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# **The Effects of Limiting the Retained Mortgage Portfolios of Fannie Mae and Freddie Mac**

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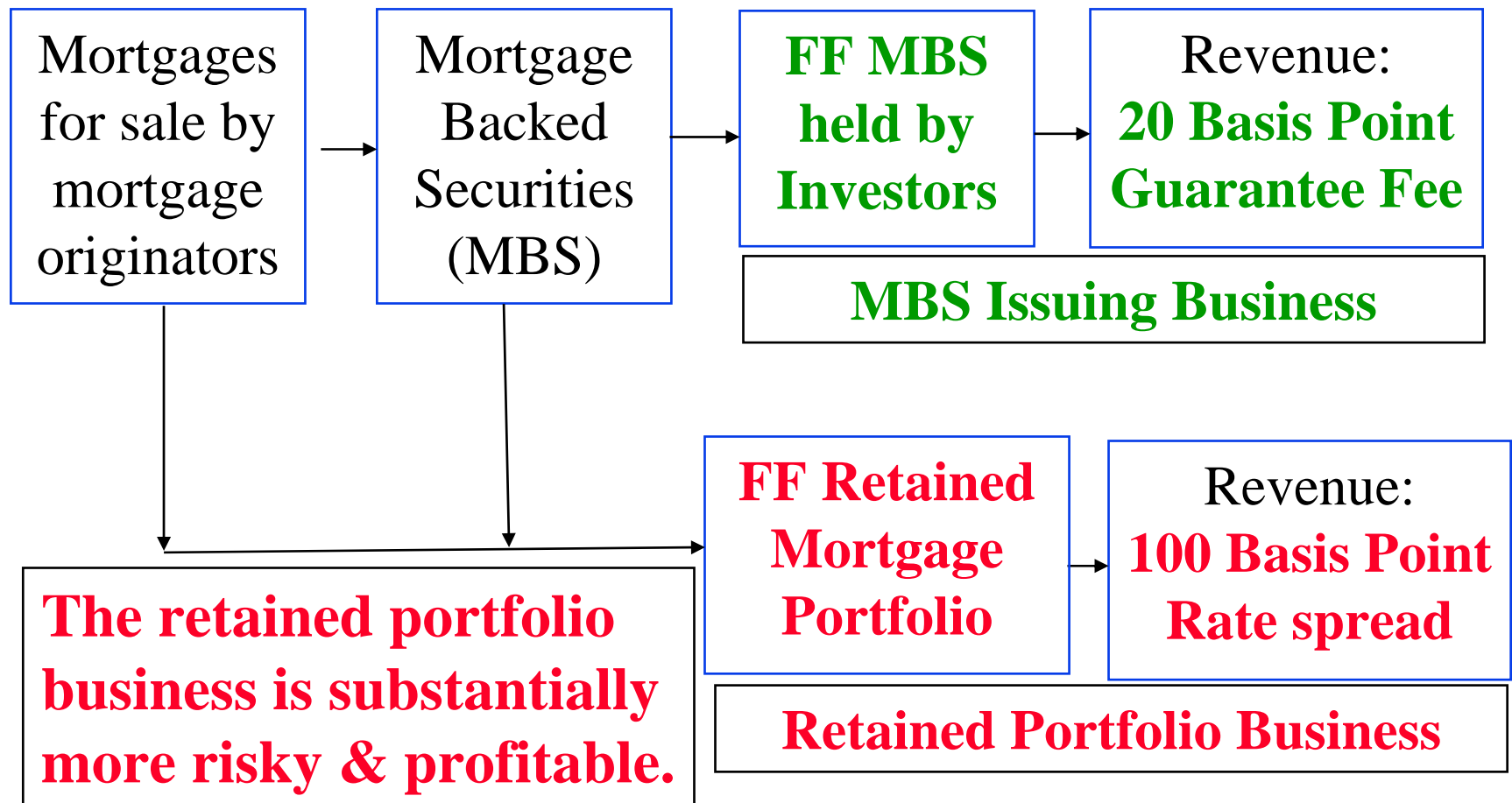
# Agenda

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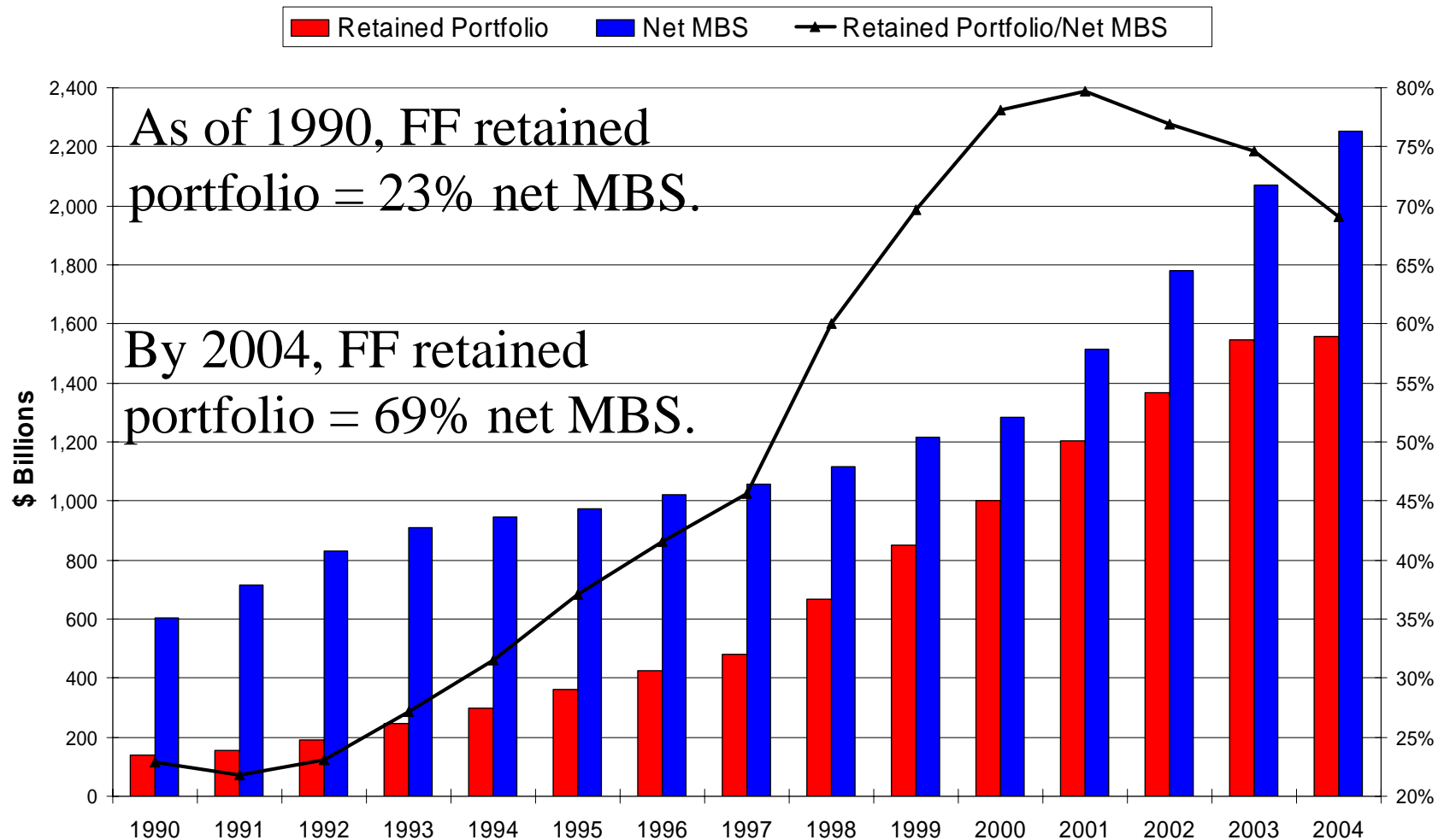
- ◆ Background: How the Fannie Mae & Freddie Mac (FF) business lines fit into US mortgage market.
- ◆ Problem: The FF retained portfolio risks.
- ◆ Solution: Limit FF retained mortgage portfolio size.
- ◆ Q & A:
  - Who replaces FF for holding mortgages?
  - What will happen to US mortgage rates?
  - What about alternative solutions?

# Fannie and Freddie Have Two Distinct Business Lines

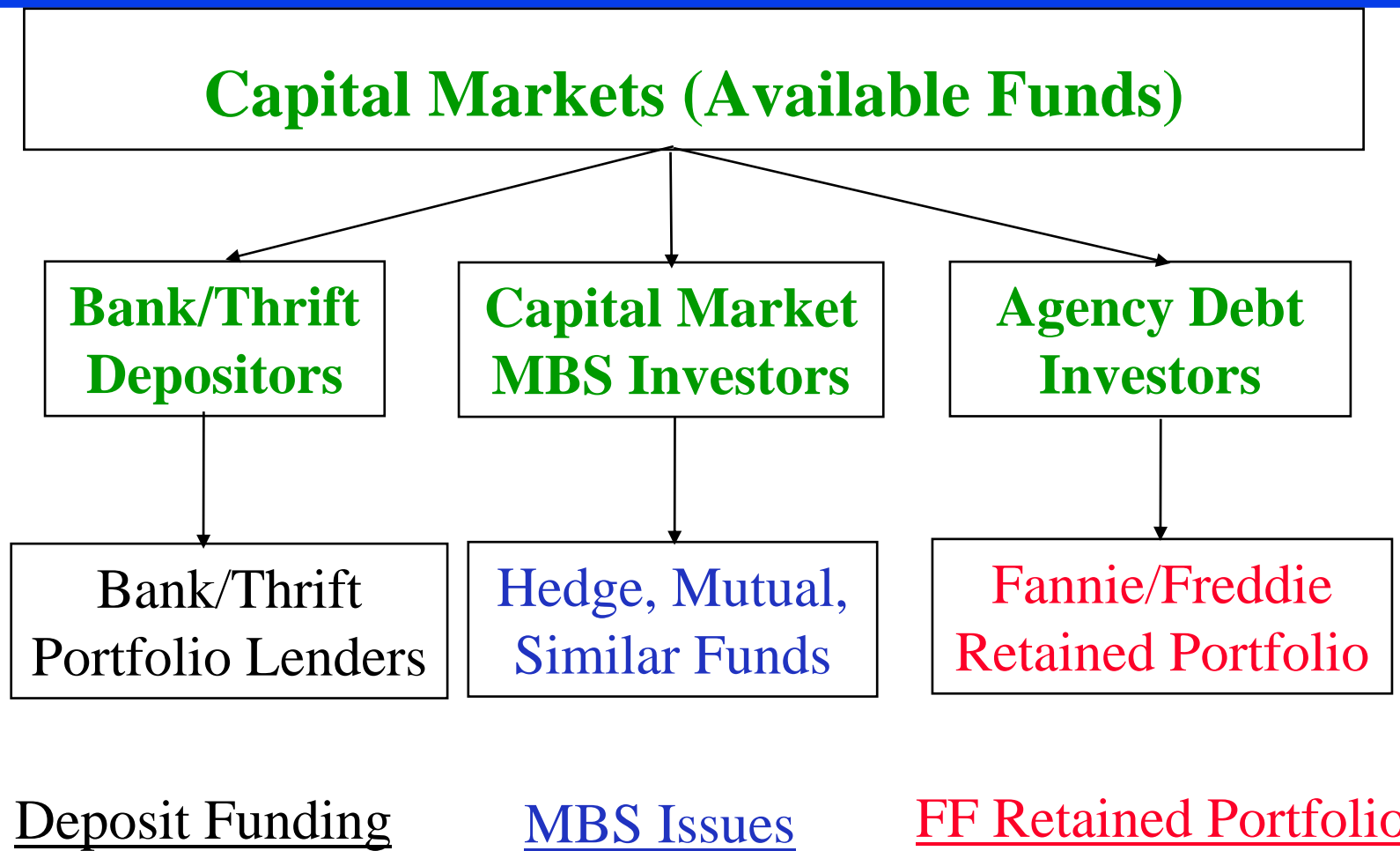
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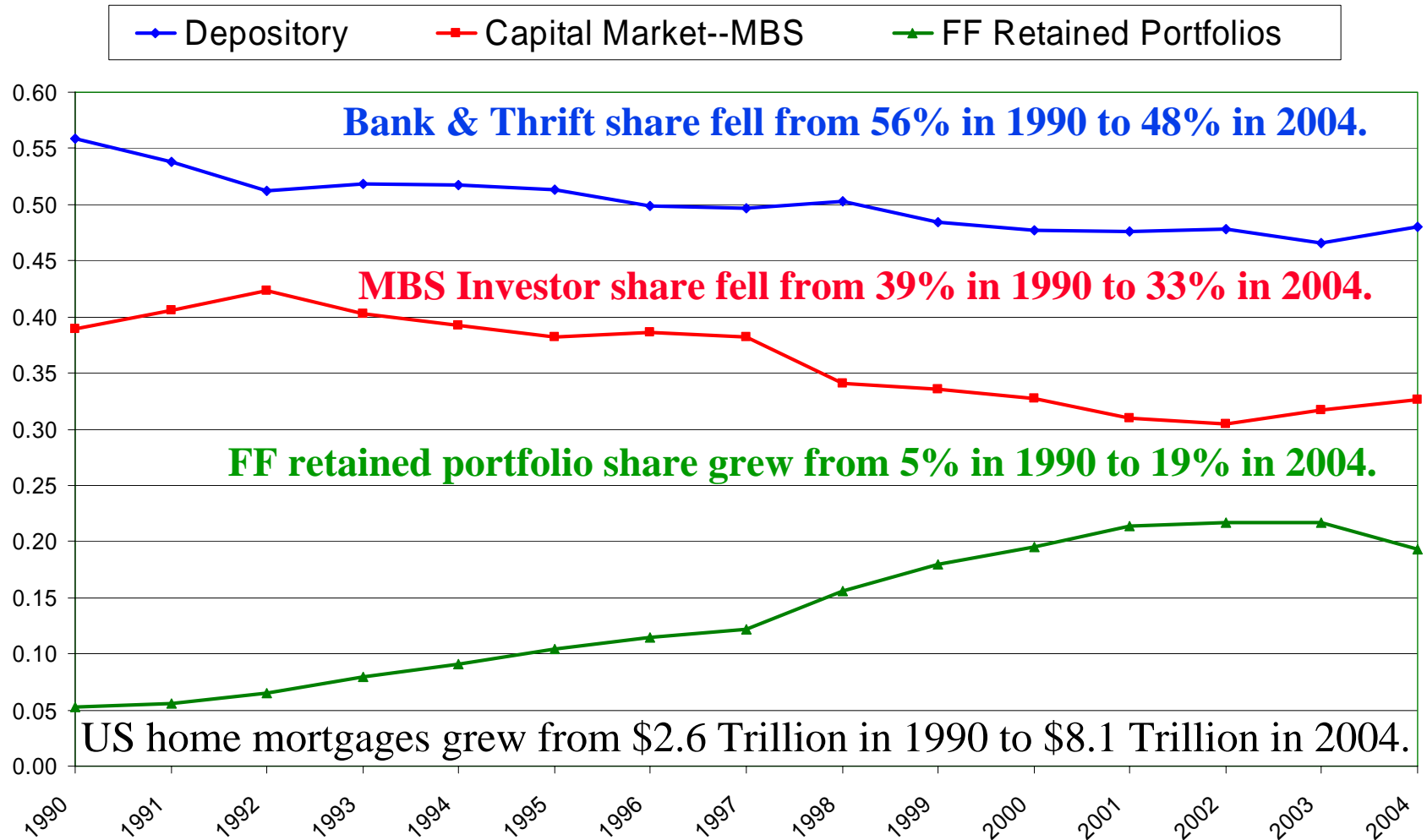
# FF Retained Portfolios and Net MBS Issued



# Three Primary Channels for Funding US Residential Mortgages



# Home Mortgage Channels: Percentage of Total Mortgages Outstanding



# Why Retained Portfolios are Such Concern:

## (1) Fixed-Rate, Prepayable, Mortgages

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- ◆ The 30 year, prepayable, fixed-rate mortgage is:
  - Highly beneficial to mortgage borrowers;
  - Potentially toxic to mortgage holders.
- ◆ For toxicity, consider a 200 basis point rate change:
  - If rates rise, value may fall 18% (short funding).
  - If rates fall, value may fall 25% (prepayment).
  - So however rates change, holder values may fall.
- ◆ FF 2.5% capital ratio is insufficient for portfolios that contain only such risks (no diversification).

# Why Retained Portfolios are Such Concern:

## (2) Incomplete and Dynamic Hedging

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- ◆ The FF mortgage portfolios potentially face high rate risk.
- ◆ FF use derivative hedges to control the interest rate risk:
  - They fully hedge small and short-term rate risks.
  - They hardly hedge large and long-term rate risks.
  - They plan to hedge the remaining risk later. But, history shows such dynamic hedging invariably fails.
- ◆ The recent accounting scandals at both firms indicate that large amounts of rate risk and earnings volatility remain.
- ◆ Only government guaranteed firms can be run this way.

# Why Retained Portfolios are Such Concerns

## (3) Contagion Risks

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- ◆ So, sooner or later, FF will suffer big losses.
- ◆ Any serious Fannie or Freddie losses, moreover, will surely cause Agency rates to spike:
  - This reinforces whatever caused the initial losses;
  - And hedges are Libor—not Agency rate—based;
  - So hedges may not help at all (William Poole).
- ◆ And whatever happens to one firm is likely to infect the other through Agency rates--a serious contagion.

# Why Retained Portfolios are Such Concern:

## (4) Systemic Risks

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- ◆ **At year-end 2004, FF guarantees = \$3.7 Trillion**  
((\$2.2 Trillion net MBS, \$1.5 Trillion retained portfolio).

<b>Comparables:</b>	<b>\$ Trillions</b>
All Treasury debt	4.4
<b>FF Guarantees</b>	<b>3.7</b>
All corporate bonds	2.9
All commercial loans	2.2
All consumer credit	2.1
All municipal bonds	2.0

- ◆ Two firms (FF) threaten entire US financial system;  
And contagion effect means it will take only 1 event.

# Limiting the Retained Portfolio Size: Efficiently and Smoothly Solves Problem

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- ◆ Limiting the retained portfolios directly solves the problem: no retained portfolio, no rate risk.
  - Also eliminates F&F MBS cherry-picking.
- ◆ It is easy to implement. Retained portfolios will liquidate through repayments in 7 to 10 years.
- ◆ MBS business line continues, even expands.
- ◆ Mortgage market and FF operated exactly this way in 1990 and earlier.

# Questions and Answers:

## (1) What Replaces the Retained Portfolios?

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- ◆ As F&F retained portfolios liquidate, they also liquidate their agency debt (97.5 cents on the dollar).
  - So Agency Debt holders become MBS holders, or
  - Agency Debt holders become XYZ holders, and XYZ holders become MBS holders, etc.
  - These same points apply to foreign investors.
  - Key: FF are only intermediaries: capital => mortgages.
- ◆ Extra credit question: what about the MBS rate risk?
  - Answer: The same counterparties that sold rate hedge derivatives to FF will sell it to the new holders.
  - Wall Street will package in suitable investment funds.

# (1) What Replaces the Retained Portfolios?

## The Role of Depository Institutions

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- ◆ Depository institutions (banks and thrifts) will be as important as capital market investors in replacing the F&F retained portfolios.
- ◆ Banks now have 48% market share, had 56% market share in 1990. So no issue with expertise to handle interest rate risk.
- ◆ Basle II will expand incentive of all banks (US and foreign) to buy MBS.
- ◆ Bank deposit insurance is funded by the industry, not the Treasury; creates industry-wide discipline.

# Questions and Answers:

## (2) What Happens to US Mortgage Rates?

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- ◆ As intermediaries, FF are in principle replaceable with near zero impact on mortgage interest rates.
  - Interest rates, including mortgages, could actually fall if investors gain faith in the US financial system as the retained portfolios decline.
- ◆ Theory/practice suggest any rate rise less than 10 bp.
  - The implicit subsidy already goes mainly to FF shareholders, and any public benefit can still be served by the continuing MBS business line.
  - MBS can also handle any liquidity issues.

# Questions and Answers:

## (3) Have We Just Moved the Risk Around?

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- ◆ No, because.....
- ◆ Diversification: Capital market/depository investors provide diversification across asset classes.
- ◆ Concentration: F&F concentrate the risk in just 2 firms, compared to zillions of market investors and thousands of depository institutions.
- ◆ Government Guarantees and Market Discipline: The implicit guarantee removes all incentive of holders of F&F debt and MBS for oversight. Capital market entities in contrast face oversight. Depository institutions fall in between.

# Questions and Answers:

## (4) Alternative Solutions?

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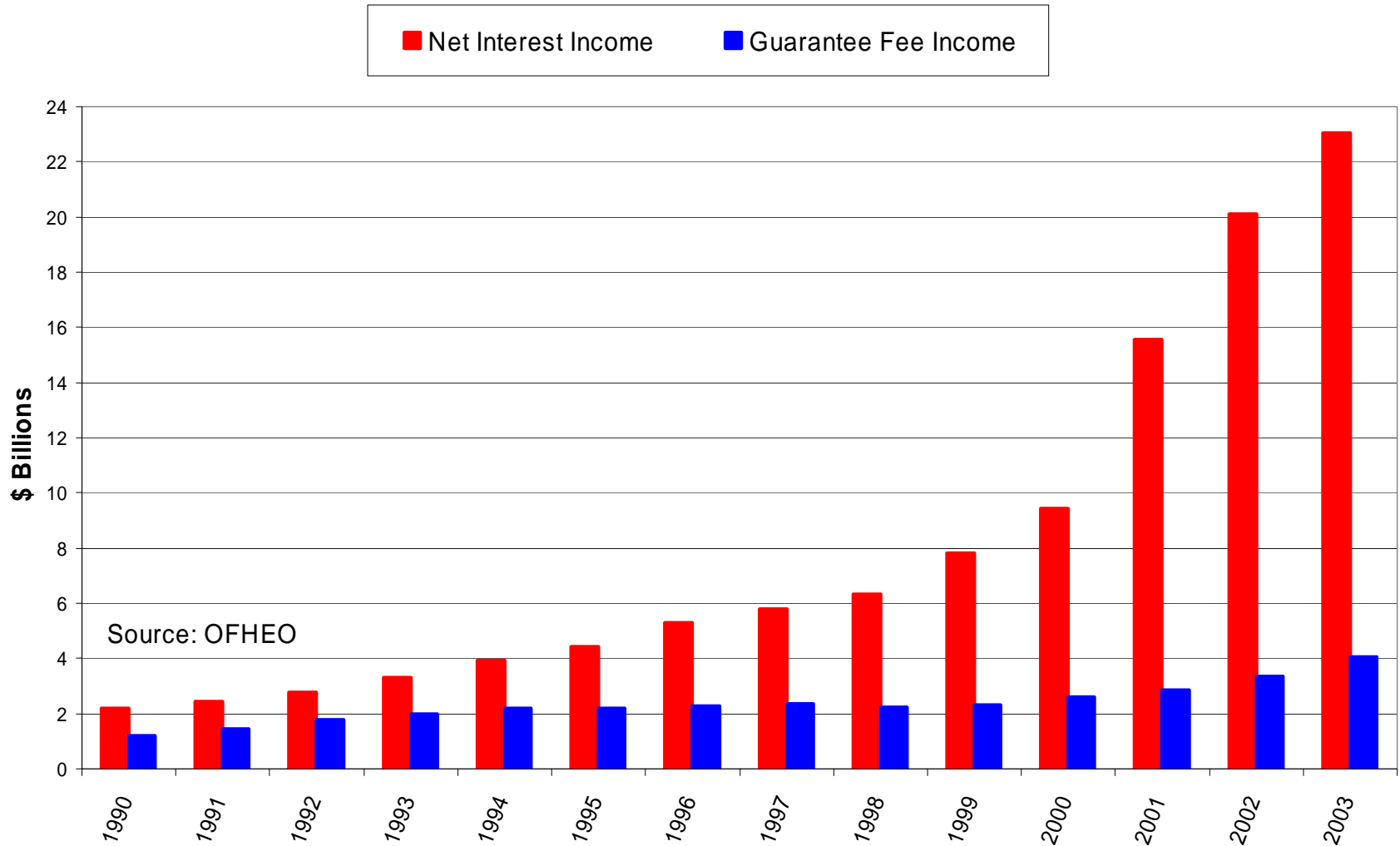
- ◆ Redesign the fixed rate, prepayable, mortgage (first best):
  - The prepayment option is the major problem.
  - US commercial mortgage markets have created functional, but not free, system for prepayment option.
- ◆ Raise F&F capital requirements:
  - Higher requirements can create riskier behavior;
  - Requires higher level of regulatory oversight.
- ◆ Full privatization has been considered since 1996:
  - Difficult to implement without FF cooperation.
  - Removing retained portfolio achieves the major benefit of privatization and is easy to implement.

# Conclusions

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- ◆ The FF retained portfolios increasingly create unacceptable risks for the US financial system.
- ◆ The portfolios, and thereby their risks, are readily eliminated through an orderly repayment process.
- ◆ Gainers and losers:
  - US taxpayers, financial system, have major gain;
  - US mortgage borrowers stay about even currently, may well gain in long-run;
  - FF shareholders lose currently.

# Annex 1: Fannie Mae and Freddie Mac Income by Business Line



# Annex 2: US Interest Rates (Constant Maturity Treasury)

