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## Frail Gas: The Vulnerable Foundation of America's Recovery

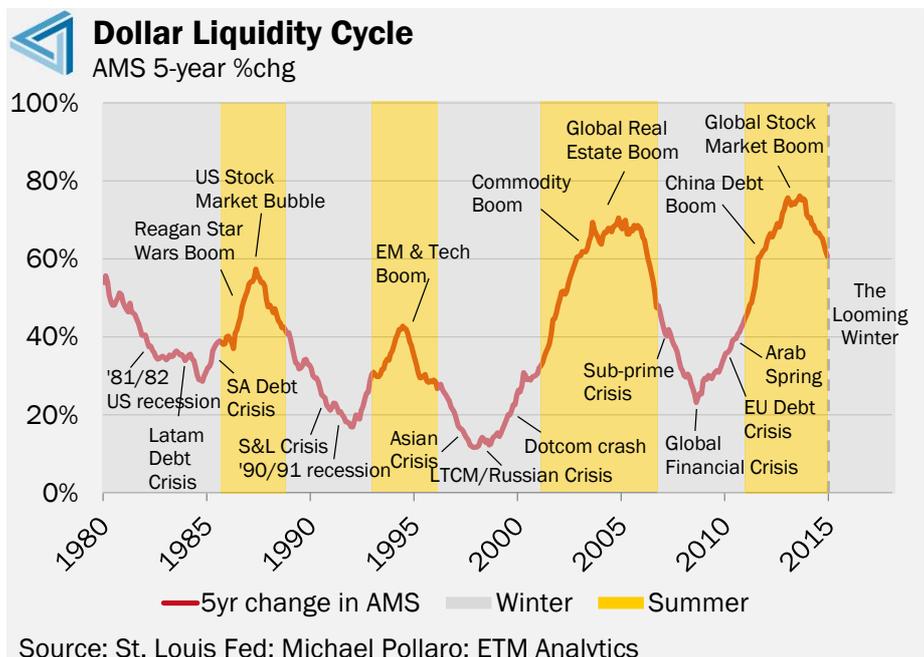
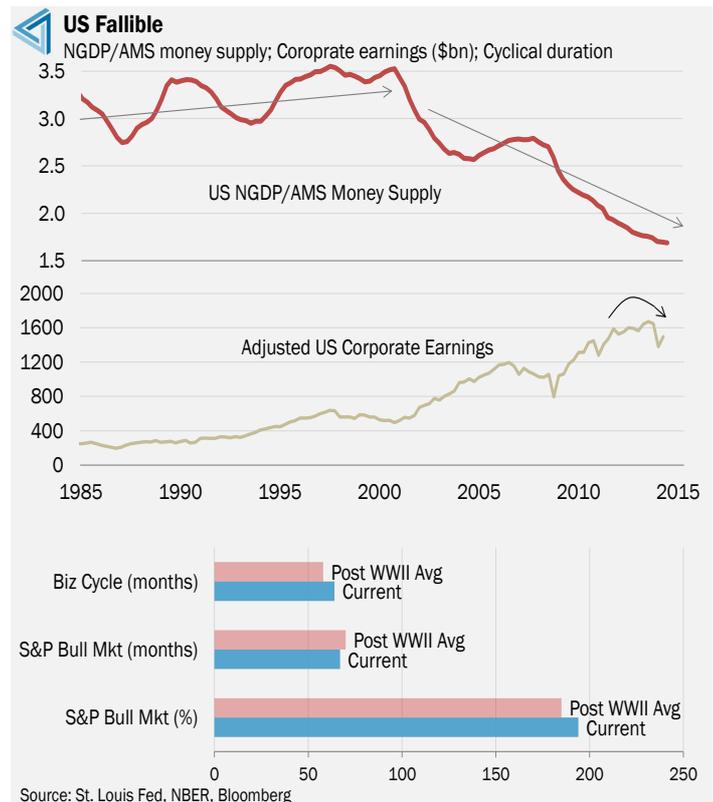
We have highlighted in previous ISJ editions why we think America is headed for a business cycle downturn in the short to medium term. We see the zone of timing for this cyclical phase sometime in h2 2015 or h1 2016. In this edition we highlight the first of a series of potential catalysts for a US downturn or deeper recession: the US energy boom.

While the banks have been pre-emptively bailed out, the broad money counterpart to that reserve money intravenous therapy has been pumped into leveraged speculation in stocks, corporate debt, high-yield bonds, houses, and much else, goosing growth and raising systemic fragilities outside the banking system. But growth off ZIRP and a flood of free money is yet to undergo its true test: A prolonged withdrawal of monetary heroin.

A host of indicators are already flagging the change of season afoot. Trillions of dollars of QE has elicited a meagre GDP response. The bull market in stocks is long in the tooth by post-war standards, as is the current expansion phase of the business cycle. Earnings quality is deteriorating, a reliable sign of looming earnings problems ahead.

The current business cycle and S&P bull markets will be longer than their post-WWII averages largely because of the sheer quantum of Fed money pumping into risk and high-yield markets, the shallow trajectory of the GDP recovery, ZIRP life-support, and as of yet subdued CPI inflation and commodity deflation.

But all cycles run their course, and the build-up of pockets of potentially large financial risk, bubble sectors, and tightening dollar liquidity, point to enough cyclical fragility for any of a number of triggers to spark a downturn.



## Shale Gas: A Sector in Need of Consolidation

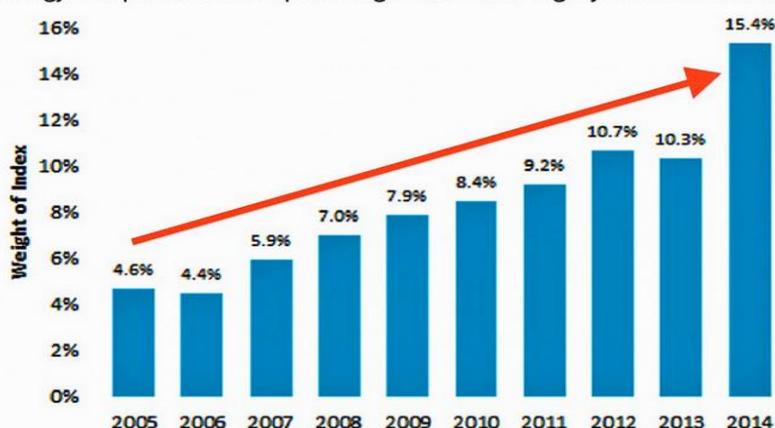
Cheap Fed money has catalysed with hydraulic fracturing technology to form an investment bubble in shale gas and downstream industries that has the potential to unravel in a painful bust.

A slew of frothy IPOs and a wave of speculative risk-seeking, QE-induced capital have seen funds pumped into the sector in recent years while returns have yet to match the hype.

Some of the large energy players have had to take sizeable write-downs already on their shale experiments. Much of the funding has been sourced in seeming “gold rush” type frenzy in the junk bond markets which have ballooned in the QE-era as Bernanke et al intended. Energy companies are estimated to now comprise nearly 16% of the US high-yield bond market – a market that has grown by well over \$1 trillion over the past 6 years – up from just 4% 10 years ago, meaning energy has attracted a net \$230 billion in just 6 years in the junk markets alone (i.e excluding IPOs and M&A). Incredibly, \$120 billion of that \$230 billion has been raised in 2014.

*Some of the large energy players have had to take sizeable write-downs already on their shale experiments*

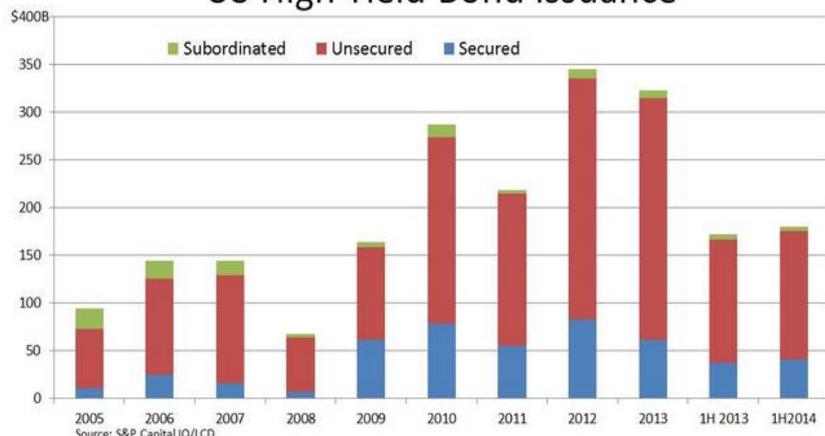
Energy companies make up a rising share of the high-yield bond market



Source: Barclays U.S. Corporate High Yield Bond Index. Columns represent the weight of the energy sector in the index. All columns represent year-end values, except 2014, which is as of October 17, 2014.

*The US energy junk bond market has attracted ±\$230 billion since 2008*

US High Yield Bond Issuance



Source: S&P Capital IQ/LCD

*Junk bond issuance likely to be higher in 2014 than 2013*

But the sector now faces a trifecta of snares: 1) rapid shale gas yield decay in operational wells calling into question the viability of many wells, 2) higher junk bond yields, and 3) falling global oil prices. The vulnerabilities are escalating.

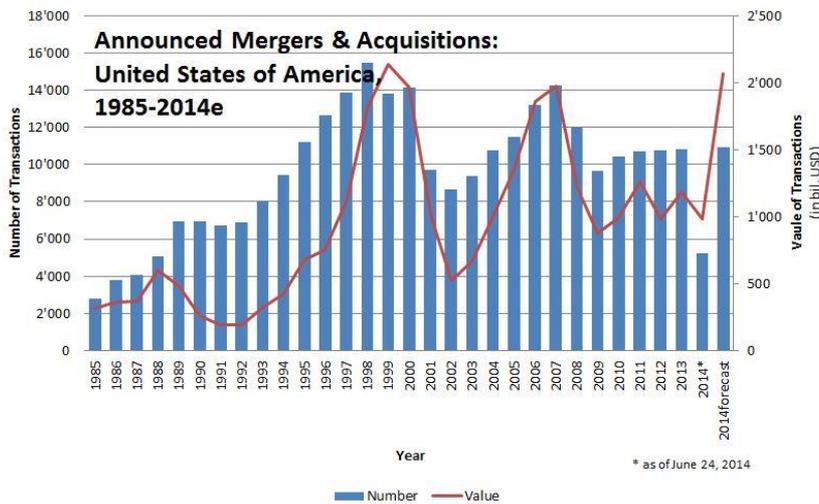
*Challenging geology, junk bond market pressures, and lower oil prices are major sector risks*

The canary in the shale well is the sea change in corporate restructuring in the sector. M&A activity in the US and Canada is surging in the backend of 2014. According to PwC, Q3 2014 was a “break-out quarter for deal activity,” and that we’re witnessing “an acceleration of the portfolio restructuring efforts...as companies focus on the importance of financial discipline.”

Financial discipline or financial survival? Total US oil and gas M&A activity was up a stratospheric 650% y/y in Q3 2014, with deals totalling an eye-watering \$123 billion in that 3-month period. Shale M&A growth (a subset of the oil and gas total) has been similarly frothy, hitting \$20 billion and then \$23 billion in Q2 and Q3 2014 (PwC Report) compared with just \$4 billion in Q1 2014 and \$8 billion in Q2 2013.

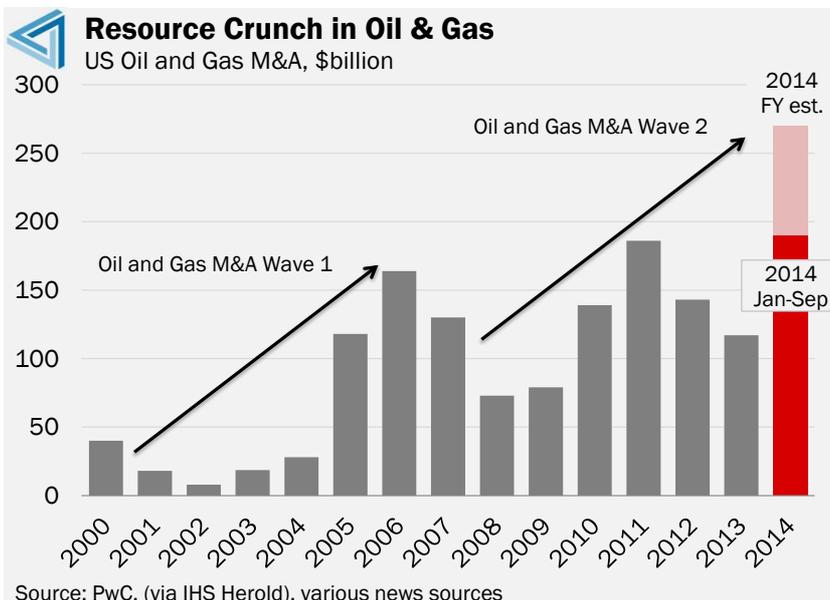
As we argued in ISJ volume 24 (Aug 2014), rising M&A is a business cycle contra-indicator signalling mass consolidation of unviable projects – a malinvestment cycle. The graph below illustrates how M&A spikes portend market corrections and recessions.

*Total US oil and gas M&A activity was up a stratospheric 650% y/y in Q3 2014, with deals totalling a massive \$123 billion*



*M&A activity precedes downturns*

PwC said in Q2 2014 that “as shale production has matured more, there is a “shift” with more companies seeking to buy “working interests” in production sites, rather than just buying up acreage.” This is what Professor Jimmy Saravia notes as a key feature of the M&A wave during the resource crunch, in this case, sharply rising shale reserve land costs and scarce specialised skills.

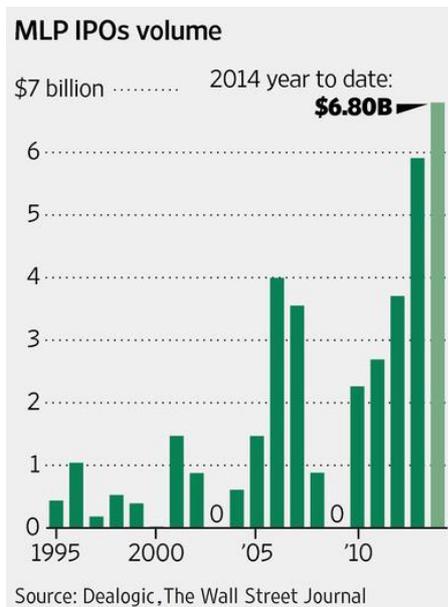


*Ominously large second M&A wave after the Q3 2014 M&A ‘surge’*

It's not just the M&A and junk bond explosion. IPOs have been climbing sharply too, set to hit \$8 billion in 2014, 300% up on 2010. Energy sector IPOs are listed in vehicles called Master Limited Partnerships (MLPs) which offer tax breaks, encouraging extra speculation.

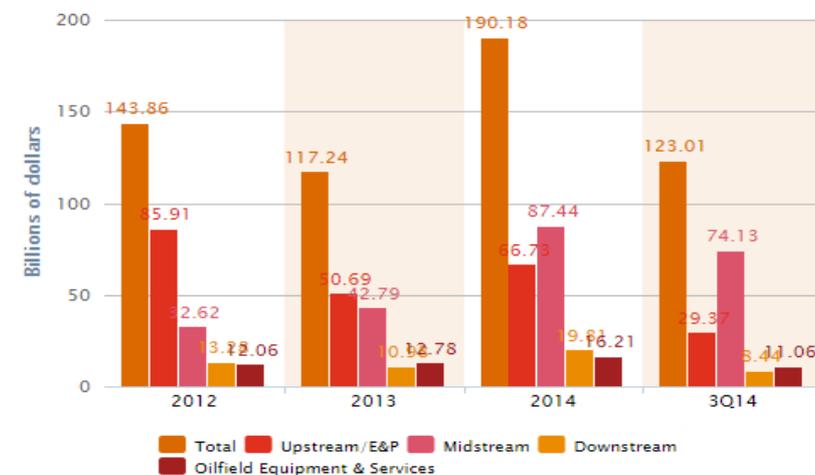
Although small relative to high-yield debt and M&A, the energy IPO space is increasingly being taken up by fringe midstream stocks that are far more speculative than normal.

The boom in midstream (i.e. pipelines, transport, logistics) investments is particularly strong at present, accounting for nearly half of total oil and gas M&A in 2014 to date, almost entirely in the Q3 2014 M&A surge. Midstream firms are clearly finding it more economical to buy growth as start-up costs escalate and smaller players come under increasing financial distress. The M&A wave after all is the process of clearing out the small players and allocating capital more efficiently – but, as with the dotcom cycle, this is painful.



*Energy IPOs rising strongly, increasingly in fringe midstream speculation*

**Total deal value**



*Midstream M&A (logistics) in particular surged in Q3 2014*

Shale industry data firm, DrillingInfo, has [reported](#) that shale well permits issued fell 15% in October. This means the drill rig count should begin to fall in coming months and production growth will slow. This is perhaps one of the first concrete signs of response to lower oil prices. Permits were down in 10 of 12 assessed shale formations, with Barnett formation in Texas and Bakken in North Dakota (lower cost plays) bucking the trend.

*Shale well permits fell 15% in October 2014, perhaps one of the first concrete signs of response to lower oil prices*

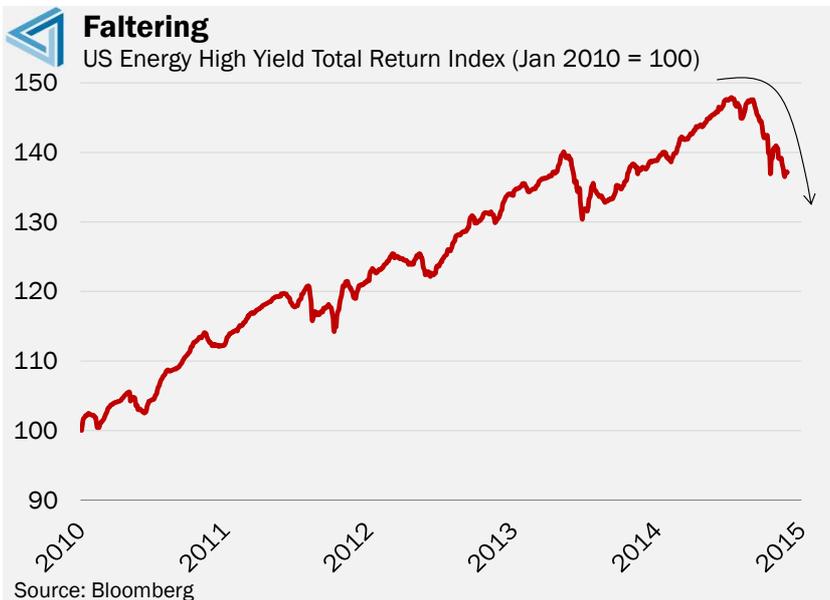
Meanwhile, the end of QE3 and Fed tightening expectations has begun to raise yields in the junk bond market, breaking a two year trend in option-adjusted spreads over US Treasuries.

*Signs of early distress in the US junk bond market*



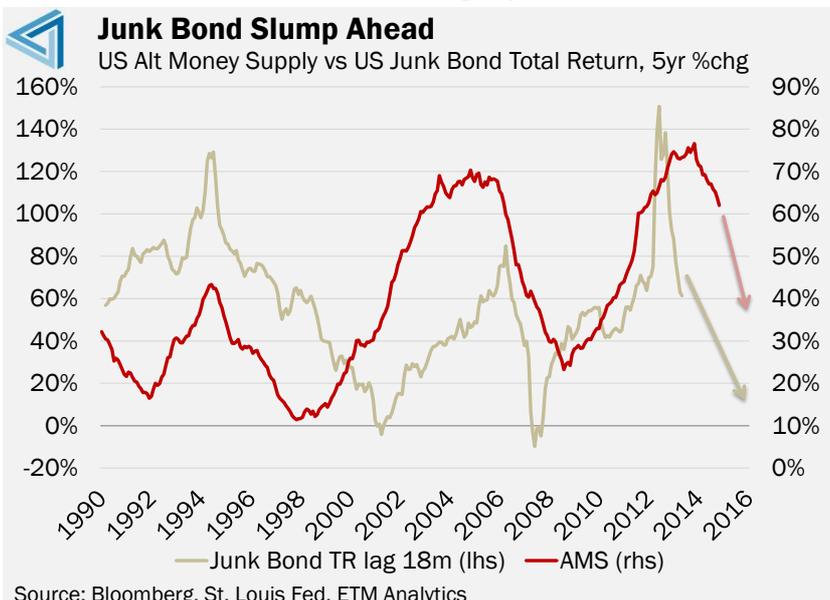
*Trend break mid-2014 shows impact of Fed taper/tightening*

The US energy junk bond total return index is rolling over and looks set for deeper losses in due course.



*Energy junk bond returns negative in 2014 and barely positive since early 2013*

The dollar liquidity cycle will have a materially negative impact on junk bond returns over the coming 3 years.



*US high yield (junk) bond returns will be negatively impacted by tighter liquidity*

## From Frail Gas to US Downturn

How might fragilities in the energy sector impact the broader economy? There are four obvious channels: direct and indirect real, and direct and indirect financial.

Texas has seen a boom in net migration, employment and overall economic growth as a result of the energy boom. Texas has accounted for nearly 20% of all US growth since 2009, more than California and New York combined.

*Texas alone has accounted for 20% of US growth since 2009*

The expansion of activity in Texas and other oil and gas states has led to expansion of downstream sectors. The midstream boom has seen pipeline transport value added expand a whopping 50% since 2009. Transport hubs will be affected by an energy downturn, as will retail and services that have developed around the energy employment growth.

*The midstream sector may be particularly vulnerable to correction*

The financial impact could be larger. Directly, we see numerous malinvestments will manifest in the energy sector, destroying debt and equity capital. Indirectly, the oil and gas junk bond fallout could be a catalyst for broader high-yield distress. This will have earnings implications across all sectors that begin to affect all stock valuations.

*Financial impact of a \$230bn junk bond and \$1T M&A boom will be significant*

## Conclusion

The oil and gas sector is characterised by M&A activity rivalling the previous sector bubbles in tech (2000) and property/retail (2008), totalling close to \$1 trillion in the current M&A wave. There has also been an explosion in high yield funding to the tune of a net \$230 billion during that time. This scale of exuberance always ends in a healthy but painful sector normalisation process.

Lower oil prices and a tightening liquidity cycle make the sector a systemic risk that can certainly be a catalyst for a US downturn.

Funding pressures are likely to get more acute post QE3 and as US dollar liquidity tightens in 2015. That will dramatically undermine the funding structure of many marginal shale investments.

*US dollar liquidity tightening will dramatically undermine the funding structure of many marginal shale investments*

Funding pressures are biting at the same time that global energy oversupply is causing crude oil prices to sink below \$70/barrel. At these prices many shale and related energy investments struggle for viability, and the marginal operations cannot survive ([IHS report](#)).

In particular, the boom in midstream gas and oil logistics has fed activity into numerous other sectors such as transport and support infrastructure, meaning the vulnerabilities stretch far beyond just the immediate oil and gas sectors. These include the retail and services hubs that have sprung up, particularly in Texas, to service the energy jobs boom.

Whether or not the oil and gas sector is the primary catalyst for the next US cyclical downturn, it is a vulnerable enough sector in terms of leveraged speculation that it will have to correct in ways that will exacerbate the looming cyclical headwinds.

*At a minimum, the shale sector correction will exacerbate cyclical headwinds*



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**Editor**

Russell Lamberti, Chief Strategist  
[russell@etmanalytics.com](mailto:russell@etmanalytics.com)

**ETM Analytics (Pty) Ltd:**

Tel: +27 11 875 8556  
Web: [www.etmanalytics.com](http://www.etmanalytics.com)  
Block 5, Killarney  
Fourways Golf Park, Roos Street  
Fourways, Johannesburg  
South Africa, 2055

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