



2010 Credit Markets Symposium

Will Deleveraging Derail the Recovery?

April 16, 2010

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These comments do not necessarily reflect the views of the Federal Reserve Bank of St. Louis or of the Federal Reserve.



Will Deleveraging Derail The Recovery?

- **US-dollar leverage trends since 1952**
 - **Large, broad-based increases until Q1.2009**
 - Total debt grew twice as fast as GDP, accelerating from the early 1980s
 - Private-sector debt grew four times faster than government debt
 - **Rapid private-sector deleveraging since Q1.2009**
 - Households, businesses, and financial sectors are shedding debt at fastest rate since at least 1952
 - Federal-government borrowing and agency MBS are partial offsets



Large, Broad-Based Leverage Increases Until Q1.2009

<i>Measured in Q1 of each year</i>	All credit- market debt	Federal govern- ment	House- holds	Domestic non- financial business	Domestic financial sectors	Agency MBS
(1) Debt growth as multiple of GDP growth, 1952-1985	1.4 x	0.6 x	2.1 x	1.9 x	9.9 x	576.3 x
(2) Debt growth as multiple of GDP growth, 1985-2009	2.0 x	1.4 x	2.0 x	1.4 x	4.5 x	4.8 x

Source: Federal Reserve Flow of Funds Accounts;
first period is Q1.1952 to Q1.1985, second period is Q1.1985 to Q1.2009



Rapid Private-Sector Deleveraging During 2009

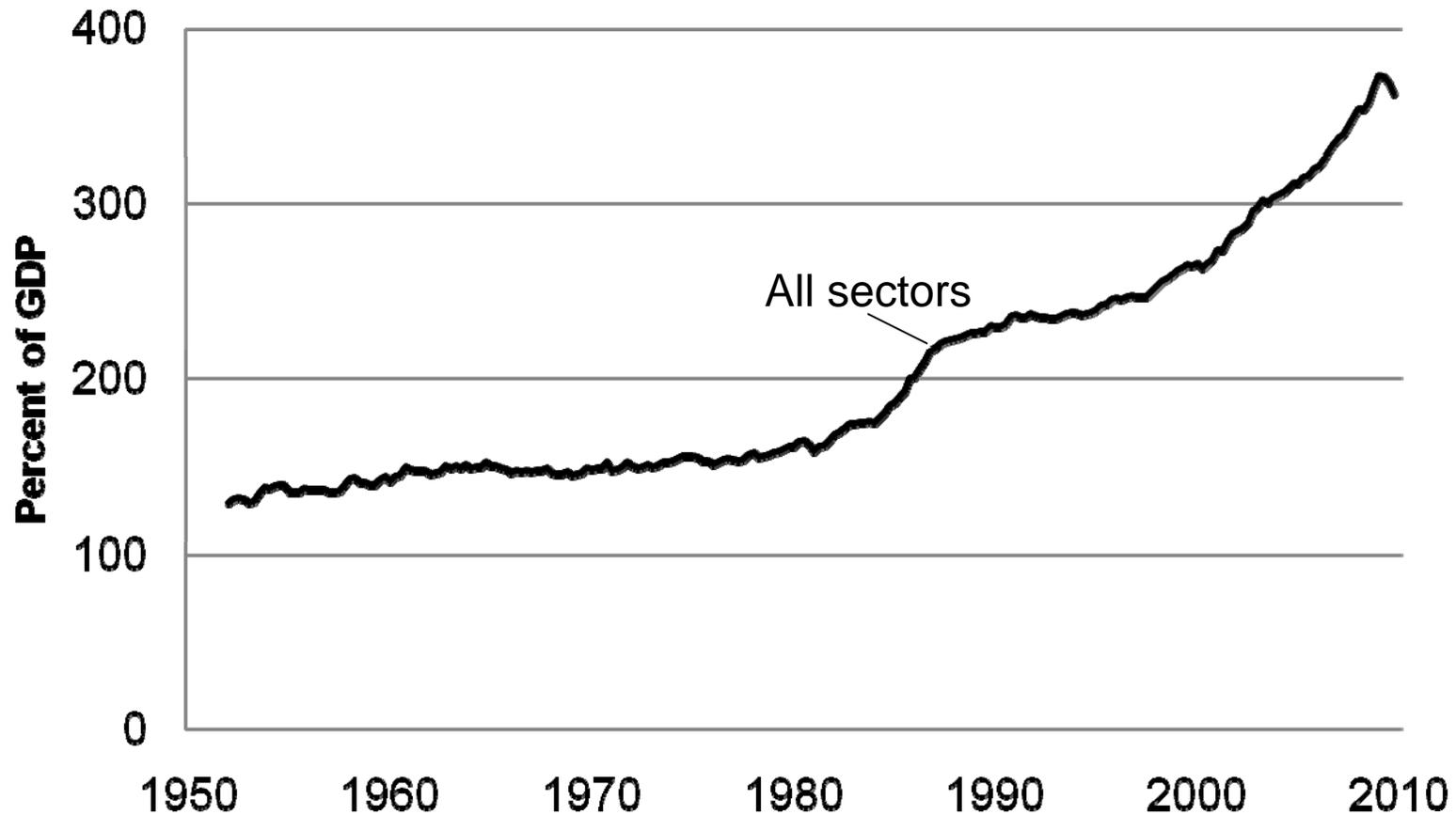
	All credit-market debt	Federal government	Households	Domestic non-financial business	Domestic financial sectors	Agency MBS
(2) Debt growth as multiple of GDP growth, Q1.1985-Q1.2009	2.01 x	1.41 x	1.97 x	1.37 x	4.55 x	4.82 x
			Domestic private sectors			
(3) Debt growth as multiple of GDP growth, Q1.2009-Q4.2009	0.97 x	1.12 x	0.97 x	0.96 x	0.90 x	1.05 x

Source: Federal Reserve Flow of Funds Accounts;
first period is Q1.1985 to Q1.2009, second period is Q1.2009 to Q4.2009



Broad-Based Increases in Leverage, Accelerating After Early 1980s

US-Dollar Credit-Market Debt Outstanding

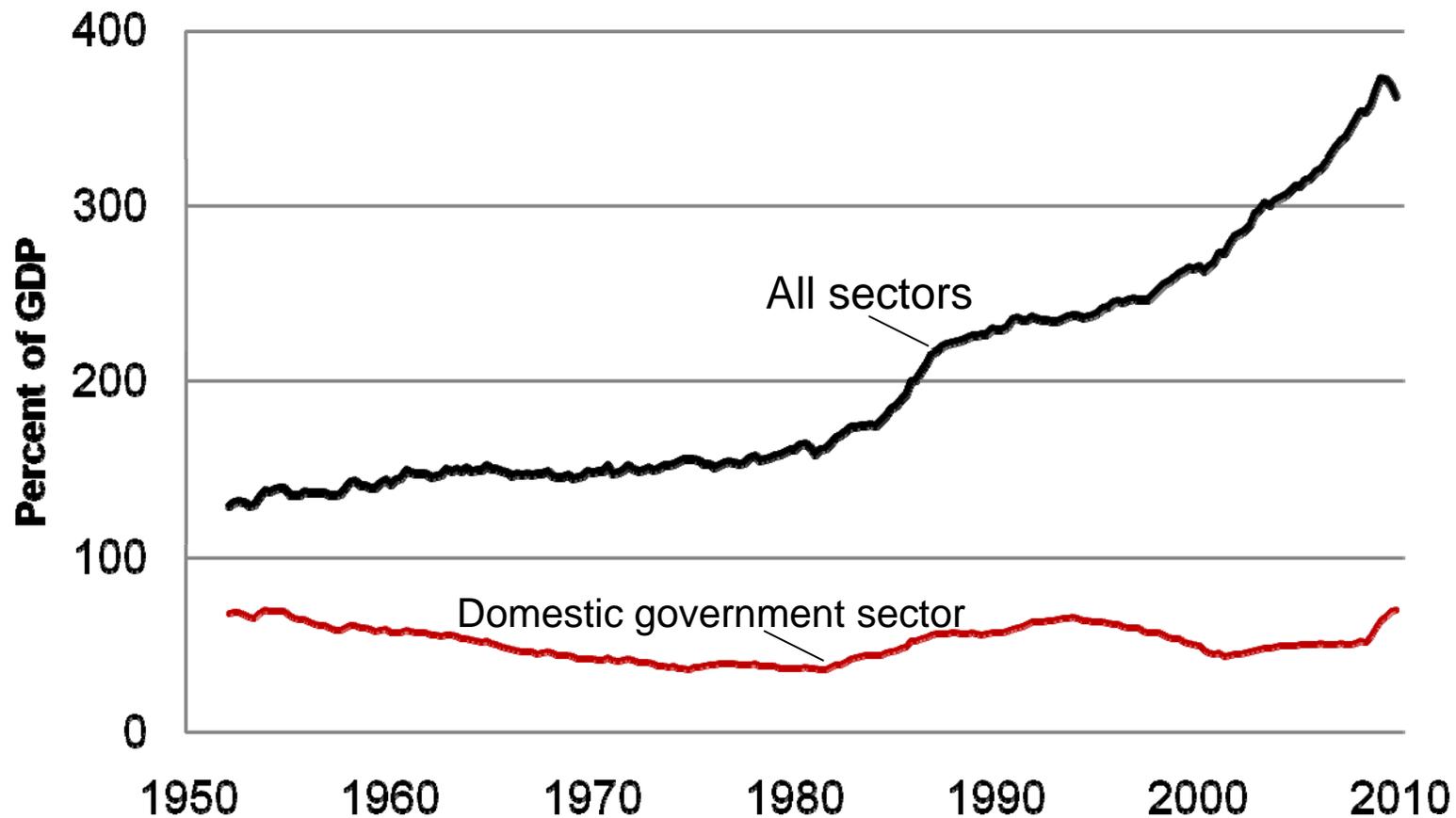


Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



Broad-Based Increases in Leverage, Accelerating After Early 1980s

US-Dollar Credit-Market Debt Outstanding

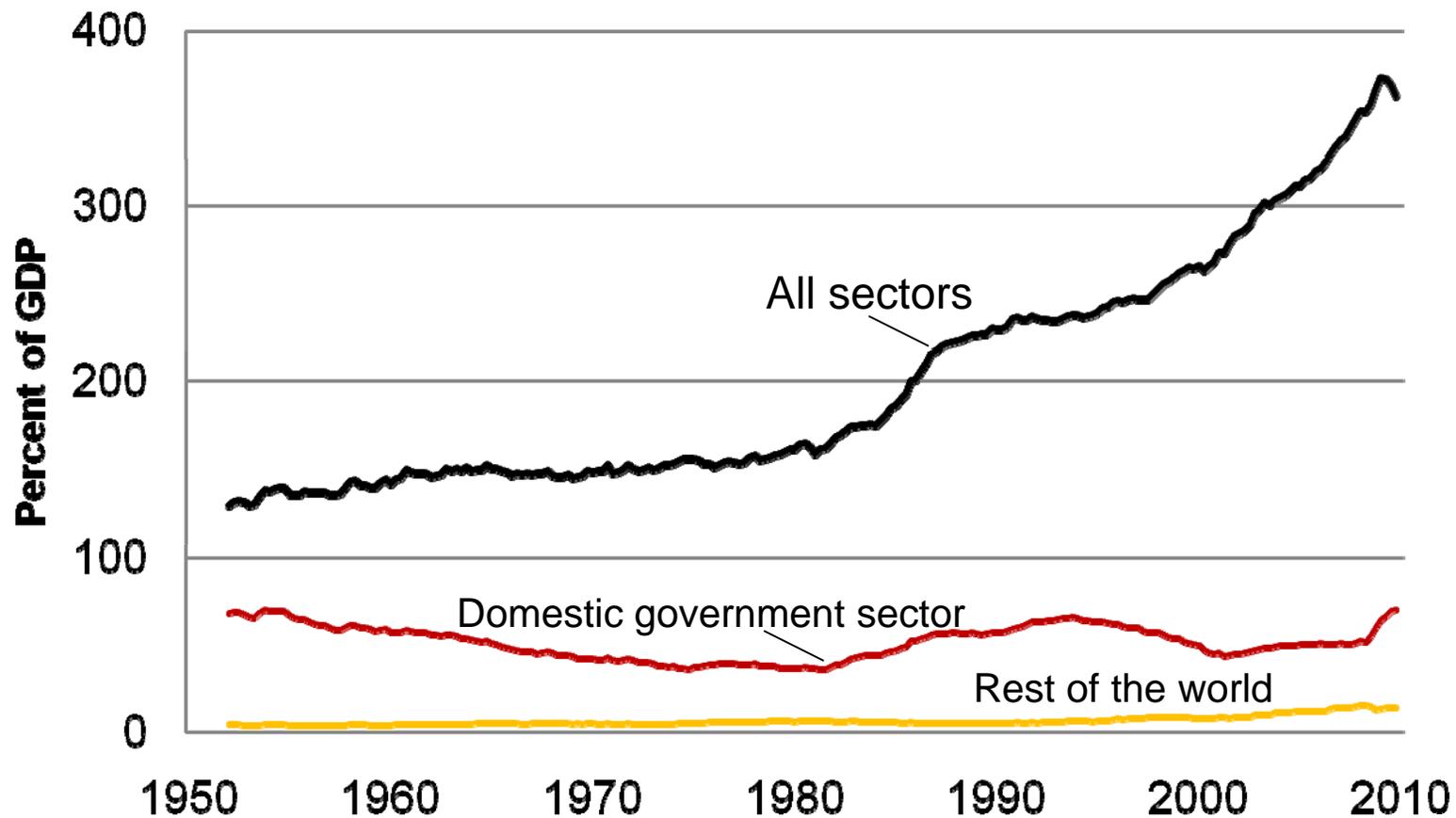


Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



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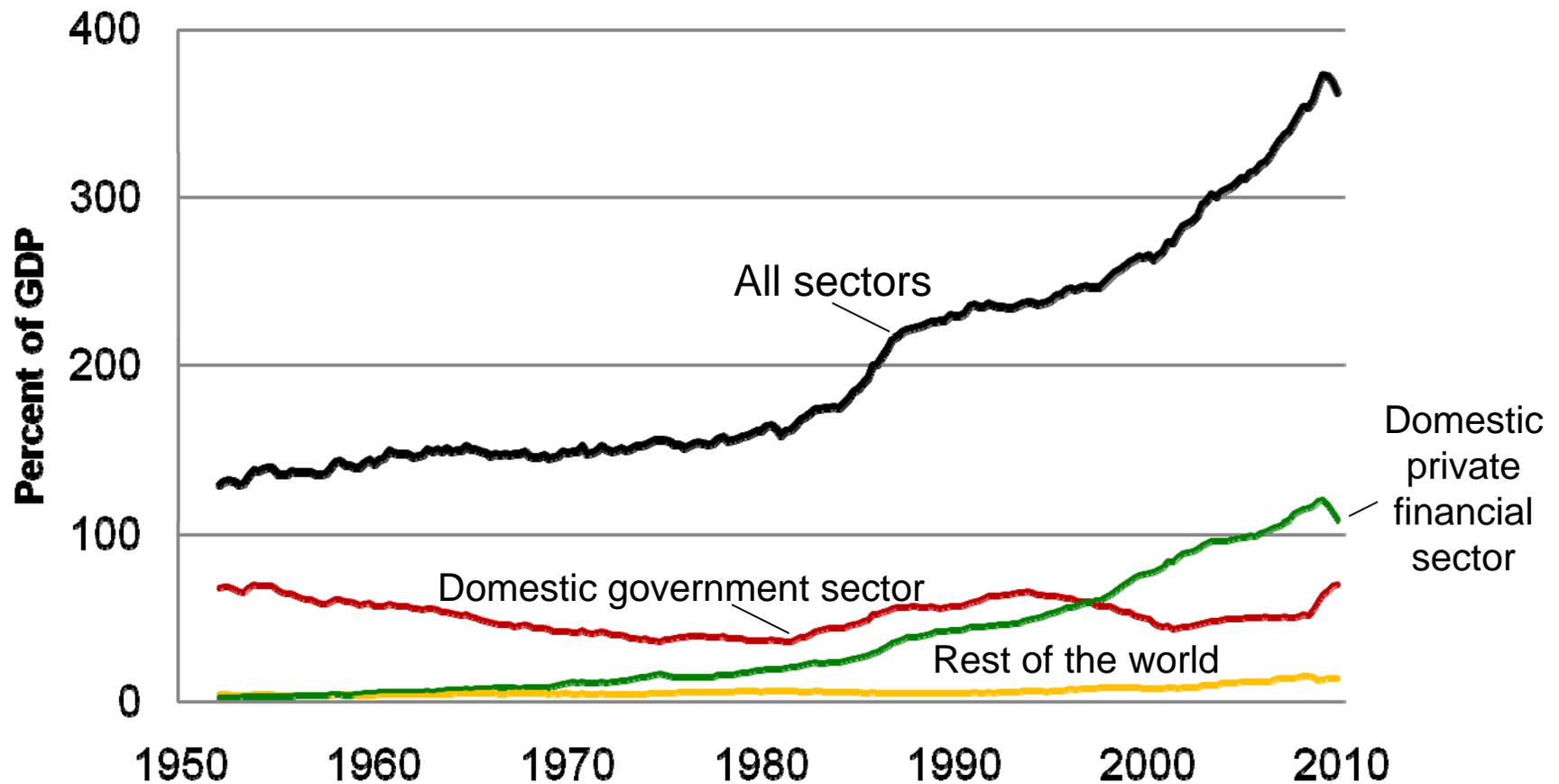


Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



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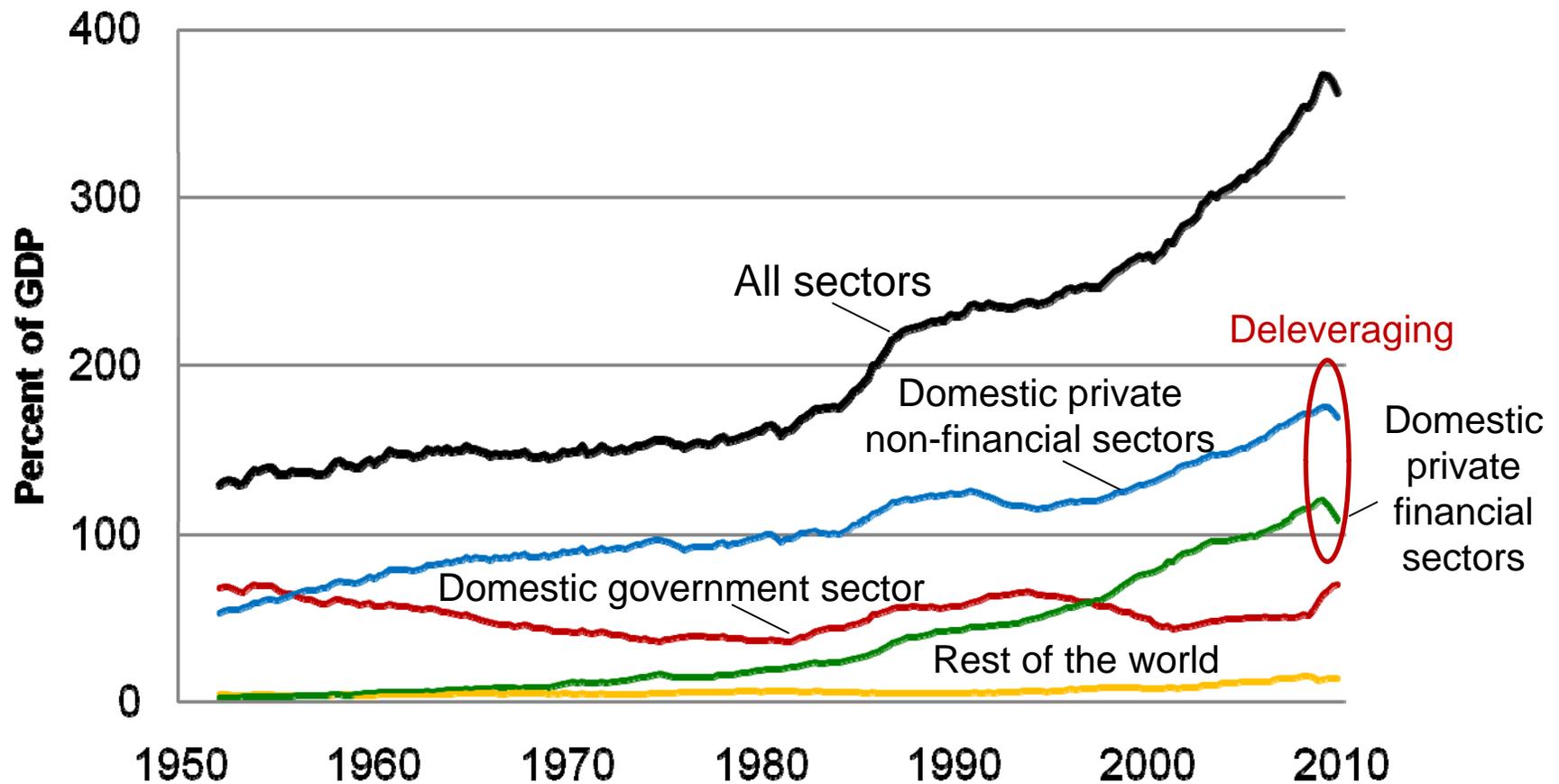


Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



Broad-Based Increases in Leverage, Accelerating After Early 1980s

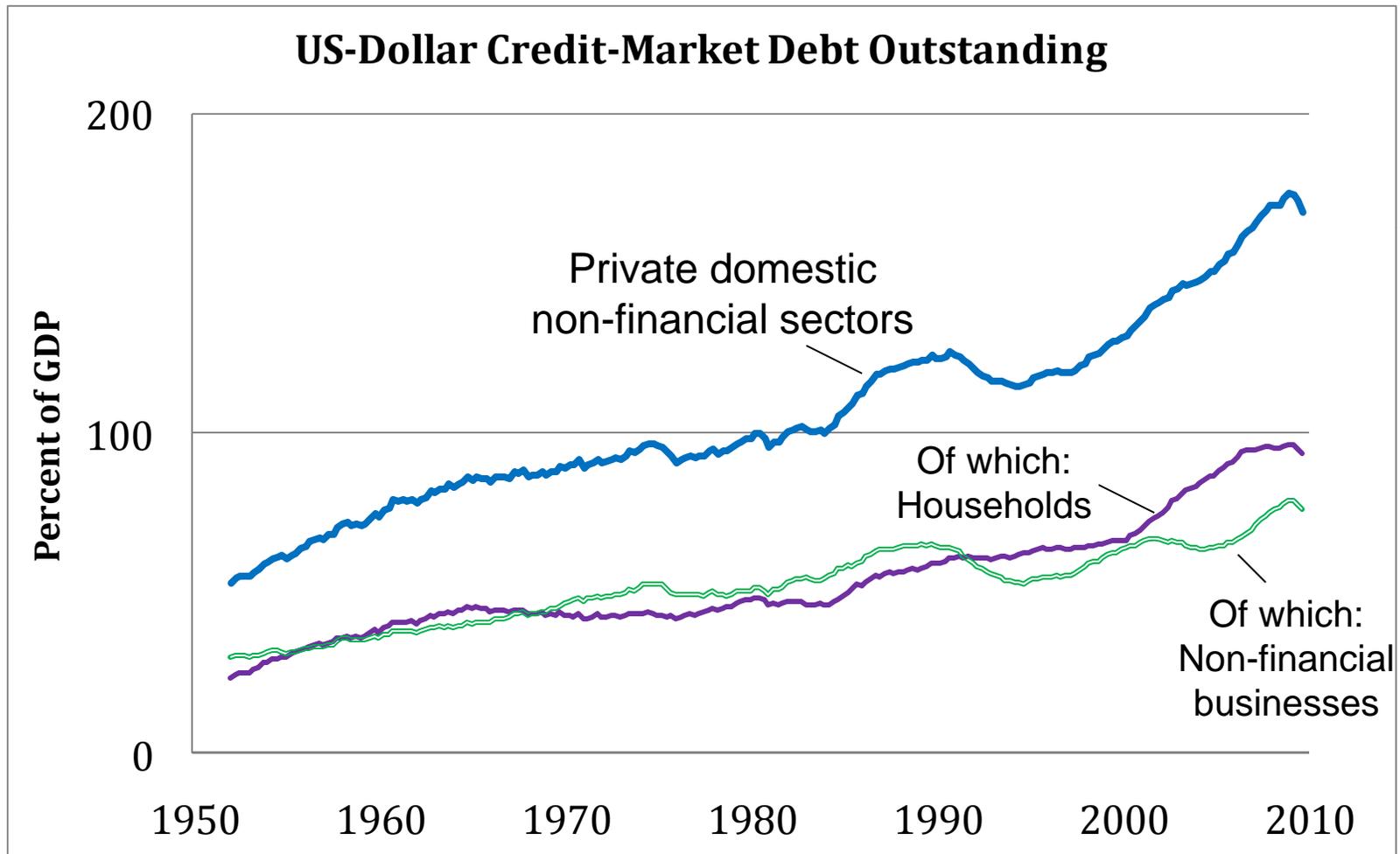
US-Dollar Credit-Market Debt Outstanding



Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



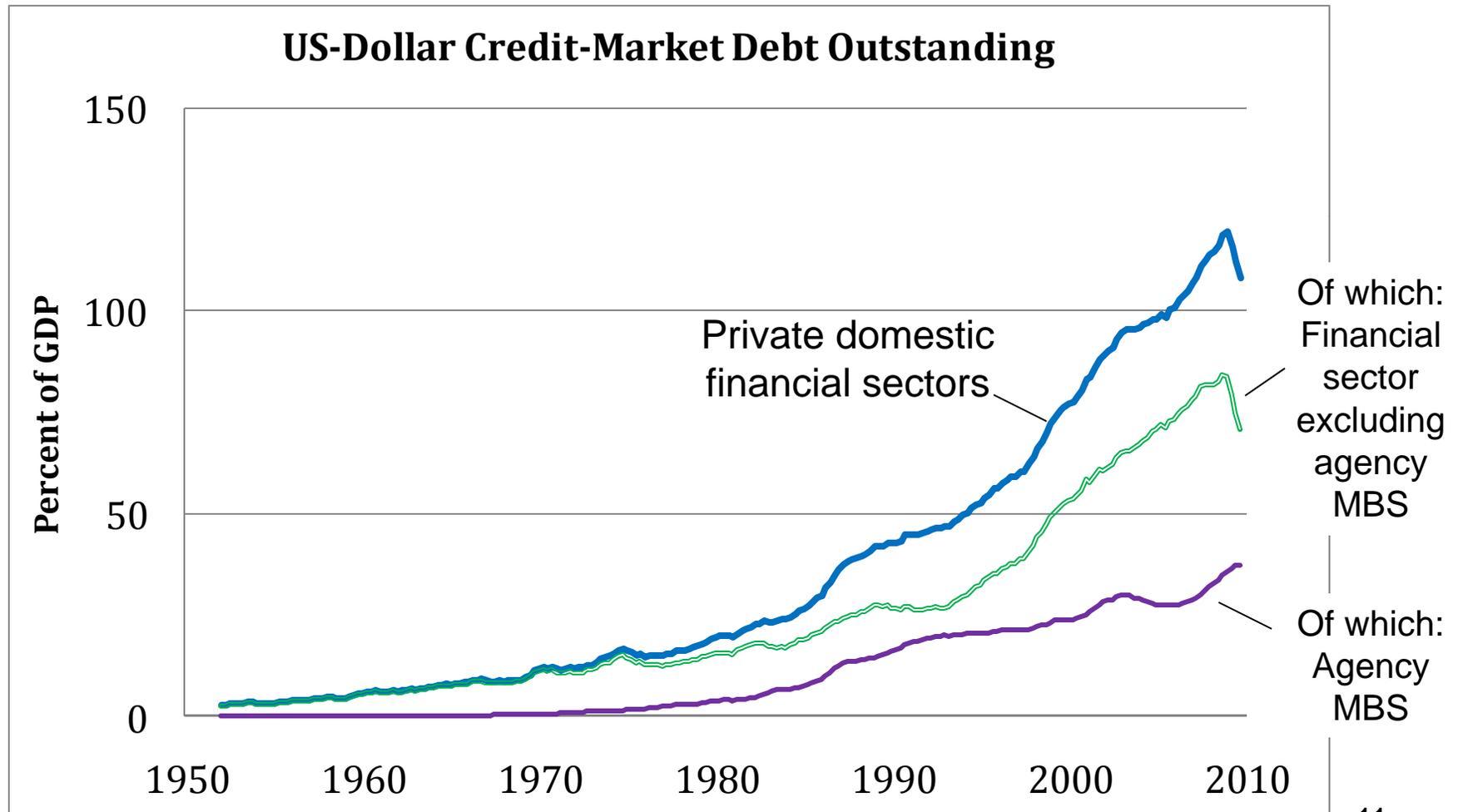
Leverage of Households Increased Faster Than That of Non-Financial Businesses



Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



Leverage of Financial Sectors Grew Especially Fast



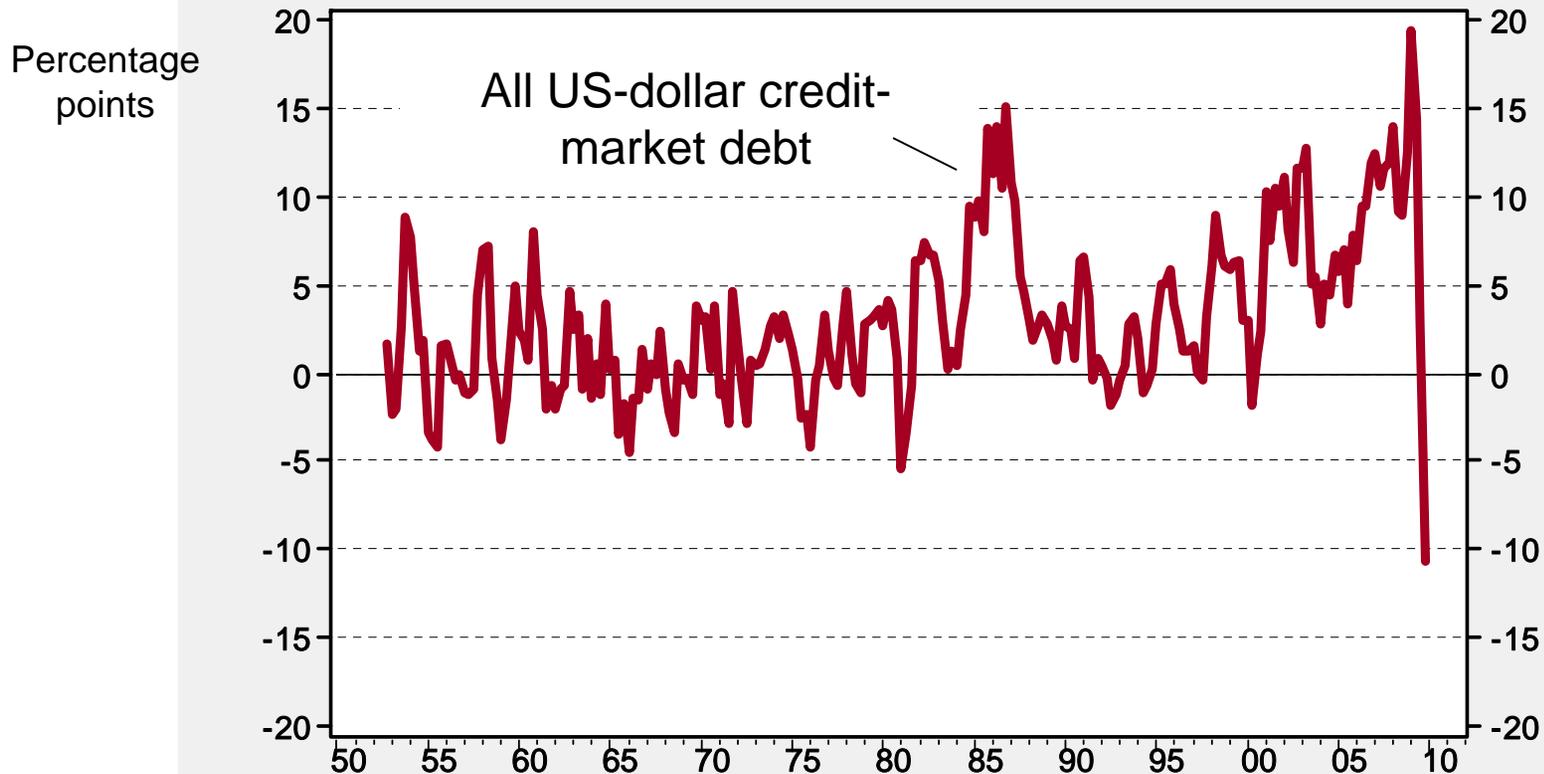
Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



Deleveraging During 2009 Was Fastest In At Least 60 Years

Three-Quarter Change in Ratio of Total Debt to GDP

Percentage points



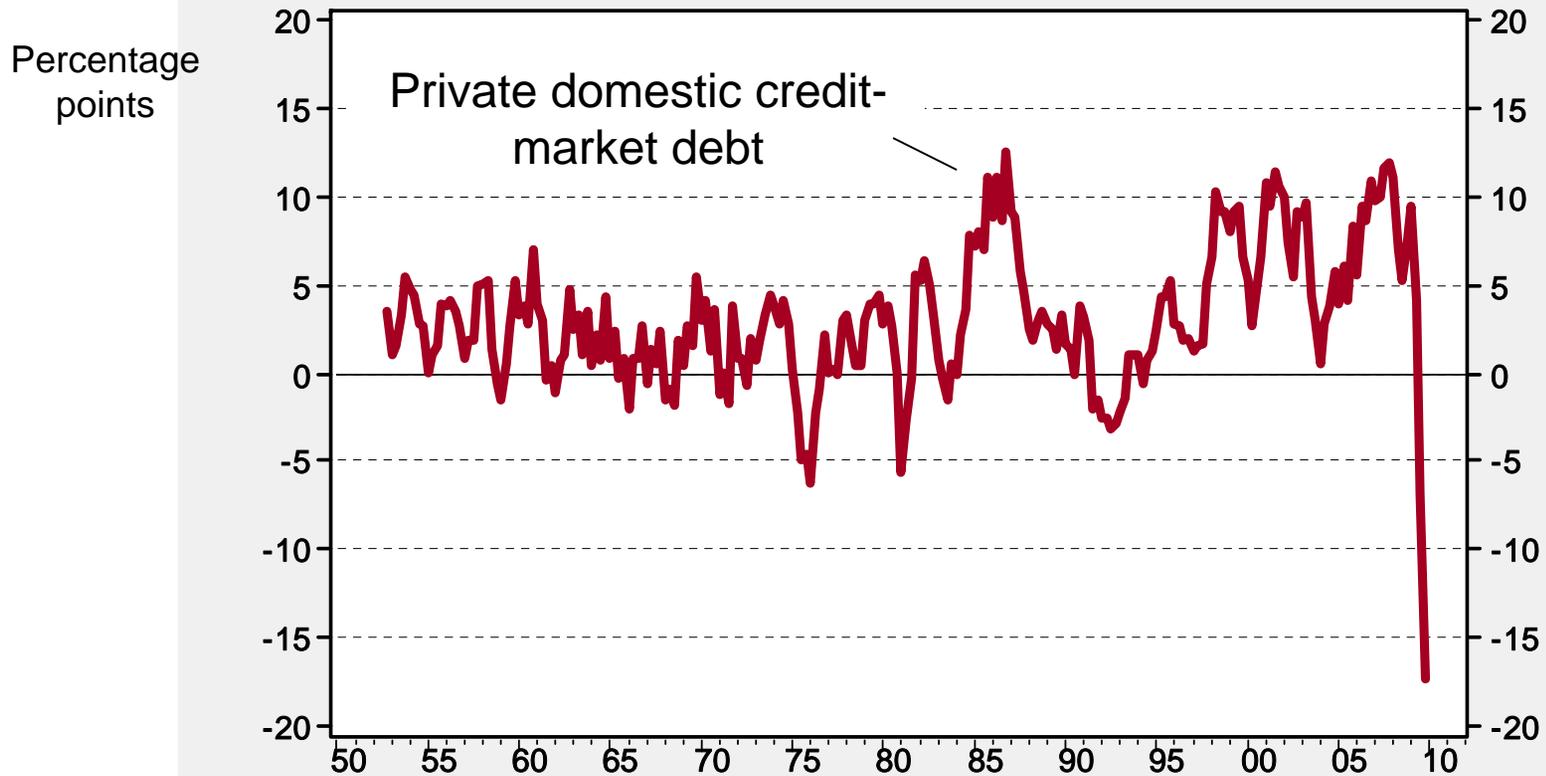
Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



Private Domestic Sectors Are the Source of Deleveraging...

Three-Quarter Change in Ratio of Private Domestic Debt to GDP

Percentage points



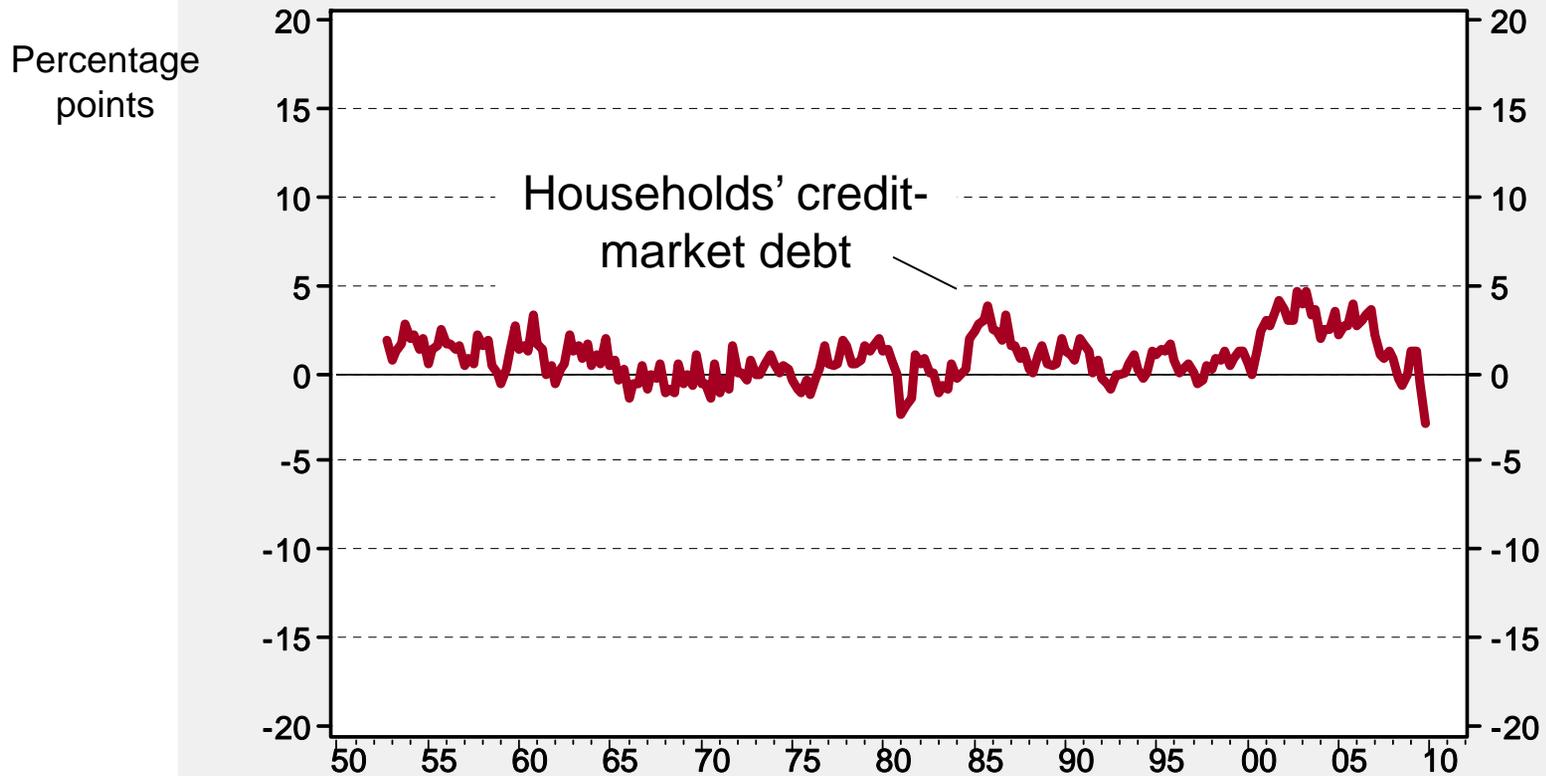
Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



... Including the Household Sector...

Three-Quarter Change in Ratio of Household Debt to GDP

Percentage points



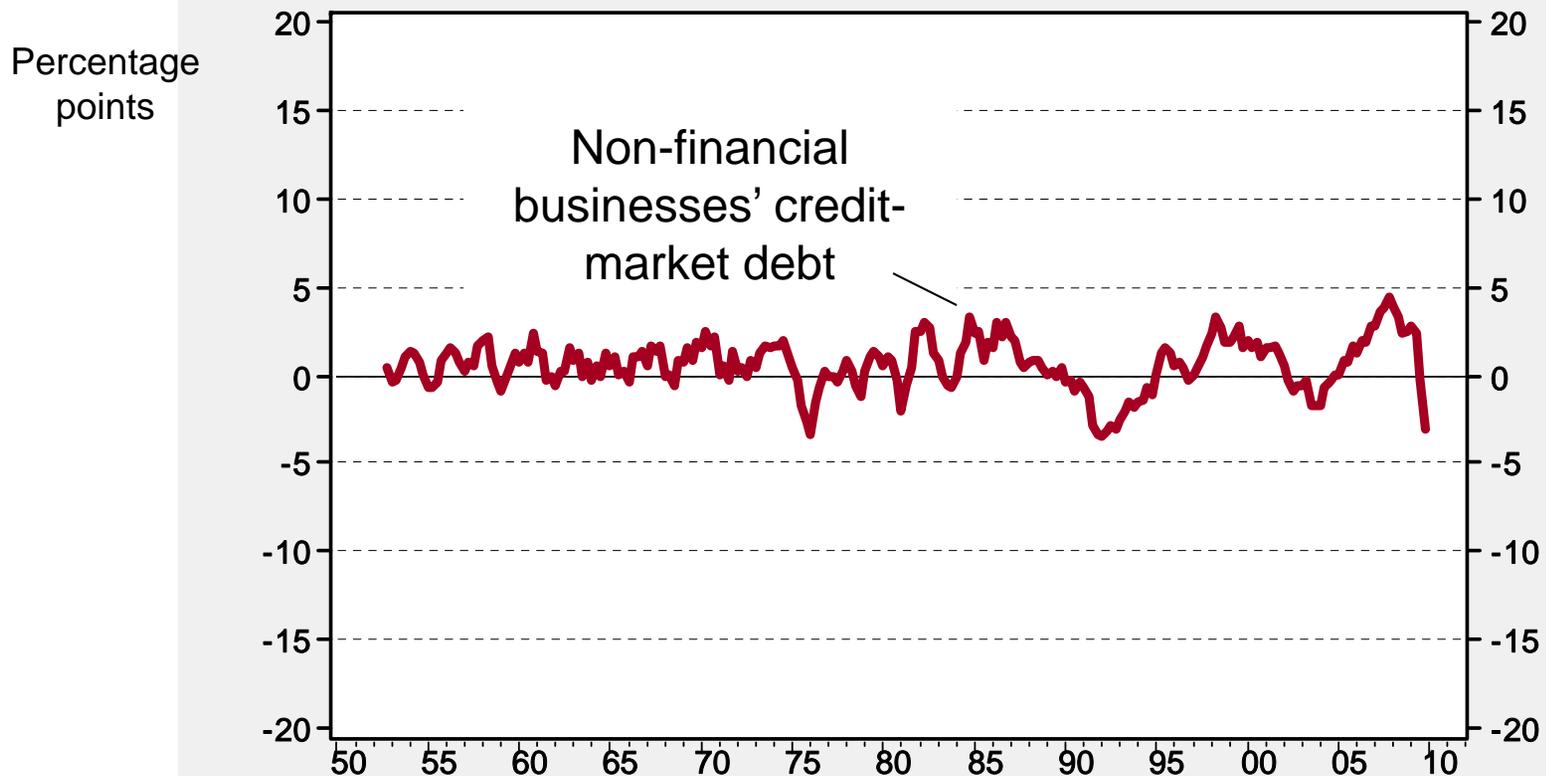
Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



... *Non-Financial Businesses* ...

Three-Quarter Change in Ratio of Non-Financial Businesses' Debt to GDP

Percentage points



Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009



... And Especially Financial Sectors

Three-Quarter Change in Ratio of Financial Sectors' Debt to GDP

Percentage points



Source: Federal Reserve Flow of Funds Accounts; quarterly through Q4.2009

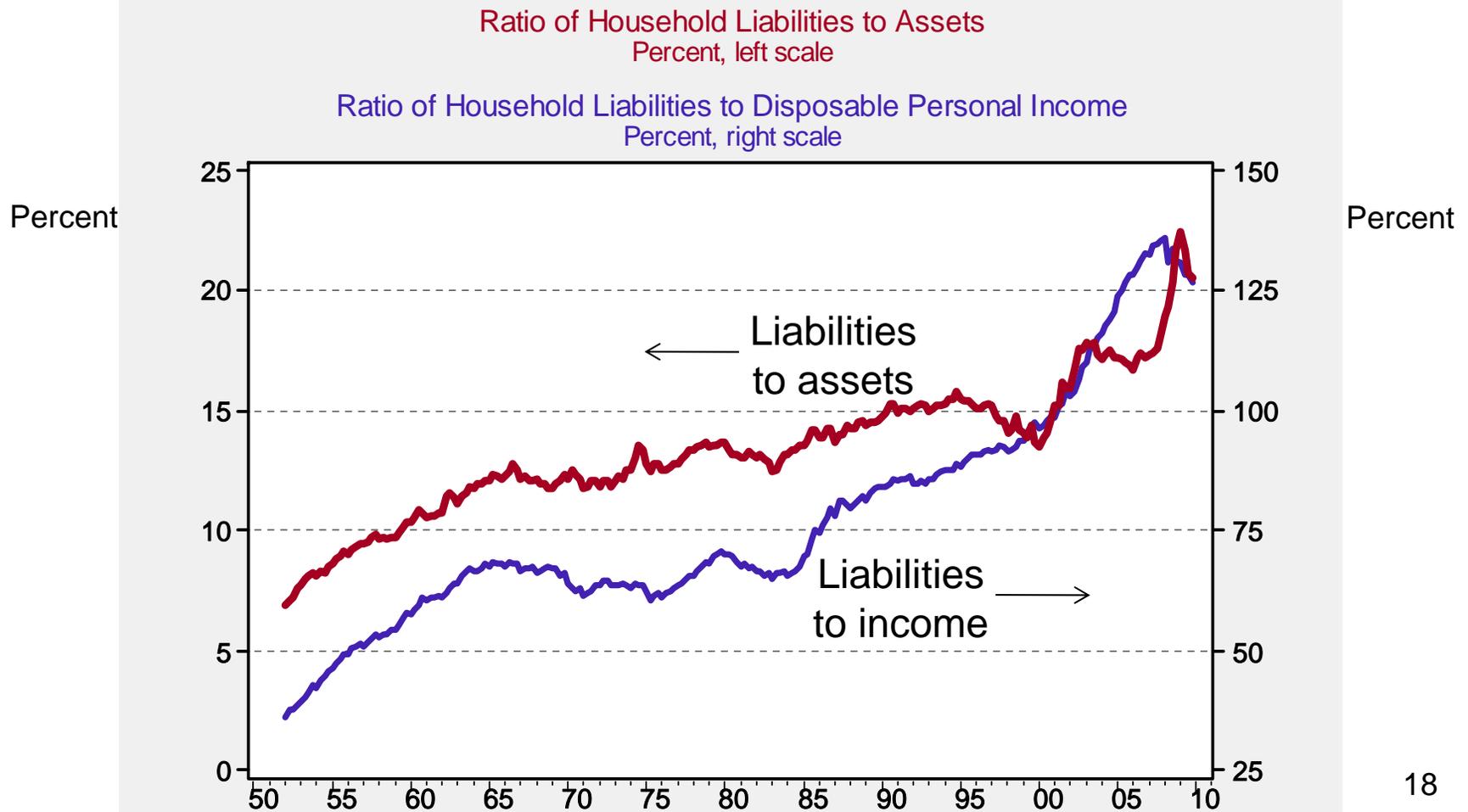


Will Deleveraging Derail The Recovery?

- **Will private-sector deleveraging continue?**
 - **Why deleverage? Too much debt!**
 - **Was 2009 a bump in the road, or a fork?**
- **Could deleveraging derail the recovery?**
 - **Evidence from the household sector:
Borrowing predicts spending**
 - **Except for agency MBS, financial sector not supporting net credit growth**



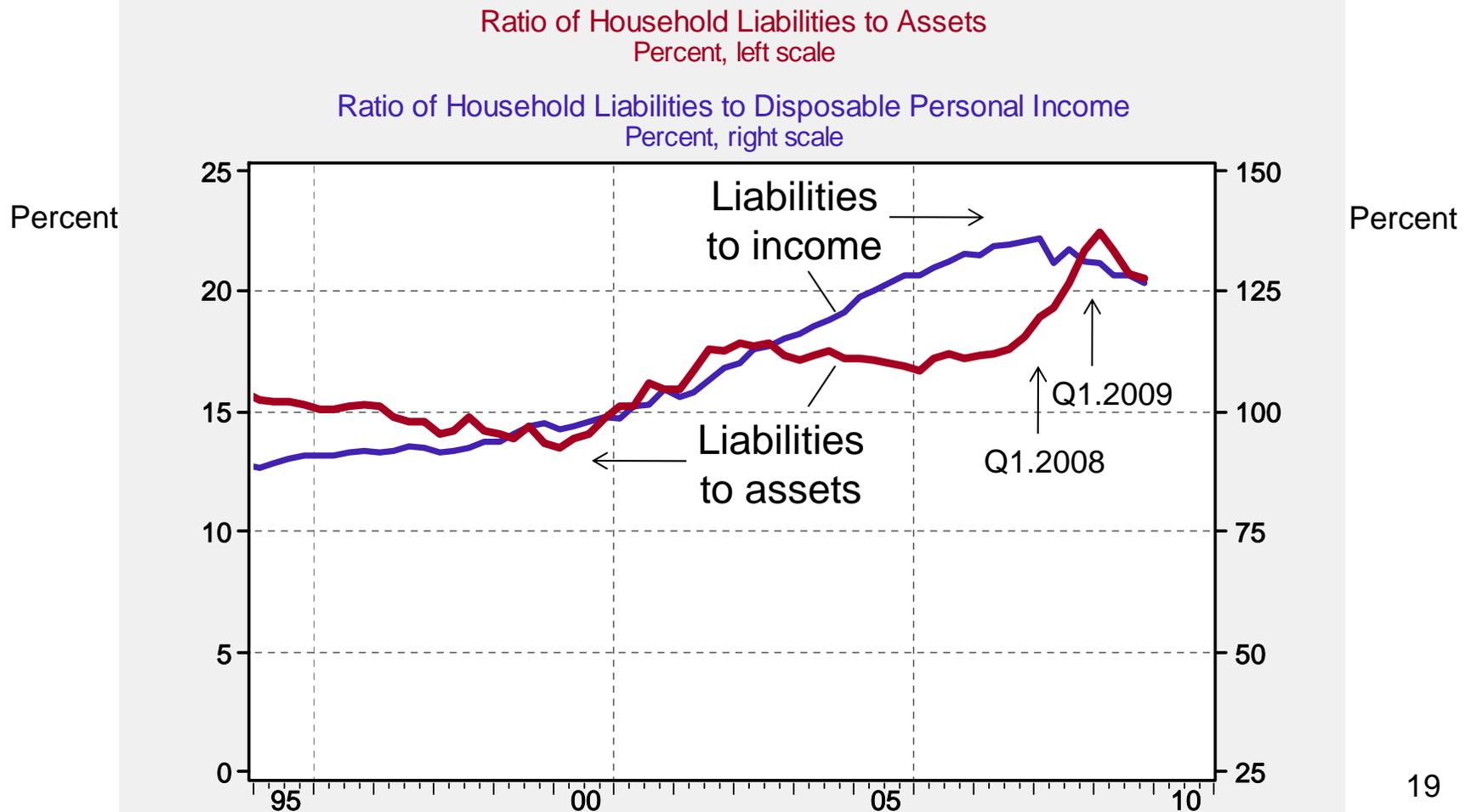
Household Leverage Ratios Reached Historic Highs in 2008-09



Source: Federal Reserve Flow of Funds Accounts; Quarterly through Q4.2009



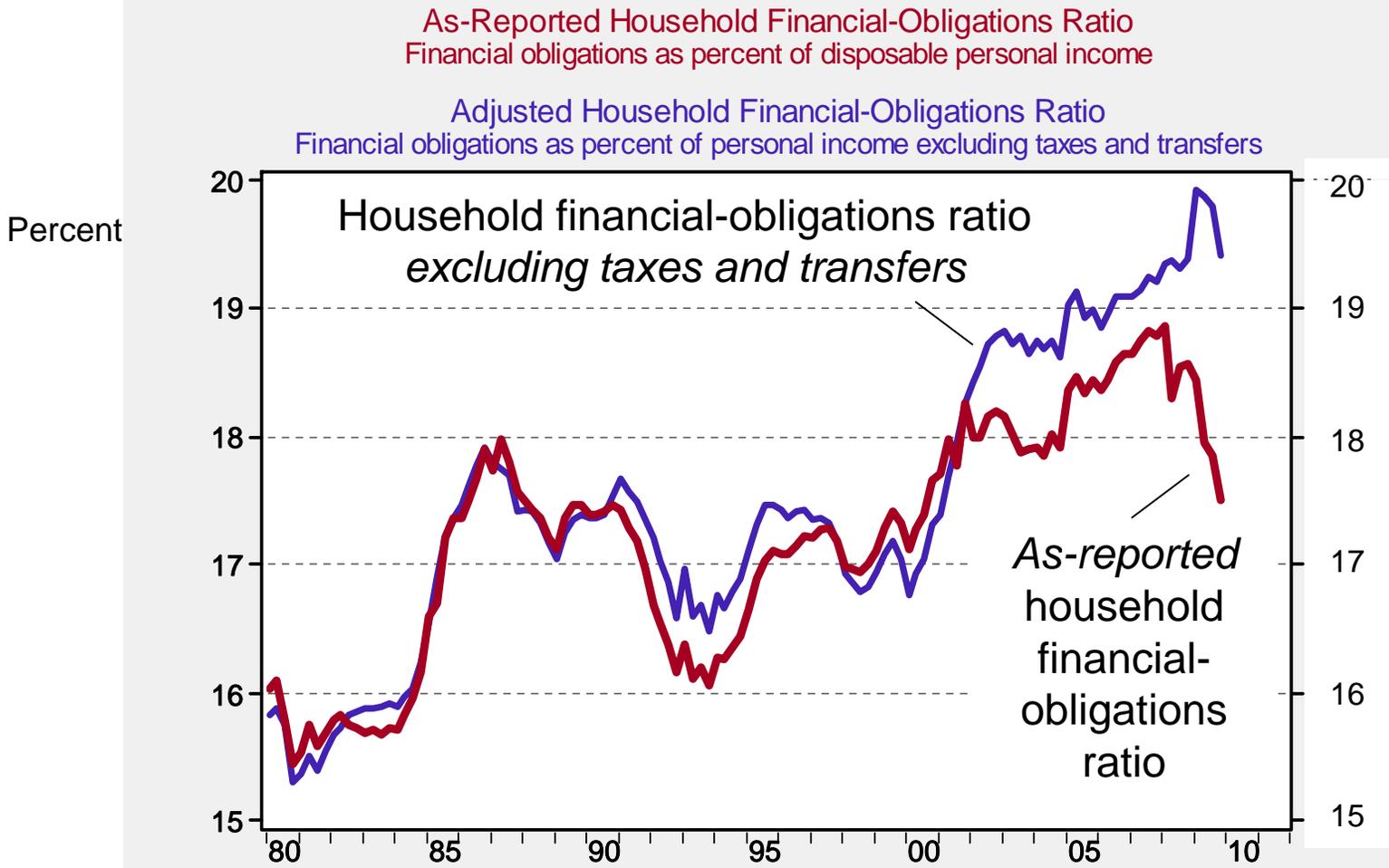
Is This The Beginning of A Sustained Deleveraging of Household Balance Sheets?



Source: Federal Reserve Flow of Funds Accounts; Quarterly through Q4.2009



Household Financial Obligations Remain High Relative to “Core” Income



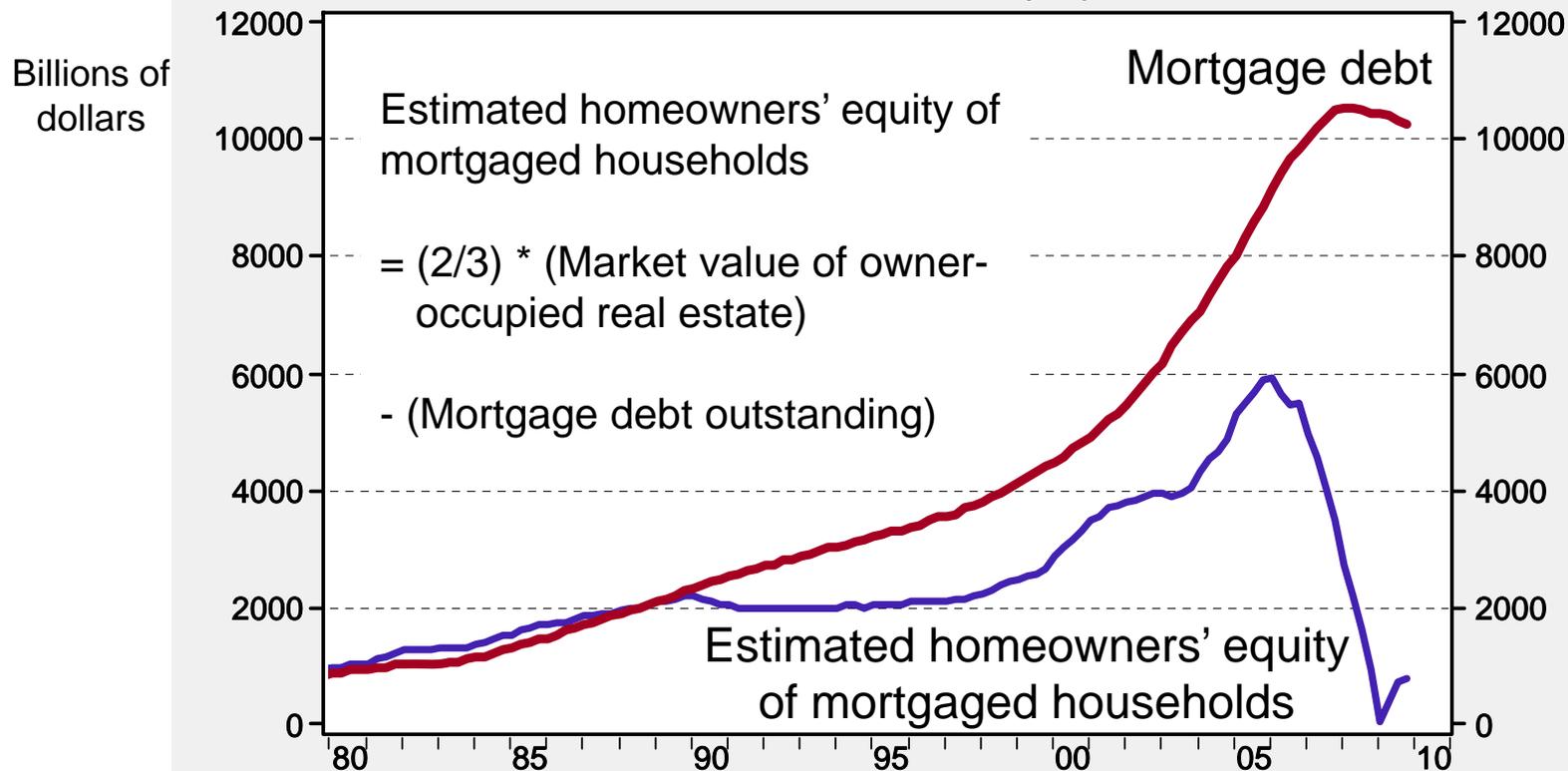
Source: Federal Reserve Board; quarterly through Q4.2009



Homeowners' Equity Among Mortgaged Households Is Severely Depleted

Mortgage Debt Outstanding
Billions of dollars, not seasonally adjusted

Estimate of Mortgaged Homeowners' Equity in Residential Real Estate
Billions of dollars, not seasonally adjusted



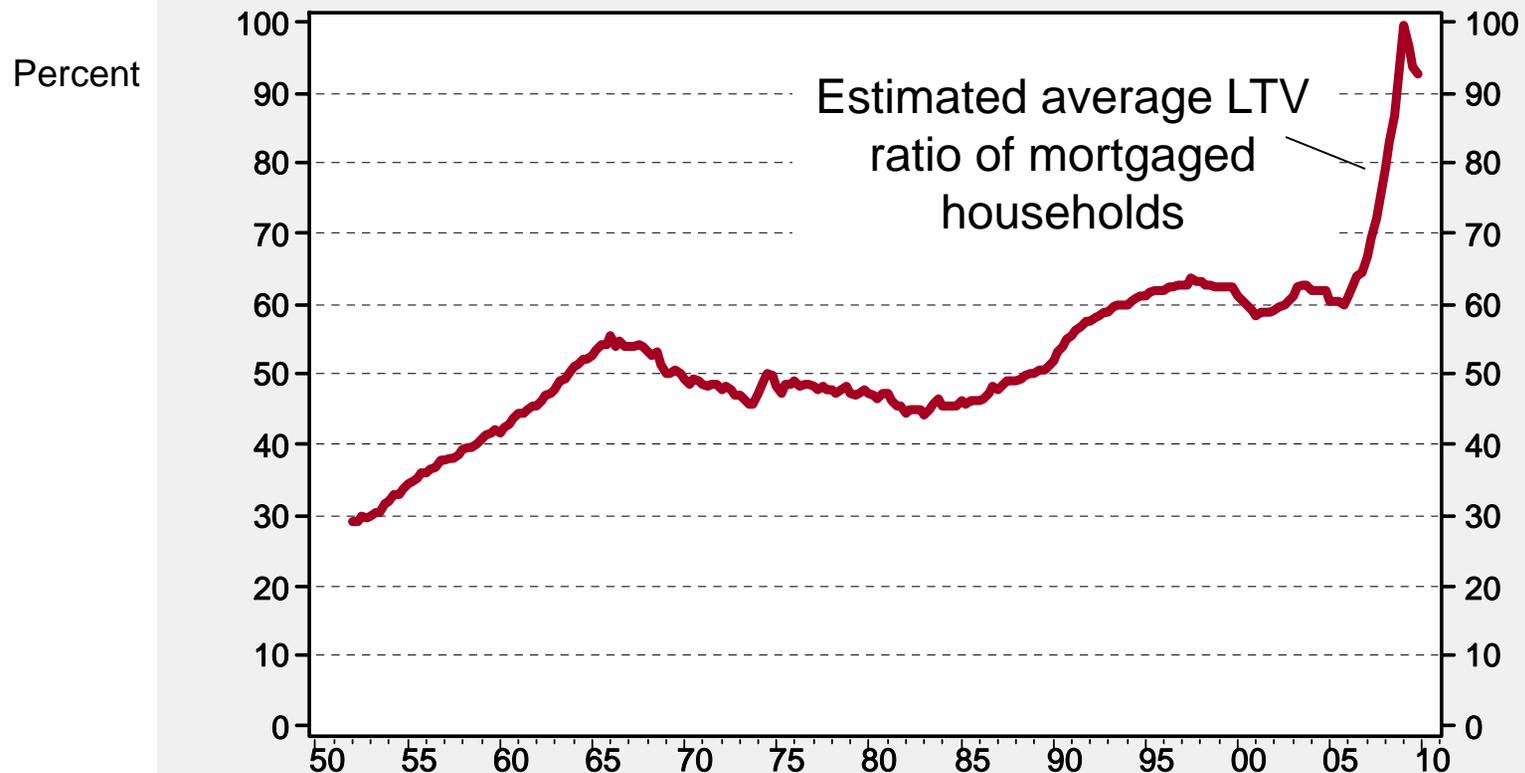
Source: Federal Reserve Flow of Funds Accounts; Quarterly through Q4.2009



LTV Ratios Uncomfortably High

Estimated Ratio of Total Mortgage Debt to Value of Owner-Occupied Real Estate

Percent



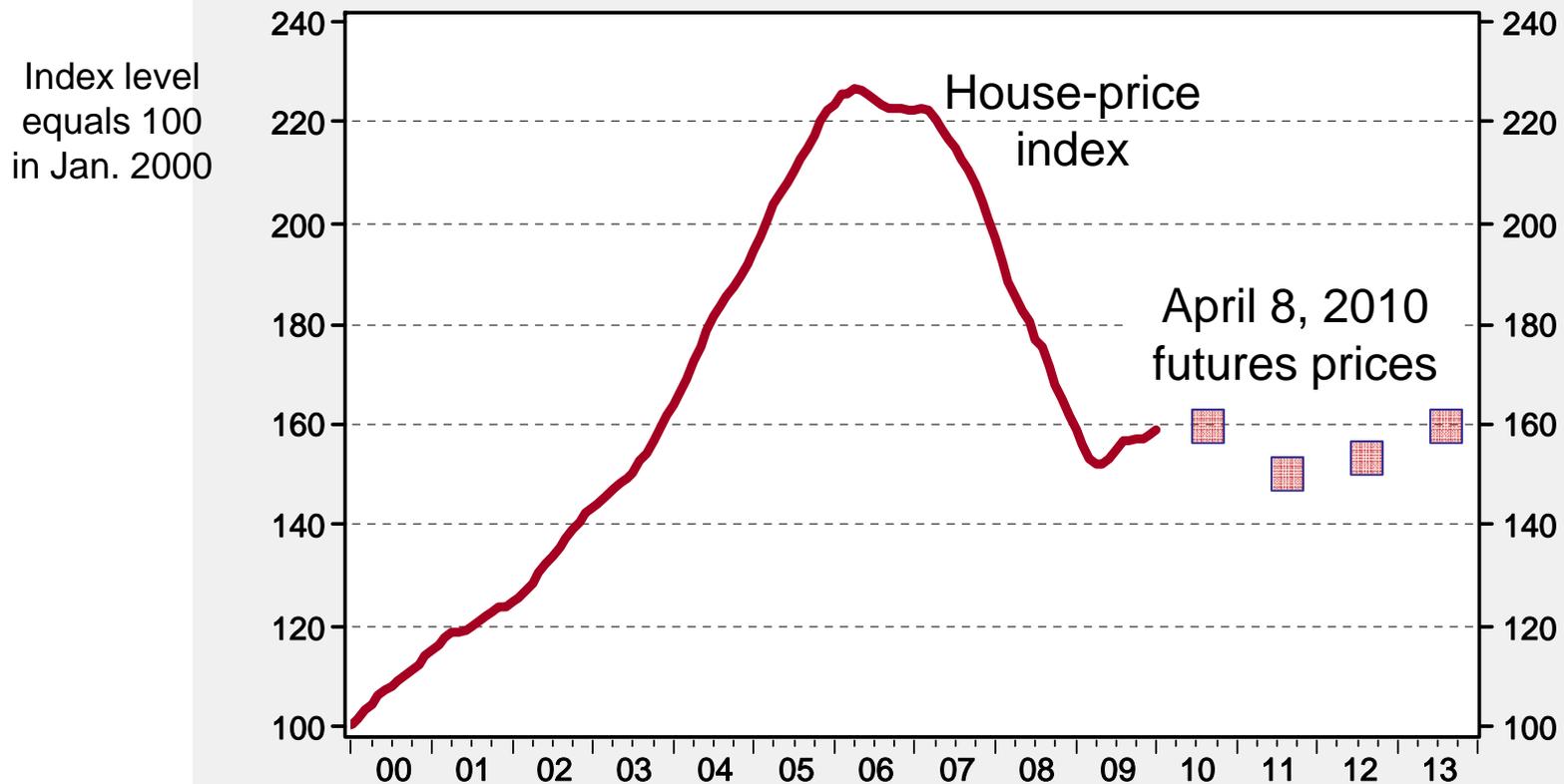
Source: Federal Reserve Flow of Funds Accounts; Quarterly through Q4.2009



Little House-Price Appreciation Likely

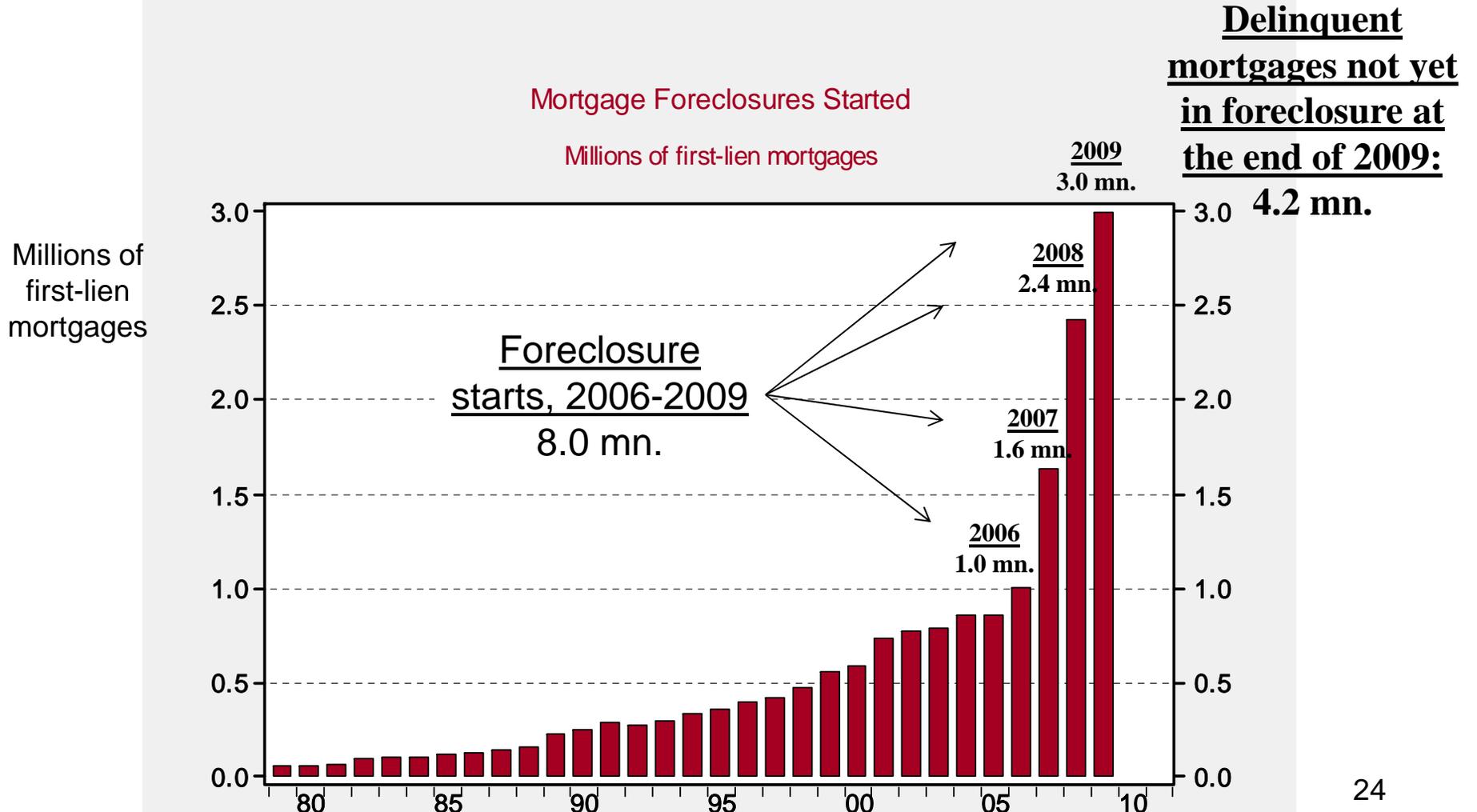
S&P/Case-Shiller Home-Price Index: Composite 10

Index equals 100 in Jan. 2000, seasonally adjusted





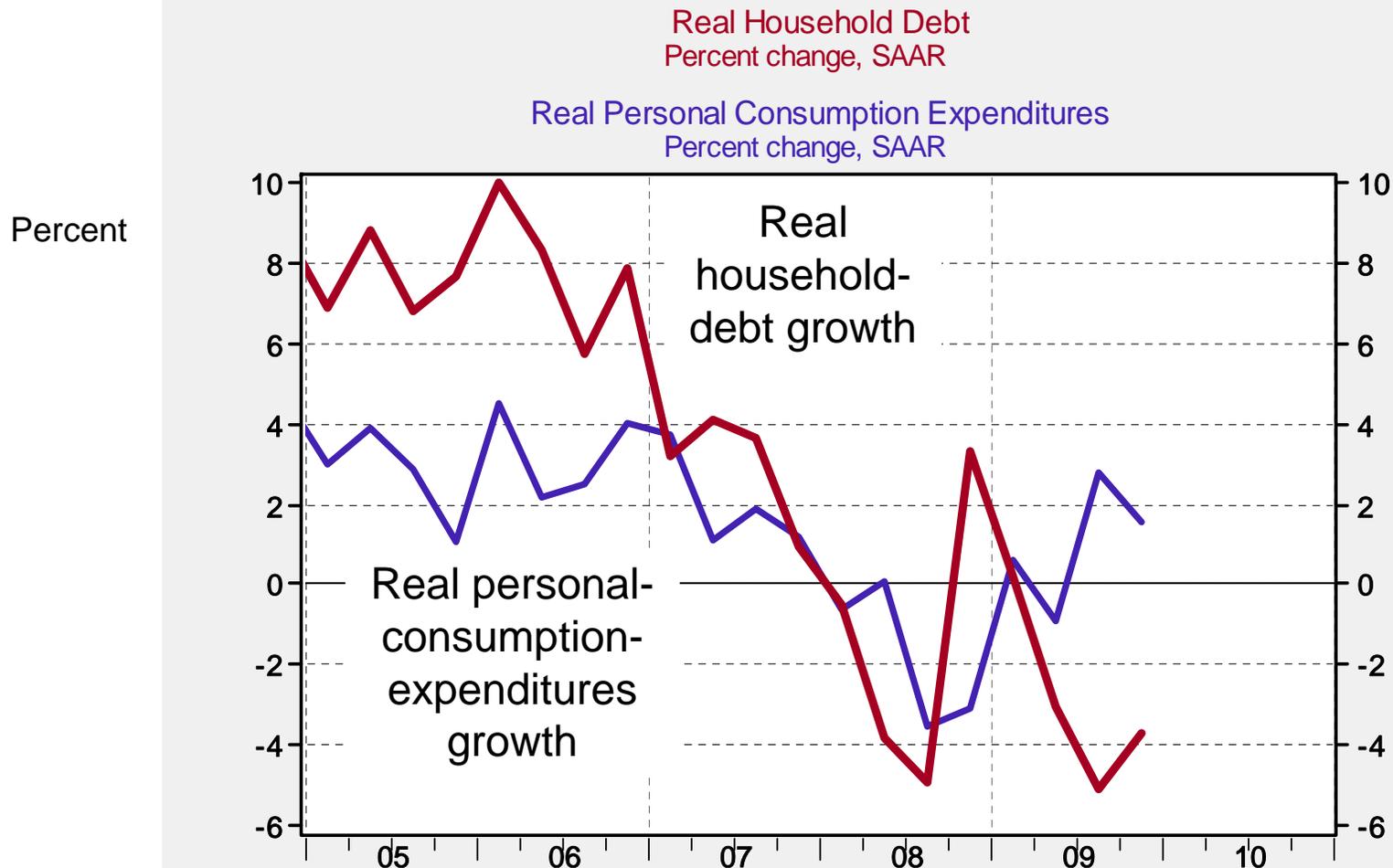
Mortgage Distress Likely to Remain Intense



Source: Mortgage Bankers Association; Annual data through 2009, adjusted for MBA's 80% coverage.



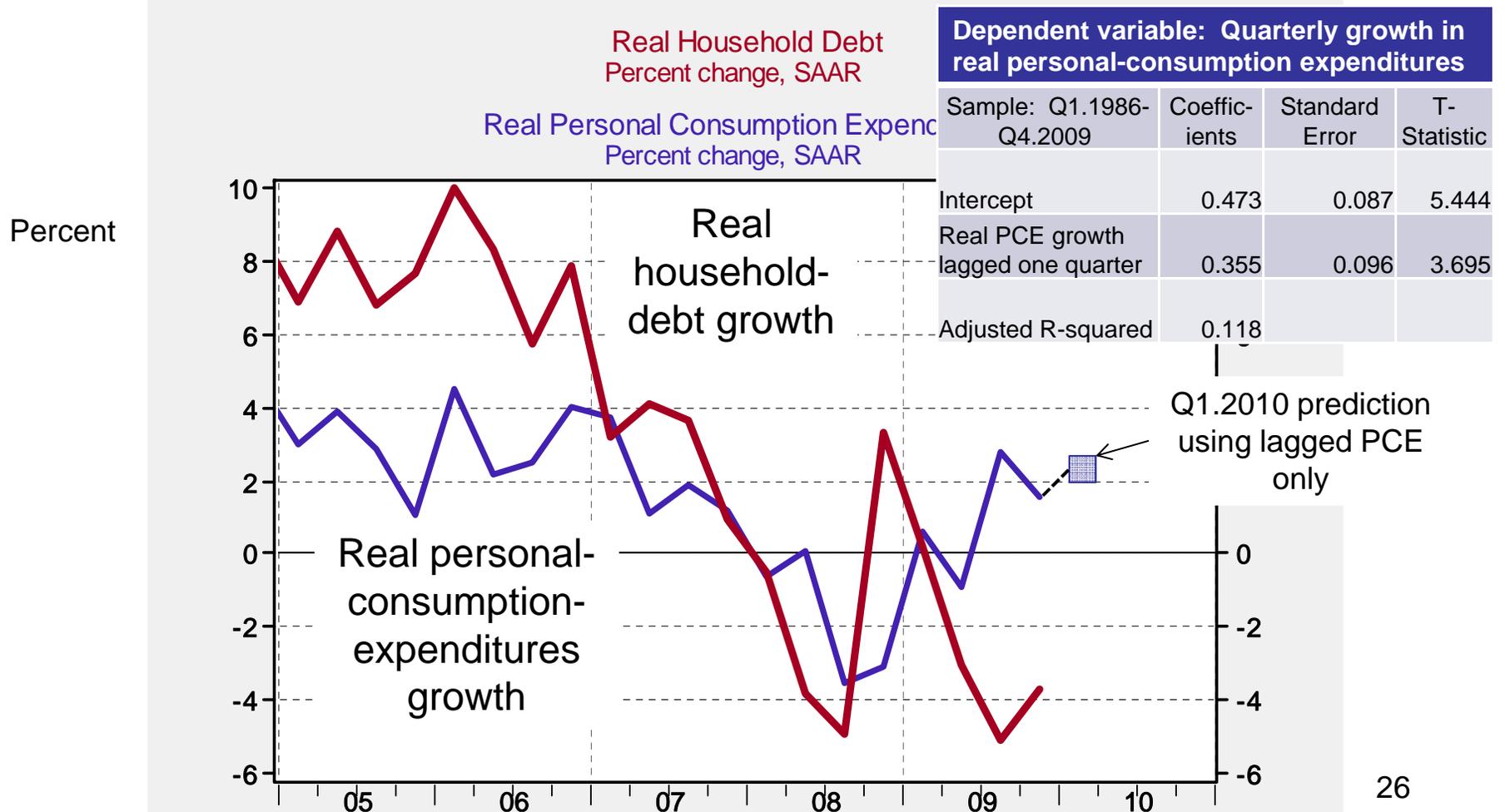
Forecasting Model With Household Borrowing Predicts Slower Consumer Spending



Sources: Bureau of Economic Analysis, Federal Reserve Flow of Funds Accounts; Quarterly through Q4.2009



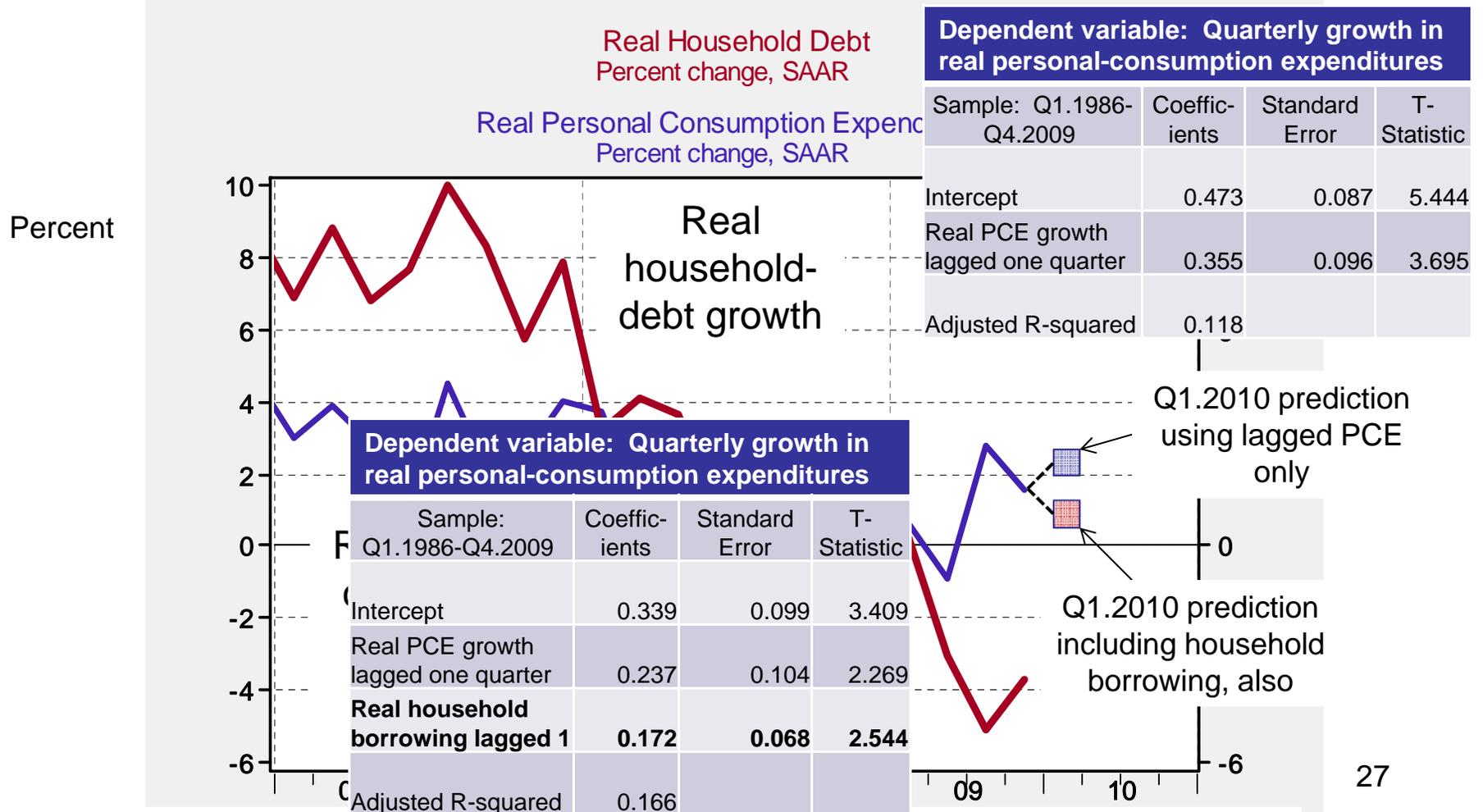
Forecasting Model With Household Borrowing Predicts Slower Consumer Spending



Sources: Bureau of Economic Analysis, Federal Reserve Flow of Funds Accounts; Quarterly through Q4.2009



Forecasting Model With Household Borrowing Predicts Slower Consumer Spending

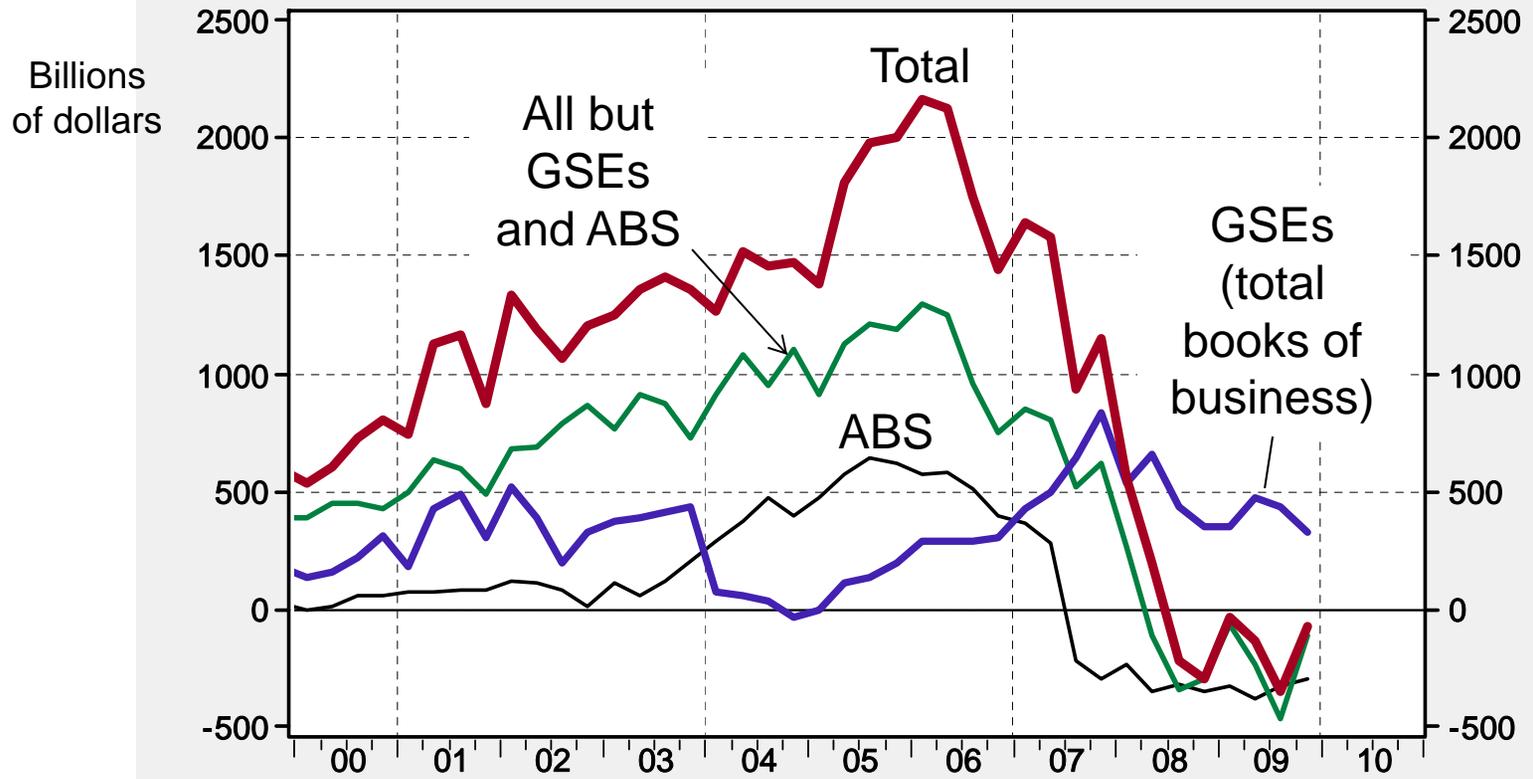


Sources: Bureau of Economic Analysis, Federal Reserve Flow of Funds Accounts; Quarterly through Q4.2009



Only GSEs Are Increasing Home-Mortgage Loans

Change in Total Home-Mortgage Debt Outstanding (bns of \$, SAAR)
Change in GSE-Owned or -Issued Home-Mortgage Debt Outstanding (bns of \$, SAAR)
Change in Home-Mortgage Debt Outstanding Excluding GSEs and ABS (bns of \$, SAAR)
Change in ABS-Issued Home-Mortgage Debt Outstanding (bns of \$, SAAR)

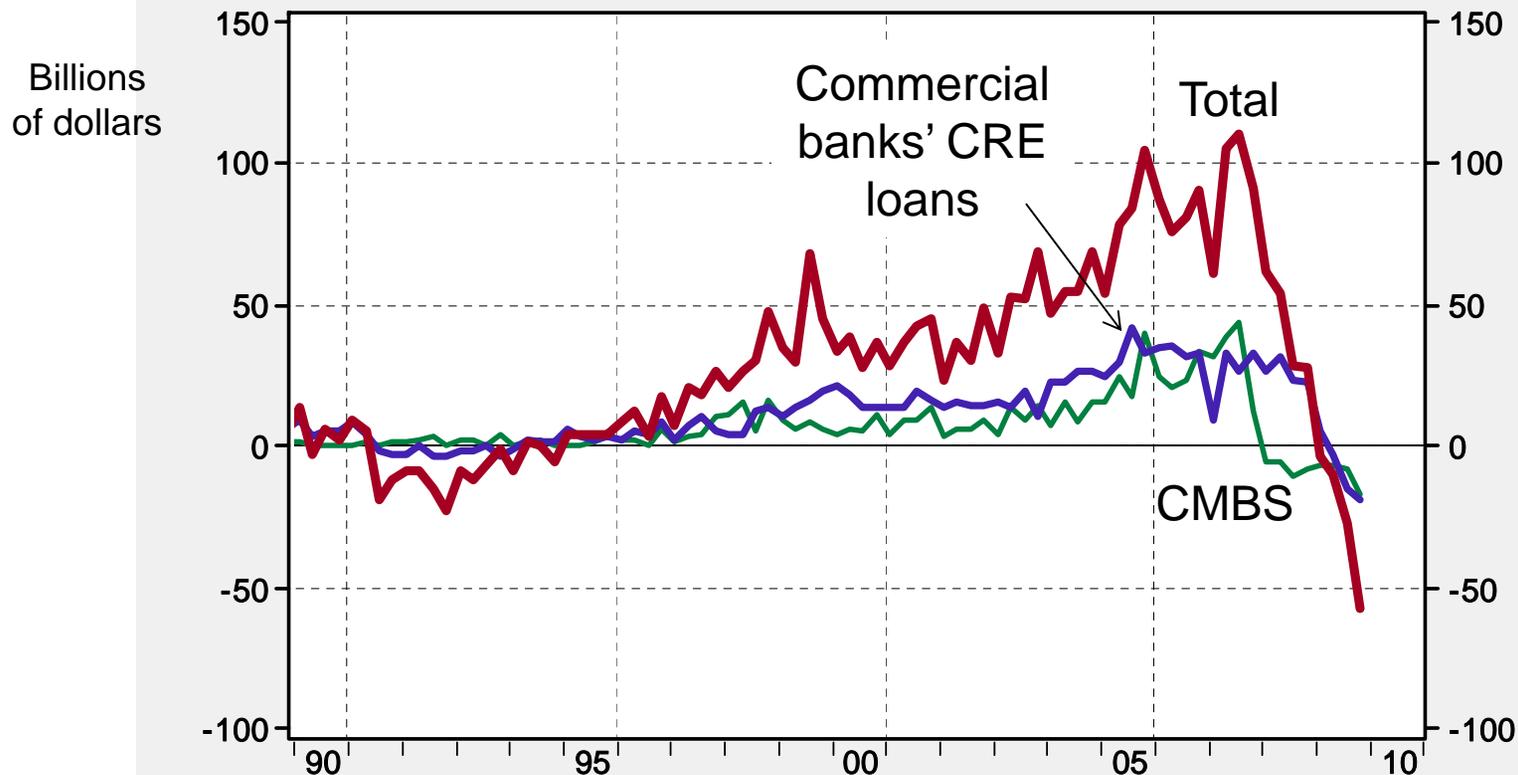


Source: Federal Reserve Flow of Funds Accounts; Quarterly through Q4.2009



Commercial Mortgages Shrinking Even More Rapidly

Change in Total Commercial-Mortgage Debt Outstanding (bns of \$, NSA)
Change in Commercial-Bank Holdings of Commercial-Mortgage Debt (bns of \$, NSA)
Change in CMBS-Issued Commercial-Mortgage Debt Outstanding (bns of \$, NSA)



Source: Federal Reserve Flow of Funds Accounts; Quarterly through Q4.2009



In Sum:
Will Deleveraging Derail The Recovery?

- **Private-sector deleveraging likely to continue**
 - **High household leverage ratios**
 - **Diminished income and wealth expectations**
 - **Financial sector under pressure to deleverage, too**
- **Recovery could be at risk if deleveraging continues or accelerates**