

Energy Futures Markets and Hedge Funds

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UtiliPoint International Inc.



How Knowledge Compels Results

A Roller Coaster Ride

- Just missed the last oil bonanza!
- Oil prices have been very low, other than during a few crisis events, for the last 20 years
- Most oil industry forecasters still have price projections and models that fail to recognize the new fundamentals
- Only the ‘speculators’ in Q4 got it right
- Why?

Why Is Energy Attractive Now?

- Increased demand in all commodity markets both global and/or regional
- Sustained lack of investment in infrastructure across the entire industry
- Increasing emphasis on environmental issues
- High levels of merchant debt coming due
- Undervalued assets on the block
- Undervalued sector in general

Why is Energy Attractive to Hedge Funds Now?

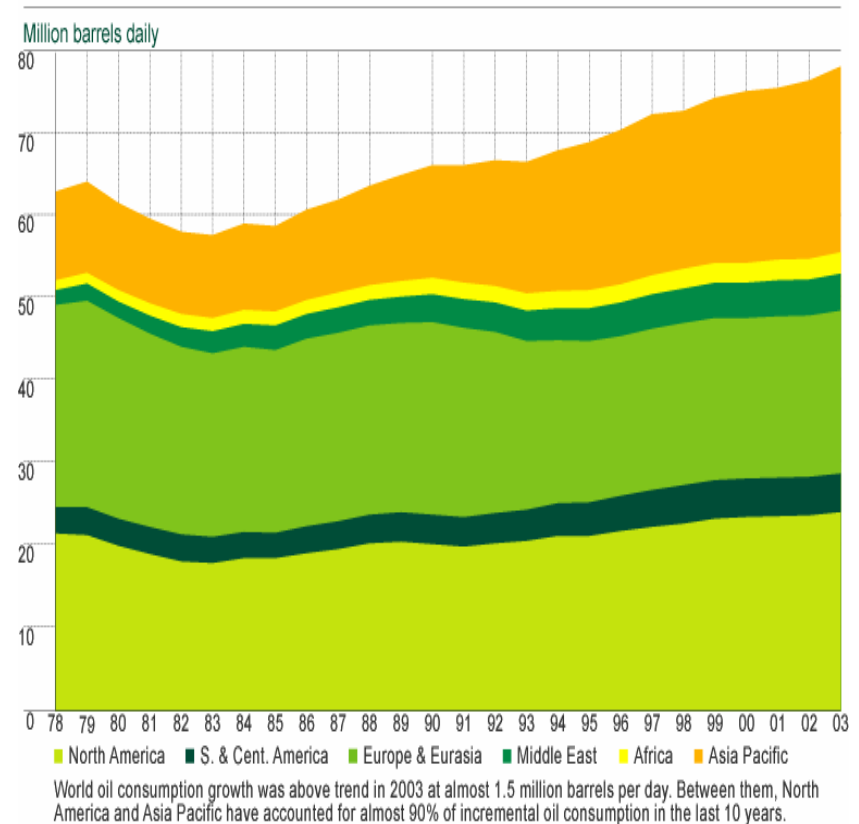
- Hedge fund universe is about 8100 funds and \$1 trillion AUM
- 2004 – Average return of around 8%
- 2004 – Record amounts of capital coming in to alternative investment and hedge funds in particular
- Energy markets volatile
- Energy undervalued and entering a new supply/demand paradigm
- Energy is a new focus for hedge funds that is ripe for better returns than average
- There was a ready supply of ex-energy traders and expertise available for hire.

Energy: An Attractive Investment



Crude Oil Demand

- Demand from Asia, in particular increased, dramatically
 - ▲ China and India known to be stockpiling oil and securing supply
 - ▲ China estimated 20% growth in oil demand in 2004 to 1.1million b/d
 - ▲ GDP growth of 9.1% in Q1 05 and oil demand expected to be 354 million tons for 05.
- US demand robust with a record 3.5% increase in demand in Q2 2004 and now consumes more than 20m b/d of crude oil – around 25% of supply

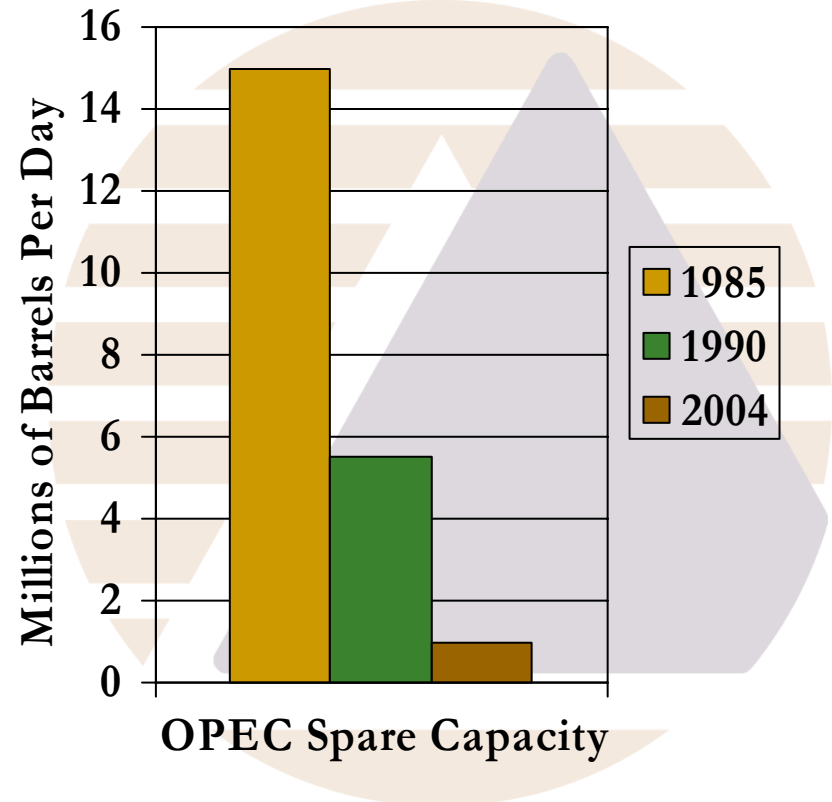


Source: BP Statistical Report 2003

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Crude Oil Supply

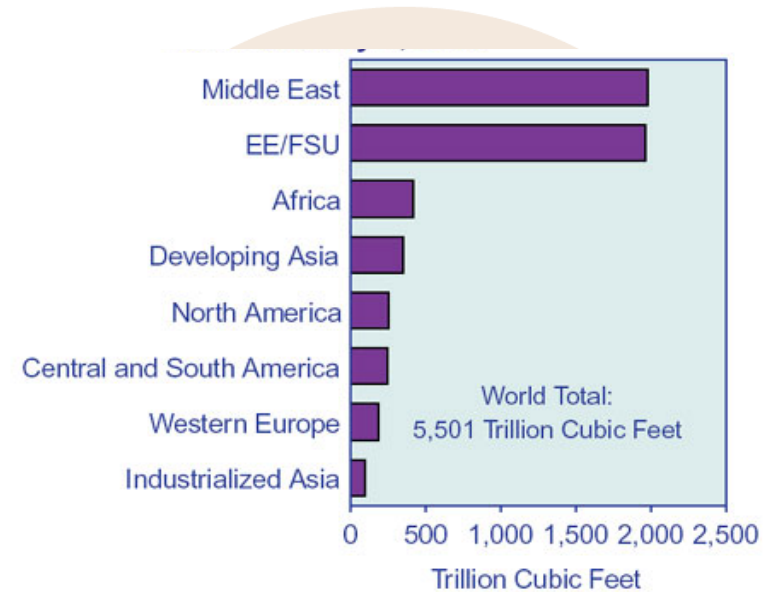
- OPEC capacity has declined from 34 million b/d to around 30 million b/d
- Only Saudi Arabia really has any spare capacity estimated as 1.6 million b/d (and there are increasing numbers of questions being asked about that)
- Oil majors not investing in exploration and some have overstated their reserves
- Light sweet crude production declining, heavy sour crude production increasing
 - ▲ New fields and production are often heavy, sour crudes
- IEA estimates that some \$2,199 billion would be needed for investment in E&P between now and 2030 if expected oil demand was to be met
- Deutsche Bank estimates that major E&P companies have cut their exploration budgets by about 27%
- Potential for critical supply disruption via terrorism, industrial disputes etc. in Russia, Nigeria, Venezuela, Iraq and else where



Source: Rice University/Economist

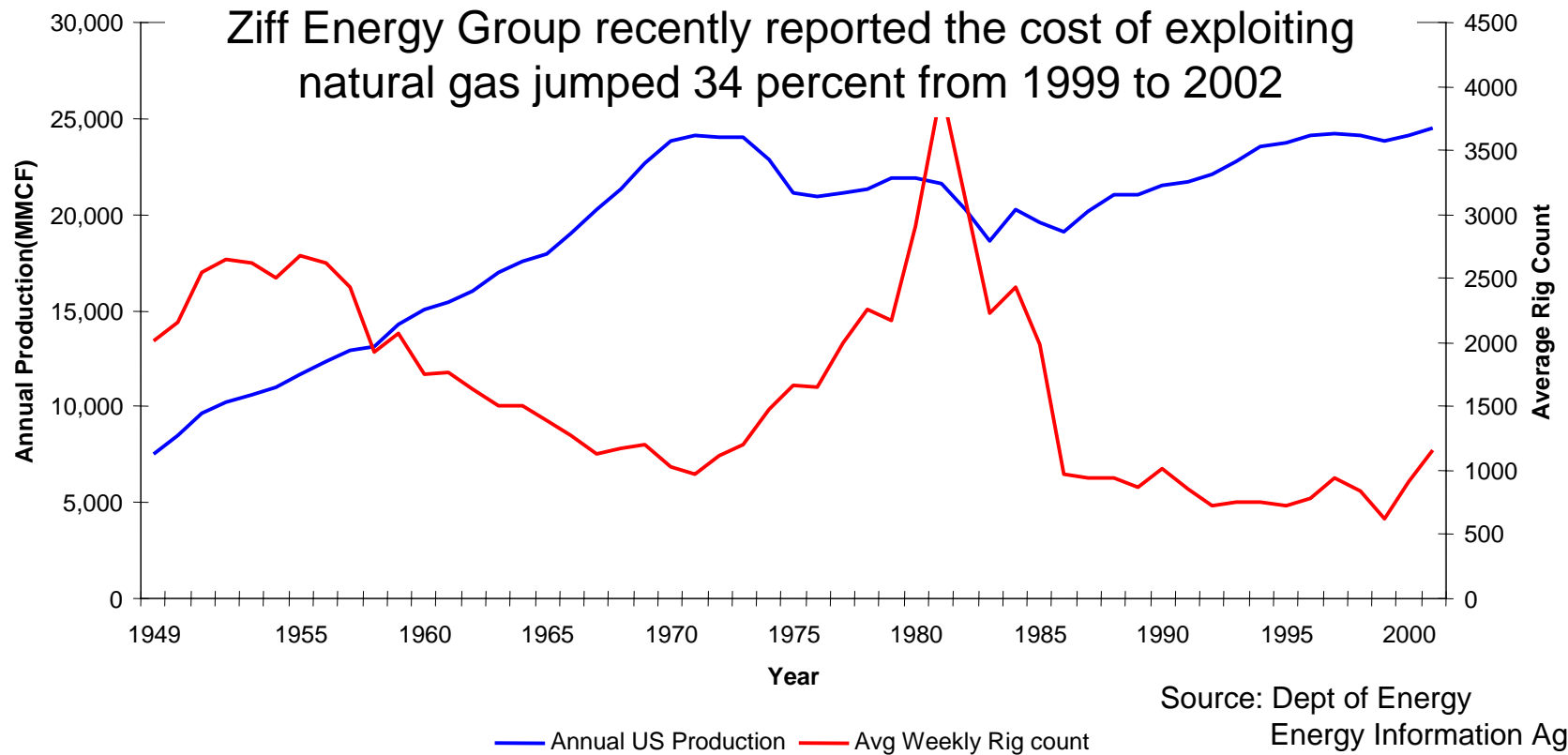
Natural Gas - World Supply

- Russia and Iran account for about 45 percent of the world's natural gas reserves
- Essentially regional markets due to transportation issues
 - ▲ LNG potential
 - ▲ Pipeline Projects
- Lack of investment in Exploration activity as per oil in recent years
- Storage critical and can impact price – recent EIA erroneous storage report caused greater than \$1 jump in NG prices
- US NG price symptomatic of new supply/demand paradigm



Source: "Worldwide Look at Reserves and Production," *Oil & Gas Journal*, Vol. 100, No. 52 (December 23, 2002), pp. 114-115.

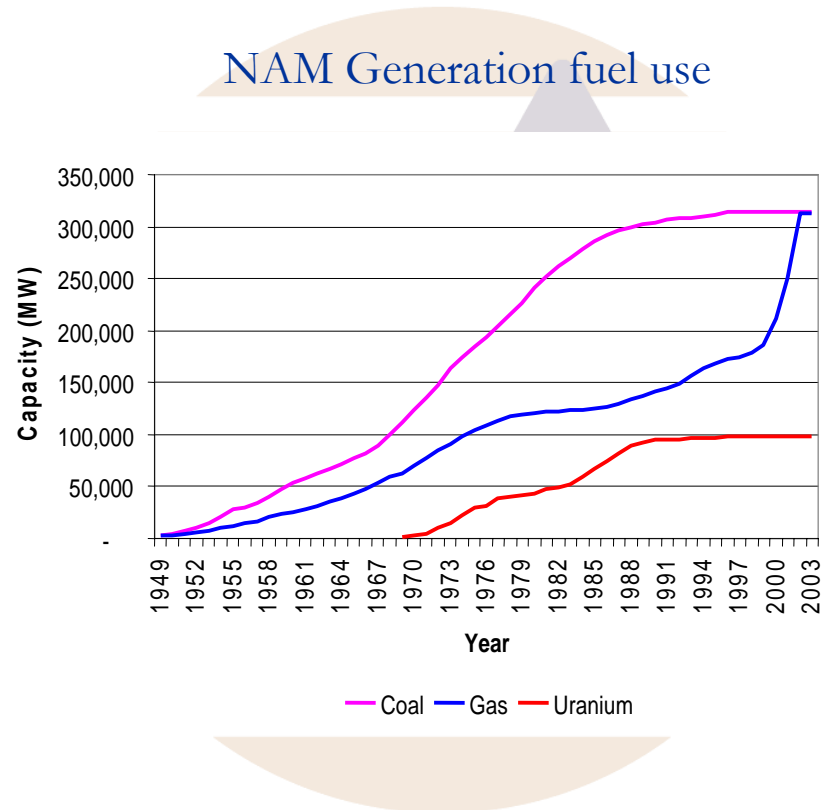
Gas Production vs. Rig Count



30% per year depletion rate!

Natural Gas Demand

- Surge of gas-fired generation projects in US in recent years increased demand considerably
- In regional markets – see supply/demand tightness resulting in price volatility.



Electric Power

- Not storable
- Regional markets – transmission constraints
- Environmental issues even with hydro power
 - ▲ ‘Green’ power increasingly popular and fetching a premium
- Regional supply/demand constraints
- US peak demand exceed 760,000 MW and could increase more than 50% in next 20 years

The Coming “Train Wreck”

- New electric generation additions = Gas
- Coal and Nuclear produce over 70% of electricity currently
- By 2010, 77% of coal units >30 years old and <300MW
- New Coal takes 5 to 7 years to complete

Renewables

- Renewable programs on the increase
- Many utilities have implemented green pricing programs
- States with portfolio requirements
 - ▲ AZ, CA, CT, HI, IL, IA, ME, MA, MN, NV, NJ, NM, PA, TX, WI
 - ▲ CA: September 12, 2002. Established the most aggressive renewable portfolio standard in the country by requiring utilities to purchase 20 percent of their electricity from renewable sources by 2017.



Coal To The Rescue?

- US has 10 times more BTU's in the form of coal than oil and gas combined
- Over 80 coal plants representing over 40 GW of power under consideration
- Coal prices rising as NG prices rise
- Takes years to construct plant once permitted
- Increasing emission regulations



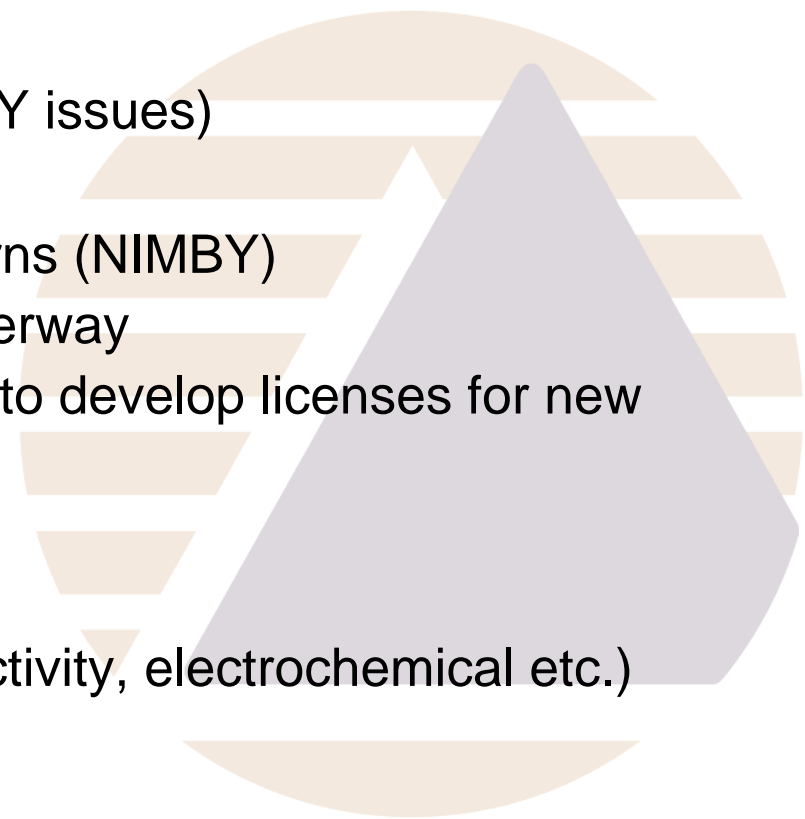
Hydrogen To The Rescue?

- Made from Water, Methane, Natural Gas
- Net Energy Loss
- Therefore effectively a battery
- Decades away



Other Energy Sources?

- Wind
 - ▲ Clean power source
 - ▲ Still environmental issues (NIMBY issues)
- Nuclear
 - ▲ Environmental and safety concerns (NIMBY)
 - ▲ Re-start of TVA nuclear unit underway
 - ▲ Utility consortiums formed in US to develop licenses for new reactors
 - ▲ Last order - 1973
- Energy Storage
 - ▲ Area of investment (superconductivity, electrochemical etc.)
- Fuel Cells
 - ▲ Years away from reality

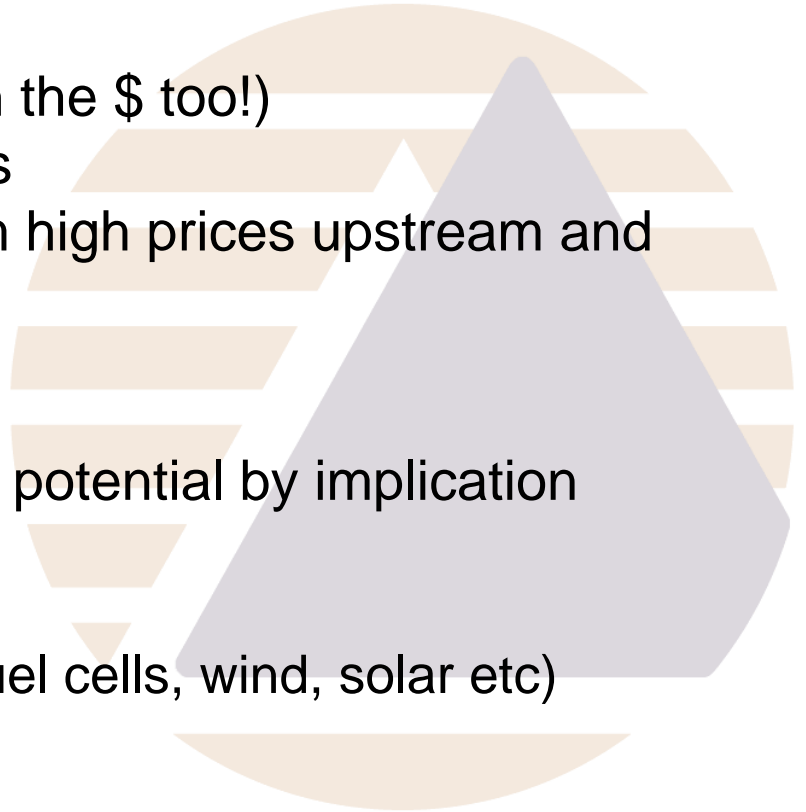


Refined Products

- Demand for gasoline, heating oil etc high in the US but seasonal
- Markets for gasoline regional due to formulation specifications
- Little investment in infrastructure such as new refineries over last two decades
- China and Asia automobile increasing popularity and economic certainty.

Implications

- Energy in all its varieties is 'hot'
- Increased price volatility
- Increasing energy prices (factor in the \$ too!)
- Race to develop new technologies
- Energy companies benefiting from high prices upstream and downstream
 - ▲ Shell record profits
 - ▲ Profits high across sector
- Anything peripheral to energy has potential by implication
 - ▲ Emissions trading
 - ▲ Renewables
 - ▲ New technology development (fuel cells, wind, solar etc)
 - ▲ Water
 - ▲ Uranium etc....



Energy Commodities: Post-Enron Vacuum Filled



Energy Trading Post Enron

- Except for oil, more short-term oriented
- More exchange traded or exchange cleared
- Destruction of many market makers in North America & Europe
- Entrance of Wall Street & City of London investment banks
- **New:** entrance of hedge funds now focused on commodity trading

Energy Trading Post Enron

- Loss primarily confined to gas and power trading
- Loss of market maker and risk taker who controlled 25 to 30% of the market
- Set back energy hedging for two years & now re-establishing itself
- Entrance of the financial houses now is greater than imagined i.e. **bringing more risk capital**

Unprecedented Price Volatilities & Opportunities

- Sustained bull markets across the energy complex for oil, gas, power and coal
- Volatility attracts traders and speculators
- North American natural gas second most attractive market
- Other plays: distressed assets, coal trading, renewable energy and carbon trading
- New liquidity providers

Why Energy Is a Unique Commodity

- Over-the-Counter Markets
 - ▲ Flexibility & customization
 - ▲ No regulation, more risk (hedge funds)
 - ▲ Longer-term in oil
- Exchange-traded futures contracts
 - ▲ Transparency
 - ▲ Clearing & elimination of counterparty risk
 - ▲ Performance
 - ▲ Government oversight



The Energy Futures Markets: Attractive to Hedge Funds

- More liquidity in daily trading & open interest
- More violent intraday price moves
- The most volatility commodities ever created
- Need natural longs and shorts
- Need speculators and market makers
- Long way from market maturation: \$2 trillion commodity markets vs. \$4 trillion physical market

Emerging Markets

- **Coal:** price volatility, change in purchasing procedures, in North America it's a a freight (rail) contract
- **Emissions:** SO₂ & NO_x is \$6 billion market today, dominated by OTC brokers, the hockey stick in 2005 for GHG & RECS
- **Weather:** need to replicate deals coupled with loss of North American market makers, \$15.8 billion market with 10,000 deals

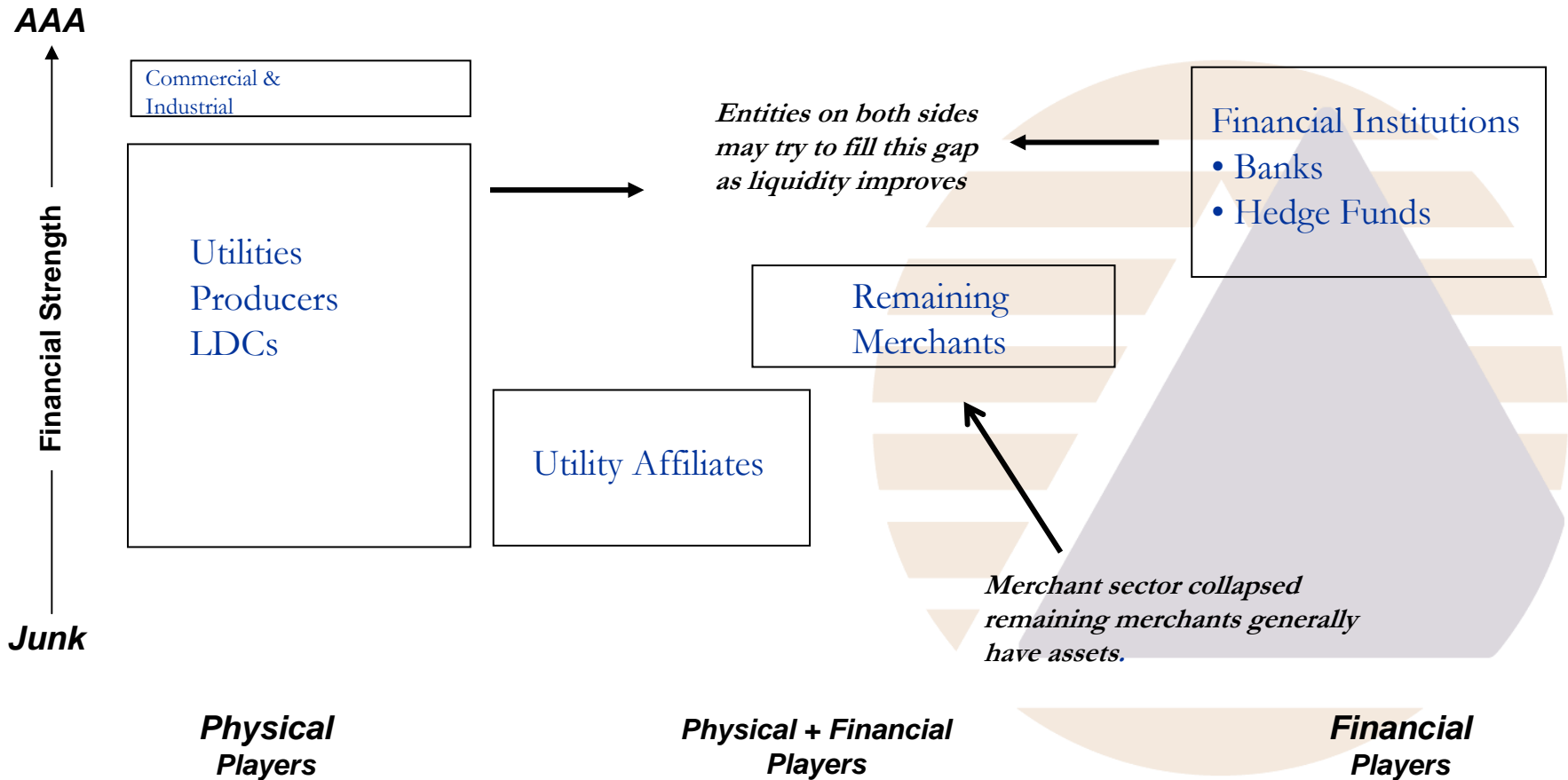
Where We're Going

- Ramping Up: More to Come
 - ▲ Germany deregulation, Singapore Tax Holiday, China trading energy futures since April
- Energy Markets require knowledge base, trading expertise and risk capital
- More trading, more liquidity, more information
- Potential for tremendous gains (Morgan Stanley & Goldman) and tremendous losses
- Energy Trading is zero sum game

Industry Re-Structuring

- Collapse of Merchant sector
 - ▲ All forms of debt
 - \$65 billion in loans coming due 2010 (S&P)
 - Total debt burden of \$125 billion
 - 2003 >\$10 billion in refinancings
 - ▲ Distressed Assets (generation facilities, pipelines, gathering systems, gas plants etc.)
 - Sales to raise much needed capital
 - Re-emergence of the Master Limited Partnership

Industry Structural Changes



Undervalued Sector?

- Record profits in Oils
 - ▲ Oil companies have been using profits to buy back shares as opposed to E&P activities and returning profits to shareholders
 - BP returning \$18 billion to shareholder (versus \$9.7 annual Exploration budget)
 - ExxonMobil returning \$6.4 billion in 2004 versus \$3.6 billion Capex
 - ▲ \$1 rise in oil price equates to 6% increase in earnings for majors (Dundee University)
 - ▲ Easiest way to new reserves – buy them in the form of smaller independents
- Underlying fundamentals in Utilities remain strong after re-structuring
 - ▲ Lehman – IPP holdings increased by over \$4 billion in 2004
 - ▲ Morgan Stanley – positive correlation between utility stock performance and M&A
 - ▲ Morgan Stanley – utility stocks outperformed S&P 500 in 2004
- View that energy stocks may be undervalued
- But issues including environmental, cost of compliance with new regulations and general investment environment

Enter the Speculators

- Hedge funds
 - ▲ Overall performance disappointing in 2004
 - ▲ Increase in investment monies at record levels
 - ▲ Seeking 'alternative asset classes'
 - ▲ Energy identified as offering potential for greater returns across all sectors and strategies
- Investment Banks
 - ▲ Renewed energy emphasis across all sectors
 - ▲ Buying oil reserves in the ground
 - Morgan Stanley – 24 mm bbls for \$775 million from Anadarko over next 4 years
 - MS and Deutsche Bank – purchased equity production in North Sea from 2007 to 2010

What Hedge Funds Bring?

- Positioned to catch the upswing in financial energy & environmental trading
- Opportunities to clear OTC energy contracts
- Opportunities to develop more equity derivative & index contracts for energy equity traders
- They bring liquidity, risk culture and trading acumen
- It's just the beginning

Specialist Funds

- Identified over 330 energy hedge funds
 - About 30% are energy specialist funds
 - Energy and energy-related activity on the increase
 - Observing about 2-6 new funds in formation per month
 - Many new funds are based in Europe – 2004 was largely NAM but Q4 saw an uptick in European fund formation in UK and Switzerland in particular
- What do these funds look like?

Energy Focused Funds

- **Commodity Traders**
 - ▲ Both macro and specialist funds
 - ▲ Macro funds switching portfolio towards greater emphasis on energy and energy-related commodities (e.g. Emissions, Uranium)
- **Physical traders**
 - ▲ Often smaller funds created by ex-energy traders
 - ▲ Power, gas focus
- **Equities & Securities**
 - ▲ Funds switching to heavier exposure to energy sector
 - ▲ New specialist funds launching targeted at energy
 - ▲ Appear to be taking a longer term view towards holdings and investments
- **Debt**
 - ▲ Hedge Funds now largest providers of debt financing to old merchants
- **Distressed assets**
 - ▲ Some funds engaged in Master Limited Partnership activity to acquire energy industry assets
 - ▲ Significant increase in MLP activity last 12-months in midstream
- **Arbitrage and other plays**

Examples

- **European Oil Fund**

- ▲ Oil-related equities
- ▲ Oil derivatives trading
- ▲ Spread Trading

- **Positioning**

- ▲ Lack of investment
- ▲ Emerging economies continue to rely on oil
- ▲ Oil producers wish to see sustained higher prices before making investments
- ▲ Security and speculation factors at play

- **3 Staff but allied with an investment bank**

- **End of march 2005 – 16.89% return since inception (6 months)**

- **US Energy Fund**

- ▲ Mispriced or distressed priced securities
- ▲ Common stock, straight and convertible debt, MLP's
- ▲ Long and short alpha exposure

- **Positioning**

- ▲ Energy stocks and bond prices reflect knowledge gaps – E&P capital spending set to rise
- ▲ Assets and earnings are mis-priced
- ▲ Higher wellhead revenues

- **2 staff**

- **Performance data not known**

Commodity Traders

- Estimate about 100 hedge funds now trading energy commodities (up from 10 last year)
 - ▲ Mainly oil futures, secondarily natural gas, electric power, weather, green and water.
 - ▲ Perhaps \$20-40 billion in AUM
 - ▲ Many are trend followers – ‘black box’ – follow one another
 - ▲ Many are ex-energy traders
 - ▲ Also – renewed interest in the form of investment bank (prop. Trading desks)
 - ▲ Blamed in some quarters for rising commodity prices and volatilities
 - However, evidence accumulating that hedge funds may reduce price volatility

Our Views on Impact

- Price movements largely related to shift in market fundamentals **not** speculators
 - ▲ Speculators follow trends and may accentuate those trends
 - ▲ Funds are 'in' and 'out' increasing volumes
- Impacts
 - ▲ Volatility?
 - ▲ More risk capital, risk acumen and more liquidity
 - ▲ More 'market views'
 - ▲ Overall positive for the industry

Who is Investing

- Traditionally private wealthy investors
- But Energy is now viewed as an alternative asset class for investment by
 - ▲ Pension Funds
 - ▲ Institutional Investors (college endowment funds, local government etc.)
- Investment monies flooding into hedge funds generally

Typical Fund Investment Requirements

- A minimum investment (often \$100,000+ but some funds ask for less)
- Management fees (typically 1-2%)
- Annual performance fee (typically 20%)

About 175 funds > \$1 billion in assets
But most funds much smaller, particularly
Specialist funds

Transparency

- Estimates suggest that about 1 in 8 start up funds fails before start of year 2
 - ▲ 40% of these failures due to fraud
 - ▲ 30% due to operational risk
- Transparency into fund valuation and NAV calculations by investors, banks and other parties (administrators etc.)
- Demonstration of adequate risk controls, policies and procedures
 - ▲ Potentially, demonstration of energy expertise and energy-specific methods and tools
- Has an impact on technology requirements

Summary

- Energy is a new alternative 'asset class' for hedge funds
- Energy is entering a new paradigm in terms of pricing, structure and players.

*The next 5 years will bring a
Boom time like we have never seen
Before*

Comments by John Olsen of 2003 Houston Energy Partners
To Pipeline Opportunities Conference in Houston January 2005

About UtiliPoint International

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