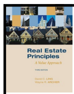


Chapter 11

Sources of Funds for Residential Mortgages

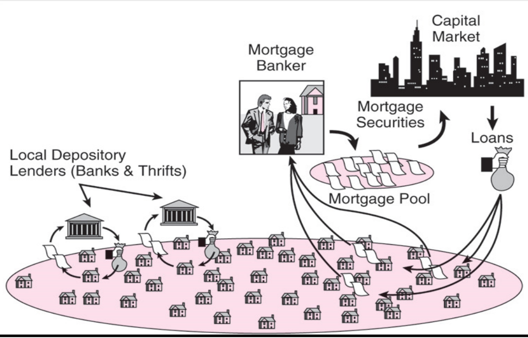
Mortgages and Mortgage Markets

Loan Type	Amount	Percent of Total
Residential (1–4 family)	$11,033	75%
Apartment (multifamily)	896	6
Commercial	2,599	18
Farm	111	1
Total	$14,639	100%

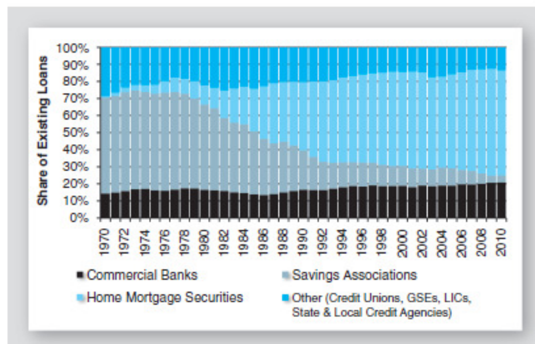
Source: *Federal Reserve Bulletin,* March 2009, Table 1.54, "Mortgage Debt Outstanding."

Traditional and Modern Housing Finance

Exhibit 11-2 Traditional and Modern Housing Finance



Traditional and Modern Housing Finance



Source: Flows of Funds Accounts of the United States.

Thrifts

- Formerly backbone of mortgage finance
  - Dominated mortgage lending
  - Extremely localized
  - Fatal flaw: Funded long-term loans with short-term savings
  - Traded freedom for deposit insurance (1930s)
    - Cocoon of regulations
    - Unable to adapt to a new financial world

Thrifts (continued)

- Flood of home loans in late 1970s - all fixed rate
- Interest rates soared in war on inflation
- Wide freedoms began in 1980s
- Asset-liability mismatch severely damaged thrifts
  - Almost one-third failed
  - 70% had disappeared by 2001
  - "Collateral damage" to elected officials, regulators, taxpayers
  - Market share of home loans plummeted (1970s: over 50%, 1997: 15%)

Thrifts Today

- Changed approach to regulation
  - Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA)
  - Risk-based capital standards
- Most are now banks (acquired or converted)
- Others often have "boutique" roles:
  - Mortgage banker Sub-prime lender
  - Commercial loans Multifamily loans
- Emphasis on ARM lending (40% of loans)

11-7

Commercial Banks

- Historically: Real estate needs of business clients
  - Business-related real estate loans
  - Home loans
  - Personal investments
- Assumed former roles of savings associations
- Large-scale construction lending

11-8

Commercial Banks (continued)

- "Warehouse" credit lines for mortgage bankers
- Effects of bank deregulation
  - Enormous consolidation of the industry
  - Aggressive pursuit of real estate lending
    - Directly
    - Through mortgage banking subsidiaries
  - New powers to reenter real estate investment and development

11-9

Portfolio and Non-portfolio Mortgage Lenders

- Portfolio Lenders (depository institutions)
  - Banks
  - Thrifts
  - Large credit unions
- Non-portfolio lenders
  - Mortgage bankers
  - Mortgage brokers
    - May include credit unions and small banks

11-10

Non-Portfolio Lenders: Mortgage Companies

- Mortgage banker: Not a bank – accepts no deposits
  - Originates loans to sell
  - Retains right to service the loan for a fee
- Mortgage broker: Brings borrower and lender together for a fee; never owns the loan

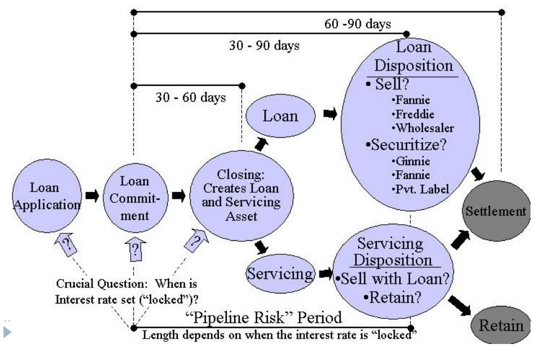
11-11

Mortgage Banker

- Originates and owns loans long enough to sell
  - Sell loans "whole"
  - Pool and securitize loans
- Servicing is core profit center
- Three-step process:
  1. Issue mortgage commitment to potential borrower
  2. Close or originate loan (funding loan)
  3. Sell loan

11-12

Mortgage Banking Creates Two Financial Assets



11-13

Mortgage Banker as Servicer

- Collects monthly payments, remits to investor
- Collects and remits payments for property taxes, hazard insurance and mortgage insurance
- Manages late payments, defaults, foreclosures
- Receives fee of .25% to .44% (25 to 44 bps)
- Typically accept loss at origination of a loan to obtain servicing rights

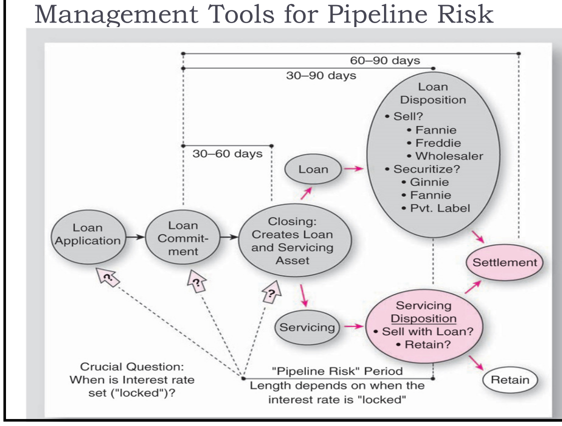
11-14

Pipeline Risk: Signature Risk of Mortgage Banking

- Pipeline risk: Risk between loan commitment and loan sale
- Two components
  - Fallout risk: Risk that loan applicant backs out
  - Interest rate/price risk: Risk that closed loans will fall in value before sold
- Mortgage bankers highly leveraged
  - Very sensitive to pipeline risk
  - Hedging necessary for survival

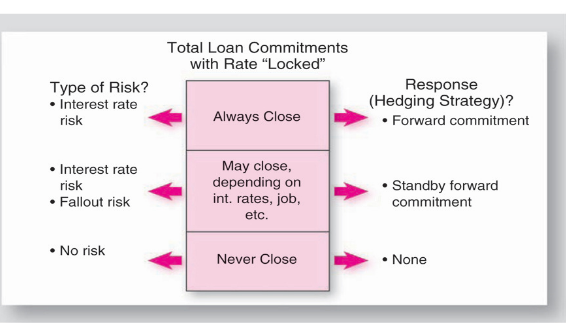
11-15

Management Tools for Pipeline Risk



11-16

Three Mortgage Banking "Pipeline" Risk Situations



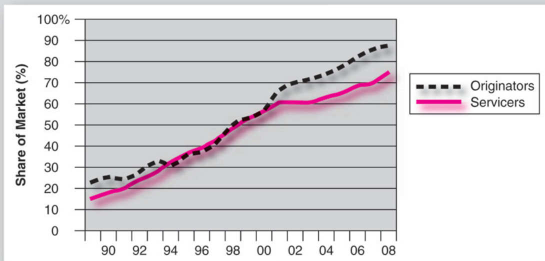
11-17

Emergence of Megamortgage Bankers

- Megabanks saw home mortgage lending as profit center
- Cyberelectronics imply huge economies of scale
- Four modes of operation:
  - Traditional "face-to-face" or "retail" lending
  - Wholesale mortgage banking
  - Internet lending
  - Lending through brokers
- Tremendous consolidation in last decade

11-18

Consolidation of the Top 20 Home Mortgage Lenders



Source: The *2009 Mortgage Market Statistical Annual*, vol 1. Inside Mortgage Finance Publications Inc. Bethesda, MD, 2009

Mortgage Brokers

- "Places" borrower's loan application with lender
  - Receives application fee
  - Receives part of lender's origination fee
- Never owns and never services loan
- Grew rapidly prior to recent housing crisis
- Causes for concern about mortgage brokerage:
  - "Front-loaded" compensation
  - Few repeat customers
  - Low competency requirements
- Wide-spread borrower abuse in recent years

11-20

Evolution of the Secondary Mortgage Market

- Pre-1970: Limited and informal
- Lack of standardization a barrier
- Large interregional differences in home mortgage interest rates (100-200 bps)
- Rising interest rates could shut down home mortgage lending through disintermediation

11-21

Beginning of the Modern Secondary Mortgage Market

- Fannie Mae (1968): Spun off from HUD to become a primary purchaser of FHA and VA mortgage loans
- Ginnie Mae (1968): Empowered to guarantee "pass-through" mortgage-backed securities based on FHA and VA loans
- Freddie Mac (1970): Formed to purchase and securitize conventional home loans from thrifts

11-22

Mortgage-Backed Securities

- Multiple mortgage loans in a single pool or fund
- Security entitles investor to pro rata share of all cash flows
- Loans in a given pool will be similar:
  - FHA/VA; or conventional (or subprime)
  - Same vintage (new or recent loans)
  - Similar interest rates
- Nearly two-thirds of all new home loans have been securitized in recent years

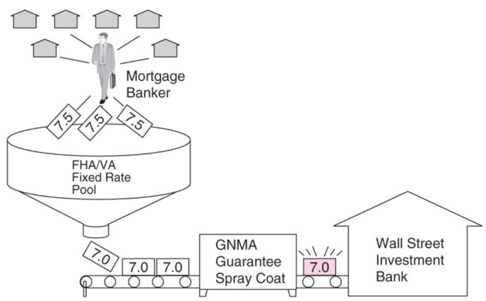
11-23

Mortgage-Backed Securities

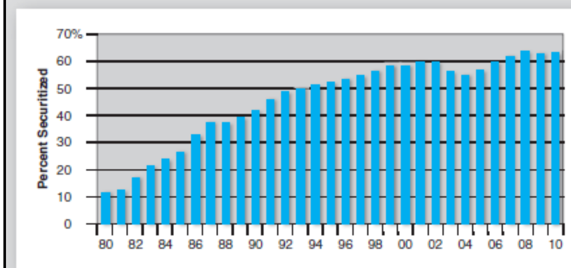
- MBS is a generic term for many types of mostly debt securities which are backed by a pool of mortgages
- RMBS – Residential MBS (from pools of mortgages on houses)
- CMBS – Commercial MBS (from pools of mortgages on CRE)
- Can be:
  - Mortgage Backed Bond
  - Pass Through
  - Collateralized Mortgage Obligation (CMO)
    - Many forms of CMO (tranches)

11-24

The Ginnie Mae Mortgage-Backed Security Process



The Growth of Home Mortgage Securitization



irst-lien home mortgage loans
urce: *Federal Reserve Bulletin*, December 2011, Table 1.54.

Role of Ginnie Mae in the Secondary Mortgage Market

- GNMA created first major pass-through MBS program
  - Does not buy mortgages
  - Guarantees timely payment of interest and principal to holders of GNMA securities.
  - Guarantees only securities based on FHA/VA loans

11-27

Fannie Mae

- Original mission: Secondary market for FHA/VA
- Became privately owned but still U.S. chartered
  - Public mission for housing
  - U.S. Treasury financial credit line available
- Surpasses Freddie Mac in buying conventional loans
- Funded through debt issues, mortgage securitization and guarantee fees
- Has securitized and sold, or owns, about 23% of outstanding home loans
- Taken into conservatorship by U.S. in 2008

11-28

Freddie Mac

- Chartered by Congress
- Deals exclusively in conventional loans
- Securitized all loans purchased until recent years
- Financially similar to Fannie Mae
- Has securitized and sold, or owns, about 15% of outstanding home loans
- Taken into conservatorship by U.S. in 2008

11-29

Importance of Fannie Mae and Freddie Mac

- Have brought about standardization in:
  - Mortgages and mortgage notes
  - Appraisal forms and practices
  - Underwriting procedures and standards
  - Also, influence practices and standards in nonconforming mortgage markets
- Have increased liquidity of mortgage markets
  - No interstate differentials in mortgage interest rates
  - No home lending disruptions when interest rates rise
  - New sources of mortgage funds in security investors

11-30

Importance of Fannie Mae and Freddie Mac (continued)

- Type of loans that GSEs buy heavily influences what loans most lenders will make
- Recent accusations against GSEs:
  - Too much influence on mortgage markets
  - Unfair competition due to their federal financial "backstops"
  - Exceeding boundaries of their charters
  - Bearing too much undisclosed risk

11-31

What Was Wrong with Fannie and Freddie?

- Not capitalized to withstand declining home values
- Said to wield too much political influence
- Said to unsuccessfully mix private enterprise with housing subsidy programs
- Said to divert the benefits of their efficiency advantage into the pockets of their management
- Said to be unnecessary in a financial world now dominated by a few giant banks
- Said to be part of an unnecessary mortgage lending system – for the level-payment fixed rate mortgage

11-32

Private mortgage Conduits

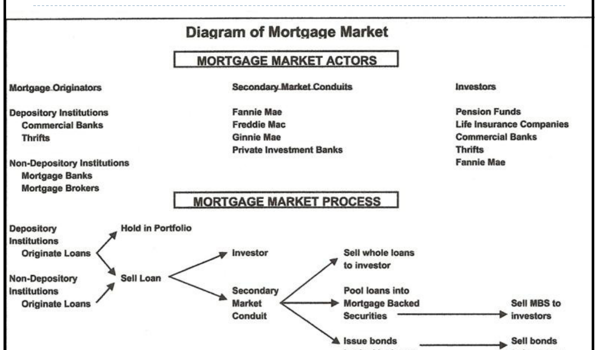
- Grew out of the market for non-conforming "Jumbo" loans
- Small market share until sub-primes emerged
- Grew explosively post-2000, mainly for sub-primes
- Diminishing rapidly as sub-prime diminish
- Likely to continue as a conduit for "Jumbos"

11-33

The U.S. Home Mortgage System Today – Four Channels

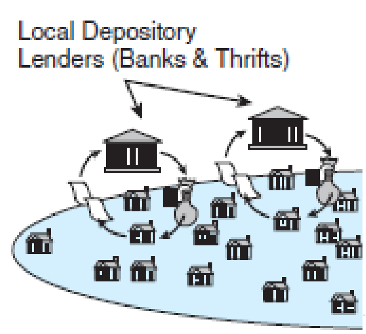
- Local depository lending (very limited)
- FHA/VA – GNMA securitization process
- Conforming conventional – GSE process
- Non-conforming conventional – private security process

11-34



11-35

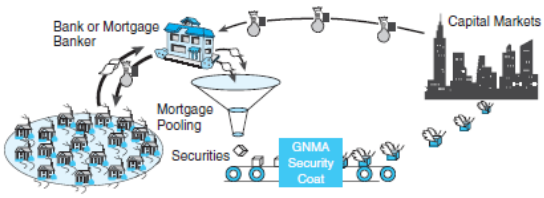
Local Portfolio Lending by Banks and Thrifts



11-36

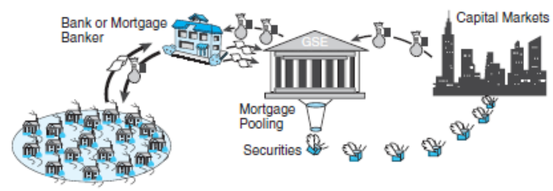
FHA/VA – GNMA Securities

FHA/VA–GNMA System:
Investor Protection by External Credit Guarantee



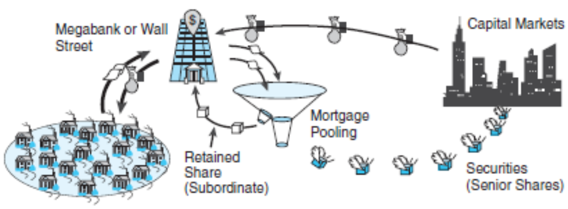
Conforming Conventional – GSE Process

Conforming Conventional—GSE Process:
Investor Protection by Issuer Guarantee

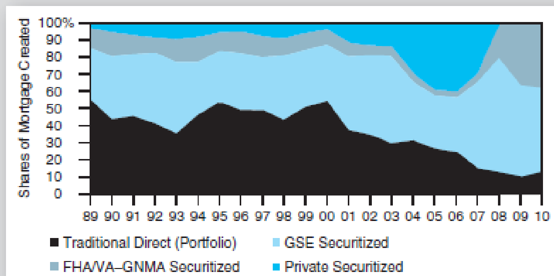


Nonconforming Conventional – Private Process

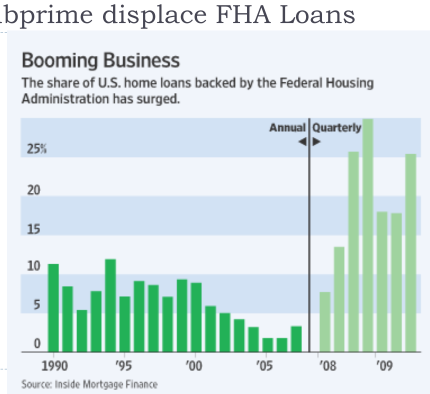
Nonconforming Conventional—Private Securities:
Investor Protection through Senior/Subordinate Structure



Market Shares of the Four Channels of Home Mortgage Lending



Subprime displace FHA Loans



Where Do You Get a Mortgage Loan in Today's Complex System?

- No simple answer, except to shop aggressively
- Portfolio lenders may offer cost and interest rate advantage
- Brokers may offer service and down payment advantage
- Depository lenders may have best ARM offers
- Non-depositories may have best fixed-rate offers
- SHOP!

Lenders' Underwriting Decisions

- Underwriting: Process of determining whether the risks of a loan are acceptable
- Three "Cs" of traditional underwriting:
  - Collateral: URAR appraisal
  - Creditworthiness: Credit report
  - Capacity: Ability to pay (payment ratios)

11-43

Traditional Payment Ratios for Mortgage Underwriting

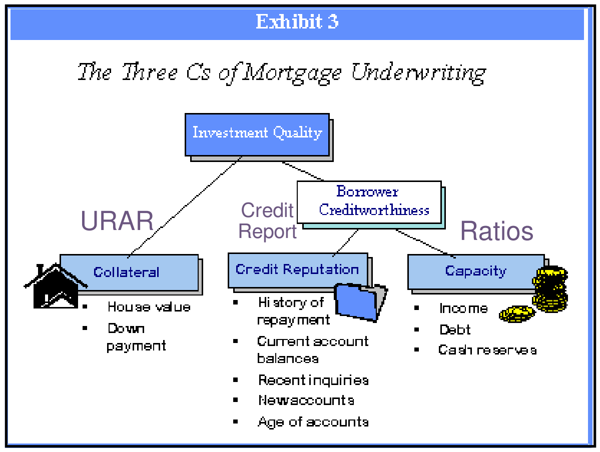
- Housing expense ratio = *PITI/GMI*
  - *PITI* is principal, interest, (property) taxes and insurance
  - *GMI* is gross monthly income
  - Recent convention set maximum at:
    - 28% for conventional loans
    - 29% for FHA
  - Known as "front-end" ratio

11-44

Traditional Payment Ratios for Mortgage Underwriting

- Total debt ratio = (*PITI* + *LTO*) ÷ *GMI*
  - *LTO* is long-term obligation
  - Recent convention set maximum at:
    - 36% for conventional loans
    - 43% for FHA
  - Known as "back-end" ratio
- Note: GMI is critical. Its computation is closely regulated by ECOA

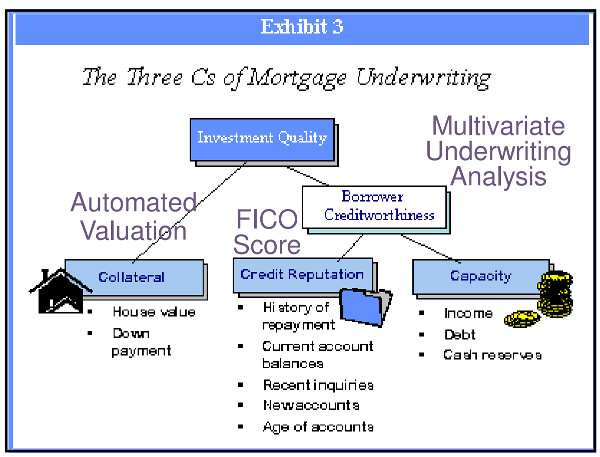
11-45



Modern Home Loan Underwriting

- Automated underwriting is dominant
  - Creation of single statistical score
  - URAR appraisal yields to "automated valuation" in most cases
  - Credit report displaced by credit score
- Single underwriting index incorporates: house value, credit score, income and obligation data
- Automated underwriting superior to traditional methods
- Remaining issue: How important is a cash down payment requirement?

11-47



Recent Underwriting Failures

- News of fraud and extensive defaults have been widely reported
- Problems were not due to the procedures and standards described above, but due to the failure to use them:
  - Half of sub-prime loans had limited documentation
  - Most of Alt-A loans had limited or no documentation (Came to be called "liar loans")
  - Private securitization firms widely suppressed loan underwriting

Affordable Housing Programs

- GSEs bought an array of affordable home loans
- Vary by allowing override of one of traditional underwriting guidelines:
  - House value
  - Credit score
  - Payment ratio
  - Targeted to different underwriting deficiencies

Affordable Housing Programs (continued)

- Programs are enabled by:
  - Automated underwriting
  - Accumulated knowledge base on affordable lending
- GSE default rates on affordable loans comparatively good.

Subprime Lending

- Many households unable to qualify for "affordable" home loans
- Subprime originally targeted three borrower deficiencies:
  - Lack of income documentation
  - Weak credit
  - Seeking financing for 100% LTV or higher

Subprime Lending (continued)

- More expensive than standard home loans
- Polar views of subprime lending:
  - Fills compelling, legitimate need (beats credit cards), or
  - Hunting ground of predatory lenders
- In any case, spun out of control, and to disaster

Qualified Mortgages

- In response to the "mortgage meltdown" following the 2008-2012 house price declines, mortgage credit has been tightened
- Top quality applicants have no problems getting loans, and interest rates are very low by historical standards
- The required documentation for borrowers has increased significantly
- The Consumer Financial Protection Bureau (created by congress) has defined a type of mortgage known as a Qualified Mortgage (as of January 1, 2014)

Qualified Mortgage

- No negative amortization allowed
- No IO payments allowed
- The points and fees on a mortgage over 100,000 can not exceed 3%
- Limits the fees that someone can earn for steering you to a QM (cannot earn more on a non-QM)
- **All FHA/VA and conforming loans** must be QM (for next 7 years)
- Must show a borrower can afford the loan over the life of the loan (cannot be qualified on the Teaser Rate).
- Back end ratio cannot exceed 43%

55

11-55