MEMORANDUM FOR	Banking Steering Group
FROM	Susan Guthrie
DATE	28 Nov 2017
SUBJECT	Requiring banks to list shares locally
FOR YOUR	Decision

We recommend BSG:

a) **Note** that some submitters to the Capital Review claim that listed capital instruments make a significant contribution to the depth and liquidity of New Zealand's financial markets.

b) **Note** that FSO requested that FP begin investigating the pros and cons of requiring banks to list a modest portion of their shares, and to list them locally.

c) **Note** that well-developed local markets, where local entities can issue debt and equity, provide an alternative to bank credit and thus have the potential to reduce the duration and severity of a banking crisis. This warrants the Reserve Bank having an interest in financial market development.

d) **Note** that New Zealand's local equity and debt markets appear significantly less developed than local markets in peer countries.

e) **Note** that requiring large local banks to list equity locally seems unlikely to materially improve the depth and liquidity of the local equity market because the scale of the issuance required to effect the necessary change is too large relative to the likely magnitude of equity in the big four banks. Local listing may however bring corporate governance improvements.

f) **Note** that requiring banks to list a minimum portion of their debt capital has to potential improve the depth and liquidity of the local debt market, and precedents exist already.

g) **Note** that, because the local equity and debt markets are shallow and illiquid, the duration and severity of a banking crisis in New Zealand appears likely to be more severe than elsewhere, all else being equal. This seems sufficient grounds to set bank prudential policies more conservatively in New Zealand than elsewhere (i.e. to have a lower tolerance for the possibility of a banking crisis) - at least until such time as a suitable market development policy is identified and implemented effectively.

h) **Agree**:
- That the undeveloped nature of New Zealand's local equity and debt markets is an important factor justifying New Zealand having relatively more conservative prudential policies compared to peer countries, including more conservative minimum capital requirements;
- That we should contact MBIE and FMA to see what work they may be doing in this area, and whether they have an interest in financial market development; and
- To the next steps outlined at the end of the paper.

Introduction

1. Some submitters to the Capital Review consultation requested that contingent debt remain part of the capital regime, claiming that listed contingent debt instruments make a significant contribution to the depth of New Zealand's capital markets. Capital markets involve the buying and selling of long term securities - both equity and debt.

> "the development of the regulatory capital market has played an important role in the local capital market. The Government has a Building Capital Markets work stream in its Business Growth Agenda, and the progress of the regulatory capital market has assisted in improving our public capital market."[1]

2. This feedback raises four issues:

    - Does the RBNZ's mandate extend to financial market development?
    - Does it matter for financial stability if domestically-based, centrally-cleared, financial markets are well-developed?
    - Are New Zealand's financial markets under-developed?
    - If there are benefits in developing the NZ financial markets further, what can, and should, the Reserve Bank do about it?

3. In a recent paper, FSO was alerted to the above feedback from submitters. FSO requested that FP begin investigating the relationship between capital instruments and local capital market development in general, and the pros and cons of requiring banks to list a modest portion of their shares, and to list them locally, as a particular matter.

4. The purpose of this paper is to provide BSG with information about these issues, and to get guidance on what further assessment should be done, if any, prior to reporting back to FSO.

Overview

5. If they are large enough, New Zealand-headquartered companies may raise capital from foreign investors operating in overseas capital markets. The four large New Zealand banks are in such a position, for example. However for most New Zealand firms, the only capital funding options available are private equity placements to local investors, long term bank credit and/or or issuing debt and equity securities on the local, centrally-cleared, capital markets operated by NZX. These local capital markets are the focus of this paper.

6. Overseas experience suggests that if a banking crisis leads to a sharp contraction in bank lending, the crisis itself, and the economic downturn that accompanies it, is more severe, and lasts longer, if local debt and equity markets lack depth and liquidity. From a policy perspective, this suggests that the undeveloped nature of NZX's equity and debt markets should be of concern to the Reserve Bank.

7. The paper argues that:
    - New Zealand's local equity and debt markets are significantly less developed than local markets in peer countries;
    - Examples from overseas suggest there may be policies that are effective in fostering the development of local equity and debt markets that are suitable for

[1] Forsyth Barr (2017) "Submission on Capital Review Paper 2", 8 September 2017.

small enterprises. However the ‘junior’ NZX equity markets (NZXA and NXT), aimed at the small enterprise sector, do not appear to have been a success;
- Requiring large local banks to list equity locally has the potential to improve the depth and liquidity of the New Zealand equity market, but not on the scale necessary to materially alter its level of development. This is because the scale of the issuance required to bring about the necessary change seems too large relative to the issued equity of the big four banks;
- If, under Basel III, the large local banks had been required to issue a minimum proportion of their debt capital locally (i.e. had some minimum issuance ratio been imposed), this may have had a significant impact on the size and liquidity of the local debt market (“NZDX”). However, as it turns out, 22% of the debt capital issued by the big four was issued locally and bank debt capital issues only represent around 19% of the current market capitalisation of NZDX.
- Given the complexity of the debt instruments that qualify as bank capital under Basel III, it seems preferable from a market conduct, and therefore fiscal risk perspective, that no minimum issuance policy was adopted when Basel III took effect in New Zealand.
- Going forward, an expected outcome of the Capital Review is that bank regulatory debt capital will be relatively straightforward contractually, and therefore suitable for retail investors. Hence, under the new regime, a policy requiring a minimum portion of bank debt capital to be issued locally might make sense.
- Given local equity and debt markets are undeveloped, and there is no obvious short-term “fix” available, the duration and severity of a banking crisis in New Zealand seems likely to be more severe than elsewhere, all else being equal. This seems reasonable grounds to set prudential policies more conservatively in New Zealand than elsewhere (acknowledging there are other reasons conservative prudential policies seem justified in New Zealand’s case).

8. Before proceeding, it is worth establishing whether, as suggested in submissions, bank capital issues have historically been important for the listed debt market NZDX. The evidence suggests otherwise.

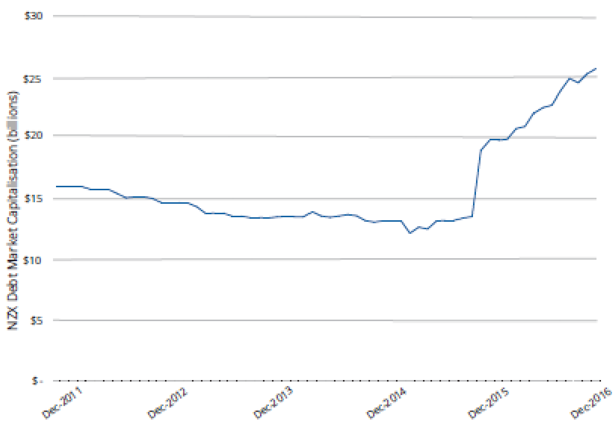
Bank capital and NZDX

9. NZ$8.5bn of debt capital has been issued by the large four banks. Of this, only $1.9bn or 22% has been listed locally. The remainder has been issued to parents entities.

10. The 2016 NZX Annual Report shows that NZDX has had a noticeable step up in market capitalisation since 2014. The $1.9bn issued by the large four banks, plus approximately $0.4bn issued by other banks, has contributed to this.

11. To put this in perspective, new debt listings on NZDX, from all sectors, amounted to $6.4bn in 2016 alone and the market capitalisation of NZDX has risen by approximately $12bn since March 2014. Hence, some 19% of the increase in the market capitalisation of NZDX has been due to listing of bank capital instruments. In contrast to bank submissions, it would appear that NZDX would have grown significantly without the (relatively limited) bank debt capital listing that has occurred.

NZX Debt Market Capitalisation



Source: NZX Data

The RBNZ's mandate extends to financial market development

12. Part 1A of the Reserve Bank of New Zealand Act 1989 ("the Act") gives the Reserve Bank responsibility for, in addition to monetary policy, "promoting the maintenance of a sound and efficient financial system". This gives the Reserve Bank a mandate to investigate policies that may reduce the likelihood - and arguably the duration and severity - of a banking crisis.

The relationship between financial market development and financial stability

13. There is potentially an important relationship between local equity and debt markets on the one hand and banking crises on the other. For example, in theory, there are four ways the local equity market might reduce the likelihood, duration and/or severity of a banking crisis (each of these contributions is discussed in more detail in the Appendix):

    - **Enhanced market discipline**: *listed equity means more and better monitoring of the bank, reducing the likelihood of a bank failure.*

    - **Equity for struggling banks**: *an alternative source of equity capital protects NZ subsidiary banks from weakness in the foreign parent bank.*

    - **Alternatives to bank credit**: *a deep and liquid equity market protects non-bank borrowers from a credit contraction, reducing the duration and severity of a banking crisis.*[2]

    - **Enhanced regulatory oversight**: *equity prices are forward-looking indicators of bank financial health.*

14. It is not necessarily the case that local debt and equity markets have to be large and liquid for these benefits to arise. Some researchers have found that what matters most

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[2] Note that during the GFC the Federal Reserve (the Commercial Paper Facility) and the Bank of England (the Asset Purchase Facility) provided funding support to non-financial companies, indicating how important the issue of replacement funding for the non-bank sector can be during a crisis. Refer IMF working paper June 2010 "Resolution of banking crises: the good, the bad, and the ugly" by Luc Laeven and Fabian Valencia.

for the severity of a banking crisis, for example, is the strength of shareholder protection against insider trading.

15. In addition to these theoretical benefits, relevant aspects of the New Zealand banking sector need to be considered when assessing a local listing policy. For example, the New Zealand sector is highly concentrated and dominated by subsidiaries of foreign owned banks. Highly concentrated banking sectors are thought to be more susceptible to systemic failure, for example, meaning that having a deep and liquid equity market may be especially important (if crises are relatively more likely, then there is arguably a greater need for policies that reduce the duration and severity of a crisis where possible).[3]

16. There is also a relationship between foreign ownership and financial stability that needs to be factored in when assessing the pros and cons of a local listing policy Where the banking sector is dominated by subsidiaries of foreign banking groups, for example, lending decisions and capital structures may reflect the operation of internal capital markets operated by the parent banking groups.

17. Internal capital markets can mean a host country is less vulnerable to domestic shocks, but more vulnerable to contagion from markets that are important to other entities in the group. Hence, it is necessary to consider how, if at all, listing shares locally might interrupt the operation of the internal capital market. Would this policy be a positive or negative for the likelihood, duration and severity of a financial crisis given its impact on internal capital markets?

18. Well-developed debt markets - especially for unsecured debt - are, like equity markets, expected to offer benefits in terms of enhanced market discipline during normal times and thus are expected to reduce the likelihood of a banking crisis. However, uninsured debt markets have failed to live up to expectations in this area.

> "Moreover, anecdotal evidence suggests that debt holders relied excessively on credit rating agencies and on the CDS market to monitor and control their bank exposures, both of which proved unreliable in retrospect….there is little evidence that large uninsured depositors or counterparties were taking pre-emptive action by moving their holdings or reducing their exposures significantly in advance of such events." [4]

19. Having a well-developed local debt market is also expected to have a favourable impact on the duration and severity of a banking crisis, providing an alternative to bank credit.[5]

Fiscal risk

20. For completeness, it is worth mentioning a further reason for requiring banks to list their shares locally, but this implies a substantial change in the ownership structure of the New Zealand banking sector. If, as a result of the listing policy Australian banks ceased to be the controlling owners of the large four New Zealand banks, fiscal risks may

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[3] World Bank (2013). Rethinking the State's Role in Finance. Policy Research Working Paper 6400. April 2013

[4] Stephanou, Constantinos (2010) "Rethinking Market Discipline in Banking, Lessons from the Financial Crisis".

[5] DeLean, T., and Joseph P. Joyce (2014) Stock markets and the costs of banking crises. Journal of Financial Economic Policy Vol. 6 No. 4 2014

reduce. In other words, having diffusely owned local banks may mean fiscal exposure to bank failure is reduced.

21. The parents of the large New Zealand banks are politically important in their home country (Australia) and New Zealand's relationship with Australia is arguably the single most important external relationship for the New Zealand government. It is difficult to imagine the New Zealand government responding to stress in a New Zealand subsidiary of an Australian bank without first exploring options (i.e. negotiating on what steps it might take) with its Australian counterpart. This reality provides the logic for the recent Trans-Tasman crisis exercise for example.

22. The fact that the New Zealand government might have to enter negotiations with their Australian counter-part regarding steps to be taken in relation to a subsidiary of an Australian bank introduces a fiscal risk that would arguably not exist if there was widely diffuse ownership of the local bank (for example, if shares in the bank were held by external pension funds, other foreign banks and mutual funds in addition to an Australian bank).

23. It is not envisaged that any local listing policy would lead the current parent entities to lose control of their New Zealand subsidiaries. But in the long term, having diffusely-owned banks might be a worthwhile policy goal.

New Zealand's local equity and debt markets appear under-developed

24. Deciding whether or not New Zealand's local equity and debt markets are under-developed begs the question, "relative to what?" While in theory a complex general equilibrium model of the financial sector and the economy might identify levels of local market depth and liquidity that are optimal from a financial stability perspective, this research option isn't available to us at this time. We are thus left with making comparisons between New Zealand and other countries.

25. In terms of the market features that should be compared, there is still some debate. It was reported above that some researchers believe it is not size and liquidity of the market pre-crisis that matters, for example, but the quality of the legal framework that underpins the market (for example, the degree of protection against insider trading). However the typical approach seems to be to use a range of market metrics including indicators that relate to market size and liquidity.

26. Since the GFC, the World Bank and the IMF have been revising their frameworks for measuring "financial development" across jurisdictions. The World Bank currently measures financial development over four dimensions: "depth", "efficiency", "access" and "stability". The "depth" indicator goes beyond the volume of private sector credit or equity market capitalisation relative to GDP, and includes, for example, value-added in the financial sector, financial institutions assets relative to GDP and the value of aggregate annual trading in stocks relative to GDP (this latter indicator is the World Bank's preferred indicator of equity market depth).[6]

27. The World Bank has gathered data from 206 countries and this data can be used to compare countries in terms of their level of financial development. Unfortunately, only some New Zealand data is included in this dataset - the majority of the statistics required for the calculation of the financial institution indicators is missing, for example.

[6] World Bank (2013) Global Financial Development Report 2013 Table 1.1

28. In terms of what countries to compare New Zealand to, the usual approach is to consider other high-income countries. On this basis, NZX's equity and debt markets appear to be both small and illiquid (i.e. lacking depth and inefficient), especially in contrast to Australia.

Equity market development indicator		**High Income mean**	**Australia**	**New Zealand**
Sharemarket turnover (value traded vis a vis value on issue) %	efficiency	43.7	63.4	12.2
Size of the sharemarket relative to GDP %	depth	70.0	88.4	52.4
Sharemarket total value traded relative to GDP %	depth	18.6	52.1	4.4
Listed companies excluding the top ten, % of market cap	access	54.8	55.7	56.9
Corporate bond issuance volume to GDP %	depth	1.9	2.8	0.9

source: World Bank Global Financial Development Data

29. However, it is arguably more meaningful to compare New Zealand to countries that, like New Zealand, have banking sectors that are dominated by subsidiaries of foreign banks. Perhaps having a sector dominated by globally-connected banks means there is less demand (from firms and potential investors) for deep and liquid local equity and debt markets. If this is the case, it makes little sense for New Zealand to try and emulate Australia, for example.

30. A further reason to reject limiting the comparative analysis to high income countries is that history suggests banking crises are an "equal opportunity menace." [7] "The incidence of banking crises is very similar in high- and middle-to-low-income countries, moreover "perhaps more surprising still are the qualitative and quantitative parallels across disparate income groups. These parallels arise despite the relatively pristine modern sovereign default records of the rich countries."[8]

31. Excluding the global financial centres of Luxembourg and Hong Kong, there are 10 low-to-middle income or high-income countries that, like New Zealand, have banking sectors dominated by subsidiaries of foreign banking groups (defined here as 70% or more of banking sector assets attributable to foreign-owned local subsidiary banks or bank branches).[9] Of these, eight are in Europe, and the remaining two are in Latin America (Mexico and Uruguay). In terms of per capita income, the countries range from Mexico (US$9,040) to Finland (US$44,730).

32. Like New Zealand, the banking sectors in the European countries are typically owned by banks headquartered in neighbouring countries. In Mexico's case, the parent banks are based further afield (Spain, the US, the UK). In all cases bar Poland, the banking sectors are not only dominated by subsidiaries of foreign banks, but there are relatively few banks as well (i.e. the sector is highly concentrated).

33. All European countries are members of the EU, hence we might expect their local equity and debt markets to be relatively undeveloped as local investors (and qualifying

[7] Reinhart, C. M., and Rogoff, K. S. (2013). Banking crises: An equal opportunity menace. Journal of Banking and Finance 37 (2013) 4557 - 4573
[8] Reinhart, C. M., and Rogoff, K. S. (2013). Banking crises: An equal opportunity menace. Journal of Banking and Finance 37 (2013) 4557 - 4573
[9] There are also low- and very low-income countries that have banking sectors dominated by foreign banks, but to keep the analysis tractable, and acknowledging data difficulties for low income countries, the comparison here is limited to high- and middle-income countries.

firms) have unrestricted access to the larger and more liquid markets in the EU. In contrast, New Zealand firms and investors face costs (foreign exchange costs, tax inefficiencies) when utilising offshore markets. This would suggest New Zealand's local markets might be more developed than those in the eight European countries, all else being equal.

34. However, what we find is that, in terms of the preferred equity depth indicator (turnover relative to GDP), New Zealand's equity market development appears to be a very long way behind Finland; by a modest margin, behind Poland, Mexico, Croatia and the Slovak Republic; similar to Czech Republic and ahead of Uruguay and three former Eastern Bloc countries (Estonia, Latvia and Romania). This comparison suggests the New Zealand equity market is indeed undeveloped and therefore may not be in a position to provide New Zealand firms with a meaningful alternative to bank credit, should a crisis occur, nor provide a realistic means for local banks to raise new capital should their Australian parent become distressed.

35. We find that the local bond market also appears to be smaller in New Zealand than in other countries with foreign-dominated banking sectors, with the exception of Uruguay and Estonia. However, the comparison is slightly more favourable if aggregate non-bank corporate bond issuance is considered - reflecting the fact that some New Zealand corporates can issue bonds into the global market.

	% bank assets due to foreign subs and branches	GNI per capital (World Bank) US$	GDP US$bn	5 bank conc. ratio %	Equity market cap^ / GDP %	Equity market turnover / GDP %	Local listed bond market cap/GDP %	Corp. bond issuance / GDP %
Croatia	90%	12,110	50	77%	45%	8%	67%	0.9%
Czech	85%	17,570	193	79%	29%	4%	69%	0.3%
Estonia	97%	17,750	23	97%	9%	1%	8%	2.5%
Finland	84%	44,730	237	95%	113%	69%	91%	1.9%
Lithuania	91%	14,770	43	99%	9%	0%	27%	n.a.
Mexico	70%	9,040	1,046	70%	34%	9%	56%	2.5%
NZ	94%	39,000	185	91%	52%	5%	9%	0.9%
Poland	76%	12,680	470	54%	26%	10%	63%	0.4%
Romania	79%	9,470	187	76%	8%	1%	30%	n.a.
Slovak	75%	16,810	90	90%	6%	7%	58%	0.7%
Uruguay	92%	15,230	52	84%	1%	0%	negligible	0.4%

^ equity market capitalisation and turnover data was collected from a variety of sources when not available from the World Bank.

36. In terms of analysis that explains the undeveloped nature of New Zealand's capital markets, Chapman Tripp prepares an annual assessment of NZX's equity market. The firm reports that NZX has been languishing, having fewer new listings, and more de-listings, in 2016 compared to previous years, while the number of NZ entities listing on ASX continues to rise. As well, the "junior" boards NZAX (NZX Alternative market for small firms) and NXT (a trading platform for direct equity investment) are struggling to compete with crowd-funding.

Crowd-funding as an alternative to local listed equity and debt markets

37. Crowd-funding is an alternative to both bank credit and issuing locally-listed equity and debt. Crowd-funding could therefore play a useful role, ensuring the continuity of enterprise activity, if there is a banking crisis.

38. However data enabling a comparison of the scale of crowd funding in New Zealand relative to peer countries has not been found.

39. Moreover, crowd funding arguably lacks transparency and therefore seems less than ideal as a backstop to the banking system. The potential for insider-trading and other similar efficiency and stability issues seems high.

Past policy initiatives

40. MBIE and its predecessor MED have been delivering a “business growth agenda” for the Government since at least 2009. From 2009 this agenda included the topic “Building Capital Markets” and included a related work stream. The work stream reflected the recommendations of the Capital Market Development Taskforce (the Taskforce) that reported in Dec 2009. One of the Taskforce’s recommendations was that that steps should be taken to deliver the “partial listing of foreign-controlled companies in major sectors like banking”. Other recommendations included reform to the Securities Act and improved disclosure.

41. Until 2015 the Taskforce’s recommendation to achieve the partial listing of bank shares was included in the benchmarks against which progress was mapped for the Building Capital Markets work stream. However, following the implementation of some of the reforms recommended by the Taskforce, the partial listing recommendation was taken off the Government’s “business growth” agenda in 2015. It was replaced by an intention to “support options for lower cost public listings”:

Policy tools available to the RBNZ

42. There are important factors determining the level of development of New Zealand’s financial markets that do not lie within the jurisdiction of the Reserve Bank, for example regulations relating to market conduct and shareholder protection from self-dealing.

43. In Europe, debt markets tailored to the needs of small enterprises are developing quite rapidly, and this provides another avenue to develop local alternatives to bank credit. In New Zealand the “junior” NZX boards (NZAX and NZT) are the equity equivalent of the European small enterprise debt markets. With lower listing costs and less disclosure required, NZAX and NXT are tailored to the needs of small firms. Chapman Tripp reports that while junior boards “have worked well in larger markets, like the FTSE AIM in London” “the junior boards operated by NZX have failed to develop a strong pipeline of new issuers”. Chapman Tripp speculated that “it may be that New Zealand’s capital markets are just too small to sustain them - especially given the early success in New Zealand of the equity crowd funding model which provides smaller issuers with a way to raise capital from the public without having to list”.

44. However, by directly impacting on what capital banks issue, capital regulations potentially have an impact on the size of the local capital market. How often instruments are traded - i.e. market liquidity - is not something the Reserve Bank can influence (except by way of direct participation, which is not being proposed here).

45. By requiring banks to issue certain types of instruments, regulators can potentially influence the quality of market monitoring too. The regulator might require banks to issue unsecured debt above a minimum level, for example, hoping this will create a group of creditors that have an incentive to closely monitor the bank.[10] Requiring

[10] Barth, James R., Levine, Ross, and Gerard Caprio (2012) “Guardians of finance: making regulators work for us” pg 25

closely held banks to publicly issue ordinary shares would be expected to have a similar effect.

46. Assuming it has the legal authority to do so, the Reserve Bank could require large banks to list a portion of their debt capital locally. The Reserve Bank could also require banks to swap a portion of their debt capital (for example, contingent debt capital) for equity capital, request the bank to issue listed shares to their shareholders in lieu of dividends or achieve a partial equity listing in some other way.

What would a local equity listing policy for large banks look like?

No obvious precedents

47. An obvious place to look for precedents would be countries that, like New Zealand, have banking sectors dominated by subsidiaries or branches of foreign banks. However none of the countries identified earlier appear to have a local listing policy.

48. The closest we have to a local listing policy is Mexico where banks cannot report AT1 instruments as capital unless the instruments have the potential to convert into the listed shares of the issuing bank. In Mexico two of the foreign-owned subsidiary banks list their shares locally (in addition to being listed on overseas markets).

49. However, there appears to be recognition in Europe that more developed capital markets would address some of the fragility evident in the European financial system. In 2015 the European Commission launched the “Capital Markets Union” (“CMU”) Action Plan. The aim of the CMU is to “strengthen Europe’s financial system by providing alternative sources of financing and more opportunities for consumers and institutional investors”.[11] The Action Plan is built around four key principles, one of which is “connecting financing to the real economy by developing non-bank funding sources.”

50. Looking more broadly, there are cases where banks have been required to list locally, in order to contribute to the development of the local equity market. But this has generally been in the context of state ownership of banks and a wider, privatisation agenda. The BNZ is an example of this, as is a recent privatisation directive from the State Bank of Vietnam:

    - The NZ government listed 15% of its shares in BNZ in 1987 and a further 34% in 1989. By 1990 the government had to bail out the bank, spending $380m and regaining ownership. BNZ was sold in its entirety to NAB in 1992.

    - In 2013 the State Bank of Vietnam began asking local banks (all of which are state owned) to list their shares. Compliance has been slow.

List on the local, or foreign, equity markets?

51. In theory, the equity market does not have to be *local* for all of the benefits identified earlier to arise. For example, in terms of access to new capital, what matters is that banks have continuous access to a large, deep pool of equity investors. Whether the capital is raised locally or offshore would, in theory, appear to be essentially irrelevant.

52. However, if New Zealand banks were to list abroad, a tax-related expense might arise for local investors (including Kiwisaver funds, managed funds and other pooled

[11] Update on the CMU June 2017, European Commission

investment funds). Currently, when New Zealand investors buy Australian listed shares, tax is paid on the dividends before they receive them. IRD does not recognise this tax payment (it goes to ATO) and so, in effect, New Zealand investors are taxed twice (this issue is sometimes referred to as the “franking credit” issue).

53. A local equity market is clearly implied if a more developed equity market is to reduce the severity of an economic downturn when banks are unwilling to lend. Not all firms can meet the listing requirements of overseas bourses.

What scale of issuance would be required?

54. In order to attract foreign interest, the big four banks would have to list sufficient equity to be an eligible investment for mandate-limited foreign investors. A realistic estimate of this threshold is NZ$1.0bn (the top 30 companies currently on NZX have market caps above $1.0bn). An equity market listing of $1.0bn equates to 11% of ANZ’s current contributed shareholder capital, and 42% of BNZ’s (these banks define the range of outcomes).

55. Requiring each bank to list shares equal to 25% (or 49%) of their contributed shareholder equity would create new NZX listings equal in aggregate to $4.8bn ($9.4bn), an increase of almost 4% (7%) in total market capitalisation. Requiring banks to issue and list sufficient new common equity to repurchase their AT1 capital currently on issue would generate $6.1bn, an expansion of nearly 5% of NZX total market cap.

What would a local debt listing policy look like?

56. A local listing policy for bank debt capital would be more straightforward as there have been local listings of bank debt capital already. All that would be required is the setting of requirements for how much debt capital each bank must issue locally.

57. If, under Basel III, the large local banks had been required to issue a minimum proportion of their debt capital locally (i.e. had some minimum issuance ratio been imposed), this may have had a significant impact on the size and liquidity of the local debt market (“NZDX”). However, as it turns out, 22% of the debt capital issued by the big four was issued locally and bank debt capital issues only represent around 19% of the current market capitalisation of NZDX.

58. A major concern with the current regime is that the debt instruments that qualify as capital under Basel III are complex and, if sold to retail investors, could raise market conduct issues. Given the complexity of the debt instruments that qualify as bank capital under Basel III, it seems preferable from a market conduct, and therefore fiscal risk perspective, that no minimum issuance policy was adopted when Basel III took effect in New Zealand.

59. Going forward, an expected outcome of the Capital Review is that bank regulatory debt capital will be relatively straightforward contractually, and therefore suitable for retail investors. Hence, under the new regime, a policy requiring a minimum portion of bank debt capital to be issued locally might make sense.

60. A key consideration is whether or not the benefits of having a more developed local debt market outweigh the costs. The costs are likely to include potentially higher funding costs for banks (if the parent could raise the capital more cheaply from the global markets, forcing the subsidiary to raise debt capital locally will add to the group’s costs).

Conclusions

61. Requiring large local banks to list equity locally has the potential to improve the depth and liquidity of the New Zealand equity market, but it seems unlikely that this would materially improve the level of development. This is because the scale of the issuance required to bring about the necessary change seems too large relative to the issued equity of the big four banks.

62. Requiring banks to list debt capital locally would be relatively easy to implement and, if simpler debt instruments are accepted as capital, fewer market conduct concerns are likely to arise. This policy may be a more realistic option in the near term, than requiring banks to list ordinary shares. However, without more detailed analysis, it is unclear whether the the financial stability benefits of developing the local debt market would be as significant as developing the local equity market.

63. While there may be value in looking at policies that can contribute to the development of the New Zealand equity and debt markets, a policy that only requires banks to list debt or equity locally may not, on its own, be sufficient. Either more foreign-owned New Zealand companies would have to be required to list in New Zealand and/or other market development policies would be needed. This all points to policy development work also being required of MBIE and/or the FMA.

64. Given local equity and debt markets are undeveloped, and that, as yet, no policy has been identified that seems capable of improving the situation dramatically in the near term, the duration and severity of a banking crisis seems likely to be more severe in New Zealand than elsewhere, all else being equal. This seems sufficient grounds to set prudential policies more conservatively in New Zealand than elsewhere (acknowledging there are other reasons why relatively conservative prudential policies seem warranted in New Zealand).

Next Steps

- Contact MBIE and the FMA to see whether they are doing work in this area and whether they share our concerns about the level of development of New Zealand's local capital markets; and
- Begin monitoring developments in the sector, and policy initiatives overseas, with a view to preparing an annual report for FSO about the level of development of the local equity and debt markets.
- Do not initiate the work required to develop a local listing policy in the near future, but keep it as a possible policy project.

Appendix 1: Why the local equity market matters for financial stability

1. There is no over-whelming consensus on the contribution a local equity market can make to financial stability. The lack of consensus appears to be due to a disconnection between theory and evidence.

2. There are four reasons why, *in theory*, having a more developed equity market may reduce the likelihood, duration and/or severity of a financial crisis:

Enhanced market discipline

3. There are several reasons why listing bank shares may enhance the discipline exerted on bank boards and bank management by stakeholders, thus reducing the likelihood of a banking crisis:

   - Holders of listed shares will seek out information about the bank that might otherwise be held privately by the board and/or management;

   - this information will be disseminated widely either through market disclosure rules and/or via movements in the share price;

   - listing shares creates a market for control of the bank, introducing the threat of takeover and merger (rather than just bankruptcy); and

   - listed shares can become part of the remuneration of bank management and boards, aligning their interests with shareholders' interests.

4. At present, foreign equity investors wanting an exposure to New Zealand's financial sector are limited to having an indirect exposure achieved through buying shares in the Australasian parent group. Giving these investors the opportunity to invest directly may generate significant foreign involvement, which may lift the quality and quantity of market monitoring of New Zealand banks.

5. There is evidence which suggests equity markets do contribute to market discipline. In 2010 the World Bank analysed the pre-GFC price performance of different types of market instruments issued by a selection of US banks that subsequently went bankrupt or were bailed out with taxpayer funds. These instruments spanned the capital structure of a typical large US bank and included equity, senior unsecured debt, subordinated debt and credit default swaps. While none of the instruments anticipated the subsequent systemic failure, once systemic concerns emerged equity, credit default swaps, and (sometimes) hybrid securities - but not senior or subordinated debt - successfully identified the weakest banks[12].

6. In practice, the GFC revealed that, despite being listed, many banks were badly managed with bank boards and management taking excessive risks and adopting strategies that departed from shareholders' interests. One of the explanations suggested for this was the existence of large, controlling owners in some banks. However many other reasons have been given for the failure of shareholders to detect poor performance (for example, the moral hazard arising from the possibility of tax-payer funded bailouts).

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[12] Stephanou, Constantinos (2010) "Rethinking Market Discipline in Banking, Lessons from the Financial Crisis".

7. There is a considerable volume of literature on the issue of corporate governance, and the role of equity markets in particular. This literature would have to be reviewed in depth in a project aimed at developing a local listing policy.

Equity for struggling banks

8. Having a large, liquid equity market might also, in theory, reduce the likelihood of a banking crisis, and reduce contagion, by enabling banks to raise additional equity capital when subject to an unexpected loss, a loss of creditor confidence and/or subject to parent entity financial distress.

9. The empirical evidence suggests that, in some instances, banks are prepared to issue new listed equity when subject to unexpected losses. [13]

Alternatives to bank credit

10. A large, liquid equity and/or debt market may, in theory, reduce the severity of an economic downturn caused by a banking crisis by providing corporates and small enterprises with an alternative source of funding when banks are reluctant to lend. This "spare tyre" role for the equity market was famously expressed in a speech by Alan Greenspan in 1999, prompted by the Asian financial crisis of 1997-8, "Do efficient financial markets mitigate financial crises? [14]

11. There is evidence suggesting that non-bank firms do switch to issuing equity when there is a tightening of bank credit during a crisis. [15] A 2014 study concluded that "our results indicate that stock markets can mitigate the effects of banking crises on economic activity …stock market activity, as measured by its depth, liquidity or turnover, does lower the costs of such crises. This effect does not depend on a country's income level."[16]

Enhanced regulatory oversight

12. Despite no clear consensus on the impact of more developed equity markets on the likelihood of a banking crisis, there nevertheless appears to be a growing interest in using the market valuation of bank equity for regulatory purposes, in addition to, or as an alternative to, regulatory capital.[17]

> "A major policy error made in association with the 2008 crisis was the failure of regulatory authorities in the United States to force the raising of capital or at least the reduction of dividend payments and stock repurchases in the Spring and Summer of 2008 even as markets were signalling serious concerns about the health of the financial system. The design of approaches using market information as an input to regulatory policy seems to us a priority."[18]

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[13] Levine, R., Lin, C., and Xie Wensi (2016). Spare tire? Stock markets, banking crises, and economic recoveries. Journal of Financial Economics 120 (2016) pg 84

[14] Greenspan (1999)

[15] DeLean, T., and Joseph P. Joyce (2014) Stock markets and the costs of banking crises. Journal of Financial Economic Policy Vol. 6 No. 4 2014

[16] DeLean, T., and Joseph P. Joyce (2014) Stock markets and the costs of banking crises. Journal of Financial Economic Policy Vol. 6 No. 4 2014

[17] Andrew Haldane

[18] Blanchard and Summers (2017). Rethinking Stabilisation Policy: Back to the Future. Peterson Institute for International Economics. 8 Oct 2017.

13. The relationship between equity markets and financial stability may vary depending on the degree of concentration in the banking sector, and the degree of foreign ownership:

The impact of high concentration

14. Concentrated banking systems are thought to differ from more competitive systems in ways that can impact on financial stability. For example, information sharing among private lenders is positive for financial stability. However when there is high concentration in the banking sector, information sharing may not come about without government intervention.[19]

15. Research reviewed by the World Bank suggests higher concentration in banking is associated with more systemic risk.

> "A review of trends in average systemic risk and bank market power indicates that greater market power (that is, less competition) is associated with more systemic risk. This observation is confirmed also by more in-depth panel data analysis."[20]

Single, controlling owners

16. If the listing of bank shares does not remove the dominance of a large owner, the quality of corporate governance may not improve significantly as a result of the local listing. While large owners have greater incentives to acquire information and monitor managers and have "greater power to thwart managerial discretion", the literature suggests the controlling shareholder may exert its influence in ways that harm small shareholders, creditors and the wider economy. [21]

17. Each of the big four banks in New Zealand has a single, controlling owner that is a foreign banking group. Multinational banking groups are believed to operate internal capital markets. A relevant issue to consider is whether, and if so how, a local listing policy might interact with the within-group internal capital markets and what effect this might have on the likelihood, duration and severity of a banking crisis in New Zealand.

18. Where an internal capital market operates, subsidiaries of multinational banks are expected to be:

- less likely to reduce lending in response to a domestic shock (including a deliberate monetary policy shock) because they have access to the group's internal capital market; and

- more likely to be impacted by financial distress offshore (in markets where the group has other subsidiaries and interests):

> "We find that during systemic banking crises, multinational bank subsidiaries keep lending, whereas domestic banks are forced to sharply restrict their credit supply…

[19] World Bank (2013). Rethinking the State's Role in Finance. Policy Research Working Paper 6400. April 2013
[20] World Bank (2013). Rethinking the State's Role in Finance. Policy Research Working Paper 6400. April 2013
[21] Levine, Ross (2005) "Finance and growth: theory and evidence", in Aghion, P. and Durlauf, S. N. (Eds), Handbook of Economic Growth Volume 1A, Elsevier, Amsterdam.

> Our findings imply that openness to multinational bank subsidiaries can benefit host countries. Since the pace of multinational bank lending is partly determined abroad, the aggregate credit supply in the host country becomes more stable and less strongly correlated with the local business cycle. We find that multinational banks provide a stabilising factor during local financial turmoil in particular…An important caveat is that the above interpretation of our results presumes that parent banks operate an internal capital market because they are better able to attract liquidity and raise capital than individual subsidiaries. Lending by foreign subsidiaries can even be scaled back in order to free up capital for the parent bank, leading to contagion from home to host countries..
>
> Indeed, the global financial crisis is currently testing the resilience of the support effects documented in this paper. Multinational banks have so far continued to support their foreign subsidiaries. For instance, in Kazakhstan, cross-border foreign bank credit to domestic banks has dried up and the latter consequently had to rein in their own lending. Multinational bank subsidiaries were much less affected." [22]

19. As explained in the body of the paper, local debt markets are also expected to impact favourably on the likelihood, duration and severity of banking crises.

[22] Ralph de Haas and Iman van Lelyveld (2010) "Internal capital markets and lending by multinational bank subsidiaries. Journal of financial intermediation 19 (2010) 1-25