SOUTHWEST CORPORATE ADVISORY SERVICES

Advisory

STRATEGIC FINANCIAL CONSULTATION
INVESTMENT PORTFOLIO MANAGEMENT
CAPITAL MARKET STRATEGISTS
CREDIT UNION SPECIALISTS

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Mortgage Cash Flows and Prepayments

Overview

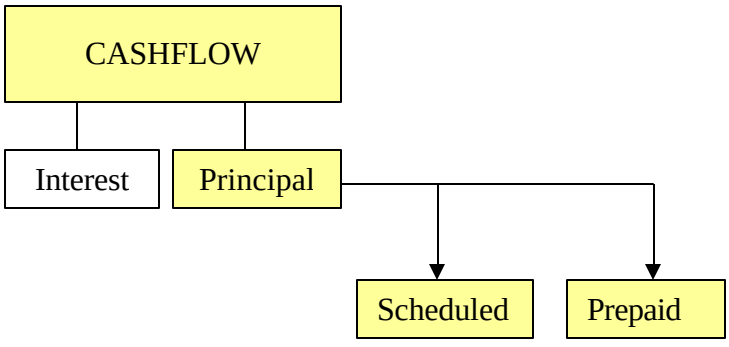
When allocating loans and investments to the balance sheet, it's important to assess their relative value by evaluating their cash flow structure and projected performance during your holding period. For mortgage assets, both whole loans and securities, it's necessary to assess their cash flows from both a credit and prepayment perspective to gauge their risk and return profiles.

Credit unions have mitigated most of their credit exposure in mortgage assets through the prudent underwriting of loans and principally investing in Agency-issued securities. In fact, credit unions have done an exceptional job managing their mortgage loan portfolios as indicated by recent financial reports. At the end of March 2008, mortgage delinquencies and charge-offs were 0.70% and 0.18%, respectively - significantly below mortgage sector figures.

Relative value is directly impacted by the cash flow performance of a mortgage asset. In turn, cash flow is greatly impacted by the prepayment performance of the asset. Therefore, it is very important to understand the elements of prepayments to assess relative value. With that, this paper examines the components of mortgage prepayments, what prepayments might be in the short-term and how that affects the relative value of mortgage securities.

Understanding Cash Flows

With a mortgage security, the basic cash flow structure consists of principal and interest payments. Principal payments include scheduled amortization and any additional amounts paid over that amount. That excess is typically referred to as prepaid principal, or *prepayment.*



The future value and performance of mortgages is based on the prepayment impact on scheduled principal cash flow, and in the case of a security, whether it was acquired at a premium or discount.

Prepayments and its Components

A prepayment is an option that allows the borrower to prepay the remaining balance of their mortgage, in part or full, prior to maturity. Even though the definition is fairly straight forward, predicting prepayments is not. In fact, generic Prepayment Speed Assumptions (PSAs) generated by sophisticated econometric models are often used in assessing cash flow streams. These PSA models incorporate specific mortgage characteristics and economic variables to determine the expected speed over the asset's life. Such variables include: the underlying contractual term, age and coupon rate of a mortgage, prevailing market rates and shape of the yield curve. The main components of prepayment include *refinancing*, *housing economics* and *seasoning*.

Refinancing

As shown by Figure 1, refinancing is by far the most significant component of prepayment. Since 1998, the refinancing component has averaged approximately 45% of all prepayments even though in more recent times that percentage has risen to as high as 83%. Refinancing is associated with the borrower's opportunity to lower their financing cost because prevailing mortgage rates are sufficiently less than their current rate. This would also take into account the costs associated with refinancing such as origination points, processing fees, and title insurance. In the past, the rule of thumb for refinancing incentive was between 150 and 200 basis points but with today's low-cost refinancing, that incentive has declined to 75 to 100 basis points – if not smaller.

One caveat to this component is the concept of "burnout." Burnout is when a mortgage asset (or pool of mortgages) is exposed to similar refinancing opportunities at two different points in time and the pool has slower prepayments the second time. This is because borrowers are heterogeneous and respond differently when their prepayment option is "in-the–money." For instance, some borrowers may have loan qualification difficulties, be traveling abroad or have lost their job which affects the timing of their new contract.

Figure 2 shows the relationship between the average 30-yr fixed rate mortgage and the Mortgage Bankers Association Refinance Index. This shows the indirect relationship between the changes in mortgage rates and applications to refinance. As rates decrease refinancings increase and as rates increase refinancings decrease.

Figure 1: Refinancings as a % of Total Applications
Jan 1998 to May 2008

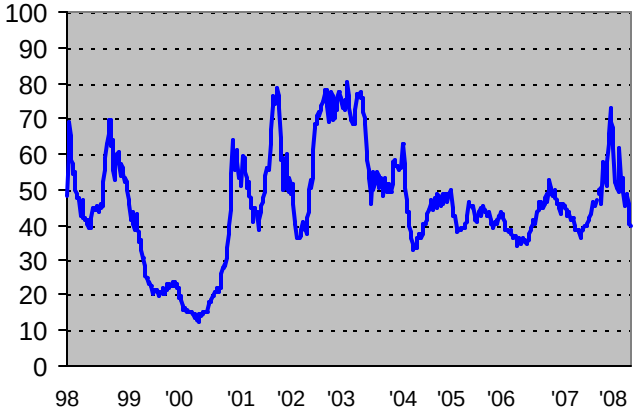


Figure 2: 30 yr FRM vs MBA Refi Index
Jan 1990 to May 2008

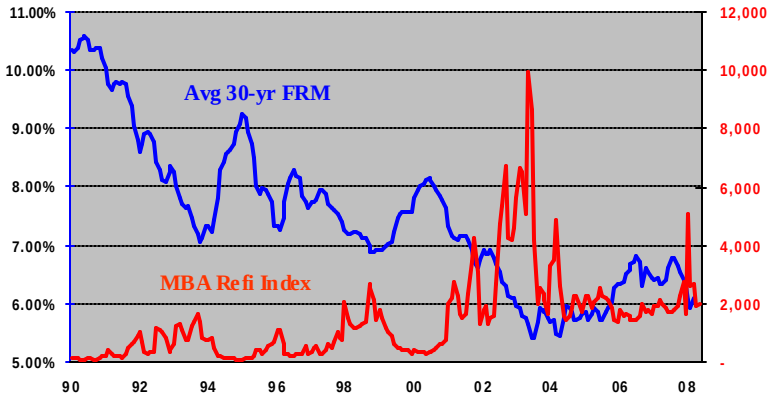
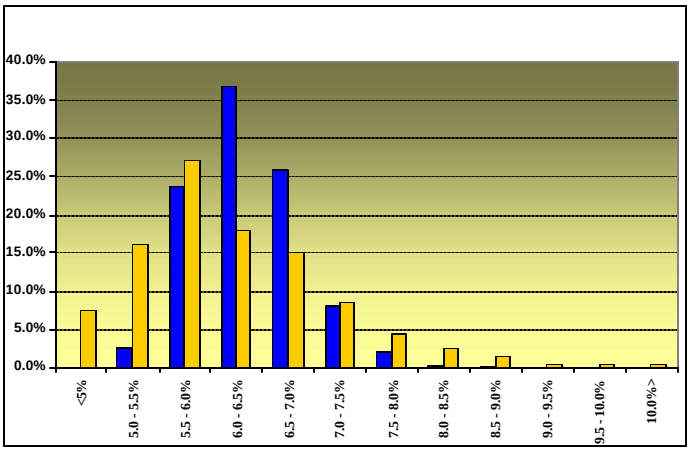


Figure 3 shows the coupon breakdown for all outstanding 30-yr fixed rate mortgages in 2006 and 2008. Based on Freddie Mac's Primary Mortgage Market Survey as of June 5, 2008, the national average 30-yr fixed rate mortgage rate was 6.09%. With the majority of current 30-yr fixed rate mortgages at rates somewhere around 6.00% to 6.25%, it's unlikely refinance prepayments will be material in the near future because the lack of financial incentives.

Figure 3: 30 yr FRM Coupon Strata



	2008	2006
<6.0%	26.4%	50.5%
<6.5%	63.1%	68.3%
<7.0%	89.0%	83.5%

Housing Economics

Housing economics impact prepayments to the extent that a strong, growing economy brings financial strength, upward mobility of the borrower and an improved overall housing sector. This generally increases prepayment speeds as homeowners look to "trade-up" on their homes or possibly move to new homes as they transition to new jobs or locations. The opposite is also true – weak markets and reduced borrower mobility could translate into slower prepayments.

Looking forward, this component of prepayments will also be slow because of the number of homeowners unable to refinance or willing to move. Even though approximately 95% of all mortgage holders are current on their payments, a small percentage of homeowners do find themselves in either a negative equity position or underwater relative to the potential sales price of their home. As a result, borrowers in a negative equity position face higher refinancing costs while borrowers whose homes are worth less than what they paid for them are slow to sell them because they don't want to realize a loss.

Figure 4 displays U.S. mortgage delinquencies by county. From this graph, we see that between 2004 and 2007 the largest increase in delinquencies came from California, parts of Nevada, Arizona, Florida, the upper-Midwest and New England. In these areas many home buyers purchased their home with non-conventional loan types (subprime, alt-a and option-based ARMs), and unfortunately, at the peak of the last housing boom. In these cases, mortgage rates reset at levels beyond the home owners ability pay given their already high debt-to-equity levels. In turn, delinquency and foreclosure levels increased.

Figure 4: Change in Mortgage Delinquency by County
(4th quarter 2004 to 4th quarter 2007)

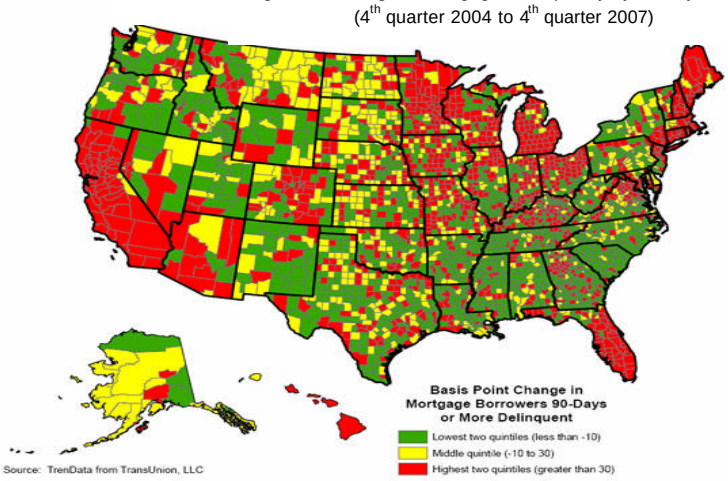
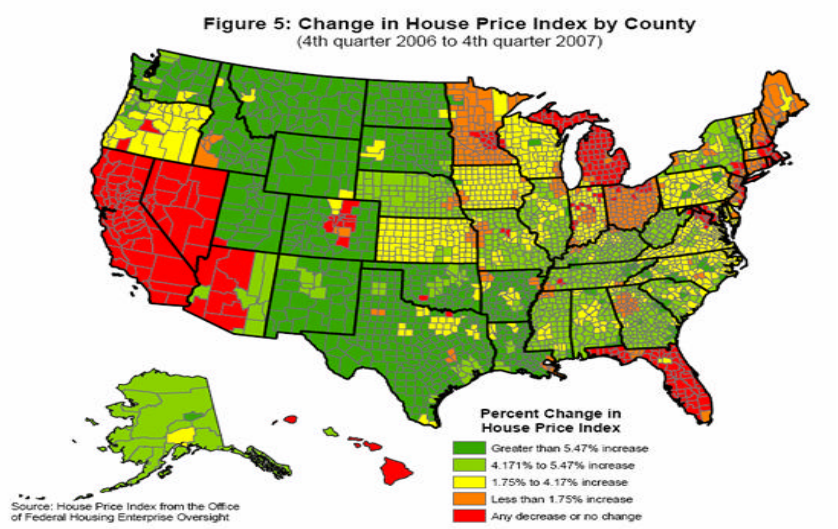


Figure 5 displays the change in home prices in the U.S. by county. Areas having flat or declining house prices were comparable to those showing the highest levels of mortgage delinquency - the West, Southeast, upper-Midwest and upper-Northeast. As delinquency levels increase there tends to be an increase in foreclosures. In turn, this affects the balance between supply and demand. With more homes on the market, prices in that particular locality generally soften.



There's no surprise that, overall, home prices have generally been on the downturn here of lately. This is complicated by the fact that fewer new borrowers either put equity into their homes when they purchased them or have meaningful equity positions in their homes.

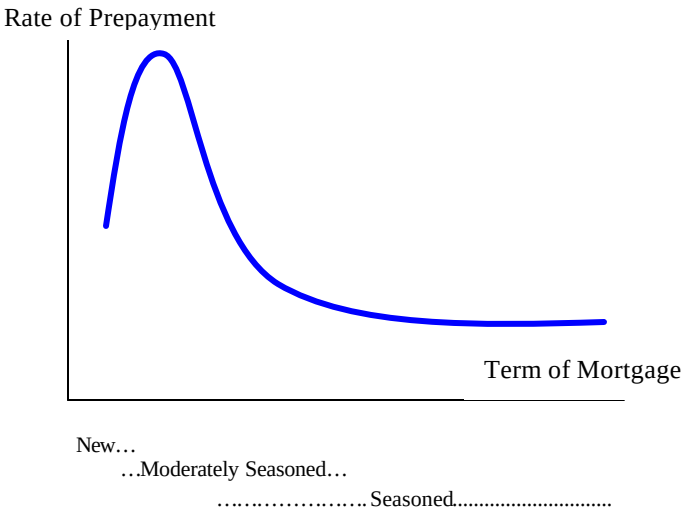
But as the last two charts reveal, the impact from housing economics has been very regionalized for the reasons stated. A good portion of the country still enjoys a stable housing market therefore, the housing economics is very spotted and the impact it might have on prepayments is solely depending on what part of the country you are evaluating.

Seasoning

Prepayment rates also vary as mortgages age in time, or *seasoning*. Generally, homeowners are less likely to move during the first few years of owning a new home because of moving costs and other non-financial aspects. But as home mortgages age, refinancings typically increase. Prepayments eventually level-off and decline as family mobility diminishes and refinancing incentives become less important.

With many mortgages recently originated and fairly unseasoned (as indicated in Figure 3), this component of prepayment should be fairly flat in the short-term.

Figure 6: Prepayment Cycle



What Should Credit Unions Expect in the Short-Term?

In the short-term, it's fair to assume mortgage prepayments are going to be slow because the main drivers aren't present. With current market rates in-line with recent origination coupons, there is little financial incentive for some borrowers to refinance. Moreover, a percentage of homeowners are not willing to move because the pull-back in home prices has affected their equity position.

With that, credit unions could experience slightly longer durations in their mortgage asset portfolios but current yield and spread levels justify holding them. Current 15- and 30-year fixed-rate mortgage rates are approximately 170 to 200 bps over the 10-yr U.S. Treasury Bond during a time when the steepness in the curve between the two- and ten-year note rates has increased from 90 basis points to 125 basis points. In terms of the investment portfolio, Agency-issued planned amortization class and current-paying sequential structures are approximately 80 bps higher than comparable term Agency-issued bullets. This shows the relative value that mortgage assets bring in relation to other alternatives.

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