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How the technicals could crack And why muddle through just won't cut it

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See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures

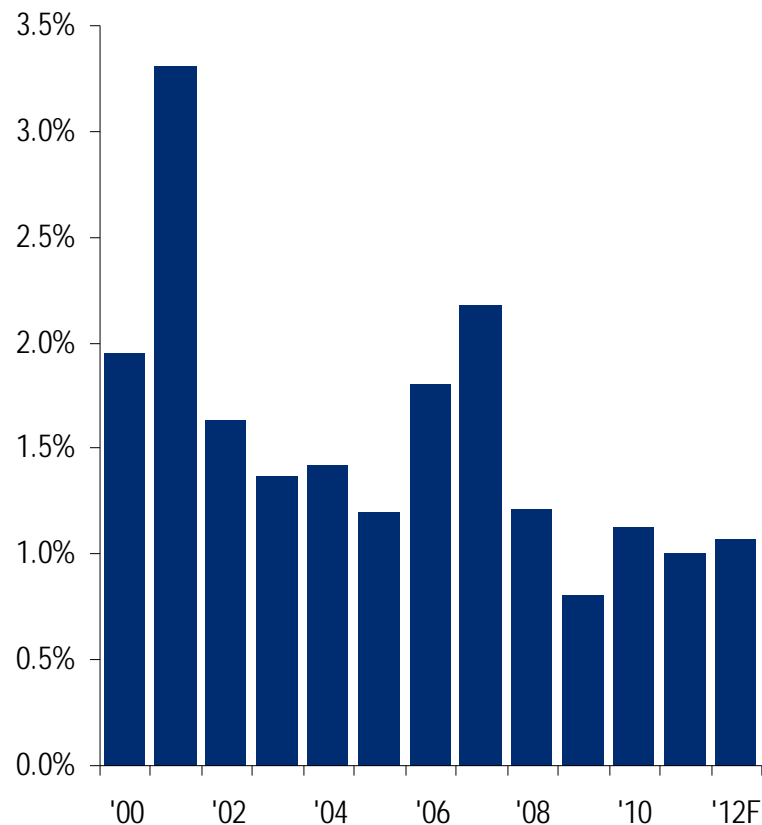
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Published 19 September 2012

The technicals couldn't be better ...

Little supply for an awfully big market ...

HG corporate net supply (% of US BIG Corp Index)

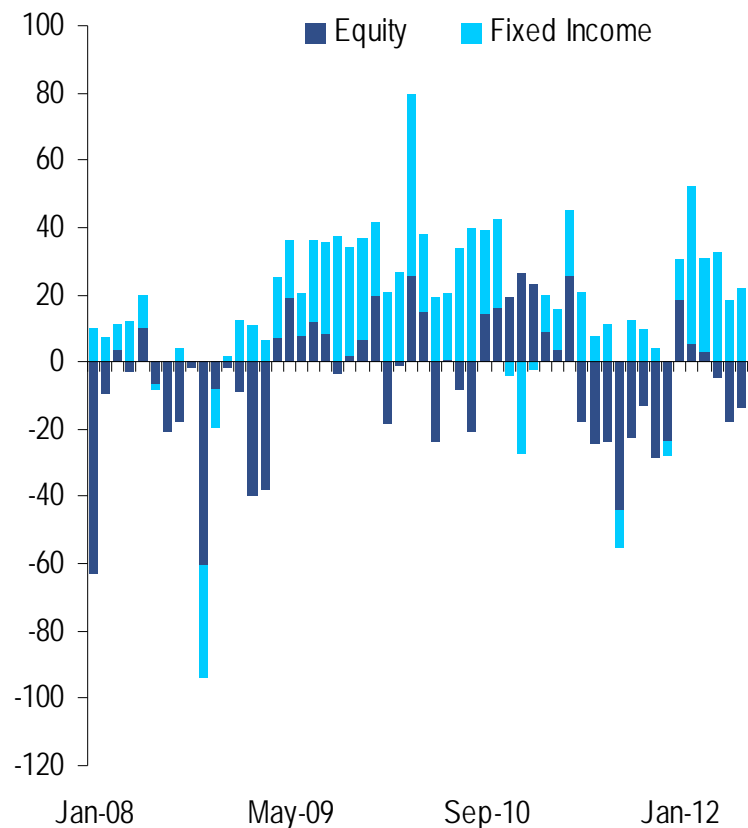


Source: Citi Research, Dealogic, Yieldbook

Note: Net supply displayed here excludes government guaranteed debt.

... and relentless inflows

Monthly equity and fixed income fund flows (\$bn)



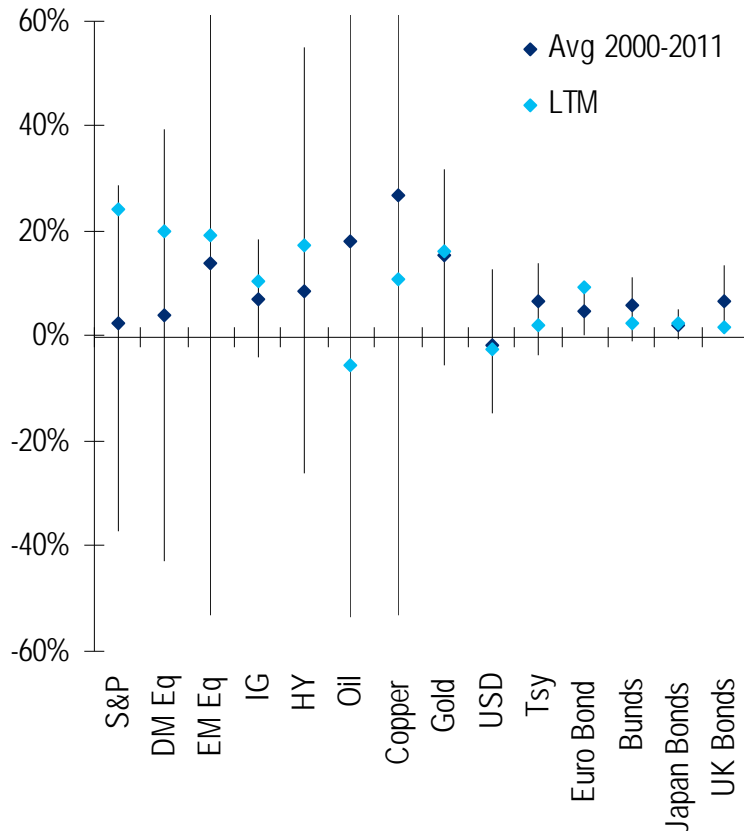
Source: EPFR, Citi Research

When does it change and why?

... because credit looks like the sweet spot

Mean-variance favorable to fixed income

Sharpe ratios for the last ten years

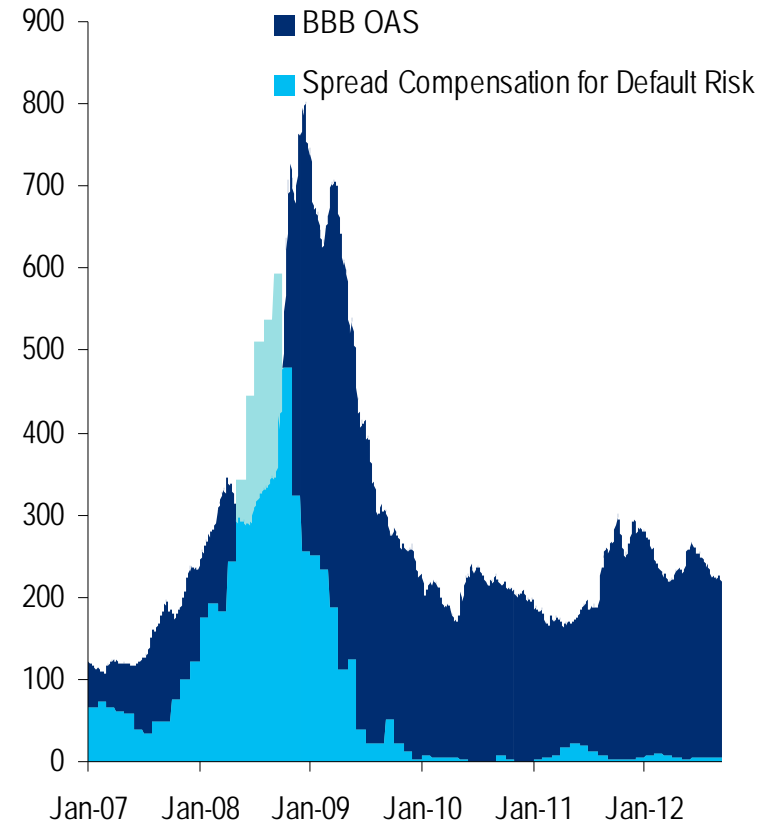


Source: Yieldbook, Bloomberg Citi Research

Note: Sharpe ratios for every year are calculated as the average monthly return divided by the standard deviation of monthly returns. For LTM, calculations are performed from Sep-11 to Aug-12.

Spreads too wide vs. fundamental risk

BBB OAS vs spread required to compensate for defaults (bp)



Source: Citi Research, Yieldbook, Bloomberg

But past returns are not indicative of future performance

The central bank as co-PM ...

Won't work out well for many FI investors ...

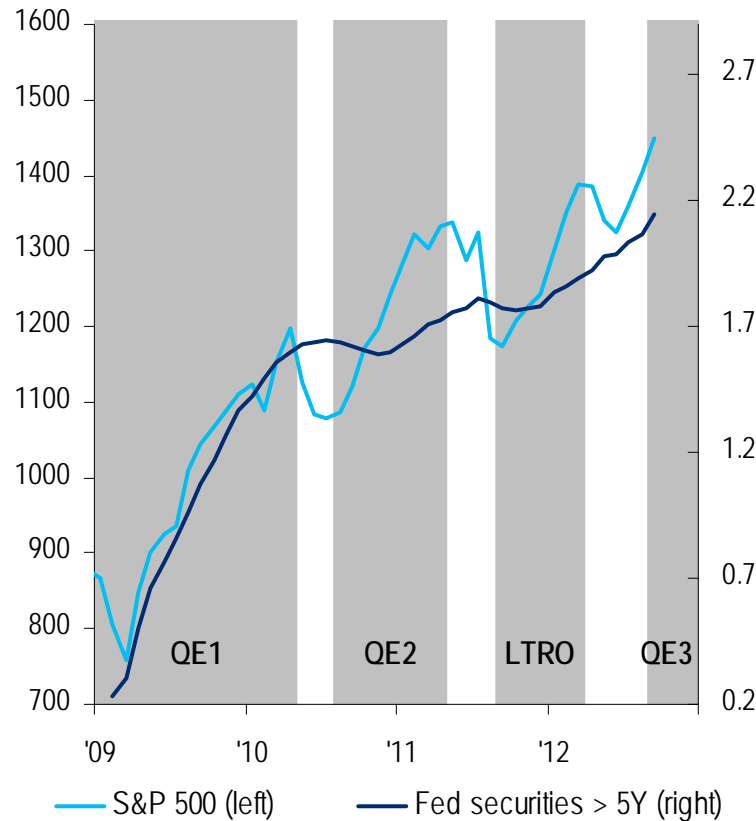
Is not a substitute for fiscal reform ...

And hasn't changed corporate incentives

Risky assets riding high on central bank intervention

Stocks reacting well ...

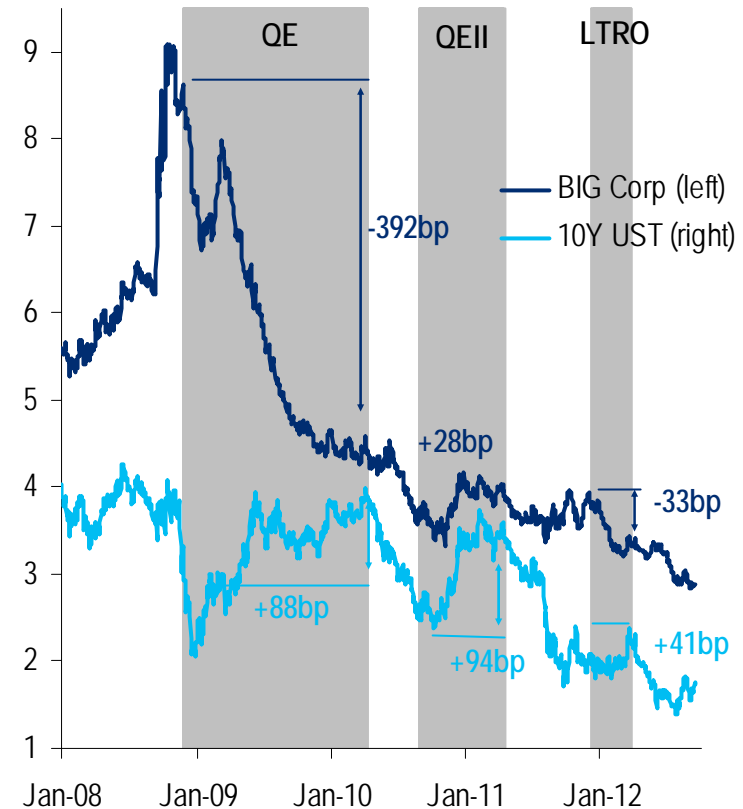
S&P500 vs. Fed's holding of securities >5 years (\$bn)



Source: Haver, Citi Research

... and corporate spreads too

BIG Corp and 10Y UST yields (%)



Source: Yieldbook, Bloomberg, Citi Research

But is the third time the charm?

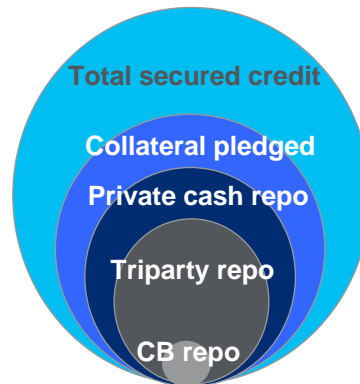
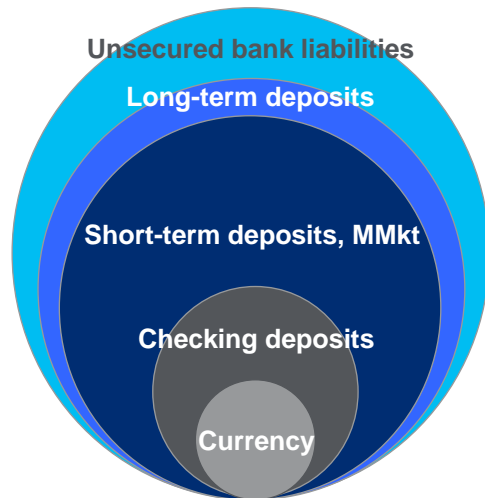
Liquidity targets only one part of credit

Traditional vs collateralized money multipliers

US (\$tn)

Traditional money supply measures...

... have shadow money counterparts



Identifier M0 M1 M2 M3

C0 C1 C2 C3 C4

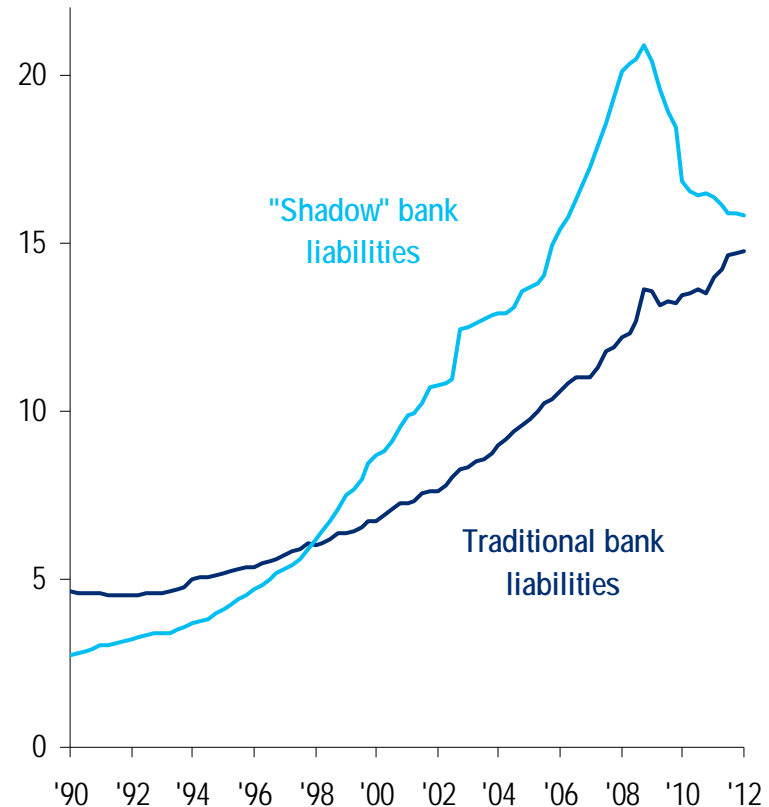
Outstanding (\$tn) 1.0 2.3 10 11

0.1 1.6 2.6 3.1 9.8

Source: Citi Research. C3 includes security-for-security repo as well as cash-for-security repo.

Spot the broken market

Sources of US credit outstanding (\$tn)



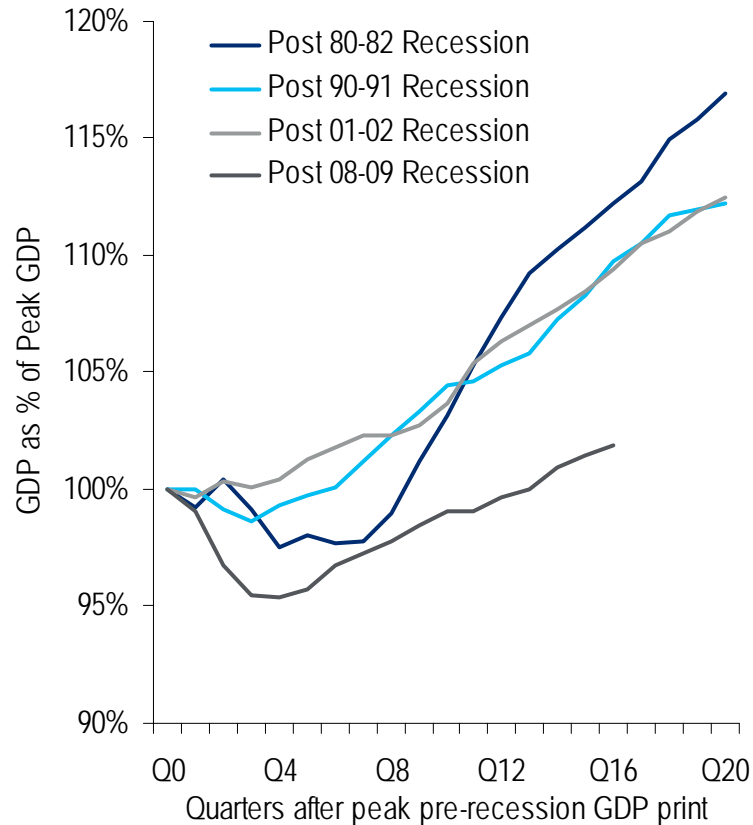
Source: Federal Reserve. See "Shadow Banking", Z. Pozsar et al., NY Fed Staff Report No. 458, July 2010. "Shadow" bank liabilities include CP, securities lending, GSE liabilities and GSE pool securities, ABS issuers and money market funds.

Much credit growth was based on collateralized lending

Still waiting for Keynes' animal spirits

Four years of lost growth ...

Nominal GDP post recession



Source: Bloomberg, Citi Research

Real economy not stimulated

Underemployment and output gap during QE periods (%)



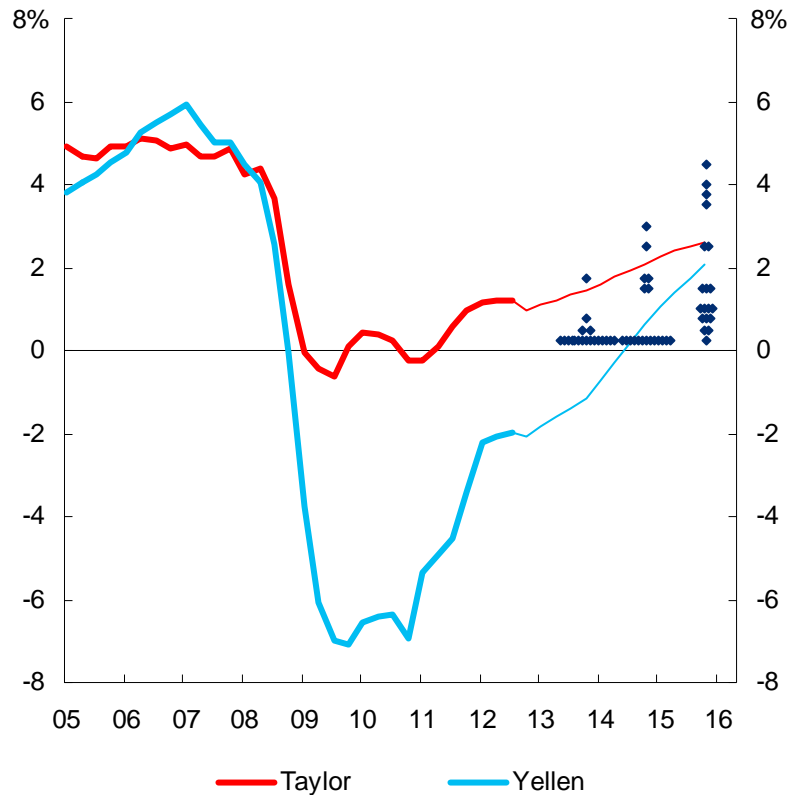
Source: Yieldbook, Haver Analytics, Bloomberg, Citi Research

Waiting for those wealth effects

How long can it last?

Up against the zero lower bound

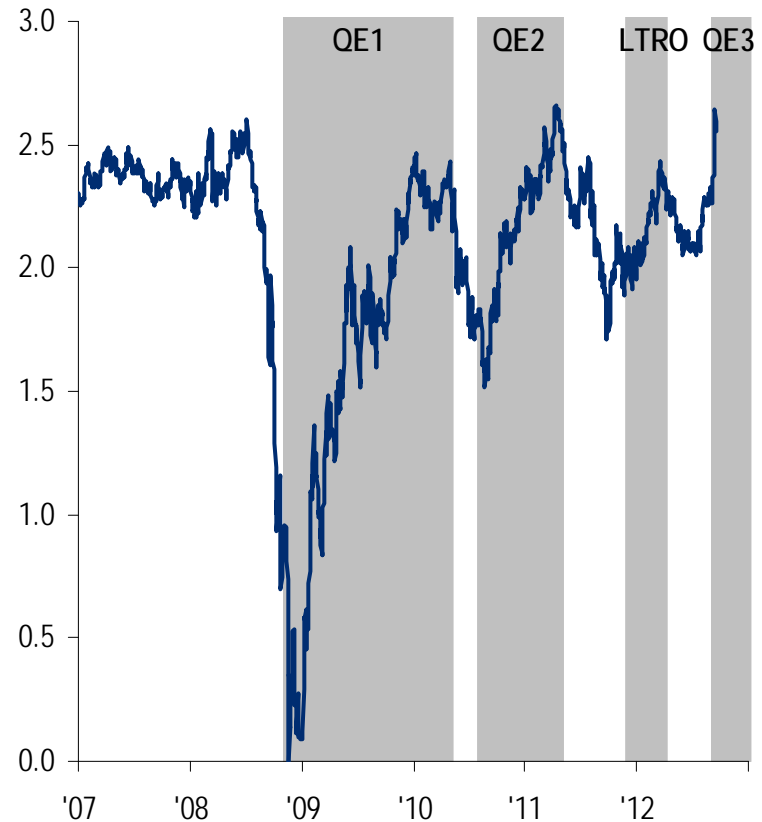
Fed funds rate and various policy rules, 2005-2015E



Source: Citi US Economics, Citi Research

How much inflation is acceptable?

US 10yr inflation breakeven rate (%)



Source: Bloomberg, Citi Research

Better question: Do we really want it to last?

The central bank as co-PM ...

Won't work out well for many FI investors ...

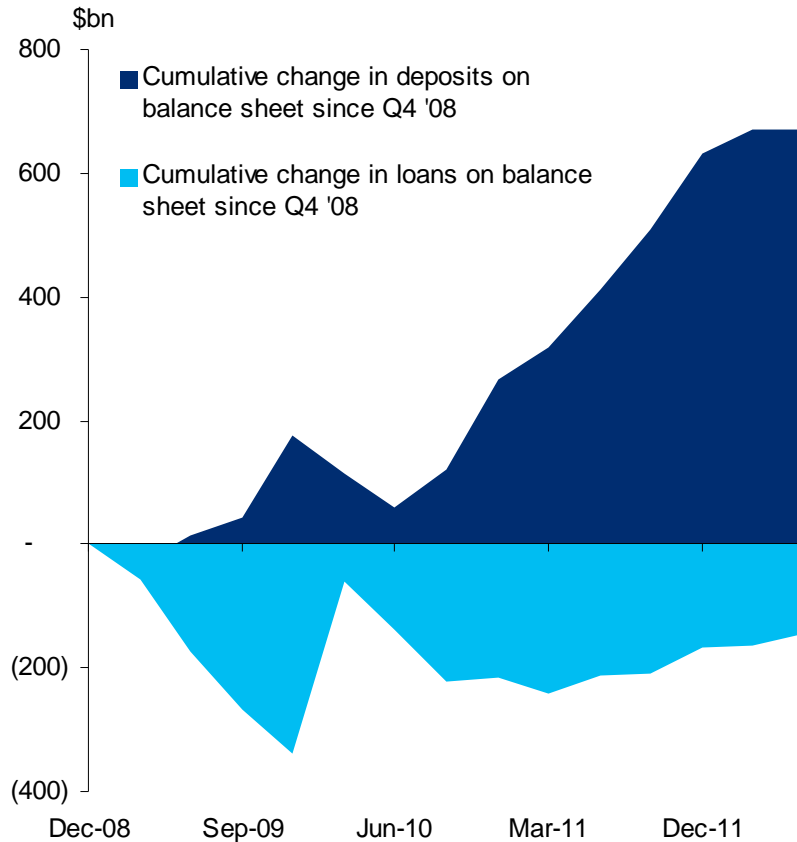
Is not a substitute for fiscal reform ...

And hasn't changed corporate incentives

It's tough being a bank in a low interest rate environment ...

Securities portfolios growing ...

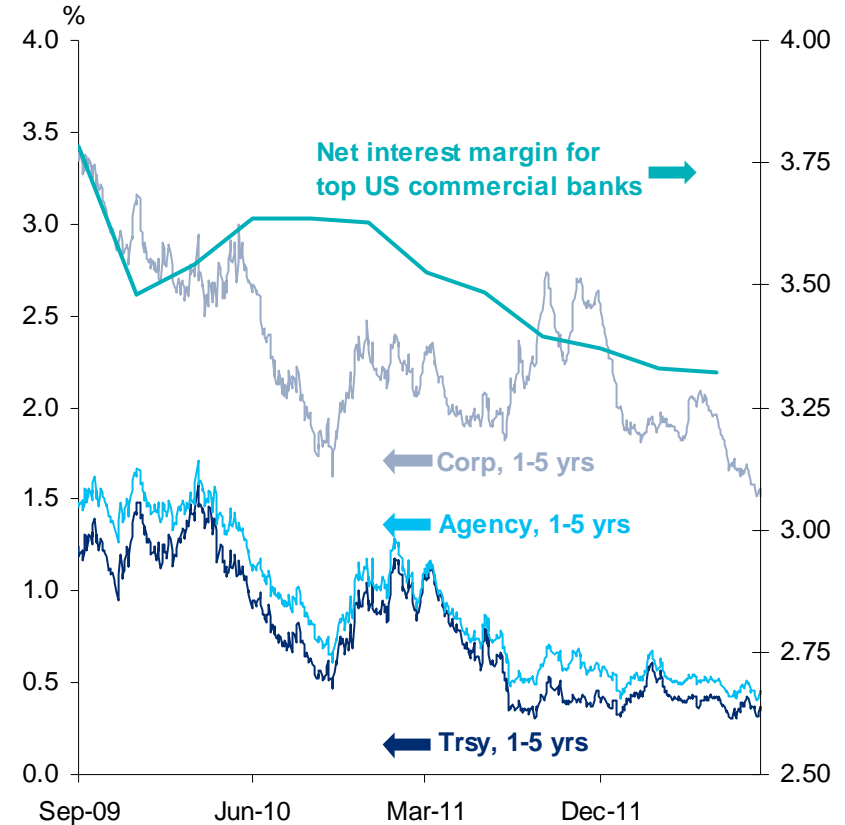
Chg. in deposits and loans for top US commercial banks



Source: Bloomberg, Citi Research

... but no “yieldy” investments left

Investment-grade yields (left) vs. net interest margin of top US commercial banks (right)



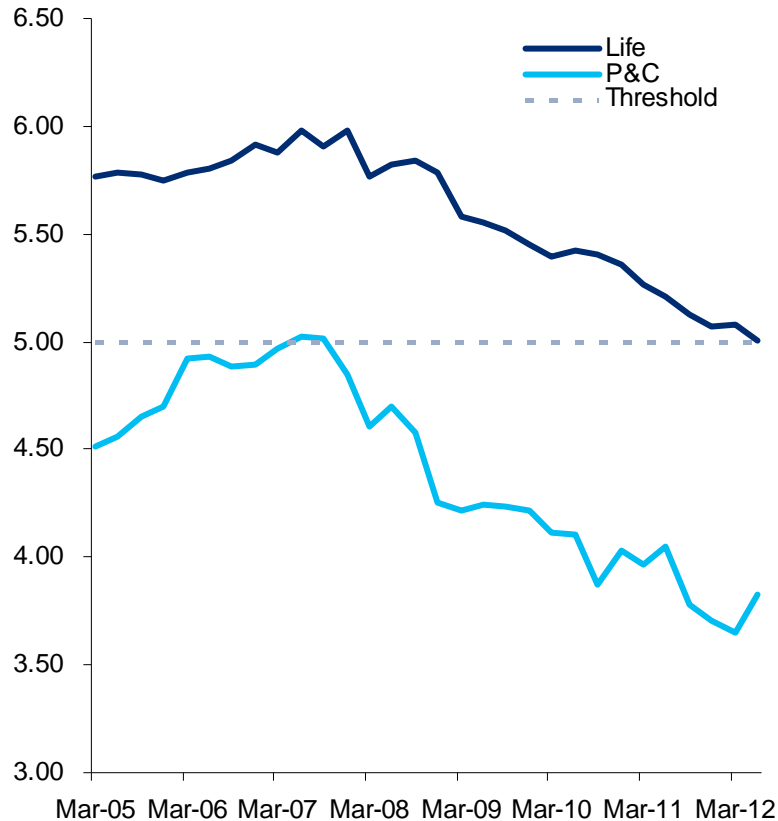
Source: Yieldbook, Bloomberg, Citi Research

Treasurers belatedly considering corporates

Or an insurer

Ever lower yields ...

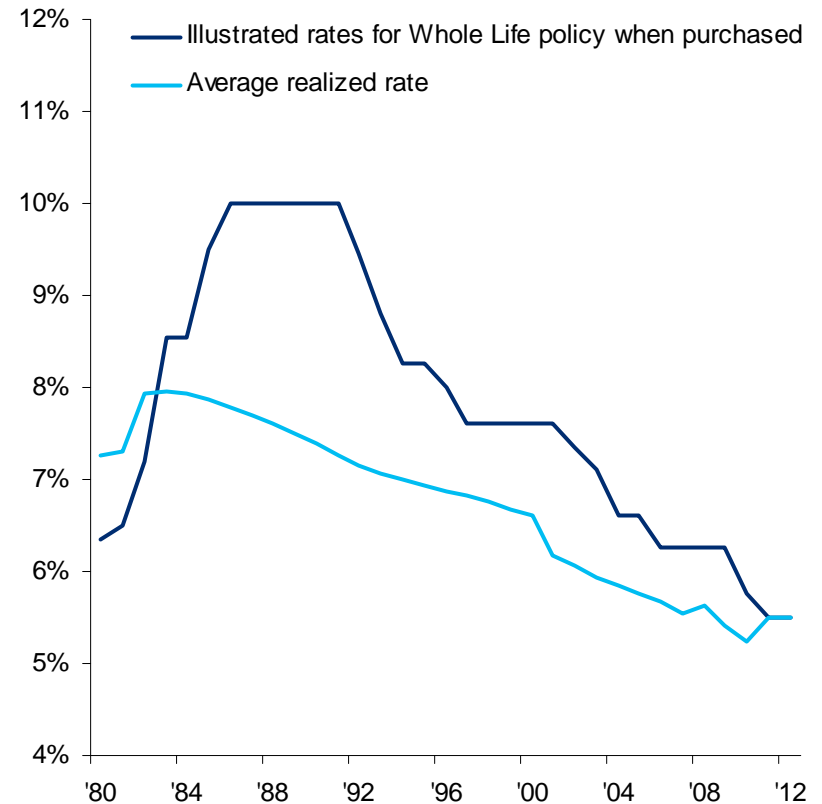
Book yields for top life and P&C insurers (%)



Source: Bloomberg, Yieldbook, Citi Research

... squeezing insurance products

Credited dividend interest rates for Whole Life insurance



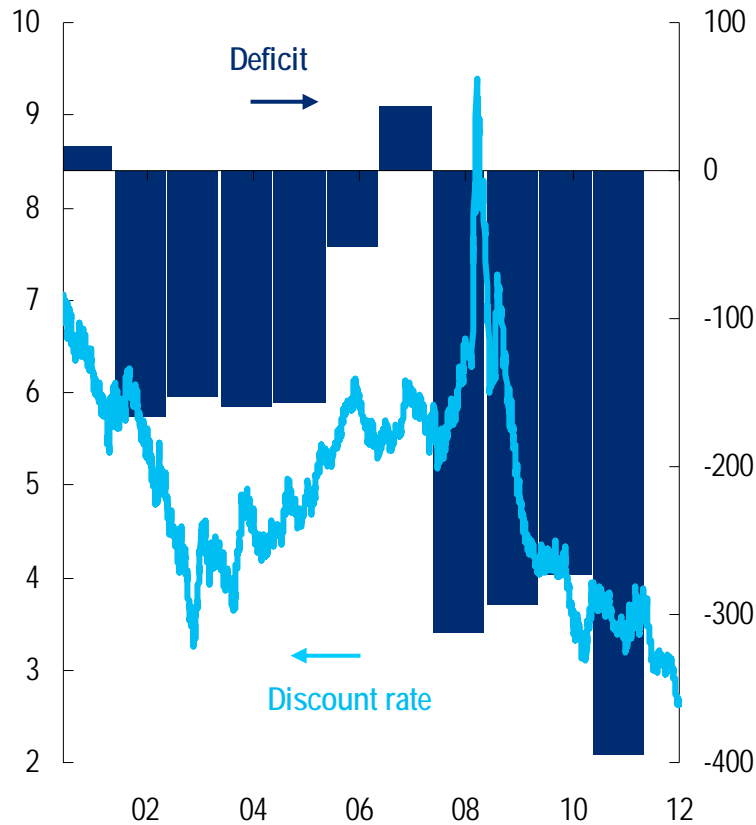
Source: Citi Research

Heading below the “profitability” breakeven

Or a pension administrator

Pension hole is getting bigger

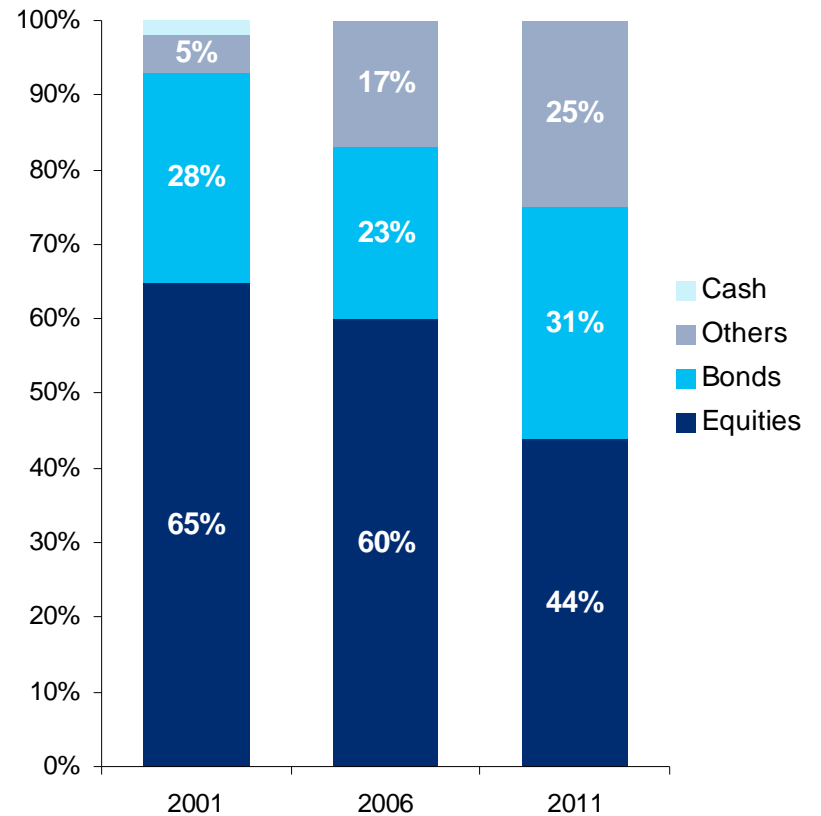
S&P1500 pension deficit (\$bn) vs. A-rated Corp Yields (%)



Source: Bloomberg, Citi Research

And allocations trending toward bonds

DB and DC pension asset allocations in the US



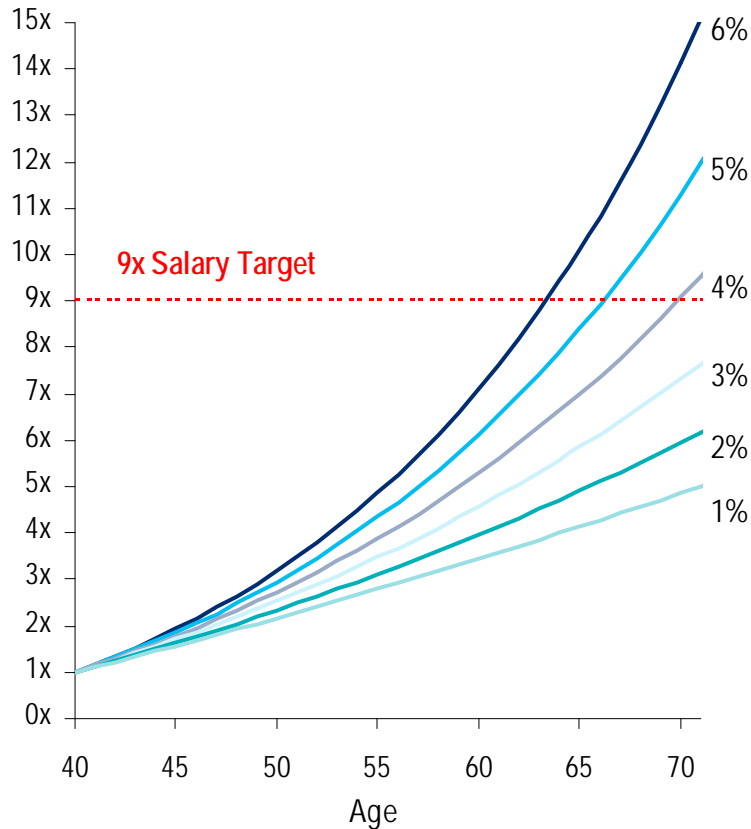
Source: Tower Watson

What about asset management?

Or a saver

The power of compounding - reversed

Accumulated savings of 40yr old saving 10% of salary under varying real rates of return, multiple of salary

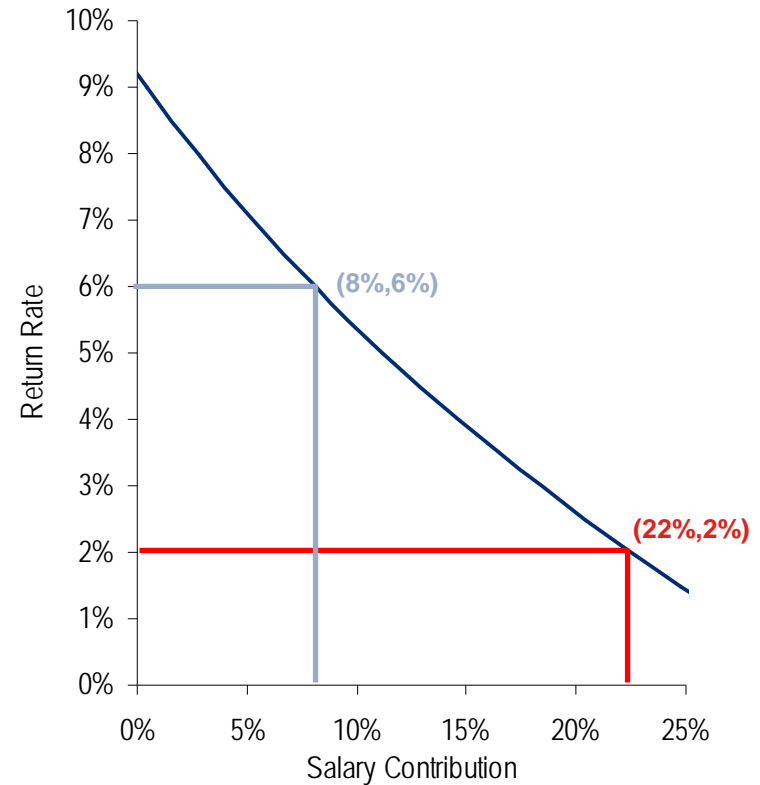


Source: Citi Research

Note: Analysis above assumes that 1 times the annual salary is already saved up at age 40.

I need to save *how* much?

Real return rates required to hit target vs. salary saved



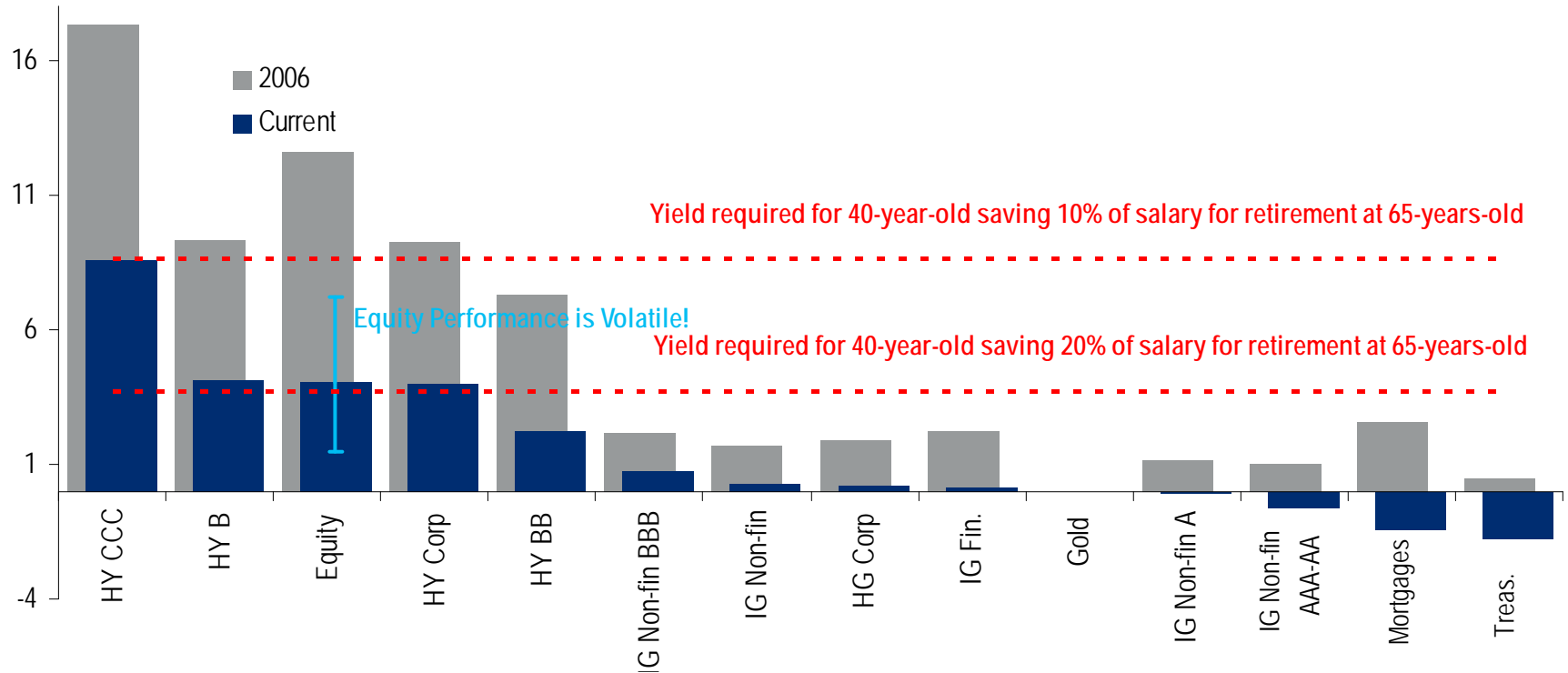
Source: Citi Research

Lower yields require much higher rates of savings

Since nothing in fixed income hits the hurdle

The efficient frontier is looking awfully deficient

Real yields of various asset classes (%)



Source: Citi Research, Bloomberg, Yieldbook

Note: *Real yields are calculated as the difference between the yield of each asset class (earnings yield in the case of equities) and 30-year treasury breakeven rates. These rates are assumed to prevail until retirement. Equity performance volatility depicted in light blue is calculated from the minimum and maximum earnings yields in the past 5 years. Real yields required for given salary contributions (in red) are calculated for a 40 year old retiring at 65, and aiming to have 8x his annual salary upon retirement.

A reality check is on the horizon

The central bank as co-PM ...

Won't work out well for many FI investors ...

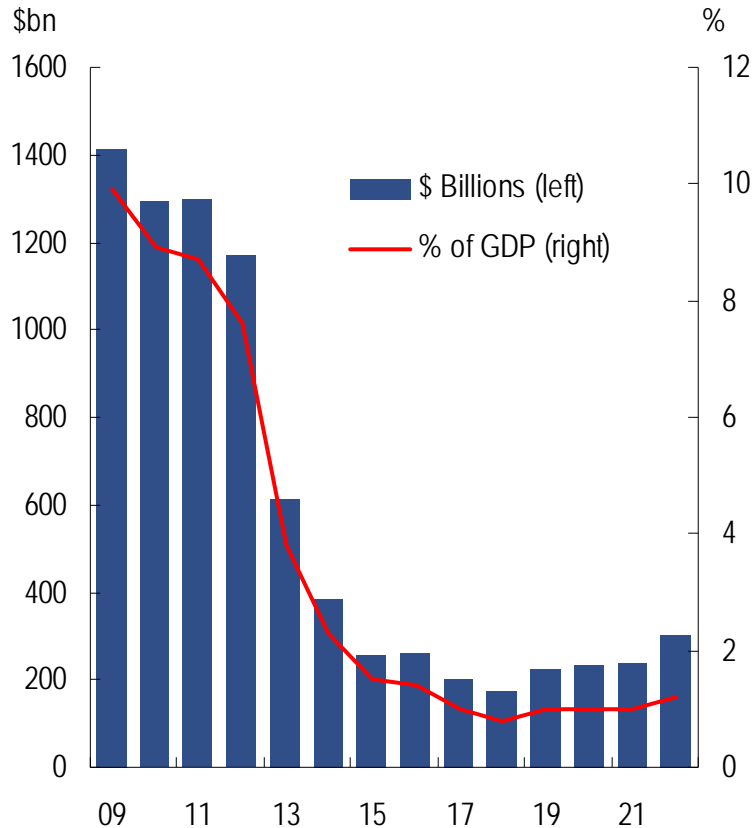
Is not a substitute for fiscal reform ...

And hasn't changed corporate incentives

The US fiscal cliff deficit debate

Falling off the cliff ...

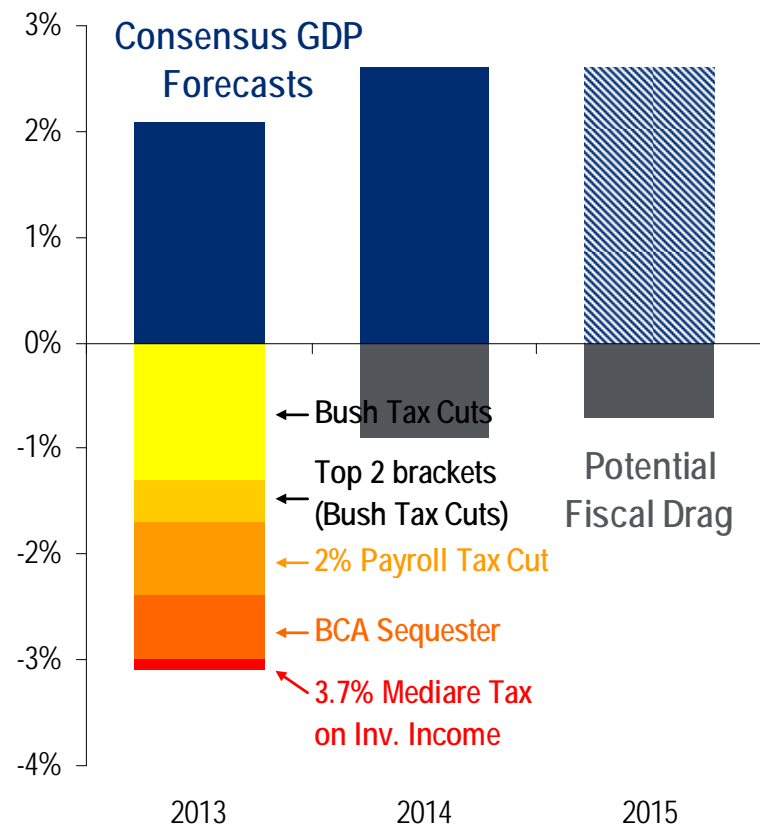
CBO deficit projection based on current law



Source: CBO

... will drag the US into recession

Street expectations for growth vs. potential fiscal drag



Source: CBO, Citi Research

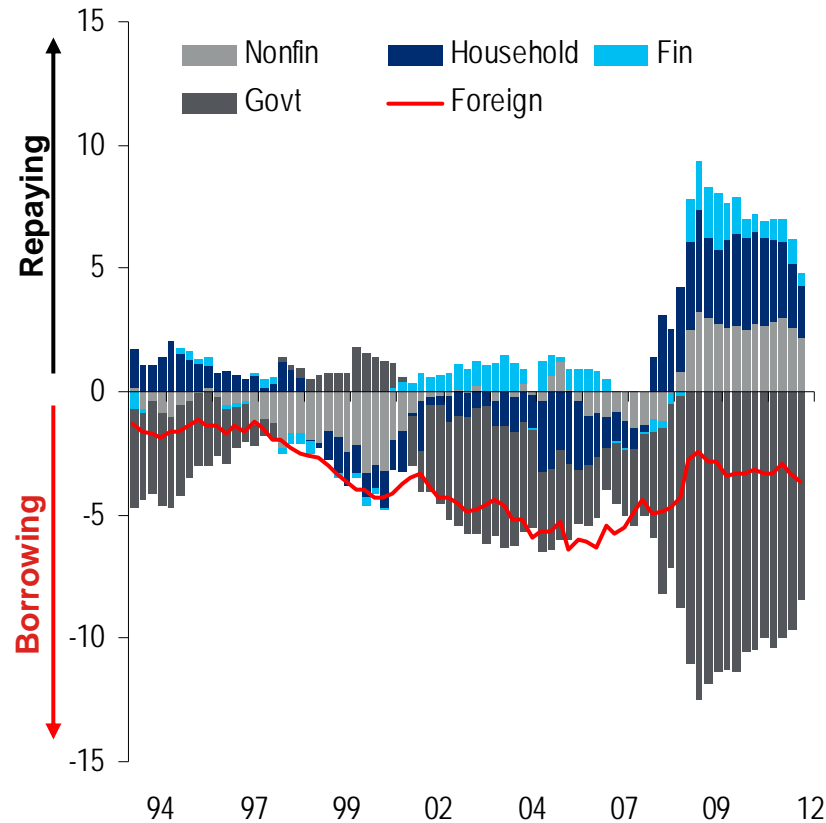
Note: '15 GDP is assumed to grow at the same rate as '14 consensus forecasts (denoted in textured blue).

Lawmakers living on borrowed time

Is only the tip of the iceberg

Pass it to the government

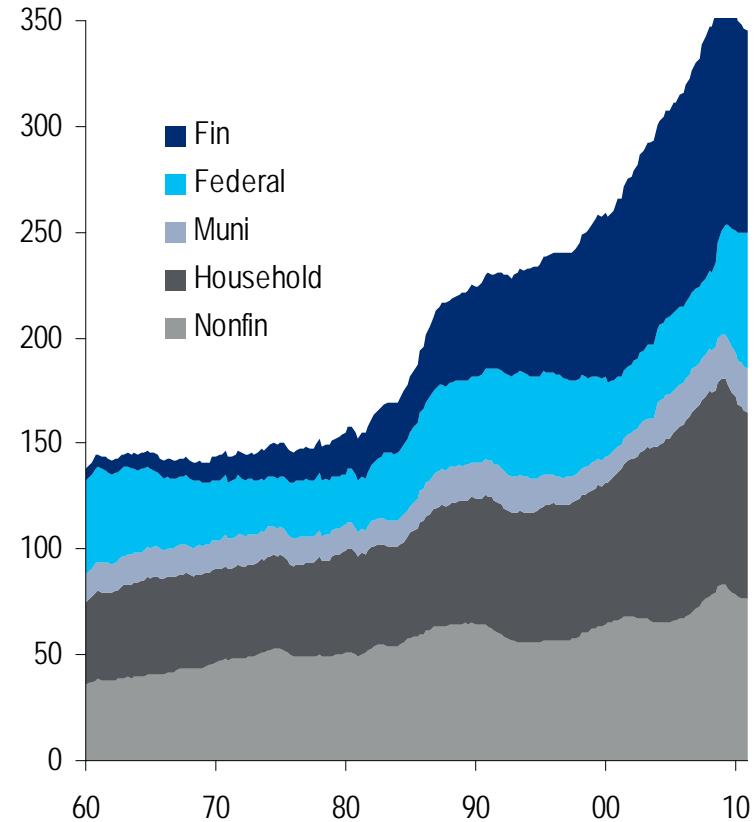
Borrowing by sector (% GDP 4qma)



Source NIPA Macroeconomic Accounts, Haver Analytics

Deleveraging? What deleveraging

Debt/GDP by sector (%)



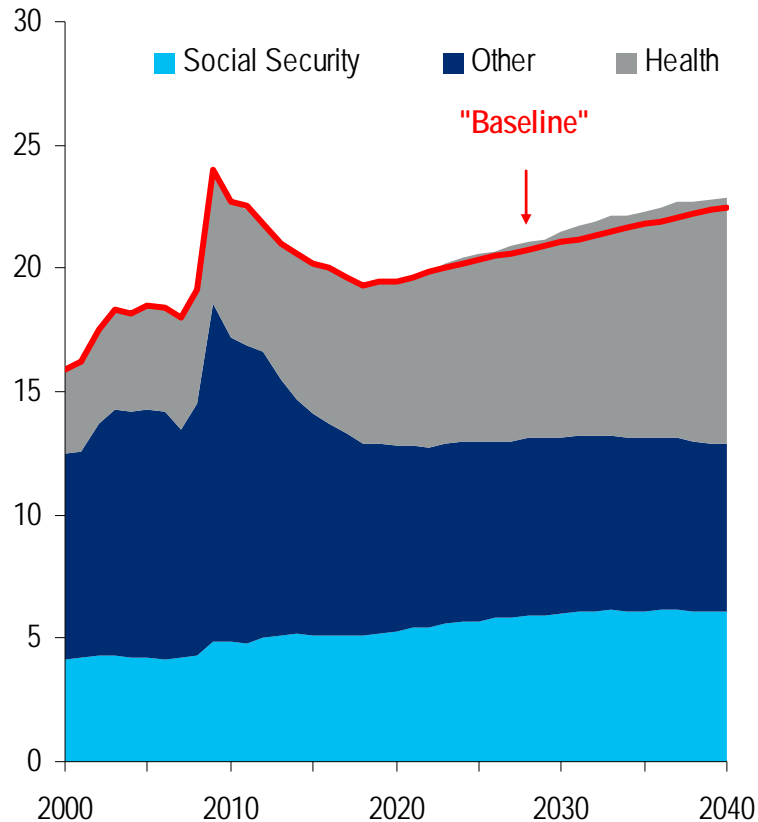
Source: Federal Reserve, Haver Analytics

A strong pair of hands – but yet to confront the deficit

How front loaded will the cuts be?

Overentitled ...

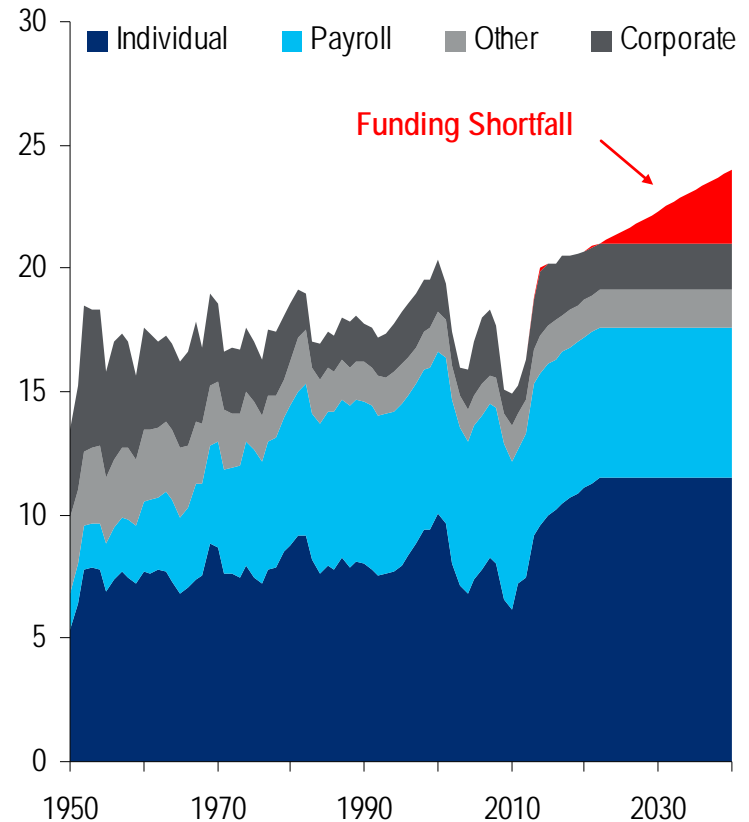
CBO long-term spending forecast, ex interest (% GDP)



Source: CBO, Citi Research

... and underfunded

CBO gov't revenue forecast vs. history (% GDP)



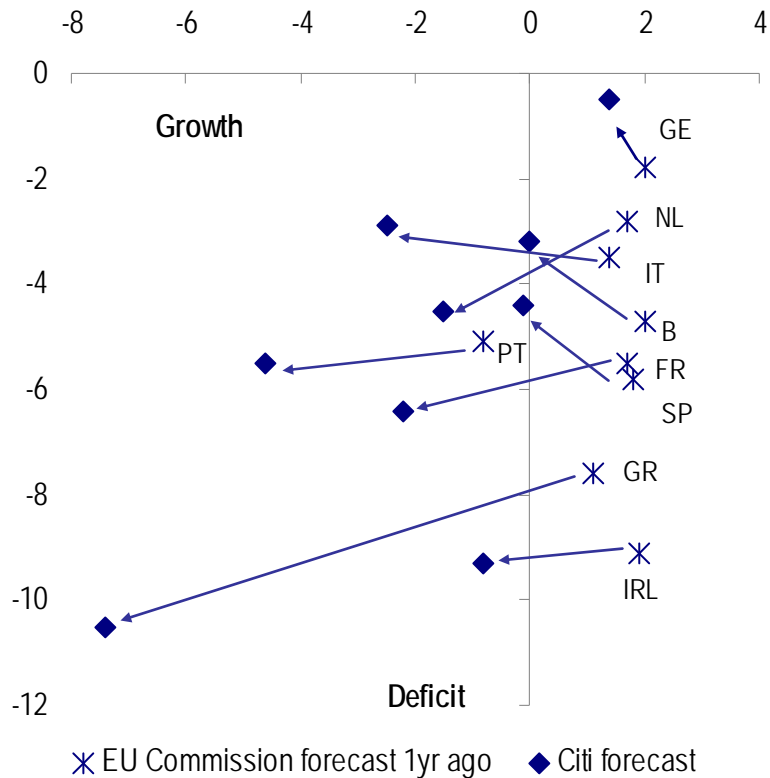
Source: CBO, Citi Research

“Baseline” forecasts seem anything but

The track record for austerity isn't that great

Both economically ...

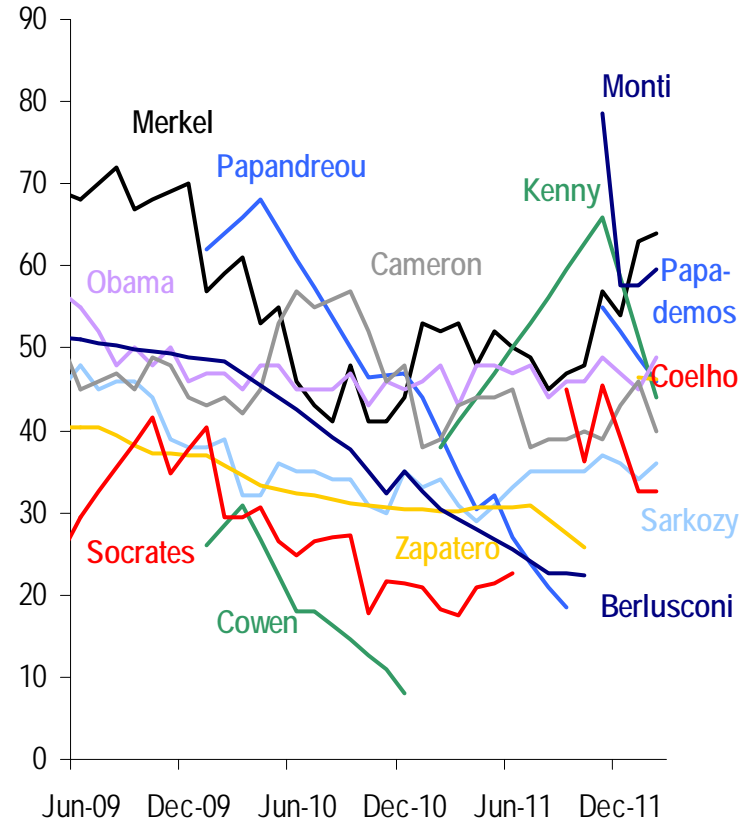
2012 Citi Forecast vs. EC Forecast a year ago (%)



Source: Citi Research, EU Commission Economic Forecast Autumn 2010

... and politically

Political approval ratings of incumbents (%)



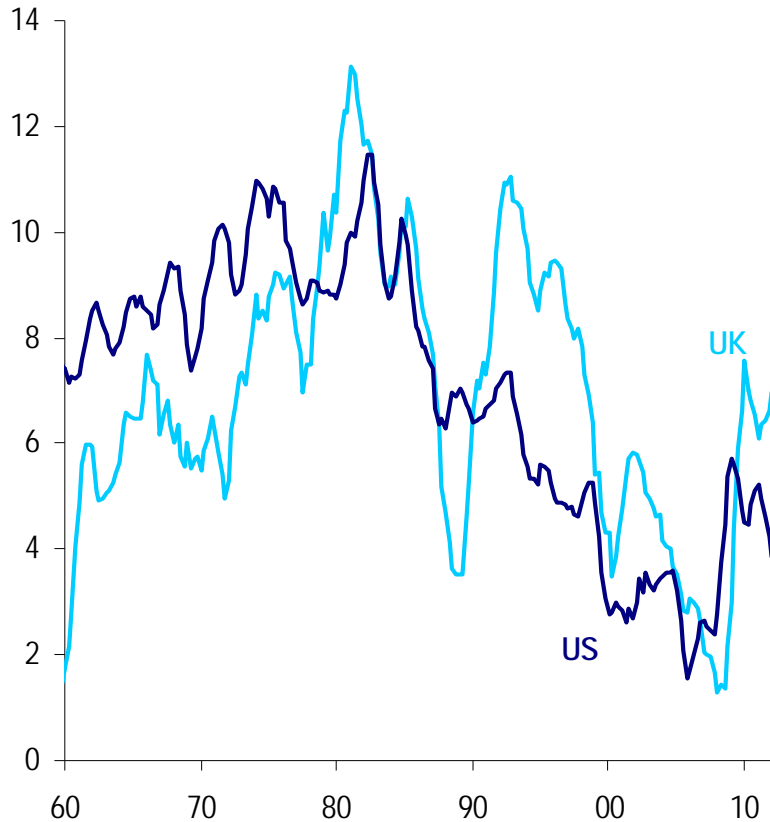
Source: National press and polling agencies, Citi Research

No surprise that political will is in short supply

Even for non-EMU countries like the UK

Higher savings

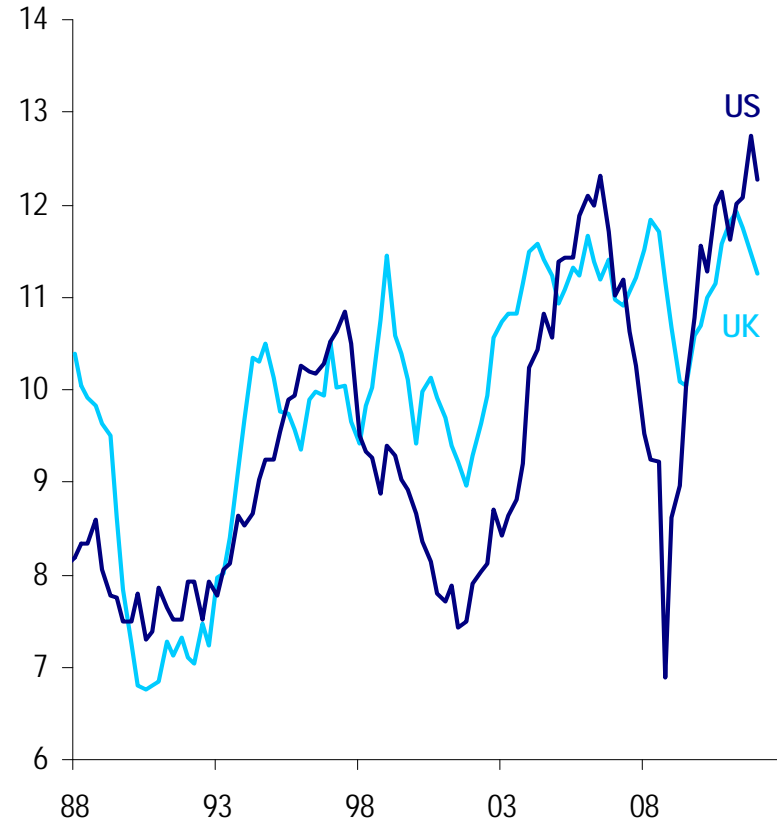
Household savings rate (% disposable income)



Source: Haver Analytics

Lower profits

Nonfinancial corporate profits (% GDP)



Source: Haver Analytics

Austerity impacts both profits and savings

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Won't work out well for many FI investors ...

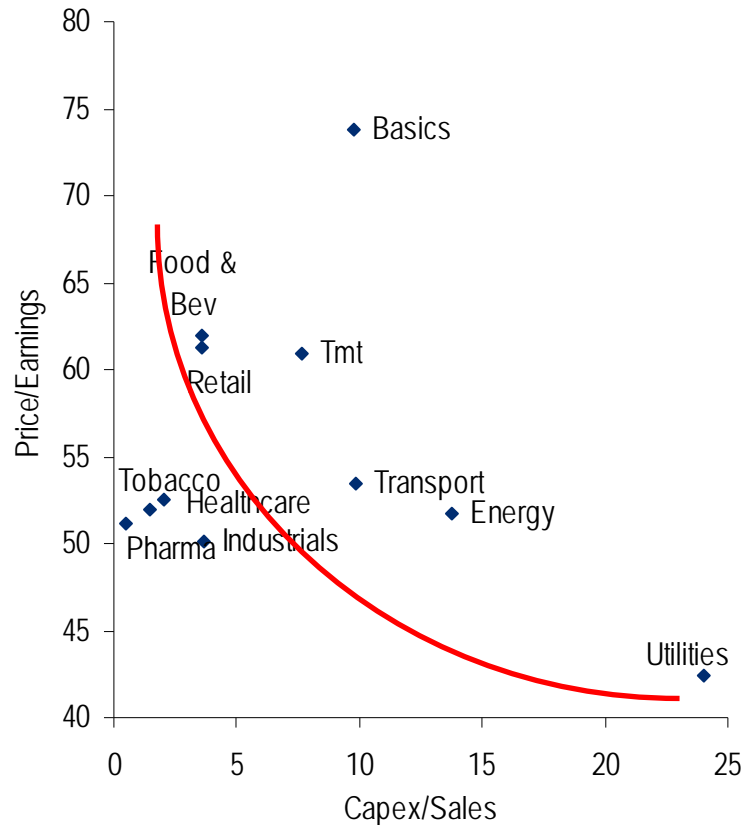
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Corporates not incentivized to grow the top line (i)

Save, or be de-rated

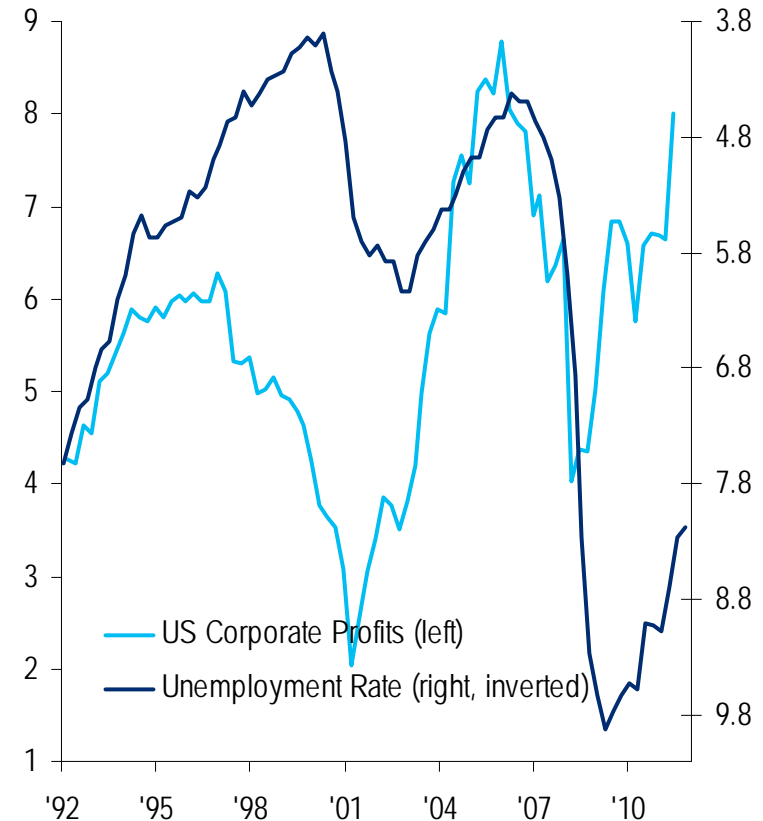
Capex/sales vs. equity P/E ratio, S&P500, 2012



Source: Bloomberg, Citi Research

Better to cut costs

US corporate profits (% GDP) vs. unemployment rate (%)



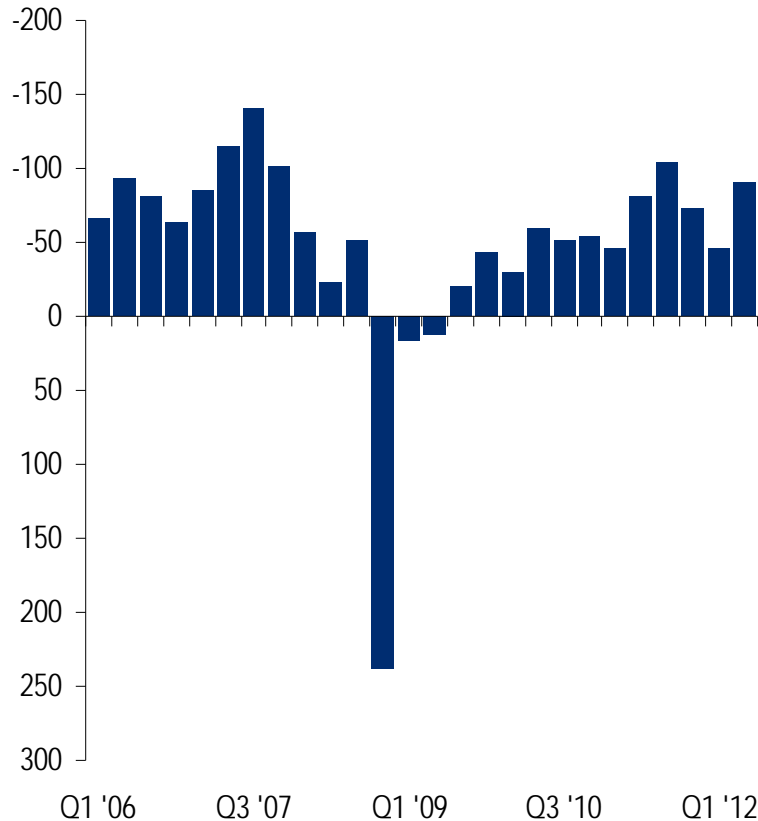
Source: BLS, Haver Analytics

Individually rational; collectively disastrous

Corporates not incentivized to grow the top line (ii)

Better to repurchase shares

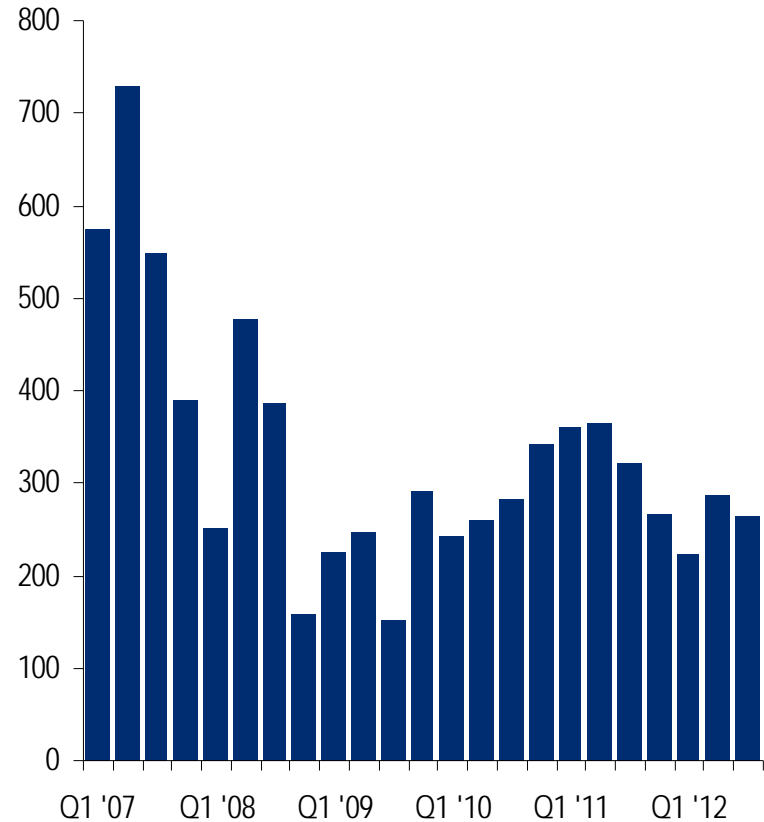
Change in capital stock of S&P500 companies by year (\$bn)



Source: Bloomberg, Citi Research

Better to find M&A opportunities

M&A volume where acquirer or target is N.A. domiciled (\$bn)



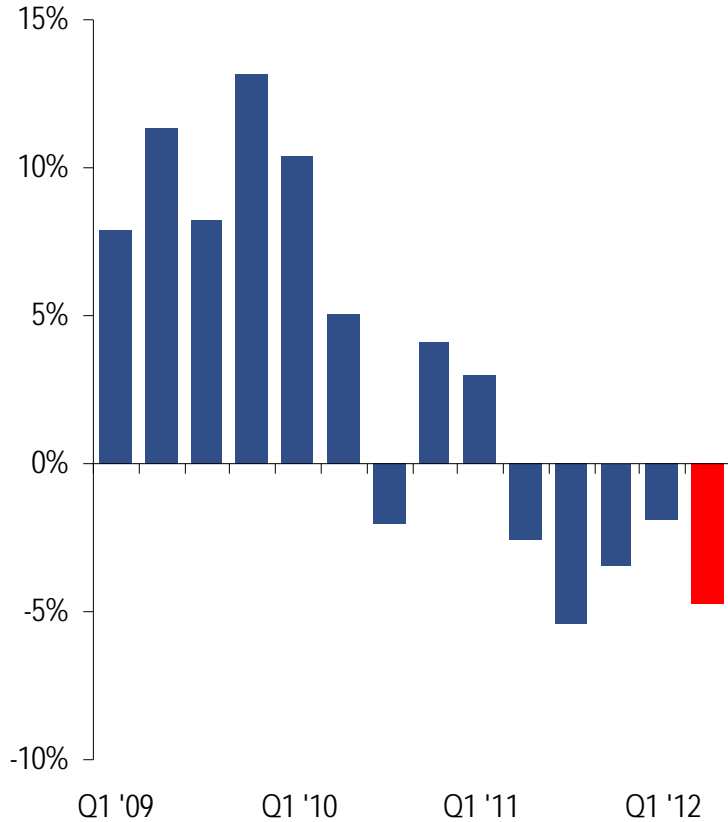
Source: Bloomberg, Citi Research

So far ... not to the detriment of bondholders

The disappointment is starting to show

Q2 the most disappointing since 3Q11

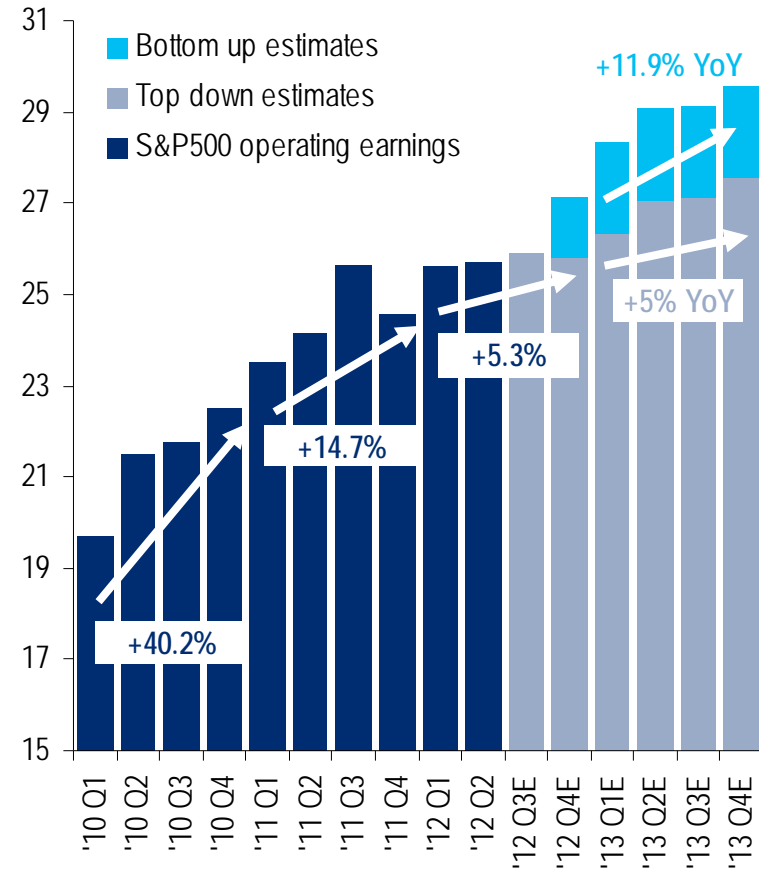
S&P500 earnings surprises relative to beginning of quarter estimates



Source: Bloomberg, Citi Research

A Q4 repeat in the making

S&P500 quarterly operating earnings

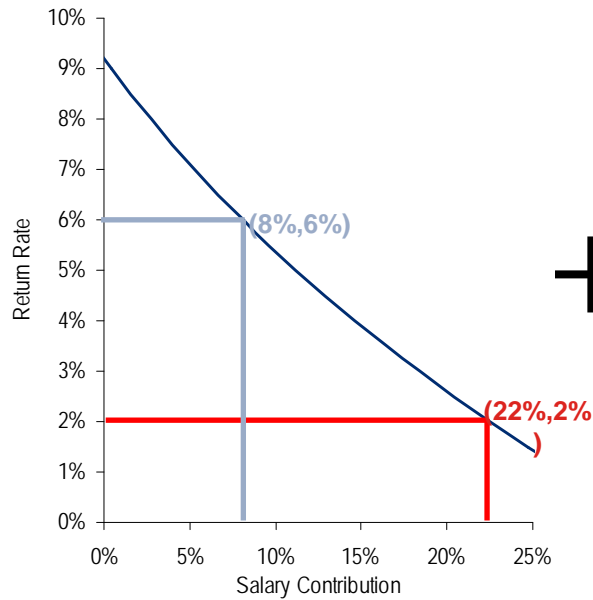


Source: Bloomberg, Citi Research

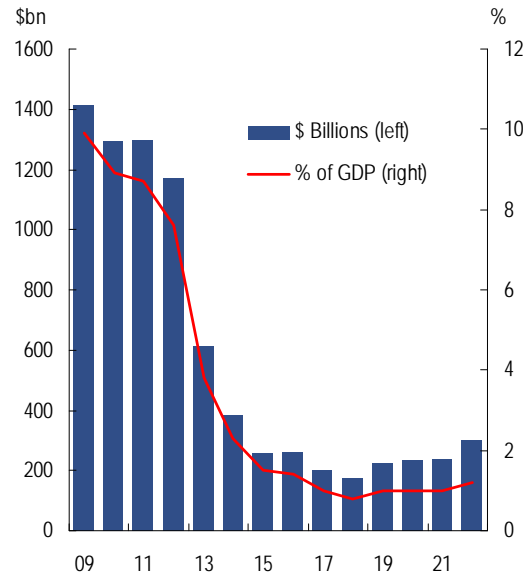
'13 not so lucky for corporates?

Conclusions

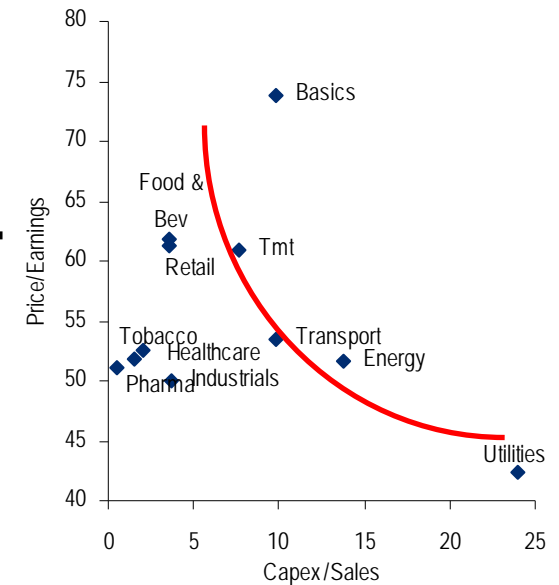
New savings paradigm



Impending austerity



Reluctant corporates



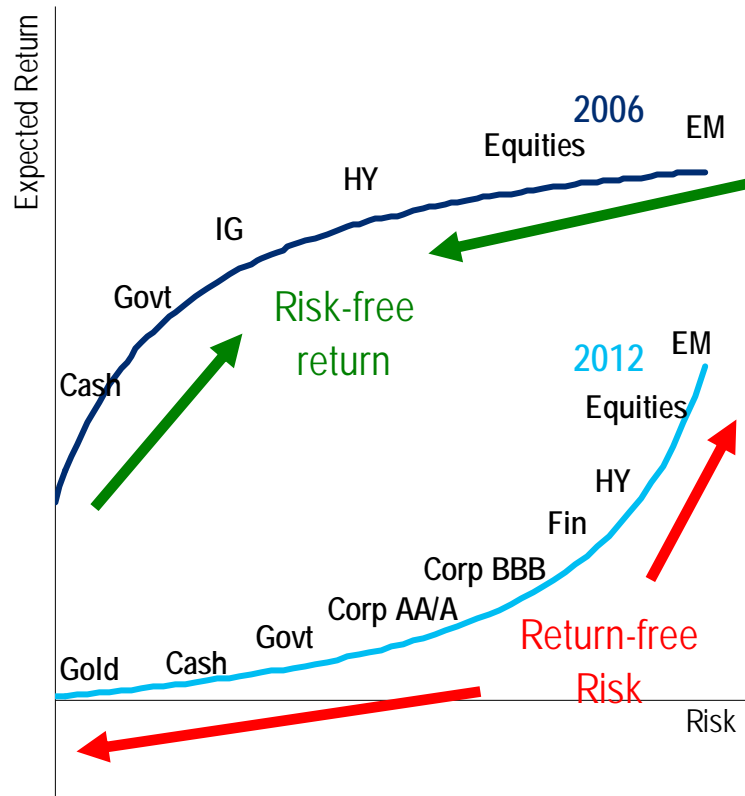
= Fixed Income Outflows

Strategies

The hyper-inflation/deflation barbell

The not so efficient frontier

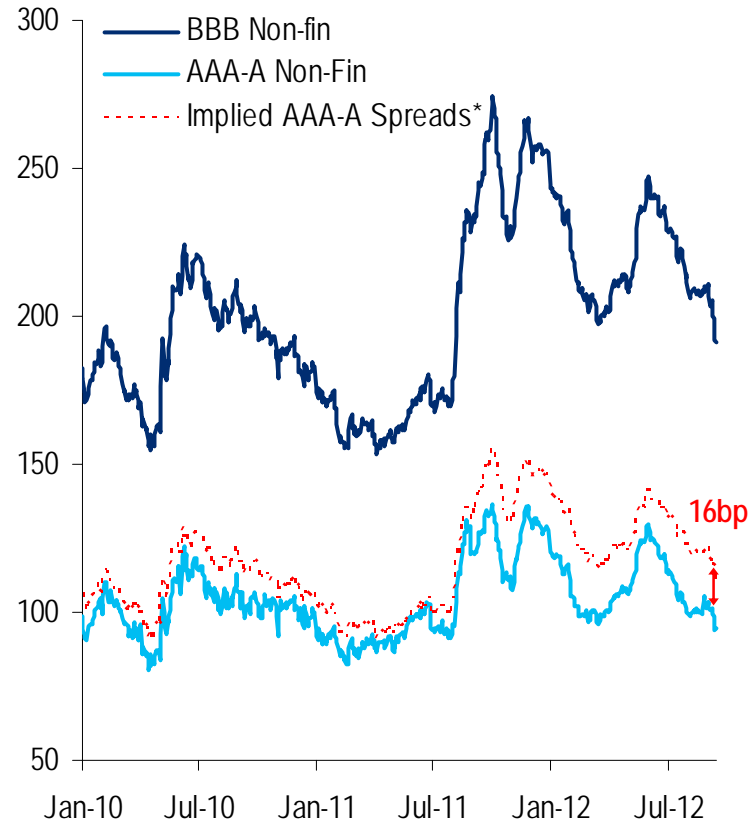
Efficient frontiers old and new schematic



Source: Citi Research

Requires playing the bifurcations

Non-financial OAS by sectors (bp)



Source: Citi Research, Yieldbook

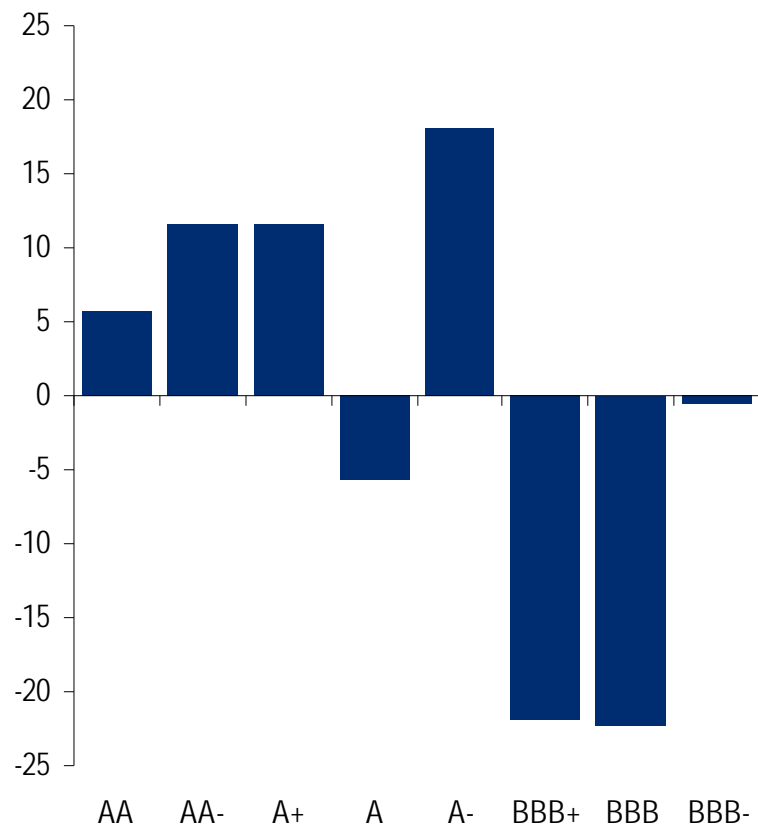
Note: Implied AAA-A spread (see *) is spread implied by regressing AAA-A Non-financial OAS on BBB non-financial OAS in Jan '98 to Dec '09 only on days where BBB non-financial OAS was greater-than 200bp.

Beware the middle-of-the-risk-spectrum assets

Watch for technical clues

Positive basis abound

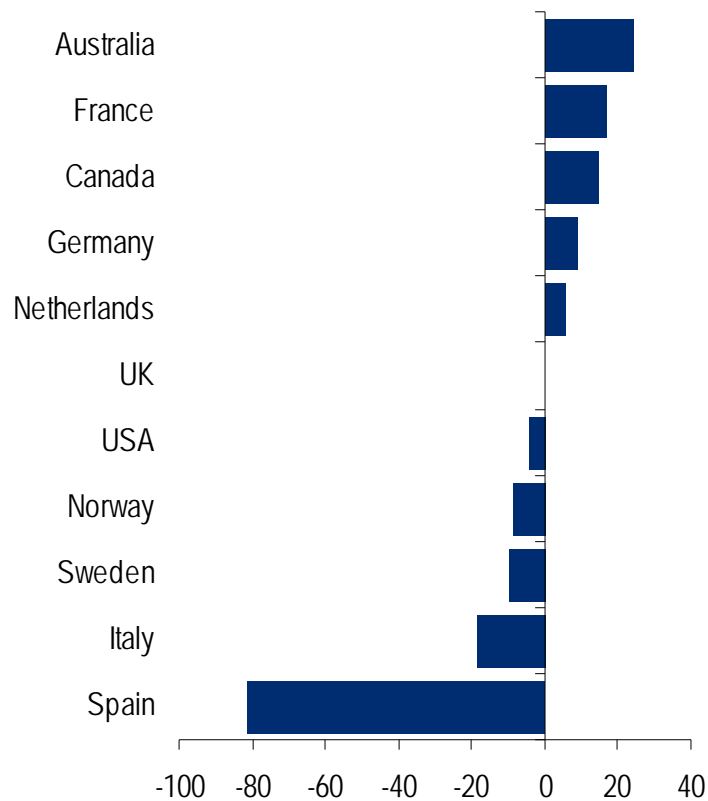
US Non-financial basis by rating (bp)



Source: Yieldbook, Citi Research

Here and abroad

Non-financial basis by domicile (bp)



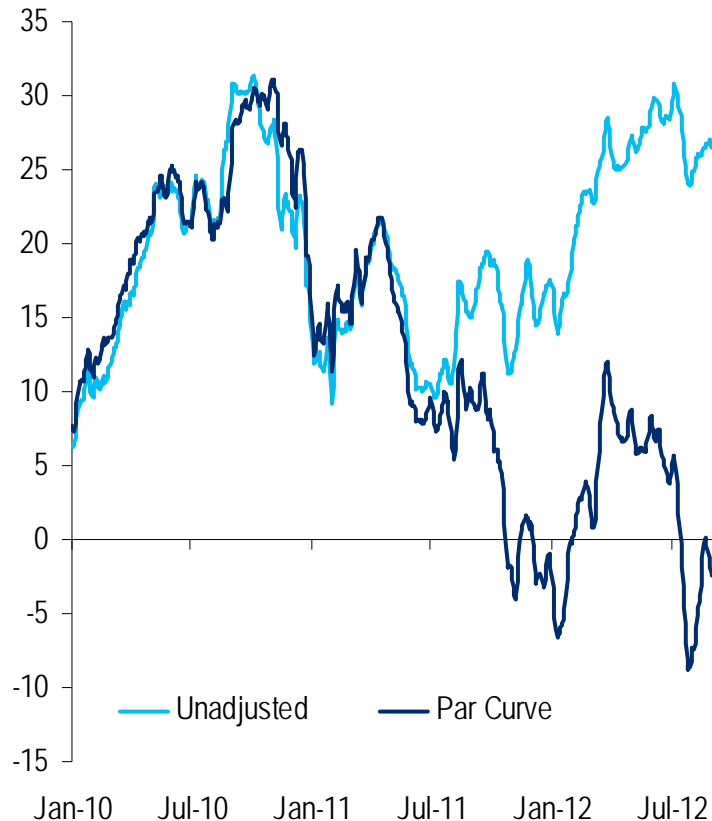
Source: Yieldbook, Citi Research

Has CDS become *less* technical than cash?

And mind the high dollar prices

High-dollar bonds skew curves higher

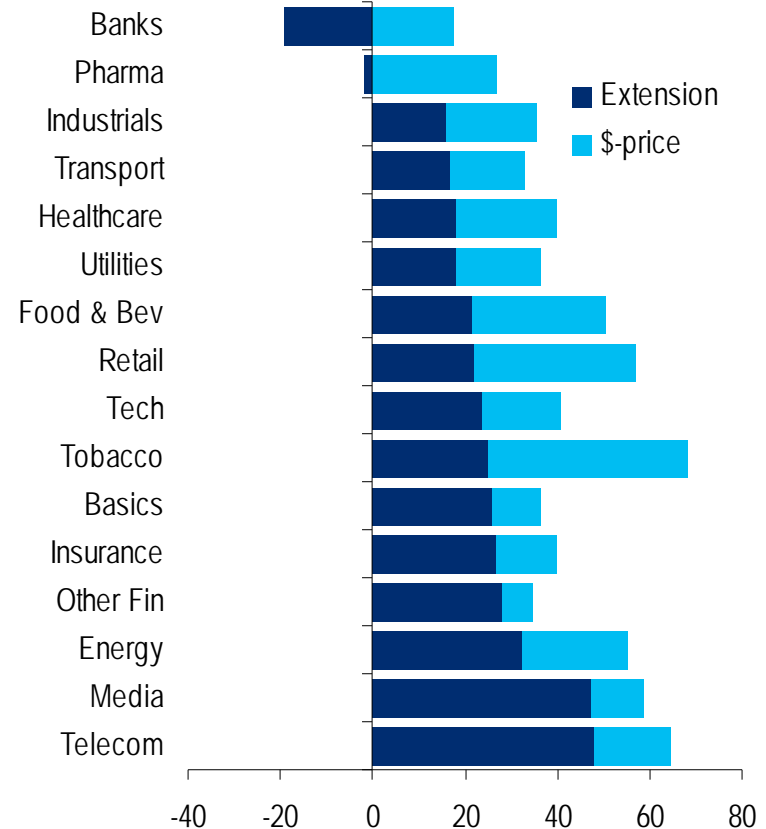
Non-financial 10s30s OAS (bp)



Source: Yieldbook, Citi Research

What are you getting paid for on 10s30s?

10s30s spread compensation breakdown (bp)



Source: Yieldbook, Citi Research

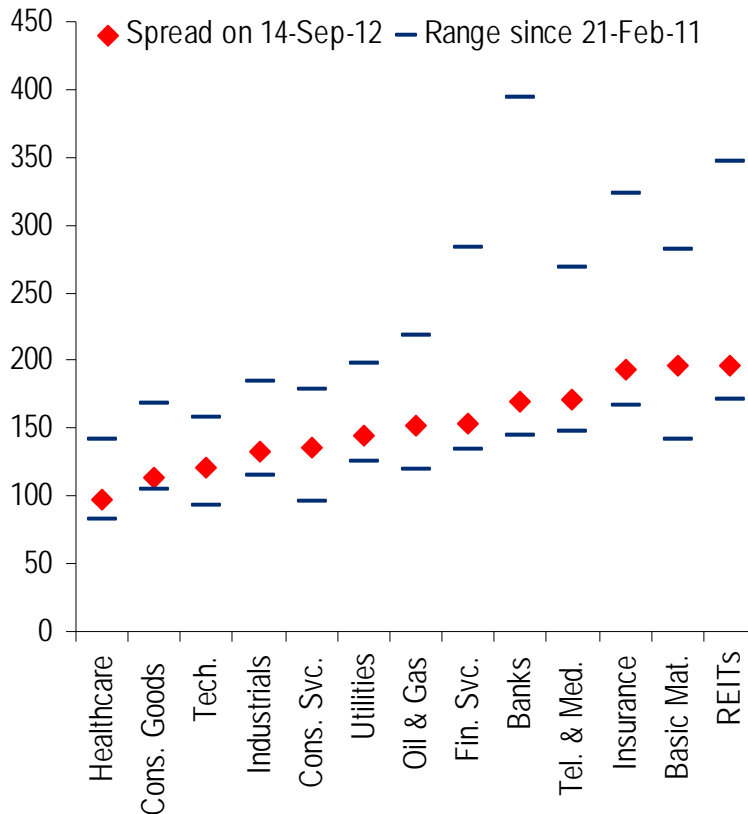
Note: The \$-price compensation is determined by taking bonds of the same issuer and similar maturities and solving for the dollar-price adjustment that brings the bonds' spreads in line with each other. Please call for details.

Extend with care

Sector picks & pans cheat sheet (courtesy Erin Lyons)

QE2 tights on the horizon?

Current OAS by sector and range from Feb. 21, 2011 (bp)



Source: Yieldbook, Citi Research

Prefer telecom, media; caution on basics

Sector	View	Picks	Pans
Banks	Neutral	FITB, KEY	
Basics	Underweight	BHP, MON, MOS	MTNA, AA, NEM
Consumer Goods	Neutral	MO, RIFP, SAB	ADM, CPB, CAG, KR
Consumer Services	Neutral	GPS, KSS, M	VFC
Energy	Overweight	BHI, NBL, RIG	ECA, HES, WFT
Healthcare	Neutral	DGX '15s	Pharma Credits
Industrials	Neutral	ADT	CAT
Insurance	Overweight	AIG, HIG, MET, PRU	
REITs	Underweight	EQR	PLD
Technology	Neutral	EBAY '42s, XRX	DELL, HPQ
Telecom & Media	Overweight	T '41s, NWSA, TWC, TWX	VOD (cash)
Utilities	Overweight	FE '31s, DUK '17s	EXC GenCo

Source: Yieldbook, Citi Research

Near term reach, then defense

Appendix A-1

Analyst Certification

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