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United States Government Accountability Office
Washington, DC 20548

October 16, 2007

The Honorable Barney Frank
Chairman
Committee on Financial Services
House of Representatives

The Honorable Spencer Bachus
Ranking Member
Committee on Financial Services
House of Representatives

Subject: Information on Recent Default and Foreclosure Trends for Home Mortgages and Associated Economic and Market Developments

Substantial growth in the mortgage market in recent years has helped many Americans become homeowners. However, as of the latest quarterly data available, June 2007, more than 1 million mortgages were in default or foreclosure, an increase of 50 percent compared with June 2005.[1] Defaults and foreclosures on home mortgages can impose significant costs on borrowers, lenders, mortgage investors, and neighborhoods. Additionally, recent increases in defaults and foreclosures have contributed to concern and increased volatility in certain U.S. and global financial markets. These developments have raised questions about the extent and causes of problems in the mortgage market.

To provide some insights on these issues, you asked us to analyze (1) the scope and magnitude of recent default and foreclosure trends, and how these trends compare with historical values, and (2) developments in economic conditions and the primary and secondary mortgage markets associated with these trends. On October 10, 2007, we briefed your offices on the results of this work. This letter provides a brief summary of those

[1]Although definitions vary, a mortgage loan is commonly considered in default when the borrower has missed three or more consecutive monthly payments (i.e., is 90 or more days delinquent). At this point, foreclosure proceedings against the borrower become a strong possibility. Foreclosure is a legal, and often lengthy, process with several possible outcomes, including that the borrower sells the property or the lender repossesses the home. Unless noted otherwise, we treat loans in default and loans in foreclosure as mutually exclusive categories.

results, and the enclosures contain the more detailed briefing materials and a bibliography of related research.

Background

The primary mortgage market has several segments and offers a range of loan products:

- The prime market serves borrowers with strong credit histories and provides the most competitive interest rates and mortgage terms. In 2006, the prime market segment accounted for about 58 percent of mortgage originations (in dollar terms).[2]

- The Alt-A market (accounting for about 16 percent of mortgage originations) generally serves borrowers whose credit histories are close to prime, but the loans often have one or more higher-risk features such as limited documentation of income or assets.

- The subprime market (about 24 percent of mortgage originations) generally serves borrowers with blemished credit and features higher interest rates and fees than the prime market.

- Finally, the government-insured or -guaranteed market (about 3 percent of mortgage originations) primarily serves borrowers who may have difficulty qualifying for prime mortgages but features interest rates competitive with prime loans in return for payment of insurance premiums or guarantee fees. The Federal Housing Administration and Department of Veterans Affairs operate the two main federal programs that insure or guarantee mortgages.

Across all of these market segments, two types of loans are common: fixed-rate mortgages (FRM), which have interest rates that do not change over the life of the loans; and adjustable-rate mortgages (ARM), which have interest rates that change periodically based on changes in a specified index.

One of the main sources of information on the status of mortgage loans is the Mortgage Bankers Association's (MBA) quarterly National Delinquency Survey (NDS), which represents about 80 percent of the mortgage market.

[2]We excluded home equity loans from our calculation of market shares. Percentages do not add to 100 due to rounding. A graph showing market shares for the various market segments from 2001 through 2006 appears in slide 11 of enclosure I.

The NDS provides national and state-level information on mortgage delinquencies, defaults, and foreclosures back to 1979 (a 28-year span) for first-lien purchase and refinance mortgages on one-to-four family residential units.[3] The data are disaggregated by market segment and loan type (FRM or ARM) but do not contain information on other loan or borrower characteristics. NDS data provide two measures of foreclosure: (1) foreclosure starts, which are loans that entered the foreclosure process during the quarter and (2) foreclosure inventory, which represents the aggregate number of loans that were in the foreclosure process during the quarter (regardless of when they entered the process).

The secondary mortgage market plays an important role in providing liquidity—that is, supplying capital—for mortgage lending by bundling mortgages into securities (called residential mortgage-backed securities or RMBS) that are bought and sold by investors. The secondary market consists of (1) Ginnie Mae securities, which are backed by government-guaranteed mortgages; (2) government-sponsored enterprise (GSE) securities backed by mortgages that meet the requirements for purchase by Fannie Mae and Freddie Mac;[4] and (3) private label securities, which are backed by mortgages that do not conform to GSE purchase requirements because they are too large or do not meet GSE underwriting criteria. Investment banks bundle most subprime and Alt-A loans into private label RMBS.

Summary

Overall, the number and percentage of mortgages in default or foreclosure rose sharply from the second quarter of 2005 through the second quarter of 2007 to levels at or near historical highs, but there was significant variation among market segments, loan types, and states.[5] More specifically:

[3]NDS data do not separately identify Alt-A loans but include them among loans in the prime and subprime categories. State-level breakouts are based on the address of the property associated with each loan. The NDS presents default and foreclosure *rates* (i.e., the number of loans in default or foreclosure divided by the number of loans being serviced).

[4]Fannie Mae and Freddie Mac are congressionally chartered, private corporations that are publicly owned that purchase mortgages from lenders. To be eligible for purchase by the GSEs, loans (and borrowers receiving the loans) must meet specified criteria.

[5]In the second quarter of 2005, foreclosure start rates began to rise after remaining relatively stable for about 2 years.

- The overall default rate grew by 29 percent, reaching a point at which just over 1 in every 100 mortgages was in default, almost a 28-year high. The foreclosure start rate did reach a 28-year high, rising by 55 percent. (See graph on slide 14 in enclosure I for additional details.)

- The subprime market experienced substantially steeper increases in default and foreclosure start rates than the prime or government-insured markets, accounting for two-thirds or more of the overall increase in the number of loans in default or foreclosure during this time frame.

- Among types of loans, ARMs experienced relatively steeper growth in default and foreclosure rates, compared with FRMs which experienced no or modest increases.

- Several "Sun Belt" states such as Arizona, California, Florida, and Nevada experienced some of the largest increases in the number and percentage of defaults and foreclosures. Industrial midwest states such as Michigan and Ohio saw more modest growth in default and foreclosure rates but accounted for a significant part of the increase in the number of troubled loans in part because their default and foreclosure rates started at higher levels. Other states, such as New Mexico, Oregon, and Utah experienced little or no growth in default and foreclosure rates.

According to mortgage industry researchers and participants, the number and percentage of loans in default and foreclosure are likely to worsen through the end of 2007 and into 2008, due partly to scheduled payment increases for many ARMs.

A number of studies and industry data indicate that a combination of economic and market developments contributed to recent increases in default and foreclosure rates:

- First, the rapid decline in the rate of home price appreciation throughout much of the nation beginning in 2005 may have reduced incentives for borrowers to keep current on their mortgages and made it more difficult for borrowers to refinance or sell their homes to avoid default or foreclosure. Our analysis found that states that experienced a sharp decline in house price appreciation following a period of strong growth (e.g., California, Florida, and Nevada) generally experienced larger percentage increases in foreclosure start rates from the second quarter of 2005 through the second quarter of 2007.

- Second, in some states with foreclosure rates that were already relatively high in 2005, weak labor market conditions likely contributed to mortgage problems. For example, the two states with the lowest rates of employment growth in recent years—Michigan and Ohio—experienced the third- and sixth- largest increases in the number of foreclosure starts.

- Third, more aggressive lending practices—an easing of underwriting standards and wider use of certain loan features associated with poorer loan performance—reduced the likelihood that some borrowers would be able to meet their mortgage obligations, particularly in times of economic hardship or limited house price appreciation. For example, data on private label securitized loans show significant increases from 2000 through 2006 in the percentage of mortgages with higher loan-to-value ratios (the amount of the loan divided by the value of the home), adjustable interest rates, limited or no documentation of borrower income or assets, and deferred payment of principal or interest.

- Fourth, growth in the market for private label RMBS beginning in 2003 provided liquidity to some brokers and lenders to support these more aggressive lending practices. Investors were attracted to these securities because of their seemingly high risk-adjusted returns.

A number of other factors—including incentives that potentially emphasized loan volume over loan quality and growth in the incidence of mortgage fraud—may have contributed to recent default and foreclosure trends, but additional information would be needed to fully assess their impact.

Scope and Methodology

To assess the scope and magnitude of recent trends in defaults and foreclosures and compare these trends to historical values, we analyzed NDS data from 1979 through the second quarter of 2007 (the most recent quarter for which data were available). The NDS data provide information on first-lien purchase and refinance mortgages on one- to four-family residential properties. For the entire period, we examined national and state-level trends in the number and percentage of loans that were in default, starting the foreclosure process, and in the foreclosure inventory each quarter. We also identified historical maximums and calculated long-run medians for these measures. For the second quarter of 2005 through the second quarter of 2007, we disaggregated the data by market segment and loan type, calculated absolute and percentage increases in default and foreclosure measures, compared and contrasted trends for each state, and compared default and foreclosure start rates at the end of this period to historical maximums and medians. We assessed the reliability of the NDS data by reviewing existing information about the quality of the data, performing electronic testing to detect errors in completeness and reasonableness, and interviewing MBA officials knowledgeable about the data. We determined that the data were sufficiently reliable for purposes of this report.

To analyze developments in economic conditions and the primary and secondary mortgage markets that may be associated with recent default and foreclosure trends, we analyzed NDS data, the Office of Federal Housing Enterprise Oversight's (OFHEO) quarterly house price index (HPI) for purchase transactions, and data on employment growth from the Bureau of Labor Statistics.[6] For each state, we calculated the average rate of growth in the HPI from the third quarter of 2003 through the first quarter of 2006 (a period of relatively steady growth in the HPI at the national level) and projected what the HPI would have been had this rate of growth continued through the second quarter of 2007. We then divided the projected HPI by the actual HPI as of the second quarter of 2007, with higher ratios indicating states that experienced relatively sharp drop-offs in house price appreciation after a period of strong growth. We ranked the states based on this ratio and determined the extent to which states with higher rankings had also experienced relatively greater percentage increases in foreclosure start rates from the second quarter of 2005 through the second quarter of 2007.

With regard to labor market conditions, we ranked states based on their percentage change in employment from the fourth quarter of 2001 (the end of the last recession) through the second quarter of 2007 and examined the relationship between this measure and changes in the number and percentage of loans entering foreclosure from the second quarter of 2005 through the second quarter of 2007. Additionally, we reviewed relevant industry, government, and academic data and research on factors that may have contributed to recent default and foreclosure trends. We did not independently confirm the accuracy of the information and analysis that we obtained from third parties. However, we took steps to ensure that the data we used from these sources were sufficiently reliable for our purposes, such as reviewing existing information about data quality, interviewing officials familiar with the data, and corroborating key

[6]The HPI measures movements in the price of single-family homes relative to a base period.

information. Finally, we interviewed officials from bank regulatory institutions, the Department of Housing and Urban Development, Federal Trade Commission, Securities and Exchange Commission, mortgage lenders, investment banks, credit rating agencies, academia, and industry and consumer groups.

We performed our work from June 2007 through October 2007 in accordance with generally accepted government auditing standards. We provided a draft of the briefing materials to the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, and the Office of Thrift Supervision for their technical comments, which we incorporated where appropriate.

We are sending copies of this report to the Chairman and Ranking Member, Senate Committee on Banking, Housing, and Urban Affairs; Chairman and Ranking Member, Subcommittee on Housing, Transportation, and Community Development, Senate Committee on Banking, Housing, and Urban Affairs; and Chairwoman and Ranking Member, Subcommittee on Housing and Community Opportunity, House Committee on Financial Services. We will also send copies to other interested parties and make copies available to others upon request. In addition, the report will be available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-8678, or woodd@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report are listed in enclosure II.

David G. Wood
Director, Financial Markets
and Community Investment

Enclosures

Enclosure I: Briefing to the Committee on Financial Services, House of Representatives

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Home Mortgage Defaults and Foreclosures

Recent Trends and Associated Economic and Market Developments

**Briefing to the
Committee on Financial Services
House of Representatives
October 10, 2007**

1

Overview

- Objectives
- Scope and methodology
- Summary
- Background
- Recent default and foreclosure trends
- Developments associated with recent trends

2

Objectives

- Analyze the scope and magnitude of recent trends in home mortgage defaults and foreclosures, and how these trends compare with historical values.
- Evaluate developments in economic conditions and the primary and secondary mortgage markets associated with recent default and foreclosure trends.

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Scope and Methodology

- Scope
  - First-lien purchase and refinance mortgages on one-to-four family residential properties, second quarter of 2005 through the second quarter of 2007.
- Methodology
  - Analysis of data collected by the Mortgage Bankers Association's (MBA) quarterly National Delinquency Survey (NDS), which
    - contains national and state-level information on mortgage delinquencies, defaults, and foreclosures back to 1979, disaggregated by market segment and loan type, and
    - represents about 80 percent of the mortgage market.

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Scope and Methodology

- Analysis of state-level data on house price appreciation and employment growth.
- Review of relevant industry, government, and academic research.
- Interviews with officials from bank regulatory institutions, the Department of Housing and Urban Development, Federal Trade Commission, Securities and Exchange Commission, mortgage lenders, investment banks, credit rating agencies, academia, and industry and consumer groups.

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Summary

- Overall, defaults and foreclosures have risen sharply over the last 2 years but they have varied significantly among market segments, loan types, and states.
    - Default and foreclosure rates grew to levels at or near historical highs.
    - Subprime and adjustable-rate mortgages accounted for most of the overall increase.
    - While foreclosure rates more than doubled in eight states, they remained flat or declined in nine states.
- A combination of economic and market developments contributed to these trends:
    - House price changes reduced incentives for borrowers to keep current on their mortgages or made it more difficult to avoid foreclosure.
    - Aggressive lending practices reduced the likelihood that some borrowers would be able to meet their mortgage obligations.
    - Growth in the private mortgage-backed securities market provided liquidity to support these lending practices.

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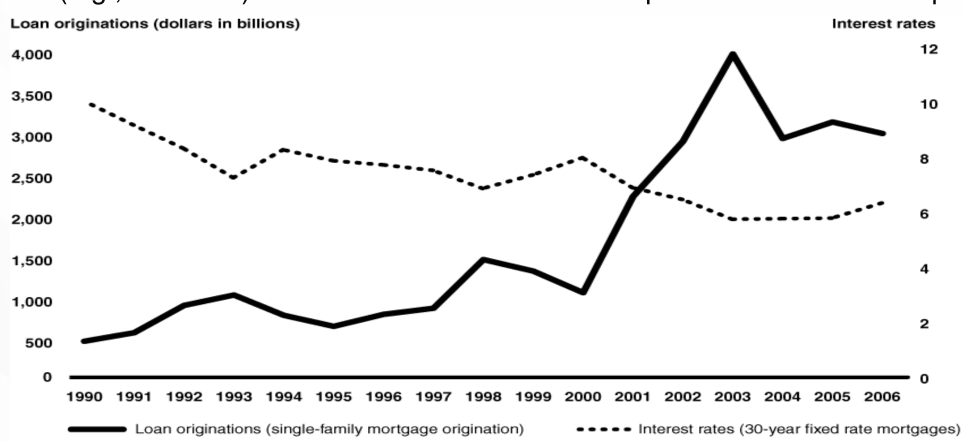
Background

- The mortgage market grew rapidly in the early part of the decade as long-term mortgage interest rates fell.
- The nation's homeownership rate increased from about 67.4 percent in 2000 to 68.8 percent in 2006.
- The percentage of home purchase mortgage originations for borrowers who were not owner-occupants (e.g., investors) increased from about 8 to 16.5 percent over the same period.



Source: GAO analysis of data from Inside Mortgage Finance.

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Background

- The primary mortgage market has several segments.
    - *Prime* - Serves borrowers with strong credit histories and provides the most competitive interest rates and mortgage terms.
    - *Alternative-A (Alt-A)* - Generally serves borrowers whose credit histories are close to prime, but loans often have one or more higher-risk features such as limited documentation of income or assets.
    - *Subprime* - Generally serves borrowers with blemished credit and features higher interest rates and fees than the prime market.
    - *Government-insured or -guaranteed* - Primarily serves borrowers who may have difficulty qualifying for prime mortgages but features interest rates competitive with prime loans in return for payment of insurance premiums or guarantee fees. The Federal Housing Administration (FHA) and Department of Veterans Affairs (VA) operate the two main federal programs that insure or guarantee mortgages.

Note: There is no uniform definition across the lending industry for what characterizes a loan as subprime or Alt-A.

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Background

- The mortgage market offers a range of loan products, which may be available in more than one market segment.
    - *Fixed-rate mortgage (FRM)* – interest rate does not change over the life of the loan.
    - *Adjustable-rate mortgage (ARM)* – interest rate changes periodically over the life of the loan based on changes in a specified index.
    - *Hybrid ARM* – interest rate is fixed and relatively low during an initial period then "resets" to an adjustable rate for the remaining term of the loan. In the subprime market, 2/28 loans (fixed rate for 2 years, adjustable rate for 28 years) are a common type of hybrid ARM.
    - *Option ARM* – borrower has multiple payment options each month, which may include payments lower than needed to cover interest (deferred interest is added to the loan balance).
    - *Interest-only mortgage* – borrower pays just the interest on the loan for a specified period, thereby deferring payment of principal.
    - *Piggyback loan* – simultaneous second mortgage that allows the borrower to make little or no down payment on the first mortgage.
    - *Jumbo mortgage* – loan amount is larger than the maximum eligible for purchase by Fannie Mae and Freddie Mac (currently $417,000).
    - *Nonconforming mortgage* – does not meet the purchase requirements of Fannie Mae or Freddie Mac because it is too large or does not meet their underwriting criteria.

Note: Unless stated otherwise, we use "mortgage market" to mean the primary mortgage market, including loans for purchase and loans for refinancing.

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Background

- Mortgages are originated through three major channels:
  - *Mortgage brokers* – Independent contractors that originate loans for multiple lenders who underwrite and close the loans.
  - *Loan correspondents* – Generally smaller lenders that originate, underwrite, and close loans and immediately sell them to other (generally larger) lenders.
  - *Retail lenders* – Lenders that originate, underwrite, and close loans without reliance on brokers or correspondents.
- Large mortgage lenders may originate loans through a combination of these channels.

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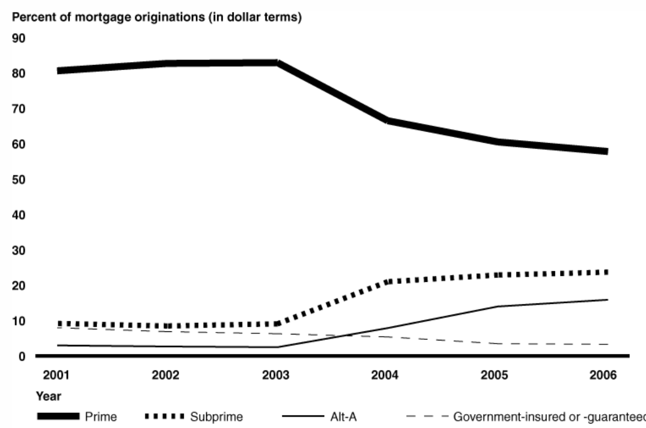
Background

- In dollar terms, subprime lending grew from about 9 to 24 percent of mortgage originations (excluding home equity loans) from 2003 through 2006.
- Over the same period, Alt-A lending grew from about 2 to almost 16 percent of mortgage originations, and the share for loans with government insurance or guarantees fell from about 6 to 3 percent.
- As we reported in June 2007, in terms of number of loans, the subprime share of the market for home purchase mortgages grew most rapidly in census tracts with lower median incomes and higher concentrations of minorities, the same areas where FHA's share dropped most sharply.



Source: GAO analysis of data from Inside Mortgage Finance.

Note: Data exclude home equity loans.

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Background

- The secondary mortgage market plays an important role in providing liquidity for mortgage lending by bundling mortgages into securities (residential mortgage-backed securities or RMBS) that are bought and sold by investors.
  - Ginnie Mae, government-sponsored enterprises (GSE), and private label RMBS are the major segments of this market.
  - Private label RMBS, also called "nonagency RMBS," are backed by jumbo and other nonconforming mortgages securitized primarily by investment banks.
  - Purchasers of RMBS include hedge funds, pension funds, insurance companies, banks, and managers of other complex structured finance products known as collateralized debt obligations.

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Background

- Delinquency, default, and foreclosure rates are common measures of loan performance.
  - Delinquency is the failure of a borrower to meet one or more scheduled monthly payments.
  - Default generally occurs when a borrower is 90 or more days delinquent. At this point, foreclosure proceedings against the borrower become a strong possibility.
  - Foreclosure is a legal (and often lengthy) process with several possible outcomes, including that the borrower sells the property or the lender repossesses the home.
    - Two measures of foreclosure are (1) *foreclosure starts* (loans that entered the foreclosure process during a particular time period) and (2) *foreclosure inventory* (loans that were in, but had not exited, the foreclosure process during a particular time period).

Note: There is no uniform definition of default across the lending industry. The NDS data measure the percentage of loans serviced each quarter that were 30, 60, or 90 days delinquent; entered foreclosure; or were in the process of foreclosure.

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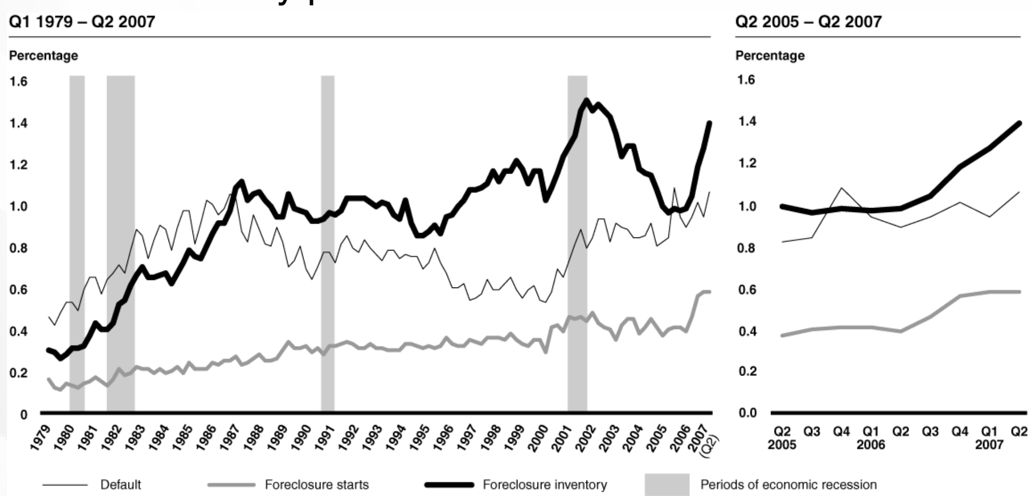
Default and Foreclosure Trends
National Level (1979-2007)

- Default and foreclosure rates for home mortgages have varied over time and have increased during both recessionary and nonrecessionary periods.



Source: GAO analysis of MBA data, National Bureau of Economic Research.

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Default and Foreclosure Trends

National Level (2005-2007)

- The number and percentage of mortgages in default or foreclosure rose sharply from the second quarter of 2005 (the most recent “low” level) through the second quarter of 2007 (the most recent quarter for which NDS data are available).

	Q2 2005	Q2 2007	Percentage increase
Number of defaults	331,000	473,000	43%
Default rate	0.83%	1.07%	29%
Number of foreclosure starts	151,000	261,000	73%
Foreclosure start rate	0.38%	0.59%	55%
Foreclosure inventory	399,000	619,000	55%
Foreclosure inventory rate	1.0%	1.4%	40%

Source: GAO analysis of MBA data.

Note: Defaults do not include loans in foreclosure. We calculated the number of defaults and foreclosures by multiplying default and foreclosure rates by the number of loans that the NDS showed as being serviced and rounding to the nearest thousand.

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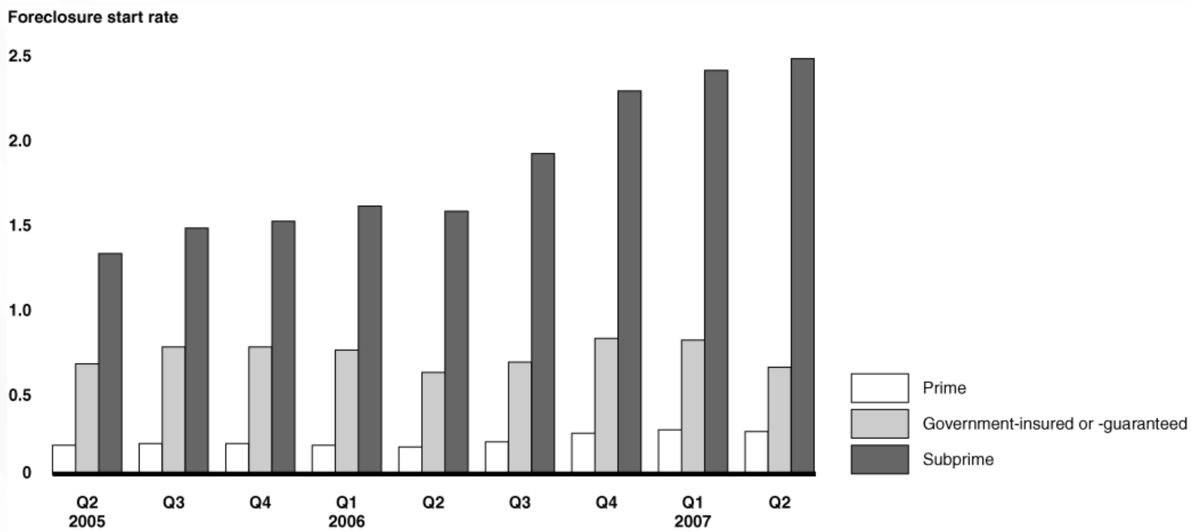
Default and Foreclosure Trends

National Level (Market Segments)

- Changes in foreclosure start rates have varied by market segment.



Source: GAO analysis of MBA data.

Note: NDS data do not separately identify Alt-A loans but include them in the prime and subprime categories.

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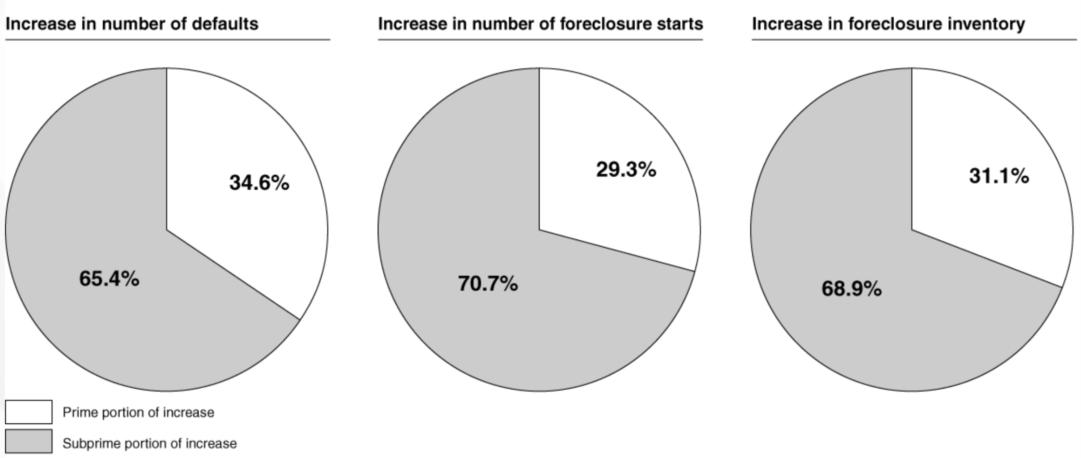
Default and Foreclosure Trends
National Level (Market Segments)

- According to NDS data, subprime loans accounted for less than 15 percent of the loans serviced but about two-thirds of the overall increase in the number of mortgages in default and foreclosure from the second quarter of 2005 through the second quarter of 2007.

Prime and subprime portions of default and foreclosure increases



Source: GAO analysis of MBA data.
Note: We excluded government-insured or -guaranteed loans because they did not contribute to the increase in foreclosure starts over the period we examined.

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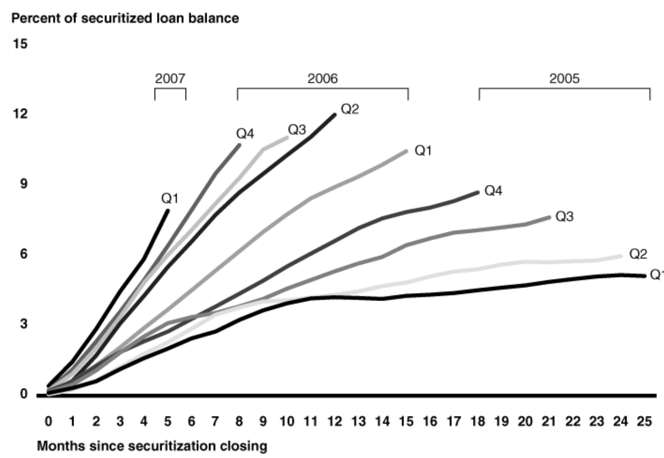
Default and Foreclosure Trends

National Level (Market Segments)

- Subprime loans originated in late 2005 and 2006 are playing a major role in recent defaults and foreclosures.
    - According to researchers at the financial services firm UBS, 2005 and 2006 originations accounted (in dollar terms) for roughly three-quarters of the subprime loans in foreclosure as of September 2007.
    - An analysis by Moody's Investors Service of subprime mortgages securitized each quarter from 2005 through the first quarter of 2007 shows that the rate of serious delinquency among similarly aged loans worsened for each successive quarterly group.

Portion of quarterly securitizations that are 60+ day delinquent or in foreclosure process



Source: GAO analysis of data from Moody's.

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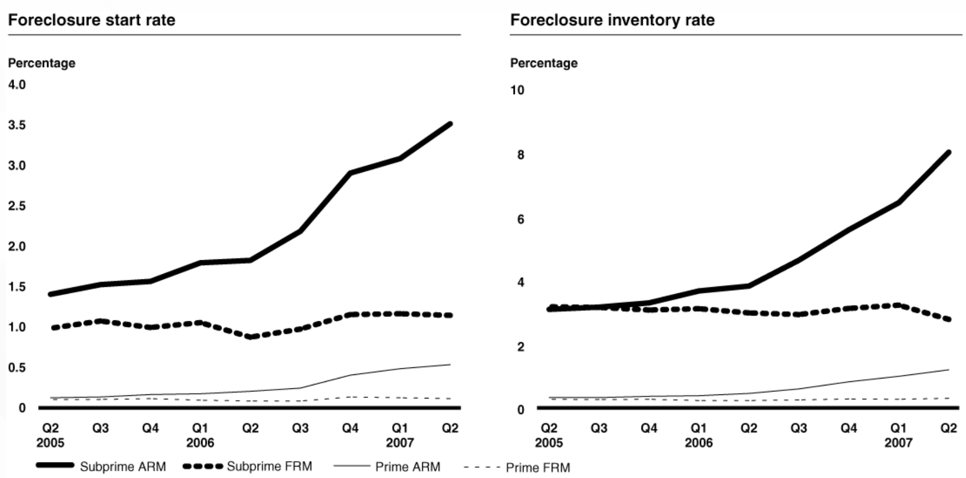
Default and Foreclosure Trends
National Level (FRMs and ARMs)

- Across market segments, ARMs experienced relatively steeper increases in default and foreclosure rates (compared with flat or modest growth for FRMs) and accounted for a disproportionate share of the increase in the number of loans in default and foreclosure.



Source: GAO analysis of MBA data.

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Default and Foreclosure Trends
State Level

- While foreclosure start rates varied among the states, in most states (41 states and the District of Columbia), they were higher in the second quarter of 2007 than in the second quarter of 2005.
- However, the magnitude of the increases varied substantially by state.
  - Several “Sun Belt” states such as Arizona, California, Florida, and Nevada have experienced some of the largest increases in the number and percentage of defaults and foreclosures.
  - States in the industrial midwest (e.g., Michigan, Ohio, and Indiana) have seen more modest growth in default and foreclosure rates but account for a significant part of the increase in the number of troubled loans, in part because their default and foreclosure rates started at higher levels.
  - Some states, such as Utah, New Mexico, and Oregon, have seen much smaller increases or even declines in default and foreclosure rates.

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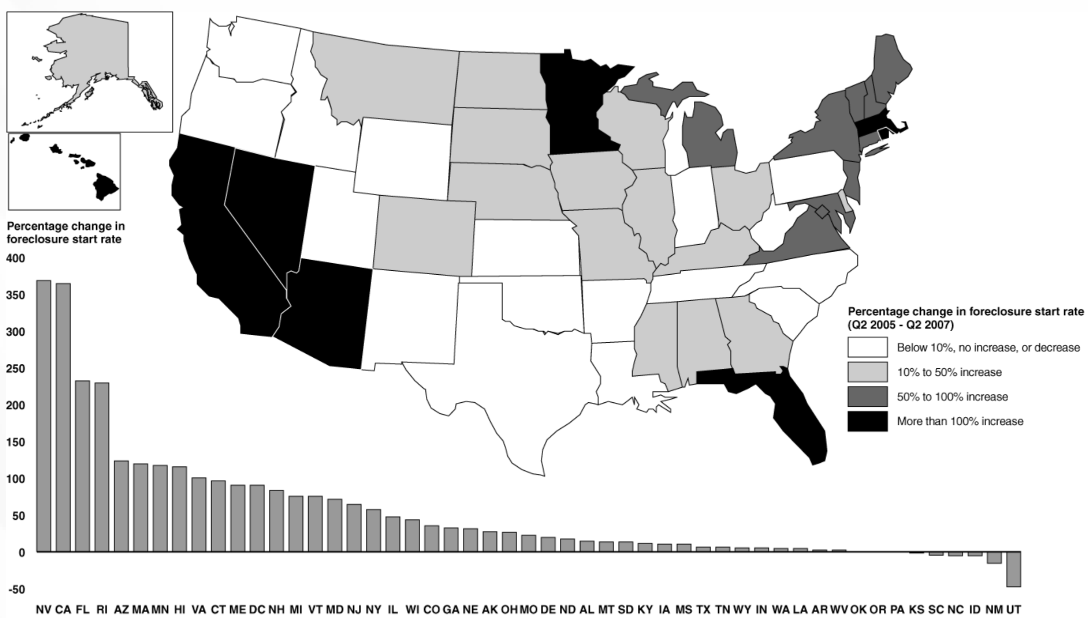
Default and Foreclosure Trends
State Level



Sources: GAO analysis of MBA data; Art Explosion (map).

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Default and Foreclosure Trends

National and State Historical Comparisons

- As of the second quarter of 2007, the number and percentage of mortgages nationwide that were in default and foreclosure were near or above their highest levels since 1979 (the first year covered by the NDS data set).
  - Default rate of 1.07 percent (second highest level);
  - Foreclosure start rate of 0.59 percent (highest level); and
  - Foreclosure inventory rate of 1.40 percent (below the historical maximum of 1.51 percent, which occurred in 2002).
- Also as of the second quarter of 2007,
  - the foreclosure start and foreclosure inventory rates were above their long-run historical medians in 47 and 40 states (including the District of Columbia), respectively.
  - foreclosure start rates were at their historical maximums in four states (Florida, Maine, Minnesota, and Nevada), as were foreclosure inventory rates in five states (Maine, Michigan, Minnesota, Ohio, and Rhode Island).

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Default and Foreclosure Trends

Outlook

- Mortgage industry researchers told us that the number and percentage of loans in default and foreclosure were likely to worsen through the end of this year and into 2008, due partly to forthcoming interest rate resets on hybrid ARMs.
- In a 2007 study, Cagan estimated that about 13 percent of ARMs (1.1 million loans) originated from 2004 through 2006 would foreclose over a 6- to 7-year period as a result of interest rate resets.
- The extent to which current default and foreclosure trends continue depends on a number of factors, including lenders' willingness to modify loan terms, the amount of liquidity available for refinancing, changes in home prices and interest rates, and general economic conditions.

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Developments Associated with Recent Trends
Overview

- A number of studies and industry data indicate that a combination of economic and market developments contributed to recent default and foreclosure increases, including:
  - the rapid decrease in home price appreciation (HPA) throughout much of the nation beginning in 2005 and weak labor market conditions in certain states;
  - an easing of underwriting standards and wider use of certain loan features that, while potentially helping to expand homeownership, also reduced the likelihood that some borrowers would be able to meet their mortgage obligations, particularly in times of economic hardship or limited HPA; and
  - growth in the private label RMBS market, which provided liquidity to some brokers and lenders to support more aggressive lending practices.
- Other developments may have played a role, but additional information would be needed to fully assess their impact.

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Developments Associated with Recent Trends

Decline in HPA

- Rapid HPA from 2003 into 2005 (which has been associated with several factors, including low interest rates, expectation of continued price increases, and a plentiful supply of credit) likely helped to mitigate defaults and foreclosures.
    - Growth in homeowner equity created incentives for borrowers to keep their mortgages current.
    - Borrowers could refinance or sell their homes to avoid default or foreclosure.
- According to industry researchers, the stagnation or decline in home prices in much of the country beginning in 2005 changed this scenario.
    - Borrowers lost this “equity cushion” and had more difficulty refinancing or selling their homes.
    - Borrowers who had purchased homes (particularly homes for investment purposes) but now owed more than the properties were worth, had incentives to stop making mortgage payments in order to minimize their financial losses.
- Several factors may have contributed to the slowdown in HPA, including a rising supply of homes and a decline in speculative activity.

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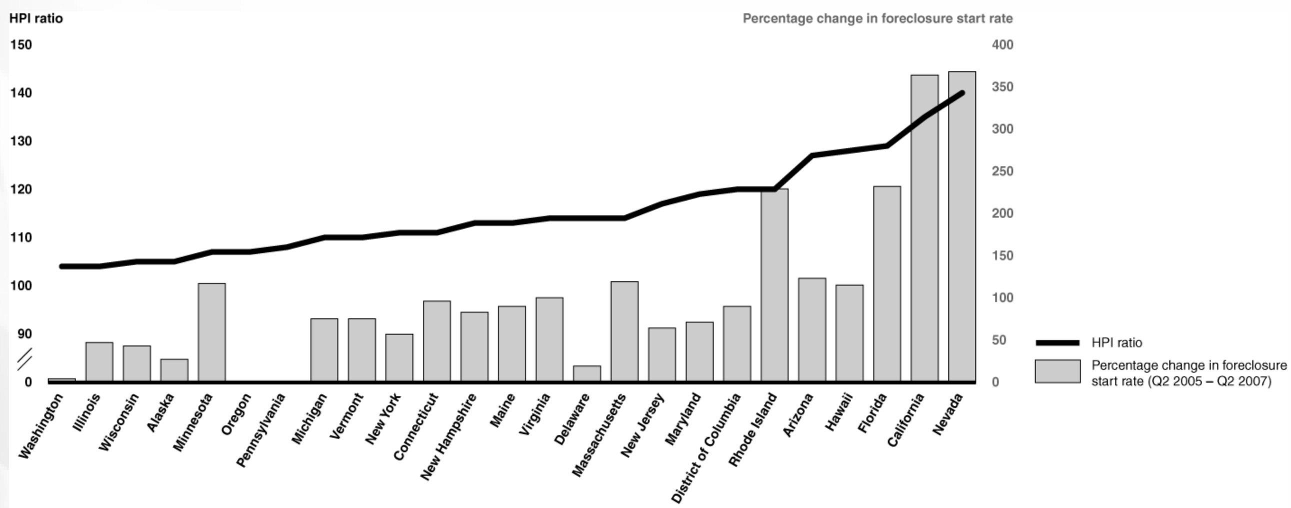
Developments Associated with Recent Trends
Decline in HPA

- States with a sharp drop-off in HPA following a period of strong growth generally experienced larger percentage increases in foreclosure start rates.



Source: GAO analysis of data from MBA and the Office of Federal Housing Enterprise Oversight (OFHEO).

Note: The HPI ratio is the ratio of (1) the projected OFHEO house price index for purchase transactions, assuming average Q3 2003 – Q1 2006 appreciation continued through Q2 2007 to (2) the actual OFHEO house price index as of Q2 2007. The figure covers the 25 states with the highest HPI ratio.

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Developments Associated with Recent Trends
Decline in HPA

- Recent analysis has examined the relationship between HPA and loan performance.
  - Zandi et al (2007) estimated that changes in HPA explained about three-quarters of the nationwide increase in mortgage delinquency rates from the fourth quarter of 2005 through the first quarter of 2007.
  - The Federal Reserve Bank of San Francisco (2007) found a strong and statistically significant relationship between increases in delinquency rates on subprime loans from 2005 through 2006 and house price deceleration. The analysis covered 309 metropolitan areas and controlled for changes in economic conditions.

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Developments Associated with Recent Trends
Weak Regional Labor Market Conditions

- Job loss is a common “trigger event” that can lead to default and foreclosure because of its direct impact on a borrower’s ability to make mortgage payments.
- Although the national unemployment rate is relatively low and has declined in recent years, parts of the industrial midwest have experienced job losses, particularly in the manufacturing sector.
  - Michigan’s rate of employment growth from the fourth quarter of 2001 (the end of the last recession) through the second quarter of 2007 was -4.6 percent, the worst in the nation.
  - The corresponding figure for Ohio was -0.9 percent, the second worst.
- From the second quarter of 2005 through the second quarter of 2007,
  - Michigan had the third highest rate of foreclosure starts for most of the period and the third largest increase in the total number of foreclosure starts (behind California and Florida).
  - Ohio had the second highest rate of foreclosure starts (behind Indiana) throughout the period and the sixth largest increase in the total number of foreclosure starts.

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Developments Associated with Recent Trends
Weak Regional Labor Market Conditions

- Zandi et al (2007) estimated that employment growth trends in certain metropolitan areas explained a substantial portion of the change in mortgage delinquency rates in those areas from the fourth quarter of 2005 through the first quarter of 2007, but had little impact nationally.
  - Negative employment growth explained about 32 percent of the change in delinquency rates in Detroit-Livonia-Dearborn, Michigan, and 20 percent of the change in Cleveland-Elyria-Mentor, Ohio.
- In a separate analysis of securitized subprime loans, Zandi et al (2007) found that erosion in labor market conditions increased foreclosure rates.

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Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features

- Strong house price appreciation in much of the country beginning in 2003 made home purchases less affordable for many buyers.
- According to several industry observers and participants, an increasingly competitive environment led lenders to lower underwriting standards and offer products that lowered monthly payments, which in turn helped feed housing price appreciation.
- According to the Office of the Comptroller of the Currency's *Survey of Credit Underwriting Practices* (October 2006), the 73 large banks surveyed reported "a third consecutive year of easing underwriting standards, as banks continued to stretch for volume and yield."

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Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features

The easing of underwriting standards and wider use of certain loan features, as evidenced by data on private label securitized mortgages (representing about 56 percent of RMBS issuances in 2006), resulted in more loans with features that may increase the risk of default and foreclosure.

- Higher loan-to-value (LTV) ratios (i.e., the amount of the loan divided by the value of the home)
    - As we reported in February 2005, a substantial amount of research indicates that LTV ratio is one of the most important factors in assessing mortgage risk.
    - The higher the LTV ratio, the less cash borrowers will have invested in their homes and the more likely it is that they may default on mortgage obligations, especially during times of financial hardship.
- Piggyback loans
    - Borrowers use these to finance all or part of their down payment, which can result in higher combined LTV (CLTV) ratios—that is, the LTV ratio taking both the first mortgage and piggyback loan into account.

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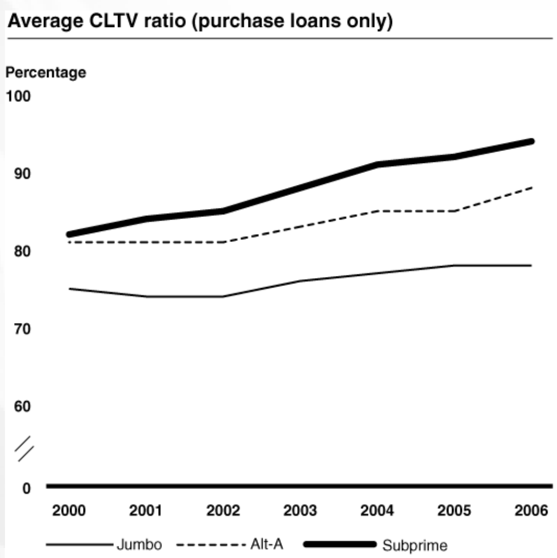
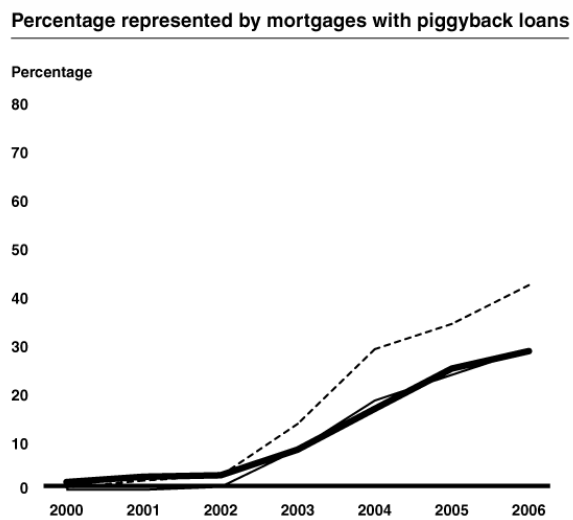
Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features





Source: UBS analysis of data from LoanPerformance.

Note: Loan characteristics are for mortgages originated in the year indicated and pooled into private label securities. The CLTV figure reflects purchase loans only, while the piggyback loan figure reflects both purchase and refinance loans. The percentages in the figure on piggyback loans represent the dollar amount of first-lien mortgages with an associated piggyback loan. In dollar terms, jumbo, Alt-A, and subprime mortgages represented about 19, 16, and 24 percent of mortgage originations in 2006 (excluding home equity loans), respectively.

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Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features

- Adjustable interest rates
  - ARMs are generally considered to carry a higher default risk than otherwise comparable FRMs, in part because borrowers are subject to higher payments if interest rates rise.
  - Hybrid ARMs can lead to “payment shock” for some borrowers because of interest rate adjustments following the initial fixed-rate period.
- Prepayment penalties
  - Can be an obstacle to refinancing because borrowers must pay a penalty if they pay off the original loan before the prepayment period expires.

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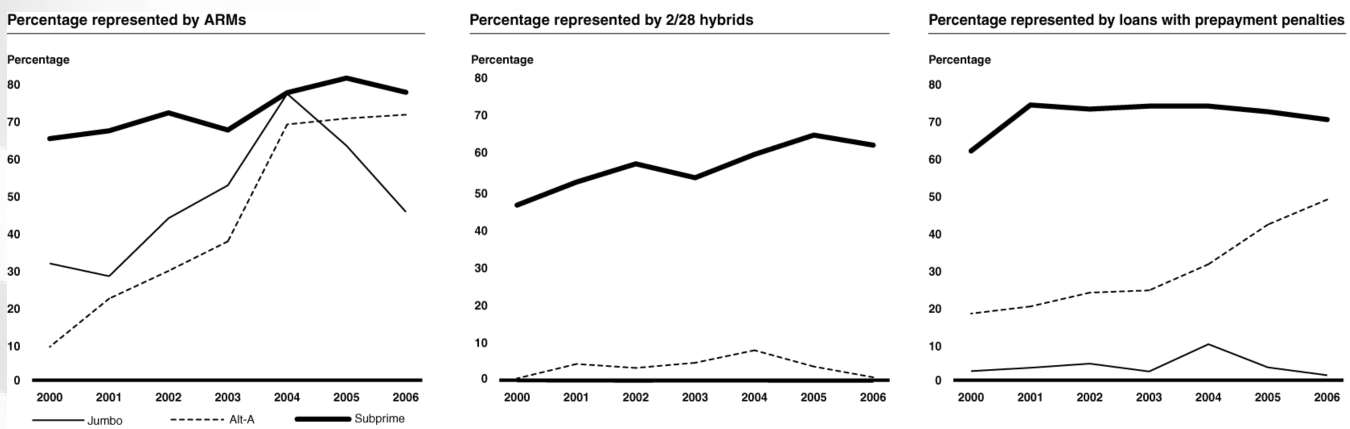
Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features



Source: UBS analysis of data from LoanPerformance.

Note: Percentages represent the dollar amount of purchase and refinance mortgages originated in the year indicated and pooled into private label securities that have certain characteristics. In dollar terms, jumbo, Alt-A, and subprime mortgages represented about 19, 16, and 24 percent of mortgage originations in 2006 (excluding home equity loans), respectively.

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Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features

- Limited or no documentation of income or assets
  - Allows borrowers to provide less detailed financial information than traditionally required.
  - Originally intended for borrowers who may have difficulty documenting income, such as the self-employed.
  - Problematic if borrowers or loan originators overstate income or assets to qualify borrowers for mortgages they cannot afford.
- High debt service-to-income ratio (the percentage of a borrower's income that goes toward paying all recurring debt payments)
  - The higher the ratio, the greater the risk the borrower will have cash-flow problems and miss mortgage payments.

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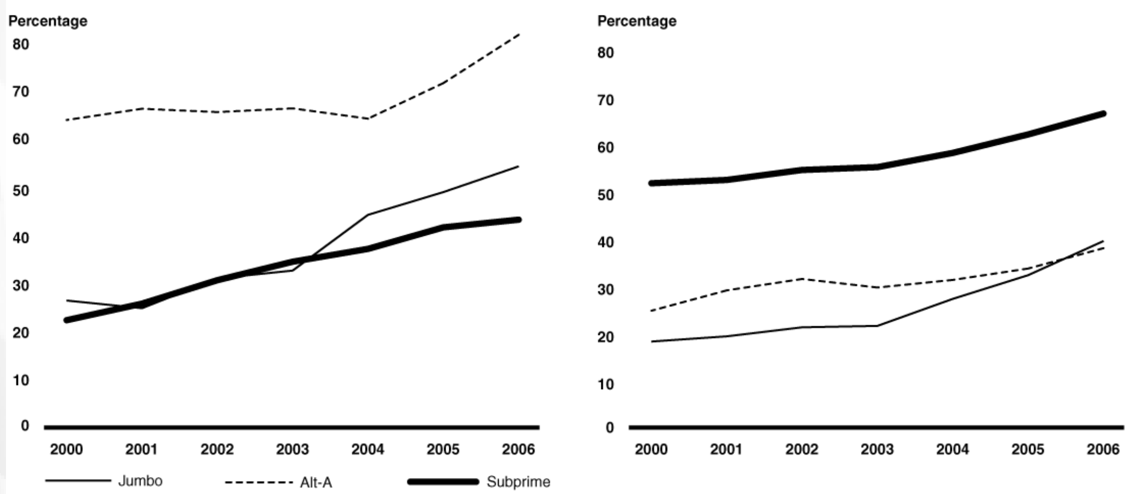
Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features

Percentage represented by loans with no or low documentation | **Percentage represented by loans with debt service-to-income ratios >40%**



Source: UBS analysis of data from LoanPerformance.

Note: Percentages represent the dollar amount of purchase and refinance mortgages originated in the year indicated and pooled into private label securities that have certain characteristics. In dollar terms, jumbo, Alt-A, and subprime mortgages represented about 19, 16, and 24 percent of mortgage originations in 2006 (excluding home equity loans), respectively.

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Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features

- Deferred payment of principal or interest
  - As we reported in September 2006, interest-only loans and loans with payment options that allow for negative amortization (by adding deferred interest payments to the loan balance) can lead to payment shock when the interest-only or payment-option period expires.
  - Borrowers may build less home equity than they would with a traditional loan.
  - Borrowers may not be well-informed about the risks of these products, due to their complexity and because promotional material by some lenders and brokers do not provide balanced information on the risks and benefits.

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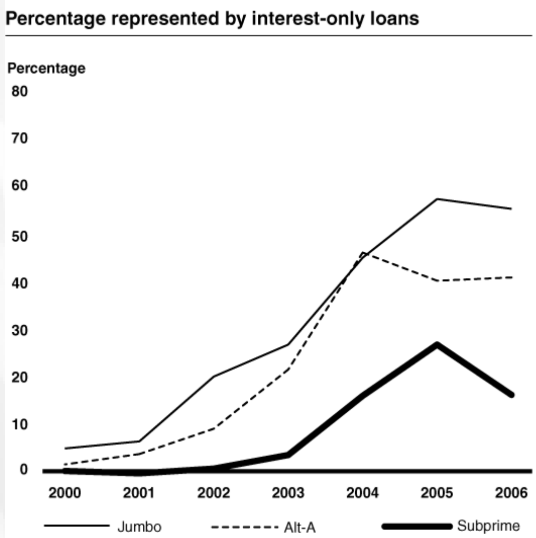
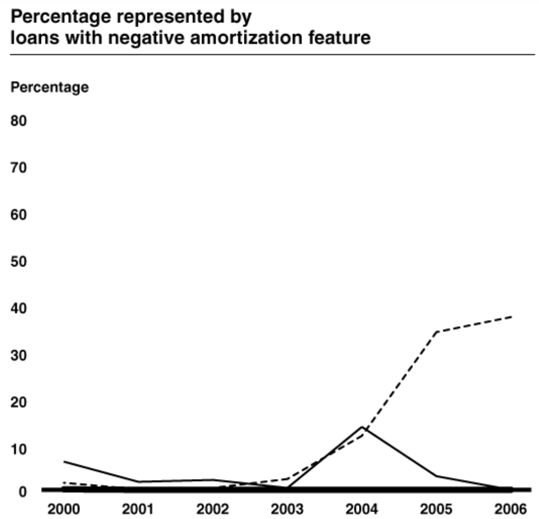
Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features





Source: UBS analysis of data from LoanPerformance.

Note: Percentages represent the dollar amount of purchase and refinance mortgages originated in the year indicated and pooled into private label securities that have certain characteristics. In dollar terms, jumbo, Alt-A, and subprime mortgages represented about 19, 16, and 24 percent of mortgage originations in 2006 (excluding home equity loans), respectively.

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Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features

Several econometric studies have examined the relationship between some of the previously noted loan features and loan performance, particularly among subprime mortgages. For example:

- Danis and Pennington-Cross (forthcoming) found for fixed-rate securitized subprime loans that (1) higher LTVs and the presence of prepayment penalties were positively correlated with default and (2) loans with limited or no documentation had substantially higher default and foreclosure rates than full documentation loans.
- Quercia et al (2005) found that securitized subprime refinance loans with prepayment penalties were more likely to experience a foreclosure than loans without such penalties.
- The Center for Responsible Lending (2006) found that securitized subprime loans with features such as adjustable rates, prepayment penalties, and no or low documentation had a higher likelihood of default than loans without those features, controlling for differences in borrower credit scores.
- Zandi et al (2007) estimated that rising debt-service burdens explained about 9 percent of the change in mortgage delinquency rates nationally and 18 percent in California from the fourth quarter of 2005 through the first quarter of 2007.

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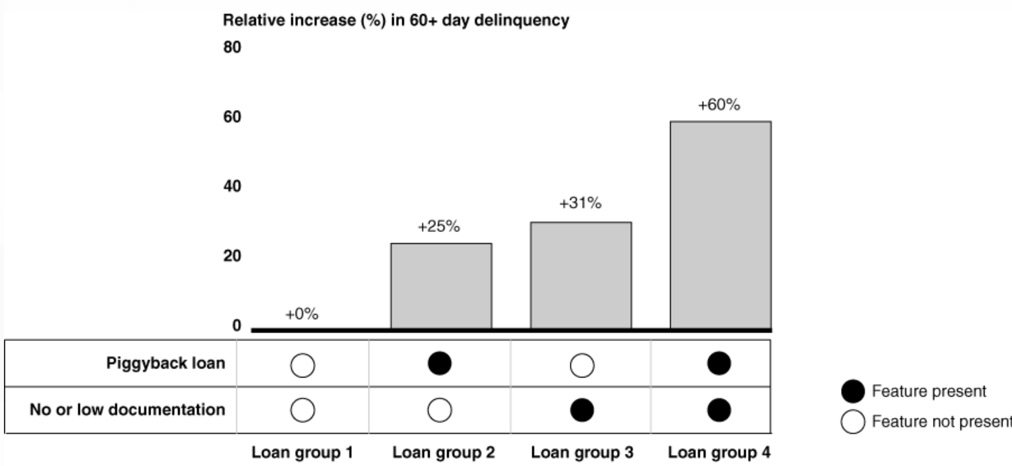
Developments Associated with Recent Trends

Easing of Underwriting Standards and Wider Use of Certain Loan Features

- Many recent Alt-A and subprime loans were originated with multiple features that are associated with a greater risk of delinquency, a practice known as risk layering.
- FitchRatings analysis of securitized subprime loans from 2005 shows the impact of risk layering on mortgage delinquency rates after 1 year of seasoning.



Source: FitchRatings.

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Developments Associated with Recent Trends
Growth in Private Label RMBS Market

- As previously noted, the increase in defaults and foreclosures has been concentrated among subprime loans, and to a lesser extent Alt-A loans, which are primarily pooled into private label RMBS (as opposed to Ginnie Mae or GSE securities).
- From 2002 to 2006, the share of private label RMBS comprised of subprime and Alt-A loans increased from 43 percent to 71 percent by dollar volume.
- Investors were attracted to these securities because of their seemingly high risk-adjusted returns.

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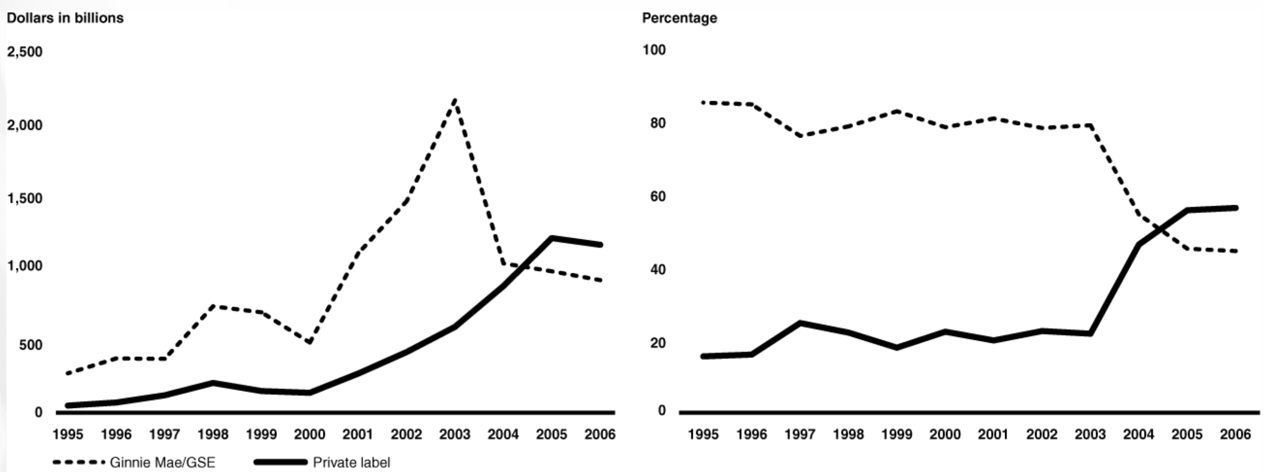
Developments Associated with Recent Trends
Growth in Private Label RMBS Market

- The dollar volume of private label RMBS grew rapidly beginning in 2003, while Ginnie Mae and GSE volume fell sharply. The market share for private label RMBS surpassed the combined market shares of Ginnie Mae and the GSEs in 2005.



Source: GAO analysis of data from Inside Mortgage Finance.

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Developments Associated with Recent Trends
Growth in Private Label RMBS Market

- As demand for private label RMBS grew, investment banks structured and credit rating agencies rated securities in an environment of declining underwriting standards, providing continued liquidity for subprime and Alt-A lending.
- Officials from investment banks and credit rating agencies indicated that they increased RMBS loss coverage levels in response to declining underwriting standards. However, they also acknowledged that they were surprised by the speed and severity of HPA declines and underestimated the risk of certain loan features such as low and no documentation and high LTV ratios.
- In mid-2007, credit rating agencies made changes to their ratings methodologies to reflect the worse-than-expected performance of subprime and Alt-A loans in particular.
  - Moody's Investors Service increased default and loss assumptions by up to 25 percent for mortgages with low or no documentation, high LTVs, or piggyback loans.
  - FitchRatings revised its ratings methodology to, among other things, place greater emphasis on regional economic risk and increase default assumptions for hybrid ARMs.

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Developments Associated with Recent Trends
Growth in Private Label RMBS Market

- Recent credit rating downgrades for RMBS have affected a relatively small portion of total private label RMBS issuances and have largely been limited to lower-rated securities.
  - Standard & Poor's and Moody's downgraded securities representing about 1 percent of the value of recently issued first-lien subprime RMBS rated by the agencies.
  - None of these downgrades affected triple-A securities.
  - However, downgrades of second-lien subprime RMBS have been more extensive—for example, Moody's has downgraded about 60 percent of the dollar volume of these types of securities that it rated in 2006.
- Rating downgrades introduced uncertainty about the credit quality of subprime RMBS, contributing to financial market disruptions that reduced liquidity for borrowers seeking to refinance out of loans at risk of default or foreclosure.

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Developments Associated with Recent Trends

Other Possible Factors

Other developments may have played a role in recent default and foreclosure increases, but additional information would be needed to fully assess their impact.

Misaligned Incentives and Lack of Accountability in the Origination and Distribution of Mortgages

- Some industry participants and observers have linked the declining credit quality of loans in recent years to market changes that have reduced incentives and accountability for prudent underwriting.
- Until the 1990s, lenders held most loans on their balance sheets, so the same entity that originated the loan and created the risk bore the risk.

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Developments Associated with Recent Trends
Other Possible Factors

- In recent years, lenders and mortgage brokers originated loans that were quickly sold down a chain of aggregators and investors.
    - Originators had financial incentives to increase loan volume, potentially at the expense of loan quality. As lenders sold loans on the secondary market, the risks were passed on to investors.
    - The private label RMBS market had more lenient underwriting standards than the Ginnie Mae and GSE portions of the secondary market.
    - Some originators, particularly independent mortgage companies, lacked sufficient capital to make good on representations and warranties designed to protect investors from imprudent and fraudulent lending practices.
- The role of mortgage brokers has grown in recent years.
    - By one estimate, the number of brokerages rose from about 30,000 firms in 2000 to 53,000 firms in 2004.
    - In 2005, brokers accounted for about 60 percent of originations in the subprime market (compared with about 25 percent in the prime market).

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Developments Associated with Recent Trends
Other Possible Factors

Federal Regulation of Lenders

- Concerns exist that certain lenders (e.g., independent mortgage companies and nonbank subsidiaries of banks, thrifts, or holding companies) that are not subject to routine monitoring and examination by federal bank regulators may tend to originate lower-quality loans.
  - Of the top 25 originators of subprime and Alt-A loans in 2006 (which accounted for over 90 percent of the dollar volume of all such originations):
    - 21 were nonbank lenders, including 14 independent lenders and 7 nonbank subsidiaries of banks, thrifts, or holding companies.
    - the 21 nonbank lenders accounted for 81 percent of the dollar volume (44 percent was originated by independent lenders and 37 percent by nonbank subsidiaries of banks, thrifts, or holding companies).
  - In prior work, we have raised concerns about nonbank lenders, noting that some have been targets of some of the most notable federal and state enforcement actions involving abusive lending.
- However, there has been limited analysis of differences in the performance of subprime loans made by bank and nonbank lenders.

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Developments Associated with Recent Trends
Other Possible Factors

Mortgage Fraud

- Some industry participants and researchers have said that mortgage fraud has been a contributing factor in recent default and foreclosure trends.
  - Subprime and Alt-A mortgages, which comprise a substantial portion of recent default and foreclosure increases, may be more likely to involve fraud because substantial percentages of these loans required no or little documentation or verification of income and assets, providing opportunities to misrepresent this information.
  - According to the Mortgage Asset Research Institute, the number of reported cases of mortgage fraud increased from about 3,500 in 2000 to about 28,000 in 2006.
    - Florida and California, the states with the highest incidence of reported mortgage fraud in 2006 (adjusted for loan volume), also experienced among the largest percentage increases in foreclosure start rates from the second quarter of 2005 through the second quarter of 2007.
  - According to some industry researchers, growth in early payment defaults in recent years (i.e., defaults occurring within a few months of loan origination) are an indicator of increasing mortgage fraud.

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Developments Associated with Recent Trends
Other Possible Factors

Interest Rates

- Rising interest rates can increase the probability of default and foreclosure for borrowers with adjustable-rate mortgages because their monthly payments grow as rates climb.
  - The Federal Open Market Committee raised the federal funds rate from 1 percent to 5.25 percent from 2004 through 2006 (although it has since reduced it to 4.75 percent).
  - Major rate indexes used to set adjustable-rate mortgages followed this upward trend, while long-term mortgage rates did not increase until late 2005.
  - Zandi et al (2007) estimated that changes in interest rates explained a modest portion (about 6 percent) of the change in delinquency rates for all mortgage loans from the fourth quarter of 2005 through the first quarter of 2007.

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Enclosure II: GAO Contact and Staff Acknowledgments

GAO Contact:

David G. Wood, (202) 512-8678 or woodd@gao.gov

Staff Acknowledgments:

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