INTERNATIONAL MONETARY FUND

IMF Country Report No. 17/110

NEW ZEALAND

FINANCIAL SECTOR ASSESSMENT PROGRAM

May 2017

FINANCIAL SYSTEM STABILITY ASSESSMENT

This Financial System Stability Assessment on New Zealand was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed on April 10, 2017.

Copies of this report are available to the public from

International Monetary Fund • Publication Services
PO Box 92780 • Washington, D.C. 20090
Telephone: (202) 623-7430 • Fax: (202) 623-7201
E-mail: publications@imf.org Web: http://www.imf.org
Price: $18.00 per printed copy

International Monetary Fund
Washington, D.C.

INTERNATIONAL MONETARY FUND

NEW ZEALAND

FINANCIAL SYSTEM STABILITY ASSESSMENT

April 10, 2017

Approved By
James Morsink and Odd Per Brekk

Prepared By
Monetary and Capital Markets Department

This report is based on the work of the Financial Sector Assessment Program (FSAP) missions that visited New Zealand in August 16–September 7, 2016 and November 2–17, 2016. The FSAP findings were discussed with the authorities during the Article IV consultation mission in March 2017.

- The FSAP team was led by Alejandro López Mejía and included Fabiana Melo, Cristina Cuervo, Caio Ferreira, Lucyna Gornicka, Antonio Pancorbo, Siegfried Steinlein, Laura Valderrama, Froukelien Wendt (all IMF) and Michael Andrews, Mimi Ho, Ian Tower, and José Tuya (external experts). The mission received inputs from Nadine Schwarz and Jonathan Pampolina (both from the IMF Legal Department), and support from David Jutrsa and others from headquarters.
- The mission met the Reserve Bank of New Zealand (RBNZ), the Financial Markets Authority (FMA), the Ministry of Business, Innovation, and Employment (MBIE), the Ministry of Justice, the New Zealand Treasury (the Treasury), and the Department of Internal Affairs (DIA), as well as various market participants. The mission also met with the Australian Treasury, the Reserve Bank of Australia (RBA), the Australian Prudential Regulation Authority (APRA), the Australian Securities and Investments Commission (ASIC), and market participants in Australia.
- FSAPs assess the stability of the financial system as a whole. They are intended to help countries identify key sources of systemic risk in the financial sector and implement policies to enhance its resilience to shocks and contagion. Certain categories of risk affecting financial institutions, such as operational or legal risk, or risk related to fraud, are not covered in the FSAPs system-wide stability analysis.
- The IMF Board considered the previous FSAP for New Zealand in 2004. The 2004 FSAP found a well-capitalized banking system, which counterbalanced some concerns on the lack of active supervision, high dependence on wholesale funding, and low savings. The status of implementation of the 2004 FSAP's key recommendations can be found in Appendix I.
- This report was prepared by Alejandro López Mejía and Fabiana Melo with inputs from the FSAP team members. The report draws on five Technical Notes and two Detailed Reports on Standards Assessments.

CONTENTS

TABLES

APPENDICES

Glossary

AMI	Allied Mutual Insurance
AML/CFT	Anti-money laundering and countering the financing of terrorism
APRA	Australian Prudential Regulation Authority
ASIC	Australian Securities and Investments Commission
AUD	Australian Dollars
CCB	Capital Conservation Buffer
CCP	Central Counterparties
CIMA	Corporations Investigation and Management Act
CFR	Core Funding Ratio
CoFR	Council of Financial Regulators
CoVaR	Conditional Value at Risk
CPSS	Committee on Payment and Settlement Systems
ESAS	Exchange Settlement Account System
ERM	Enterprise Risk Management
FCR	Financial Condition Report
FMA	Financial Markets Authority
FMI	Financial Market Infrastructure
FSB	Financial Stability Board
FSO	Financial System Oversight (Committee) (RBNZ)
GFC	Global Financial Crisis
HVCS	High Value Clearing System
IAIS	International Association of Insurance Supervisors
IOSCO	International Organization of Securities Commissions
IPSA	Insurance (Prudential Supervision) Act 2010
LCH	London Clearing House
LCR	Liquidity Coverage Ratio
LGD	Loss-Given Default
LVR	Loan-to-value Ratio
LTV	Loan-to-value
MBIE	Ministry of Business, Innovation, and Employment
MOU	Memorandum of Understanding
MOC	Memorandum of Cooperation on Trans-Tasman Bank Distress Management
MoF	Minister of Finance
NBLI	Nonbank Lending Institutions
NSFR	Net-Stable Funding Ratio
NZCDC	New Zealand Clearing and Depository Corporation
NZD	New Zealand Dollar
NZX50	NZX 50 Index (main stock market index in New Zealand)
OBR	Open Bank Resolution
OMO	Open Market Operation

ORRF	Overnight Reverse Repurchase Facility
PFMI	CPSS-IOSCO Principles for Financial Market Infrastructures
PNZ	Payments New Zealand
PRESS	Proportionate Risk Evaluation Surveillance System
iPRESS	Insurance–Proportionate Risk Evaluation Surveillance System
RFA	Registered Financial Advisers
RBA	Reserve Bank of Australia
RBNZ	Reserve Bank of New Zealand
SBI	Settlement Before Interchange
TAF	Term Auction Facility
TTBC	Trans-Tasman Banking Council

EXECUTIVE SUMMARY

Imbalances in the housing market, banks' concentrated exposures to the dairy sector, and their high reliance on wholesale offshore funding are the key macrofinancial vulnerabilities in New Zealand. The banking sector has significant exposures to real estate and agriculture, is relatively dependent on foreign funding and is dominated by four Australian subsidiaries. A sharp decline in the real estate market, a reversal of the recent recovery in dairy prices, a deterioration in global economic conditions, and a tightening in financial markets would adversely impact the system. The key risks faced by the insurance sector relate to New Zealand's vulnerability to natural catastrophes.

Despite these vulnerabilities, the banking system is resilient to severe shocks. Results of stress tests and sensitivity analysis across all relevant risk factors indicate that the solvency and liquidity of the banking system can withstand adverse and severe shocks. In addition, there is a limited impact of solvency and liquidity contagion from direct exposures to banks and nonbank financial institutions, common holdings of securities, and market contagion. That said, the results from stress tests, although a useful supervisory tool, need to be interpreted with caution and the authorities can strengthen the financial sector oversight and crisis preparedness frameworks to further improve the resilience of the system.

Strengthening the macroprudential framework is important. The financial system is dominated by four major banks with similar business models in which the majority of assets are associated with housing loans. Direct exposures among them are relatively limited, but the potential for spillovers is elevated. Credit has resumed strong growth during the last few years, putting pressure on funding and increasing concerns with the housing sector. So far, the authorities have applied exposure limits to loans with high loan-to-value ratios (LVR) which, while strengthening the profile of banks' portfolios, have had limited effects given rising housing prices. Adding a debt-to-income cap to the macroprudential toolkit would enhance systemic resilience by limiting the risks from growing household indebtedness. Imposing additional loss-absorbency requirements for domestic systemic banks, and allowing an effective accountability of the RBNZ without jeopardizing the integrity and independence of its macroprudential decision-making process are also recommended.

The approach of the RBNZ to supervision should be strengthened by increasing the weight of regulatory discipline in its three-pillar framework. The RBNZ approach to supervision relies on three pillars: self, market, and regulatory discipline. The authorities have strengthened regulatory discipline since the last FSAP, but the three-pillar framework should be improved by adopting a more intensive approach to supervision. This would increase the ability of supervisors to be proactive to exercise regulatory discipline and obtain reliable information to enforce self- and market-discipline. The RBNZ is encouraged to issue enforceable supervisory standards on key risks, review the enforcement regime to promote preventive action, and initiate on-site programs targeted on areas of high risk. In addition, clarifying the responsibilities of the Treasury and RBNZ on financial sector issues and reinforcing the role and autonomy of the RBNZ as prudential regulator and supervisor would enhance the ability of the RBNZ to respond swiftly to ongoing and emerging risks.

Increasing supervisory resources for all financial sectors is key. This would support the highly qualified RBNZ staff in improving the effectiveness of the supervisory process, enhancing their knowledge of financial institutions' operations, and deepening risk assessment of supervised entities—and strengthening their ability for early preventive action.

The proposed reforms to the regulatory and oversight framework for Financial Market Infrastructures (FMIs) will get New Zealand broadly on par with international standards. The proposed regime will provide the authorities with the legal basis for the oversight of systemically important FMIs, and with a graduated range of enforcement, crisis management, and regulatory powers. The authorities are encouraged to adopt international principles for FMIs in secondary legislation to provide for a transparent set of requirements to the industry and allow a consistent implementation of international standards among all systemically important FMIs.

The reform of securities market regulation significantly improved the framework, but further enhancements are required. The review of the regulatory framework was instrumental in implementing key reforms, including the establishment of the FMA as conduct regulator. The new regime governs how financial products are offered, promoted, issued and sold, and introduces licensing for providers of certain products, including managers of retail funds. The regulatory perimeter could be reviewed to include wholesale asset managers and custodians, whose activities will become more relevant as the asset management industry matures, bringing potential new risks. There is also a need to enhance conduct regulation in the insurance sector.

The crisis resolution framework needs to be enhanced further. The Open Bank Resolution (OBR) framework, which aims to avoid the use of public funds when resolving systemically important banks, is a step in the right direction. To enhance its credibility and strengthen the financial safety net, the introduction of deposit insurance would be the best option. Absent support for deposit insurance, a second option is to legally establish a *de minimis* exemption from freezing and haircutting deposits in OBR, set at an appropriate level. The decision-making process in a crisis and the exercise of resolution powers need to be clarified. The RBNZ should be the sole resolution authority, with clear mandates and responsibilities, requiring the approval of the Minister of Finance (MoF) only for resolutions with fiscal or systemic implications.

The home-host relationships between Australia and New Zealand are well above international practice, but stronger collaboration would enhance synergies. The RBNZ could take a more proactive role in collaborative supervision. The scope of the Memorandum of Cooperation on Trans-Tasman Bank Distress Management (MOC) could be extended to include insurance companies and FMIs. Moreover, further work on the trans-Tasman framework for assessing systemic importance and discussing possible coordinated responses would support timely and effective decision-making in an actual crisis.

Table 1. 2016 New Zealand FSAP: Key Recommendations

Financial Stability and Financial Sector Resilience	**Time**[1]
Increase RBNZ resources for the supervision and regulation of banks, insurance companies, and FMIs (¶30, 36).	ST
Strengthen cooperation and collaboration arrangements with Australian authorities (¶32).	ST
Clarify responsibilities of the Treasury and RBNZ on financial sector issues to reinforce the role of RBNZ as prudential regulator and supervisor (¶31, bullet 4).	ST
Issue enforceable standards on key risks, governance, risk management, and controls to make RBNZ's supervisory expectations more transparent and support supervisory preventive action (¶31, bullet 1).	ST
Review and extend the enforcement regime to promote preventive action and enhance sanctions powers, including by eliminating ministerial consent for directions, and making compliance with RBNZ policy documents evidence of prudent practice (¶31, bullet 2).	MT
Initiate on-site programs to test the foundation of the three pillar approach and directors' attestations, and increase supervisory engagement with institutions in order to require appropriate action (¶31, bullet 3).	ST
Refine FMA supervision by a) direct monitoring of aspects of asset management relevant to financial stability; b) ensuring quality of Financial Markets Supervisors; and c) enhancing insurance intermediary and conduct regulation and supervision (¶30, 34).	I
Expand the FMA's regulatory perimeter to include licensing and supervision of custodians and appropriate oversight of wholesale asset managers (¶35).	ST
Adopt and implement proposed FMI legislation on regulation, oversight, and enforcement powers (¶36).	I
Adopt the PFMI through detailed requirements in secondary legislation; change the frequency of FMI self-assessments in the proposed regime from three to two years; and enhance compliance of the designated FMIs with PFMI requirements (¶37).	ST
Ensure that designated nonfinancial businesses and professions are subject to AML/CFT requirements, particularly company service providers, lawyers, and accountants (¶39).	MT
Expand data collection and modeling efforts to develop structural models for credit risk in commercial real estate (CRE) and corporate portfolios (¶13).	MT
Macroprudential Framework	
Strengthen arrangements for macroprudential policy by increasing communication efforts; by increasing the transparency of the process to adjust the framework; and by maintaining an accountability framework that does not jeopardize the integrity and independence of the macroprudential decision-making process (¶23).	C
Introduce DTI measures in the macroprudential toolkit (¶25).	I
Implement DTI measures if the changes to the LVR do not reduce the risks in the housing sector (¶25).	I
Increase capital buffer requirements to reflect the concentration of the financial sector in four banks (¶26).	I
Crisis Readiness, Management, and Resolution	
Strengthen domestic crisis management arrangements by reaching ex ante agreement on roles, responsibilities, and processes; prepositioning, mobilization, logistics, and communications plans; and testing through simulation exercises (¶42).	MT
Reconsider the merits of deposit insurance, or in the absence of policy support, introduce a limited depositor preference to provide legal certainty for the *de minimis* exemption in OBR (¶44).	MT
Revise the RBNZ Act to provide greater clarity and certainty in resolution, by inserting objectives in resolution including protection of depositors and the public interest and requiring accountability reporting against these objectives; by clarifying that the RBNZ is the sole resolution authority, and inserting an express requirement for ministerial consent for resolutions with fiscal or systemic implications only (¶42).	MT

[1] C = continuous; I (immediate) = within one year; ST (short-term) = 1–3 years; MT (medium-term) = 3–5 years.

MACROFINANCIAL SETTING AND RISKS

1. **Since 2011, New Zealand has enjoyed an expansion that has recently gained momentum** (Table 2). Construction has been a major driver, with strong net migration and low interest rates amplifying the momentum. Growth is expected to remain at above 3 percent in 2017, well above trend. In the medium term, growth is projected to moderate in the face of net migration normalizing, earthquake reconstruction spending declining, and interest rates rising. Inflation is expected to gravitate toward the mid-point of the 1–3 percent target range of the RBNZ. External shocks are the main source of downside risks.

2. **The financial sector in New Zealand is dominated by banks, focuses its activities on lending to the domestic private sector, and is characterized by the importance of four Australian subsidiaries.** Banks represent about 75 percent of total financial assets (Figure 1). The sector seems well capitalized and liquid, nonperforming assets are low, and profitability has remained broadly stable (Table 3 and Figures 2 and 3). Foreign funding accounts for almost 20 percent of banks' liabilities. The system is concentrated on four subsidiaries of the largest Australian banks, whose share in the banking sector's total assets was 86 percent at end-2016 and represent a significant share of parents' assets. The systemic importance of these subsidiaries for the parent banks, which are all systemic for the home supervisor as well, makes New Zealand-Australian interdependence unique among other countries with high foreign bank presence (Figure 4). Nonbank financial institutions (NBFI) have more than halved in size since 2007. Nonbank lending institutions (NBLI) are savings institutions (credit unions and building societies), deposit-taking that fund their activities via deposits or debentures issued to the public and non-deposit taking finance companies. Most are domestically-owned.

3. **The insurance sector is small and characterized by high concentration and an extensive presence of foreign (mainly Australian) insurers.** There are 96 licensed insurers, with 76 percent of premium income being from branches or subsidiaries of foreign insurers. The largest insurer, an Australian group, accounts for almost half of total non-life premium income. Only about half of non-life premium income is written by the private sector, reflecting the migration of savings from insurance to investment products and the important role played by government in coverage of particular risks which it finances by levies: the Accident Compensation Commission (ACC) provides extensive coverage for personal injury insurance, and the Earthquake Commission (EQC) provides first loss cover for losses from earthquakes and other specified natural hazards for insured residential properties.[1]

4. **The capital market of New Zealand is small but has been growing in recent years, with an increase in managed funds.** The listed stock market capitalization was 42 percent of GDP in 2015, and the total amount of bonds outstanding in the local market was 50 percent of GDP. The bond market is dominated by central government issues and financial institutions. Since 2004, the

[1] ACC and EQC have been excluded from the scope of the insurance sector work in the FSAP owing to the nature of their functions which is similar to social insurance schemes: both are funded by compulsory levies on individuals, employers, insurance policies, and trade licenses (among others).

share of primary listings' holdings by domestic institutional investors increased 9 percentage points to around 40 percent in 2014. The number of transactions in secondary markets increased since 2010—almost threefold on the main stock market index in New Zealand (NZX 50). This increase has been fostered by the creation of the KiwiSaver scheme, partial privatization of state-owned enterprises and low global and domestic interest rates.

Table 2. New Zealand: Selected Economic Indicators, 2012–2022

Population, millions (Dec 2015):	4.6
Quota (in SDR millions):	1,252.1
Main Exports:	Dairy, meat, forest products
Key Export Markets:	China, Australia, E.U., U.S.
Nominal GDP per capita, USD (2016):	37,056
GINI Coefficient (2012):	33 percent 1/

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
						Projections					
Output											
Real GDP Growth, Production (in percent)	2.5	2.2	3.4	2.5	3.1	3.1	3.0	2.6	2.6	2.6	2.5
Employment											
Unemployment (in percent of labor force)	6.4	5.8	5.4	5.4	5.1	5.0	4.8	4.8	4.8	4.8	4.9
Prices											
Consumer Prices (percentage change)	1.1	1.1	1.2	0.3	0.6	1.5	2.0	2.0	2.0	2.0	2.0
General Government Finances (in percent of GDP) 2/											
Revenue	34.0	33.9	33.9	34.9	34.8	34.2	34.0	34.0	34.1	34.1	34.0
Expenditure	35.9	34.9	34.2	34.2	34.2	33.7	32.6	32.0	31.5	31.2	31.2
Fiscal Balance 3/	-1.9	-1.0	-0.3	0.7	0.6	0.5	1.4	2.0	2.6	2.9	2.8
Public Debt (Gross)	31.3	30.0	29.5	29.6	29.5	27.4	23.7	21.2	18.7	15.5	12.4
Macro-financial											
Reserve Bank of New Zealand Policy Rate (percent, average)	2.5	2.5	3.1	3.2	2.1	1.8	2.3	2.7	3.0	3.0	3.0
Credit to the Private Sector (percentage change)	3.7	5.1	4.5	8.4	7.5	6.1	5.5	4.8	4.7	4.8	4.8
Balance of Payments (in percent of GDP, unless otherwise indicated)											
Current Account	-3.9	-3.2	-3.2	-3.4	-2.7	-2.5	-3.1	-3.3	-3.4	-3.5	-3.5
FDI	-0.1	-0.7	0.7	0.1	-0.4	0.7	0.6	0.6	0.6	0.6	0.6
Gross Official Reserves (in months of prospective imports)	4.1	3.7	3.6	3.8	4.2	...	...	...	...	...	...
Net External Debt	-78.2	-71.5	-68.8	-66.0	-65.7	-65.3	-65.6	-66.1	-66.6	-67.2	-67.6
Exchange Rate											
Real Effective Exchange Rate	108	111	115	109	109	...	...	...	...	...	...

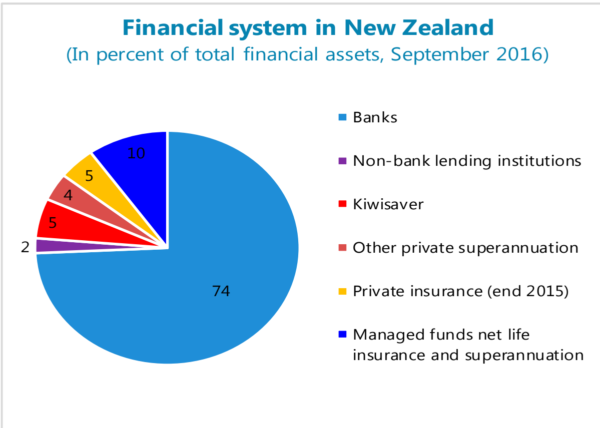
Sources: Data provided by the New Zealand authorities; OECD and IMF staff estimates and projections.

1/ OECD Income Distribution and Poverty Database. New definition, post- taxes and transfers.
2/ Calendar year.
3/ Fiscal balance equals revenue less expenditure; expenditure includes net capital investment.

Figure 1. New Zealand: Financial Sector Overview

Financial intermediation takes places primarily through the banking sector, which mostly focuses on domestic lending.

The financial system is dominated by banks...



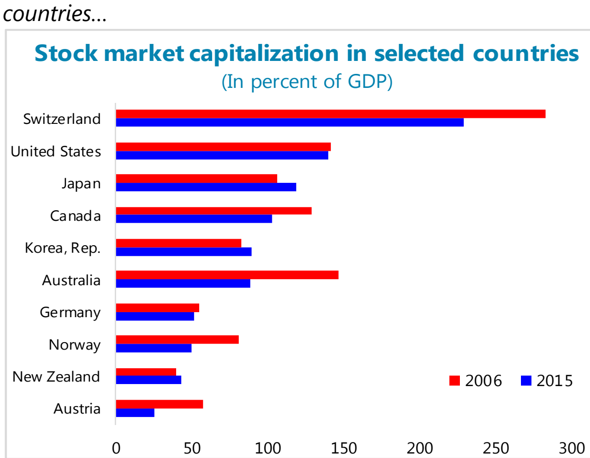
...which have been growing since 2006.

Evolution of the financial system
(In percent of GDP)

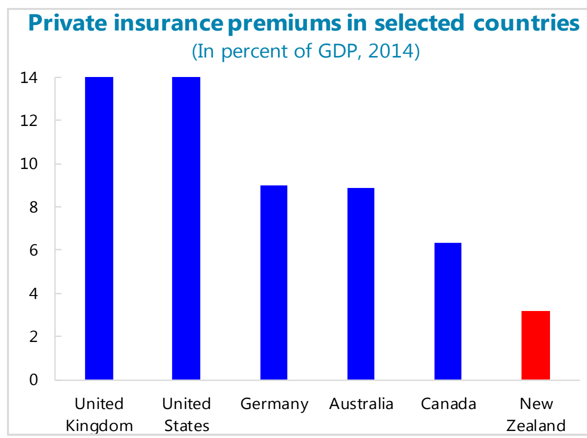
	2006	Sept 2016
Banks	173.9	197.5
Private insurance*	13.7	12.5
Nonbank lending institutions	15.7	5.4
Managed funds and trusts, including:	41.9	54.5
KiwiSaver** and other superannuation	13.0	24.8
Retail and cash management trusts	12.3	17.1
Other funds and trusts	16.6	12.5

** Data as of 2011 and as of 2015; ** Opened in 2007.*

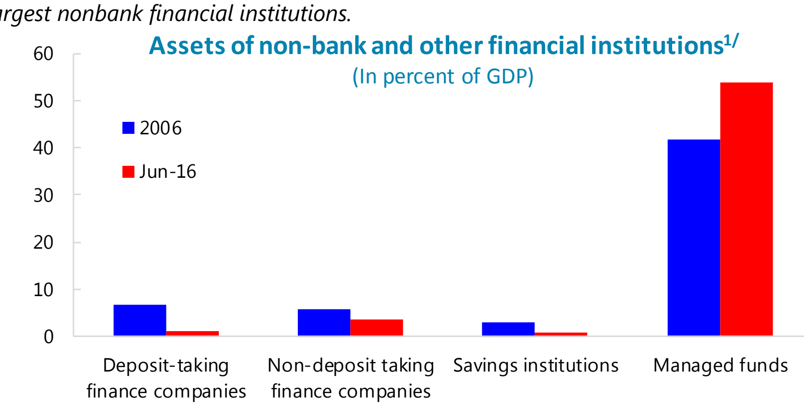
Stock market capitalization remains low compared to other countries...



...and so does the size of the private insurance sector.



Managed funds are the largest nonbank financial institutions.



1/ Excluding insurance. Non-bank lending institutions consist of: deposit-taking finance comapnies, non-deposit taking finance companies and savings institutions.

Sources: RBNZ and IMF staff calculations.

Table 3. New Zealand: Financial Soundness Indicators, 2010–2016[1/]

	2010	2011	2012	2013	2014	2015	2016Q3
Interest rates (percent end-year)							
90-day bank bill rate	3.0	2.8	2.7	2.7	3.4	3.2	2.5
90-day bank bill rate, real	0.7	-1.2	1.6	1.5	2.2	2.9	2.2
Stock market index (percent change, end-year)	2.4	-1.0	24.2	16.5	17.5	13.6	8.8
Capital adequacy (in percent)							
Regulatory capital to risk-weighted assets	12.8	13.3	13.1	12.5	12.4	13.5	13.1
Tier I capital to risk-weighted assets	9.8	10.6	11.5	11.4	11.4	12.1	11.9
Capital to assets	7.4	7.9	8.2	8.7	8.4	8.2	8.0
Asset quality (in percent)							
Non-performing loans to total loans	2.1	1.7	1.4	1.0	0.8	0.5	0.5
Non-performing loans net of provisions to capital	18.7	13.7	9.8	6.9	5.4	3.9	4.2
Non-performing loans (in millions of NZ$)	6,255	5,239	4,312	3,380	2,790	2,000	2,087
Liquid assets to total assets	16.5	16.9	16.2	16.2	15.7	15.0	14.0
1-month maturity mismatch (in percent)	7.3	9.3	7.9	7.0	6.9	6.3	5.2
Core funding ratio	81.2	82.8	85.6	85.5	86.3	85.8	86.3
Customer deposits to total loans	-	69.6	70.6	72.6	73.4	73.7	71.8
Off-shore wholesale funding to total liabilities 2/	27.4	24.3	21.6	20.3	20.1	19.6	19.8
Asset composition (in percent of total)							
Agricultural	15.8	15.5	15.7	15.5	15.5	15.6	15.3
Business	24.2	24.3	24.3	24.0	24.0	23.8	23.7
Households	60.0	60.1	60.0	60.5	60.5	60.5	61.0
Of which: Housing	55.6	55.8	55.7	56.3	56.3	56.4	57.1
Profit Ratios (in percent)							
Return on assets	0.8	1.2	0.9	1.1	1.1	1.0	0.9
Return on equity	11.2	16.1	11.4	13.9	14.1	12.0	11.9
Net interest margin	2.2	2.3	2.2	2.2	2.4	2.3	2.1

Sources: Data provided by the New Zealand authorities and IMF staff estimates.

1/ Capital adequacy measures, NPLs net of provisions to capital, liquid assets, 1-month mismatch ratio, core funding ratio, and return on equity are calculated for locally incorporated banks only.

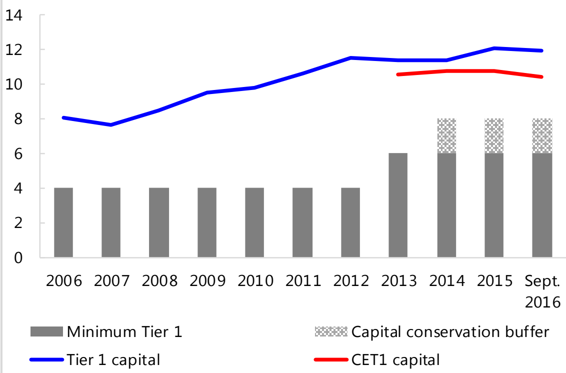
2/ proxied by the share of foreign-currency-denominated liabilities to total liabilities

Figure 2. New Zealand: Financial Soundness Indicators for Banks and Insurance Companies

Banks and insurance companies appear to be sound.

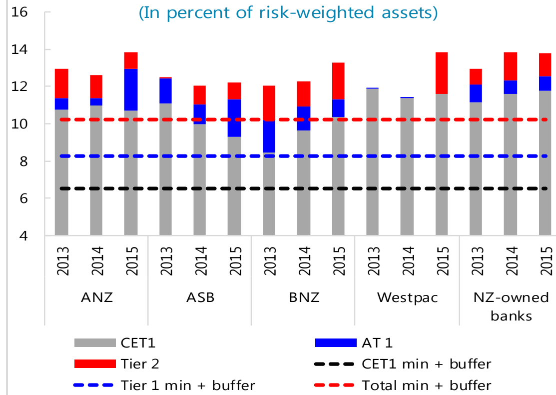
While banks hold capital buffers well above regulatory minima…

Capital ratios of New Zealand banks
(In percent of risk-weighted assets)



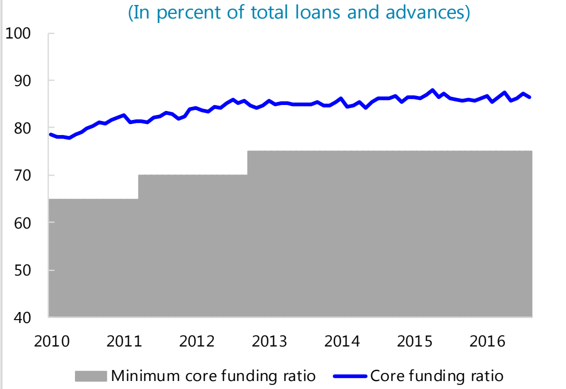
…this may reflect increased issuance of hybrid debt.

Capital ratios of banks in New Zealand
(In percent of risk-weighted assets)



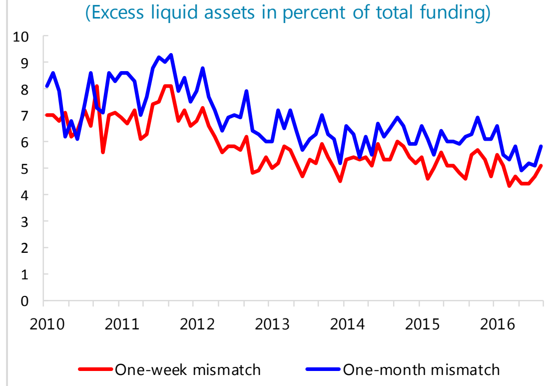
Banks' levels of stable funding are above regulatory minima…

Banks' core funding ratio
(In percent of total loans and advances)



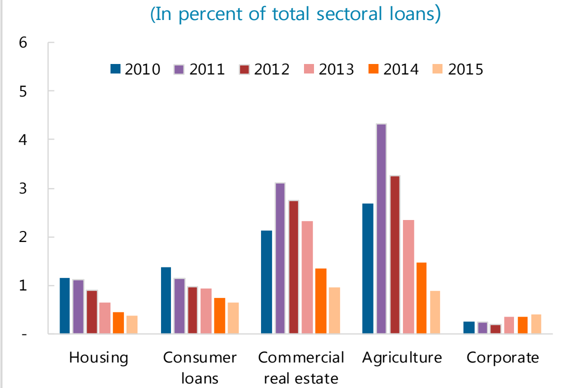
…they have sufficient holdings of liquid assets to short-term liabilities according to the New Zealand-specific metrics…

Mismatch ratios of the banking sector
(Excess liquid assets in percent of total funding)



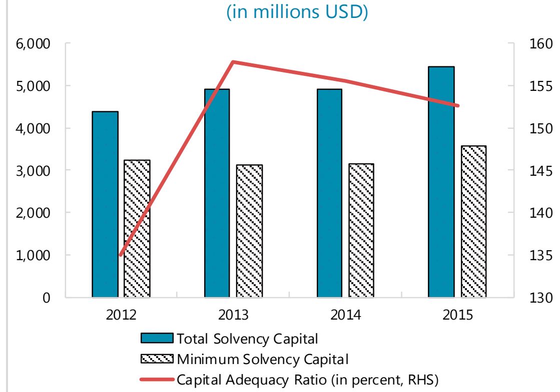
…and asset quality is high too.

Banks' non-performing loans
(In percent of total sectoral loans)



The insurance sector has remained well-capitalized since the introduction of prudential regulations in 2010.

Capital adequacy of insurance sector
(in millions USD)



Sources: RBNZ and IMF staff estimates.

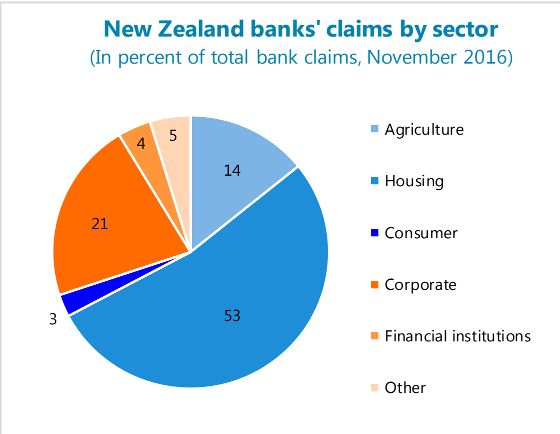
Figure 3. New Zealand: Banking Sector: Profitability and Balance Sheet

While offshore funding has decreased somewhat since the GFC, it still plays an important role.

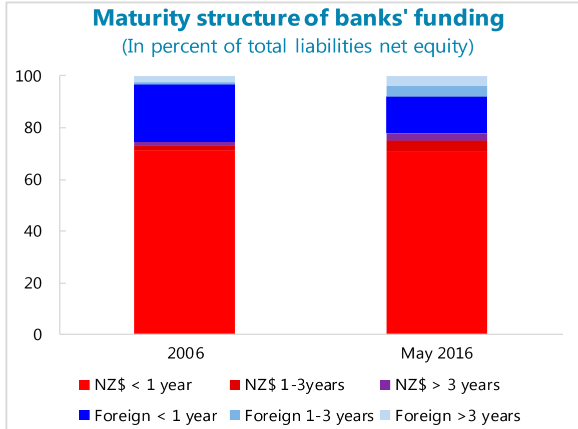
Bank profitability has remained stable over the last 10 years.

	2005	2010	2015	September 2016
Number of banks	16	19	25	24
Total assets (in percent of GDP)	156.7	193.2	194.8	198
Return on assets	1.2	0.8	1.1	0.9
Return on equity	15.2	11.2	14.1	11.9
Net interest margin	2.4	2.2	2.4	2.1

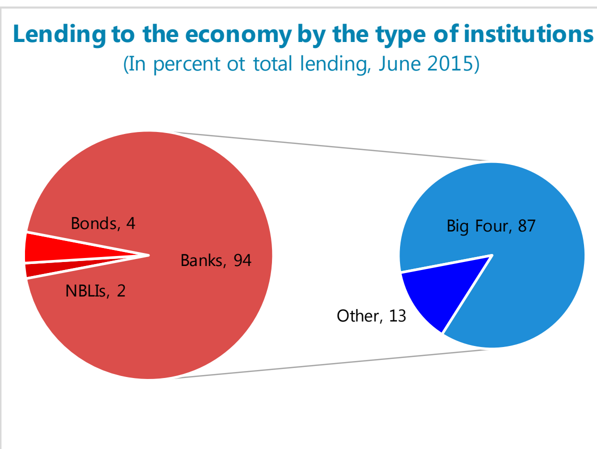
Assets are dominated by claims to the domestic economy…



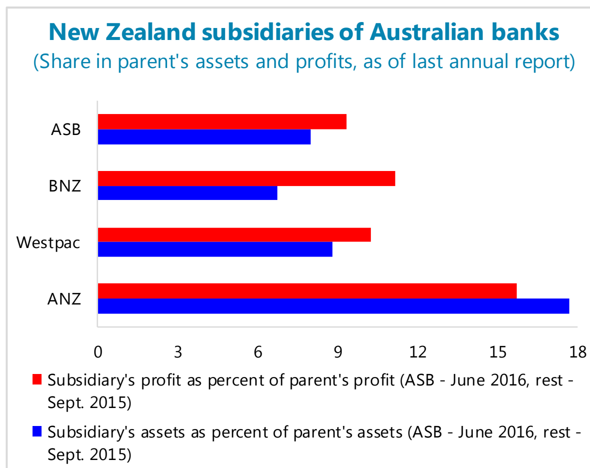
… and while the role of short-term, offshore funding has decreased, bank liabilities are still mostly short-term.



The banking sector is highly concentrated in subsidiaries of four Australian banks…



… which constitute significant shares of parents' assets.



Sources: RBNZ and IMF staff estimates.

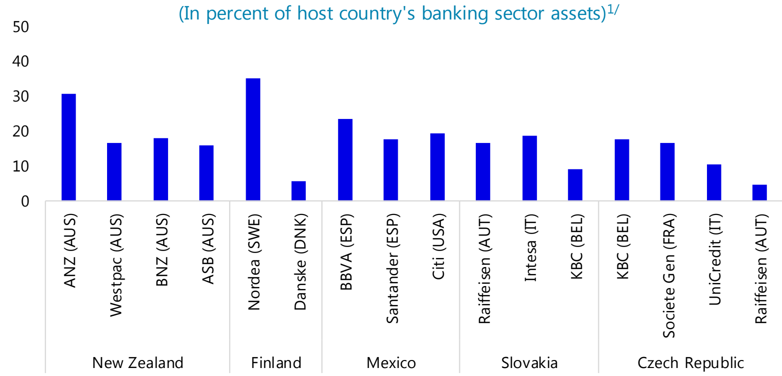
Figure 4. New Zealand: Banking Systems with Significant Presence of Foreign Banks

New Zealand's interdependence with Australia is unique among countries with a strong presence of foreign banks.

Australian subsidiaries (including branch assets of dual-registered banks) account for 86 percent of New Zealand banking sector's assets, compared to 41 percent for Spanish banks in Mexico and 35 percent for the Swedish bank in Finland.

Subsidiary's assets

(In percent of host country's banking sector assets)1/

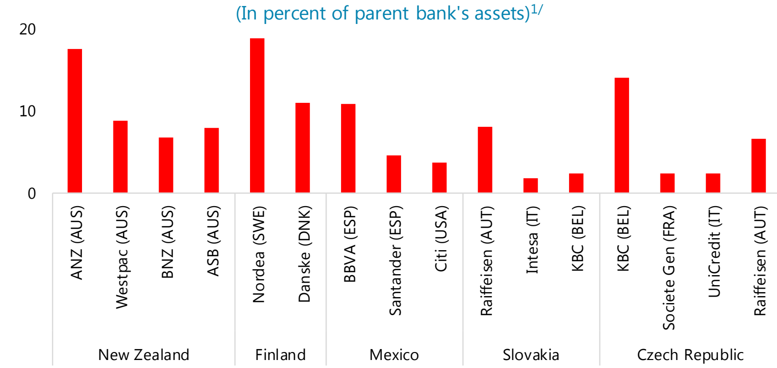


1/ New Zealand, Finland, Mexico, Slovakia, Czech Republic are host countries. Home countries are provided in parentheses. In all cases parent banks exceed 10 percent share of the home country's banking sector. For Nordea the figure shows percent of bank lending and deposit-taking activity in Finland.

There are several countries where local subsidiaries account for a significant share of their parents' operations, but usually parent banks of locally-important subsidiaries are from different countries.

Subsidiary's assets

(In percent of parent bank's assets)1/



1/ New Zealand, Finland, Mexico, Slovakia, Czech Republic are host countries. Home countries are provided in parentheses. In all cases parent banks exceed 10 percent share of the home country's banking sector. For Nordea the figure shows percent of the Nordea group lending attributable to the Finnish subsidiary.

Source: IMF staff estimates.

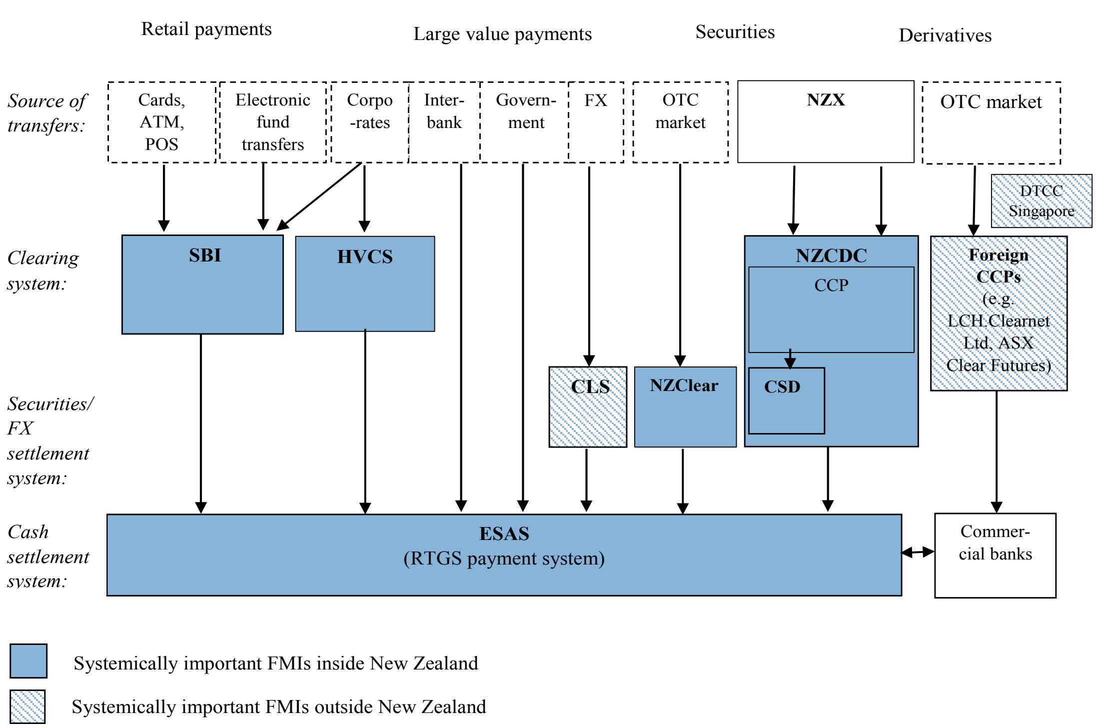
5. **FMIs are of systemic importance at a national level, while the derivatives market is increasingly dependent on FMIs that are operated abroad.** Several domestic and foreign FMIs are relevant for the economy in New Zealand (Table 4 and Figure 5). Derivative transactions of New Zealand banks are increasingly cleared by foreign central counterparties (CCPs). This is a direct consequence of the G20 mandate to clear standardized over-the-counter derivatives through CCPs. Although New Zealand is not a G20 member, many foreign derivative counterparties are required to clear centrally and so New Zealand banks are ensuring that they have the same capability.

Table 4. New Zealand: Systemic Indicators for FMIs

	Exchange Settlement Account System (ESAS)	NZClear	New Zealand Clearing and Depository Corporation (NZCDC)	Settlement Before Interchange (SBI)	High Value Clearing System (HVCS)
Size of daily settlement value 2015 (percent of GDP).	30 billion NZD (12 percent).	7 billion NZD (3 percent).	Securities: 85 million NZD; derivatives: 900,000 NZD (<0.5 percent).	3.6 billion NZD (1.4 percent).	24 billion NZD (9.8 percent).
Interconnectedness of financial institutions.	19 direct members, indirectly serving most financial and nonfinancial institutions.	128 direct members, indirectly serving other financial and nonfinancial institutions.	5–8 direct members (depends on service) and indirectly serving other financial and nonfinancial institutions.	8 direct members, indirectly serving households, corporates and financial institutions.	13 direct members, indirectly serving households, corporates and financial institutions.
Critical to other FMIs.	Critical to NZClear, SBI, HVCS, CLS.	-	CCP depends CSD within NZX Group	-	
Substitutability	Commercial banks	NZCDC	NZClear	HVCS	SBI
Types of markets served.	All interbank transactions.	Bond and equity markets.	Equity and derivatives markets.	Interbank settlement retail trades.	Interbank settlements.
Other critical functions.	Critical for monetary policy operations.	Critical for monetary policy operations and collateral management.	Relevant for collateral management.	-	Settlements for housing market.

Figure 5. New Zealand: Landscape of Systemically Important Financial Market Infrastructures

Financial Market Infrastructures in New Zealand are highly connected.



Source: IMF staff analysis.

6. The vulnerabilities of the New Zealand financial system are largely associated with concentrated exposures to the real estate and agriculture sectors, dependence on wholesale funding, and the similar business models of the four Australian subsidiaries. In particular:

- ***The banking sector exposure to residential mortgages reached over 50 percent of total claims at end-2015.*** Low global and domestic interest rates for the last few years are a main driver behind the observed increases in mortgage lending.[2] While low interest rates facilitate debt repayments by the existing mortgage borrowers, rising housing prices have elevated the debt-to-income ratios of new house buyers. The rise in real estate prices has been most rapid in Auckland (Figure 6). The property boom has been driven also by increased investor activity.

- ***The banking sector has a large concentration of loans to the agricultural sector.*** Agriculture credit exposure, with the dairy industry accounting for more than two-thirds, stood at 15 percent of total exposures in 2015. Low global milk prices have put significant financial pressure on dairy farms, with half of the sector having experienced a second consecutive season of operating losses. However, prices have recently recovered and, according to the most recent forecasts, the effective payout for the dairy industry will increase above the break-even price in the next season. Nonetheless, the already high dairy-farm debt relative to trend income has increased recently, and remains a source of risk.[3] Credit risk concerns in other sectors are limited, with corporate lending growing at around 5 percent in 2016 (compared to 15.6 percent during January 2007–July 2008), and low debt-to income ratios hovering around 16 percent.

- ***The financial system is highly concentrated on a few Australian-owned players, with similar business models and vulnerabilities.*** As a result, there is a strong correlation in the financial soundness of the subsidiaries among themselves and with their parents.

- ***The banking sector depends to some extent on wholesale funding, including foreign-currency funding sourced from offshore markets, and is exposed to liquidity risk from maturity mismatch.*** The main liquidity risk has traditionally been a reliance on offshore wholesale funding relative to domestic deposits. Rollover liquidity risk has been mitigated by the introduction of the core funding ratio (CFR) in 2010. However, because over 50 percent of banks' assets are long term housing financing, the maturity mismatch is still a concern. Banks have also reduced their reliance on non-NZD funding to below 20 percent of total liabilities.[4] While this development mitigates concerns over vulnerability to FX risk and increases the availability of foreign currency swap counterparties, pushing down hedging costs, banks might be vulnerable to risks related to hedging techniques under a stress event. As New Zealand's banks looking for offshore funding use mostly the primary market, funding liquidity on global markets is relatively

[2] The weighted average time before a mortgage has to be repriced is around 12 months because most borrowers are still under floating or on short-term fixed rates.

[3] Additional risk comes from the high concentration of debt within the dairy sector: at the end of the 2013–2014 season, 10 percent of farms accounted for around one-third of the total sectoral debt. To address credit risk concerns on farm lending, in June 2011 the RBNZ put in place a new capital requirement for farm lending.

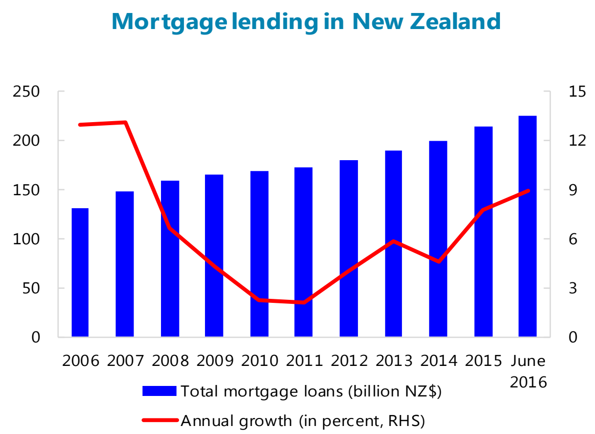
[4] This represents a reduction of around 10 percentage points from the pre-crisis peak.

more important than market liquidity. Yet, heightened volatility in global financial markets may contribute to a pick-up in wholesale funding spreads.

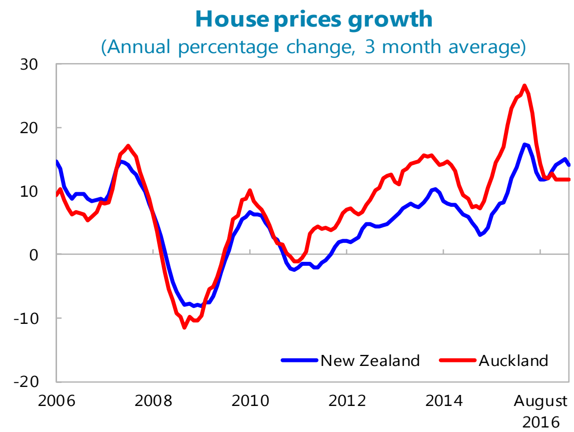
Figure 6. New Zealand: Financial Sector Vulnerabilities

The main financial sector vulnerabilities are associated with developments in the housing sector, the decrease in dairy prices, and reliance on offshore funding.

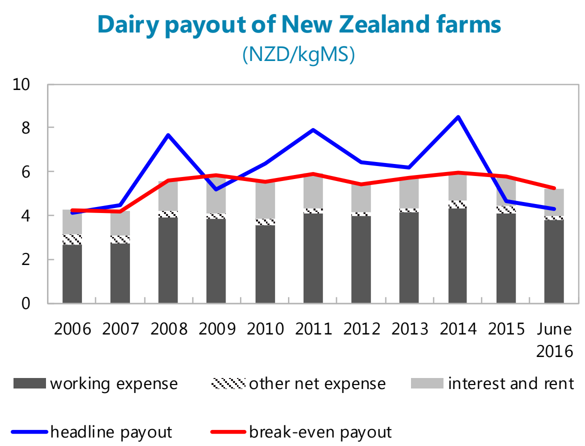
Mortgage lending has experienced strong growth over last two years…



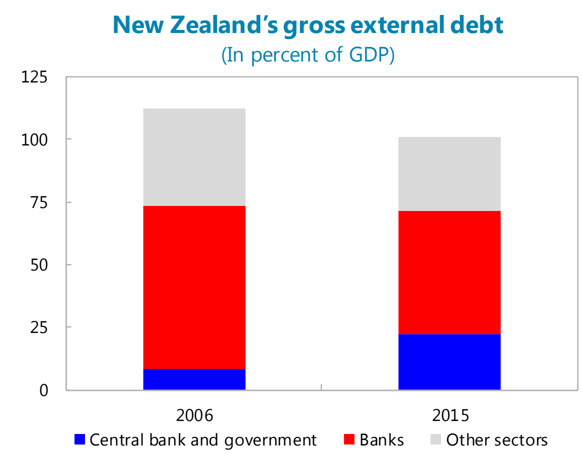
…with housing prices increasing especially in the Auckland area, where 1/3 of the population lives.



Dairy farms' earnings have fallen below break-even levels in 2015–2016 season.



The banking sector's debt dominates New Zealand's external debt.



Sources: RBNZ and IMF staff estimates.

FINANCIAL STABILITY AND RESILIENCE

7. **The analysis of resilience is linked to the four major macrofinancial risks that might challenge the solvency or liquidity position of the banking system** (Table 5). These are: (i) a strong correction in the real estate market; (ii) depressed dairy prices; (iii) deterioration in global economic conditions; and (iv) tight conditions in global financial markets. The stress tests results indicate that New Zealand banks are generally resilient to these risks.

Table 5. New Zealand: Risk Assessment Matrix (RAM)

Source of risk	Overall Level of Concern	
	Likelihood of severe realization in 1–3 years	**Expected impact on financial stability**
	High	***Medium***
Persistently lower dairy prices, triggered by supply and demand factors, reversing only gradually.	• While recent reduction in global supply has helped reduce the imbalance between demand and supply, markets have remained volatile and supply might readjust more gradually than expected, keeping dairy prices low in a tail risk event.	• The estimated payout would be well below the break-even payout of $5.25 per KgMS, resulting in a third consecutive season of negative cash flow for many farms. • Low milk prices would put the dairy sector under material stress, with debt relative to trend income increasing over 350 percent. • This could result in a sharp increase in nonperforming loans.
	Medium	***Medium***
A significant China downturn leading to a global growth slowdown and further declines in commodity prices.	• The China downturn would weaken New Zealand export demand directly (as China is New Zealand's second largest trading partner), and indirectly (as Australia is New Zealand's largest trading partner and Australia's largest export market is China). • The global growth slowdown would impact New Zealand through broad-based falls in export demand, low commodity prices, and confidence effects.	• A global recession would adversely affect bank earnings. Borrowers' creditworthiness would be affected (including through falling property prices), leading to greater than expected defaults, write-offs, and loan impairment charges. • The adverse effect on net income from a sharp slowdown could be amplified by large currency fluctuations and disruptions in capital flows. • Australian-owned New Zealand banks would be particularly exposed to a sharp slowdown in China, with potential spillover effects from Australian parents.
	Medium	***High***
Dislocations in offshore wholesale funding markets.	• The trigger could be related to various sources, including disorderly and/or accelerated monetary policy normalization in the U.S., low market liquidity, or funding pressures for the Australian-owned New Zealand banks prompted by regulatory changes. • The cost of long-term wholesale funding would increase if heightened market volatility returns.	• Higher funding costs could erode banks' net interest margins weighing down on profits, which could be also affected by lower securities valuations. • Banks' ability to borrow cross-border would be hampered by market disruptions, exacerbating funding and liquidity risk. • New Zealand banks' reliance on wholesale funding remains large, especially when just over half of this funding is sourced offshore.
	Medium	***Medium***
A large correction in property markets, including both residential and CRE segments. This may be triggered by deteriorating global conditions, including from a significant downturn in China.	• Auckland house prices remain elevated relative to fundamentals and market pressures are increasing. • Price pressures are spreading to the rest of the country further stretching household balance sheets. • CRE prices continue to increase with prices relative to rents returning to pre-crisis peaks, while supply factors point at the risk of oversupply in the medium-term.	• The banking system would be affected by a generalized and substantial fall in property prices in New Zealand. • A fall in real estate prices would lead to higher credit impairment losses in portfolios secured by real estate assets. • If the correction triggers an economic recession, rising unemployment and lower corporate profits could lead to higher impairments across other asset classes. Credit risk would be exacerbated by high household debt-to-income ratios.

8. The resilience of the New Zealand banking system was assessed under a 5-year solvency test (with interlinkages between funding costs and stressed capital ratios), a set of liquidity stress tests, a broad range of sensitivity tests, and a contagion module (Appendixes II and III). The sensitivity analysis was informed by supervisory reverse stress tests conducted by the four major banks which yielded insights into business vulnerabilities and potential system-wide effects from correlated losses in the banking system. To enhance the consideration of systemic risk in the stress testing exercise, the contagion module included: (i) a network analysis drawing on bilateral exposure data to assess how credit and funding risk propagate given the network of exposures, and (ii) a contagion analysis based on market-based data to evaluate contagion through financial markets from transactional exposures, common holding of securities and investors' correlated strategies.

A. Solvency Stress Tests

9. The IMF team and the RBNZ ran parallel solvency stress tests, covering credit risk, market risk, funding risk, and interest rate risk in the banking book under two macroeconomic scenarios (Figure 7).[5] The baseline scenario reflected the 2016 October IMF WEO macroeconomic projections. The adverse scenario captured the key risks identified in the RAM using a stressed macroeconomic scenario and idiosyncratic funding shocks. The scenario simulates a balance sheet recession triggered by deteriorating global conditions, tighter and more volatile financing conditions, a credit cycle downturn in China, and persistently lower commodity prices.[6] The global downturn directly impacts Australia and New Zealand, creating additional spillovers in New Zealand through financial linkages with Australia and a sharp correction in the New Zealand property and equity market and triggering a private domestic demand-driven contraction. The funding shock includes bank-specific stressed spreads over the projected benchmark rate for wholesale debt issuance. In addition, it incorporates a 'systemic' funding shock component linking bank-specific funding costs to the stressed capital position of the rest of the banking system.

10. The stress test included the interaction between solvency risk and funding costs as well as contagion from weaker banks in funding markets. The projection of bank funding costs followed an iterative process. In the first stage, the initial projection of bank-specific funding costs was informed taking into account aggregate projections for the reference rate in debt markets, bank-specific stressed spreads for wholesale issuance benchmarked against the behavior of their actively traded bonds during the Global Financial Crisis (GFC), and the bank structure of liabilities as of June 2016. Stressed funding costs were used to project bank-specific stressed Tier 1 ratios. In the second stage, the forecast of funding costs was revised driven by macroeconomic variables, bank-

[5] IMF staff and the RBNZ agreed on a common baseline and downturn scenarios to analyze the resilience of the banking system. Staff of both institutions used their own analytical models to generate projections. Appendix III (Stress Testing Matrix) has a detailed comparison between the two approaches to stress testing.

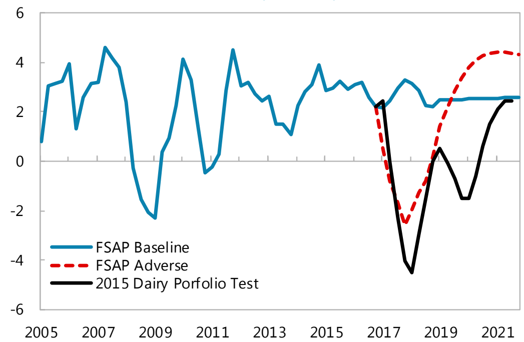
[6] To assess the vulnerability of dairy farmers to adverse shocks, the scenario features a combination of a sustained 20 percent fall in dairy prices relative to June 2016 and a protracted recovery, representing a 60 percent fall from the peak observed in June 2014, with a 20 percent peak-to-trough drop in land prices.

Figure 7. New Zealand: FSAP Stress Test Scenarios

The adverse scenario in the stress test captures key macrofinancial risks.

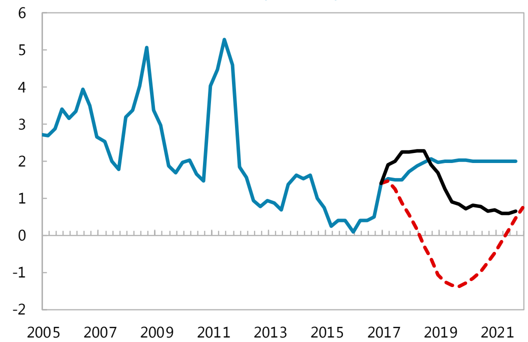
Real GDP growth declines sharply and is followed by a V-shaped recovery. The peak deviation from baseline reaches -7.5 percent by 2018.

Real GDP Growth
(in percent, year-on-year)



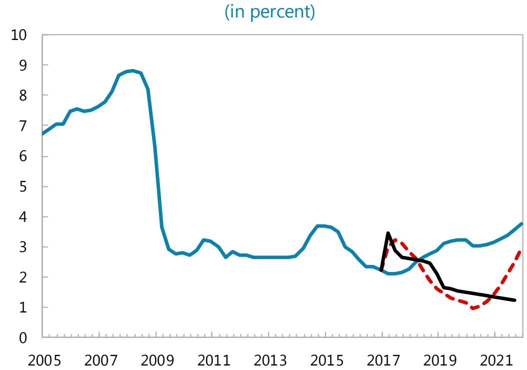
Inflation falls into negative territory, and remains below zero until the end of the stress period.

Inflation Rate
(in percent, year-on-year)



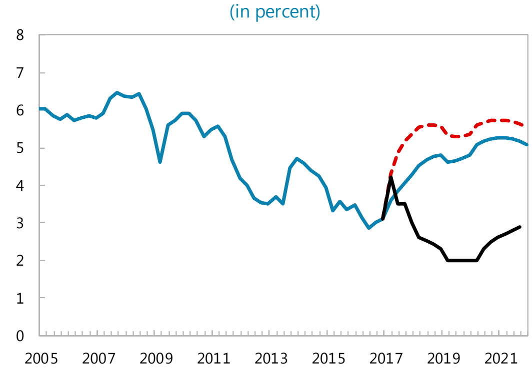
Conditions tighten initially, but relax as credit risk premia soften and monetary policy remains accommodative.

90d Bank Bill Rate
(in percent)



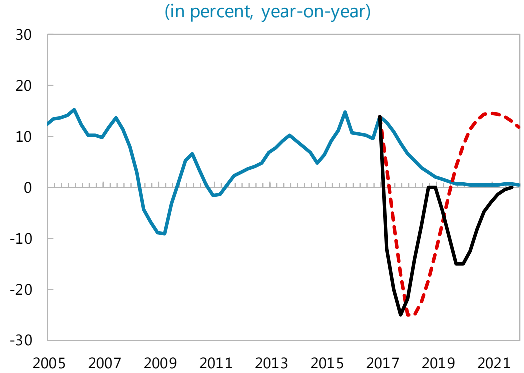
The yield curve steepens, pushing down asset valuations.

10y Yield Rate
(in percent)



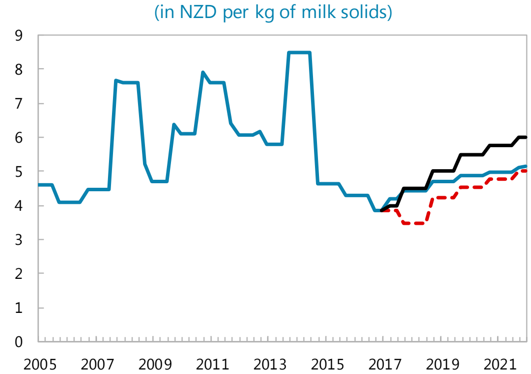
House prices fall by 35 percent by 2018, but recover to the pre-crisis levels by the end of the stress period.

Housing Prices
(in percent, year-on-year)



Dairy payout remains below the break-even of around NZD 5/KgMS. Projections are more severe than under the 2015 RBNZ dairy stress test scenario.

Dairy Payout Price [1/]
(in NZD per kg of milk solids)



Sources: RBNZ, IMF, and IMF staff estimates.

[1] The number quoted as Dairy Payout Price includes the price paid for milk and total distributable profit.

specific variables (including stressed Tier 1 ratios from stage 1), global variables, and a contagion risk factor from the rest of New Zealand banks which is unexplained by systematic risk factors. This component captured the 'systemic funding risk' shock from idiosyncratic shocks in peer banks to each individual bank, and led to a revised path of capital ratios.

11. The results suggest that major New Zealand banks are resilient to a severe global economic downturn, although most would need to use the capital conservation buffer (CCB) under stress (Figure 8). The IMF stress test results are broadly comparable to those produced by RBNZ using the commonly agreed scenario and RBNZ's in-house credit risk models in combination with expert judgment (Appendix IV). Under the baseline scenario, the capital of all banks is above minimum requirements and the CCB with the aggregate CET1 at around 10.5 percent by 2021. In addition, while the RBNZ has not implemented the Basel III regulatory leverage ratio, this was projected for stress testing purposes, and the aggregate Tier 1 leverage ratio settles around 7.2 percent. Under the adverse scenario, all banks meet minimum requirements with the aggregate CET1 ratio at 7.7 percent at the low point of the stress, but four banks would breach their total capital CCB in 2018. The shortfall in aggregate capital ratios under the stress test is mainly driven by stressed risk-weighted assets (RWAs), credit losses, and funding costs. Banks are able to retain capital through profitability despite the erosion in margins, supporting capital ratios during the downturn.

12. In addition to scenario-based solvency tests, sensitivity tests further explored bank vulnerabilities to wider shifts to risk factors (Figure 9). Drawing on insights from reverse stress tests, the direct impact on capital ratios from pressures on effective margins is significant, while the impact from a sharp hike in risk-free rates, pushing down asset valuations, is more limited. The effect of a sharper decline in housing prices on mortgage Loss-Given Default (LGD) rates is mitigated by improved LTV ratios. A severe collapse of real estate prices by 50 percent would push up bank LGD ratios on mortgage loans to about 30 percent. Most of the impact comes from recent vintages, despite improved LVRs at around 65 percent, due to the larger impact of the housing price correction. A separate sensitivity test on credit concentration suggests that this risk is moderate: by simulating the default of the largest counterparties of each of the 5 largest banks, including other banks, other financial institutions, and corporates,[7] banks would be able to meet their regulatory capital ratios following the default of their three largest counterparties.

13. Stress tests are a useful supervisory tool but should be interpreted with caution. Stress test scenarios replicate historical events or express extreme "tail events" based on historical loss distributions, even though the nature of crisis is to have unanticipated shocks where the past offers limited guidance. The RBNZ could usefully expand data collection and modelling efforts to develop structural models for credit risk in CRE and corporate portfolios.

[7] Only bank exposures to supranationals were excluded from the analysis.

B. Liquidity Stress Tests

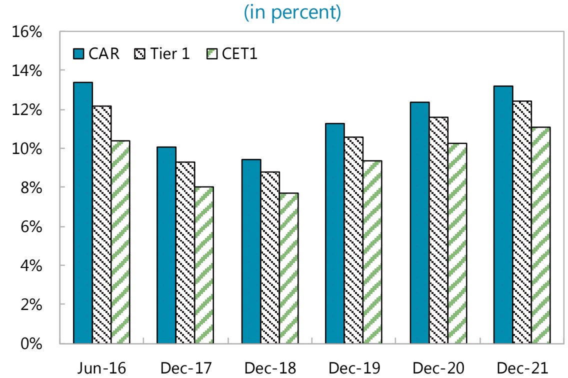
14. A set of liquidity tests was performed jointly by the RBNZ and the IMF team based on commonly agreed assumptions. They helped assess banks' short-term resilience to an abrupt and sudden withdrawal of funding as well as banks' structural exposure to liquidity risk. While all locally incorporated banks are required to comply with RBNZ liquidity policy, Basel III liquidity requirements have not been implemented in New Zealand. The RBNZ adopted quantitative liquidity requirements in April 2010. The one-month mismatch ratio is broadly aligned with Basel III liquidity coverage ratio (LCR) whereas the CFR has a similar structure to the Basel III net-stable funding ratio (NSFR).

Figure 8. New Zealand: Results of the FSAP Solvency Stress Test – Adverse Scenario

Under the severe scenario, all banks would still meet minimum requirements but most banks would draw down their capital conservation buffer.

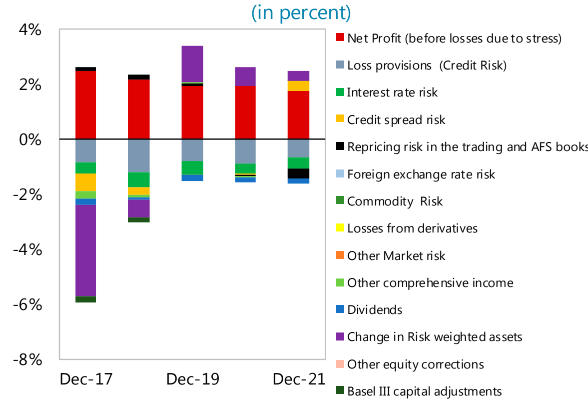
Aggregate bank capital ratios decline in the first two years of the severe scenario and recover afterwards. The recovery is less pronounced for CAR due to the full phase-out of non-qualifying Basel III capital instruments.

Capital Adequacy Ratio
(in percent)



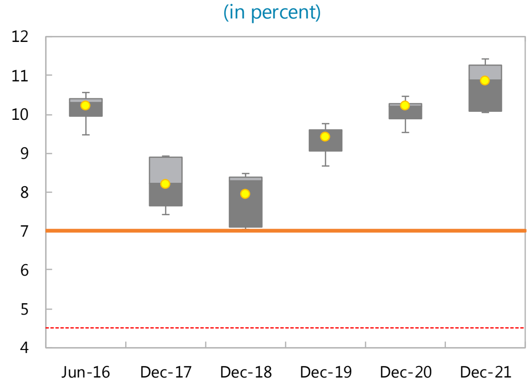
Increased risk weighted assets contribute the most to the fall in capital ratios.

Contribution to Change of CAR
(in percent)



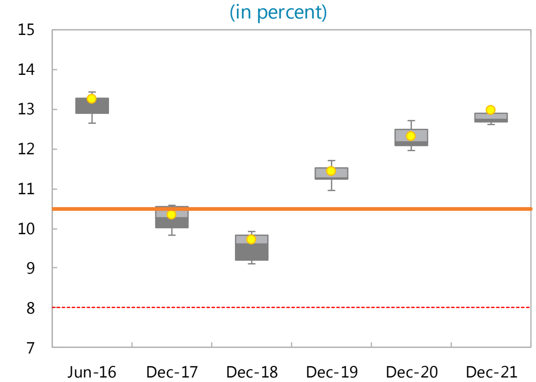
No bank breaches the CET1 minimum ratio or the capital conservation buffer over the stress test horizon…

CET1
(in percent)



…but most banks breach their capital conservation buffer for total regulatory capital at the low point of the stress.

CAR
(in percent)



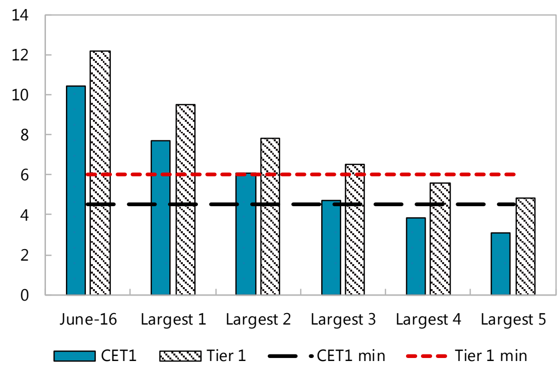
Source: IMF staff estimates. The sample of banks included the five major New Zealand locally incorporated banks. Boxplots include the mean (yellow dot), the 25th and 75th percentiles (grey box, with the change of shade indicating the median), and the 10th and 90th percentiles (whiskers). The dashed line indicates the minimum capital regulatory ratio. The solid line includes the capital conservation buffer.

Figure 9. New Zealand: Sensitivity Tests

Bank capital ratios are relatively more sensitive to pressures on net interest margins and concentration risk.

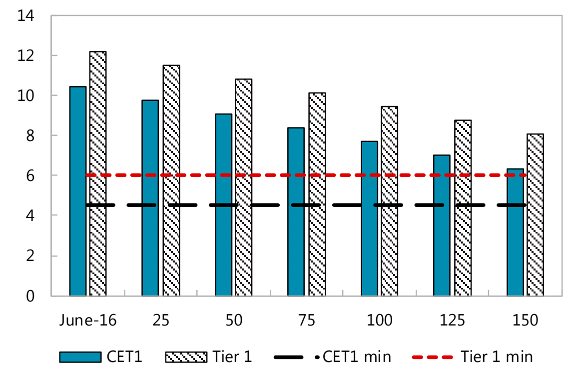
The simultaneous failure of the three largest counterparties would push capital ratios toward their regulatory minimum.

Credit Concentration Test
(in percent of capital)



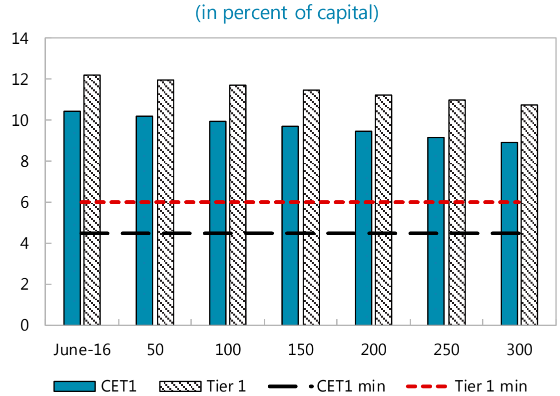
A prolonged compression of net interest margins by 150 bps would erode capital buffers by around 400 bps.

NIM Compression
(in percent of capital)



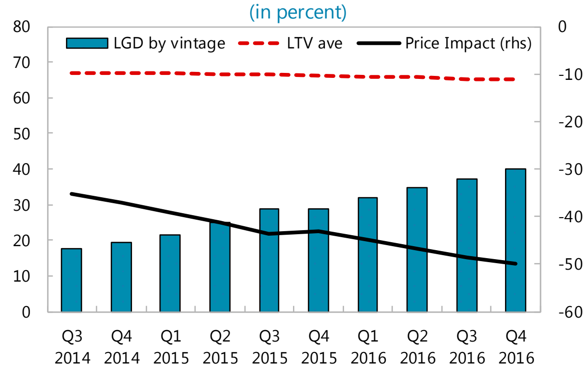
Capital ratios are resilient to sharp increases in policy rates.

Repricing Risk
(in percent of capital)



A 50 percent fall in residential real estate prices combined with a forced sale discount of 25 percent, would widen LGD ratios to under 30 percent despite improved LTV ratios.

Impact on LGD
(in percent)



Source: IMF staff estimates.

15. **The top-down liquidity stress tests were undertaken using Basel III liquidity standards and the current RBNZ regulatory framework.** The team and the RBNZ conducted a range of Basel III quasi-LCR tests over 2 different horizons and 3 separate scenarios.[8] These scenarios included the

---

[8] To populate the data in the LCR liquidity stress testing tool, the RBNZ's liquidity survey was used to compute the 30-day and 1-week maturity mismatch ratio. RBNZ conducted a mapping of LCR categories for level 1 and level 2 of High Quality Liquid Assets (HQLA), various categories or types of liabilities and off-balance sheet for cash-outflows and several categories of contractual receivables for cash-inflows. The mapping was conducted on a best effort basis, but in some categories the matching might not be perfect.

standard 2013 LCR prescribed haircuts, rollover and run-off rates, and 2 additional scenarios tailored to New Zealand banks, which are more severe than those prescribed by the Basel III regulatory framework: 30-day quasi-LCR test, and 5-day quasi-LCR test run on three stress scenarios (namely "LCR scenario," "New Zealand retail" scenario, and "New Zealand wholesale" scenario).[9] The liquidity stress tests under the RBNZ's liquidity regulatory framework included: (i) one-month mismatch ratio to assess banks' resilience to a withdrawal of funding; and (ii) the CFR to evaluate banks' reliance on short-term wholesale funding.

16. Despite significant reliance on wholesale funding, New Zealand banks' funding structure appears resilient, partly due to strengthened regulatory and supervisory standards since the last FSAP. Originally set at 65 percent in 2010, banks are now required to have at least 75 percent of their loan portfolio financed using core funding. The weighted average CFR for the banking system was 85 percent in August 2016. Banks would have sufficient liquid buffers to withstand a 1-week and 30-day liquidity stress scenario. Under Basel III assumptions, the 30-day weighted average LCR ratio was 113 percent in August 2016. Under the "New Zealand retail" scenario, the aggregate LCR ratio fell to 73 percent with 6 banks falling under the threshold. While the aggregate LCR ratio improves under the "New Zealand wholesale" scenario to 78 percent, the aggregate liquidity is larger at 2.8 percent of the total assets as this scenario hits the major banks harder (Figure 10). These tests should be interpreted with caution as they do not stress the effectiveness of cross-currency swaps used to hedge wholesale funding issued in foreign currency.

C. Contagion Analysis

17. A contagion module assessed the potential for distress in a financial firm to create risks to overall financial stability. The transmission of distress from an individual firm to the broader banking sector is spread through bilateral exposures and market contagion. Network analysis is used to examine bilateral exposures, where counterparties with significant exposures to the failing firm may suffer material losses resulting in their inability to satisfy their obligations spreading distress to other parts of the financial system in the form of cascading defaults down the credit chain.[10] Under market contagion, market participants' revise their expectations on the solvency of other firms exposed to the firm in distress, conditional on the broader economic and financial environment.

[9] The "New Zealand retail" scenario features run-off rates for stable (unstable) deposits of 10 percent (15 percent) rather than 5 percent (10 percent) under Basel LCR. The run-off rate for undrawn but committed credit and liquidity facilities for retail and SMEs (corporates) rises from 5 percent (20 percent) to 10 percent (40 percent), among other shifts to draw-down rates. Under the "New Zealand wholesale" scenario, the run-off rate for uninsured corporate deposits increases from 40 percent to 100 percent, operational deposits generated by clearing and custody are drawdown at a 75 percent rate rather than 25 percent, and secured funding backed by Level 2B assets runs at a rate of 100 percent over the Basel 50 percent mark, among other changes to Basel rollover rates.

[10] The network analysis is based on Espinosa, M. and Sole, J. (2010), "Cross-Border Financial Surveillance: A Network Perspective", IMF Working Paper 10/15.

18. The network analysis captures the potential for cascading defaults throughout the New Zealand interbank market. It includes a credit shock simulation whereby one credit counterparty defaults at a time. It also includes a funding shock simulation whereby the default of a funding counterparty might induce a liquidity shortfall. The potential fire-sale of assets in a stressed market was linked to the LCR prescribed haircuts for liquid assets. The analysis was based on RBNZ's large exposure data template.[11] The coverage of the network analysis included all 15 locally incorporated banks.

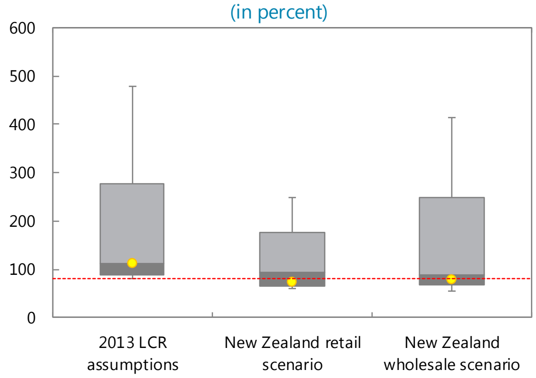
Figure 10. New Zealand: Liquidity Stress Test Results

New Zealand banks are resilient to sizable withdrawals of funding – both using NZ-specific metrics, as well as when applying a quasi-LCR stress test.

The majority of banks would comply with the transitional 80 percent 30d LCR threshold under Basel III, but the size-weighted average quasi-LCR falls below this mark under the retail and the wholesale scenarios.

30d Quasi-LCR Test

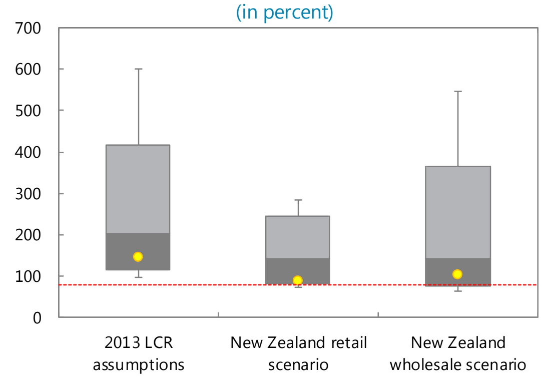
(in percent)



Results improve under the 5d quasi-LCR test, with no bank falling below the 80 percent threshold, and just a small liquidity shortfall of 1.3 percent of assets under the wholesale scenario.

5d Quasi-LCR Test

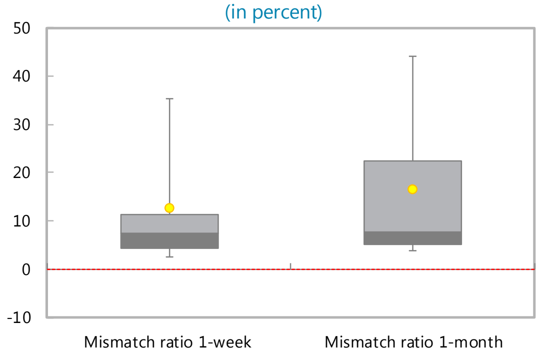
(in percent)



All banks comply with the RBNZ's liquidity requirements, i.e. the 1-week and 1-month mismatch ratios…

RBNZ Mismatch Ratio

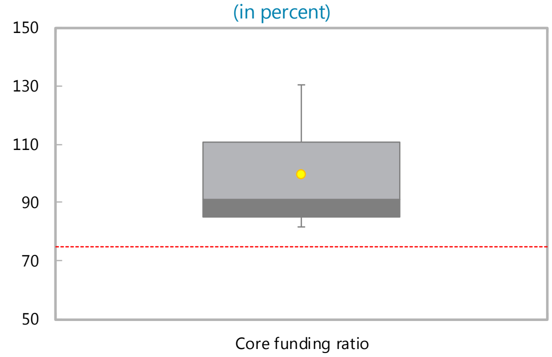
(in percent)



…as well as the core funding ratio.

RBNZ Core Ratio

(in percent)



Sources: RBNZ and IMF staff estimates.

Note: The sample of banks included in the liquidity stress test includes all fifteen New Zealand locally incorporated banks. Boxplots include the mean (yellow dot), the 25th and 75th percentiles (grey box, with the change of shade indicating the median), and the 10th and 80th percentiles (whiskers) for the quasi-LCR ratios, and the 10th and 90th percentiles for RBNZ liquidity regulatory ratios. The red line indicates the lowest acceptable ratio value (hurdle rate).

[11] The database covers the 10 largest bank and nonbank financial institution exposures, as well as the 10 largest other exposures and any exposure larger than 10 percent of CET1 capital. The network analysis thus captures any significant cross-sector exposures.

19. The risk of contagion from a bank default through interbank exposures appears to be limited, but results need to be interpreted with caution. Interbank exposures are relatively small compared to banks' capital levels. Under the baseline calibration there are no banks whose default would lead to consecutive defaults of other institutions. A loss of the 3 largest cross-bank exposures leads to a cascade default of one locally-incorporated bank, while a loss of three largest corporate and exposures to other nonbank financial institutions results in cascade defaults of four banks. However, if LGD on defaulted exposures increases to 90 percent, the simulated default of one bank leads to a cascade default of 1 more bank and 5 institutions default following the loss of their 3 largest exposures. While the results are sensitive to changes in the LGD assumptions, they are robust to changes of the discount on asset sales and of the share of non-replaceable funding. These results need to be interpreted with caution, as fire-sale assets are calibrated exogenously using LCR prescribed haircuts, so spiral effects from deeper discounts in prices of non-liquid assets are not modeled explicitly. Moreover, contagion effects from a bear-market sentiment to banks following similar business models to the bank in distress are excluded.

20. The analysis of market contagion is complementary to the network analysis. Contagion effects are measured using market-implied asset returns capturing spillovers unrelated to credit exposures (i.e., due to common exposures or driven by banks with similar business models). In addition, systemic contagion can be transmitted by internationally active banks. The analysis is performed for Australian banks due to the lack of market data for New Zealand subsidiaries. For the large Australian banks, instability can spread from their global counterparts, given their active presence in offshore debt markets and derivative markets. While the analysis is conducted at the consolidated level, distress is expected to trickle down at the subsidiary level due to the tight correlation between Australian banks' equity returns and New Zealand banks' funding spreads. Lower equity returns at the consolidated level are associated with widening funding spreads for New Zealand banks in wholesale markets (Figure 11).

21. The Conditional Value at Risk (CoVaR) framework is used to assess whether individual distress could pose a material risk to financial stability.[12] Although there is not a unique definition of financial distress, a firm is assumed to be in distress when it reaches its Value at Risk (VaR). The quantification of contagion effects depends on the definition of the financial system and the financial conditions under which a firm's failure arises. Two financial systems were defined: (i) a global banking system covering the 30 G-SIBs as of November 2015,[13] and (ii) an Australian banking system including the four largest Australian banks. The set of conditioning state variables is guided by their role in affecting global returns in financial markets.

22. Inward cross-border spillovers from distressed G-SIBs to New Zealand banks are significant. The analysis suggests that Australian banks have become increasingly exposed to European banks. The transmission of distress is more severe to tail equity returns than to

---

[12] Lopez-Espinosa, Moreno, Rubia, and Valderrama, (2012) "Short-term wholesale funding and systemic risk: A global CoVaR approach", *Journal of Banking and Finance* 36, 3150–3162.

[13] Calculations are performed over 28 G-SIBs due to data limitations. Group BCPE is not listed and Agricultural Bank of China market-based data starts only in July 2010.

market-implied asset returns during stressed times due to fire sales effects and contagion in funding costs. The reverse is true during calm periods suggesting flight-to-quality rebalancing of investors' portfolios.

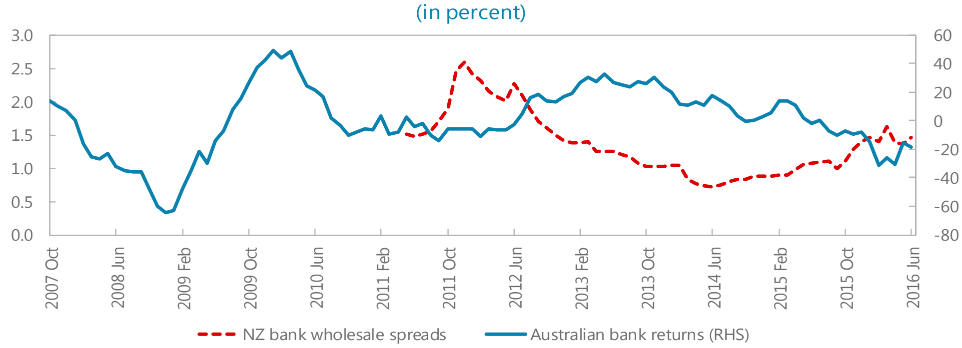
Figure 11. New Zealand: Cross-Border Spillovers

Inward cross-border spillovers from distressed G-SIBs to New Zealand are significant.

There is high negative correlation between Australian banks' equity returns and their New Zealand subsidiaries' wholesale funding spreads.

Australian Banks' Returns and New Zealand Banks' Spreads[1]

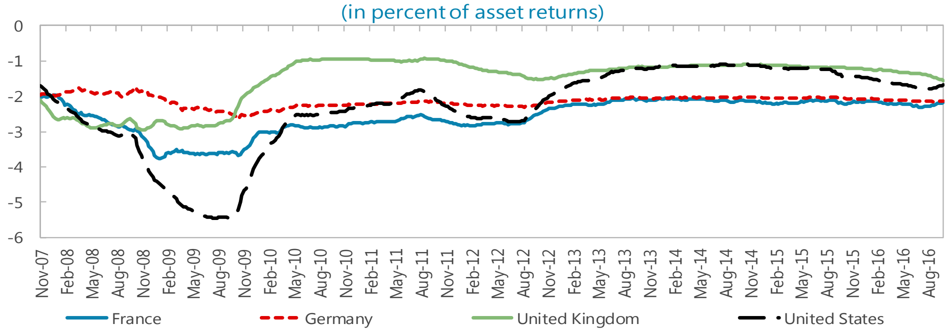
(in percent)



European banks have become relatively more systemic to Australian banks.

Contribution to Systemic Risk in Australia

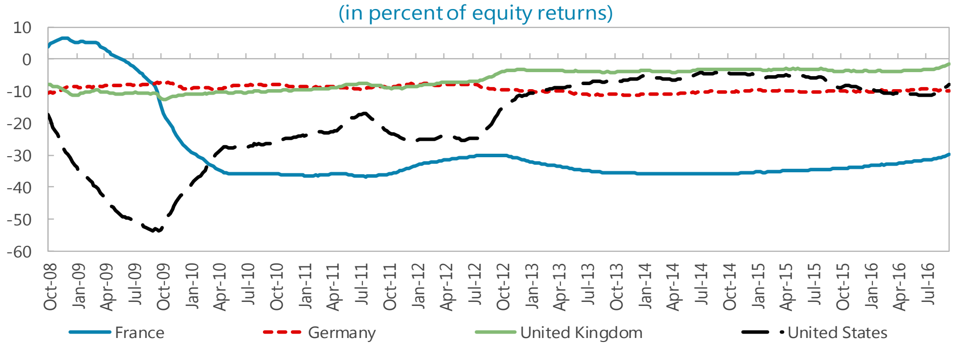
(in percent of asset returns)



This result is confirmed when systemic risk is measured by the contribution to distressed equity returns.

Contribution to Systemic Risk in Australia

(in percent of equity returns)



Sources: Bloomberg, RBNZ data, IMF staff estimates.

[1] The blue line shows monthly-averaged weekly equity returns of the four big Australian banks weighted by their asset size. The red line shows the monthly average wholesale funding spreads in domestic and offshore markets for New Zealand banks.

FINANCIAL SECTOR OVERSIGHT

A. Macroprudential Framework

23. New Zealand has a good institutional framework for macroprudential policy, but decision-making procedures could be strengthened. There is a clear mandate for financial stability, operationally clarified by a Memorandum of Understanding (MoU) signed between the RBNZ and the MoF. The MoU, however, created a narrow framework, limiting actions to banks and including just four instruments in the toolkit. This has constrained RBNZ's macroprudential actions, should risks arise which require a different set of tools. To amend the toolkit, the RBNZ needs to obtain the agreement of the MoF, but procedures for that are not transparent to the public. To make the process more transparent, the RBNZ's advice and the opinions of the MoF on the need for adjustment should be publicly disclosed within an appropriate timeframe.[14] Furthermore, a more regular review of the macroprudential toolkit prescribed in the MoU than the current five years (e.g., biannually) may be useful. In addition, timely prudential action requires a decision-making processes free from financial industry and political pressures. The accountability framework should allow effective accountability without jeopardizing the integrity and independence of the macroprudential decision-making process, reviewing actions already taken but also safeguarding against influence on actions in advance.

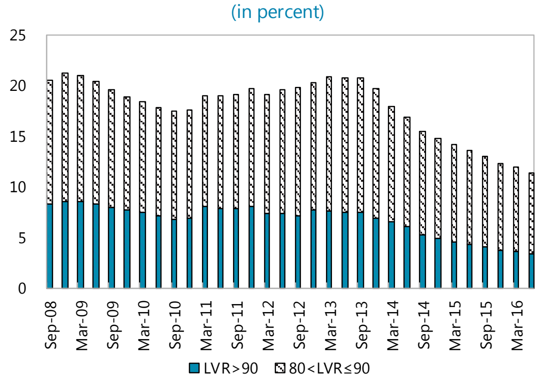
24. New Zealand has actively used macroprudential tools to address systemic risks in the housing sector, but more may be needed (Figure 12). In mid-2013, rules were introduced requiring banks to reduce the volume of high-LVR lending to below 10 percent of new commitments. Real estate prices and credit expansion continued to grow strongly, particularly in the Auckland area, leading the RBNZ to tighten further the LVR restriction to Auckland investors at end-2015. Despite the financial stability benefits generated by the reduction of the LVRs, growth in house prices and credit has remained elevated, reducing the resilience effects of the framework and causing the RBNZ to extend investor restrictions nationwide starting in October 2016. The new restrictions eliminate the regional differences and impose tighter limits on investor loans and owner-occupier lending. Nevertheless, imbalances in the sector still generate systemic risk: long-term declining rental yields and a still rising price-to-income ratio suggest overvaluation, and household debt-to-income has edged up further. The persistence of imbalances suggests that the potential benefits from LVR measures have reached their limits and other tools are needed.

[14] The Treasury might need to develop additional analytical capacity on financial stability issues in order to better assist the Minister in this task.

Figure 12. New Zealand: Housing Sector Risks

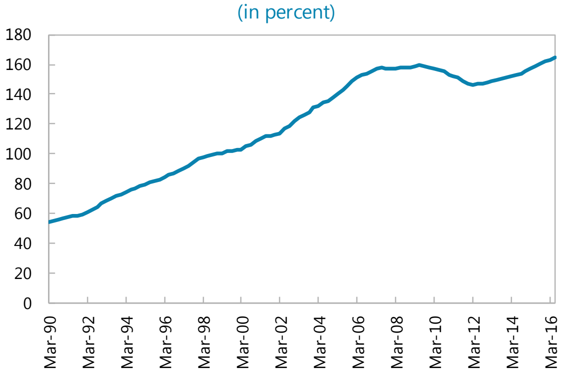
LVR restrictions imposed by the RBNZ have reduced the share of high LVR mortgages…

Share of High LVR Mortgages
(in percent)



…but imbalances remain, such as the record high household indebtedness.

Debt to income ratio
(in percent)



Sources: NZ authorities and IMF staff estimates.

25. Since housing loans represent more than half of banks' assets, limits on debt-to-income could usefully become part of the macroprudential toolkit. It is still not possible to assess the full effects of the October 2016 LVR adjustments in the housing market. If the measures do not substantially reduce current risks, as the recent experience with LVR measures seems to suggest, authorities should complement the current measures with Debt-to-Income (DTI) limits. The RBNZ is discussing with the MoF the introduction of DTI limits in the macroprudential toolkit. Caps on DTI (or measures of similar nature such as debt servicing to total income (DSI)) can usefully complement the LVR restrictions and would help addressing remaining risks and targeting more directly risks derived from high household indebtedness. Considering that risks can build up relatively quickly, the expansion of the macroprudential toolkit is an important precautionary measure for the RBNZ to be ready to respond should the need arise. The reliance on multiple tools may also reduce distortions when compared to the use of one conservatively calibrated tool. First-time home buyers, for instance, tend to be more affected by LVR restrictions because they do not have the equity gain arising from the increase in house prices, though they tend to be in a relatively better position in terms of servicing debt in relation to investors. In addition, authorities are encouraged to maintain efforts to reduce distortionary tax benefits and facilitate housing supply.

26. The concentration of the financial sector generates structural vulnerabilities that need to be addressed and capital buffers should reflect this systemic risk. Direct exposures among the four largest banks are relatively limited, but the potential for spillovers is elevated. One of the important channels for spillovers is the reliance on overseas funding, which could lead to a tightening in the system in case of problems in one bank. Furthermore, due to their size, the deleveraging or fire sales of assets by one bank could contaminate the whole system due to the depression of asset values and economic activity. The RBNZ have been making efforts to increase the effectiveness of bank resolution regimes to better manage these risks should they crystalize.[15]

[15] The outsourcing policy requires large banks to have the legal and practical ability to control and execute core outsourced functions.

Nevertheless, the largest banks are systemically important and should be required to hold capital commensurate with the magnitude of the externalities of any future distress. It is recommended that the current review of capital requirements being undertaken by the RBNZ should increase capital buffers to reflect the prevalence of SIFIs in the financial system.

B. Banking and Insurance

27. The RBNZ has a non-intrusive approach to supervision and does not conduct on-site inspections to verify and determine compliance with regulations and guidelines or the effectiveness of management, systems, and data.[16] The RBNZ's supervisory approach relies on three pillars: market discipline, based on public disclosure; self-discipline, based on sound corporate governance and (for banks) directors' attestations of public information; and regulatory discipline, based on a simple and conservative regulatory framework, off-site monitoring, and disciplinary actions. Enhanced formal and informal cooperation with APRA reflects the unique interdependence of the two financial systems (APRA conducts a more intrusive supervisory approach, from a home perspective, towards the New Zealand operations of Australian banks and insurers).[17]

28. Since the last FSAP, the RBNZ has increased attention to strengthening regulatory discipline, but the approach still has shortcomings. For banks, the RBNZ has adopted Basel II and III capital standards, introduced its prudential liquidity policy ahead of Basel III, issued additional supervisory guidance and increased regulatory reporting. The RBNZ took on prudential supervision of the insurance sector under legislation enacted in 2010, broadly applying the three-pillar approach developed for banking and developing a set of prudential requirements. In 2016, the RBNZ began the final stage of a multi-year upgrade of its supervisory reporting from banks, but improving supervisory data collection from insurers is a particular need. Conduct supervision has been enhanced through broadening the scope of FMA responsibilities to include insurance products, but there are significant gaps in the framework for insurance conduct regulation.

29. The overall framework for prudential regulation is well-developed, though there is scope to extend the powers of the RBNZ and develop enforcement practices. While the RBNZ has extensive powers in relation to licensing, supervision and enforcement, its effectiveness would be strengthened with broader powers to impose binding standards in all areas of prudential regulation (powers are limited to solvency and fit-and-proper requirements). The framework for licensing of overseas insurers (branches) could be strengthened to ensure the RBNZ assesses the equivalence of foreign regulatory regimes. Supervisory engagement, particularly with large institutions, needs to move towards communicating supervisory expectations and requiring action.

[16] For a historical overview of the Reserve Bank's approach to prudential supervision, including the evolution of the three pillars, see: Chris Hunt (2016) "A short history of prudential regulation and supervision at the Reserve Bank", Reserve Bank of New Zealand *Bulletin*, 79(14), August.

[17] The Trans-Tasman Council on Banking Supervision, established in 2005, provides the general framework for cooperation and collaboration among the relevant authorities. Several reciprocal legal provisions also reflect the need for enhanced cooperation. *Ad-hoc* MoUs complement formal arrangements.

30. While RBNZ staff are highly competent, insufficient resources are an impediment to enhancing the effectiveness of the three pillar approach, even if the low-intensity approach is retained. The competence and professionalism of staff is recognized by market participants, but the RBNZ operates under specific resource constraints and numbers are insufficient. Strengthening the regulatory discipline pillar will require increased resources, including technical capacity to develop prudential requirements and guidelines, deepen the analysis that supports the supervisory ratings, and to develop a supervision policy that reflects a balance between risk and efficiency costs of supervision. The FMA, in turn, needs to build more insurance expertise to promote adequate conduct supervision of the sector.

31. The non-intrusive approach to supervision of the RBNZ stands in contrast with the Basel Core Principles for Effective Banking Supervision (BCP) and Insurance Core Principles (ICP) and can impair the effectiveness of market and self-discipline (Annexes V and VI)**.** The effectiveness of the RBNZ approach—and its convergence with the BCP and ICP—is hindered by: (i) the absence of supervisory testing to determine compliance and the effectiveness of risk management, and (ii) limited supervisory guidelines and regulations that could serve as benchmarks for the three pillars. While policy implementation will take significant time, there is a need to close the most significant gaps by:

- ***Issuing enforceable supervisory standards on key risks.*** Such standards, tailored to reflect the complexity and risk profile of the institutions and the system, would provide transparency to market participants regarding the supervisor's expectations in the areas being attested to by directors. Standards also help support supervisory judgment to implement preventive enforcement. Regulation of governance, risk management and controls and undertaking risk assessment in these areas need to be strengthened to promote the effectiveness of governance in practice.

- ***Reviewing the enforcement regime to promote preventive action.*** Compliance with the guidelines issued by the RBNZ should serve as evidence of prudent banking and insurance. Also, in the case of banking, the legal need for the consent of the MoF to issue directions in cases not involving a systemic impact should be removed.

- ***Initiating on-site programs to test the foundation of the three-pillar approach and directors' attestations.*** The RBNZ has performed off-site thematic reviews to profile banks' risk management in areas of concern, such as dairy and real estate. The off-site process (PRESS and iPRESS) rates financial institutions based on their risk profile (and their systemic impact). The on-site activity, which could be undertaken by the staff of RBNZ or by external experts, should be targeted to areas of high risk, to issues identified through off-site analysis, or to determine how banks and insurers are managing new risks and products. It is also important to test the accuracy of the regulatory reports.

- ***Clarifying the responsibilities of the Treasury and RBNZ for financial sector issues, reinforcing the RBNZ's role as prudential regulator and supervisor.*** Unclear boundaries could potentially compromise RBNZ independence and limit its ability to fulfill its supervisory role. Further delineating the boundaries with the Treasury would enhance the ability of the RBNZ to undertake effective supervision by responding swiftly to ongoing and emergent situations (Appendix V).

32. **While the RBNZ has a close home-host relationship with APRA, further strengthening the collaboration with APRA would help support the key role played by home-country supervision in New Zealand.** The Australian presence has been a source of strength, including the parental support received following the Canterbury earthquakes. The low intensity approach of RBNZ is partly mitigated by APRA's intensive home-supervision. The RBNZ is encouraged to be more active in the joint on-site visits, focusing on work that serves the objectives of home and host supervisors. This would help prepare both supervisors for effective coordination also in times of stress. In addition, the interdependence also exposes New Zealand to shocks originating in Australia (there is a particular exposure in the case of life insurance because of the significant Australian presence in branch form, the exemption given to branches from many RBNZ prudential requirements, and the direct dependence on Australian insolvency law and practice in case of failure).

C. Capital Markets

33. **The capital markets regulatory framework has gone through a major overhaul since the last FSAP, and the supervision of the asset management industry started only recently.** Many capital market players were not licensed or supervised at the time, including asset managers. Regulatory reform created the FMA as conduct regulator of the financial sector and determined a licensing regime for managers of Managed Investment Schemes (MIS). Retail offers of MIS are now regulated and subject to governance, disclosure and eligibility requirements. The FMA completed initial licensing of MIS managers and is refining a risk-based approach to supervision of the sector.

34. **Private entities, called Financial Markets Supervisors (Supervisors), are now licensed and are expected to play a role in the monitoring of MIS managers.** Under the old regime, trustees were appointed to act on behalf of the unit holders of investment funds. Under the new regulatory framework, MIS offered to retail investors are required to appoint a Supervisor. These are private companies licensed by the FMA to carry out certain statutory supervisory activities, including primary oversight of significant features of the MIS framework, such as monitoring the adequacy and use of asset valuation policies, custody, leverage and liquidity risk management. There are challenges and benefits from leveraging off the work of Supervisors and the FMA is encouraged to keep the risks and appropriate responses under constant review. The FMA needs to ensure that it has oversight of areas relevant to the stability of the sector, where more technical expertise and a macro perspective are required, and ensure the quality of Supervisors work.

35. **The overall regulatory framework for asset management is well developed, but there is scope to consider broadening its perimeter.** The provision of custody services does not require a license in New Zealand and, therefore, falls outside of direct supervision by the FMA—or by any other authority. The government could usefully require that these entities be subject to licensing

and supervision. Also, wholesale asset management activities are not covered by the FMC Act. This sector may not be significantly larger than the retail sector, but there is insufficient data to assess its risks.

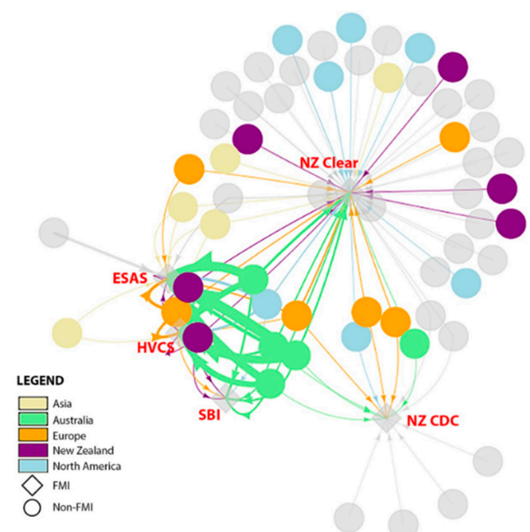
D. Financial Market Infrastructures

36. FMIs are heavily dependent on the four largest banks and a potential failure of one of the main banks would put severe stress on all FMIs and the market as a whole (Box 1)**.** In this context, the reform of the regulatory and oversight framework for FMIs is welcomed. The RBNZ and the FMA, which are jointly responsible for the regulation and oversight of FMIs, currently lack sufficient legal powers to identify and address risks building up in FMIs, partly because the regime is voluntary and the authorities do not have the appropriate toolkit. Proceeding with the proposed reforms will make New Zealand better aligned with international standards. The proposed regime will provide the authorities with legal powers for the oversight of systemically important FMIs, a gradual range of enforcement powers, and crisis management and regulatory powers. Implementation of the new regime will need more oversight resources than those currently planned.

Box 1. Network Analysis of FMIs and their Members

The landscape for FMIs is densely interconnected, with many FMIs having the same members. Members can be banks, other financial institutions and government agencies. High interconnectivity suggests that financial or operational failures of a given FMI, or a critical member, could quickly propagate through the financial system if proper safeguards are not in place.

The figure in this box shows different clusters within the network. The largest overlap of members exists between ESAS, SBI, and HVCS. NZ Clear and NZCDC largely form their own "network clusters." Banking groups are most heavily centered in the ESAS/SBI/HVCS cluster, but are highly connected to NZ Clear as well. By contrast, nonbank financial groups are largely uninvolved with ESAS/SBI/HVCS but are connected to NZ Clear and NZCDC.



The size of the arrows between the FMIs and their members represents the settlement volume. Banking groups are the dominant share of New Zealand FMI transactions. Nonbank financial groups and domestic government bodies are the next most active sectors, but their share of transaction volume is low by comparison (measured in NZD). Overall, membership in New Zealand FMIs is dominated by Australian banks, followed by New Zealand banks. Three Australian banks have a membership in all FMIs, whereas the four Australian banks represent 80 percent of total settlement volume. Although trading volumes of New Zealand members are lower, they are highly connected with all domestic FMIs.

Source: IMF staff.

37. Adopting international principles for FMIs in secondary legislation, formalizing supervisory practices, and increasing staff resources are important. Detailed requirements support FMIs, their owners, and operators, in understanding oversight expectations and provide guidance in the drafting of public self-assessments, increasing transparency. In addition, although the quality of the oversight staff is high, their low number results in an 'ad hoc' approach to supervision. Supervisory staff does not conduct supervisory standard assessments, and has limited time for the analysis of broader themes that are relevant for financial stability, such as cyber resilience of FMIs, crisis management arrangements and risks related to the use of overseas FMIs. Thus, significantly stepping up resources is key. Furthermore, the FMA is encouraged to publicly disclose their role and responsibilities in relation to the oversight of domestic and foreign FMIs.

E. Financial Integrity

38. Since the 2004 FSAP, the AML/CFT regime of New Zealand was assessed by the Financial Action Task Force (FATF) and strengthened by the authorities. The authorities notably amended the AML/CFT Act addressing the main deficiencies identified by the FATF, and assessed the country's ML/TF risks. Professional services/gatekeepers and legal persons with complex ownership structures were identified as highly vulnerable to ML, with drug crimes, fraud, tax evasion and foreign predicate crimes generating the most significant levels of illicit proceeds. The authorities are taking steps to align the legal framework with the FATF 2012 standard by mid-2017, updating the ML/TF risk assessments, and preparing for the next FATF assessment scheduled for 2019.

39. While significant progress was made, shortcomings remain and further strengthening the AML/CFT regime is necessary. Several designated non-financial businesses and professions are not fully subject to AML/CFT requirements. In particular, lawyers and accountants (who perform customer due diligence obligations on behalf of more than 40 percent of financial institutions) should be subject to AML/CFT measures and supervision in line with the standard – although the Government has recently introduced legislation to address the issue. Moreover, additional measures should also be taken so that the authorities have timely access to up-to-date beneficial ownership information of legal persons and arrangements.

F. Correspondent Banking Relationships

40. New Zealand banks have closed accounts of Money Transfer Operators (MTOs) and the authorities have taken an active approach to help enhance remittance corridors. Average transfer costs are trending up and available data suggests that the MTO market has become more concentrated, with the volume of remittances to Small Pacific States remaining broadly stable over the last few years. The RBNZ issued a statement in 2015 clarifying Anti Money Laundering (AML) obligations and advocating a measured risk management approach by banks. In addition, government agencies are providing technical assistance to Small Pacific States, including on combating money laundering and the financing of terrorism (ML/CFT), modernizing payments infrastructure in several islands, and supporting innovative remittance transfer solutions.

CRISIS MANAGEMENT

41. There are several unique considerations on contingency planning and crisis management arrangements in New Zealand. These include the minimally resourced approach to supervision and emphasis on self-discipline and market discipline, strong interdependence with Australia, and a long-standing decision not to introduce deposit insurance arguing that it would weaken self-discipline by banks and market discipline by depositors.[18] The Council of Financial Regulators (CoFR), comprised of the FMA, the RBNZ, the Treasury, and the MBIE (portfolio responsibility for the FMA), is an advisory and coordinating body.

42. Domestic crisis managements arrangements should be strengthened and greater clarity is required on the decision-making process for dealing with a crisis and exercise of resolution powers. The detailed planning undertaken in trans-Tasman work-streams must be supported by a similar domestic process to ensure logistics and communication plans are pre-positioned. Work on preparing procedural guidance for the use of resolution tools needs to be completed, as does the development of rosters of potential statutory managers and staff from government, agencies and the private sector that could be mobilized to deal with a crisis. In addition, the RBNZ Act and Insurance (Prudential Supervision) Act 2010 (IPSA) should be revised to require post-reporting by the RBNZ on performance against resolution objectives to enhance accountability. The RBNZ Act should be revised to have the same power as in the IPSA to apply for the appointment of a liquidator. A special resolution regime paralleling that in the IPSA should be introduced for nonbank deposit-takers. Most importantly, the RBNZ should be the sole resolution authority, with clear mandates and accountabilities, requiring the approval by the MoF only for resolutions with fiscal or systemic implications. The Treasury's role should focus on whether and how to provide a guarantee or public funds in support of a resolution recommended by the RBNZ, and provision of advice to the Minister in this respect.

43. From June 2013, large banks have been required to comply with the RBNZ's OBR Pre-positioning Requirements Policy. The OBR was developed to provide a credible alternative to the use of public funds when resolving systemically important banks. OBR does not actually resolve a failing bank, but rather is a tool to take control of the institution and continue operations while seeking a resolution. The goal of the OBR is to allow a distressed bank to continue its core banking services to retail customers and businesses, while placing the cost of a bank failure on the bank's shareholders and creditors rather than the taxpayer. All banks with over NZD 1 billion of deposits are required to participate. There are many complexities to be addressed if the OBR is to be seen as a credible alternative to a bail-out. These arise from policy choices with respect to the RBNZ's supervisory approach and absence of one of the usual safety-net components, deposit insurance, absence of some direct legal powers, and the challenges of dealing with any large failing institution.

[18] In 2008, amid the GFC, a temporary retail deposit guarantee scheme was introduced and it was wound down in December 2011.

44. The introduction of a deposit insurance framework is the first-best element to complete the financial safety net. OBR involves freezing a portion of balances—including deposits—to cover any losses beyond what the bank's capital position could absorb. As the authorities have reiterated their long-standing opposition to deposit insurance, it is recommended, as a second best option, to introduce limited deposit preference to provide a clear legal foundation for a *de minimis* exemption from freezing and haircutting deposits in OBR. The RBNZ public consultation has suggested a *de minimis* exemption of NZD 500, but it is recommended that a higher amount, established in legislation, would provide some of the benefits of deposit insurance – such as mitigating against runs and reducing the political pressure to bail out depositors. Authorities' analysis suggests that NZD 10,000 per depositor would exempt the full amount of 80 percent of the number of bank deposits, while still leaving the bulk by value of deposits at risk.[19] Moreover, the issuance of additional capital instruments with write-down and convertibility features could be considered, to provide a further buffer of bail-inable liabilities. However, caution is needed as the majority of these instruments have been purchased by individual investors who may not fully appreciate the assumed risks.

45. Further work on the trans-Tasman framework for assessing systemic importance and discussing coordinated responses would help support decision-making in an actual crisis. There is no ex-ante consensus on the single-or multiple-point of entry resolution strategies. While there has been progress on a framework for assessing systemic importance, and discussions on coordinated responses, the authorities involved have national mandates and accountabilities, which may constrain their ability to agree in advance on measures to deal with a potential crisis whose precise details are unknown. In addition, the Trans-Tasman MOC should be expanded (and renamed) to include insurance and FMIs.

[19] This is well below the two to three times per capita GDP rule of thumb commonly used in determining deposit insurance limits, and reflects the fact that most New Zealanders do not accumulate large savings in bank deposits. Deposits in registered banks and equity in investment fund shares represented about 60 percent and 23 percent, respectively, of household financial assets as of June 2016.

Appendix I. New Zealand: Implementation Status of 2004 FSAP Recommendations

Recommendations	Status
Disclosure-based regime	Partially implemented
Maintain the quality, scope, and timeliness of disclosure to ensure it continues to meet best international practice	The RBNZ implemented Pillar 3 (along with the rest of Basel II) in early 2008 by updating and expanding the existing capital adequacy disclosure in their disclosure regime. However, this was done in a slimmed-down version, providing what was judged to be sufficient information for the New Zealand market. There have been several add-ons to Pillar 3 in recent years, which the RBNZ has mostly not implemented because they do not consider them material for New Zealand banks or particularly meritorious (e.g. banks' remuneration policies and practices). Some changes were made in early 2013 to reflect Basel III updates (covering the new classification of capital instruments, more detail on their terms etc., and the new types of capital ratio including the CET1 ratio and the buffer ratio). The regulatory stocktake exercise currently being undertaken by RBNZ is looking at options to improve the disclosure regime. As part of this exercise, the main change being proposed is to introduce a simple and accessible quarterly 'dashboard' that facilitates comparison across banks. The dashboard would present key financial information on all locally incorporated banks in a standard format in one place on the RBNZ website.
Importance of independent directors	Implemented
Fit-and-proper criteria should continue to apply in a comprehensive manner. The RBNZ could offer independent bank directors the possibility of discussing areas of concerns without absolving directors of their statutory responsibilities	In June 2010, the RBNZ introduced new corporate governance requirements for New Zealand incorporated registered banks (which came into effect in 2012). The changes were broadly designed to strengthen the independence of locally incorporated foreign-owned banks (vis-à-vis their parents). Post-GFC, the RBNZ has also significantly increased its engagement with independent directors.
Surveillance	Partially implemented
For banks, monitor more regularly liquidity and large exposure early warning indicators. Consider commissioning third-party reports and establish a small specialist team to make focused, on-site visits on particular aspects of credit and operational risk	The RBNZ elected not to establish a small, specialist in-house team to make focused on-site visits on particular aspects of credit and operational risk. In 2010 the RBNZ introduced a prudential liquidity policy (BS13) to address funding liquidity risks (including the relative reliance of New Zealand banks on short-term wholesale market funding). The RBNZ also started collecting private (regulatory) data on a monthly basis, on any 'large exposures' that are in arrears (since late 2008). This regulatory data collection is also used to ensure that banks are tracking these exposures on an on-going basis. The new regulatory report, which will apply to all registered banks, will require banks to list their largest credit exposures, irrespective of their credit ratings.

Recommendations	**Status**
Crisis management and bank resolution	Partially implemented.
Review possible approaches to bank resolution, and the operational and legal consequences that might arise, with a view to establishing internal operational guidelines.	The Reserve Bank Amendment Act of 2003 introduced several changes to RBNZ powers to respond to a bank in distress or a failure situation. These changes removed the need for the RBNZ to consult with a bank before giving directions to a bank, or to remove, replace or appoint directors (but, as before, these powers still require the consent of the MoF). The 2003 Amendment Act also introduced changes to the appointment of a statutory manager (for a specified period as opposed to indefinitely as previously). In early 2005 a trans-Tasman Council on Banking Supervision was formed to help enhance the coordination of home-host regulatory issues between the New Zealand and Australia. In 2006, another Amendment Act formally implemented the Government's response to various recommendations of this new Council. The RBNZ is now required to implement its powers vis-à-vis the banking system in such a way as to avoid any detrimental impact on financial system outcomes in Australia, to the extent that is reasonably practicable. A reciprocal provision was included in Australian legislation. In addition, any statutory manager appointed to oversee a troubled financial institution is required to consult with APRA. In addition, a *Memorandum of Cooperation on Trans-Tasman Bank Distress Management* was signed in 2010. The Memorandum is designed to help assist participants to reach a coordinated response to financial distress in any bank or banking group that has significant operations in Australia and New Zealand.[1] The Memorandum does not pre-commit to, or rule out, any particular resolution options. The GFC prompted the accelerated development and implementation of a mechanism to resolve a bank in distress while minimising the impact on the financial system. OBR, in principle, allows a distressed bank to be closed overnight and placed into statutory management (at the decision of the Minister following recommendation from the RBNZ).
Nonbank supervision	Partially implemented
Review practices and resource needs for the government agencies involved in oversight, especially the offices of the Registrar and the Government Actuary, with a view towards enhancing public access to timely and comprehensive data	The regulatory landscape for nonbank financial institutions (NBFIs) has altered considerably since the last FSAP. This has involved both prudential and market conduct dimensions. In 2006 a working group was established tasked with 'reviewing financial products and providers' (RFPP) to develop an effective and consistent framework for regulation of nonbank lenders. The RFPP led to the RBNZ assuming responsibility for the regulation of nonbank deposit-takers (where supervision rests with trustees who are licensed by the FMA) following a 2008 Amendment Act.[2] The Insurance (Prudential Supervision) Act 2010 completed the shift to the single prudential regulator model. The RBNZ does not regulate nonbank non-deposit taking lenders.

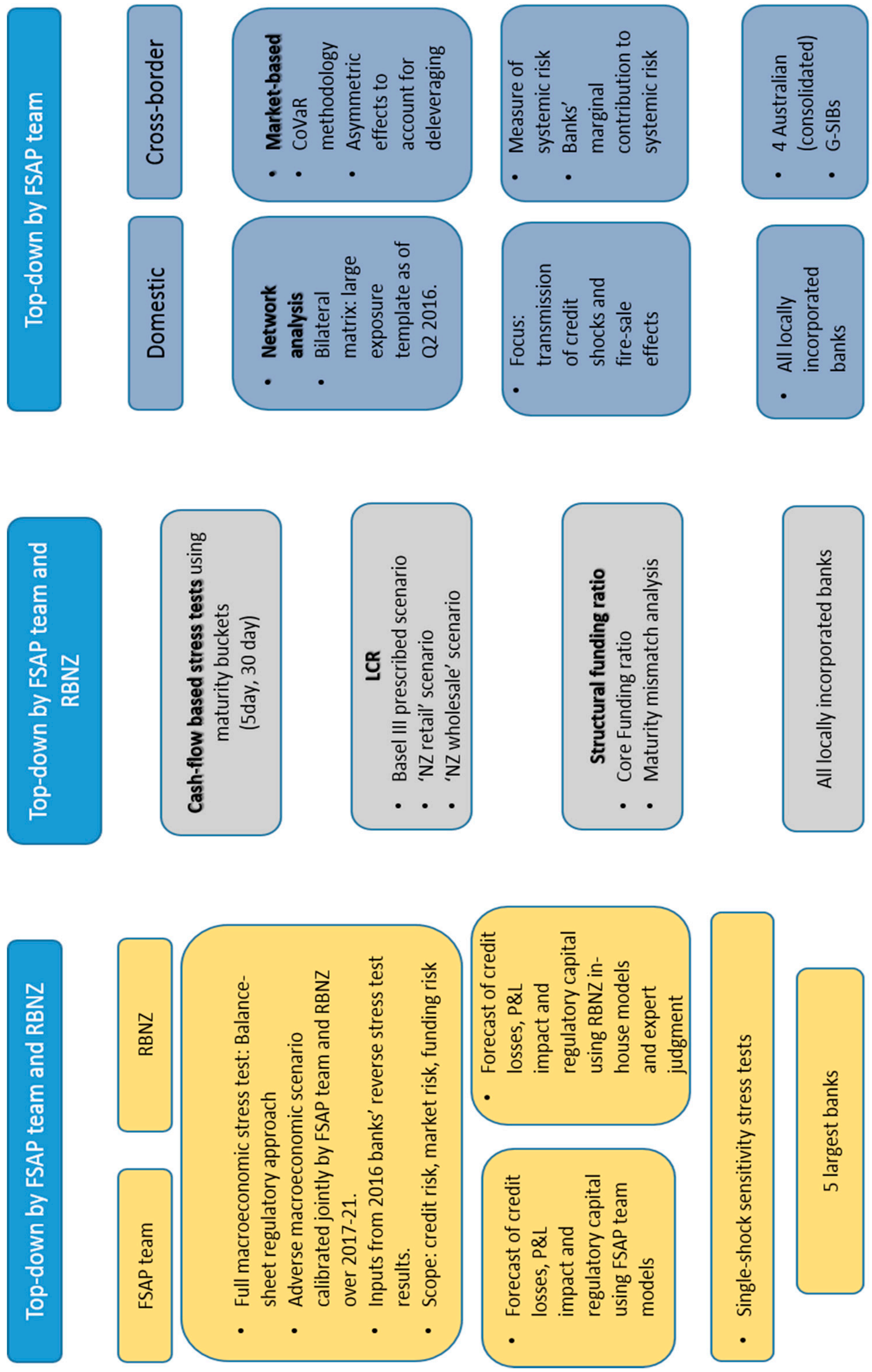
Recommendations	Status
	The FMA was established in 2011 reflecting recommendations to consolidate a range of different financial regulatory functions into a single financial markets securities regulator. As a result, the role of the Government Actuary was disestablished in April 2011 and its functions, powers and responsibilities were incorporated within the FMA in May 2011. The Insurance and Superannuation Unit, previously responsible for managing the oversight and regulation of the Superannuation Schemes Act and the KiwiSaver Act, was also disestablished in April 2011. The staff of the Insurance and Superannuation Unit transferred to the FMA. A new online register—the Disclose Register—has been put in place to provide the market with information about investment products, and act as a vehicle for issuers to upload documents, data and information. The FMC Act established two registers; a register for offers of financial products (split into debt and equity securities, derivatives and managed investment products), and a register for managed investment schemes (split into managed funds and other managed investment schemes). The Disclose Register contains both of these registers. The Companies Office and the Registrar of Financial Service Providers (the Registrar) are the administrators of the Disclose Register. The Disclose Register provides an online tool for issuers and managers to register and manage information about their offers and schemes, and fulfil many of their compliance obligations. Once fully populated, it will also provide investors with one source of information about offers of financial products and managed investment schemes. By midnight on 30 November 2016, most existing offers and schemes must be registered on the Disclose Register. Until then, there is a transition period during which issuers and managers may be able to rely on other existing enactments to maintain existing offers and schemes. The Financial Service Providers Register (FSPR), created in 2008, is a searchable online register of the people, businesses, and organisations that offer financial services in New Zealand. The purpose of registration is to enable the public and regulators to access information about financial service providers, and to prohibit certain people from providing financial services. Nevertheless, registration as a financial service provider is not an official approval of an individual, business, or organisation and does not necessarily indicate that the provider is licensed or regulated in New Zealand or any other country. The FSPR also records any licences or authorisations that the financial service provider may have under the RBNZ Act 1989, Insurance (Prudential Supervision) Act 2010, Financial Advisers Act 2008, Financial Markets Supervisors Act 2011, and Financial Markets Conduct Act 2013.

Recommendations	Status
Securities markets regulation	Partially implemented
Enhance the regulatory framework by including minimum standards of conduct for collective investment scheme operators, improving reporting mechanisms, strengthening standards and penalties relating to market abuse, and strengthening oversight of market intermediaries that are not exchange members.	Significant changes have been made to New Zealand's securities regime since the last FSAP review. Some of these developments can be traced to the 2004 recommendations, while others are a response to other factors, most notably, the GFC. The 2006 RFPP led to a fundamental shift in the approach to securities regulation with the establishment of the FMA in 2011 and new standards for market conduct culminating in the introduction of the Financial Markets Conduct Act 2013 (the FMC Act). The FMA was established to consolidate a range of different financial regulatory functions into a single financial markets securities regulator, and also to administer a new regulatory framework, which consolidated the regulation of securities into a single regime. However, because of the increased urgency of improving confidence in financial markets as a result of the GFC, the FMA was in fact established prior to the completion of the new regulatory framework designed to complement the new institutional structure – the FMC Act. The FMC Act provides a regulatory framework for financial conduct. It governs the way financial products are offered, promoted, issued and sold. This includes the on-going responsibilities of those who offer, issue, manage, supervise, deal in and trade financial products. The FMC Act also regulates the provision of certain financial services. In particular, it introduces licensing for providers of CIS to retail investors. The FMC Act was progressively brought into force from April 2014. Although the new regime was in effect on 1 December 2014, most regulated entities had until 1 December 2016 to transition from the old to the new regime.

[1] Parties to the memorandum are: the RBNZ, New Zealand Treasury, the FMA, RBA, APRA, Australian Treasury, and ASIC.

[2] Statutory provisions relating to NBDTs were later carved out into a separate Act – the NBDT Act 2013.

Appendix II. Overview of FSAP Stress Testing



Appendix III. Stress Test Matrix (STeM): Solvency and Liquidity Risks

Banking Sector: Solvency Test			
Domain		Framework	
		TD by Authorities	TD by FSAP Team
1. Institutional perimeter	Institutions included	Four major banks: ANZ Bank New Zealand Ltd; ASB Bank Ltd; Bank of New Zealand, and Westpac New Zealand Ltd. The criteria used to determine the institutional perimeter include: firms' balance sheet, firms' share in the lending market, and firms' role in the New Zealand payment system	Five major banks: ANZ Bank New Zealand Ltd; ASB Bank Ltd; Bank of New Zealand, Westpac New Zealand Ltd., and Kiwibank Ltd. The criteria used to determine the institutional perimeter include: firms' balance sheet, firms' share in the lending market, and firms' role in the New Zealand payment system
	Market share	About 85 percent of total banking sector assets.	About 90 percent of total banking sector assets.
	Data	Effective date: June 2016. Effective date for market risk: June, 2016. Data: Supervisory data, publicly available data. Scope of consolidation: Consolidated group basis.	Effective date: June 2016. Effective date for market risk: June, 2016. Data: Supervisory data, publicly available data (bank disclosures, Bloomberg, Thomson Reuters, Dealogic, Markit, Haver Analytics, Moody's KMV, Bankscope, SNL, International Financial Statistics (IFS), IMF Global Assumptions (GAS), and IMF WEO). Scope of consolidation: Consolidated group basis
	Stress testing process	The RBNZ conducts its own TD macroprudential stress test based on the WEO/RBNZ forecast (baseline) and IMF's Global Macrofinancial Model with inputs from the RBNZ (adverse). RBNZ uses its own structural models for real estate exposures (TUI model) and the dairy stress portfolio (model for defaults on dairy lending). The results aggregation process includes adjustments based on expert judgment including losses for other portfolios.	The FSAP team conducts its own TD macroprudential stress test based on the WEO/RBNZ forecast (baseline) and the IMF's Global Macrofinancial Model with inputs from the RBNZ (adverse). For expected losses, a separate credit risk model is calibrated for 5 economic sectors (drawing on RBNZ supervisory data) and core industry sectors (drawing on market-based data). For unexpected losses in IRB portfolios, PDs are estimated from stressed loan loss provision ratios linked to IRB models and allowing for RBNZ regulatory overlays on farming lending and mortgage exposures. For STA exposures and specialized lending subject to the slotting approach, stressed NPL ratios, stressed coverage ratios, and a stressed transition matrix for performing

Banking Sector: Solvency Test			
Domain		Framework	
		TD by Authorities	TD by FSAP Team
			exposures are projected. For robustness, the TD stress test includes projections using RBNZ's structural TUI model on borrowers' balance sheets and a detailed stress test of banks' mortgage book by LTV vintage using a Merton-based option-value approach. For market risk, stress to major sovereign issuers is modeled.
2. Channels of risk propagation	Methodology	Risks are projected using a variety of structural credit risk models (based on borrowers' stressed financials), macro modeling (based on historical relationships between key macroeconomic and financial variables under stress) and expert judgment. RBNZ models the impact of a sharp rise in wholesale and retail funding costs, and how the increase in funding costs is passed on to customers, drawing on banks' BU stress test results and expert judgment.	A comprehensive battery of econometric and structural models is specifically developed and calibrated for the 2017 New Zealand FSAP. Over 100 credit risk models are estimated for PDs based on bank-level regressions, panel-based regressions, and multivariate vector autoregressive models (VAR) with principal component analysis (PCA). Over 25 models are estimated to project solvency and funding cost interactions and contagion from peer banks. Lending rates are linked to shocks to deposit rates and wholesale funding spreads, projected in line with the macro scenario, bank-specific solvency ratios and funding stress in peer banks. Shocks to NIMs are modeled as a function of RBNZ's Official Cash Rate, money market shocks, and the slope of the yield curve, with pass-through effects estimated empirically, and linked to the interest repricing schedule for each bank as of June 2016. Bank specific wholesale spreads are linked to the behavior of ytm spreads of active bonds at the peak of the GFC under the adverse scenario and over the last two years under the

Banking Sector: Solvency Test			
Domain		Framework	
		TD by Authorities	TD by FSAP Team
			baseline scenario.

<table>
<tr><th colspan="4">Banking Sector: Solvency Test</th></tr>
<tr><th colspan="2" rowspan="2">Domain</th><th colspan="2">Framework</th></tr>
<tr><th>TD by Authorities</th><th>TD by FSAP Team</th></tr>
<tr><td></td><td></td><td></td><td>Mark-to-market losses from full revaluation of sovereign securities, excluding balance sheet hedges.</td></tr>
<tr><td>3. Tail shocks</td><td>Scenario analysis</td><td colspan="2">The adverse scenario is calibrated using the IMF’s Global Macrofinancial Model and auxiliary models estimated by the RBNZ drawing on historical crisis-episodes in New Zealand, Australia, and the United Kingdom.

This scenario is characterized by deteriorating global conditions from a sharper than expected global growth slowdown, tighter and more volatile conditions, a credit cycle downturn in China, and persistently lower commodity prices. The global downturn impacts directly on Australia and New Zealand. Additional spillovers hit New Zealand through financial linkages with Australia, autonomous confidence effects, and a sharp correction in the New Zealand real estate market and equity market.

This scenario constitutes a 2.4 standard deviation move in two-year cumulative real GDP growth rate by 2018, calculated over 1990–2016.

New Zealand GDP growth contracts by - 1.4 percent in 2017 relative to a baseline projection of 2.5 percent growth rate. Real GDP reaches a peak deviation from baseline levels at -7.1 percent in 2018–19, which is higher than the 4.1 percent assumed in the 2014 joint stress test undertaken by APRA and RBNZ. Unemployment peaks at over 10 percent by end-2018 and there is persistent disinflation over 12 quarters. There is a sharp real estate market correction, with a peak-to-trough decline of 40 percent for residential prices, and 30 percent for CRE. In addition, the real equity price index falls by 30 percent by end-2018. The deep recession increases banks’ credit risk with money market rates peaking in 2017, and bank credit falling by 20 percent relative to baseline levels by 2021. This is accompanied by the steepening of the yield curve induced by a rebound in the term premium driven by internationally correlated duration risk premium shocks, pushing up long-term lending rates.

The scenario includes an additional idiosyncratic and system-wide funding risk shock triggered by dislocation of money markets and linked to banks’ capital ratios under stress and contagion from other New Zealand banks.</td></tr>
</table>

Banking Sector: Solvency Test			
Domain		Framework	
		TD by Authorities	TD by FSAP Team
	Sensitivity analysis		Concentration risk. Shocks to NZL residential house prices impacting stressed LGDs. Shocks to the NZD swap curve. Shocks to net interest margins. Additional calibration informed by 2016Q3 banks' reverse stress test exercise.
4. Risks and buffers	Positions/risk factors assessed	<u>Credit risk</u> Mortgage loans credit risk losses projected using the TUI model, a structural approach to the understanding and measurement of residential mortgage lending risk. Rural portfolio credit risk losses projected using the dairy portfolio model that incorporates cross-sectional data and considers behavioral assumptions of the drivers of default. Other sectoral categories in the credit book include: SME/corporate lending, CRE lending, consumer lending, sovereign/bank lending ("liquid bonds"). <u>Operational and market risk</u> Driven by mark-to-market losses of the liquid asset portfolio. Losses are reversed as bonds mature. <u>Profits</u> Margin compression as banks push down lending margins to alleviate customer distress. Also, they are unable to pass higher funding spreads on to fixed term mortgage customers. <u>Regulatory impact</u> Phase-out of Tier 1 and Tier 2 instruments according to transitional rules.	<u>Credit risk</u> IRB and Standardized exposure. Positions include retail exposures, corporate exposures, sovereign/public sector exposures, and exposures to financial institutions. Covered bonds and securitization exposures are included. Off-balance sheet exposures using baseline and stressed Credit Conversion Factors (CCFs) are included. <u>Sovereign risk</u> Mark-to-market valuation of securities (from shocks to interest rates and credit spreads) in trading book and AFS/FVO linked to macro scenario. <u>Market risk other than sovereign risk</u> Market stress from shocks to changes in interest rates and credit spreads. <u>Profits</u> Income from loans and non-loan activities. Interest income declines for the amount of lost income from defaulted loans. Interest income from non-defaulting loans is estimated according to satellite models. Interest expenses increase due to rising funding costs linked to the macroeconomic scenario with empirically estimated pass-through, stressed capital ratios and contagion from peer banks. Net fee and commission income and other income evolve with macroeconomic conditions and banks' balance sheets. No change in business models (no rebalancing of portfolio).

Banking Sector: Solvency Test			
Domain		Framework	
		TD by Authorities	TD by FSAP Team
			Balance sheets evolve over the stress horizon according to the scenario. <u>Regulatory impact</u> The effects of the phase-out of no-longer-eligible additional Tier 1 and Tier 2 capital are included. No conversion of additional Tier 1 capital is assumed during the stress horizon.
	Behavioral adjustments	<u>Dynamic balance sheets</u> Credit supply effects are disallowed to calibrate credit risk projections. Balance sheets evolve with key macroeconomic aggregates adjusting for credit demand effects. EAD under stress from off-balance sheet exposures increases about 5-10 percent on average, reflecting higher use of undrawn credit and liquidity facilities. As a conservative assumption, all facilities are assumed to be contractually irrevocable ("committed") to extend funds in the future. Maturing assets are replaced by exposures of the same type and risk. Dividends are linked to banks' net profits. Under positive profits, the dividend payout floor is set at 30 percent subject to dividend restrictions if banks breach their capital conservation buffer. Otherwise, no dividend payout is assumed. The effective tax rate evolves with the macro scenario. Losses are recognized in the same year that loan is impaired. If banks' capital ratio falls below regulatory minimum during the stress test horizon, no prompt corrective action is assumed.	
5. Regulatory and market-based standards and parameters	Calibration of risk parameters	<u>Parameter definition</u> PiT credit loss rates for expected losses and TTC PDs and LGDs for regulatory capital requirements (RWAs). <u>Parameter calibration</u> For IRB exposures, shifts to RWAs are informed by banks' BU stress test results, historical experience during the GFC and expert judgment.	<u>Parameter definition</u> PiT, PDs and LGDs for expected losses. PiT TTC-adjusted PDs and TTC LGDs for regulatory capital requirements (RWAs). PDs are blended PDs (i.e., include both defaulted and non-defaulted counterparties) by asset class. LGDs are calculated post credit risk mitigation by asset class. <u>Parameter calibration</u> For IRB exposures, shifts to PDs are informed by shocks to credit risk losses and banks' estimated PDs calculated in historical stressed episodes.

<table>
<tr><th colspan="4">Banking Sector: Solvency Test</th></tr>
<tr><th colspan="2" rowspan="2">Domain</th><th colspan="2">Framework</th></tr>
<tr><th>TD by Authorities</th><th>TD by FSAP Team</th></tr>
<tr><td></td><td></td><td></td><td>Shocks to LGDs are projected using a Merton-based approach for mortgage exposures, shocks to unemployment for retail unsecured exposures, and shocks to GDP for corporate exposures.

PDs and LGDs evolve with the macroeconomic and financial variables of the scenario.

For STA exposures and specialized lending subject to the slotting approach, inflows into NPL categories are based on a panel regression, including risk migration for performing exposures, and stressed coverage ratios.</td></tr>
<tr><td></td><td>Regulatory standards</td><td colspan="2">Capital definition according to Basel III/RBNZ rulebook, including CET1, Tier 1, and total CAR.
The CET1 ratio is computed using Basel III end-point definition.
Capital components that are no longer eligible for additional Tier 1 and Tier 2 capital components follow a front-loaded Basel III transitional path according to RBNZ's regulatory capital framework with complete phase-out by January 1, 2018.
CET1/Tier 1/CAR ratio hurdle rate at 4.5/6.0/8.0 percent of RWAs for regulatory minimum capital breach with an additional 2.5 percent hurdle rate for capital conservation buffer breach.
Leverage ratio (3 percent hurdle rate met with Tier 1 capital) using the Basel III definition, notwithstanding the fact that the NZ liquidity regulatory framework does not include a leverage metric.</td></tr>
<tr><td>6. Reporting format for results</td><td>Output presentation</td><td colspan="2">Evolution of CET1, Tier 1, CAR for the aggregate banking system.
Distribution of individual CET1, Tier 1, CAR in the banking system.
Contribution of key drivers to aggregate net profits and aggregate CET1 capital ratios.
Number of banks and share of total assets below hurdle rates.
Capital shortfall in terms of nominal GDP.</td></tr>
</table>

Liquidity Stress Testing Matrix		
Domain		**IMF designed stress test conducted jointly with the RBNZ**
1. Institutional perimeter	Institutions	Selection criteria: RBNZ liquidity returns under BS13.
	Market share	All fifteen locally incorporated banking institutions.
	Data and base date	The one-week and one-month maturity mismatch is based on supervisory data as of August 31 2016, under the RBNZ liquidity policy framework (BS13). The one-week and one-month quasi-LCR test is based on supervisory data as of August 31 2016. The definition of HQLA is stricter than under APRA's Basel III LCR implementation under APRA's *Prudential Standard APS 210 Liquidity* given the lack of a fee-paying contingent credit line facility in New Zealand.
2. Channels of risk propagation	Methodology	Basel III measures of liquidity risk—the quasi-LCR conducted on three calibrated scenarios. A cash-flow analysis based on RBNZ's mismatch ratio. A general maturity mismatch analysis by maturity bucket based on RBNZ's CFR.
3. Risks and buffers	Risks	Funding liquidity risk, rollover risk, and market liquidity risk.
	Buffers	HQLA securities assessed at market values net of haircut on a security-by-security basis.
4. Tail shocks	Size of the shock	<u>A range of adverse scenarios</u> LCR Scenario under standard assumptions calibrated by BCBS. An LCR "New Zealand retail stress" scenario. The calibration of this deposit run-off scenario replicates the peak stress observed in relevant comparator jurisdictions during the GFC. An LCR "New Zealand wholesale stress" scenario. This scenario replicates the liquidity stress observed during the GFC. It is characterized by: (i) a freeze of wholesale funding on the interbank market, secured funding market via repo and covered bonds, and the commercial paper market (with run-off rate for operational deposits of 75 percent and for not-fully covered corporate deposits of 100 percent), and (ii) liquidity risk from shocks to secured funding backed by RMBS to 50 percent and shocks to undrawn but committed credit and liquidity facilities with run-off rates of 50 percent for supervised banks and other financial institutions. Implied cash flow assumptions include haircuts of up to 60 percent for securities and bank loans that can be mobilized in repos, no issuance of new unsecured funding and freeze of securitization markets, call-back rates of up to 100 percent, and cash outflows of up to 75 percent.

Liquidity Stress Testing Matrix

Domain		IMF designed stress test conducted jointly with the RBNZ
5. Regulatory standards	Regulatory standards	Counterbalancing capacity above net cash outflows under stress scenario. Basel III transitional arrangement for the LCR ratio at 80 percent. CFR above RBNZ's regulatory 75 percent threshold.
6. Reporting format for results	Output presentation	Changes in average liquidity position and counterbalancing capacity for each scenario. Distribution of banks' liquidity position under each scenario. Number of banks with counterbalancing capacity below net cash outflows. Banks' post-shock net liquidity position. Liquidity shortfall in terms of banking system total liabilities.

Appendix IV. The RBNZ and the IMF Stress Tests

The RBNZ stress test results are broadly comparable to the IMF stress test results using the commonly agreed scenario and RBNZ's in-house credit risk models in combination with expert judgment. Under the RBNZ test, results are computed for the aggregate balance sheet of the big four banks. Under the adverse scenario, aggregate Tier 1 capital is projected at around 8.4 percent at the low point, and total capital ratios reaching about halfway through the conservation buffer at the worse point. This is broadly comparable to IMF aggregate results with stress tests conducted on individual balance sheets covering the five largest banks.

- Credit risk losses are substantial with a weighted-average cumulative bad debt expense over the 5-year horizon of around 4.0 percent relative to starting loans under the IMF test and 3.6 percent of starting assets under the RBNZ test. The aggregate projection masks some dispersion in loss rates across credit portfolios, ranging between 1.4 percent of bad debt expense for housing loans, 5.4 percent for real estate and SMEs, 7.0 percent for the rural portfolio, and 12.3 percent for personal loans under the IMF test, relative to projected loss rates of 2.1 percent for housing loans, 6.0 percent for CRE, 9.0 percent for the rural portfolio, and 10.0 percent for personal loans under the RBNZ test.

- Market risk losses are larger under the IMF stress test as trading securities and AFS securities suffer marked-to-market losses. This is driven by a widening in money market spreads due to credit risk shocks and the steepening of the yield curve triggered by term premium shocks across debt markets. Given the composition of banks' securities portfolio as of June 2016, market shocks lead to an accumulated asset valuation loss of around 10 percent. This is a very conservative estimate as hedges assumed are to not operate under stressed market conditions. By contrast, liquid assets were treated as HTM securities under the RBNZ test and were hit by an accumulated loss rate of 0.3 percent.

- Interest risk losses are material as bank funding costs increase under stressed money market conditions and banks' ability to pass funding shocks through to lenders is constrained, being capped at 50 percent in the IMF test. The sharp rise in funding costs is driven by the combined effect of a shock to the reference rate, credit risk concerns over bank debt as capital buffers are eroded under stress, and system-wide contagion from weaker banks. However, the impact of funding shocks on banks' capital buffers is somewhat mitigated by thin maturity gaps in the banking book and sound interest rate repricing schedules.[1] Overall, net interest margins compress by around 60 bps at the low point of the stress from 2.2 percent in June 2016.

Reverse stress tests conducted by the four large banks reveal that bank capital ratios are robust to a severe macroeconomic downturn but could be exposed if there was also a compression of margins and a spike in operational risk. While the loss rate reported by banks under their bespoke extreme scenarios are not too different from the FSAP macro stress test and the 2015 common ICAAP scenario, net profits reported by some banks are hit by a compression of

[1] For residential mortgage loans, the average number of months to rate reset stands at around 11 months.

margins of around 100 bps over the 3-year scenario. Capital buffers are also eroded by an increase in operational risk losses reaching an average 11 percent of credit losses, and leading to rising regulatory capital requirements.

Appendix V. Report on the Observance of Standards and Codes: Basel Core Principles for Effective Banking Supervision—Summary Assessment[1]

A. Introduction

The primary goal of this assessment of the implementation of the BCP by the RBNZ is to focus authorities on areas needing attention. The BCP are a framework of minimum standards for sound supervisory practices which are considered universally applicable, and are mainly intended as a common benchmark to assess the quality of supervisory systems and to provide input into a country's reform agenda. The current assessment was conducted against the standard issued by the Basel Committee on Banking Supervision (BCBS) in 2012.[2] This assessment is part of the FSAP undertaken by the IMF in 2016. The assessment is based on the regulatory and supervisory framework in place at the time of this visit.

The scope of the assessment is RBNZ supervision of the registered banks. Other financial industries supervised by the RBNZ are not covered in this assessment. In addition, the assessment is not intended either to represent an analysis of the state of the banking sector, the macroprudential policy framework, or crisis management framework, which are addressed in dedicated technical notes of this FSAP.

The supervisory approach of the RBNZ reflects the characteristics of the local banking industry and the authorities' goal to limit moral hazard by relying on market discipline and not offering deposit insurance. The RBNZ approach relies on three pillars: market discipline, based on public disclosure; self-discipline, based on bank directors' attestations of public information; and regulatory discipline, based on a simple and conservative regulatory framework, off-site monitoring, and disciplinary actions. It also relies on synergies with APRA home-country supervision of Australian banks' operations in New Zealand. In practice, though, the RBNZ approach is in conflict with the BCP requirements, which expect granular regulatory guidance and on-site independent verification work by the supervisor.[3] The RBNZ aims to strengthen supervision while retaining its current approach. Against this backdrop, the purpose of the exercise was to assess the effectiveness of New Zealand's banking supervisory systems and practices against the Core Principles, which are neutral with regard to different approaches to supervision, so long as the overriding goals set by each Principle are achieved.

---

[1] The assessment team included Antonio Pancorbo, IMF, and José Tuya, IMF external expert.

[2] Basel Committee on Banking Supervision: *Basel Core Principles for Effective Banking Supervision*, May 2012: http://www.bis.org/publ/bcbs230.pdf.

[3] "On-site work is used as a tool to provide independent verification that adequate policies, procedures and controls exist at banks, determine that information reported by banks is reliable, obtain additional information on the bank and its related companies needed for the assessment of the condition of the bank, monitor the bank's follow-up on supervisory concerns, etc." (BCBS: BCP standard, page 30).

The assessment was conducted taking into account the unique characteristics of the New Zealand banking industry. The banking market is highly concentrated and dominated by four large Australian subsidiaries, whose share of total banking sector assets was 83 percent as at June 2016. The four subsidiaries are significant to their parents as well (about 15 percent of group earnings and total assets on average). Enhanced formal and informal cooperation arrangements with APRA reflect the unique codependence of the two banking systems and are aimed at providing substantial synergies in support of the RBNZ fulfilling its prudential responsibilities. There is one large state-owned bank and the rest are small banks, both foreign- and domestic-owned. The supervisory approach for those institutions differs from that for the larger banks, but although small, they can still pose reputation risk for the RBNZ.

The mission held extensive meetings with RBNZ officials, as well as the Treasury, FMA, APRA, the industry, and relevant third parties who generously shared their views. The assessment team visited the cities of Wellington and Auckland in New Zealand, as well as Sydney and Melbourne in Australia. The assessors would like to acknowledge the very high quality of cooperation received from all the authorities. In particular, the team extends its thanks to RBNZ staff who provided a very comprehensive, high-quality self-assessment, and who responded promptly and comprehensively during the mission to the extensive information requests from the team.

B. Overview of the Institutional Setting and Market Structure

The RBNZ is the prudential supervisory authority of New Zealand. Its responsibilities include the prudential regulation and supervision of registered banks and insurers, regulation of NBDTs, the oversight of the payment system (and settlement systems jointly with the FMA), and AML/CFT supervision for banks, NBDTs and life insurers. The RBNZ acts as lender of last resort and exercises crisis management powers. Some crisis management powers and the power to make regulations are exercised together with the MoF and the Governor-General acting on recommendation from the RBNZ. In 2013 the RBNZ introduced a framework for macroprudential policy vis-à-vis the banking sector under its existing objectives and powers.

The GFC had a mild negative impact on the New Zealand banking sector, but a significant number of finance companies had difficulties over 2006–2010 and were put into receivership. While liquidity pressures arising from the GFC were the trigger for closures in some cases, failures were caused well before then, mainly by problems with asset quality, connected lending, and credit management. Although the New Zealand banking sector was relatively unscathed during the GFC, several factors not necessarily related to bank supervision contributed to the maintenance of financial stability. Among other factors, banking business models in New Zealand are simple and the parent banks of the large subsidiaries were in a position to support their New Zealand operations and were subjected to an effective and intensive home-country supervision.[4]

[4] In addition, unexpected funding-liquidity risks that materialized for the New Zealand banking system, given a relative reliance on wholesale funding, were contained by unprecedented emergency liquidity facilities and support provided by the RBNZ.

The banking sector focuses its activities on lending to the domestic private sector and providing traditional products. The sector seems to be well capitalized and to have sufficient liquid assets, the quality of assets is high, and profitability has remained stable over the last 10 years. Nevertheless, the financial sector is relatively dependent on wholesale funding, including foreign currency funding sourced from offshore markets. While foreign funding has declined since the GFC, it still accounts for 19 percent of banks' liabilities. As of October 2015, over 80 percent of banks' liabilities (including deposits and minus equity) had a maturity of below one year, and 65 percent was on demand or with maturity of less than 3 months.

C. Preconditions for Effective Banking Supervision

New Zealand is a small open economy, underpinned by strong policy frameworks.[5] New Zealand's modern economy benefits from a strong commitment to open-market policies that facilitate vibrant flows of trade and investment. Transparent and efficient regulations are applied evenly in most cases, encouraging dynamic entrepreneurial activity in the private sector.

The fiscal and monetary policy authorities are independently responsible for their respective areas of policy. The Treasury is responsible for maintaining a stable and sustainable macroeconomic environment, and fiscal policy is one of its main tools. The RBNZ, for its part, is responsible for ensuring price stability as defined by the *Policy Targets Agreement* signed between the MoF and the Governor. The RBNZ is operationally independent regarding monetary policy formulation. The RBNZ Act also enables the Governor-General, on the advice of the MoF, to direct the RBNZ to formulate and implement monetary policy for any economic objective, other than ensuring price stability, for a period not exceeding 12 months.

New Zealand has a defined institutional framework for financial stability policy formulation.[6] The RBNZ has independent decision-making power vis-à-vis macroprudential policies empowered by the RBNZ Act. A MoU signed in May 2013 outlines the governance arrangements for the use of macroprudential tools. During the 2008–2009 crisis the RBNZ established a new committee, the Macrofinancial Committee, to focus explicitly on macrofinancial stability issues. New Zealand has actively used macroprudential tools to address systemic risks.

New Zealand has a well-developed public infrastructure to support its financial system. New Zealand ranks in the 97–100th percentile of all countries for the World Bank key indicators of governance.[7] They are Voice and Accountability, Political Stability and Lack of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. While all six indicators are

[5] A complete analysis of the macroeconomic framework can be found in IMF's macroeconomic surveillance reports. For example, Article IV consultations: http://www.imf.org/external/pubs/cat/longres.aspx?sk=43678.0.

[6] See further in the accompanying 2016 FSAP Update Technical Note on Macroprudential Institutional Framework and Policies.

[7] See http://info.worldbank.org/governance/wgi/pdf/c168.pdf

important settings for financial stability and other regulatory purposes, government effectiveness, regulatory quality and the rule of law are particularly important. In this regard New Zealand has:

- An adaptable and responsive legislature able to maintain ongoing law reform.
- Quality laws relating to business organization, business and personal insolvency, personal and real property registration and transfer, and consumer protection.
- An independent judiciary of high standing.
- Institutions responsible for and able to administer and enforce market conduct and competition law (FMA and the Commerce Commission).
- Strong independent professions (legal, accounting and actuarial) and adherence to international and professional standards (IFRS, actuarial standards, etc.).
- Support for freedom of contract, property rights and the rights of the individual and protection from arbitrary action by the government, consistent with a developed economy.
- A well-developed corporate and commercial law.

The prudential regime provides a number of triggers under which the RBNZ may apply failure resolution or crisis management powers. The legal framework for resolution of banks is established in the RBNZ Act. Upon identifying an institution as failing or likely to fail, the RBNZ recommends to the MoF initiation of resolution through the appointment of a statutory manager. In addition, OBR has been developed as a tool, not tested yet, to provide a credible alternative to a bailout should it become necessary to resolve a systemically important institution. Nevertheless, greater clarity is required on the decision-making process for dealing with a crisis and the exercise of resolution powers.[8]

The RBNZ has a statutory lender-of-last-resort role. To mitigate liquidity risks, the RBNZ introduced a prudential liquidity policy in 2010 designed to encourage banks to self-insure against funding-liquidity risks. The Australian parents could previously provide contingent funding to the New Zealand subsidiaries up to 50 percent of the parent's Tier 1 capital. APRA has since tightened its prudential requirements relating to related party exposures to the New Zealand subsidiary banks reducing their non-equity exposures to 5 percent of Tier 1 parent capital. New Zealand banks are also required to set up contingent funding arrangements that are secured by instruments that are exempt from resolution actions in New Zealand, such as covered bonds which were introduced to help manage and diversify funding liquidity. Banks started issuing covered bonds in 2010 due to difficult market conditions.

There is no ex ante depositor protection insurance in New Zealand. This reflects both current government policy and the RBNZ's long-standing view that the emphasis should be on reducing the

[8] See further in the accompanying 2016 FSAP Update Technical Note on Contingency Planning and Crisis Management Framework.

moral hazard attached to any public perception of the government backstopping all or part of the financial system (implicit guarantee). In addition, the RBNZ considers that deposit insurance is challenging in a highly concentrated system. It is also not well suited to dealing with systemic failures. That said, a temporary opt-in retail deposit scheme was introduced in 2008 in order to give assurance to New Zealand depositors (of registered banks and NBDTs) in light of financial market instability. Initially for two years, the scheme was subsequently extended until December 2011. The government plans on considering the merits of an explicit depositor protection scheme, in conjunction with crisis governance, in due course.

The regulatory and commercial environment in New Zealand supports market discipline. This is particularly the case in those industries that operate under free-market conditions.[9] In addition, the RBNZ is committed to bank disclosure, and there are no restrictions on the ability to move deposits and other investments from bank to bank. Market discipline in the banking industry of New Zealand is less idiosyncratic than it is assumed in the RBNZ supervisory approach. Large maturity mismatches make banks' financial structures extremely fragile worldwide, threatening massive losses and the disruption of financial services to the broad economy. To protect the economy from systemic risks, governments provide public safety nets. To break a systemic crisis, there is commonly no other option than to call on public resources. This is more so in the context of welfare state systems. Recent experience in New Zealand with the public policy response to the GFC and the crisis of the finance companies may well illustrate the case.[10] For free-market processes to operate in an unfettered way in the banking industry and play a beneficial disciplinary role, all sorts of implicit and explicit public safety nets would need to be dismantled, and socially and economically critical payments and settlement systems should be able to continue their operations despite a bank failure. Otherwise, market discipline in the banking industry has to be complemented by, and often replaced by, effective regulatory discipline.

D. Main Findings

Since the last FSAP, the RBNZ has increased attention to strengthening regulatory discipline, following international standards in substance. For example, the RBNZ has adopted the new Basel capital framework, issued supervisory guidance and increased regulatory reporting. In 2016, the RBNZ began the final stage of a multi-year upgrade of its supervisory non-public statistical and prudential reporting from banks. The supervisory policies published are, for the most part, related to "conditions of registration" and, thus, enforceable. The RBNZ has performed off-site thematic reviews to profile banks' risk management in areas of concern, such as dairy and real estate. An off-site process (PRESS) is in place that rates banks based on their risk profile and their systemic impact. An AML/CFT supervision process has been implemented.

[9] Market discipline in general can be understood as the disciplinary force exercised by market participants and geared towards providing a competitive environment, removing bad performers, and promoting good ones. The main driver of effective market discipline is the personal assumption of profits and losses as a consequence of free exchanges.

[10] To learn more about the finance companies crisis, see, for example: House of Representatives. New Zealand Parliament: "Inquiry into finance company failures." October 11, 2011.

The effectiveness of the current approach to supervision is limited by the heavy weight placed by RBNZ on market discipline as compared to regulatory discipline (and to intensive supervision in particular). A defining feature of RBNZ's approach is the absence of independent testing of prudential returns and risk management practices for prudential purposes. In particular, the RBNZ avoids detailed on-site inspections, either by its own staff or external experts, concerned that this would weaken bankers' incentives to ensure robust controls.[11] The RBNZ needs to re-evaluate whether the lack of a more intensive approach, including an increased on-site program, may undermine market and self-discipline. In addition, the current approach makes it difficult for supervisors to develop expertise on bank operations, hampering the effectiveness of their analysis and policy development.

The assessors were very impressed with the quality and competence of the RBNZ staff; however, insufficient resources are a serious impediment to achieve compliance in-substance with the BCP. The RBNZ's staff operate under resource constraints and a mere reallocation would not be enough, even if the current low-intensity approach is retained. Strengthening the regulatory discipline pillar will require a reassessment of resources and technical capacity. To continue enhancing the supervisory process, an increase in staffing is required to a level that would at least enable the RBNZ to develop an on-site program that tests the foundation of the three pillar approach, to deepen the analysis that supports the PRESS ratings, and to issue supervisory guidelines that promote preventive actions.

The self-discipline pillar relies on directors' attestations to the fact that the bank has adequate risk management systems in place. However, the RBNZ has issued limited guidance as to what constitutes adequate risk management. The vacuum created by the RBNZ not stating its expectations on adequate risk management is likely filled by foreign banks basing their attestations on home-country supervisors' standards. For domestic-owned banks, it is likely that each may be following standards adopted from different sources. The RBNZ is very familiar with the Australian standards, but for the next tier of foreign-owned banks (as well as for the tier of domestic-owned banks) it would need to review standards on-site. Not issuing standards may result in an uneven playing field as some banks may be following stricter standards than others, thus diminishing the value of disclosures as directors are attesting to different standards.

An effective self-discipline regime needs to be supported by a well-developed regulatory framework and swift enforcement when banks violate the rules. The RBNZ has broad enforcement powers, but the lack of regulatory benchmarks mentioned before and the high legal threshold for issuing directions (orders) make swift enforcement less likely. To issue directions under section 113(1)(e) of the RBNZ Act when a bank is conducting business in a non-prudent manner the consent of the MoF is required. Demonstrating imprudent behavior based on, for example, inadequate risk management or insufficiently developed risk appetite statements, is made difficult by the lack of supervisory standards. As a result, the RBNZ's enforcement is currently based primarily on breaches that have already occurred and is not preventive.

[11] The only exception is in the case of AML/CFT supervision, where an on-site program is in place.

Recommended actions in this report seek to improve compliance with the BCP, and enhance the effectiveness of the RBNZ three-pillar approach. Key recommended actions as developed in this report, include: (i) amending section 78 of the RBNZ Act to make compliance with RBNZ-issued supervisory policy evidence of prudent banking; (ii) issuing supervisory policy documents as warranted (for example on credit risk); (iii) carrying out targeted on-site programs (directly or through external experts) to verify regulatory reports, risk management, and the quality of credit exposures; (iv) enhancing proactive cooperation within the trans-Tasman agreements to support cross-border synergies in supervision; (v) considering options to facilitate the taking of enforcement action based on supervisory judgment; and (vi) improving analysis to support PRESS ratings by retaining work papers to document determinations on adequacy of risk mitigants.

An important precondition for effective banking supervision is the willingness to act. As is well-established IMF policy,[12] a positive assessment of the supervisor's ability to act—based on its resources, authority, organization, constructive working relationships, and as evidenced by actions taken to impose corrective action—is not sufficient to ensure effective supervision. This must be complemented by the "will" to act in order to take timely and effective preventive actions in normal times, and corrective actions in times of stress. Developing this "will to act" requires a clear and unambiguous supervisory mandate, operational independence coupled with supervisory accountability and transparency, skilled staff, and an arm's-length relationship with the industry that avoids "regulatory capture." The Principle by Principle assessment reflects on the supervisor's "ability to act" and the conditions needed for their "will to act." However, effective supervision also requires as a catalyst a political will that cannot be measured nor evaluated externally.

This section summarizes the main findings of the detailed assessment conducted in the context of the FSAP. Built on these main findings, Table 1 below presents briefly a sense of the degree of compliance with each of the 29 principles that comprise the BCP.

Responsibilities, Objectives, Powers, Independence, and Cooperation (CPs 1–3, and 13)

While the responsibilities of RBNZ as banking supervisor are defined in law, there are ambiguities at an operational level. The statutory objectives of the RBNZ are broadly defined as "promoting the maintenance of a sound and efficient financial system; or avoiding significant damage to the financial system that could result from the failure of a registered bank." Broad definitions of concepts such as "sound and efficient financial system," "significant damage," or a focus on "systemic implications" only, have allowed the RBNZ to develop over time a particular hands-off supervisory philosophy that departs from conventional, more resource-intensive supervisory practices.[13] For example, the current approach has limited appetite for independent verification of supervisory returns and first-hand knowledge of the soundness and risk management

[12] Jose Viñals, *et al.*, (2010) *The Making of Good Supervision: Learning to Say No*, IMF Staff Position Note 10/08: http://www.imf.org/external/pubs/ft/spn/2010/spn1008.pdf.

[13] The MoF's letter of expectations for the RBNZ Board, of April 22, 2016, will help clarify how the objectives of soundness and efficiency are promoted and balanced, and to judge performance with respect to RBNZ's functions. See https://www.beehive.govt.nz/release/english-releases-rb-board-letter-expectations.

of individual banks. The supervisory objectives have to be clarified at an operational level. Towards this end, the RBNZ is currently defining its risk appetite framework, which will reinforce the RBNZ's statutory objectives by translating them into practical outcomes, and clarify how supervision has to be conducted in practice.

RBNZ staff are highly qualified, but numbers are clearly insufficient to conduct effective supervision, even if on-site work was conducted by external experts under RBNZ prudential mandates and guidance. Insufficient resources are a serious impediment to developing an effective and intrusive supervisory approach carefully tailored to the characteristics of New Zealand's banking industry and bearing in mind potential synergies stemming from the trans-Tasman agreements. The RBNZ should reassess the adequacy of the resources assigned to its banking supervisory function. This will make it possible to address the recommendations of this assessment that are oriented toward strengthening the supervisory process, enhancing knowledge and risk assessment of supervised entities, facilitating early action and preparedness for crisis management, and allowing staff to analyze broader themes relevant for financial stability.

While coordination and collaboration with the government is defined in law and supported by a MoU, boundaries between areas of responsibility may need to be further clarified in practice. The Act provides the RBNZ with powers to operate at arm's length from the government and MoF, subject to control functions and checks and balances embedded in the legislation. However, the role of the Treasury as adviser to the Minister in relation to the RBNZ's primary responsibility for prudential supervision, as governed by an MoU signed in 2012, creates ambiguities in practice with regard to the respective roles of the RBNZ and Treasury that need to be clarified. In addition, the authorities may wish to consider aligning the RBNZ Act with the IPSA and Nonbank Deposit Takers (NBDT) Act by removing the role of the Minister in issuing directions (as discussed below regarding CP11). At the moment, lack of clarity on roles and attributions have mostly manifested in deficiencies in effective coordination on policy advice. However, ambiguities have the potential to lead to undue delays in issuing prudential regulations or government interference in prudential issues, if RBNZ technical expertise on prudential matters is not clearly recognized.

Strengthening the collaboration with APRA will support the reliance of the RBNZ on synergies from home-country supervision. The RBNZ has a unique and close home-host relationship with APRA, which reflects the heightened co-dependence between the financial systems of Australia and New Zealand. This is underpinned in legislation and further given effect through bilateral MoUs and the Trans-Tasman Banking Council (TTBC), set up in 2005.[14] That said, arrangements for cooperation and collaboration could be used proactively to further serve RBNZ's and APRA's joint interests as well as helping each to achieve their own objectives in a cost-effective manner for the supervisors and the industry. For example, RBNZ could seek proactive engagement during the on-site visits conducted by APRA, in order to gain knowledge of, and confidence in, the home supervisory

[14] See "Terms of reference for the Trans-Tasman Council on Banking Supervision": http://www.rbnz.govt.nz/regulation-and-supervision/banks/relationships/terms-of-reference-for-the-trans-tasman-council-on-banking-supervision.

approach and the techniques that are central to APRA's supervisory model.[15] Building sound cross-border relationships takes time and will prepare both supervisors for an effective coordination in times of stress. The need for a more coordinated approach by the two supervisors was a widely-held view among the stakeholders who met with the assessors.

Methods of Ongoing Supervision (CPs 8–10, and 12)

The New Zealand banking system has some unique characteristics which have influenced the supervisory process followed by the RBNZ. The largest four banks are subsidiaries of Australian banks and individually represent a significant investment and earnings source to the parents. As a result, the home-country supervisor (APRA) maintains robust monitoring of the subsidiaries as part of their consolidated supervision. Accordingly, a strong home-host relationship has been established between APRA and the RBNZ, providing the RBNZ with sufficient information to develop a high level of comfort on the regulatory standards met by the Australian banks and their financial condition. In this context, the RBNZ is able to tailor their supervision-by-risk to reflect their higher risk tolerance, and not incorporate some supervisory standards considered essential in the BCPs.

Ongoing supervision by the RBNZ is based on the three pillars of market, self and regulatory discipline. Market discipline is accomplished through public disclosure and publication of financial information. The main elements of self-discipline are corporate governance, particularly the RBNZ requirement that bank directors attest in the published financial statements that risk management systems "are in place to monitor and control adequately all material risks of the banking group." Regulatory discipline has increased since the 2004 BCP assessment with the issuance of supervisory rules and guidelines in areas viewed as significant by the RBNZ. These areas include but are not limited to: capital (Basel II and III), liquidity, outsourcing, related party lending, and corporate governance. In addition, to support regulatory discipline, an off-site financial analysis system (PRESS) has been put in place to identify, measure, and monitor risk areas and arrive at a risk rating for registered banks.

The RBNZ follows a non-intrusive approach to supervision. In particular, guidelines and regulations avoid establishing hard limits or prescriptiveness in most areas, and detailed on-site inspections are not conducted. It is the supervisory philosophy of the RBNZ that the banks' management and directors are in the best position to design risk management systems and establish limits based on the risk appetite and capital available to support those risks. Through off-site reviews of risk appetite statements, financial information, reports submitted to bank management, and on-site visits to meet with bank management and directors, conclusions are drawn about the reliability of directors' attestations and compliance with RBNZ guidelines.

The guidance issued by the RBNZ does not sufficiently communicate its expectations on the elements it considers necessary in management systems to monitor and adequately control material risks. Therefore, directors' attestations may be based on differing benchmarks and

[15] Specific areas where collaborative work can be explored may include governance, risk assessments, underwriting standards, execution of common tasks, and crisis preparedness.

expectations. It is likely that foreign-owned banks are filling the vacuum left by the lack of RBNZ guidelines with their home country supervisors' guidelines and requirements. For the locally-owned and incorporated banks, the vacuum may be filled from various sources. Without its own detailed review of individual banks' operations, the RBNZ is, in essence, relying on the adequacy of home country standards for the foreign-owned banks. For the locally-owned banks, testing of attestations through bank-specific reviews is required to determine the adequacy of standards being followed.

The RBNZ does not conduct inspections, and on-site interaction with banks takes the form of prudential meetings and primarily focuses on the 10 largest banks. The meetings provide an opportunity to discuss results of supervisory analyses and other issues that may have been identified by the RBNZ. Thematic visits have also been conducted to review systemic issues in deeper detail. The scope of the thematic visits does not include direct access by supervisors to bank records or files, with the review relying on increased information requests and questionnaires. The RBNZ participates as an observer during on-site inspections by APRA. Overall, the lack of first-hand independent verification of prudential returns and assessment of banks' risk management practices prevents the RBNZ from having a thorough understanding of the banks.

PRESS serves as the risk assessment tool for measuring and monitoring risks. The PRESS process incorporates 10 risk areas and adds a systemic impact factor to arrive at an aggregate numerical rating for the bank, reflecting its risk profile and systemic impact. Macroeconomic factors and stress testing results (conducted by RBNZ or individual banks) add a forward-looking aspect to PRESS. Information reviewed includes bank internal reports and, increasingly, information from regulatory reports. Although some forward-looking elements may be included, the ratings are primarily results-oriented. The analysis conducted to support the ratings is not well documented and is based primarily on banks' internal risk reporting.

The RBNZ does not conduct effective consolidated supervision. The supervisory approach, risk and prudential reporting requirements, and monitoring and analysis are based on the registered bank's banking group as defined in conditions of registration. The conditions of registration allow supervision to be conducted on a subconsolidated basis, i.e., to focus on the registered bank and its subsidiaries. The wider banking group or conglomerate would not be supervised. Nevertheless, the corporate structures of New Zealand banking groups are simple and there are no material foreign operations of New Zealand incorporated banks. The four banking groups with more complex structures are large Australian banking groups supervised by APRA. Attention to consolidated supervision is focused on the assessment of "parent support" as a PRESS risk factor, as well as maintaining good communication with the insurance supervisory function of the RBNZ and FMA. The RBNZ has the ability to change its approach to consolidated supervision if the risk profile of the banking groups changes.

Ownership, licensing, and structure (CPs 4–7) are not areas of particular concern at the time of this assessment. Registration by the RBNZ is what constitutes a bank, and not what business an entity carries on. This situation may have created lack of clarity in the past as many other entities were carrying on bank-like activities such as accepting deposits. But since 2013, all NBDTs are licensed by the RBNZ. Their supervision is entrusted to their private sector trustee companies based on RBNZ sectoral regulations. Transfer of significant ownership happens very infrequently in New Zealand, because ownership of most of the registered banks is concentrated in single banking groups, and because of the small number of institutions. Major acquisitions were not a significant activity at the time of the assessment.

Corrective and Sanctioning Powers of Supervisors (CP11)

The RBNZ has broad powers for imposing corrective action or sanctions, but issuance of directions requires the prior consent of the MoF. Under section 113 of the RBNZ Act, with the consent of the MoF, the RBNZ may issue directions requiring banks to take corrective action, remove or replace directors, auditors, or management and cease any unsafe business activity. Directions may be imposed to correct violations, but also to address actions not considered prudent by the RBNZ. Enforcement powers have been recently used to require disclosure re-publication, impose additional conditions of registration or to require additional reporting.

The RBNZ has issued limited guidance establishing a framework for identifying banking activities and practices considered unsound and not prudent. The lack of a detailed regulatory framework supporting supervisory judgment makes issuance of preventive directions more difficult. Directions may be issued when the bank or associated persons are conducting business in a manner prejudicial to the soundness of the financial system, or the business of the bank is not being conducted in a prudent manner. The threshold to issue a direction is high and the lack of supervisory guidance on what constitutes prudent banking (other than the broad description in section 78) makes use of supervisory judgment more difficult. Additionally, even bank-specific directions not having systemic implications require the prior consent of the MoF.

Although largely untested, the enforcement (directions) process may result in the RBNZ being reactive with its corrective action. Use of supervisory judgment is enhanced when the supervisor has issued enforceable guidelines on risk management processes. Also, the requirement that the Minister consent to bank-specific directions (section 113(1)(e)) may impose additional burdens and reduce the timeliness of enforcement actions.

Corporate Governance (CP14)

Although not enforceable by the RBNZ, the Companies Act of 1993 establishes requirements on corporate governance and the RBNZ has issued prudential requirements (Document BS14) providing additional guidance to banks. BS14 incorporates fit-and-proper principles from the Basel Committee's 2010 paper: *Principles for enhancing corporate governance*. BS14 also addresses Board composition and the inclusion of independent directors. Although BS14 refers to the Basel paper, only areas directly linked to conditions of registration are enforceable.

The RBNZ monitors compliance through off-site reviews, but the scope is not sufficiently detailed to meet the BCP standard. Supervisory activities do not include determining the level of engagement by boards and their oversight of senior management, nor does it include a review of governance structures, management selection, remuneration decisions and whether the Board adequately communicates corporate culture or establishes a strong control environment.

Prudential Requirements, Regulatory Framework, Accounting, and Disclosure (CPs 15–29)

The RBNZ does not impose direct requirements on banks to have comprehensive risk management policies and processes, except in the areas of capital adequacy and liquidity. The RBNZ relies on the required attestation provided by directors with every financial statement disclosure that: "the bank had systems in place to monitor and control adequately the material risks of the banking group, including credit risk, interest risk, currency risk, equity risk, liquidity risk, operational risk, and other business risk, and that those systems are being properly applied." Accuracy of the disclosure is tested off-site by the RBNZ through report analysis and by on-site interviews with bank management.

Liquidity policy (BS13) requires banks to comply with a number of quantitative and qualitative standards. The policy establishes a number of quantitative measures based on balance sheet ratios and cash flows to arrive at one-week and one-month percentages of liquidity outflow to total funding. Also computed is a one-year core funding ratio, required to be not less than 75 percent. The results of the liquidity requirements yield broadly similar results as application of Basel III.

Connected (Related) Party Exposures Policy (Document BS8) establishes requirements on related party transactions, including limits and transactions being on market terms. The policy establishes an aggregate limit on all related party exposures of 125 percent of Tier-one capital and 15 percent on aggregate nonbank related party exposures, by condition of registration. The aggregate limit on net exposures (under robust bilateral netting agreements) is set according to the bank's rating, with a maximum of 75 percent of Tier 1 capital. The policy does not require that transactions with related parties and their write-off receive prior Board approval, and the definitions do not cover all types of related party that are required by Principle 20. Compliance is monitored off-site, but information is aggregated and is not adequate to monitor related party lending risk.

The RBNZ seeks to follow the Basel guidance for capital adequacy to the extent that the guidance is appropriate for New Zealand (BS2 A and B). The RBNZ has implemented the Basel II Internal Models Based Approach (BS2B: four banks are accredited to use the IRB approach) and Standardized approaches (BS2A). The RBNZ takes a simple and conservative approach to capital adequacy. The main conceptual divergence from the Basel framework is the implementation of the leverage ratio, which the RBNZ has not considered at this stage, and is kept under review in light of other countries' experiences. Other departures from the Basel framework (such as, Pillar 2, Pillar 3, SIFI surcharges) can be considered examples of regulatory policy decisions tailored to national circumstances. The capital framework is currently under review.

New Zealand's legal framework ensures that the financial statements of every bank are prepared in accordance with New Zealand equivalents to internationally recognized accounting standards (NZ IFRSs). The financial statements are audited by a qualified external auditor in accordance with auditing standards applicable in New Zealand that are equivalent to internationally recognized auditing standards (ISAs).[16] The RBNZ relies on the external auditing process and director attestations to determine for prudential reasons whether banks use valuation practices consistent with IFRSs. The RBNZ routinely meets with the external auditor of the 10 largest locally incorporated banks. However, these meetings do not cover valuation practices, an area specifically trusted to external auditors. Other areas of supervisory responsibility delegated to external auditors are normally not covered in these meetings either.

[16] Please see IFRS country profile in the IASB website: http://www.ifrs.org/Use-around-the-world/Documents/Jurisdiction-profiles/New-Zealand-IFRS-Profile.pdf

Table 1. New Zealand—Summary Compliance with the Basel Core Principles
Principle 1. Responsibilities, Objectives, and Powers
RBNZ's objectives are defined consistently with this Principle. However, at an operational level some uncertainty has arisen because of the practical interpretation given to broadly defined legal terms. In addition, it is also of concern that responsibilities for banking supervision are not clearly defined and understood by all authorities involved, as further discussed in CP2.
Principle 2. Independence, Accountability, Resourcing, and Legal Protection for Supervisors
RBNZ's shortage of banking supervision staff and limited resources are serious impediments to developing an effective supervisory approach, even if the current low-intensity approach were maintained. In addition, although the RBNZ Act gives the RBNZ powers to operate at arm's length from the government, subject to checks and balances embedded in legislation, the Act should be aligned with the IPSA and the NBDT Act by removing the role of the Minister in issuing directions. Section 68B and current arrangements under the 2012 MoU create ambiguities in the role of the RBNZ and Treasury that, if not addressed decisively, may lead to undue government interference in the primarily prudential responsibilities of the RBNZ.
Principle 3. Cooperation and Collaboration
The framework for cooperation and collaboration with relevant domestic authorities, particularly the Treasury, may create ambiguities, given their mutual advisory roles and responsibilities for resolution and prudential policy, as discussed in CP2. The framework for cooperation and collaboration with APRA, as the relevant foreign supervisor, is outstanding. However, given the unique co-dependence between the RBNZ and APRA, the RBNZ may wish to explore additional practical and proactive ways of collaborating with APRA, to deliver supervision of the cross-border systemically important banks in a manner that is cost-effective for both the supervisors and the industry.
Principle 4. Permissible Activities
The permissible activities of institutions that are licensed and subject to supervision as banks are clearly defined and the use of the word "bank" in names is controlled. The authorities, however, need to assess risks posed by companies registering in New Zealand and offering bank-like or other financial services only abroad.
Principle 5. Licensing Criteria
The registration process is compliant with CP5.
Principle 6. Transfer of Significant Ownership
The framework is adequate and transfer activity is not significant in the New Zealand banking sector at the time of the assessment. Future assessments of the BCP will need to consider the materiality of this activity in the banking sector.
Principle 7. Major Acquisitions
See comments on Principle 6 above.
Principle 8. Supervisory Approach
The primary methodology employed by the RBNZ to assess risks off-site is PRESS, which functions as an early warning system by tracking trends and measuring possible impact on the banking system. The

Table 1. New Zealand—Summary Compliance with the Basel Core Principles (continued)
supervisory approach relies on the market discipline provided by disclosure and transparency, backed by attestation from directors as to the adequacy of risk management. Regulatory discipline is imposed through off-site monitoring, interviews with bank management, enforcement when deficiencies are uncovered and by a limited issuance of supervisory policies. The analysis is not documented, and it does not include a detailed evaluation of risk mitigants. The results of PRESS are not specifically discussed with banks.
Principle 9. Supervisory Techniques and Tools
The RBNZ does not rely on on-site inspections as a supervisory tool. Attestations by directors are not verified by on-site reviews but by reviewing documents requested off-site. Meetings with banks provide an opportunity to discuss supervisory findings and bank risks. Stress testing is required in the ICAAP process and is also performed by the RBNZ.
Principle 10. Supervisory Reporting
The RBNZ does not independently verify the prudential returns, and is not planning to do so. Currently, verification of supervisory returns and the valuation framework for prudential purposes consists of cross-checking different reporting outcomes for consistency.
Principle 11. Corrective and Sanctioning Powers of Supervisors
The RBNZ Act provides broad powers to the supervisor. Section 113 grants powers to issue directions, with the consent of the MoF, to require corrective action and impose sanctions. Section 78 defines "prudent manner;" a bank's failure to conduct business in a prudent manner may lead to the bank being issued a direction. However, issuance of a direction based on BS documents or supervisory judgment is hampered as the threshold is high. Enabling the issuance of bank-specific directions without the need for MoF consent, and more directly linking compliance with BS documents setting out expectations for prudent banking would facilitate the use of supervisory judgment and timely supervisory action.
Principle 12. Consolidated Supervision
The RBNZ's supervisory approach focuses on the registered bank's banking group as defined in conditions of registration and the RBNZ Act, i.e., the registered bank and its subsidiaries. The wider banking group or conglomerate would be considered in respect of funding or capital support, and contagion or reputation risk implications e.g., through the assessment of parent support in the PRESS assessment. Nevertheless, the concept of proportionality is considered in the assessment as discussed under "Methods of ongoing supervision" (under "Main Findings," see above).
Principle 13. Home-host Relationships
The RBNZ is not a home supervisor for any bank with material cross-border operations. As host supervisor, the RBNZ has a close home-host relationship with APRA. However, there is still scope for the RBNZ to take advantage of more proactive coordination and collaboration with APRA to fulfil the RBNZ's supervisory objectives and tasks in a cost-efficient manner.
Principle 14. Corporate Governance
BS14 and BS10 establish supervisory policy on Board size and composition, fit-and-proper requirements, and require directors to act in best interest of the bank. The RBNZ is also planning to enhance its ability to ensure ongoing suitability of directors/management, since currently non-objection by the RBNZ is only required at the time of appointment. The guidance issued is limited, and the level of engagement does not address whether directors are effective and exercise their duty of care, and whether the Board approves and oversees the implementation of policy and compliance with the risk appetite statement.

Table 1. New Zealand—Summary Compliance with the Basel Core Principles (continued)
Principle 15. Risk Management Process
While the RBNZ requires banks' directors to attest to having adequate risk management systems in place, it has not issued requirements to serve as benchmarks for banks to measure their systems against. Issuing enforceable requirements would also facilitate effective corrective action or the taking of enforcement action. The RBNZ takes a high-level approach to determining the adequacy of risk management, relying on reports reviewed off-site or meetings with the banks. The supervisory approach does not meet most of the essential criteria that require detailed reviews of operations and a more intrusive approach.
Principle 16. Capital Adequacy
The capital adequacy framework is, in substance, aligned with international standards, with a simple and conservative bias. Departures from the Basel framework (leverage ratio, Pillar 2, Pillar 3, SIFI surcharges) can be considered examples of regulatory policy choices tailored to national circumstances. The capital framework is currently under review.
Principle 17. Credit Risk
The RBNZ does not have requirements on credit risk management policies; does not issue guidance on credit management processes or Board involvement; and does not verify the adequacy of banks' processes.
Principle 18. Problem Assets, Provisions, and Reserves
The RBNZ has not issued requirements or definitions on nonperforming loans, forbearance, renewals, cured loans or loan classifications based on risk. The RBNZ does not issue prudential guidelines on loan loss provisioning.
Principle 19. Concentration Risk and Large Exposure Limits
The RBNZ does not establish large exposure limits, nor has it issued guidance on the management of concentration risk. In 2016 an additional regulatory collection of large exposure data was initiated.
Principle 20. Transactions with Related Parties
BS8 on connected (related) party lending establishes a limit on aggregate nonbank related exposure at 15 percent of Tier 1 capital, and aggregate related exposure (including banks) at 125 percent of Tier I capital. The aggregate limit on net exposures (under robust bilateral netting agreements) is set according to the bank's credit rating, with a maximum of 75 percent of Tier 1 capital. The policy does not require prior Board approval for effecting transactions or write-offs. Exposure to related parties of a bank's directors is not included in the definition of bank related parties. Compliance is monitored off-site but information collected does not provide sufficient detail to monitor related party transactions.
Principle 21. Country and Transfer Risks
The level of country risk is minimal as banks do not actively engage in cross-border exposure. The RBNZ is very familiar with conditions in Australia where the exposure lies as home country for the four largest banks. Additionally, Australia country risk is low. The RBNZ closely monitors Australia country risk and the parents of the subsidiaries in New Zealand.
Principle 22. Market Risk
Capital requirements are based on the Basel 1996 amendment. Estimates of market risk reveal low impact. RBNZ monitoring is considered proportionally appropriate.

Table 1. New Zealand—Summary Compliance with the Basel Core Principles (concluded)
Principle 23. Interest Rate Risk in the Banking Book
The RBNZ has not issued guidance on the management of interest rate risk or interest rate risk strategy/policies nor issued benchmarks for measuring the risk. The RBNZ relies on reviewing banks' internal reporting.
Principle 24. Liquidity Risk
BS13 establishes the supervisory policy on liquidity. Quantitative limits are imposed on one-week, one-month, and a one-year core funding ratio that produce results no less than the Basel standards, according to RBNZ estimates of the comparisons.
Principle 25. Operational Risk
The RBNZ reviews banks' operational risk management practices through the review of banks' management reports. Detailed guidelines and on-site testing to verify adequacy of bank practices is not performed.
Principle 26. Internal Control and Audit
The RBNZ does not comply with most of the requirements of CP26, nor does it intend to do so. Determining for prudential reasons that banks have adequate internal control frameworks is left to the bankers themselves. The role of the RBNZ is to maintain light-handed monitoring based on regular consultations with bank senior management and directors. Independent verification of internal controls is a critical area to ensure the soundness of individual institutions.
Principle 27. Financial Reporting and External Audit
New Zealand's legal framework ensures that the financial statements of every bank are prepared and audited in accordance with New Zealand equivalents to internationally recognized accounting and auditing standards. However, the RBNZ does not itself determine that banks use valuation practices consistent with IFRSs. It relies on the external auditing process and director attestations to provide this prudential outcome. The RBNZ meets with the external auditor of each of the largest locally incorporated banks. However, these meetings do not cover valuation practices, or other areas of supervisory responsibility entrusted to external auditors.
Principle 28. Disclosure and Transparency
The RBNZ is committed and actively engaged in achieving high-quality public disclosure by banks in line with international standards and practices. The RBNZ should continue its efforts to assess whether public disclosure meets the needs of the users as a means to enable market discipline. The RBNZ is encouraged to complement disclosure requirements with information on remuneration as discussed under Principle 14.
Principle 29. Abuse of Financial Services
New Zealand was relatively late in implementing legislation and an AML/CFT regime (in 2013). This has allowed the RBNZ to benefit from experiences in other jurisdictions, and achieve significant progress in addressing deficiencies in the pre-2013 regime. The supervisory approach in this area departs from the hands-off approach to prudential supervision in general. The framework still needs to mature further, and the next FATF assessment in 2019 will be an important landmark to reassess progress.

E. Recommended Actions

Table 2 below lists the suggested actions for improving compliance with the BCPs and the effectiveness of regulatory and supervisory frameworks.

Table 2. New Zealand—Recommended Actions
Principle 1. Responsibilities, Objectives, and Powers
Develop an operational definition of the RBNZ's objective for banking supervision to remove possible ambiguities arising from the broad formulations in the legislation. Based on these clarifications, consider revisiting some of the key tenets of the supervisory approach, in particular the absence of independent verification of supervisory returns, and first-hand knowledge of the soundness and risk management of individual banks and banking groups. This will also raise the international standing of New Zealand's banking supervision.
Principle 2. Independence, Accountability, Resourcing, and Legal Protection for Supervisors
As an overall conclusion from this BCP assessment, reassess the level of resources needed to adequately fulfil the RBNZ's responsibilities for banking supervision. The authorities should reassess the need to clearly delineate the roles and responsibilities of the Treasury vis-à-vis RBNZ's statutory objectives for banking supervision, to ensure that control functions and checks-and-balances do not become undue interference in the execution of RBNZ's prudential mandate. Similarly, clarifications should be agreed on the exercise of those sections in the RBNZ Act where the Minister may have the power to give directions to the RBNZ, particularly section 68B. Clarifications should narrow the scope for the government to unduly interfere in the statutory responsibilities and routine tasks of the RBNZ as an independent supervisor. Arrangements and procedures for interaction between the Treasury and RBNZ, including the interpretation of section 68B, have to be established clearly in such a way that the relationship between the two organizations is transparent and traceable.
Principle 3. Cooperation and Collaboration
The recommendations in CP2 and CP13, as they relate to cooperation and collaboration with national and trans-Tasman authorities, also address deficiencies in achieving compliance with CP3.
Principle 8. Supervisory Approach
Increase the analysis of the risk mitigants listed for the individual risks, retain work papers, and share the results of the analysis with banks.
Principle 9. Supervisory Techniques and Tools
Carry out, or have carried out on its behalf, on-site inspections to verify or test data and information on which the analysis of key risks relies: for example, the credit portfolio, Board minutes, and the implementation of Board policies and regulatory reports. On-site reviews can be targeted and their frequency based on risk.
Principle 10. Supervisory Reporting
The RBNZ is encouraged to develop processes for strong first-hand independent verification of banks' prudential returns, especially in the areas of earnings and credit asset quality, given the credit profile of the banking industry. This will allow the effective identification of prudential concerns through an independent assessment of risks, while ensuring that these risks are mitigated in a timely manner.

Table 2. New Zealand—Recommended Actions (continued)
Principle 11. Corrective and Sanctioning Powers of Supervisors
Make compliance with BS Policy documents evidence of prudent practice (s78) and eliminate Ministerial consent for directions under section 113(1)(e) of the RBNZ Act (thereby also aligning with IPSA and the NBDT Act). These changes would facilitate the implementation of enforcement action on a preventive basis and support the use of supervisory judgment.
Principle 12. Consolidated Supervision
RBNZ is advised to prepare itself for the possibility that the current circumstances and mitigating factors change, and develop a proper framework for consolidated supervision. This could include, for example: developing a proper economic definition of the banking group under supervision; establishing a supervisory methodology to collect and analyze information on intragroup transactions; and developing formal policies to limit the scope of foreign operations of New Zealand incorporated banks on the basis of weak host jurisdictions.
Principle 13. Home-host Relationships
The RBNZ is encouraged to identify areas where policy making and supervisory activities for the day-to-day supervisory assessment of risks would benefit further from active cooperation and collaborative work with APRA, to enhance RBNZ's cost-effective approach to supervision pursuing its own statutory mandate. For example, RBNZ could pursue a proactive coordinated approach on the assessment of group risk exposures, risk management, corporate governance and cross-border crisis management.
Principle 14. Corporate Governance
The significant reliance on self-discipline is not supported by published and enforceable supervisory expectations. The update of BS14 should include expanded guidelines on risk appetite statements, on required policies to be developed by the Boards, and on codes of conduct.
Principles 15. Risk management process; 17. Credit Risk; and 18. Problem Assets, Provisions, and Reserves; 19. Concentration Risk and Large Exposure Limits; 20. Transactions with Related Parties; 21. Country and Transfer Risks; 22. Market Risk; 23. Interest Rate Risk in the Banking Book; and 25. Operational Risk
Achieving compliance would require a major change to the RBNZ's supervisory approach. • Supervisory regulations or enforceable policies would need to be issued establishing benchmarks and requirements for measuring, monitoring and managing risks. This would provide guidance to banks on supervisory expectations when attestations are made. • A more intrusive approach would be needed, including on-site inspections (by the RBNZ or its appointed representative) to determine compliance and deepen supervisors' understanding of banking operations and risks. • Increase the forward-looking capacity of supervision by increased use of stress testing. • Additional resources and training would be required.
Principles 17. Credit Risk; and 18. Problem Assets, Provisions, and Reserves
As this is the most significant risk in New Zealand, detailed guidelines should be issued, addressing: loan classification, extended loans, forbearance, nonperforming and cured loans, and provisioning. There need to be on-site reviews to ascertain credit portfolio quality and to verify the accuracy of internal bank reports shared with the RBNZ.

Table 2. New Zealand—Recommended Actions (concluded)
Principle 19. Concentration Risk and Large Exposure Limits
Establish lending limits for concentrated credit exposures and ensure banks are properly aggregating exposures across any connected group of counterparties.
Principle 20. Transactions with Related Parties
Expand the requirements on related party loans to include prior approval by the Board and reporting on write-offs for Board approval. Expand the information collected to include terms, names, and repayment status. And expand the definition of related party to include related parties of the bank's directors and other parties and transactions, as defined in footnotes to CP20.
Principle 26. Internal Control and Audit
The RBNZ should be conscious that independent verification of internal controls is a critical area to ensure the soundness of individual institutions, and an indispensable means to exercise effective regulatory discipline.
Principle 27. Financial Reporting and External Audit
While respecting the difference in responsibilities between external auditors and the RBNZ, the RBNZ should engage them in a focused and effective dialogue to discuss valuation practices, as well as other areas of prudential concern delegated to external auditors.

F. Authorities' Response to the Assessment

The New Zealand authorities (the FMA, MBIE, RBNZ, and Treasury) wish to thank the IMF and the banking assessors for their thorough assessment of New Zealand's compliance with the *Basel Core Principles for Effective Banking Supervision*. The authorities welcome the opportunity to comment on the IMF's *Detailed Assessment Report* (DAR).

The New Zealand authorities strongly support the FSAP as a means of promoting and improving both the quality of financial sector regulation and the outcomes that this regulation aims to achieve.

By way of context, the New Zealand banking system is highly concentrated and largely foreign owned, with subsidiaries of the four large Australian banks accounting for a large share of total banking assets. New Zealand is not a member of either the BCBS or the Financial Stability Board (FSB). Nevertheless, New Zealand looks to adopt the recommendations of international standard setting bodies when they are appropriate for New Zealand circumstances, and these are often customized to deliver outcomes that best meet New Zealand's needs.

The last New Zealand FSAP was conducted during 2003–2004. Since that time there have been significant developments in the New Zealand regulatory landscape, including to banking sector regulation and supervision. Some developments can be traced to the recommendations of the previous FSAP, while others are tied to separate factors such as the global financial crisis.

The New Zealand financial system weathered the crisis comparatively well – the banking system did not experience a major deterioration in asset quality and nonperforming loans remained low by international standards. The crisis did, however, highlight the reliance of the New Zealand banking system on wholesale market funding. In response the Reserve Bank introduced a new prudential liquidity policy in 2010 designed to ensure banks self-insure against short-term funding pressures.

The Reserve Bank was quick to adopt the new global solvency standard for banks embodied in Basel III, implementing the new higher minimum capital requirements at the start of 2013. The crisis also prompted the accelerated development and subsequent implementation of a policy designed to minimize the damage to the financial system from the failure of a large bank. This policy, OBR, was introduced in 2012.

Complementing these policy developments, the Reserve Bank has also stepped up its supervisory intensity since the crisis, reflected in the degree of engagement with banks, and improvements in its supervisory analysis and data. The DAR acknowledges these significant improvements in the Reserve Bank's 'regulatory' pillar.

The DAR notes that the Reserve Bank's approach to banking sector regulation rests not only on a 'regulatory pillar' (formal enforceable rules and requirements) but also on ensuring that bank directors and senior managers have the right incentives to manage their bank's risks (self-discipline), and that market participants have the appropriate information, incentives and mechanisms to help influence the behaviour of banks in a way that also contributes to a sound and efficient banking sector (market discipline).

The New Zealand authorities recognize that, despite a rebalancing towards more regulation post-crisis, New Zealand's banking regime remains somewhat unusual given the emphasis that the Reserve Bank places on self-discipline and market discipline, and its relatively low-intensity supervisory approach.

The findings and recommendations contained in the DAR provide an opportunity for the Reserve Bank to reflect on its current model and the extent to which, together, the 'three pillars' might better contribute to a sound and efficient New Zealand banking system. The recommendations imply extensions or adjustments to the Reserve Bank's current model in the following areas:

- There should be common benchmarks and enforceable requirements against which banks should measure, monitor and manage all the key risks facing their business in order to facilitate corrective or enforcement action.

- In conjunction, there should be a greater willingness to take supervisory or enforcement actions, not just in response to formal regulatory breaches, but also on a more preventive basis (based on a greater use of supervisory standards) to mitigate 'imprudent behaviour' that could lead to more serious consequences.

- Supervisory and disclosure information should be subject to more verification either by the Reserve Bank or by external experts.

- Market discipline has more limitations than the Reserve Bank's approach suggests.

- There should be a reassessment of the resources needed to adequately fulfil the Reserve Bank's responsibilities for banking supervision.

The Reserve Bank, in conjunction with other relevant New Zealand authorities, will consider the recommendations in these and other areas identified in the DAR. It is too early to provide a definitive response, but the Reserve Bank believes that those recommendations tied more explicitly to improving self-discipline and market discipline merit particular attention. As an example the Reserve Bank recently initiated a thematic review of the attestation framework, partly in response to the IMF's findings.

The DAR also acknowledges the importance of trans-Tasman cooperation given the significant presence of Australian-owned banks in New Zealand. The New Zealand authorities believe that the current home-host arrangements established with Australian authorities are very sound and consistent with international best practice. Nevertheless, the authorities will continue to develop and deepen the work with their Australian counterparts on areas of common interest.

The IMF assessment places considerable importance on the principle of ensuring the continued independence of the Reserve Bank in the performance of its regulatory and supervisory functions. While the DAR does not point to any examples of government interference, New Zealand authorities will work together to consider the recommendations in this area and to ensure that an appropriate degree of separation is maintained between the Reserve Bank and the executive branch of government.

In conclusion, the New Zealand authorities found the FSAP a valuable process with many potentially useful insights for the Reserve Bank's prudential framework. The New Zealand authorities will be considering the recommendations systematically over the coming months with a view to ensuring that New Zealand's approach to banking sector regulation continues to be cost-effective while promoting the soundness and efficiency of the financial system.

Appendix VI. Report on the Observance of Standards and Codes: Insurance Core Principles—Summary Assessment[1]

A. Introduction

This assessment of insurance regulation and supervision in New Zealand was carried out as part of the 2016 New Zealand FSAP. The assessment is benchmarked against the ICPs issued by the International Association of Insurance Supervisors (IAIS) in October 2011, as revised in November 2015.

The assessment excludes personal accident and earthquake schemes provided by government entities. There are two bodies (with the status of "Crown agents" under the New Zealand Crown Entities Act 2004) responsible for damages due to natural disasters and accidental injuries:

a. The EQC, established under the Earthquake Commission Act 1993, provides natural disaster coverage in relation to residential property and associated land up to specified limits.

b. The ACC, established under the Accident Compensation Act 1972, provides no-fault personal injury coverage for all New Zealand residents and visitors.

Both have been excluded from the scope of this assessment due to the nature of their functions which is similar to social insurance schemes. These schemes are, however, included in the market statistics in this report because they form an integral part of financial protection in New Zealand and excluding them would understate overall available insurance and hamper international comparison.

B. Information and Methodology Used for Assessment

The assessment is based solely on the laws, regulations and other supervisory requirements and practices that are in place at the time of the assessment in August 2016. While this assessment does not reflect new and ongoing regulatory and supervisory initiatives, key proposals for reforms are summarized by way of additional comments. The authorities provided a comprehensive self-assessment, supported by examples of actual supervisory practices and assessments, greatly enhancing the robustness of the assessment.

C. Overview of the Institutional Setting and Market Structure

The RBNZ adopts a principles-based, low-intensity supervisory philosophy. The RBNZ commenced prudential supervision of the insurance sector in 2010 after the passage of the IPSA. The supervisory emphasis is on the board's accountability and the consumer's responsibility in selecting financial products and providers. Consistent with this philosophy and with its powers under

[1] The assessment team included Mimi Ho and Ian Tower (external experts). The assessment was conducted from August 16 to September 7, 2016.

IPSA, the RBNZ has issued standards and guidelines for insurers, and has consciously refrained from conducting in-depth on-site supervision, with a view to encourage self-discipline on the part of insurers' boards and management.

The responsibility for insurance market conduct supervision lies with the FMA. The FMA's oversight of insurers and insurance intermediaries is embedded in its general oversight of financial advisers and financial products. Established in 2011, the FMA took over the functions of the former Securities Commission of New Zealand and the Government Actuary.

New sales of life insurance are for protection only, without savings elements. Most life insurers have established fund management subsidiaries and now provide insurance and fund management out of separate entities. New life business is mostly confined to pure protection. KiwiSaver, a tax efficient (non-insurance) work-based retirement savings product with some early withdrawal flexibility, has attracted savings that might have otherwise gone into insurance.

There is no compulsory class of non-life insurance because of the role of the ACC. The ACC provides universal no-fault protection against work and non-work related injuries. Consequently, there is no compulsory insurance often seen in other markets, such as motor and workers' compensation insurance. Individuals may take up additional private insurance to supplement the ACC's coverage. Premiums/levies collected by ACC and EQC account for 45 percent of total non-life premiums.

The industry is highly concentrated. The total number of licensed insurers was 96 at the end of 2015, 35 of which are branches of foreign insurers. The industry is also highly concentrated in a few insurers. Australian-owned operations in New Zealand (branches and subsidiaries combined) represent 66 percent of market by premium and 75 percent by assets. The RBNZ has extensive cooperative arrangements with the Australian authorities as the home supervisor.

The non-life insurance sector is exposed to earthquake and other natural disasters. New Zealand is highly vulnerable to natural catastrophes: earthquake, volcanic eruption, and the resulting landslide, tsunami, fire, flood, etc. The Canterbury earthquakes in 2010–2011 resulted in the government bail-out of one insurer and the failure of another. Most of the Canterbury claims fell to the private insurance market, as the EQC only covers residential properties up to limits.

D. Preconditions for Effective Insurance Supervision

There is a well-established and transparent macroeconomic and financial sector policy framework. The primary responsibilities of the RBNZ include macroprudential policy; the oversight and designation of payments systems; and monetary policy. The Treasury is responsible for execution of the government's economic policy. The FMA is responsible for oversight of organized financial markets and conduct of business across the financial sector.

There is a well-developed public infrastructure. The laws on business organisation, insolvency, property registration and transfer and consumer protection are well-established. Property and contract law is well developed, through statute or common law, and is enforced by the courts. The judiciary is independent and of high standing and there is a developed legal profession. The accounting and auditing frameworks follow international standards and there is a well-developed profession. Auditors and audit work are subject to oversight and disciplinary processes. The New Zealand Society of Actuaries is an independent professional body.

There are extensive general corporate governance standards in laws, codes, and guidelines. The Companies Act 1993 sets outs the role and responsibility of the board, the rights of shareholders (including in relation to the appointment and removal of directors) and the conduct of general meetings. It includes disclosure requirements in relation to staff remuneration. The FMC Act sets out governance obligations that apply to issuers of debt securities, managers of managed investment schemes and their supervisors. The FMA has also published corporate governance principles and guidelines that are addressed to a wide set of entities. The New Zealand Exchange has issued corporate governance principles applicable to its listed companies.

There are disclosure requirements associated with company law and regulation and listing on the stock exchange. There is a general requirement for audited financial statements to be produced and made available to the public via the Companies Office register. Entities that do not have public accountability (and smaller for-profit public sector entities) may choose to be subject to reduced requirements. Listed companies are subject to the stock exchange's disclosure requirements.

In line with the general regulatory philosophy, there is no insurance policyholder protection scheme that would provide a safety net in the event of insurer failure. The policy framework emphasizes the need for consumers to make informed decisions, the avoidance of moral hazard, and reducing public perception of any implicit government guarantee. Regulation places particular emphasis on the importance of appropriate disclosure. However, insurers and intermediaries are required to be members of a dispute resolution scheme, except where they are undertaking only wholesale business.

There are deep and liquid financial markets, although they are relatively small by international standards, and limited (for debt issues) to shorter maturities. New Zealand insurers invest largely in NZD-denominated assets and mostly in debt securities. Equity and bond markets are small by international comparison and the range of instruments limited. Government and financial institutions dominate debt issuance. Government securities are issued only out to ten years and the resulting lack of long-term risk-free benchmark rates constrains longer term private issuance. There are limited inflation-indexed products which would help insurers to manage inflation risks. There are no restrictions on foreign investment. Given the significance of foreign-owned insurers to the New Zealand market, many insurers make use of their head office or parent company to source and manage foreign investments.

E. Main Findings

Table 1. New Zealand—Summary Compliance with the Insurance Core Principles
1. Objectives, Powers, and Responsibilities of the Supervisor
Legislative changes in recent years have strengthened the regulatory framework, establishing a "twin peaks" approach with the RBNZ responsible for prudential regulation and the FMA for conduct in financial markets, including that of insurers and insurance intermediaries. The objectives of the regulators are clearly set out in law and support the protection of insurance policyholders, even if the statutory objectives of the RBNZ focus on the soundness of the insurance sector, including promoting public confidence. Both the RBNZ and FMA have extensive powers, but these do not extend, with important exceptions in RBNZ's case, to establishing rules themselves or to imposing administrative sanctions.
2. Supervisor
The governance structure and decision-making processes are clearly defined for both the RBNZ and FMA. There are transparent arrangements for the appointment and removal of the RBNZ Governor and members of the RBNZ and FMA boards, although reasons for any dismissal do not have to be published (they are likely to be made public in practice). There is scope for publication of more information on the insurance sector in aggregate. The relationship between the RBNZ and government provides for supervisory decisions to be generally taken by the RBNZ, except the appointment of a statutory manager, reflecting the severity of this form of intervention. While the RBNZ's key relationship is with the MoF, it also works with and keeps the Treasury informed on individual insurers. As an independent Crown Entity, the FMA is protected from government intervention in supervisory decisions. Its responsibilities and those of the MBIE and the Minister of Commerce regarding regulatory policy are clearly defined. The adequacy of resources at both the RBNZ and FMA needs to be reconsidered.
3. Information Exchange and Confidentiality Requirements
The RBNZ has legal power to obtain information and share it with other authorities with similar functions. Domestically, there is a formal avenue for relevant authorities to regularly share information. Internationally, the RBNZ has signed cooperation MoUs with its Australian and U.K. counterparts, and is a signatory to the IAIS MMoU. A formal agreement is not a precondition for information sharing.
4. Licensing
The licensing requirements set out in IPSA are clear and comprehensive, as is the RBNZ's guidance on its interpretation of the legislation, which draws on its licensing of insurers when IPSA took effect. A number of applications were rejected. The RBNZ's policy is to be accommodating towards overseas insurers and in the case of branches, the RBNZ states that it has regard to the benefits of an overseas insurer's presence in the New Zealand market when assessing the home country's regulatory regime. A relatively wide range of jurisdictions are treated as having regulatory arrangements equivalent to (or at least as satisfactory as) those of New Zealand.
5. Suitability of Persons
The legislation has established a clear framework for suitability, under which insurers themselves are held responsible for developing and implementing a policy on fit-and-proper requirements and certifying to the RBNZ that new appointments comply with the policy. The RBNZ does not exercise prior approval for key

Table 1. New Zealand—Summary Compliance with the Insurance Core Principles (continued)
individuals for particular roles. The scope of the requirements does not extend, however, beyond directors, the CEO, CFO, and the Appointed Actuary. There is extensive scrutiny of significant shareholders at the licensing stage and, in respect of controlling shareholders, in case of changes in control, but there are no ongoing requirements regarding their suitability.
6. Changes in Control and Portfolio Transfers
The legislation requires notification to the RBNZ of changes in control and proposed portfolio transfers. The threshold for the definition of control in IPSA is high in relation to international practices, which define control more broadly or focus approval on significant owners rather than just majority shareholders. Its approach exposes the RBNZ to the risk that potentially detrimental changes in significant owners occur without its knowledge, depriving it of the ability to take any required action. The RBNZ has received a large number of applications for approval of transfers under IPSA. Although policyholder protection is not an objective under IPSA, the RBNZ must base its decisions on an assessment of the impact on policyholders.
7. Corporate Governance
The current framework is less comprehensive and binding than the ICP requires. The RBNZ's 2014 thematic review of risk governance (a subset of overall corporate governance) underscores the importance for the RBNZ to: • Provide clear and comprehensive articulation of its expectations with regard to governance to ensure consistent understanding and improve quality of governance. • Design an ongoing monitoring strategy to give the RBNZ the necessary comfort that ongoing self-discipline is effective.
8. Risk Management and Internal Controls
The legal requirements on risk management and internal controls are less prescriptive and legally binding than the ICP requires. Other than the Appointed Actuary, there are no explicit binding requirements for insurers to have risk management, compliance, and internal audit functions. There is also a lack of a clear indication of the insurer's responsibility for outsourced functions.
9. Supervisory Review and Reporting
The RBNZ has full supervisory powers and a developing set of tools, the application of which takes a structured approach to assessing risk and allocating resources. There is scope for publishing more details of the approach. The supervisory framework is still evolving. Baseline monitoring appears thorough and supervisors have been leveraging limited resources to carry out more in depth risk assessment through thematic work. However, routine supervisory engagement with insurers, even the largest, is focused mainly on issues arising from reporting and regulatory transactions and the annual senior management meeting. The RBNZ does not routinely carry out qualitative assessment based on in-depth interaction, for example, of governance, for risk assessment or remediation purposes. Supervisory resources are accordingly limited, compromising the RBNZ's ability to identify and respond to risk. The RBNZ's full set of reporting requirements has been introduced only recently and the requirements lack granularity.

Table 1. New Zealand—Summary Compliance with the Insurance Core Principles (continued)
10. Preventive and Corrective Measures
The legislative framework and RBNZ's internal procedures provide for the RBNZ to take corrective action and to escalate from supervisory action through to imposing enforceable requirements, including directions, according to the severity of the issue. There is no requirement for publication of corrective actions. Not all of the powers outlined in IPSA have yet been used. In some cases, the RBNZ has deliberately not intervened as strongly as it could have, reflecting the challenges faced by many insurers in transitioning to the new regime. However, the RBNZ has imposed significant corrective measures on some insurers.
11. Enforcement
The legislation clearly sets out a range of enforcement tools and sanctions, to be used against individuals as well as insurers, and the circumstances under which they may be applied. The RBNZ has implemented internal procedures to ensure that actual or potential breaches of any requirements are recorded and managed through to resolution. The RBNZ's powers remain largely untested. Financial and other penalties may be sought from the court, including against individuals.
12. Winding-up and Exit from the Market
The RBNZ has a range of options in dealing with voluntary and involuntary liquidation of insurers. It chooses which option to use based on circumstances. While policyholder protection is a principle of IPSA, the only specific protective measure is the priority of claim for life insurance policyholders in the statutory fund. There is no policyholder protection scheme currently and there is no intention of establishing one. The largest life insurer by assets is an Australian branch, to which the home jurisdiction's solvency standard and statutory fund requirements apply; it is not required to hold assets in New Zealand; and its winding-up process along with New Zealand policyholders' rights are not within the RBNZ's control.
13. Reinsurance and Other Forms of Risk Transfer
The RBNZ recognizes the importance of reinsurance particularly in the light of New Zealand's exposure to natural disasters. However, the responsibility for ensuring the appropriateness of reinsurance arrangements is largely left to the Appointed Actuary.
14. Valuation
The valuation of assets and liabilities for solvency purposes is broadly in line with the ICP standard. The rating is due to the lack of guidance on the choice of discount rates for long maturity businesses.
15. Investment
Insurers are generally permitted to invest freely provided they maintain adequate capital in respect of the associated risks. Supervisory influence on investments is indirect through capital charges. However, this principles-based approach would normally be accompanied by monitoring by the supervisor not only of the actuarial analysis but of the detailed breakdown of actual investments and changes over time that may indicate a developing risk appetite. The RBNZ is not collecting the information on investments they would need to carry out this monitoring

Table 1. New Zealand—Summary Compliance with the Insurance Core Principles (continued)

16. Enterprise Risk Management for Solvency Purposes
The key gaps are: • There should be a rigorous process of risk identification and measurement (ICP 16.1) involving all aspects of the operations. • The insurer's risk management policy should include a description of the insurer's policies towards risk retention, risk management strategies (reinsurance, the use of derivatives), and address the relationship between pricing, product development and investment management. (ICP 16.3) • Asset-liability management. (ICP 16.5) • The Enterprise Risk Management (ERM) framework should include mechanisms to incorporate new risks and new information on a regular basis and incorporate a feedback loop (ICP 16.9 and 16.10). While not as extensive as the Own Risk and Solvency Assessment, the Financial Condition Report (FCR) is objectively prepared and serves a particularly useful function
17. Capital Adequacy
The solvency standard takes into account the risk profile of the insurers. While it does not address dependencies and interrelationships between risk categories, it is a practical methodology. However, the single solvency control level makes it difficult for the RBNZ to make early intervention.
18. Intermediaries
There is a generally well-developed framework applying to insurance intermediaries which sell more complex products and companies that provide advice on a wide range of financial products (Authorised Financial Advisers and Qualifying Financial Entities). The FMA carries out licensing assessments and supervision of these intermediaries, and publishes extensive guidance. There is an effective enforcement process and strong protection is applied to client money due to insurance policyholders. However, the regime applying to those who choose only to sell simpler products, even to retail customers, is limited. Simpler products as defined cover all types of insurance except investment-linked policies (not sold in practice). The FMA and government are already addressing these issues in a government-led review of the legislation on financial advice.
19. Conduct of Business
The conduct of business regime is particularly focused on financial advice. Other aspects of insurance conduct of business are less well covered and in many cases not covered at all in regulation or covered only in FMA guidance. A developing framework of self-regulation in general insurance and established dispute resolution services help reduce risks to customers, but do not substitute for regulatory requirements and effective oversight. The FMA is increasing its overall resources, publishing extensive information on its expectations and undertaking thematic work. The conduct risks in insurance may be lower than in many other developed markets owing to the product range. Nonetheless, aspects of the insurer's relationship with customers where there may be misconduct, including the handling of claims and complaints, and advice on (nominally) simpler products provided by registered financial advisers (RFAs), are effectively unregulated. Risk-based supervisory oversight, including proactive identification and management of risks, is largely limited to financial advice.

Table 1. New Zealand—Summary Compliance with the Insurance Core Principles (continued)
20. Public Disclosure
The disclosure requirements are based on accounting standards, supplemented by mandatory disclosure of financial strength: a credit rating by approved credit rating agencies, actual solvency capital amount, the minimum amount required, and the resultant solvency margin and solvency ratio. Comparison across insurers is made difficult by the fact that: (a) accounting standards allow some management discretion on the details to be disclosed; (b) branches are allowed to present solvency information using home jurisdiction methodologies; and (c) additional solvency margins are required of some insurers. Compared to the ICP, financial statement disclosure requirements are also lacking in the areas of investments, asset liability management, description of risk concentration, and interaction between capital adequacy and risk.
21. Countering Fraud in Insurance
Fraud related to insurance is captured by general criminal law on theft, misrepresentation etc. and the criminal and regulatory authorities cooperate to identify cases of fraud and have brought successful prosecutions on insurance-related fraud. The supervisory bodies are part of a network of official agencies cooperating in this area (although on a less formal basis than for AML/CFT work) and spreading wider awareness of fraud issues. Fraud is covered in RBNZ guidelines (in connection with risk management), and fraud prevention and controls are in principle covered in supervisory work within the RBNZ's risk-based approach. Other priorities have led to limited specific focus to date on fraud issues.
22. Anti-Money Laundering and Combating the Financing of Terrorism
Both the RBNZ and the FMA are designated supervisors under AML/CFT legislation. The RBNZ monitors life insurers, using reports and analysis of vulnerabilities to AML/CFT risk. It conducts desk-based reviews and a small number of on-site inspections, taking a risk-based approach. The intensity of supervision is lower than for banks, reflecting the risk assessment. The RBNZ benefits from a specialist unit that has built expertise and relationships with other authorities, including in Australia. The FMA collects information, carries out reviews and publishes findings, in relation to the reporting entities within the wide scope of its regulation, although there is no specific work program for insurance intermediaries.
23. Group-wide Supervision
Supervision of insurance is new and the extent of group-wide supervision is limited. While the RBNZ has obtained information of all legal entities in a group at the licensing stage (2013), its knowledge will become outdated over time in the absence of a regular reporting and monitoring of group membership and group structures, except where there is a change of control (see ICP 5). The RBNZ has not established relationships with overseas supervisors other than the Australian Prudential Regulation Authority (APRA) mainly due to resource constraints.
24. Macroprudential Surveillance and Insurance Supervision
Although the RBNZ's objectives focus on the sector, its supervision is focused to a large extent on individual insurers. Its scope to take a system-side view has been hampered to date by limited availability of detailed comparative information from regulatory reporting. However, a more macroprudential approach was taken in response to the Canterbury earthquakes. With increased data availability from late 2016, the RBNZ will be better able to identify emerging market-wide risks, assess for potential systemic significance and publish more aggregate information on the sector. While the development of macroprudential supervision will also contribute to the effectiveness of the supervision of individual insurers, it will not substitute for that activity and is therefore likely to require additional supervisory resources.

Table 1. New Zealand—Summary Compliance with the Insurance Core Principles (concluded)
25. Supervisory Cooperation and Coordination
NZ has an open and cooperative attitude towards supervisory cooperation, although its attitude is more reactive than proactive. Domestically, there are arrangements to discuss and share information among relevant authorities. Internationally, the RBNZ has well established procedures to cooperate with Australia whose insurers represent 66 percent of the market. Despite the large foreign participation in its market, the RBNZ's active participation in supervisory colleges is mainly limited to one.
26. Cross-border Cooperation and Coordination on Crisis Management
The largest non-life insurer in New Zealand (which is locally incorporated) has a 44 percent market share. There would be a serious impact on the market should it be in distress, similar to the issues caused by the need for the government to acquire AMI as a result of Canterbury earthquake losses. In addition, New Zealand policyholders of foreign branches may be vulnerable to possible overseas policyholder preference. Effective cross-border crisis management is key to New Zealand policyholder protection and financial stability. The RBNZ is only in the early scoping phase in developing its policy relating to managing insurers in crisis.

F. Recommended Actions

Table 2. Recommendations to Improve Observance of the ICPs

Insurance Core Principle	Recommendations
1. Objectives, Powers, and Responsibilities of the Supervisor	The authorities should make explicit in the RBNZ's purposes (or in the principles which it must take into account) the objective of policyholder protection, consistent with existing distress management and other provisions in the legislation and the way in which the RBNZ approaches regulation and supervision in practice. The powers of the RBNZ should be extended to issue binding standards on the full range of prudential issues (including governance and risk management), building on its existing powers in relation to solvency and fit-and-proper requirements; IPSA should be amended to apply solvency standards directly rather than via conditions of license. The powers of the RBNZ and FMA should be extended to enable them to impose administrative sanctions, including fines, subject to appropriate procedural requirements. The legislation should be amended, when opportunity arises, to enable the RBNZ to impose a condition of license or change an existing condition without having to consult the insurer itself, in cases where immediate action is required.
2. Supervisor	The RBNZ and Treasury should review their 2012 MoU with a view to clarifying and constraining the circumstances in which information on individual insurer supervisory issues are reported by the RBNZ to the Treasury, limiting the exchange of information to clearly-defined cases of Treasury need and avoiding a risk of increased government involvement supervisory work; any review of the MoU could also clarify

Table 2. Recommendations to Improve Observance of the ICPs (continued)	
	the limits of the Treasury's involvement in the development of insurance regulation. The RBNZ and FMA should review their resource needs, in light of experience of their new regimes to date and taking into account recommendations for enhancements to their current approaches in this assessment. The RBNZ and FMA should jointly review the adequacy of current and proposed new published reporting on aggregate data and trends in the insurance sector, working with industry bodies as appropriate, to ensure the availability of appropriate information, for use by policy-makers and private stakeholders.
3. Information Exchange and Confidentiality Requirements	None
4. Licensing	The RBNZ should review the approach to licensing of overseas insurers to ensure an appropriate balance between attracting foreign involvement and applying a rigorous test of the equivalence (and readiness to cooperate in practice) of foreign jurisdictions. The RBNZ should review the requirement in IPSA section 19(4) on the RBNZ to treat home country regulation and supervision as appropriate, if the jurisdiction is prescribed in the regulations and/or the list of jurisdictions in the current regulation. The RBNZ should review, with other authorities and the industry, the extent of and risks relating to insurance cover provided to consumers from abroad and whether any change is required in the scope of the licensing requirement or any other changes in regulation. The RBNZ should develop a policy for the use of IPSA powers to restrict the amount or share of total business which insurers may write outside New Zealand.
5. Suitability of Persons	The legislation and/or the RBNZ standards should be amended in due course to: - extend the scope of the individuals covered by the fit-and-proper framework, ideally in conjunction with the introduction of requirements for insurers to create a full range of control functions (see ICP 8). - establish an ongoing requirement on the suitability of significant owners, adopting an appropriate definition that would capture those with interests below 50 percent as well as shareholder controllers themselves, ideally aligned with the approach to approval of changes in control (ICP 6). - create an explicit expectation that insurers notify the RBNZ of significant issues affecting the suitability of key persons as and when they occur, in between the reassessments that are required every three years.

Table 2. Recommendations to Improve Observance of the ICPs (continued)	
	The RBNZ should build into their supervision framework increased oversight of the quality and completeness of insurers' fit-and-proper policies and their implementation in practice.
6. Changes in Control and Portfolio Transfers	IPSA should be amended to extend the requirements on changes in control to require notification of shareholder changes which involve a lower level of ownership (shares or voting rights) or which otherwise carry with them the right to appoint one or more directors; An approval process (rather than a reevaluation of licensing requirements) should be considered, as well as powers to disenfranchise unsuitable shareholders, if consistent with the general New Zealand law framework. The RBNZ should develop a risk-based approach to carrying out assessments, enabling it to undertake, for example, a reduced level of work where a home supervisor is involved, consistent with its general approach to overseas insurers.
7. Corporate Governance	The RBNZ should issue a more comprehensive standard on corporate governance. It could consider using the FMA Corporate Governance Handbook as a baseline, and strengthen it to a higher standard in areas where it deems appropriate. The RBNZ could consider adopting a two-tiered approach, by issuing legally binding regulations (see ICP 2) for key governance requirements (such as board composition and accountability), and non-binding guidelines for others (such as establishing board committees). The RBNZ should design an ongoing monitoring strategy to give the necessary comfort of ongoing effective self-discipline. An in-depth understanding of each insurer's governance structure and its effectiveness should be incorporated into the RBNZ's ongoing supervision, in addition to periodic thematic reviews on a selective basis.
8. Risk Management and Internal Controls	The RBNZ should require the establishment of dedicated risk management, compliance and internal audit functions for insurers. To reduce the burden on smaller insurers, some of these functions may be outsourced. The RBNZ should issue an outsourcing standard, incorporating its consideration and assessment methodology used at the licensing stage, and setting out the insurer's oversight responsibility and accountability for outsourced functions. The RBNZ should incorporate assessment of the effectiveness of the insurer's risk management framework into its ongoing supervisory process. To ensure consistency in compliance, RBNZ should also strengthen the enforceability of its risk management requirements (see ICP 1 on its powers to do so).
9. Supervisory Review and Reporting	The RBNZ should complete the implementation of the current supervisory framework, in particular the planned elaboration of supervisory strategies and action plans; and use these to communicate, in writing and at supervisory meetings, their assessment of individual insurers and the key actions which they expect management to take; they could also

Table 2. Recommendations to Improve Observance of the ICPs (continued)	
	consider disclosing to insurers appropriate parts of the risk assessment itself. The RBNZ should review its approach to the use of supervisory tools with a view to identifying where they would most benefit from increased on-site supervisory work; and then start carrying out such work in practice. The RBNZ should develop its reporting requirements over time to capture more information on insurers' exposures, including their investments and off-balance sheet business. The RBNZ should review the increased supervisory resources needed to effectively implement the supervisory approach, with the recommended enhancements.
10. Preventive and Corrective Measures	The RBNZ should develop an internal policy and approach to action to be taken when an insurer's solvency, while remaining above the minimum solvency requirement, is at a level (or is changing sufficiently fast) such that the risk of a breach of the minimum starts to become a risk. The objective would be to ensure that appropriate preventative action is taken at an early stage. The RBNZ should consider whether its approach would benefit from a presumption in the legislation that certain corrective action requirements be published, unless there are reasons related to the confidentiality of the issue not to do so.
11. Enforcement	In the context its review of IPSA and the development of its enforcement strategy, the RBNZ should assess: – whether to seek additional enforcement powers such as infringement notices, administrative fines or enforceable undertakings. – the merits and appropriateness in the wider New Zealand context of powers to restrict or suspend dividends or other payments to shareholders and to mandate portfolio transfers, to the extent that these are not clearly covered by the power of direction. The RBNZ should review the significant limitation on the power to require licensed insurers to cease to enter into new business in section 144(2) of IPSA.
12. Winding-up and Exit from the Market	The RBNZ should explore the best way to achieve IPSA's policyholder protection principle. Options include one or a combination of the following: – Extend the statutory fund requirement to non-life insurance. – Remove the exemption from statutory life fund requirement granted to Australian branches. – Provide a general priority of claim for all policyholders in IPSA in the absence of a statutory fund.
13. Reinsurance and Other Forms of Risk Transfer	The prudent management guidelines should be amended to include timely finalization of reinsurance contracts to reduce risks and potential disputes.

Table 2. Recommendations to Improve Observance of the ICPs (continued)	
	The RBNZ should require insurers to have a board-approved reinsurance strategy as part of its risk and capital management strategy. A reinsurance statement should be included in the FCR from both life and non-life insurers, in light of the importance of reinsurance in managing catastrophe risk for non-life. The RBNZ should review the reinsurance statements to form its own judgement on whether the reinsurance program is compatible with the insurer's reinsurance strategy.
14. Valuation	The RBNZ should work with the NZSA to establish a methodology for selecting appropriate discount rates. For example, the Treasury publishes a table of discount rates for 50 years applicable to all Government reporting entities submitting valuations to Treasury for valuing insurance claims liabilities under PBE IFRS 4 Insurance Contracts. This table or a variation thereof may be suitable for valuing private insurance contracts as well.
15. Investment	The RBNZ should collect a more granular breakdown of assets to facilitate an understanding of an insurer's investment exposures, including in higher risk or innovative investment instruments. The RBNZ should provide greater clarity on its expectations regarding investment governance (for example, the board's accountability over investment strategy and investment process).
16. Enterprise Risk Management for Solvency Purposes	The RBNZ should issue comprehensive ERM guidelines to promote proper risk management process on an enterprise-wide basis. The RBNZ should require insurers to conduct own risk and solvency assessments to identify the relationship between risk management and the level and quality of financial resources needed and available on a group-wide basis. This could be achieved through an enhancement to the Financial Condition Report.
17. Capital Adequacy	Having two solvency control levels as described in ICPs 17.3 and 17.4 would enable the RBNZ to make less intrusive early intervention before the financial condition of the insurer deteriorates to a critical level. For consistency and efficiency, the RBNZ should develop internal guidance on the appropriate actions for each solvency control level, in particular, the strongest actions to be taken when the insurer fails to maintain the lower solvency control level. The New Zealand solvency standard should apply to all statutory funds to improve comparability across branches and subsidiaries. The regulatory capital requirements should be established in an open and transparent process. The basis and circumstances for using licensing conditions to impose additional solvency margin requirements should be made more transparent. The RBNZ has also recognized that a number of areas in the solvency standards could be made clearer.

Table 2. Recommendations to Improve Observance of the ICPs (continued)	
18. Intermediaries	The government should revise the legislation (as already planned) to strengthen or remove the registration-only regime currently available to intermediaries, introducing minimum requirements for competence and disclosure that apply to all advisers, including insurance brokers. The government should consider a proportionate regulatory regime for insurance intermediation not currently captured by the legislation, including pure sales and intermediation where ancillary to another line of business. The FMA should assess the need for insurance-specific requirements on intermediation as well as an insurance-specific work program, taking into account its overall assessment of risks in financial markets. In that context, they should assess their need, in the medium and longer terms, for more insurance-specific skills and expertise.
19. Conduct of Business	The government and the FMA should review the scope of conduct regulation for insurance, considering all aspects of the insurance product life cycle, and develop a regulatory framework to include: – Minimum standards on all (or all higher risk) issues. – A licensing framework that would provide for screening of new entrants and clear identification of the insurers and intermediaries to whom the regulation framework will apply. – A minimum level of risk-based supervisory oversight applying to the licensed population, avoiding duplication with the existing approach applied to financial advisers. The FMA should review its requirements for increased insurance-specific expertise and overall insurance resources.
20. Public Disclosure	Strengthen disclosure in the following areas: – Risk management (asset-liability management practices, sensitivity of regulatory capital and provisions for mismatching). – Financial position (capital management policy, capital adequacy information). – Investment (objectives, policies and procedures). Consider ways to improve the solvency disclosure information to facilitate comparability across insurers and between subsidiaries and branches (see ICP 17). Enhance the quality of governance disclosure and its enforceability.
21. Countering Fraud in Insurance	In order to ensure a minimum coverage of fraud in its supervisory work and to support insurance company focus on fraud risks, the RBNZ should: – as part of its planning for the development of its supervisory work and resource planning, schedule thematic or firm-specific work on fraud controls; and

Table 2. Recommendations to Improve Observance of the ICPs (concluded)	
	– in due course include guidance to supervisors on evaluation of fraud risks in the iPRESS framework.
22. Anti-Money Laundering and Combating the Financing of Terrorism	None
23. Group-wide Supervision	The RBNZ should develop a strategy on group-wide supervision reflecting its supervisory philosophy and available resources. It should take into account the significance of its domestic insurers in foreign markets (having a negative impact on New Zealand's reputation). The RBNZ should review its approach to licensing insurers with a substantial amount of business undertaken outside New Zealand, including whether and when to use its powers under IPSA to set requirements on minimum levels of domestic business.
24. Macroprudential Surveillance and Insurance Supervision	The RBNZ should increase the market wide analysis of the sector from 2017, defining regular outputs (for internal use) such as standard reports on market trends, interconnectedness and other potential sources of systemic risk, as well as templates for the publication of aggregate information (it already has plans for consultation in this area). While in the medium term, stress-testing exercises should be considered, the RBNZ could undertake cross-company analysis of information in Financial Condition Reports, which could be supplemented by requiring increased reporting of sensitivity analysis.
25. Supervisory Cooperation and Coordination	The RBNZ should establish a process to more proactively evaluate the need to identify a group-wide supervisor, and the need to establish supervisory colleges for cross-border insurance groups. Regardless of the outcome, the process will instill the discipline of ensuring clarity of supervisory responsibility. The RBNZ should initiate contacts with the host supervisors where New Zealand insurers have large market shares to understand the risks to New Zealand-owned operations in those markets. The RBNZ should also increase its engagement with insurers with substantial overseas operations.
26. Cross-border Cooperation and Coordination on Crisis Management	Due to the high level of cross border activities, the RBNZ should prioritize its crisis management policy and procedures, while studying how best to achieve IPSA's principle of policyholder protection in crisis. Due to the high catastrophe risk in the New Zealand market, the RBNZ should require insurers to establish and maintain contingency plans and procedures based on their specific risks in use for going- and gone-concern situations.

G. Authorities' Responses to the Assessment

The New Zealand authorities (the FMA, MBIE, RBNZ, and Treasury) wish to thank the IMF and the insurance assessors for their thorough assessment of New Zealand's compliance with the IAIS *Core Principles for Effective Insurance Supervision*. The New Zealand authorities welcome the opportunity to comment on the IMF's *Detailed Assessment Report* (DAR).

The New Zealand authorities strongly support the FSAP as a means of promoting and improving both the quality of financial sector regulation and the outcomes that this regulation aims to achieve.

At the time of the last New Zealand FSAP conducted during 2003–04, regulation of the insurance sector was very limited. In part as a response to the recommendations of the previous FSAP, a working group was established in 2005 to examine the existing regulatory frameworks for nonbank financial institutions and financial products. As a consequence of that review, the Reserve Bank became the prudential supervisor for the insurance sector with the passage of the IPSA. The review also contributed to a major overhaul of New Zealand's approach to capital market regulation, and the establishment of the FMA as a general market conduct regulator with responsibilities encompassing the insurance sector.

The DAR has acknowledged that the implementation of IPSA and a prudential regime for the insurance sector was a major achievement. The New Zealand authorities are pleased that the insurance assessors have judged that this new regulatory framework is reasonably "well-developed."

The implementation of IPSA was a very demanding exercise for the Reserve Bank, particularly in the initial licensing phase which lasted three years. In addition, the 2010–11 Canterbury earthquakes were an unfortunate but timely reminder of the significance of robust solvency requirements, given the importance of catastrophe risk in the New Zealand market. Today, the insurance sector is in a much better position to absorb a shock of this nature.

Following the completion of the licensing process in September 2013 the Reserve Bank began developing and embedding a supervisory framework appropriate for New Zealand conditions that broadly aligns with the approach taken for the prudential regulation and supervision of the banking sector.

For the banking sector there is a long-standing 'three pillar' approach tied to the interplay between self, market and regulatory discipline. This framework is also appropriate for achieving the Reserve Bank's statutory objectives for the insurance sector – to promote a 'sound and efficient insurance sector,' and to 'promote public confidence in the sector.' This systemic focus means the Reserve Bank does not direct its policy and supervisory resources at eliminating all the risks that face individual insurers. Moreover, IPSA is not a zero failure regime – i.e., the Reserve Bank is not required to ensure that no insurer will fail or that there will be no losses to policyholders.

The supervisory counterpart to this emphasis on self and market discipline is a risk-based approach reflecting the fact that not all insurers are equally important to the sector or the wider financial system. Moreover, on-site inspections are an inherently more intrusive and costly form of supervision and can, in the Reserve Bank's view, potentially undermine the incentives on the insurance firm's own directors and management to identify and manage risks.

The DAR has noted a number of areas where the prudential regime falls short of full observance with the IAIS's core principles. In part, this is due to the on-going implementation of supervisory initiatives in a regime that is still maturing (such as supervisory risk assessments and regulatory reporting by insurers). In other areas the DAR acknowledges the gap in full observance is a function of the emphasis the Reserve Bank places on self and market discipline, reflected in the limited scope for on-site inspections and the relatively lightly resourced approach to supervision more generally.

The New Zealand authorities note the recommendations designed to improve the Reserve Bank's three pillar approach to insurance regulation. Examples relating to improving self and market discipline include enhanced disclosure from insurers and the Reserve Bank, and the expansion of powers to develop standards for corporate governance, risk management and internal controls.

A number of the IMF's recommendations are helping to inform the review of the statutory framework for insurance prudential regulation that is currently underway. The terms of reference for this review were released in April 2016 and an Issues Paper was released in March 2017. The review aims to assess the performance of IPSA to ensure it continues to create the preconditions for a cost-effective supervisory regime that helps achieve a sound and efficient insurance sector.

The New Zealand authorities note the IMF's recommendations regarding conduct regulation for insurance, bearing in mind that the FMA's reach into insurance is limited to incidences of mis-selling or misrepresentations and the regulation of financial advice as it relates to insurance agents and brokers.

The review of the FA Act that is currently underway will go some way to address the IMF's recommendations relating to intermediaries. However, it is acknowledged that these changes will not affect conduct regulation of insurers themselves or non-advised sales of insurance.

The New Zealand authorities will, as priorities allow, consider the IMF's recommendations and examine the issues relating to the broader question of the scope of conduct regulation for insurance considering all aspects of the insurance product life cycle.

As the law reforms for financial advisers are completed, the FMA will reassess resource requirements and the need to consider any insurance-specific work alongside its other strategic priorities and programme of work.