Cambridge Centre for Alternative Finance (CCAF) and ASIC's survey of marketplace lending providers. The CCAF survey is more comprehensive, with responses from 33 platforms, while ASIC's survey has a narrower sample and covers just nine platforms. Given that data on fintech activities are limited, insights from business liaison are also useful.

According to the CCAF survey, fintech companies lent $738 million in Australia in 2016 (Graph 1). This represents just 0.1 per cent of shadow bank lending activity and a trivial share of the $3 trillion in total loans outstanding.[3] While lending volumes are small, they are growing very rapidly. Consistent with this, a prominent peer-to-peer lender, SocietyOne, reported a 67 per cent increase in lending volumes in the first half of 2017 compared with a year earlier (see SMH (2017)).

Graph 1



Graph 2



Fintech lending in Australia is still just a fraction of lending in countries where the industry is more established (even on a per capita basis; Graph 2). Much of this likely reflects institutional factors, such as the regulatory restrictions in China that have encouraged growth in its shadow banking sector and the presence of government-driven securitisation markets in the US.[4] Nonetheless, some part may reflect an opportunity for fintech lending to gain greater acceptance from borrowers and to benefit from increased scale and network effects (while also benefiting from the sectors' expected growth globally). The push to an open banking regime, announced in the May budget, also favours the growth of fintech credit.

Most fintech lending in Australia is currently based on the balance sheet model, where credit risk is retained by lenders. Peer-to-peer activities (where the credit risk is transferred to investors) account for a small share of lending. This is in contrast to the US, the UK and China where the peer-to-peer model is

2 Some fintech companies are in the process of obtaining 'restricted banking licenses' from APRA. Others may be required to report data to APRA as Registered Financial Corporations once their assets exceed $50 million.

3 The ASIC survey, which has a narrower sample, showed lending volumes of $156 million for the 2015-16 financial year.

4 Fintech lenders in the US have increased their share of residential mortgage lending from 3 per cent in 2007 to 12 per cent in 2015 (Buchak, Matvos, Piskorsky and Seru (2017)). In the Netherlands, technology companies have enabled insurance companies and pension funds to significantly increase their share of mortgage origination, supported by government guarantees against defaults due to unemployment or various personal circumstances (see FT (2016) and ECB (2017) Box 7).

dominant. The Australian fintech industry is predominantly funded by institutional investors, although this could change in future as the industry becomes more established and investors better understand the risks (many platforms in Australia are currently only open to institutional investors, who are considered more sophisticated than retail investors). Banks have provided significant funding (as discussed below), despite liaison suggesting that some banks have been reluctant to do so due to the lack of visibility on the credit process and that these firms are direct competitors. Private equity firms have also been active in investing in fintech companies.

Business lending makes up the bulk of fintech credit activity in Australia.[5] This type of lending includes small business loans, supply chain finance and invoice trading. Some fintech platforms have developed innovative ways to distribute credit, such as offering business loans through accounting software packages or integrating credit within payment platforms. These providers have greater visibility of borrowers' cashflow which provides an information advantage for credit risk assessment, similar to the way Amazon and Alibaba use their extensive data on borrowers to assess credit risk.[6]

Fintech Lending Conditions

Available evidence suggests that interest rates charged by fintech lenders are generally – but not always – high relative to rates on a typical bank loan. Fintech lenders also claim to offer more tailored interest rates, which match the risk profile of borrowers, than banks. Consistent with this, there is a wide range of advertised rates of prominent fintech lenders in Australia (Table 1). According to the ASIC survey, around 80 per cent of loans have interest rates of between 8 to 15 per cent, with a significant number at higher rates, particularly for business loans. The limited publicly available loan data also suggest that average interest rates are in excess of 10 per cent for all platforms other than RateSetter (whose rates are fairly equally distributed around 4-5 per cent and 9-10 per cent). These interest rates are significantly higher than the average outstanding lending rate for small business (5¼ per cent), although more in line with average lending rates for personal loans (12 per cent).

Table 1: Selected Fintech Platforms' Lending Terms

	SocietyOne	RateSetter	Marketlend	DirectMoney	Prospa
Business model	Peer-to-peer	Peer-to-peer	Peer-to-peer	Pooled fund	Balance sheet
Loan type	Personal	Personal/business	Business	Personal	Business
Security	Unsecured	Secured and unsecured	Secured and unsecured	Secured and unsecured	Unsecured
Maximum loan	$50,000	$45,000	$2,000,000	$35,000	$250,000
Average loan size	N/A	$12,467	$47,000	N/A	$25,000
Loan term	2 to 5 years	2 to 5 years (average of 3 years)	3 months to 6 years	3 to 5 years	3 months to 2 years
Advertised rates	7.5% to 19%	3.7% to 10.2%	8.5% to 18.5%	9.4% (unsecured high quality)	N/A
Actual rates	Investor returns of 10.6% after fees and impairments	Average rate of 7.8%	15% to 18% on unsecured 12 month lines of credit	Average rate of 12.7%	"Similar to or higher than credit cards"
Amount funded	$350 million since 2012	$168 million since 2014	$26.4 million since 2014	$21.6 million since 2006	$400 million since 2011

Sources: Company websites and news reports.

Consumer loans are generally restricted to smaller amounts while business lenders have advertised maximum loans sizes of up to $250,000 (or even $2 million for the still small Marketlend platform). According to the ASIC survey, almost all consumer loans were less than $50,000 and around half of business loans larger than this amount. Loan terms are typically from 2 to 5 years.

5 Business lending accounted for 65 per cent of total volumes in the 2016 CCAF survey, around a third of which was invoice trading. The smaller ASIC survey sample was heavily weighted towards consumer lending.

6 See Bloomberg (2017) and Forbes (2017).

Financial Stability Implications

Fintech lending has the potential to benefit the economy by reducing the cost of assessing borrowers and enabling new sources of information to be used to assess credit risk. This could lead to more efficient credit allocation by facilitating credit provision to previously underserviced market segments, reducing the time taken for borrowers to access money and lowering the cost of finance for some borrowers. Technological advancement driven by the fintech sector is likely to lead to increased efficiency gains for the financial sector, particularly if banks adopt such practices.

However, the growth of fintech credit could also shift lending activity to the less regulated shadow banking system, which has more ambiguous financial stability implications. On the positive side, growth of fintech credit would reduce the economy's reliance on bank finance and distribute risk away from the banking sector. While balance sheet lenders have similar business models to banks, peer-to-peer lenders generally do not undertake maturity and liquidity transformation and have limited ability to apply leverage. Opposing this, fintech lenders are much less regulated than banks which may lead to excessive risk taking. This could also encourage banks to compete on lending standards.

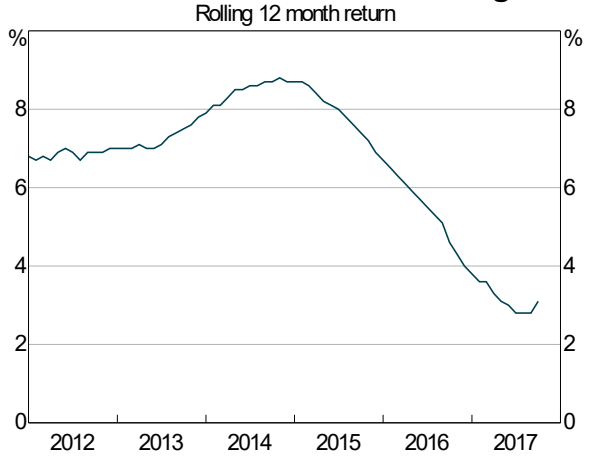
Impact on Bank Credit Standards

One potential risk is that competition from fintech lenders could prompt banks to lower their lending standards. This could occur through simple competition on standards, or it could result from banks adopting some simplified fintech credit assessment practices in ways that erode standards (if used well, these processes could improve credit assessment by incorporating new sources of information, but they remain untested and replace human oversight and the conversation with the borrower).

Regarding the prospect of competition on loan standards, it is difficult to assess the credit quality of fintech loans given data limitations and the short history of the industry. However, there is some evidence which suggests many fintech lenders are targeting borrowers that would not qualify for bank loans, such as businesses with shorter operating histories and without assets for security. For example, the ASIC survey found that almost all outstanding fintech consumer loans and at least three quarters of fintech business loans were unsecured. In contrast, most bank lending to small businesses is secured against collateral, typically residential property (see Connolly, La Cava and Read (2015)). Bank liaison also suggests that fintech lenders are willing to lend larger amounts than banks on an unsecured basis. Fintech loan arrears rates reported in the ASIC survey are similar to those of bank lenders at present, but most of these loans are relatively new and so are yet to be tested.

Credit quality concerns are compounded by the incentives of fintech lenders being misaligned with that of investors. Fintech platforms have a short-term incentive to lower credit standards to approve more borrowers because they rely on origination revenue and credit losses are borne by investors (similar to the conflicts of interest of securitisers without 'skin in the game'). According to the ASIC survey, fintech loan providers derive over 80 per cent of their revenue from loan origination fees, although this partly reflects the rapid growth of the industry relative to a small outstanding loan book. This concern is most relevant to business loans, given that fintech lenders are still constrained by responsible lending obligations when lending to consumers.

Graph 3
Orchard US Consumer Online Lending Index
Rolling 12 month return



Sources: Orchard Platform; RBA

Fintech lenders may also be charging unsustainably low interest rates in order to gain market share and achieve minimum efficient scale. This would be of particular concern if the share of funding from retail investors grows, as they arguably lack the sophistication required to appropriately price loans (but on many platforms need to bid for rates). There is some evidence of this in the US where there has been strong competition in peer-to-peer lending – returns from consumer online lending have declined to around three per cent due to lower interest rates and higher charge-off rates (Graph 3). More

generally, differences in borrower risk profiles make it difficult to assess whether fintech lenders charge lower interest rates, and the international evidence is mixed.[7]

There are already some examples which suggest that banks have begun to compete on lending standards. NAB has developed an in-house 'fintech' business loans unit QuickBiz that competes directly with fintech lenders by offering unsecured small business loans with a fast turnaround; it recently doubled the maximum loan size on offer to $100,000 (see The Australian (2017)). Bank liaison also suggests that at least one other institution is considering increasing maximum loan sizes to compete with fintech lenders.

Banks' Direct Exposures to Fintech Credit

An alternative is that instead of competing, banks could facilitate growth in fintech as a way to avoid prudential oversight and circumvent lending restrictions. This could create a system-wide loosening in credit standards and contagion risk between fintech credit and banks.

Banks have been major funders of Australian fintech lenders to date, suggesting this could be a risk, although the small size of the industry means banks' direct exposure to fintech credit currently poses minimal risk to their balance sheets (Table 2). Fintech lending in Australia is predominantly funded by institutional investors and banks have provided funding to a number of platforms. Several of the major banks have also made equity investments in a range of fintech companies, including lenders, or have entered into partnership arrangements. For example, CBA and Westpac have partnered with various fintech lenders and refer borrowers that do not meet their lending standards for a fee. According to the CCAF, 19 per cent of fintech credit platforms in Australia have a bank as a shareholder.

Table 2: Reported Bank Investments in Fintech Credit

Bank	Investments
NAB	$200 million warehouse funding for zipMoney; $200 million receivables funding facility for AfterPay; $50 million invested in fintech companies through NAB Ventures; in-house fintech business loans unit QuickBiz.
Westpac	Equity investments in Society One, zipMoney, Valiant Finance and Coinbase through venture capital manager Reinventure Group. Distribution partnership with Prospa.
CBA	Partnership deal with OnDeck.
Macquarie	Provides funding for DirectMoney and is a large shareholder.
Bendigo	Provides funding to Tic:Toc and an offset account facility for its customers.
Auswide	Funded $60 million in personal loans through MoneyPlace and owns a majority equity stake.
Others	Peer-to-peer lender SocietyOne's funders include 20 mutual ADIs, including Beyond Bank, G&C Mutual Bank, Unity Bank and Regional Australia Bank who are also shareholders.

Source: various news sources.

That said, it is more likely that these relationships exist because of a desire to capture technology and adopt some of these practices in their own businesses. This is consistent with public statements from the major banks and their broader effort to invest in technology to compete with fintech challengers (NAB's QuickBiz unit is one such example). It would also explain why banks have been more willing to fund fintech lenders than traditional shadow banks that also allow regulatory arbitrage. This reluctance stems from capital charges on lending to financial institutions typically being equivalent to direct credit exposures and the impact of the Liquidity Coverage Ratio on the cost of providing undrawn lines of credit.[8]

Credit Availability through the Cycle

A longer term concern, should fintech lenders gain significant market share, is the impact they could have on the availability of credit through the cycle. While fintech facilitates a diversified source of funding, this

7 Studies by Demyanyk and Kolliner (2014) and Deloitte (2016) point to lower interest rates paid on individual fintech consumer loans. De Roure et al (2016) find similar rates for German borrowers after adjusting for risk. Buchak et al (2017) find higher interest rates for US fintech residential real estate loans.

8 Under the Standardised Approach to credit risk, exposures to ADIs, small business and personal loans all have a risk weight of 100 per cent (the risk on prime residential mortgages is 35 per cent). Banks must also offset the undrawn portion of the facility with (low yield) High Quality Liquid Assets equivalent to between 40 and 100 per cent to comply with the LCR.

funding is likely to be more pro-cyclical due to the absence of a deposit guarantee and regulation. Fintech lenders generally depend on short term funding that promises a variable rate of return (in contrast with banks which have access to sticky deposit funding and longer term debt financing). As a result, fintech platforms are particularly reliant on investor confidence and subject to investor herding and swings in risk appetite, particularly where retail investors make up a larger proportion of funding.

Fintech lenders could also exacerbate the upswing in credit cycles if they become large enough. For balance sheet lenders, this is mainly because they are not limited by capital requirements and other regulations. Pro-cyclical lending is less likely for marketplace lenders, who rely on investor equity capital, but their funders are arguably more prone to swings in risk appetite than banks. More generally, fintechs are arguably more vulnerable to a cyberattack, fraud or misconduct event that affects the reputation of the industry and causes investors to withdraw funding, as happened to Lending Club recently (see Financial Times (2016)).

As non-bank lenders are not subject to prudential supervision, a large fintech credit sector would also reduce the effectiveness of macroprudential measures aimed at preventing the build-up of risk in the financial system (although APRA's new powers over non-ADI lenders may reduce the risk of regulatory leakage). Buchak et al (2017) find that the increase in regulatory burden of regular banks is responsible for about 70 per cent of the increase in shadow banks' share of mortgage lending in the US, with financial technology accounting for the remaining 30 per cent.

Assessment

Fintech credit currently poses limited risks to financial stability due to its small size. However, it has been growing very rapidly and is likely to continue doing so – especially if banks continue to be ready suppliers of funding. Given their current small size, the main concern at this stage is the potential for banks to reduce their lending standards in response to competitive pressures from fintechs. There is also a risk that banks use fintech as a means to circumvent regulation, although that seems unlikely. Further ahead, if fintech lending becomes a more significant share of the market, this could also result in greater pro-cyclicality of credit availability through the cycle.

Calvin Yap
Australian Financial System
Financial Stability Department
20 November 2017

COUNCIL OF FINANCIAL REGULATORS MEETING 27 NOVEMBER 2017

AGENDA ITEM 6: ANNUAL UPDATE ON SHADOW BANKING

Purpose

This paper updates the Council on developments in shadow banking. It provides an assessment of whether there is any material build-up of systemic risk in Australia outside the prudentially regulated sector, along with information on recent international shadow banking trends and regulatory developments (Attachment). It satisfies the Financial Stability Board's (FSB's) requirement that jurisdictions have a systematic process for reviewing shadow banking entities and activities that could pose financial stability risks.

Key points

- Internationally, preliminary results from the FSB's annual global shadow banking monitoring exercise suggest that activity increased marginally during 2016; this year China has submitted data on time.
- Domestically, risks arising from shadow banking continue to appear limited given the sector's small share of financial system assets and its minimal links with the banking system.
- Credit activities do not appear to have shifted significantly to the shadow banking sector over the past year. However, as in past years, ongoing tightening of banks' regulations and/or lending standards for residential property lending continues to create opportunities for shadow banks to grow. Despite this, shadow banks' share of residential property lending remains small and there are key constraints to it being quickly scaled up.
- Council agencies continue to monitor shadow banking activity, focusing in particular on credit for housing and residential development, as this could exacerbate risks in the domestic financial system.

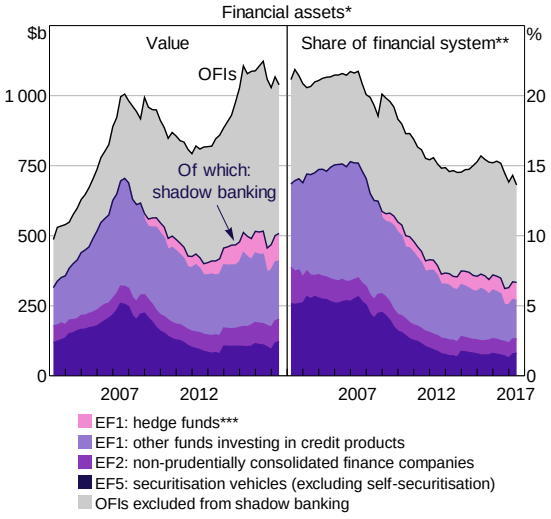
International Shadow Banking Trends

Domestic shadow banking trends

There is little evidence that the continued strengthening of banks' lending standards over the past year (in part due to heightened regulatory oversight) has caused credit activities to shift to the shadow banking sector. The size of the shadow banking system has remained steady at around 7 per cent of the financial system - around half the size it was in 2007 (Graph 3). This is also at the lower end of the international range (see Graph 2).

The *narrow* measure of Australia's shadow banking sector accounts for around half of all OFI assets, and includes managed funds extending credit (including hedge funds), finance companies and mortgage originators.[2] Exposures that are included in OFI assets but excluded from the shadow banking measure mainly consist of self-securitised assets of authorised deposit-taking institutions (ADIs).

Graph 3
Shadow Banking and OFIs in Australia



* Total assets for some entity types where financial assets data are unavailable
** 'Financial system' excludes the RBA
*** Hedge fund data are only available from December 2008
Sources: ABS; APRA; ASIC; RBA

2 We focus mainly on the *narrow* measure because it allows for a more targeted assessment of shadow banking risks in Australia.

Also excluded from shadow banking are 'equity funds' (defined as managed funds with more than 80 per cent of their assets invested in equities), as well as finance companies, money market corporations and lenders mortgage insurers that are part of a prudentially regulated banking group.

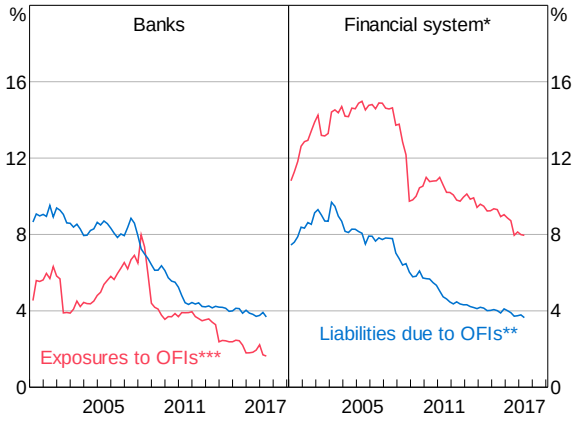
As discussed in the Regulatory Developments attachment, draft legislation currently before parliament would give APRA greater power to collect data from non-ADI lenders which will make it easier for APRA to monitor these entities' activities.

Stress outside the prudentially regulated sector can be transmitted to banks if there are strong linkages between the sectors. However, banks have minimal exposures and liabilities to OFIs in Australia, with these accounting for around 2 per cent and 4 per cent of banks' financial assets, respectively (Graph 4). The broader financial system's exposures are higher, at around 8 per cent. However, close to 40 per cent of the financial system's exposures to OFIs are superannuation fund investments in managed equity funds (explaining the large share of exposures to OFIs not held by banks).

Because of its small size and limited connections with the financial system, the shadow banking sector in Australia is currently judged to pose limited systemic risk, consistent with the conclusion reached in previous shadow banking updates to the Council. Nonetheless, we continue to monitor shadow banking activities, particularly around property lending, which warrants attention given the tightening of lending standards at prudentially regulated banks.

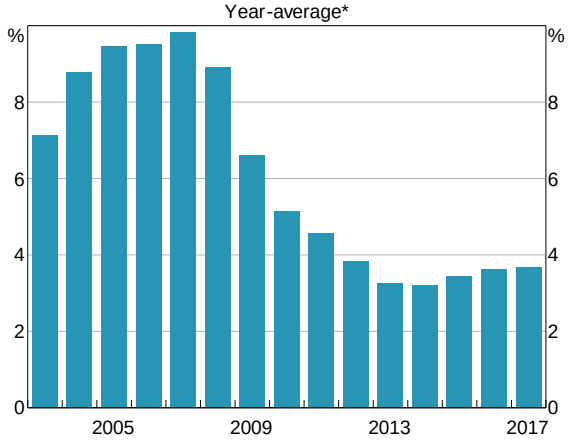
The available evidence suggests that shadow banks' share of residential mortgage lending has increased only slightly and remains well below pre-crisis levels (Graph 5).[3] While there are limited data on shadow bank property development lending, liaison suggests that this has increased relatively strongly over the past year or so, although not by enough to offset the pullback by domestic banks. These developments are discussed in detail below.

Graph 4
Connections to OFIs
Share of financial assets



* Excludes the RBA
** Includes equity funding
*** Excludes self-securitisation
Sources: ABS; APRA; RBA

Graph 5
Estimated Non-ADI Share of Housing Credit
Year-average*



* 2017 is year-to-date average
Sources: APRA; RBA

Fintech lending is a relatively new part of the shadow banking sector which we are also monitoring, although we have limited data on these lenders and are reliant on industry surveys.[4] Fintech lenders currently account for a very small proportion of lending in Australia, but have grown at a rapid pace over the past few years. While they currently pose minimal risks to financial stability given their small size, there is some evidence that they have targeted lower quality borrowers and that some banks are beginning to respond by loosening lending standards for small business loans.

The following sections provide details on the main shadow banking categories in Australia.

3 See Gishkariany M, D Norman and T Rosewall (2017), 'Shadow Bank Lending to the Residential Property Market', RBA *Bulletin*, September, pp 45-52 for more details.

4 Fintech lenders are largely exempt from reporting requirements and are not captured in our measure of shadow banking.

Managed funds (classified as EF1)

The activities of hedge funds and other funds invested in credit-related assets represent more than half of Australia's shadow banking sector.[5] These funds continued to account for around 4 per cent of financial system assets over the past year, and the risks associated with this sector do not appear to have changed significantly over this time. The majority of managed funds' assets are invested in equities or property, rather than credit products. Some funds do undertake liquidity transformation, but the risk of a run on these entities and resultant asset fire sales are limited by the requirement for retail funds in Australia to suspend redemptions if their liquid assets fall below 80 per cent of total assets.[6] In addition, almost all money market fund (MMF) type entities in Australia are structured as variable net asset value (NAV) funds, which reduces the incentives for investors to run.[7]

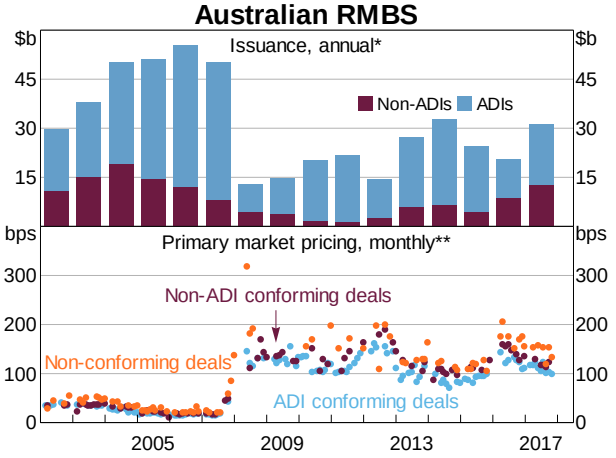
Managed funds do lend to residential property developers, but the available data suggest that this lending remains small and is little changed over the past few years. Nevertheless, given the size of the managed funds sector, there is a potential for these funds to emerge as a source of funding for shadow banking activities, similar to the way that insurance companies and pension funds account for a growing share of mortgage lending in the Netherlands.[8]

Securitisation (classified as EF5)

Securitisation is a major source of funding for shadow bank mortgage lenders. Total issuance of residential mortgage-backed securities (RMBS) by non-ADIs this year has been stronger than any other year since the crisis, although it is still only around 1 per cent of the stock of Australian housing debt (Graph 6).

Graph 6

Australian RMBS



* 2017 is year-to-date

** Face-value weighted monthly average of the primary market spread to bank bill swap rate for AAA rated notes

Source: RBA

A key constraint to a rapid expansion of shadow bank property lending is the cost and availability of funding. Non-bank mortgage originators require warehouse funding (revolving finance until mortgages are securitised), which banks are reluctant to provide due to: regulatory scrutiny; the way these facilities are treated under liquidity requirements; and changes to the capital needed to be held against such exposures. Longer-term funding is typically through RMBS, and while RMBS spreads have declined somewhat over the past year, RMBS pricing is still significantly higher than pre-crisis levels and well above the cost of bank funding (deposits or senior unsecured bank debt). Because of this, shadow bank lenders will only be competitive in lending to lower credit quality borrowers. Consistent with this, mortgage originators' RMBS tend to be backed by riskier loan pools, with a higher share of loans with low documentation and high loan-to-valuation (LVR) ratios.

The risks from mortgage originators' securitisation activity to the financial system continue to be limited by their small market share. Even so, we continue to monitor developments in this market closely for signs that tighter lending standards applying to banks are shifting activity to the shadow banking sector.

5 The FSB definition of EF1 includes mixed/balanced funds even though up to 80 per cent of their assets may be invested in equities.

6 See Price and Schwartz (2015), 'Recent Developments in Asset Management', RBA *Bulletin*, June, pp 69-78 and Lowe (2015), The Transformation in Maturity Transformation', Address to Thomson Reuters' 3rd Australian Regulatory Summit, Sydney, 27 May.

7 Constant NAV funds use the amortised cost method to value their assets to maintain their constant NAV structure, while variable NAV funds use the marked-to-market method to value some or most of their assets. See ASIC (2012), 'Money market funds', Report 324.

8 See ECB (2017), 'Box 7: The growing role of non-bank lending to households - a case study on the Netherlands', *Financial Stability Review*, May, pp 97-100.

Registered financial corporations (classified as EF2 and EF3)

Finance companies and money market corporations (akin to broker dealers) – collectively known as 'registered financial corporations' (RFCs) – are non-prudentially regulated entities with business structures that are the most similar to banks. Almost all money market corporations and some finance companies in Australia are consolidated into domestic or foreign banking groups, and these are excluded from the shadow banking measure (for example, Macquarie Equipment Finance, a finance company within the Macquarie Group, is excluded). Non-prudentially consolidated RFCs (for example, Toyota Finance Australia) accounted for only 1 per cent of financial system assets in 2017, broadly consistent with their share over the last few years.

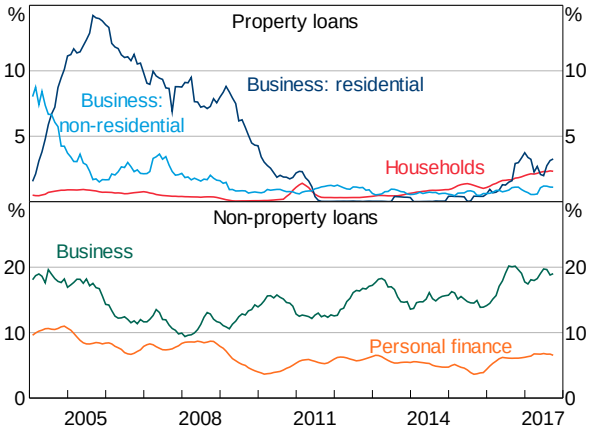
RFCs' lending to households for residential property has increased over the past year, but remains low at around 3 per cent of total housing loan approvals (Graph 7). Similarly, finance companies' lending to residential property developers has picked up as banks have become less willing to lend to such firms, but remains a relatively small share of total approvals to this sector. Moreover, much of this shadow bank finance is expensive mezzanine debt which poses less risk to financial stability as it is subject to some regulatory oversight if a bank provides the senior debt. However, there has also been some growth in shadow banks' provision of senior debt.

Non-prudentially regulated RFCs may seek to maximise returns by operating at high levels of leverage, thereby increasing risk in the financial system. The average leverage ratio (the ratio of assets to equity) of RFCs was 11 times as at September 2017, which is close to the average leverage ratio of ADIs. However, there are a significant number of RFCs operating at much higher leverage ratios. As discussed in last year's update, non-prudentially consolidated RFCs generally have lower leverage ratios than those within a banking group (Graph 8). Moreover, those that take on higher leverage ratios typically do so because of sizeable repurchase agreements ('repos') on both sides of their balance sheet and most of these repos are transacted using high-quality Australian government securities as collateral, limiting the credit and funding risks from this activity.

Graph 7

Finance Companies' Loan Approvals

Share of total loan approvals by borrower*



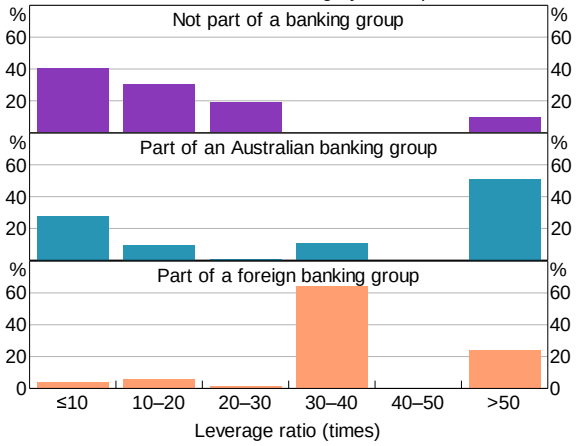
* Six month rolling average

Sources: APRA; RBA

Graph 8

RFC Assets by Leverage Ratio*

Share of RFC assets in each category, 30 September 2017



* Ratio of assets to equity; excludes three institutions that reported negative equity

Sources: APRA; RBA

Financial Stability Department

Reserve Bank of Australia

20 November 2017

Domestic and International Regulatory Developments

APRA's New Powers over Non-ADI Lenders

In the May 2017 Budget, the Government announced measures to reinforce APRA's macroprudential powers, including powers over non-ADIs. After a public consultation, draft legislation was introduced in October. Once passed, APRA will have the power to make rules relating to the lending activity of non-ADI lenders, where 'APRA considers that the provision of finance by one or more non-ADI lenders materially contributes to risks of instability in the Australian financial system'. While APRA would be able to immediately make non-ADI rules once the legislation is passed, the Explanatory Memorandum makes clear that these powers are intended to be generally held in reserve.

The legislation also broadens the scope of the *Financial Sector (Collection of Data) Act 2001* to allow APRA to collect information from a larger array of non-ADIs. Collecting these data will take some time; non-ADI lenders will need to register with APRA first, after which APRA will make the necessary reporting standards (expected to include two rounds of industry consultation). Only following this will non-ADIs begin providing data to APRA.

Market Participant Capital Requirements

ASIC is considering a range of enhancements to the ASX Market Participant requirements including increasing the core capital requirement, preparation of a scenario-based liquidity plan and a range of enhanced reporting obligations. ASIC is also considering extending these risk-based capital rules to ASX 24 Market Participants. Any changes will need to be the subject of industry consultation.

Under existing arrangements, market Participants (which are part of the money market corporations sector) are subject to range of capital requirements under ASIC's Market Integrity Rules. The requirements are different for ASX Market Participants and for ASX 24 Participants. The ASX Market Participant capital requirements are Basel II-like with a modest core capital requirement and a variable component under which liquid capital must exceed a firm's total risk requirement by a ratio of 1.2. The total risk requirement is determined by reference to a basket of six risk categories (counterparty risk, large exposure risk, underwriting risk, etc.). ASX 24 Market Participants have a basic net tangible asset (NTA) requirement and must prepare a statement of net liquid assets and of client funds. They must maintain a buffer of 150% of the required NTA.

Assessment of Shadow Banking for the 2017 G20 Summit

Step-in Risk

RESERVE BANK OF AUSTRALIA

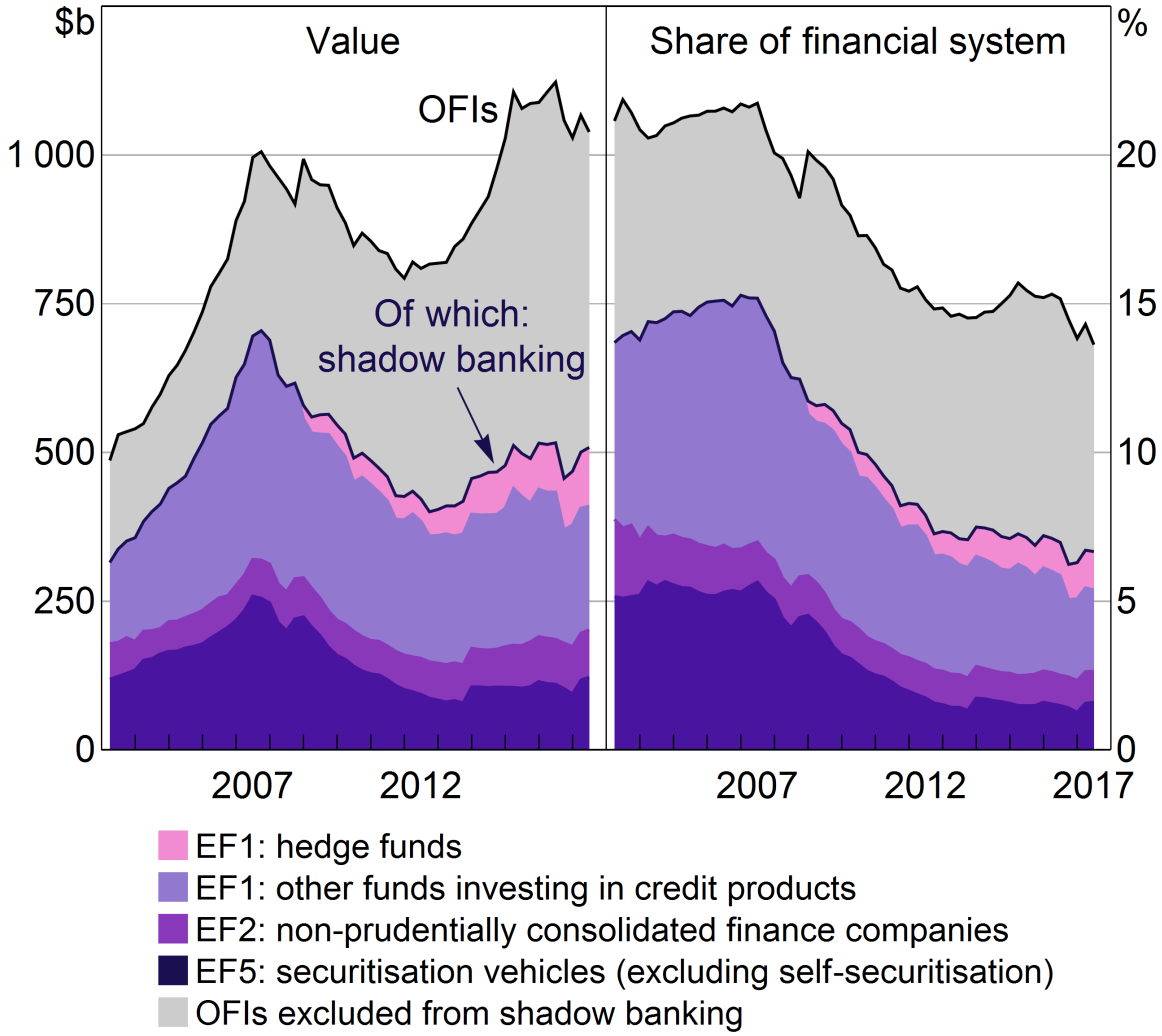
7 December 2017
Sydney

Shadow banking in Australia

Michael Gishkariany

Shadow Banking and OFIs in Australia

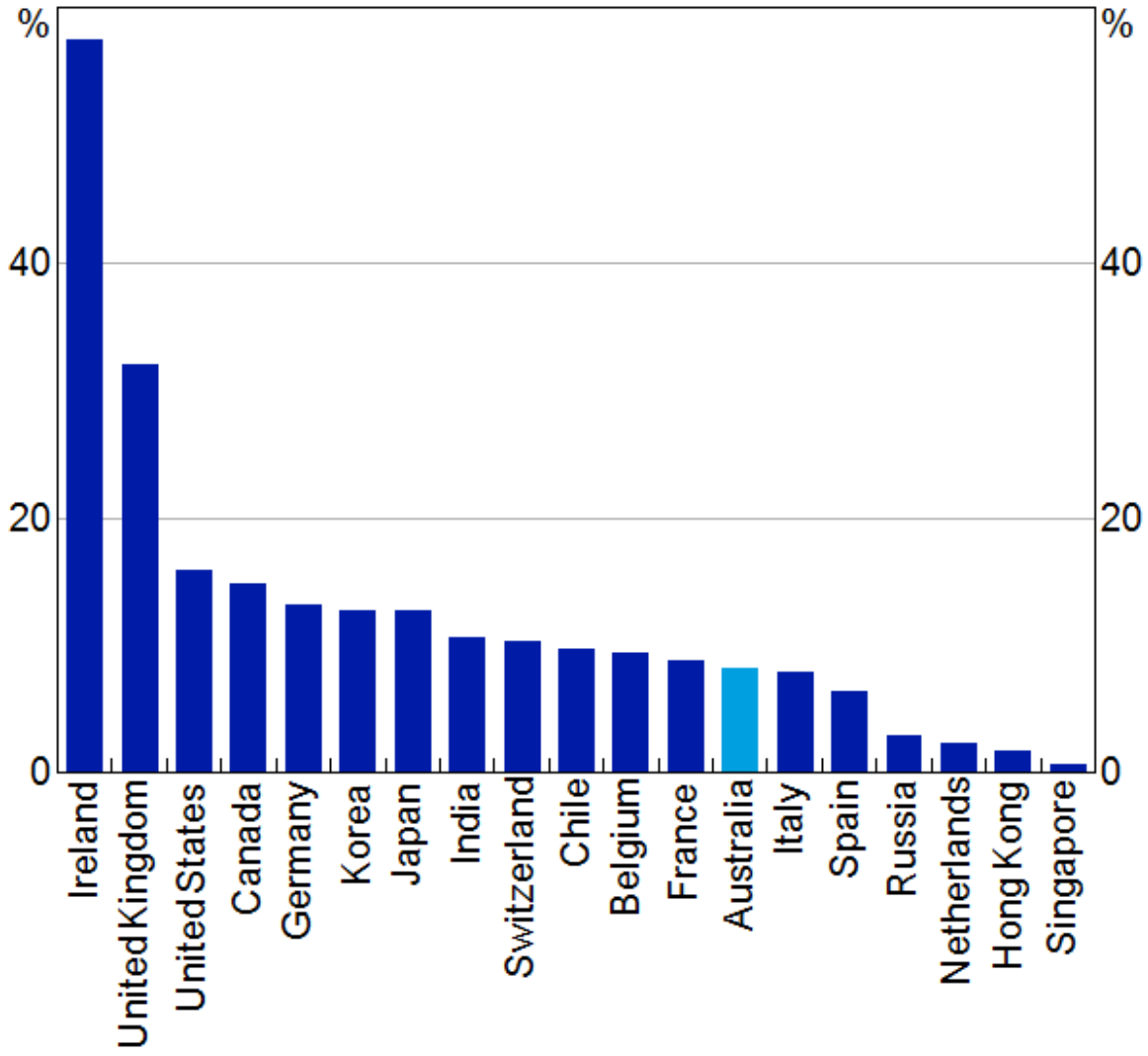
Financial assets



Sources: ABS; APRA; ASIC; RBA

Shadow Banking

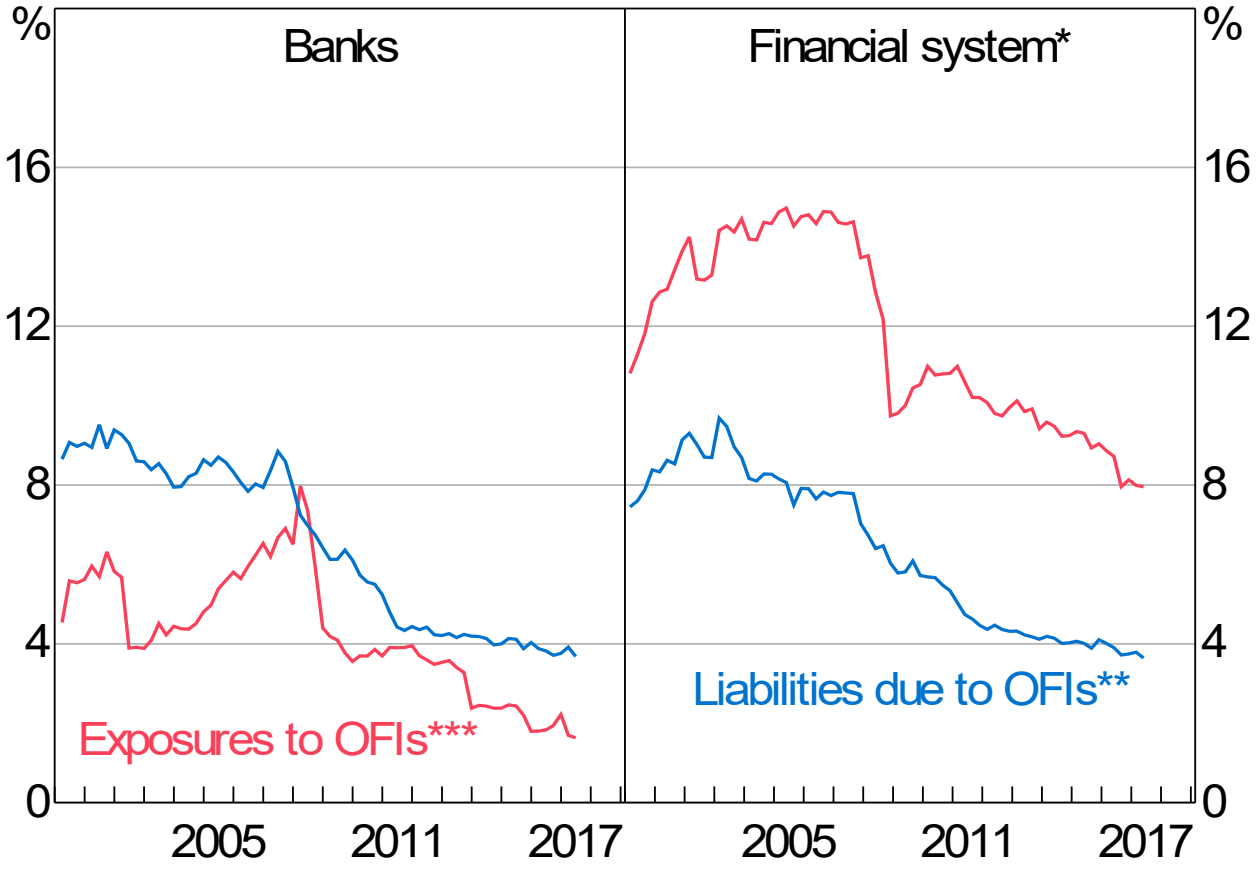
Share of domestic financial system assets, as at December 2015



Source: FSB

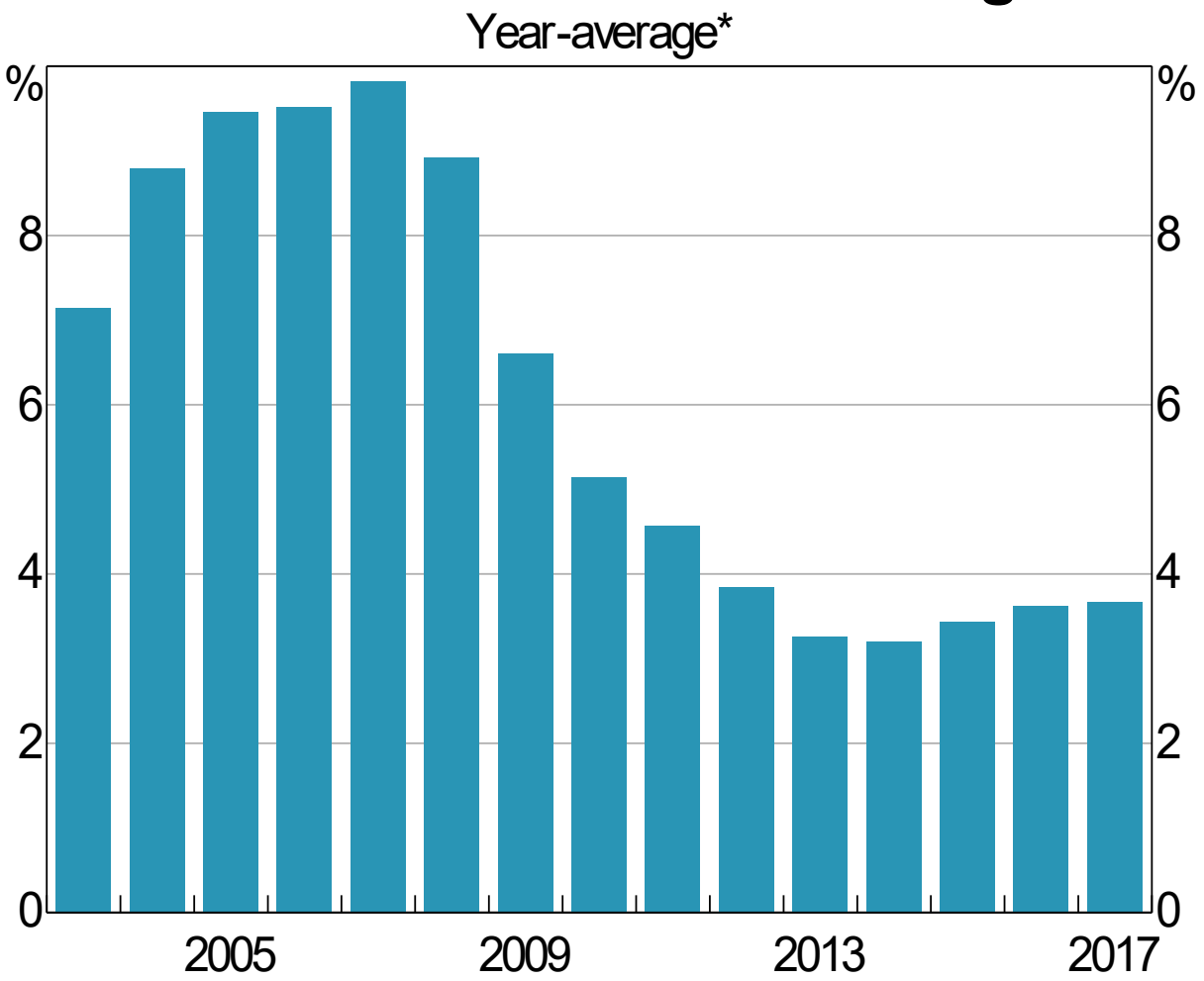
Connections to OFIs

Share of financial assets



* Excludes the RBA
** Includes equity funding
*** Excludes self-securitisation
Sources: ABS; APRA; RBA

Estimated Non-ADI Share of Housing Credit

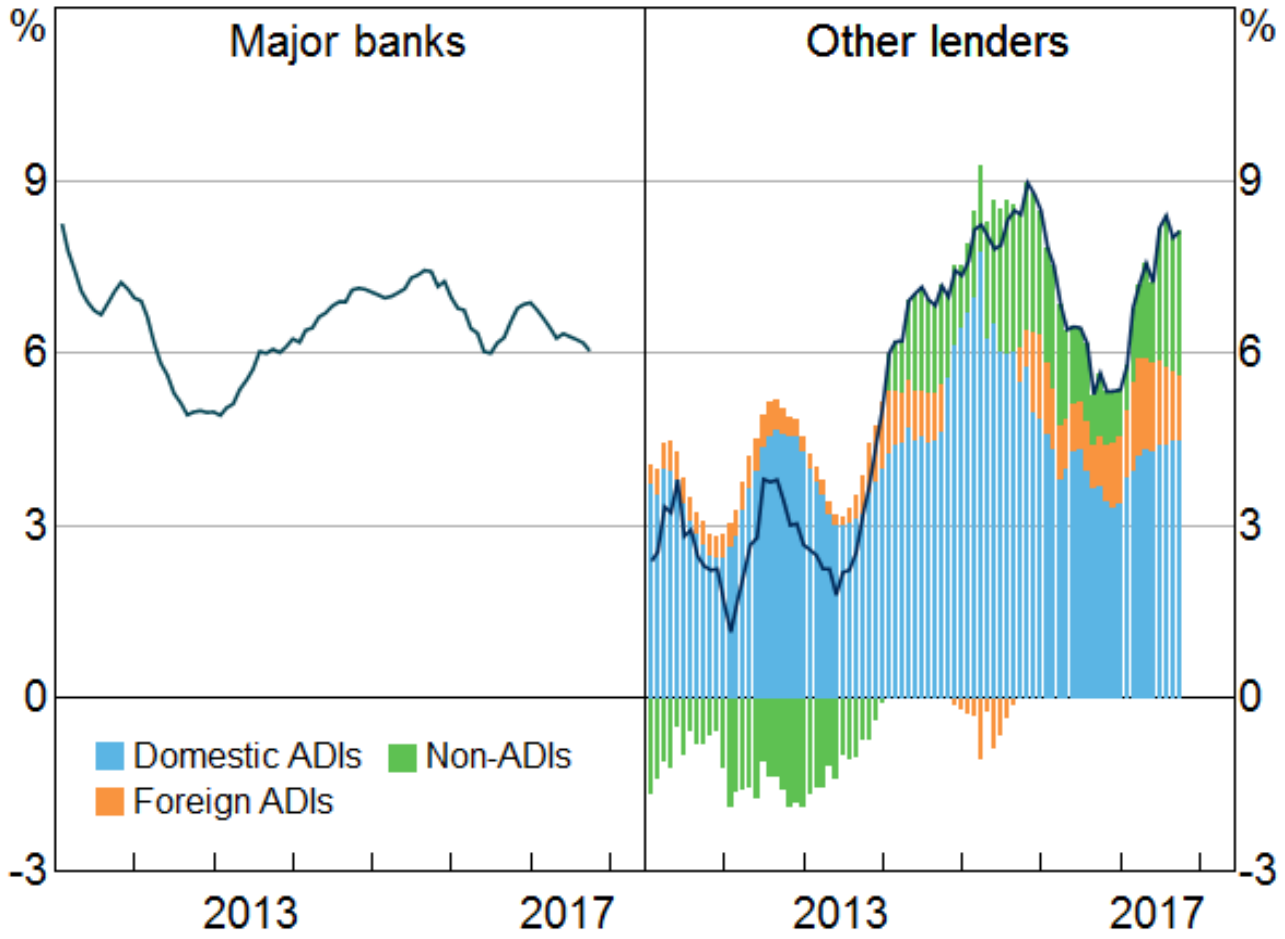


* 2017 is year-to-date average

Sources: APRA; RBA

Housing Credit Growth*

Six-month annualised

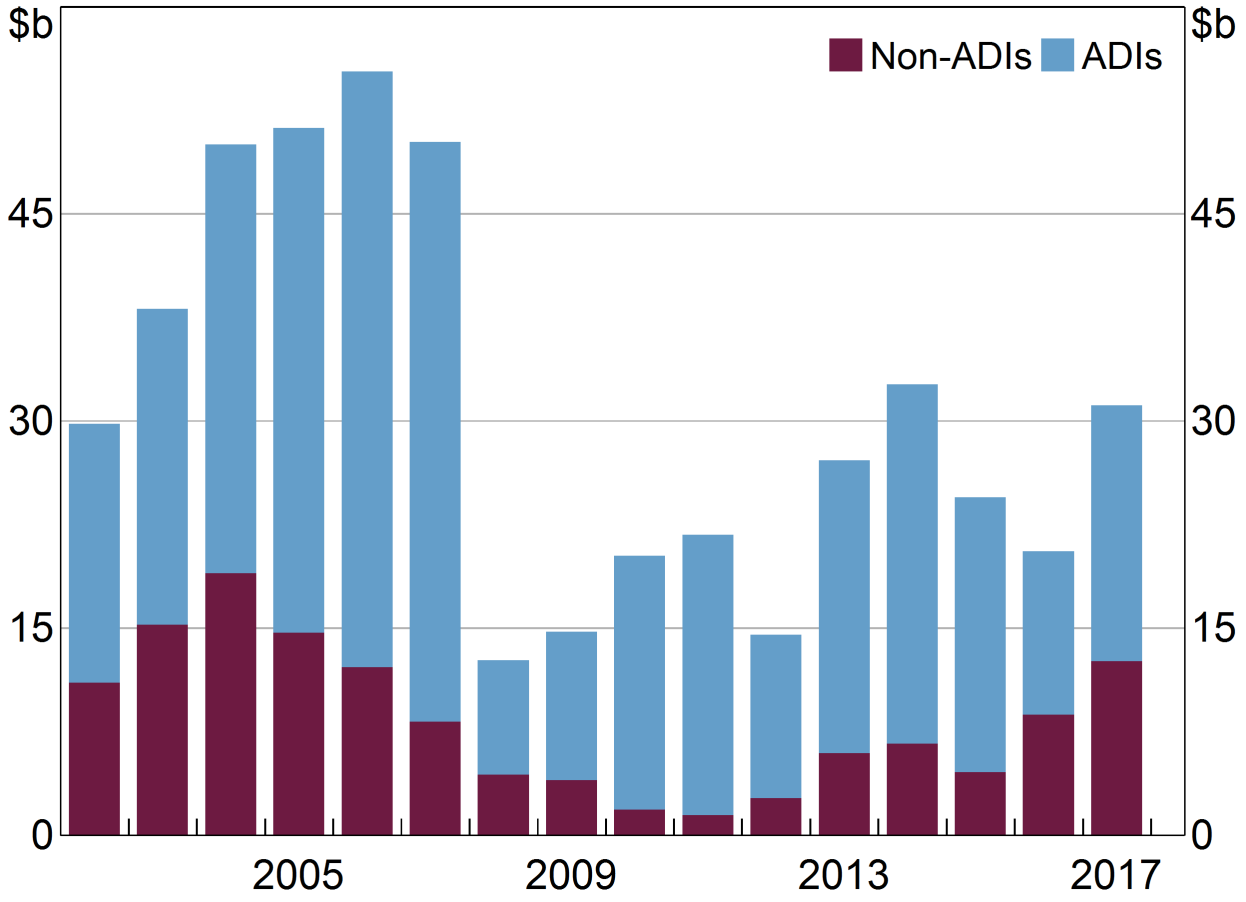


* Seasonally-adjusted and break-adjusted

Sources: APRA; RBA

Australian RMBS

Issuance, annual*

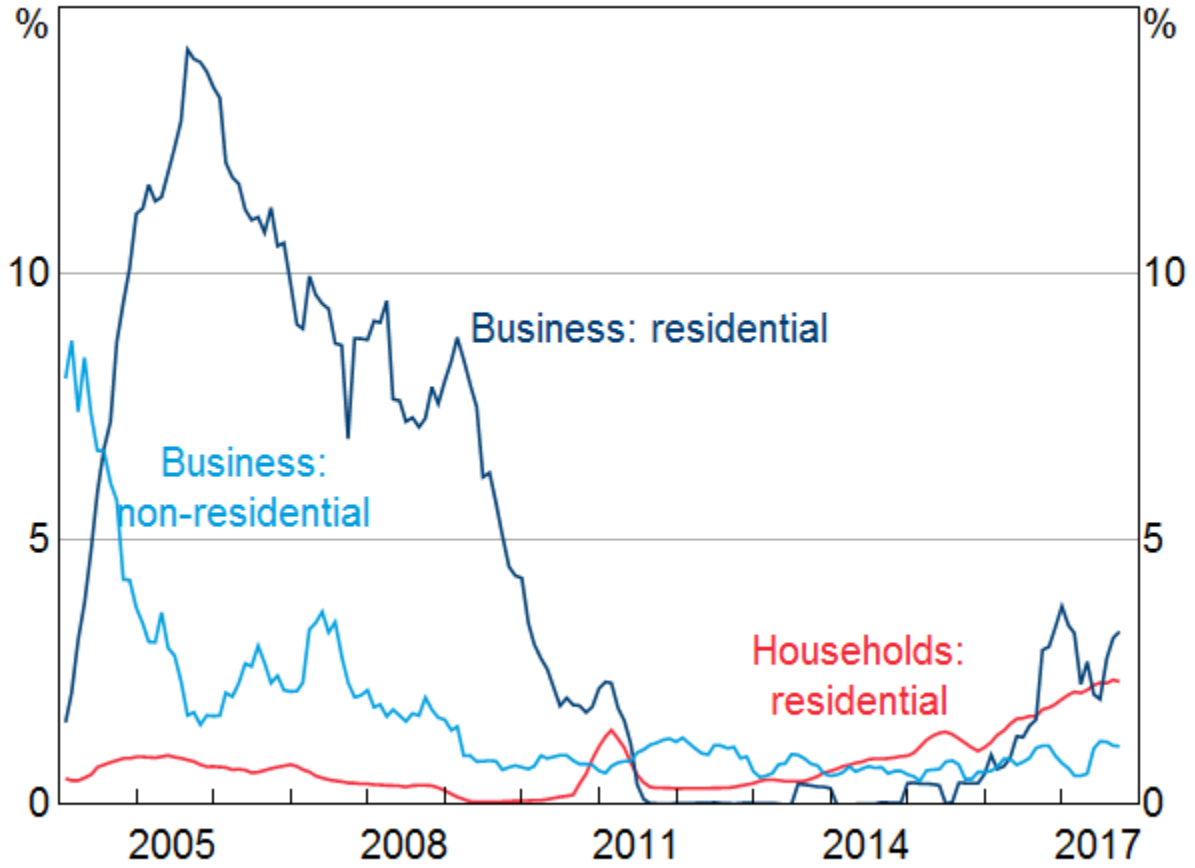


* 2017 is year-to-date

Source: RBA

Finance Companies' Property Loan Approvals

Share of total property loan approvals by borrower*



* Six month rolling average

Sources: APRA; RBA

From: YAP, Calvin
Sent: Wednesday, 31 January 2018 3:34 PM
To: NORMAN, David
Subject: Shadow Banking Meeting Notes [SEC=UNCLASSIFIED]
Attachments: Outline - Shadow Banking Meeting.docx

Hi David,

See attached my notes for the meeting.

Cheers,
Calvin

Calvin Yap | Analyst | Australian Financial System | Financial Stability Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| w: www.rba.gov.au

Shadow Banking Meeting

- Update on our estimate of non-ADI housing credit in the Financial Aggregates
  - Produced by IMS, issues due to the lack of comprehensive data on non-ADIs
  - Some recent work by IMS suggests that this measure could overestimate the current stock of non-ADI housing credit

- While the data are imperfect, they show a pickup in non-ADI housing credit growth, especially in the second half of last year
  - Non-ADI housing credit is currently growing significantly faster than housing credit from banks

- However, non-ADIs still remain small as a share of outstanding housing credit (around 4-5%) and as a contributor to overall housing credit growth
  - Because its starting from such a small share, we are less concerned about the risk to the financial system, although it's something to keep a close eye on

- Data on RMBS issuance is also consistent with an increase in non-ADI housing lending
  - Non-ADI RMBS issuance consistently strong over 2017, especially in the second half of the year
  - Highest issuance since before the financial crisis
  - Market conditions remain favourable for issuance – RMBS spreads continued to decline slightly over 2017, although not by as much as the declines in 2016
    - Decline in non-ADI RMBS spreads of ~15-20bps to ~100bps (~40bps decline over 2016)

- We still believe that the main constraints on non-ADI housing lending are higher funding costs and reliance on banks for warehouse funding
  - Securitisation database:
    - Non-ADI lending rates have come down slightly, mainly for owner-occupied P&I loans – potentially a sign that lower RMBS funding costs are being passed on to borrowers
    - At the same time, banks have increased rates for investor and interest only loans
  - As a result, the gap between the rates offered by non-ADIs compared with banks has narrowed

- Have not been any significant developments in non-ADI property development lending space, same story as outlined in the Bulletin article in October last year

From: @apra.gov.au>
Sent: Wednesday, 31 January 2018 5:42 PM
To: NORMAN, David; DOHERTY, Emma; DONOVAN, Bernadette; YAP, Calvin
Cc:
Subject: Summary and take outs from today's RBA/APRA shadow banking catch-up [DLM=For-Official-Use-Only]

For Official Use Only

Dear all,

Many thanks to you all for your contributions today - I learnt a lot and hope that others also found it useful. Please find below a brief summary and action items etc. Feel free to provide feedback if there is anything omitted/unclear/incorrectly reported.

KEY TAKE OUTS

- broad consensus that the shadow banking sector does not appear likely to pose a current or near-term material risk to the Australian financial system
- over the 2nd half of 2017, non-ADI housing credit grew significantly faster than banks.

- ADIs are increasing exposures to P2P lenders - for majors primarily learning/acquisition; for a few small ADIs, large exposures could present heightened risk.

ACTION ITEMS

What	Who	Status	Links
Share list of non-ADI financiers, FS fintech note	RBA (David)	Complete	Non-ADI financiers (APRA link) FINANCIAL STABILITY IMPLICATIONS OF FINTECH CREDIT IN AUSTRALIA (APRA link)
Share list of non-ADI activity (just started, only 3 entries)	APRA	Complete	
Share info on aggregate, high-level trends in warehousing data	APRA	Open	--
Sharing of RBA non-ADI housing credit estimates – to discuss	RBA/APRA	Open	--
Incorporate non-ADI discussion & info sharing in RBA/APRA quarterly risk meeting	RBA/APRA (David/Mark S)	Open	--

SUMMARY

Purpose/scope of meeting

- Motivation
  - Nearer term – more active data collecting & monitoring role for APRA (backdrop of tighter regulatory requirements/benchmarks for ADIs & impending non-ADI legislation)
  - Longer term – financial innovation/new entrants

- Purpose of meeting
    - Enhance cross-agency capacity in monitoring and analysing risks from non-ADI FIs and other parts of the shadow banking sector by sharing knowledge, building common understanding of priority risk areas
- Scope – NOT FSCODA registration and reporting (already dedicated CFR WG)

Recent developments/risks

Broad consensus that **shadow banking sector is unlikely to pose a current or near-term material risk** to the Australian financial system

Residential property

- **recent pick-up in non-ADI housing credit**, which was not evident at the time of the Sep-17 RBA Bulletin article [APRA only - see graph]
    - *caveat emptor* - best endeavours RBA estimate of non-ADI housing credit growth combining RFC data and other sources; recent RBA work suggests this could overestimate the current stock of non-ADI housing credit
    - data on RMBS issuance is consistent with an increase in non-ADI housing lending - non-ADI RMBS issuance consistently strong over 2017, especially in the second half of the year; highest issuance since before the financial crisis; market conditions remain favourable – RMBS spreads continued to decline slightly over 2017, although not by as much as the declines in 2016; decline in non-ADI RMBS spreads of ~15-20bps to ~100bps (~40bps decline over 2016)
- however **non-ADIs still remain small as a share of outstanding housing credit** (around 4%) and as a contributor to overall housing credit growth
- risks
    - little evidence of non-ADI competition eroding standards of regulated sector

CRE

- **no significant developments** since Sep-17 Bulletin article

P2P

- Mostly consumer lending (some at Payday lender end of spectrum), a little business
    - On balance sheet, links to banking system
- **ADIs are increasing exposures to P2P lenders** - for majors primarily learning/acquisition, for a few small ADIs large exposures as % capital could present heightened risk (but not to system)
- Constrained by lack of scalability

Funding

- main **constraints to non-ADI housing growth** – higher funding costs and reliance on banks for warehouse funding; also limited market appetite for high risk loans in securitisation pools
    - RBA securitisation database: non-ADI lending rates have come down slightly, mainly for owner-occupied P&I loans – potentially a sign that lower RMBS funding costs are being passed on to borrowers, while banks have increased rates for investor and interest only loans => gap between the rates offered by non-ADIs compared with banks has narrowed
- Super – investigating specific cash options with unexpectedly high returns; anecdotal talk of super warehouse funding
- RML monitoring of ADI warehouse facilities (Mar-17 further measures) – only have data for 2 quarters; no obvious increase in risk/activity (though higher churn would not be picked up)

Data sources/gaps

Key sources

- RBA: syndicated lending data; securitisation database (n.b. contractual constraints on sharing)
- APRA/RBA: industry liaison - banks, brokers, others
- APRA/RBA: manual spreadsheets recording non-ADI activity from news, analyst reports etc.

Gaps

- CFR WG on non-ADIs is looking at **identification of material entities**; can support this work by providing direction from risk perspective e.g. how much attention should we pay to non-ADI CRE lenders?

ATTENDEES

APRA

(RDA - ADI Strategic Intelligence)
(RDA - Superannuation Strategic Intelligence)
(RDA – Residential Mortgage Lending)
(RDA - Credit Risk)
(Policy Development)
(Diversified Institutions)

RBA

David Norman, Calvin Yap (FS – Australian Financial System)
Bernadette Donovan (FS – Households, Businesses and Credit)
Emma Doherty (DM – Institutional Markets)

AUSTRALIAN PRUDENTIAL REGULATION AUTHORITY
1 Martin Place (Level 12), Sydney, NSW 2000
GPO Box 9836, Sydney, NSW 2001
T 02 9210 3000 | W www.apra.gov.au

UPDATE ON DOMESTIC SHADOW BANK ACTIVITY

This note updates the Council on recent developments in the domestic shadow banking sector, with a focus on this sector's lending to the property market.

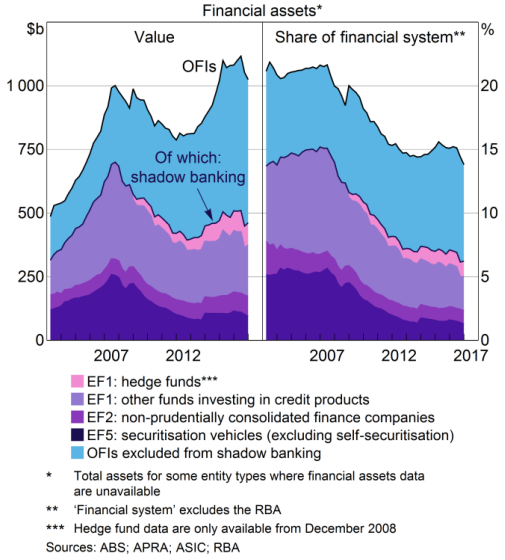
Key points:

- Overall, systemic risks stemming from the domestic shadow banking sector are limited due to its small share of financial system assets and limited linkages to the banking system.
- Domestic banks tightening of lending standards over recent years has created an opportunity for shadow banks to expand. This has been spurred by banks' repricing of investor and interest-only mortgages, and favourable funding conditions in non-bank RMBS markets.
- Estimates suggest that growth shadow banks' housing lending is about twice that of the major banks, but still only a small share of total housing loans. Shadow banks' lending for property development has likely increased by more, but has not offset the pull-back by banks.
- Recently passed legislative changes will improve regulators' ability to monitor shadow banking activities and their financial stability implications.

Overview of shadow banking sector

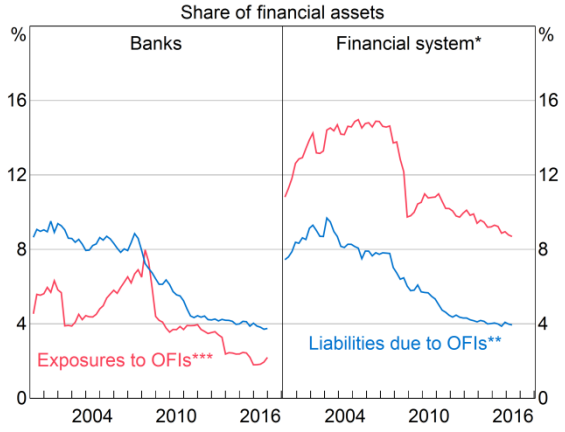
The domestic shadow banking system poses limited risks to the financial system. The sector is around 6 per cent of domestic financial system assets, which is small by international standards (Graph 1).[1] In addition, contagion risks are limited by banks' exposures to the sector, which are only a few per cent of their financial assets (Graph 2).

Graph 1
Shadow Banking and OFIs in Australia



* Total assets for some entity types where financial assets data are unavailable
** 'Financial system' excludes the RBA
*** Hedge fund data are only available from December 2008
Sources: ABS; APRA; ASIC; RBA

Graph 2
Connections to OFIs



* Excludes the RBA
** Includes equity funding
*** Excludes self-securitisation
Sources: ABS; APRA; RBA

The domestic shadow banking sector can be separated into three main types of entities:

- Managed funds: these are usually equity financed by wealthy individuals, syndicates, trusts and superannuation funds. They account for about two-thirds of the domestic shadow banking

1 The measure of shadow banking presented in this paper is consistent with the Financial Stability Board's (FSB) *narrow* measure, which limits shadow bank assets to those relating to lending or credit intermediation. This focuses shadow bank activities to those that mostly likely have financial stability implications. The FSB's *broader* measure includes assets of all assets of non-prudentially regulated entities, including those that do not related to lending. The broader measure of domestic shadow banking is about twice the narrow measure.

sector and this share has increased over the past decade as financial assets have expanded. Examples of these entities include hedge funds, cash management trusts and other funds investing in credit products (like commercial property or business credit).

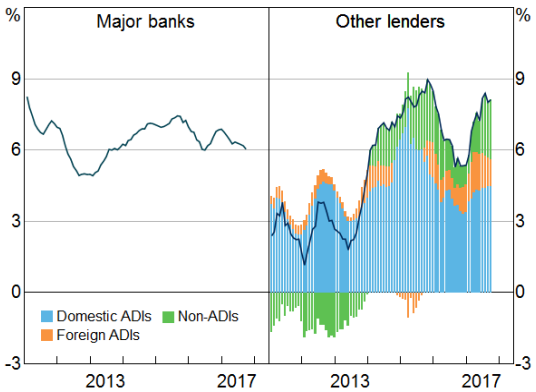
- Registered Financial Corporations (RFCs): these entities' main business is to intermediate debt finance in the same manner as a bank but without access to deposit funding.[2] They account for around one-sixth of the domestic shadow banking sector. Examples of these entities debt funded
- Wholesale funders: these are securitisation vehicles that are not consolidated within a banking group. They primarily originate residential mortgage mortgages and rely heavily on securitisation to fund their activities. They account for about one-fifth of the domestic shadow banking system, down from around one-third prior to the crisis. Examples of these entities include non-prudentially consolidated mortgage originators and car lease finance?

A tightening in regulation of the banking sector has historically contributed to growth in (or 'leakages' to) the shadow banking system. Shadow banking literature has found that macro prudential policies targeted towards slowing bank credit have typically resulted in bank lending contracting and growing for non-banks. In addition, these leakages tend to be stronger in countries where there is greater reliance on lending from the largest banks. In some European countries, most notably the Netherlands, tighter capital requirements for banks have contributed to a notable rise in the share of outstanding mortgage credit originated by pension funds and insurers. This international experience is relevant to consider given the tightening in lending to the residential property market in Australia over the past few years.

Shadow bank lending to the residential mortgage market

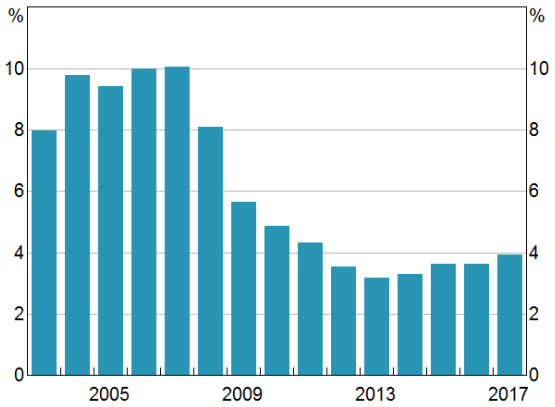
Estimates suggest that growth in shadow bank residential mortgage lending picked up materially over the second half of 2017 and is now significantly higher than growth in this type of lending by banks (Graph 3). However, shadow banks still account for only a small share of outstanding residential mortgages (around 4 per cent), and their contribution to overall housing credit growth remains limited (Graph 4).

Graph 3
Housing Credit Growth*
Six-month annualised



* Seasonally-adjusted and break-adjusted
Sources: APRA; RBA

Graph 4
Estimated Non-ADI Share of Housing Credit
Year-ended



Sources: APRA; RBA

While the opportunity for shadow banks to expand in residential mortgage lending stemmed from banks' tightening of lending standards, it has been spurred by favourable developments in mortgage and residential mortgage backed securities (RMBS) markets. Banks have repriced investor and IO loans higher, making shadow banks more competitive for these loans (Graph 5). In addition, the cost of financing these mortgages has declined, with spreads on non-bank RMBS – shadow banks' main source

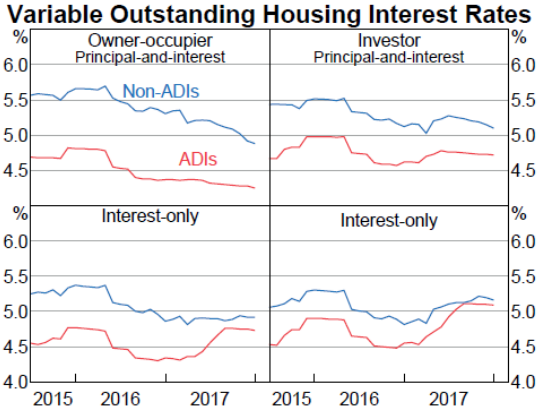
2 RFCs that are consolidated into broader domestic or international banking groups are excluded.

of funding – falling in recent years (Graph 6). This has supported non-bank RMBS issuance over 2017, which was higher than in any other year since the financial crisis. However, RMBS spreads remain significantly higher than pre crisis levels.

There are several key constraints to these activities expanding rapidly. These include that the cost of RMBS funding for shadow banks' remains well above the cost of bank financing (deposits or senior unsecured bank debt). Another is the cost and availability of warehouse financing, which is generally provided by a major bank. Warehouse financing is capital intensive for banks to provide and APRA has increased its oversight of banks' warehouse facilities to ensure they don't grow too fast or the underlying mortgages deteriorate in quality (relative to banks' mortgages).

Graph 5

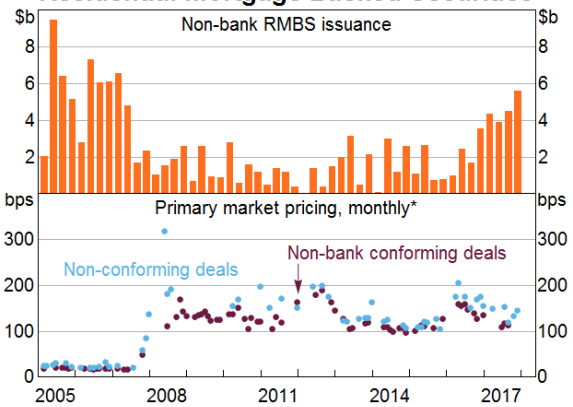
Graph 4.16
Variable Outstanding Housing Interest Rates



Sources: RBA; Securitisation database

Graph 6

Residential Mortgage Backed Securities



* Face-value weighted monthly average of the primary market spread to bank bill swap rate for AAA rated notes

Source: RBA

Shadow bank lending for property development

Accurately monitoring shadow bank lending to this sector is challenging.[3] Incomplete data suggests that RFCs' share of residential property development loan approvals is around x per cent. A broader measure from the ABS suggests that managed funds' lending to non-financial corporations is $28 billion, and has been little changed since 2014. However, this figure is likely to significantly overstate lending to residential property development as it includes all loans to corporates for any purpose.

The Banks' liaison program provides a useful way to assess shadow banks' lending to property development. This information suggests that shadow banks' expansion is likely greater than suggested by RFC data, but still only partially offsets the pull-back by the major banks.

Recent legislative changes

Accurately estimating shadow bank lending to the property market is difficult because non-prudentially regulated entities are subject to less extensive reporting requirements than banks. Recently passed legislative changes to the *Financial Sector (Collection of Data) Act 2001 (FSCODA)* mean that many entities that previously had no or only voluntary reporting requirements will have mandatory reporting to APRA. These changes will improve regulators' ability to monitor shadow banking activities and their financial stability implications.

3 For example, entities lending to this sector don't need the visibility required to sell mortgages to households, and there is less regulatory oversight because Australian law provides less protection to commercial borrowers compared with consumers.

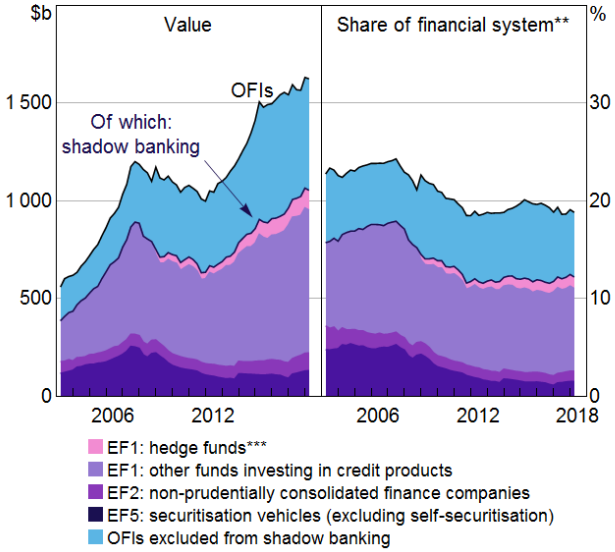
RECENT DEVELOPMENTS IN SHADOW BANKING IN AUSTRALIA
Note to Financial Stability Board Shadow Banking Experts Group

Other financial intermediaries (OFIs) account for around 20 per cent of total financial system assets in Australia, while the narrow measure of shadow banking accounts for around 12 per cent (Graph 1).[1] Shadow banks' share of the financial system has increased slightly over the past year. A significant, but unquantifiable, proportion of these entities' assets are not associated with credit intermediation and pose little stability risks because of the absence of maturity transformation, liquidity transformation or leverage. For example, equity investments held in trust for pension funds pose limited financial stability risks, but are captured within EF1. OFIs have minimal funding and credit links to the regular banking system and the financial system more broadly (Graph 2).

Graph 1

Shadow Banking and OFIs in Australia

Financial assets*

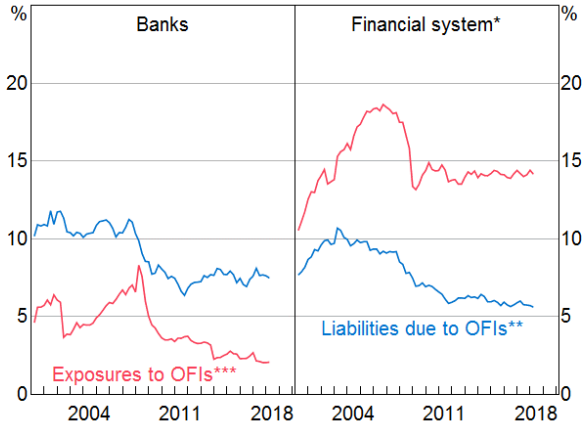


* Total assets for some entity types where financial assets data are unavailable
** 'Financial system' excludes the RBA
*** Hedge fund data are only available from December 2008
Sources: ABS; APRA; ASIC; RBA

Graph 2

Connections to OFIs

Share of financial assets

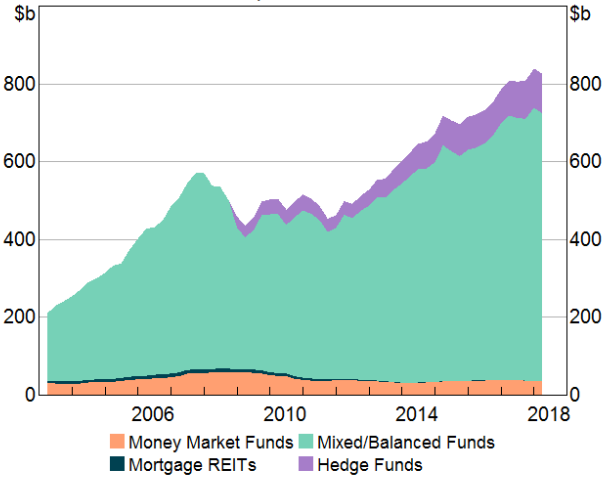


* Excludes the RBA
** Includes equity funding
*** Excludes self-securitisation
Sources: ABS; APRA; RBA

Graph 3

Collective Investment Vehicles

Components of EF1



Sources: ABS; RBA

EF1: Managed funds investing in credit products

In Australia, a range of managed fund products comprise over three quarters of the narrow shadow banking measure and more than half of all OFIs. Their size in part reflects the large volume of funds managed on behalf of pension funds.

The majority of Australian managed funds' assets are invested in equities or commercial real estate, rather than credit products, which reduces the risks they pose to the broader financial system. Mixed/balanced funds account for most of the sector and are responsible for almost all of the growth over the past decade (Graph 3). In general these funds have very little invested in credit products, although data limitations and their exposures to sovereign bonds typically means they are included in EF1.

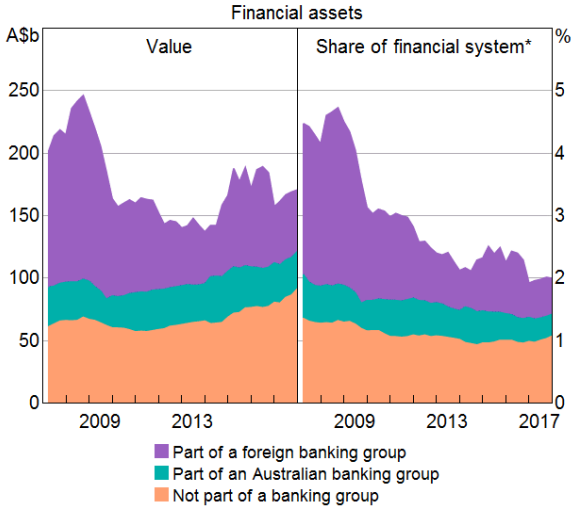
1 Shadow banking in Graph 1 is the FSB's narrow measure. EF3 is zero as all broker-dealers are prudentially consolidated (apart from one small institution, excluded for confidentiality). EF4 is not shown due to its small size (0.1% of financial system assets). The Australian Bureau of Statistics (ABS) made substantial changes to the financial accounts release which affected the shadow banking measure. In particular, the ABS switched to a 'non-look through' approach for pension fund investments in wholesale unit trusts which resulted in a large increase in the size of the managed funds sector. See ABS (2017) for more detail.

There are some additional mitigating factors that reduce the risks that managed funds pose to the broader financial system. The risk of a run on these entities and resultant asset fire sales is limited by the requirement for retail funds in Australia to suspend withdrawals if the fund's assets are deemed to be illiquid (see Price and Schwartz (2015) and Lowe (2015) for further details). In addition, almost all money market funds are considered to be structured as variable net asset value funds.

EF2 and EF3: Intermediation of loans and market activity that is dependent on short-term funding

Finance companies and money market corporations (akin to broker dealers) – collectively known as 'registered financial corporations' (RFCs) – are the non-prudentially regulated entities with business structures that are most similar to banks. The RFC sector as a whole represents only around 2 per cent of financial system assets (Graph 4). This share has declined markedly since the financial crisis as some RFCs, particularly those in foreign-owned banking groups, scaled back their activities or exited the industry. Almost all broker dealers, and some finance companies, are prudentially consolidated into either domestic or foreign banking groups. Altogether around half the assets of RFCs are excluded from our estimates of shadow banking in Australia on this basis.

Graph 4
Registered Financial Corporations



* Excludes the RBA
Sources: APRA; RBA

Some RFCs engage in lending to the property sector, and we remain alert to the potential for non-bank lending to be spurred as an unintended consequence of Australian regulators' efforts to improve banks' mortgage lending standards (see RBA (2018), p40). While non-bank mortgage lending is growing faster than banks' lending, it still represents less than 5 per cent of outstanding residential mortgages. Non-bank lenders are constrained by their higher funding costs relative to banks which makes it difficult to compete for prime quality borrowers. Recently passed legislation provides Australia's prudential regulator, the Australian Prudential Regulation Authority (APRA) with reserve powers to impose rules on non-ADIs if their activities are judged to pose a material risk to financial stability (see Treasury (2017)).

EF4: Facilitation of credit creation

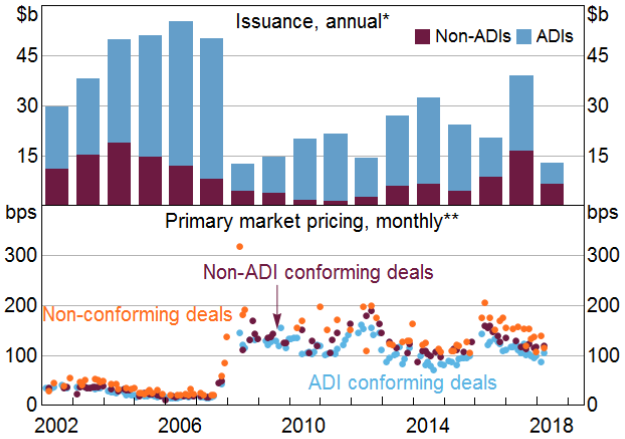
The primary institutions that facilitate credit creation in Australia are lenders mortgage insurers. These insurers are prudentially regulated by APRA and make up a very small proportion of financial system assets.

EF5: Securitisation vehicles

Securitisation is an area of shadow banking in Australia that warrants particular attention, given its connections with the housing market and banking system, and the potential for leakage due to the tightening of regulations on prudentially regulated entities. Residential mortgage-backed securities (RMBS) issuance by non-ADI mortgage originators has increased, reaching a post-crisis high in 2017 (Graph 5). RMBS spreads have also declined since 2016, although they remain well above pre-crisis levels.

Non-ADI mortgage originators tend to have somewhat riskier loan pools than banks – for example, their RMBS are backed by higher shares of loans with low documentation and high loan-to-

Graph 5
Australian RMBS



* 2018 is year-to-date
** Face-value weighted monthly average of the primary market spread to bank bill swap rate for AAA rated notes
Source: RBA

valuation (LVR) ratios. RMBS issued by mortgage originators are also connected to the banking system through support facilities provided by regular banks, including warehouse facilities, liquidity facilities and a variety of swaps, though these amount to a very small share of banks' total assets.

At present, non-bank securitisation activity poses limited systemic risk because of its small share of overall funding in the financial sector; outstanding RMBS issued by mortgage originators accounted for a little over 1 per cent of Australian mortgages as at December 2017, down from 4 per cent in September 2007. A key constraint to non-ADI securitisation issuance expanding rapidly is its higher cost compared with bank funding (both deposits and unsecured bonds). APRA and the RBA continue to monitor RMBS issuance for signs of a significant switch of lending to non-ADIs in response to tighter housing lending practices in ADIs.

Reserve Bank of Australia
August 2018

Financial Stability Workshop – 2018 – Denmark

Update on shadow banking in Australia

Intro – 1 minute = 130 words [132]

Has been supervisory action to tighten bank lending standards. One risk is that as banks tighten their lending standards, non-banks step in and continue providing this credit. This could undermine the effectiveness of prudential supervision or exacerbate property market conditions.

Useful to break shadow banking activity into housing lending and commercial property lending.

1. Australia has experienced some growth in non-bank credit to the household sector.
2. More activity in non-bank credit for commercial property development.
3. New legislation to improve monitoring was introduced earlier this year and reserve powers to enable regulation if required

Non-bank credit to HHs - 2 ½ mins = 320 words

The prudential regulator, APRA, has introduced measures to reinforce sound lending and improve the quality and composition of lending. These include

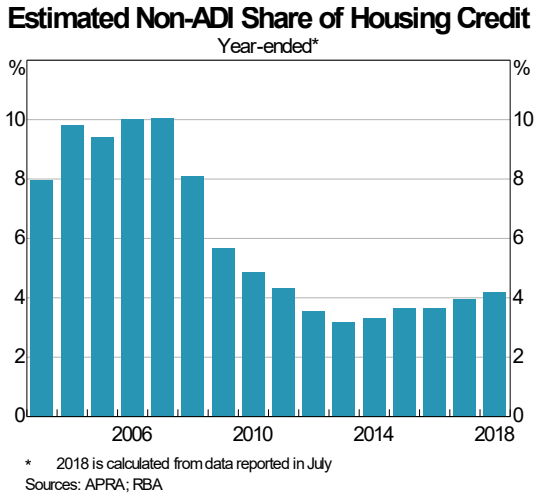
- Limits on investor credit growth and new IO lending;
- Requiring banks to limit high LVR lending and lending with riskier characteristics.

The prudential regulator, APRA, has tightened lending standards for banks. These include

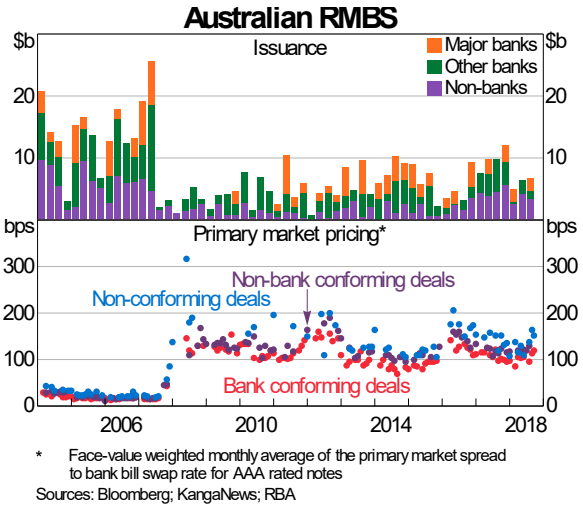
- Minimum interest rate buffers; these are also applied to existing debt obligations
- Haircuts on variable income, such as bonuses and overtime, used in loan assessments.
- Closer scrutiny of living expenses.

These have led to smaller maximum loan sizes. It has also become much harder to get an interest only loan, especially if you are an owner occupier or have an LVR above 80%.

One risk with these measures is that there could be leakage to non-bank lenders. The following graph shows an estimate of their share of housing credit. This data comes from non-bank lenders reporting to APRA. The reason it is estimated is that we are aware that some non-bank lenders providing housing credit do not report this data. This is because they fall outside the criteria for reporting data and choose not to do it voluntarily. Very recently, APRA was given new powers which should address this issue. I will come back to this towards the end.



We do have other data sources on these lenders. They predominantly fund themselves by issuing RMBS, and we have good data and visibility of this market. We can monitor their issuance to identify new entrants, and estimate the size of non-bank lenders providing housing credit.



Through a combination of the RMBS data and the APRA data, we can also monitor the characteristics of the loans they make and their performance.

Our assessment is that this is an area to watch. They are more active and are growing faster than the banks and picking up market share. But to date, they remain small.

Non-bank credit for commercial property - 2 ½ mins = 320 words

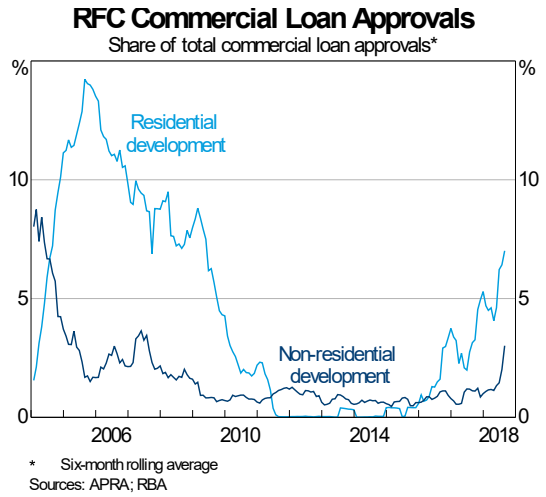
On commercial property, APRA conducted a Thematic Review of the [17] largest banks in 2016. Among other things, this looked at their lending standards. APRA found shortcomings in the lending standards and the industry has moved to address these. The greater scrutiny of commercial property is at a time when valuations for office property are elevated, yields are low, and vacancy rates in the largest cities are quite low.

In residential development, there has been a large increase in supply in 3 cities. There were concerns about how this new supply would be absorbed but to date, prices, rents and vacancy rates are little changed.] In two cities, Brisbane and Melbourne, this new supply was concentrated in small areas, whereas in Sydney, it was spread more evenly across the city.

So the context for thinking about non-bank activity here is that the banking sector is tightening standards risks are elevated in commercial property and consequently, banks are reassessing their appetite for commercial property. It has become much harder for developers of residential apartments to access finance. Consequently, they are looking to non-bank lenders for finance.

We have some APRA data on non-bank commercial loan approvals [as you can see on the graph]. For residential development, it is clearly rising over the past couple of years. I have confidence in the trend, but less confidence in the level. We know this data is incomplete and some lenders do not report. Our ability to use other data sources is more limited compared to lending to households because their funding sources are more varied and less visible.

Consequently, we have supplemented this with liaison with industry. This liaison suggests non-banks are more active than previously, and tending to provide mezzanine finance at much higher rates. There is often still a bank in the lending structure, so there is still some bank oversight of the deals. The finance from non-bank lenders is much more expensive than bank finance. This is a disincentive for developers to use it if they can access bank finance.



New legislation - 2 ½ mins = 320 words

As I mentioned earlier, there are known gaps in our data coverage. This arises because a lender must be a 'corporation' and numerous lenders were trusts. APRA did not have the power to compel trusts to report. Also, there were minimum sizes for the balance sheet of the entity. Entities which routinely securitised their loans and no longer had them on their balance sheet sometimes did not meet this criteria. While some entities which did not meet the reporting criteria, some chose to voluntarily report, but others did not.

In March 2018, legislation was passed to address these coverage issues. The RBA, Australian Bureau of Statistics and APRA have formed a working group to implement the new legislation and improve coverage. In addition, this working group is looking at *what* these entities report to ensure it remains relevant.

As part of the legislative changes, APRA was given reserve powers to regulate non-bank lenders if they began to engage in activities undermining financial stability. The intention is that this power is a backstop – there if needed but not expected to be needed anytime soon.

The non-banks lenders are subject to consumer laws on responsible lending obligations. These apply equally to banks and non-banks. In addition, many non-bank lenders providing housing credit use liquidity facilities, "warehouses", provided by banks. APRA has indicated to banks that they do not want these

warehouse facilities to be used in a way that undermines the measures to reinforce sound lending standards. APRA can see the size of these facilities and expects entities to make enquiries about the quality of the housing loans they are secured against.

Conclusion – 1 minute = 130 words [147]

Australia is experiencing more non-bank lending activity. For lending to households, it is rising but from a small base of less than 5% of housing credit. Data coverage through the current APRA reporting framework is reasonable, but there are gaps. We supplement the APRA data by monitoring RMBS issuance.

For lending for commercial property, the APRA data is less complete. However, it does indicate lending for residential property development is increasing. We supplement this data by liaising with industry. From this, we can track the terms and conditions and the pricing.

To address these shortcomings, legislation was passed earlier this year. This enables APRA to broaden the range of entities reporting. Australian authorities are also reviewing what data is currently collected and what should be collected in future. APRA has also been given 'reserve' powers to regulate non-bank lenders if they were to threaten financial stability.

Bernadette Donovan
Senior Manager
Households, Businesses and Credit
8 October 2018

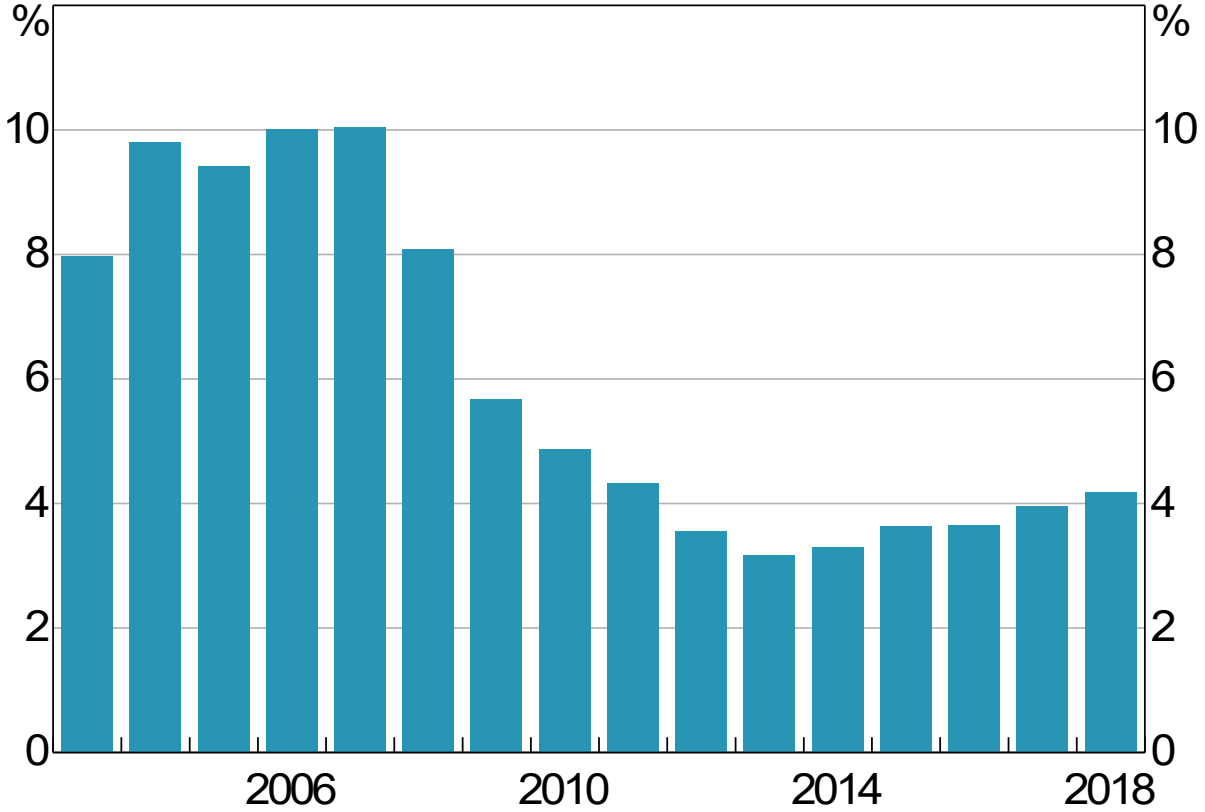
Update on Shadow Banking in Australia

Bernadette Donovan

10 October 2018
Financial Stability Workshop, Denmark

Estimated Non-ADI Share of Housing Credit

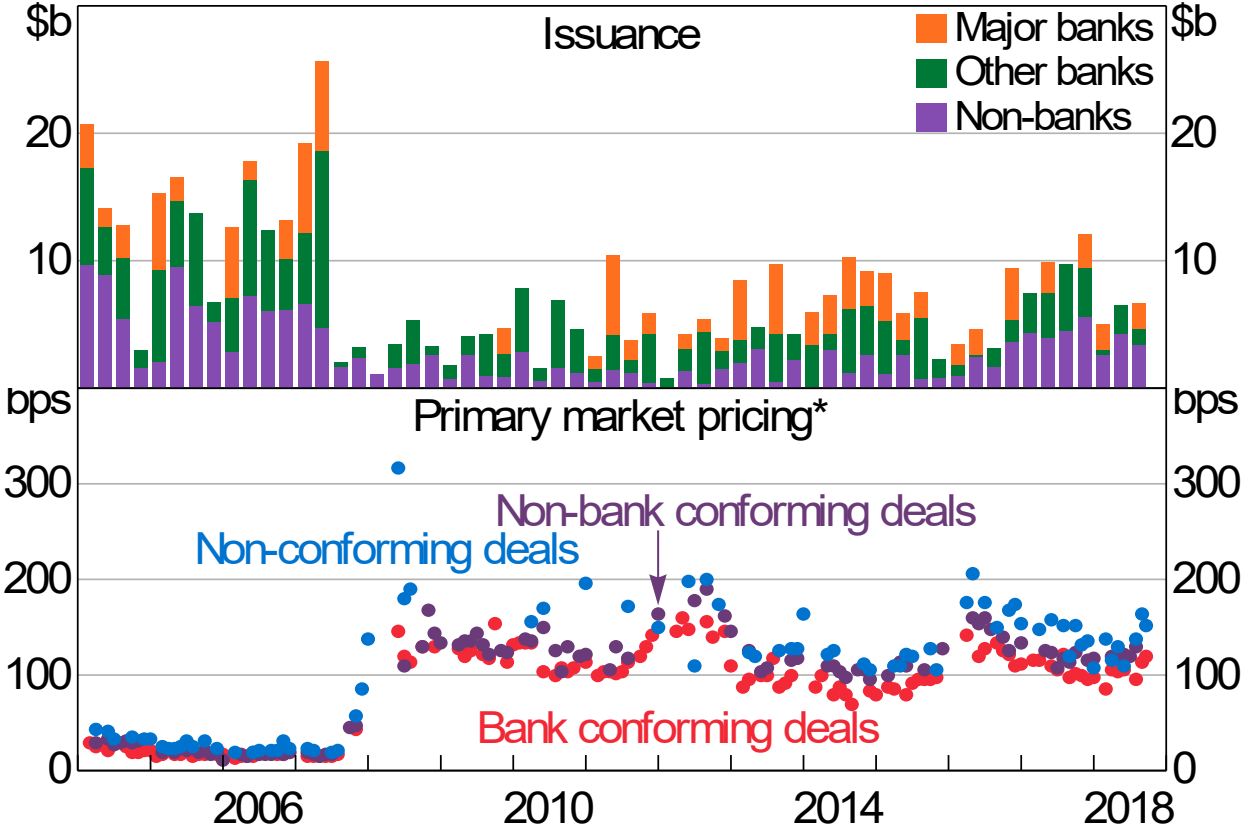
Year-ended*



* 2018 is calculated from data reported in July

Sources: APRA; RBA

Australian RMBS

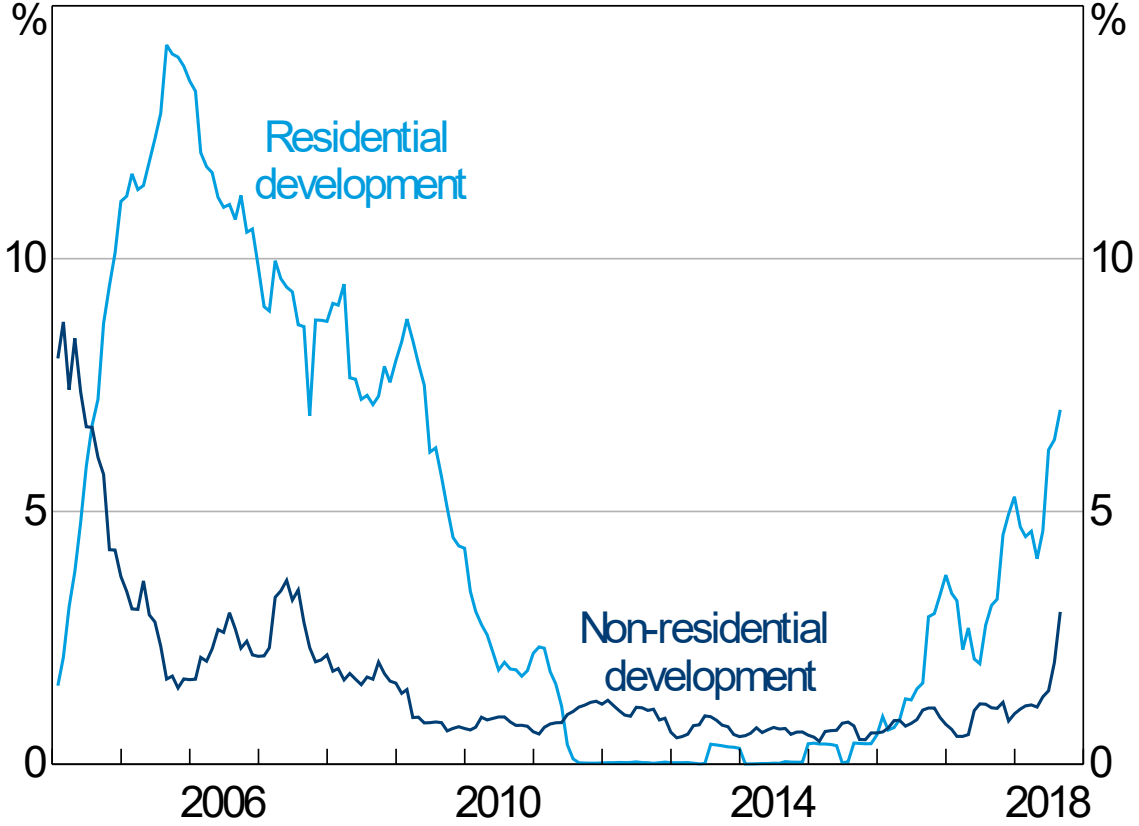


* Face-value weighted monthly average of the primary market spread to bank bill swap rate for AAA rated notes

Sources: Bloomberg; KangaNews; RBA

RFC Commercial Loan Approvals

Share of total commercial loan approvals*



* Six-month rolling average

Sources: APRA; RBA

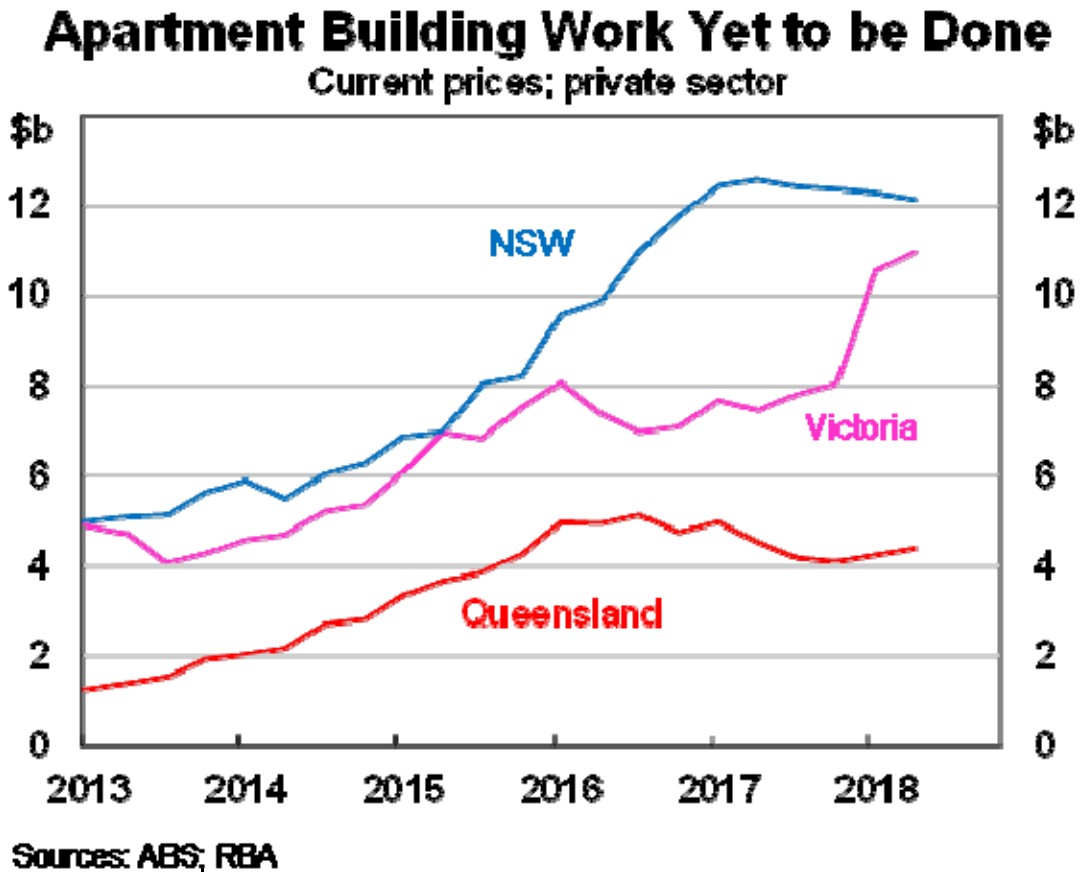
Questions?

From: NORMAN, David
Sent: Wednesday, 14 November 2018 3:55 PM
To: YAP, Calvin
Cc: GISHKARIANY, Michael; DONOVAN, Bernadette
Subject: Interesting graph for shadow banking [SEC=UNCLASSIFIED]

Calvin,

Here's the graph that makes me think we should not downplay the potential for non-ADIs to contribute to overbuilding in Melbourne. Work yet to be done (basically new approvals minus work done) has really picked up in Melbourne this year, and liaison says that a big chunk of this is being funded by non-ADIs. Banks have been reducing their exposures, which reduces the risk that they are exposed to falling collateral values, but they still have a reasonable amount outstanding.

Bernadette, keen to hear with and have to add to our understanding! As mentioned, one question I would love you to ask them is whether they report to the ABS (on the managed funds form). Managed fund loans & placements to non-financial corporates has persistently declined over the past few years, and I don't know if that is because (a) the ABS misses firms like this; (b) other stuff captured within here – such as lending to non-development – is falling or (c) liaison is wrong!



Here's the link: \\San2\Fsdata\FS\AFS\Non ADIs\Shadow Banking\Other\Apartment building activity by state.xlsm

David Norman | Senior Manager | Australian Financial System | Financial Stability Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| f: +61 2 9551 8454 | w: www.rba.gov.au

From: FLOOD, Darren
Sent: Friday, 16 November 2018 12:10 PM
To: NORMAN, David; YAP, Calvin
Subject: RE: CFR Shadow Banking Outline [SEC=UNCLASSIFIED]

Thanks chaps. This is good.

At some point in the drafting process, would you mind please adding in a couple of components that we are trying to standardise across CFR papers – both at the start:

Purpose

(one or two sentences indicating why they're getting it) In this case it's going to be something like "To update Heads on developments in non-ADI lending and the risks generated in the sector. To highlighting gaps in available data and plans for addressing them." (not really sentences I know)

Key points

(a few dot points of the messages they should take away)

Thanks
Darren

From: NORMAN, David
Sent: Wednesday, 14 November 2018 12:42 PM
To: FLOOD, Darren ; YAP, Calvin
Subject: RE: CFR Shadow Banking Outline [SEC=UNCLASSIFIED]

Hi Darren,

We made a few more changes than I talked to you about, to better highlight the risks and make this fresher. I've left track changes on for you to see. If you are happy, accept all and send it on to the CFR.
D18/336799

Thanks
David

David Norman | Senior Manager | Australian Financial System | Financial Stability Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| w: www.rba.gov.au

From: FLOOD, Darren
Sent: Tuesday, 13 November 2018 3:00 PM
To: YAP, Calvin
Cc: NORMAN, David
Subject: RE: CFR Shadow Banking Outline [SEC=UNCLASSIFIED]

Thanks Calvin. This is good.

In terms of the things requested by CFR and the Governor:

- The CFR was interested in whether a shift from ADIs to non-ADI lending would bring any additional risks (I suspect they largely had housing lending in mind). Would it be possible to bring material on risks together –

either in one overall section, or as a discrete element within each sector discussion? That might include (non-exhaustively) the investor/IO stuff; David and I had talked about a general assessment of loss rates based on securitisation data; and also the material on banks' exposures to non-banks.

- The Governor is very interested in gaps in the data (he had in mind from available data that non-ADI mortgage lending was growing very quickly, but DM told him it was not the case). I'd suggest making that a separate section in the body of the text rather than an attachment (and leave out the international reg developments). Maybe DM is writing that section, but I could see it covering:
    - What areas do we not have data on and which do we think are the most important?
    - What anecdotal/alternative evidence do we have?
    - APRA's new powers
    - Update on the RBA/APRA/ABS working group – lack of progress up to now, but seems like some quick wins have now been agreed.

Does that sound right?

Would you be able to tweak the outline to reflect that? I will then need to send it to the other CFR agencies so that they understand the focus.

Thanks
Darren

From: YAP, Calvin
Sent: Thursday, 8 November 2018 5:09 PM
To: FLOOD, Darren
Cc: NORMAN, David
Subject: CFR Shadow Banking Outline [SEC=UNCLASSIFIED]

Hi Darren,

Please see the outline for the CFR Shadow Banking Update paper here: D18/336799

Let me know if you have any questions.

Regards,
Calvin

Calvin Yap | Senior Analyst | Australian Financial System | Financial Stability Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| w: www.rba.gov.au

CFR Shadow Banking Annual Update

- Shadow banking can cause risks to financial stability by exacerbating credit and asset price cycles, leading banks to weaken their credit standards, or through contagion to the banking sector. The FSB recently stopped using the term 'shadow banking', and this change will be adopted here.

Domestic Shadow Banking Trends

- Overall, shadow banking as a share of the financial system has increased very little over the past few years
  - The share is still smaller than pre-GFC and connections with the regulated banking sector are small
  - Securitisation has risen slightly, but decline in managed funds' debt investments

Securitisation

- There is evidence that non-ADI lenders have increased their share of residential mortgage lending since the tightening in prudential regulation of ADIs
  - Non-ADI RMBS issuance over 2017 was at highest level since the GFC, has remained elevated throughout 2018
  - Growth in residential mortgage lending by non-ADIs remains high and well above that of banks, partly because higher interest rates charged by banks for investor and IO loans have made non-ADIs more competitive
- What are the risks?
  - Securitisations data shows that non-ADI investors have increased their share of investor and IO loans, while ADIs have retreated from these market segments. While this has limited the impact of prudential tightening, market developments suggest it is not exacerbating asset price cycles and ADIs have not responded by loosening lending criteria.
  - Performance of non-bank lending has been only slightly worse than that of bank lending to date, but could change in a downturn
  - Warehouse funding exposures create some risk to banks, but total size of facilities is small compared with bank capital and total exposures have not changed much of late
  - While non-ADIs have increased their share of housing credit, their share is less than 5 per cent
- A key constraint to a more rapid expansion of non-ADI mortgage lending is the cost of funding: while RMBS market conditions have improved over past 2-3 years, spreads have increased slightly since the middle of last year and the increase in BBSW rates has also increased funding costs. More importantly, RMBS pricing is still significantly higher than pre-crisis levels and well above the cost of bank funding (deposits or senior unsecured bank debt)

Managed funds

- Managed funds account for more than half of shadow banking
  - The risks associated with this sector are overstated by the size reported to FSB as the majority of managed funds' assets are invested in equities or property, rather than credit products

    Under FSB's guidelines, managed funds with up to 80 per cent of their assets invested in equities are included in shadow banking
  - Managed funds do lend to residential property development. The available data suggests that this lending remains small but liaison indicates that it is much more prevalent, especially in Melbourne. Continue to monitor this closely given ADIs' pullback from lending to developers.
    - Much of this is expensive mezzanine debt which poses less risk to financial stability and is subject to some regulatory oversight if a bank provides senior debt. But involvement in senior debt is becoming more common and any debt may still contribute to overbuilding.
    - Residential building work yet to be done in Victoria is high, raising the risk of overbuilding that impacts on banks' positions (though this have been reduced over time)
  - Other reason why FSB considers managed funds to be risky is that they may be susceptible to runs. However, run risks are limited due to requirement for retail funds to suspend redemptions if liquid assets fall below 80 per cent of total assets. Almost all money market funds in Australia are structured as net asset value funds which reduces incentives for investors to run.

Registered financial corporations

- Non-prudentially consolidated RFCs account for just 1 per cent of the financial system, their share has been stable over the past few years
- There is some evidence that their lending for property development has picked up as banks have become less willing to lend for development

Data gaps

- Legislation passed in early 2018 gives APRA reserve power over non-ADIs posing material risks to financial stability and increased data collection powers for non-ADI lenders
- A working group has been established to implement improved data collection for non-ADI lenders, but resource and other constraints have meant there has been little progress to date
- Biggest data gaps are in lending to business (especially property development), but quickest wins are from housing since clear who are main lenders. Could proceed quickly by approaching top [X] RMBS issuers that don't already report, telling them to register.

International Shadow Banking Trends

- Recent international shadow banking trends based on FSB's shadow banking monitoring exercise. The preliminary results of the exercise, while not yet published, will be available and used to update this section.

COUNCIL OF FINANCIAL REGULATORS MEETING 10 DECEMBER 2018

AGENDA ITEM 2(E): ANNUAL UPDATE ON NON-BANK FINANCIAL INTERMEDIATION

Purpose

This paper updates the Council on developments in non-bank financial intermediation (NBFI), otherwise known as 'shadow banking'.[1] It provides an assessment of whether there is any material build-up of systemic risk in Australia outside the prudentially regulated sector, along with information on recent international NBFI trends. It also includes a discussion of current data gaps and steps being taken to address these. This paper satisfies the Financial Stability Board's (FSB's) requirement that jurisdictions have a systematic process for reviewing NBFI entities and activities that could pose financial stability risks.

Key points

- Domestically, risks arising from NBFI continue to appear limited given the sector's small size and its minimal links with the banking system.
- There has been some shift in residential mortgage lending to the non-ADI sector as prudential regulation of ADIs tightened over recent years, though non-ADIs' share of housing credit remains small. This shift has been most evident in relation to investor and interest-only loans. However, our assessment is that this is not currently a material risk to financial stability, and is not increasing banking sector risks.
- Liaison suggests that non-ADI lenders have also become more active in lending for property development. There is some risk that this contributes to overbuilding that erodes the health of the banking system, although the high interest rates charged by non-ADI lenders limits this risk.
- The quality of data on non-ADI lending is poor. But a cross-agency working group (RBA, APRA and ABS) is working to improve the coverage of non-ADI lenders that report to APRA following legislative changes earlier this year that expanded APRA's data collection powers.
    - For housing lending, a small number of large securitisers account for most of the gap in data coverage and APRA is now seeking to register these entities.
    - For business lending, regulators have less visibility over the gaps in coverage. The group is considering how to best identify, on an ongoing basis, which entities should report.
- Internationally, preliminary results from the FSB's annual monitoring exercise on non-bank financial intermediation suggest that activity continued to trend higher in 2017. Of the 29 reporting jurisdictions, 28 recorded an increase in the total narrow measure of NBFI; the United States, China and the Cayman Islands provided the largest contributions to growth.

What are the potential risks arising from non-bank financial intermediation?

There are three main risks that NBFI can pose to financial stability:

1. NBFI may exacerbate credit and asset price cycles, given it is subject to less regulation which can dampen 'animal spirits'. This increases the risk of large and disorderly asset price declines in the future. This can, in turn, erode the value of banks' collateral and increase defaults, since banks lend against similar collateral and to the same industries as NBFI.
2. Competition from NBFI lenders may put pressure on banks to increase risk taking and/or weaken lending standards. Non-ADIs, free of the more constraining regulations applying to ADIs, are typically more willing to lend to riskier borrowers, and their residential mortgage-backed securities (RMBS) tend to be backed by a higher share of loans with low documentation and high loan-to-valuation ratios.

1 In October, the FSB adopted the term 'non-bank financial intermediation' because of concerns around the negative connotations of 'shadow banking'. In the Australian context, NBFI includes all non-Authorised Deposit-taking Institutions (non-ADIs).

3. Problems within the NBFI sector may spread to prudentially regulated entities due to direct linkages between the two, such as warehouse funding provided to non-ADI mortgage originators. In some cases there may also be unrecognised contingent liabilities to off-balance sheet entities that come on-balance sheet at times of stress (such as with structured investment vehicles during the crisis). If non-ADIs are forced to fire sale assets, this would also impact ADIs that are exposed to similar assets.

These issues aside, the failure of a NBFI entity is unlikely to create systemic financial instability on its own. There could be implications for specific types of borrowers or markets if other entities do not step in to replace the credit that failed NBFI entity is no longer supplying. One benefit of NBFI is that it allows riskier activity to occur without putting banks or deposits at risk.

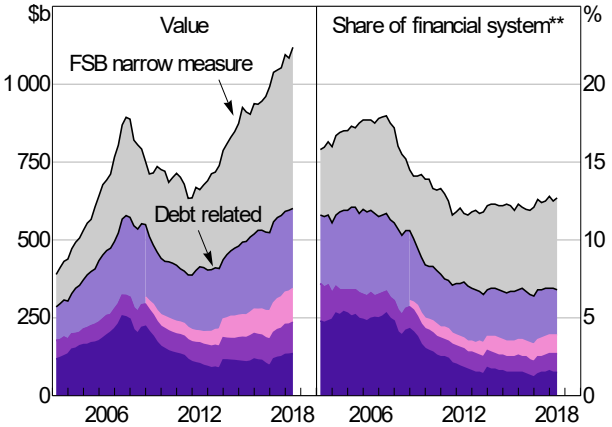
Trends in Australian non-bank financial intermediation

This paper broadly adopts the FSB's methodology for categorising non-bank financial intermediation. Graph 1 shows the FSB's 'narrow' NBFI measure for Australia. We focus on the lending and debt-related components of the narrow NBFI measure, since the other component, equity investments held by managed funds, pose minimal risks to financial stability (discussed further under "Managed funds", below).

The lending and debt-related components of NBFI in Australia have remained stable over the past few years at around 7 per cent of the financial system – well below its share in 2007. Almost half of this is comprised of debt instruments held by managed funds (mostly sovereign and corporate bonds). The remainder is made up of hedge funds, securitisation vehicles and non-prudentially consolidated finance companies. Over the past two years, the stock of securitisation vehicles on issue has increased slightly but this has been offset by a decline in managed funds' debt investments.

In addition to being relatively small, the linkages between NBFI entities and banks are modest. We only have data on the linkages between banks and a broader measure of the non-bank sector, 'Other Financial Intermediaries' (OFIs); this measure includes all financial intermediaries that are not regulated (including those that only invest in equity). Banks' exposures to OFIs in Australia account for just 2 per cent of banks' financial assets, and their liabilities to OFIs are only moderately larger at 7 per cent (Graph 2). The broader financial system's exposures to OFIs are higher, at around 14 per cent of assets. However, close to two-thirds of this is superannuation fund investments in managed funds, which pose limited financial stability risk.

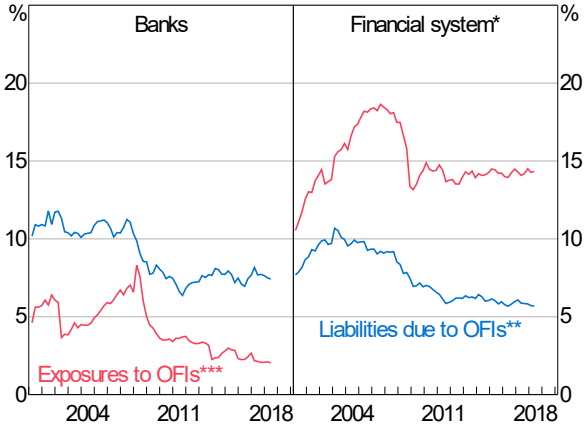
Graph 1
Non-bank Financial Intermediation
Financial assets*



Equity held by managed funds investing in debt
Debt instruments held by managed funds investing in debt
Hedge funds***
Non-prudentially consolidated finance companies
Securitisation vehicles (excluding self-securitisation)

* Total assets where financial assets data are unavailable
** Financial system excludes the RBA
*** Hedge fund data are only available from June 2008
Sources: ABS; APRA; ASIC; Australian Fund Monitors; RBA

Graph 2
Connections to OFIs
Share of financial assets



* Excludes the RBA
** Includes equity funding
*** Excludes self-securitisation
Sources: ABS; APRA; RBA

Because of its small size and limited connections with the banking system, the NBFI sector in Australia is currently judged to pose limited systemic risk. This is consistent with the conclusion reached in previous updates to the Council. Nonetheless, there has been a heightened focus on risks emanating from NBFI

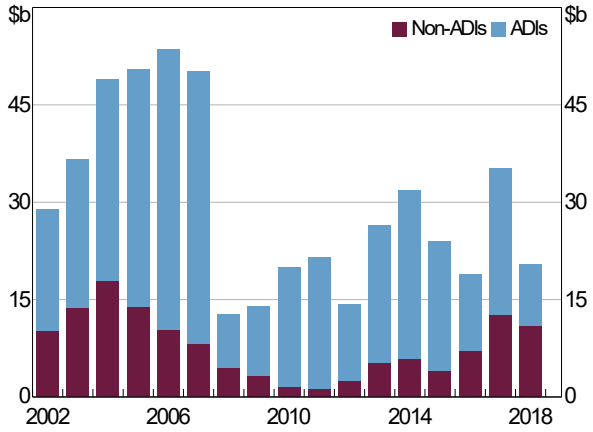
property lending as prudential standards have been tightened. The following sections look more closely at this, as well as other activities of each of the main shadow banking categories in Australia.

Securitisation

Non-ADI lenders (such as Pepper, Firstmac and Liberty) have increased their share of overall residential mortgage lending over the past few years. Non-ADIs' residential mortgage lending is estimated to be growing at more than twice the rate of ADIs' lending, and dollar value of non-ADI issuance of RMBS is again close to pre-crisis levels (Graph 3). (Securitisation accounts for over 90 per cent of funding for non-ADI mortgage lenders, and residential mortgages account for the vast majority of assets securitised in Australia.) That said, while the non-ADI share of housing lending has increased, it remains less than 5 per cent of outstanding housing credit and well below its peak in 2007 (Graph 4; though these estimates are derived from low-quality data as discussed below). In 2018, RMBS issuance as a share of housing loan approvals (ex refinancing) is a little higher at 6 per cent, which gives a very rough idea of non-ADI lenders' share of *new* lending.

Graph 3

Australian RMBS Annual Issuance

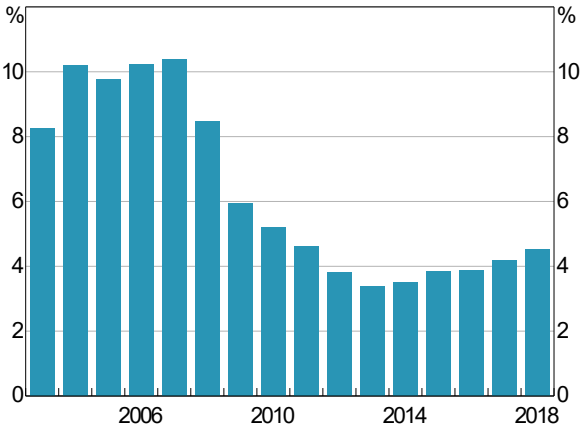


* 2018 is year-to-date
Source: RBA

Graph 4

Estimated Non-ADI Share of Housing Credit

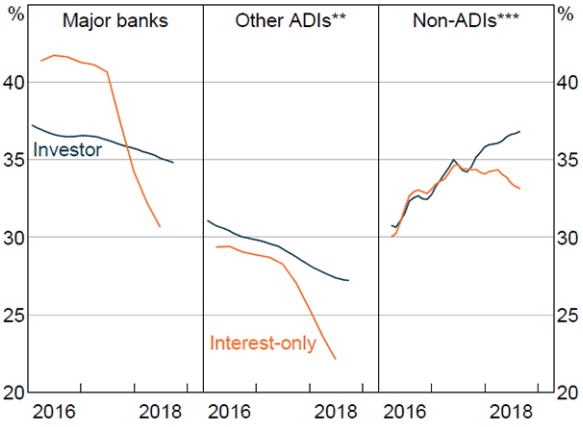
Year-ended*



* 2018 is calculated from data reported in October
Sources: APRA; RBA

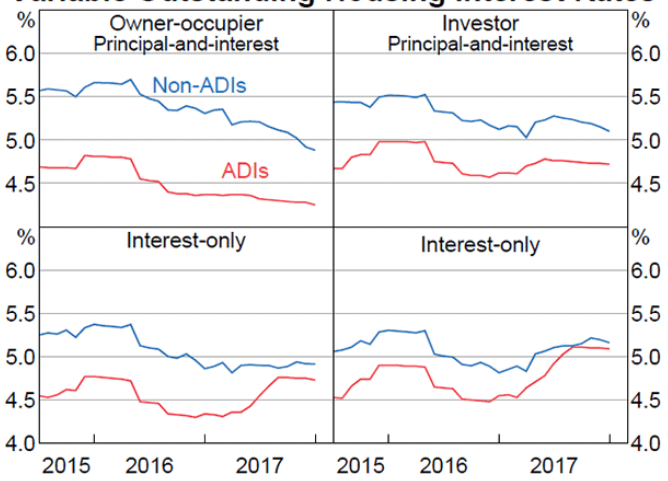
Growth in non-ADI mortgage lending has been driven in large part by APRA's tightening in prudential regulation of ADI lenders over recent years. (Non-ADI lenders are subject to responsible lending laws, but not ordinarily APRA supervision.) Data from the Reserve Bank's Securitisation Database show that non-ADI lenders have materially increased the share of their own loans going to investors and have maintained the share of interest-only loans (IO), while ADIs have retreated from both these market segments (Graph 5). This has occurred because ADIs increased interest rates on investor and IO loans in response to APRA's investor and IO lending benchmarks, making non-ADIs more competitive for these types of loans (Graph 6). The general tightening of lending standards at ADIs may also have contributed to a shift towards non-ADI lenders. Even though non-ADI lenders have been writing an increasing share of higher risk loans, arrears rates for non-ADI mortgages are only slightly higher than for ADI mortgages and have not increased materially, although this could change as loans mature and during a more serious housing market downturn.

Graph 5
Shares of Lenders' Books*



* For example, the investor share of major banks' outstanding housing loans
** ADIs with greater than $1 billion in total housing assets
*** Share of RMBS outstanding in the Securitisation System; 3-month moving average
Sources: APRA; RBA; Securitisation System

Graph 6[2]
Variable Outstanding Housing Interest Rates



Sources: RBA; Securitisation database

There is a risk that leakage to the non-ADI sector could weaken prudential tightening measures and undermine efforts to reduce the riskiness of new borrowing. However, the recent downturn in housing markets and slowing credit growth suggest this is not currently a risk. Another risk is that ADI lenders could respond to their declining market share by loosening lending standards. So far, there is little evidence of this occurring; banks appear instead to be tightening lending standards due to ongoing scrutiny from APRA and the Royal Commission. A third risk is if ADIs are directly exposed to poor-quality non-ADI lending through the warehouse funding facilities they provide to these lenders. Warehouse funding exposures create some risks to banks and these exposures have increased over the past year, although the size of these facilities remains small compared with bank capital ($13.6 billion of drawn exposures from the majors compared with $176 billion of CET1 capital). Banks are reluctant to increase these exposures due to regulatory scrutiny, a liquidity requirement to match the undrawn exposures with high quality liquid assets, and the capital required to be held against such exposures.

A key constraint to a more rapid expansion of non-ADI mortgage lending is their higher cost of funding (Table 1). RMBS pricing is well above the cost of bank funding (deposits or senior unsecured bank debt) and still significantly higher than pre-crisis levels. RMBS market conditions have improved over the past two to three years, but yields have increased slightly since the middle of last year because of both a rise in spreads and the increase in BBSW rates. Unless non-ADIs are able to secure alternative lower cost long-term funding, this funding differential will limit the ability of non-ADI lenders to compete with banks for the highest quality owner-occupier principal & interest mortgages.

Table 1: Funding costs for ADI and non-ADI lenders
Recent indicative rates, spread over BBSW rates

Major Bank Retail Deposits	Bank 5-year Senior Unsecured Debt (AA-)	Residential Mortgage Backed Securities (AAA)
Minus 60 basis points	80 basis points	130 basis points

Sources: RBA; Bloomberg

Managed funds

Managed funds investing in debt account for almost half of the debt-related component of the narrow NBFI measure.[3] One area of focus within managed funds is lending to property developers, as there are a number of funds that specialise in providing such financing (including Balmain, MaxCap and Qualitas). This

2 We are unable to show more recent data due to confidentiality issues
3 When assessing NBFI risks, we exclude equity investments held by these funds as these pose limited risks to financial stability. Instead we focus on managed funds' holdings of debt instruments (including government debt), as these are more closely linked to credit provision. The FSB, however, requires equity exposures of many balanced funds to be included.

is an area where data are particularly limited. ABS data suggest that managed fund lending to non-financial corporates is small and has decreased over recent years, but the ABS does not capture the activities of the funds most involved in property development financing. Furthermore, liaison contacts report that NBFI financing of property development is widespread and growing rapidly, especially in Melbourne. Contacts claim this is happening because banks have pulled back from lending into this market, given concerns about potential overbuilding and increased regulatory scrutiny, while developers remain optimistic.

Property development funded by non-ADI lenders could contribute to oversupply, with implications for banks' portfolios. For example, apartment building work yet to be done in Victoria has risen by almost 50 per cent over the past year and now exceeds the annual value of apartment construction work done, suggesting that the risk of overbuilding is still a concern. This could indirectly impact banks' exposures to property developers if it results in price declines. Much of this lending is expensive mezzanine debt which poses less risk to financial stability because it is "appropriately" priced and subject to some regulatory oversight if a bank provides the senior debt. But non-ADI involvement in senior debt is becoming more common and either form of lending may still contribute to the risk of overbuilding.

Aside from their lending activities, managed funds can pose a risk to the stability of markets if they undertake liquidity transformation and are hence subject to the risk of a run leading to asset fire-sales. In Australia, run risk is limited by the requirement for retail funds to suspend redemptions if their liquid assets fall below 80 per cent of total assets.[4] In addition, almost all money market fund (MMF) type entities in Australia are structured as variable net asset value (NAV) funds, which reduces the incentives for investors to run.[5]

Registered financial corporations

Registered Financial Corporations (RFCs) are NBFI entities that are registered with APRA because they have bank-like characteristics (i.e. they intermediate between savers and borrowers). This category includes money market corporations and some finance companies. Until recently, there was a relatively restrictive definition of which entities were required to register with APRA. This resulted in coverage issues, including not capturing many of the large securitisers that extend credit for housing. Steps are currently being undertaken to improve coverage following an expansion of APRA's data collection powers in March 2018 (discussed below).

However, almost all RFCs in Australia are consolidated into domestic or foreign banking groups, and so they are excluded from the measure of NBFI lending. Non-prudentially consolidated RFCs (for example, car finance companies and some mortgage originators) account for only 1 per cent of financial system assets. This share has not changed over the last few years.

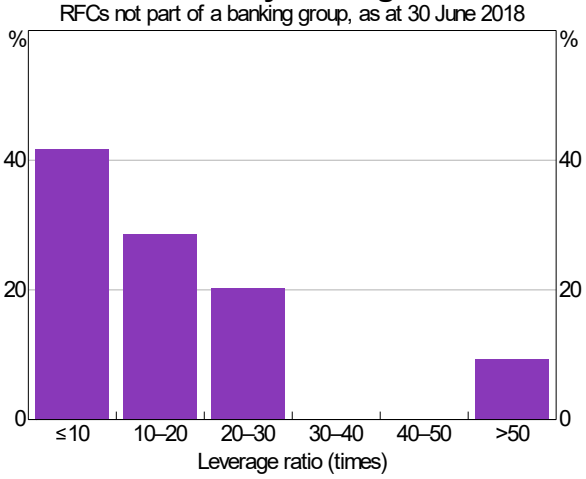
RFCs' lending to households for residential property has increased over the past few years, but the coverage of RFC data is incomplete (they are used as one input to the estimates shown in Graph 4). There has been a more pronounced pickup in lending to property developers, both residential and non-residential. However, much of this reflects some NBFIs commencing reporting, and the data still do not capture most of the large relevant entities.

4 See Price and Schwartz (2015), 'Recent Developments in Asset Management', RBA *Bulletin*, June, pp 69-78 and Lowe (2015), 'The Transformation in Maturity Transformation', Address to Thomson Reuters' 3rd Australian Regulatory Summit, Sydney, 27 May.

5 Constant NAV funds use the amortised cost method to value their assets to maintain their constant NAV structure, while variable NAV funds use the marked-to-market method to value some or most of their assets. See ASIC (2012), 'Money market funds', Report 324.

Non-prudentially regulated RFCs may seek to maximise returns by operating at high levels of leverage, thereby increasing risk in the financial system. The average leverage ratio (the ratio of assets to equity) of RFCs that are not part of a banking group was 12 times as at June 2018, which is less than the average leverage ratio of ADIs (Graph 7). That said, there are a small number of RFCs with very high leverage ratios.

Graph 7
RFC Assets by Leverage Ratio*
RFCs not part of a banking group, as at 30 June 2018



* Ratio of assets to equity
Sources: APRA; RBA

Data Gaps

The analysis thus far has highlighted the poor quality of data on NBFI lending. Data quality is most limited in relation to commercial lending, where there is limited visibility on the types of entities lending, but is also poor for residential mortgage lending. This lack of accurate data is a result of the relevant legislation historically only requiring NBFI entities to report data to APRA if they met quite strict criteria (most notably, that the sole or principal business activities in Australia were the borrowing of money and the provision of finance and that the business did not utilise a trust structure).

These data gaps limit the ability of Council agencies to properly monitor trends, and hence risks, arising from NBFI lending. We must therefore rely on imprecise estimates based off relatively small samples of reporting firms, or qualitative information gleaned from liaison. Some additional information can be extracted from the RBA's Securitisation Database, but that is not a precise source of information because of the long and variable lags involved in newly originated loans being securitised. (This takes almost a year on average, but up to two or three years for some loans.)

Amendments were made to the relevant legislation in March 2018 that expanded APRA's data collection powers. A cross-agency working group, consisting of APRA, the ABS and RBA, is working to improve the coverage of non-ADI lenders that report to APRA. The working group has been seeking to expand coverage to the largest residential mortgage securitisers; these firms have been prioritised because they account for most of the gap in coverage for housing credit. APRA is now seeking to register these entities. It is important that we resolve this gap quickly, so as to improve the quality of our analysis on housing lending.

Unlike housing lending (where we have visibility over the gaps in coverage), for business lending identifying the lenders that should be reporting is more difficult. This is because such firms do not need to be visible to be successful, unlike housing lenders. The nature and growth of these lenders can also change rapidly. The cross-agency working group is seeking to develop a (low-cost) way to ensure relevant entities register with APRA and to enable ongoing monitoring of which entities should start to report to APRA.

International Trends in Non-Bank Financial Intermediation

Financial Stability Department
Reserve Bank of Australia
3 December 2018

6 Captive finance companies are wholly-owned subsidiaries that finance retail purchases from the parent firm; examples include automotive finance companies or other vendor captive finance companies such as Toyota Financial Services, IBM Global Financing, and Caterpillar Financial.

From: YAP, Calvin
Sent: Tuesday, 8 January 2019 5:40 PM
To: NORMAN, David
Cc: GISHKARIANY, Michael
Subject: RE: Risks from non-ADIs [SEC=UNCLASSIFIED]
Attachments: Outline - Note on Shadow Banking Risks.docx

Hi David,

I've re-worked your points a bit into the attached outline. One question I have is whether we want to include an assessment of NBFI risks in Australia in the note (either in each section, or as a separate section at the end). I'd also like to chat a bit more about the historical examples.

Calvin

From: NORMAN, David
Sent: Monday, 5 November 2018 9:53 AM
To: YAP, Calvin
Cc: GISHKARIANY, Michael
Subject: Risks from non-ADIs [SEC=UNCLASSIFIED]

Here's what I've got so far… please refine/add/restructure as you see fit, then let's talk about it before you embark on writing the thing up.

Risks:

1. Failure of non-ADI itself creates financial instability?
    - Would need to be very large
    - Even then, not clear who loses (other than shareholders): RMBS would lose if asset quality issues, but not from excessive leverage or maturity transformation; no depositors (at least retail) that pull remaining money out of banks; current borrowers not disrupted as have the money (need to repay new entity/RMBS holders)
    - Main disruption would be to new credit creation, if remainder of market cannot scale up to replace it. (Could also be problematic if attempts to prevent failure cause fire sale of assets…. see 3 below)
    - Historical example = ?
2. Failure of non-ADI will come back on banks?
    a. If banks funding non-ADIs (i.e. interconnectedness)
        - Saw evidence of this during GFC
    b. If non-ADIs are off-balance sheet contingent liability of banks
        - Historical example is pre-GFC securitisation
3. Non-ADI lending exacerbates credit and asset price cycles:
    a. By enabling activity to occur that is excessive
        - Risks depend on reasons don't want that lending: if just trying to take out of regulated/deposit-insured entities (i.e. prudential reasons) then fine – even desirable, but if trying to dampen borrowing for leverage concerns (i.e. macroprudential) then problem.
        - Concern is that excessive borrowing/building increases the risk of asset price declines and fire sales, which could feed back on bank balance sheets if hold assets with correlated price
        - Aside: could largely monitor market price/turnover/activity variables – don't necessarily need to know who funding it since issue is whether excessive (debt-fuelled) price movement
        - Historical example = LTCM
    b. Banks/regulators respond by weakening lending standards (or capital rules)
        - As non-ADIs take market, banks tempted to cut standards to compete, resulting in poor lending by banks

- Risk in Australia – at least in housing – mitigated by APRA supervision
- Historical example: emergence of US money market funds prompted Congress to liberalise bank deposit rates (Regulation Q) and then repeal the Glass-Steagal Act

c. Lack of skin-in-the-game with RMBS
    - Pre-GFC issue of originate and distribute creating moral hazard. Still present, but less of an issue now that investors more cogniscent of junior tranche risks

David Norman | Senior Manager | Australian Financial System | Financial Stability Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| w: www.rba.gov.au

NBFI Risks to Financial Stability

Introduction

- NBFI, or 'shadow banking', can be defined as credit intermediation involving entities outside of the regular banking system
- NBFI activity may involve liquidity transformation, maturity transformation, imperfect credit risk transfer and leverage, which can entail FS risks
- This note explores the ways in which NBFI can pose risks to financial stability – helpful to focus our NBFI monitoring efforts
  - Size of the NBFI sector is just one indicator of FS risks

FS Risks from the failure of a non-ADI

- On its own, the failure of a non-ADI lender should not create financial instability
  - Failure of a non-ADI mostly affects private investors – shareholders, creditors, RMBS holders (if there are asset quality issues). No retail depositors at risk.
  - Main risk is to new credit creation – liquidity and maturity transformation are inherently fragile and non-ADIs lack access to public backstops during times of stress
  - Failure of a large non-ADI, or multiple non-ADI lenders, could disrupt credit creation if the remainder of the market cannot scale up to replace them – economic impact
    - This risk is more significant when NBFI makes up a large part of the financial system => important to monitor non-ADI market share
  - Historical example: ?
- That said, failure of a non-ADI lender could have a direct impact on the regulated banking sector
  - To the extent that banks provide funding to non-ADI lenders (such as warehouse loans to securitisers), they are exposed to losses
    - Historical example: banks funding non-ADI lenders in lead-up to GFC
  - Banks may also be exposed if non-ADIs are off-balance sheet contingent liabilities for banks
    - Historical example: pre-GFC securitisation that came on-balance sheet during the crisis as banks felt compelled to provide support to avoid reputational damage
  - Important to monitor linkages between banks and non-ADIs, including contingent liabilities

FS risks from NBFI activity exacerbating credit and asset price cycles

- Non-ADI lenders enabling excessive lending/building activity to occur
  - Excessive lending could inflate asset prices or non-ADI lenders could finance excessive building activity at the peak of the cycle
    - This could exacerbate asset price/construction boom-bust cycles, increasing the severity of future asset price declines - particularly if non-ADI lenders under financial stress are forced to fire-sale assets

- Even if banks are not directly exposed to non-ADIs, this feeds back to their balance sheets if banks hold assets with correlated prices or if banks have lent to cyclically exposed companies such as property developers
- Historical example: LTCM?
- => monitor non-ADI construction lending, asset prices

- Non-ADI competition leading banks/regulators to increase risk taking or weaken credit standards
  - As non-ADIs increase market share, banks may be tempted to cut lending standards to compete, increasing the riskiness of bank lending books
  - Non-ADIs often target riskier borrowers and may have more lax lending standards since they are not subject to prudential requirements.
    - Securitisation model results in moral hazard because of lack of skin-in-the-game (this is less of an issue now that investors are more cognisant of risks of holding junior tranches).
  - This risk is mitigated somewhat by prudential regulation (e.g. APRA supervision of housing lending standards)
  - However, regulators may also be tempted to loosen prudential standards if non-ADI lenders increase market share (e.g. emergence of US money market funds prompted Congress to liberalise bank deposit rates (Regulation Q) and then repeal the Glass-Steagal Act)
- Non-ADI lending undermining effectiveness of macro-prudential measures
  - Since non-ADI lenders are not subject to prudential regulation, macro-prudential measures may result in leakage to the non-ADI sector
  - This may be fine or desirable, if the aim is to reduce risk-taking in regulated/deposit taking entities
  - However, if macro-prudential measures are driven by concerns over system-wide leverage or excessive asset prices/overbuilding, then regulatory leakage can undermine these efforts

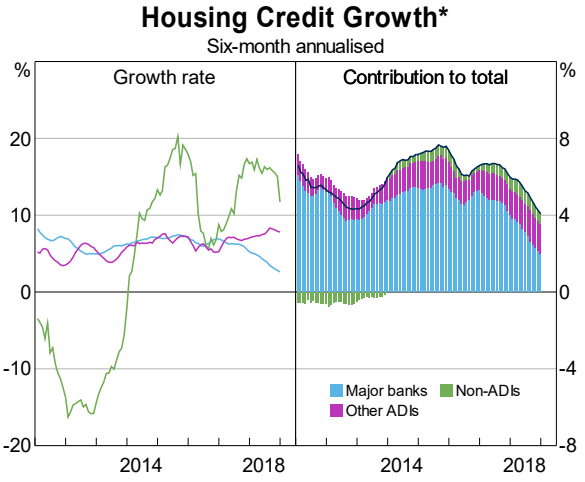
Conclusion

Note: No text appears after conclusion (i.e. no redaction has been made)

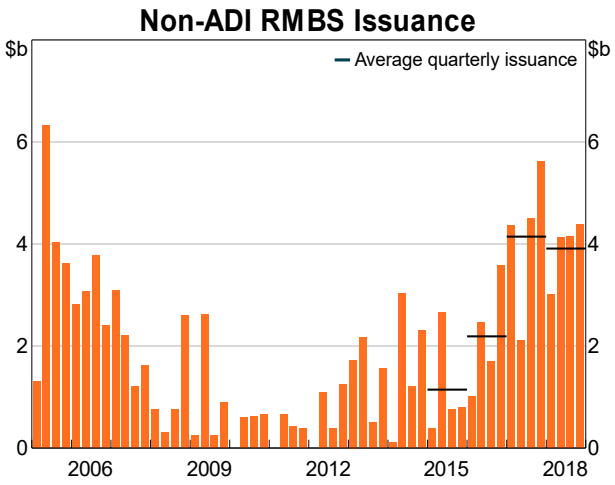
NON-BANK FINANCIAL INTERMEDIATION (SHADOW BANKING)

Non-ADI property lending:

- Non-ADI residential **mortgage lending**:
  - Continues to grow well above system growth
  - But remains small as a share of housing credit, at less than 5 per cent
  - Non-ADI issuance of RMBS also remained high over the course of 2018
  - Recent strong growth driven by
    - a pick-up in prime and near-prime lending, owing to greater certainty of loan approval and faster turnaround compared with major banks
    - erosion of previous pricing differential to ADIs for investor and IO loans
- Non-ADI lenders still **constrained** by the higher cost of RMBS funding (vs deposits and unsecured bonds).
- Non-ADI **lending to residential property developers** is growing faster than banks' lending
  - Until recently, has not been enough to offset banks pulling back; interest rates were rising
  - This has changed a bit recently as bank lending has stabilised
  - Interest rates on these loans are high (>10 per cent for development).



* Seasonally-adjusted and break-adjusted
Sources: APRA; RBA



Sources: Bloomberg; RBA

APRA powers over non-ADIs:

- Legislation passed last year allows APRA to **gather data** from all non-ADI lenders engaged in material lending activity
  - We are working with APRA to better capture non-ADI lenders, including for the Financial Aggregates
  - APRA sent a letter to 24 non-ADI entities late last year and has met with a number of entities to discuss reporting requirements
- The legislation also gives APRA **rule-making powers** over non-ADI lenders materially contributing to risks of financial instability, although intended only as a 'reserve' power.

Financial Stability Department
7 February 2019

A FRAMEWORK FOR ANALYSING FINANCIAL INNOVATION AND NEW DEVELOPMENTS

Red text = red flag (poses some risks)

Black text = no red flag.

	Buy now pay later	Lending to commercial property developers
Size How big are the entities? How confident are we that we can estimate the size? How fast is it growing? How important are they in particular market segments (concentration) Given their size, should we do further work?	- Entities are small. Size is known. - Can easily monitor new entrants and track size. - Growing rapidly but off a very small base. - Growing importance in consumer finance but still very small.	- Know the size of some entities from APRA reporting. - BUT: know this is an underestimate and is incomplete. - Is growing rapidly. - Important in resi dev financing. - Therefore should do further work.
Interconnectedness What are their connections to prudentially regulated institutions? What are the risks to prudentially regulated institutions from this connection? What would be the consequences if an entity failed?	- Major banks own a couple of the larger players. - could suffer reputational risk, pressure to maintain funding if it was to dry up, might cannibalise their credit card portfolio profits, might suffer losses if defaults rose. - Banks may be sharing risk management expertise with the entities they own. - Consequences of failure: some impact on merchants, consumers, the banks who own them. But overall, it would be contained.	- Generally, not connected to banks. - Finance parts of some of the deals the banks are involved in. - Banks – will be providing oversight and risk management of the deals they are involved in; reputational risk from being associated with any devs that go bad. - Failure would affect any deals NBFIs had partly financed – risk of incomplete buildings; failure might mean banks have to supply more funds to finish projects they are involved in.
Complexity/opaqueness What is their business model? How easy is it to understand?	- Lending to consumers at point of sale; - Straightforward to understand.	- Lending to developers - Not too hard to understand if in the industry.

How transparent is it? Could you explain it to your grandmother?	- Easy to explain	- Loan terms are commercial in confidence; hard for authorities to monitor.
Risk taking Who bears the risks? Is this entity the decision-maker? Do those involved understand the risks? Who funds them? Are there misaligned incentives or conflicts of interest? Is it sophisticated, savvy entities or 'mum and dad' entities? Do the profits seem too good to be true? Are they so profitable because it is high risk? Has the innovation/new development been tested in a downturn? If a downturn eventuates, how might they be vulnerable? How much leverage does it involve?	- Risk borne by investors, owners, [merchants?], indebted consumers. - Funded by ? - Not convinced all consumers understand the risks. - May eat into margins of merchants (but might increase their sales). - Consumers: not sophisticated - Merchants: some will be sophisticated, some wont'. - Highly profitable. May attract new entrants who might compete it down. - Don't appear to be misaligned incentives or conflicts of interest. - Yet to be tested in a downturn. Vulnerable to rises in unemployment, falls in consumer spending.	- Risks borne by developers, the entities, their investors. - Likely to be sophisticated investors but could be super funds; these should understand the risks - Don't appear to be misaligned incentives or conflicts of interest. - Funding is opaque – there might be unsophisticated investors in there. - Don't know how profitable it is. Interest rates are high which suggests it is very profitable; High profits may be because it is risky. May attract new entrants who might compete it down. - Some entities have experienced downturns; some new players won't have. - Vulnerable to increase in construction costs; concentrated exposures to a handful of developers; downturn in dwelling investment.
Competition Are prudentially regulated entities adjusting their business models in response? Are they taking on more risks? Who benefits from the innovation? What need is it serving?	- No. - Consumers without credit cards benefit; way for consumers to access credit without paying high interest if able to pay on time. Can avoid some of the pitfalls of credit cards. - merchants benefit (but face some costs to do so)	- No. No. - Developers benefit; Enables projects to get underway.

	- Some similarities with lay by except you can take the good straight away	
Asset price cycles How might it contribute to asset price cycles? How much leverage do they facilitate?	- Very unlikely to. - Adds slightly to household debt.	- Fund construction that might exacerbate property price cycles if done on a large scale. - Facilitates more leverage, at weaker covenants. - How will they respond to defaults? Will they do fire sales?
Regulatory avoidance How is it regulated? Does it take advantage of gaps in regulation? Does the business model only succeed because of these gaps? Is there any whiff of scams/frauds/unscrupulous behaviour?	- Takes advantage of gaps in laws about lending to consumers. - Changes to regulation could negatively affect their business model and profitability. - Concerns about consumer protection.	- Fairly unregulated. - taking advantage of gaps in reporting requirements. - Not required to follow prudential standards on capital, lending requirements. Do take advantage of this.

Bernadette Donovan
Households, Businesses and Credit
Financial Stability Department
20 March 2019

From: HAMILTON, Adam
Sent: Thursday, 28 March 2019 10:27 AM
To: NORMAN, David
Cc: Financial Stability - FS; REES, Daniel; GUTTMANN, Rochelle
Subject: RE: Note FS: How do Non-bank Financial Intermediaries Contribute to Financial Stability Risks? [SEC=UNCLASSIFIED]

Thanks David.

I think animal spirits is a separate argument to competition but I don't know about 'gambler's instincts'. We should publish that in the FSR if it underpins our argument.

I'm arguing competition by itself will not cause banks to make ex ante economically unprofitable loans, which is what we should care about. The paper you linked to only shows that competition will make lending *less* economically profitable. The point I'm trying to make is that there is an optimal amount of financial stability and competition alone will not push us below that optimum if everything else is set correctly. I'm not surprised that the effect of competition is larger in countries with strong deposit insurance, highly regulated financial systems and lower initial fragility. They are systems where economic rents are likely to be highest and so competition will have more scope erode profits.

Adam

From: NORMAN, David
Sent: Wednesday, 27 March 2019 2:54 PM
To: HAMILTON, Adam ; YAP, Calvin
Cc: Financial Stability - FS ; REES, Daniel ; GUTTMANN, Rochelle
Subject: RE: Note FS: How do Non-bank Financial Intermediaries Contribute to Financial Stability Risks? [SEC=UNCLASSIFIED]

Hi Adam,

Always good to hear your thoughts and challenges! Thanks for taking the time to reply. I have a general response to one question you raise and will copy in everyone else because I figure you are keen for this to be more than just a bilateral discussion. (Apologies to those who have no interest!)

On competition, I think the problem arises because animal spirits means banks can at times have insufficiently long horizons and/or too little appreciation for the level of risk. That can mean that *ex ante* risk-adjusted ROE is different from *ex post* ROE (even ignoring the normal issue of imperfect foresight). This problem is related to implicit guarantees but I think it is deeper than that. It is one of the main arguments, in my mind, for regulation (since regulators are hopefully less prone to animal spirits, though still face imperfect foresight).

I also think that these animal spirits can be influenced by the level of competition, because people tend to underestimate risks when pressure is on. (There is a 'gambler's instinct'.)

There is actually a reasonable literature on the relationship between competition and bank stability. This shows that the level of competition (or various proxies for it) does influence financial stability… although the sign on that relationship is not always consistent! The most recent paper I am aware of argues that more competition erodes financial stability on average, and that this is particularly so in countries with strong deposit insurance, stricter

regulations, lower initial fragility, etc. However, it's hard to properly measure these things so it's not possible to say any one paper settles the issue.

Thanks again for your comments,
David

David Norman | Senior Manager | Australian Financial System | Financial Stability Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| w: www.rba.gov.au

From: HAMILTON, Adam
Sent: Wednesday, 27 March 2019 10:01 AM
To: YAP, Calvin
Cc: Financial Stability - FS ; REES, Daniel ; GUTTMANN, Rochelle
Subject: RE: Note FS: How do Non-bank Financial Intermediaries Contribute to Financial Stability Risks? [SEC=UNCLASSIFIED]

Hi Calvin

I thought this was interesting and important.

I agree that NBFI failures do not pose excess financial stability risks in themselves. I see bank failures as the main financial stability risk. Banks are unique in that they create deposits which is used in transactions as you note. They also have perverse incentives to take excess risk because of implicit guarantees. NBFIs do not create deposits or have the same misaligned incentives and so are presumably taking socially optimal risk unless we can prove otherwise.

On competition eroding lending standards, I've never understood why this is a problem. A bank maximises its expected risk-adjusted ROE. It will never extend ex ante economically unprofitable loans. This means competition should only erode lending standards if there is excess economic profit and we should encourage this. That is unless there is some additional benefit to extending lots of loans or being large – which there is because of TBTF – but I've never heard anyone make that argument.

Thanks
Adam

From: YAP, Calvin
Sent: Tuesday, 26 March 2019 11:25 AM
To: Notes policy groups
Subject: Note FS: How do Non-bank Financial Intermediaries Contribute to Financial Stability Risks? [SEC=UNCLASSIFIED]

Non-bank financial intermediaries (NBFIs), or 'shadow banks', have come under greater scrutiny from policymakers due to the role they played in the 2008-09 financial crisis. This note explores the ways in which NBFIs can pose risks to financial stability to inform our monitoring of the sector. I argue that the failure of a NBFI on its own should not create financial instability, but that risks arise when there is potential contagion to banks via direct funding links or contingent liabilities. Similarly, the actions of NBFIs can create systemic risk by exacerbating credit and asset price cycles, or by encouraging banks to weaken lending standards. I show that these channels have underpinned prior episodes in which NBFIs in other countries have contributed to financial instability. Keeping these risks in mind, I provide a high level assessment of the financial stability risks of NBFI activity in Australia, and find these to be limited at this point.

For more information, see: How do Non-bank Financial Intermediaries Contribute to Financial Stability Risks?

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HOW DO NON-BANK FINANCIAL INTERMEDIARIES CONTRIBUTE TO FINANCIAL STABILITY RISKS?

Non-bank financial intermediaries (NBFIs), or 'shadow banks', have come under greater scrutiny from policymakers due to the role they played in the 2008-09 financial crisis. This note explores the ways in which NBFIs can pose risks to financial stability to inform our monitoring of the sector. I argue that the failure of a NBFI on its own should not create financial instability, but that risks arise when there is potential contagion to banks via direct funding links or contingent liabilities. Similarly, the actions of NBFIs can create systemic risk by exacerbating credit and asset price cycles, or by encouraging banks to weaken lending standards. I show that these channels have underpinned prior episodes in which NBFIs in other countries have contributed to financial instability. Keeping these risks in mind, I provide a high level assessment of the financial stability risks of NBFI activity in Australia, and find these to be limited at this point.

Introduction

Non-bank financial intermediaries (NBFIs), otherwise known as 'shadow banks', can be defined as entities involved in credit intermediation outside the regular banking system.[1] NBFIs often (though not always) undertake similar activities to banks, which may involve liquidity transformation, maturity transformation or high levels of leverage. These activities are inherently risky and NBFIs lack access to public backstops which help to stabilise the banking system during times of stress.

NBFIs have played a significant role in many previous episodes of financial instability. The most prominent contribution of NBFIs to risks was in the years leading up to the Global Financial Crisis (GFC). In particular, the rapid growth of securitisation, where loans were packaged into increasingly complex financial instruments, helped fuel the boom in US subprime lending that was at the heart of the crisis. NBFIs also increased systemic risk through the creation of seemingly risk-free and liquid "cash equivalents" such as money market funds. These were seen as a substitute for bank deposits when in fact they were exposed to credit and liquidity risk, and prone to runs. The risks associated with these funds was exposed when a large money market fund "broke the buck" in 2008 due to its exposure to Lehman Brothers debt securities, leading to runs on other funds and placing further pressure on short-term funding markets.[2] The near failure of insurance giant American International Group (AIG) during the crisis also showed that risks originating from NBFIs can spread to the banking system. Banks and other financial institutions relied on credit default swaps written by AIG and had significant securities lending exposures to AIG. While AIG's insurance operations were prudentially regulated, its financial products division undertook activities that were more akin to an investment bank or hedge fund.

This episode is the most prominent example, but there are others. For example, the failure of the highly leveraged hedge fund Long-Term Capital Management (LTCM) in 1998 created considerable concern about potential systemic risk. As the largest hedge fund in the US, LTCM had accumulated sizeable positions across numerous financial markets, and represented a significant counterparty risk for major financial institutions.

This note explores the ways in which NBFIs can potentially pose systemic risk. I draw upon these historical examples to illustrate the possible channels that can pose risks, but the aim is to communicate a general framework or theory for how NBFIs can contribute to systemic risk. This is intended to be general in application, not focussed on the Australian situation or on current types of non-banks.[3] These general principles can be used to assess both current and future risks posed by non-banks, which is important as the origins of the next crisis may be different from previous episodes. As an illustrative example, I use this theory to provide an assessment of the risks to financial stability arising from NBFIs in Australia.

1. Failure of a disconnected non-bank financial institution is unlikely to create systemic stress

Like banks, NBFIs undertake risky activities (but are generally not subject to prudential regulation intended to reduce the likelihood of failure). However, on its own, the failure of a NBFI should not create financial system instability. This is because the risks of failure are primarily borne by shareholders and other private investors (including holders of securitised loans if there are credit quality issues). Importantly, retail

1 For the purposes of this note, non-bank refers to any non-ADI institution engaging in bank-like activity.
2 See Tarullo (2012) for a discussion of the risks associated with money market funds.
3 This draws upon the Financial Stability Board's framework, which calls for monitoring of NBFI activities involving maturity/liquidity transformation, imperfect credit risk transfer, leverage and/or regulatory arbitrage (see FSB (2013)).

depositors are not at risk, which matters because deposits are widely assumed to be risk-free investments, are in some cases guaranteed by the government and are commonly used to finance everyday transactions. The different funding structure of NBFIs means their failure is unlikely to see households panic or cause liquidity shortages in the banking industry more generally.

One possible exception is if the failure of a NBFI disrupts new credit creation because other lenders are unable to fill their void. This risk is more significant when NBFIs make up a large share of the financial system, or if there are particular market segments that are heavily reliant on NBFIs. That said, Australia's experience during the GFC showed that banks can increase their lending significantly in response to the exit of NBFIs (although in that instance the Government's wholesale funding guarantee helped support bank lending). Major banks increased their share of housing loan approvals by more than 10 percentage points after the closure of securitisation markets led to a large fall in non-bank housing lending. This occurred in part by the major banks acquiring non-bank (and other) competitors such as RAMS, Aussie, and Wizard.

Of course, the failure of an NBFI could be the first sign (rather than cause) of more widespread problems in the financial system, particularly if other institutions have similar business models.

2. But interconnections with the banking system would create problems

(a) Direct linkages

Financial linkages between banks and NBFIs create the risk of contagion to the regular banking sector and therefore systemic instability. Banks may have direct exposure to NBFIs through loans or other funding arrangements, such as warehouse facilities provided to non-bank mortgage originators. Banks may also be exposed to counterparty risk by entering into financial transactions with NBFIs, such as OTC derivatives, repos or securities lending. These exposures may not be fully covered by collateral, particularly during periods of heightened market volatility. Interconnections can be extensive and may not be well understood, particularly for large, complex financial institutions. For example, regulators did not fully appreciate the extent to which AIG was interconnected with banks and the broader financial system until during the GFC. AIG had written credit default swaps on over US$500 billion of assets, which banks relied on to hedge real-estate risk. AIG was also heavily involved in securities lending and had loaned US$75 billion in securities in exchange for cash collateral from banks and broker dealers.[4] AIG was bailed out in large part because of concerns that banks would be exposed to substantial losses if it were to fail, further destabilising the financial system.

(b) Contingent liabilities

Banks' exposures to NBFIs can increase significantly at times of stress. For example, a bank may offer a back-up credit line to a NBFI which is only drawn down during times of stress. Alternatively, a bank may provide support to a related off-balance sheet entity under stress in order to avoid the reputational damage that would occur if that entity were to fail. This occurred during the GFC, when banks stepped in to rescue their sponsored structured investment vehicles (SIVs) or investment funds even where they had no contractual obligation to do so.[5] These rescues effectively amounted to a transfer of the SIV's assets and liabilities, and all of the associated problems, to banks' own balance sheets. This may be less of an issue in future as regulators have made it less profitable for banks to provide contingent lines of credit, forced banks to recognise contingent liabilities and in some cases disallowed banks from rescuing sponsored vehicles.

3. Non-bank financial institutions can exacerbate the credit and asset price cycle

(a) By creating excess demand or fire sales

Even where there are no direct linkages, the activities of NBFIs can create systemic risk through their impact on the value of banks' assets or collateral. NBFIs can exacerbate credit and asset price cycles by adding to demand during the upswing or withdrawing from the market during the downturn. While this is also true of banks, NBFIs are not subject to prudential supervision which can, in theory, constrain risk-taking and curb pro-cyclical lending behaviour. Excessive lending by NBFIs could inflate asset prices or finance overbuilding at the peak of the cycle, increasing the risk of large and disorderly asset price declines in the future. Likewise, if NBFIs under financial stress are forced to sell assets at fire-sale prices, this would further exacerbate a

4 See McDonald and Paulson (2014) for a detailed description of AIG's credit default swap portfolio and securities lending operations.

5 See Segura (2017) Appendix A for a summary of bank support of SIVs during the GFC.

market downturn. This would, in turn, erode the value of banks' collateral and increase defaults, since banks lend against similar collateral and to the same industries as NBFIs.

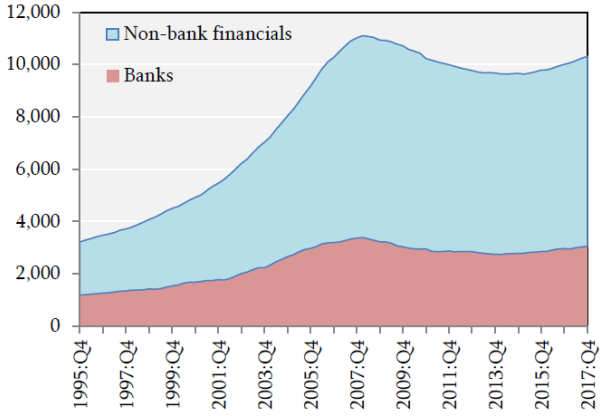
The potential for the actions of a large NBFI to have a significant impact on financial markets and other financial institutions was highlighted by LTCM. There were concerns that if LTCM defaulted, its counterparties would have quickly moved to limit their exposures by liquidating sizeable positions at depressed prices. LTCM estimated that the resulting market disruption would have potentially resulted in losses totalling US$3-5 billion for its top 17 counterparties (many of whom were banks).[6]

(b) By weakening credit standards

As NBFIs increase their market share, banks may be tempted to weaken lending standards in order to compete. This risk is somewhat mitigated in Australia for consumer credit as non-bank lenders are required to comply with responsible lending laws. RMBS investors also impose market discipline on non-bank mortgage lending standards. Nonetheless, NBFIs as a whole tend to lend to a much broader range of borrowers, including those that would find it difficult obtaining finance from banks. This includes higher risk borrowers such as those with low-documentation, higher loan-to-valuation ratios or businesses with limited trading history. And even if NBFIs manage this risk well, the additional competition can still encourage banks to compete on lending standards.

There can also be specific issues with the securitisation model. If credit risk is not retained by the loan issuer, it can reduce the incentive to carefully screen borrowers. Evidence from the US suggests that the securitisation process adversely affected the screening of subprime borrowers prior to the GFC (see Keys et al, 2010). NBFIs accounted for most of the growth in US housing credit between 2001 and 2007 and these lenders were an important driver of weakening lending standards over this period (Graph 1).[7] This is arguably less of an issue now that investors are more cognisant of the risks of holding junior tranches and often look for originators to retain some of the risks on their own balance sheet.

Graph 1
US Home Mortgage Credit by Type of Lender (US$b)



Source: Financial Accounts of the U.S.. Non-bank financials includes life insurance companies, private pension funds, State and local govt. retirement funds, Government-sponsored enterprises, Agency- and GSE-backed mortgage pools, ABS issuers, Finance companies, and REITs.

(c) Regulatory avoidance

NBFIs may create regulatory arbitrage opportunities since they are not subject to prudential regulation, even when undertaking similar activities as banks. As a result, efforts to tighten bank prudential standards or introduce macroprudential measures may result in leakage to NBFIs. This may be appropriate or desirable, if the aim is to reduce the level or risk *within regulated entities*. However, if macroprudential measures are driven by concerns over the health of *customer* balance sheets, excessive asset prices or overbuilding, then regulatory leakage could undermine these efforts. A large and growing NBFI sector can also potentially influence politicians or regulators to ease constraints on banks. For example, it has been argued that the rapid growth in deposit substitutes from non-bank lenders was one of the reasons behind the repeal of the Glass-Steagall Act (which separated investment and commercial banking activities; see Wilmarth (2018)).

Monitoring efforts should focus on these risks

Activities involving maturity/liquidity transformation or high leverage increase the risk of the failure of a NBFI. However, from a financial stability perspective our focus is on the likelihood that these risks become systemic, rather than what risk they pose to an individual NBFI. Given that, the main indicators we should monitor are:

- **Risk to credit supply:** the size and market share of the NBFI sector are relevant to monitor as these affect the impact on credit availability if NBFIs were to withdraw from the market. However, this is just a proxy

6 See the Working Group on Financial Markets' report to Congress (1999).
7 See Aikman et al. (2018) for a summary of the factors that led to the GFC.

for the more important qualitative assessment of how readily other institutions would be able to substitute for credit currently provided by NBFIs and whether there are any particular market segments that are reliant on NBFIs.

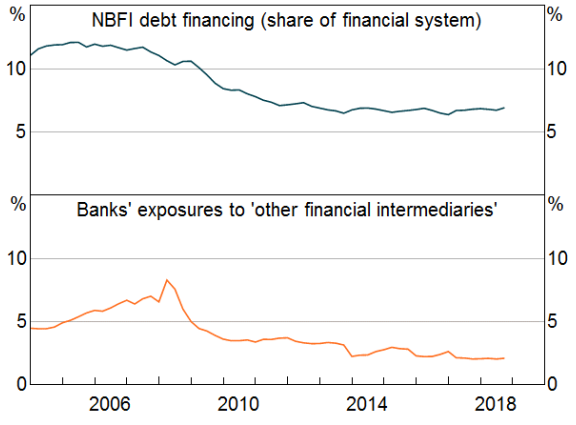
- **Interconnectedness:** we can measure banks' direct exposures to NBFIs by considering their funding links and counterparty risk exposures. But indirect linkages are also important and, where NBFIs' business models are complex or opaque, understanding these linkages is a more challenging task. Even where banks appear to have minimal links with NBFIs, we should consider the extent of their relationship and whether there is a degree of implied support. This could be based on factors such as public perceptions of links between banks and NBFIs and potential reputational risk to a bank if an NBFI were to fail.
- **Potential to exacerbate credit or asset price cycles:** monitoring should consider the degree of pro-cyclicality of NBFI activity and how much this exacerbates asset price or credit cycles. This should include an assessment of the risk of disorderly fire-sales by NBFIs under financial stress. The potential impact on banks depends on the extent of their common exposures with NBFIs, for example whether they hold similar assets or lend to the same industries. The scale of NBFIs is also relevant here. And we need to consider changes in the behaviour of banks in response to competition from NBFIs. These may include changes in lending standards or adopting new business practices which could increase risk.

As an illustrative example, we can use this framework to provide a high level assessment of the financial stability implications of NBFI activity in Australia.

- Overall, NBFIs account for a small and relatively stable share of the financial system over the past few years (Graph 2). Non-bank lending for property has been growing at a faster pace (both residential mortgages and property development), but non-banks' share of residential mortgage lending is still less than 5 per cent. It is likely that banks could substitute for this NBFI lending without significant disruption.
- Banks' funding connections to NBFIs are limited; their exposures to 'other financial intermediaries', a broad measure of NBFI activity, account for just 2 per cent of banks' financial assets. It is hard to be sure about contingent liabilities, but we do not currently think they are material.
- However, banks hold similar assets to NBFIs so their impact on asset price and credit cycles matters. This is less of a concern for non-bank residential mortgage lending, which has strengthened since mid 2017 while housing markets and credit growth were weakening (Graph 3). However, there is some concern that non-bank lending to apartment property developers may continue to boost supply, placing further downward pressure on property prices. There is also no evidence of banks weakening their lending standards to compete for property loans, or even (as yet) in business lending (see Yap 2017). In fact, banks have been tightening property lending standards even as non-bank lenders have increased their market share.

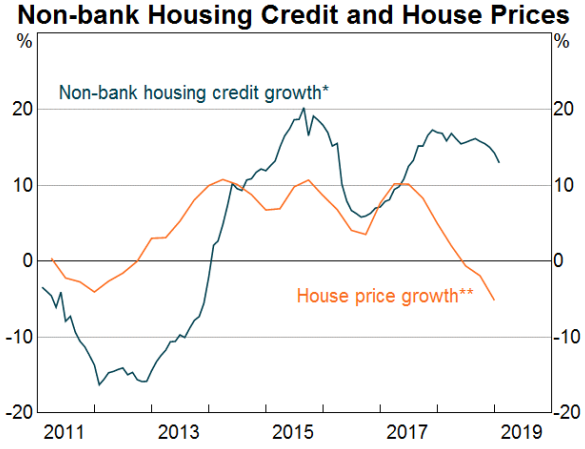
Overall, the financial stability risks from NBFI activity are assessed to be limited at this point, although risks associated with property development bear watching.

Graph 2
NBFI Size and Interconnectedness



Sources: ABS; APRA; RBA

Graph 3
Non-bank Housing Credit and House Prices



* Six-month annualised
** Year on year, weighted average of eight capital cities
Sources: ABS; APRA; RBA

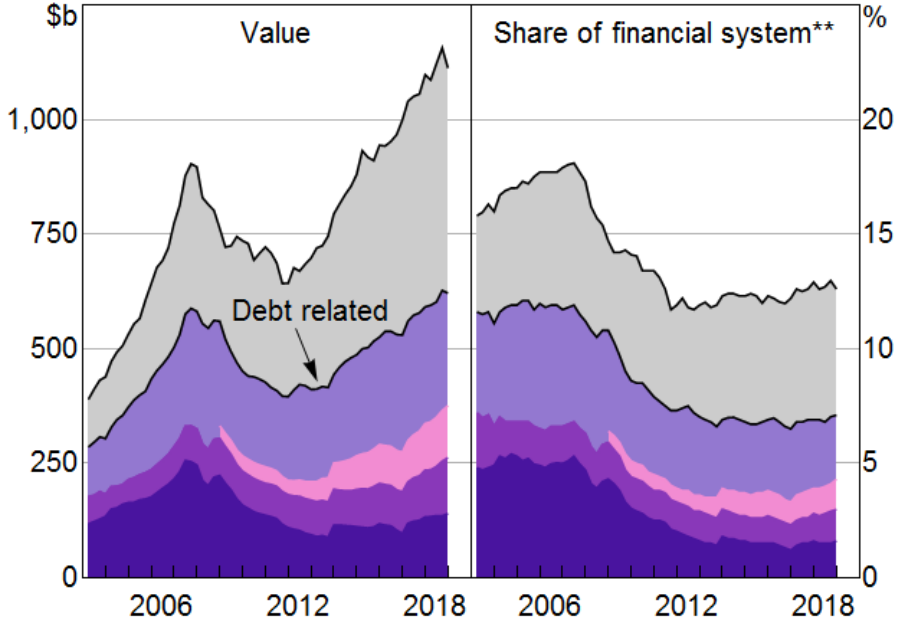
Calvin Yap/ Australian Financial System/ Financial Stability Department/ 26 March 2019

How do Non-bank Financial Intermediaries Contribute to FS Risks?

FS Weekly Seminar
10 April 2019

Non-ADI Financing Activity

Financial assets*



Equity held by managed funds investing in debt
Debt instruments held by managed funds investing in debt
Hedge funds***
Non-prudentially consolidated finance companies
Securitisation vehicles (excluding self-securitisation)

* Total assets where financial assets data are unavailable

** Financial system excludes the RBA

*** Hedge fund data are only available from June 2008

Sources: ABS; APRA; ASIC; Australian Fund Monitors; RBA

Outline

- Channels for NBFI financial stability risks
  - Interconnections
  - Impact on credit and asset price cycles

- Monitoring

- Non-bank property lending in Australia

Risk of Failure vs Systemic Risk

- NBFIs undertake risky bank-like activities

- Failure of disconnected non-bank financial institution unlikely to create systemic stress
  - Losses borne by shareholders and other private investors
  - Depositors not at risk

- Although could potentially disrupt new credit creation

Interconnections with Banks Create Problems

- Direct linkages
  - Funding links
  - Counterparty risk

  Example: AIG's credit default swaps and securities lending exposures

- Contingent liabilities
  - Exposures may increase during stress
  - May exist even where there is no legal liability

  Example: banks rescuing SIVs or investment funds during the GFC

Impact on Credit and Asset Price Cycle

- Excess demand or fire sales
  - Pro-cyclical behavior by non-bank institutions
  - Asset fire-sales

Impact on Credit and Asset Price Cycle

- Excess demand or fire sales
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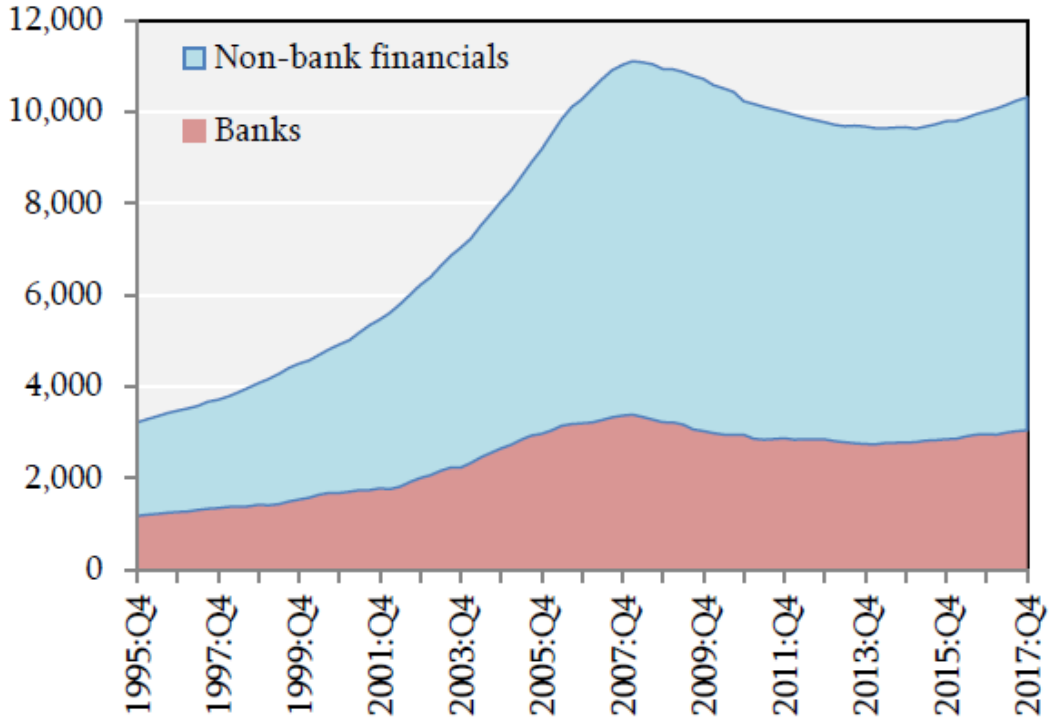
- Weakening credit standards
  - Non-banks lend to broader range of borrowers
  - Temptation for banks to lower standards to maintain market share

  Example: securitization pre-GFC

Impact on Credit and Asset Price Cycle

US Home Mortgage Credit by Type of Lender



Impact on Credit and Asset Price Cycle

- Excess demand or fire sales
  - Pro-cyclical behavior by non-bank institutions
  - Asset fire-sales

- Weakening credit standards
  - Non-banks lend to broader range of borrowers
  - Temptation for banks to lower standards to maintain market share

  Example: securitisation pre-GFC

- Regulatory avoidance
  - Regulatory arbitrage undermining prudential measures

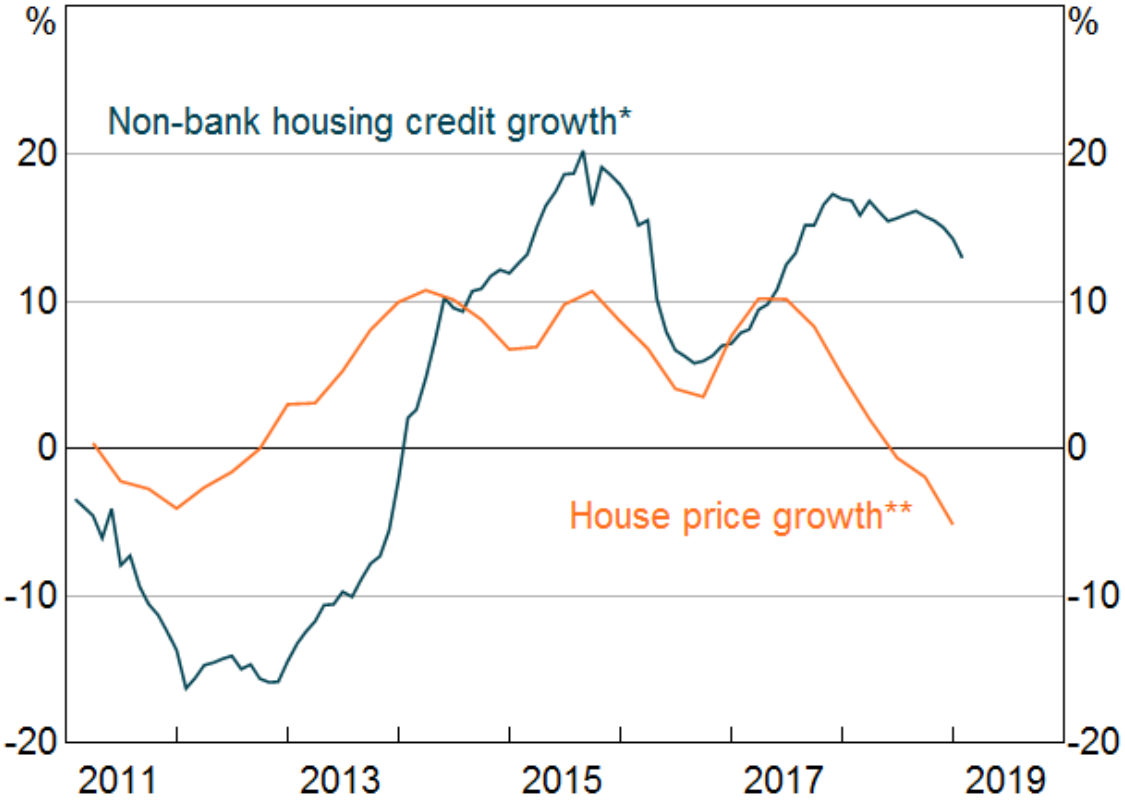
Monitoring Framework

	Residential Mortgage Lending	Property Development Lending
Risk to credit supply		
Interconnectedness		
Potential to exacerbate credit or asset price cycles		

Monitoring Framework

	Residential Mortgage Lending	Property Development Lending
Risk to credit supply	• Small share, banks could easily provide loans • More difficult for higher risk borrowers	
Interconnectedness	• Small amount of warehouse funding	
Potential to exacerbate credit or asset price cycles	• Supportive given slowdown in property markets • No evidence of weaker lending standards	

Non-bank Housing Credit and House Prices



* Six-month annualised

** Year on year, weighted average of eight capital cities

Sources: ABS; APRA; RBA

Monitoring Framework

	Residential Mortgage Lending	Property Development Lending
Risk to credit supply	• Small share, banks could easily provide loans • More difficult for higher risk borrowers	• Larger share of market? • Banks reduced risk appetite
Interconnectedness	• Small amount of warehouse funding	• Mainly funded by private investors • Co-funding projects with banks
Potential to exacerbate credit or asset price cycles	• Supportive given slowdown in property markets • No evidence of weaker lending standards	• May be contributing to risk of overbuilding

Discussion

- Are there any other ways that NBFIs can cause systemic risk?
- What other risks should we be monitoring?
- Is there sufficient regulation of non-bank financial institutions?

Historical Examples

- Securitisation pre-GFC
  - Non-bank lenders accounted for most of the growth in US housing credit
  - Subprime lending, weakening of lending standards

- "Cash equivalent" money market funds
  - Exposed to credit and liquidity risk, prone to runs
  - Fire sale risk, pressure on short-term funding markets

- Failure of non-bank institutions of systemic importance
  - AIG: credit default swaps and securities lending exposures
  - Long-Term Capital Management: counterparty risk, fire sale risk

DO BANKS HAVE A FUTURE IN A TECH-DRIVEN WORLD?

Technological innovation has resulted in significant disruption in industries such as retail, transport and accommodation, and it has been speculated that the banking industry is similarly ripe for disruption.[1] While banks are losing their edge in some core functions, I argue that banks' maturity transformation function is much more difficult for non-banks to replicate and results in a significant funding cost advantage for banks. I also find little evidence that tech-focussed lenders have lower operating costs, perhaps because economies of scale are considerable. This means that these new competitors are unlikely to pose much of a threat to banks' lower risk lending, particularly if customers primarily care about price (which consumer surveys suggest is true, at least for large loans). Non-bank lenders are therefore likely to focus on higher risk loans or borrowers not well serviced by banks, or obtain banking licenses to gain access to deposit funding. Large global tech companies potentially pose a larger threat to incumbent banks, though it is unclear that they have an appetite to engage in lending.

Introduction

Some have argued that 'fintech' firms, 'neobanks' and 'bigtech' (large global technology companies) pose a major threat to incumbent banks and, in the extreme, could displace them. New entrants are already challenging incumbent banks' dominance in payment services, which is one of their core functions.[2] Moreover, it is feasible that some of these firms could out-compete banks in another core function, credit risk assessment, if they gain access to customer data through Open Banking (or other means) and use technology to assess credit risk more efficiently and accurately than banks. This would leave banks with an advantage in only one core function: maturity transformation.

As Ellis (2016) notes, perceived threats to the banking system are not new and have previously been unfounded; the 'future of the financial system' was the subject of the RBA Conference in 1996. I remain sceptical because banks' maturity transformation function is unique, difficult for non-banks to replicate and critical to the cost advantage enjoyed by banks. To illustrate this, I use a simple model of lender profitability to evaluate the potential for technology focussed non-bank lenders to compete directly with banks, taking into account differences in funding costs, operating costs and expected credit losses. I also consider the potential for new sources of funding for non-bank lenders and the role of bigtech in financial services.

Lower funding costs for banks provide a big advantage over non-bank lenders

Banks play a unique role in the economy because of their ability to take deposits, which can be redeemed at par and on demand (Ellis 2016). This is only possible because banks have access to emergency liquidity support and are backed up by the Government's deposit guarantee scheme. This allows banks to perform maturity transformation more effectively (or cheaply) compared with non-regulated institutions, which is reflected in lower funding costs for banks.

In particular, banks benefit from low cost deposit funding, which accounts for around 60 per cent of their total funding (Table 1). The cost of these deposits is, on average, *below* the cash rate. The major banks also have a relative low cost of wholesale debt funding, reflecting their strong credit rating and perhaps some degree of implicit public support (see Hughes 2015). In contrast, non-bank lenders do not have access to deposit funding and their funding costs are double (or more) that of banks (though vary substantially depending on the type of loan). Non-bank residential mortgage lending is mostly funded in the short-term by warehouse facilities and in the long-term by issuing residential mortgage-backed securities (RMBS). Recent RMBS issuance and liaison with non-bank lenders suggest that 'all-in' funding costs are around 3¼ per cent for prime mortgages and around 3¾ per cent for non-prime mortgages, significantly higher than

Table 1: Estimated Debt Funding Costs[(a)]

Major Banks	Estimated Cost %	Non-banks	Estimated Cost %
Deposits	1¼	Mortgages	
Short-term debt	2.1	Prime	3¼
Long-term debt	3.2	Non-prime	3¾
Hybrids	4.0	Business lending	
Total non-equity funding	**1.8**	Lower risk	4½
		Higher risk	9½

(a) Estimated as at end-May 2019
Sources: APRA; RBA

1 For example, see 'Techs Raid on the Banks', *The Economist*, 2 May 2019.
2 See Bolt, Fisher, Langcake and Lim (2017) for an overview of developments in payments systems, which are not the focus of this note.

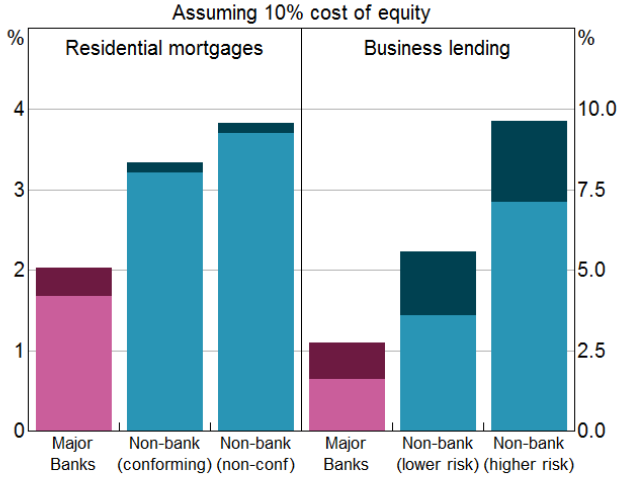
banks' debt funding costs.[3] RMBS funding costs may not always be this high relative to the cash rate. In fact, RMBS funding costs were close to the cash rate prior to the global financial crisis (GFC), enabling non-banks to grow rapidly. However, there are no current indications of a return to pre-GFC pricing of credit risk. Bank funding spreads were also much lower (relative to the cash rate) at that time (Black and Titkov 2019).

For business lending, non-banks use a broader combination of funding (corporate debt, warehouse facilities and SME loan securitisation, although as Fernandes (2019) notes, the SME backed securitisation market is less developed). This makes it difficult to generalise, but publicly reported data and recent SME securitisations suggest funding costs of around 4½ per cent for lower risk business loans that are well secured against collateral such as commercial property or unpaid invoices.[4] Funding costs are (unsurprisingly) significantly higher for riskier unsecured business lending. For example, Prospa reported debt funding costs of around 9½ per cent in its 2018 Prospectus.

To get a complete picture of funding costs, we need to also consider the proportion of relatively expensive equity funding. This is because the cost of debt funding for non-banks is more sensitive to risk, as risk typically resides with debt investors for non-banks but with equity investors for banks. More generally, prudential regulation of banks sets minimum capital requirements that non-banks are not bound by.

For residential mortgages, non-bank lenders clearly hold less capital; as little as 1 per cent equity relative to outstanding loans. Banks' equity funding is determined by credit risk weights and their required capital ratio. For residential mortgages, the major banks are required to maintain around 4 per cent equity and hybrid funding, reflecting the relatively low risk weights for mortgages.[5] Despite this, total bank funding costs for residential mortgages are still significantly lower than for non-banks because the contribution of equity to total funding costs is small (Graph 1).

Graph 1
Total Funding Costs
Assuming 10% cost of equity



* Darker shading represents equity funding
Source: RBA

In theory we would expect non-banks to also hold less capital for business lending (since they are not constrained by prudential capital requirements). However, the available data actually suggest that non-bank business lenders use *more* equity funding relative to banks.[6] This could be because debt investors are reluctant to take on this risk and require much greater subordination than for mortgages (meaning risk resides with the non-bank lender), or because they lack sufficient scale to make efficient use of their capital. Either way, the available evidence suggests that total funding costs are significantly higher for non-bank business lenders as they hold more capital and have more expensive debt funding.

The discussion so far has assumed fintechs operate without a deposit-taking licence. Neobanks could perhaps operate with much lower funding costs because of their ability to take deposits. Nonetheless, there is evidence globally and in Australia that larger deposit-takers pay lower rates on average than smaller deposit-takers.

Lower operating costs make up only some of the difference, if at all

It is often claimed that new technology focussed lenders have an operating cost advantage over incumbent banks because of three reasons: (i) large banks are encumbered by complex legacy IT systems that are costly (or even impossible) to upgrade and inefficient, diminishing their ability to reduce personnel costs; (ii) existing banks

3 Based on RMBS spreads of 150 (200) basis points for prime (non-prime) loans and BBSW rates 25 basis points above the cash rate.
4 Debt funding costs for ASX listed invoice finance company Scottish Pacific are estimated at around 4.4 per cent; Think Tank's recent CMBS deals were priced around 230 basis points over BBSW; the highest rated tranches of Liberty Financial's recent SME securitisation priced at 145 to 195 basis points over BBSW; small business lender OnDeck priced a US securitisation at 3.75 per cent.
5 Including capital held for operational risk and interest rate risk.
6 Scottish Pacific holds equity equivalent to around 20 per cent of outstanding loans. Prospa's loans are around 25 per cent equity funded. Banks are required to maintain around 15 per cent equity and hybrid funding for SME and corporate lending.

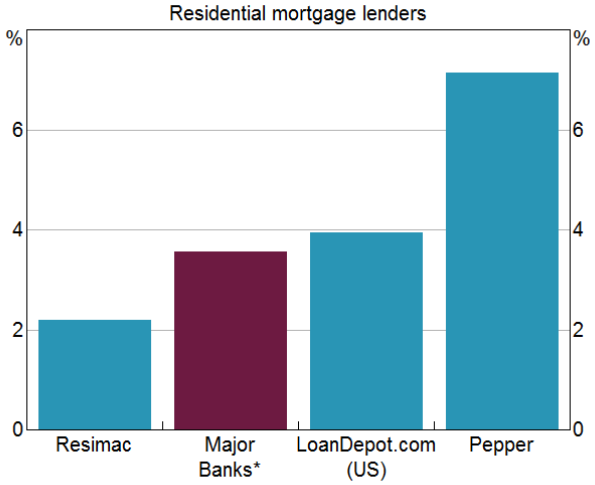
have branch networks that must be (at least in part) maintained; and (iii) banks also face regulatory and compliance costs associated with maintaining an ADI license, which have increased post Royal Commission.

Comparing operating costs of banks and non-banks is challenging due to limited data on non-bank lenders and the difficulty accounting for outstanding loans that have been securitised. However, for residential mortgage lenders, we get around the securitisation problem by measuring operating costs as a share of loan originations, and have data for two listed Australian non-banks (Pepper and Resimac) and one of the largest US non-bank lenders (loanDepot.com). For business lending, we look at operating costs relative to total assets for two listed Australian non-banks (Scottish Pacific and Prospa). We also consider three UK neobanks that mainly engage in personal lending (OakNorth, Monzo and Starling).

These data suggest that the operating cost advantage may be overstated, particularly when challenger firms are small. For mortgage lending, Resimac reports moderately lower operating costs than the major banks, but both Pepper and loanDepot.com report higher costs. For business lending, operating costs are much higher at Scottish Pacific and Prospa, although in the case of Prospa this reflects the fact that it is still a relatively new business and writes risky (high cost) loans (Graph 3). Costs are also very high for UK neobanks Monzo and Starling Bank, though OakNorth has costs which are similar to the majors. It is likely that Monzo and Starling's costs will decrease over time as they expand, but they have already been operating for four years, highlighting the deep pockets required before neobanks can typically become profitable. More generally, banks' operating costs are low, implying that there are not big efficiency gains to be made.

Graph 2

Operating Costs as a Share of Originations

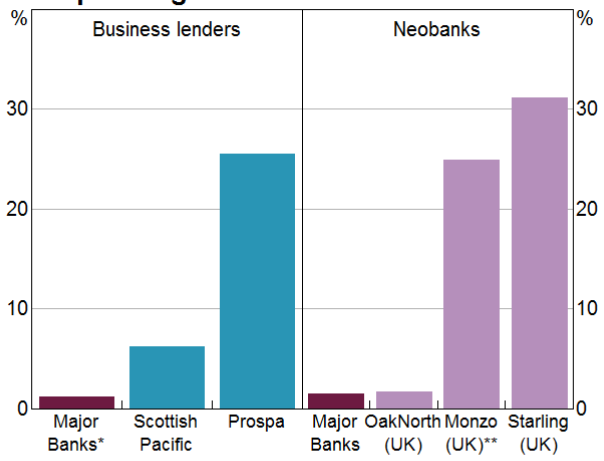


* Calculated for banks' retail or consumer business

Sources: Company annual reports and SEC filings; RBA

Graph 3

Operating Costs as a Share of Loans



* Calculated for banks' business and private banking operations

** As a share of total assets

Sources: Company annual reports, SEC filings and prospectuses; RBA

Higher costs mean non-bank lenders are unlikely to be competitive for lower risk borrowers

I combine estimates of funding costs, operating costs and expected credit losses into a stylised model of lender profitability, which I use to calculate the break-even lending rate required to achieve a 10 per cent return on equity (Graph 4). For residential mortgage lending, non-bank lenders are likely to find it difficult to offer the same rates as the major banks, even when we assume lower operating costs. This is also true for business lending, although the wide variation in the quality of business loans makes it difficult to compare lending rates. Bank loans to small businesses are often secured against residential property while non-bank business loans may be unsecured or secured against lower quality collateral.

This analysis could understate the competitiveness of non-bank lenders if investors demand a higher return for investing in bank shares, resulting in a higher cost of equity for banks. There is some evidence that bank investors earn exceptionally high returns from certain types of lending, for example, Jones (2016) finds that the major banks' consumer lending operations generate a return on equity of between 15-25 per cent.

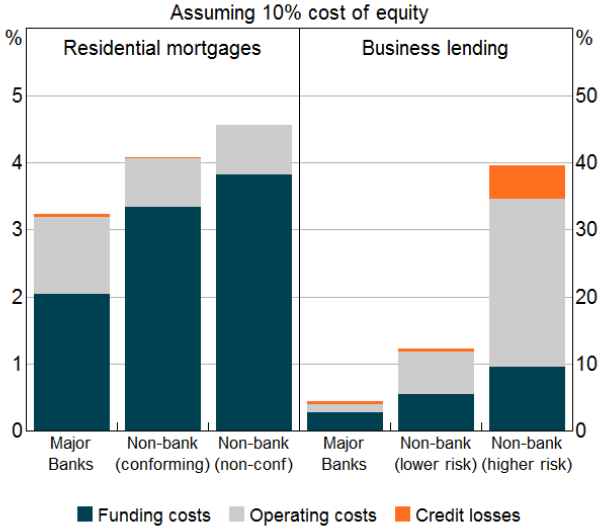
Even so, banks' costs are lower at all but extreme rates of return. This is shown in Graph 5, which plots the relationship between the lending rate for prime residential mortgages and investors' return on equity. The major banks' mortgage pricing is more sensitive to the cost of equity due to their higher share of equity funding. However, major banks are still able to offer more competitive mortgage rates even if their cost of equity is 15

per cent higher than for non-bank lenders. It would take an implausibly high return of equity for bank investors, of 35 per cent or higher, for non-bank lenders to be competitive.

Graph 4

Break-even Lending Rates

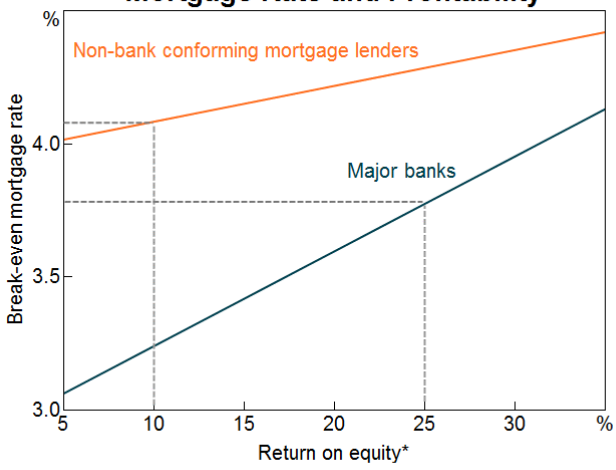
Assuming 10% cost of equity



Source: RBA

Graph 5

Mortgage Rate and Profitability



* Ignores goodwill and other regulatory deductions

Source: RBA

While non-banks appear to have much higher costs, they could compete by offering better service and convenience (for example, faster loan approval times and more efficient verification of borrower information). However, consumers consistently report that the interest rate is the most important factor for large infrequent transactions such as home loans (Deloitte 2016). This suggests that non-bank lenders are likely to continue to focus on borrowers that find it difficult to get loans from banks, such as small businesses with limited security, home buyers with non-standard sources of income or higher risk customers. Prudential interventions (e.g. APRA's investor and interest-only benchmarks) have also helped non-bank lenders compete for some borrowers.

Could new sources of funding change our results?

Financial innovation has resulted in new sources of funding for non-bank lenders, and a new source of cheap non-bank funding could emerge that would erode banks' cost advantage. However, so far nothing has replicated the effectiveness of the maturity transformation undertaken by deposit-issuing banks.

One prominent innovation is peer-to-peer lending, which seeks to bypass financial intermediaries by directly matching borrowers with investors (see Yap 2017). This provides an alternative means of funding loans, although the cost of this funding is determined by the return expectations of investors. Three things make it relatively expensive. One is that peer-to-peer investors face liquidity risk as they can only retrieve their funds if the loan is repaid or sold to another investor. Another is that smaller investors may also have limited diversification, which is particularly an issue for small business loans where there is a lot of idiosyncratic risk. Thirdly, peer-to-peer investors earn unleveraged returns and, as Ellis (2016) notes, equity-type claims expect equity-style returns. This means that returns from low risk loans such as mortgages are unlikely to be attractive to such investors, especially when investing in an RMBS can provide the same exposure with the additional benefits of diversification, tranching and some liquidity. On the other hand, higher absolute returns from riskier loans may be more appealing to peer-to-peer investors.

Might payments be a path for non-banks to capture lending?

Fintech/bigtech's success in providing payments services could be used to cross-subsidise lending services, in addition to directly impacting bank revenues from payment services (which account for at least 3 per cent of banks' income). A key question is whether tech companies would be able to attract deposits away from banks, undermining their funding advantage. While digital wallets have some of the characteristics of a bank deposit, it seems unlikely that digital wallet balances will grow substantially – without paying relatively high interest rates – as they are not covered by the deposit guarantee. The NPP also makes it simple to move money between bank accounts and digital wallets.

Bigtech might pose a greater long-term threat to banks

Large global technology companies such as Apple, Google, Amazon and Facebook would pose a bigger threat to banks if they were to compete in financial services. They have significant financial resources and could leverage their established brands and sizable user bases to quickly reach efficient scale. Technology is at the core of these businesses, and they have access to a wealth of data that could be used to sell financial products or assess credit risk. They also have lower debt funding costs relative to other non-bank lenders, though still significantly higher than banks.[7] Bigtech already has a presence in the Australian payments market through digital wallets such as Apple Pay, G Pay and Pay Pal. In China, tech companies have started in payments before moving into other financial services.

Notwithstanding these advantages, offering a full suite of banking services would represent a significant shift in business models and subject these companies to greater regulatory and political scrutiny that they are unlikely to welcome. Tech companies offering financial services directly (either with a banking license or as a non-bank lender) would attract the highest level of regulatory scrutiny. Companies may instead choose to partner with financial institutions to offer 'white label' or co-branded financial products while limiting their financial and regulatory risks, or offer a platform for different financial institutions to sell financial products to their user base.[8] In these models, bigtech would effectively become just another (albeit dominant) broker, perhaps also charging banks for credit risk assessment.

A broader risk is that tech companies could change the way customers interact with financial institutions and potentially weaken banks' ownership of the customer relationship.[9] Churn rates on deposits and mortgages are very low, which supports incumbents. But open banking will make consumers' banking data more readily available, and financial aggregator apps make it easier to compare financial products. If customers become more willing to switch between products offered by different financial institutions, financial services could become increasingly commoditised such that banks are forced to compete purely on price. This could have implications for major banks' deposit funding costs (if savers are more willing to switch to banks offering higher rates) and the margins they are able to charge on loans and other financial products.

Financial stability implications

Technology driven innovation is likely to continue to disrupt financial services, although there is significant uncertainty over the extent to which this will affect core banking services. Some disruption would be welcome should it increase competition and lead to a more efficient financial system. However, there could also be an impact on financial stability if disruption occurs suddenly, or if banks' profitability is reduced to an unsustainable level. These risks depend on the type of institution gaining market share:

- If incumbent banks lose market share to newer institutions with a banking license (such as neobanks), then the financial stability implications would be limited as these would be subject to prudential regulation. Increased competition could impact the profitability of incumbents and the financial system. There is some empirical evidence that less profitable banking systems are more risky, but the link between competition and financial stability is not settled (see Beck, De Jonghe and Schepens 2013). Moreover, the Australian banking system currently makes sufficient profit that a reasonable decline in profitability would not create financial stability concerns.
- If there is a shift towards non-bank financial intermediaries, this would raise questions around their potential to exacerbate credit or asset price cycles and the availability of credit supply during a crisis (Yap 2019). Prudential regulation would also be less effective in managing financial stability risks which means that monetary policy may need to play a greater role. It could also be appropriate to considering broadening regulation of non-bank entities, although there are limitations on how much non-banks can be regulated.

7 For example, the average funding cost of Apple (AA+) in FY2017 was 140 basis points higher than US banks, and its bonds still trade at least 40 basis points above the yield on equivalent-maturity US Treasuries.

8 The latter is the model used by Chinese fintech Ant Financial, formerly known as Alipay and an affiliate of the Alibaba Group. It has leveraged its popular payments service by developing a platform for other institutions to offer funds management, insurance and lending products, alongside its own products.

9 For a more detailed discussion of possible scenarios, see *'Implications of fintech developments for banks and bank supervisors'*, BIS (2018).

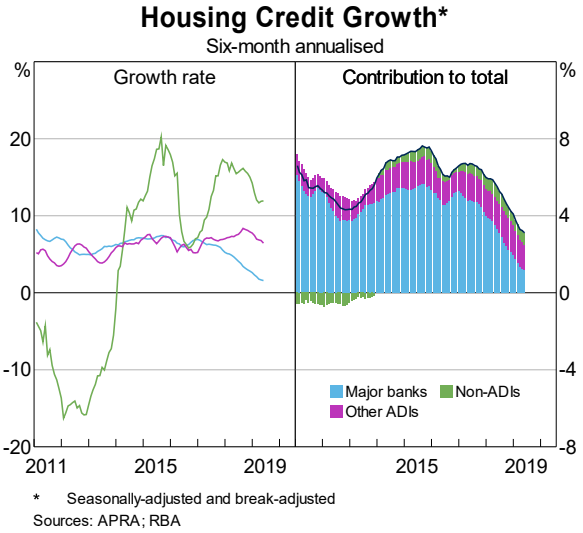
Given the results and arguments presented in this paper, the most likely scenario is for incumbent banks to remain dominant while investing in technology and adopting fintech best practice. Australian banks have been active investors in fintech, partly motivated by a desire to capture technology. If banks are able to maintain their dominant position, the financial stability implications would be limited, although they would still likely see a reduction in payments revenue and face increased technology investment costs. Nevertheless, it will be important to continue to assess the impact of new technologies on the financial system, particularly where they could potentially reduce banks' funding cost advantage.

Calvin Yap
Australian Financial System
Financial Stability Department
1 August 2019

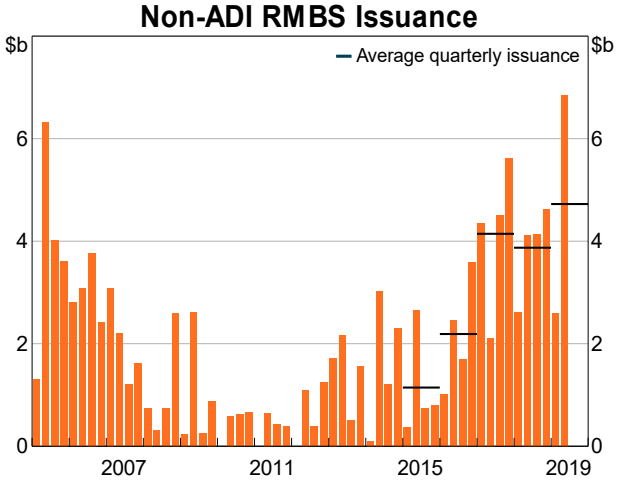
NON-BANK FINANCIAL INTERMEDIATION (SHADOW BANKING)

Non-ADI residential mortgage lending:

- Growth well above system but has slowed recently alongside weaker demand for housing credit and increased competition from banks. Non-ADI share of total housing credit remains small (<5 per cent).
  - Non-ADI issuance of RMBS has been high over recent quarters, consistent with earlier strong non-ADI credit growth and supported by favourable market conditions.
- For lowest risk mortgages, non-ADI lenders still constrained by the higher cost of RMBS funding (vs deposits and unsecured bonds).



* Seasonally-adjusted and break-adjusted
Sources: APRA; RBA



Sources: Bloomberg; RBA

Non-ADI property development lending

- Limited data, but liaison suggests that non-ADI lenders have been funding significant share of new development. Charge much high rates than banks, but accept lower pre-sales and/or higher LVRs.
- Could contribute to overbuilding of apartments but risk seems small given sharp fall in approvals.

Other non-bank lending

- Has been stable as a share of financial assets, well below pre-GFC levels.

APRA powers over non-ADIs:

- Made significant progress on improving data coverage of non-ADI lenders, though some material lenders still missing.
- APRA now has rule-making powers over non-ADI lenders materially contributing to risks of financial instability, although intended only as a 'reserve' power.

Financial Stability Department
29 July 2019

From: FERNANDES, Kate
Sent: Wednesday, 18 September 2019 3:52 PM
To: Notes policy groups
Subject: Note DM: Recent Trends in Non-ADI Residential Mortgage Backed Securities [SEC=UNCLASSIFIED]

Non-ADIs have accounted for around half of all residential mortgage backed security (RMBS) issuance in recent years, issuing twice as much as the major banks since 2016. Using the Securitisation Dataset the RBA is able to monitor the collateral underpinning non-ADI RMBS deals. I find that recent deals include a higher share of investor and interest-only loans, a lower share of high LVR loans and that their loans are considerably less seasoned. I also observe that non-ADIs have been leading the market in innovation in deal structures, including more tranches and more specialised tranches (such as foreign currency tranches). Finally the amount of subordination non-ADIs have been required to provide their senior tranches has been falling in recent years, driven by the non-conforming sector.

For more information, see Recent Trends in Non-ADI Residential Mortgage Backed Securities.

Kate Fernandes | Senior Analyst | Securities Markets | Domestic Markets
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
| w: www.rba.gov.au

RECENT TRENDS IN NON-ADI RESIDENTIAL MORTGAGE BACKED SECURITIES[1]

Non-ADIs have accounted for around half of all residential mortgage backed security (RMBS) issuance in recent years, issuing twice as much as the major banks since 2016. Using the Securitisation Dataset the RBA is able to monitor the collateral underpinning non-ADI RMBS deals. I find that recent deals include a higher share of investor and interest-only loans, a lower share of high LVR loans and that their loans are considerably less seasoned. I also observe that non-ADIs have been leading the market in innovation in deal structures, including more tranches and more specialised tranches (such as foreign currency tranches). Finally the amount of subordination non-ADIs have been required to provide their senior tranches has been falling in recent years, driven by the non-conforming sector.

Who are the non-ADI issuers?

Non-ADIs have accounted for around half of all RMBS issuance in recent years, issuing twice as much as the major banks since 2016. As such, non-ADIs are an integral part of the securitisation market. Moreover, non-ADIs are an important source of competition to ADIs and offer products in underserviced parts of the market (self-employed borrowers, lower quality borrowers etc.).[2]

Non-ADIs are financial institutions that originate mortgages loans but are not authorised to accept deposits. Non-ADIs are not prudentially regulated by APRA, but are subject to ASIC regulations and responsible lending standards.[3] The non-ADI sector issues around 3 per cent of housing credit in Australia, though their lending has been growing strongly in recent years.

As non-ADIs cannot access deposit funding, they rely heavily on wholesale funding and many use securitisation as a primary funding source. Nine non-ADIs frequently issue residential mortgage backed securities (RMBS) in the Australian market (Table 1).[4] Most of these deals are submitted to the RBA for repo-eligibility and therefore detailed loan level data is available to the RBA in the Securitisation Dataset.[5]

Table 1: Non-ADI RMBS

Public RMBS issued between January 2015 and June 2019

	Amount Issued ($b)	Number of deals issued	Deals issued in 2018
Pepper Group	11.63	17	5
Firstmac	10.97	13	3
Liberty Financial	10.87	15	3
Resimac	10.19	14	3
La Trobe Financial	3.57	7	2
Columbus Capital	3.21	6	1
Bluestone	2.27	8	3
RedZed	1.58	5	1
Australian Finance Group (AFG)	1.50	4	1
Mortgage House	0.30	1	0
Victorian Mortgage Group	0.18	1	0

Sources: Bloomberg; KangaNews; RBA

In this note, I take a closer look at recent trends in the non-ADI RMBS market, making use of the Securitisation Dataset and SMS's database of issuance. I find that issuance of non-ADI RMBS has picked up considerably in recent years and they now are the dominant issuers in the Australian market. I also find that the collateral underpinning their deals now includes a higher share of investor and interest-only loans,

1 Working files for this note can be found here: D19/429112 (restricted access).
2 See SMS's list of Securitisation Issuer Profiles for more information on the markets each non-ADI targets.
3 While non-ADIs are not prudentially regulated by APRA, as of March 2018 APRA has the power to make rules for non-ADIs if they believe the aggregate impact of non-ADI lenders is materially contributing to risks of instability in the Australian financial system. APRA also now requires more non-ADIs to report data to them under the new Economic and Financial Statistics collection.
4 For an excellent introduction to asset-backed securities see Arsov, Kim and Stacey (2015).
5 For an overview of the Securitisation Dataset and its limitations see Fernandes and Jones (2018).

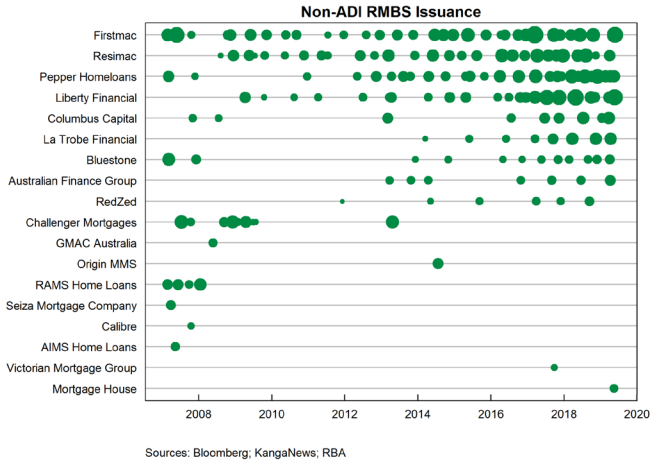
a lower share of high LVR loans and their loans are less seasoned than they were in the past. Overall the collateral underpinning non-ADI deals appears to be less risky than in the past, as measured by the subordination required by credit rating agencies. Finally I observe that non-ADIs have been leading the market in innovation in deal structures, including more tranches in their deals and more specialised tranches (such as foreign currency tranches).

Recent trends in issuance

In the five years after the Global Financial Crisis (GFC) the non-ADI RMBS market shrunk considerably. A number of non-ADIs completely stopped issuing RMBS, with several being acquired by ADIs (particularly the major banks) and some closing down (Graph 1). The larger non-ADIs continued to issue during this period, but less regularly and with smaller deal sizes. Several of these larger non-ADIs (Resimac, Firstmac, Liberty and Challenger) received support in this period from the Australian Office of Financial Management's RMBS investment program.

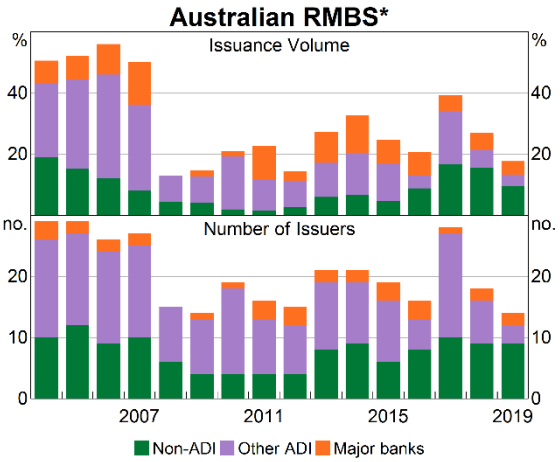
The non-ADI market began to recover in 2013, with a few non-ADIs returning (including Bluestone and Columbus) and a few new entrants issuing their first RMBS (including LaTrobe, RedZed and AFG). By 2017 non-ADIs were issuing higher volumes than they had in the pre-GFC period and were a much larger share of the market, issuing slightly less than half of the total volume (Graph 2). Non-ADIs dominated issuance in 2018, issuing nearly 60 per cent of market volume of RMBS. Issuance in 2019 to date has remained strong. The last few years have also seen most non-ADIs issue the largest deal in their history, with Firstmac, Resimac, Pepper and Liberty all issuing deals with a volume over $1 billion for the first time since the GFC.

Graph 1



Sources: Bloomberg; KangaNews; RBA

Graph 2



* Data to 30 June 2019

Sources: Bloomberg; KangaNews; RBA

The recovery and recent strength in issuance has been attributed to the following factors: [6]

- **Increased demand from overseas investors for Australian RMBS.** Some investors appear to have been crowded out of international RMBS markets by quantitative easing programs, and have as a result shown more interest in the Australian market. Also, the 'hunt for yield' has been cited as driving for increased demand from international investors, especially from Japan and Europe. These factors might have also encouraged investors who would previously only invest in ADI RMBS to consider non-ADI RMBS and lower rated tranches (there have been reports of high demand for mezzanine tranches). We have also had reports of international investors providing warehousing funding, as APS120 encouraged ADIs to exit this market. Providing mezzanine funding might be attractive because it might guarantee slices of the eventual RMBS deal.
- **Growth in the 'marginal' mortgage market.** APRA's crackdown on ADI lending standards, especially for interest-only and investor lending, has led ADIs to reduce their lending to these segments.

6 Sources: ASF conferences (2018, 2017), KangaNews non-bank handbook 2016, 2017 and 2018

Affected borrowers might have turned to non-ADI lenders, which has led to considerable growth in non-ADI lending.

- **Mortgage brokers and online applications.** Several non-ADIs have also pointed to increases in the use of mortgage brokers and increased willingness for consumers to apply for loans online as drivers of demand (as some of them specialise in convenient, online applications).

Recent trends in collateral

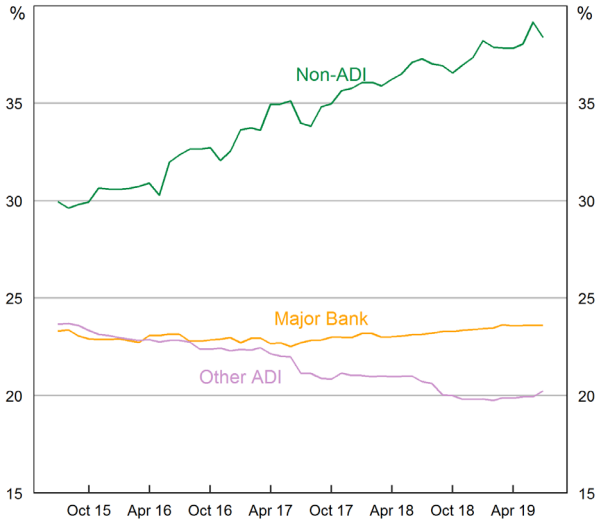
The underlying collateral in non-ADI deals can be monitored using the Securitisation Dataset. This comes with a couple of limitations. First, the data only go back to mid-2015. Second, there are issues with the timing of data, as there are delays between the origination of a non-ADI loan, which then needs to be securitised and accepted as repo-eligible before the loan enters the database.[7] Nonetheless, we do not judge these problems to be too severe.[8]

The share of investor loans in non-ADI deals has grown considerably, in contrast to the rest of the market (Graph 3). All non-ADI lenders have increased the share of investor loans in their securitisations over the past two years, except the lenders who had the highest shares of investor loans at the start of this period. These other lenders have held their shares roughly steady. This upward trend is likely to continue as several recently issued non-ADI deals, which are yet to be recorded in the Securitisation Dataset, have contained higher than average shares of investor loans.

A similar trend was observed for interest-only (IO) loans but this plateaued in 2017 and has begun to decline in line with the rest of the market. However, the share of IO loans in non-ADI deals remains considerably higher than deals from ADIs (Graph 4). Trends in IO shares have varied by individual non-ADI; non-ADIs who focus on prime lending have generally held their share of IO loans steady or allowed their share to decline modestly. Most other non-ADI lenders increased their share of IO loans between 2016 and mid-2018 but have lowered or held their share steady since.

Graph 3

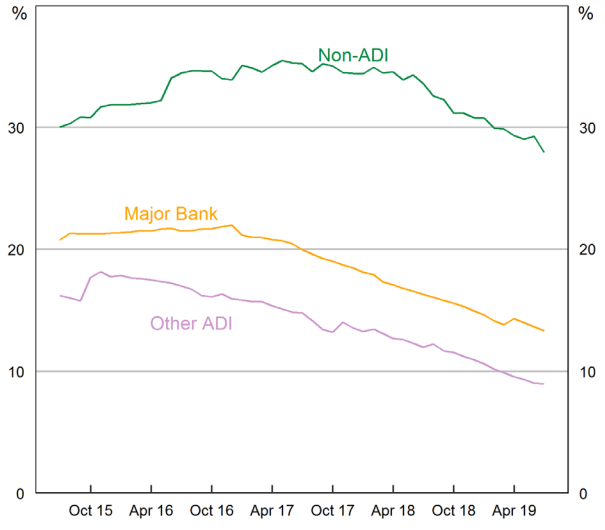
Investor Share of Securitised Loans
Marketed deals only



Sources: RBA; Securitisation Dataset

Graph 4

Interest-only Share of Securitised Loans
Marketed deals only



Sources: RBA; Securitisation Dataset

These trends have likely been driven by the tightening of lending standards in the ADI sector, which has driven some 'near prime' borrowers (borrowers who would have been considered prime prior to the recent tightening in standards) to non-ADI lenders (Graph 5). It's worth noting that non-ADIs hold such a small share of the housing credit market it would be impossible for them to soak up all the unmet demand from

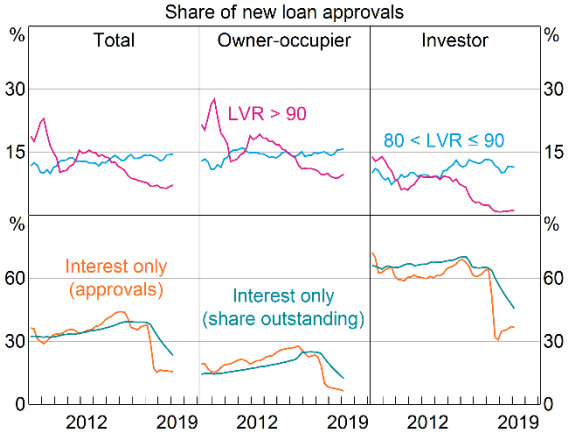
7 However, there are three warehouse facilities in the securitisation database, which means that loans funded through these facilities should appear very soon after origination.

8 An additional concern is that not all non-ADI deals are submitted for repo-eligibility and are therefore are submitted into the database. However, the coverage of marketed non-ADI RMBS in recent years has been pretty good – the Dataset has received data on all known non-ADI RMBS deals issued in 2016, all but two small deals from 2017 and two deals issued late in 2018. It is possible we are missing privately placed deals that SMS does not observe, but liaison indicates that these are not common (see D18/175817).

the ADI sector. The recent fall in the interest-only share in non-ADI securitisations is a little hard to explain. It could be that overall market demand for interest-only loans has declined and non-ADIs simply followed this trend later than the rest of the market. It could also be an artefact of the Securitisation Dataset, which received a large number of interest-only loans in 2017 which may have started to convert to principal and interest or be refinanced while fresh loans from 2019 are yet to be received by the Dataset.

The increased demand for non-ADI loans has led to a fall in the weighted average seasoning of deals, with some deals having a weighted average seasoning as low as two months (Graph 6).[9] This fall indicates that non-ADIs are originating volumes of loans to securitise faster that they have in the past. The share of loans in deals with less than two years seasoning has reached new highs, reaching 91 per cent of all non-ADI loans securitised in 2017 (Table 2).

Graph 5
ADIs' Housing Loan Characteristics*
Share of new loan approvals



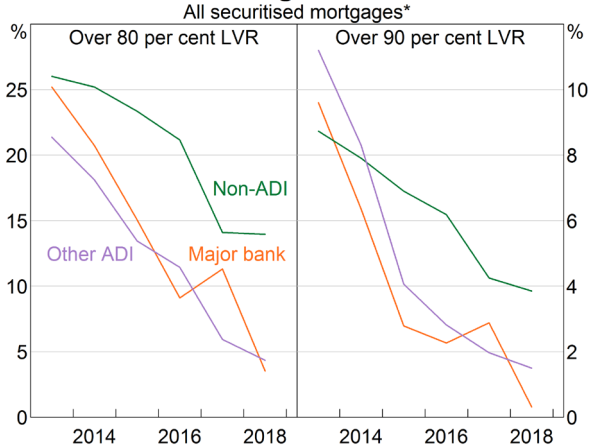
* Series are break-adjusted for reporting changes; interest-only series are seasonally adjusted
Sources: APRA; RBA

The weighted average LVR of non-ADI deals has fallen as has the share of high LVR loans (Graph 7 and Table 2). This is notable given the fall in seasoning, as younger loans generally have higher LVR's. The non-ADI sector appears to have followed the ADI sector by tightening LVR standards, rather than competing for the market share given up by ADIs in the same way they have for investor and IO loans (Graph 7). This may be because non-ADIs (or their RMBS investors) do not wish to take on the risk of these loans, or these potential borrowers may have been discouraged and not sought out alternative finance in a similar manner to investors and IO borrowers. It also may be the case that the 'near-prime' borrowers that non-ADIs have been able to attract more recently have lower average LVRs than the typical non-ADI customer.

Graph 6
Weighted Average Seasoning
All outstanding securitised mortgages

Sources: RBA; Securitisation Dataset

Graph 7
Share of High LVR Loans
All securitised mortgages*



* Original LVR as of first entry into the Dataset
Sources: RBA; Securitisation Dataset

There have been few other notable collateral trends over the past few years; the shares of other borrowers that some non-ADIs traditionally target, such as self-employed borrowers, low/alt documentation or non-conforming borrowers, have not shifted significantly (Table 2).

9 Seasoning is the age of a given loan in months.

Table 2: Non-ADI Pool Statistics by Issuance Year

At issuance [(a)], marketed deals only

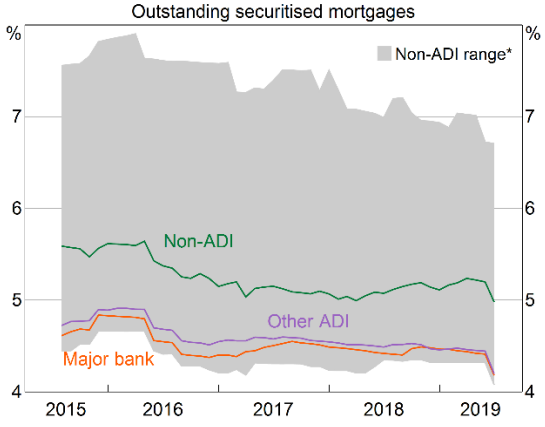
	2015	2016	2017	2018
Size ($b)	4.1	8.6	14.3	22
Number of deals	10	19	23	15
Average loan size ($)	262,600	289,672	322,400	358,001
Weighted average LVR (%)	70.5	69.1	68.7	68.5
LVR > 80% (%)	26.7	22.3	20.1	16.3
LVR > 90% (%)	5.6	6.0	6.1	4.4
Weighted average seasoning (months)	24.1	24.1	12.4	11
Seasoning <24 months	77.1	86.0	88.6	91.3
Investor loans (%)	29.6	34.7	37.6	37.2
Interest-only loans (%)	33.5	36.7	36.2	26.4
Non-metro loans (%)	23.3	21.2	19.2	17.7
Self-employed borrowers (%)	29.5	23.2	25.3	29.7
Conforming loans (%)	-	62.8	61.4	40.3
Full-doc loans (%)	76.4	83.5	85.9	79.6

(a) Where issuance statistics are not available the value shown is the value at first submission to the Securitisation Dataset
(b) Some fields have been redacted due to data quality issues.

Sources: Securitisation Dataset; RBA

Non-ADI interest rates have declined over the past few years but remain on average higher than interest rates offered by ADIs (Graph 8). The gap between ADI and non-ADIs average interest rates had been narrowing, although this has reversed slightly since mid-2018. There is considerable variation in average interest rates between non-ADIs, as they target a variety of niche markets.

Graph 8
Weighted Average Interest Rates
Outstanding securitised mortgages



* Range of weighted average interest rates by non-ADI firm
Sources: RBA; Securitisation Dataset

Trends in RMBS structures

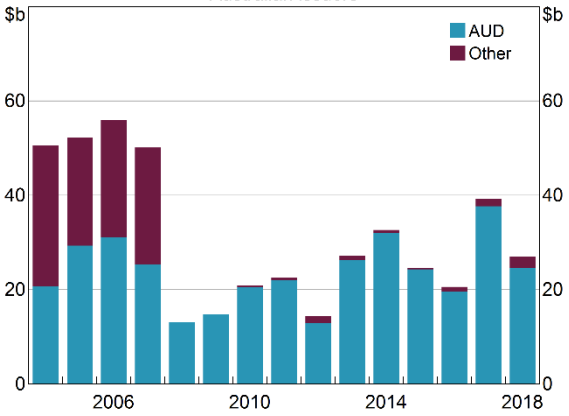
Non-ADIs may vary in their RMBS deal structures more than ADIs because they are not constrained by prudential regulation such as APS120.[10] Also, they might be more responsive to investors needs because they are more reliant on their funding.[11]

Over recent years, it has become relatively more common for non-ADIs to include tranches denominated in US dollars or Euros (Graph 10). Foreign currency tranches were prevalent in both non-ADI and ADI deals prior to the GFC, but completely disappeared from the market in 2008 (Graph 9). All foreign denominated

10 For an explanation of APS120 see Dakin (2017).
11 An investor survey conducted by Perpetual found that Australian RMBS investors overwhelmingly prefer to deal with non-ADIs over ADIs (D18/99709). Investors suggested this was because non-ADIs depend on investor engagement for nearly all of their funding.

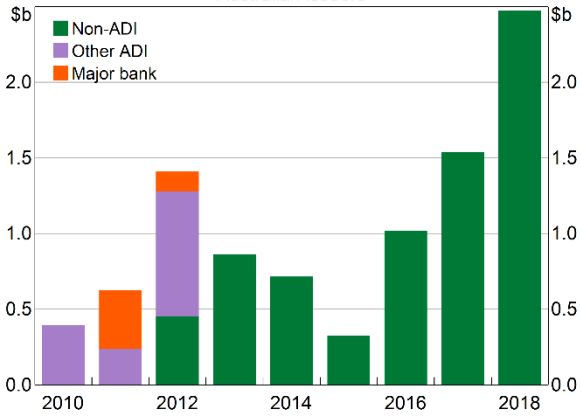
tranches issued since 2012 have been issued by non-ADIs and this issuance has been growing strongly, albeit off a low base. Non-ADIs have indicated they are interested in keeping these tranches as long as the currency swaps allow them to remain economical. Foreign currency tranches are also important as many non-ADIs are actively seeking to attract offshore investors to their deals in order to diversify their investor base and because they are concerned their issuance may grow beyond the demand for RMBS from domestic investors.[12]

Graph 9
RMBS Issuance by Currency
Australian issuers



Sources: Bloomberg; KangaNews; RBA

Graph 10
Foreign Currency RMBS Issuance
Australian issuers



Sources: Bloomberg; RBA

To simplify the required currency exchanges these tranches are generally structured to amortize on a schedule or are structured similarly to a bond, with set interest payments and the entire principal paid on a set date.[13] These structures are uncommon outside of foreign currency tranches, as most RMBS tranches use a pass though structures, where the notes receive the principal collected from the underlying pool.

Over the past few years there has been an increase in the number of tranches offered per RMBS deal; a trend which has been led by the non-ADI sector (Graph 11). This trend might be driven by investor demand, giving them more options on where in the capital stack they can invest.[14] Non-ADI deals are generally offering more mezzanine tranches, as these are in high demand. Issuers are also often dividing up the largest and most senior tranche into a number of tranches with specialised features. Examples of some of these specialised trances that have been issued lately include:

- Tranches structured to have weighted average life (WAL) of less than 1 year.
- Tranches with fixed rate coupons rather than floating rate.
- Tranches with a specific weighted average life – for example Columbus issued a tranche structured to have a 5 year WAL.

Finally there has been shifts in the subordination provided to deals since 2013 – particularly for the large AAA rated tranches.[15] The amount of subordination required by credit rating agencies for an AAA rating has been trending down since the start of 2016 for non-conforming non-ADI lenders (Graph 12). For conforming lenders the amount of subordination required increased slightly prior to 2015 and has remained fairly steady since. This is likely driven by the fall in the share of high LVR loans and the increase in 'near-prime' borrowers that many of these lenders have been able to attract in recent years, which are likely to have better characteristics than the traditional market these non-ADIs target. The overall fall in required subordination was surprising given the increase in investor and IO lending and the fall in

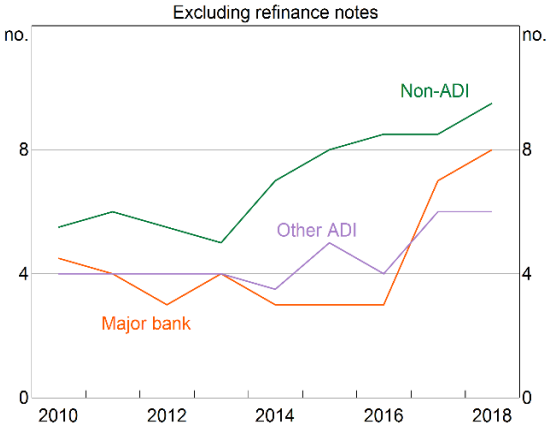
12 For detailed discussion of demand for non-ADI RMBS see KangaNews 2018 non-bank handbook.
13 These notes also often require the trust to issue a refinance note if principal collections are not sufficient to cover the bullets maturity. For an example of a bullet tranche see the USD denominated A1-u1 tranche from Pepper Residential Securities Trust No. 20. For an example of a tranche with a scheduled amortisation schedule see the USD denominated A1a and Ab tranches from Resimac Premier Series 2018-2.
14 See KangaNews 2018 non-bank handbook
15 Subordination for a given tranche is the proportion of tranches issued by the RMBS that are ranked lower than the given tranche in the cash-flow waterfalls.

seasoning. These trends by themselves would have required additional subordination, as ratings agencies consider these types of lending to be more risky.[16]

Graph 11

RMBS - Median Number of Tranches

Excluding refinance notes

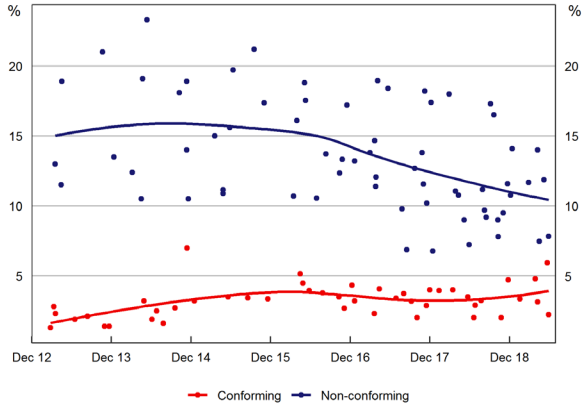


Sources: Bloomberg; KangaNews; RBA

Graph 12

AAA Required Subordination*

Non-ADI deals submitted to the Securitisation Dataset



* Minimum subordination required to be granted a AAA rating, accounting for LMI coverage
** Line esimated using LOESS (local regression)
Sources: Fitch; Moody's; RBA; S&P; Securitisation Dataset

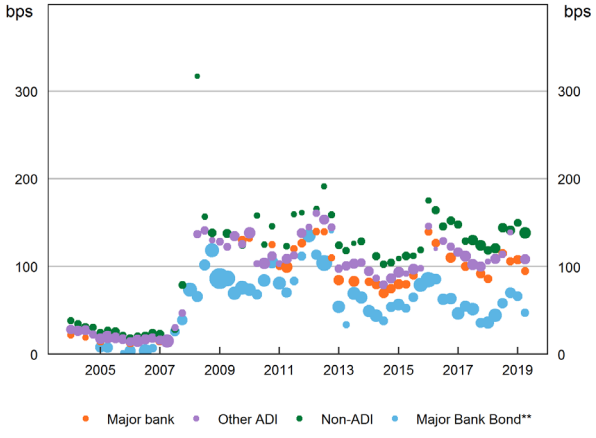
Pricing

Non-ADI RMBS pricing has generally followed broader market trends in recent years, as has the rest of the RMBS market (Graph 13). AAA rated major RMBS notes have priced around 30-50 basis points wide of major bank senior unsecured paper since around 2016, which is a bit wider than the gap observed in previous years and much wider than spreads observed prior to the GFC. The increase in spreads since 2016 is possibly due to increases in supply of RMBS in the market or increased risk aversion due to concerns about the housing market. Non-ADI RMBS continue price wider than ADI RMBS, with non-conforming deals pricing on average around 20 bps wider than conforming non-ADI deals.

Graph 13

Australian RMBS - Primary Market Pricing

Spread to BBSW*

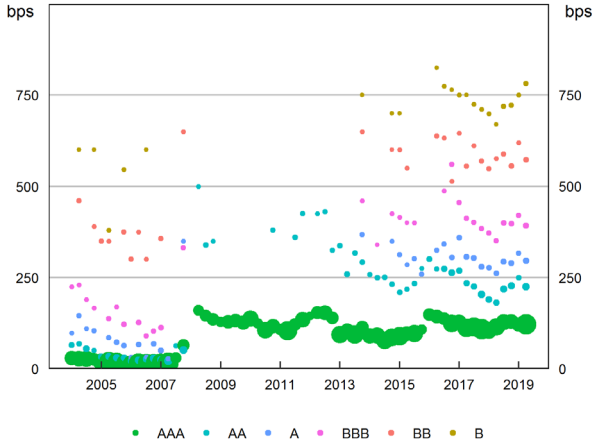


* Face-value weighted quarterly average of the primary market spread to bank bill swap for AAA rated notes
** 3 year target tenor
Sources: Bloomberg; KangaNews; RBA

Graph 14

Australian RMBS - Primary Market Pricing

Spread to BBSW*



* Face-value weighted quarterly average of the primary market spread to bank bill swap. Only includes domestically issued notes with disclosed pricing.
Sources: Bloomberg; KangaNews; RBA

Within deals there was a tightening of spreads for the non-AAA rated tranches of domestically issued RMBS between 2016 and mid-2018 (Graph 14). This corresponds with a broader trend of tighter pricing of lower rated securities; for example the spread between A and BBB rated corporate bonds more than halved in this period. This tightening may have been driven by the 'hunt for yield' that led to increased demand for

16 This trend in required subordination could be decomposed further using the Dataset and the CreditTools package, but this analysis was decided to be out of scope for this note.

RMBS and may have encouraged experienced RMBS investors to look further down the capital stack.[17] The spreads of lower tranches likely responded more to this increase in demand as there is a smaller supply of them, as the senior AAA rated tranches make up the majority of any RMBS deal.

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18 September 2019

17 Sources: ASF conferences (2018, 2017), KangaNews non-bank handbook 2016, 2017 and 2018