

LGFA Risk & Compliance Update 2018



What is going to be covered today:

- Improvements made to the LGFA Risk Management Framework.
- Changes to the LGFA Treasury Policy.
- LGFA Balance Sheet Risk
- Compliance against Approved Treasury Policy Limits
- Market risk.
- Credit risk.
- Liquidity risk.
- Summary

Improvements made to the LGFA Risk Management Framework

A full review of the risk management framework undertaken in conjunction with the LGFA Audit and Risk Committee, this led to the development of the Risk Management Policy and the redevelopment of the LGFA risk identification and assessment framework.

The Risk Management Policy is an overarching policy document that summarises risk management at the LGFA and how it is operated.

- Defines the risk appetite of the organisation
- Summarises the governance structure of the organisations and references it back to the LGFA constitution and the shareholders agreement.
- Documents the role of the Board, the Audit and Risk Committee and the Shareholders council.
- Documents the risk management framework used at the LGFA – risk identification and assessment tools, policy framework, treasury policy and risks, legal compliance, treasury risk compliance, reporting framework, delegated authorities, three lines of defence model and Internal Audit.

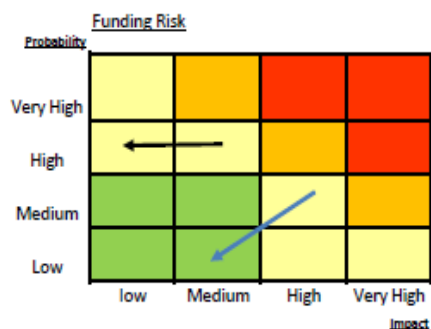
LGFA Risk Register – Risk identification and Assessment

- Redevelopment of the LGFA risk register. The register currently identifies and assesses 37 different business risks.
- Risk register is reviewed quarterly by management and reported to the Audit and Risk Committee.
- Risk register and assessment framework is reviewed by the Audit and Risk Committee Annually.

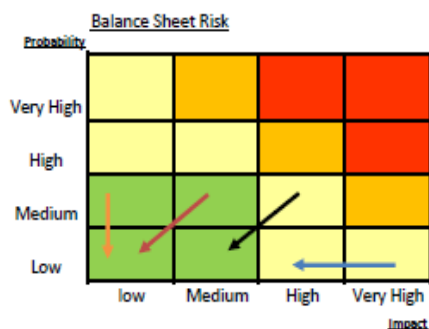
LGFA RISK REGISTER March 2018

Risk Description				Inherent Risk Assessment		Controls and Mitigation Processes		Residual Risk Assessment	
Risk	Risk Category	Potential Inherent Risk Outcome		Likelihood (L/M/H/VH)	Impact (L/M/H/VH)	Description of Key Controls & Mitigation Processes	Internal Audit Assessment	Likelihood (L/M/H/VH)	Impact (L/M/H/VH)
1 Tender failure - full fail	Funding	• Reputation risk - market/LG sector • Inability to issue bonds to meet LG borrowing requirements (low probability)		Medium	High	Tender Failure Protocols, LGFA Bill issuance mitigates risk, liquidity assets Portfolio and liquidity monitors. Hold pre-tender discussions as required with significant Council borrowers on options should tender be underbid. Maintain relationships with Banking counterparties, Domestic and Offshore Investors & scheduled Investor update presentations.	Internal Audit completed Nov 16 & Nov17	Low	Medium
2 Tender failure - partial fail	Funding	• Reputation risk - market/LG sector • Inability to issue bonds to meet LG borrowing requirements (low probability)		High	Medium	Tender Failure Protocols, LGFA Bill issuance mitigates risk, liquidity assets Portfolio and liquidity monitors. Hold pre-tender discussions as required with significant Council borrowers on options should tender be underbid. Maintain relationships with Banking counterparties, Domestic and Offshore Investors & scheduled Investor update presentations.	Internal Audit completed Nov 16 & Nov17	High	Low
3 Capital Adequacy	Balance Sheet	• LGFA is insufficiently capitalised • Risk to ability to undertake business plan		Low	Very High	Capital structure reviews. Three year cycle commencing in 2018. Initial Equity and Borrower Notes subscription.	Not Covered by Internal Audit	Low	High
4 Balance sheet maturity mismatch	Balance Sheet	• Insufficient maturing assets to cover maturing liabilities • Liability and asset margin mis-match leading to financial loss		Medium	High	Approved Limit 15% of Balance Sheet, PDH & VaR limits, monthly compliance reporting. Board reporting (CEO Report)	Internal Audit completed Aug17	Low	Medium
5 Downside Risks to Net Interest Income (NII)	Balance Sheet	• Downside risk to NII due to low council demand • Reputational risk to shareholders		Medium	Medium	Annual Strategic planning & SOI forecasting, monthly financial reporting. Board reporting, risk adjusted pricing to member councils.	Internal Audit completed Aug17	Low	Low
6 Council decline to take up loan	Balance Sheet	• Financial loss • Issuance proceeds to be invested - interest/credit risk issues		Medium	Low	Likelihood reducing over time as member council base grows & on-lending activity increases through the bespoke lending facility across broader council base. Proactive pre-tender confirmation process with councils. Operational guidelines easily assessable to councils through the Council handbook and the development of the web based Council portal. Frequent relationship visits and annual Shareholders and Borrowers day presentations.	Internal Audit completed Feb18	Low	Low
7 Credit default - Council	Credit	• Insufficient liquidity to cover maturing liabilities • Exercise of LG security • LGFA required to call on LG guarantee		Medium	Very High	Financial covenants, external ratings, council exposure limits in place, compliance certificates completed annually by borrowing councils and reviewed by LGFA. LGFA liquidity arrangements (cash, LAP, NZDMO facility, Bill issuance) to cover council default. Full review of annual financial results and long term plans for all participating councils. Board sign-off on internal credit assessment for any new council borrowers. Borrowers watch list maintained by Manager Credit & Client Relations, internal assessment of each councils balance sheet strength completed annually.	Internal Audit completed Feb18	Low	Very High
8 Credit default - Market Counterparties	Credit	• Financial loss • Insufficient liquidity to cover maturing liabilities		Medium	High	Counterparty credit limits, daily compliance monitoring, monthly compliance reporting and relationship visits.	Internal Audit completed Feb18	Low	High
9 LGFA Rating risk	Credit	• Increased cost of funds • Loss of investor confidence - reduced investment • Disruption to issuance strategy		Medium	Very High	Annual meeting with Fitch and S&P rating agencies, communication maintained as required.	Not Covered by Internal Audit	Medium	Very High
10 Council covenant breach/position deterioration	Credit	• Increased risk of LG credit default		Medium	Very High	Full review of annual financial results and longer term plans for all participating councils, maintain credit watch list of councils where risk is considered highest, ensure compliance certificates are received on an annual basis, monitor financial performance of each borrowing council against forecasts in their long term plans. Annual internal assessment of each councils balance sheet strength. LGFA liquidity portfolio and NZDMO standby liquidity facility to cover any contingencies if required.	Internal Audit completed Feb18	Low	High
11 LGFA liquidity	Liquidity	• Insufficient liquidity to cover maturing liabilities - interest and principal		Medium	High	Liquidity limits and daily compliance monitoring, liquid assets portfolio actively managed and NZDMO liquidity facility in place.	Internal Audit completed June17.	Low	High

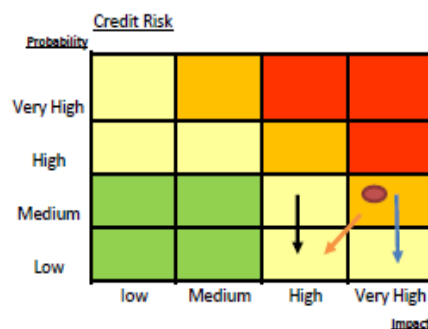
LGFA RISK MATRICES



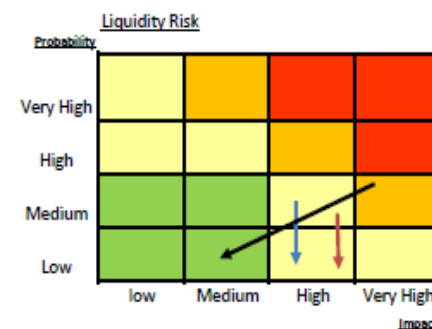
- 1 Tender Failure - full
- 2 Tender Failure - Partial



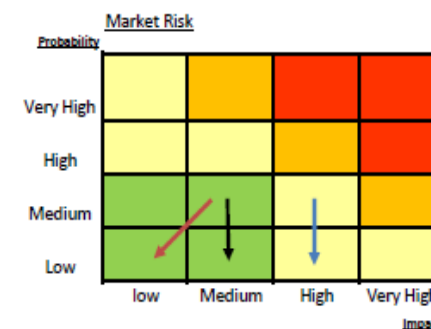
- 3 Capital Adequacy
- 4 Maturity mismatch
- 5 Downside risks to Nil
- 6 Council decline to take up loan



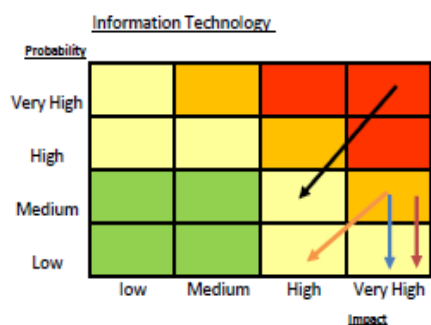
- 7 Council default
- 8 Credit default - market counterparties
- 9 LGFA Rating risk
- 10 Council covenant breach / position deterioration



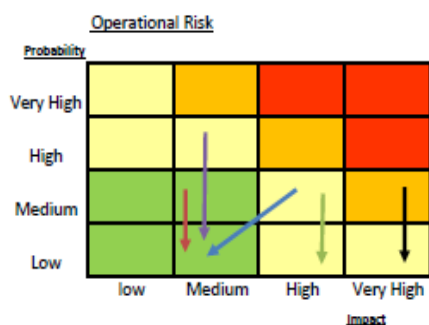
- 11 LGFA Liquidity
- 12 Market liquidity
- 13 NZDMO Standby liquidity facility



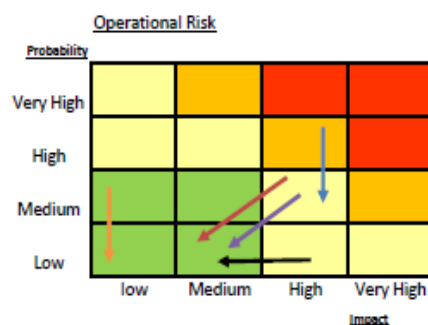
- 14 Risk Appetite
- 15 Adverse moves in market rates
- 16 Model risk - VaR and PDH



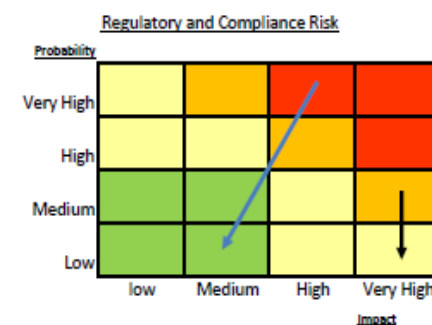
- 17 Vendor/Cloud Risk - Quantum Treasury System
- 18 Cyber risk - risk of loss from cyber threats
- 19 Data Integrity - Physical breach
- 20 Data Integrity / IT security failure



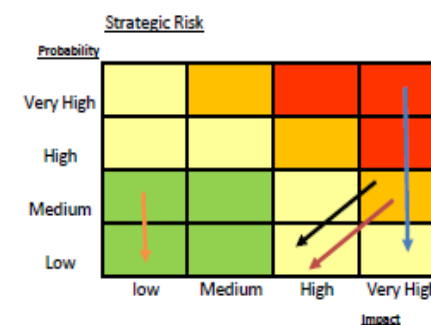
- 21 Business Interruption risk
- 22 Fraud and theft
- 23 Unauthorised activity
- 24 Settlement and payments execution - low value
- 25 Settlement and payments execution - high value
- 26 Health and Safety



- 27 Key Person risk
- 28 NZDMO Swaps execution
- 29 Bespoke lending facility
- 30 Repo bond lending facility
- 31 External service providers



- 32 Monitoring and reporting - Compliance failure
- 33 Regulatory risk - Legal



- 34 Reputation risk and market perception
- 35 Business model - debt issuance & management
- 36 Governance structure
- 37 Overhead management

Changes to the LGFA Treasury Policy

The following approved changes have been made to the LGFA Treasury Policy :

- Value at Risk limits were increased with Shareholder Council approval from \$250k to \$400k.
- Category 3 credit limits for banking counterparties were increased from \$75m to \$125m with Shareholders Council approval.
- Council issued Commercial Paper was added as an approved Instrument by the LGFA Board in June 2018.
- Other Policies Approved by the Board include the: Risk Management Policy, Whistle blowers Policy, Diversity Policy and the LGFA Code of Ethics.

The LGFA Balance Sheet is made up of:

LGFA Balance Sheet Risk

- Liquid Assets Portfolio (Cash, Deposits, Discountables, Bonds)
- Borrower Notes (Fixed rate and floating rate)
- Council loans (Fixed and floating)
- LGFA Bills (3month and 6 month maturities)
- LGFA Bonds
- Swaps

LGFA Balance Sheet Growth and Change					
Assets	May-17	Fixed Rate loans to Councils	Volume	Mix	
Assets	May-17	Floating Rate loans to Councils	1,460,579,817	19%	
		Total:	6,101,500,000	81%	
			7,562,079,817		
Liabilities	May-17	LGFA Fixed Rate Bonds	7,315,000,000	95%	
Liabilities	May-17	LGFA Treasury Bills	350,000,000	5%	
		Total:	7,665,000,000		
Assets	May-18	Fixed Rate loans to Councils	Volume	Mix	
Assets	May-18	Floating Rate loans to Councils	1,444,067,587	18%	-16,512,230
		Total:	6,382,300,000	82%	280,800,000
			7,826,367,587		264,287,770
Liabilities	May-18	LGFA Fixed Rate Bonds	7,569,000,000	94%	254,000,000
Liabilities	May-18	LGFA Treasury Bills	475,000,000	6%	125,000,000
		Total:	8,044,000,000		379,000,000

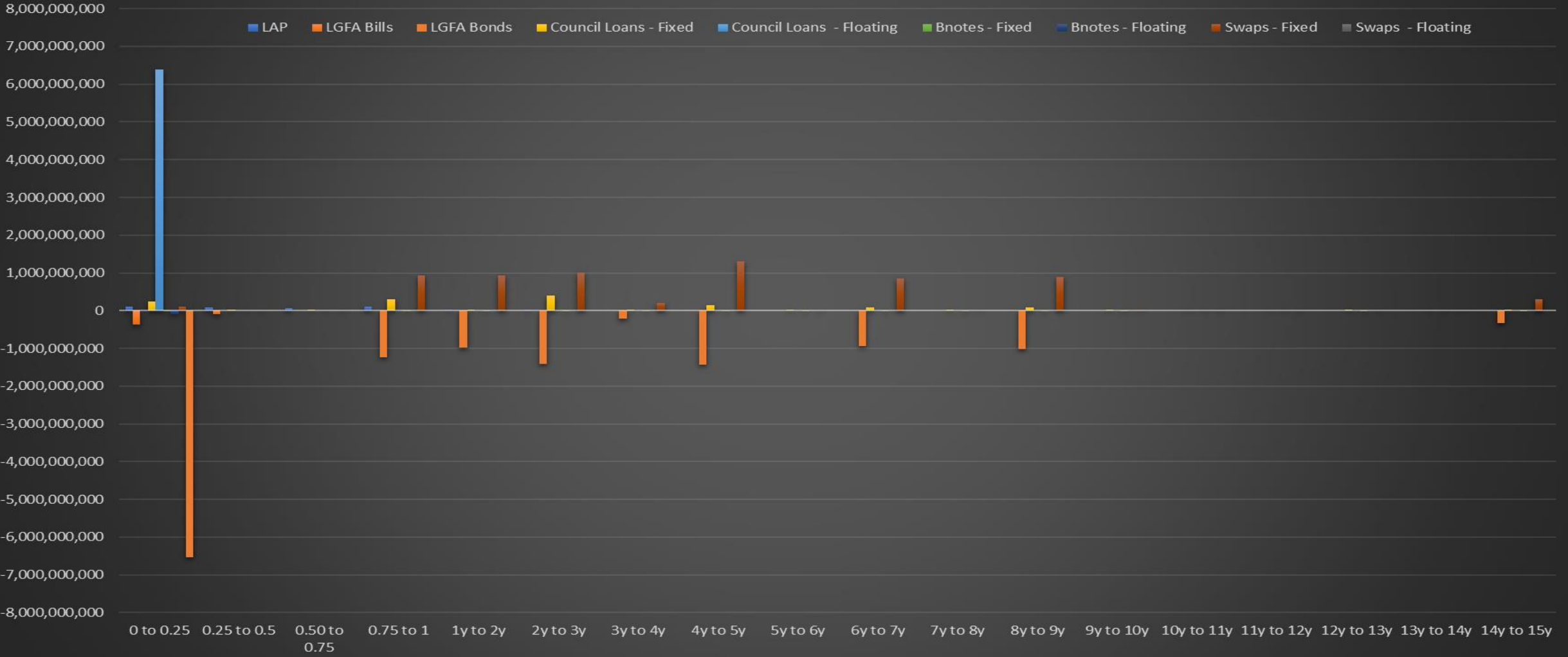
Key Points:

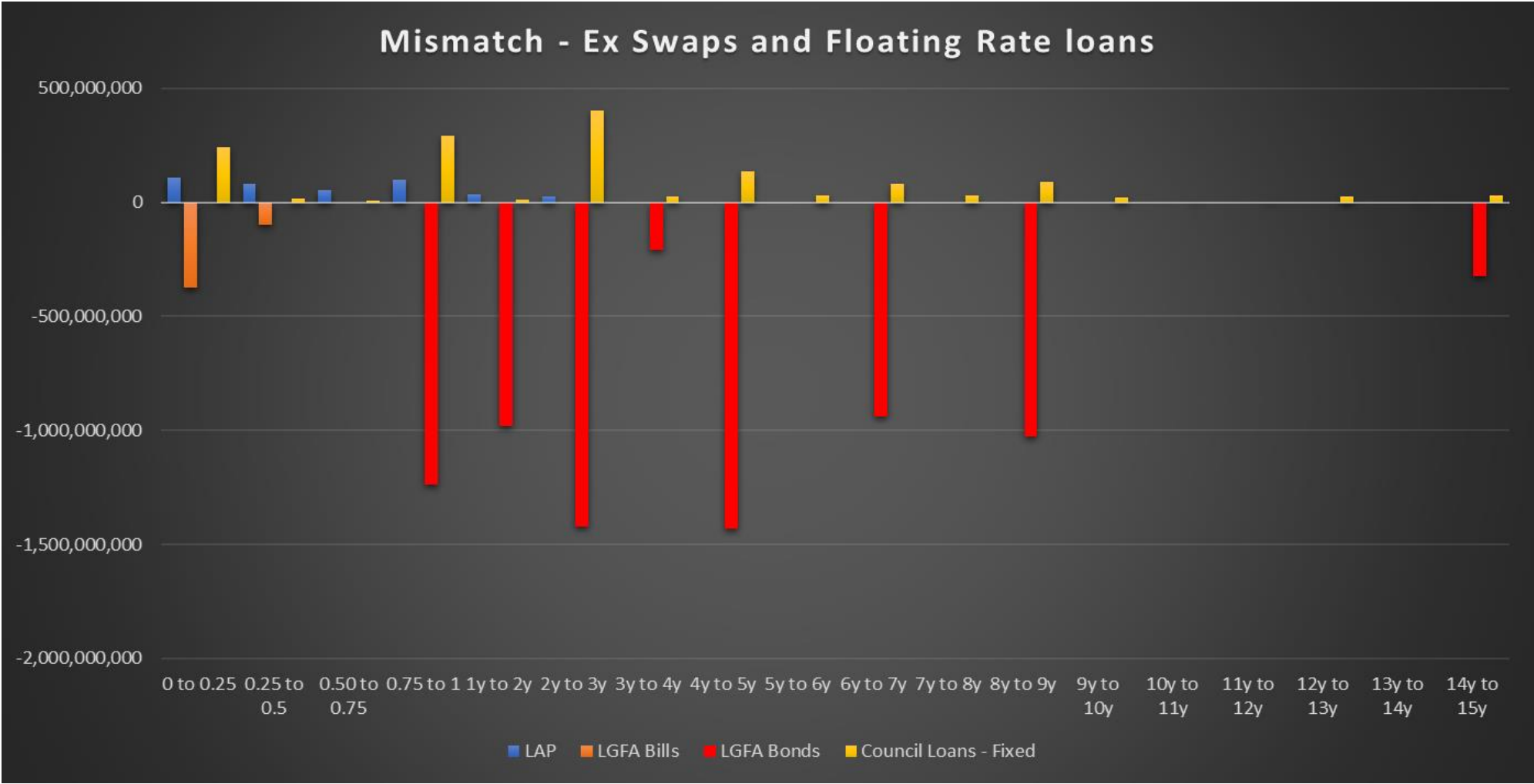
- Balance Sheet Assets increased by \$264m
- Majority of the increased assets were floating rate loans, fixed rate loans slightly lower.
- Fixed to floating mix for Asset loans remained constant approx. 82% floating and 18% fixed
- LGFA Issuance remained constant approx. 94% Bonds and 6% short term LGFA Bills

Balance Sheet Repricing Profile

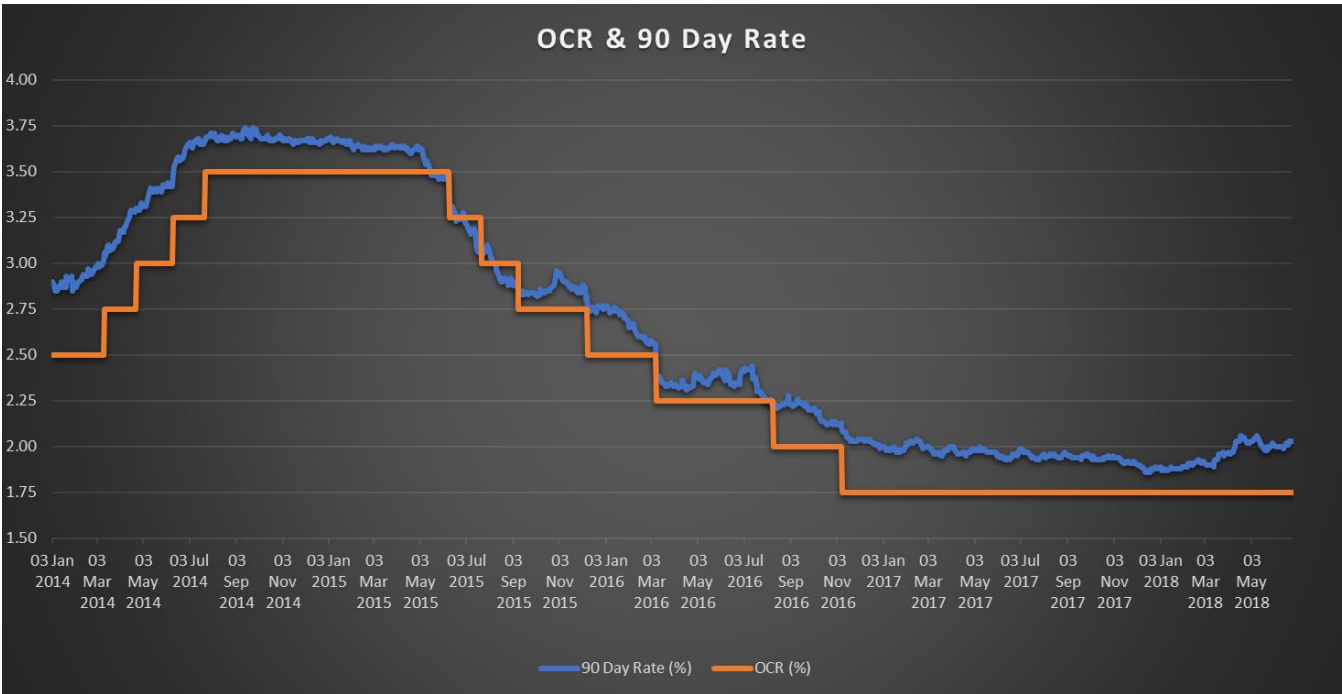
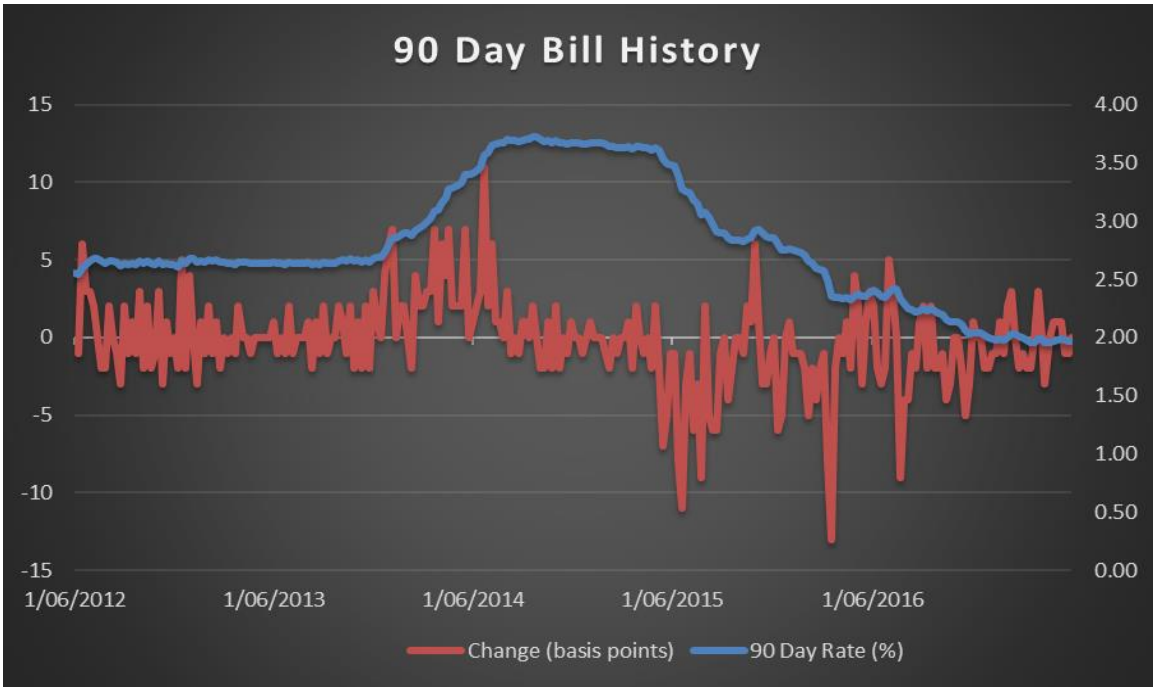
Years	LAP	LGFA Bills	LGFA Bonds	Council Loans - Fixed	Council Loans Floating	Bnotes - Fixed	Bnotes - Floating	Swaps - Fixed	Swaps - Floating		Assets	Liabilities	Gap
0 to 0.25	108,500,000	-375,000,000		239,634,956	\$6,382,300,000	-48,000	-102,116,800	94,500,000	-6,528,200,000		6,824,934,956	-7,005,364,800	-180,429,844
0.25 to 0.5	81,716,000	-100,000,000		17,690,632		0		0			99,406,632	-100,000,000	-593,368
0.50 to 0.75	55,000,000			7,000,000		0		0			62,000,000	0	62,000,000
0.75 to 1	96,977,000		-1,240,000,000	293,500,000		-4,696,000		940,200,000			1,330,677,000	-1,244,696,000	85,981,000
1y to 2y	32,500,000		-980,000,000	12,500,000		-200,000		938,750,000			983,750,000	-980,200,000	3,550,000
2y to 3y	25,000,000		-1,420,000,000	400,200,000		-6,403,200		1,005,000,000			1,430,200,000	-1,426,403,200	3,796,800
3y to 4y			-210,000,000	26,000,000		-416,000		212,000,000			238,000,000	-210,416,000	27,584,000
4y to 5y			-1,429,000,000	136,800,000		-2,188,800		1,296,750,000			1,433,550,000	-1,431,188,800	2,361,200
5y to 6y				30,700,000		-491,200		0			30,700,000	-491,200	30,208,800
6y to 7y			-939,000,000	80,500,000		-1,288,000		843,000,000			923,500,000	-940,288,000	-16,788,000
7y to 8y				32,000,000		-512,000		0			32,000,000	-512,000	31,488,000
8y to 9y			-1,026,000,000	91,500,000		-1,464,000		891,500,000			983,000,000	-1,027,464,000	-44,464,000
9y to 10y				22,000,000		-352,000		14,000,000			36,000,000	-352,000	35,648,000
10y to 11y				0		0		0			0	0	0
11y to 12y				0		0		0			0	0	0
12y to 13y				25,000,000		-400,000		0			25,000,000	-400,000	24,600,000
13y to 14y				0		0		0			0	0	0
14y to 15y			-325,000,000	29,042,000		-464,785		292,500,000			321,542,000	-325,464,785	-3,922,785

Balance Sheet - Timing and Volume mismatches





90Day BKBM - History and Short Term Outlook

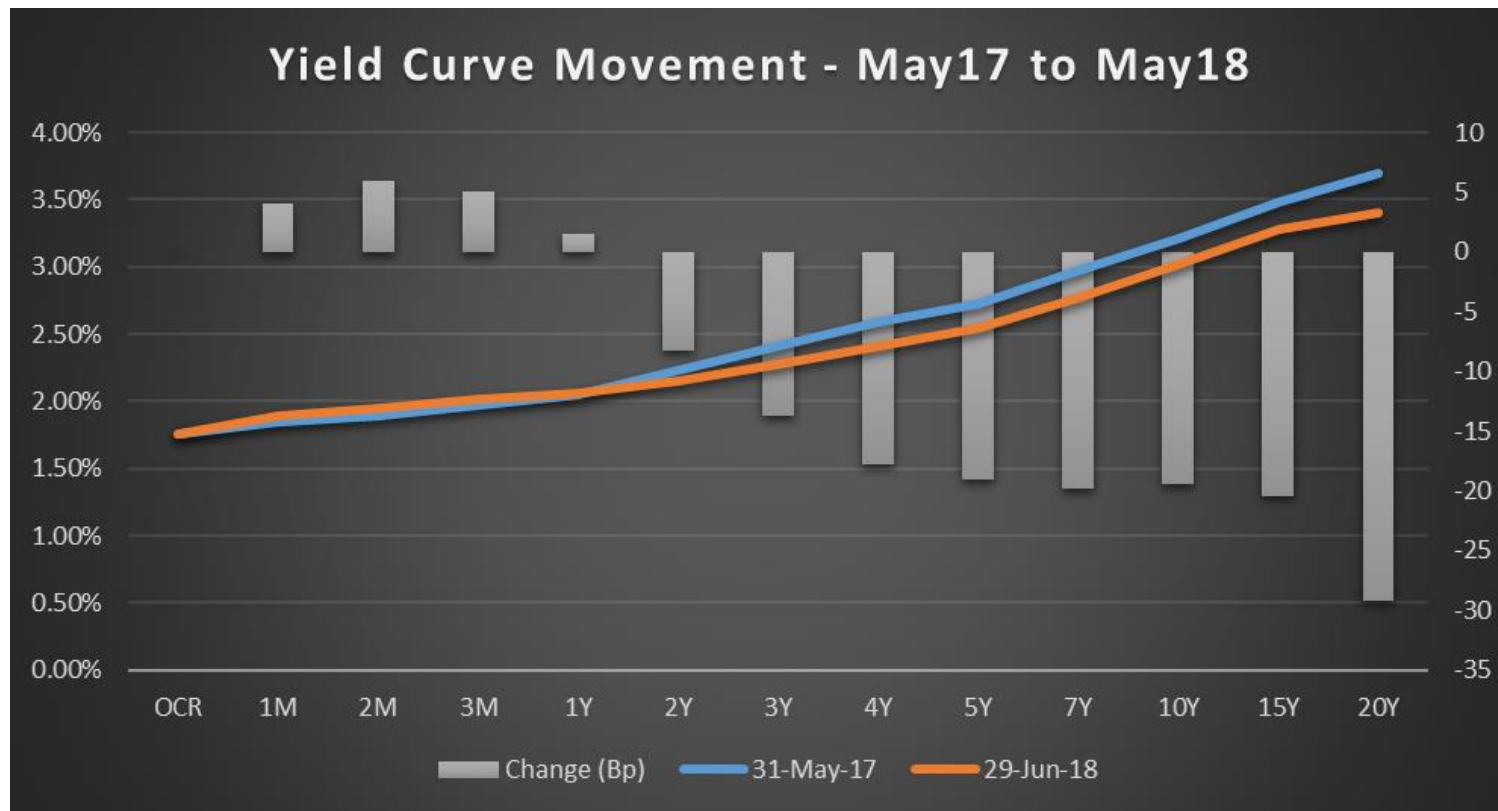


	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18		Sep-18	Dec-18	Mar-19	Jun-19
ANZ	2.00%	2.00%	2.00%	2.10%	2.30%		2.02%	2.02%	2.02%	2.02%
WBC	2.00%	2.00%	2.00%	2.00%	2.00%		2.00%	2.00%	2.00%	2.00%
ASB	2.00%	2.00%	2.00%	2.00%	2.00%		2.00%	2.00%	2.00%	2.00%
BNZ	2.00%	2.00%	2.10%	2.35%	2.65%		2.00%	2.00%	2.10%	2.35%

- May MPS - OCR will remain at 1.75%pa for sometime.

Yield Curve Risk

	OCR	1M	2M	3M	1Y	2Y	3Y	4Y	5Y	7Y	10Y	15Y	20Y
31-May-17	1.75%	1.85%	1.89%	1.97%	2.05%	2.23%	2.42%	2.59%	2.73%	2.97%	3.22%	3.48%	3.69%
29-Jun-18	1.75%	1.89%	1.95%	2.02%	2.06%	2.15%	2.28%	2.41%	2.54%	2.78%	3.02%	3.28%	3.40%
Change (Bp)	0	4	6	5	1.5	-8.25	-13.71	-17.75	-19	-19.8	-19.5	-20.5	-29.25



- OCR remained at 1.75%
- Short end rates have increased by approx. 5bps.
- 2s/5s flattened from 50bps to 39bps.
- 2s/10s flattened from 99bps to 87bps.

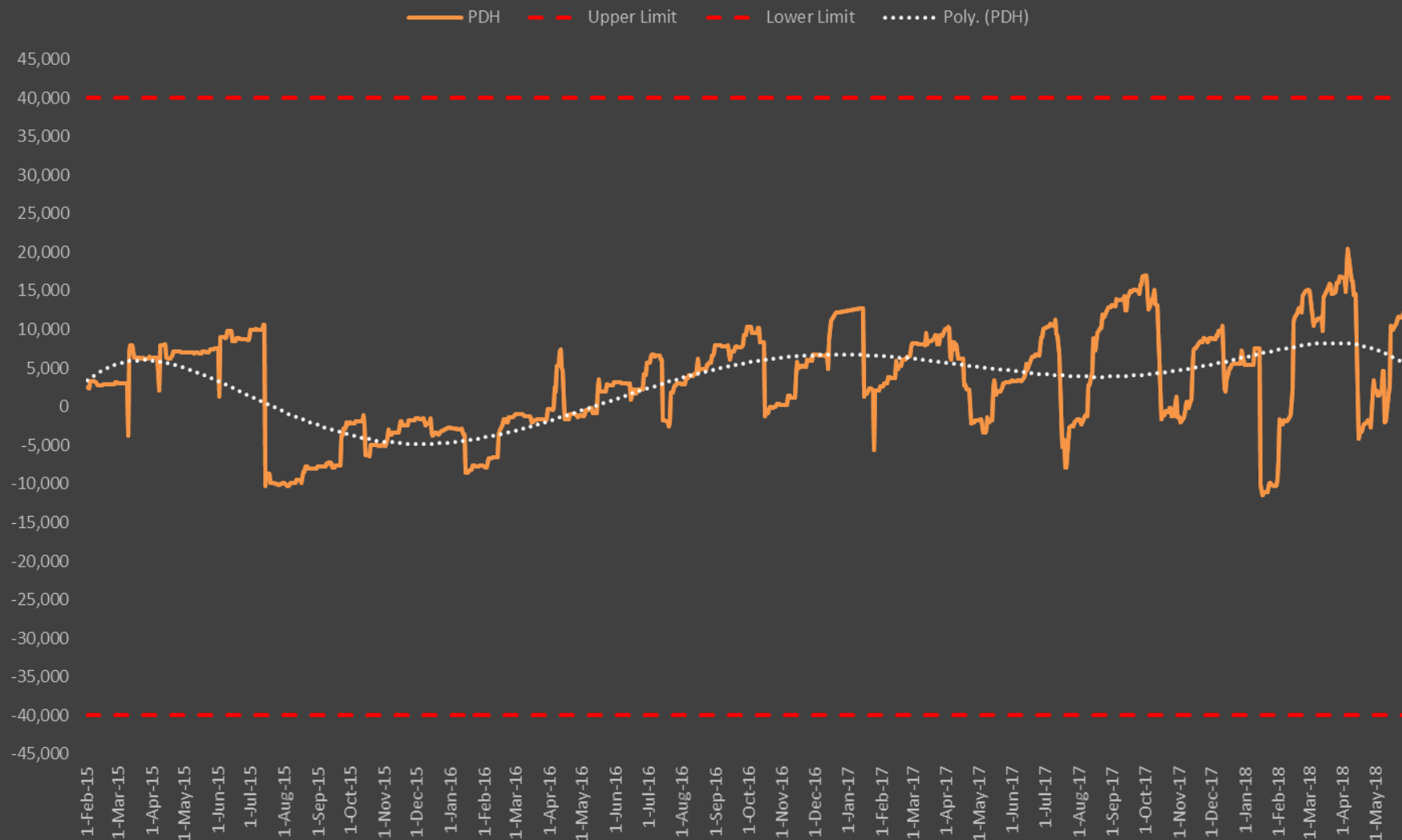
Compliance and Treasury Policy Limits

Policy	Limit	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18	Mar 18	Apr 18	May 18
One month Liquidity Monitor	>120%	G	G	G	G	G	G	G	G	G	G	G	G
Three Month Liquidity Monitor	>110%	G	G	G	G	G	G	G	G	G	G	G	G
Twelve Month Liquidity Monitor	>110%	G	G	G	G	G	G	G	G	G	G	G	G
Council Exposure (any 12 month period)	<10% of Balance Sheet	G	G	G	G	G	G	G	G	G	G	G	G
Liquidity Buffer	>110%	G	G	G	G	G	G	G	G	G	G	G	G
Partial Differential Hedge (PDH) / Interest Rate Gap Report	\$40,000	G	G	G	G	G	G	G	G	G	G	G	G
Value at Risk (VaR)	\$400,000	G	G	G	G	G	G	G	G	G	G	G	G
Council Maturity (any 12 month period)	\$100m or 33% of borrowing from LGFA	G	G	G	G	G	G	G	G	G	G	G	G
Funding Largest Council Exposure	>100%	G	G	G	G	G	G	G	G	G	G	G	G
Foreign Exchange Exposure	Nil	G	G	G	G	G	G	G	G	G	G	G	G
NZDMO Facility Utilisation	Report monthly	G	G	G	G	G	G	G	G	G	G	G	G
Counterparty Credit Limits	80% of Portfolio \$75m Counterparty (category 3)	G	G	G	G	G	G	G	G	G	G	G	G
Auckland Council Exposure (proportion of total Council exposure)	<40%	G	G	G	G	G	G	G	G	G	G	G	G
Balance Sheet Maturity Mismatch	<15% of Balance Sheet	G	G	G	G	G	G	G	G	G	G	G	G
Authorising Treasury transactions	Two approvers, one signature	G	G	G	G	G	G	G	G	G	G	G	G

All approved treasury compliance limits are:

- Measured, monitored and reviewed daily.
- Monthly Compliance Report which is distributed to all LGFA staff and directors.
- Noted as a standard agenda item at LGFA Board meetings.

LGFA PDH Exposure (\$ per bp)
2015-2018



PDH measures the basis point sensitivity of the Balance Sheets exposure to interest rate risk.

The average PDH exposure between has not changed significantly over 2016, despite the strong balance sheet growth.

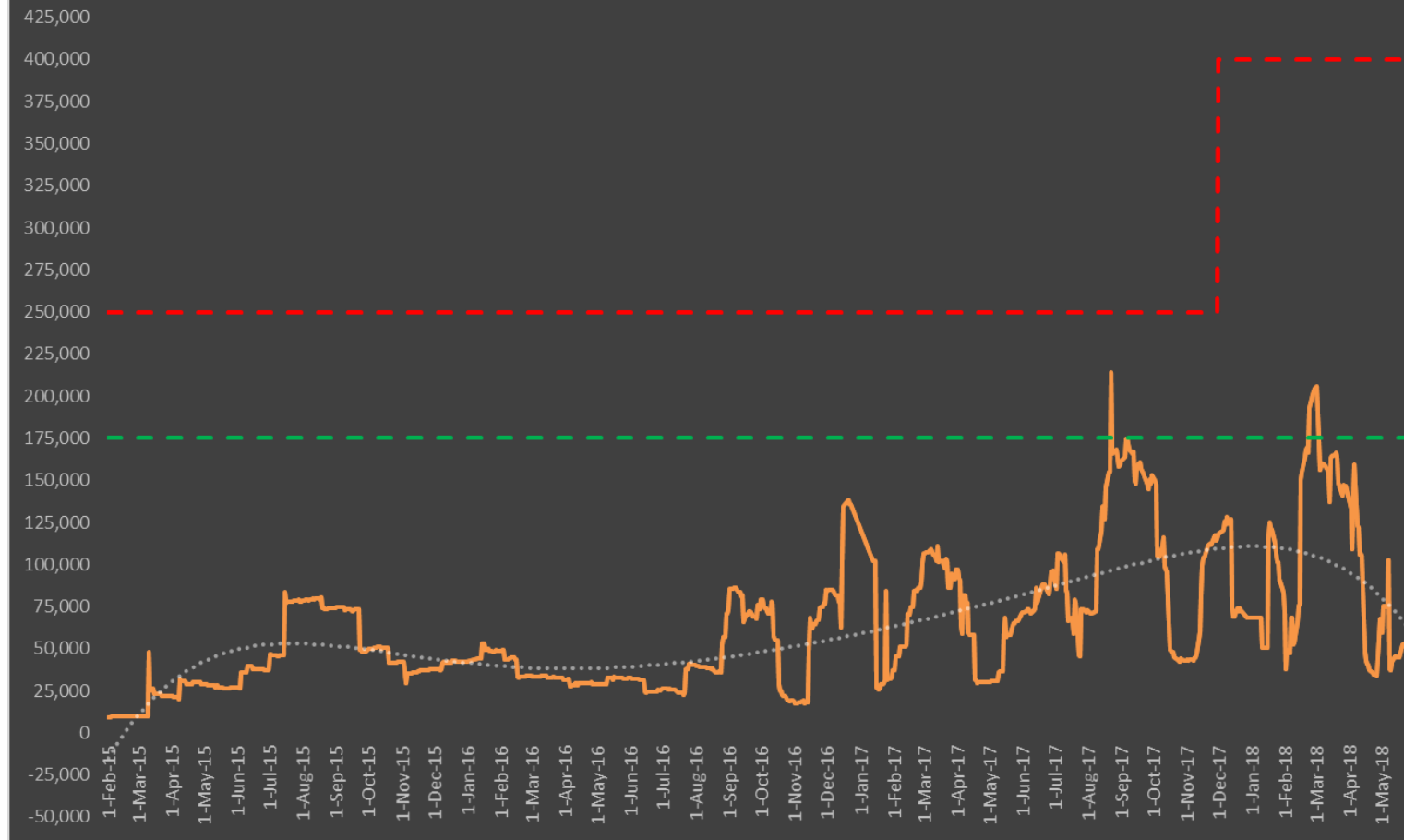
PDH exposure has remained well within limit over 2016.

PDH is reported and reviewed daily. Also reported to the Board monthly and noted in the CEO report at LGFA Board meetings.

Market Risk – VaR and PDH

LGFA VaR Exposure (\$)
2015 - 2018

— VaR — Soft Limit — Treasury limit Poly. (VaR)



VaR is more volatile when you compare the profile from 2015 to 2018.

Increased volatility in VaR reflects:

1. Growing balance sheet and market volatility.
2. Timing mismatch that occurs from the increased utilisation of the bespoke lending facility.

VaR exposure remains well within approved treasury policy limit.

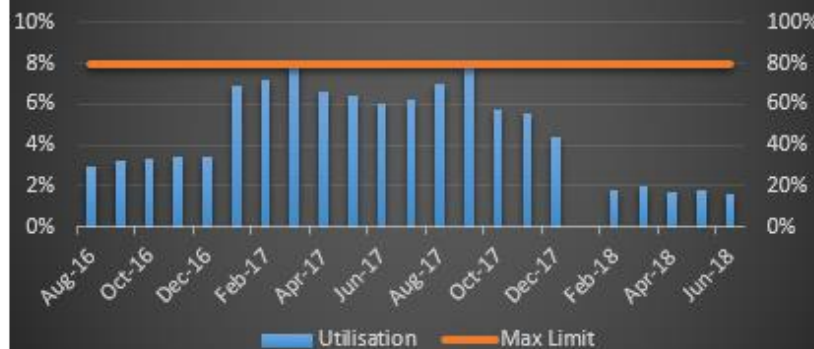
VaR is reported and reviewed daily. VaR exposures are reported to the Board monthly and also noted in the CEO Report at LGFA Board meetings.

Credit Risk – Utilisation and Compliance

Category 1 Utilisation



Category 2 Utilisation



Categories one to four measure the credit exposure for non council exposures.

Cash and Liquid Assets portfolio.

All credit exposures remain within credit category limits.

Category 3 Utilisation



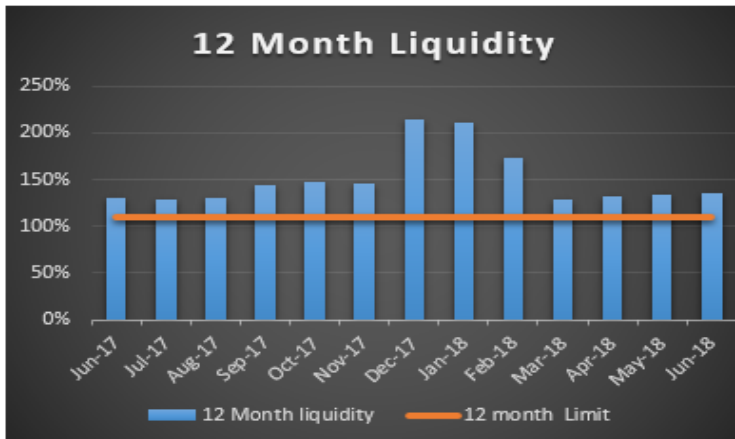
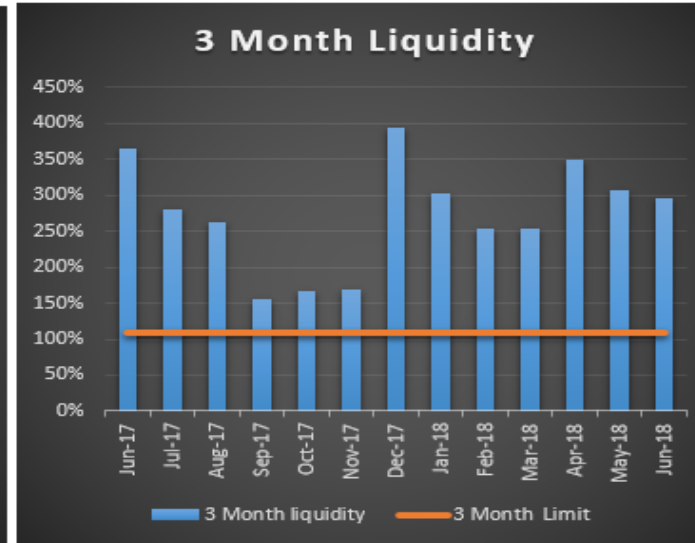
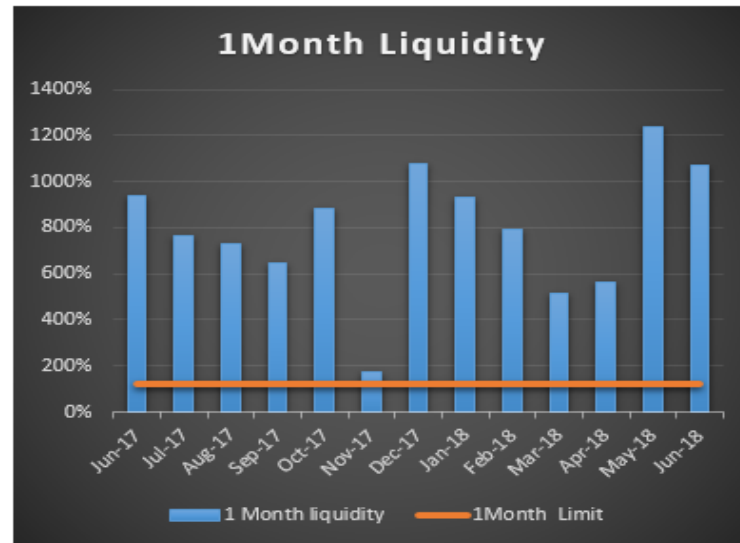
Category 4 Utilisation



Credit exposures are reported and reviewed daily. Exposures are reported to directors monthly.

Credit Category	Category 1	Category 2	Category 3	Category 4
Credit Category Definition	NZ Govt and RBNZ	A1+:AAA	A1+:A1/AA+ A1+:A1/AA A1+:A1/A+	A1+:A1/A+
Exposure Limits	Min 20%	Max 80%	Max 80%	Max 20%
Max Term	10 Years	3 Years	3 Years	1 Year

Liquidity Risk – Utilisation and Compliance



Liquidity Limits:	
1 Month Liquidity Limit:	120%
3 Month Liquidity Limit:	110%
1 Year Liquidity Limit:	110%

Liquidity is measured and monitored over monthly, quarterly and annual forecast horizons.

All liquidity exposures remain compliant against approved liquidity limits.

Liquidity exposures are reported and reviewed daily. Exposures are reported to directors monthly.

NZDMO liquidity facility increased from \$400m in May17 to \$600m currently.

- Strong governance and oversight from the LGFA Board and the Audit and Risk Committee.
- LGFA continued to experience balance sheet growth over the year which increased our exposure to floating rate assets, over a period where short term interest rates remained flat and the swaps curve flattened.
- PDH and VaR utilisation remained conservative and well within approved treasury policy limits.
- Credit utilisation remained conservative and well within approved treasury policy limits.
- The LGFA 2017 maturity bond maturity was successfully managed, within the approved treasury policy limits. The NZDMO liquidity facility utilisation increased from \$400m to \$600m. The next major liquidity event will be the maturity of the LGFA March 19 Bonds.
- No Breaches of approved treasury compliance limits.
- Management in association with the LGFA Board continues to promote the culture and values of the organisation.
- LGFA Internal Audit function used to continually examine and improve key controls and processes.