Superintendencia de Bancos e Instituciones Financieras Chile

Surveillance of Mortgage Credit
The Approach of the Banking Regulator

Workshop on Real Estate Prices and Financial Stability

25th April 2014 – Central Bank of Chile

Eric Parrado

Chairman

Superintendency of Banks and Financial Institutions of Chile

Agenda

- A basic reminder from 1863
- Mortgage Credit Market: Overview
- Features of Mortgage Credit in Chile: Structure and Risk Profile
- Regulation: Ongoing Improvements

A basic advice from Hugh McCulloch (letter to banks, 1863)

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- Principles:
  - "Let no loans be made that are not secured beyond a reasonable contingency"
  - "Do nothing to foster and encourage speculation"
  - "Give credit facilities only to legitimate and prudent transactions"
  - "Distribute your loans rather than concentrate them in a few hands"
- I believe that these basic principles hold true today
- These words are certainly a good reminder to strengthen credit risk provision's regulation

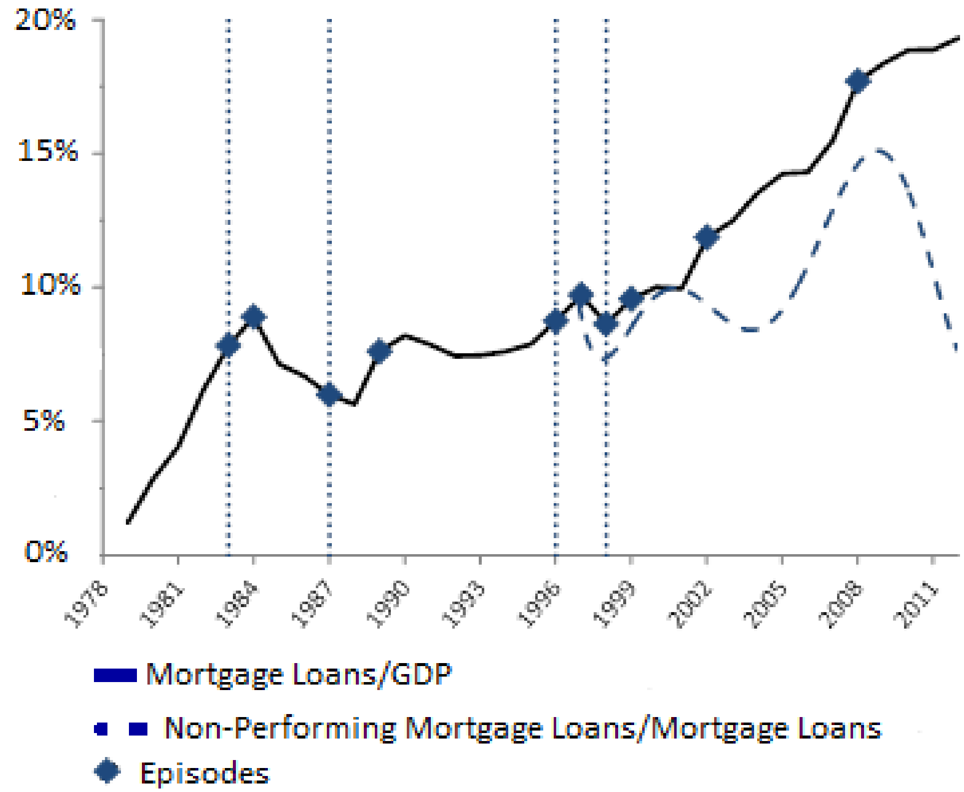
Mortgage Credit Market: Overview

Past Lending Credit Booms?

- IMF Lending Booms definition, *y = Annual Changes of (Credit/ GDP)*
  Rules: i) [y > 10% and |*y-Trend(y)*| ≥ 1,5·*σ*(*y*)] *or* ii) Annual Variation (y) > 20%

The last hypothetical mortgage credit boom was in 2009. However, this can be explained by the reduction of GDP rather than increase of credit given the global crisis

Application on Chilean Banking System (1978 - 2011):
Hypothetical Episodes



Source: Acosta, F., Poblete, D.; 2013, "Identificación de Booms Crediticios y Riesgos en la Cartera Hipotecaria Residencial", Nota Técnica. SBIF

According to Chilean development mortgage loans should grow even more

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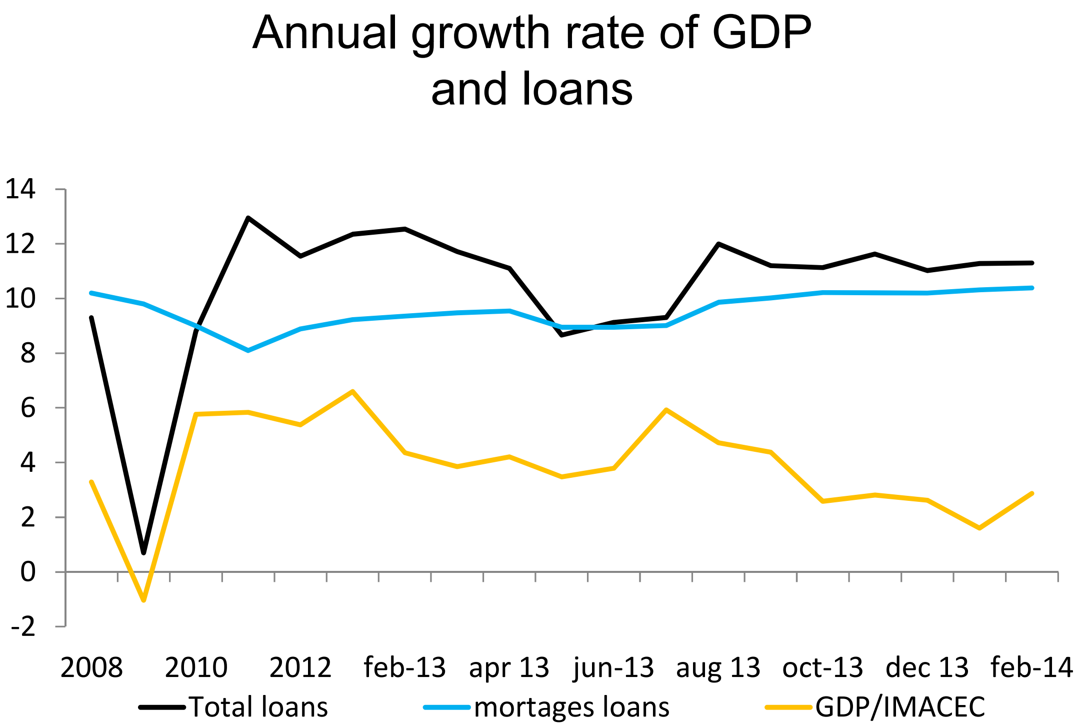
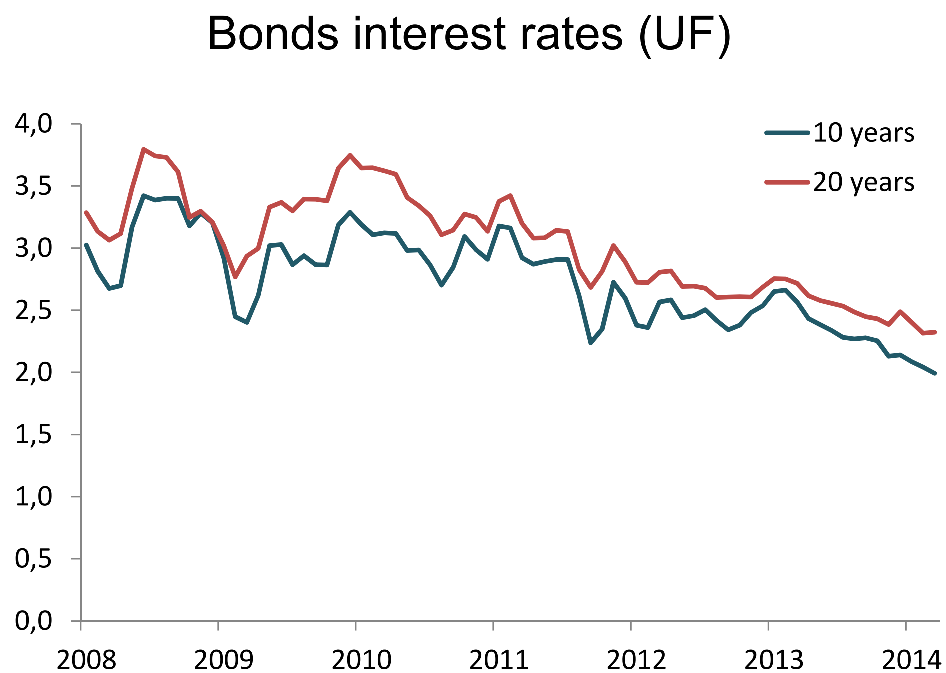
Ratio loan mortgages over logarithmic GDP per capita, 2012

Source: SBIF and European Mortgage Association

Mortgage loans have grown steadily due to better funding conditions, financial market deepening and macroeconomic stability

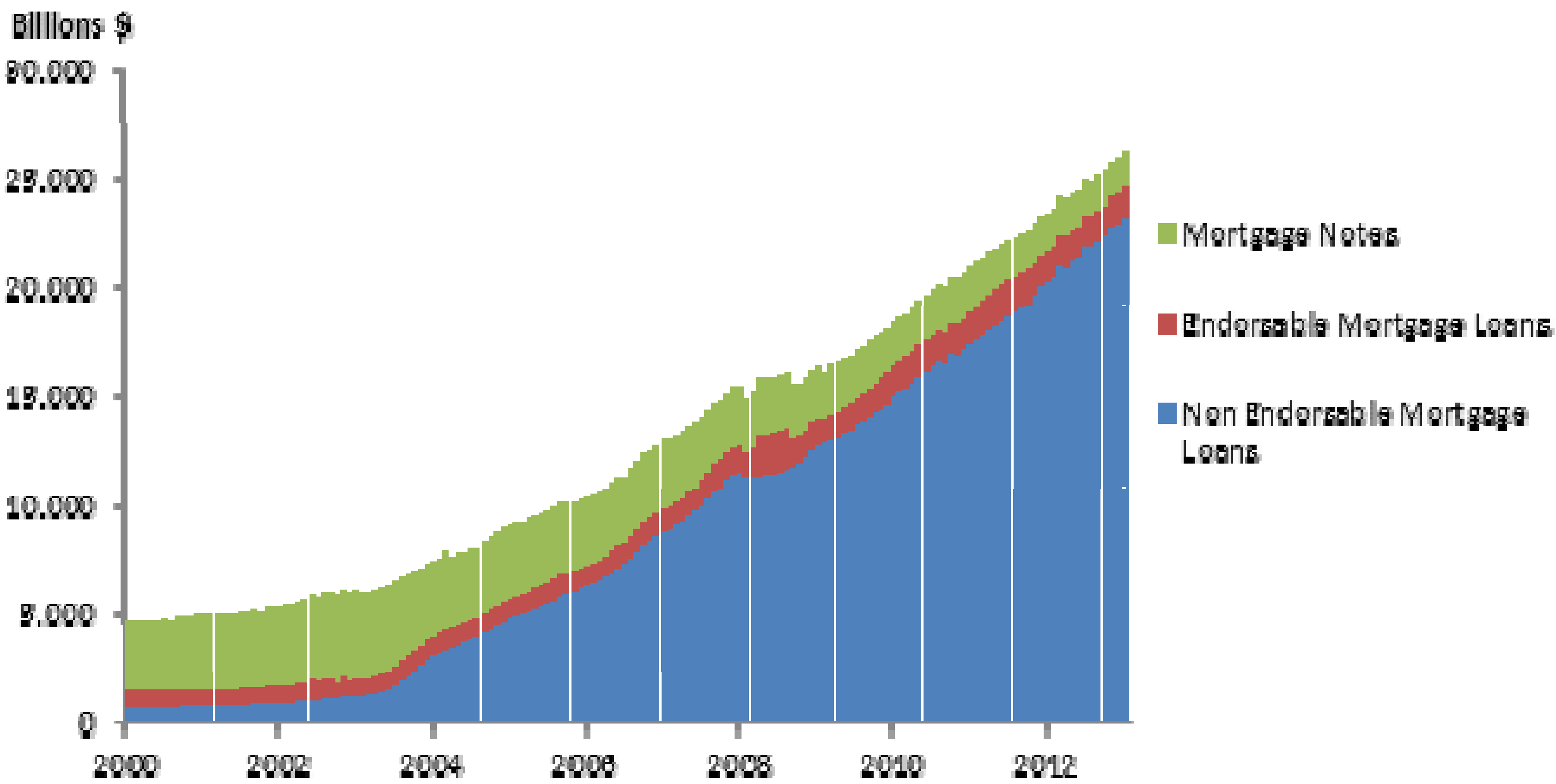




Source: SBIF and Banco Central de Chile

Since 2003 banks have intensively used their own resources to finance housing credit

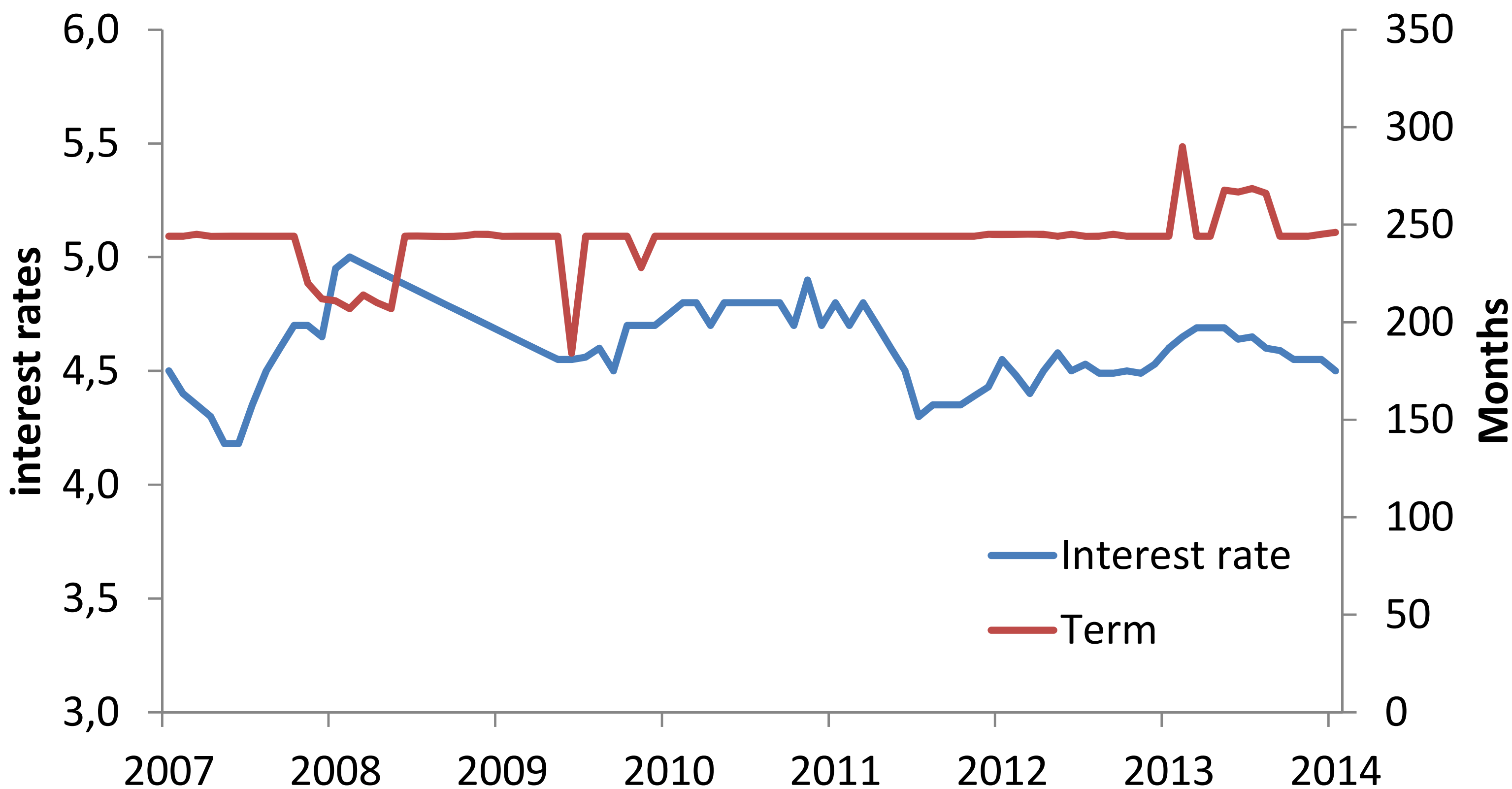
Types of finance for housing



Source: SBIF.

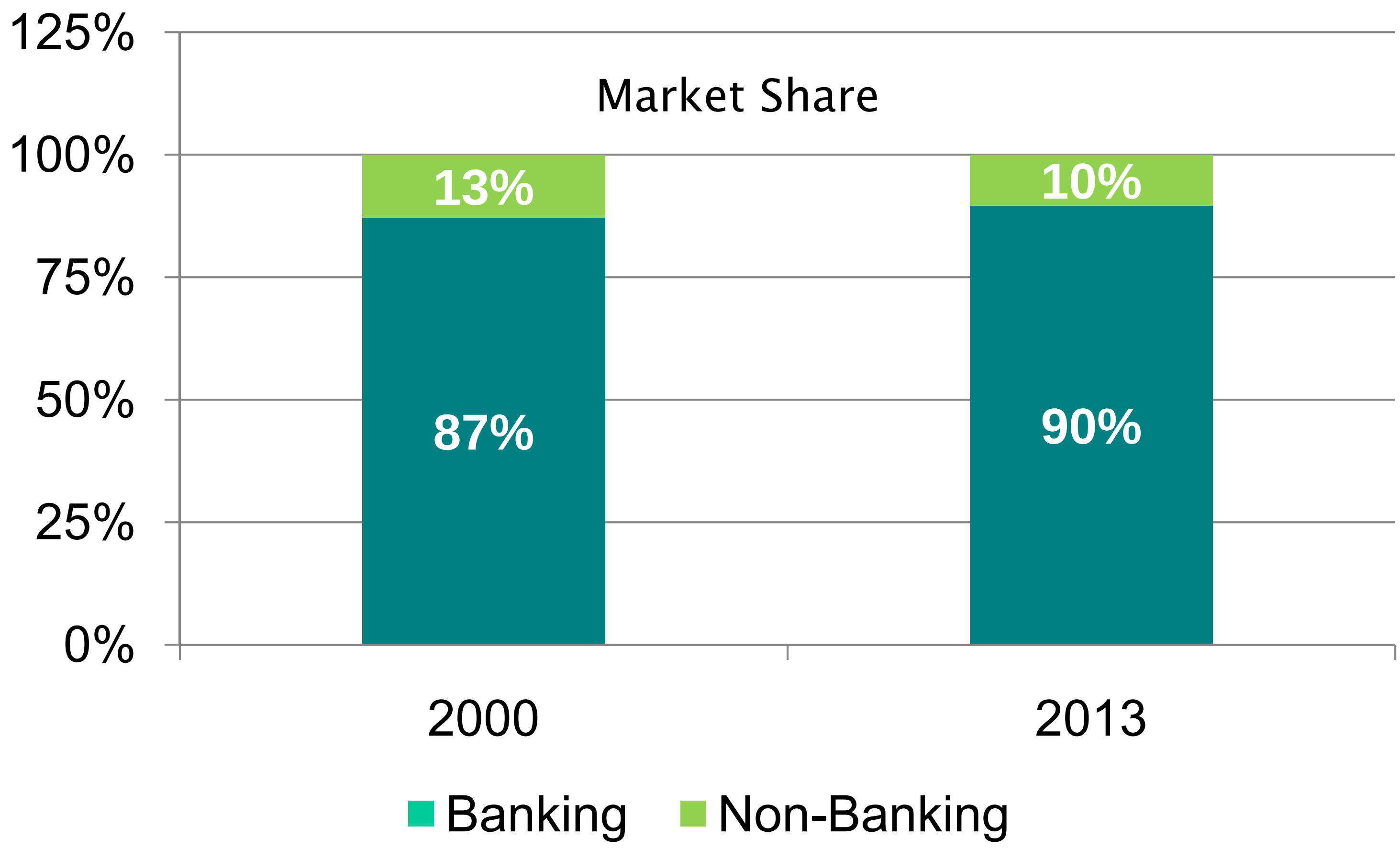
Mortgage credit growth is associated to economic conditions instead of lower rates and/or longer term

Mortgage interest rates (UF) and term



Source: SBIF

Share of Mortgage Loans



Source: SBIF and Banco Central de Chile

Main Features of Mortgage Loans in Chile: Structure and Risk Profile

The banking sector has been cautious in granting 2 or more loans to one debtor

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Stock distribution of number of mortgage loans by debtor
(% of total amount)

Period \ N° of personal credit	1	2	>=3	Total
2009	78,8	17,6	3,6	100
2010	81,1	15,2	3,8	100
2011	80,9	15,0	4,1	100
2012	79,8	15,6	4,6	100
2013	77,8	16,8	5,4	100
2014	77,0	17,1	5,9	100

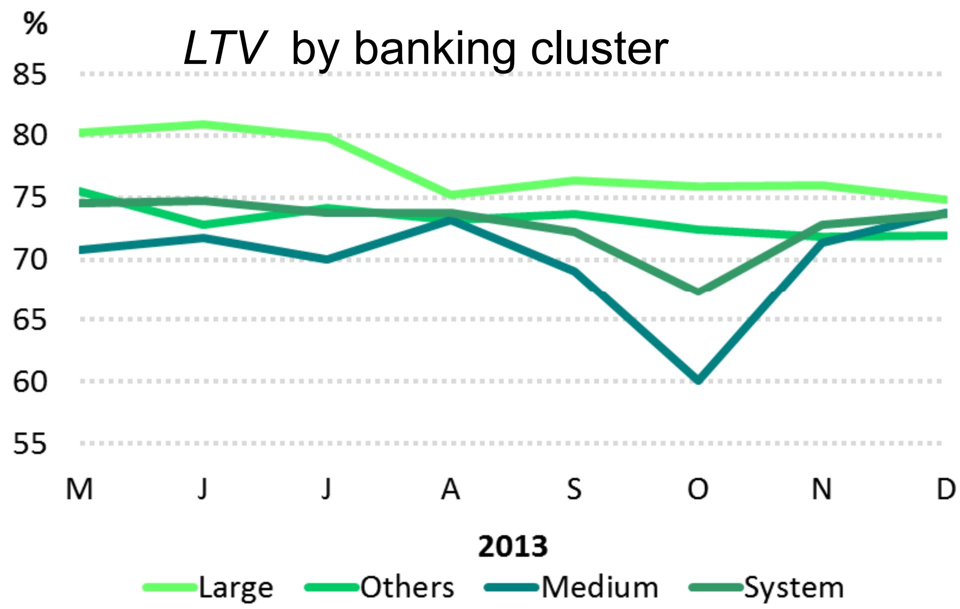
Flow distribution of number of mortgage loans by debtor
(% of total amount)

Period \ N° of personal credit	1	2	>=3
2009	97,97%	1,91%	0,12%
2010	97,44%	2,13%	0,43%
2011	97,80%	1,58%	0,62%
2012	97,35%	1,46%	1,19%
2013	97,86%	1,63%	0,51%
2014	97,41%	2,01%	0,57%

Source: SBIF

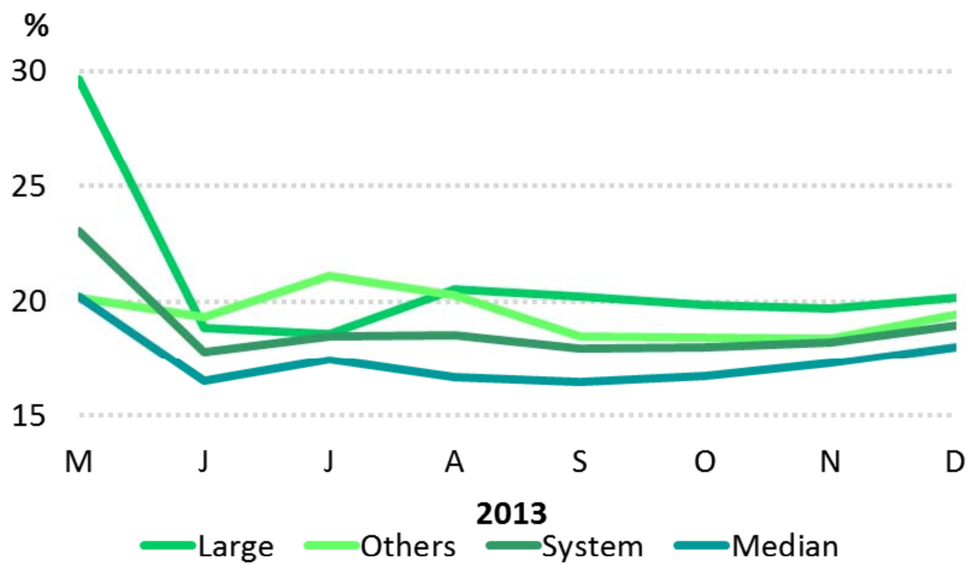
LTV and *Debt to Income Ratio*

- The new loan LTV evolution, reported by banks during 2013, is largely explained by medium size banking cluster



Source: Reported by the banks

Debt to Income (DTI) by banking cluster



Source: Reported by the banks

- The *DTI Ratio* (reported by banks) proved to be stable throughout 2013, converging to prudential levels

Regulation: Ongoing Improvements

LTV as a Granting Standard and Prudential Tool (1/2)

- Some international regulators agree that *LTV's is one of the main risk factors*:
  - USA (FED, 2008, "Risk-Based Capital Guidelines; Capital Adequacy Guidelines: Standardized Framework; Proposed Rule and Notice")
  - Australia (APRA, 2012, "Prudential Standard APS 112")

- Supported by empirical evidence:
  - IMF, 2011, "Housing Finance and Financial Stability-Back to Basics?", Chapter 3, Global Financial Stability Report, April 2011.
  - Haldane, A., Hall, S., Pezzini, S., 2007, "A new approach to assessing risk to financial stability", paper N° 2, Financial Stability Report, Bank of England.
  - Whitley, J., Windram, R., Prudence, C., 2004, "An empirical model of household arrears", working paper no. 214, Bank of England.

LTV as a Granting Standard and Prudential Tool (2/2)

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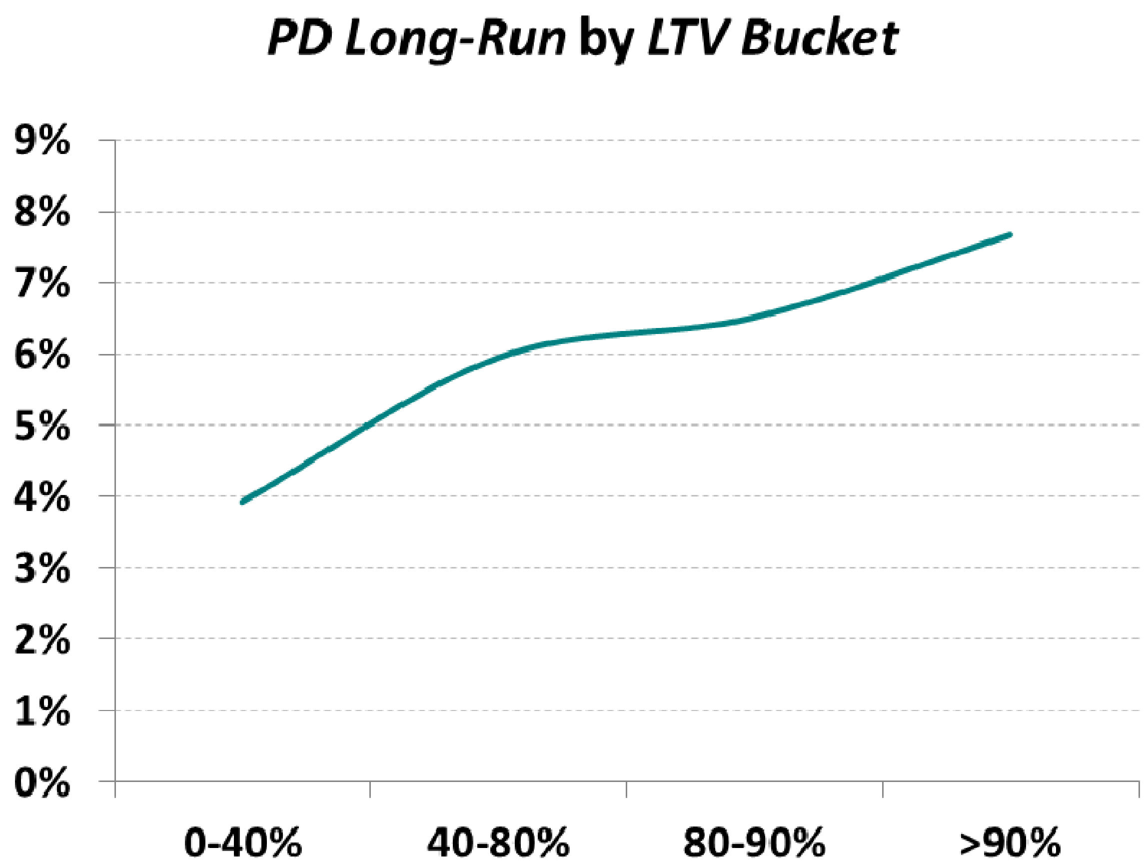
- Chilean's banking residential mortgage portfolio. A preliminary SBIF estimation for the *Long-Run probability of default (PD)*:



Sources: SBIF

Regulation Ongoing Improvements: Pillars (1/2)

Reinforce the banking credit risk provision regulation:

- Expected loss approach in line with Basel II: improvements to the current banking regulation (2011)
- Additional prudential standards to compute the mitigation effect in the guarantees, both real and financial collaterals
- Our ultimate goal is to strengthen the Chilean financial stability and this effort has no intention to control an hypothetical real state price boom.
- This is a regular process for the SBIF with a focus on improvement of credit risk provision regulation

Regulation Ongoing Improvements: Pillars (2/2)

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New Minimum Standards for “Internal Models” provisioning:

- An stricter regulation for “Internal Models” defining minimum standards (Public Consultation has been closed on Feb to Apr 2014).
- It is expected that some banks will migrate to the “Standard Model”, at least in the short-medium run. This may create a moderate increase in provisions.

Standard Models to Residential Mortgage Loans

- *The "Standard Models" stood in public consultation* for Banks (Dec-03 to Mar-2014).
- *PD* and *LGD* parameters depending on prospective risk factors of default, like: delinquency, ***LTV*** and original credit value.
- *LTV is* a fundamental risk factor within the banking´s "*Standard Models" for* lining up the loan granting process with prudential standards and stimulate the mortgage guarantees active management.

Regulation Ongoing Improvements: Objectives

The ongoing improvements lines-up the local regulation to international standards. The new regulation for the Standard Models has the following objectives:

- Credit Risk Provisions based in the *Expected Loss Distribution*
- Credit risk management procedures to differentiate borrower's depend on its inherent risk or its residual risk (ex: by guarantees)
- Credit risk's provisions integrated with the end-to-end loan granting process
- Use of *Standard Model* when “Internal Models” clearly posses deficiencies

Final thought

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- “Let no loans be made that are not secured beyond a reasonable contingency”
- LTV helps to support that as a granting standard and prudential tool

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