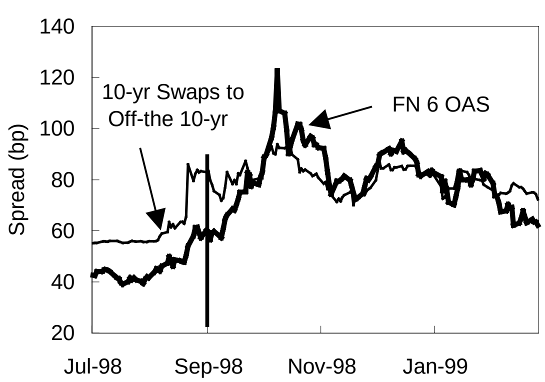
Swaps Are Not the New Benchmark For Most Investors

With reports of its demise greatly exaggerated, Treasuries — not swaps — are still the dominant factor driving mortgage pricing. Recently, much has been written and said about the emergence of swaps as the new pricing paradigm of the mortgage market. We think this view overstates the importance of swaps on mortgage spreads. In our opinion, spreads widened last fall owing primarily to the combination of the historical peak in supply and the reduction in dealer risk profile. Consequently — as was clear over the past month as mortgages tightened without much change in swap spreads — mortgage are not held hostage to swap spreads. Although swaps are an important barometer of the entire spread product market, including mortgages, we do not recommend hedging with swaps

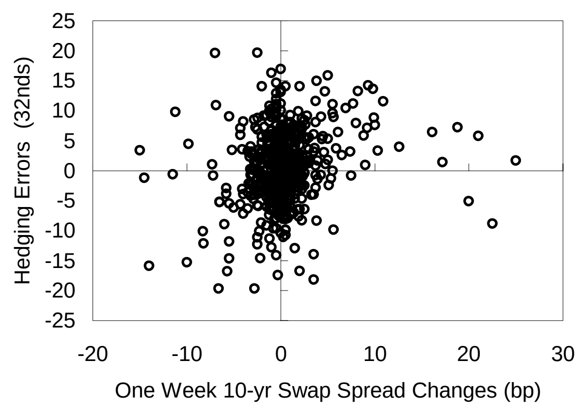
First, let's put the relationship between swaps and mortgages in context. *Hedging mortgages with swaps would not have appreciably improved hedging performance during the widening in September and October compared with hedging with off-the-run Treasuries.* As shown in the chart below, from the beginning of September to the wides of October, constant volatility OAS on FNMA 6s moved out over 60 bp while 10-year swap spreads widened only 10 bp (both calibrated to the off-the-run curve). Hedging this kind of extreme mortgage spread widening with swaps would have entailed selling six swaps for every mortgage (hedging the duration mismatch with Treasuries). Even looking at a longer period, starting in August, mortgages widened by almost three times the widening in swaps spreads.

Mortgages Widened by More Than Swaps



Does this mean that mortgages are rich because they have six times the spread exposure of swaps? No, for the same reason that they are not cheap because they have one-tenth the spread exposure of Brady bonds. It means that swaps are not an important factor for pricing mortgages. Historically, adding swaps to a hedge that includes Treasuries does not improve performance, and actually reduces performance by the swap spread. The figure below shows one-week changes in 10-year swap spreads to the off-the-run curve (the x-axis) versus one-week hedging errors using our EOAS Treasury hedge ratios (the y-axis). It demonstrates that changes in swaps spreads have had no power in explaining hedging errors.

Swaps Wouldn't Improve Hedging Performance
(Hedging Errors of FN 6s versus Swap Spread Changes)



Clearly, there has recently been some short-term correlation of mortgage and swap spreads. However, this does not mean that investors should hedge with swaps because it does not imply causation. The correlation of mortgage spreads and swap spreads has been explained by the correlation of the two with Treasury yields, which is already incorporated with the Treasury hedges. In the table below, we show the average 22-day correlation of one-day changes in swap spreads, mortgage spreads, and 10-year Treasury yields in 1998–99.

Correlation of Mortgages With Swaps Explained by Correlation of Both With Treasuries (1-Day Changes)

Correlations	1998	1/98-8/98	8/98-Now
FN CC with 10-yr Swaps*	44	44	44
FN CC with 10-yr Tsy**	41	48	33
Swaps with 10-yr Tsy**	43	46	41

*Swap spread to the off-the-run 10-year **Off-the-run

Refi Supply Is Giving Way to Paydown Demand

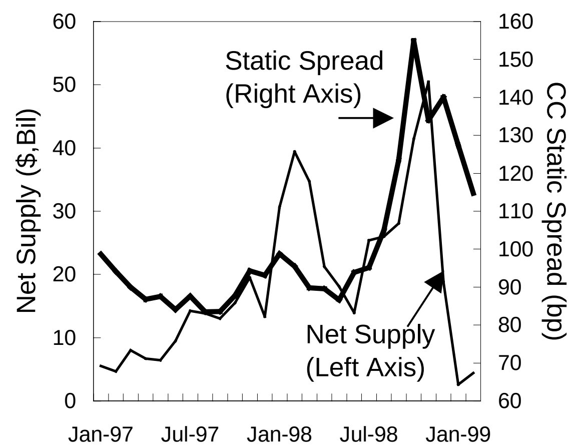
We believe that the mortgage widening in late 1998 was primarily driven by record supply coupled with a reduction in dealer risk positions. So far in 1999, these same forces have tightened spreads by more than historical norms. Supply has given way to record paydown demand, which is hitting at the same time that dealer shelves are relatively empty of product. This dynamic will continue to create increased directionality of spreads and shorter empirical durations than historical norms.

In the past, mortgage spreads have tended to be buffeted by the mistiming of mortgage supply with demand to replace the paydown. A refi will almost immediately get translated into supply as mortgage bankers sell the mortgage forward. The mistiming occurs because the investor suffering the paydown will not see the results of this refi in the form of a paydown check for a month or two. A dealer will play the role of the shock absorber to this mistiming, taking down the supply from the mortgage banker until the paydown demand emerges. Spread movement reflects the mistiming by widening on supply and then tightening from paydown demand.

These spread swings were very exaggerated in late 1998 and early 1999. The supply wave widening was greater than normal, as supply surged from historical peaks; meanwhile, dealers, in contrast to the first part of 1998, refused to play their normal role of shock absorber and did not position the supply. As a result, spreads widened enough to attract other investors to increase positions. Spread tightening was also greater than normal because of the same factors. Paydown demand was higher than historical norms since refis hit record levels. Spreads also tightened because buyers did not find the supply on dealers' shelves. The process of buying back the supply from those who bought the supply in 1998 was expensive.

The two graphs at right underscore this point. In the first graph, we show that net supply (issuance lagged by two months less paydowns, e.g., October net supply is December issuance less October paydowns) reached peak levels in late 1998 while spreads widened. Now, not surprisingly, spreads have tightened as net supply has dropped to almost zero because paydowns have surged while gross supply has diminished. The second graph shows that the magnifying factor has been dealer inventories. During most of 1997–1998, dealers tended to position roughly one month or more of gross supply. However, in late 1998, they not only failed to increase their positions as supply surged, but actually reduced them dramatically. Now that the supply wave has abated, investors seeking to replace paydowns have found dealer shelves largely devoid of product. *Consequently, spreads have tightened and will continue to tighten until the paydown demand subsides.*

Spreads Widened From Supply



Dealer Inventory Shrunk As Supply Was Growing