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Review of Subprime Mortgage Prepayments and Credit

Through all of 2000, prepayments on fixed-rate subprime mortgages have been declining slowly. For example, the average aggregate speed for the first six months of 2000 was 20.6% CPR, compared with 19.5% CPR for the last six months of the year.[1] This trend was also evident at the end of 2000. The aggregate speed for the November 2000 through January 2001 period was 19.1% CPR, about 1% CPR lower than the speed for the August–October 2000 period.

In a departure from seasonal patterns, January speeds were 1% CPR higher than December speeds.

In a significant departure from seasonal patterns, the aggregate speed for January 2001 was a full 1% CPR higher than for December 2000. This is the first time, in at least six years, that the aggregate speeds for January came in higher than the aggregate speeds for December. Prior to this year, the average drop from December to January had been 6.2% CPR.

Prepayment patterns for individual issuers often deviated modestly from the average pattern of the slow decline in speeds. For example, prepayments on RFC/RASC and Countrywide loans stayed nearly constant throughout 2000, while prepayments on Saxon loans declined by 1.7% CPR between the first and second halves of the year. The absolute levels of speeds also varied from issuer to issuer. For example, prepayments on Conseco loans in 2000 were consistently 6.5% CPR higher than prepayments on Countrywide loans. All of the issuers we track, however, showed an uptick in speeds in January 2001 compared to December 2000. Figure 15 displays the aggregate speeds for four representative subprime mortgage issuers, along with the aggregate prepayments for all Fannie Mae 30-year loans and the Freddie Mac 30-year Survey rate. Figure 16 shows the aggregate speed for the subprime sector, together with the conforming prepayments and the conforming rate.

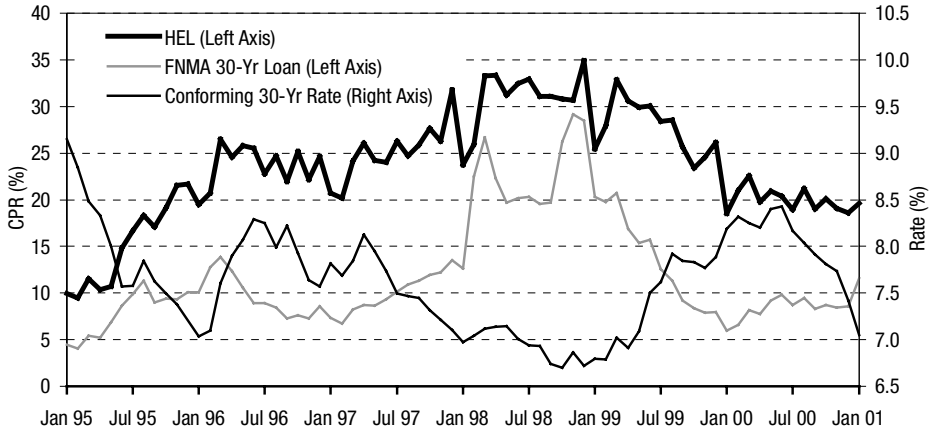
[1] To remove the effects of the seasoning ramp, aggregate speeds are computed for collateral aged 13 months and more. Our aggregate speed is based on prepayments of fixed-rate loans issued by seven large subprime issuers.

Figure 15. Aggregate Subprime Historical Prepayments for Four Representative Issuers

Date	RFC	Countrywide	Saxon	Conseco	Fannie Mae 30-Year Loans	Conforming 30-Year Rate
01/01/97	15.3				7.39	7.82
02/01/97	14.2				6.72	7.69
03/01/97	28.6				8.25	7.85
04/01/97	25.8				8.70	8.13
05/01/97	27.1				8.67	7.95
06/01/97	28.7				9.31	7.74
07/01/97	22.3				10.17	7.49
08/01/97	26.8				10.94	7.47
09/01/97	28.5				11.29	7.45
10/01/97	36.1		14.6		11.96	7.32
11/01/97	28.1		31.3	31.0	12.24	7.21
12/01/97	31.3		22.9	33.2	13.57	7.11
01/01/98	31.1		24.8	26.3	12.64	6.98
02/01/98	25.7		35.9	26.3	22.50	7.05
03/01/98	41.3		48.1	33.4	26.70	7.12
04/01/98	39.6		29.5	34.9	22.30	7.14
05/01/98	38.8		29.1	32.7	19.70	7.15
06/01/98	33.1	18.4	30.4	37.5	20.20	7.01
07/01/98	33.9	24.1	31.2	33.2	20.30	6.94
08/01/98	27.7	18.0	32.7	32.8	19.60	6.93
09/01/98	30.6	18.2	26.9	34.5	19.70	6.74
10/01/98	34.4	21.9	32.7	30.2	26.20	6.70
11/01/98	31.8	24.4	31.4	32.0	29.20	6.87
12/01/98	38.8	23.6	29.7	35.8	28.50	6.72
01/01/99	25.4	22.3	33.0	27.0	20.30	6.80
02/01/99	32.7	29.0	33.5	29.7	19.80	6.79
03/01/99	33.9	32.1	32.6	35.9	20.70	7.02
04/01/99	31.5	30.7	32.9	34.4	16.90	6.91
05/01/99	33.0	27.6	32.5	30.8	15.40	7.09
06/01/99	33.3	26.3	32.2	33.1	15.70	7.50
07/01/99	28.2	19.7	24.4	32.4	12.60	7.62
08/01/99	30.4	17.6	27.1	32.9	11.30	7.92
09/01/99	24.6	20.9	21.5	30.4	9.20	7.85
10/01/99	22.5	16.6	22.2	26.5	8.40	7.83
11/01/99	23.4	18.0	25.3	28.5	7.90	7.77
12/01/99	26.0	17.7	19.7	29.2	8.00	7.89
01/01/00	17.0	17.7	22.1	20.5	6.00	8.19
02/01/00	19.1	16.2	20.4	25.9	6.60	8.32
03/01/00	19.9	14.7	18.3	25.2	8.20	8.25
04/01/00	18.2	14.4	21.6	22.2	7.80	8.20
05/01/00	19.9	19.1	18.8	23.7	9.20	8.40
06/01/00	19.7	15.1	17.8	23.7	9.80	8.43
07/01/00	18.8	16.6	19.8	21.0	8.70	8.17
08/01/00	20.8	17.6	17.5	23.1	9.50	8.04
09/01/00	17.7	12.6	18.4	22.4	8.30	7.91
10/01/00	19.7	16.1	19.6	22.8	8.70	7.81
11/01/00	19.6	18.0	16.3	22.5	8.50	7.74
12/01/00	18.8	17.1	16.9	21.0	8.60	7.42
01/01/01	20.0	18.7	NA	24.4	11.60	7.05

Source: Salomon Smith Barney.

Figure 16. Aggregate Subprime and Conforming Historical Prepayments



Source: Salomon Smith Barney.

Although the conforming rates declined by almost 140bp between June and December 2000, prepayments on conforming loans failed to rally until January 2001, or until the rates made a sufficiently large pool of outstanding mortgages refinanceable. It is therefore not surprising that prepayments on subprime mortgages, which are generally slower to respond to rate incentives, have not yet experienced a significant uptick. We expect such a response to occur during the next several months.

January speeds likely indicate the beginning of enhanced refinancing activity.

January speeds likely indicate the beginning of enhanced refinancing activity. As we pointed out, over the past six years, prepayments in January have always come in significantly below the December levels. Although there is some variation between issuers, related to differences in reporting periods, **the January slowdown may be expected on the basis of economic considerations.**[2] Since subprime loans are most often used as a debt-consolidation vehicle, many potential refinancers likely wait to receive the bills from their holiday shopping before refinancing their home equity loans. The increase in speeds in January 2001 compared to December 2000 suggests then that the prevailing interest-rate incentives are reversing the usual seasonal slowdown.

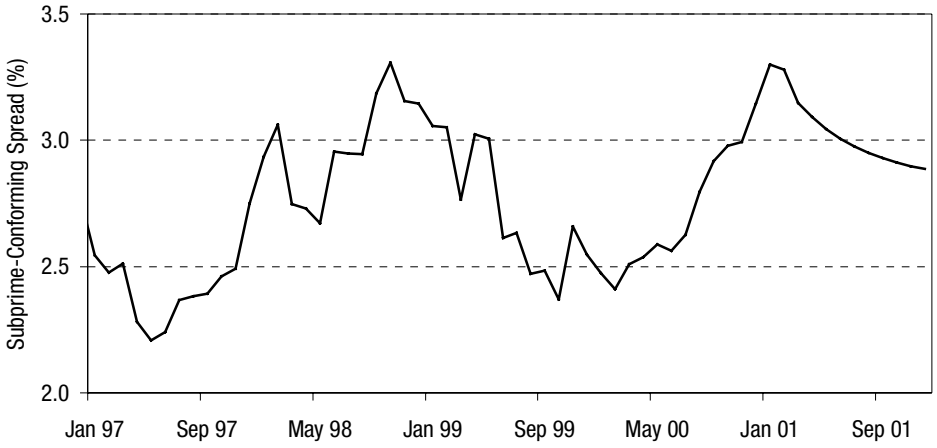
Several factors have limited or will limit the speed increases for subprime loans:

- **The spread between subprime and conforming mortgage rates has increased significantly during the past six months.** Therefore, the changes in conforming rates overestimate the refinancing incentive available to subprime borrowers. Although a part of the spread widening may be ascribed to a weakening of competition in the subprime industry, we believe that most of it is a result of a predictable, and historically verifiable, dynamics of subprime rates, driven by changes in the conforming rates.[3] Figure 17 shows the history of the subprime-conforming spread and our projections. (After October 2000 the spread is projected from our model.) If the conforming rates remain at their current level, the projections suggest that the spread will move only slowly toward its historical mean.

[2] In each of the preceding six years, the loan pools that entered into the calculation of aggregate speeds for January were almost exactly the same as the pools that enter into the calculation of aggregate speeds for December. This implies that the difference in speeds is not an artifact of our aggregation method.

[3] See *Bond Market Roundup: Strategy*, March 2 and March 9, 2001.

Figure 17. Actual and Projected Subprime-Conforming Spread



Source: Salomon Smith Barney.

- **Significant slowdown of home price appreciation.** Since the first quarter of 1997, when it registered 2.9%, the annual rate of home price appreciation has climbed steadily through the second quarter of 2000, reaching 7.4%. Although it eased slightly in the third quarter of 2000, to 7.3%, it is still well above the ten-year average of 3.8%.[4] The recent tumble of the stock market and the current economic slowdown will likely suppress the growth of home prices dramatically over the next several years. Lower equity in the borrowers' homes will lower voluntary prepayments but enhance defaults, leading to *lower* overall speeds. (An estimate of the size of the effect for a given scenario of home prices can be obtained by reviewing the impact of current LTV on prepayments and defaults.)
- **Collateral trends.** Even though prepayment penalties have been widespread since 1998, their proportion in the universe of all outstanding loans is still growing, leading to lower aggregate speeds and a modest decrease in interest-rate sensitivity. Balancing this trend for the remainder of this year will be a significant increase in the number of loans with penalties that will expire, implying short-lived but high spikes in prepayments. In addition, several large lenders have relaxed their underwriting standards since 1999, as suggested by lower FICO scores. Lower-credit borrowers in subprime pools tend to suppress interest-rate sensitivity.

Other economic factors are likely to enhance prepayment speeds. For example, the slowdown in the economy may prompt consumers to refinance more readily their high-interest revolving credit. Household debt-service burden, which we have found to be positively correlated with both voluntary prepayments and defaults, increased again in the third quarter of 2000, reaching its highest level since 1987.

We expect increased prepayments over the next several months.

In summary, we expect increased prepayments of subprime loans over the next several months, although the speeds will likely be lower than in the first half of 1998, when the conforming rates were at their current levels. **For the aggregate subprime speed, our estimate of the uptick is 4%–5% CPR.**

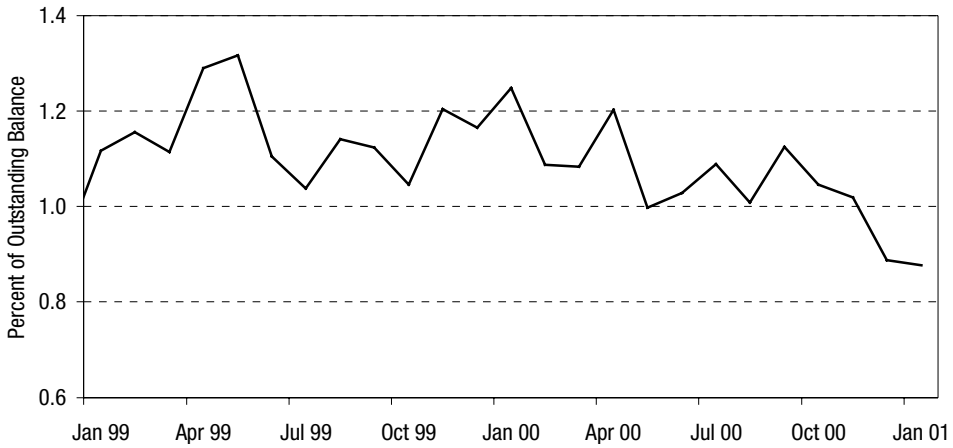
[4] Source: Freddie Mac.

Comments on Credit

Aggregate losses declined slightly in the last three months.

After adjusting for seasoning, net losses on all securitized subprime mortgage transactions (including high-LTV loans, second liens, and HELOCs) remained nearly constant between January 1999 and October 2000, but have declined in the last three months.[5] Figure 18 shows annualized net monthly losses on these transactions, adjusted to the loan age of 18 months, as a function of the outstanding balance. **Most of the decline is a result of higher seasoning, rather than lower unadjusted loss rates.** During the period shown, the annualized loss rate has ranged from 0.9% to 1.3%. (The losses *peak* between 36 and 48 months at about three times the level shown in Figure 18.)

Figure 18. Net Losses on Subprime Mortgage Transactions



Source: Salomon Smith Barney.

Losses for several large, upper-tier issuers of closed-end, first-lien subprime mortgages, such as Countrywide, Saxon and Chase Funding, showed little trend over the past two years. Figure 19 displays the net monthly losses for the Countrywide subprime mortgage collateral, at the loan age of 13 months. Also shown in the figure are 90-plus day delinquencies of the portfolio.

Although losses held steady in 2000, serious delinquencies increased steeply.

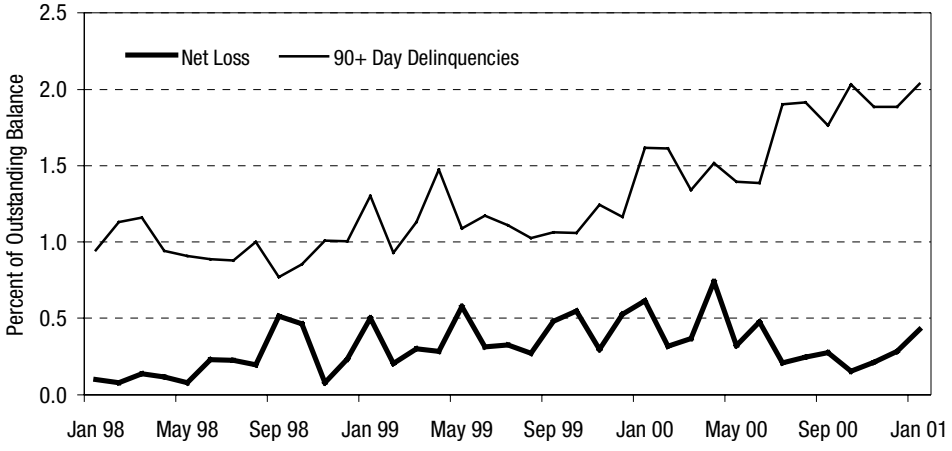
Although losses for Countrywide loans held steady in 2000, serious delinquencies increased steeply. A similar pattern is evident in the collateral backing Saxon and Chase transactions. Part of the explanation for the increase in delinquencies lies in the **strain that the overall consumer debt is placing on borrowers' monthly cash flows.** (The debt may be quantified by the household debt-service burden, by the total revolving and nonrevolving consumer debt per capita, or, if available, by the current debt-to-income ratio.)[6] Compounding the default rate is the exit from the lending business of the majority of subprime lenders that have in the past readily extended credit to delinquent borrowers.

[5] Figures based on subprime mortgage transactions contained in the Intex database.

[6] See *Bond Market Roundup: Strategy*, November 3, 2000.

Another reason for the rising delinquencies, however, is the **changing composition of the collateral pools backing the most recent transactions.** A separation of the economic and collateral trends warrants further study.[7]

Figure 19. Net Losses and Serious Delinquencies on Countrywide Subprime Mortgage Transactions



Source: Salomon Smith Barney.