QUANTUM ENERGY PARTNERS℠

IPAA & TIPRO Leaders in Industry Luncheon

S. Wil VanLoh, Jr.

October 10, 2010

Topics

1) The "Great Deleveraging" – The Macro Economic Megatrend

2) Some Energy Themes And Observations

3) Private Equity Investing In The Energy Sector

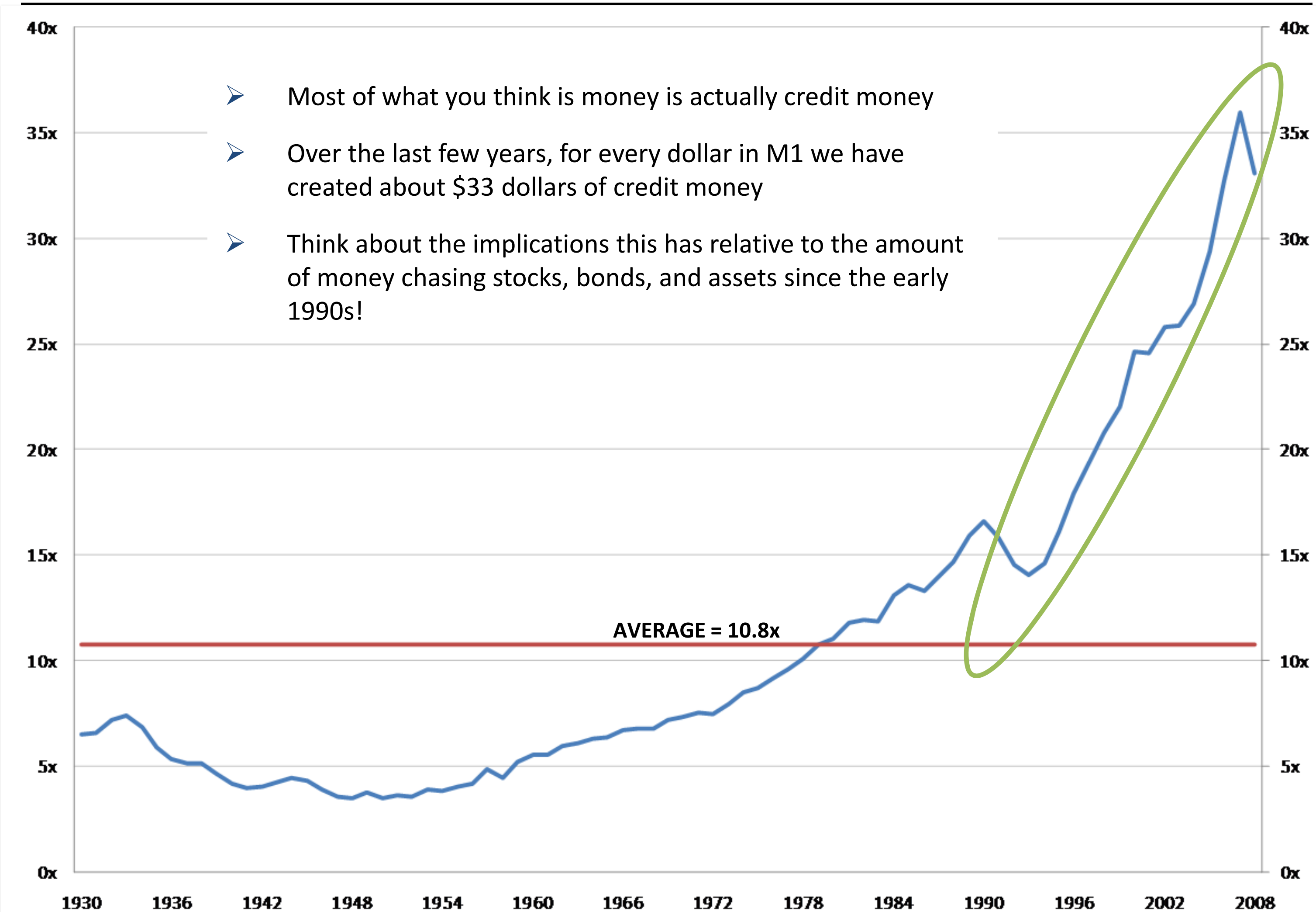
An interesting quote from the world's "bond king"

"The U.S. and most other G-7 economies have been significantly and artificially influenced by price appreciation for decades … Growth, in other words, was influenced on the upside by leverage, securitization, and the belief that wealth creation was a function of asset appreciation as opposed to the production of goods and services. Americans and other similarly addicted global citizens long ago learned to focus on markets as opposed to the economic foundation behind them."

-**Bill Gross, PIMCO November 2009 Investment Outlook**

The U.S. (and the world) was flooded with "credit money"…

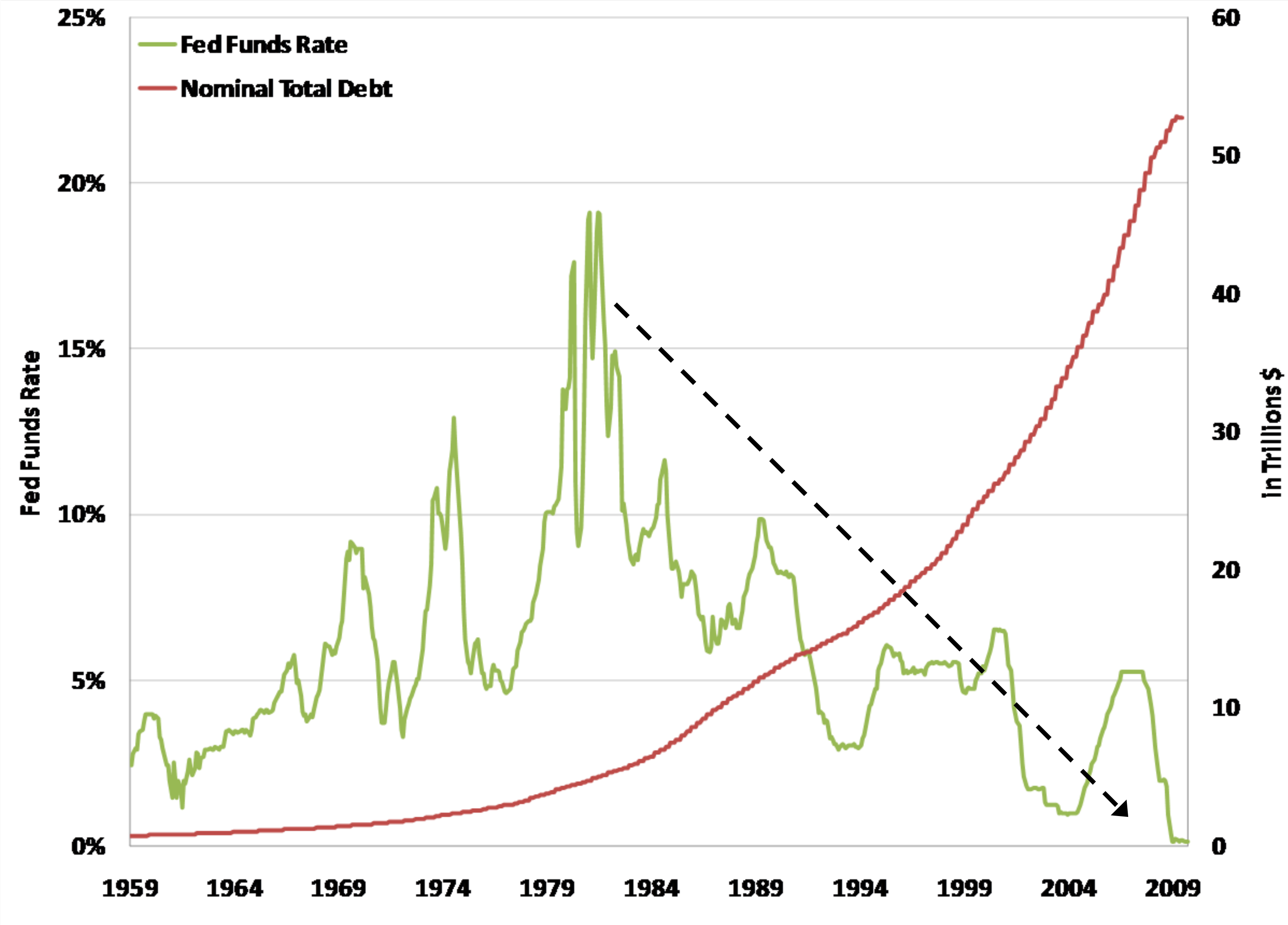
Credit money drove asset prices



- Most of what you think is money is actually credit money
- Over the last few years, for every dollar in M1 we have created about $33 dollars of credit money
- Think about the implications this has relative to the amount of money chasing stocks, bonds, and assets since the early 1990s!

Note: Total debt to M1 ratio: M1 defined as the total of all physical currency part of bank reserves + the amount in demand accounts ("checking" or "current" accounts)
Source: Bloomberg, Ned Davis Research, BEA

…which became cheaper and cheaper to sustain the economy…



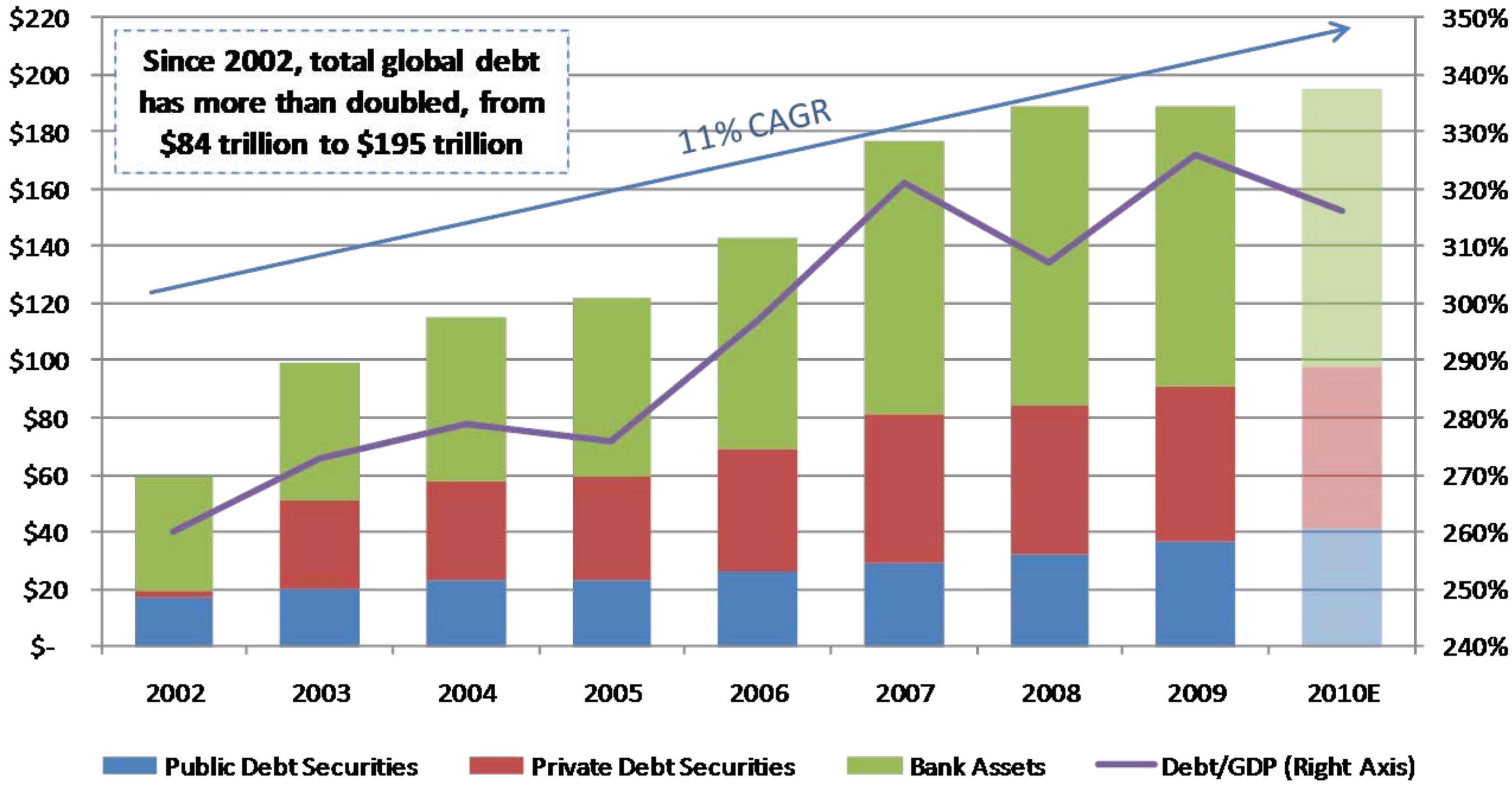
Source: Bloomberg

…which in turn led to multiple bubbles

- **Stock market**
- **Real estate**
- **Commodities**
- **Industrial capacity**
- **Wine**
- **Art**
- **Energy???**

Global GDP growth has been supercharged by this surge in debt

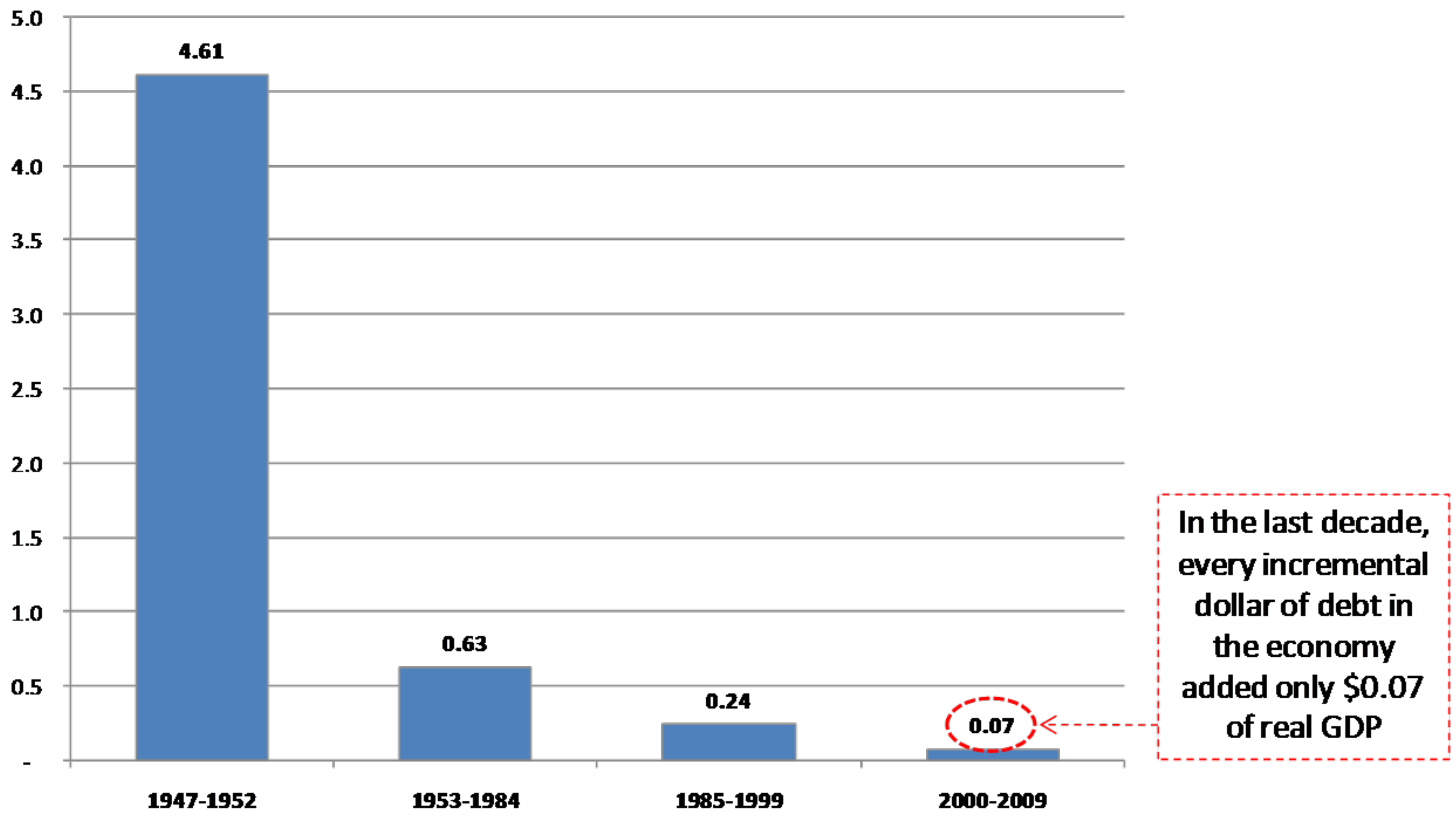
- In the past 8 years the global economy has added over $100 Trillion in debt
- The entire global economy is now levered about 3.15x income (GDP)



Source: IMF Global Financial Stability Report, IMF World Economic Outlook, Hayman Advisors Estimates

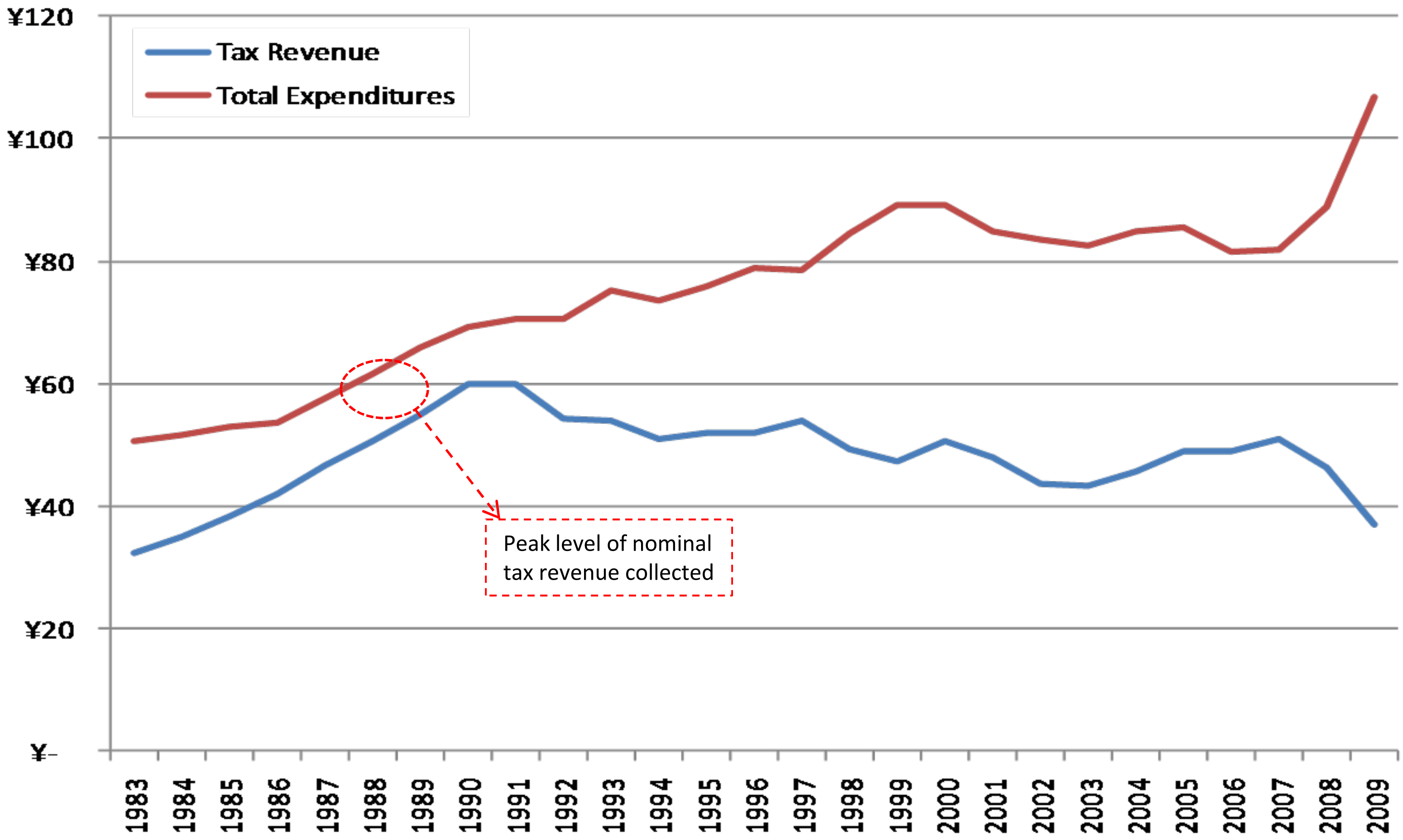
The marginal benefit of new credit has plummeted

- As the marginal utility of debt approaches zero, Keynesian stimulus is rendered ineffective



Source: Bloomberg, Ned Davis Research, Federal Reserve, Hayman Advisors Estimates

Japan may be the catalyst for the next wave of the financial crisis

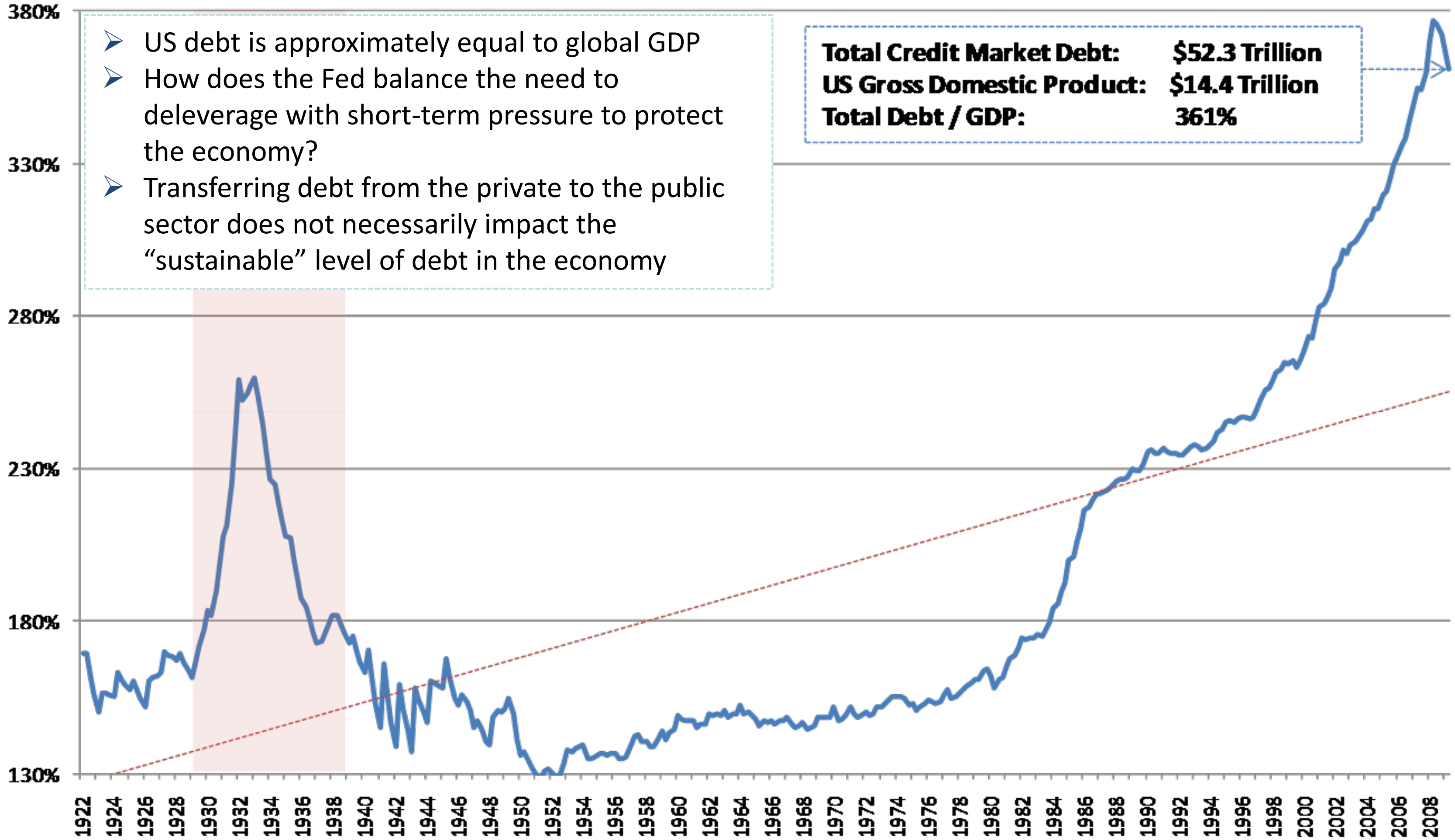


Source: Latest data available as of December 2009: Japan Ministry of Finance, BOJ, Hayman Advisors Estimates

Returning debt to normalized levels is unavoidable & will be painful

- US debt is approximately equal to global GDP
- How does the Fed balance the need to deleverage with short-term pressure to protect the economy?
- Transferring debt from the private to the public sector does not necessarily impact the "sustainable" level of debt in the economy

Total Credit Market Debt:	**$52.3 Trillion**
US Gross Domestic Product:	**$14.4 Trillion**
Total Debt / GDP:	**361%**



Source: Ned Davis Research, Federal Reserve Flow of Funds reports, Bloomberg, Hayman Advisors Estimates

Lets recap and connect the dots on the macro economic landscape

- Over the last 25 years, we have witnessed the **greatest expansion of debt** in the history of the world

- Due to the magnitude of debt outstanding in developed economies today, a **deleveraging process will be a tsunami event** that will affect GDP, the price of goods and services, capital markets, and both social and political environments

- As the risk-free price of money dropped toward zero, **investors were forced into risky assets in search of returns** (this was the "Great Stimulus") driving up the prices of commodities, financial assets, and real assets

- While "Quantitative Easing" has averted a global liquidity crunch and crisis of confidence for now, we have **not restructured our debt or spending to fix the underlying problems**

- **States' and local municipalities'** debt and unfunded liabilities (**think pensions and healthcare**) is a ticking time bomb (see the Meredith Whitney report)

- Western world **must pay the piper** and be more fiscally responsible

So what does this backdrop mean for the energy business?

- Slow GDP growth (or possibly even contraction) will lead to weaker demand and consumption (consumer, commercial and industrial) for some time

- We will most likely see periods of volatility in credit markets, equity markets and capital liquidity – one should not take access to cash/capital for granted

- Commodities (like oil & gas) are sometimes seen as stores of value (like gold), so may occasionally experience money flows (positive or negative) that are not related to industry and economic fundamentals

- On a relative basis, energy is a sector that will likely do better than most other consumer-driven, GDP sensitive sectors

Topics

1) The "Great Deleveraging" – The Macro Economic Megatrend

2) Some Energy Themes And Observations

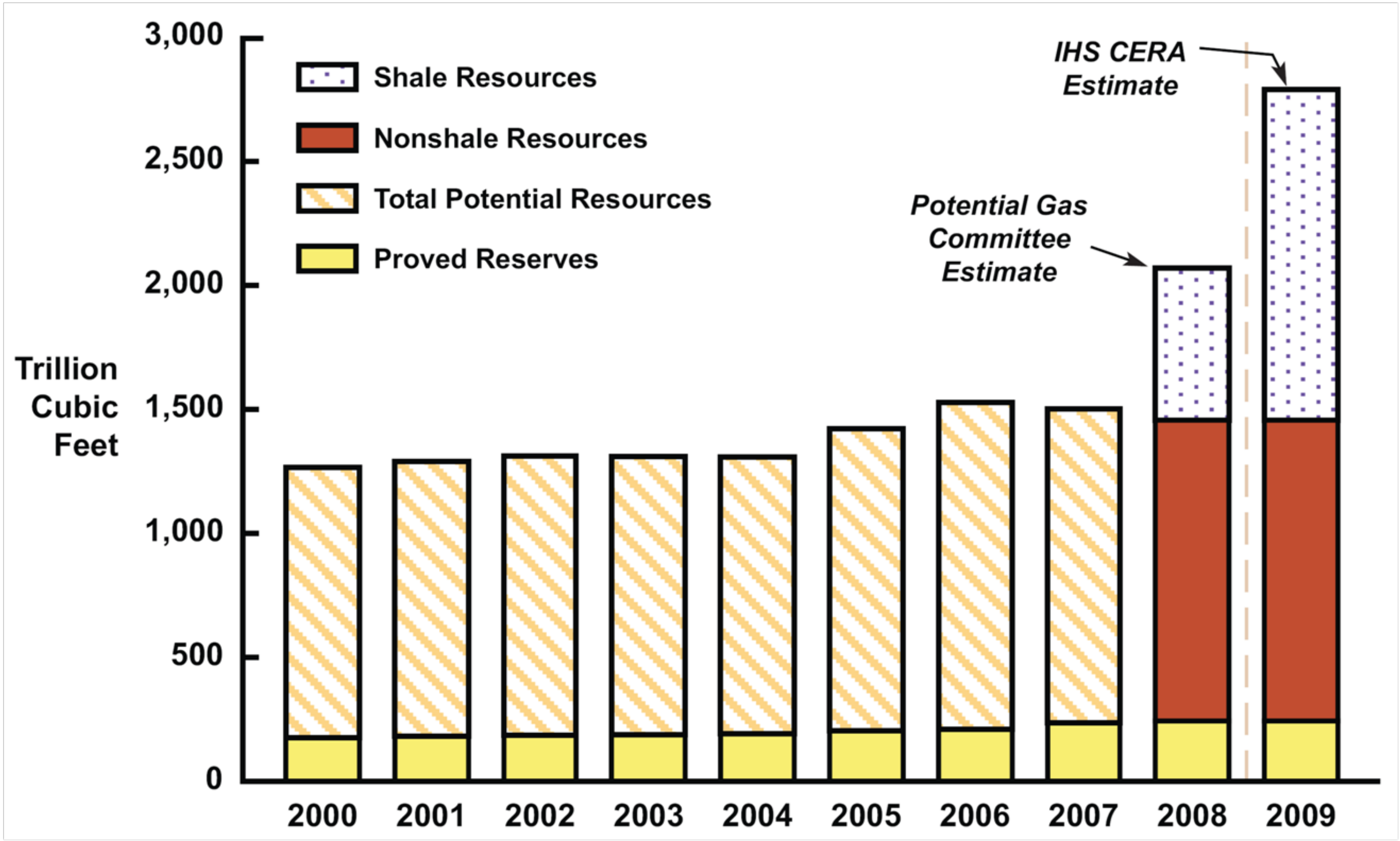
3) Private Equity Investing In The Energy Sector

Overview of some industry themes and observations

- **SHALES, SHALES, & SHALES – "The Energy Megatrend"**
- The U.S. is now structurally long gas and experiencing a supply glut
- Despite low prices, high drilling activity levels persist
- The industry may be overestimating EURs and underestimating costs
- Three main "secondary" drivers or potential drivers of gas supply include the shift to "liquids rich plays" (negative), environmental challenges (negative), and loosening LNG fundamentals (positive)
- Two main drivers of gas demand include U.S./world economic growth/contraction (positive/negative) and the ramp up in gas-fired power generation (positive)

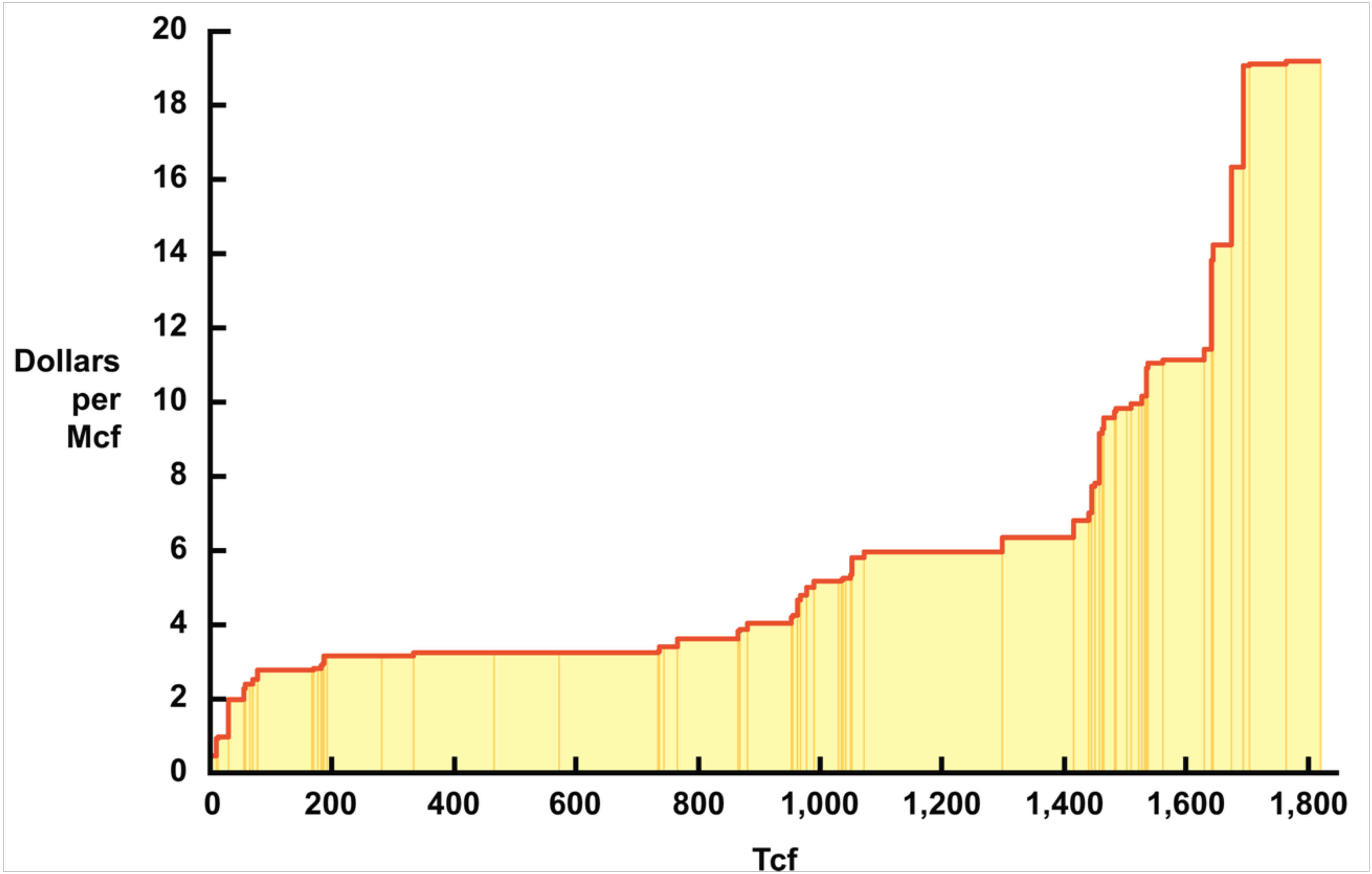
THE U.S. IS NOW STRUCTURALLY LONG GAS AND EXPERIENCING A SUPPLY GLUT

Gas resource estimates have been significantly revised upward…



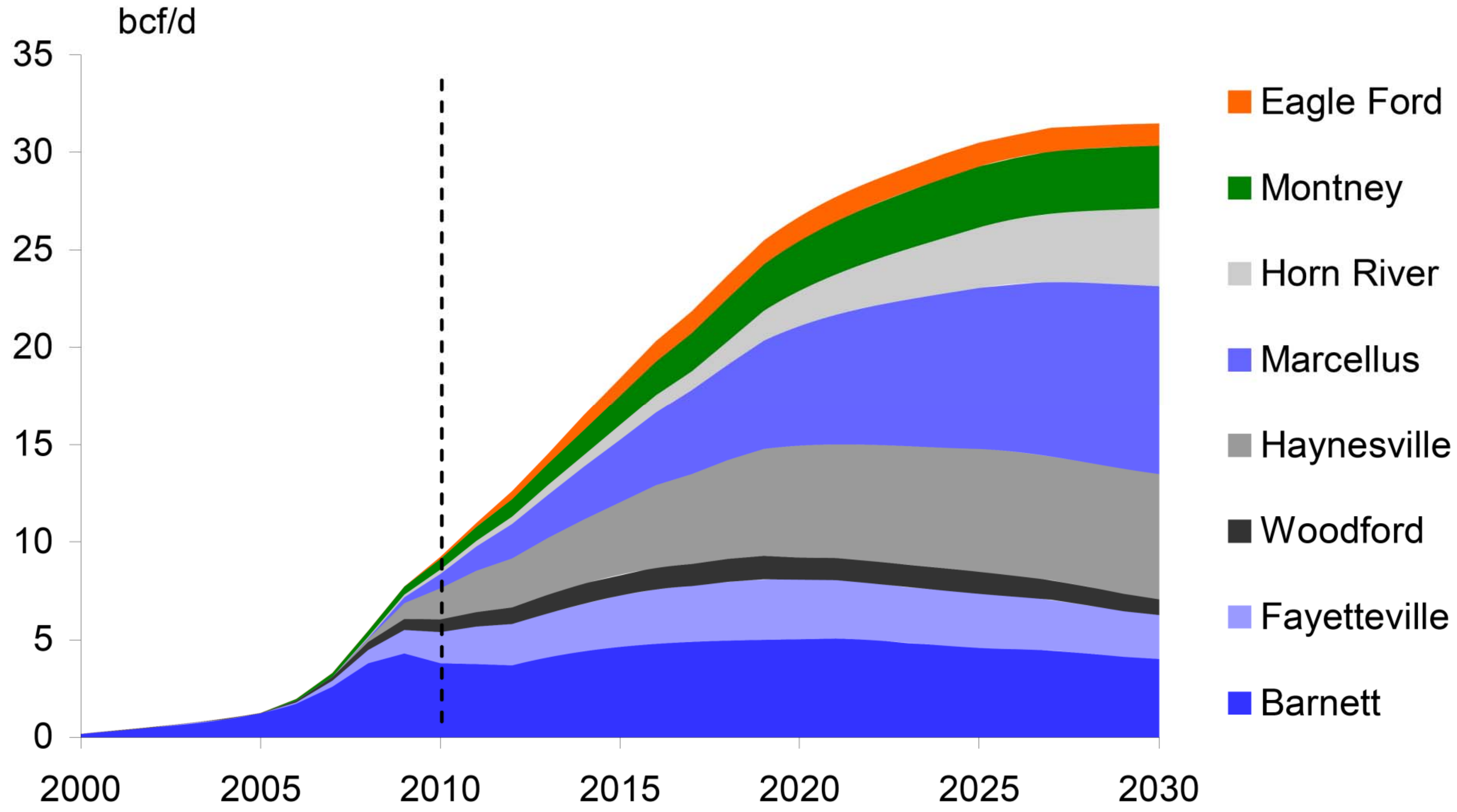
Source: EIA, PGC, IHS CERA

… which potentially suggests a long-run price path for cheap natural gas



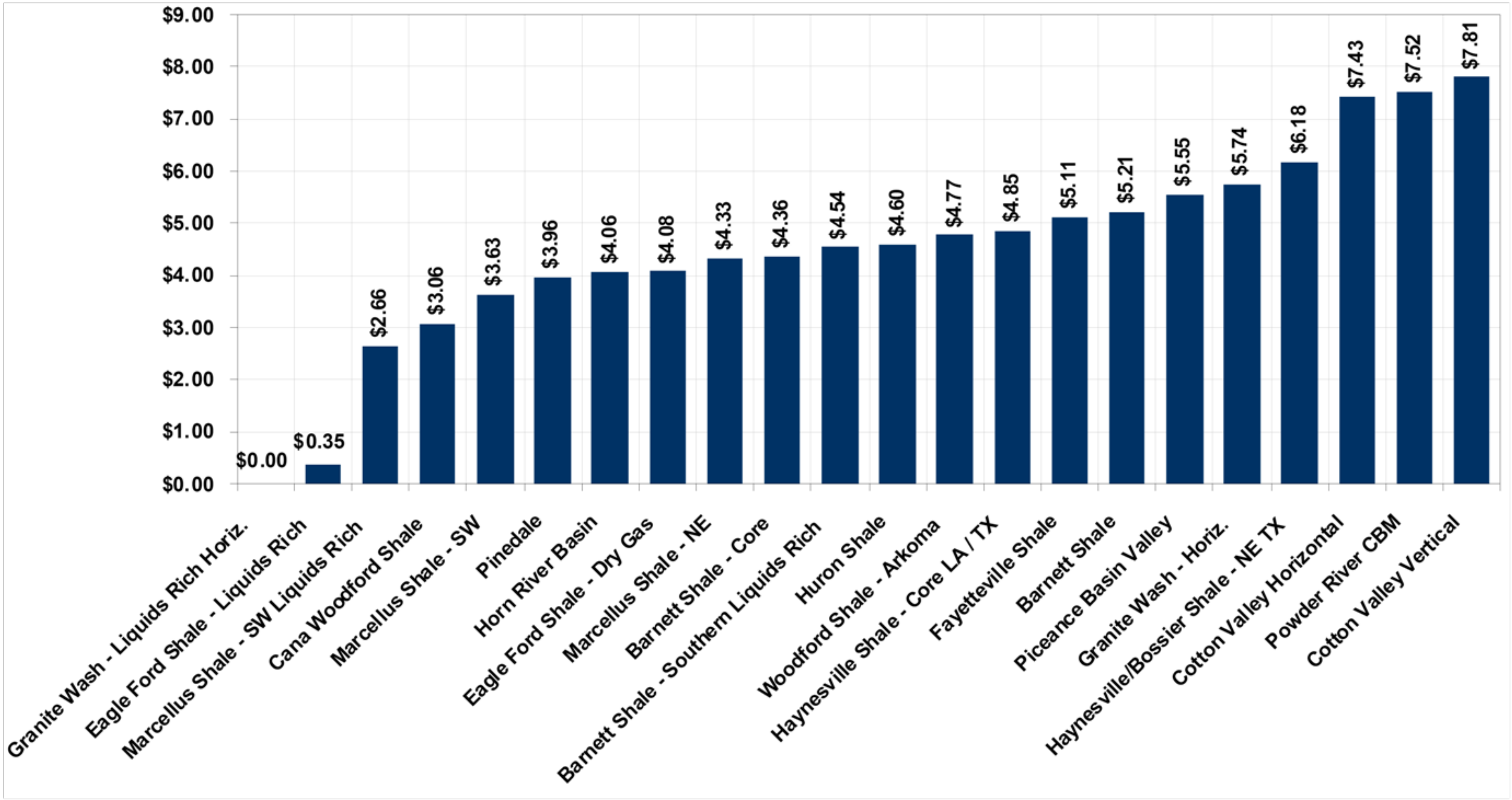
Source: IHS CERA

Unconventional resource plays are expected to be an increasing share of U.S. natural gas production …



Source: Wood MacKenzie, Deutsche Bank, DOE/EIA

...although not every shale is comparable or similar



Note: Assumes $80 per Bbl crude oil and 15% after tax rate of return

Source: Company Data, Credit Suisse

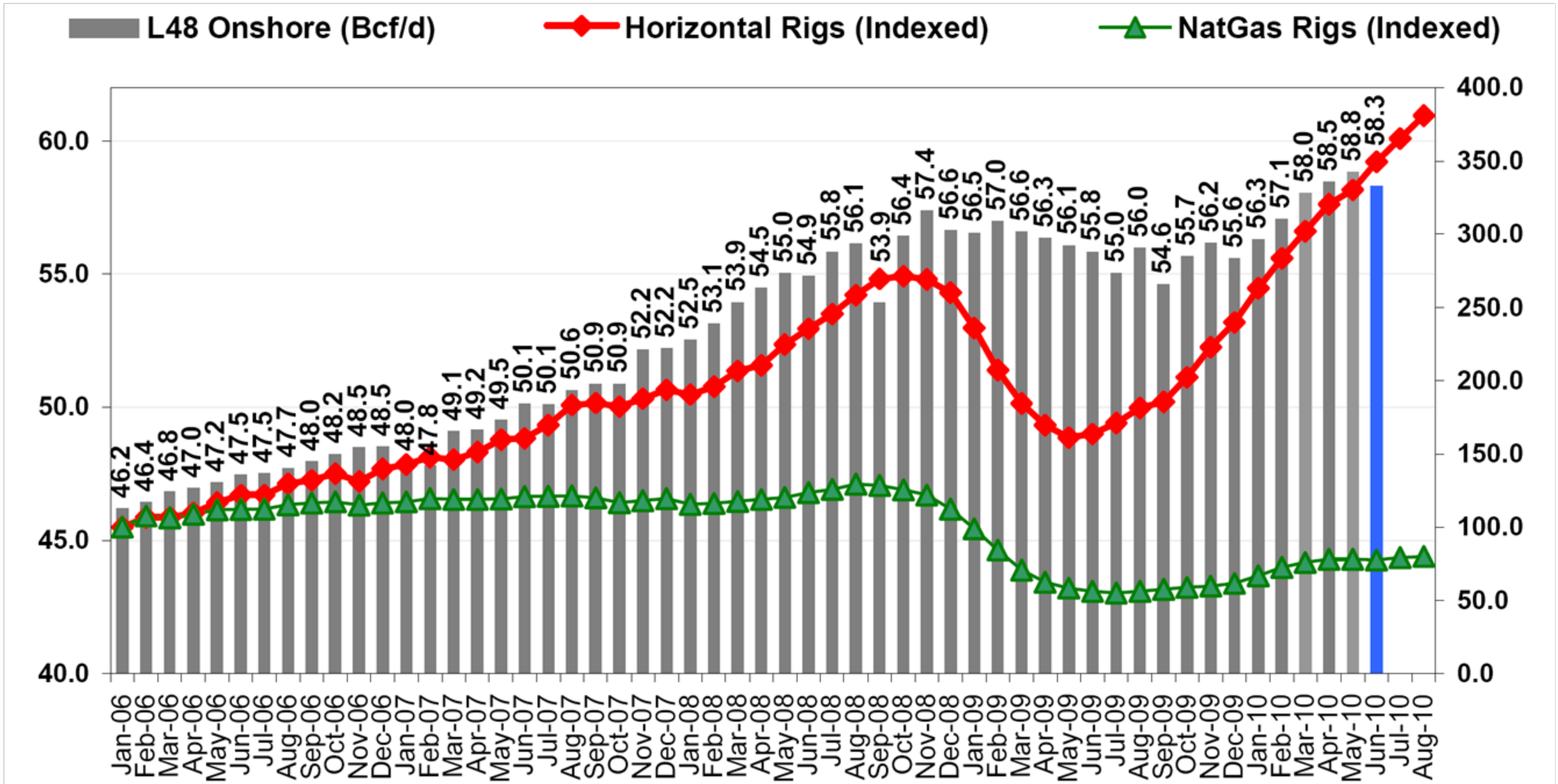
DESPITE LOW PRICES, HIGH DRILLING ACTIVITY LEVELS PERSIST

Given the low prices, why haven't we seen a slow down in drilling?

- Aggressive production growth targets
- Drilling to hold acreage
- Robust capital markets supplying lots of money
- IOCs, NOCs and the Majors entering into JVs and large acquisitions
- Hedging providing meaningful price, and therefore cash flow, support
- NGLs providing a price uplift

Onshore U.S. production tracking horizontal rig surge

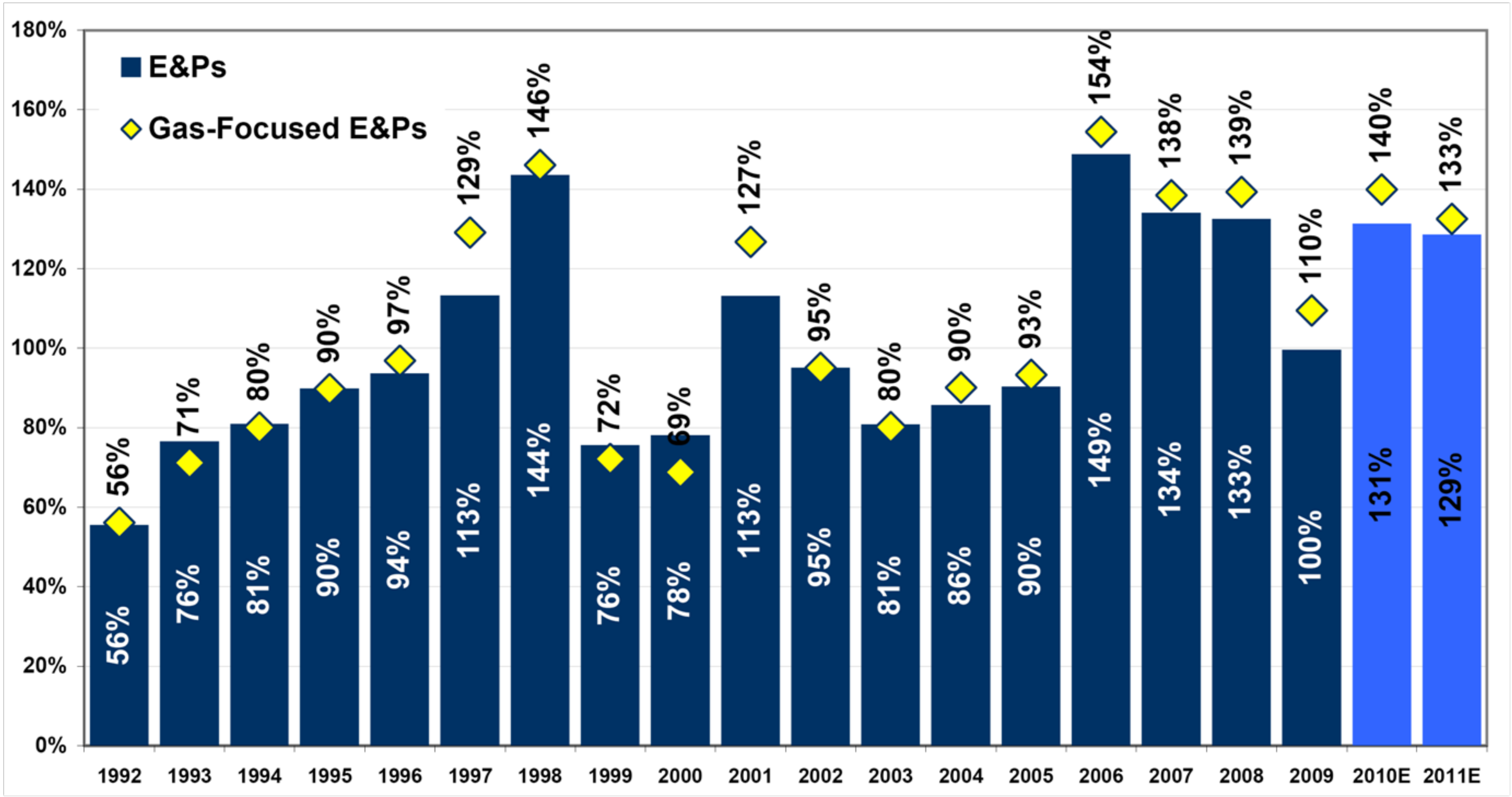
- June 2010 onshore U.S. production up 4.4% or 2.5 Bcf/d yr/yr
- Horizontal Rigs: 912 as of 9/17/2010 and 40% above the 2008 peak of 650
- Gas Rig count now at 982 as of 09/17/10, up 48% from 2009 trough of 665



Source: EIA, Credit Suisse

Overinvestment hurting U.S. gas prices

- Historical E&P plowback (organic plus unproved acquisition %)

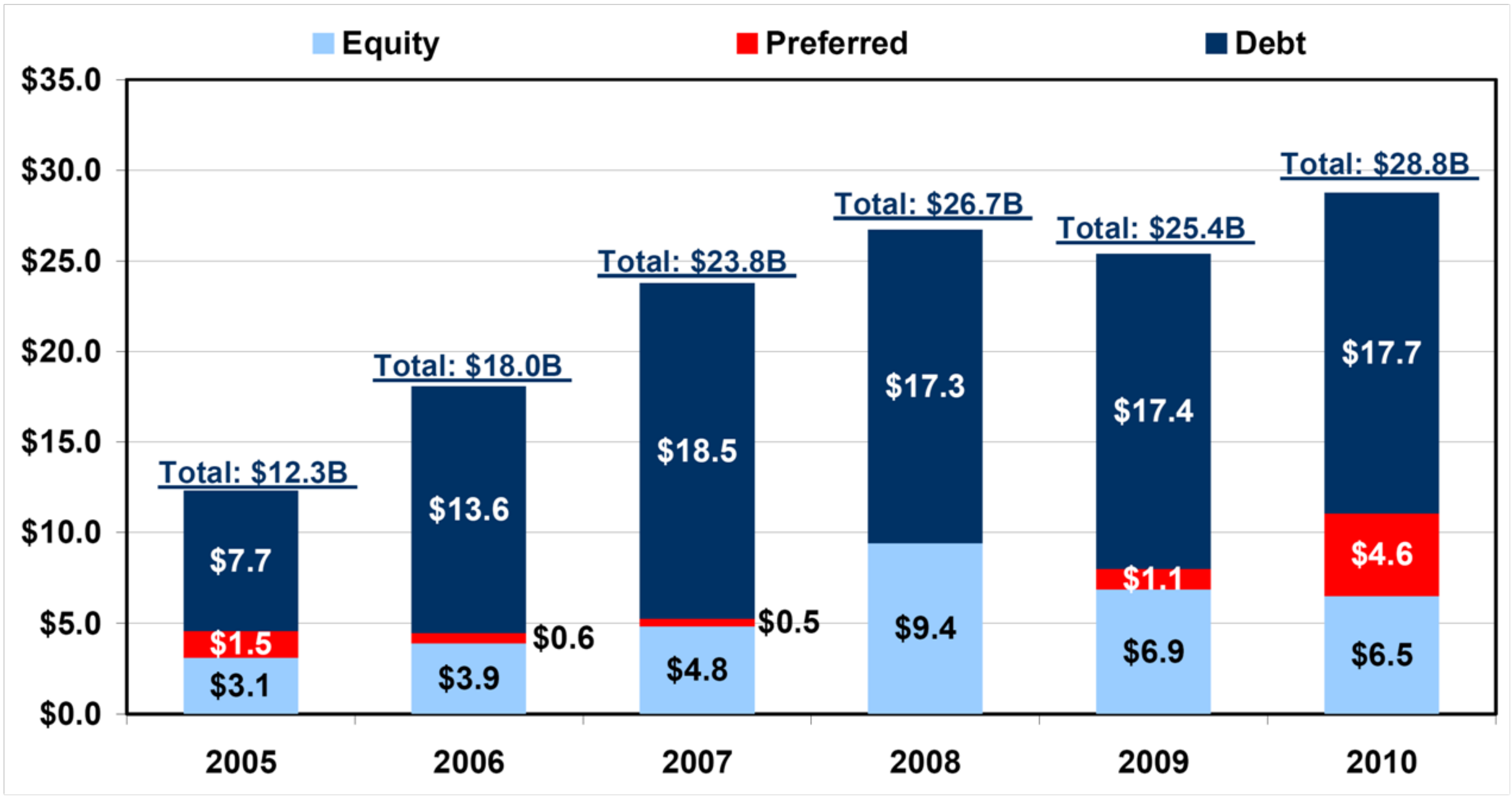


Note: Represents Exploration and Development (organic) and unproved acquisition capital expenditures as a percent of Cash Flow from Operation. Based on Credit Suisse pricing of $76.98/$4.72 in 2010 and $72.50/$5.25 in 2011.

Source: Company data, Credit Suisse

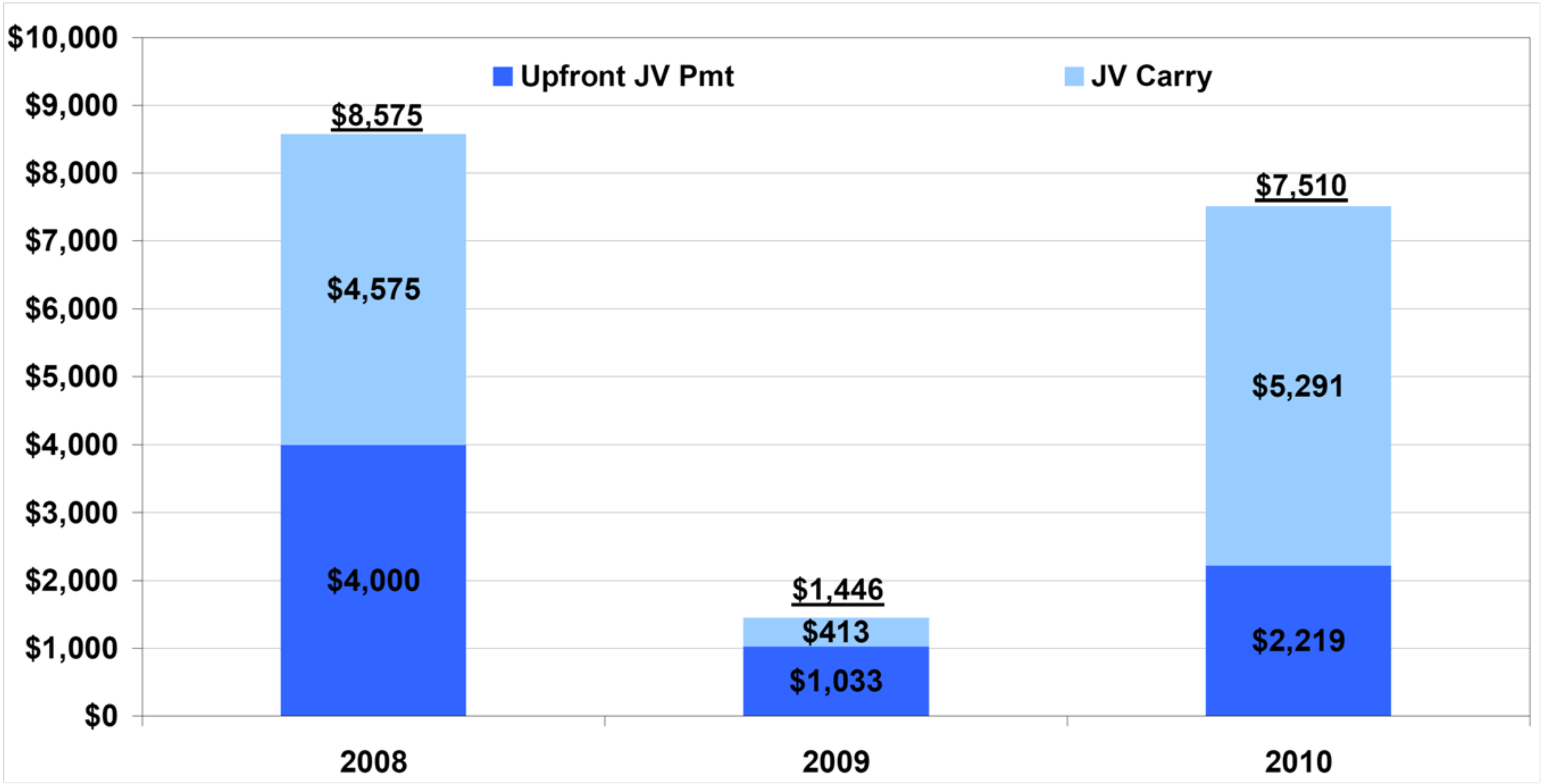
Equity and debt market have been funding E&Ps

- Historical E&P capital raising activity



Source: Bloomberg, Company data, Credit Suisse

JVs have been a source of cash/promote



Source: Credit Suisse

Hedging gains have supported corporate cash flows

Hedging Gains and Loss for All Producers

Credit Suisse Pricing

	Hedging Gain / (Loss) Oil & NGLs ($MM)	Gas ($MM)	Total ($MM)	Cash Flow Hedged ($MM)
2009	$1,060.0	$9,980.8	$11,040.8	$48,469.3
2010E	-$32.5	$5,251.2	$5,218.6	$55,695.2
2011E	-$38.7	$429.0	$390.3	$66,938.7

Assumes CS pricing of $79.23 and $4.74 in 2010 and $80 and $6.00 in 2011. 2009 uses actual prices.

Futures Pricing

	Hedging Gain / (Loss) Oil & NGLs ($MM)	Gas ($MM)	Total ($MM)	Cash Flow Hedged ($MM)
2009	$1,060.0	$9,980.8	$11,040.8	$48,469.3
2010E	$155.3	$6,213.5	$6,368.8	$53,500.6
2011E	-$92.7	$2,874.2	$2,781.5	$61,588.3

Assumes futures pricing of $76.51 and $4.46 in 2010 and $81.40 and $4.61 in 2011. 2009 uses actual prices.

Gas-Focused Producers

Credit Suisse Pricing

	Hedging Gain / (Loss) Oil & NGLs ($MM)	Gas ($MM)	Total ($MM)	Cash Flow Hedged ($MM)
2009	$601.0	$9,009.6	$9,610.6	$28,009.8
2010E	$264.2	$4,758.6	$5,022.8	$29,030.7
2011E	$192.1	$406.3	$598.4	$35,349.6

Assumes CS pricing of $79.23 and $4.74 in 2010 and $80 and $6.00 in 2011. 2009 uses actual prices.

Futures Pricing

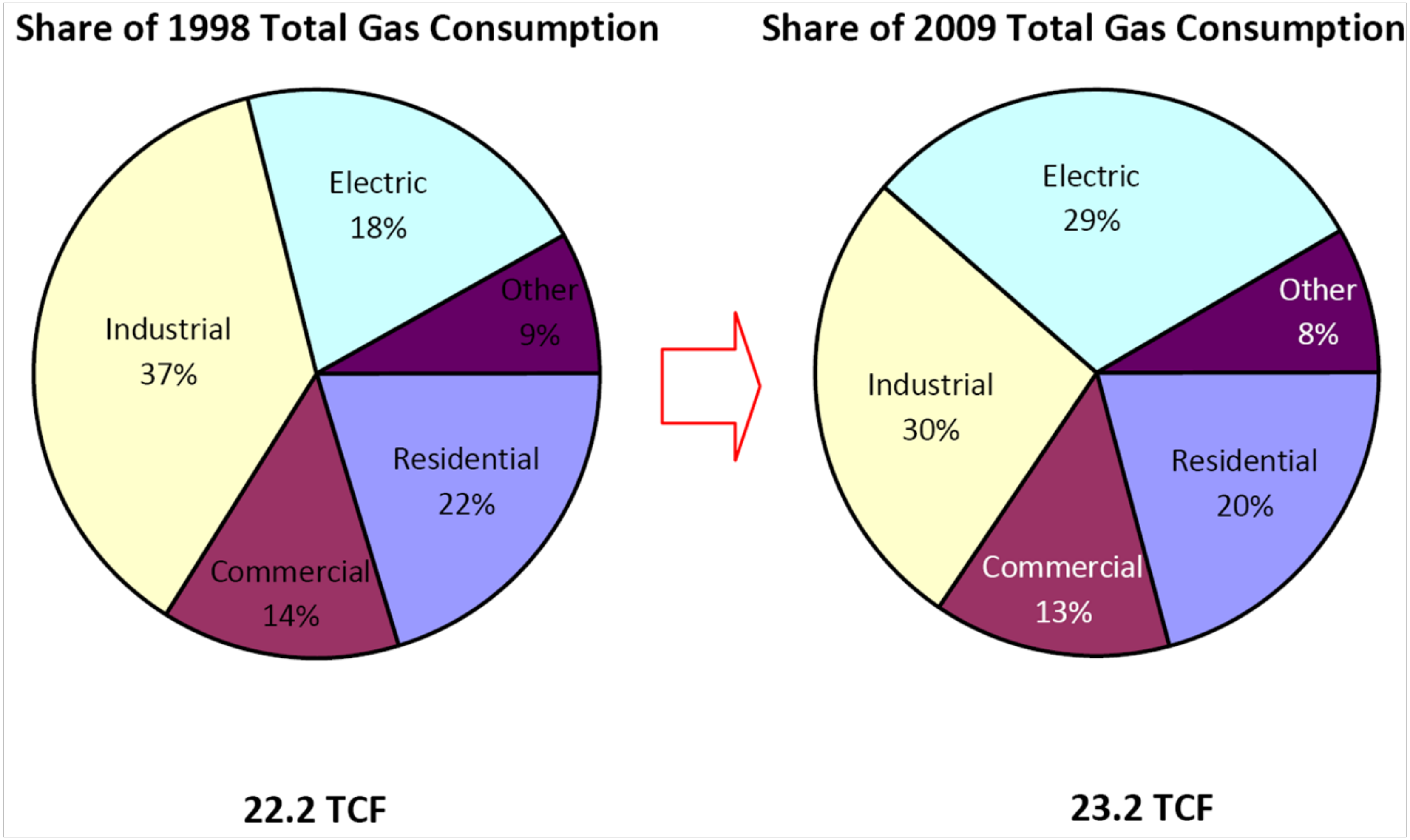
	Hedging Gain / (Loss) Oil & NGLs ($MM)	Gas ($MM)	Total ($MM)	Cash Flow Hedged ($MM)
2009	$601.0	$9,009.6	$9,610.6	$28,009.8
2010E	$353.3	$5,567.1	$5,920.4	$27,953.0
2011E	$158.0	$2,350.0	$2,508.0	$30,868.0

Assumes futures pricing of $76.51 and $4.46 in 2010 and $81.40 and $4.61 in 2011. 2009 uses actual prices.

Source: Company data, Credit Suisse

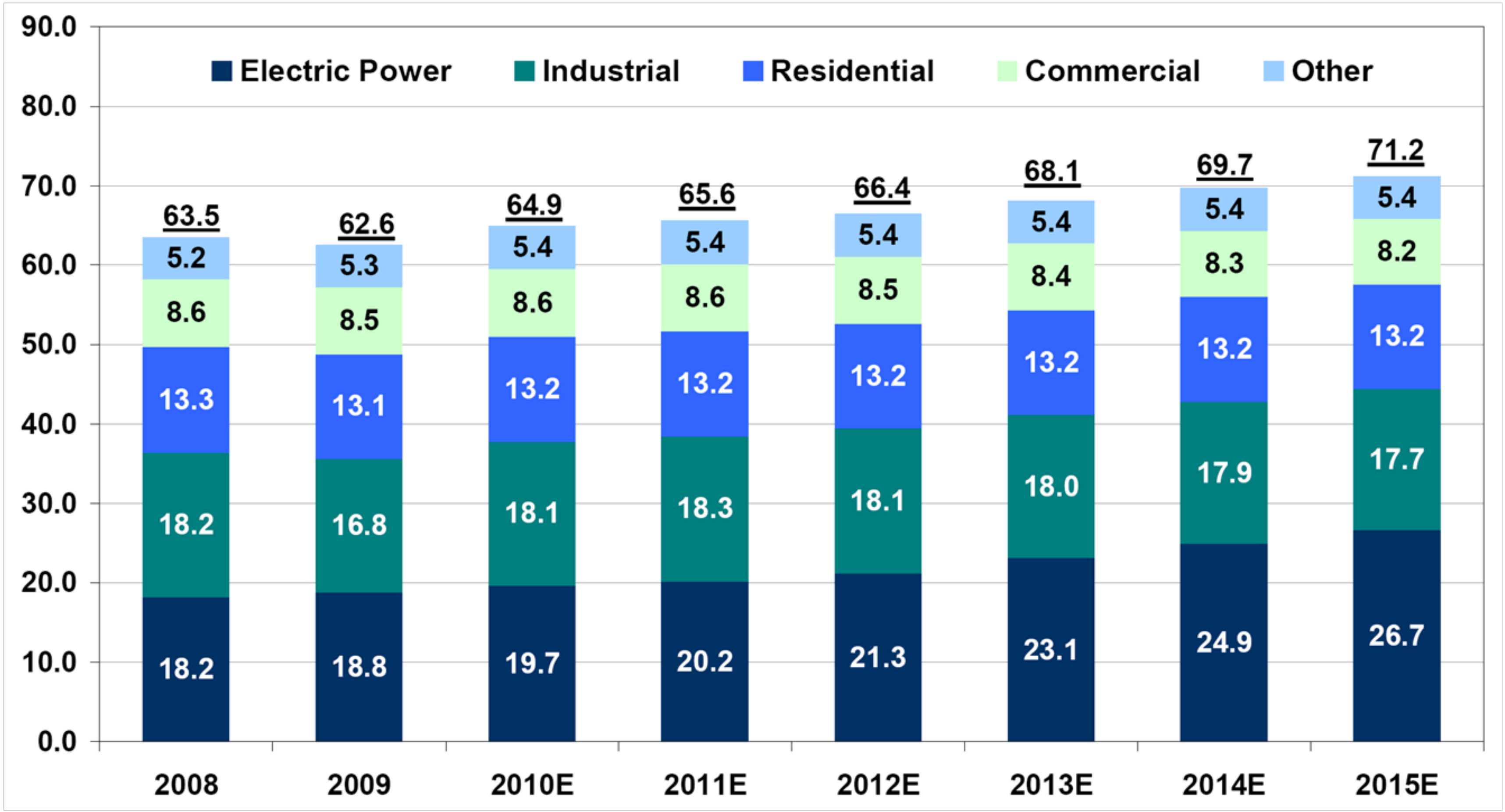
A KEY DRIVER OF GAS DEMAND WILL BE THE LIKELY RAMP UP IN GAS-FIRED POWER GENERATION

Natural gas consumption 1998 vs 2009



Source: EIA, Bloomberg Finance, Deutsche Bank

Electric power demand should drive total demand growth



Source: EIA, Credit Suisse

Topics

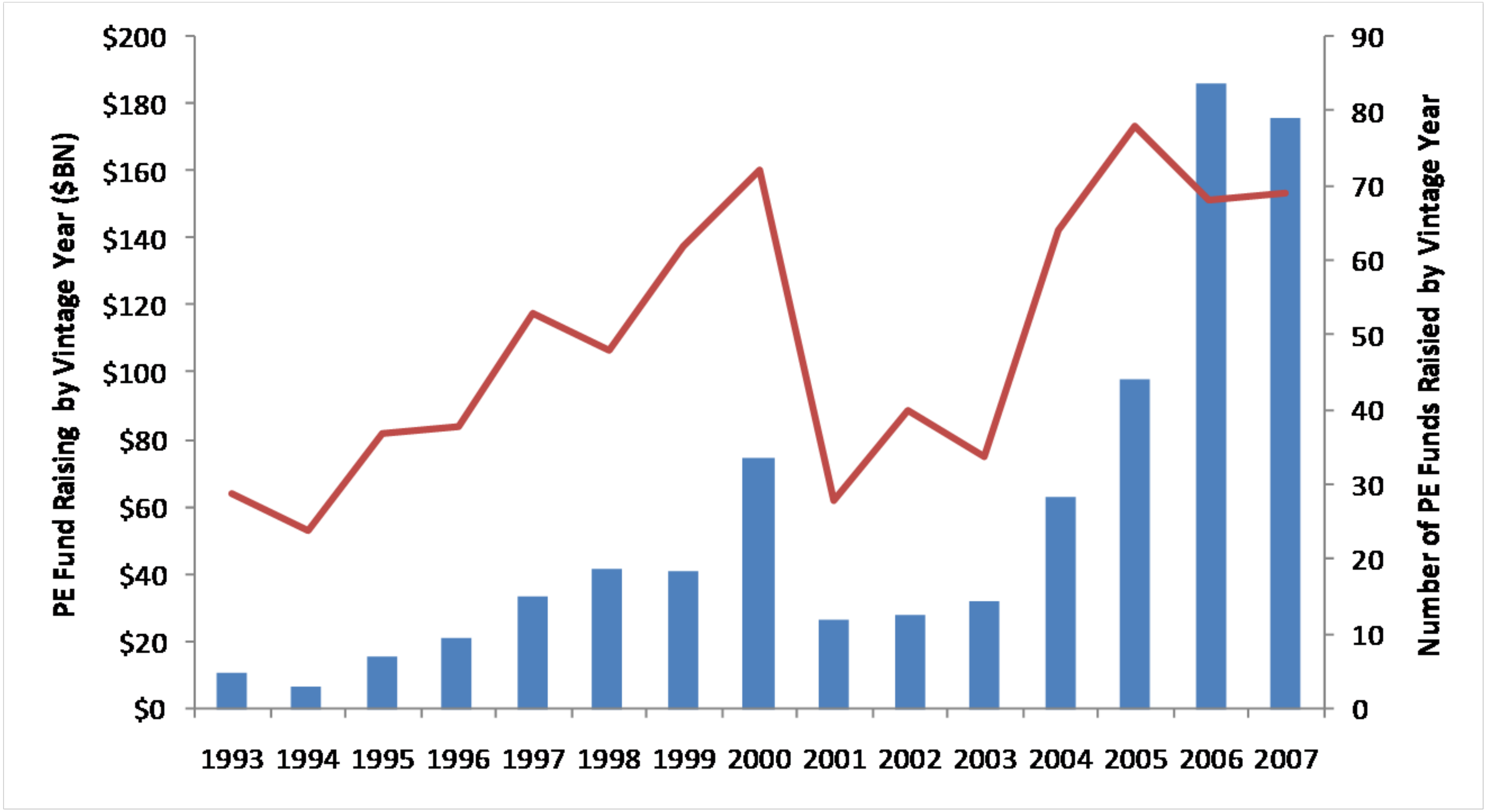
1) The “Great Deleveraging” – The Macro Economic Megatrend

2) Some Energy Themes And Observations

3) Private Equity Investing In The Energy Sector

Private equity fund raising exploded between 2005 and 2007

*2005-2007 fund raising averaged **$153 billion/yr** vs. **$33 billion/yr** for 1993-2004*



Source: Cambridge Associates LLC

How did energy-focused private equity fare?

Pre- Sept 2008

- Many energy-focused PE funds participated in the debt-and-commodity-price fueled party

Sept 2008 – Mar 2009

- Some concern over LP funding and PE fundraising grinded to a halt
- PE funds went into “damage control” mode
- Collapse in capital markets and commodity prices exposed a number of sub-optimal business plans and teams

Mid 2009 onwards

- 2009 and early 2010 saw lots of consolidation/shut downs of PCs
- Generally speaking, most energy PE firms came through “ok”
- PE fundraising has since resumed a very brisk pace
- Latter half of 2010 has seen a meaningful increase in new investment activity, albeit more selective than before

Quantum's perspective on investing capital in the energy sector today

- Irrespective of macro or industry dislocations, at its core the energy sector (broadly defined) remains attractive for long-term focused investors
- While some companies will create lots of value through their shale investments, many will destroy capital also
- Management teams with a core competency and a well-defined business plan will continue to play a vital role in the allocation of capital in this sector
- While Quantum is sober about the risks inherent in the investment environment, we are very actively seeking new investment opportunities where we can deploy $100 to $500 million in equity capital
  - $900 million acquisition of assets from Denbury
  - $500 million equity commitment to a new power generation platform/team – Quantum Utility Generation
  - Recently filed an S-1 to create a new public E&P MLP – QR Energy, LP