



Presentation to the Treasury Borrowing Advisory Committee

U.S. Department of the Treasury
Office of Debt Management
November 2, 2010



Agenda

- Fiscal Developments
- Auction Demand
- Portfolio Metrics
- Long-Term Challenges

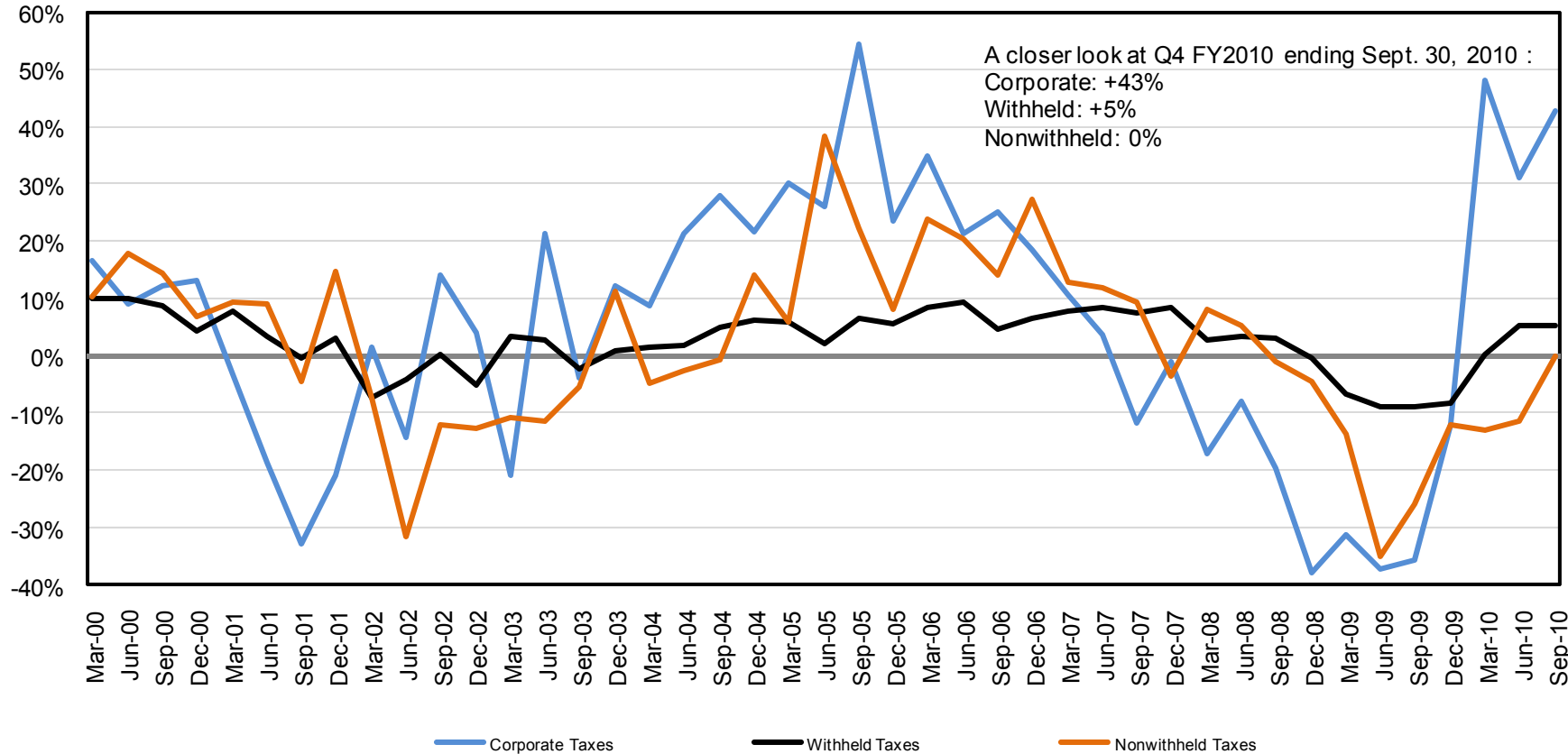
FISCAL DEVELOPMENTS





Tax Receipts Continue to Improve

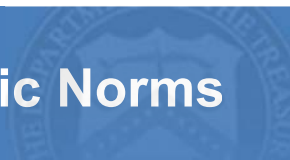
Quarterly Tax Receipts Year over Year Percentage Change



Note: Adjusted for 9/11/01 Corporate Tax Receipts disruption
Source: Monthly Treasury Statement

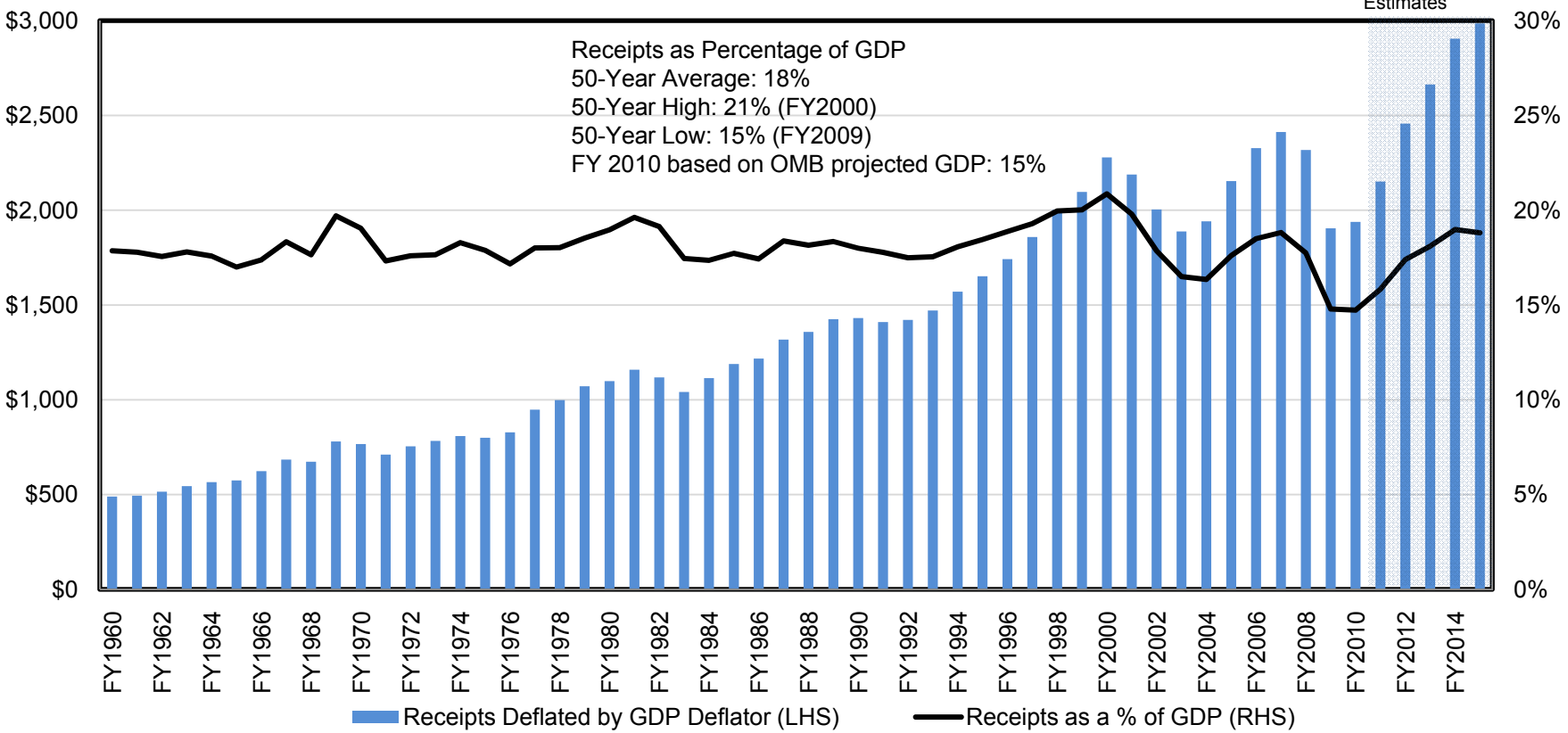
Note: Data plotted are year over year changes in quarterly receipts





Receipts as a Percentage of GDP are Projected to Reach Historic Norms

Total Inflation Adjusted Receipts In 2005 \$ Billions, Percentage of GDP



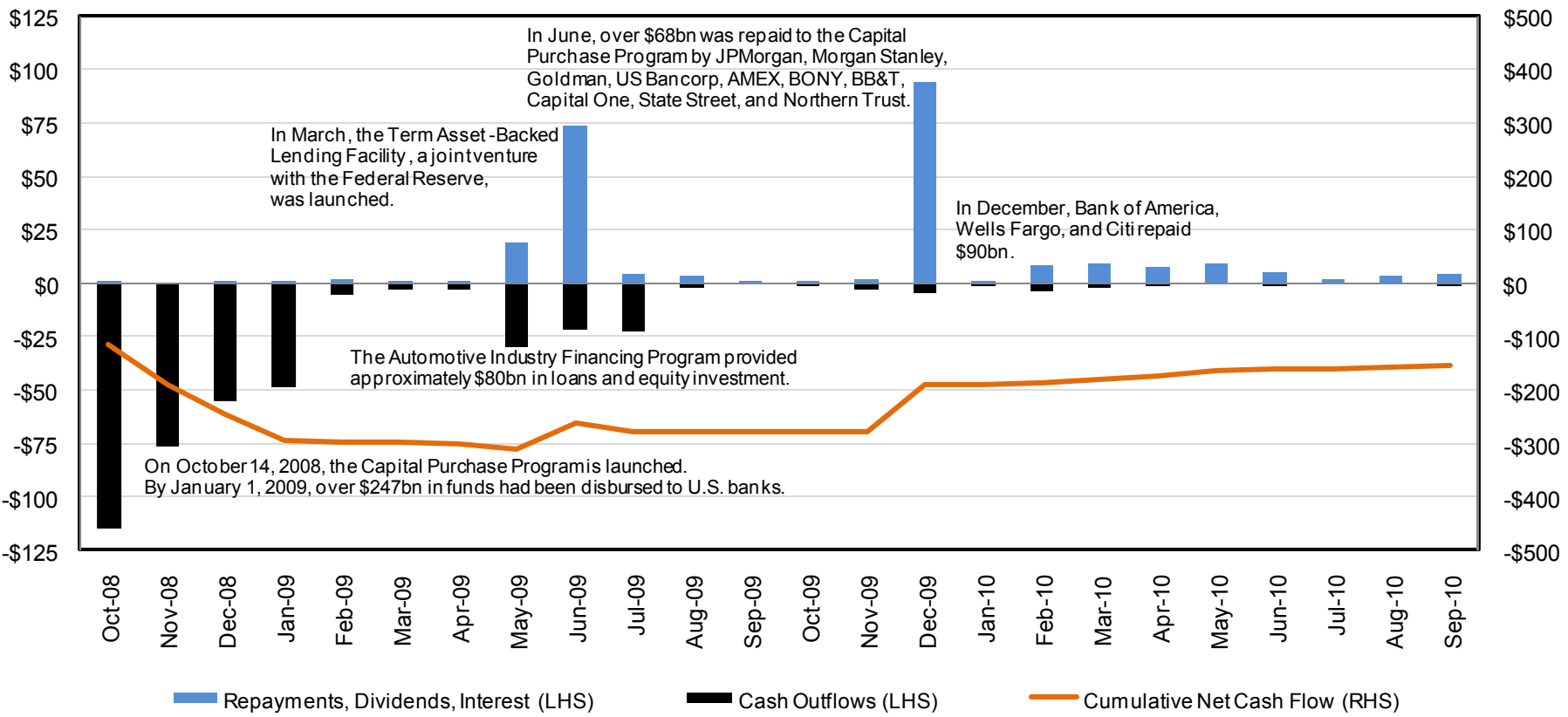
Source: OMB projected GDP and GDP deflator, Monthly Treasury Statement receipts





TARP Repayments Continue

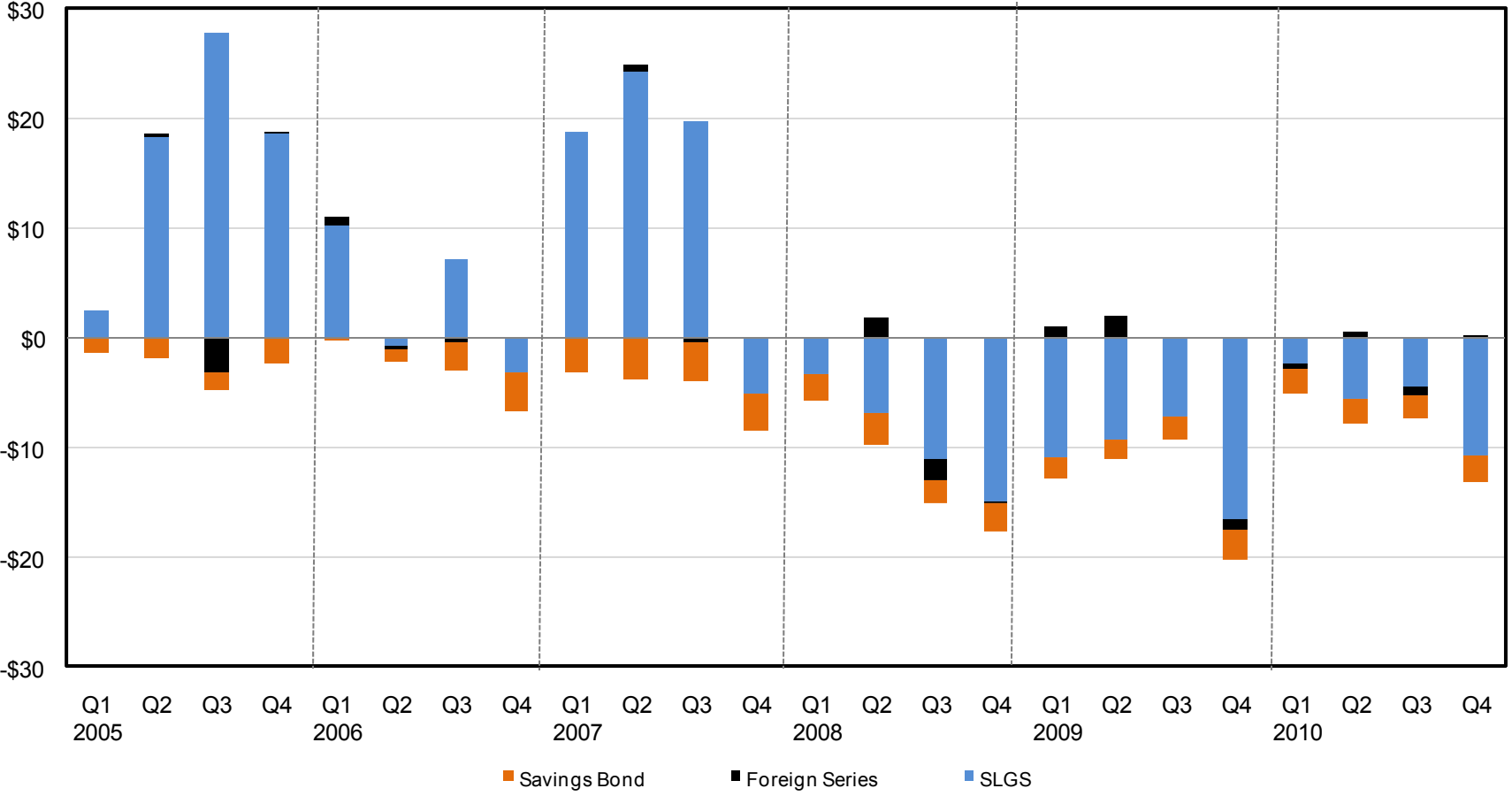
TARP Cash Flows In Billions \$





Non-Marketable Redemptions Have Increased Marketable Issuance

Net Non-marketable Issuance In Billions \$



Source: Monthly Treasury Statement

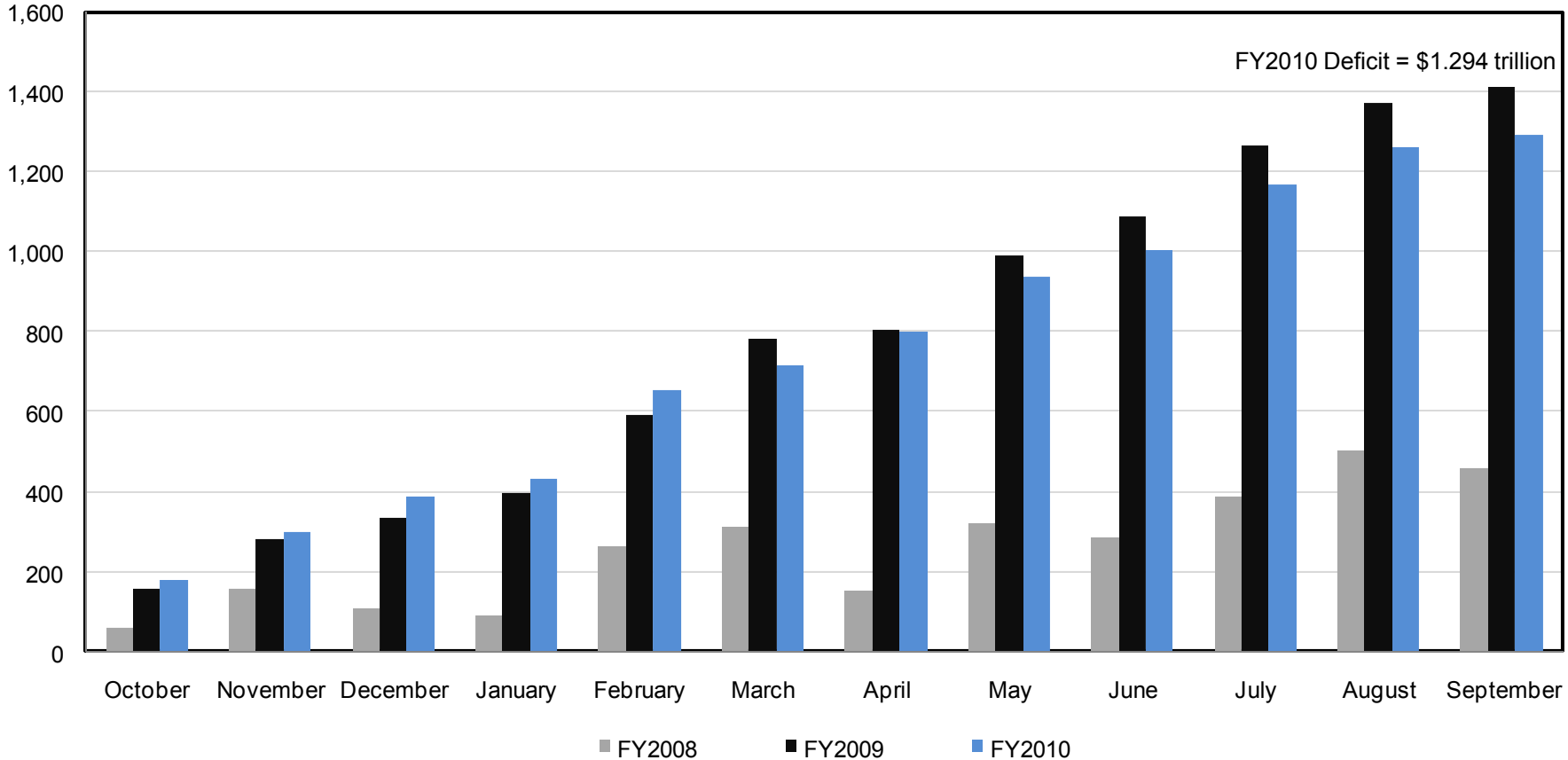




The Budget Deficit for Fiscal Year 2010 Narrowed Modestly

Cumulative Budget Deficits by Fiscal Year

In Billions \$



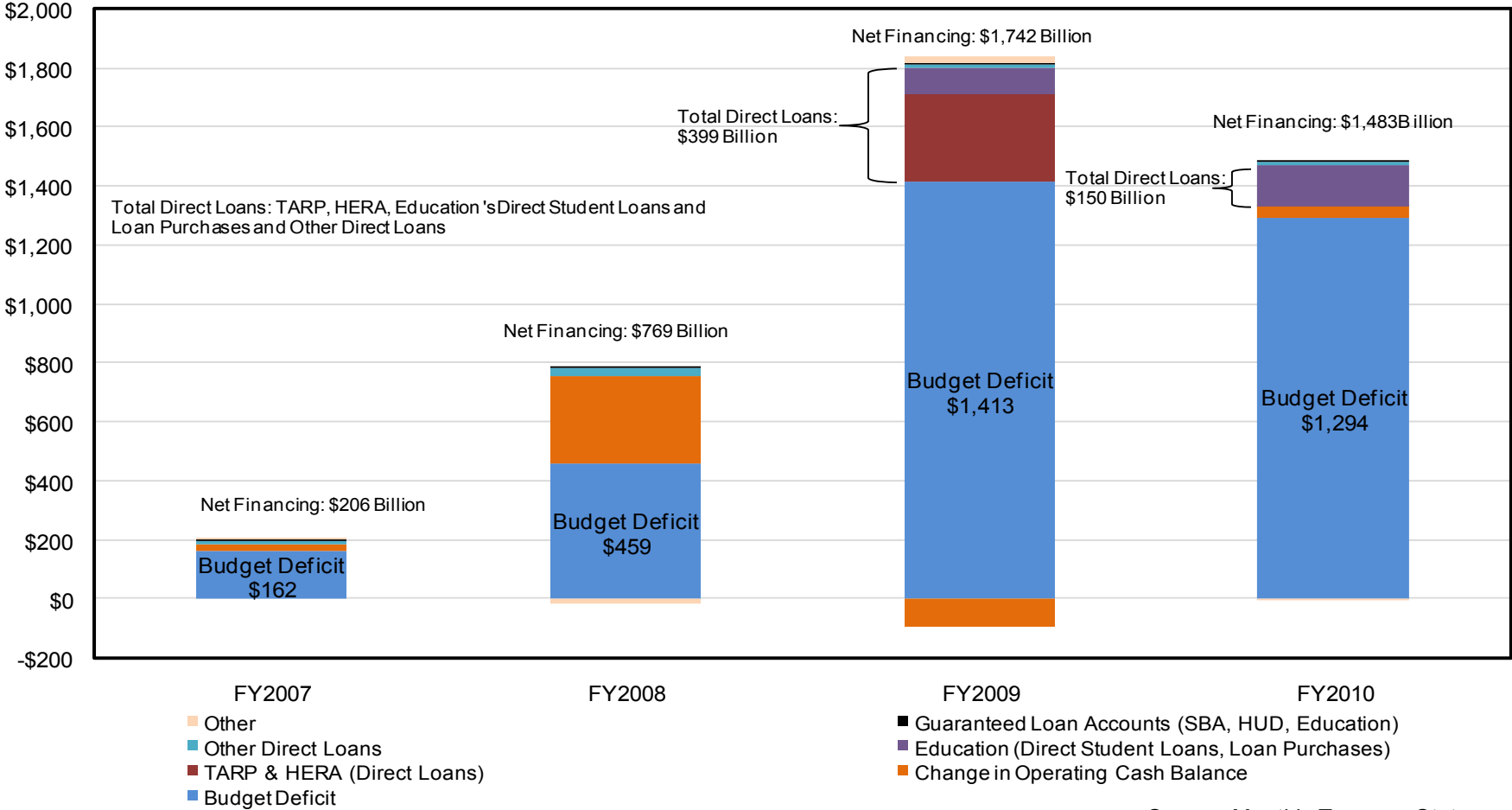
Source: OMB for end of Fiscal Year, Monthly Treasury Statement for other months





Net Financing Amounts Have Recently Exceeded Budget Deficits

Annual Budget Deficit and Net Financing Fiscal Year in Billions \$



Source: Monthly Treasury Statement





Primary Dealer and Government Deficit Estimates

FY 2010-2012 Deficit and Borrowing Estimates		\$ Billions	
	Primary Dealers*	CBO	OMB
FY 2011 Deficit Estimate	1,214	1,066	1,416
FY 2012 Deficit Estimate	1,023	665	911
FY 2013 Deficit Estimate	906	525	736
FY 2011 Deficit Range	1,075-1,350		
FY 2012 Deficit Range	800-1,350		
FY 2013 Deficit Range	600-1,300		
FY 2011 Marketable Borrowing Range	1,026-1,400		
FY 2012 Marketable Borrowing Range	800-1,400		
Estimates as of:	Oct 2010	Aug 2010	July 2010

*Based on Primary Dealer feedback on October 25, 2010. Deficit estimates are averages.



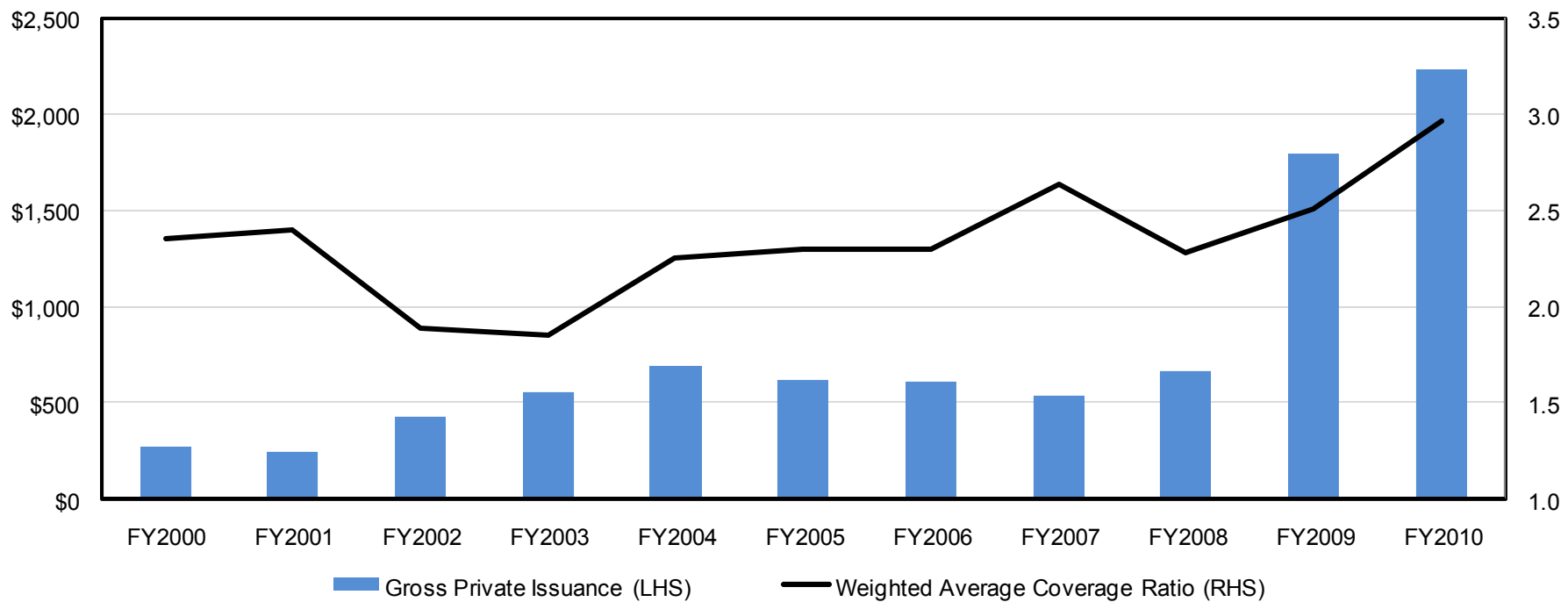
AUCTION DEMAND





Auctions Continue to Exhibit Strong Coverage

Weighted Average Coverage Ratio on Notes and Bonds In Billions \$, Coverage Ratio



Note: Excludes TIPS and Bills issuance.

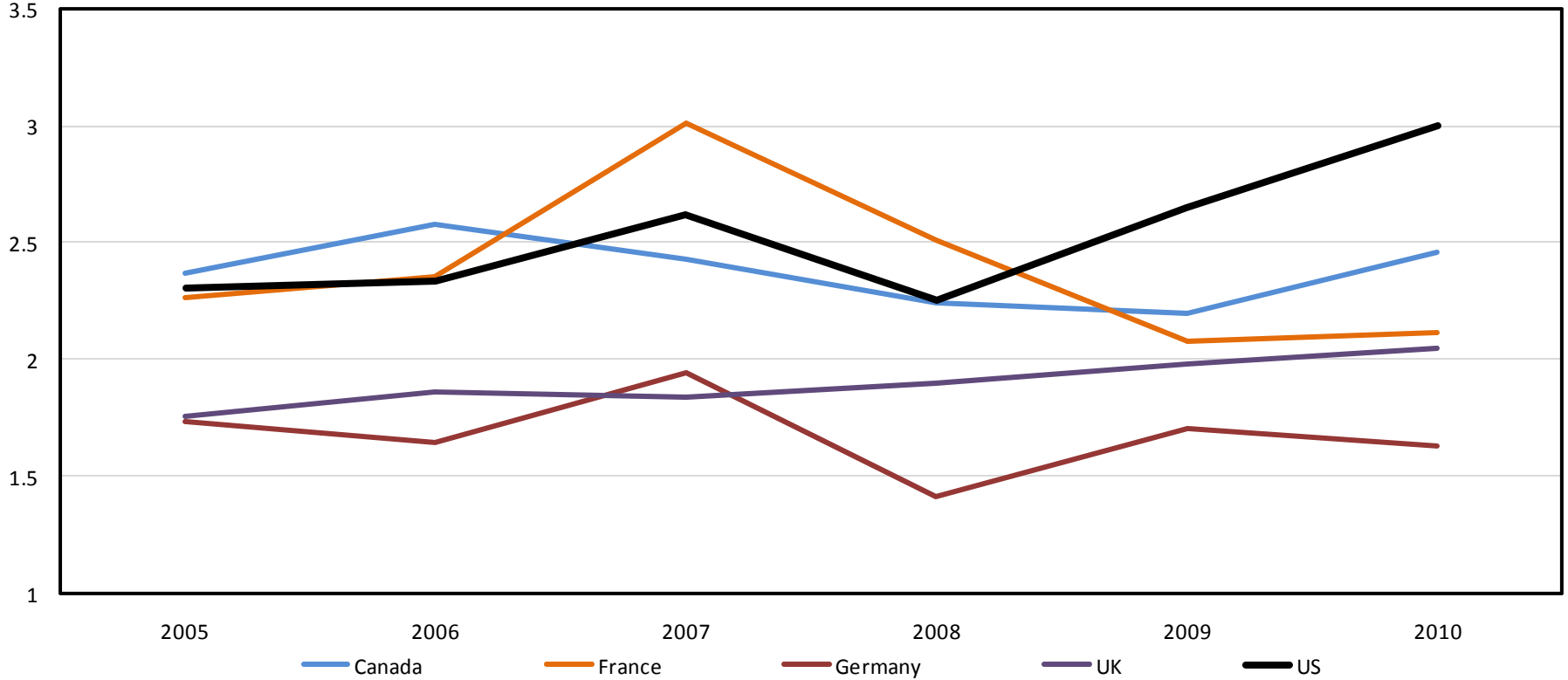
Source: Treasury Investor Class Data





Bid-to-Cover Ratios for Other Sovereign Issuers

Nominal Coupon Auction Bid-to-Cover Ratios for Other Sovereign Issuers Weighted Average by Allotment Amount, Calendar Year



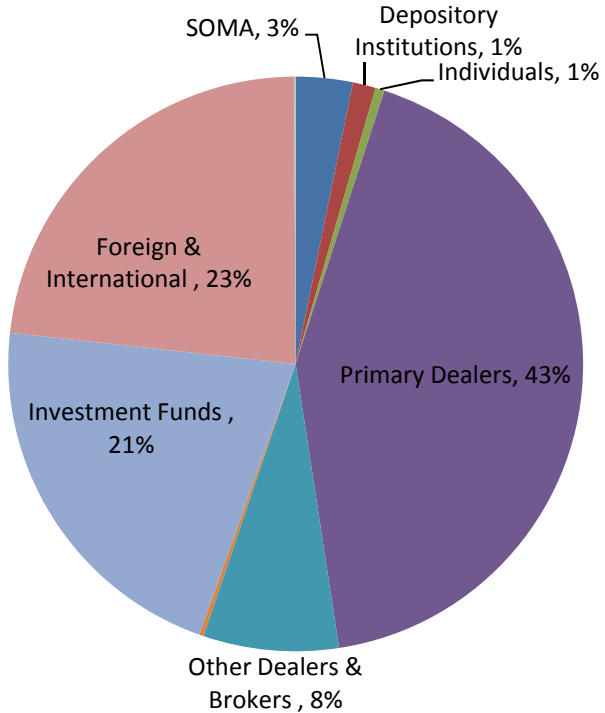
Source: Bank of Canada, Agence France Tresor, Deutsche Finanzagentur, UK Debt Management Office



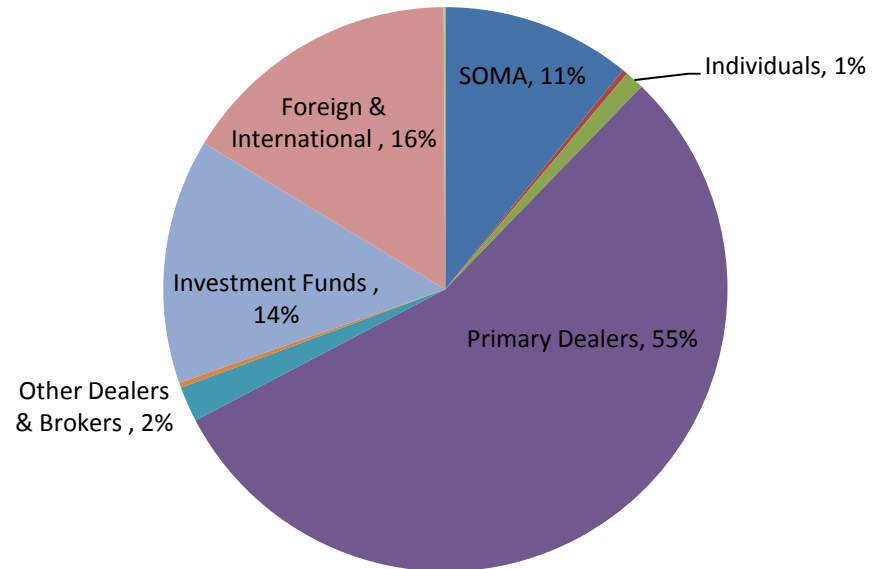


Investment Funds Have Increased Coupon Auction Participation

FY2010: Average Investor Class Allotments



Five-Year Average of Investor Class Allotments*



Note: Includes TIPS but excludes Bills; *FY2005 through FY2009

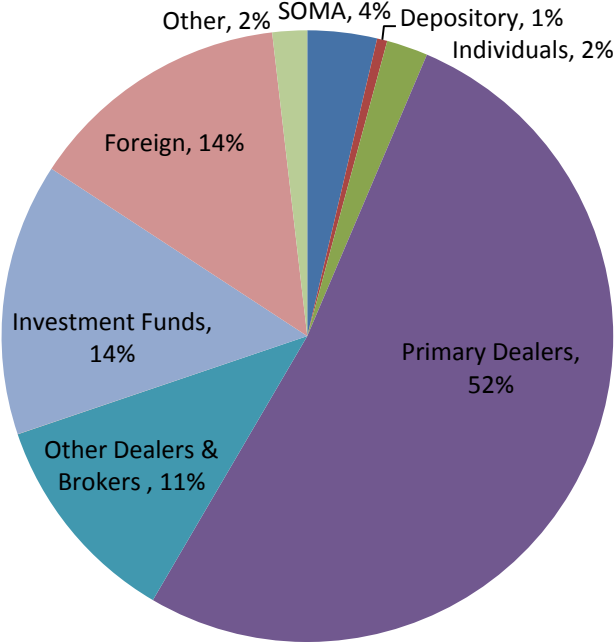
Source: Treasury Investor Class Data; Data through 9/30/2010



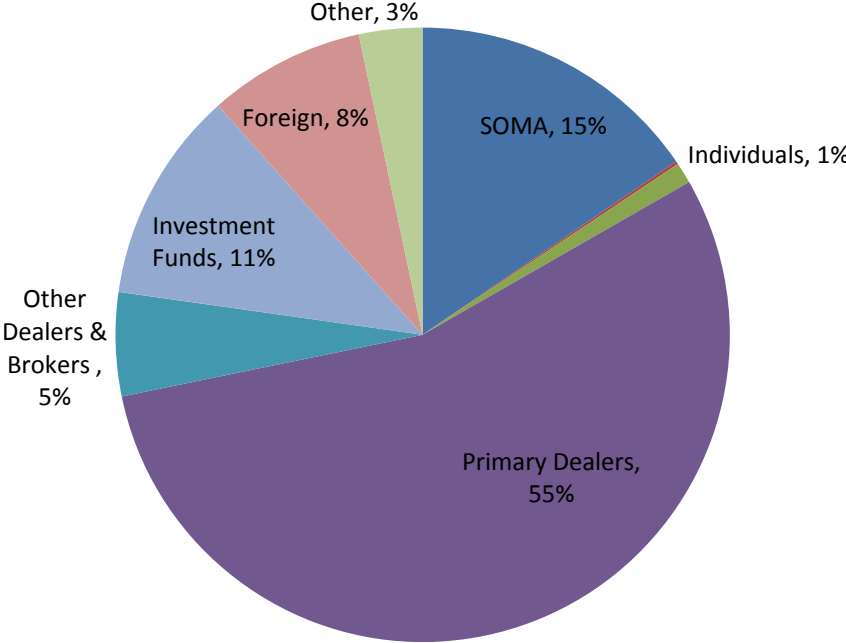


Bill Auctions Exhibiting an Increase in the Diversity of Participants

FY2010: Average Investor Class Allotments



Five-Year Average of Investor Class Allotments*



*FY2005 through FY2009

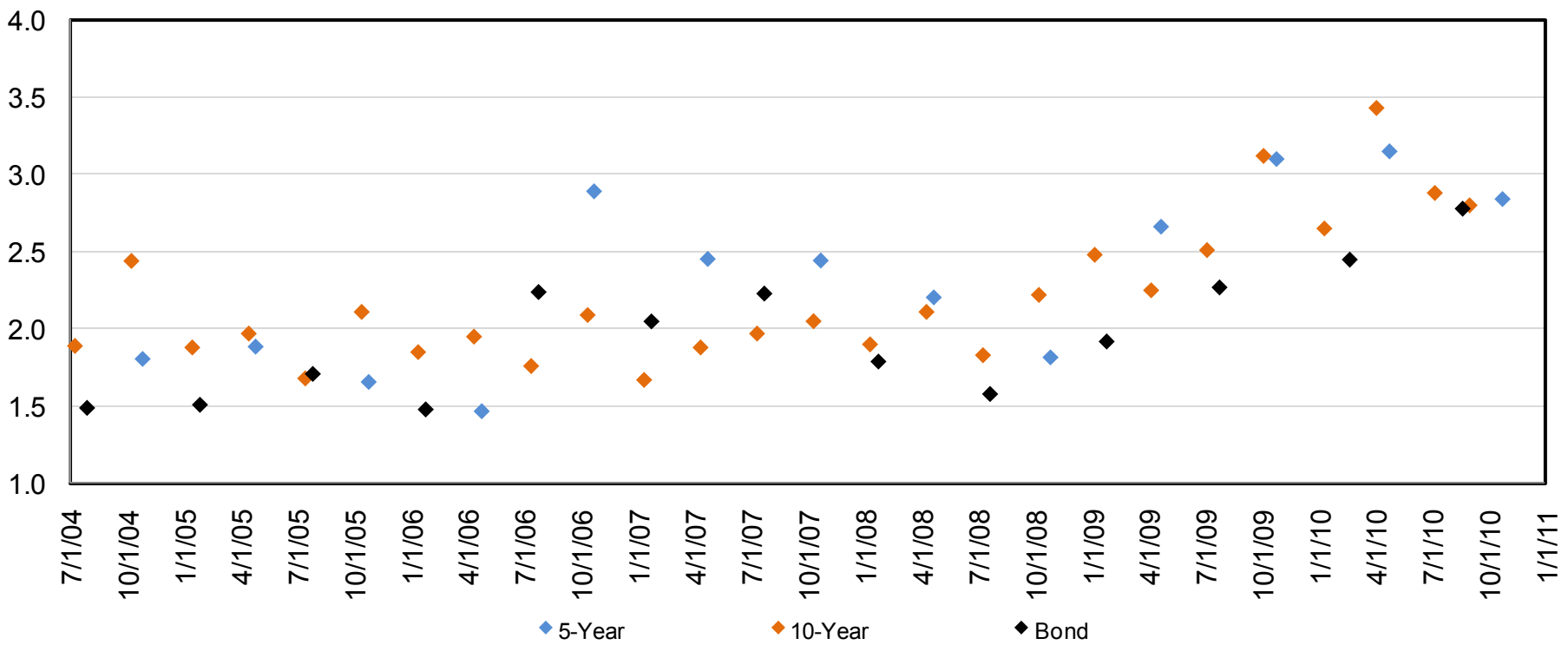
Source: Treasury Investor Class Data; Data through 9/30/2010





TIPS Auctions Continue to Perform Well

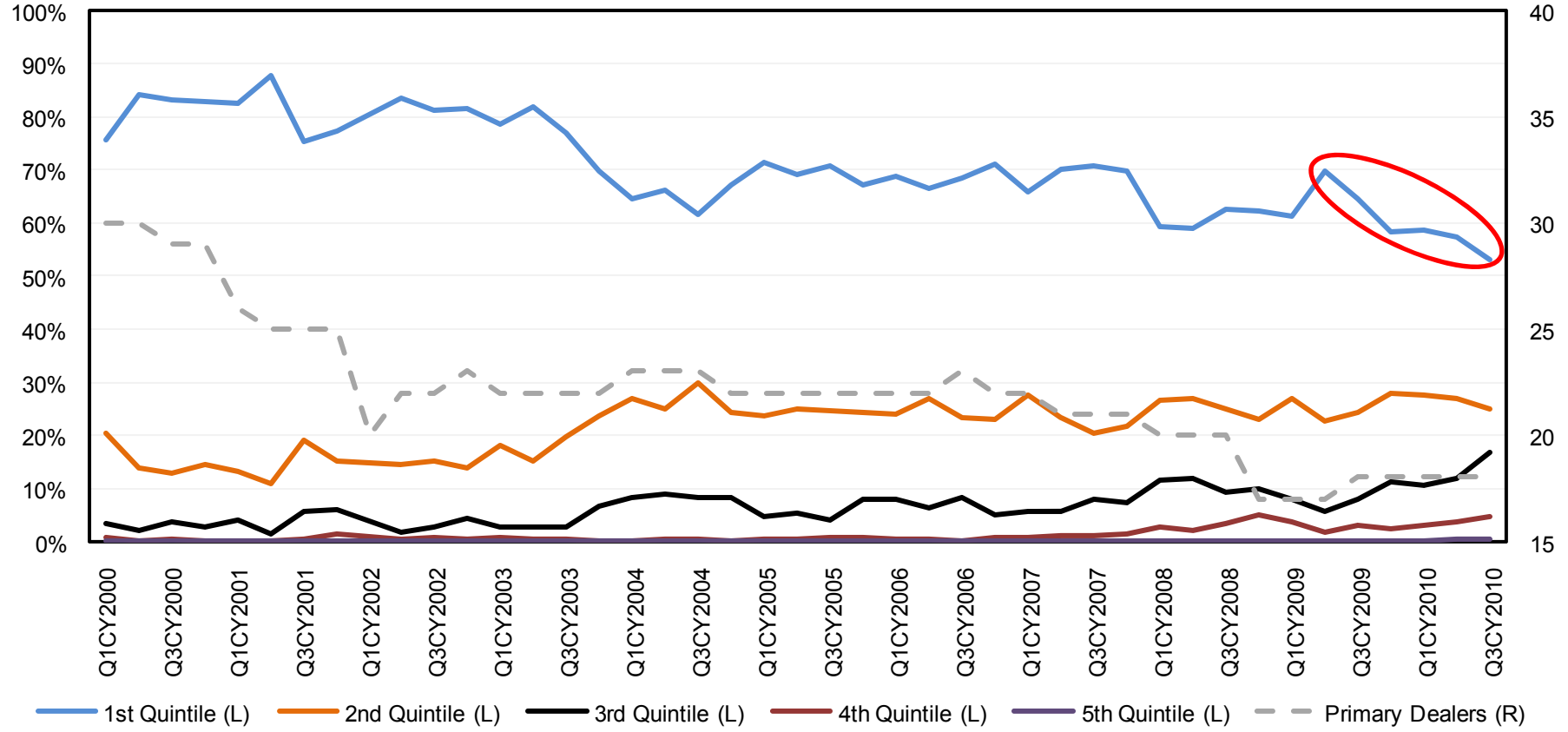
Bid-to-Cover Ratios Bids Tendered Divided by Bids Accepted





Concentration in TIPS Secondary Market Trading has Declined

Primary Dealer Market Share in TIPS by Quintile Percentage of Secondary Market Flows, Number of Primary Dealers



Source: Federal Reserve Bank of New York



PORTFOLIO METRICS

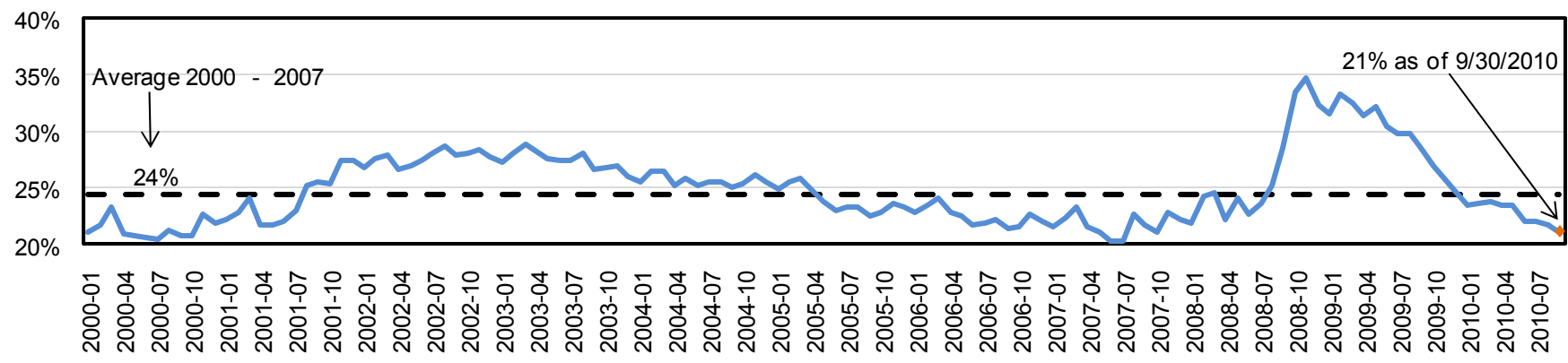




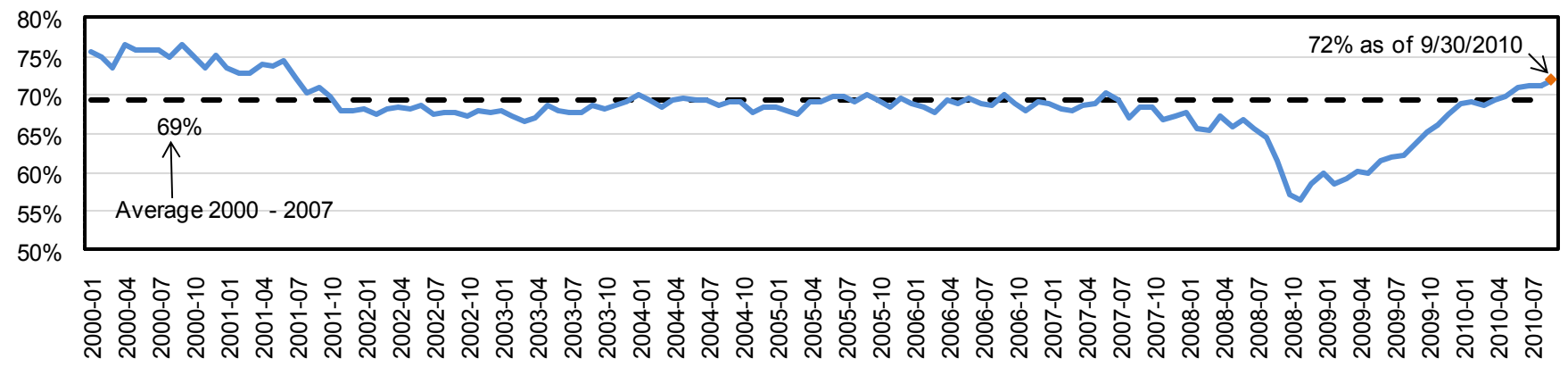
Nominal Coupons and Bills as a Percentage of the Portfolio

Bills Percentage of Total Portfolio

Note: Includes SFP and CMBs



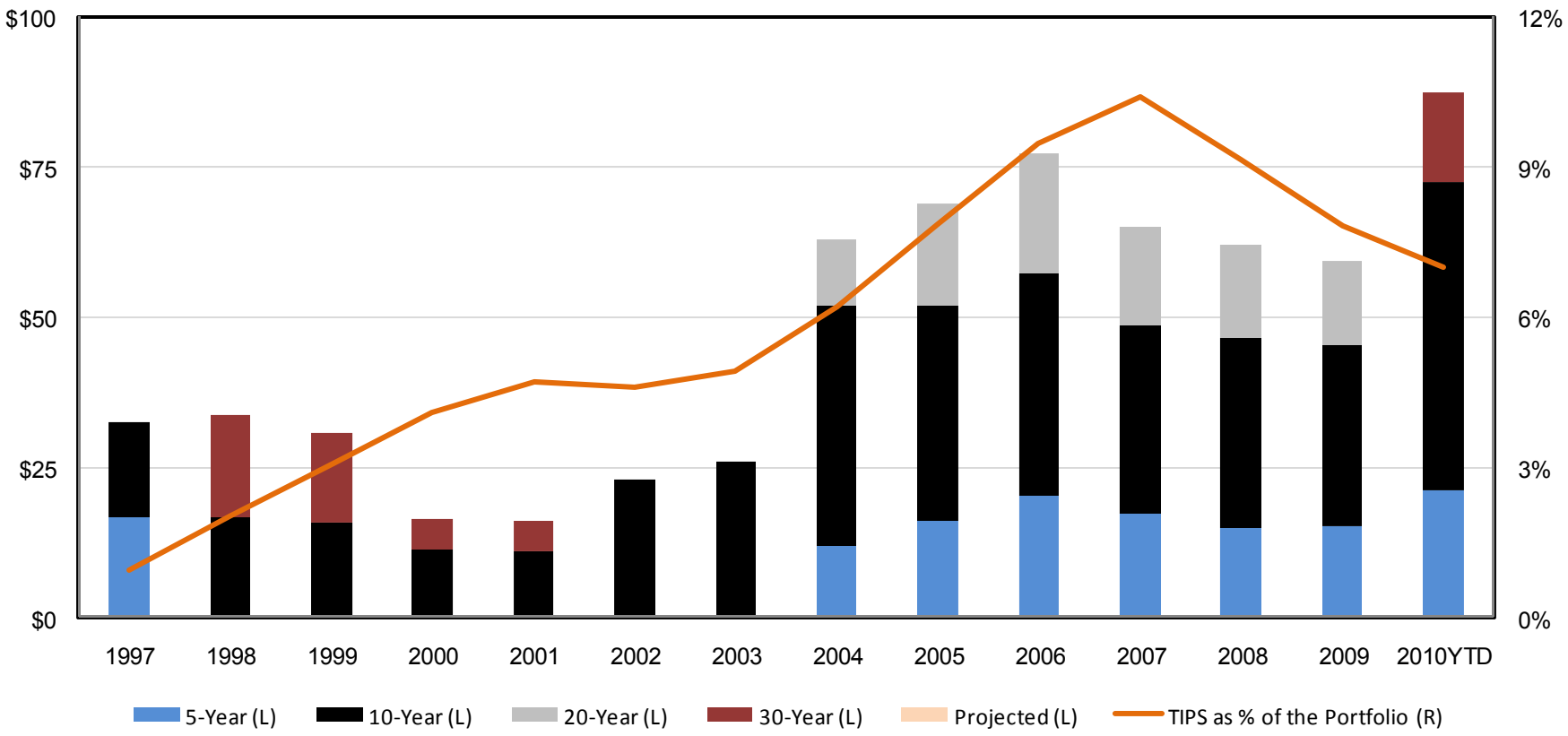
Nominal Coupons Percentage of Total Portfolio





TIPS Issuance Will Continue to Increase

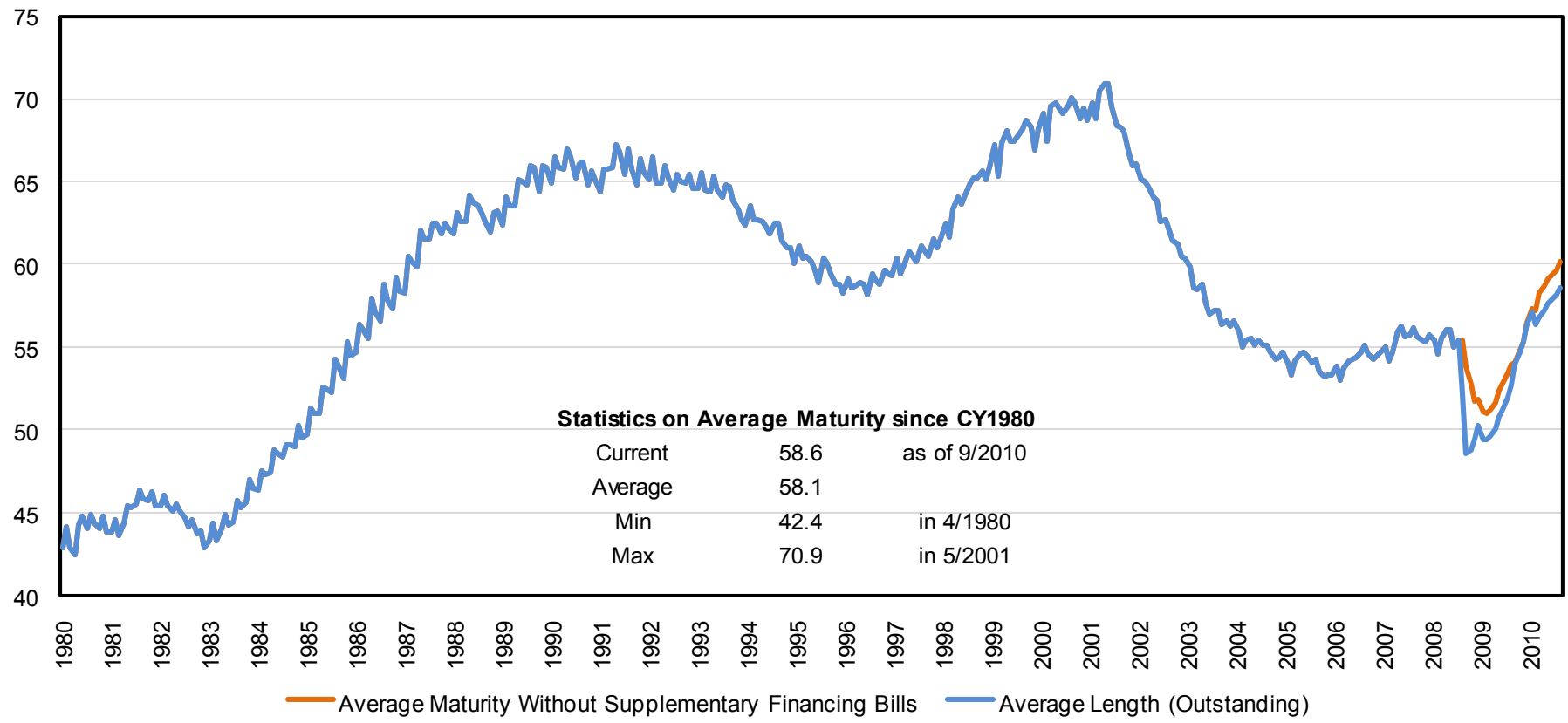
TIPS Calendar Year Issuance in Billions \$, Percentage of Portfolio





Average Maturity of the Debt Continues to Lengthen

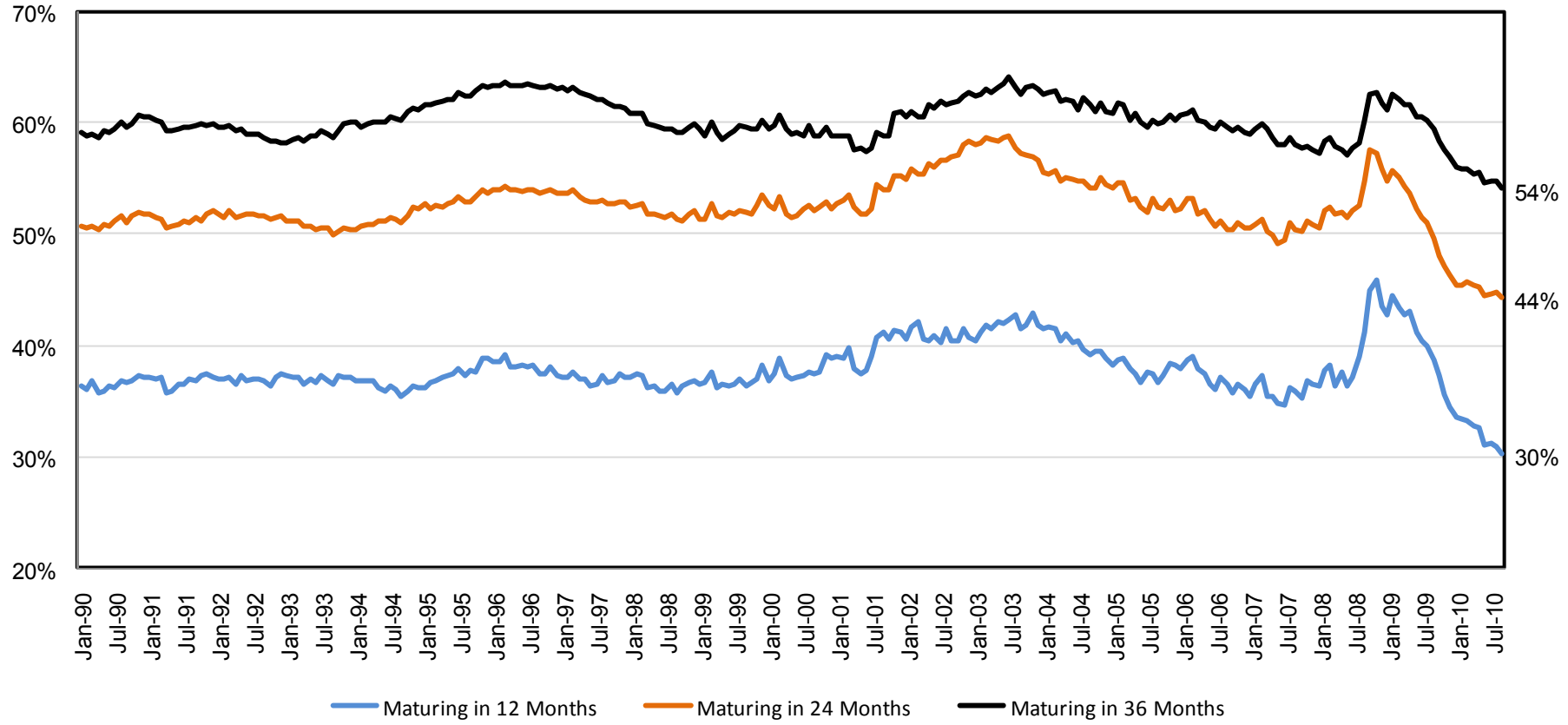
Average Maturity of Marketable Debt In Months





Percentage of Debt Maturing in the Near-Term is at Historic Lows

Percentage of Debt Maturing in Next 12 to 36 Months



Note: Data through 9/30/2010



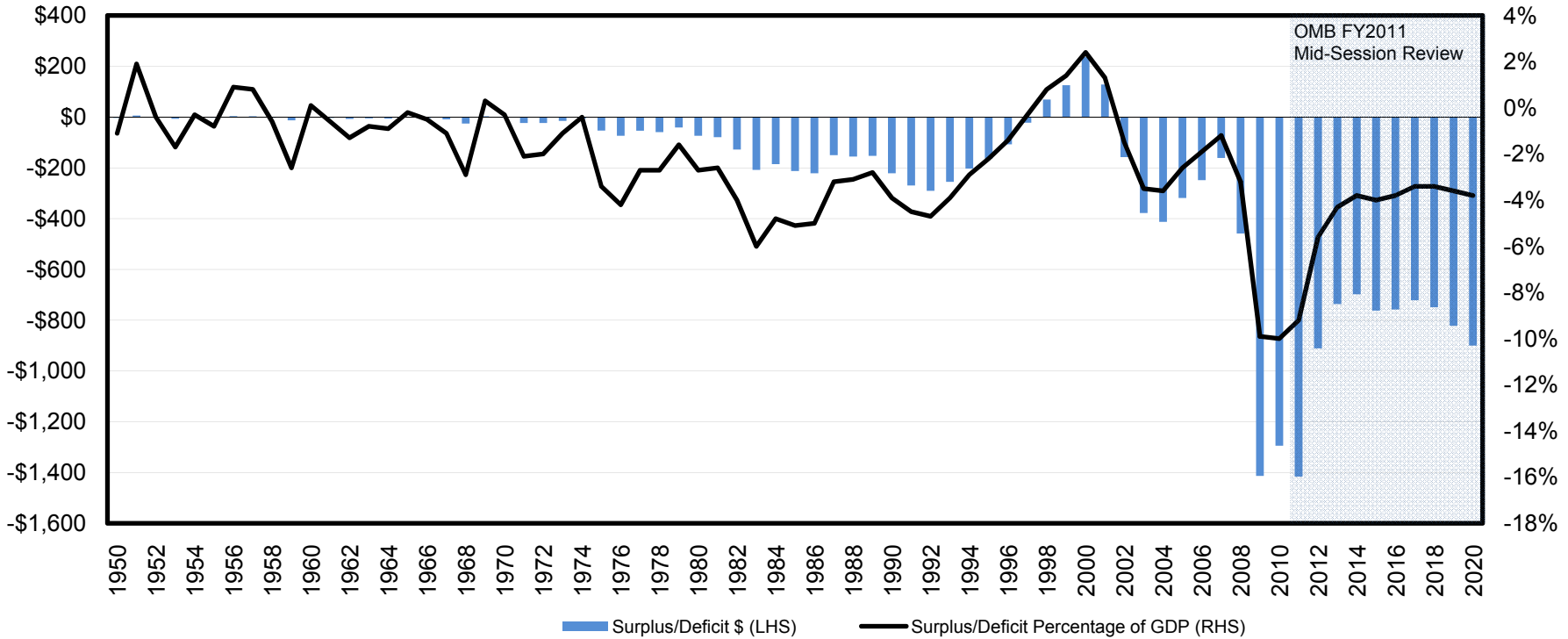
LONG-TERM CHALLENGES





OMB FY2011 Mid-Session Review Projections

Budget Surplus/Deficit In Billions \$, Percentage of GDP



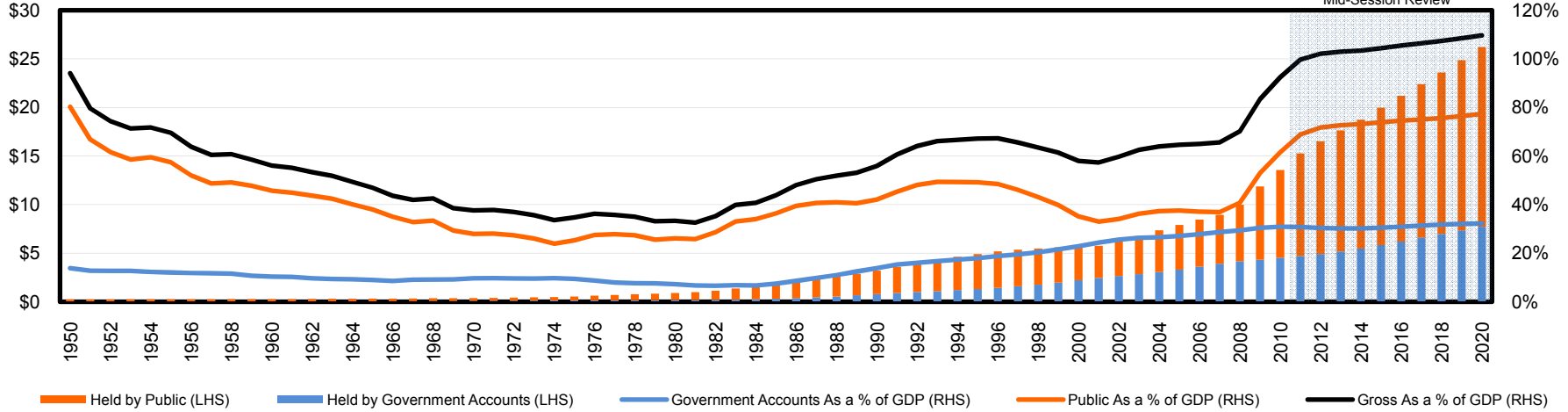
Source: OMB



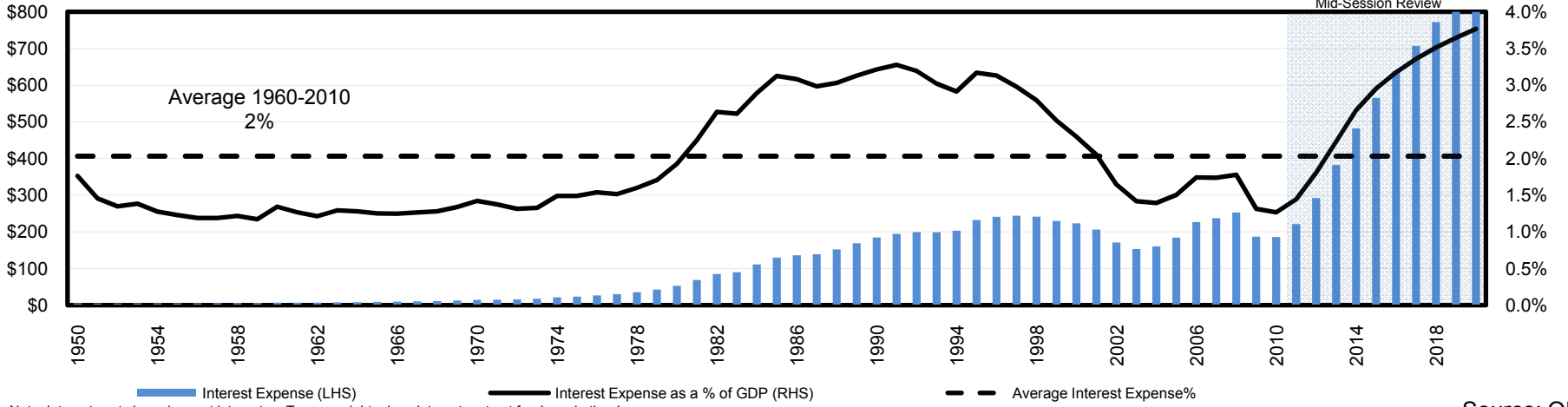


OMB Long-Term Debt Metrics

Fiscal Year Outstanding Debt
In Trillions \$, Percentage of GDP



Fiscal Year Interest Expense
In Billions \$, Percentage of GDP



Note: Interest costs based on net interest on Treasury debt minus interest on trust funds and other income.

Source: OMB





What adjustments to debt issuance, if any, should Treasury make in consideration of its financing needs in the short, medium, and long term?

	2Y Note	3Y Note	5Y Note	7Y Note	10Y Note	30Y Bond	Sum
April Coupon Issuance	\$44	\$40	\$42	\$32	\$25/\$21/\$21	\$16/\$13/\$13	
October Coupon Issuance	\$35	\$32	\$35	\$29	\$24/\$21/\$21	\$16/\$13/\$13	
% Change April-October	-20%	-20%	-17%	-9%	-2%	0%	
Annualized Cuts From October	\$108	\$96	\$84	\$36	\$4	\$0	\$328

Comparing October and April levels of issuance, Treasury has cut \$328 billion in annualized borrowing capacity.

Treasury Borrowing Advisory Committee
Presentation to Treasury
Charge #2

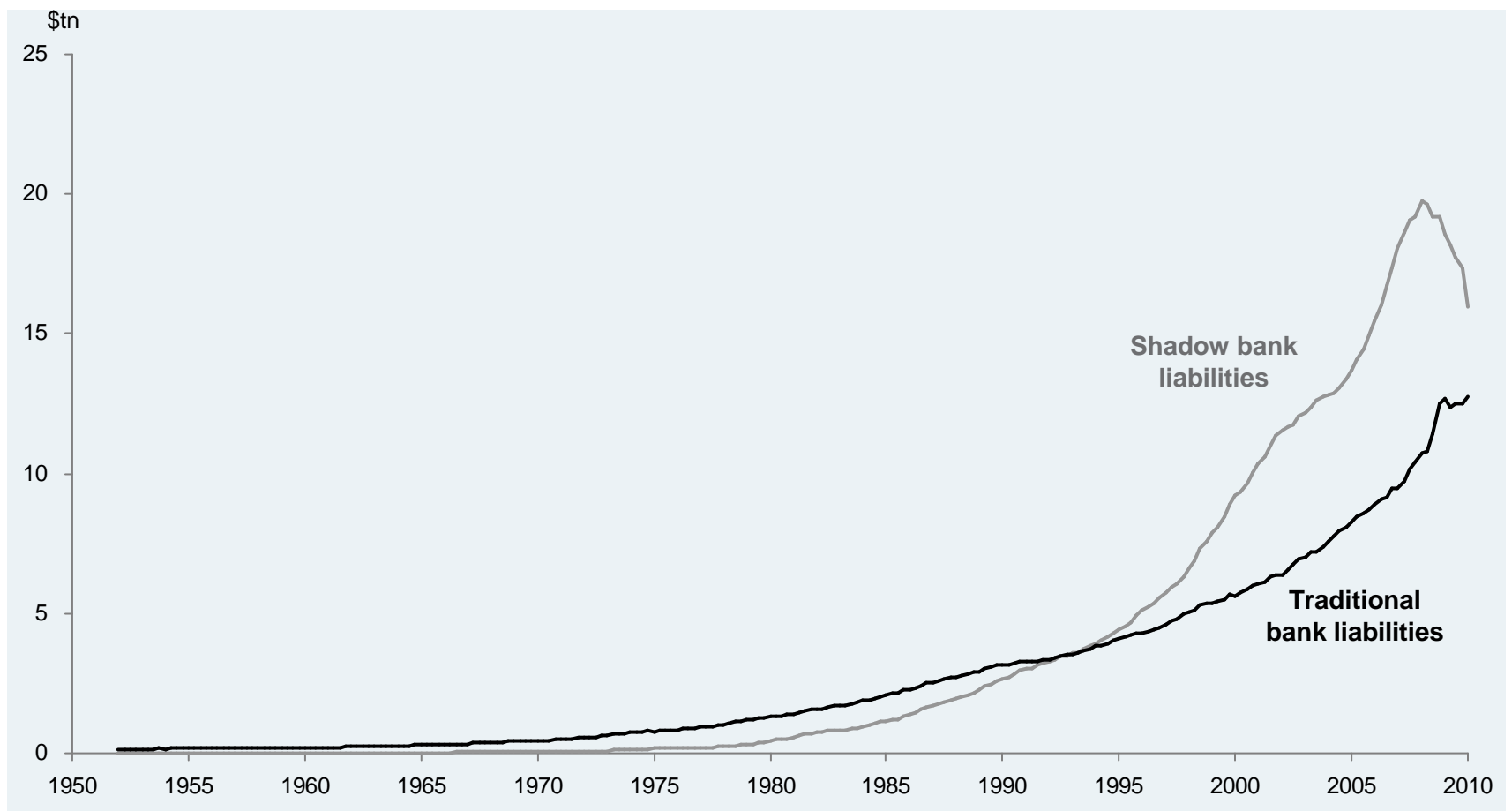
November 2, 2010

Outlook for Non-Bank Financial Institutions Post 2008 Financial Crisis

Prior to the 2008 financial crisis, a number of non-bank financial institutions played a critical role in providing credit and liquidity across the global financial system. Many of these entities now play a more diminished role in the allocation of credit. Please discuss the current state of non-bank financial institutions and the outlook going forward. What are the implications for financial markets and the Treasury market specifically?

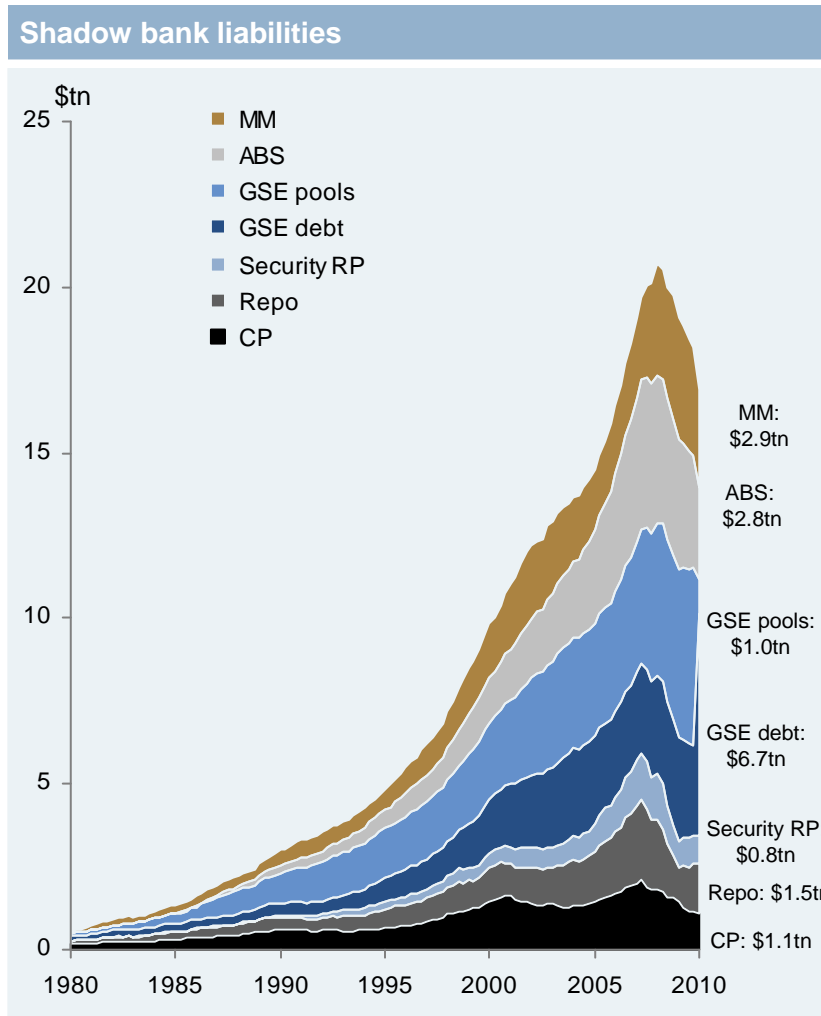
Shadow banking liabilities shrank during the crisis, but still exceed those of traditional banking

Shadow bank liabilities vs traditional bank liabilities

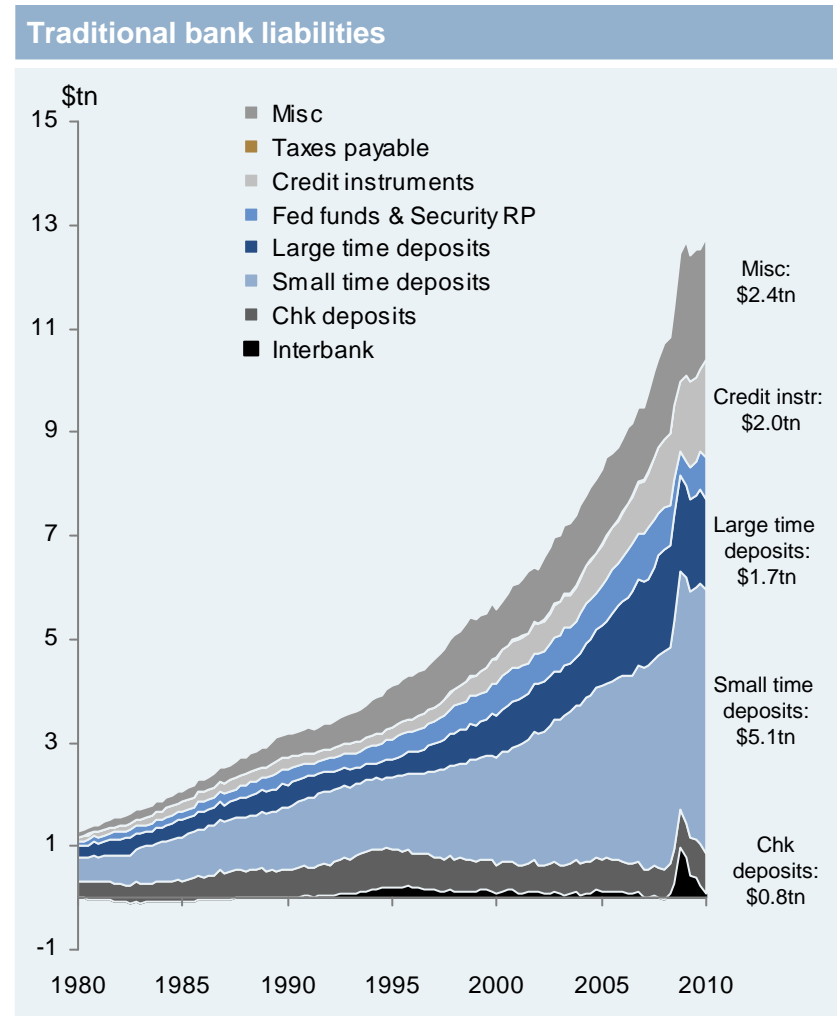


Source: Federal Reserve

Shadow banking liabilities shrank during the crisis, but still exceed those of traditional banking (cont)



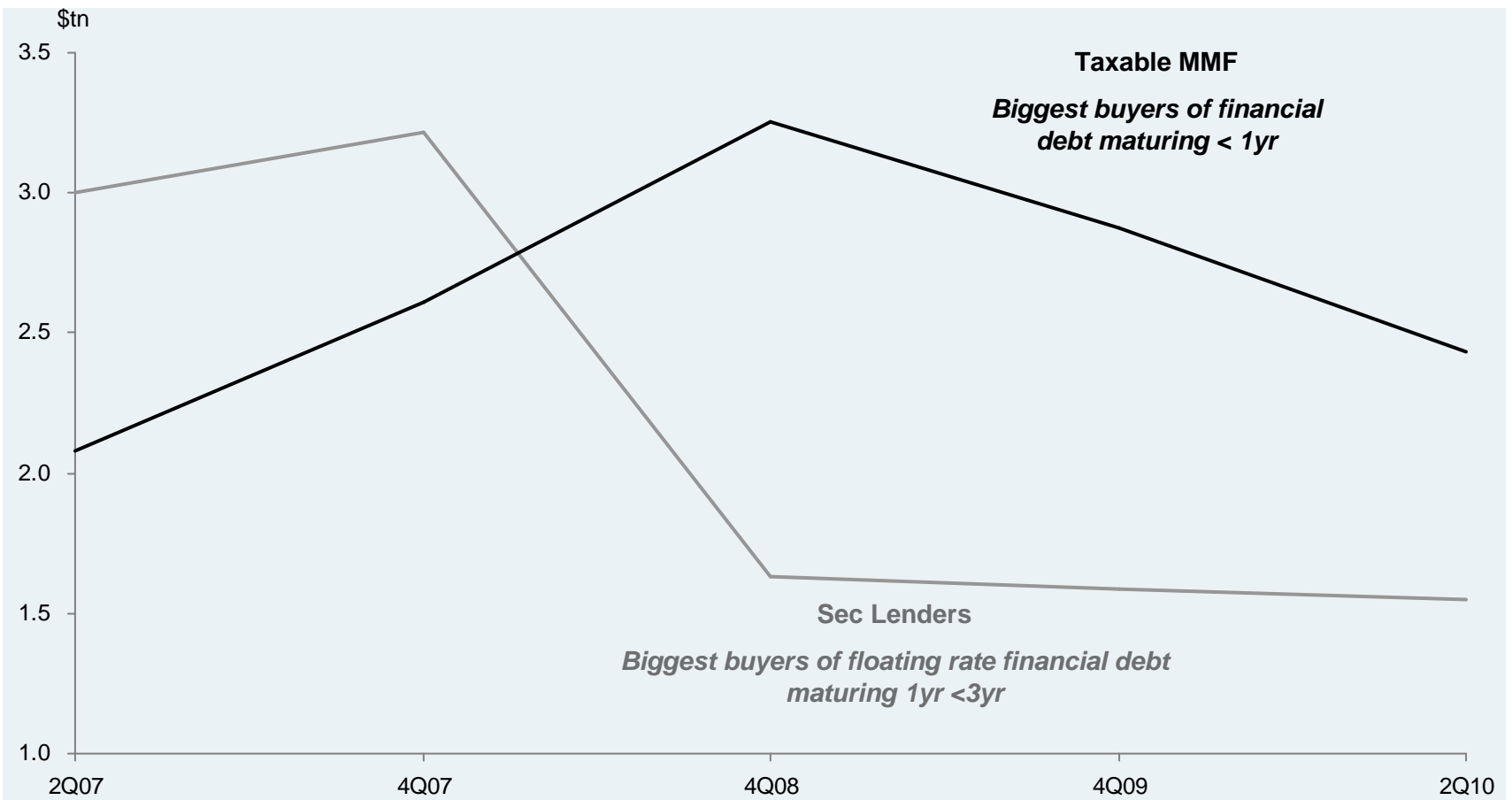
Source: Federal Reserve



Source: Federal Reserve

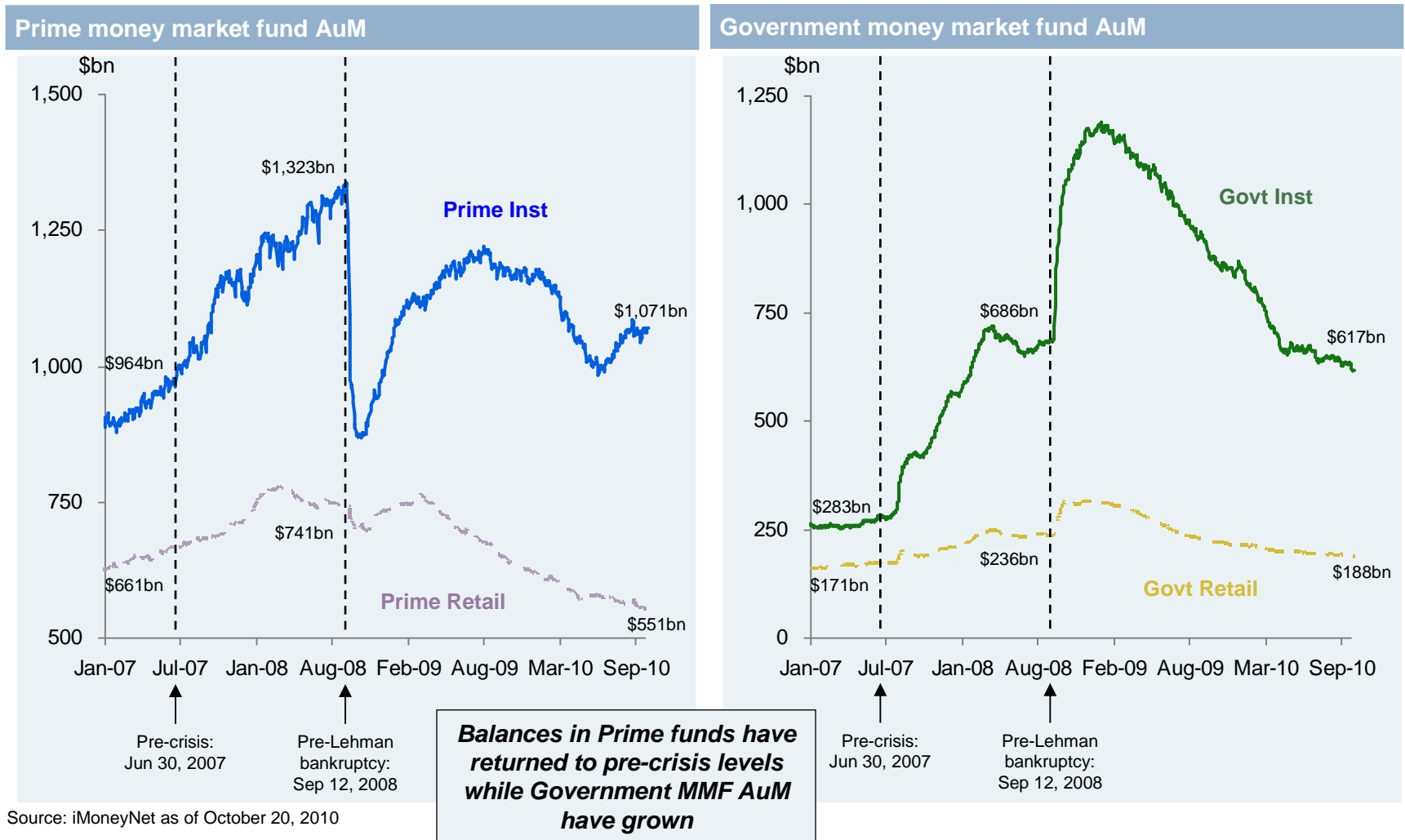
Key liquidity investors were transformed by the crisis

Taxable money fund and securities lenders assets under management



Note: Securities lenders assets are J.P. Morgan estimates
Source: J.P. Morgan, iMoneyNet

Balances in money funds have declined significantly since September 2008 but are higher than pre-crisis levels



Credit sensitive money market assets fell during the crisis

Supply of money market instruments excluding Treasuries



Percentage change in asset classes since Jun 2007



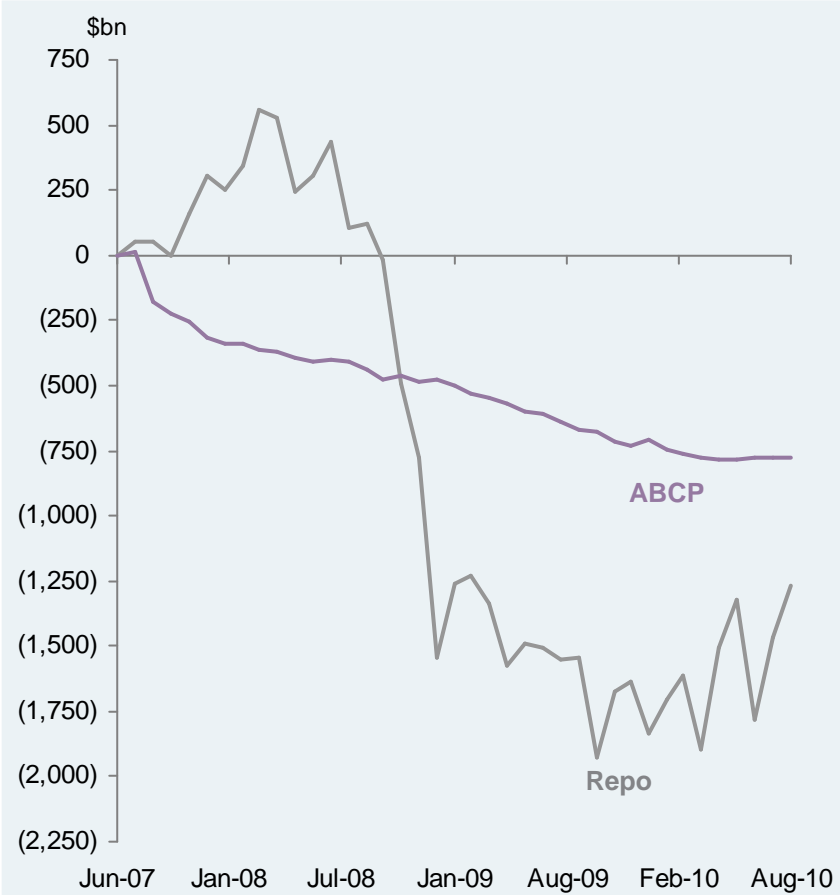
■ **The size of the shadow banking system has shrunk significantly already**

- Sophisticated ABCP issuers such as SIVs and securities arbitrage vehicles have become extinct as liquidity investors shy away from market-valued based structures and mortgage exposures. Traditional cash-flow, client funding ABCP models are what remains today
- Repo utilization has also declined as dealers have delevered and reduced their reliance on repo as a funding source

Source: J.P. Morgan; Data through September 30, 2010

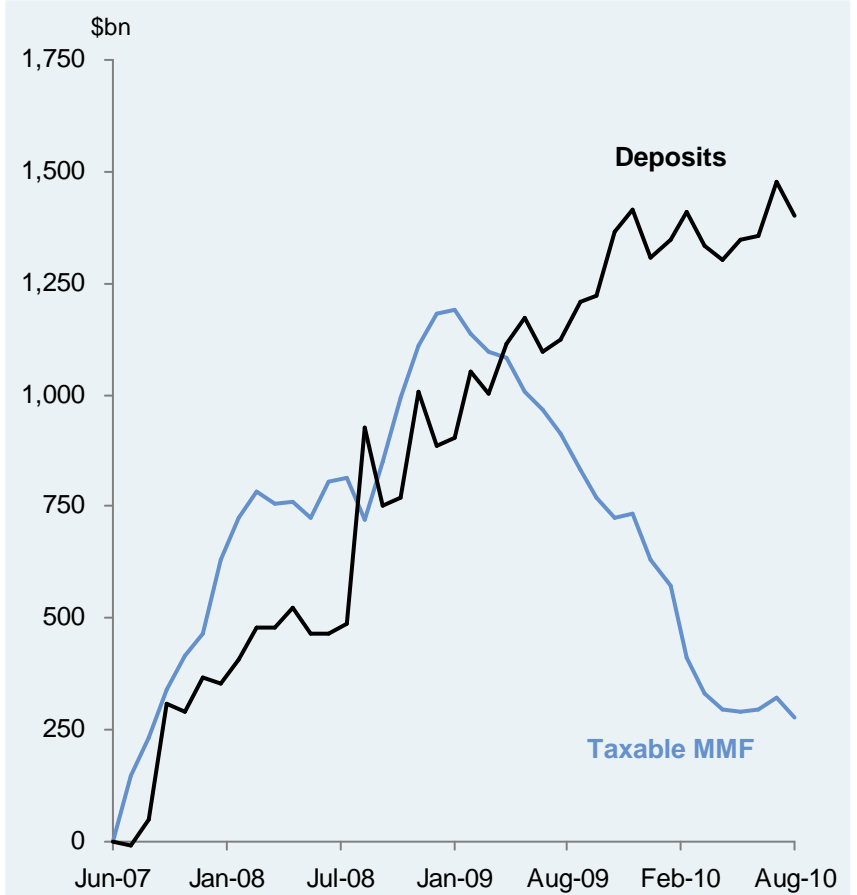
Certain products providing leverage to banks and financials have declined, even as cash in banks and money funds have grown

Cumulative changes in Repo and ABCP outstanding



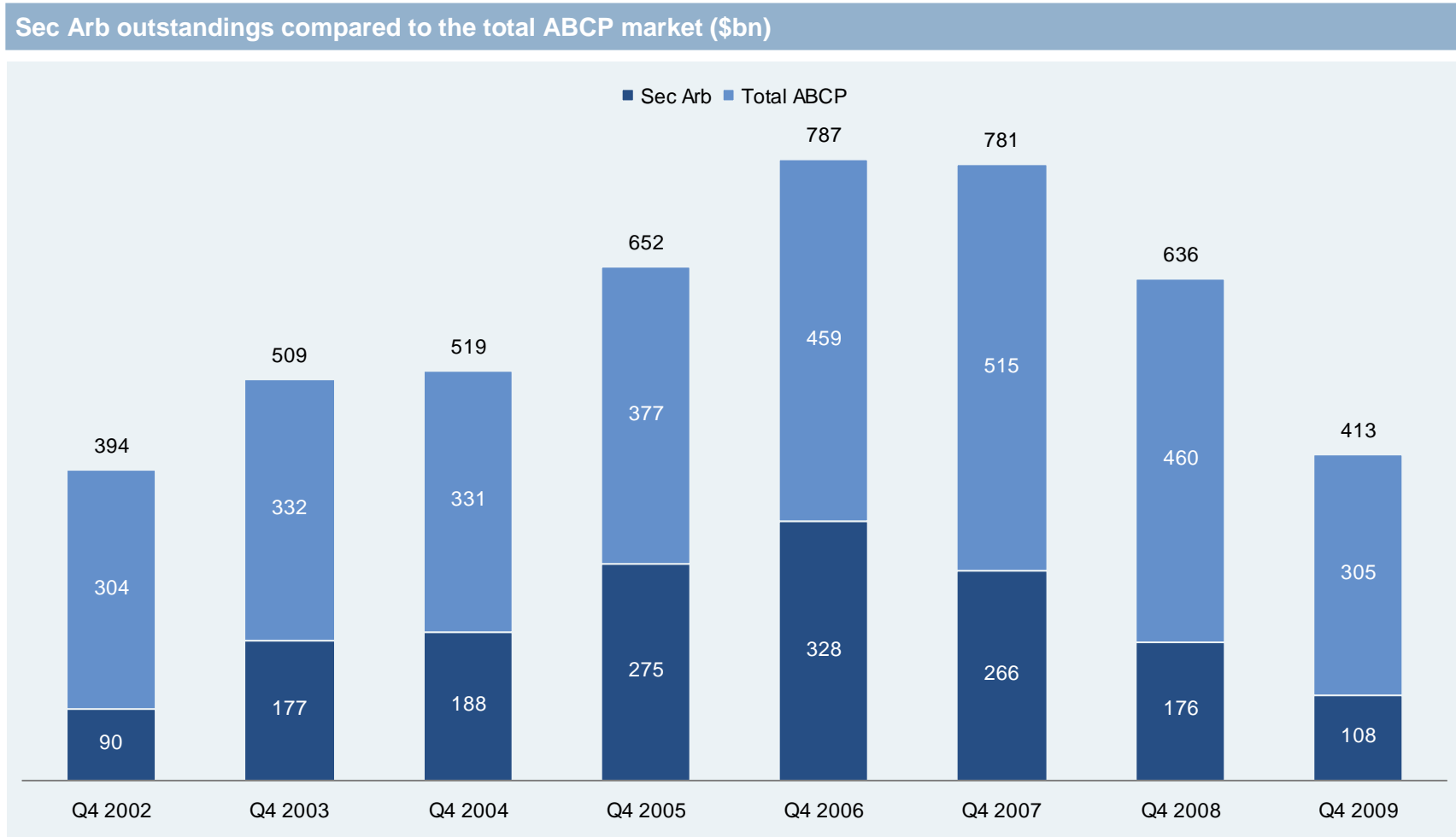
Source: Federal Reserve, J.P. Morgan

Cumulative changes in taxable MMF and deposit balances



Source: iMoneyNet, FDIC

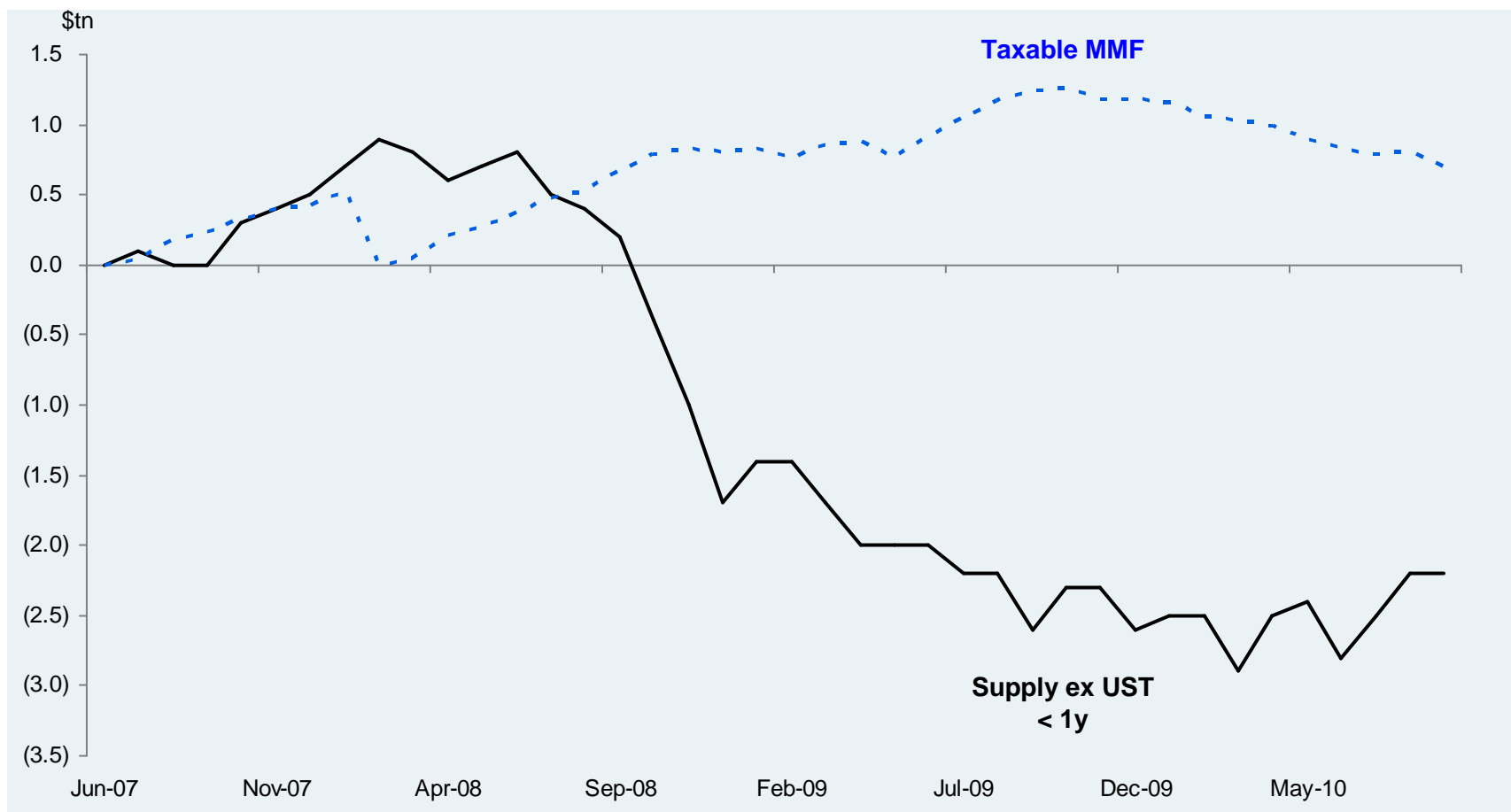
Securities financed by ABCP climbed steadily until 2007 when the market reversed course



Source: Moodys; includes U.S. and European ABCP programs (multi-seller, hybrid and securities arbitrage)

Delevering cut supply while demand has grown

Taxable money fund AUM vs. total money market supply

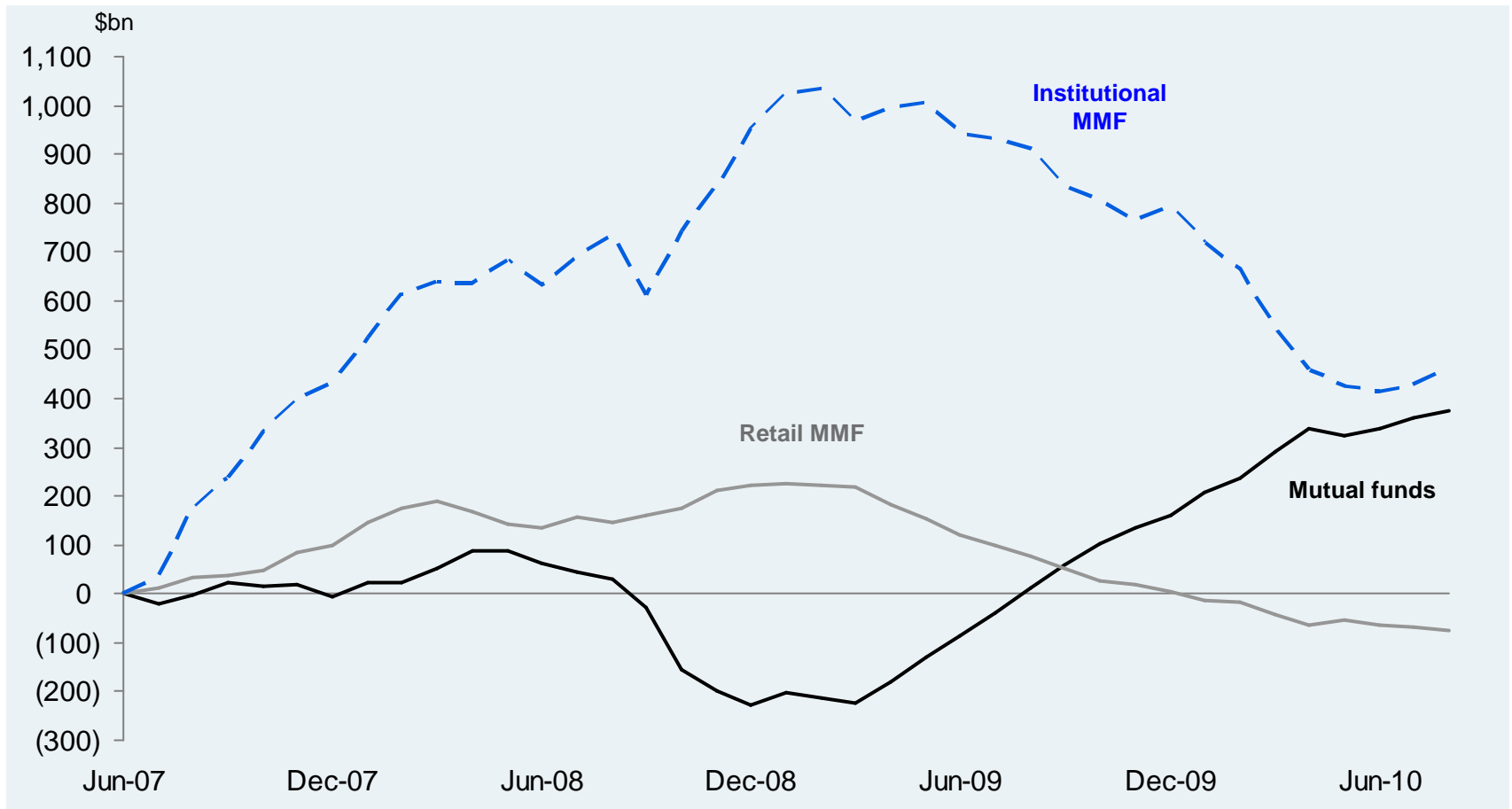


Source: J.P. Morgan

Note: Supply data includes UST bills and coupons, agency discount notes and coupons, repo sold, unsecured commercial paper, ABCP, negotiable CDs, Bonds < 13 months and money market eligible extendible notes

Money fund balances are only partly related to demand for other risky assets like bonds and stocks

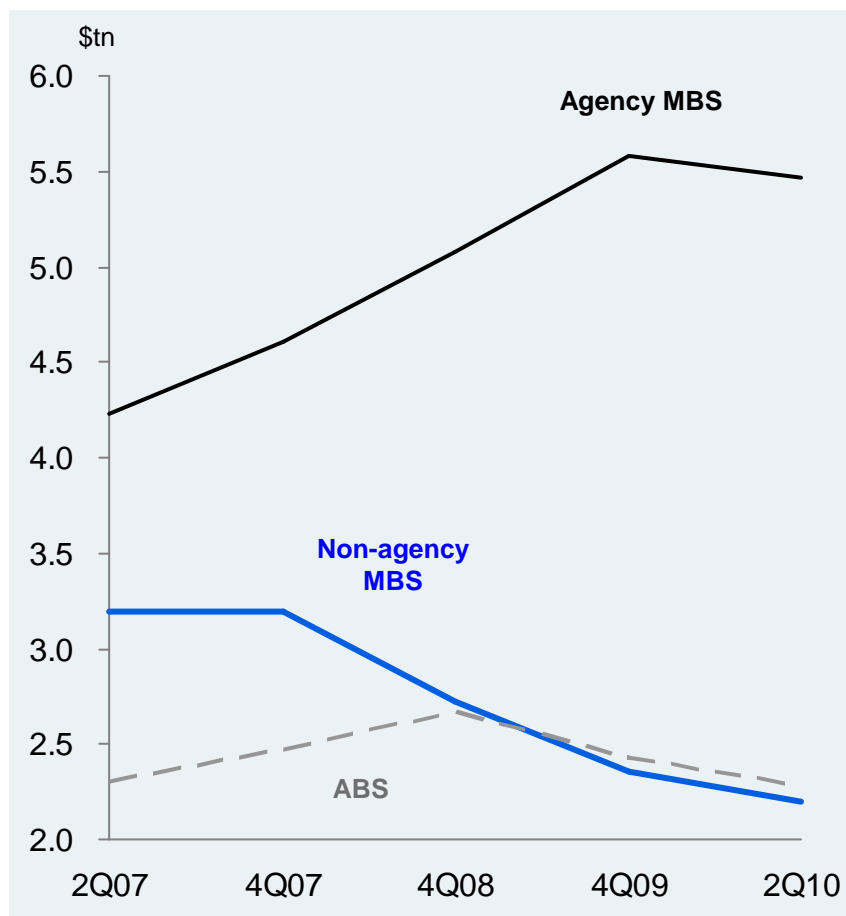
Cumulative monthly flow of cash since June 2007



Source: iMoneyNet, ICI

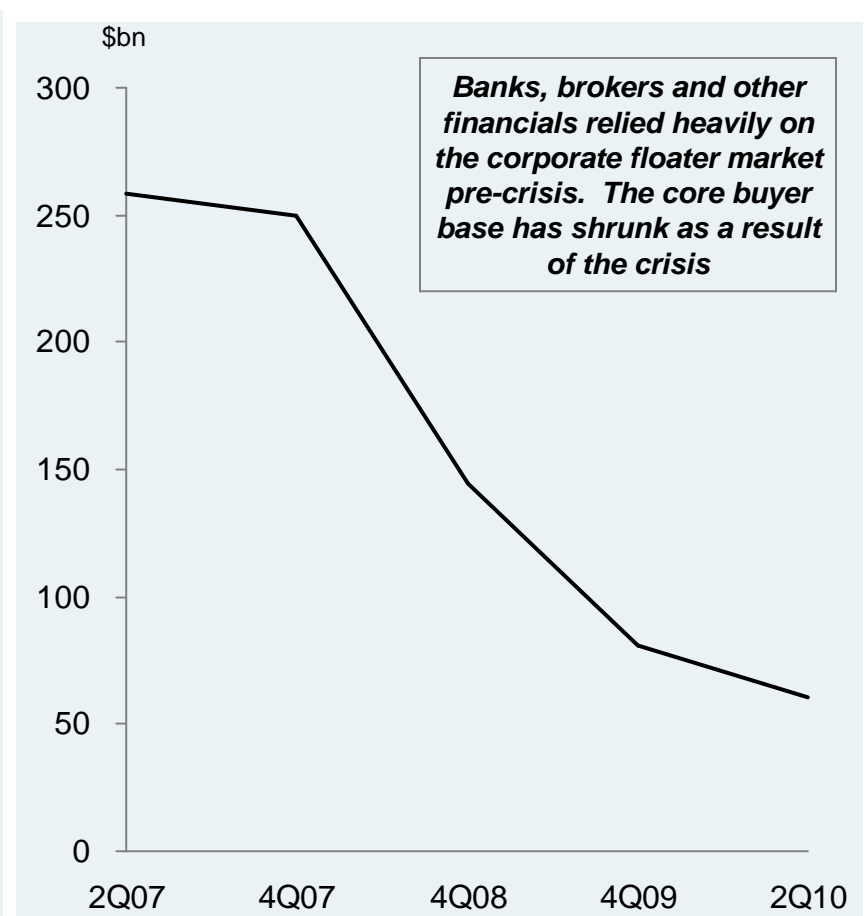
Structured products and floating rate securities were tools for maturity transformation; Use of both have declined

MBS and ABS outstanding



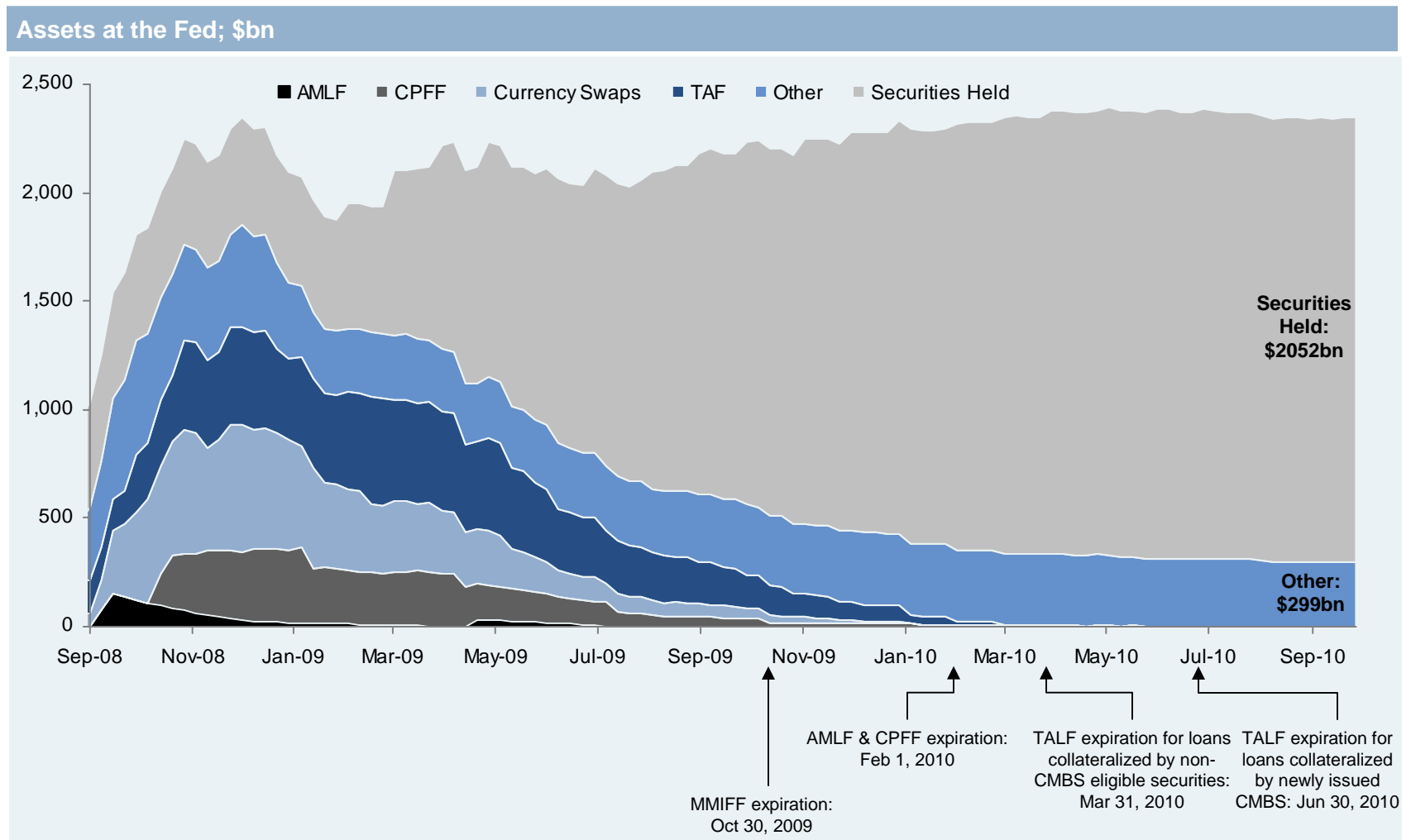
Source: SIFMA

FRN with 1 to 3 year maturity outstanding



Source: J.P. Morgan

Fed emergency programs to provide temporary liquidity worked well and have largely expired as the need for them subsided



Source: Federal Reserve

Note: "Other" includes loans to AIG, TALF, Maiden Lane holdings, Gold, Special drawing rights certificates, and Treasury currency outstanding

Summary and Outlook

- Investor demand for cash-like investments remains high and has actually grown during the crisis in spite of near zero interest rates
- Delevering and changes in investor assets under management and risk appetite has decreased the supply of credit sensitive products in the short term markets
- The combination of more demand and lower supply of alternative products reinforce the demand for Treasury bills and other short duration Treasuries
- Regulatory changes like 2a-7 liquidity requirements and Basel III's liquidity coverage ratio also serve to reinforce greater holdings of Treasuries by both "shadow banks" and traditional banks

Treasury Borrowing Advisory Committee
Presentation to Treasury
Charge #3

November 2, 2010

TBAC Charge #3

Potential Impacts of Basel 3 Regulatory Reform

- The Basel 3 banking regulatory framework, which is expected to be implemented over the next decade, includes tighter definitions of Tier 1 capital, prescribed leverage and liquidity ratios, counter cyclical capital buffers, additional capital requirements for large interconnected firms and new limits on counterparty credit risk. Please comment on the potential impact of Basel 3 on the financial markets and the Treasury debt markets.

Executive Summary

Basel 3 spans stricter capital, liquidity and leverage requirements

- Timing for implementation is over next decade, however markets adjusting more quickly
- Capital most clearly defined, liquidity and leverage in the process of being codified but may be most onerous constraint
- Financial sector trading at 20 year low reflects significance of Basel 3 in particular with other regulatory requirements in a slow economic environment

Impact assessment of Basel 3 complex given interplay with other policy moves

- Challenge of assessing the macroeconomic, financial, and Treasury debt market impact of the Basel 3 capital and liquidity changes is complicated by other regulatory and economic factors, such as other Basel initiatives, US regulatory reforms and Fed policy.

Impact on Treasury markets multi-faceted

- Treasury requirements affected generally by economic growth and credit creation implications of Basel 3 and more specifically by rules governing ownership of securities and loans.
 - Economic Growth. Economy benefits through lower volatility over the long run as a result of reduced systemic risk. However, reduced availability and/or a higher price for credit could impinge on growth. Achieving appropriate balance of objectives remains paramount.
 - Treasury Holdings. Liquidity requirements likely to cause banks to increase Treasury holdings but some flexibility to hold Agency and Agency MBS may mute the demand.

Different Perspectives on the Impacts of Basel 3

Small and Medium Enterprises:

- “In the medium term, as banks increase their capital ratios by reducing lending, **access to credit is likely to become more difficult and borrowing costs are liable to increase.**”
- “The proposed new regulation is likely to result in significantly **higher trade financing costs** and **tighter access** to traditional trade financing instruments, such as letters of credit.” -- *Dun & Bradstreet October 2010 Special Report*

Banking Industry

- “For the “G3” (United States, Euro Area and Japan), we project that full implementation of regulatory reform on our assumed time frame would **subtract an annual average of about 0.6 percentage points from the path of real GDP growth** over the five year period 2011-15, and an average of about 0.3 percentage points from the growth path over the full ten year period, 2011-2020” – *IIF – Impact of Basel 3, June 2010*

Investors

“Steps banking industry will take as a result of the LCR and NSFR:

- “First, banks will have to **increase liquid assets** (primarily by holding more central bank reserves and more Treasuries), which will **crowd out holdings of higher yielding loans and securities.**”
- “Second, the **supply of bank credit will likely decline**, and what remains will be more expensive.”
- “Third, the amount banks borrow in the **short term** and interbank markets will **decrease sharply**, while the **amounts they borrow from the term markets** may very well run laps around current levels”. – *JP Morgan*

Policy Makers

- “Less active money markets, higher volatility of short-term interest rates; could make the **transmission of monetary policy signals more difficult.** Increase in steepness of money market yield curve affects monetary policy transmission mechanism” – *Lorenzo Bini Smaghi, Member of the Executive Board of the ECB September 29, 2010 on Basel 3 Liquidity*
- “The core message... is that net benefits remain positive for a broad range of capital ratios... the sizeable gap between benefits and costs for a broad range of assumptions still suggests that in terms of the impact on output there is **considerable room to tighten capital and liquidity requirements while still achieving positive net benefits.**” – *BCBS An Assessment of the long term economic impact of stronger capital and liquidity requirements, August 2010*

Basel 3 Overview

Basel 3 more complex than previous Basel Accords

- Unlike prior Basel Accords which focused on one or two objectives — such as introducing a new capital standard or recalibrating an existing standard — Basel 3 has undertaken multiple actions on multiple standards in what is expected to be a relatively shorter period of time than prior Basel regulations due primarily to market expectations

Basel 1 Introduced minimum capital standards for banking book

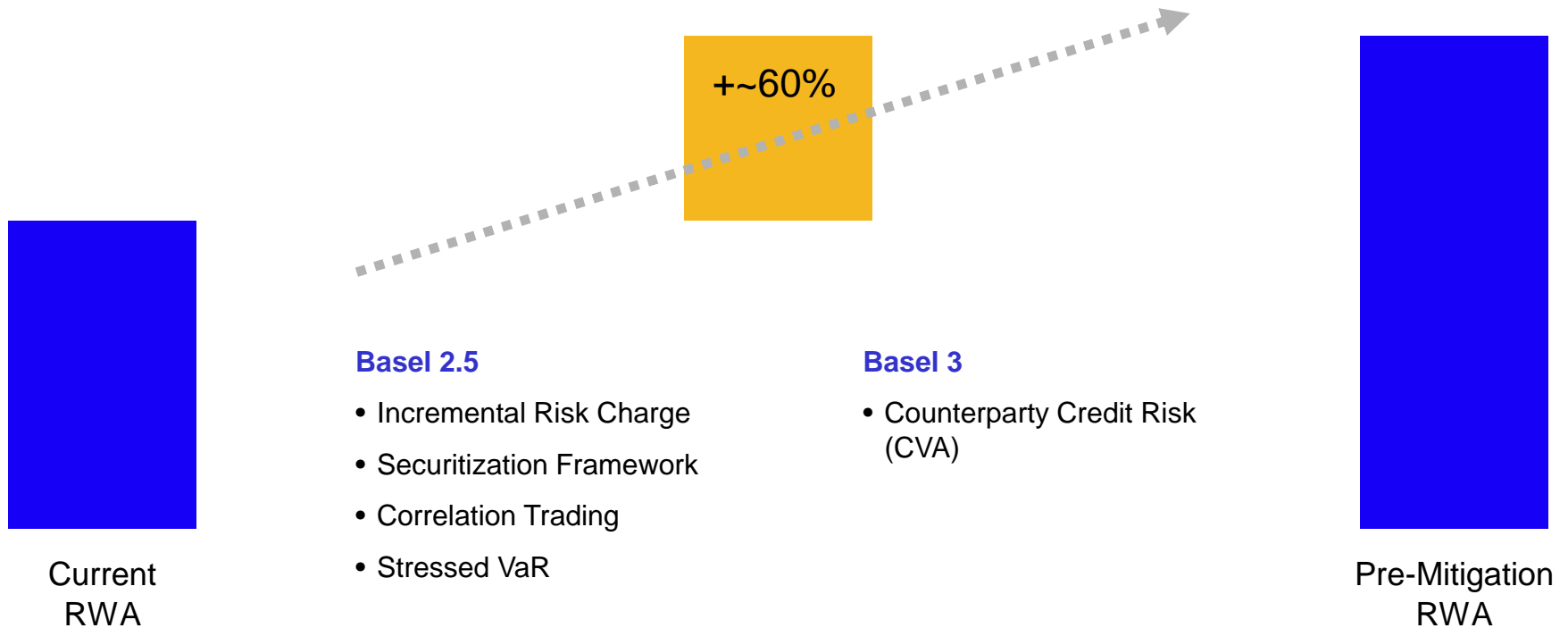
Basel 1.5 Introduced VaR model based capital for trading book

Basel 2 Recalibrated capital for banking book capital by allowing internal models
Introduced operational risk capital

Basel 2.5 Substantially revised Basel 2 for certain credit products—Securitization, Correlation Trading

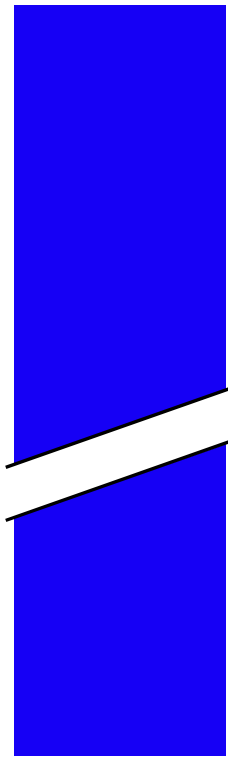
Basel 3 Introduced higher capital requirements for certain credit products
Recalibrated quality of capital and materially raised minimum capital ratios
Introduced liquidity and funding ratios
Introduced leverage ratio

Capital Requirements Increase with Higher Risk Weights of Certain Asset Classes



- Based on bank disclosure to date, risk-weighted assets are expected to increase approximately 60%, pre-mitigation
 - Some banks have also disclosed mitigation opportunities not quantified above
- Ongoing appropriate calibration critical to support credit activities, such as securitization and hedging activities
 - *Banks need to ration credit further, likely increasing end-user rates*
 - *Ability to hedge credit risk declines, potentially reducing extension of credit*

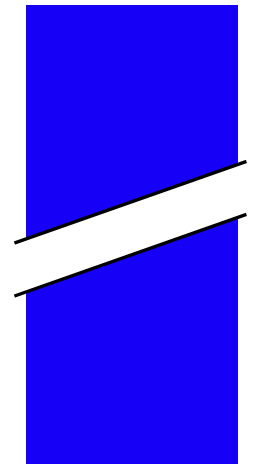
Quality of Capital: Increased Deductions in Numerator Place Further Constraints on Bank Capital



Tier 1 Capital

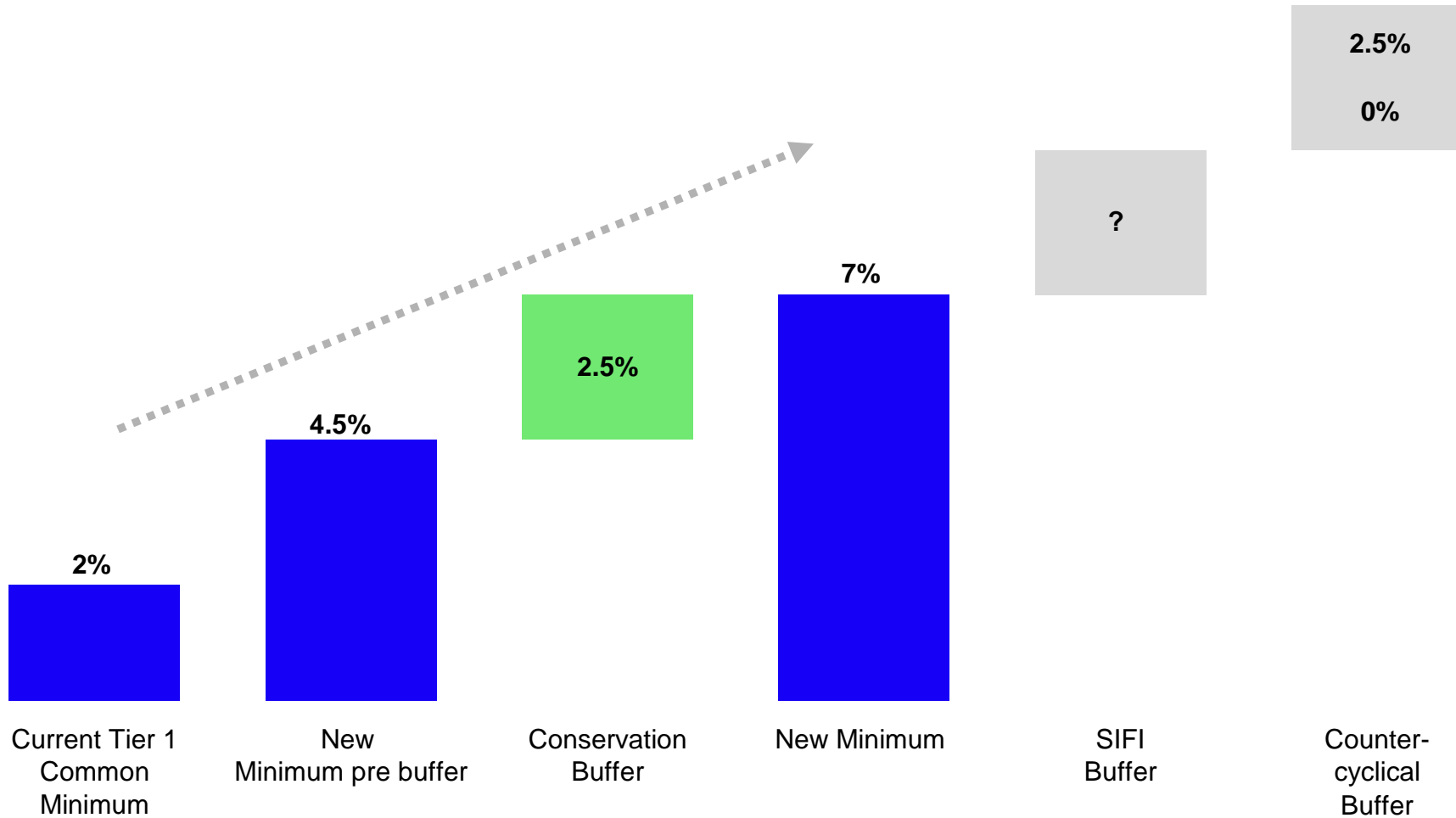


- Perpetual Preferred Stock
- Trust Preferred
- Intangibles (e.g. MSR)
- Non-controlling Interest
- Deferred Tax Assets



Tier 1 Common

Higher Capital Requirements, Some Still to be Defined

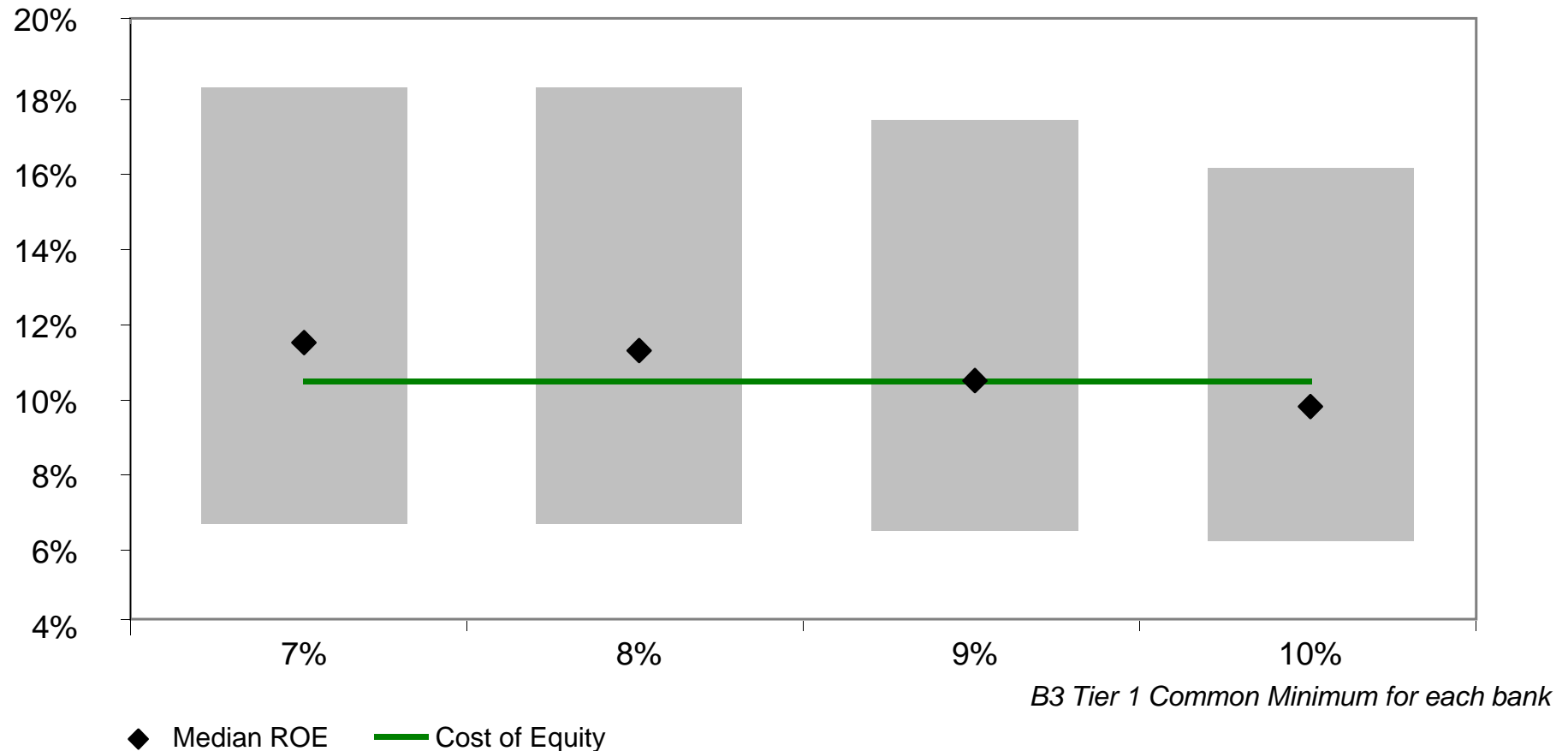


Note: 2% Tier 1 Common minimum based on 4% minimum Tier 1 capital requirement and predominance test which implies at least 50% must be in the form of Tier 1 common equity

Capital Calibration Will be a Key Determinant of Extent Economy Will Be Impacted by Basel 3

Estimated ROEs vs. Cost of Equity for US Large Cap Banks

2012 ROE



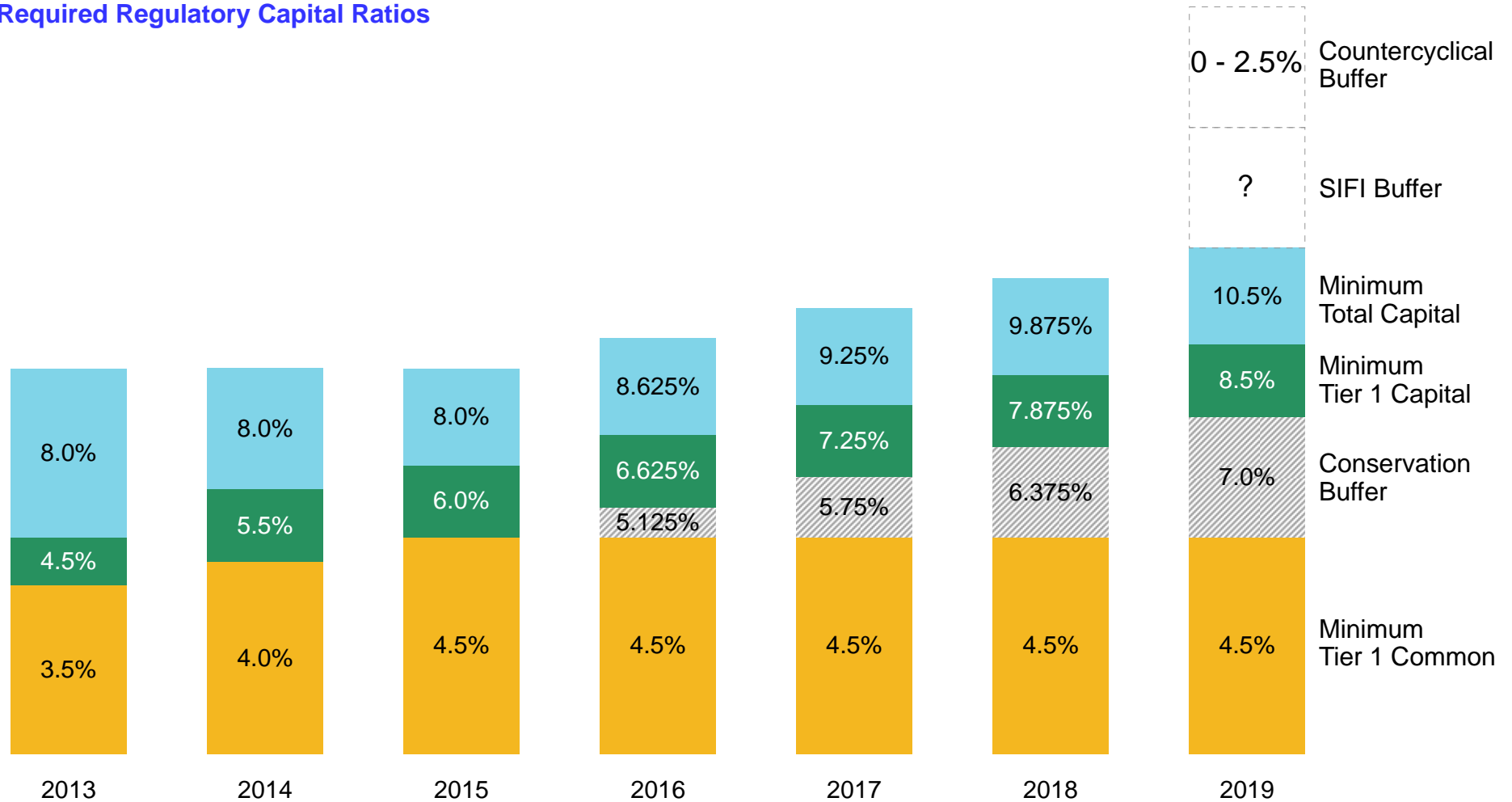
Note: AXP excluded from grey ranges because high 28% ROE skews the scale, making changes difficult to observe.

Source: Company data, Morgan Stanley Research

Research highlights interplay between capital requirements, ROE, lending supply and potential of lending moving to shadow banking

Basel Implementation Schedule Provides a Multi-year Glide Path for Meeting Capital Ratios

Required Regulatory Capital Ratios



Banks and investors already focused on pro-forma impact, compressing timelines

Liquidity Ratios Defined, Calibration Ongoing

Liquidity Coverage Ratio (LCR) & Net Stable Funding Ratio (NSFR)

Liquidity Coverage Ratio	Net Stable Funding Ratio
<ul style="list-style-type: none"> Intended to guard against a “run” on a bank’s wholesale liabilities Defined as follows: $\frac{\text{Stock of high quality assets}}{\text{Net cash outflows over a 30d horizon}} > 100\%$ Stock of high quality assets include: <ul style="list-style-type: none"> Cash Qualifying marketable securities from sovereigns, central banks, public sector entities, and multi-lateral development banks Qualifying corporate bonds rated A to higher Qualifying covered bonds rated A- or higher Net cash outflows include: <ul style="list-style-type: none"> Retail deposits Unsecured wholesale funding Secured funding Conduits Contingent funding liabilities Implementation Date: December 31, 2011 	<ul style="list-style-type: none"> Intended to promote longer term funding of assets Defined as follows: $\frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} > 100\%$ Available amount of stable funding include: <ul style="list-style-type: none"> Equity Secured and unsecured liabilities >1y Retail deposits Term deposits with maturities <1y Required amount of stable funding include: <ul style="list-style-type: none"> Debt securities rated at least AA with maturities >1y Loans with maturities <1y Gold Commitments Other assets Phase-in period: 2011 to 2017 Implementation Date: 2018

Note: This is meant to serve as a guide. Issuers and Investors should consult their accounting and legal advisors. Please visit the BIS website for complete definitions

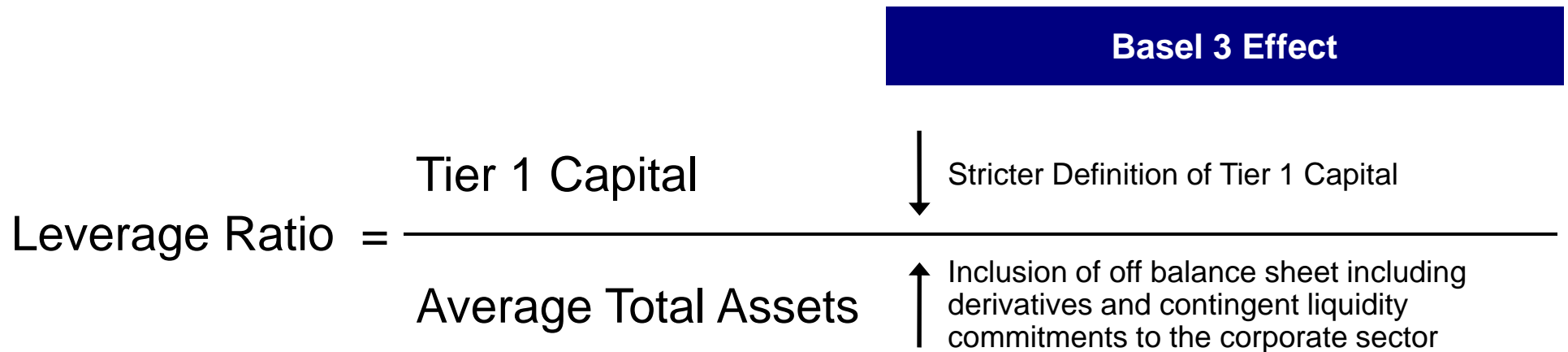
Source: BIS, J.P. Morgan

- LCR: Likely problematic as currently proposed, particularly in its treatment of deposits and unfunded commitments
 - Without further calibration, requires banks to carry higher percentage of liquid assets which reduces lending capacity and ROA
- NSFR: Problematic for most banks and Basel has stated they are considering changes
 - “Basel NSFR suggests significant deposit shrinkage including 75-100% of non-operational deposits. Our experience in the last cycle was inflows.... We do think it will reduce credit.” (source: JP Morgan)

Liquidity Ratio's Secondary Impact on Economy

- Liquidity Ratio Impacts (assuming no change in rule):
 - Higher Cost of Lending: For each dollar lent, more liquid assets are required which lowers lender efficiency and raises borrowing costs
 - May impact interbank liquidity, lower hedge availability and raise funding costs
 - Expected to impact money market industry by reducing back-stop facilities for CP & TOBs necessary to meet 7-day money fund liquidity requirements
 - Incremental crowding out of bonds not eligible for the Liquidity Ratio
 - May incent rise of unregulated non-banks

Leverage Ratio Represents a Higher Bar for Most US Banks Due to Stricter Criteria; Calibration Ongoing



- Disclosure to begin 2015
- Minimum ratio proposal is 3% versus today's 5% in the US.
 - Viewed as constraining given the inclusion of off balance sheet assets, suggesting meaningful deleveraging required without further calibration

Leverage Ratio's Impact on Markets

Lines of Credit: Likely to lead to lower availability, higher cost

- Money market funds: business model impact if credit lines pulled in this low rate environment
- Corporates: less CP would affect balance sheet efficiency and profitability
- Municipals: cost of financing would rise

Lending: Lower availability of financial derivative hedges, likely to lead to smaller loans

- Banks: may reduce lending and raise cost of loans. Competition grows from shadow banking.

Large Cap Banks Trading Multiple

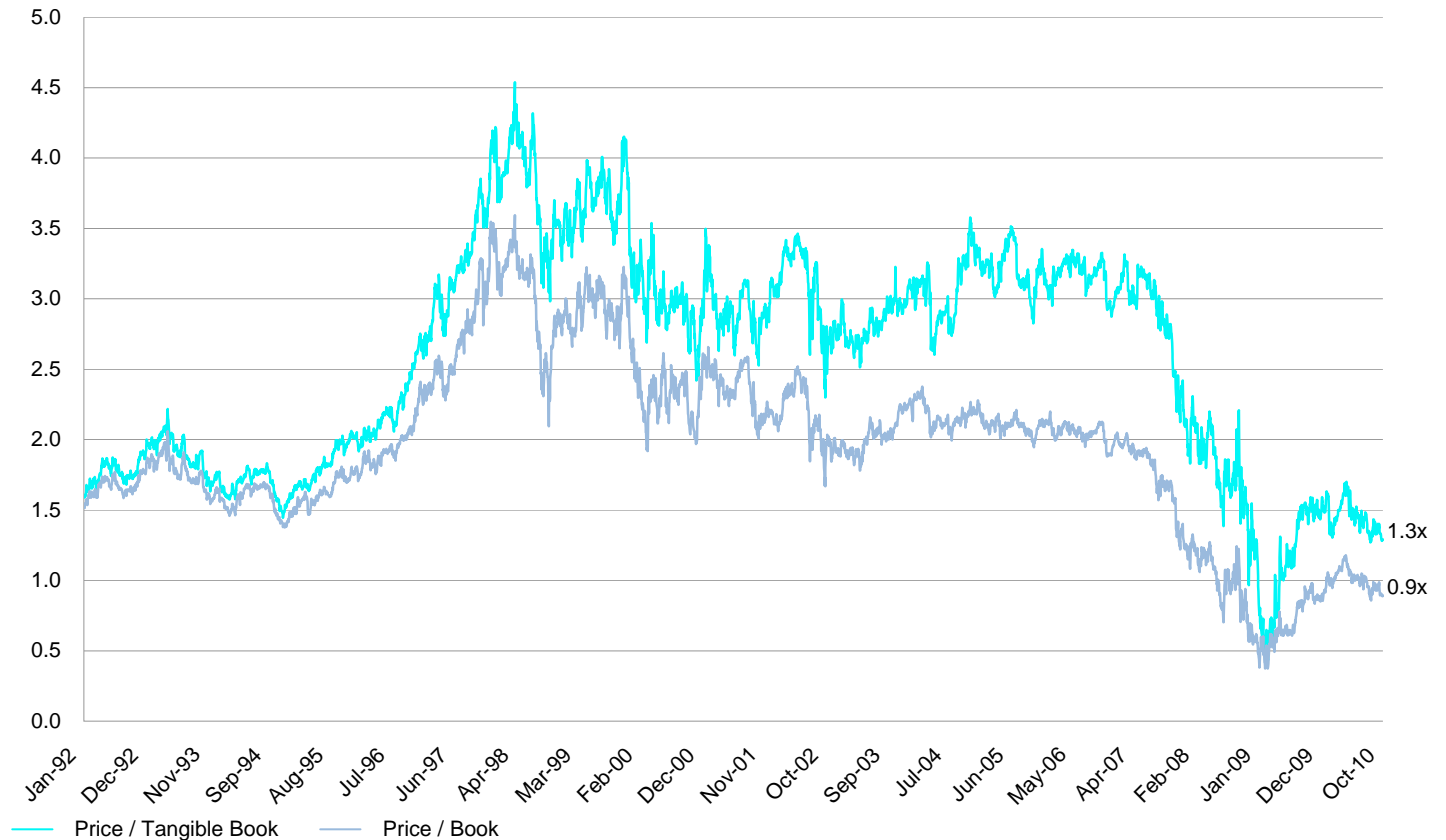
Large Cap Bank Index ⁽¹⁾

Trading Multiples

Large Cap Bank Index	Price /	
	Book	Tangible Book
Current	0.9x	1.3x
5-Year Avg	1.3x	2.1x
10-Year Avg	1.8x	2.6x
15-Year Avg	2.0x	2.8x

Large Cap Bank Trading Multiples

Price / Book and Price / Tangible Book Value (x)



Source SNL Financial

Note

1. Median of current BKK constituents excluding trust banks (STT, BK and NTRS)

Implications for the Treasury Debt Markets

Costs versus Benefits

The goal of Basel 3 is to improve the resilience of the financial system. However, the perceived long run macroeconomic benefits are difficult to quantify with any degree of precision. And, there may be costs associated with the tightening in financial conditions that accompanies the implementation of higher capital standards and increased liquidity requirements which should be considered.

“The main benefits of a stronger financial system reflect a lower probability of banking crises and their associated output losses”
– BIS

“The commonly expressed view is that whatever economic implications may result from implementing these reforms, they are a ‘cost worth paying’”
– IIF

Questions for Discussion

- 1) What are the potential macro-economic costs associated with Basel 3 and can the risk of financial crises be appropriately reduced without constraining necessary economic growth ?
- 2) What are the ramifications of a compressed timeline for implementation of Basel 3 requirements ?
- 3) How will financial markets be impacted, in particular the Treasury market ?

What are the Potential Costs?

A Number of Studies with a Wide Range of Estimates

1. **BIS**: Modest economic impact. Lending rates rise by about 30 bp, but these costs slowly dissipate and the long run impact is negligible. GDP reduction in G-3 after 5 years is about 0.4% -- or 1/8 the size of the IIF estimate.
2. **Elliot**: Modest economic impact. A large increase in capital requirements is estimated to increase average loan pricing by only about 20 bp, with little effect on availability (note: did not analyze impact of higher liquidity requirements).
3. **KSH**: Modest economic impact. A 10 percentage point increase in capital requirements would raise loan rates by only 25 bp to 45 bp (note: did not analyze impact of higher liquidity requirements).
4. **IIF**: Very large economic impact. Significant rise in lending rates (+100 bp to +200 bp in US and Europe). GDP growth over the next five years is reduced by 0.5 percentage points per year in the US and 0.9 percentage points per year in Europe. Cumulative impact on the level of real GDP in the G-3 after 5 years is -3.1%, with an accompanying sizeable effect on unemployment rates.

Source

- (1) Bank for International Settlements, "Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements - Interim Report", August 2010.
- (2) Douglas J. Elliott, "Basel III, the Banks, and the Economy", The Brookings Institution, July 26, 2010.
- (3) Anil Kashyap, Jeremy Stein, Samuel Hanson, "An Analysis of the Impact of Substantially Heightened Capital Requirements on Large Financial Institutions", May 2010.
- (4) Institute of International Finance, "International Report on the Cumulative Impact on the Global Economy of Proposed Changes in the Banking Regulatory Framework", June 2010

Why is the IIF's Assessment of the Economic Impact so Different?

- The IIF simulation includes all regulatory changes (higher capital requirements, countercyclical buffers, liquidity requirements, Dodd-Frank and FCRF).
- IIF does not decompose the estimated impact on lending rates and the overall economy but it seems that the new liquidity requirements are responsible for much of the expected drag on economic growth.
 - Specifically, the LCR requirement leads to higher holdings of cash and government bond assets together with less lending, while the NSFR implies a need to pay up for longer maturity deposits. Both of these factors are assumed to result in slower credit growth.
- The link between credit growth and GDP appears to be much stronger in the IIF simulation than in the BIS models.
- Finally, BIS simulations include a monetary policy response – that is, easier policy is assumed to offset some or all of the tightening in credit.

BIS Estimates Reflect a Modest Impact to the Economy

BIS modeled the capital and liquidity impacts independently:

- Capital: A GDP reduction of 0.38%, on a global basis after four and a half years.
- Liquidity: estimated to be a median decline in GDP on the order of 0.08% (note: the BIS analysis indicated that there was greater uncertainty regarding the estimated impact of the rise in liquidity requirements than for the higher capital standards).

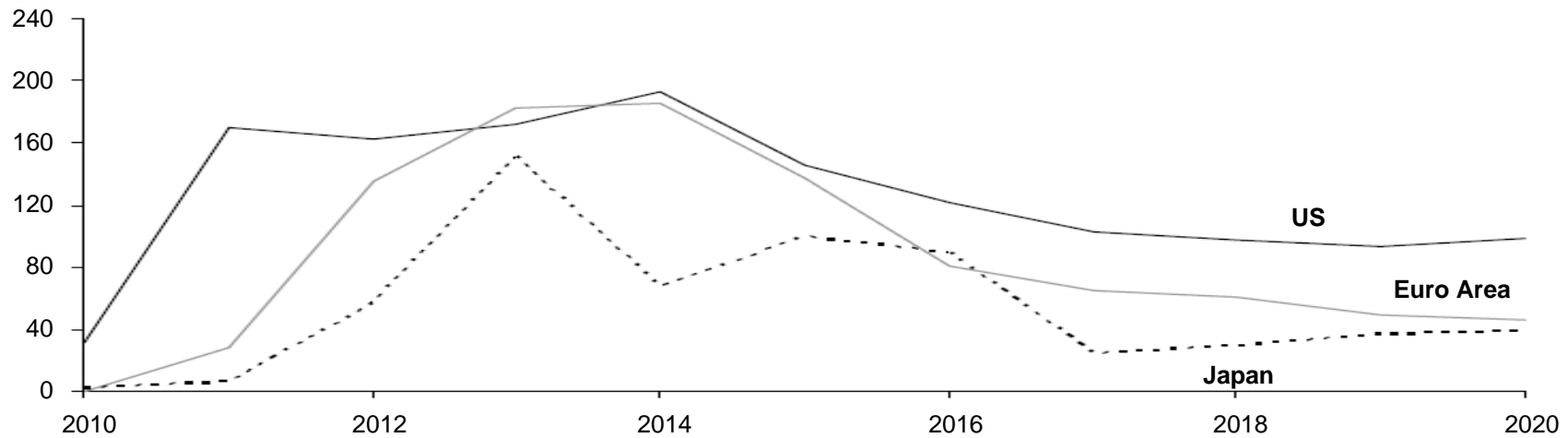
BIS used a variety of models which looked at the impact on:

- Lending spreads
- Credit supply
- Monetary policy
- Liquidity

IIF Projects a Substantial Negative Economic Impact

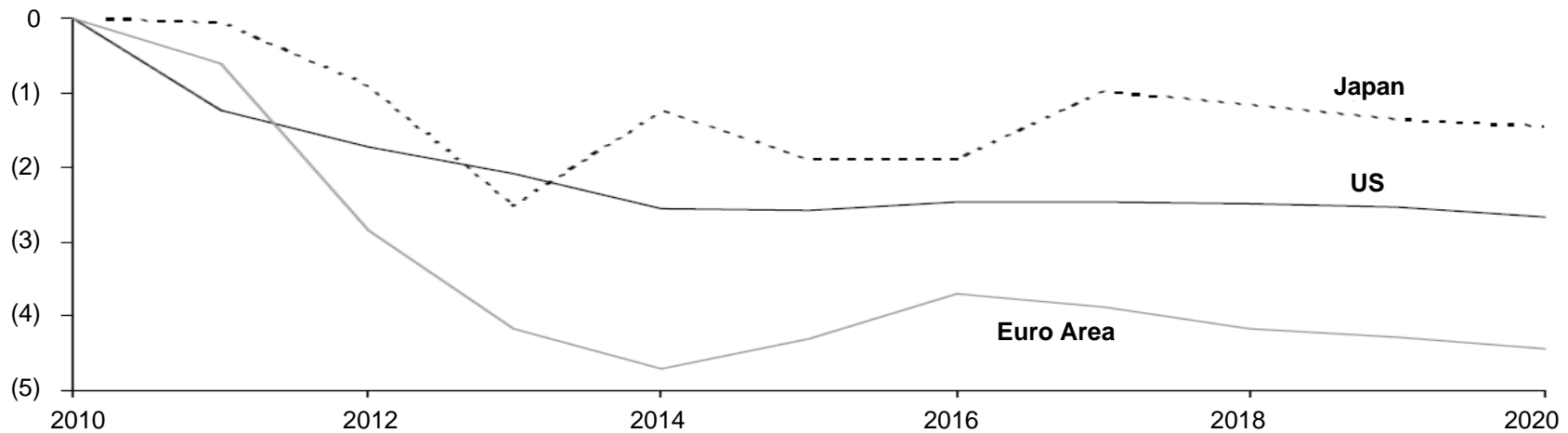
Change in Real Lending Rate to Private Sector Borrowers (1)

basis points



Change in Real GDP (2)

%



Notes:

(1) Difference between bank lending rate paths in "regulatory reform" scenario versus "base" scenario.

(2) Difference between Real GDP paths in "regulatory reform" scenario versus "base" scenario.

Source: IFF Estimates

Ramifications of changing adoption timeline

Analysis of Basel 3 impacts (e.g. BIS, IIF, other economists) largely assumes the 2019 timeline. Given the markets' accelerated adoption of Basel 3, how might these analyses be adjusted, if at all?

Policy makers believe the markets will respect the timelines set out for Basel 3 adoption...

“We are not enforcing the 2019 standards today and do not expect banks to meet those standards today. We expect the banks to have come up with capital plans that show how they will meet those standards over time and I would think the markets will be very accepting of that strategy.”

– William Dudley, President and Chief Executive Officer of the Federal Reserve Bank of New York : (Remarks at the 2010 Institute of International Finance Annual Membership Meeting, Washington, D.C.)

However, other organizations are pushing for quicker adoption and

“As the global financial system stabilizes and the world economic recovery is firmly entrenched, phasing out intangibles completely and **scaling back the transition period should be considered.”**

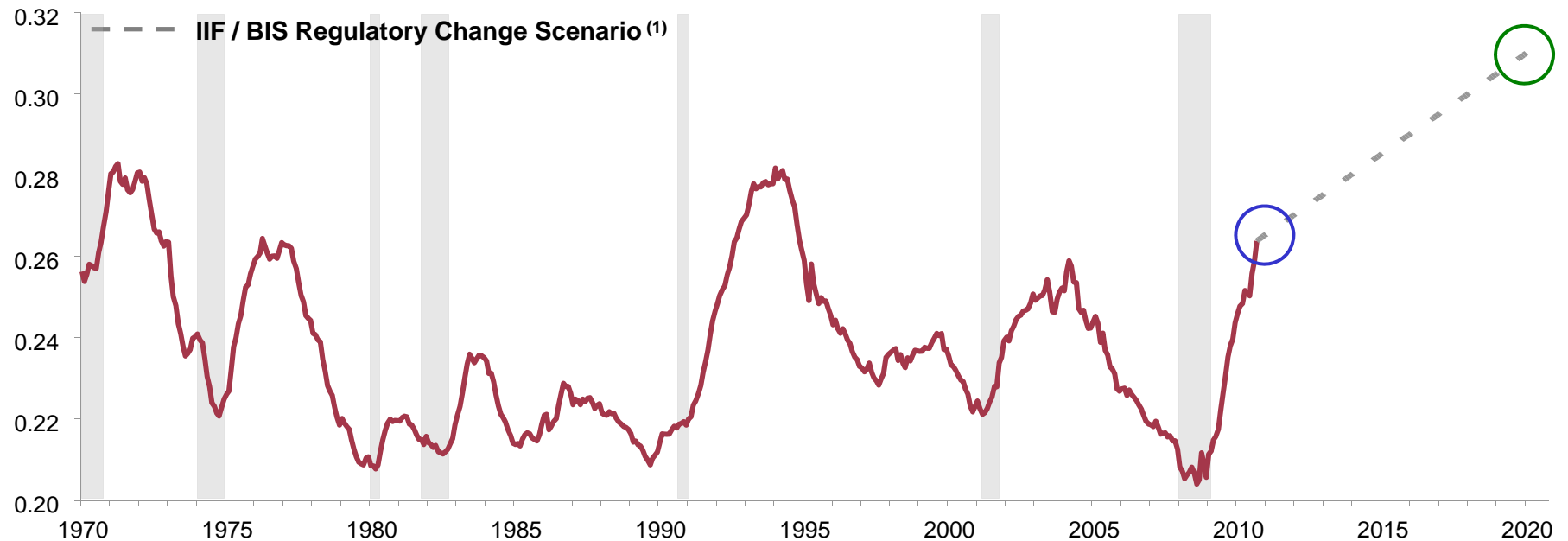
– IMF Staff Position Note October 2010 Shaping the New Financial System

Investors want banks to get there quickly....

Based on 3Q10 earnings calls, investors are increasingly asking when they can expect buybacks and dividends.

Basel 3 Liquidity Requirements Imply More Securities, Fewer Loans

US Bank Securities Holdings as a Share of Total Bank Credit



- At present, bank credit consists of about 26% securities (mostly MBS) and 74% loans. Historically, the securities share tends to rise during and shortly after recessions, then lending usually picks up as economic recovery becomes more firmly entrenched.

Notes:

(1) The IIF model simulation implies a sharp rise in the securities share of bank credit over the next decade. The BIS model simulation assumes a 25% increase in bank holdings of liquid assets and a lengthening of the maturity of banks' wholesale liabilities.

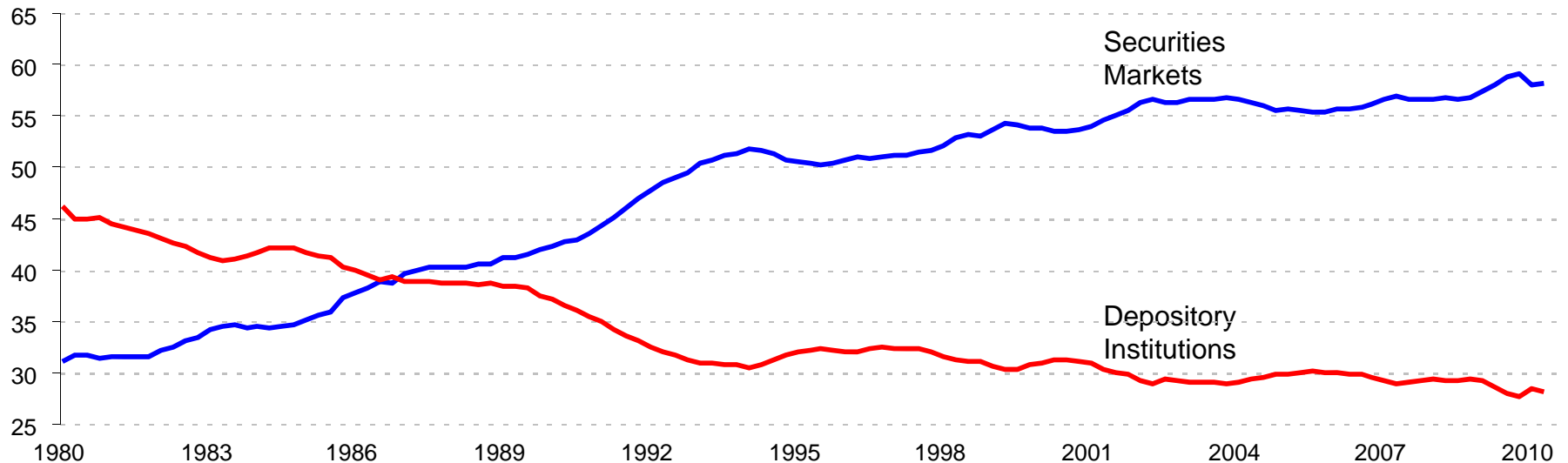
Source: Federal Reserve H8 report for historical data, IIF for 2010-2020 estimates

Shaded areas indicate recession

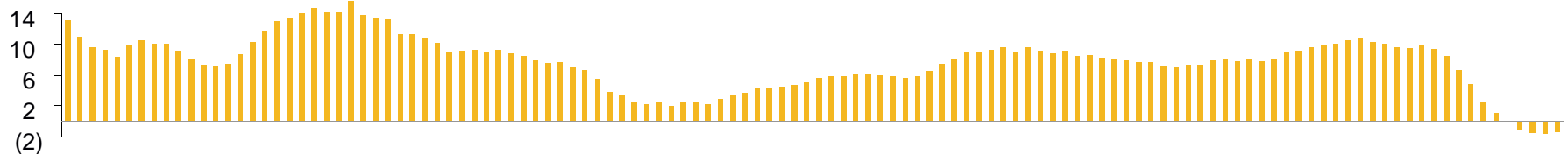
Bank Credit equals bank loans plus securities holdings (note: it excludes asset items such as excess bank reserves).

New Capital & Liquidity Standards will Place Ever Greater Reliance on Troubled Securities Markets

Share of Private Nonfinancial Debt Outstanding



Private Domestic Nonfinancial Debt (% change YoY)



- The liquidity coverage ratio (LCR) component of Basel 3 could lead to withdrawal of backstops for ABCP and ultimately eliminate that market as a viable form of short term financing.
- Thus, any pullback in bank lending is likely to lead to a tightening in financial conditions. In particular, sectors such as small business might face significantly tighter credit availability.

Basel 3 Liquidity Coverage Ratio: Impact Likely to Vary Significantly Across Regions

The IIF estimates that Euro Banks fall well short of LCR standards

Statistics for various banking areas; %

	Economy's dependence on banks		Distance for banks to adjust	
	Banks assets as % GDP	Banks' share of credit Intermediation	Liquidity Coverage Ratio	Net Stable Funding Ratio
United States	83.1	26.6	81.8	84.3
Euro Area	346.6	73.8	27.8	61.9
Japan	168.8	52.6	92.4	82.6

Source National data and IIF estimates

The Change in Liquidity Requirements is Likely to Lead to a Shift in Bank Balance Sheets

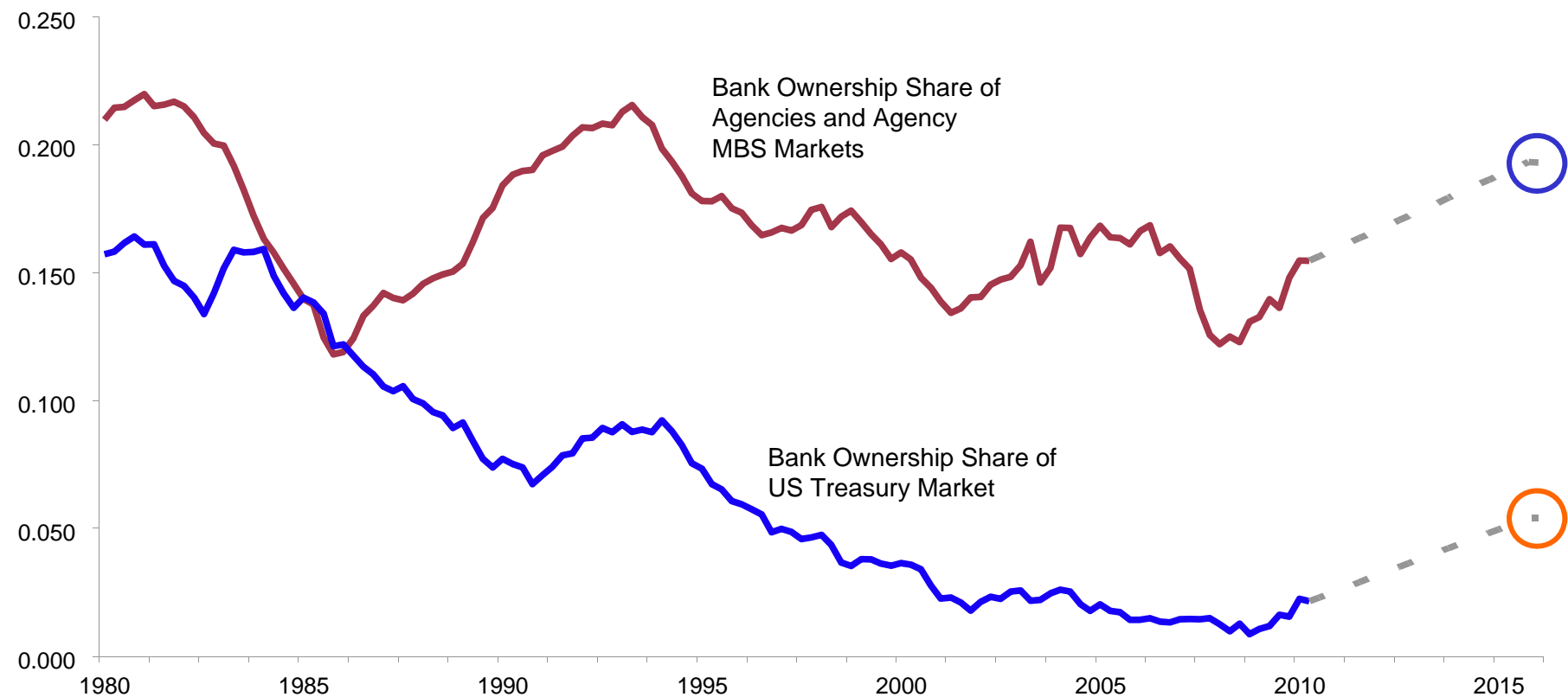
Based on our analysis, we believe Basel 3 is likely to lead to increased bank demand for Treasuries

1. The estimate for bank holdings of Treasuries in 2015 is based on analysis by Barclay's Capital which concluded that Basel 3 liquidity requirements would lead to \$400 billion of new Treasury purchases by US commercial banks. We also factor in the expected rise in overall securities holdings
2. Within the securities portfolio, banks are likely to boost their holdings of Treasuries relative to other securities because of more favorable treatment in the calculation of the LCR. Specifically, most agency securities receive a 15% haircut in the calculation of the LCR and so-called Level 2 liquid assets are limited to 40% of total liquid assets.

	2010		2015
Bank Holdings of Treasuries	181 Bn	➔	675 Bn
Total Treasuries Outstanding	8.4 Tr	➔	12.5 Tr
Bank Ownership Share (%)	2.2%	➔	5.4%

Assessing the Impact of Basel 3 on Bank Holdings of Treasuries and Agencies

Assets Will Consist of More Securities and Fewer Loans

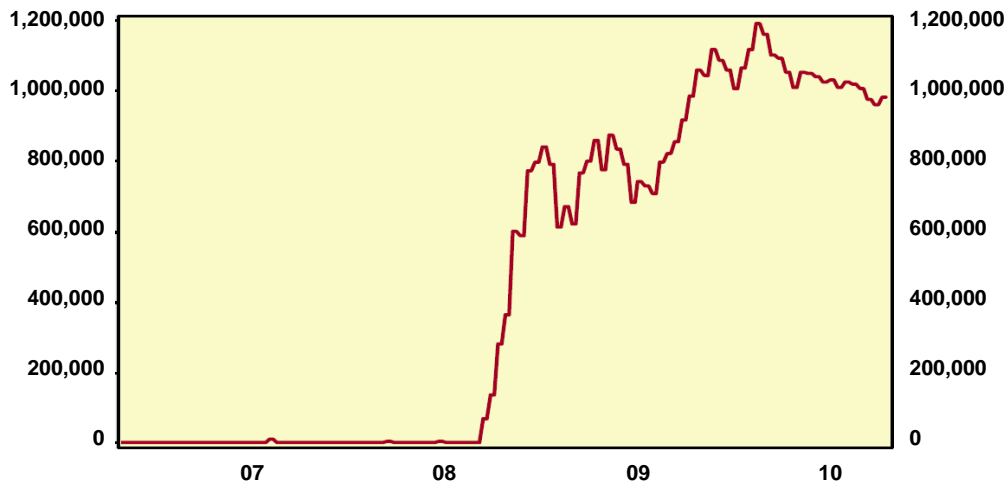


- Bank holdings of Treasuries in 2015 are based on Barclay's Capital estimates of the impact on Treasury demand as well as the expected rise in overall securities holdings.
- Holdings of agencies are based on the expected rise in overall securities holdings alone. Also, the 2015 estimates do not account for the potential impact of the 40% limitation on Level 2 liquid assets and thus are subject to considerable uncertainty.
- We calculate the expected ownership share under certain assumptions for growth in the overall markets. For Treasuries, we use the latest official CBO estimates and for agencies we assume a 4% annual growth rate.

A Final Complicating Factor to Consider ...

Adjusted Excess Reserves of Depository Institutions

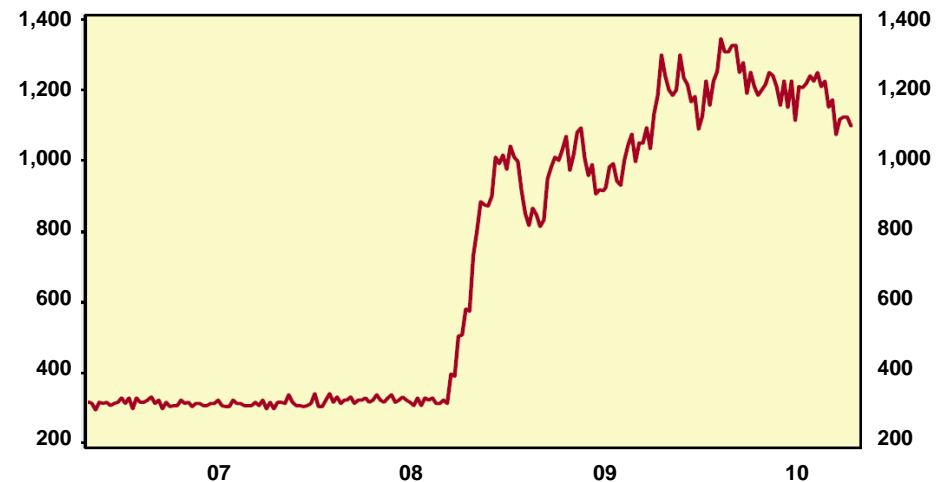
NSA, \$MM



Source: Federal Reserve Board / Haver Analytics

Cash Assets: All Commercial Banks

SA, \$Bn



Source: Federal Reserve Board / Haver Analytics

Under Basel 3, excess bank reserves are among the items included in the calculation of the liquidity ratio. The US banking sector currently has an approximate \$1 trillion of extra liquid assets reflecting the unprecedented expansion of the Federal Reserve's balance sheet in recent years. Presumably, this is a temporary phenomenon and the volume of excess reserves will eventually revert to historic norms. Such a development could magnify the strains associated with the banking system's adjustment to higher liquidity requirements. This issue also reinforces the notion that the markets are currently being buffeted by a whole host of unusual factors making it difficult to gauge the impact of major policy initiatives, such as Basel 3, on the economy and the markets.

Treasury Borrowing Advisory Committee
Presentation to Treasury
Charge #4

November 2, 2010

U.S. Treasury Borrowing Advisory Committee Presentation to Treasury Charge #4

Implications of Additional Policy Actions

Monetary authorities in a number of countries are considering additional measures in an effort to improve growth. What range of measures is currently expected? What are the potential near-term and long-term impacts for financial markets and the Treasury market specifically?

November 2, 2010

November TBAC Meeting

- I. Market expectations for QE2
- II. Medium term (1-2 year) market impacts from QE2
- III. Long term (3+ years) market impacts from QE2
- IV. Impact on Treasury debt issuance
- V. Global impact from U.S QE policies

I - Market expectations for QE2

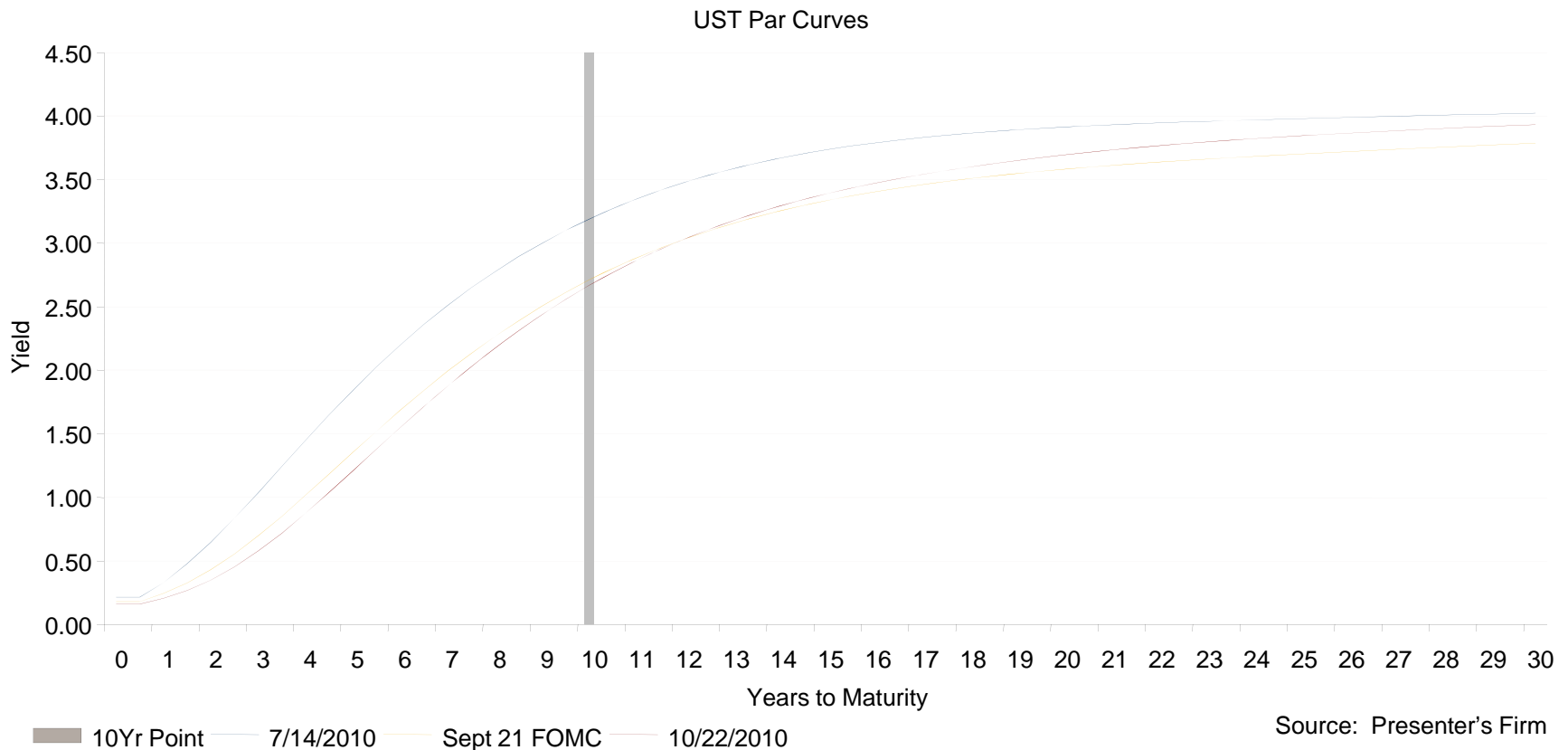
- \$100bln a month (including ~\$30bln of mortgage reinvestment?)
- Open-ended, no “shock and awe”
- Tied to “economic conditions” or “progress towards mandates”
- Expectations for the Fed program is for 1 year (~\$1.2trln)
- If conditions do not improve, it is expected the program could expand beyond one year (and possibly include other assets over time)

II – Medium term impacts

- Treasury yield curve: Lower and flatter led by the 5yr to 10yr maturities
- 30Yr Yields: Remain high versus historical curve valuations
- TIPS Breakeven Inflation Rate: Bias higher
- Intermediate Swap Spreads: Wider
- Rate Volatility: Lower
- Credit Spreads: Tighter
- Term Risk Premiums: Lower
- Mortgages: Initially wider versus Treasuries, keep pace/tighter versus swaps. Tighten versus Treasury and swap curve over time.
- Equities: Higher
- Dollar: Weaker

Policy reshapes the yield curve

- Rates first fall and curve flattens
- Since September FOMC, 30yr point resteeperns to near July levels but intermediate sector remains lower in yield



Impact of Fed purchases on the curve

- Implied Fed purchases are based up \$1.2trln in new purchases (\$100bln a month) and \$360bln of MBS reinvestments (\$30bln a month)
- Maturity distribution based upon 2010 purchase pattern. QE2 program will likely target a longer duration profile

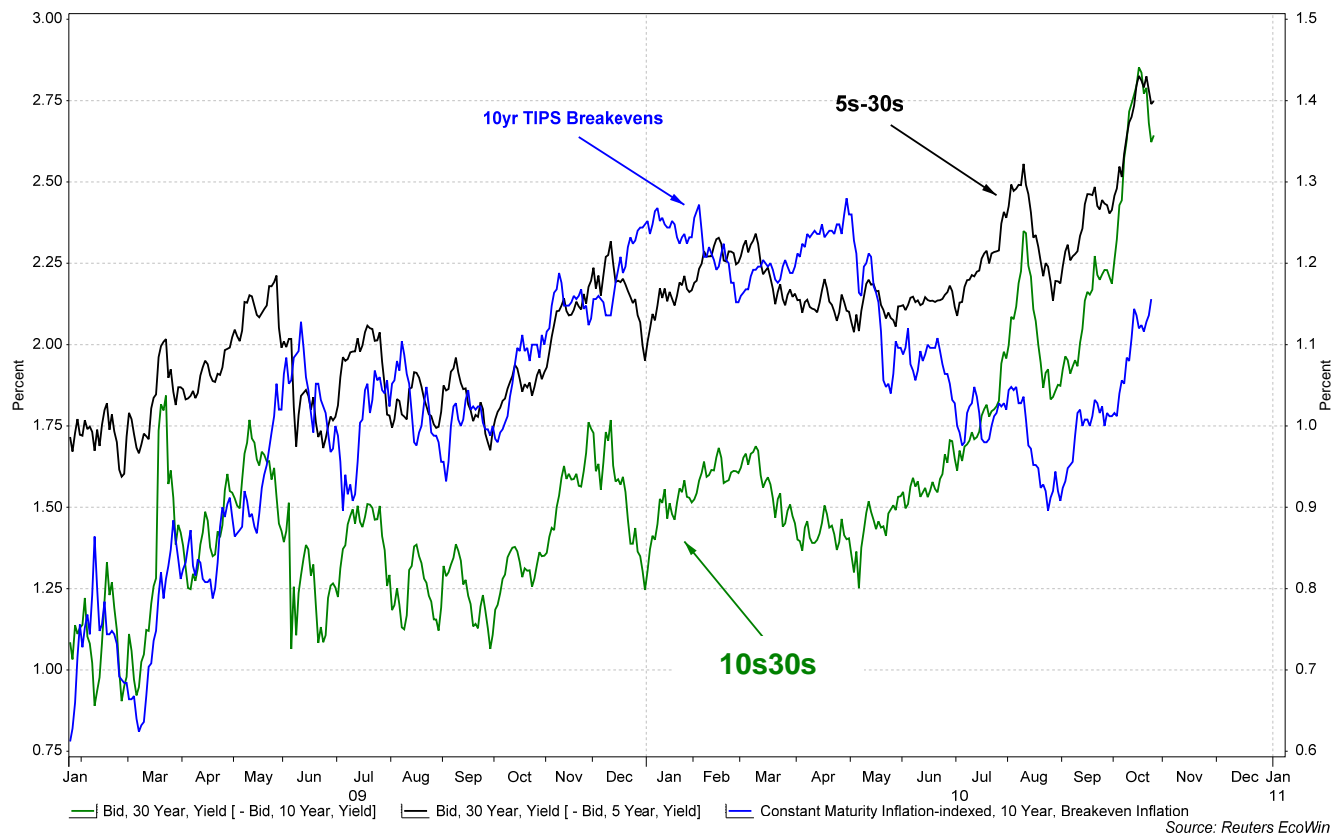
(\$bln)	Implied Fed Purchases	Projected Gross Issuance	35% of Gross Issuance	Still Need to Buy	Float of off-the runs available to Fed (up to 35%)	Difference
1.5-2.5yr	79.6	364.0	127.4	-	220.2	220.19
2.5-4yr	238.7	328.0	114.8	123.9	212.8	88.95
4-6yr	464.9	364.0	127.4	337.5	221.4	(116.08)
6-10yr	619.3	573.0	200.6	418.8	290.1	(128.70)
10+yr	124.8	160.0	56.0	68.8	121.2	52.38
TIPS	31.2	119.0	41.7	-	145.5	145.49

Source: Presenter's Firm

* Available Gross Issuance for the Fed to purchase under 35% SOMA limit

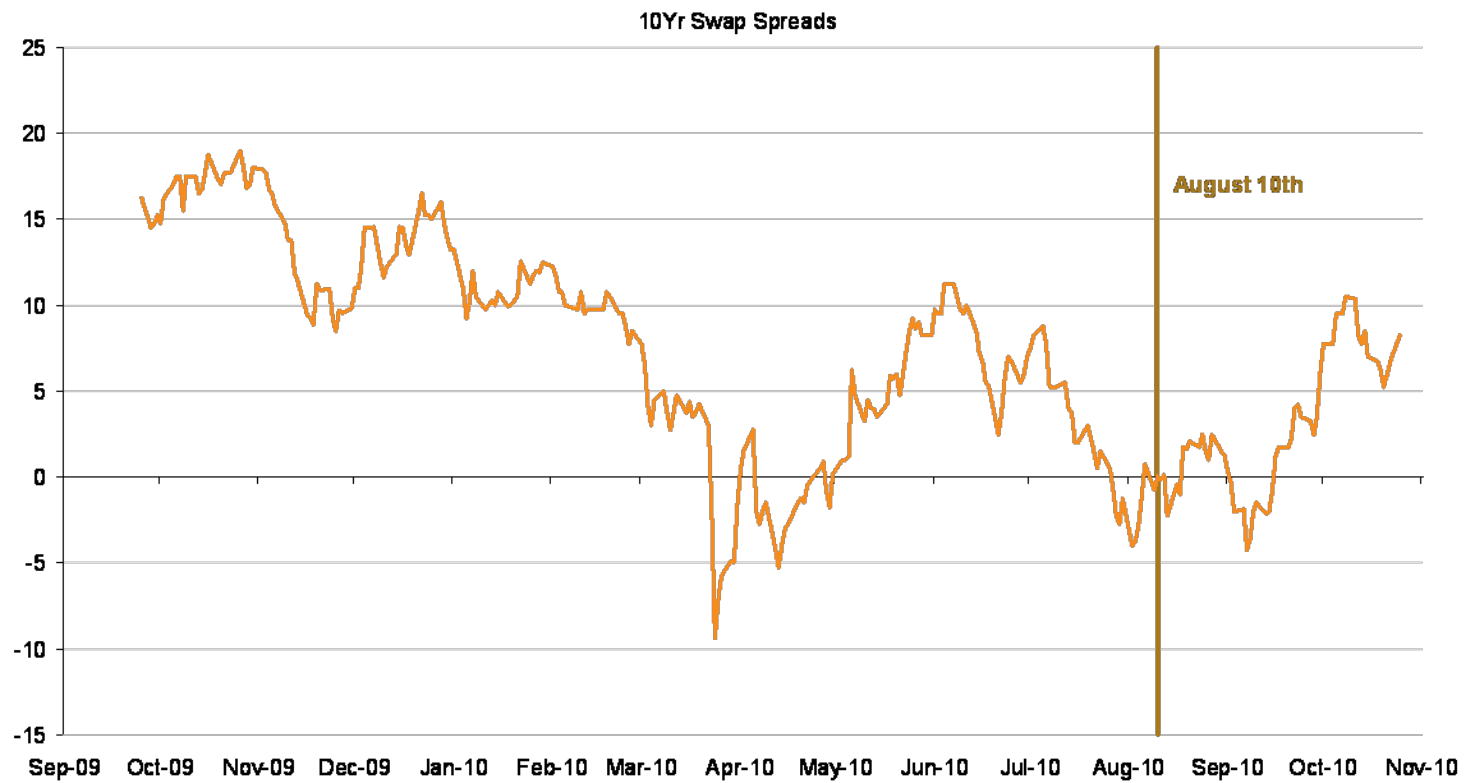
Rising inflation expectations impact 30yr yields

- The fear of reflation or weaker USD has pushed 30yr yields 22bps higher vs. 10yr yields since the September 21st FOMC meeting
- 10yr Inflation Breakevens have also risen 36bps since September 21st.



Expectations of QE widen swap spreads

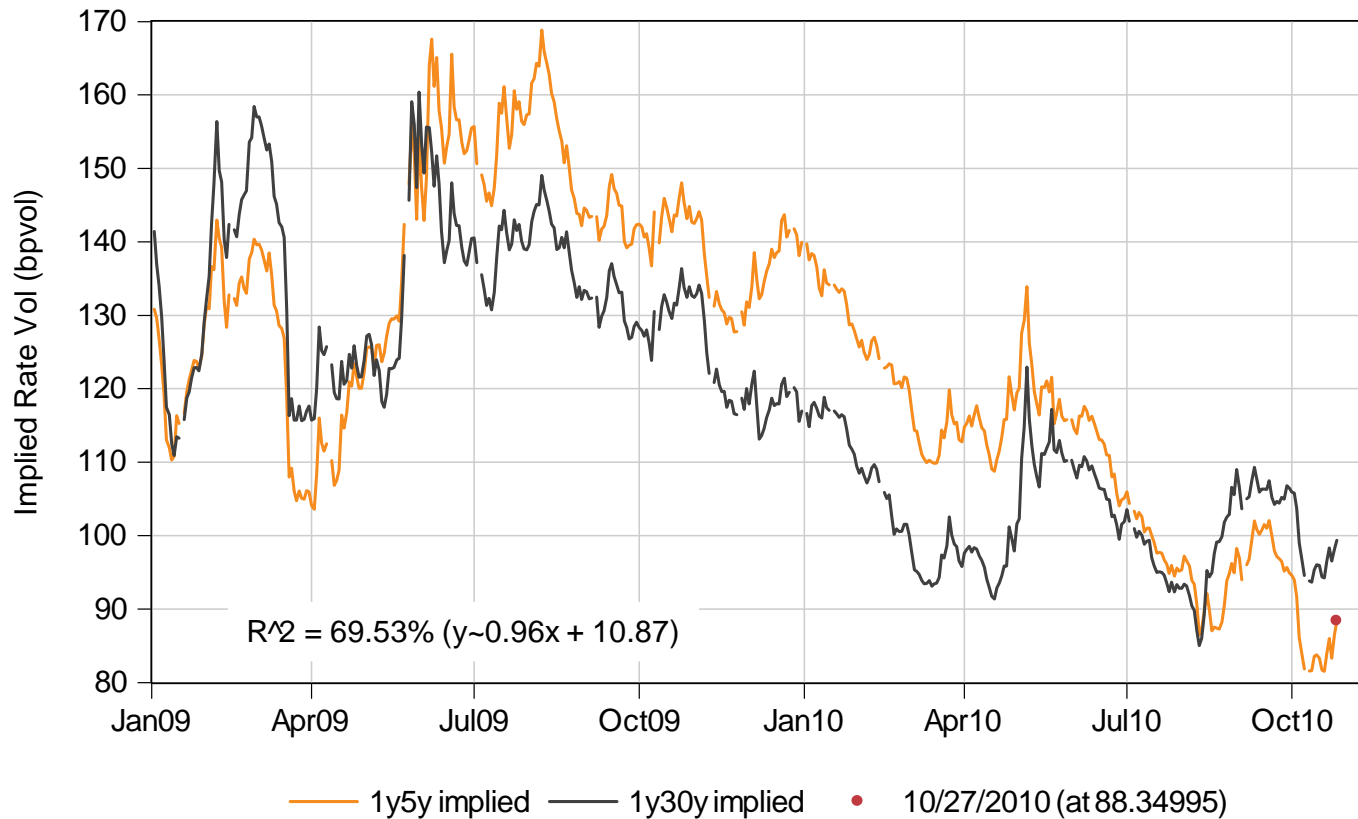
- The lack of net Treasury supply after Fed purchases will drive swap spreads wider in the intermediate sector
- Implications for tighter repo markets also push swap spreads wider



Source: Bloomberg

Implied volatility will naturally fall as 0% bound approaches

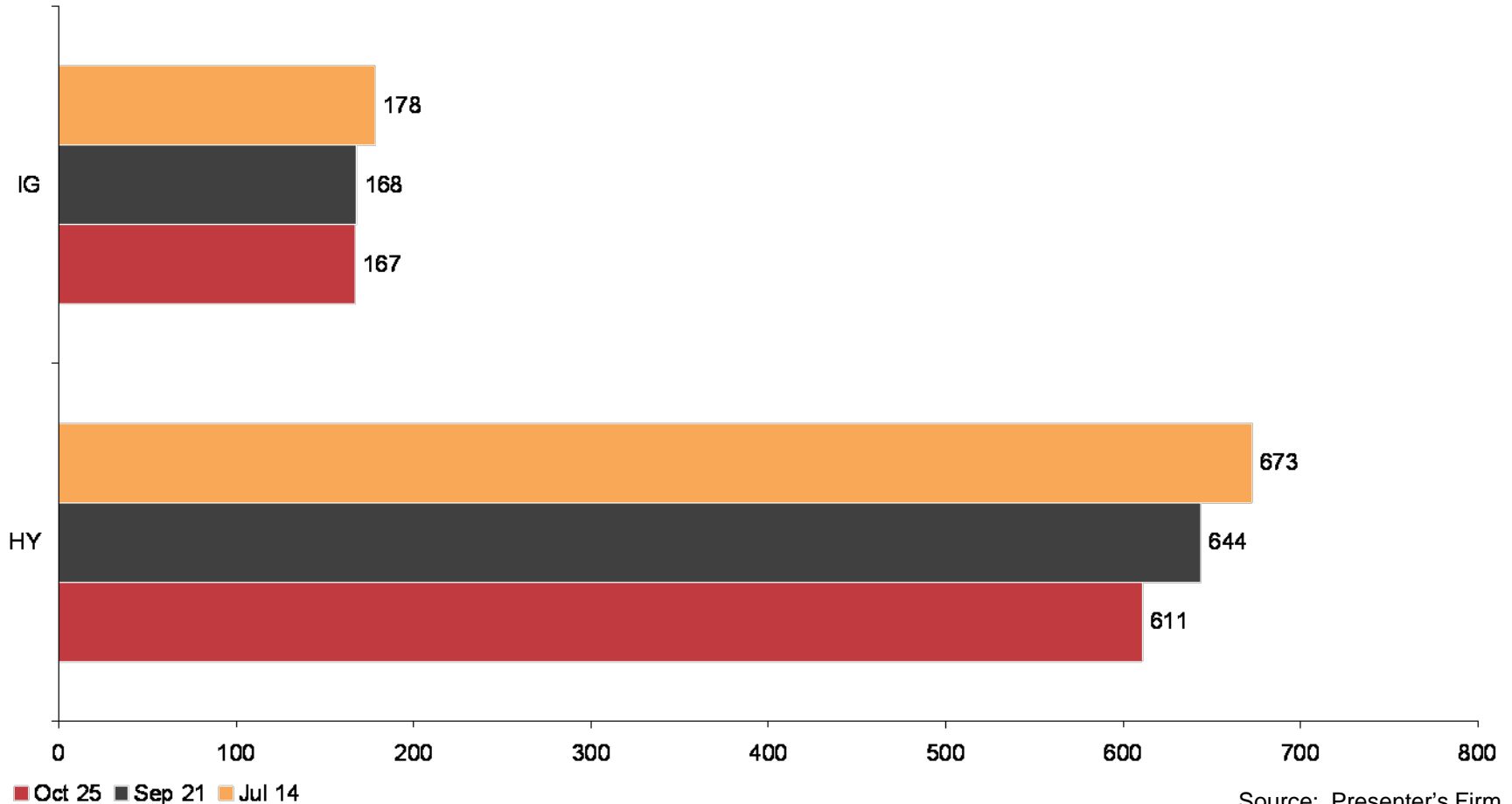
- However, realized volatility in the long end remains higher as uncertainty and reflation concerns build



Source: Presenter's Firm, Bloomberg

Credit spreads compress despite record gross investment grade + high yield September issuance

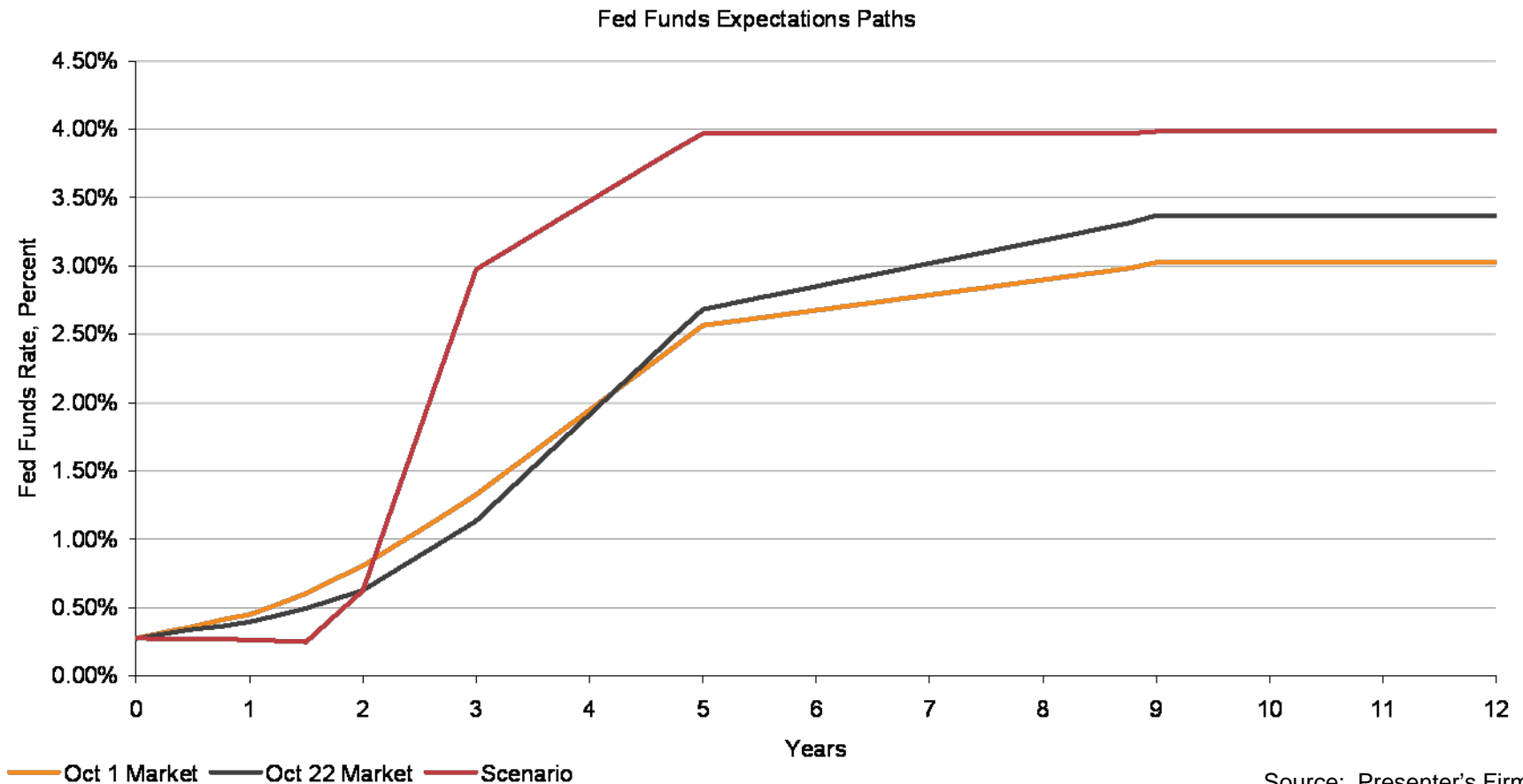
- QE is good for risk assets



III – Long term impacts

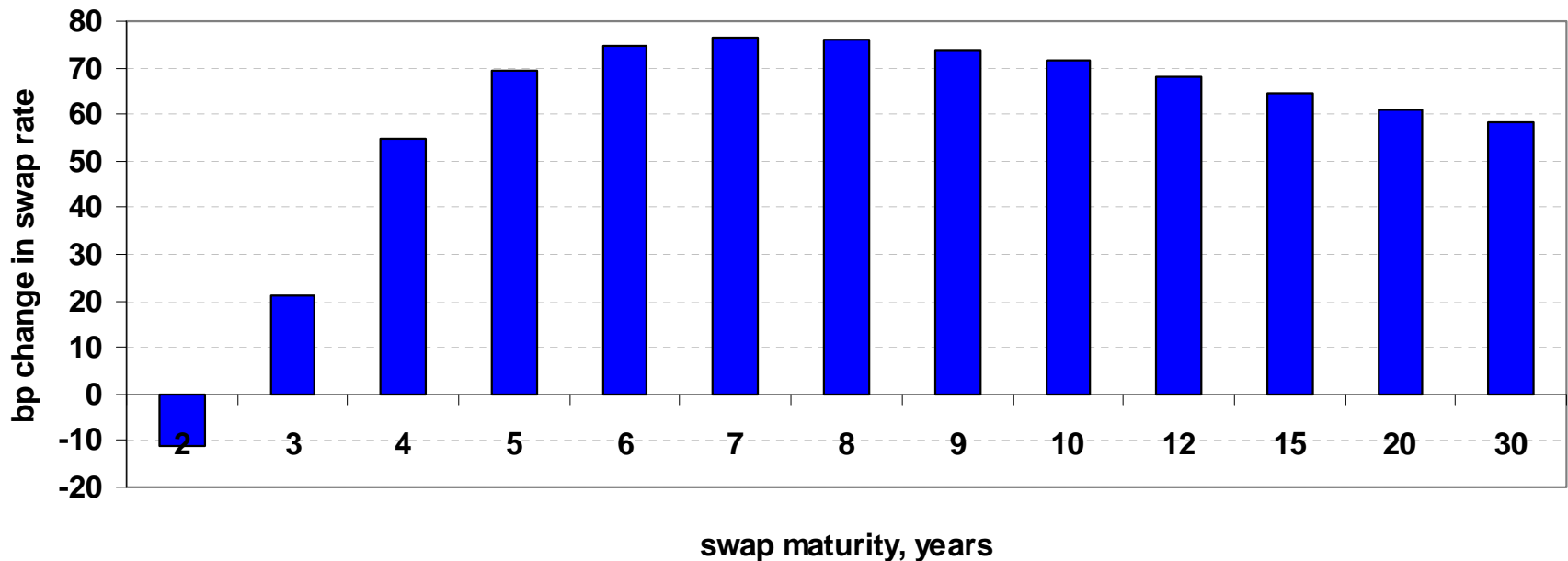
- Potential liquidity issues
- Does lack of supply in 5yr to 10yr sector push buyers into T-bills or 30yrs?
- Do large Fed purchases crowd out private investors? Is this the Fed's intent to push investors out the risk curve?
- Do foreign and central bank investors diminish purchases due to the weaker dollar?
- Repo markets will tend to tighten as collateral supply shrinks due to limitations to the Fed's System Open Market Account (SOMA) lending capabilities
- How does Fed exit QE?
 - Sequencing previously discussed: drain reserves through reverse repos and term deposits, hike IOER/fed funds rate, then sell assets. However, due to an increasingly large balance sheet, assets may now need to be sold earlier than previously envisioned.
 - Market reactions could be extreme when Fed signals policy tightening

Path of the FF rate extracted from yield curve and a more realistic tightening scenario. Note the existing curve is implying a very slow moving Fed that levels off at 3%.



Exit strategy: When the Fed signals tightening, the probability of a quick and strong reaction is high. Below are the differences for various maturities between the Oct 22 yield curve and the yield curve consistent with the previous slide's tightening scenario.

Changes in swap rates under scenario



Source: Presenter's Firm

Exit strategy and asset sales

- While shedding assets could potentially exacerbate the rise in market yields as exit strategy unfolds, the Interest On Excess Reserve (IOER) rate enables the Fed to manage the timing/pace of sales. Through reverse repo and the IOER, the Fed can drain reserves while running a large asset balance sheet.
- If asset sales are predictable and gradual, the impact on longer-term market rates can be minimized.
- Policy normalization would presumably occur after the economy is growing at a healthy pace. At that time, the budget situation should be improved, so that Treasury could be cutting issuance as the Fed is selling.
- The total amount of assets the Fed must ultimately sell will depend on how long QE II remains in place and how quickly policy is reversed (less runoff).
- On the positive side, asset sales can prevent another “conundrum.” In other words, the Fed now has a tool to control long term rates during a tightening cycle. This is in contrast to 2004 when 10yr yields dropped 100bps in the first year following the commencement of the tightening cycle.

Lack of net supply of high quality \$ assets

- The net projected supply of alternative high-grade fixed income assets is also historically low
- YTD mutual fund flows show \$38bln out of stocks, \$185bln into bonds (all bonds)
- The projected total purchase amount of QE2 of \$1.56trn exceeds the entire combined net issuance of these asset classes

(bln)	2009	2010	2011
Treasury	1284	1600	1115
Agency	-17	-148	37
Agency MBS	445	-65	100
IG Corporate	150	0	100
Total	1862	1387	1352

Source: Presenter's Firm

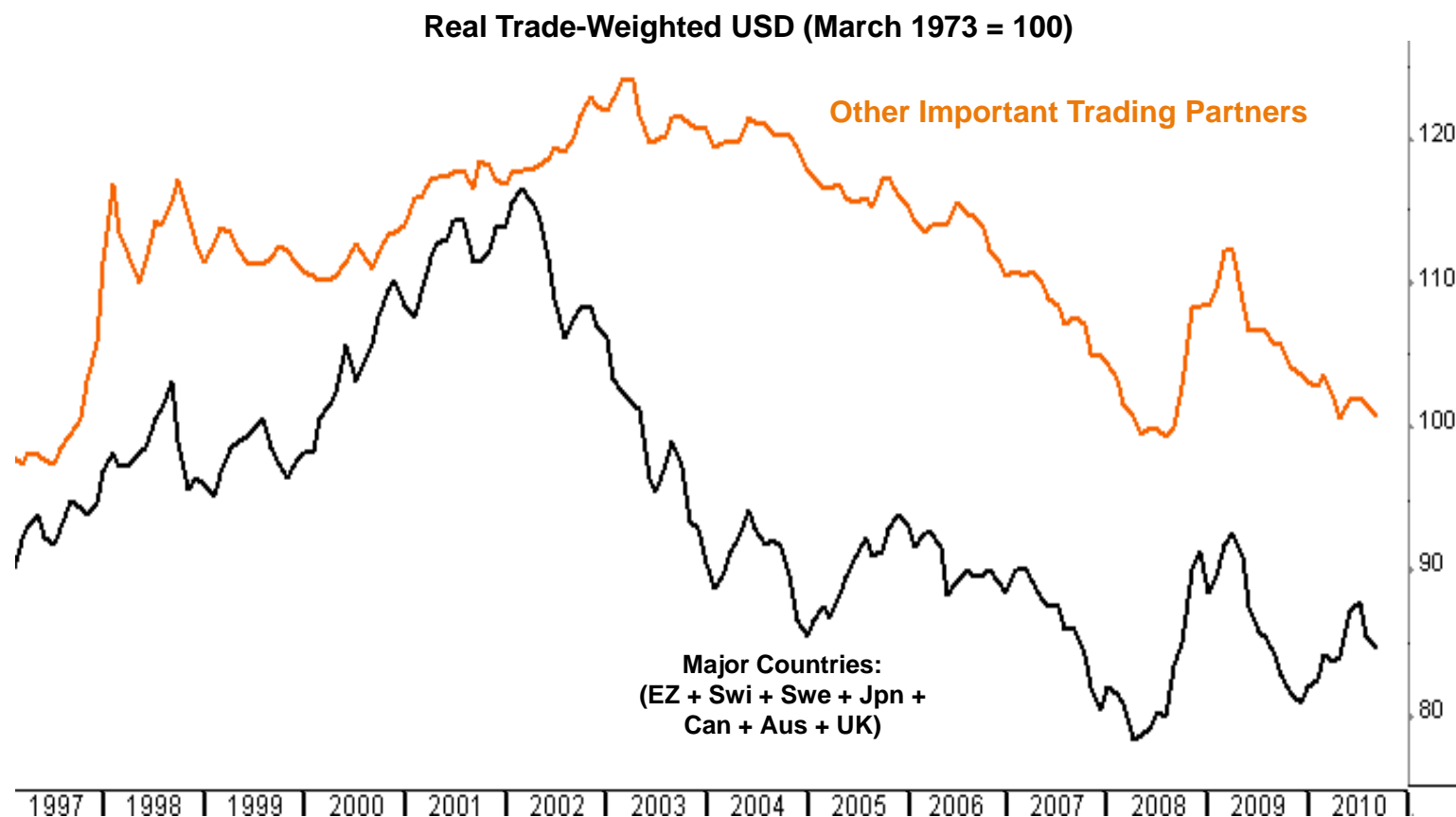
IV. Impact on Treasury debt issuance - should the U.S. Treasury alter its issuance strategy due to QE purchases?

- The U.S. Treasury and the Federal Reserve are two distinct, independent entities.
- It is not in the long-term interest of the U.S. Treasury and its creditors for the Treasury to appear to coordinate with one specific buyer.
- The Federal Reserve may or may not be a long-term holder of this Treasury portfolio. Therefore, to alter issuance based upon Fed buying patterns rather than desired debt maturity profiles may prove problematic in the future.
- Due to the benchmark liquidity status of Treasuries globally, the Treasury must keep issuance "regular and predictable."
- The Treasury must issue in all market conditions. If repo market or general liquidity deteriorates due to Fed purchases, Treasury could consider steps such as more frequent reopenings instead of monthly new issues in the 3yr, 5yr, and 7yr maturities.

V. Global impact from U.S. QE policies

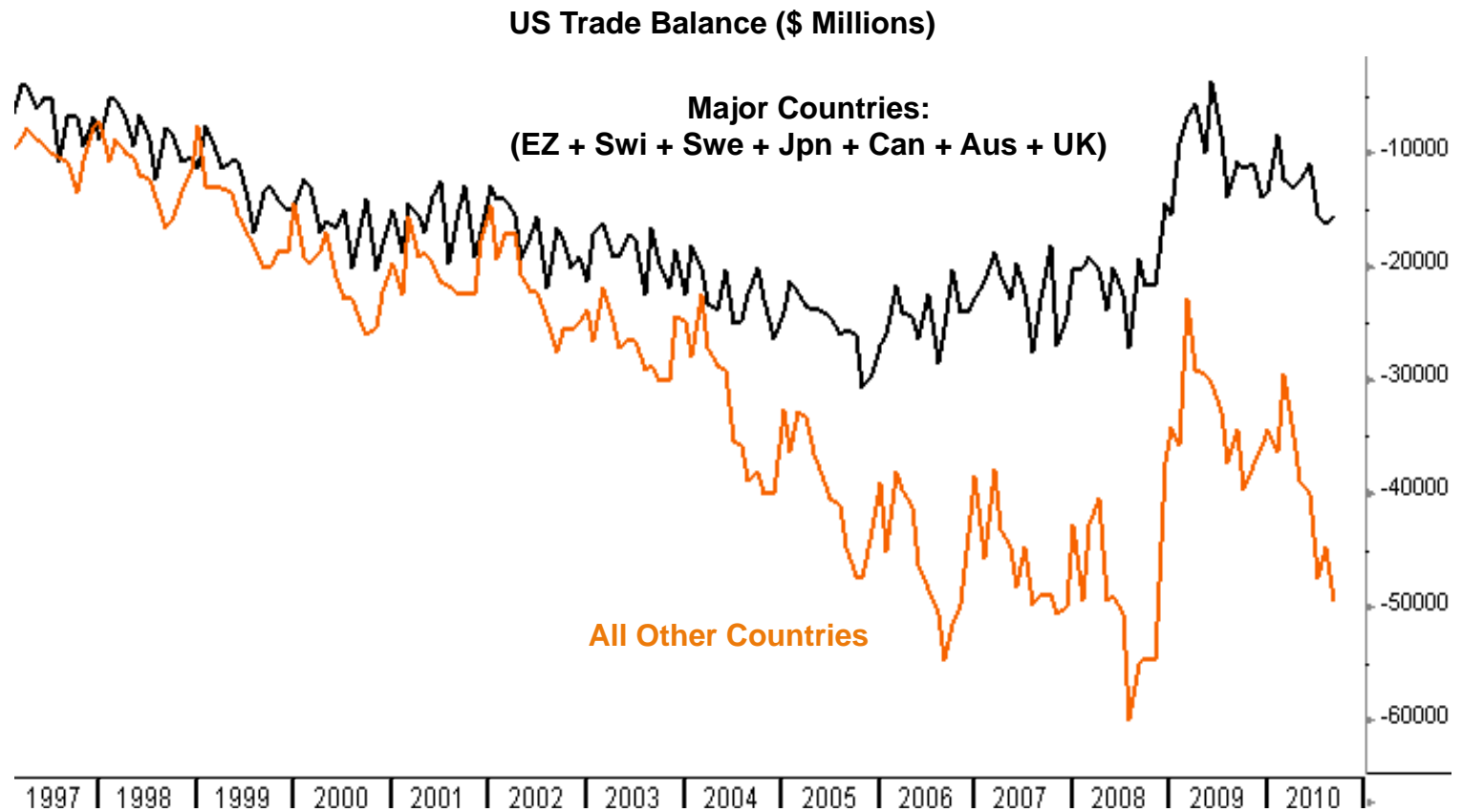
Expectations of QE have weakened the USD...

- The USD has weakened considerably vs. the majors but not vs. others mainly due to the Asian currency pegs



Source: Bloomberg

... while the US Trade imbalance has shifted decidedly toward EM countries ...

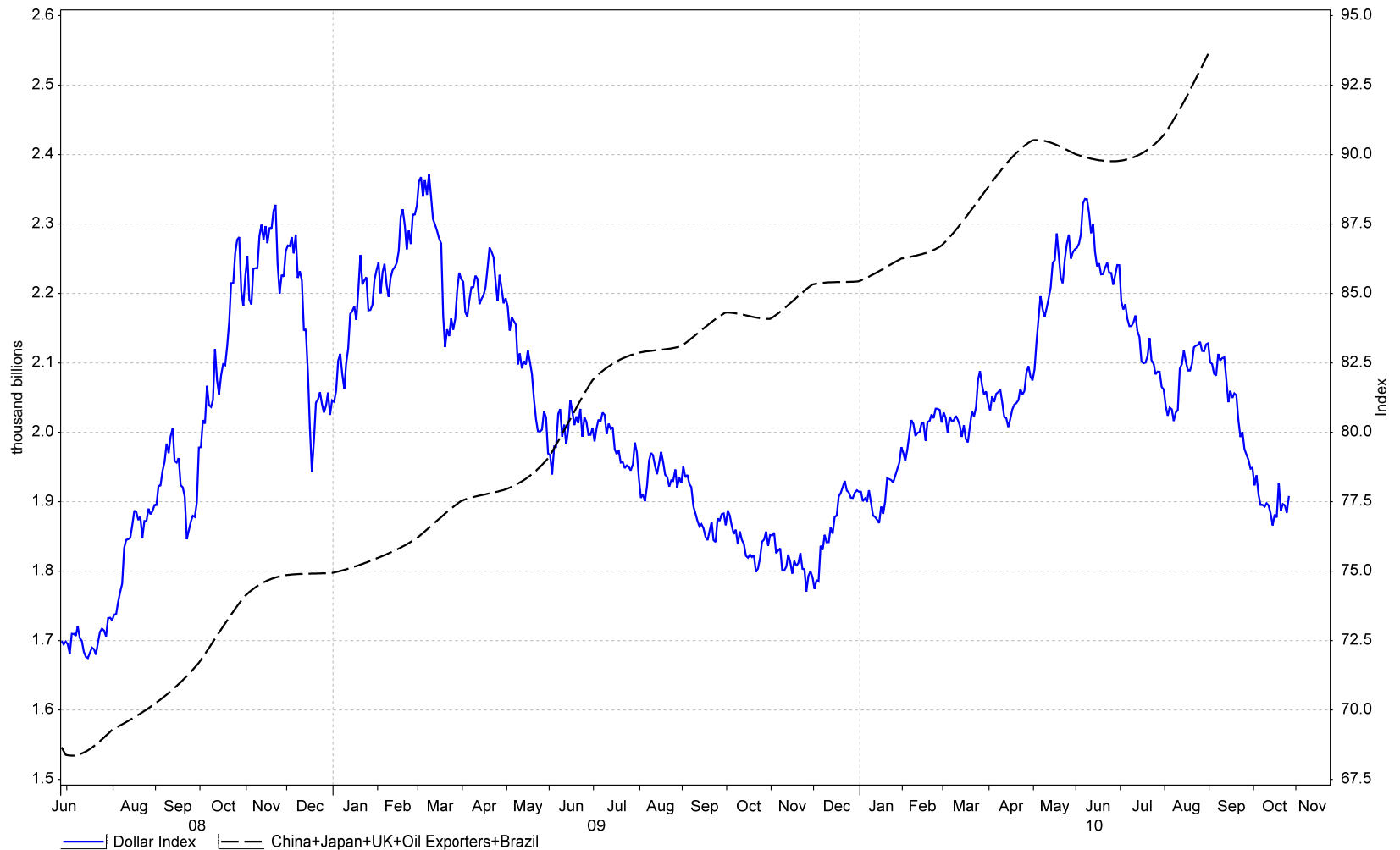


Source: Bloomberg

... leaving surplus nations with a few choices:

1. Appreciate, allowing related adjustments
 - Singapore
2. Not Appreciate
 - Unsterilized (accommodate via intervention), importing unwelcome Fed inflationary policy (Asian nations)
 - Sterilized (Switzerland, Brazil)
3. Institute Capital Controls
 - Brazil (taxes on certain foreign investments), Thailand (15% withholding tax), under consideration in Korea (withholding tax, others)
4. Enact Additional Monetary Easing
 - Japan, potentially the UK

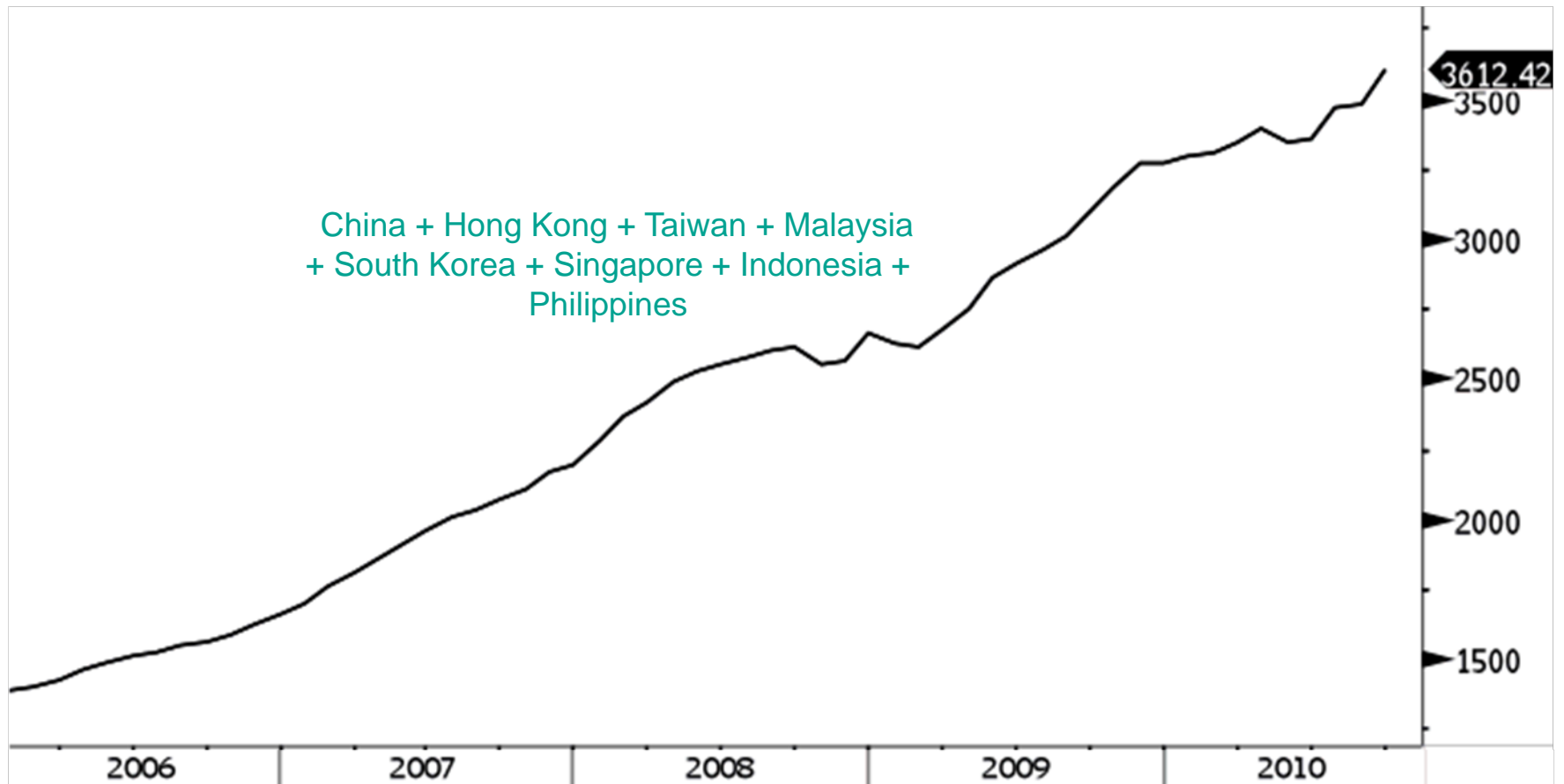
Cumulative reserve growth of top 5 Treasury holders vs. DXY



Source: Reuters EcoWin

Asian FX reserve growth in particular has accelerated

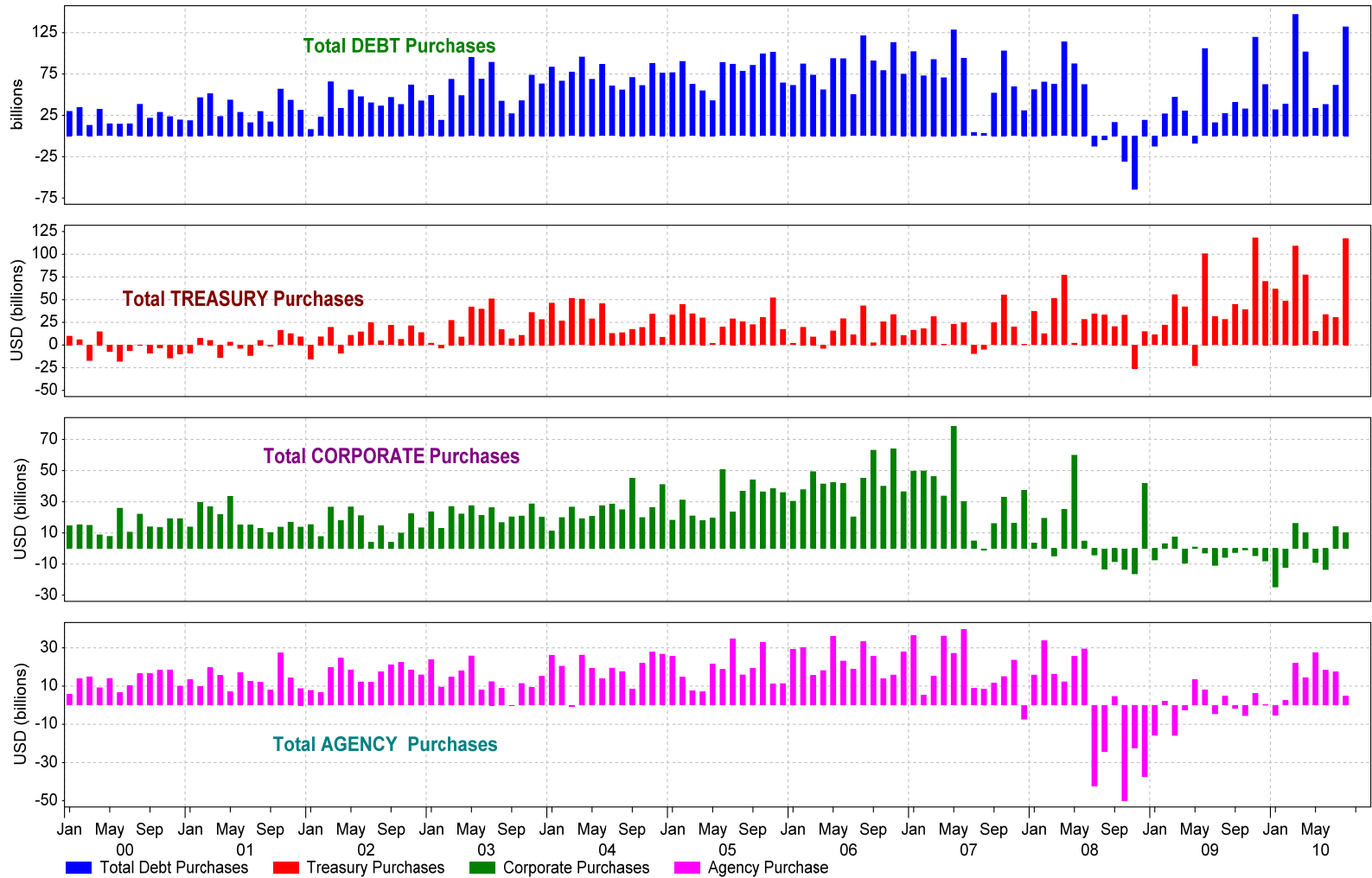
Asia Foreign Exchange Reserves (\$ billions)



Source: Bloomberg

Dollars recycled

TIC Data MoM Purchases



Source: Treasury Dept.

Importing Fed policy, China tightens

- When China intervenes in the FX market to reduce upward pressure on the renminbi, the PBOC buys US dollars from the banking system and sells renminbi, which become domestic bank reserves.
- To remove these reserves from the banking system (sterilize) , the PBOC sells bills to the banks.
- To the extent that sterilization is incomplete and reserves remain in the banking system, these reserves are a potential source of money supply growth which, if excessive, can lead to inflation (cause for benchmark rate hike in October?)
- This chart shows the relationship between FX reserve and M1 growth. The association between FX reserves and M1 suggests that at least a portion of China's FX reserves are unsterilized. Whether this is by design or not is less clear.

