

May 2014

# Riding the wobble and avoiding the snap

## When the brick on elastic meets the ball in a bowl

**Matt King**

Credit Products Strategist

[matt.king@citi.com](mailto:matt.king@citi.com)

+44 207 986 3228

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

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Prepared on 5 May 2014.

Ever more stretched

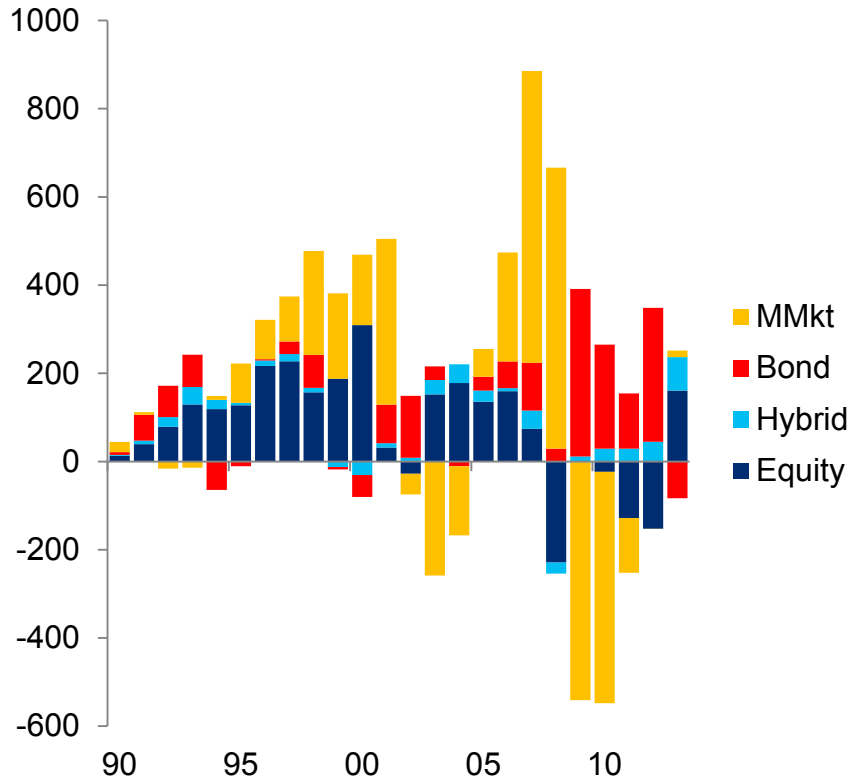
Yet remarkably sticky

How not to come unstuck

# It's all about the inflows

## Out of cash, into everything else

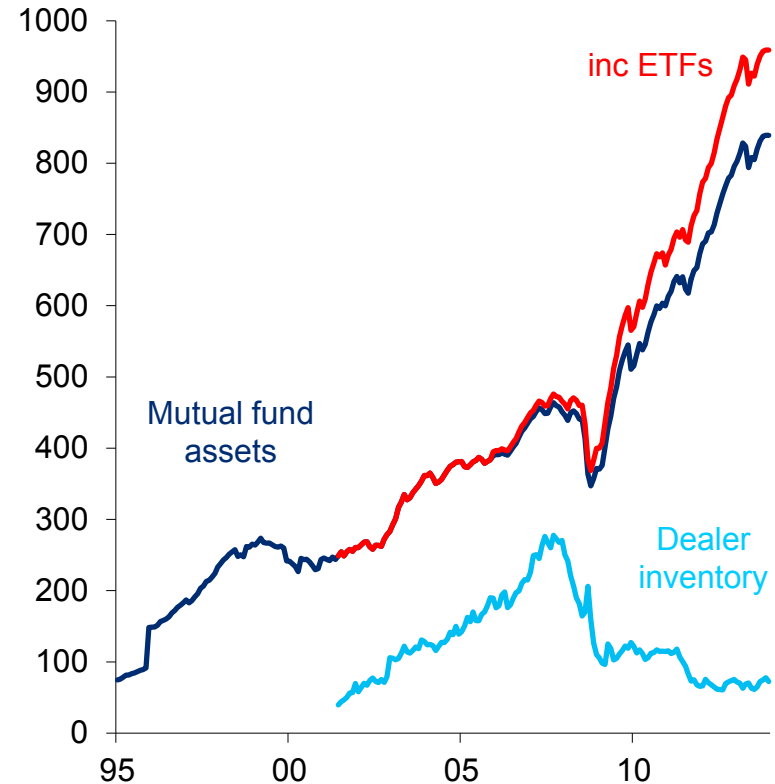
Annual inflows to US mutual funds by type, \$bn



Source: ICI, Haver Analytics.

## Entrance with no exit

US credit mutual fund assets vs dealer inventory (\$bn, IG+HY)



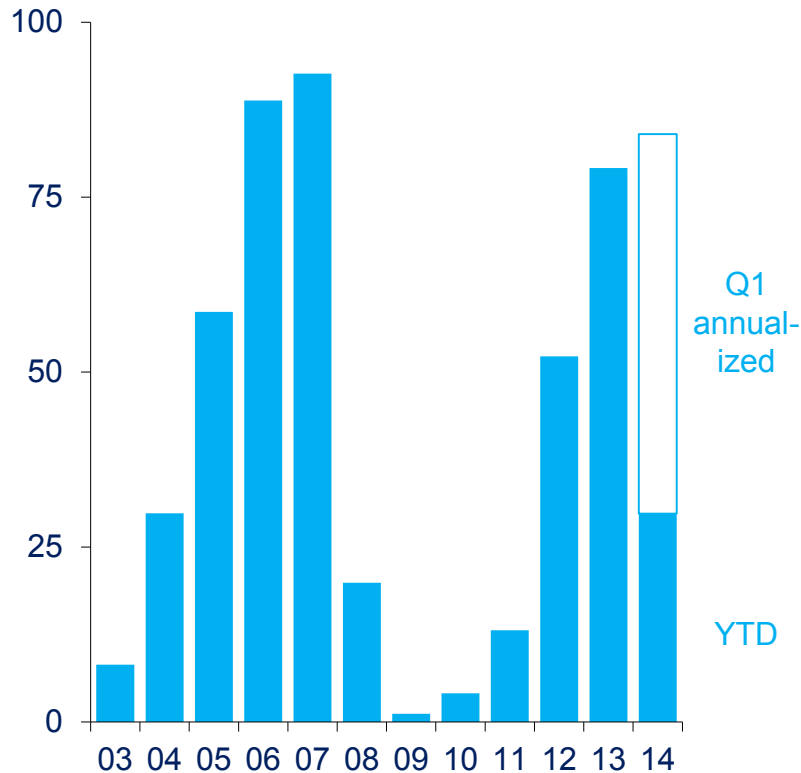
Source: ICI, NY Fed, Bloomberg, Haver Analytics, Citi Research.

## Markets are awash with liquidity

# But does this mean froth, or outright bubbles?

## Non-recourse leverage back in demand

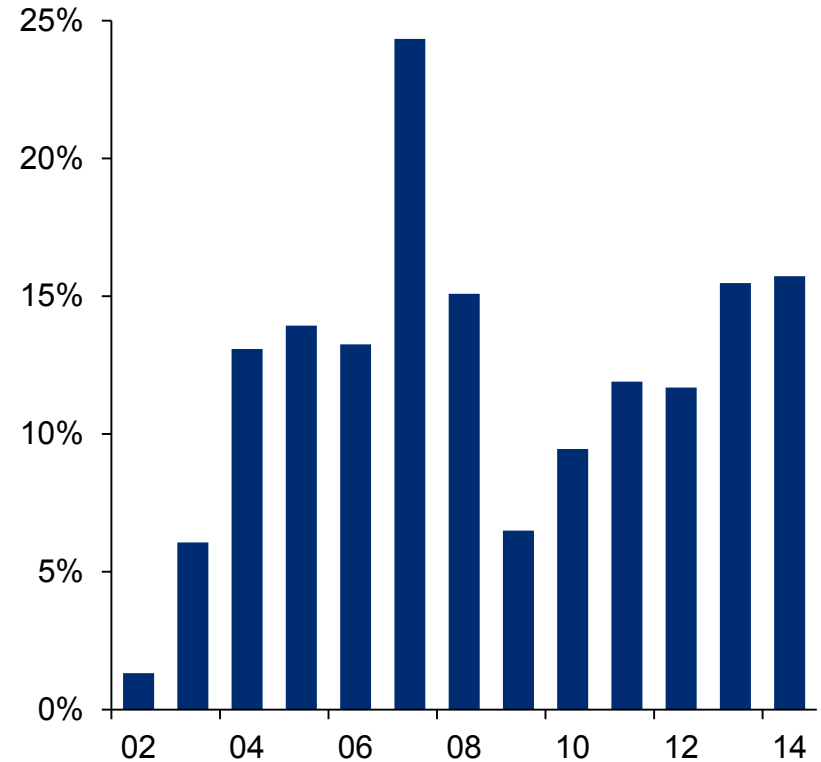
US CLO issuance, \$bn



Source: Citi Research.

## Survival of the weakest

Proportion of US HY issuance comprised of CCCs



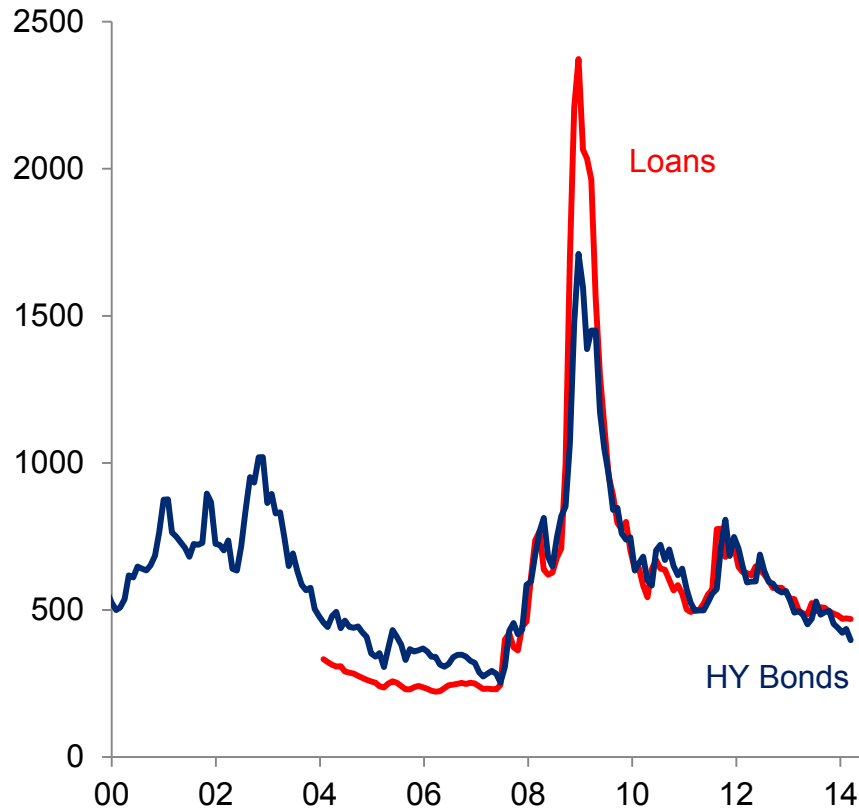
Source: Citi Research.

Certainly the reach for yield is back

# How stretched are valuations?

## Spreads not yet at cyclical tightness...

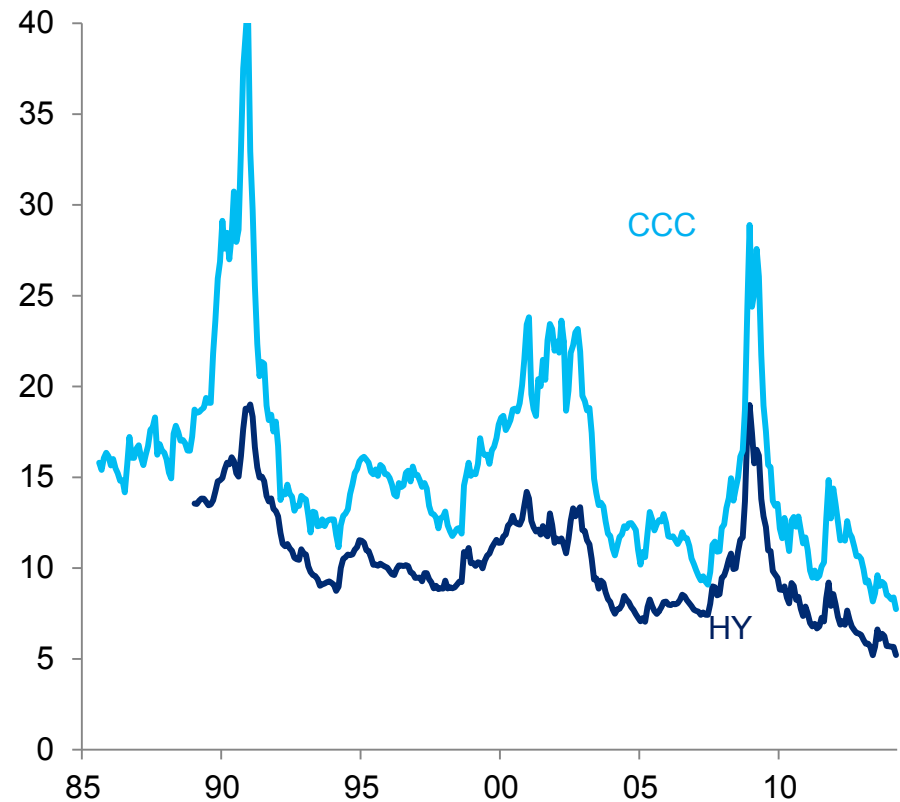
US lev loan and HY spreads, bp



Source: Citi Research, S&P Capital IQ.

## ...but yields are setting new records

US yields-to-worst, %



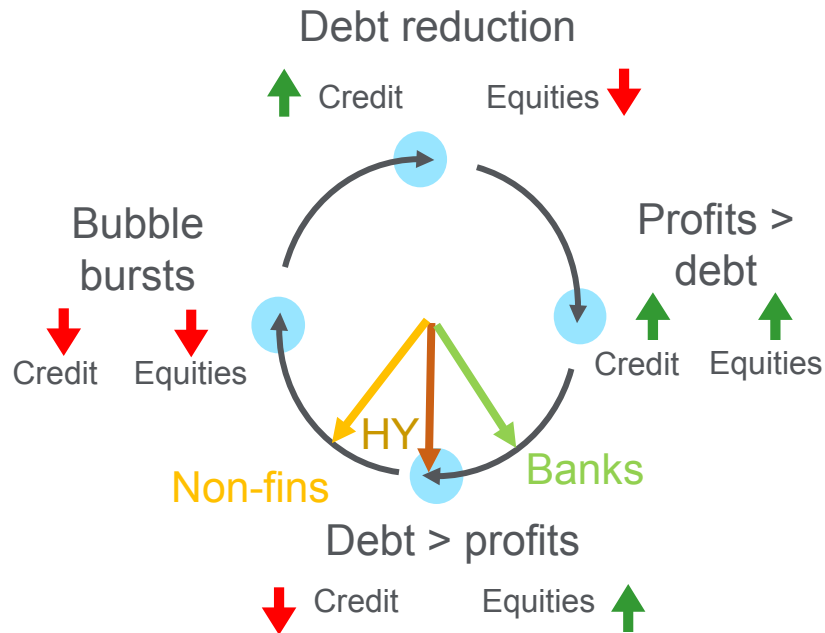
Source: Citi Research.

Less extreme in credit than in rates

# Yet credit fundamentals are deteriorating

## The leverage clock

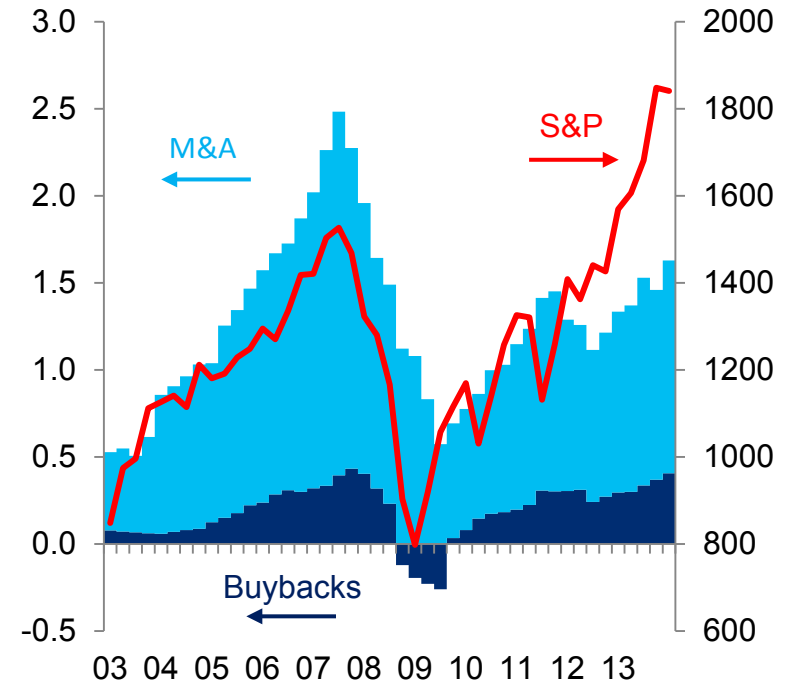
Citi's stylised view of the position in the credit cycle



Source: Citi Research.

## Who needs investors if corps buy this much?

Rolling 12m US corp equity purchases (\$tn) vs S&P 500



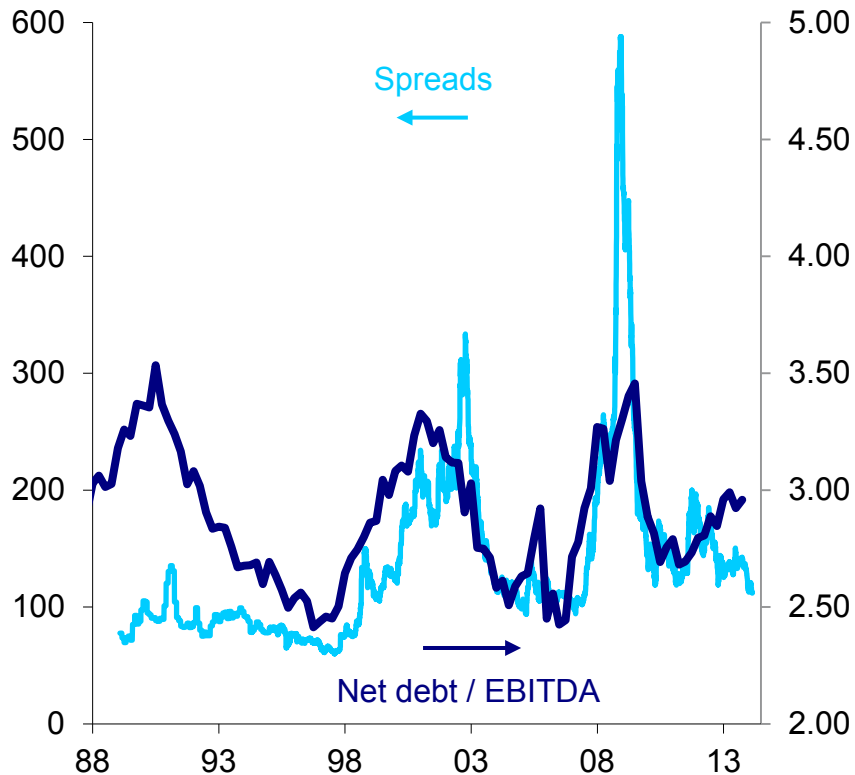
Source: Bloomberg, Fed flow of funds, Citi Research.

The disconnect with fundamentals is disturbing

# Distorted markets

## Spreads no longer follow leverage

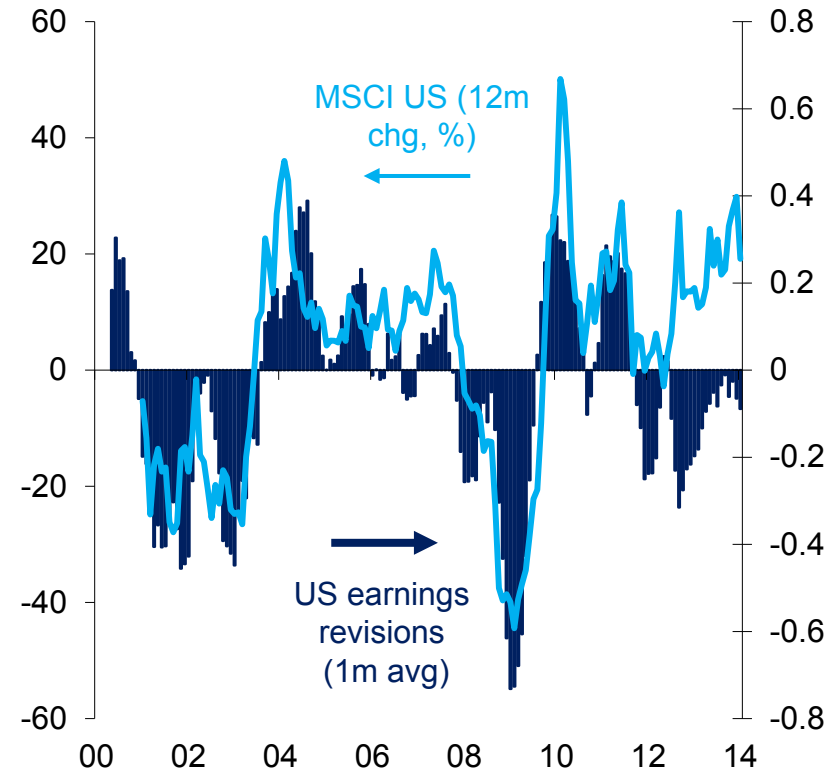
US nonfin spreads (bp) vs net debt/EBITDA (times)



Source: Citi Research, Federal Reserve, Haver Analytics.

## Equities no longer follow earnings

US equity market change vs consensus earnings revisions



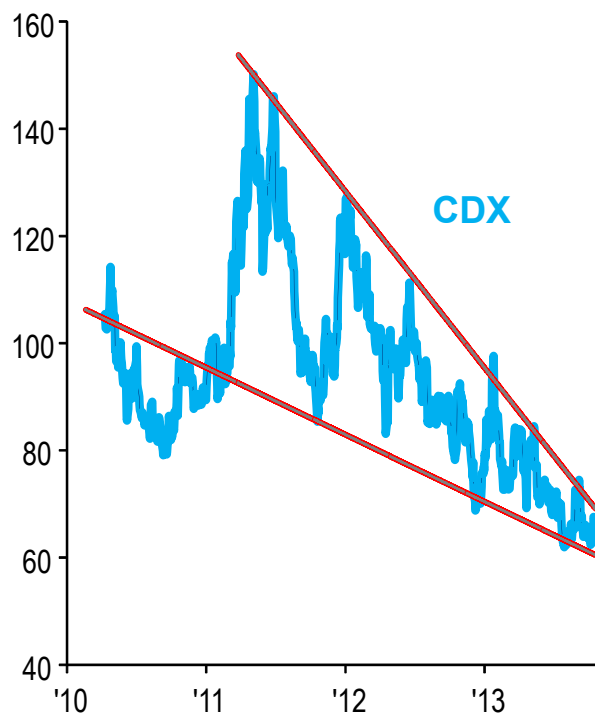
Source: Citi Research.

Markets stopped following fundamentals  
about two years ago

# What does it take to shock this market?

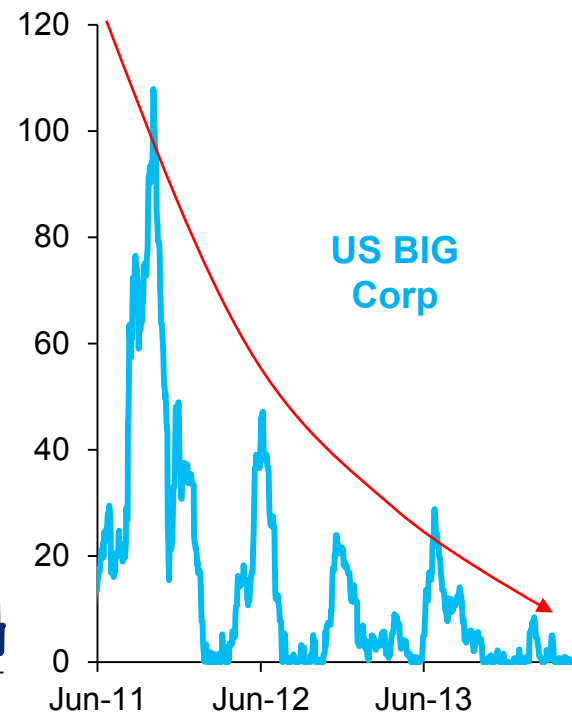
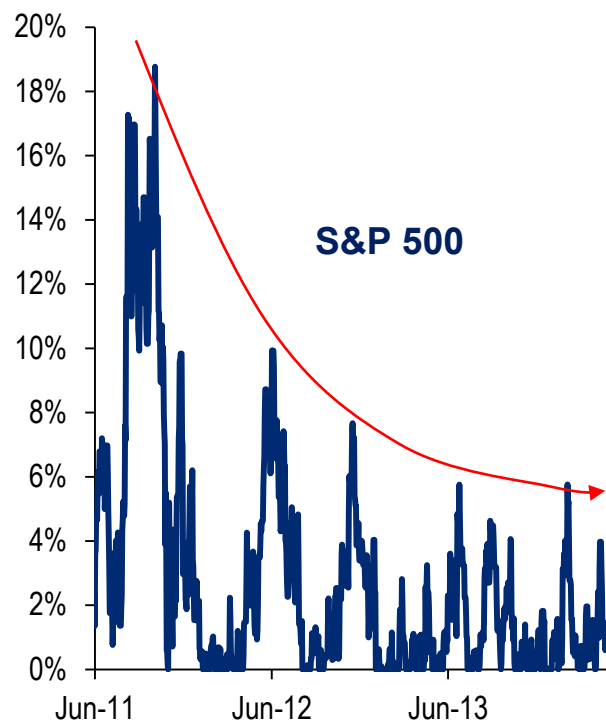
## Channelled – or repressed?

On-the-run CDX IG 5yr spread (bp)



## Diminishing drawdowns in equities and in credit

3m peak-to-trough movements



Source: Citi Research, Markit, Bloomberg

Vol ↓ => Risk limits ↑ => Demand ↑ => Valuations ↑ => Vol ↓

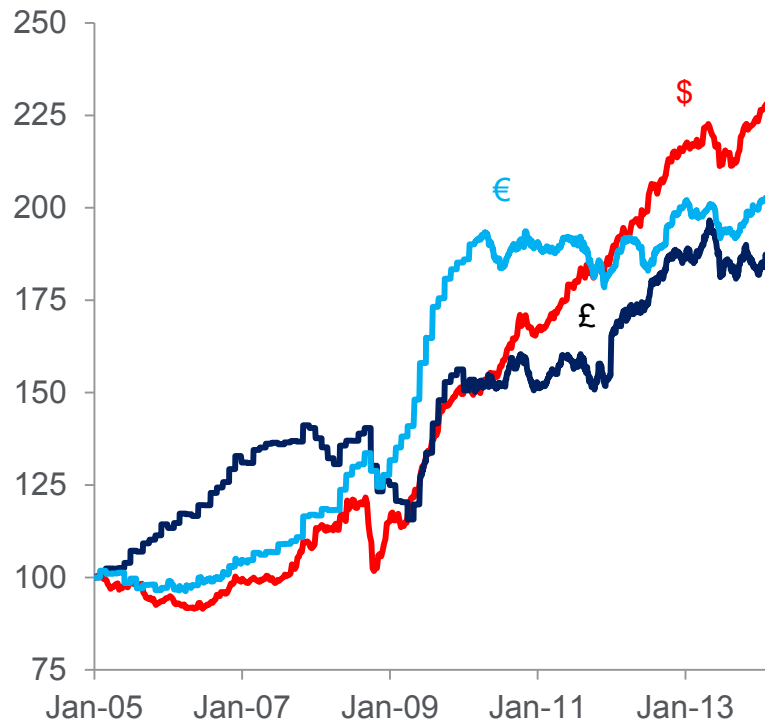
It feels quiet – almost unnaturally so



# Primary vs secondary liquidity

## Outstandings have doubled...

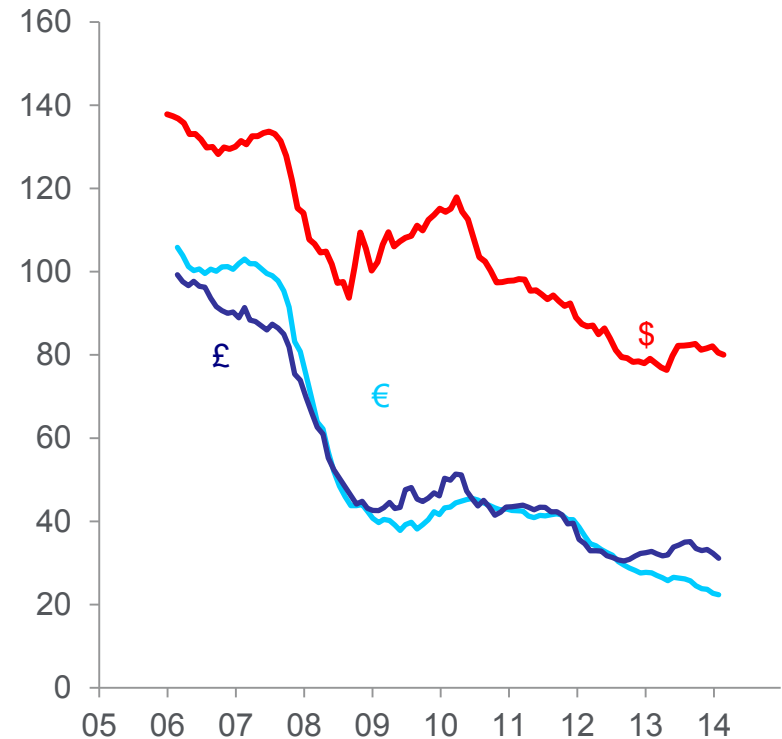
IG corporate bonds outstanding (index, Jan05=100)



Source: Citi Research, Markit.

## ...leaving turnover smaller by comparison

Turnover in IG corporate bonds, 12m rolling, % outstandings



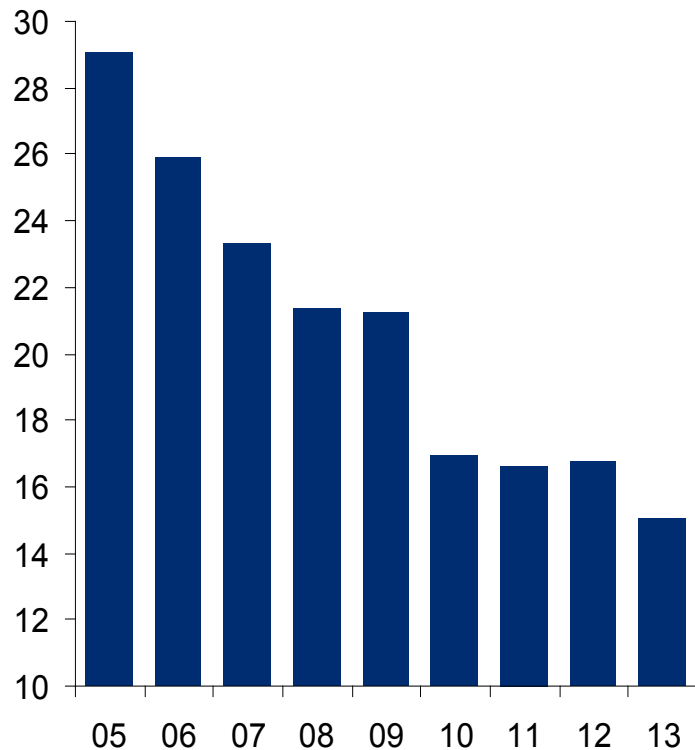
Source: Xtrakter, Markit, TRACE, Citi Research.

Secondary trading has not kept pace  
with the market's expansion

# How are investors responding?

## Make trades smaller...

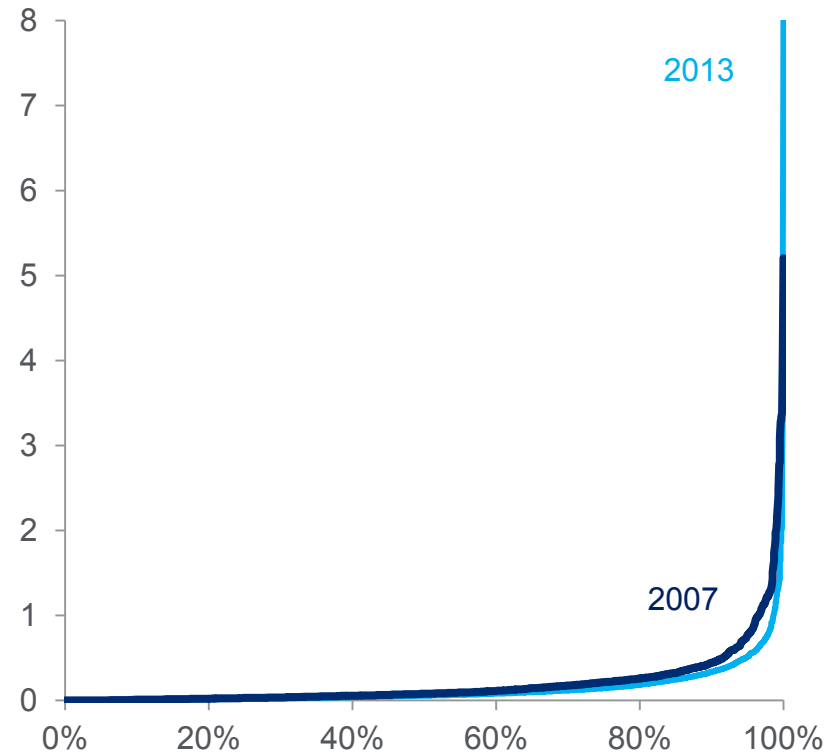
Average block trade size, US IG, \$m



Source: FINRA TRACE, Citi Research.

## ...and concentrate on recent new issues

Corp bonds ranked by annual traded volume in block trades, \$bn



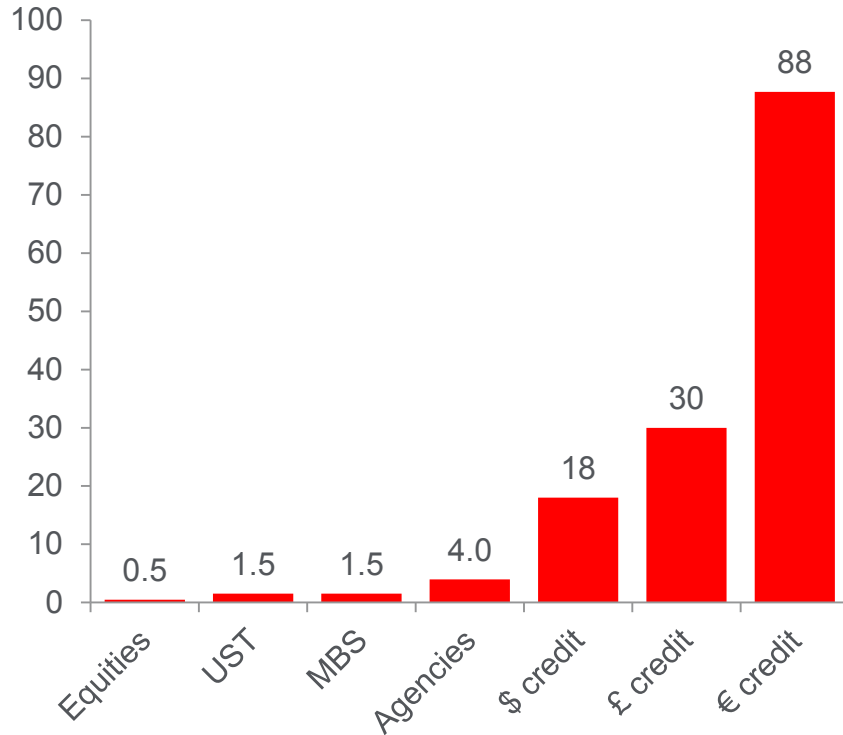
Source: TRACE.

Liquidity is becoming more concentrated

# Fake markets

## Credit liquidity dominated by primary

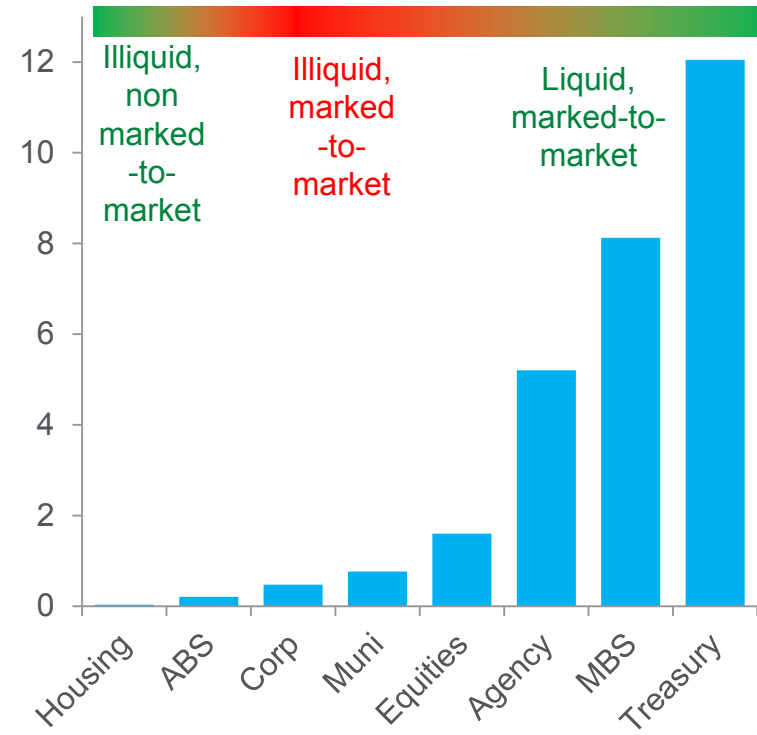
Gross issuance as % secondary market turnover, annual



Source: SIFMA, Citi Research, Xtrakter, NY Fed, Datastream.

## You shouldn't mark illiquid assets

Annual turnover (multiple of outstandings, times)



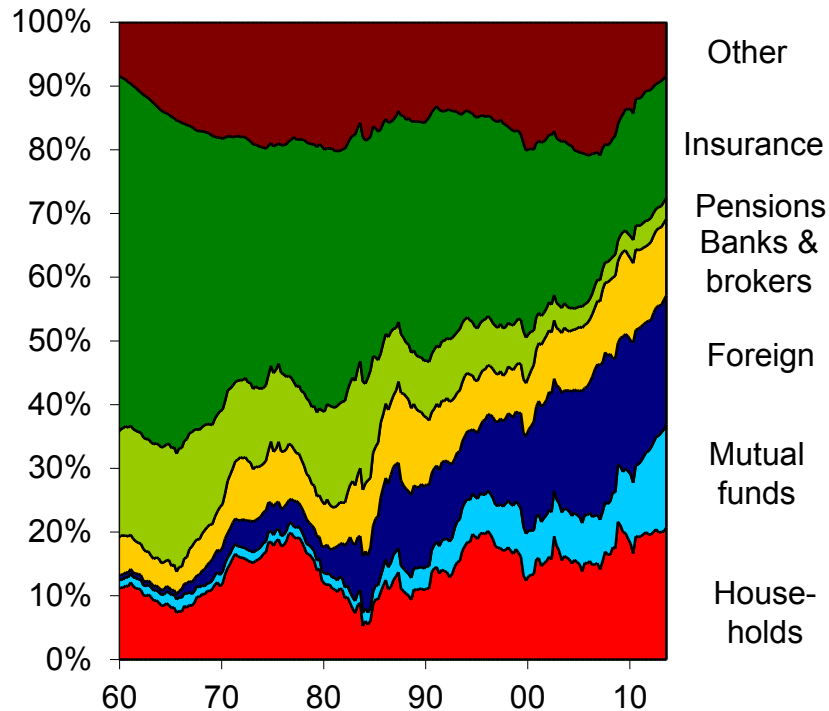
Source: SIFMA, Citi Research, National Association of Realtors, Datastream.

But the way out still seems problematic...

# Who's been doing all the buying?

## Stable hands diminishing

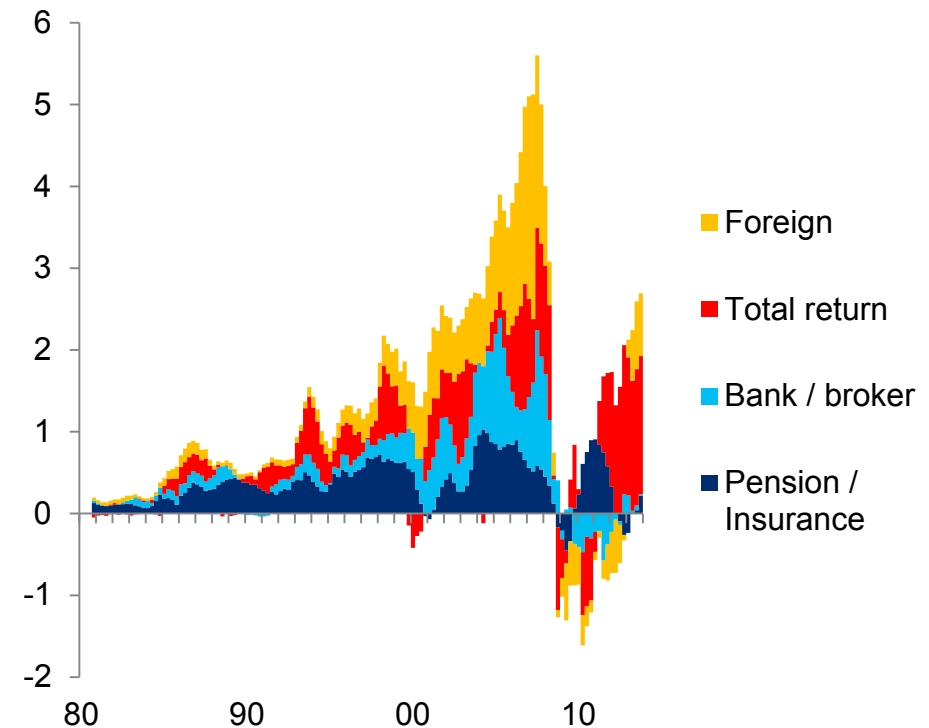
Owners of US non-financial corporate bonds, % of outstandings



Source: Fed flow of funds, Citi Research

## ... on the back of total return buyers

Net annual purchases of US corporates by sector (\$tn)



Source: Fed flow of funds, Citi Research

...especially given the nature of recent demand

Ever more stretched

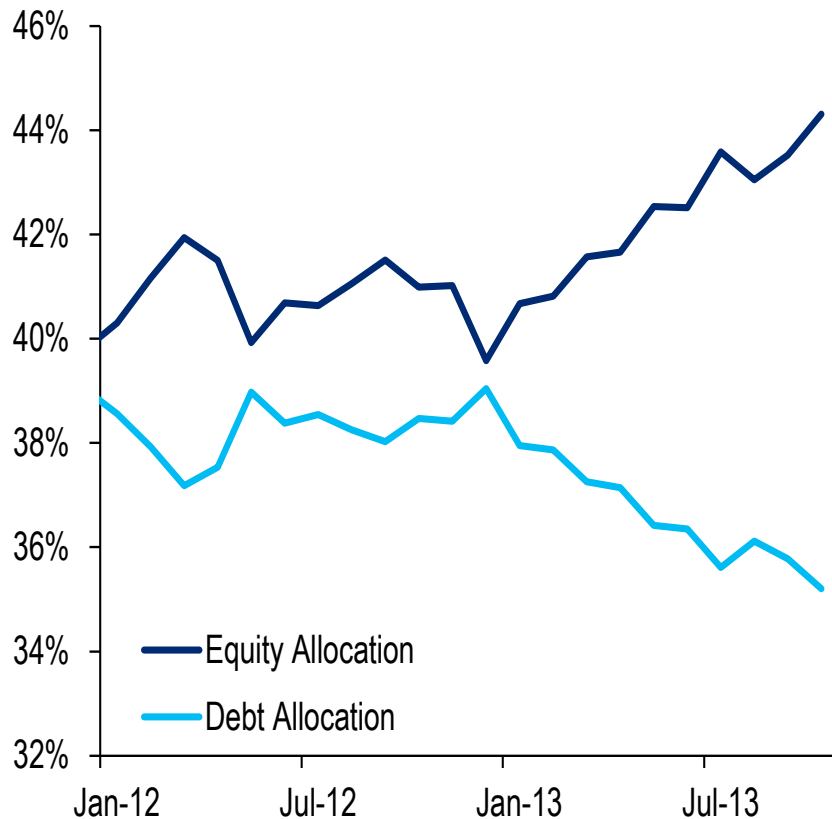
Yet remarkably sticky

How not to come unstuck

# Why haven't we sold off already?

## Rotating out, or rebalancing *in*?

US pension fund asset allocation, % assets

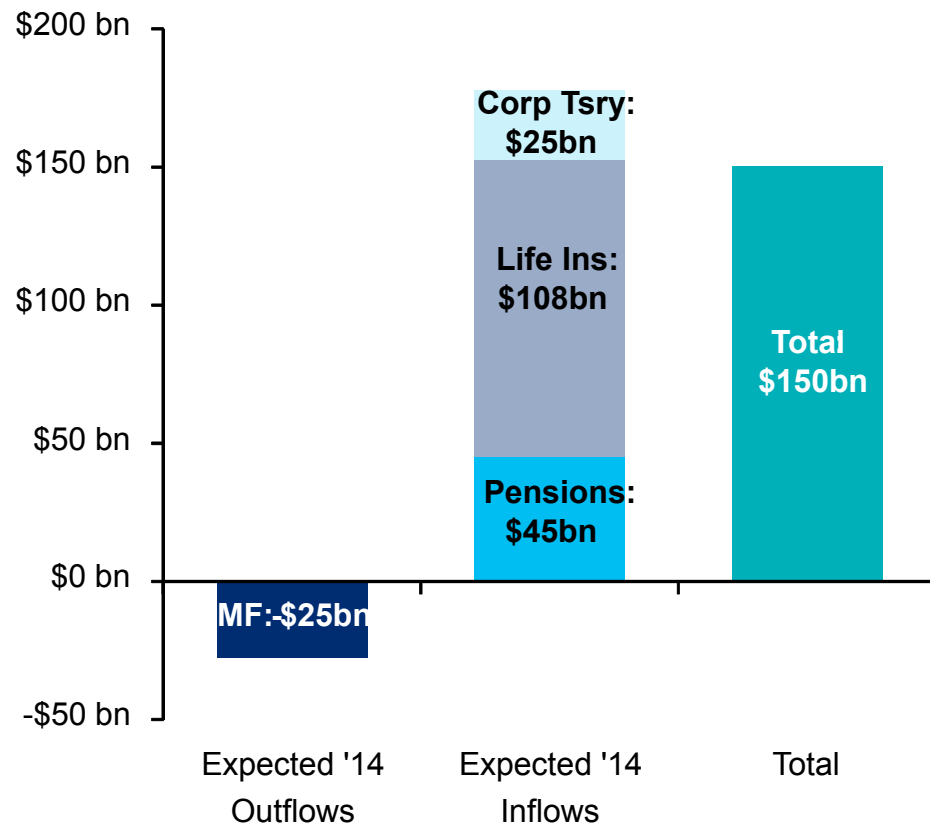


Source: Citi Research

Note: Based on largest 250 plans

## Model behaviour

Estimated US credit demand under simple models, \$bn



Source: Citi Research, EPFR, Bloomberg, SNL, Federal Reserve.

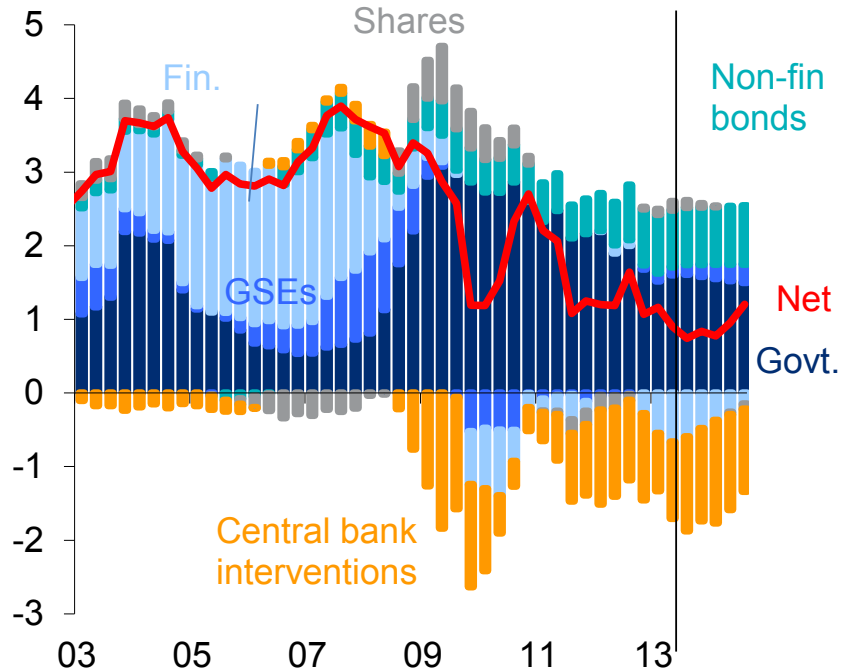
See *US Credit Market Update: A Review of Balances and Imbalances*, S. Antczak, 29 April.

## Higher yields should also imply rebalanced demand

# Too much money chasing too few assets

## Net issuance down from \$4tn to \$1tn

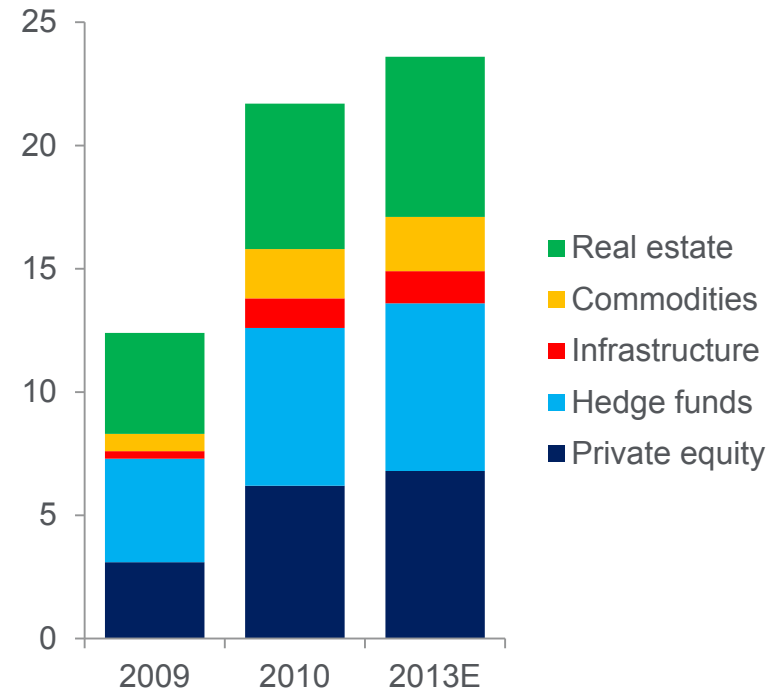
Net iss. of new securities minus central bank\* interventions, 12m rolling, \$tn



Source: Haver Analytics. \*: Federal Reserve, BoJ & ECB

## No alternative but to buy alternatives

Holdings of alternative assets, NAVEU avg, % AUM



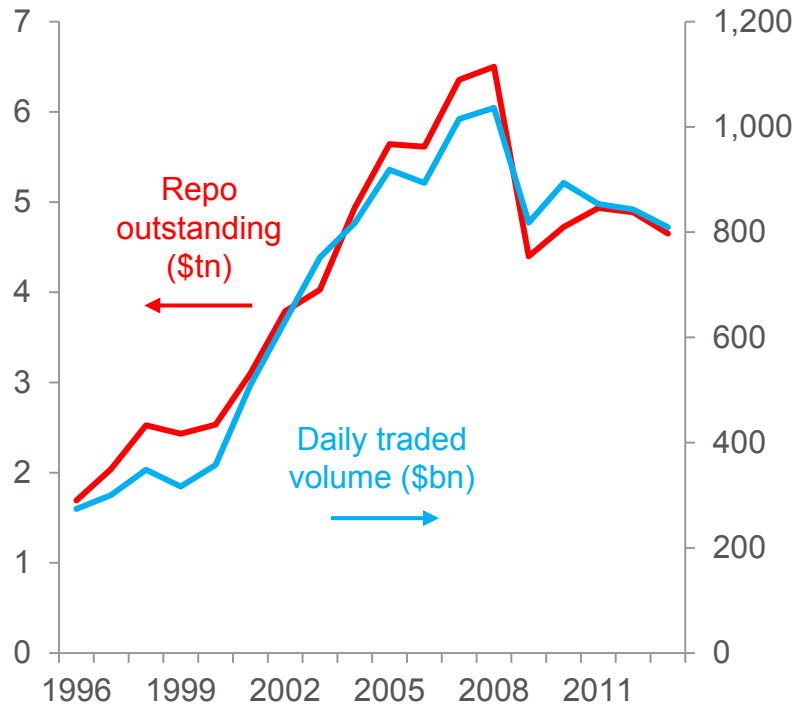
Source: McKinsey / Institutional Investor Global Survey on Institutional Investing, 2011.

Not just increased demand – also reduced supply

# The effects of constraints on leverage

## Less repo means lower volumes...

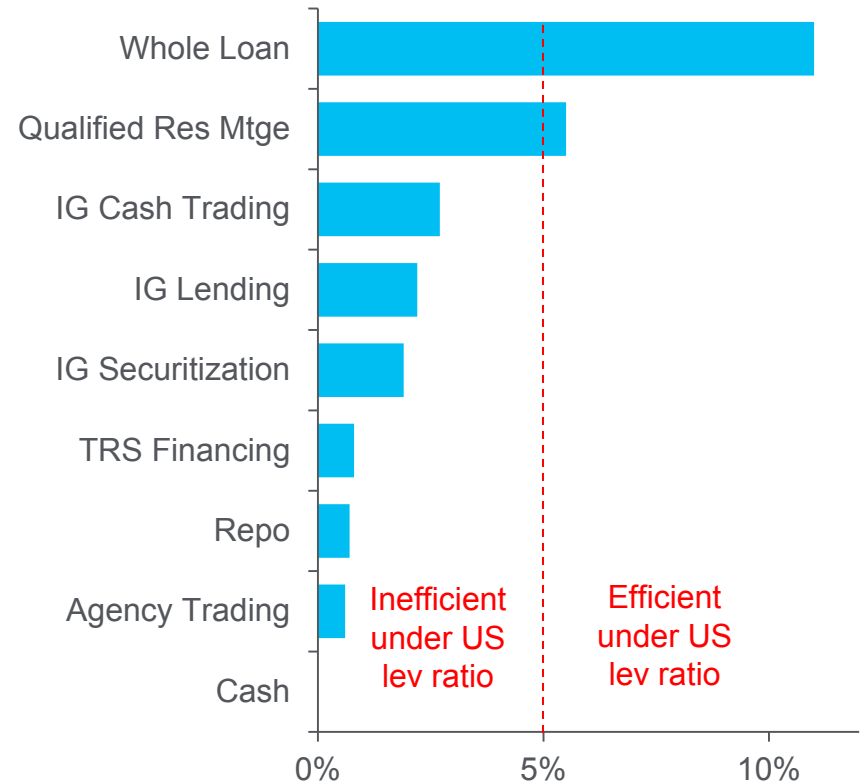
Primary dealer total financing (\$tn) vs  
total daily traded volume across US fixed income (\$bn)



Source: SIFMA. Dealer financing = repo + reverse repo.

## ...but return requirements have not fallen

CET1 required against various businesses, % notional



Source: Citi Capital Optimization team. See [The Legacy of the Bank Leverage Ratio \(for Credit\)](#), J. Shoup, 18 Sep.

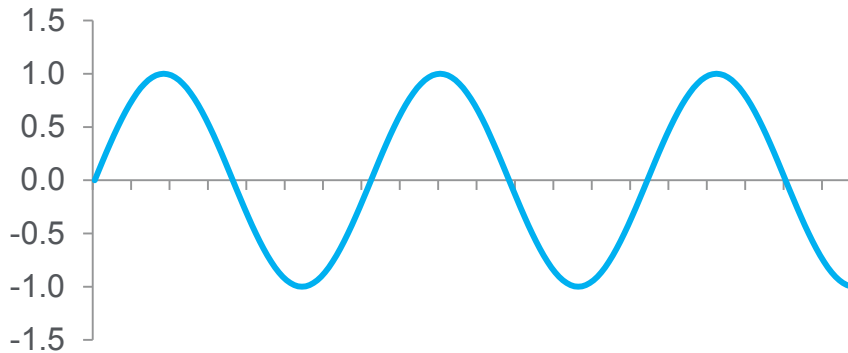
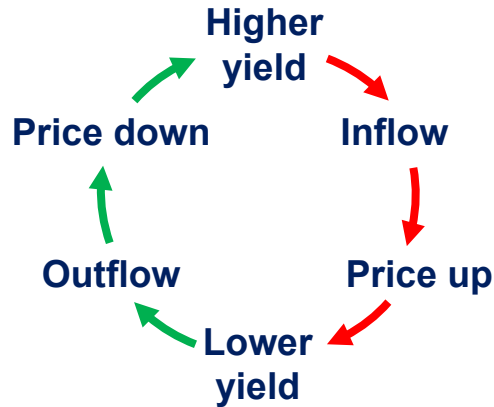
## Less trading, but not less risk taking



# The importance of feedback loops

Normally, price movements are self-limiting

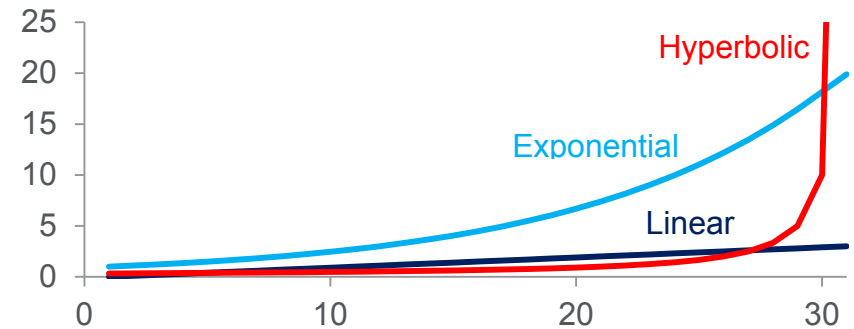
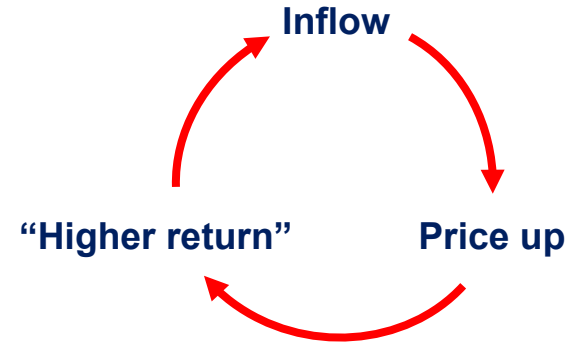
Negative feedback loop



Source: Citi Research.

Bubbles, however, behave hyperbolically

Positive feedback loop

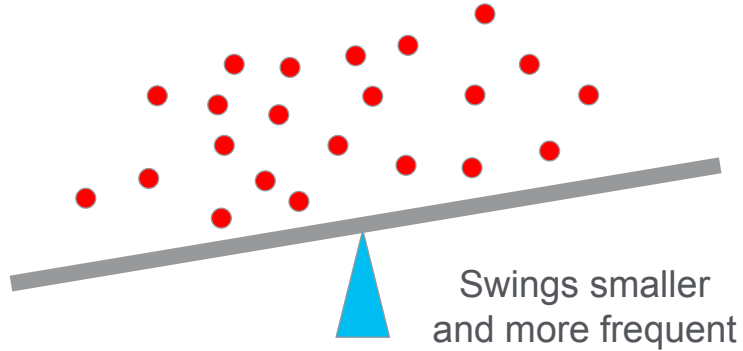


Source: Citi Research.

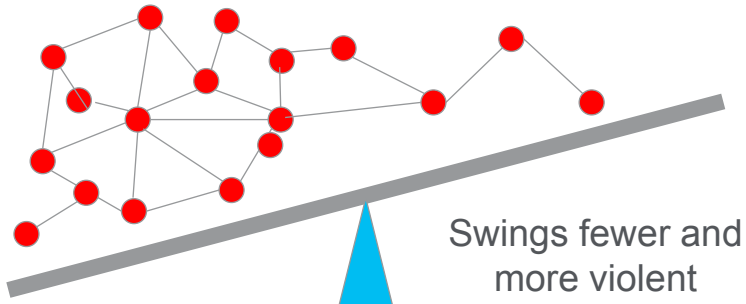
But which process are we following?

# Bricks on elastic, and balls in bowls

## Independent



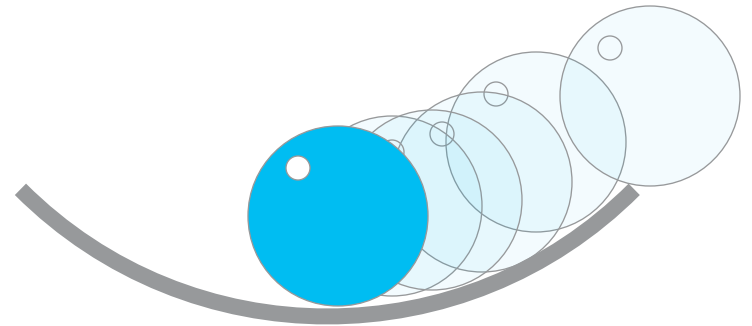
## Interconnected



Source: IMF, World Bank, NBER, Bank of England.

## Ball in a bowl

Nudge gently and it comes back. Nudge harder...



Interconnections make for stickiness, but also fragility

# Everyone looking at inflows

## Market much more correlated with positions

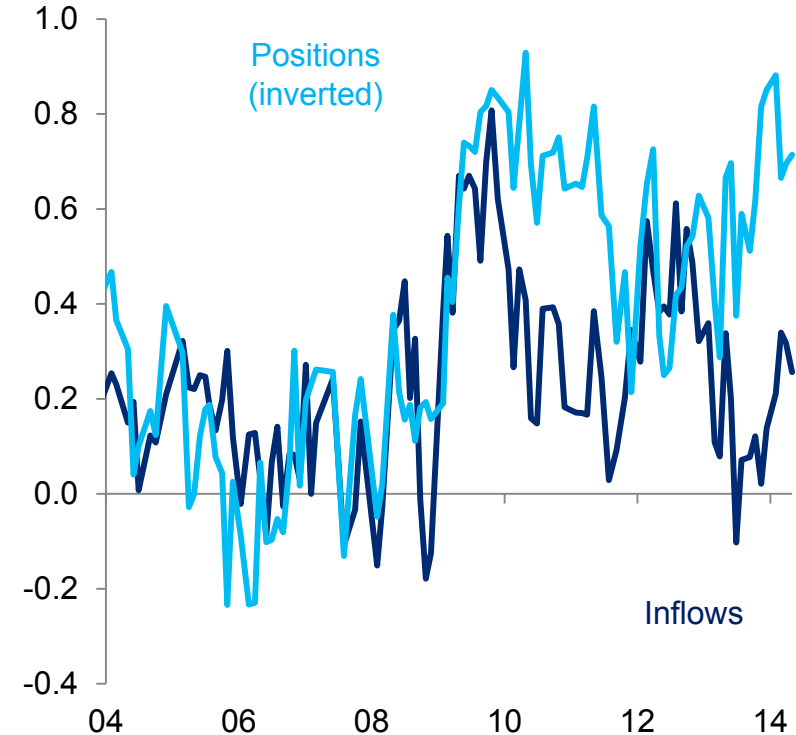
Citi credit survey positions (index, -2 to +2) vs iTraxx (bp)



Source: Citi Research, Markit.

## Yet positions are justified only by inflows

Citi credit survey positions and net inflows (index, -2 to +2)



Source: Citi Research.

Inflows *do* seem stickier than tactical position-taking

# Unstable on our feet

Tactical shorts

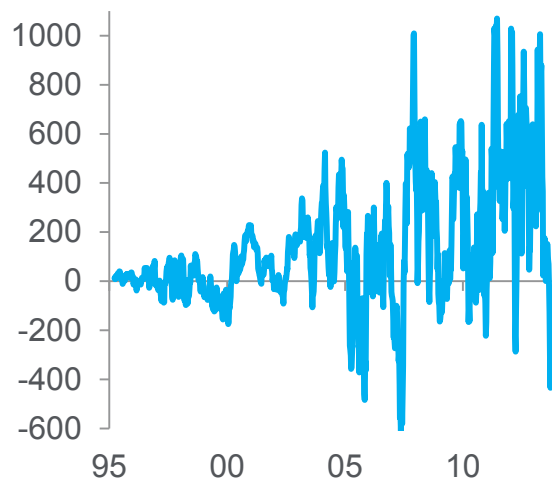
+

Strategic longs

=

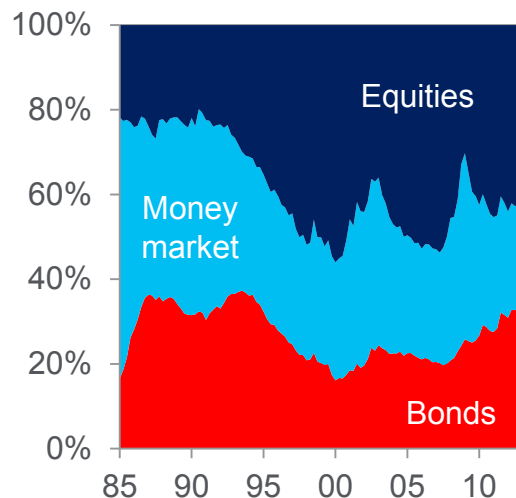
Ball in a bowl

Net UST positioning, m contracts



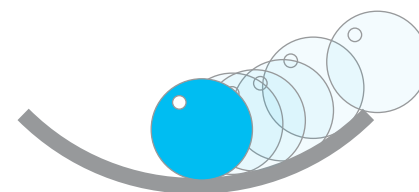
Source: CFTC. 2s, 5s, 10s, 30s, ultra in 10y equivalent.

US mutual fund asset allocation, %



Source: Fed flow of funds.

Stable – up to a point



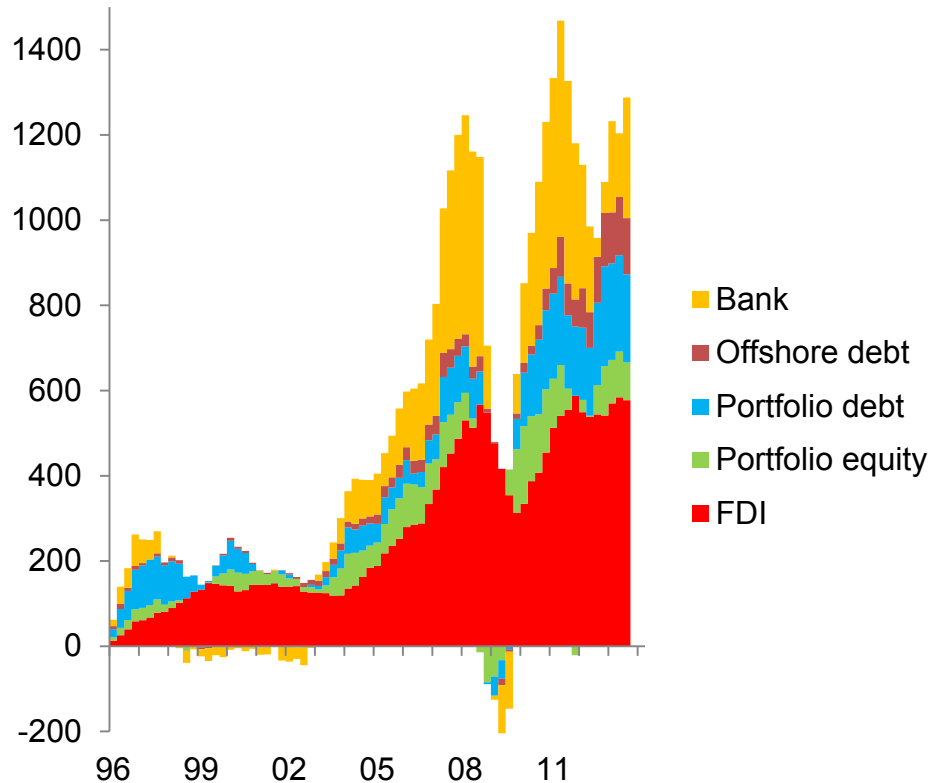
- But doesn't the same apply to EM, to periphery govies, to € bank debt..?

Preparing for a risk may postpone its actually happening

# The most popular tourist destination? EM

## Piling in, and ever more of it through debt

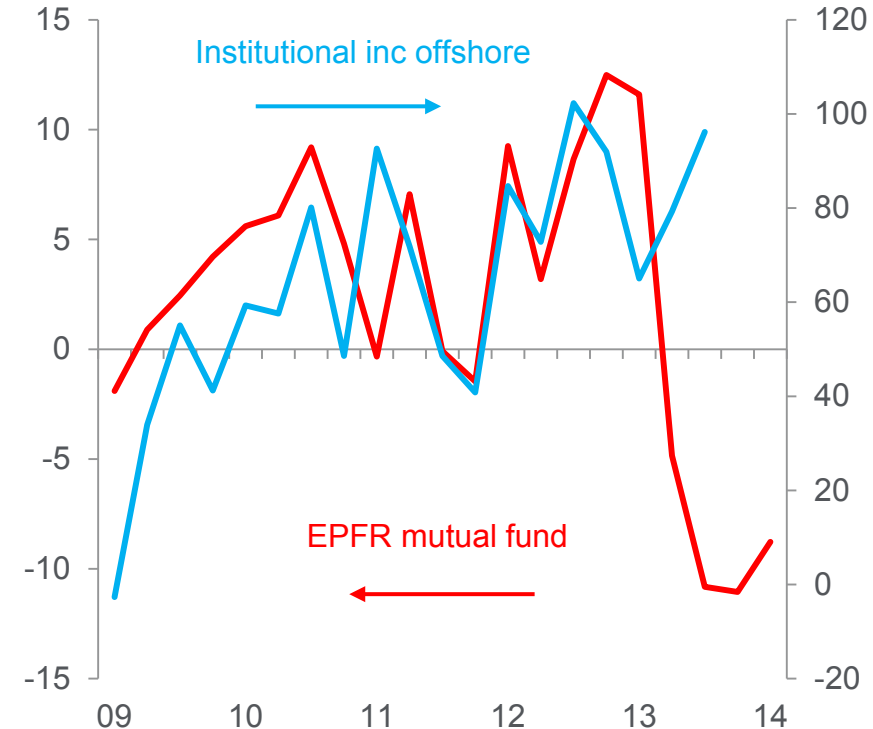
Rolling annual flows to emerging markets\*, \$bn



Source: National Balance of Payments, BIS securities statistics, Haver Analytics, Citi Research.  
\*Sample of 16 countries representative of broader total.

## What would make institutionals sell?

Quarterly flows to EM by source\*, \$bn



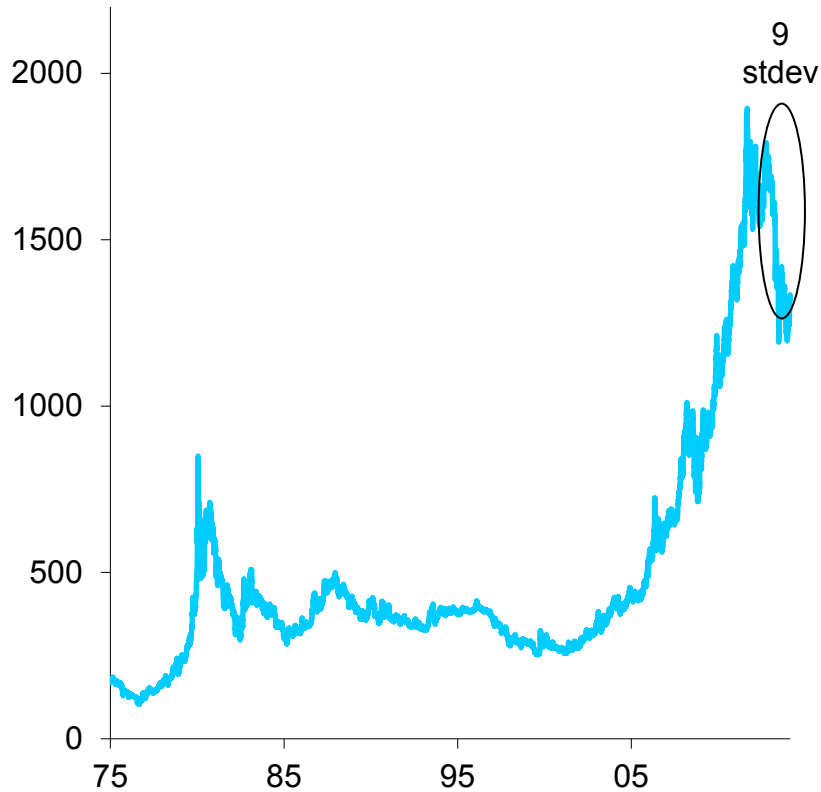
Source: Haver Analytics, EPFR, Citi Research, national balance of payments.  
\*Institutional flow estimated by subtracting EPFR flows from balance-of-payments-derived total.

Even in EM, flows remain remarkably sticky

# Holiday snaps

## Suddenly not so precious

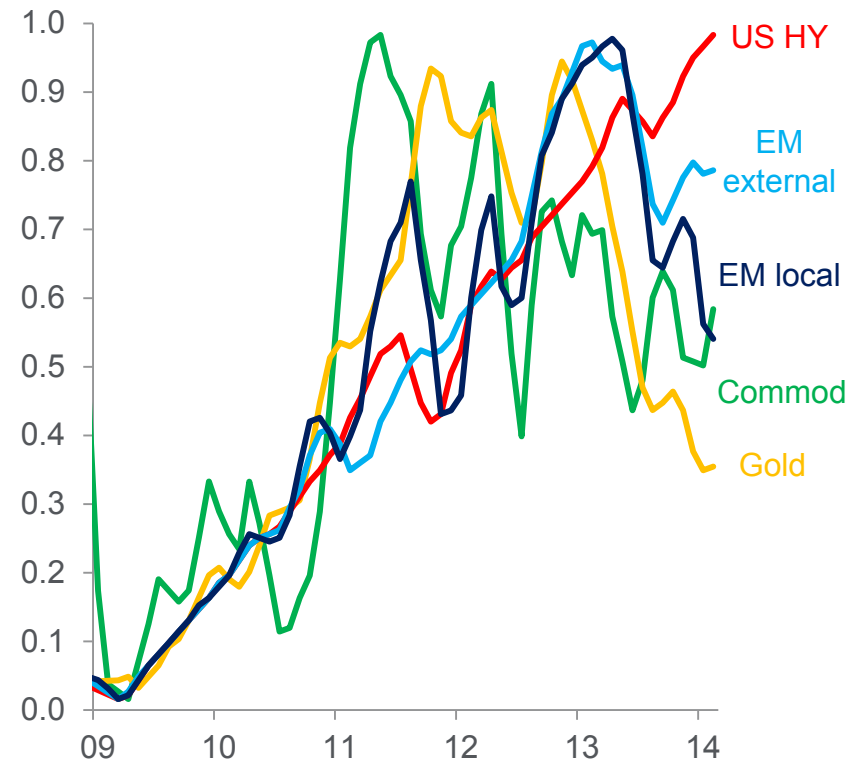
Gold price, \$



Source: Haver Analytics.

## Disillusionment one asset at a time

\$ total return percentiles since 2009, unhedged, 3m mov avg



Source: Haver Analytics, Citi Research.

It's only with outflows that you get a proper repricing

Ever more stretched

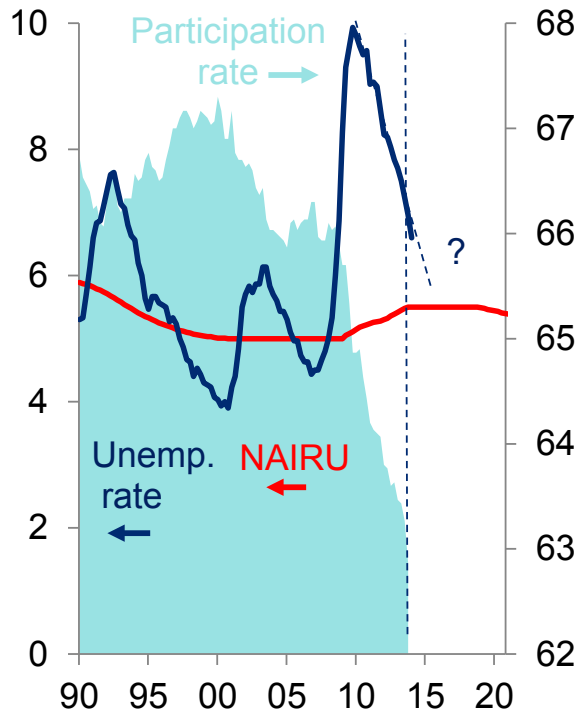
Yet remarkably sticky

How not to come unstuck

# All eyes on rates and inflation

## Will leavers return?

US unemployment & participation rate  
vs CBO estimate of NAIRU\*, %

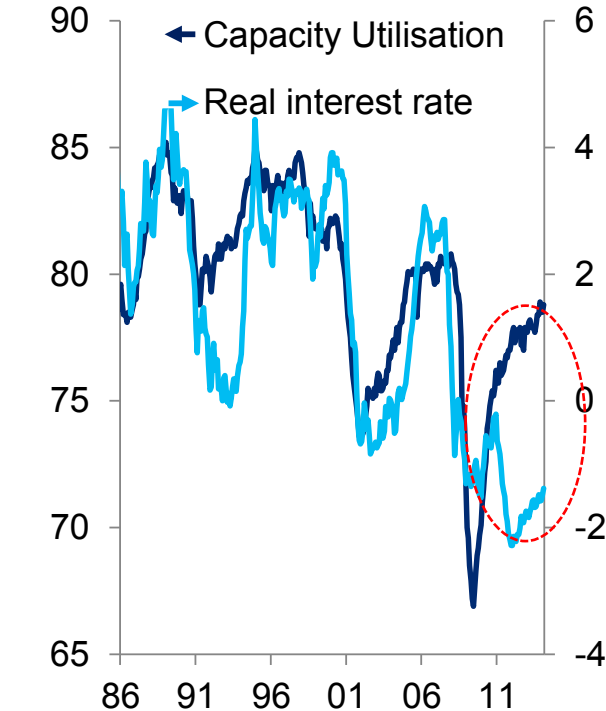


Source: Citi Research, Haver Analytics.

For more on this topic, see *When will the credit cycle turn?*, H. Lorenzen, April 2014.

## Real interest rates too low?

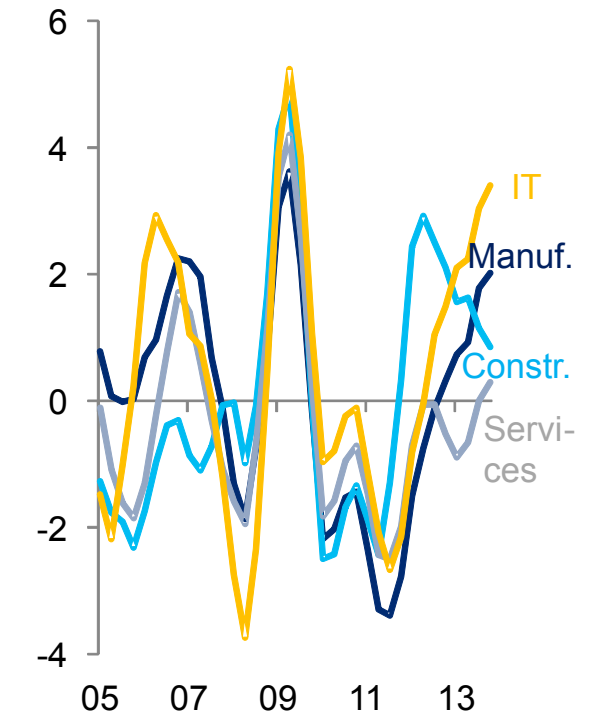
US cap. utilisation vs real interest rate, %



Source: Citi Research, Haver Analytics.

## Wages are key to the Fed!

US real wage increase by sector, % YoY



Source: Citi Research, BLS, Haver Analytics.

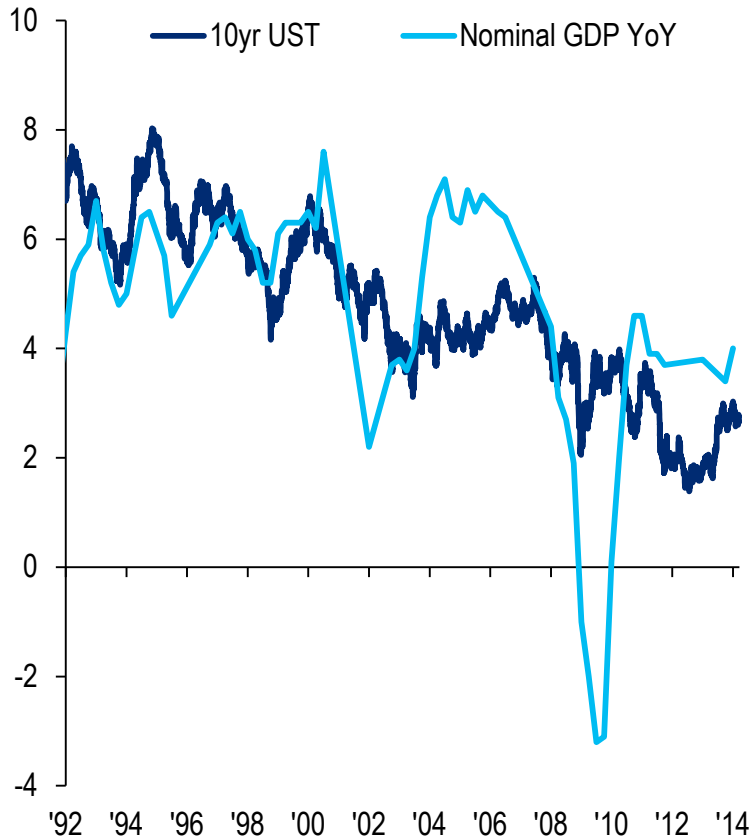
When the turnaround comes, it seems likely to be sudden



# When will inflation and rates actually rise?

Where nominal goes, so has the 10y ...

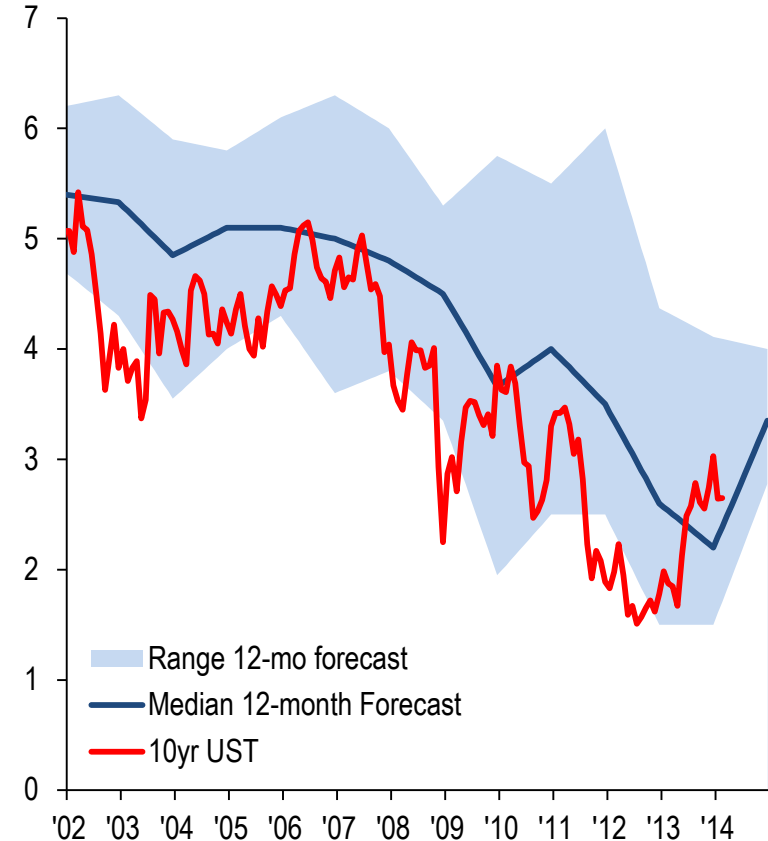
Nominal GDP vs 10y Treasury yield (%)



Source: Citi Research, Bloomberg, Bureau of Economic Analysis  
See *Too many unknowns and not enough spread*. J. Shoup, March 2014.

... but yield forecasts have been disappointed

10y Treasury yield vs forecasts made 1y prior (%)



Source: Citi Research, Bloomberg

But it could also prove quite some way off

# Strategies for sticky markets

When the traditional framework says “sell”...

Citi credit investment factor views, -2 to +2

...yet central banks say “buy”, you:

	Fundamental	Technical
Short-term	<b>News</b> <b>0</b>	<b>Positions</b> <b>+1</b>
Long-term	<b>Leverage</b> <b>-1</b>	<b>Valuation</b> <b>-1</b>

- Pick better places to be long
- Go long, but with hedges
- Use barbells

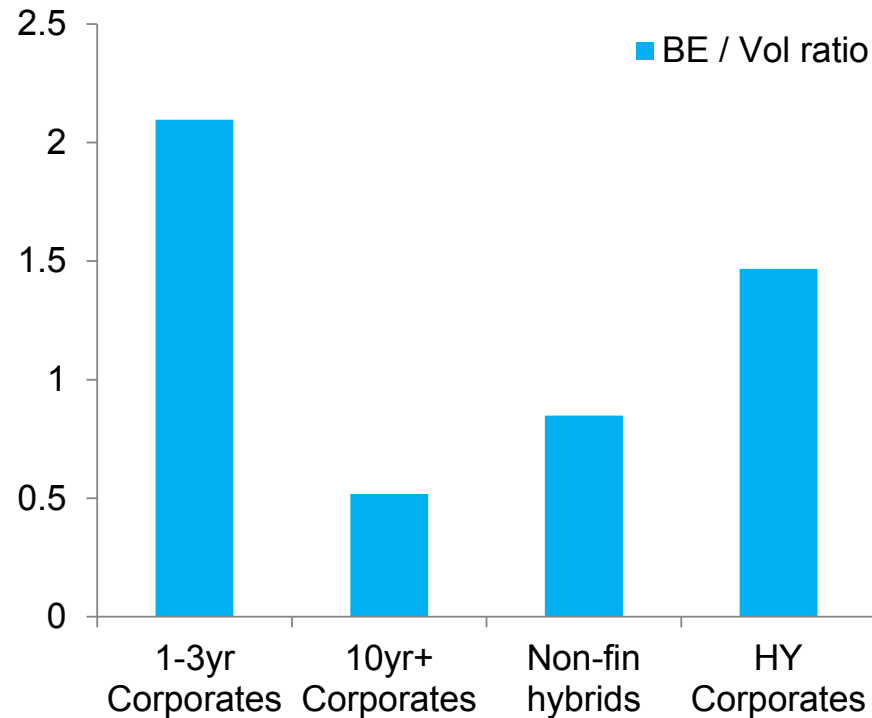
Source: Citi Research.

Rel val, hedges or barbells

# Pick the least uncomfortable positions in cash credit

## Heed those breakevens!

12m BE/Vol ratio for select investments, Europe



Source: Citi Research, MarkIt.

## Think in terms of relative value

Selected rel val recommendations

Subordination > cred. risk > Duration

Long duration in CDS; Short in cash

CDS > cash

Europe > US

Financials > non-financials

Leveraged > releveraging credits

Long T2-host CoCos

CDS Flatteners

Sell short-dated straddles

Long risk junior tranches

Long equities vs credit

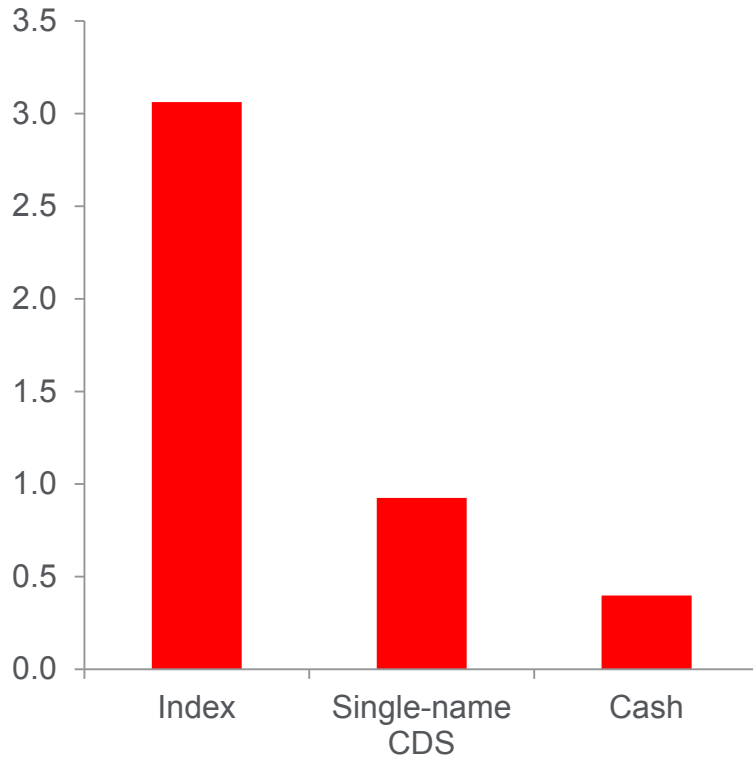
Source: Citi Research.

Subordination > Lower credit quality > Duration

# Prefer CDS to cash wherever possible

## Liquidity breeds liquidity

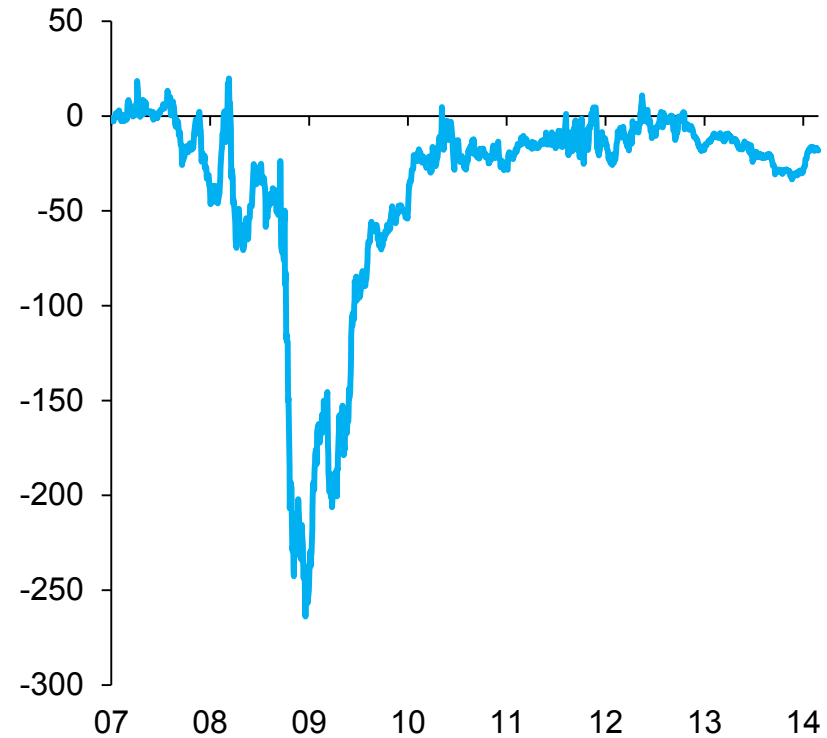
Annual turnover in € IG, €tn



Source: Markit (index), DTCC (CDS), xTrakter (cash) .

## Neg basis spikes more likely than positive

Average CDS-cash basis on US corp credit, bp, maturity-matched



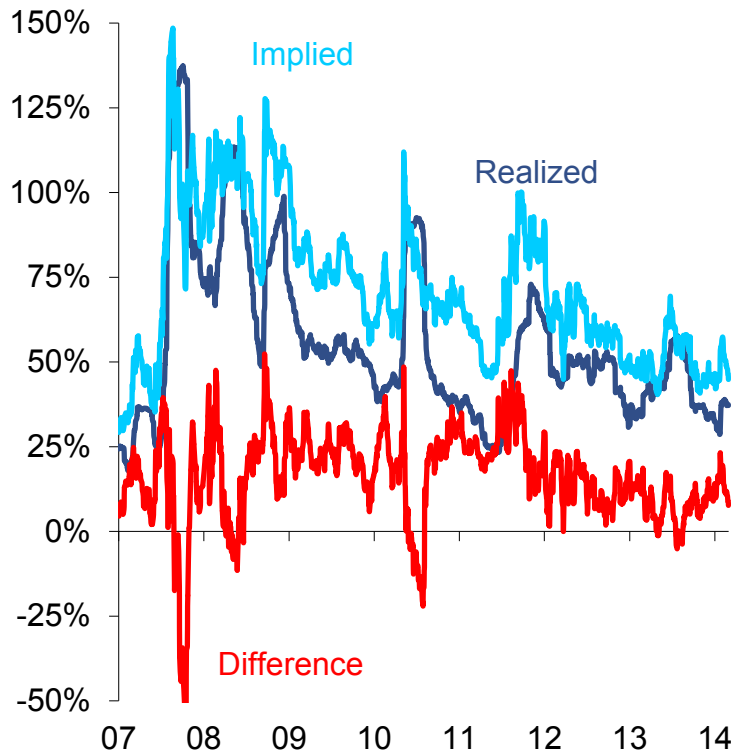
Source: Citi Research.

## Sell protection for liquidity, and optionality

# Go long, but with hedges

## In credit, implied trades high vs realized

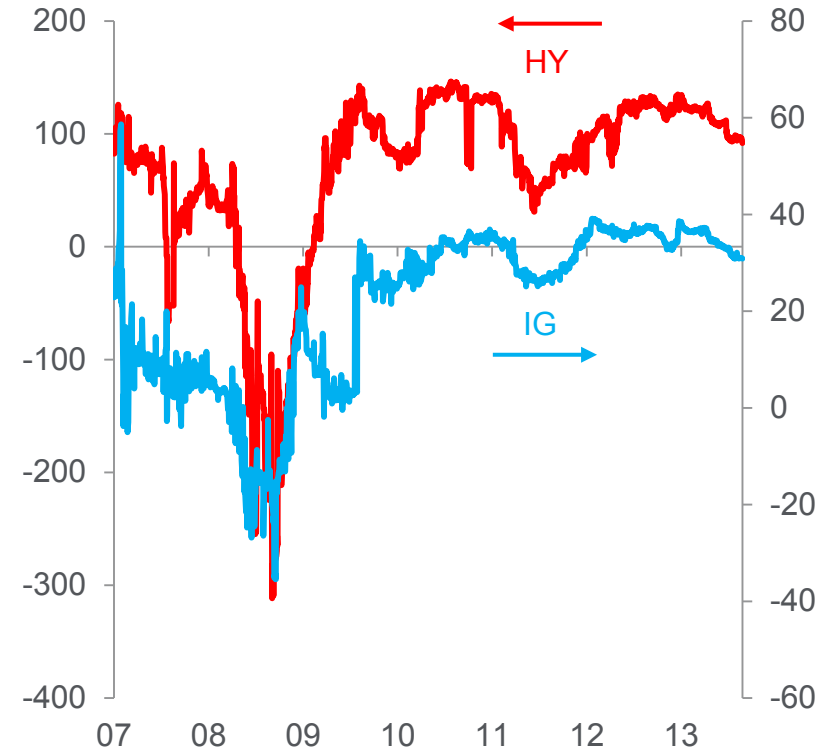
Implied vs realized vol on iTraxx



Source: Citi Research. See the [Credit Options Pricing Tool](#) on CitiVelocity. Trade specifics shown are for illustrative purposes only.

## CDS: near-record steep levels

3s5s steepness in \$ credit (bp)



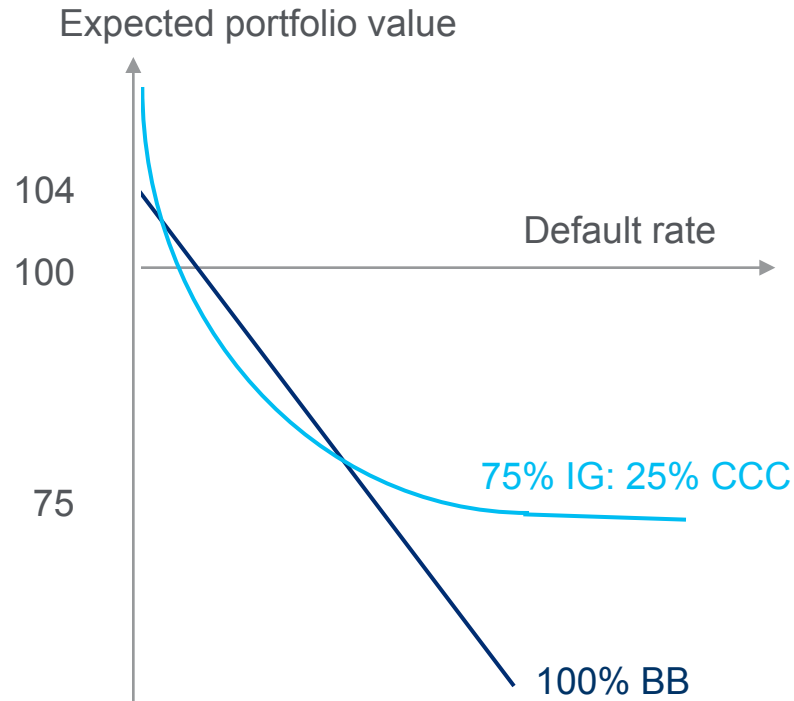
Source: Markit, Citi Research. See [Options vs Curves: Playing with Tail Risk](#), A. Elizalde, 13 Feb.

Vol hedges are too short-dated and too crowded.  
Use flatteners instead

# The barbell principle

## Two ways to make 4%

Same yield, different payoffs (stylised)



Source: Citi Research.

## Finely balanced

Barbells to consider



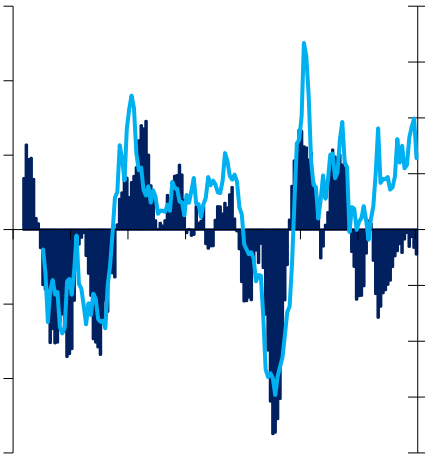
Long	Short	Long
US IG	BB, B	CCC
Covered	Sen / LT2	T1
Cash	Fixed Income	Equities
GE, FI	IT/SP/FR	PT, IR
US Utilities	Industrials	US Fins

Source: Citi Research.

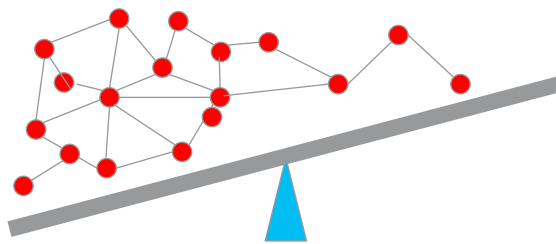
Try to be long the tails, not short them

# Conclusion

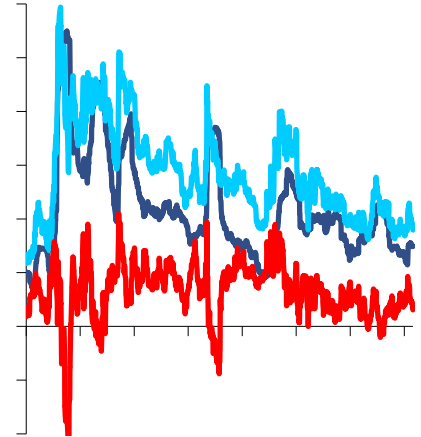
Everyone's long,  
with no conviction



Stable until it breaks



Try to find less  
crowded exits



Elastic tends to break suddenly and without warning -  
but we think this band has further to stretch

# Appendix A-1

## Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

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