

## Impact of Mortgage Rate Propagation on IOs/POs

Like the rest of the mortgage market, IOs/POs have felt the effects of the Treasury curve inversion. When compared with on-the-run Treasuries that investors typically use to hedge (two-, five, and 10-years), IOs and POs were both slightly weaker, using price-based hedge ratios. Given the increase in implied volatility, the size of the Treasury move, and the fact that mortgage spreads widened, however, we would regard IO/PO relative value as not having materially changed over that time. On a Treasury OAS basis, however, IOs have tightened significantly over the last month, on the order of 80–100 bp for most Trusts (with the notable exception of lower coupons). In contrast, POs widened significantly during that time. The culprit is, of course, the lower forward rates implied by the Treasury inversion. These lower Treasury rates impart a higher refinancability to IOs, particularly if they are near the cusp for refinancability. In essence, the cost associated with hedging out the exposure to longer-term rates for IOs increased, despite the fact that IO investors often do not explicitly hedge out that exposure.

### Mortgage Rates Tied to Treasury Rates

As we discuss in an accompanying article, the large impact of the inversion on Treasury OASs is directly tied to the fact that in a typical OAS model, mortgage rates are propagated as a function of Treasury rates. This has caused mortgage rates to trend lower on a forward basis, which makes many investors feel uncomfortable, given the technical nature of the inversion. Rather than being concerned about the technicals of the Treasury market, the real issue is whether the historical relationship between mortgage rates and Treasury rates that is used in OAS frameworks still holds over longer time periods. In the table below, we include the Treasury OAS of various Trusts using two mortgage rate propagation methodologies. The first is our standard method based upon Treasury rates (driven primarily by 10-year rates with some short-rate dependence), and the

second is based on 10-year swap rates (note that this is the same comparison used in the lead article). While it is clear that there are differences between the two approaches, the scale of the differences is actually smaller than the overall tightening. As we would expect, the OASs based on Treasury rate propagation tightened more than those driven by swaps, but overall, both methods showed IOs tightening by the same order of magnitude. If we were to have chosen price-based regression hedge ratios (which have been longer than OADs), we would have had IOs widening during the last month, while OAD-based durations actually had them tightening significantly. From this, we conclude that mortgage rate propagation is a smaller effect than choosing the correct durations to use.

### Turnover Projections Have More Impact

In our view, the real issue facing the IO/PO market is not how to drive the mortgage rate in OAS valuations but rather turnover rates in this non-refi environment. Across the coupon stack, IO OASs tighten by 80–100 bp under a 10% increase in the baseline level of turnover in the Goldman Sachs OAS model. *We conclude that the particular method of mortgage rate propagation has a smaller effect than the baseline level of turnover for IO/PO valuation.* The decision on whether the current realized fast turnover speeds can be sustained over time is the real issue facing investors.

### Discount POs and Higher Coupon IOs

We reiterate our recommendation that investors continue to focus on lower coupon, discount POs and higher coupon, semi-seasoned IOs in the search for value. Combining discount POs with the sale of volatility in the form of swaptions or mortgage options represents an attractive way to monetize the cheap convexity of 1998-99 vintage discounts. In addition, we believe that investors should rely more on constant OAS durations than price-based durations at these rate levels, with particular attention to hedging out both their short-rate and their long-rate exposures.

### Mortgage Rate Propagation Impact on IOs

LIBOR OAS on IOs Using Swap-Driven and Treasury-Driven Mortgage Rate Propagation

	Swap-Driven Mortgage Rate					Treasury-Driven Mortgage Rate				
	FH S197 (6.0)	FH S192 (6.5)	FH S183 (7.0)	FN T254 (7.5)	FN T275 (8.0)	FH S197 (6.0)	FH S192 (6.5)	FH S183 (7.0)	FN T254 (7.5)	FN T275 (8.0)
11/5/99	22	79	166	194	351	54	111	190	216	367
2/10/00	-37	-21	41	59	282	-31	-19	40	58	277
<b>Change</b>	<b>-59</b>	<b>-100</b>	<b>-125</b>	<b>-135</b>	<b>-69</b>	<b>-85</b>	<b>-130</b>	<b>-150</b>	<b>-158</b>	<b>-90</b>