Deutsche Bank

Outlook for the US Consumer

With a closer look at how much wealth declined during the crisis across the income distribution

June 2012

Torsten Slok, Ph.D.
Chief International Economist
Managing Director
60 Wall Street
New York, New York 10005
Tel: 212 250 2155
Torsten.Slok@db.com

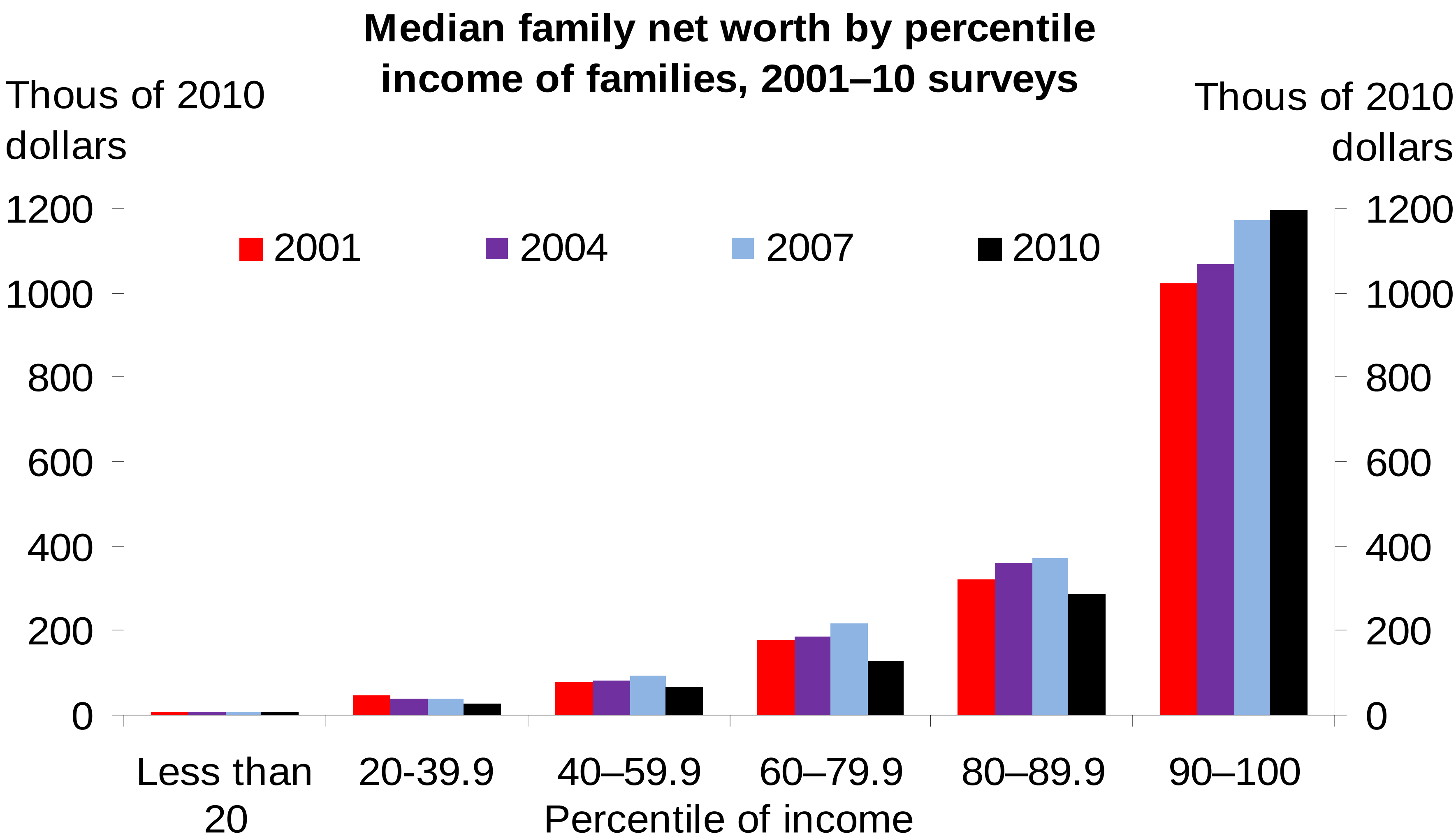
Main messages in this presentation

- The 55-64 year olds saw their net worth decline by almost $100k from 2007 to 2010 (p. 4)
- Median net worth declined $50k from 2007 to 2010 for couples with children (p. 5)
- College educated families saw their net worth decline by a third from 2007 to 2010 (p. 6)
- Families on the West Coast experienced the biggest wealth decline during the crisis (p. 8)
- The most important reason for saving money is no longer retirement but liquidity (p. 9)
- The median value of stock holdings for all households has fallen from $43k in 2001 to $30k in 2010 (p. 10)
- Housing makes up 50% of all household assets, except for the 90th percentile of income (p. 14)
- Leverage, i.e. household debt divided by household assets, is highest for the middle-income groups (p. 17)
- Leverage for <35 year olds is more than 50% (p. 18)
- Mortgage debt went up for high income families from 2007 to 2010, but fell for middle-income families (p. 21)
- Average credit card balance for high-income families is $8k (p. 22)
- Household debt is falling and assets are slowly edging up, i.e. balance sheet repair continues (p. 32 and 48)
- The number of people who are going into foreclosure is falling (p. 46)
- Households' financial obligations ratio now at the lowest level since 1984 (p. 54)
- Overall, we have seen a continued improvement in consumer demand for loans and banks' willingness to lend (p. 71)

Bottom Line: Household sector balance sheet repair continues and household deleveraging could come to an end in late 2012 as the housing market continues to improve and home prices start rising modestly.

How much did household wealth decline during the crisis across the income distribution?

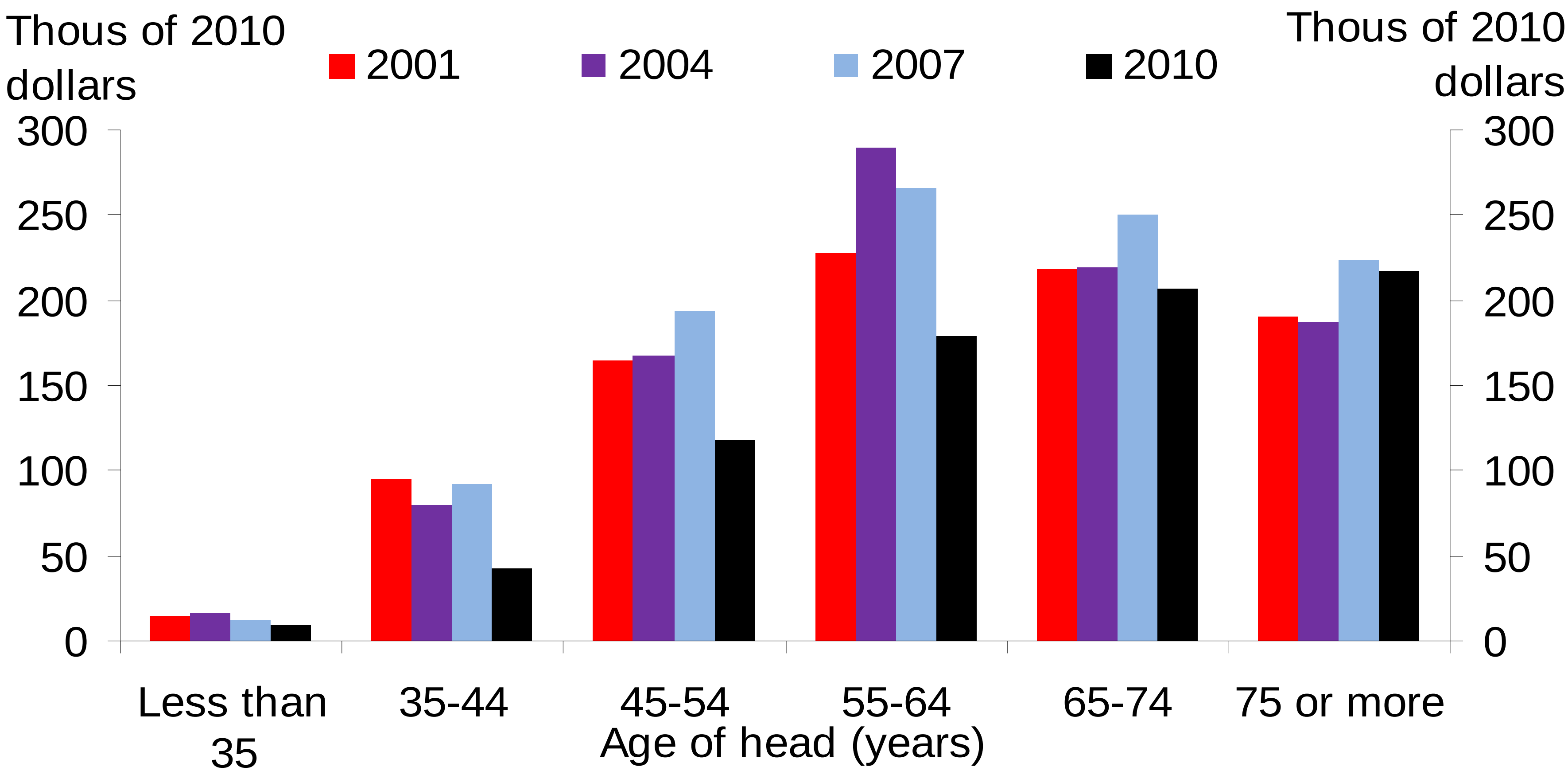
Median net worth of the 90th percentile of income is around $1mn



Source: FRB, DB Global Markets Research

The 55-64 year olds saw their net worth decline by almost $100k from 2007 to 2010

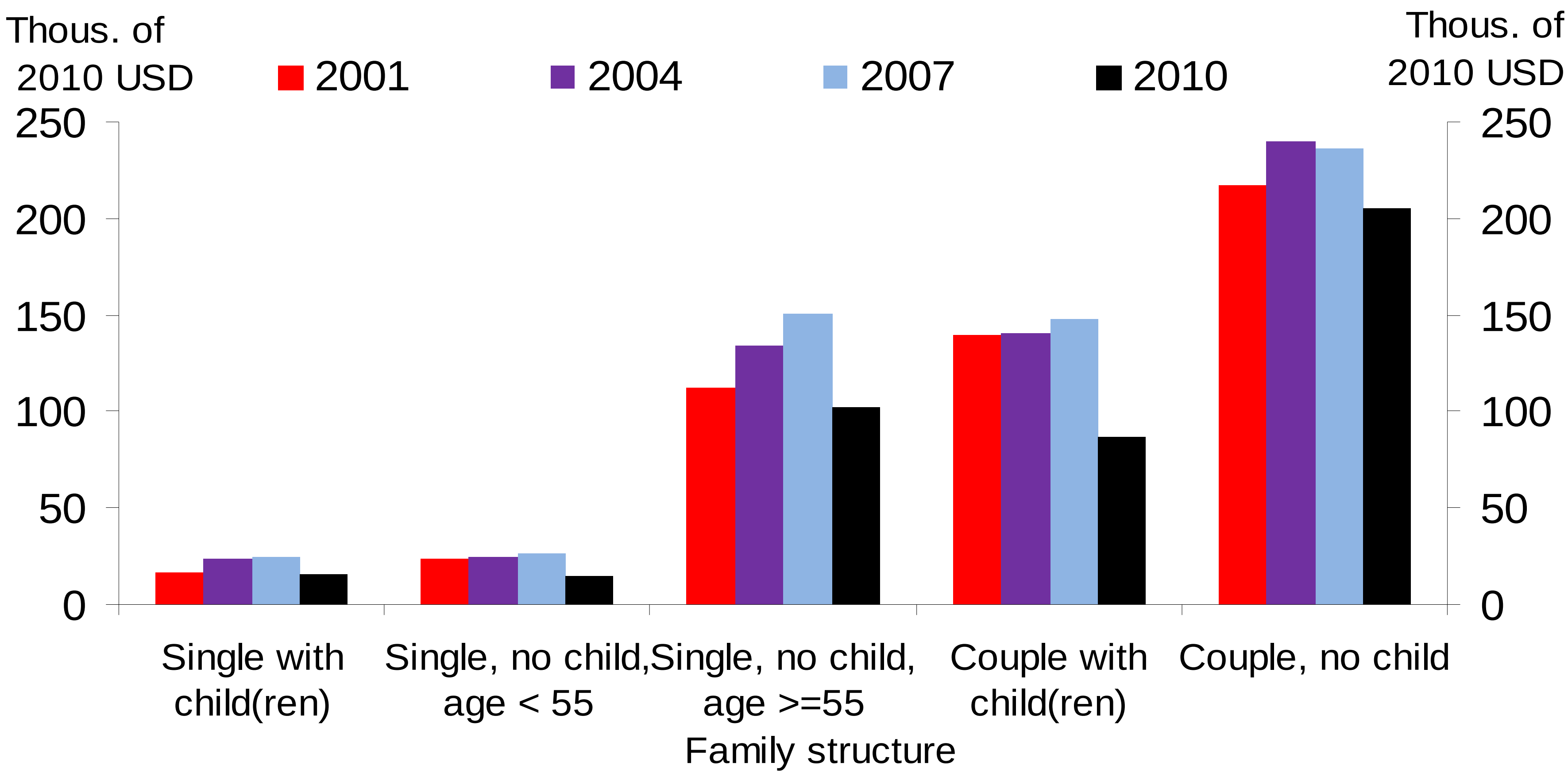
Median family net worth, by age of head of families, 2001–10 surveys



Source: FRB, DB Global Markets Research

Median net worth declined $50k from 2007 to 2010 for couples with children

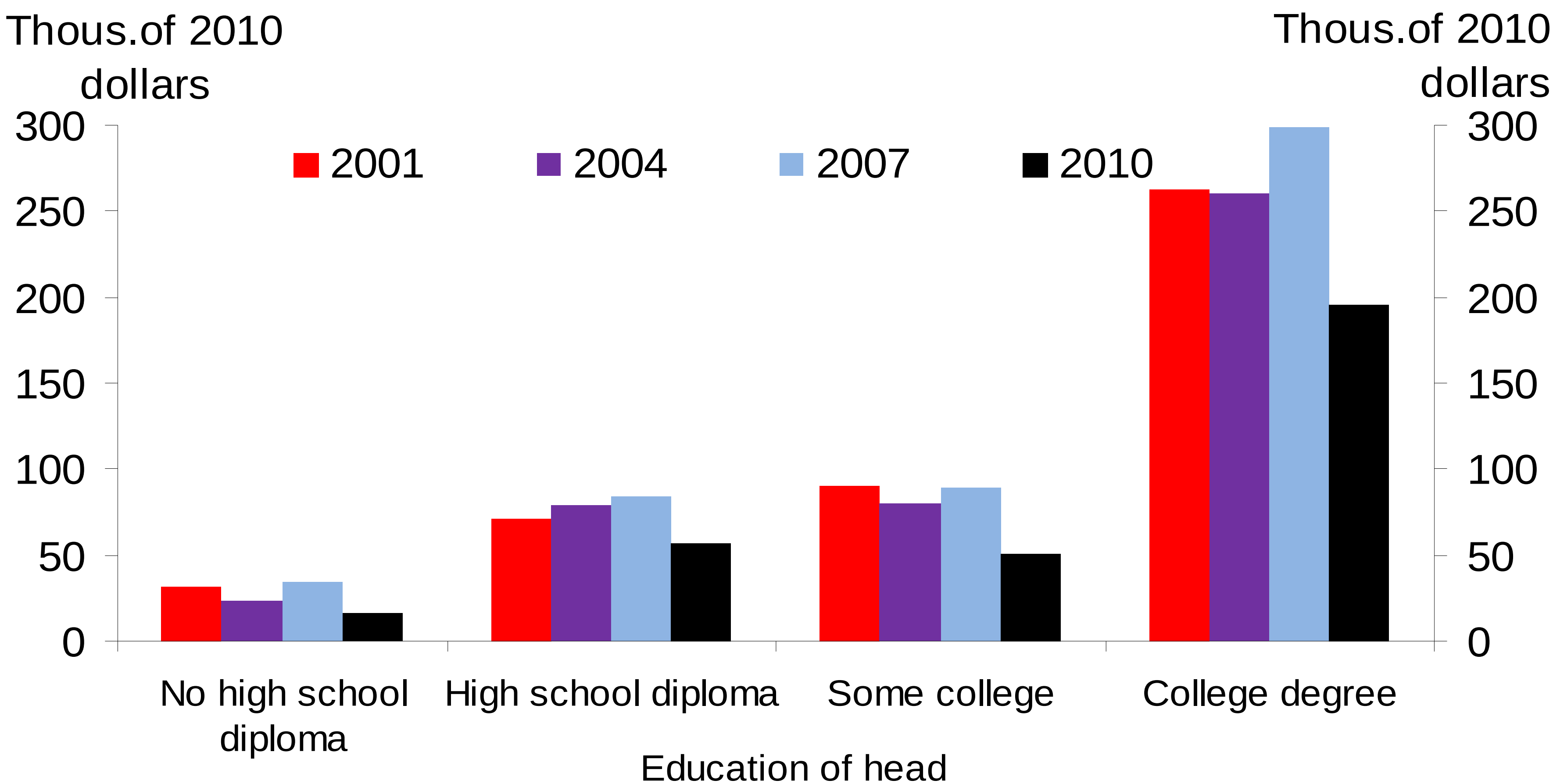
Median family net worth by family structure, 2001–10 surveys



Source: FRB, DB Global Markets Research

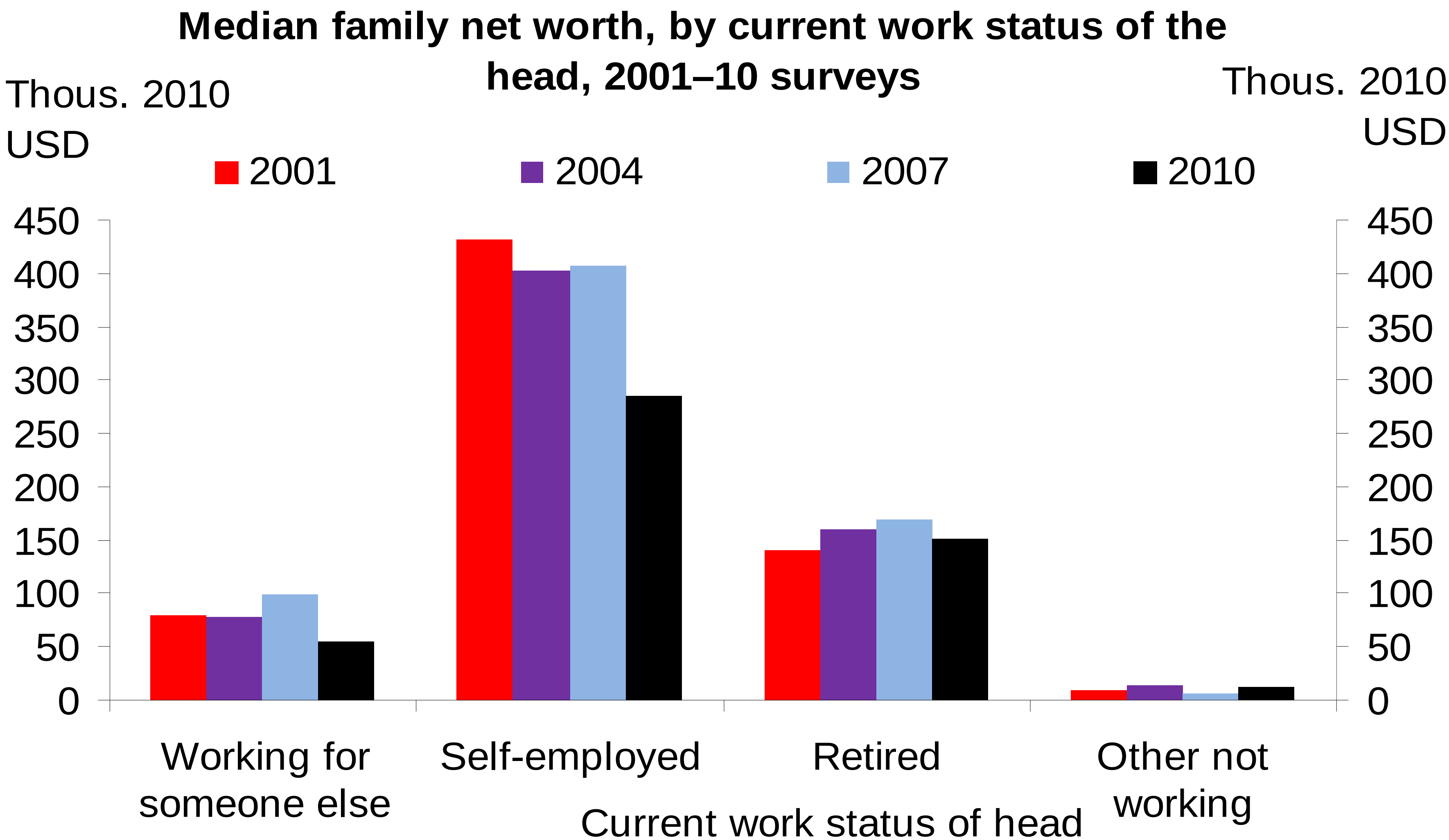
College educated families saw their net worth decline by a third from 2007 to 2010

Median family net worth, by education of head of family, 2001–10 surveys



Source: FRB, DB Global Markets Research

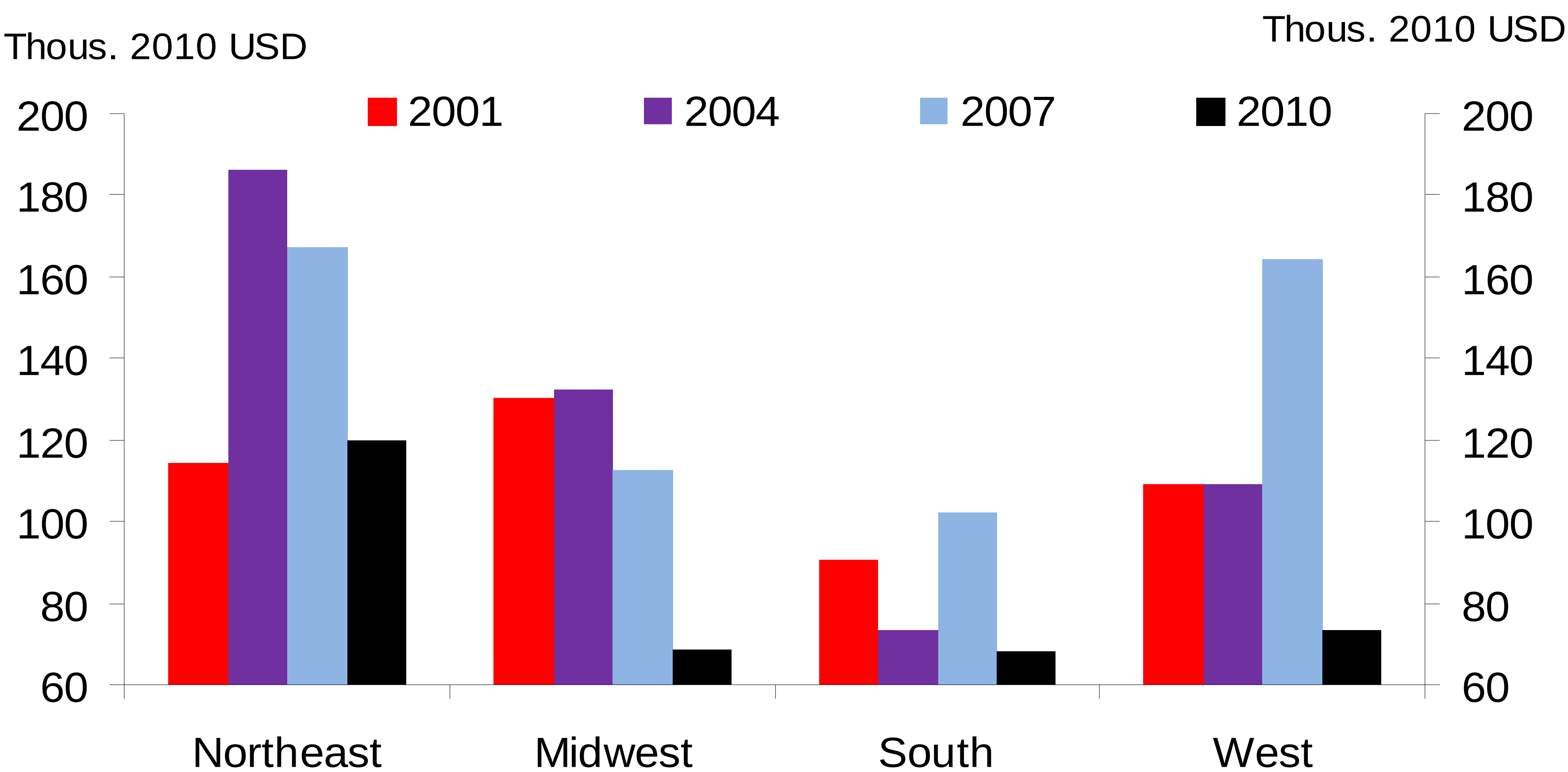
Net worth for self-employed declined $100k during the crisis



Source: FRB, DB Global Markets Research

Families on the West Coast experienced the biggest wealth decline during the crisis

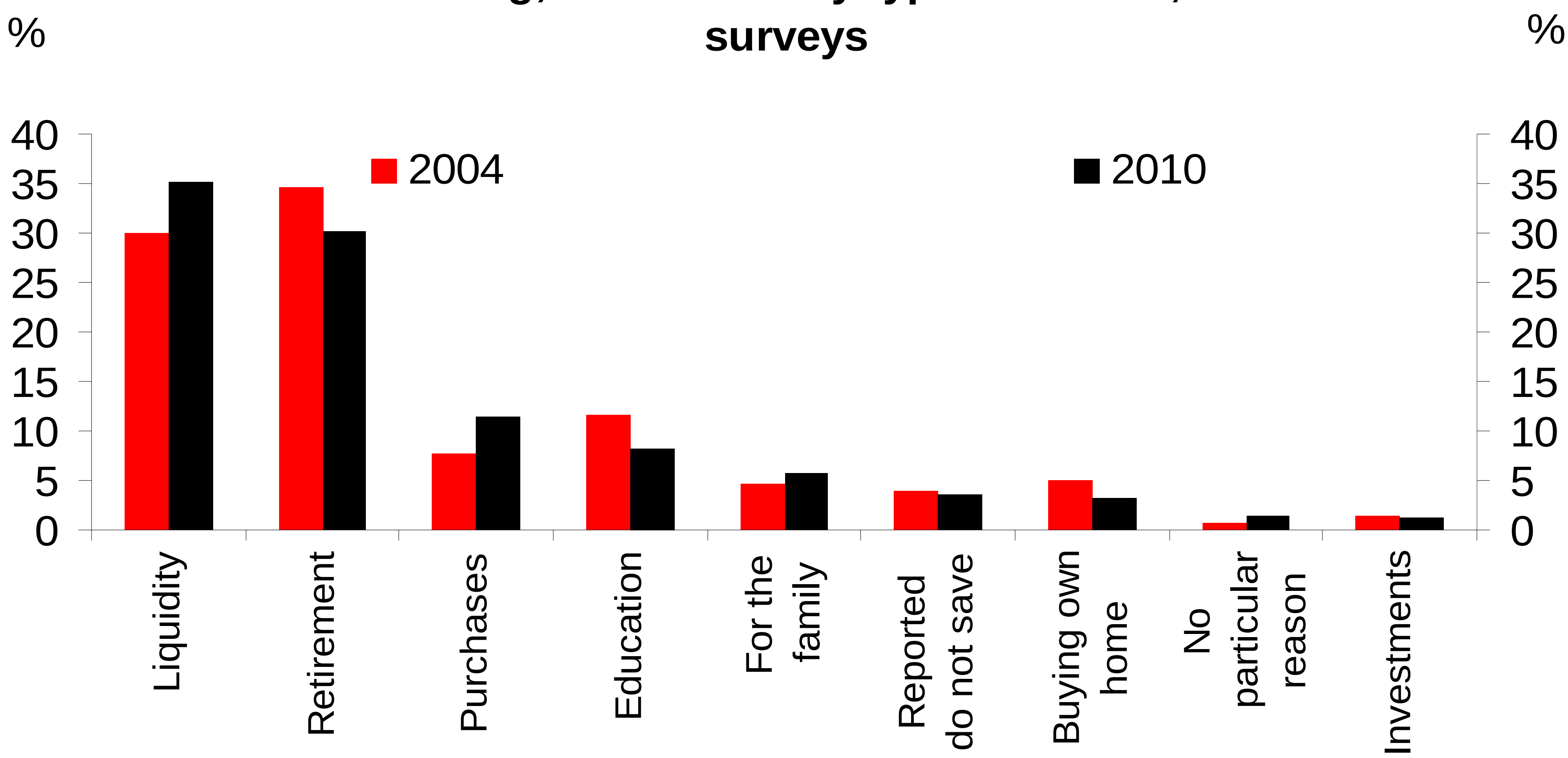
Median family net worth, by region, 2001–10 surveys



Source: FRB, DB Global Markets Research

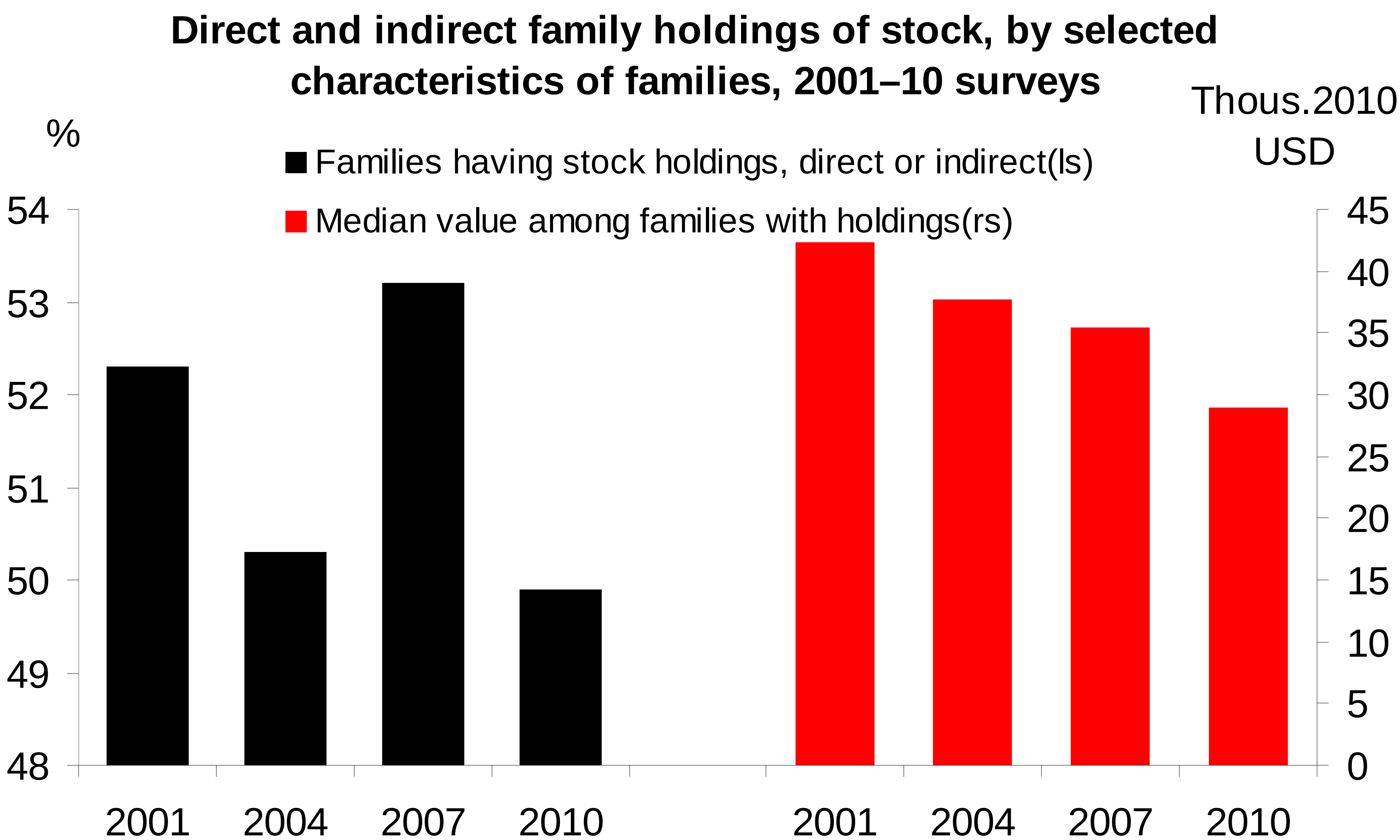
The most important reason for saving money is no longer retirement but liquidity

Reasons respondents gave as most important for their families' saving, distributed by type of reason, 2001–10 surveys



Source: FRB, DB Global Markets Research

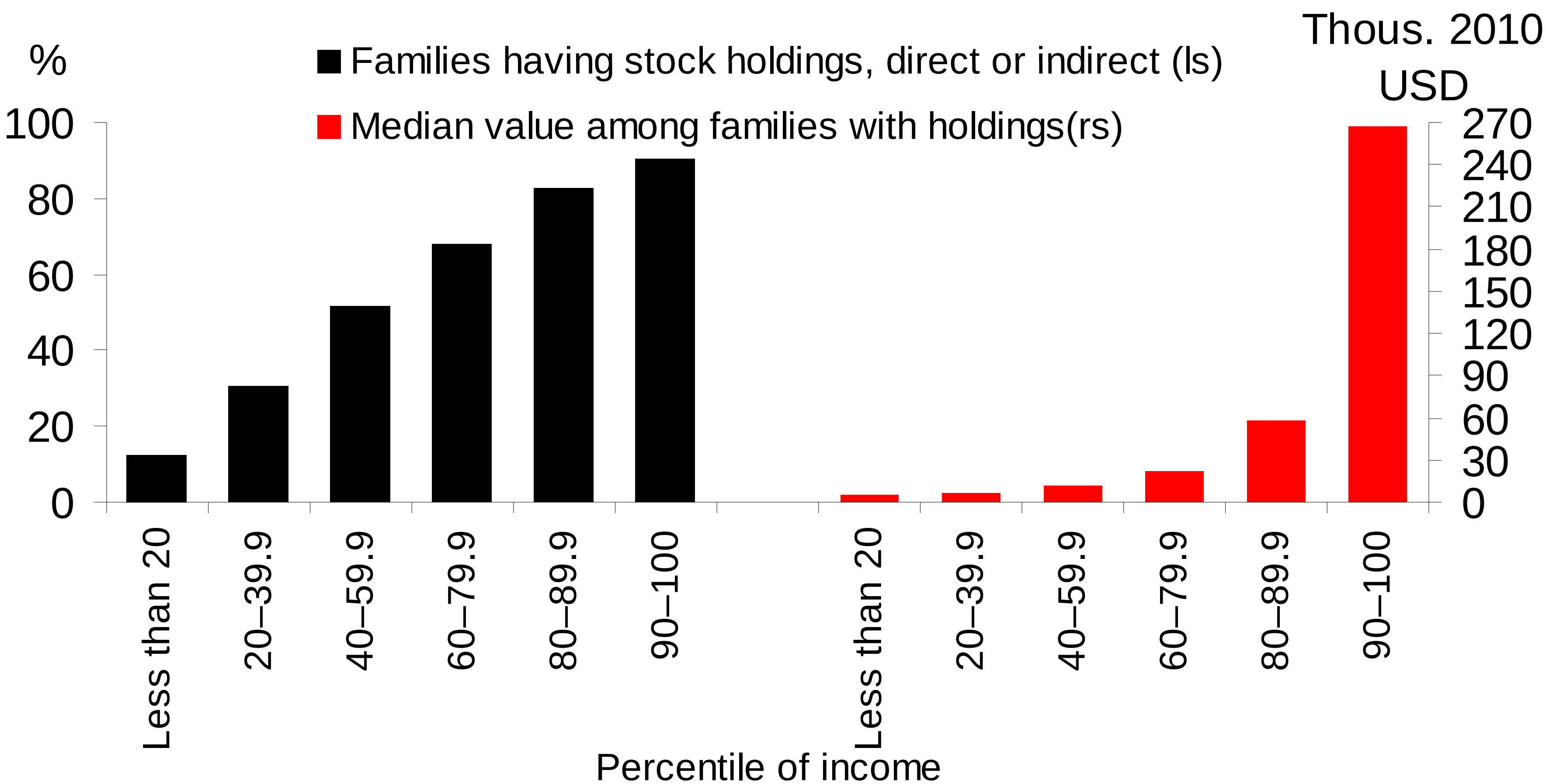
The median value of stock holdings for all households has fallen from $43k in 2001 to $30k in 2010



Source: FRB, DB Global Markets Research

For families in the 90th percentile of income the median holding of stocks is $270k

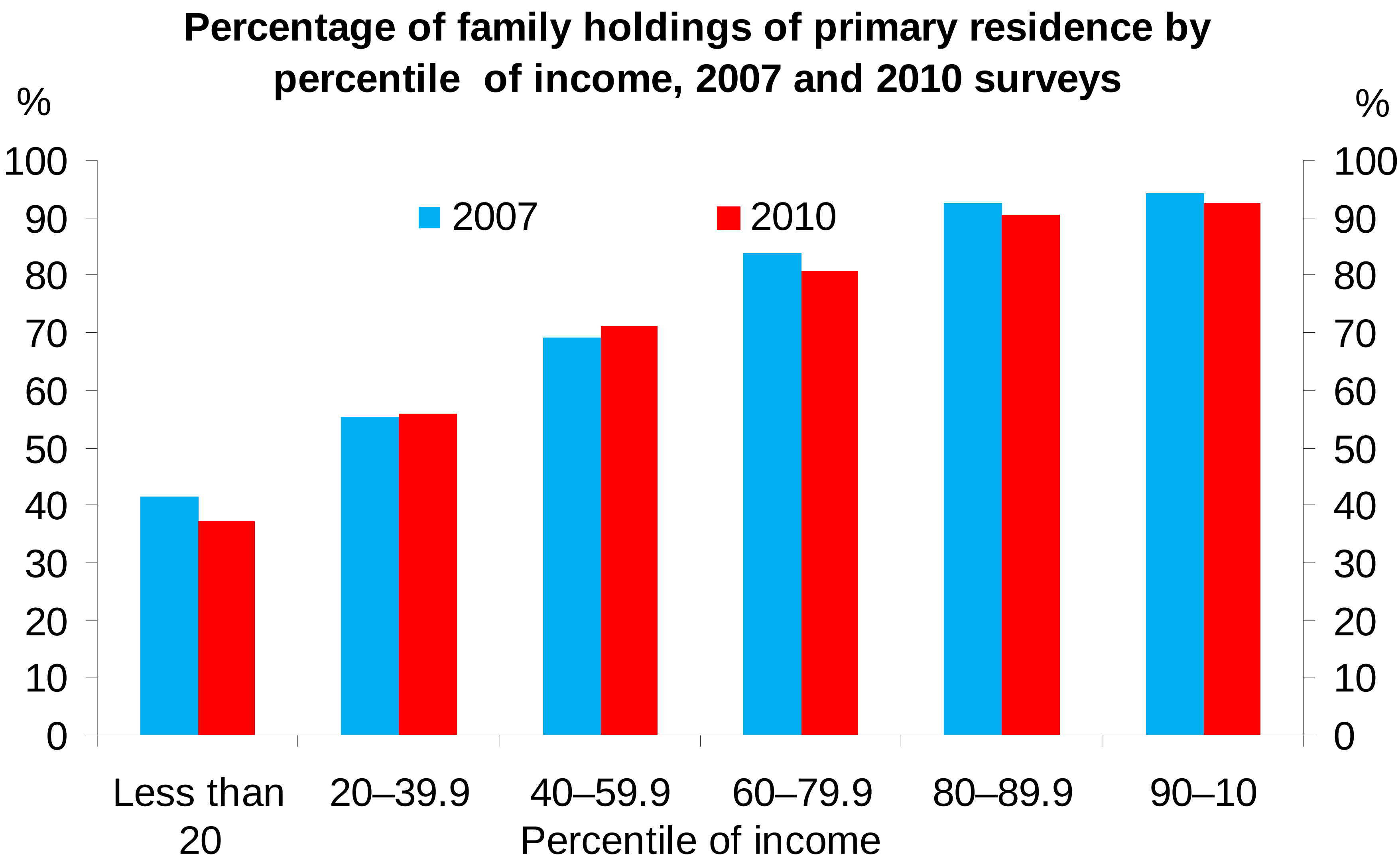
Direct and indirect family holdings of stock, by income distribution, 2001–10 surveys



Source: FRB, DB Global Markets Research

Torsten Slok, torsten.slok@db.com +1 212 250-2155

For high-income groups the homeownership rate is higher



Source: FRB, DB Global Markets Research

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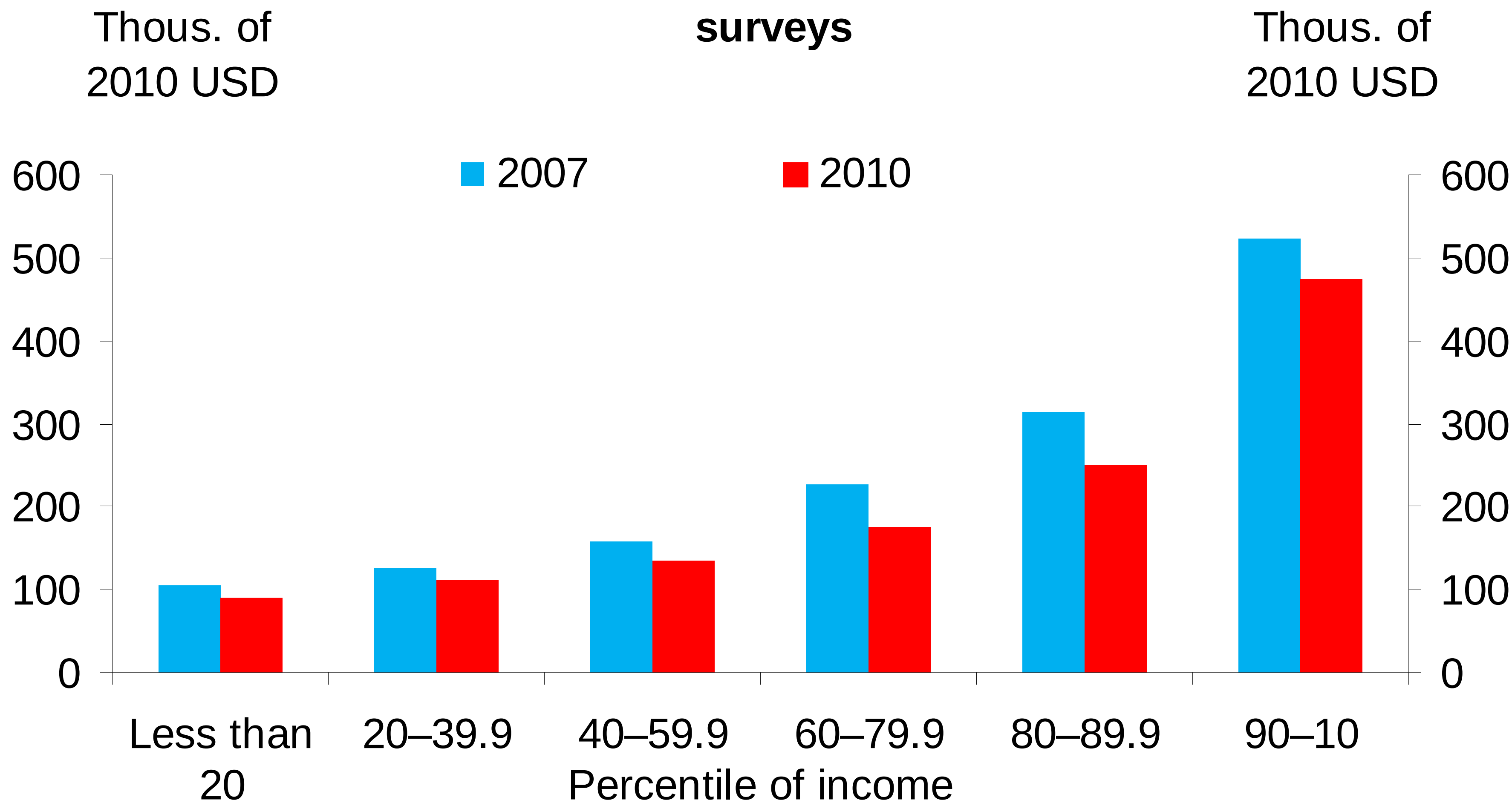
For the 90th percentile of income the median value of their home is around $500k

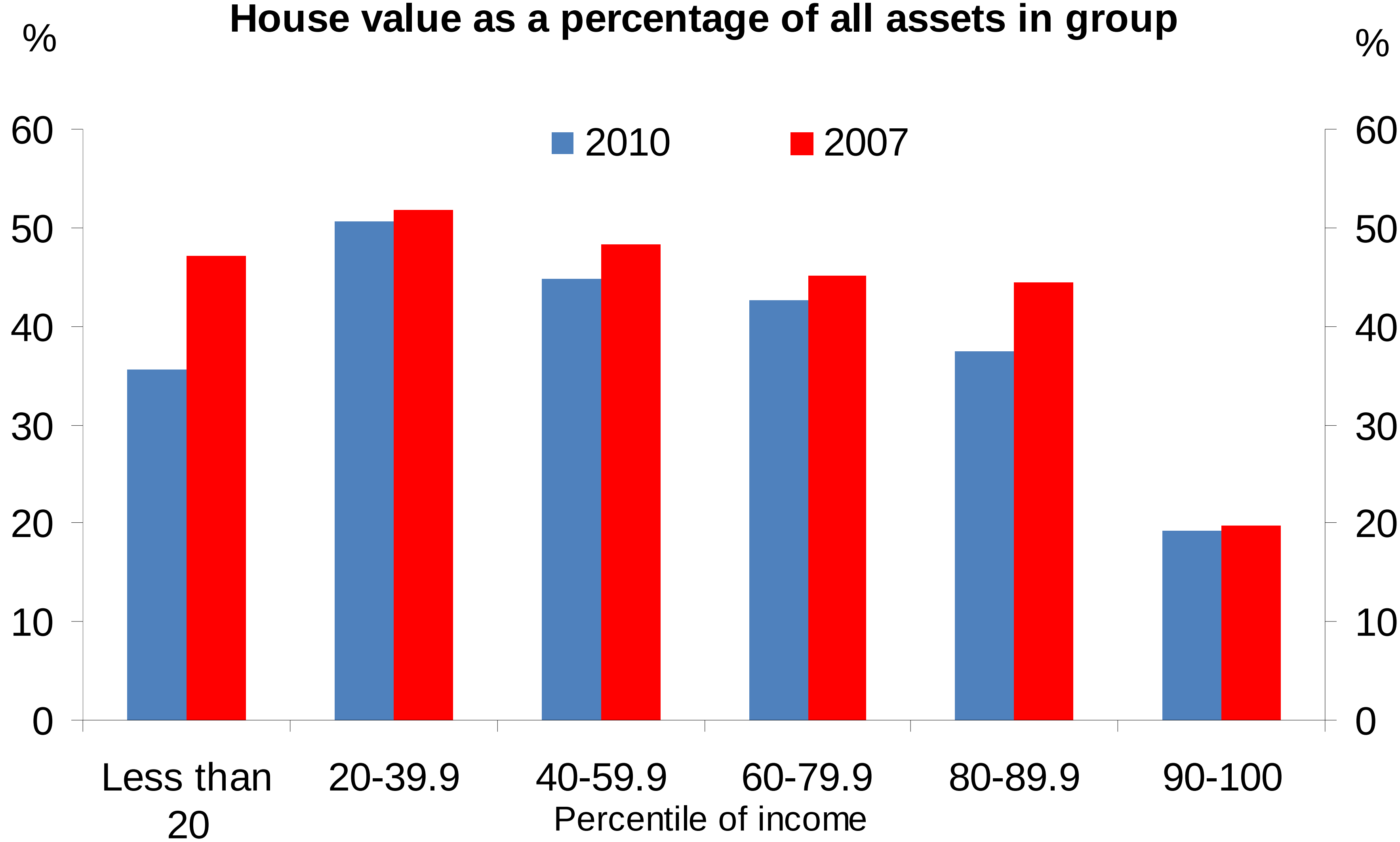
Median value of holdings for families holding asset of primary residence by percentile of income 2007 and 2010 surveys



Source: FRB, DB Global Markets Research

Housing makes up 50% of all assets, except for the 90th percentile of income

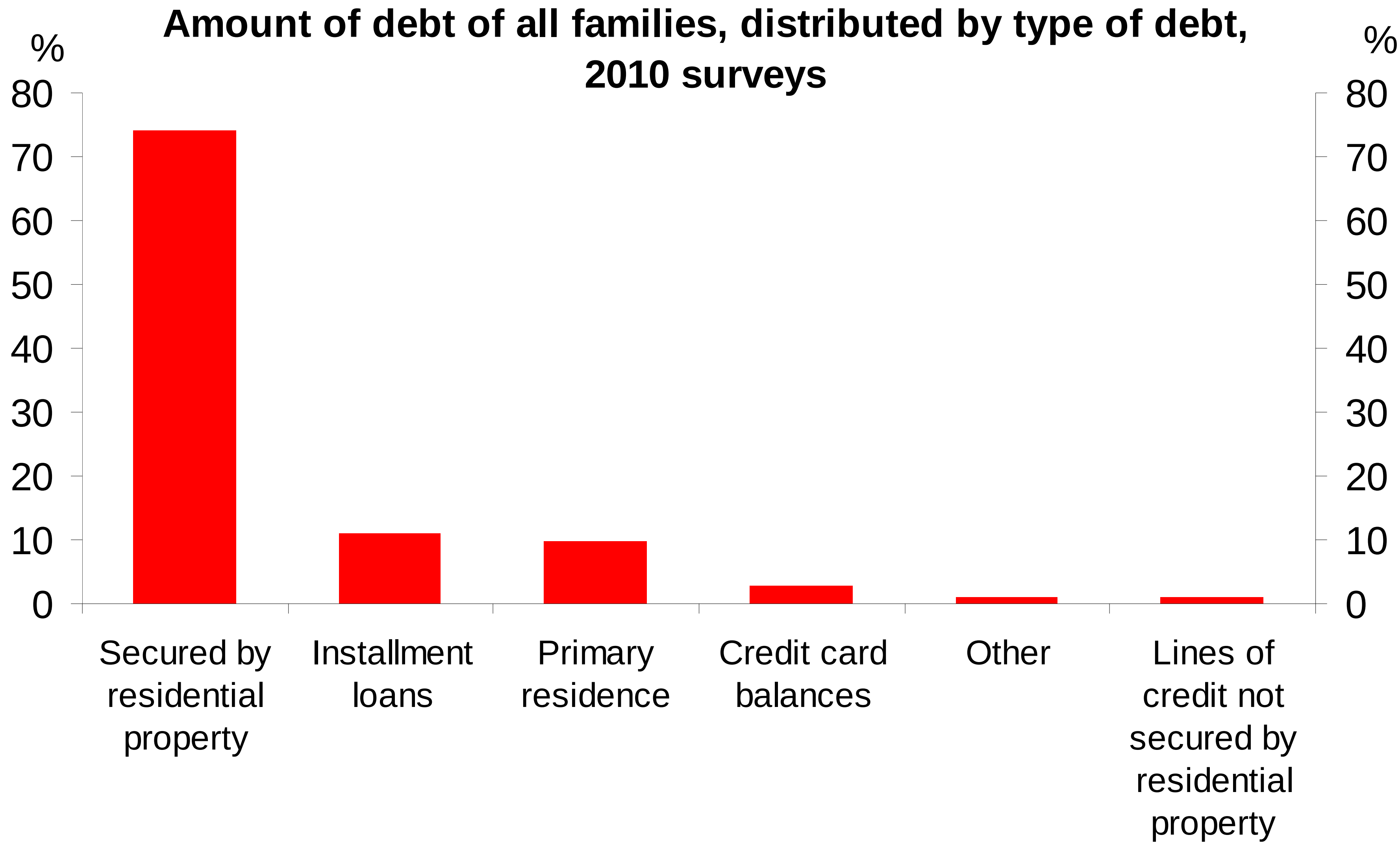
House value as a percentage of all assets in group



Source: FRB, DB Global Markets Research

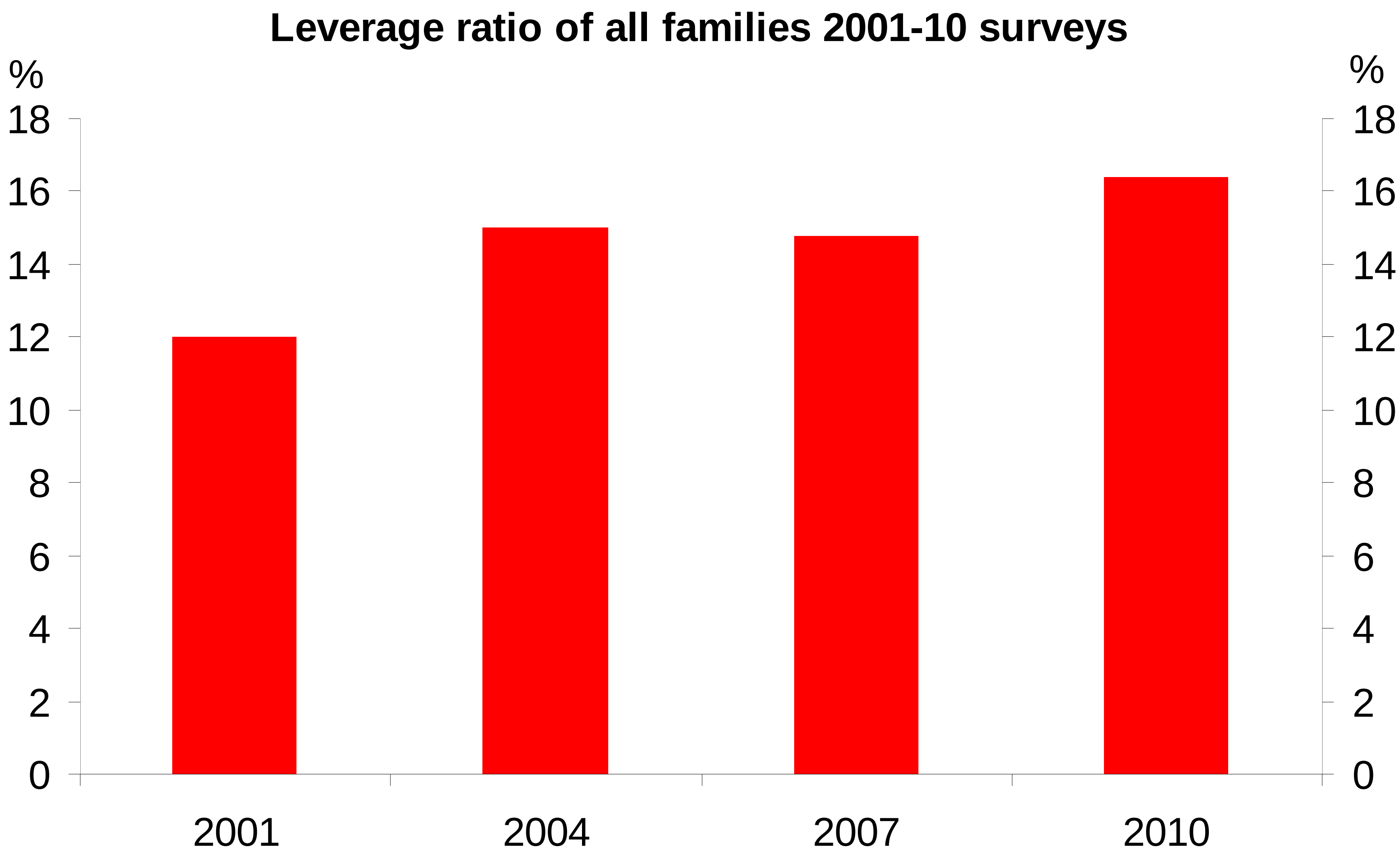
Torsten Slok, torsten.slok@db.com +1 212 250-2155

Most household debt is mortgage debt



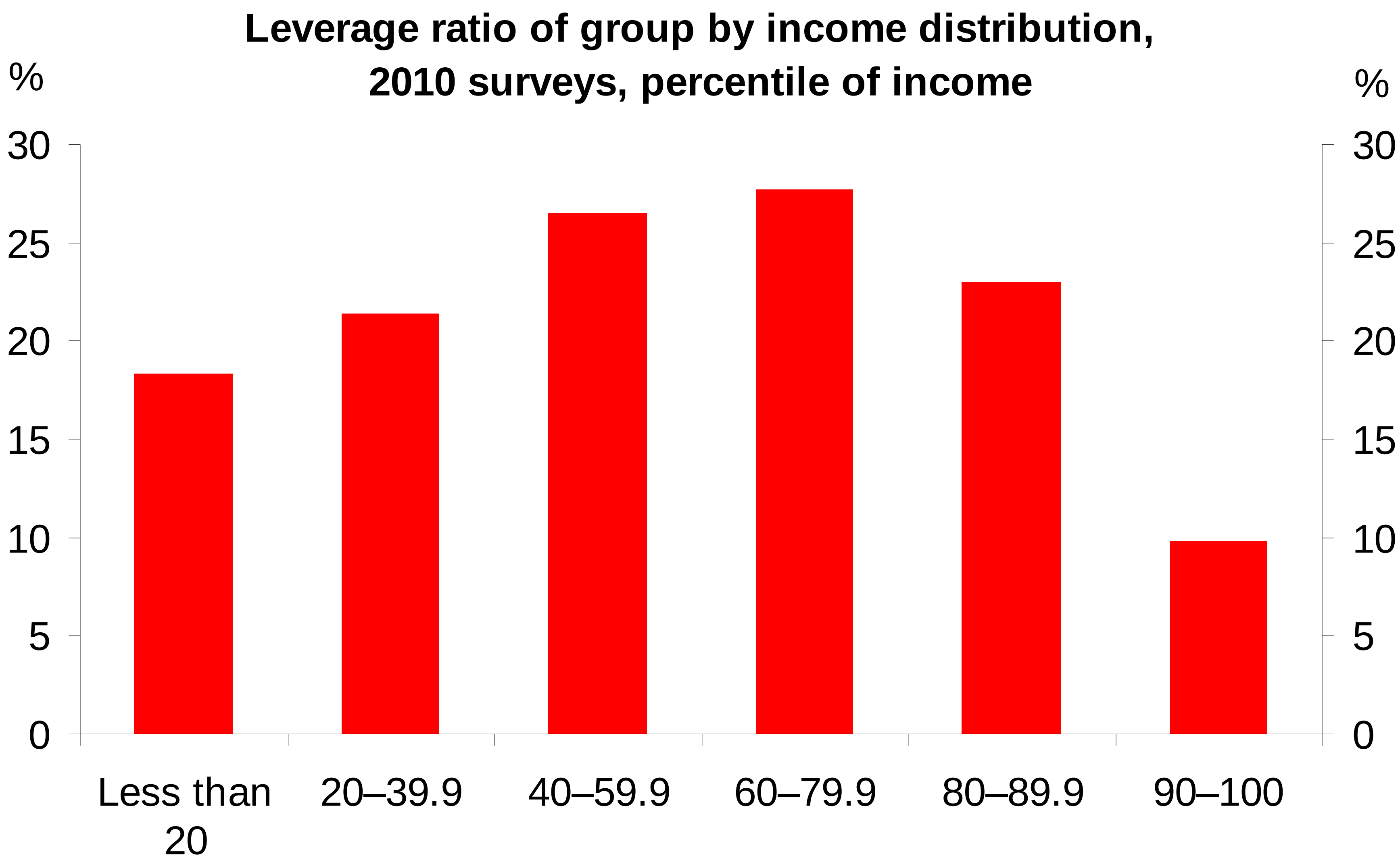
Source: FRB, DB Global Markets Research

Leverage, i.e. debt as a share of assets, was 16% in 2010



Source: FRB, DB Global Markets Research

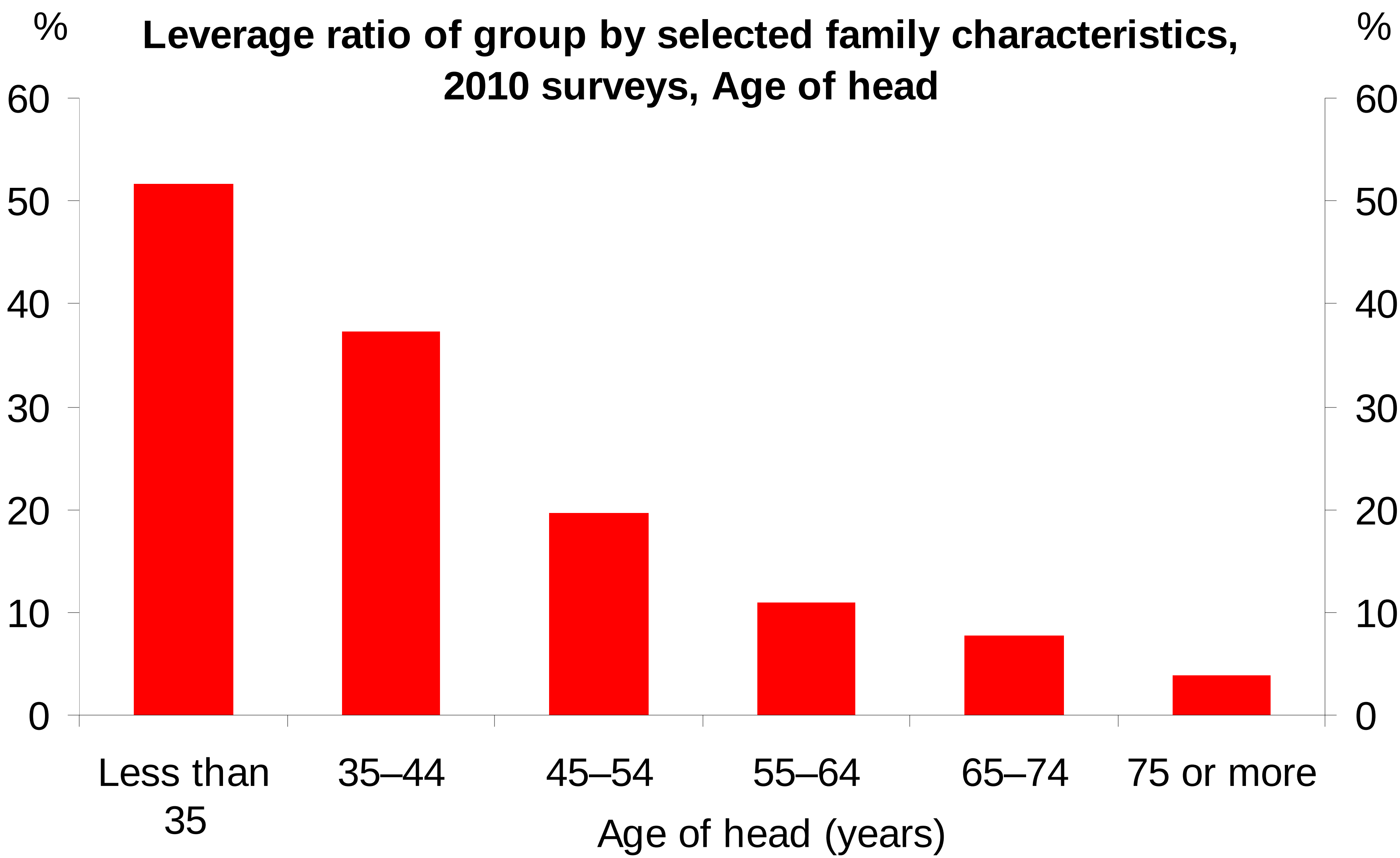
Leverage is highest for the middle-income groups



Source: FRB, DB Global Markets Research

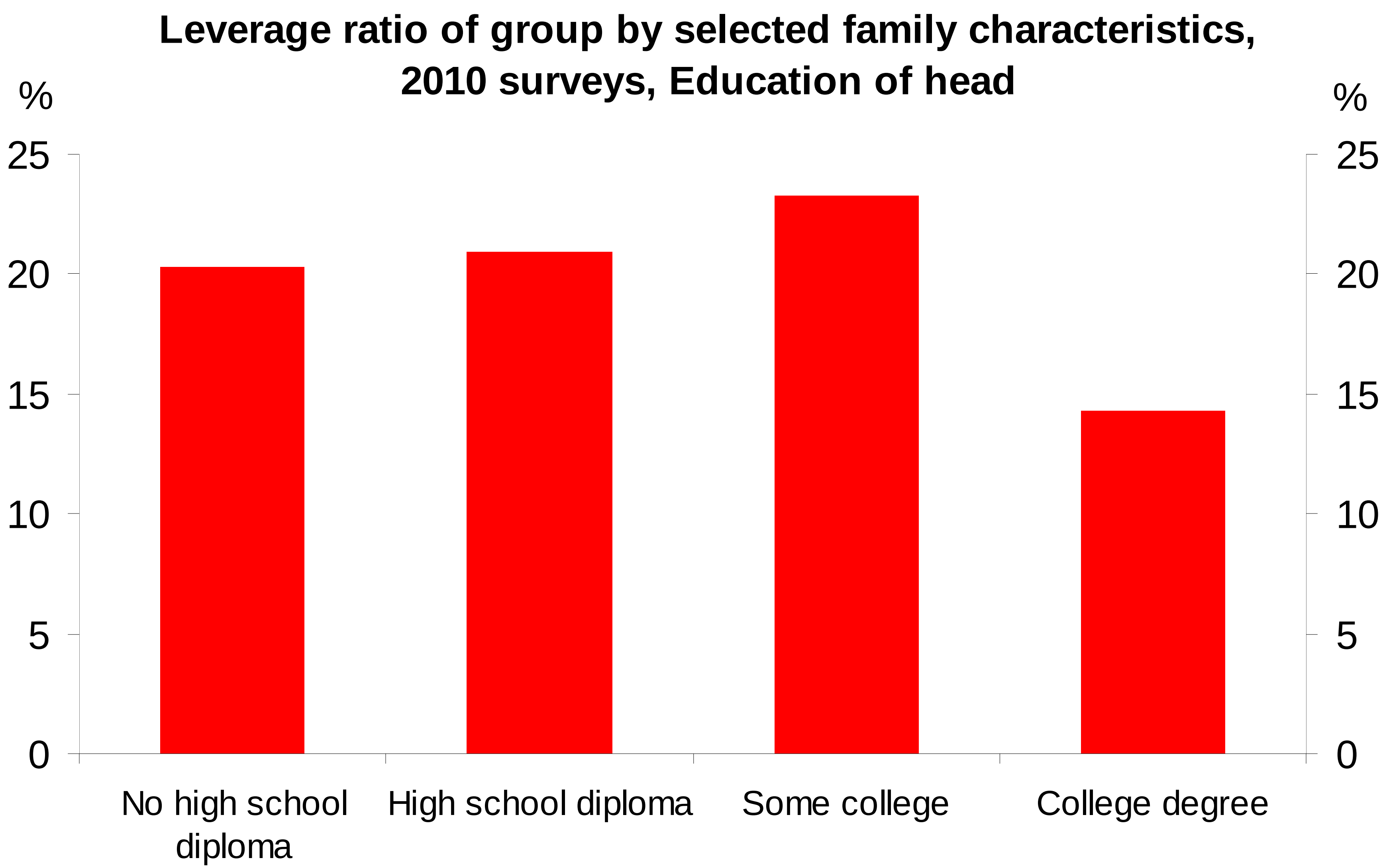
Torsten Slok, torsten.slok@db.com +1 212 250-2155

Leverage for <35 year olds is more than 50%



Source: FRB, DB Global Markets Research

College degree families have the lowest leverage



Source: FRB, DB Global Markets Research

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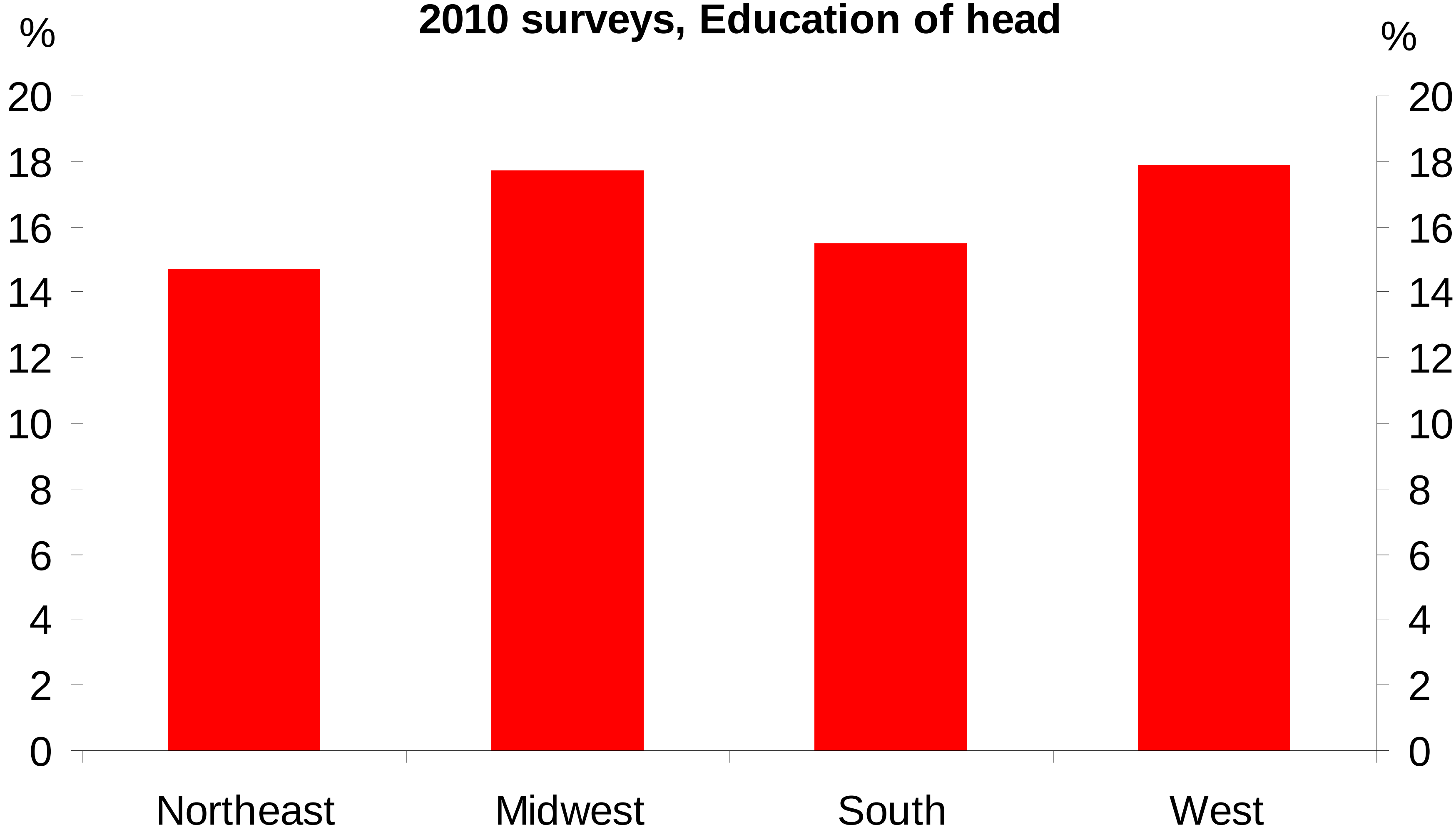
Families in the West and Midwest have the highest leverage

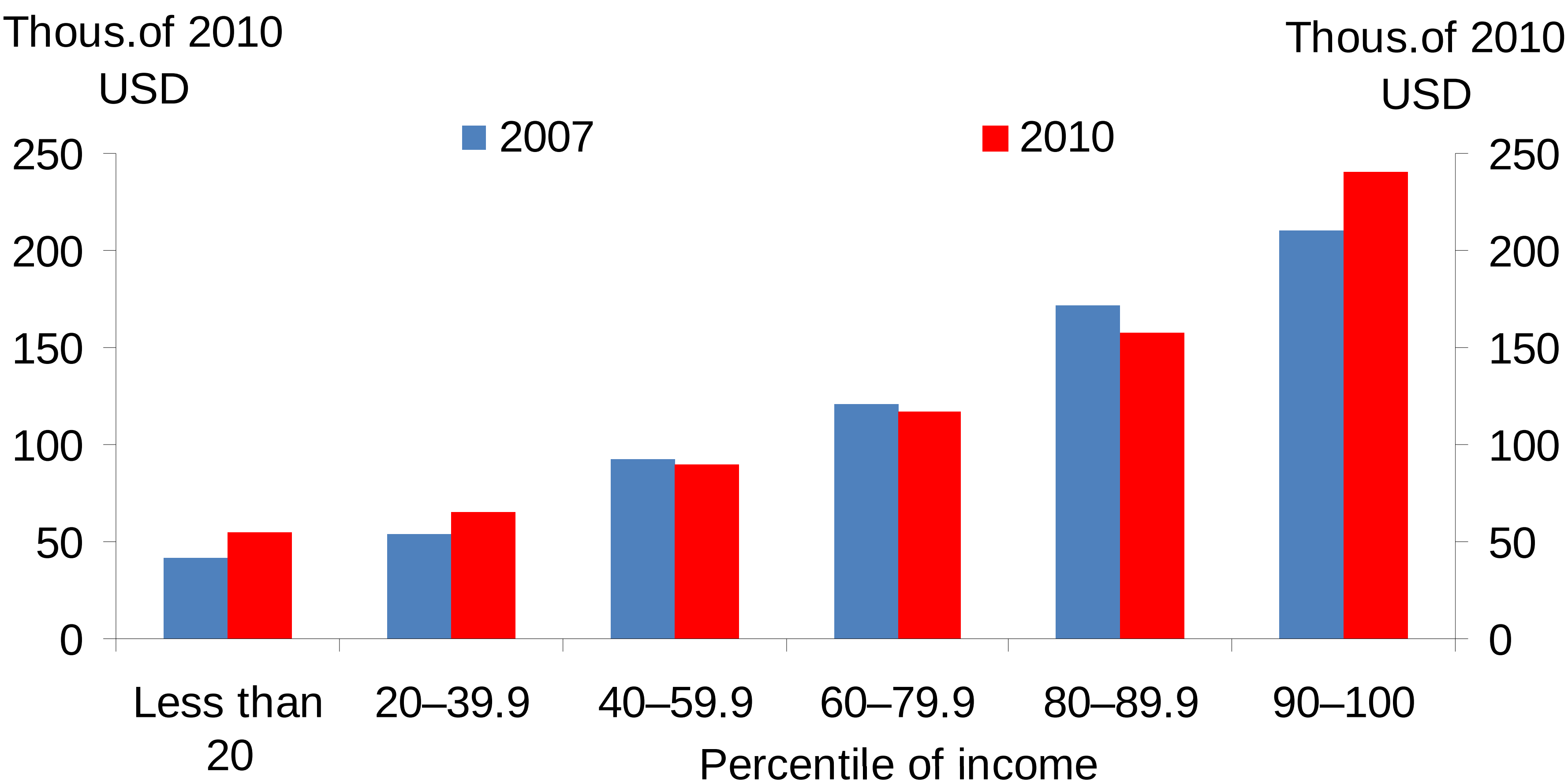
Leverage ratio of group by selected family characteristics, 2010 surveys, Education of head



Source: FRB, DB Global Markets Research

Mortgage debt went up for high income families from 2007 to 2010, but fell for middle-income families

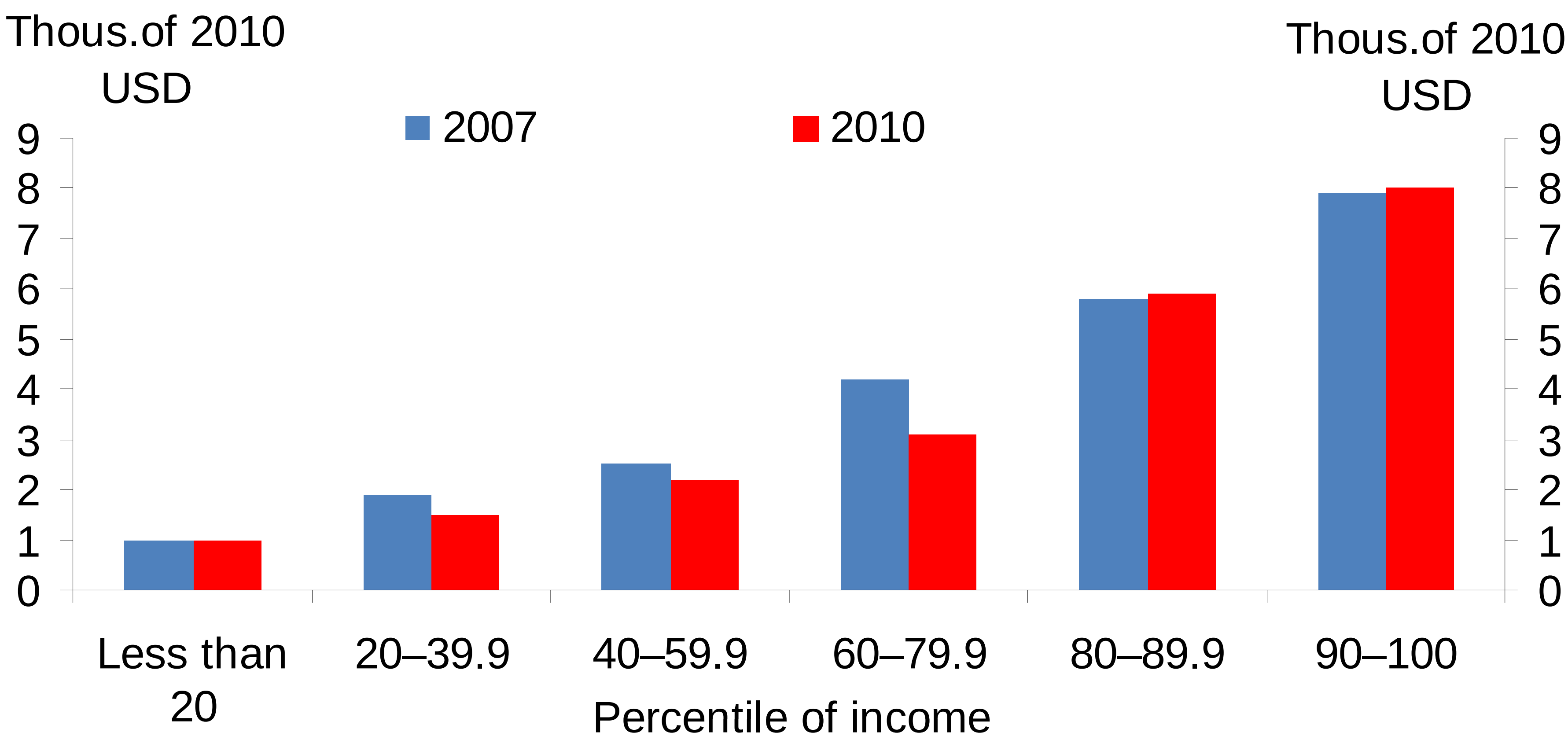
Family holdings of debt, by selected characteristics of families and type of debt, primary residence, 2007 and 2010



Source: FRB, DB Global Markets Research

Average credit card balance vary from $1k to $8k, and high income families increased their average balance from 2007 to 2010

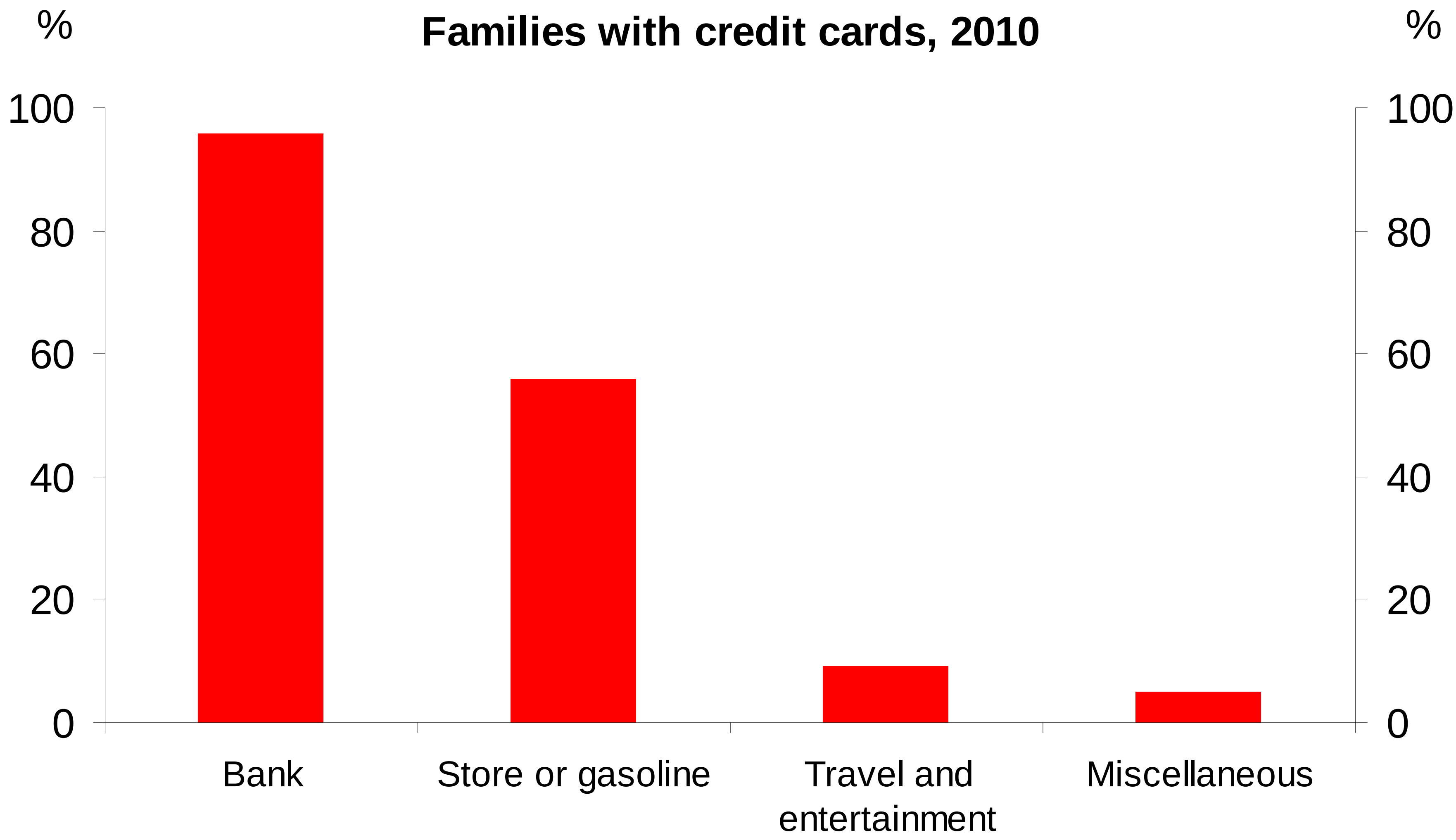
Family holdings of debt, by selected characteristics of families and type of debt, Credit card balance, 2007 and 2010



Source: FRB, DB Global Markets Research

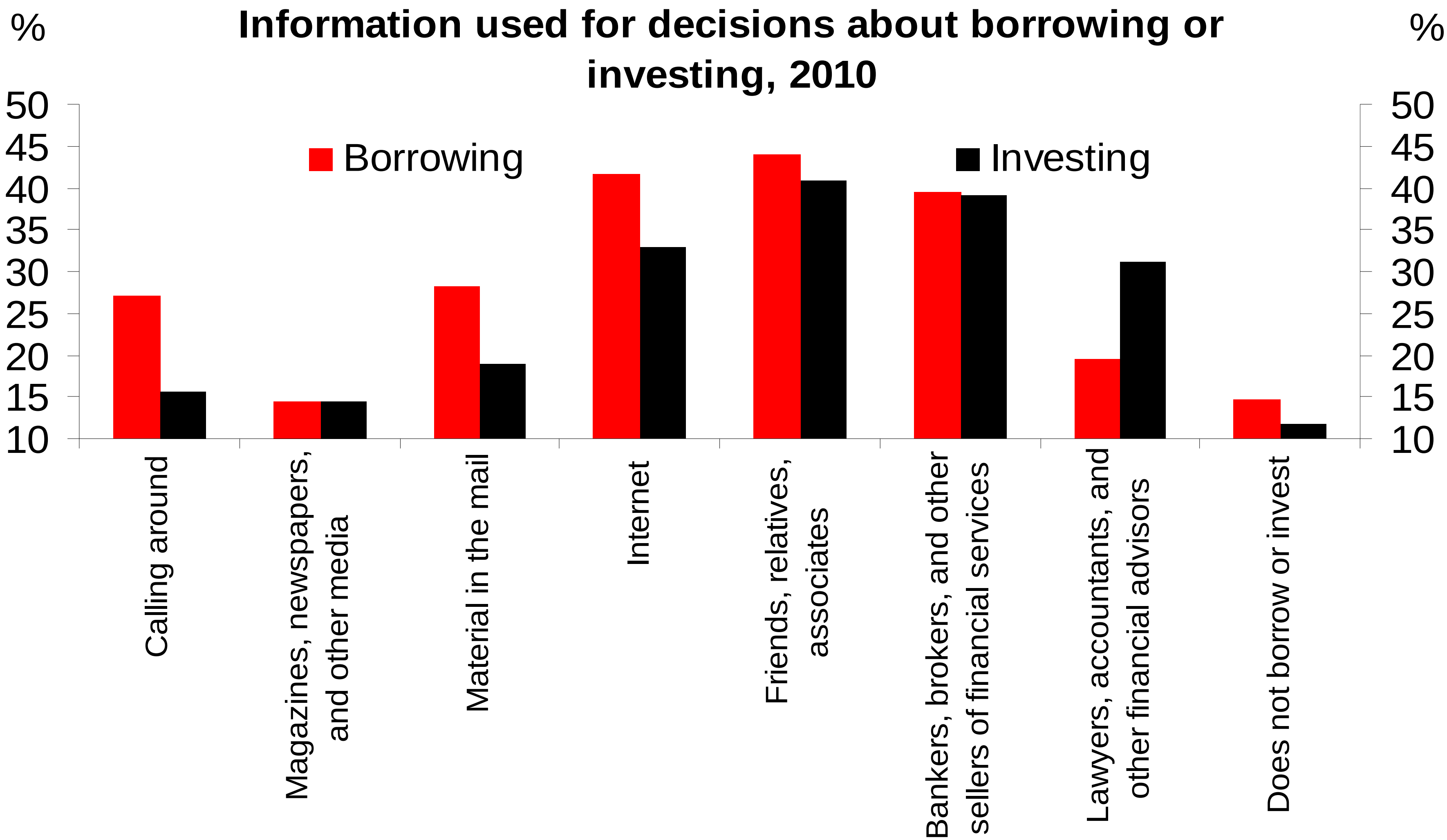
Torsten Slok, torsten.slok@db.com +1 212 250-2155

50% of families with credit cards have a store or gasoline credit card



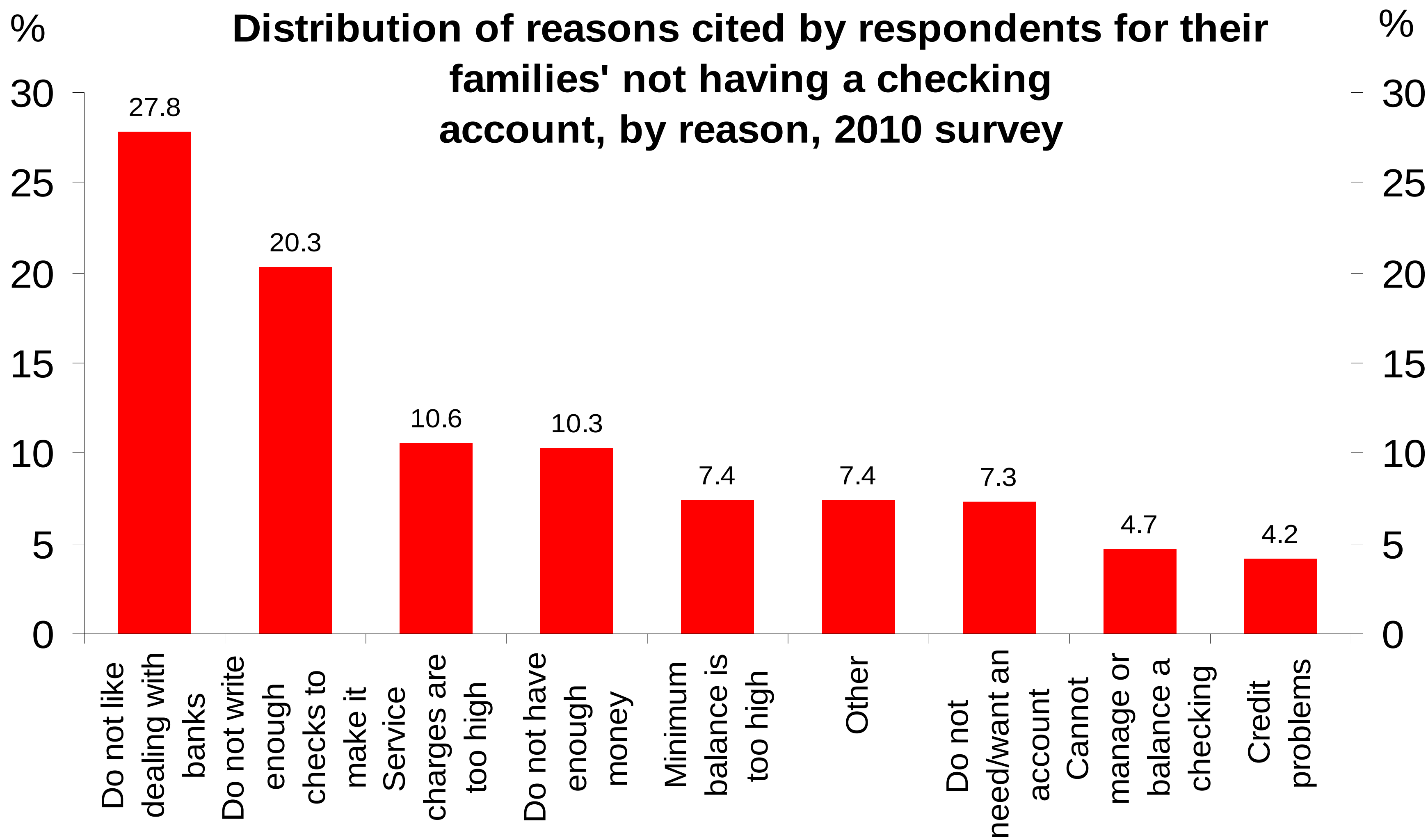
Source: FRB, DB Global Markets Research

About a third use the internet to make investing and borrowing decisions



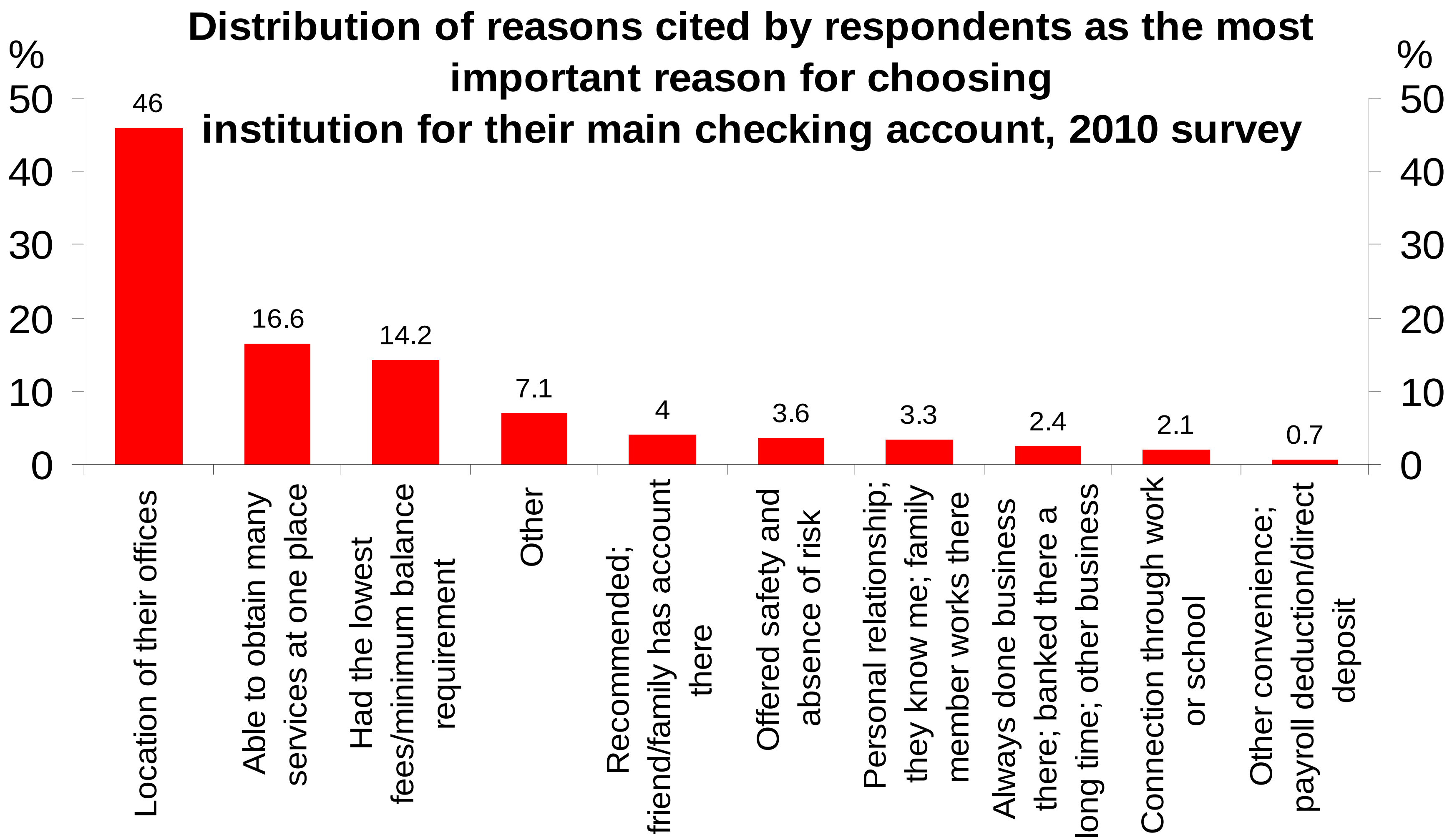
Source: FRB, DB Global Markets Research

For people who don't have banking accounts 28% say that it is because they don't like dealing with banks



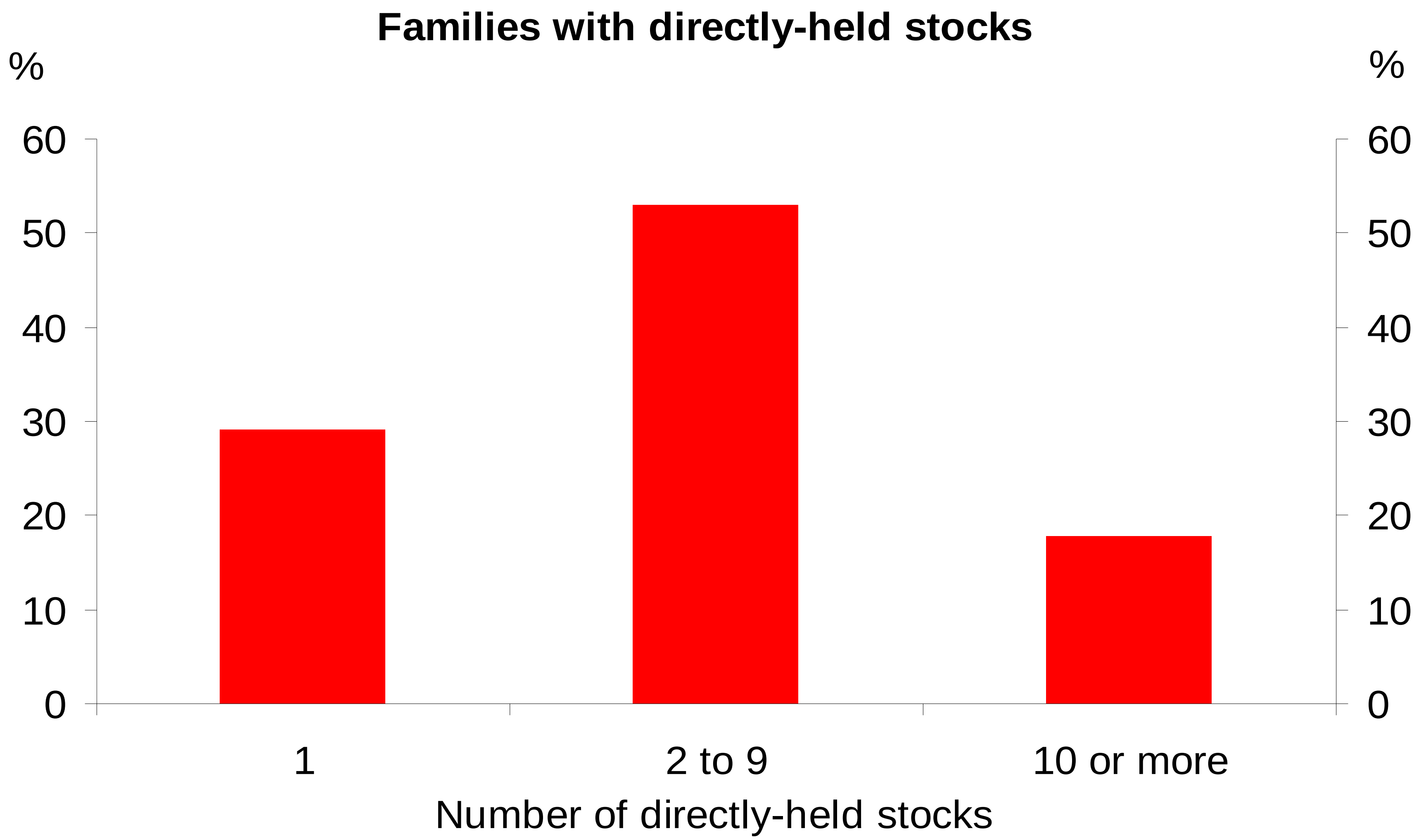
Source: FRB, DB Global Markets Research

Location is the most important factor when households choose which bank to use



Source: FRB, DB Global Markets Research

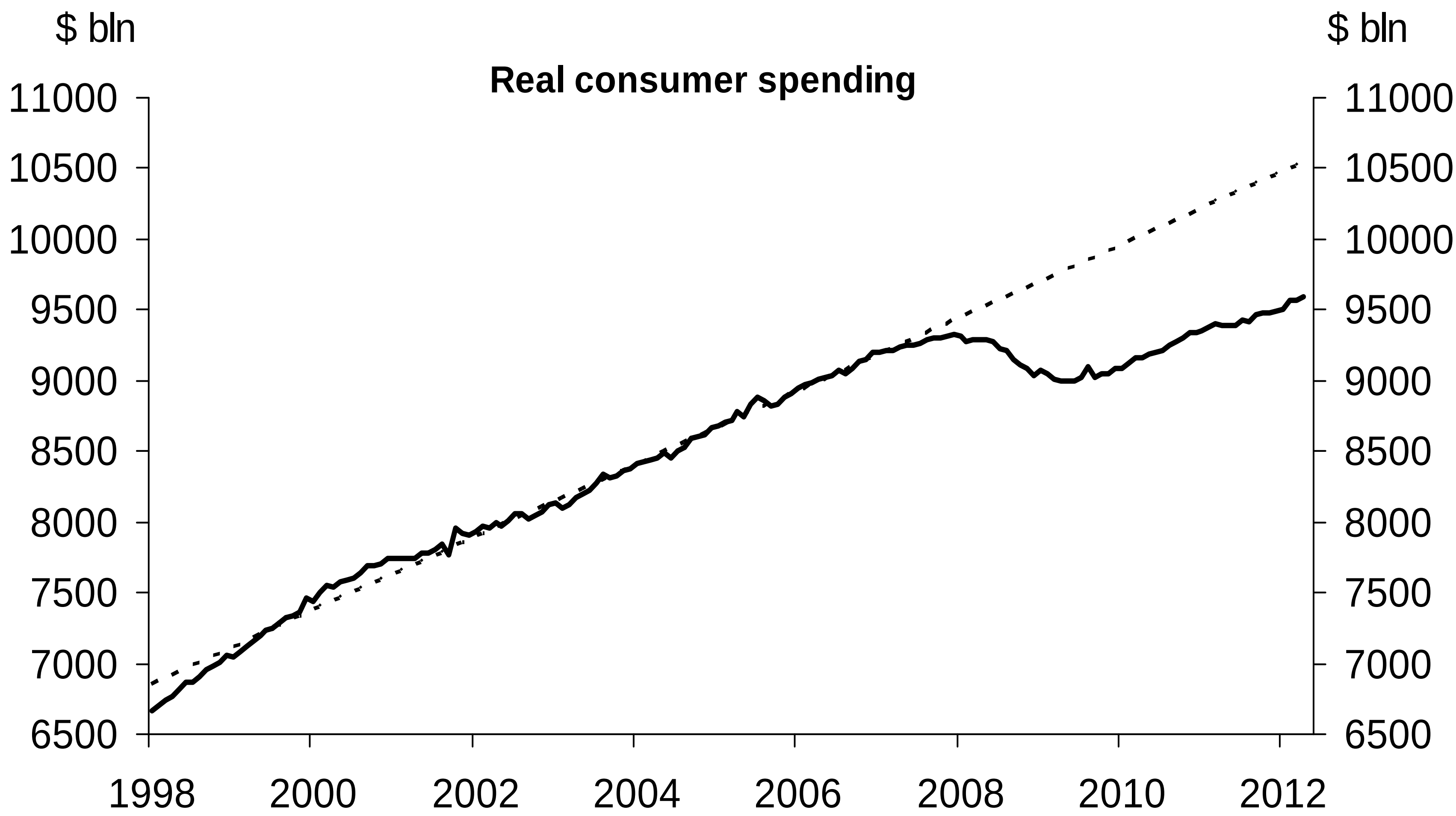
Less than 20% of families with directly held stocks have more than 10 stocks in their portfolios



Source: FRB, DB Global Markets Research

The consumer's post-crisis balance sheet

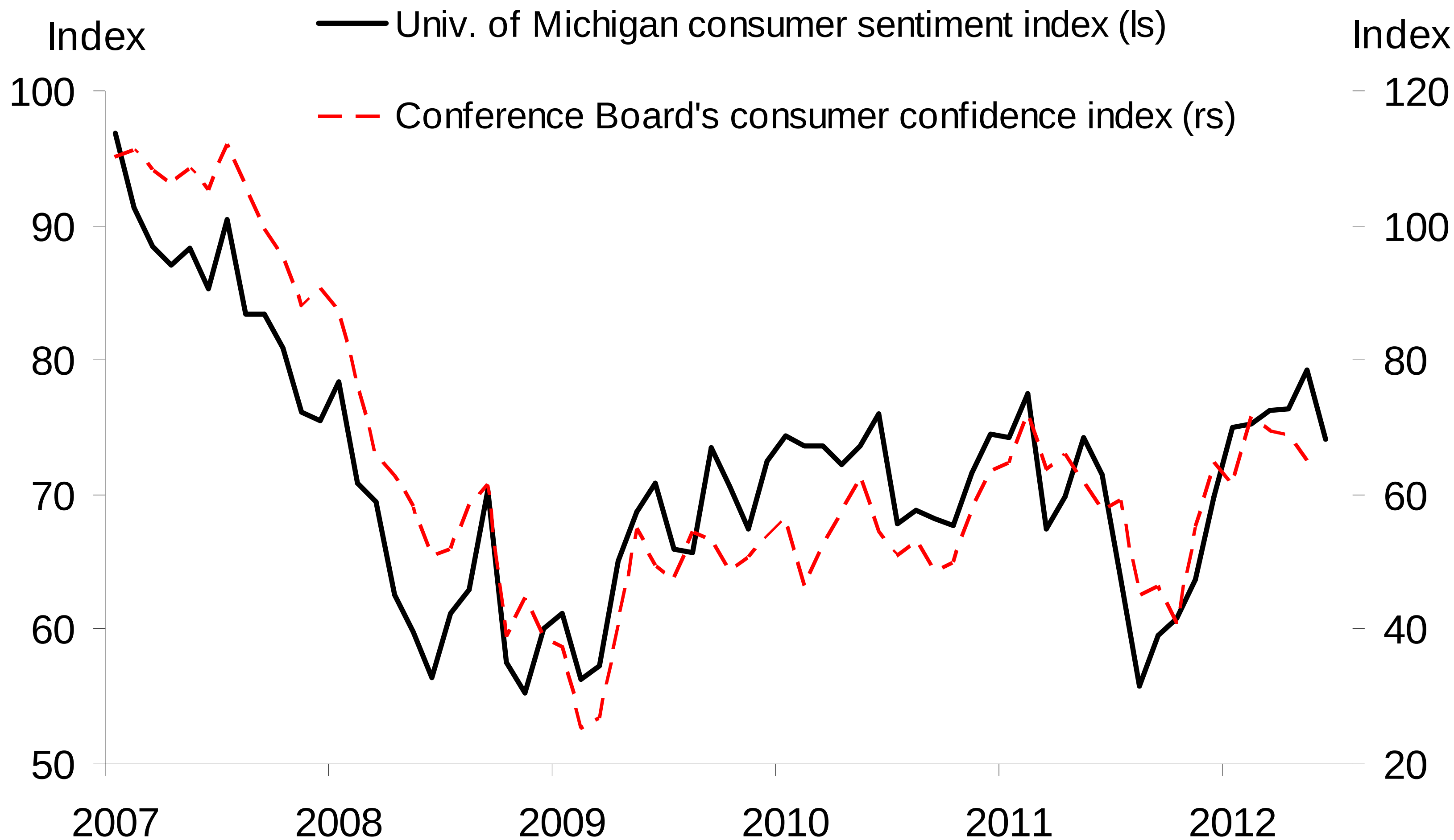
A lot of potential for consumer spending to move up toward the pre-crisis trend, but more employment and household balance sheet repair is needed to get there



Source: BEA, Haver Analytics, DB Global Markets Research

Torsten Slok, torsten.slok@db.com +1 212 250-2155

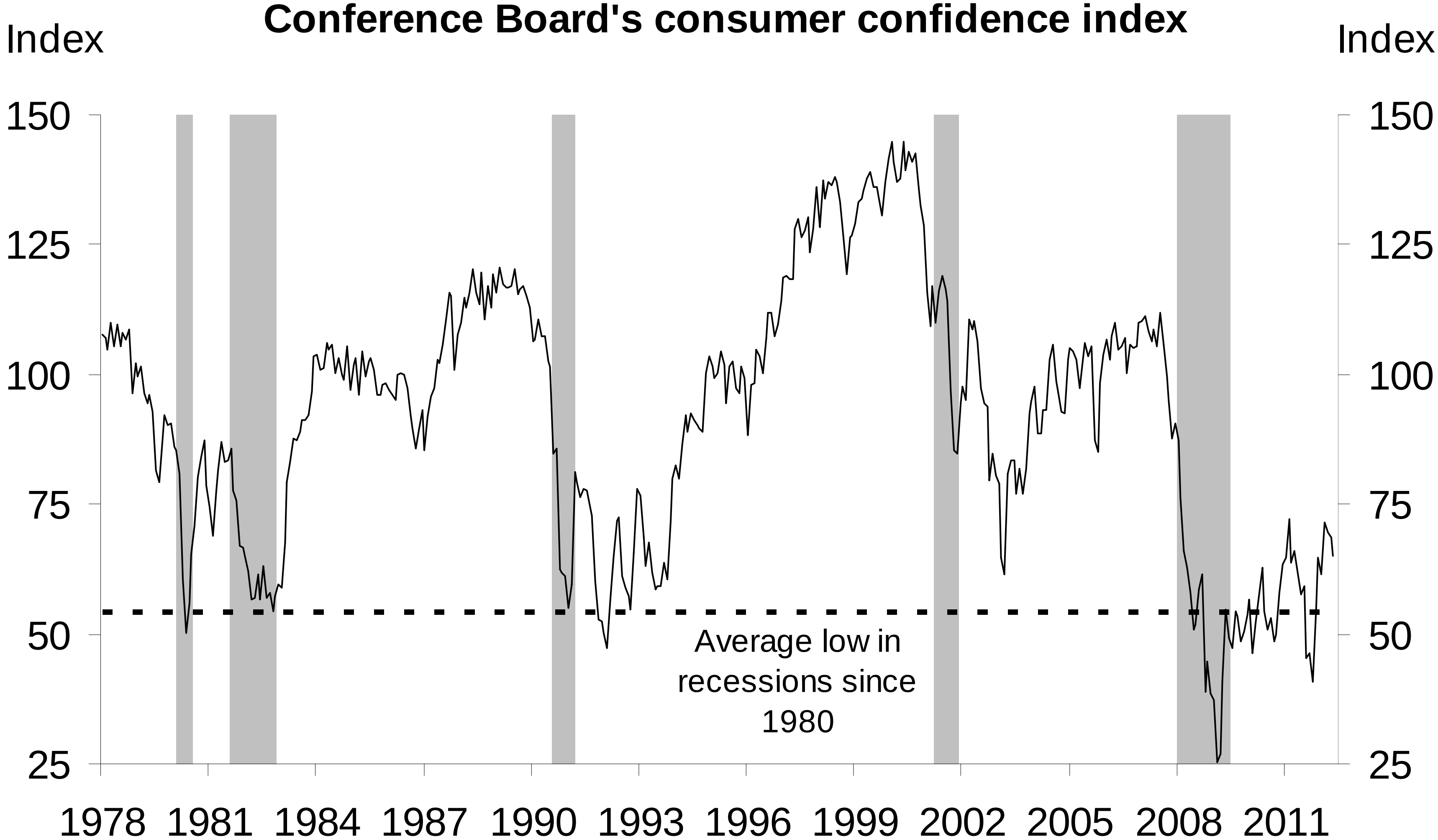
US consumer confidence no longer rising…



Source: Conference Board, Univ. of Mich., Haver Analytics, DB Global Markets Research

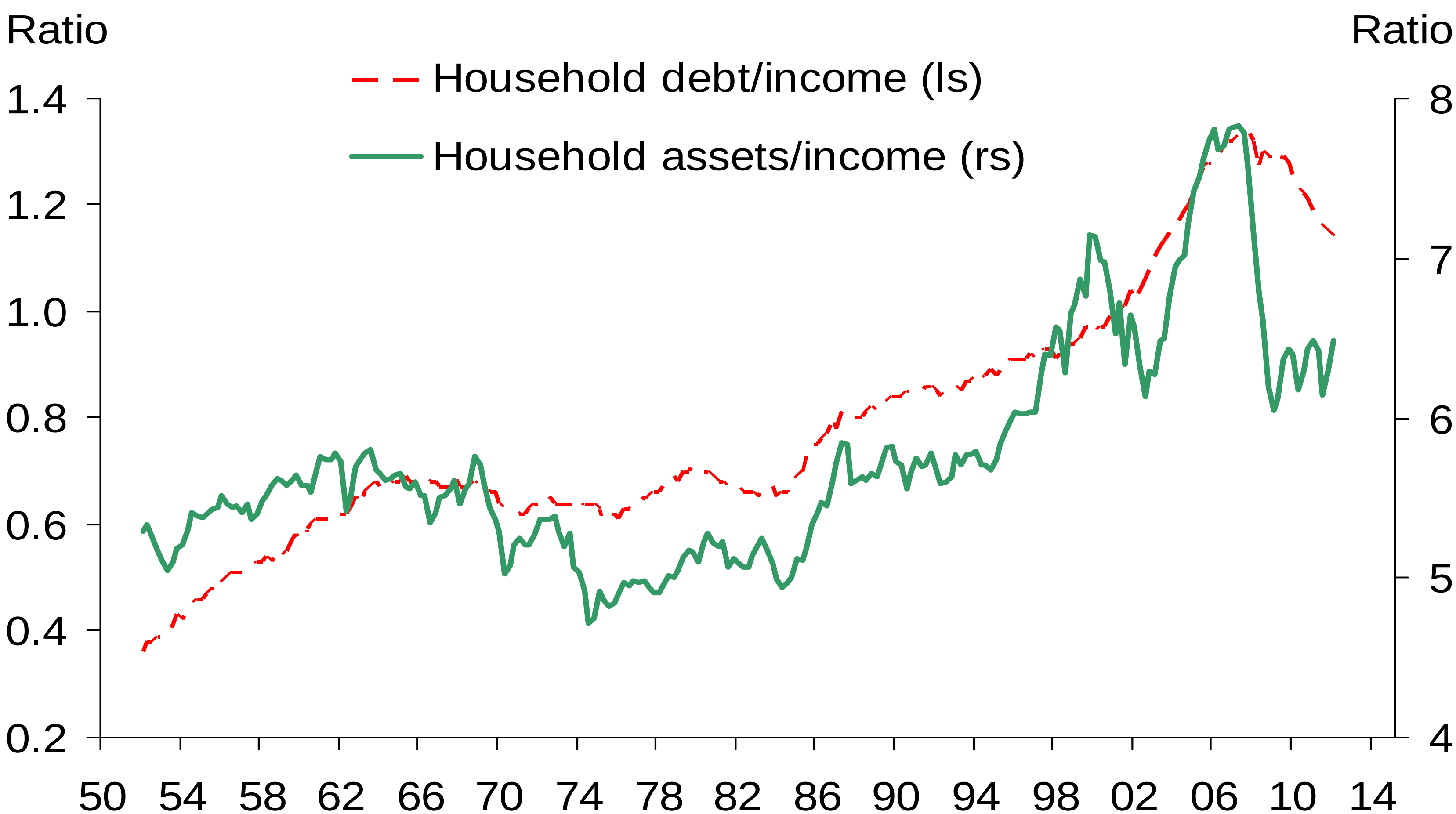
…but confidence is still higher than the average lows of previous recessions

Conference Board's consumer confidence index



Source: Conference Board, Haver Analytics, DB Global Markets Research

Household debt is falling and assets are slowly edging up, i.e. balance sheet repair continues

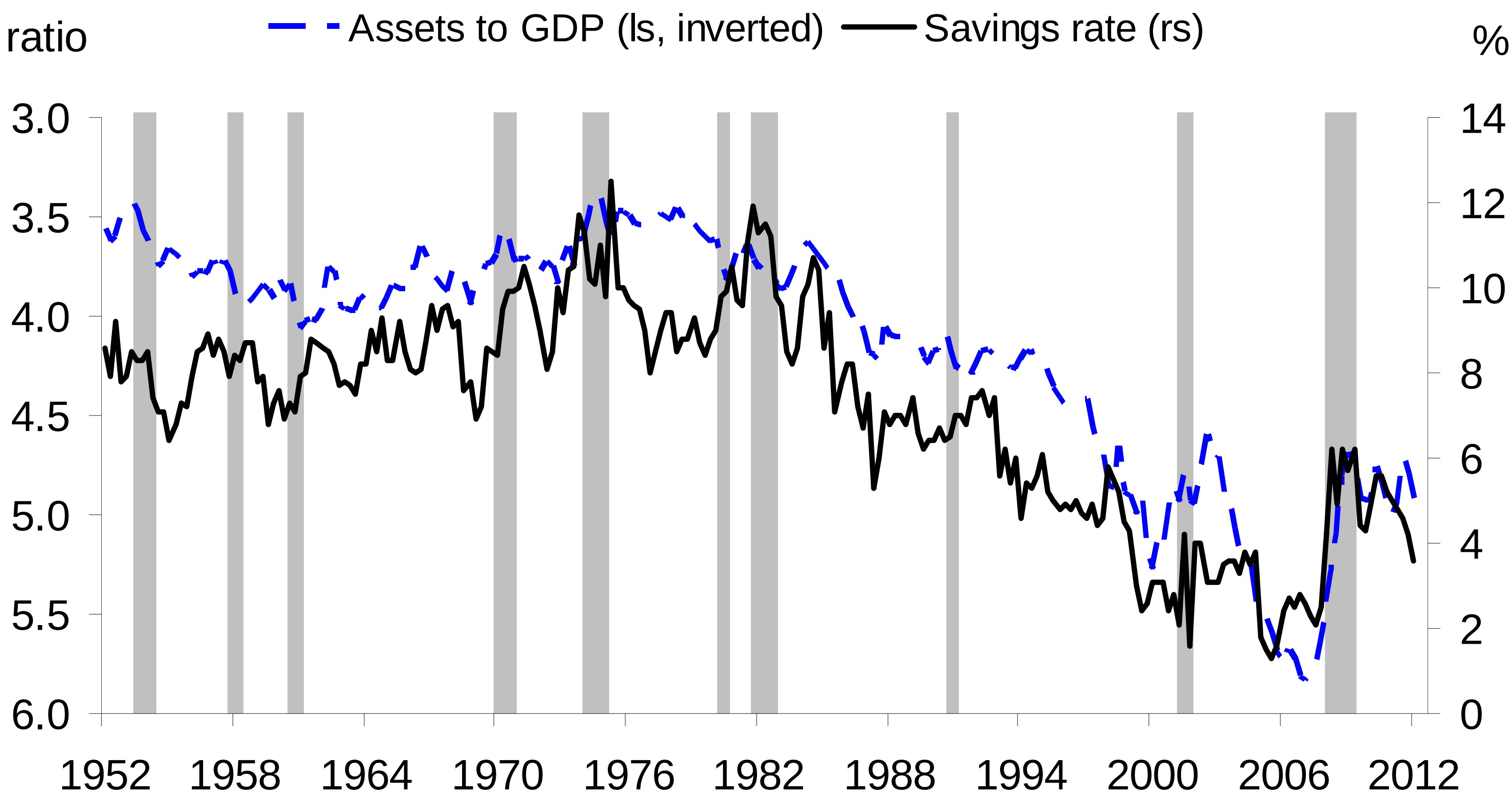


Note: Latest data for 2012Q1.

Source: FRB, Haver Analytics, DB Global Markets Research

Asset prices, i.e stock prices and home prices, are a key driver of whether consumers decide to save or spend. Partly through wealth effects partly through confidence effects

Households



Source: FRB, BEA, Haver Analytics, DB Global Markets Research

Torsten Slok, torsten.slok@db.com +1 212 250-2155

June 2012

Understanding the Deleveraging Process

Understanding leverage

Leveraging up	Deleveraging
Easy to borrow/low margins	Hard to borrow/high margins
Leverage rising	Deleveraging
Rise in asset prices	Asset prices fall
Margins fall further	Margins rise further

Source: DB Global Markets Research

Torsten Slok, torsten.slok@db.com +1 212 250-2155

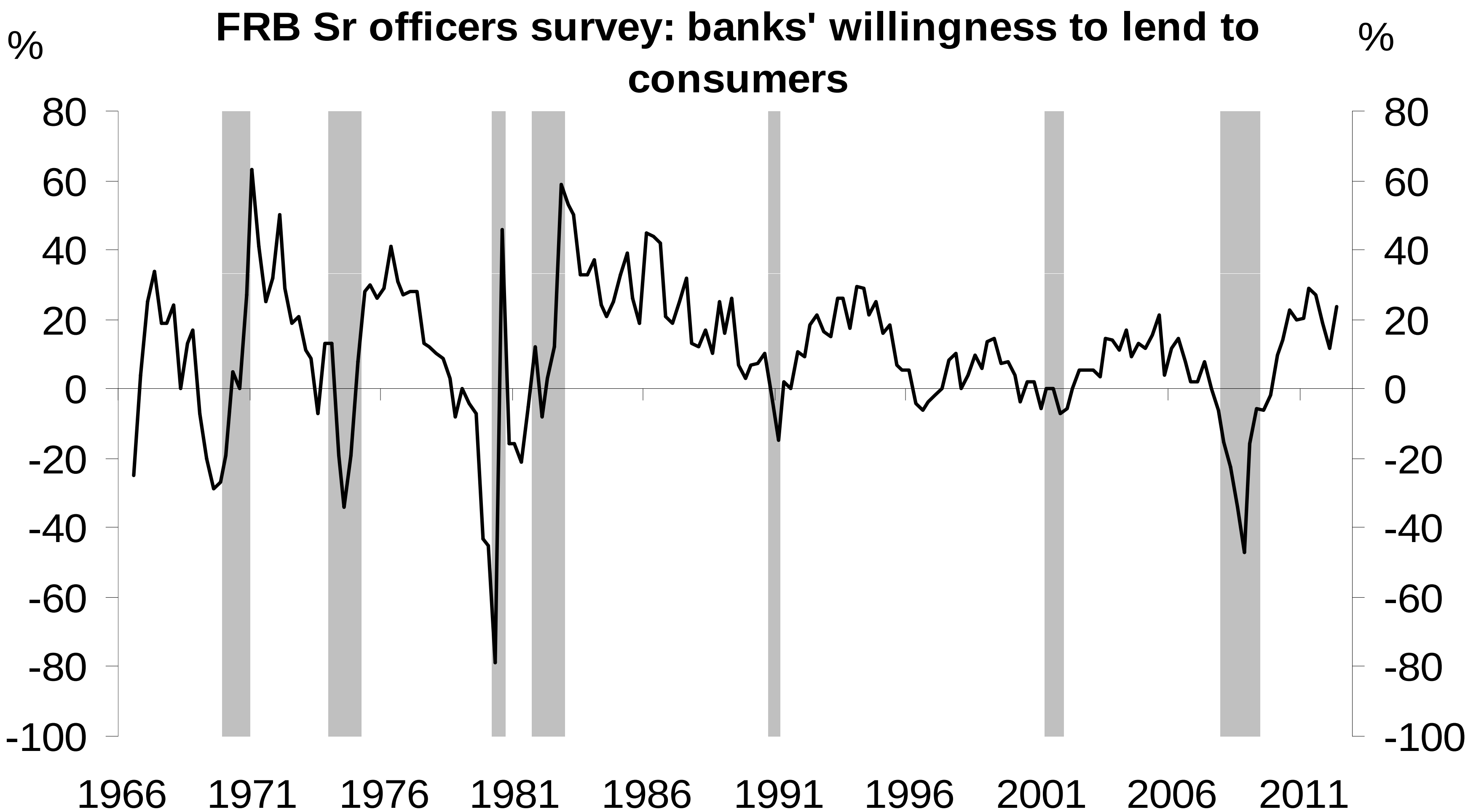
Leverage enters traditional consumption models via households' net worth. In other words, what happens to equity and home prices is very important for how much more deleveraging is needed

Private consumption is driven by:

Consumption = A1*Income + A2*Net Housing Wealth + A3*Net Financial Wealth + A4*Interest rate

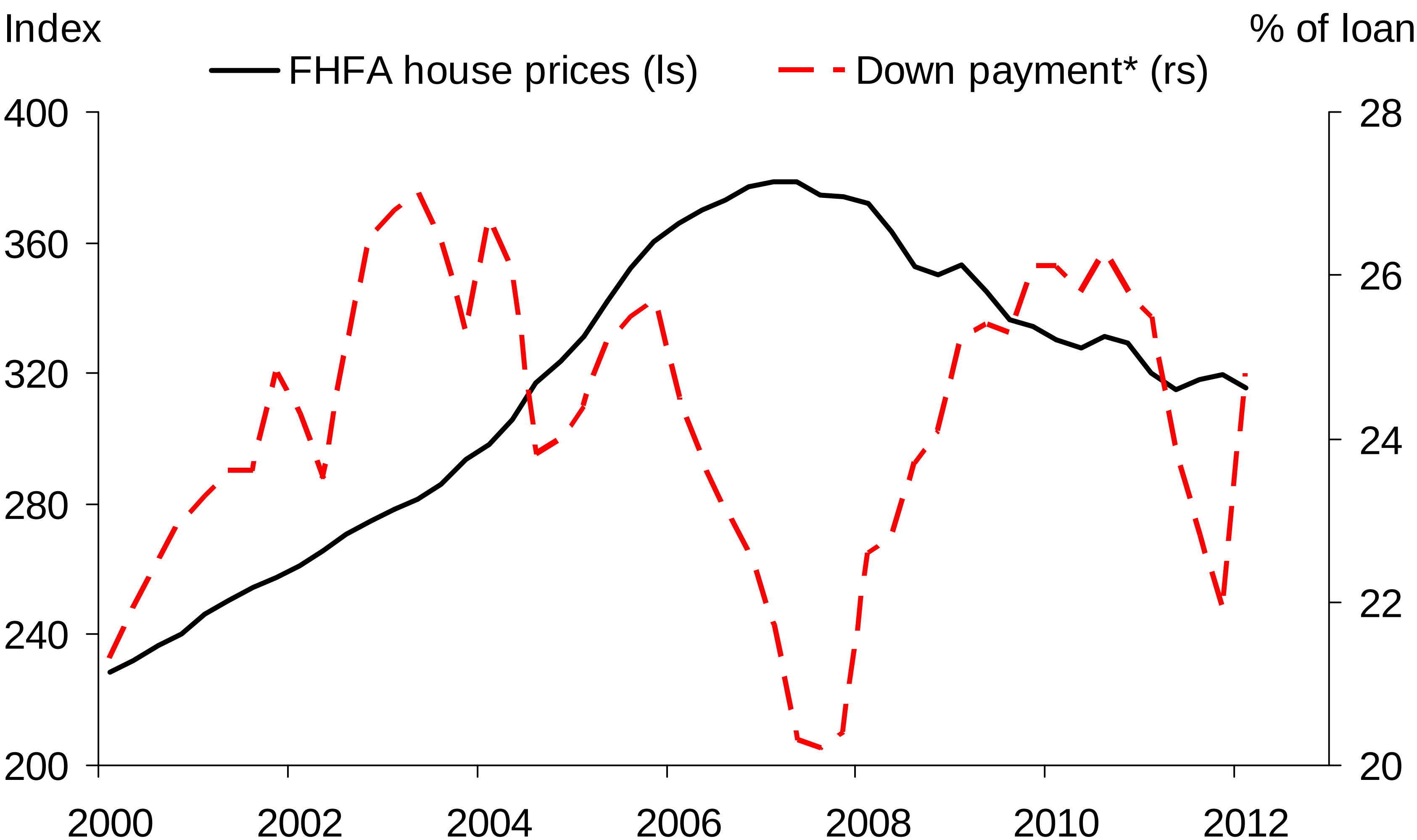
Households' net worth = assets – liabilities. Assets are much more volatile than liabilities. And assets are driven by expectations to the future and Fed policy. As a result, lower interest rates and easier financial conditions (for example as a result of QE/Operation Twist and Fed communication) can lead to higher asset prices, which again can end the deleveraging process and ultimately raise consumer spending growth. If asset prices don't rise then the deleveraging process will take longer to complete.

Banks are more willing to lend to consumers



Source: FRB, Haver Analytics, DB Global Markets Research

Average down payment on a house rising recently

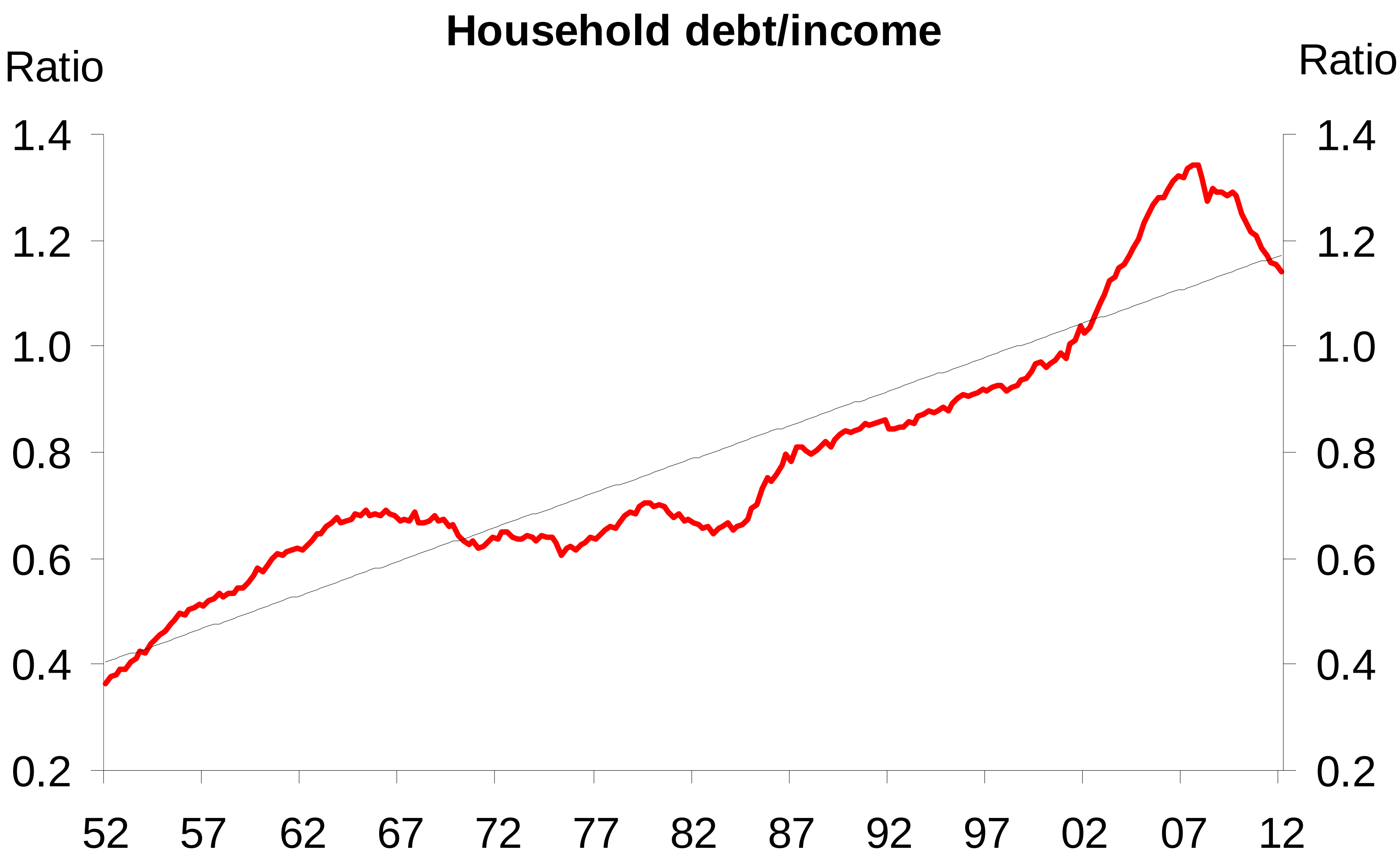


* Denotes the average down payment on all loans closed

Source: FHFA, Haver Analytics, DB Global Markets Research

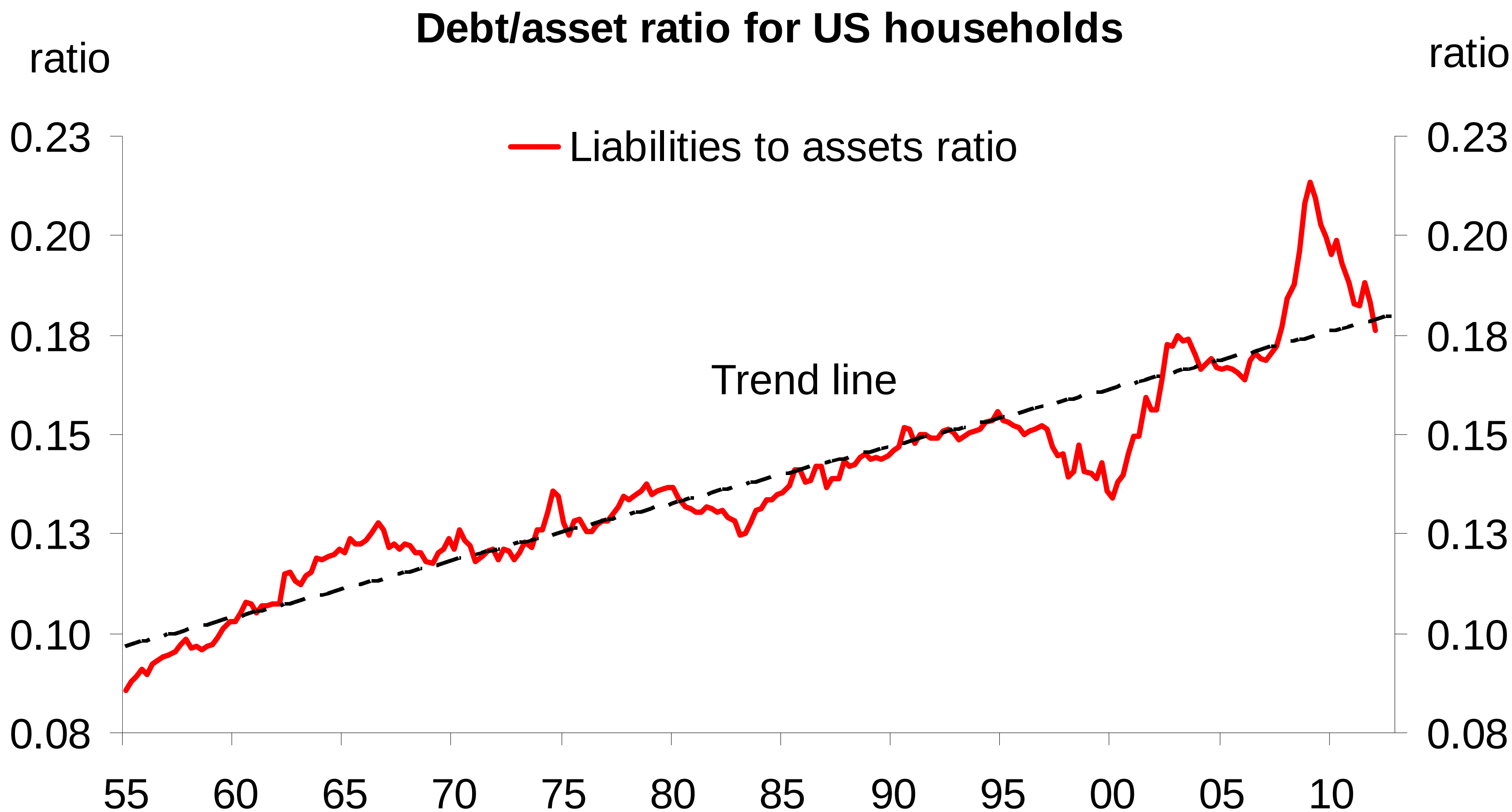
How far are deleveraging indicators from their pre-bubble (=2003/2004) levels?

We are back to the historical trend in debt/income – undershooting likely



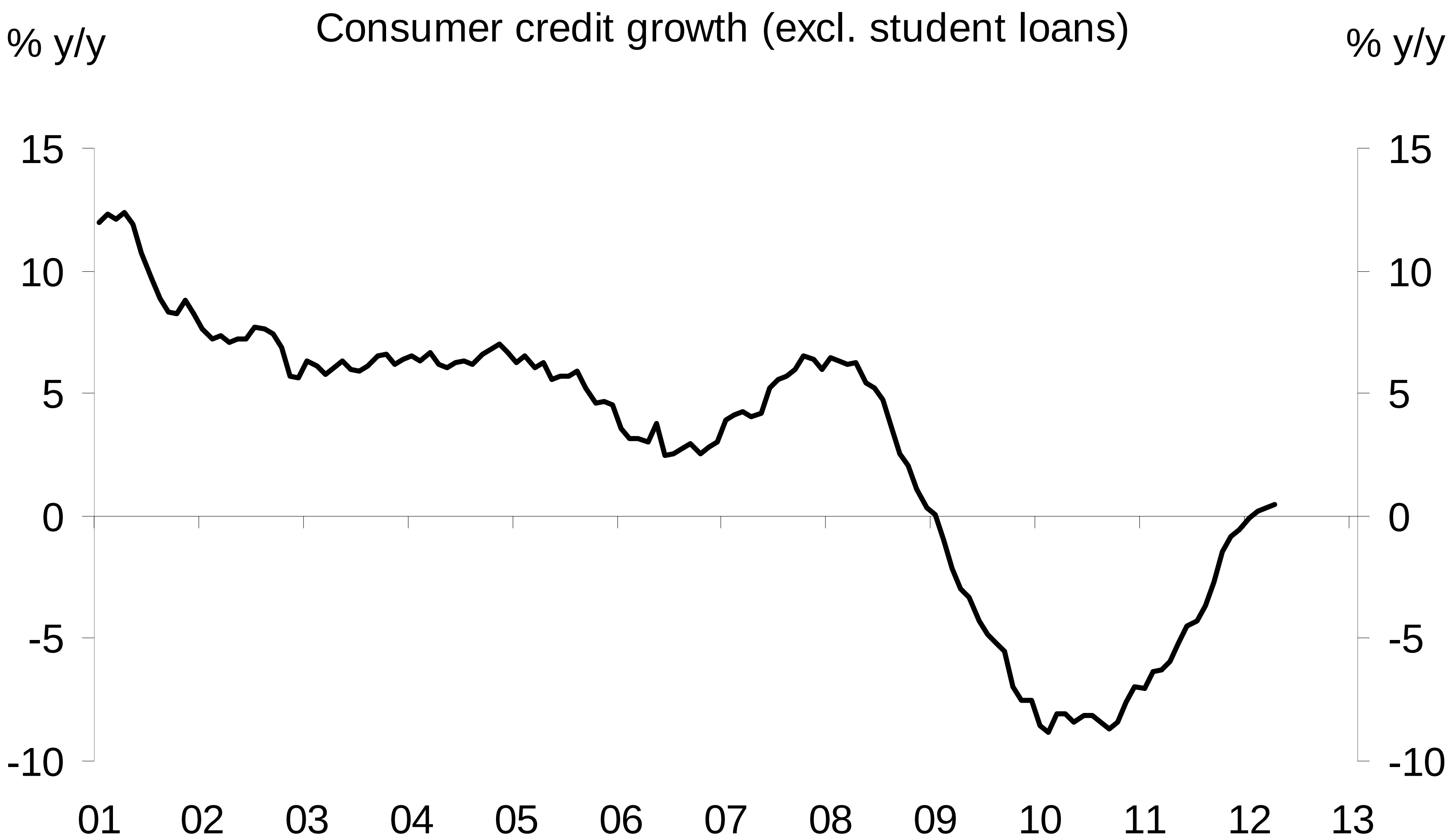
Source: FRB, Haver Analytics, DB Global Markets Research

Household liabilities to assets now below trend



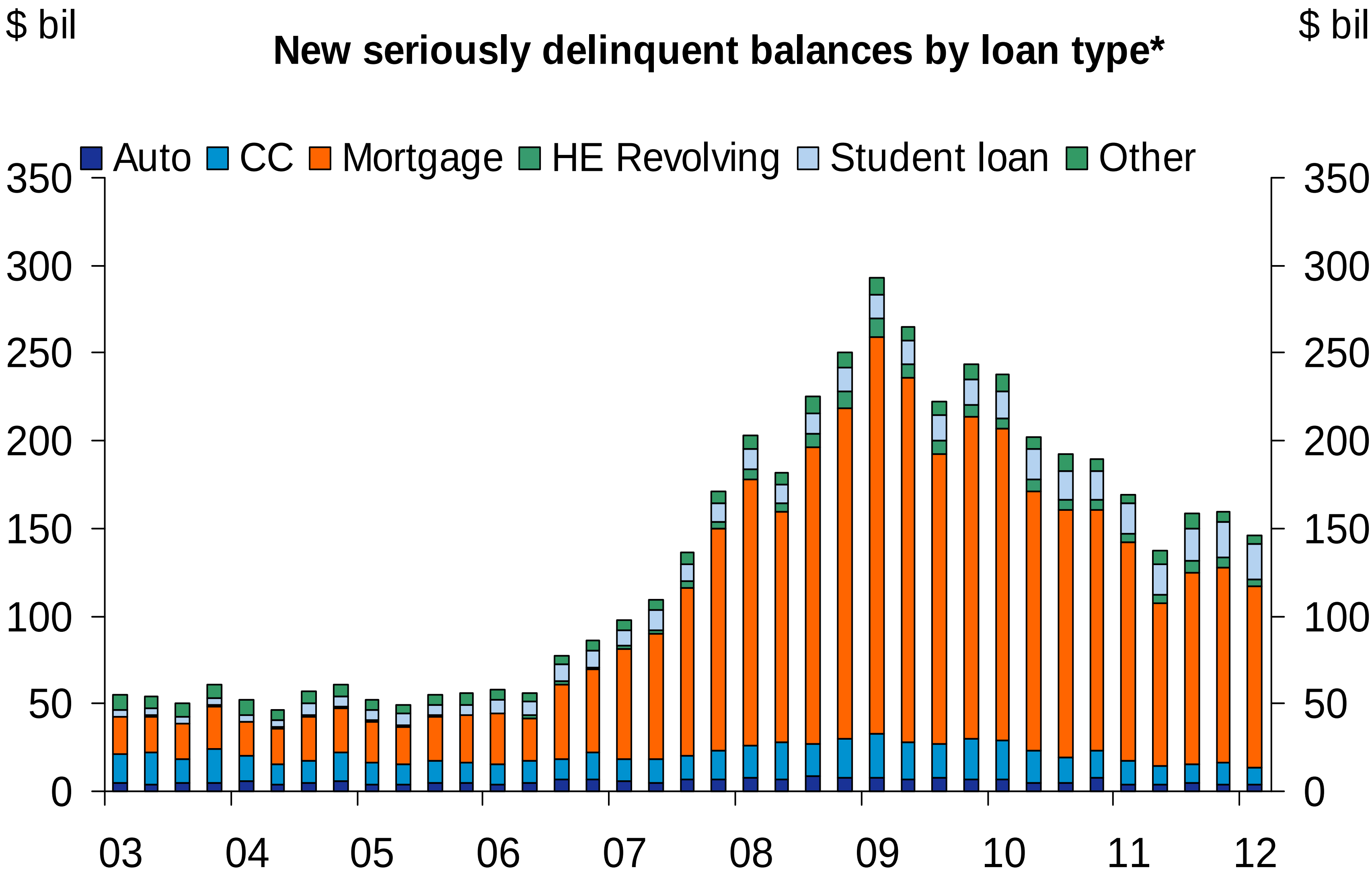
Source: FRB, Haver Analytics, DB Global Markets Research

Consumer credit growth has cut through zero …



Source: FRB, Haver Analytics, DB Global Markets Research

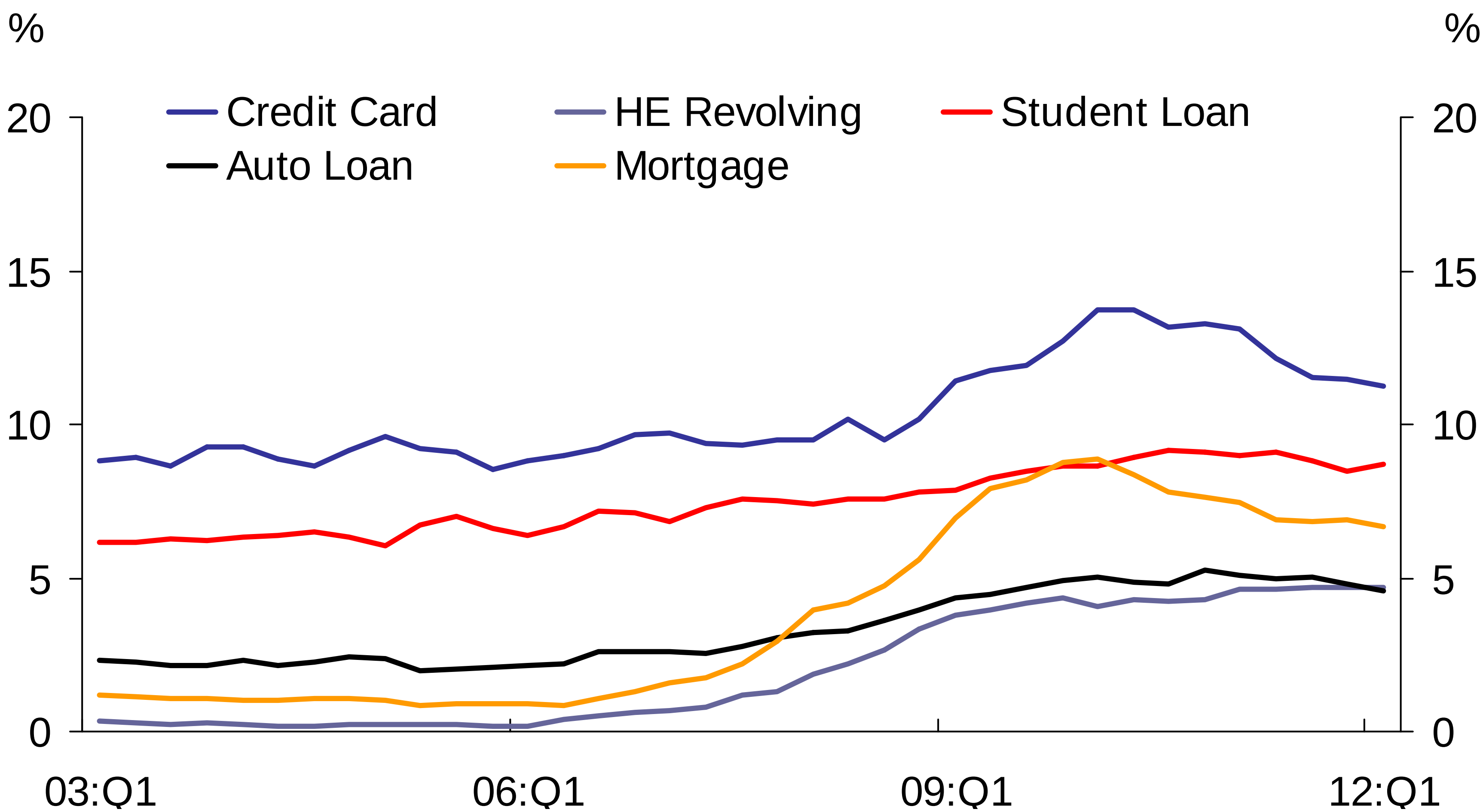
…but because of ongoing problems in the housing market new seriously delinquent loans are only back to their 2007 level and starting to move sideways...



Source: FRB-New York, DB Global Markets Research

…and 90+ days delinquent balance near 2008 and 2009 levels and moving sideways…

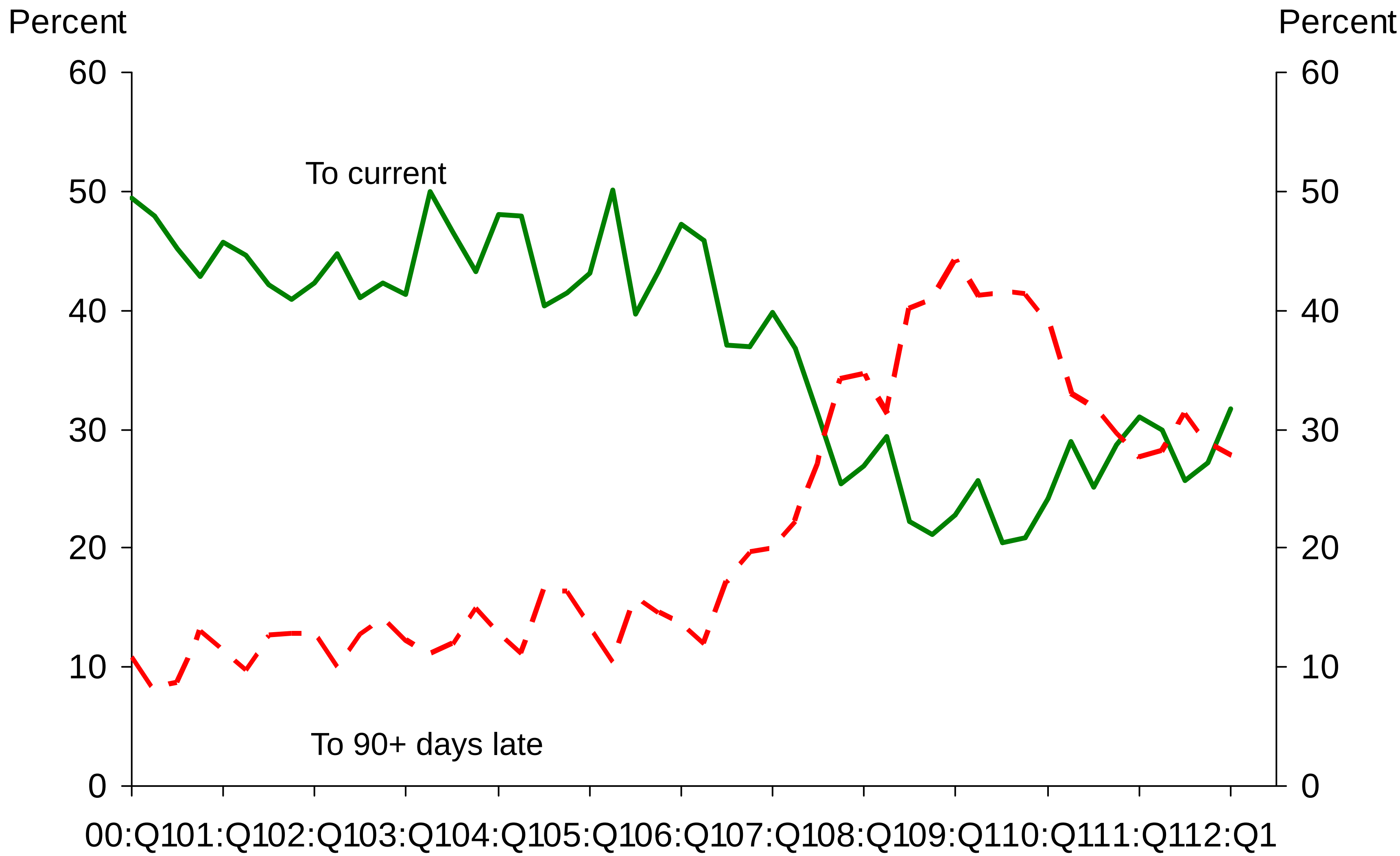
Percent of Balance 90+ Days Delinquent by Loan Type*



Source: FRB-New York, DB Global Markets Research

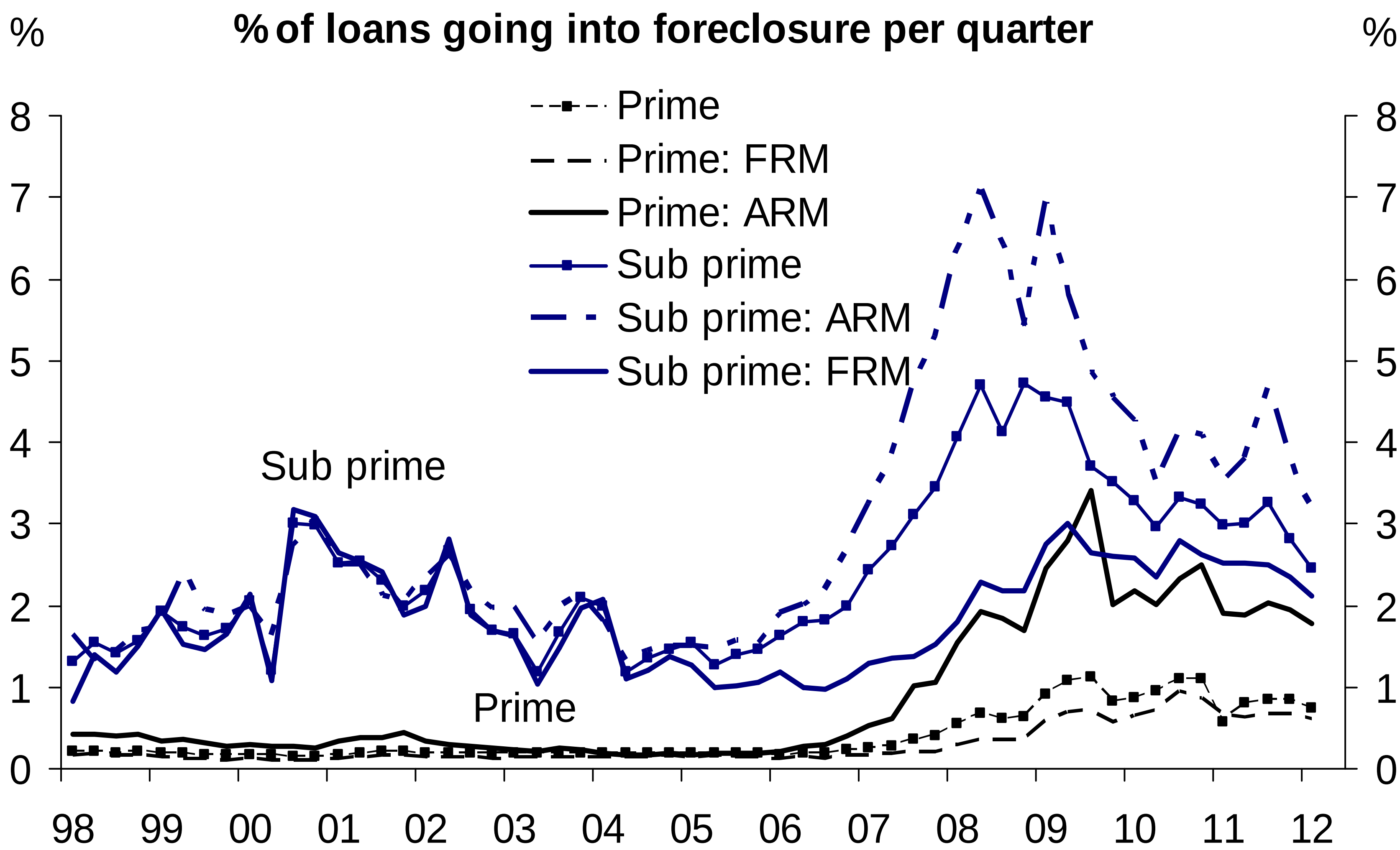
Torsten Slok, torsten.slok@db.com +1 212 250-2155

…but we have seen an improvement recently in transition rates for loans that are 30-60 days delinquent…



Source: FRB-New York, DB Global Markets Research

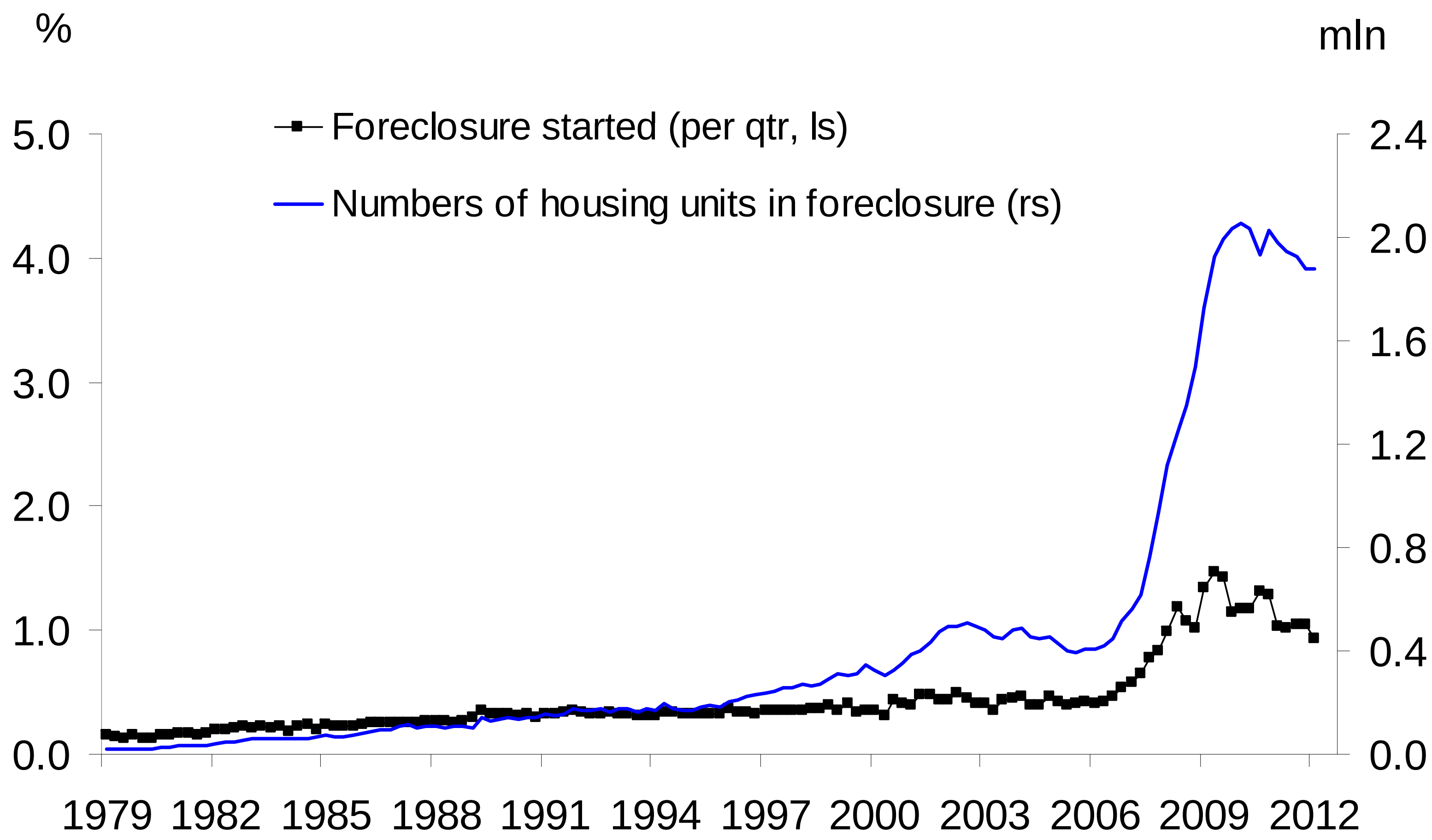
…and the number of people who are going into foreclosure is falling…



Note: ARM=Adjustable Rate Mortgage, FRM=Fixed Rate Mortgage

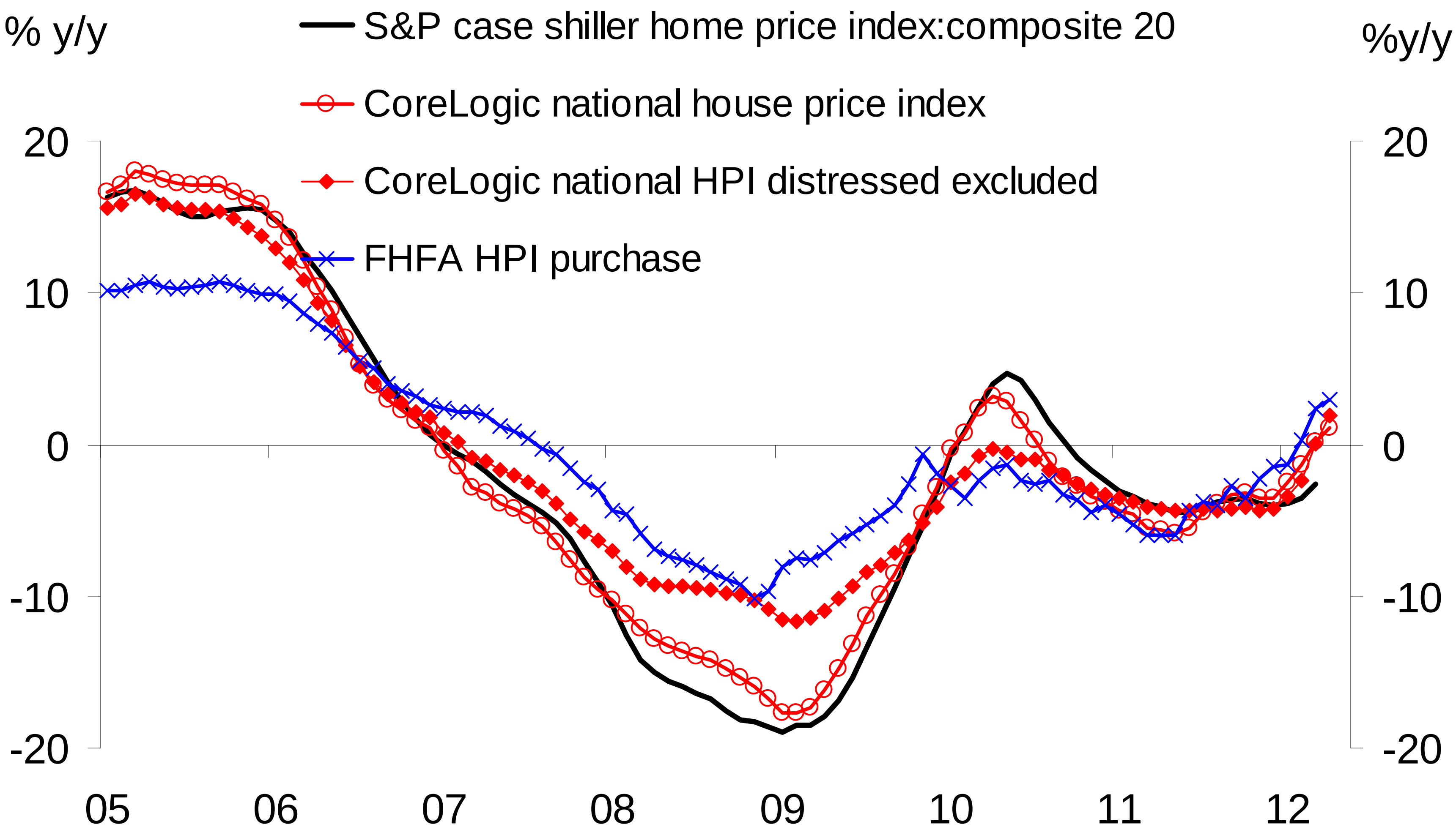
Source: MBA, Datastream, DB Global Markets Research

…and the total number of households in foreclosure slowly coming down…



Source: MBA, Datastream, DB Global Markets Research

…and home prices starting to turn up…



Source: S&P, CoreLogic, FHFA, Haver Analytics, DB Global Markets Research

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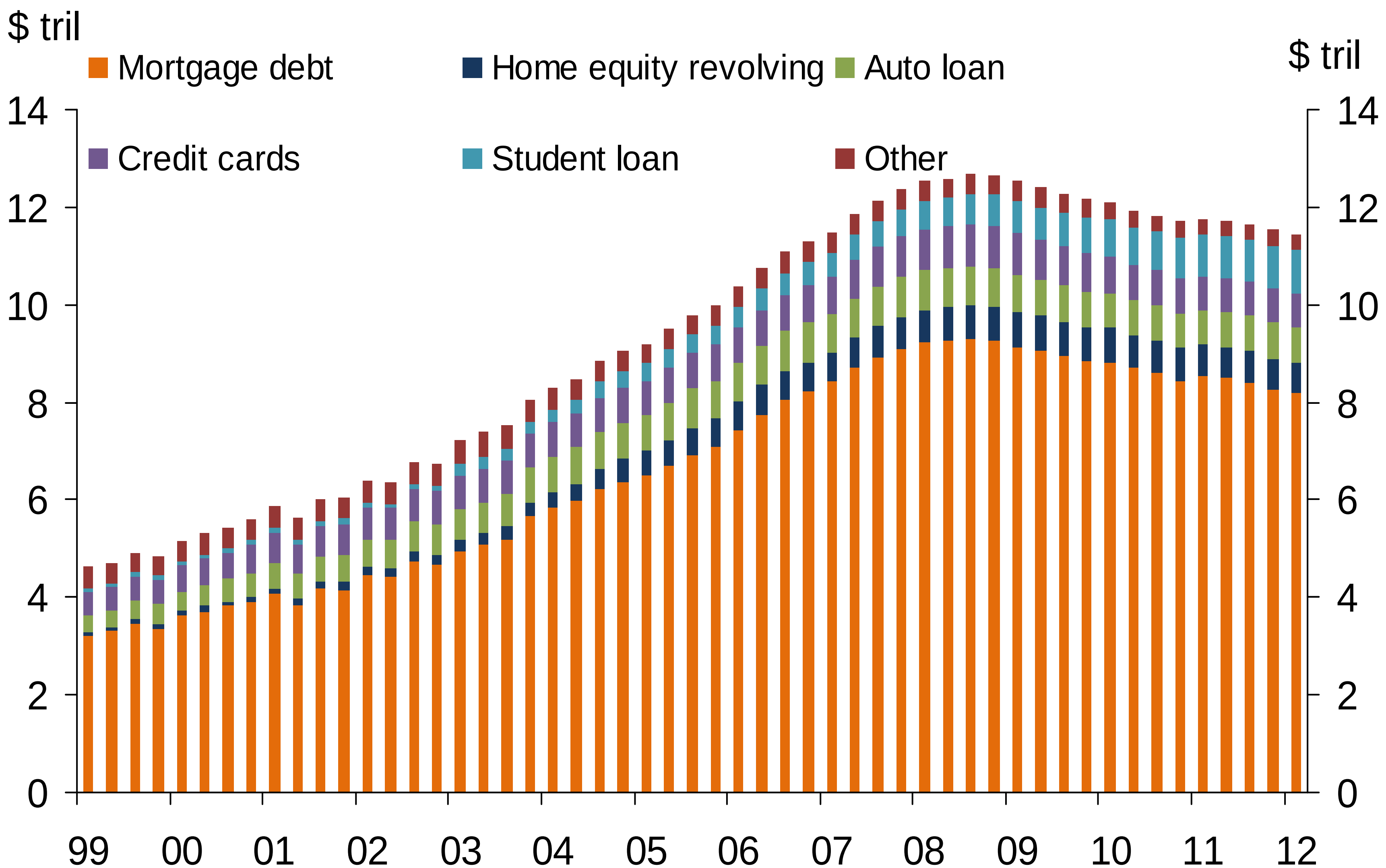
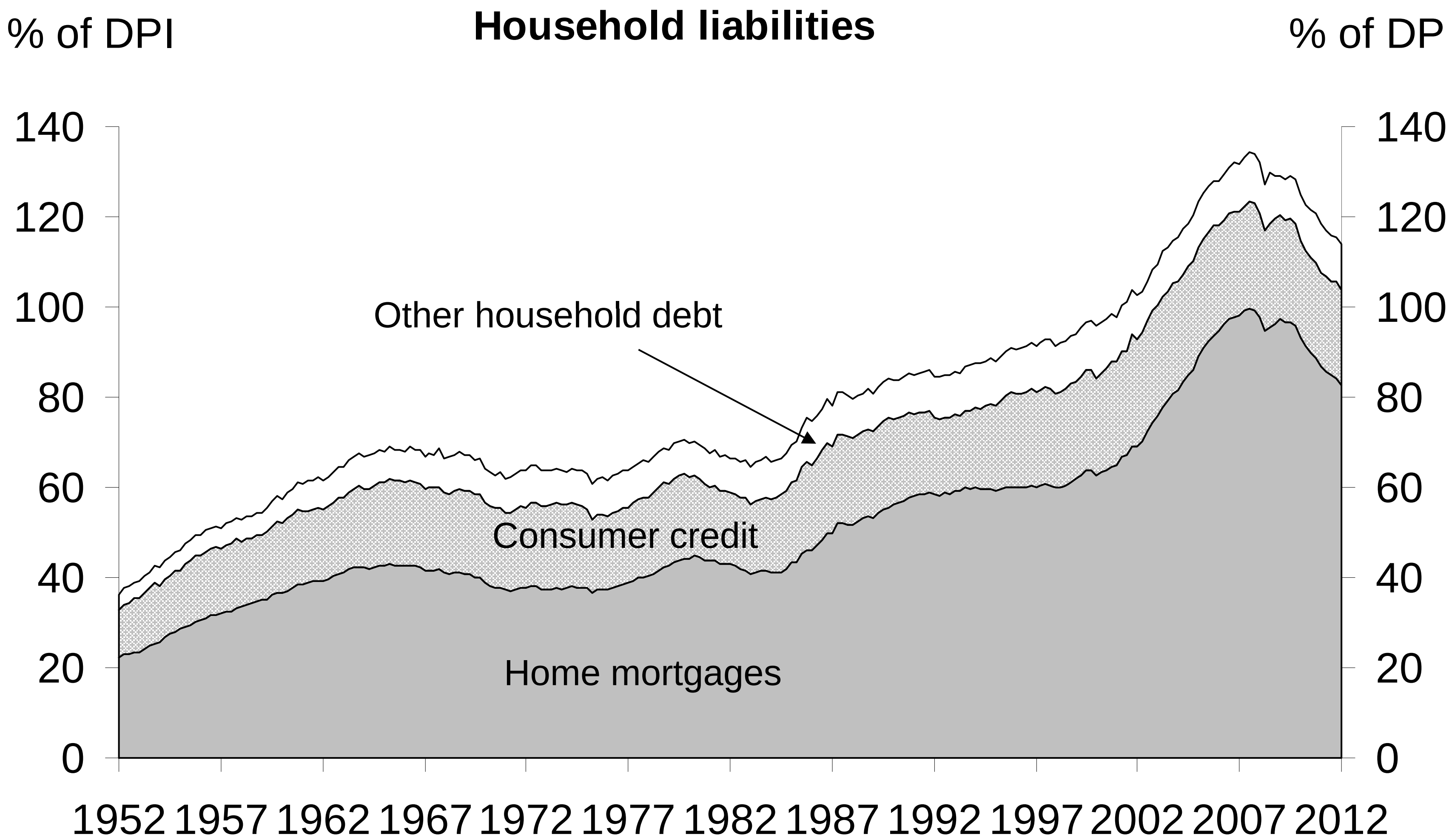
…and total household absolute debt levels back to the 2007 level…



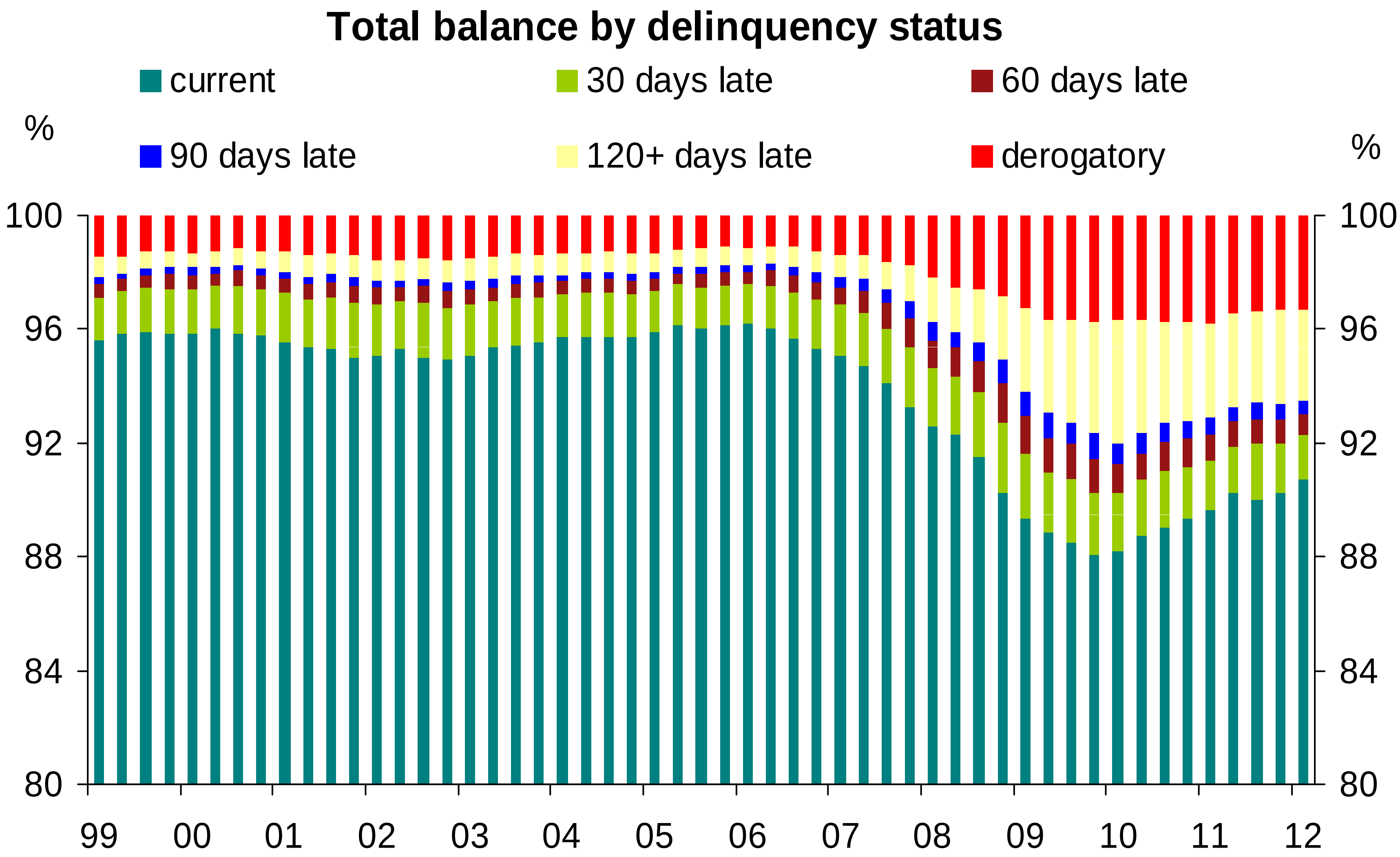
Source: FRB, DB Global Markets Research

…but as a share of income the downtrend in household debt continues and we are currently at 2003/2004 levels...



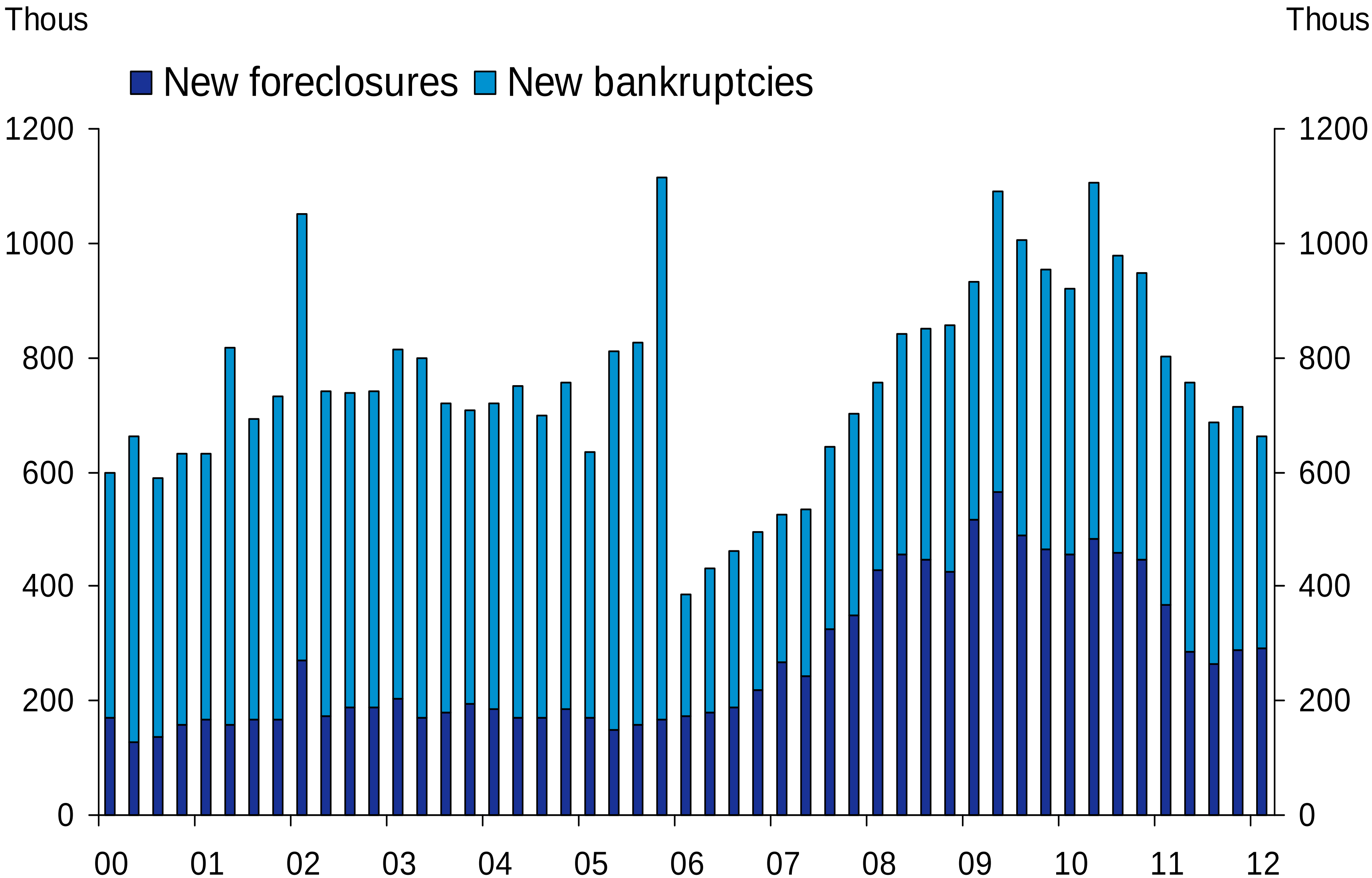
Source: FRB, Haver Analytics, DB Global Markets Research

…and the number of loans that are current are at the 2008 level…



Source: FRB-New York, DB Global Markets Research

…and new foreclosures and bankruptcies still elevated but lower than in 2009 and 2010…



Source: FRB-New York, DB Global Markets Research

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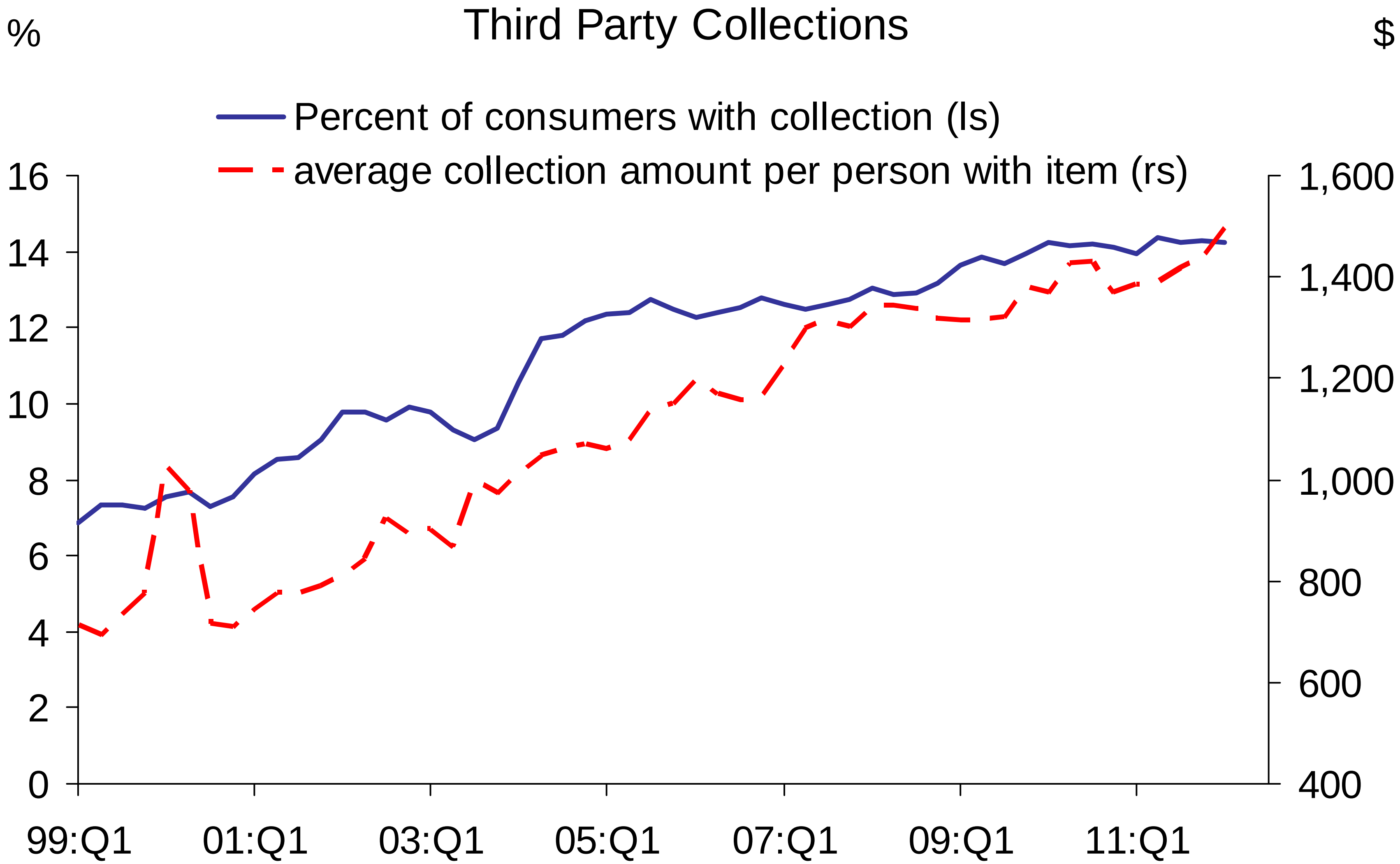
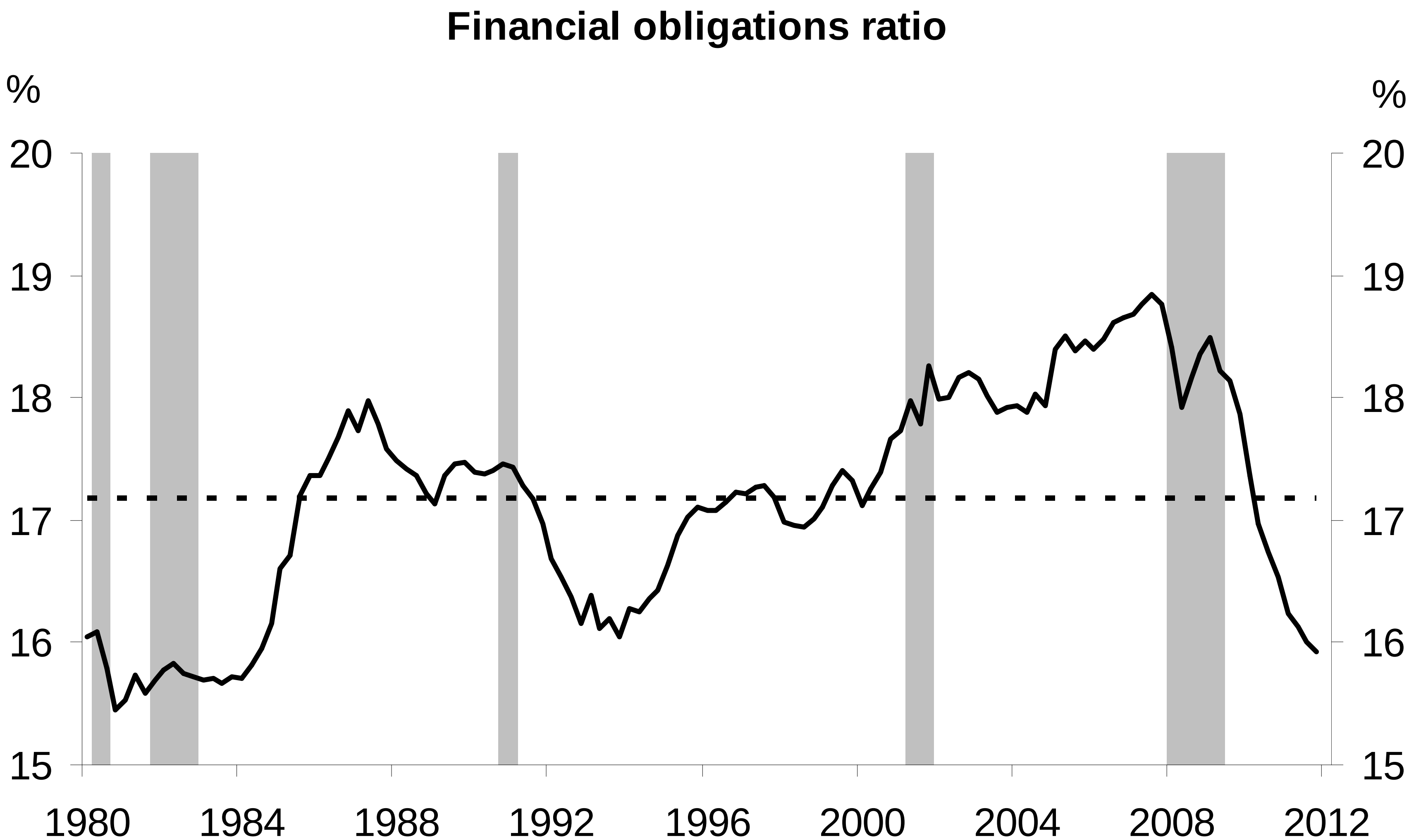
…and still significant collection problems: Average collection amount per person at $1,500, an all-time high



Source: FRB-New York, DB Global Markets Research

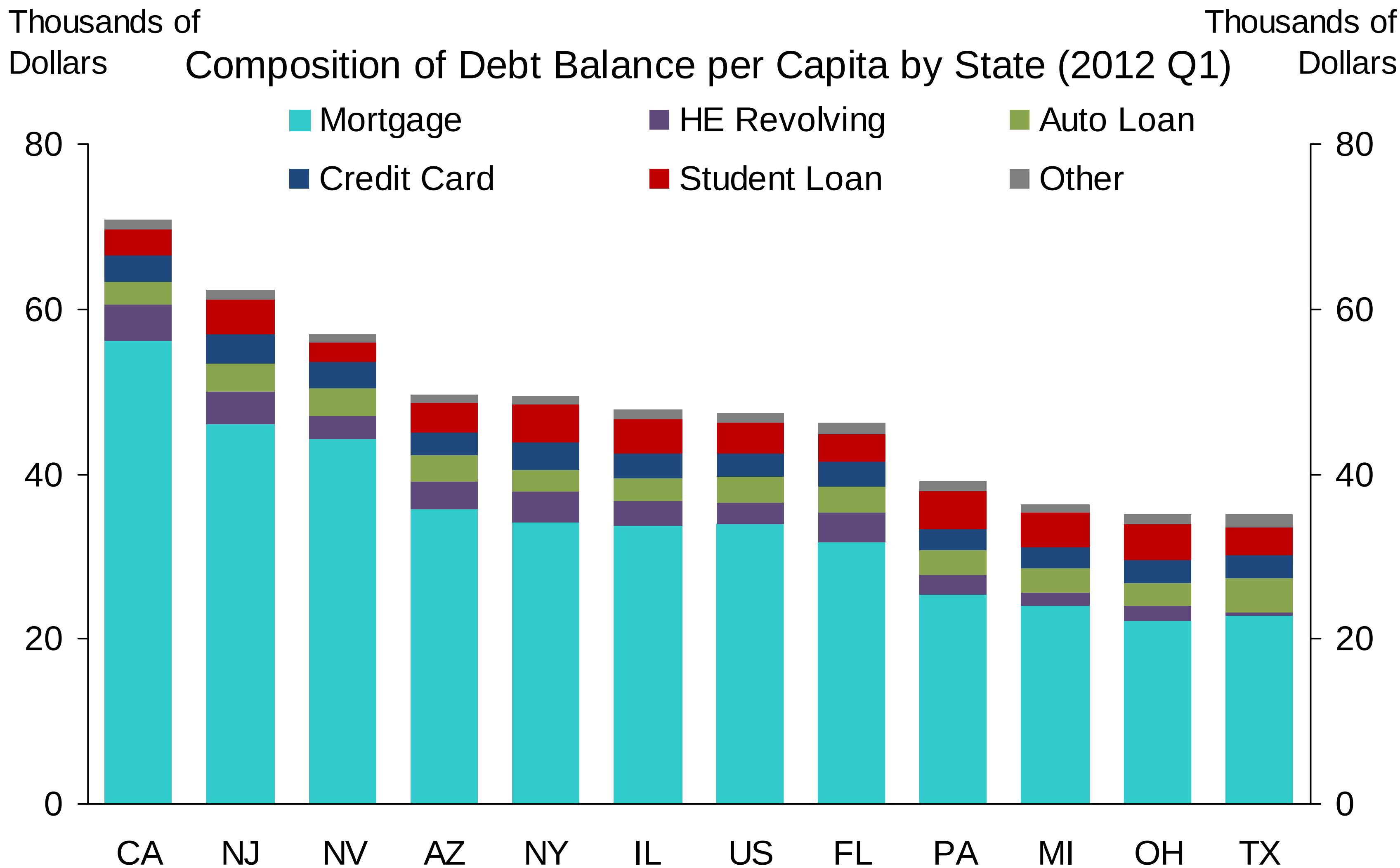
Households' financial obligations ratio at the lowest level since 1984, mainly because of low interest rates



Source: FRB, Haver Analytics, DB Global Markets Research

Household Deleveraging at the State Level

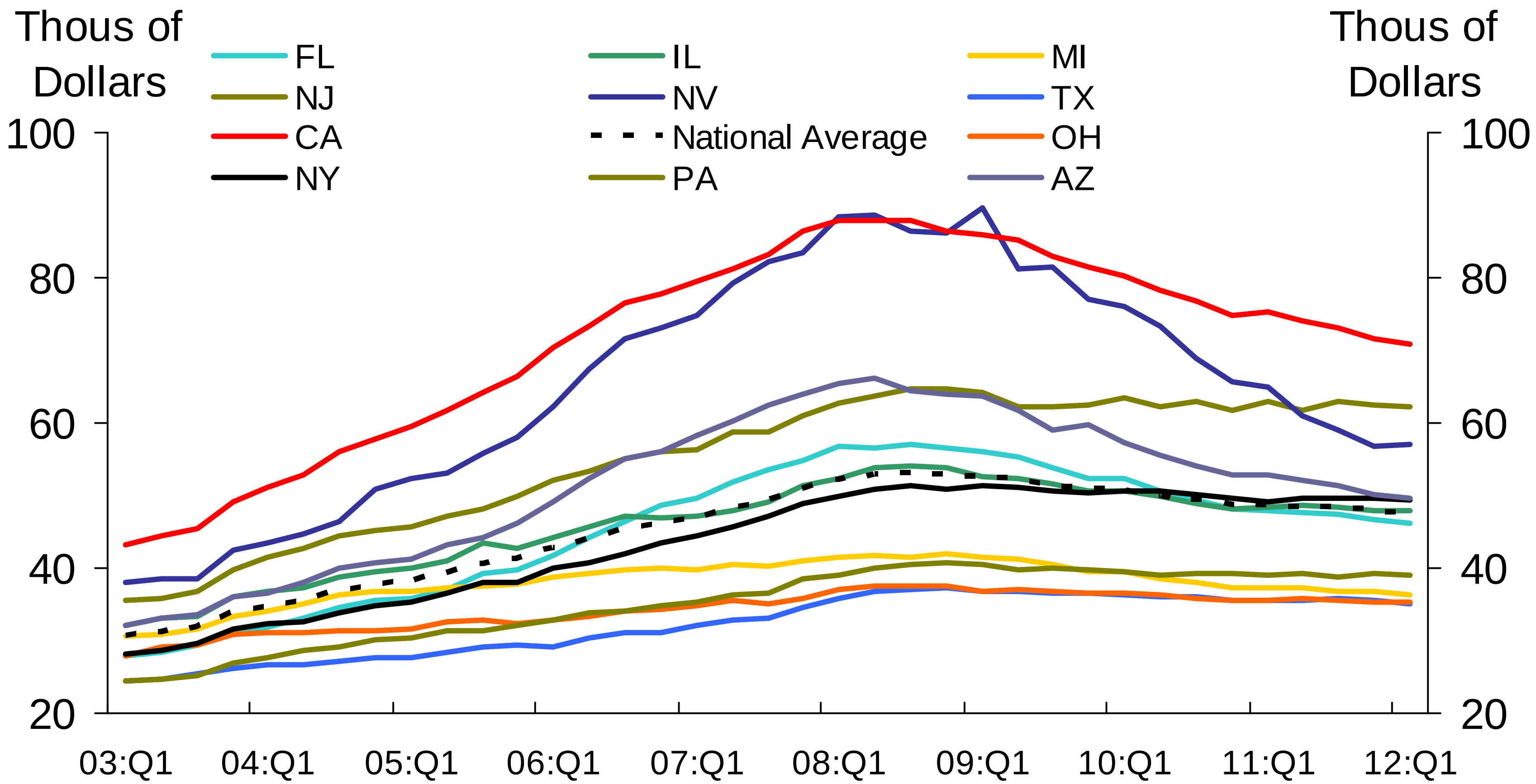
Per capita debt levels vary by state



Source: FRB-New York, DB Global Markets Research

Deleveraging has hit housing bubble states particularly hard, but we have come a long way in the adjustment. Bubble states now close to 2006/2007 levels, non-bubble states closer to historical averages

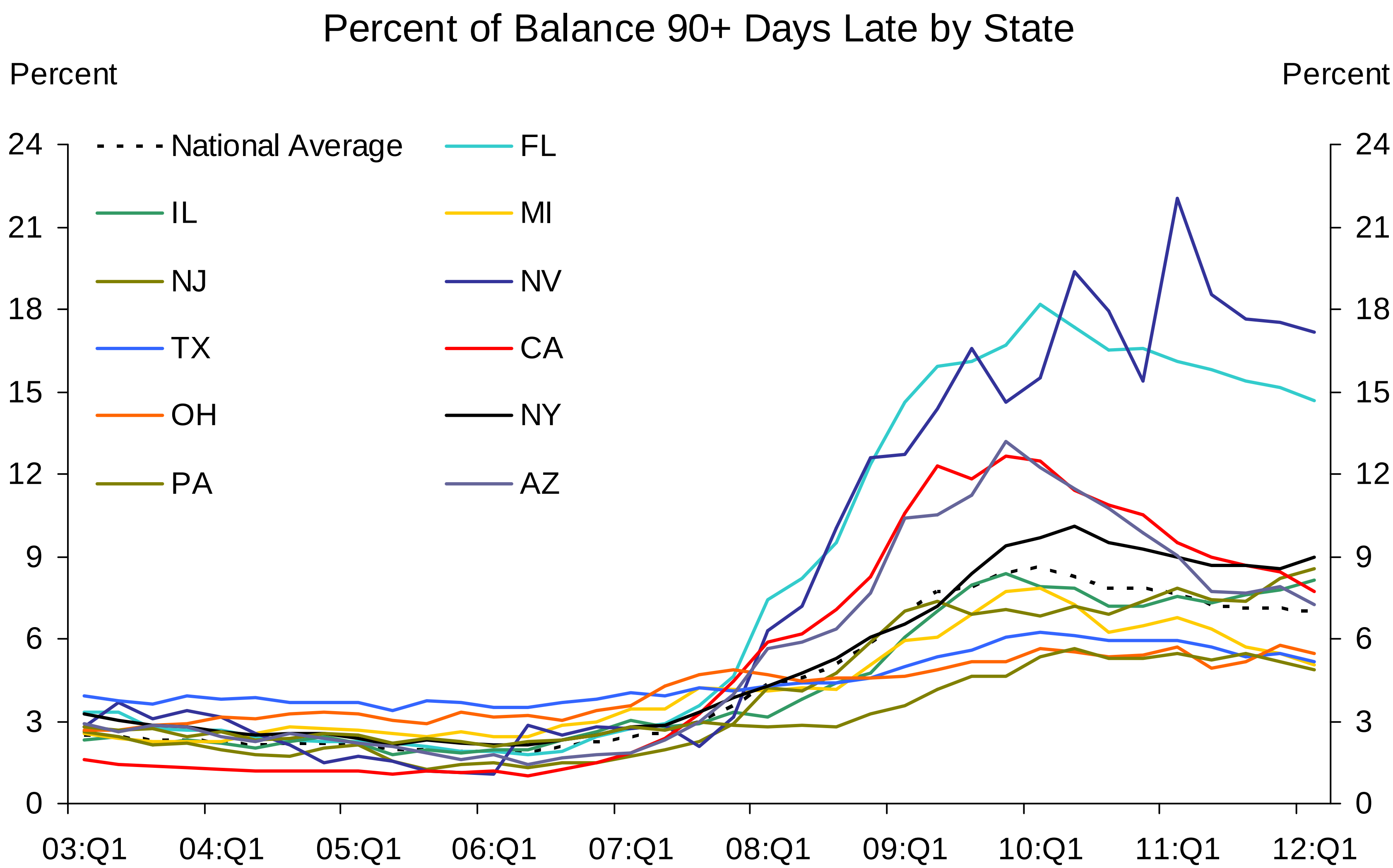
Total Debt Balance per Capita* by State



* Based on the population with a credit report

Source: FRB-New York, DB Global Markets Research

Seriously delinquent loans: Nevada still elevated, the rest getting better

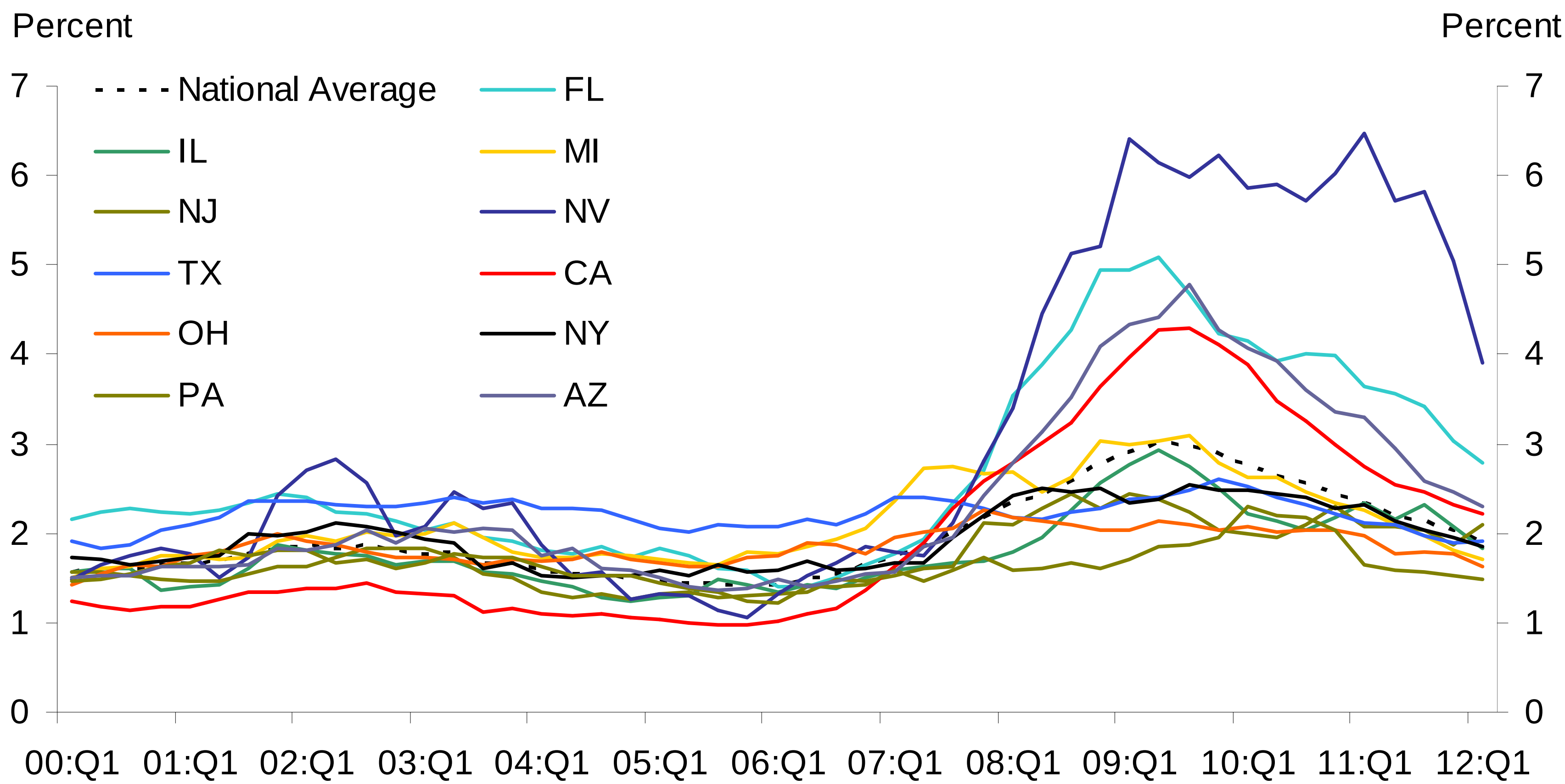


Source: FRB-New York, DB Global Markets Research

Torsten Slok, torsten.slok@db.com +1 212 250-2155 June 2012

Delinquency transition rates generally moving down, with most states within 1 percentage point of their historical averages

Quarterly Transition Rates into 30+ Days Late by State*



*Four Quarter Moving Average, Rates from Current to 30+ Days Delinquent, All Accounts

Source: FRB-New York, DB Global Markets Research

Torsten Slok, torsten.slok@db.com +1 212 250-2155

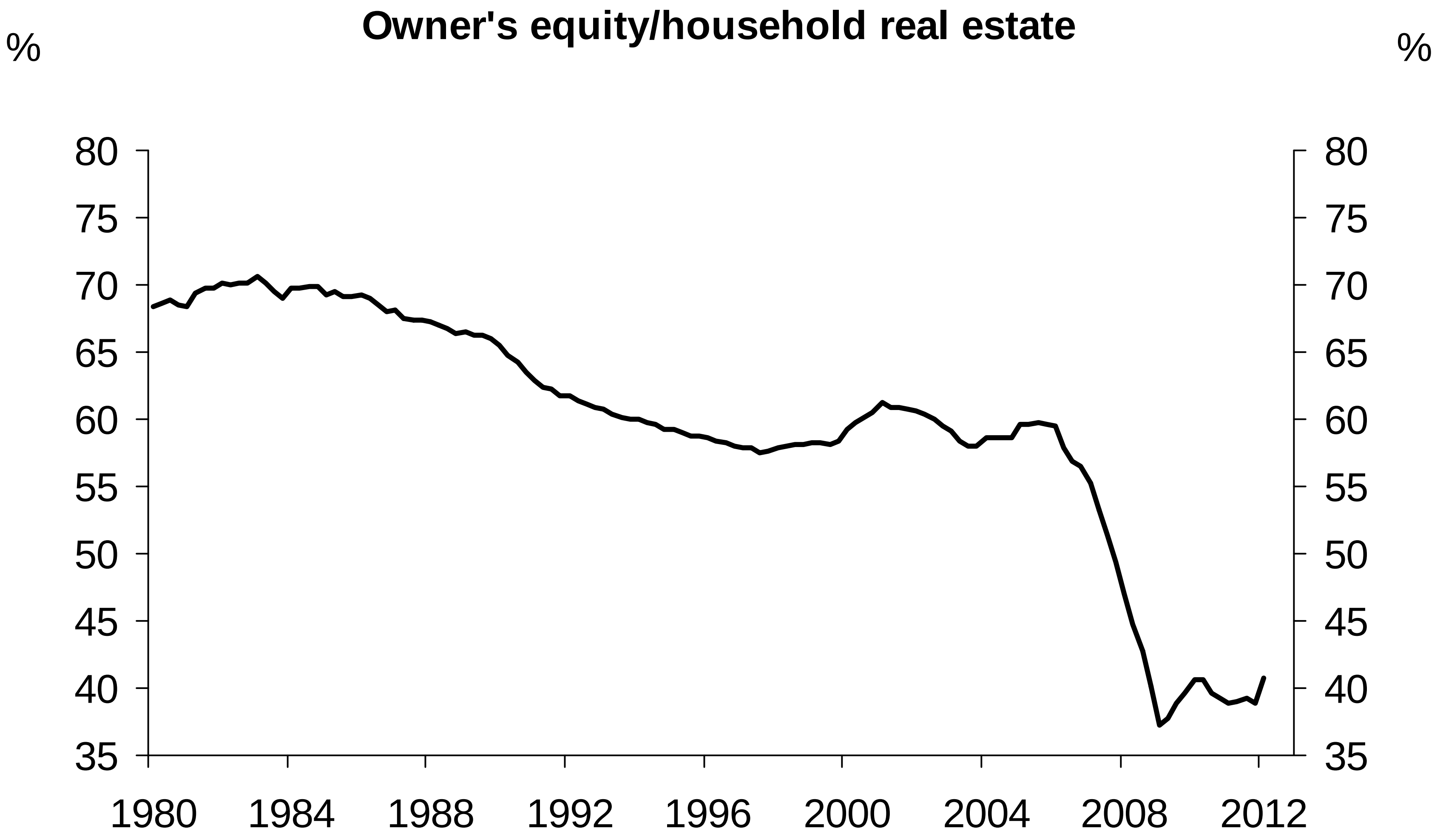
The Asset Side of the Household Balance Sheet

US homeowners lost on average $50k during the housing bust

Total housing wealth destruction between Q2 2006 and Q2 2010					
State	**Total housing value Q2 2006**	**Total housing value Q2 2010**	**Actual wealth loss**	**Loss per homeowner (in $)**	**Loss as a % of total as of Q2 2006**
California	$6.0trn	$3,7trn	$2,3trn	**231,320**	39%
Arizona	$0.7trn	$0.3trn	$0.3trn	**157,404**	50%
Florida	$1,8trn	$1.0trn	$0.8trn	**146,815**	46%
New York	$1,3trn	$1,1trn	$0.2trn	**76,165**	18%
Illinois	$0.9trn	$0.6trn	$0.2trn	**74,689**	27%
U.S.	$28.6trn	$23.1trn	$5.5trn	**49,417**	19%

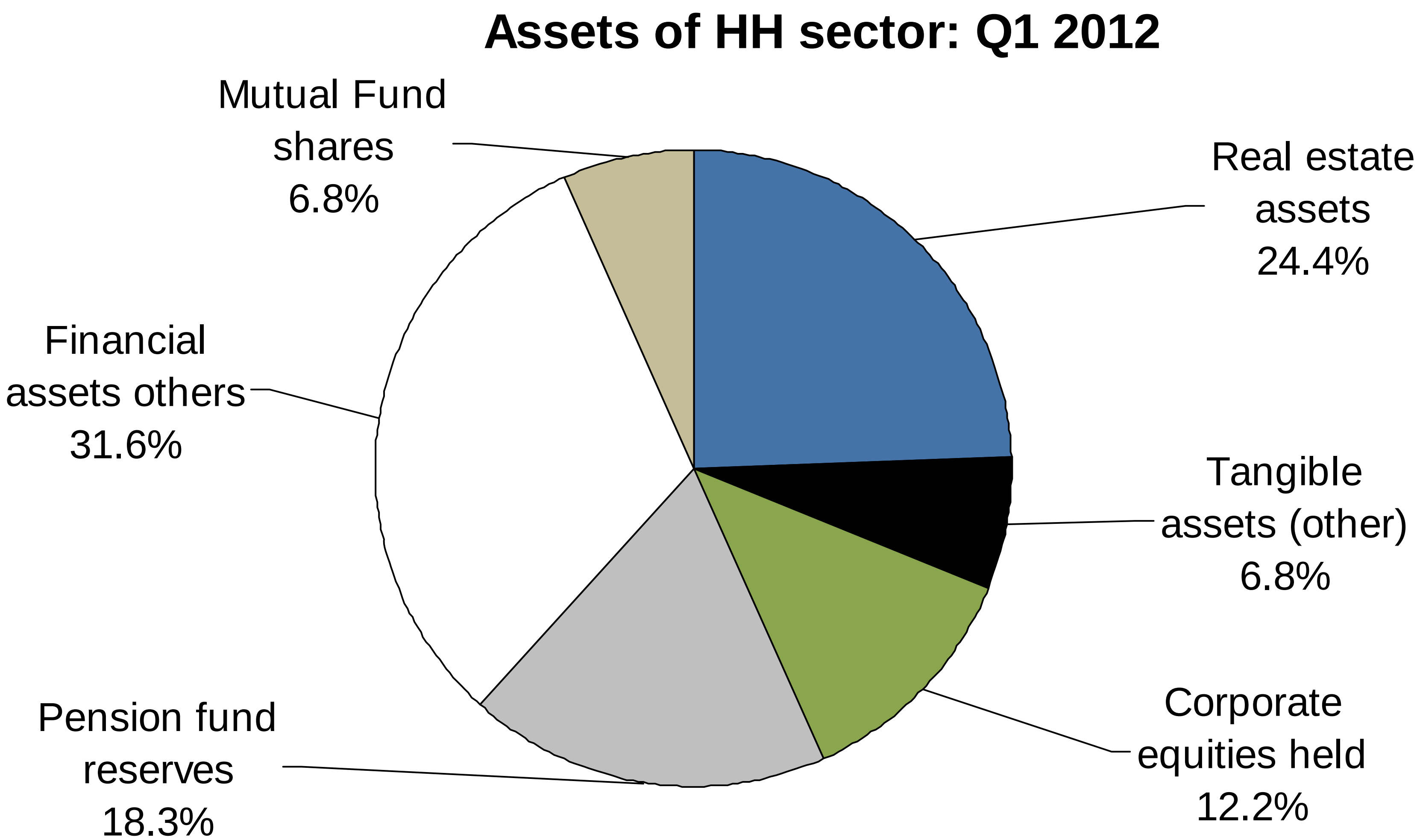
Source: Loan performance/core logic, Freddie Mac, S&P/ Case- Shiller, DB Global Markets Research

Households' real estate equity starting to move up



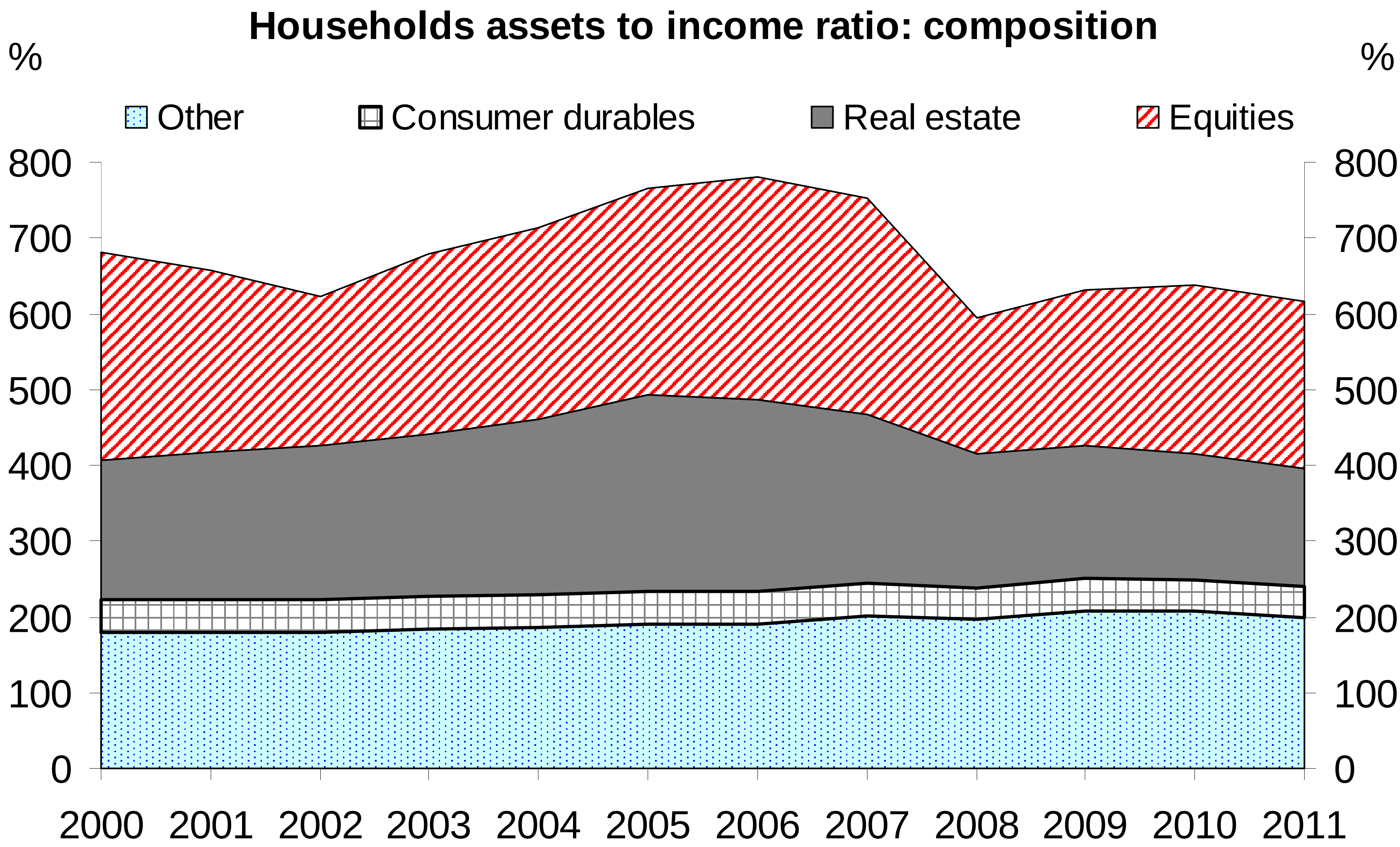
Source: FRB, DB Global Markets Research

Distribution of household assets



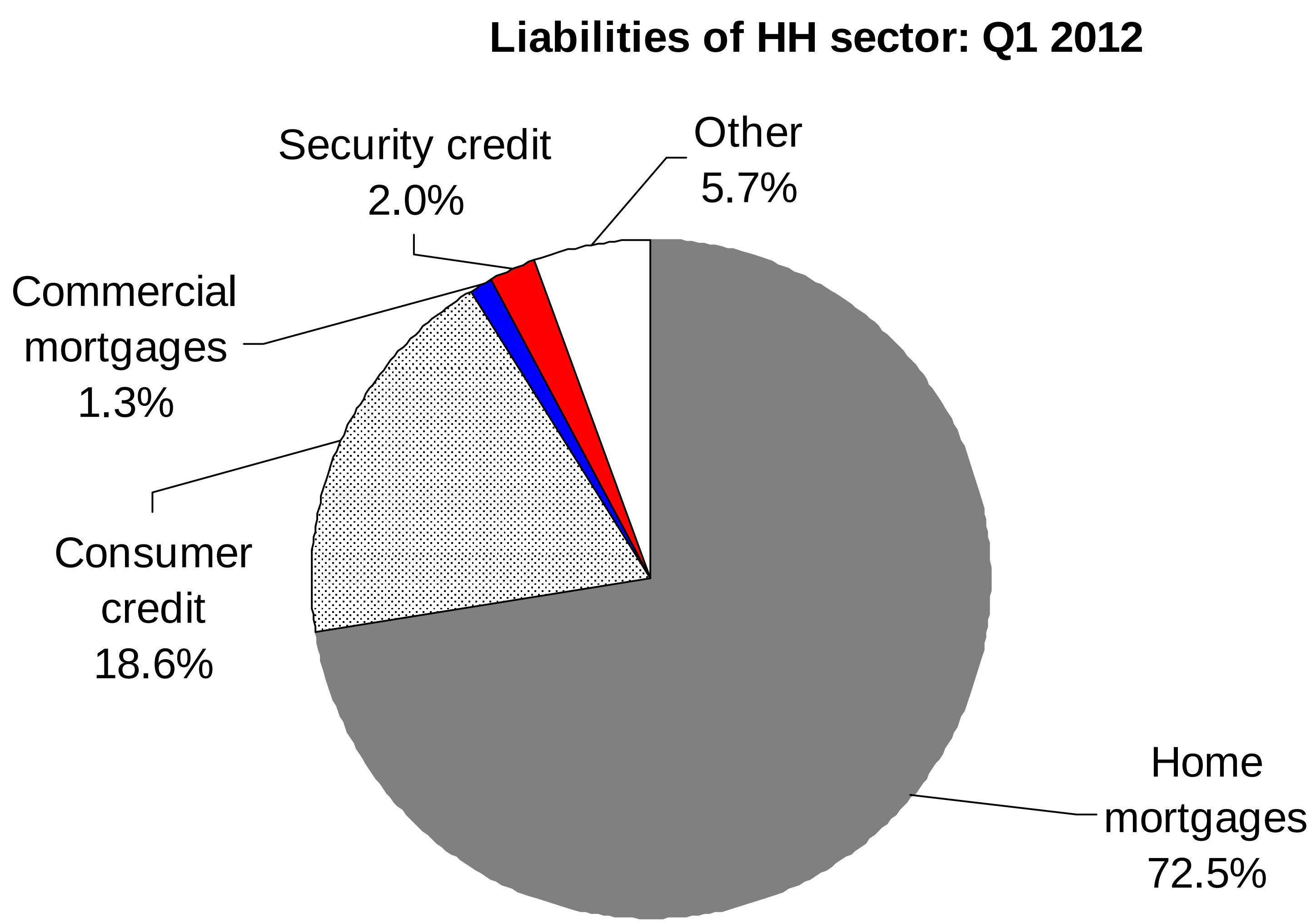
Source: FRB, Haver Analytics, DB Global Markets Research

Equities more important than homes in household assets



Source: FRB, Haver Analytics, DB Global Markets Research

Distribution of household debt

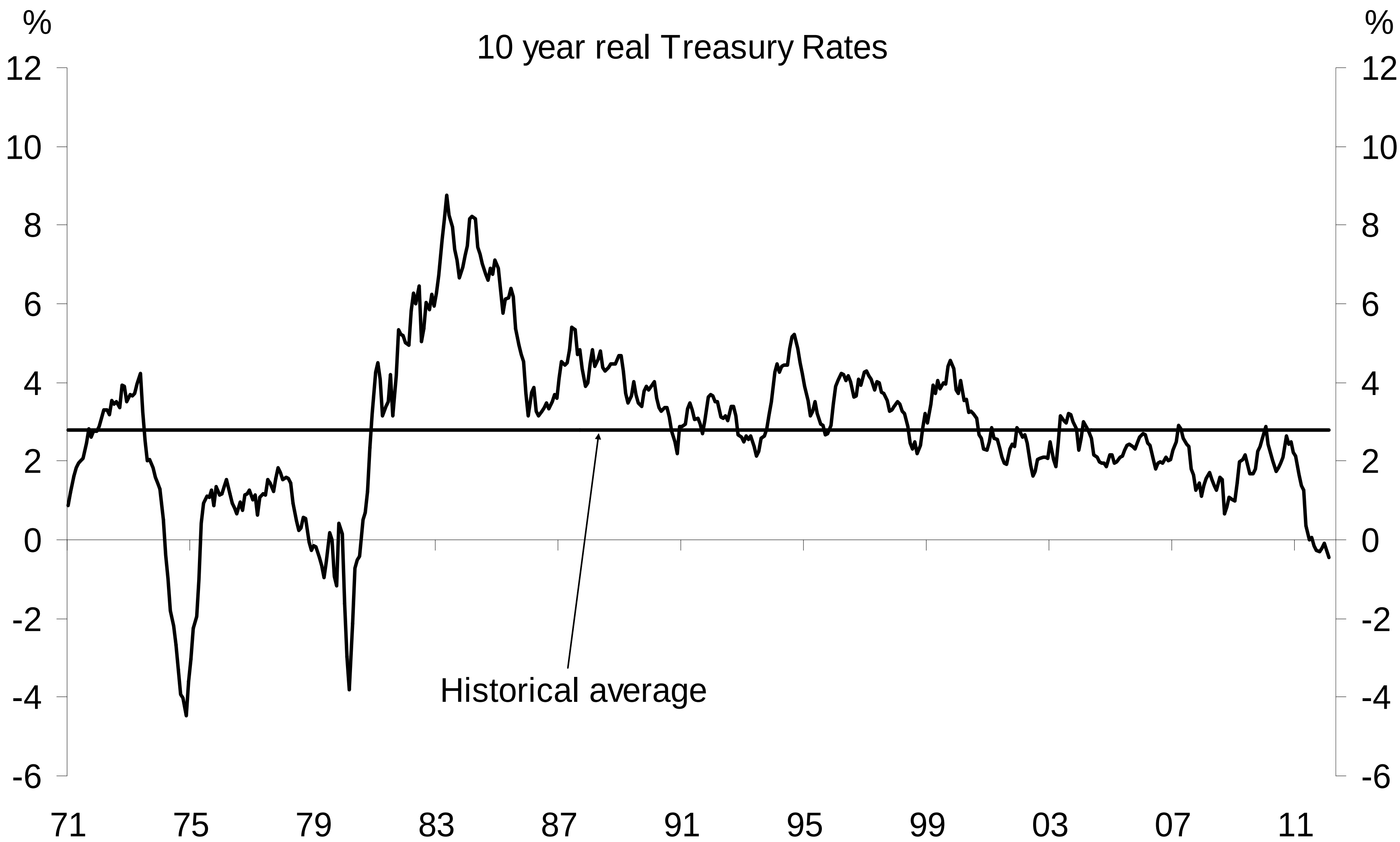


Source: FRB, Haver Analytics, DB Global Markets Research

Measuring credit conditions/financial conditions

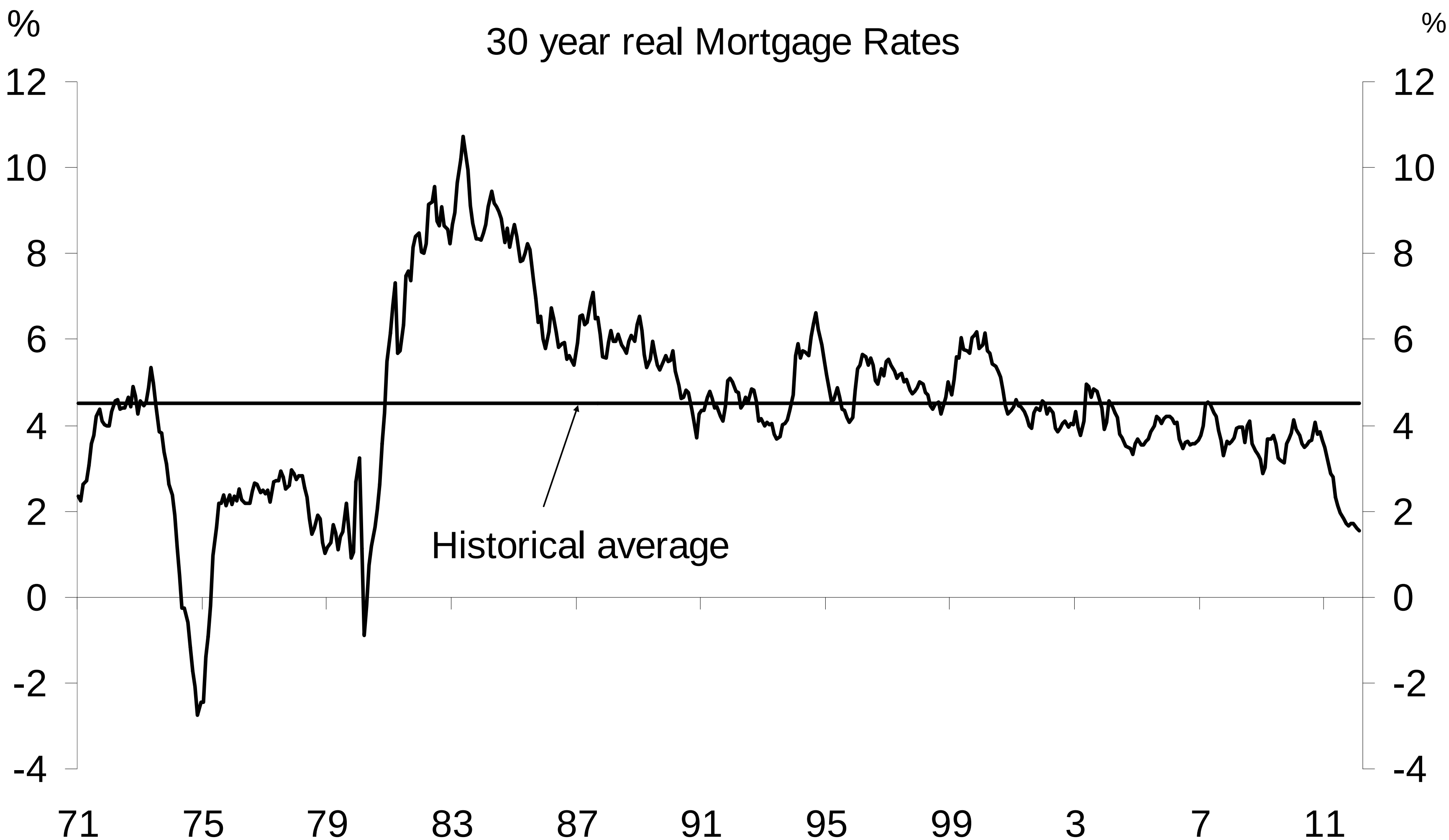
Torsten Slok, torsten.slok@db.com +1 212 250-2155

10-year real yields negative and well below their historical average



Source: FRB, Haver Analytics, DB Global Markets Research

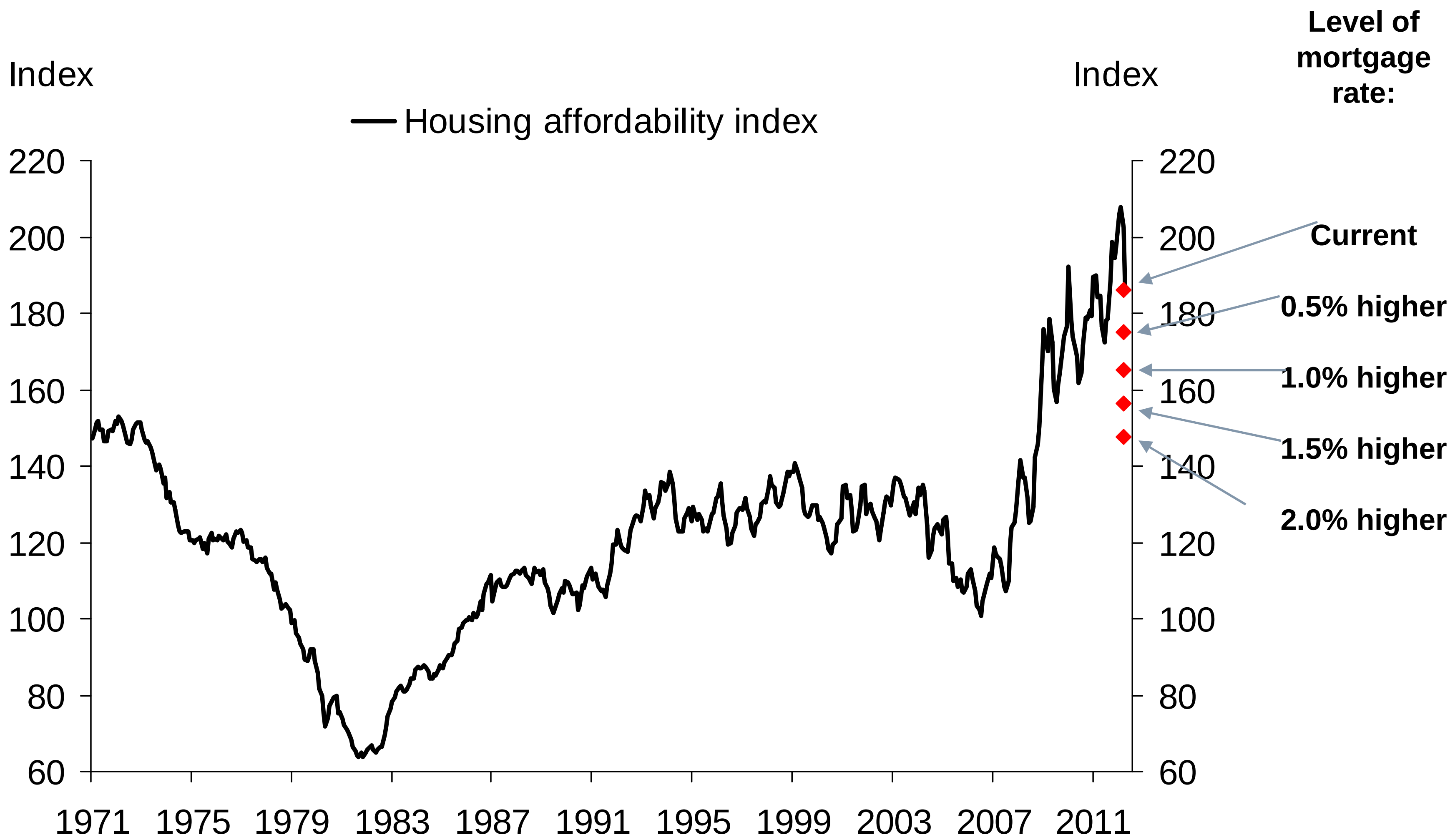
Real mortgage rates far below their historical norm



Source: FRB, Haver Analytics, DB Global Markets Research

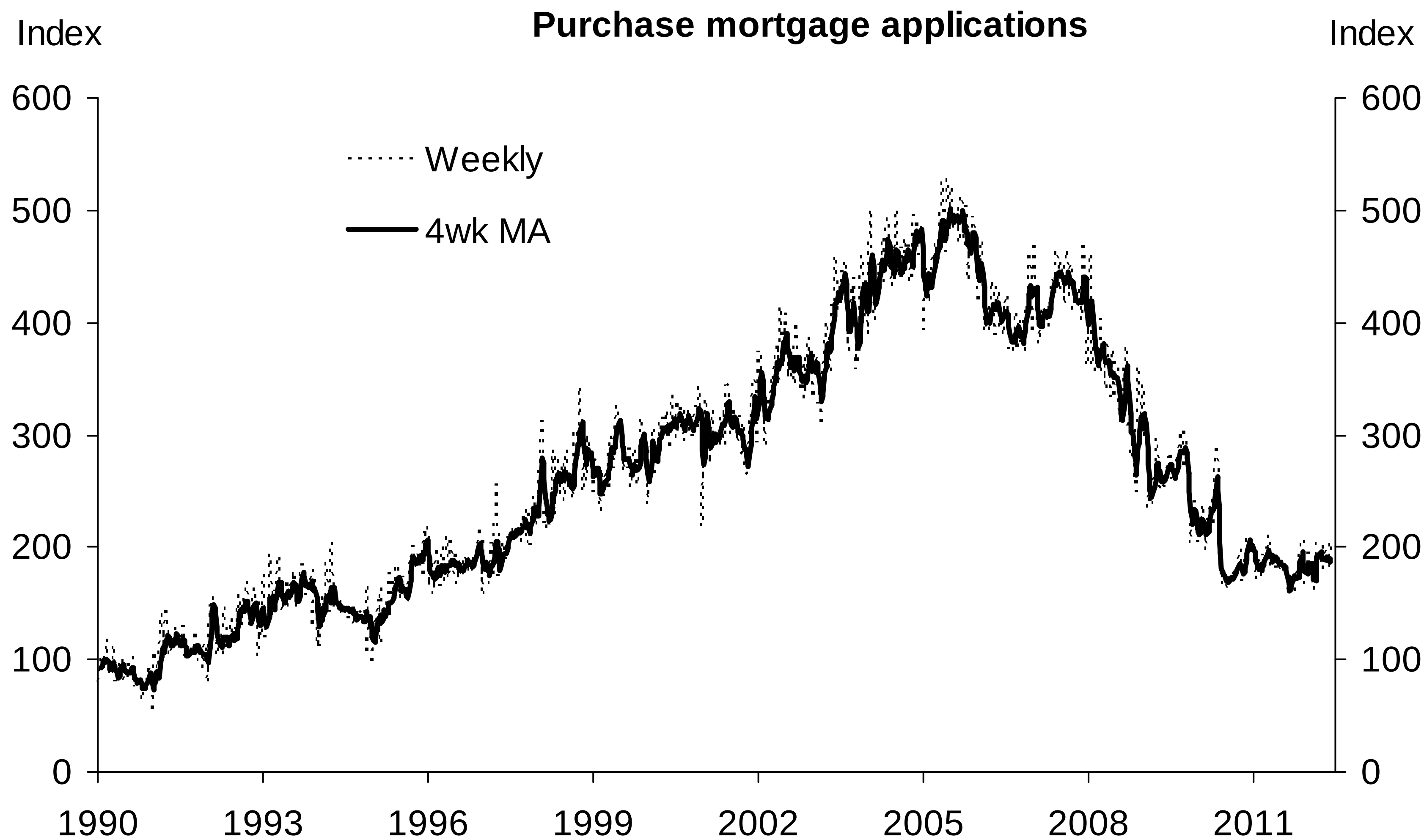
Torsten Slok, torsten.slok@db.com +1 212 250-2155

It is very cheap to buy a home - if you can get credit…



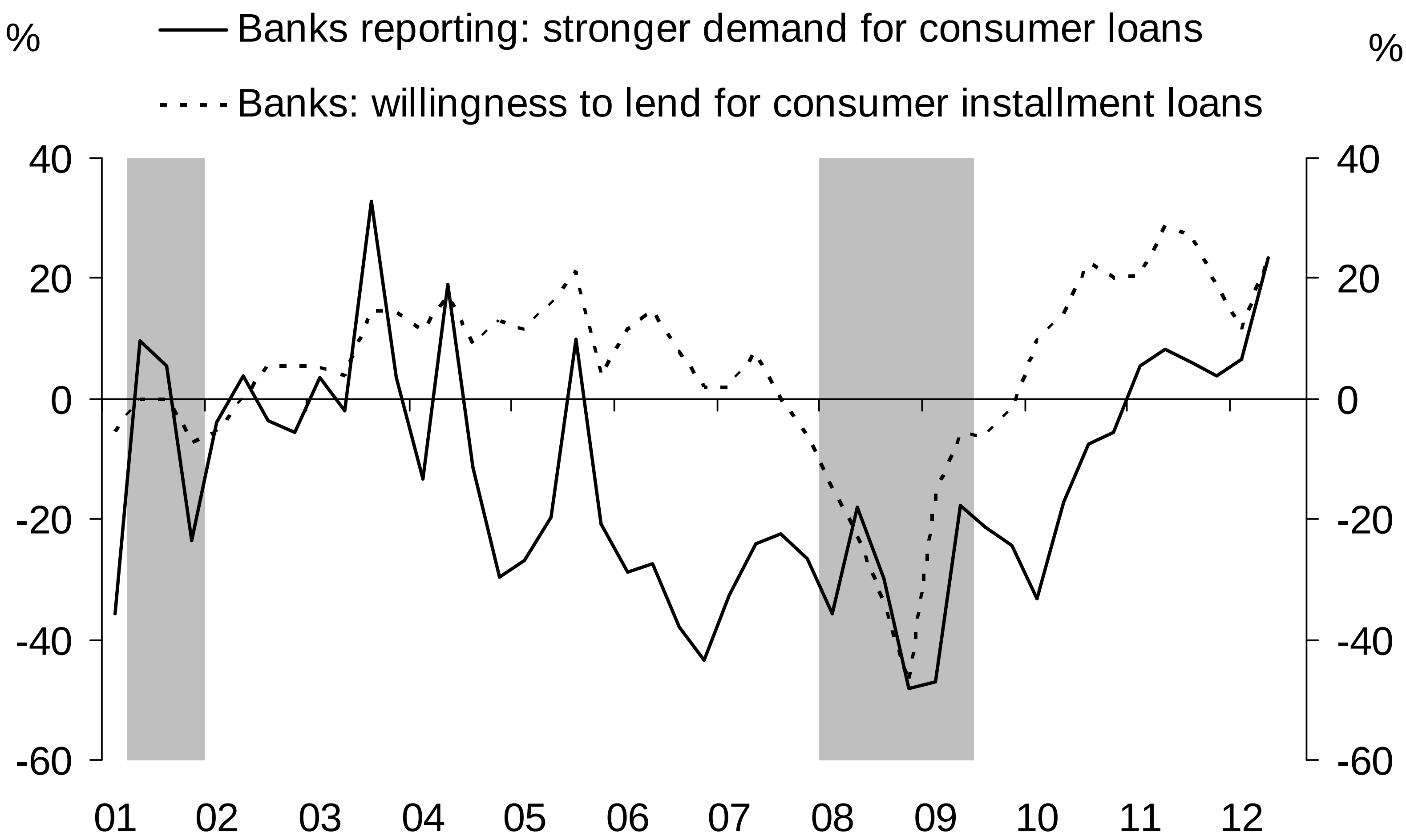
Source: NAR, Haver Analytics, DB Global Markets Research

…but not many are buying a home - mortgage purchase applications at 15-year lows



Source: MBA, Haver Analytics, DB Global Markets Research

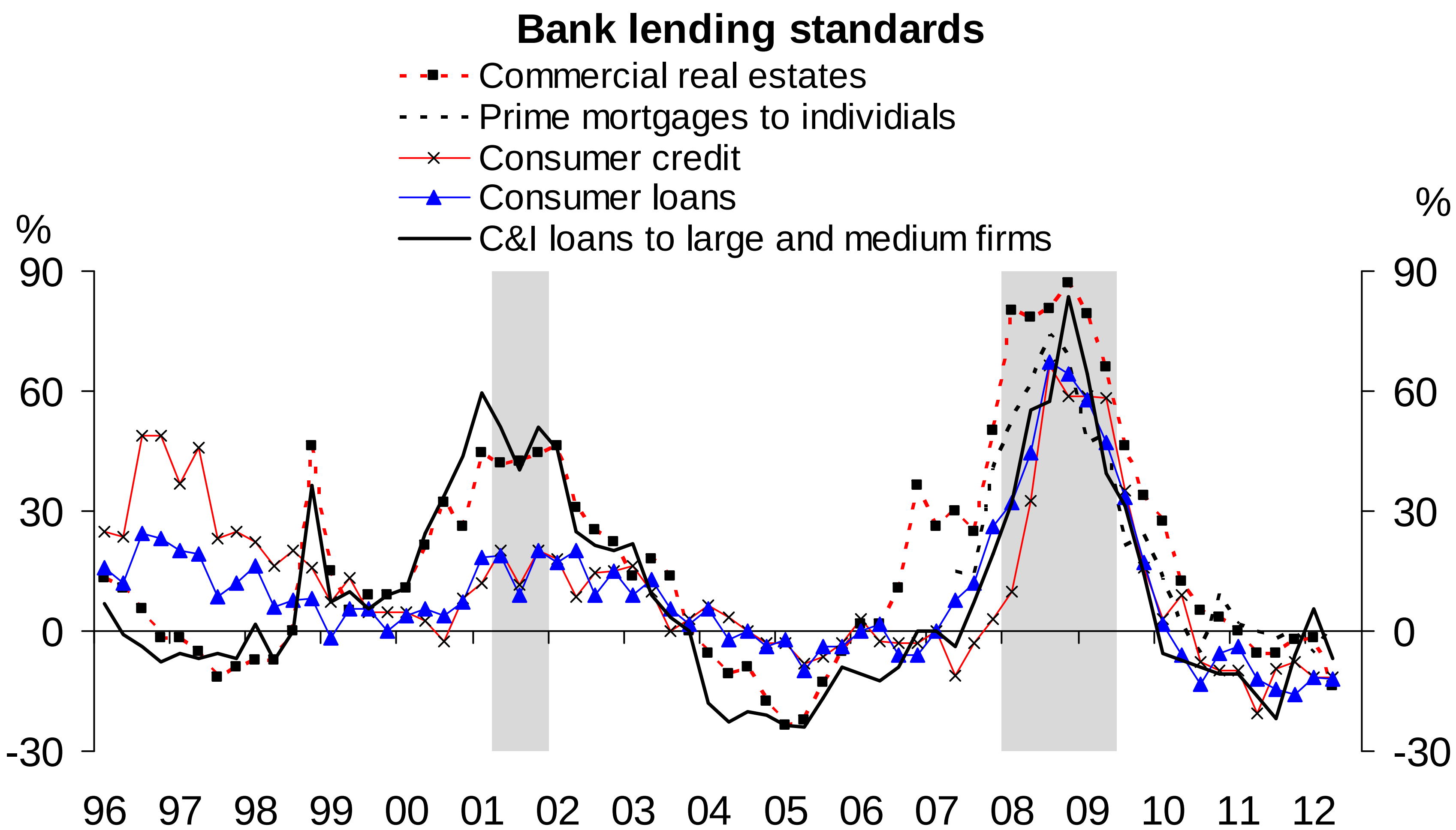
We have seen an improvement in consumer demand for loans and banks' willingness to lend



Source: FRB, Haver Analytics, DB Global Markets Research

Torsten Slok, torsten.slok@db.com +1 212 250-2155

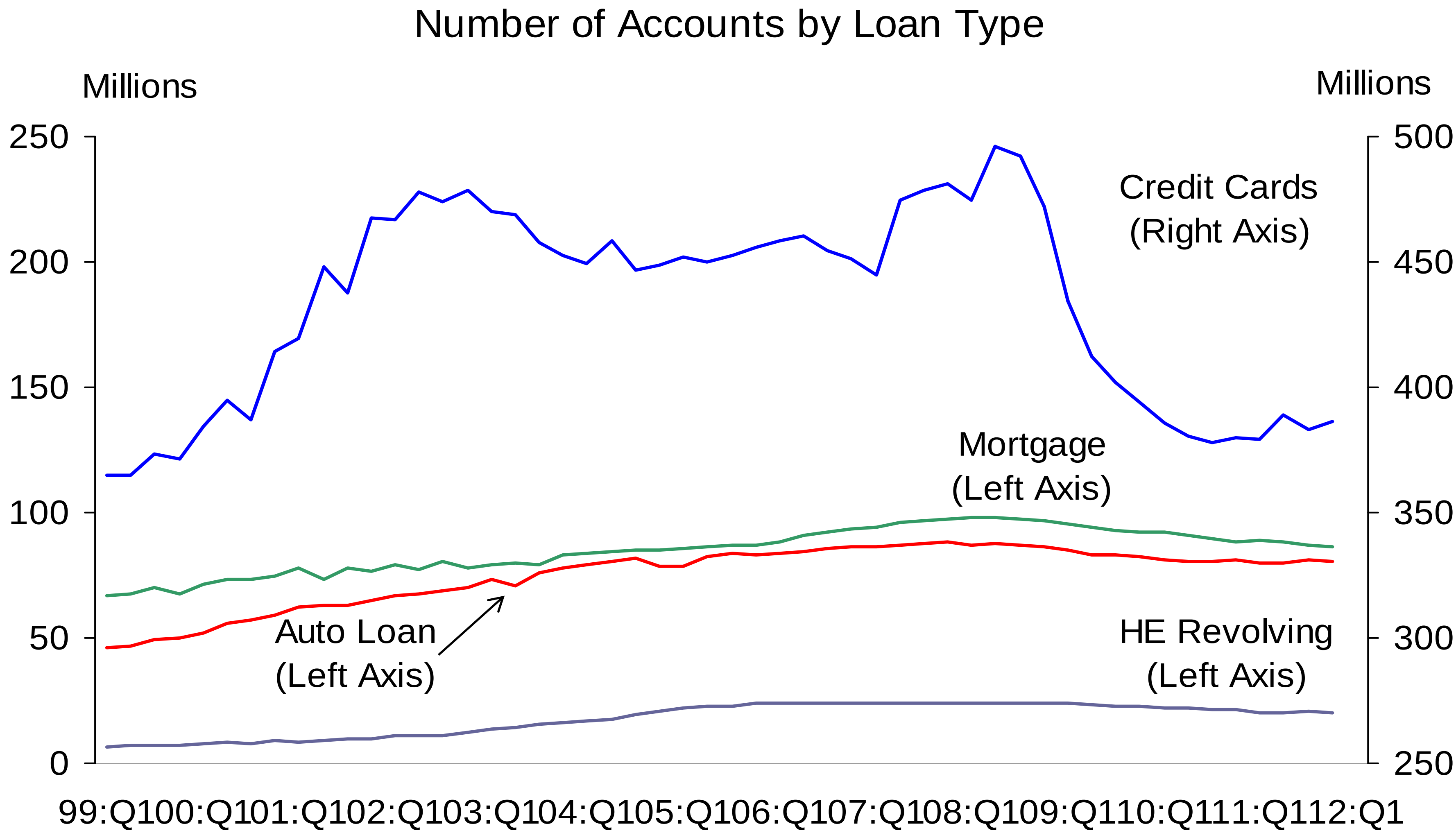
Bank lending standards easing modestly but from a very tight level…



Source: FRB, Haver Analytics, DB Global Markets Research

Torsten Slok, torsten.slok@db.com +1 212 250-2155

…with the number of credit cards outstanding slowly starting to rise again



Note: Data Exclude Student Loans Source: FRB-New York, DB Global Markets Research

Torsten Slok, Ph.D.

Chief International Economist, Managing Director

Deutsche Bank Securities, Inc.

- Torsten Slok joined Deutsche Bank Securities in the fall of 2005 and is a senior member of the Global Economics Team.
- Mr. Slok's Economics team was ranked No. 1 in fixed income research by Institutional Investor in 2010 and 2011. Slok currently serves as a member of the Economic Club of New York
- Prior to joining the firm, Mr. Slok worked at the OECD in Paris in the Money and Finance Division and the Structural Policy Analysis Division. Before joining the OECD he worked for four years at the IMF in the Division responsible for writing the World Economic Outlook and the Division responsible for China, Hong Kong, and Mongolia.
- Mr. Slok studied at University of Copenhagen and Princeton University. He has published numerous journal articles and reviews on economics and policy analysis, including in Journal of International Economics, Journal of International Money and Finance, and The Econometric Journal.

Appendix 1

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