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Impact of Financial Regulations on Mortgage Markets

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Overview



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- Coordinating disparate regulators
- Real estate price bubbles
- Core functions of mortgage lenders and their regulation
- Institutions – Non-Bank lenders, State banks
- International standards

Coordinating Disparate Regulators



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As mortgage markets develop, more institutions:

- Bank and non-bank lenders – product design rules, capital rules, investment in subordinated bonds, etc.
- Securities – disclosure, registration requirements
- Insurance, pensions - investment rules for mortgage related securities
- Rating agencies – for securities, loan servicers, lenders

Create constructive savings and investment cycles, avoid regulatory arbitrage in lending, securitization

- Level playing field through capital requirements, true sale definition, tax rules, disclosure requirements, etc.

Lending during House Price Bubbles



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- Long list of bubbles and bursts: Japan 1980s; Thailand 1990s; Colombia 1990s; U.S.A. 1970s/1980s oil patch states (and now?).
- Residential v. commercial– differing cycle length and amplitude
- When is a hot market a bubble?
 - Demand – demographic trends, household income growth, interest rates, availability of financing (U.S. 1995-2005), foreign direct investment (China), lack of investment alternatives (Russia, China, Mexico)
 - Supply - local land factors (Mexico ejido land, transition country land markets, environmental regulations, physical limits in local markets such as Bombay or San Francisco, California)
- Regulatory responses
 - Restrict LTV, loan designs (Colombia, U.S.), haircut appraisal (Germany)
 - Monitor and publicize market trends, supervise liquidity position, maintain quality of origination process, monitor restructurings – act early

Core Functions of Mortgage Market Participants



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• ORIGINATION –

- **Credit risk of client** – credit bureau, privacy rules, product design rules (risk of teaser rates, negative amortization, Colombian legislation of mortgage design versus Anglo Saxon liberal approach)
- **Value the collateral** – appraisal standards and their enforcement (Mexico, government standards, U.S. industry-driven standards, Germany – incorporating expected price changes),
- **Document the loan, transfer title, register mortgage lien** – lots of failures historically, regulated via general bank examinations (U.S. 1980s, Mexico '95)
- **Title Registration** – Federal systems (Russia, Mexico) v. centralized (Peru, Spain)

• SERVICING –

- **Operational Risk** – internal controls, business processes, Basel 2 capital requirements, Pillar 2 Supervisory Authority

• HOLDING – Who retains credit and market risk?

- **Capital rules** for retained loans, lender investments in bonds – Basel 2 Pillar 1
- **Disclosure** of loan portfolio, bond performance – Basel 2 Pillar 3

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Regulating Non-Bank Lenders



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So long as they do not pose a systemic risk to the financial system, non-depository lenders should enjoy lighter regulation

- **Italy** – Legal framework for NBFIs with minimum capital, “significant” NBFIs are supervised by central bank
- **Australia** – NBFIs registered, must provide data on activities and comply with securities disclosures, but not regulated or supervised
- **Mexico** – from SOFOLE (limited objective companies) with banking supervisor oversight to SOFOME (multiple objectives) without oversight
- **Preserve market discipline** – financial disclosures, reporting on activities, security disclosures, external audits, role of rating agencies
- **Preserve consumer protections**

Maintain a level playing field between bank and non-bank lenders

If NBFIs grow to present systemic risk, prudential regulation should be considered



Regulating State Banks

- State-sponsored second tier banks (e.g., liquidity facilities, development banks) often pose systemic risk to the local system by virtue of their size, market role, state involvement
- Generally subject to political risk - degree depends on governance and ownership structure
 - Reduce political risk with independent board, transparent management practices
- Should be subject to same safety and soundness regulation as any commercial bank
 - Establish a commercial basis for operation
 - Put them on a footing with private sector
- Policy for loss reserves a significant issue for many government-owned institutions – when to publicly recognize a loss

Transparency and Market Discipline (1)



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- Improved transparency fosters market actions to discipline bad management (I.e., actions by investors and depositors before the crisis builds)
 - Adopt international standards for financial statement preparation and presentation, see also Basel 2 market discipline requirements
 - Foster international standards for appraisal, accountancy, etc.
- Regulators always subject to political pressure
 - Transparency strengthens the position of regulators

Transparency and Market Discipline (2)



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What does the market want to know?

- Depositors, bond Investors:
 - Bank's ability to pay interest and principal
 - Sufficient resources, management expertise to service debt in most conditions
- Shareholders
 - Sufficient resources, expertise to build the value of equity holdings and/or maintain value in hard times

Valuation – Creating Information



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- Value of the mortgage loan hinges on the value of the property that secures it
- Valuations are difficult
 - Speculative new construction, segmented markets (Russia, China, Mexico) or informal self-built (Mexico, Peru)
 - Infrequent transactions on old, depreciated stock (Russia, Armenia)
 - Understated prices are registered to avoid taxes (many countries)
- Lenders should track market values over time to understand the strength of their mortgage portfolios given weighted average LTVs, trends for lending – this is where bubbles can have an impact
- Supervisors should promulgate appraisal standards, require lenders to adhere to them
- Supervisors can act as neutral information provider by collecting and publishing data on real property price trends – Census, OFHEO HPI



Reserves

- General Reserves against expected losses – a matter of judgment
 - Lenders establish a reserve on balance sheet against expected defaults
 - Most jurisdictions expect one to four percent held as reserve, depending upon historical experience
- Specific reserves – taken as loans default – important to write off 100% of defaulted loans
- No detailed standards exist – IAS and Basel 2 both discuss
 - Accountants say you write off when you think you cannot collect
 - Amount and rules are up to the regulator – 90 or 180 days for default? Shorter is better but not too short. What percent to write off at different points in time?
- Critical that regulators set and enforce reserve requirements
 - In crises, one of the first targets for regulatory forbearance

Mortgage Loan Design



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- Fixed rate amortizing is the simplest – common in only a few countries – Germany, Denmark, United States
 - Raises interest rate risk for lender when funded with short term deposits
- Adjustable rate with cap – United States, United Kingdom
 - Less market risk for lender, persistent liquidity risk, increased credit risk in volatile markets
- Inflation adjusting mortgages – Chile, Colombia, Mexico, Poland (early 1990s)
 - Inflation risk shared between lender and borrower if salaries adjust
 - Complex designs resulted in disasters in Colombia, Mexico
- Pendulum between laissez faire and strict legal limits – critical to understand impact on credit risk in volatile times, focus on consumer disclosure, lender/investor ability to hedge



International Standards

- For financial reporting - International Accounting Standards (IAS)
 - IAS 32 – factors that affect the amount, timing and certainty of future cash flows relating to financial instruments and the accounting policies applied to those instruments
 - IAS 39 – principles for recognizing and measuring financial instruments, including recognition of profit and loss
- For risk disclosures - Basel 2 Pillar 3 – Market Discipline
- For appraisals - International Valuation Standards, International Valuation Standards Committee
- Professional standards – For accountants, appraisers, financial analysts, mortgage bankers, etc., see professional associations
- For market value of the banking book – Basel 2 is silent! A big vacuum for fixed rate mortgage lenders

Basel 2 – Pillar 3

Disclosure Requirements (1)



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- Designed to complement the minimum capital requirements (Pillar 1) and the supervisory review process (Pillar 2)
- Designed to avoid conflict with accounting standards – narrower
- Cover capital, risk exposures, risk assessment processes, and hence the capital adequacy of the institution

Basel 2 – Pillar 3

Disclosure Requirements (2)



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- **Examples of mortgage credit risk disclosures**
 - Definitions of past due and impaired (for accounting purposes);
 - Description of approaches followed for specific and general reserve and statistical methods used
 - Total loan balances end of period, average loan balances over the period, each broken down by major types of credit exposure (e.g., mortgage, retail, commercial, etc.)
 - **Geographic distribution of exposures**, broken down in significant areas by major types of credit exposure
 - Actual losses (e.g. charge-offs and specific provisions) in the preceding period for each portfolio and how this differs from past experience
 - A discussion of the factors that impacted on the loss experience in the preceding period

Basel 2 – Pillar 2

Supervisory Standards



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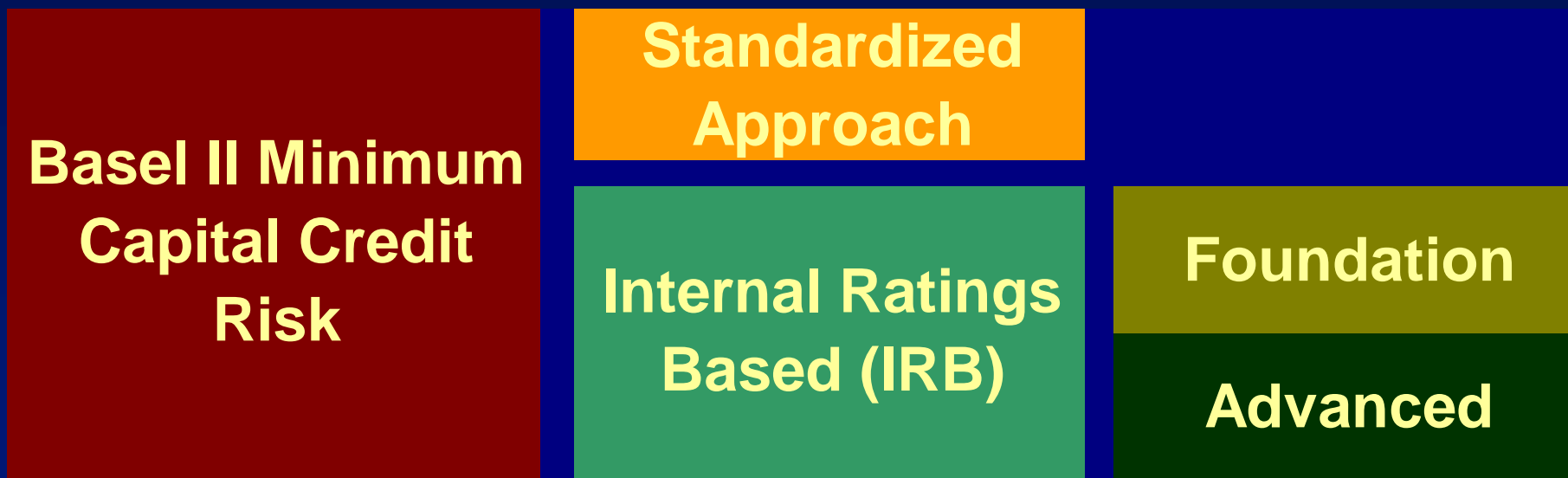
- Bank management develops internal capital assessment process and sets capital targets, internal controls, limits on business, provisions and reserves
- Bank process for assessing and reporting on capital adequacy, role of board and management, risk assessment, and internal control review
- **IMPACT ON MORTGAGES?**
 - Interest rate risk in the banking book – no capital standard
 - Product design – indexed adjustable rate mortgages with caps, history of inflation-linked loans in Colombia, Mexico
- Operational risk – long-lived loans, documentation and legal risk distinct from short term consumer credits

Basel 2 – Pillar 1

Risk Based Capital Standards (3)



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Basel 2 – Pillar 1

Risk Based Capital Standards (1)



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- **Basel 2 Standardized Approach for retained loans**
 - For markets with historical data on credit performance, a 35% risk weight for mortgages (down from 50% under Basel 1) with substantial discretion given to supervisor
 - **For most emerging markets, careful consideration should be given before moving towards 35% - should be based on quantitative demonstration of reduced risk**
- **Basel 2 Internal Ratings Based Approach**
 - Finer alignment of risk and capital requirements
 - Lets banks use their own econometric models and historical data to estimate Probability of Default (PD) and Loss Given Default (LGD)
 - Lower risk weights for whole residential mortgages – LGD floor set at 10% for markets with proven credit performance
 - **Emerging markets generally lack data to apply right away, but where data exists, technology is becoming cheap**



Basel 2 – Pillar 1

Risk Based Capital Standards (2)

Basel 2 IRB requires investments by banks and regulator

- Rating & risk systems subject to minimum conditions and disclosure requirements -
 - Must provide meaningful assessment of borrower and transaction characteristics
 - Two dimensions:
 - ⑩ Risk of default, and
 - ⑩ Transaction specific factors, e.g. collateral, seniority, product type
- Rating System Design – rating dimensions, rating structure, rating criteria, assessment horizon, use of models, documentation
- Extensive criteria for models, system documentation, data history (min 5 years for PD estimate), data maintenance, stress tests, corporate governance
- Corporate Governance and Oversight – credit risk control, internal & external audit

Basel 2 – Pillar 1

Risk Based Capital Standards (3)



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Thinking Ahead to Mortgage Securitization

- **True sale** – transfer of portfolio to a legal entity (i.e., special purpose vehicle or SPV) - the SPV exists independently from the issuer – can never retrieve the assets – is this possible under law?
- What **legal and regulatory issues** does the transfer raise?
- The SPV issues and services bonds
- SPV should be exempt from value added taxes – the investor is taxed on the interest income
- Will have to consider role of rating agencies
- Requires substantial and steady volume of originations
- Many issues under Basel 2, IAS, etc.



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