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### FRB Memo Josh Gallin and Andreas Lehnert to Vice Chairman Ferguson re Talking Points on House Prices

Joshua Gallin

Andreas Lehnert

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# BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

DIVISION OF RESEARCH AND STATISTICS

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**Date:** May 5, 2005  
**To:** Vice Chairman Ferguson  
**From:** Josh Gallin and Andreas Lehnert  
**Subject:** Talking Points on House Prices

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## **Is housing overvalued?**

The upper panel of chart 1 shows the year-over-year percent changes in the repeat-transactions house-price index from the Office of Federal Housing Enterprise Oversight. The middle panel shows the level of this index. The lower panel shows the ratio of the CPI index for tenants' rent to the repeat-transactions price index.

- The rent-price ratio has a distinct downward trend. The existence of the trend complicates the task of judging whether the housing stock is “fairly valued.” That said, the ratio is currently further below its trend than at any point in the past 30 years.
- Historical experience suggests that when the rent-price ratio is below its trend, real house-price growth during the subsequent few years tends to be slower than usual. Real rent growth also tends to be faster than usual, but prices do most of the “correcting.”
- Because the rent-price ratio is currently below its trend, we judge there to be some downside risk to house prices going forward. Instances of outright decline in nominal national-level house-price indexes are rare, suggesting that the risk may be limited. However, the discrepancy between the rent and price indexes is greater now than at any time in the last 30 years.
- Theory notwithstanding, the level of the cost of capital does not appear to be correlated with the level of the rent-price ratio (see chart 2).
- Even if one accepts the rent-price ratio as a measure of valuation, one should not expect it to give precise estimates of the timing and magnitude of a potential house-price correction. Indeed, house-price growth has continued to outstrip rent growth during the past few years even as the rent-price ratio has fallen further below trend.

- In addition, historical experience cannot anticipate structural breaks in the underlying statistical relationship. For instance, changes in the mortgage-finance industry have made it easier and cheaper to finance the purchase of a home.

### **What might happen to the financial system if house prices fell?**

We believe that even a sudden and sizable drop in house prices would be unlikely to trigger a financial crisis or put any substantial stress on the financial system.

- Even sudden, big, drops in house prices are unlikely to trigger a substantial increase in the number of mortgage defaults:
  - Borrowers do not default on mortgages if they have substantial equity in their homes. The average loan-to-value ratio is below 50 percent, suggesting that most homeowners do have plenty of equity in their homes.
  - Defaults would likely be concentrated in the subprime market, where high LTVs and less-than-perfect credit histories are more common. This market accounts for about 12 percent of outstanding mortgages and is heavily securitized.
- Structural changes in the mortgage market have made a systemic financial crisis as the result of a house price drop less likely than it might have been in the past.
  - Outstanding non-GSE MBS (RMBS) now account for more than 13 percent of outstanding mortgage debt, up from essentially zero in the early 1990s.
  - RMBS deals are very transparent; the issuer releases detailed underwriting information on each loan. The markets for all tranches of these securities are liquid and deep.
  - Technological improvements in mortgage servicing, including improved modelling, have decreased loss rates on mortgages.
- The GSEs and their regulator all perform simulations of GSE performance given a house price shock; they find that a 10 percent decline is not a problem. (Remember that homeowners' equity and private mortgage insurance protect the GSEs for many of the mortgages they insure.)
- Recent studies of possible GSE failures have also looked at the impact of declines in mortgage-backed security (MBS) prices on banks. The FDIC and BS&R's studies of the effect of a failing GSE on banks both conclude that banks have plenty of capital and appear well-positioned to handle a substantial MBS price decline, suggesting that an increase in mortgage default rates and losses would not be a problem.

- Losses triggered by a house price decline would likely fall on banks and on private MBS. The banks, as discussed above, have lots of capital and the private MBS is priced in a way that accounts for this possibility.
- Even historically large declines in house prices would be small relative to the recent decline in household wealth owing to the stock market. From a wealth-effects perspective, this seems unlikely to create substantial macroeconomic problems.

# Chart 1 House Prices 1975--2004

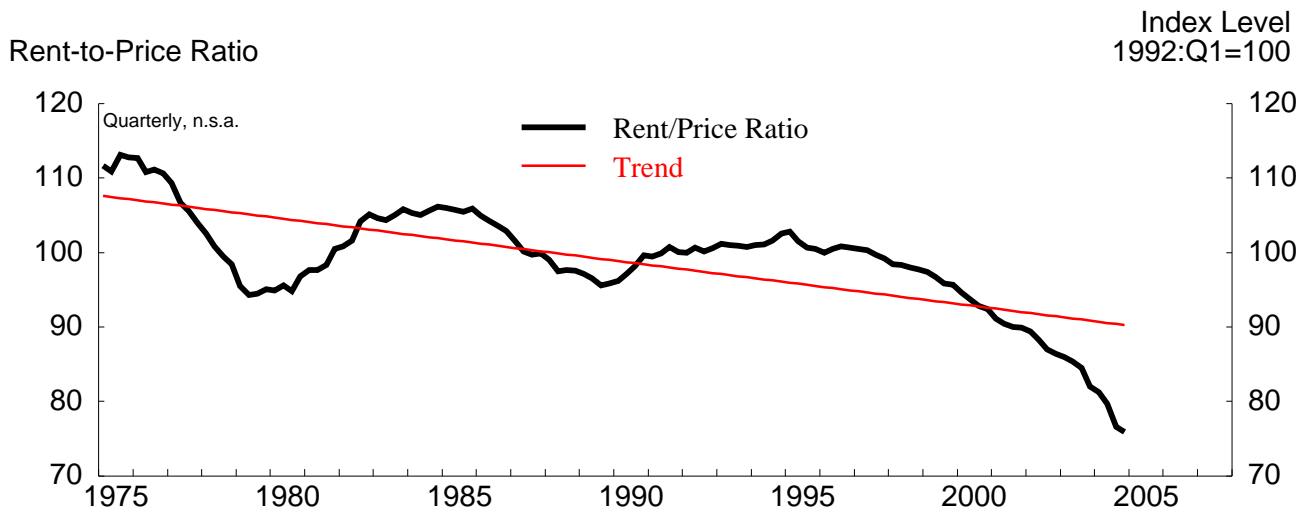
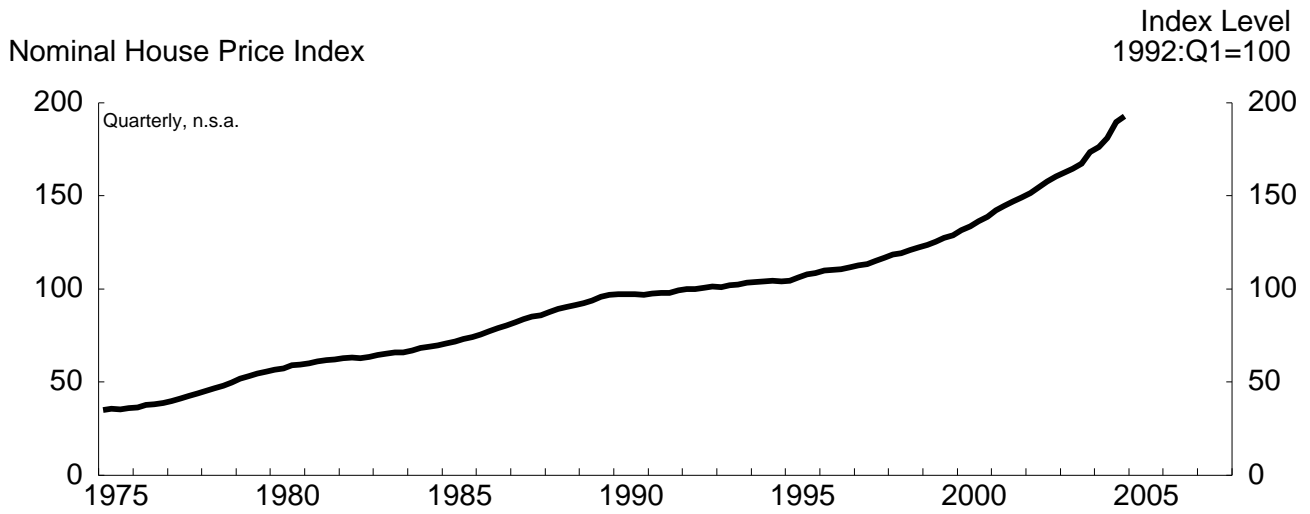
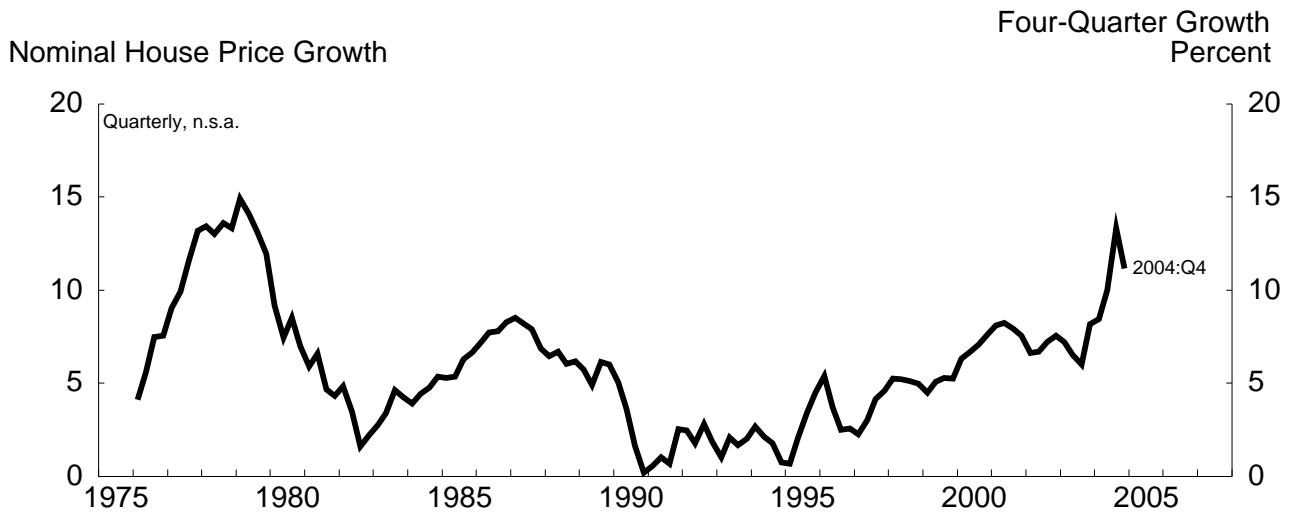
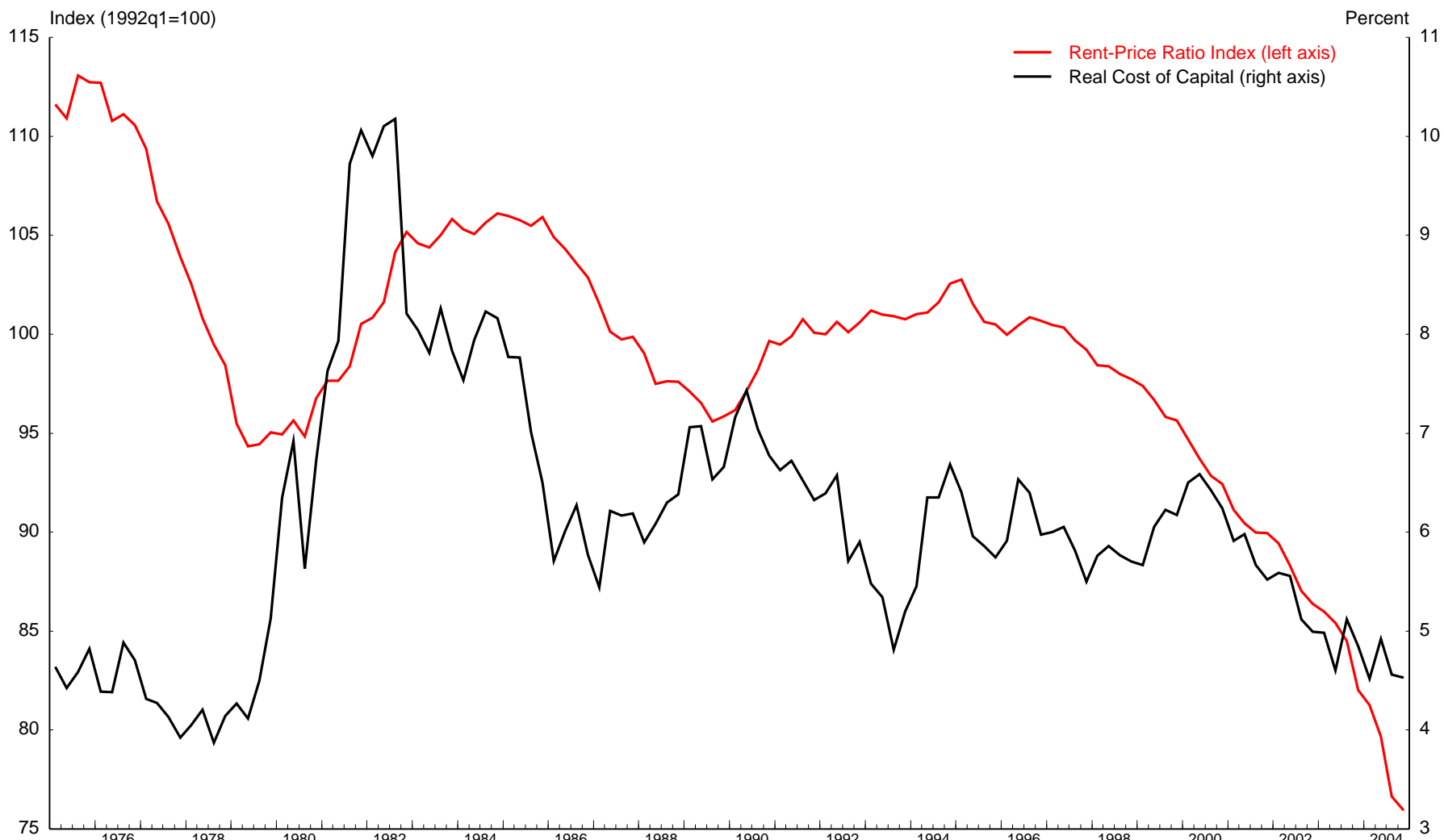


Chart 2

### The Rent-Price Ratio and the Real Cost of Capital



Note. Rent-price ratio is the ratio of the CPI index for tenants' rent and the OFHEO repeat-transactions price index. The real cost of capital is from FRB/US and includes effects of interest rates, mortgage interest deductions, property tax, and depreciation.