

# *Price Risk Management*

*A presentation for:*

## **2011 Motor Vehicle Metals & Resins Conference**

**MF** Global<sup>SM</sup>  
Taking Man Financial  
into the Future

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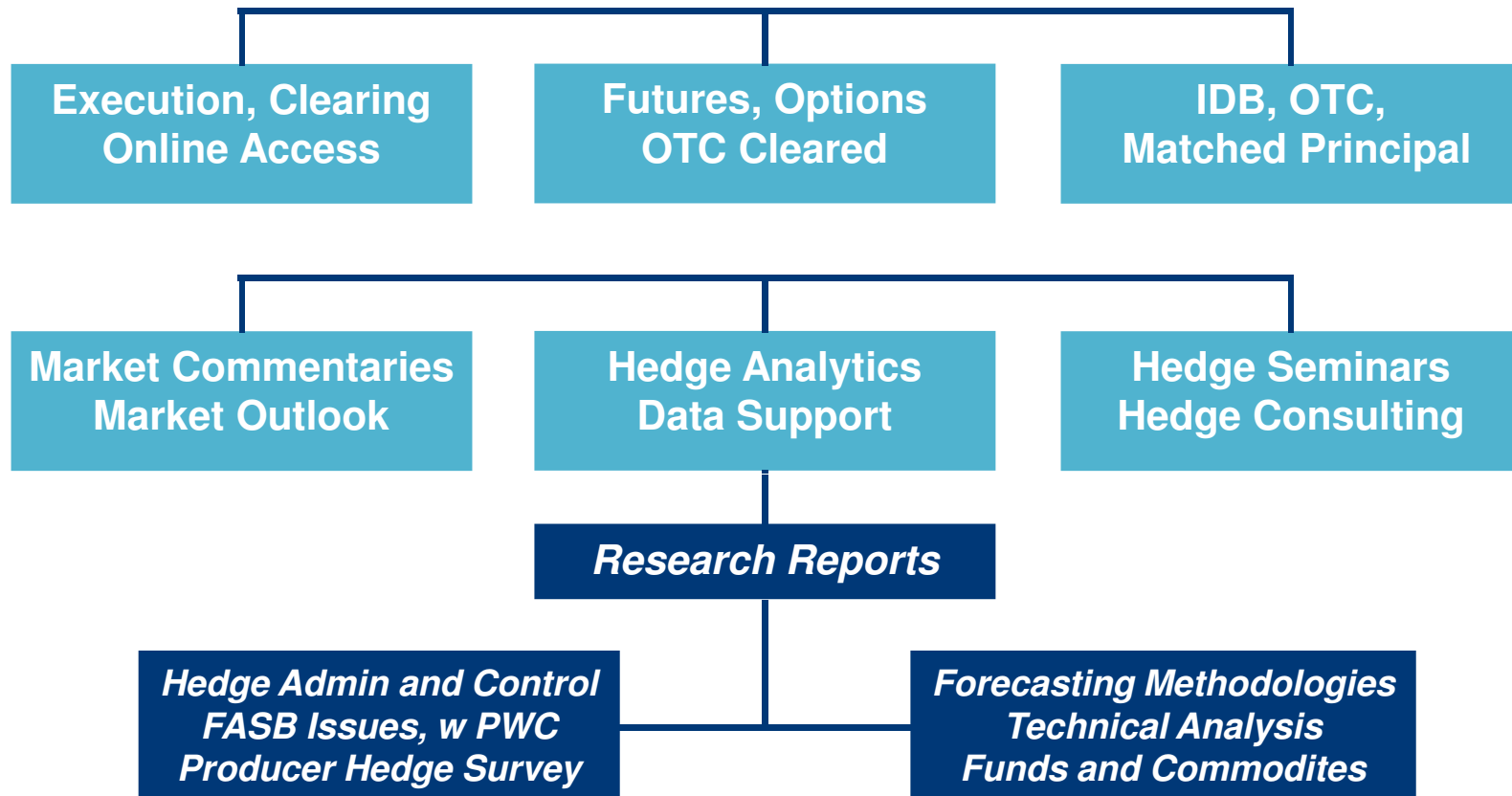
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# Commodities Division, Client *Services*



**Large Market Share/Access to Liquidity,  
Geographic Diversity, Multiple Venue Execution and Clearing Capabilities  
Professional Reputation and Service Capabilities**

## MF Global Industrial Materials Team: Uniquely Differentiated Model Creates Value For Clients

MF Global's Industrial Materials Team is uniquely equipped to serve clients in the worldwide futures, options and cash markets. The following attributes separate us from our competition:

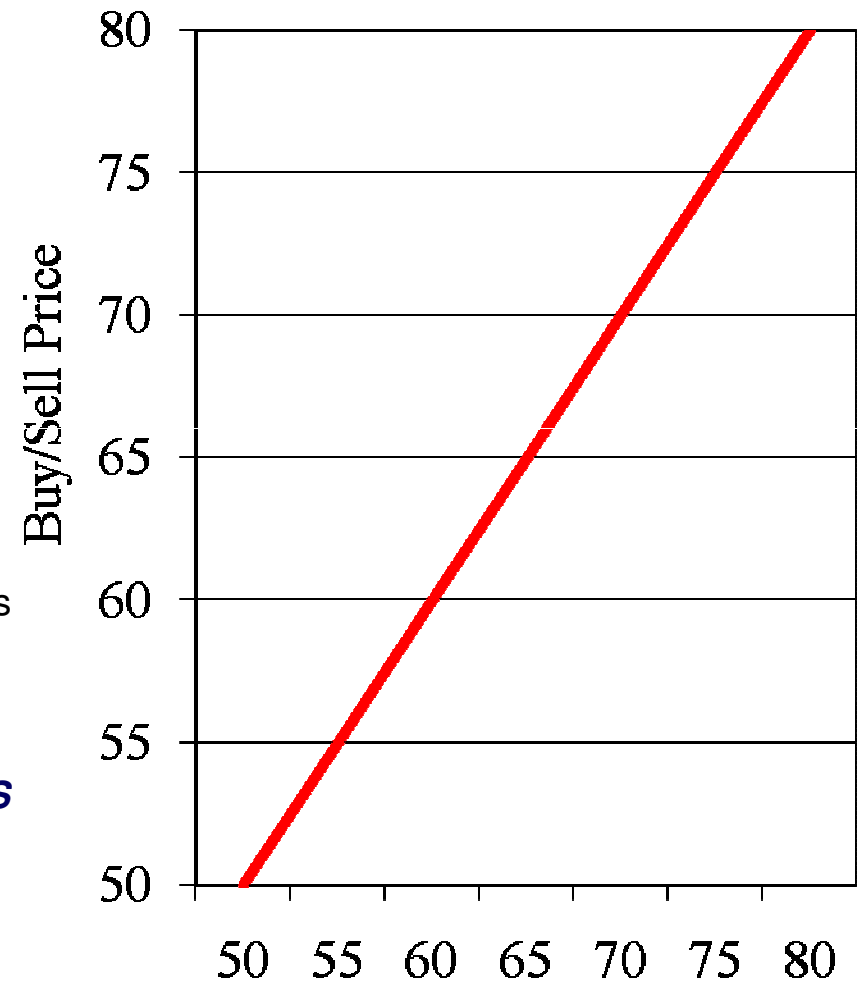
Predominantly agency model	<ul style="list-style-type: none"><li>• Focus on client order execution rather than taking risk positions</li></ul>
Diversified and balanced business model	<ul style="list-style-type: none"><li>• Across multiple products, markets, customers, regions</li></ul>
Expansive market coverage and product offering	<ul style="list-style-type: none"><li>• Cover major industrial materials- both mature and formative markets. Futures, Options, OTC</li></ul>
Dedication to commodity business	<ul style="list-style-type: none"><li>• 225-year heritage of continuous involvement and increasing commitment</li></ul>
Fluency in price risk problems	<ul style="list-style-type: none"><li>• Hire out of industries we serve and keen understanding of commodity pricing exposures</li></ul>

# Industrial Materials Team - Focus

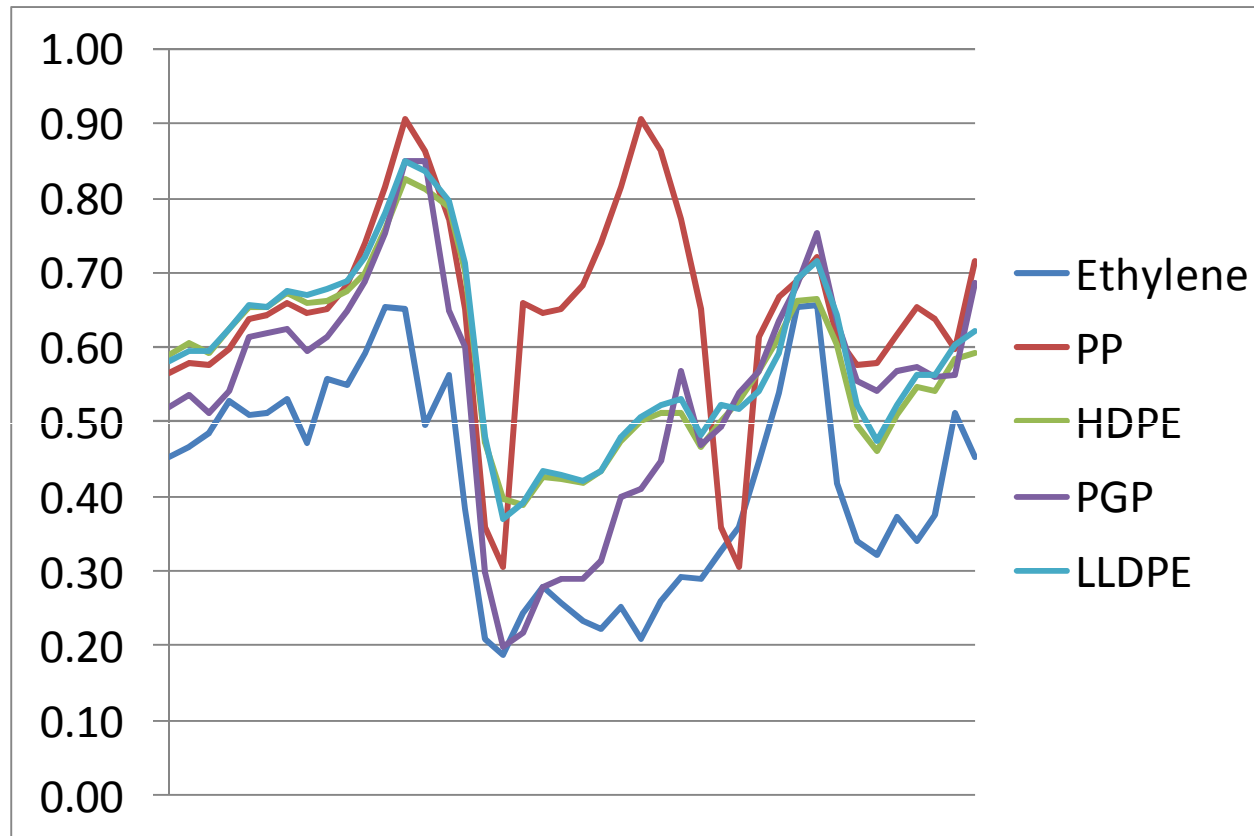
- NGLs, Olefins, Polymers
- NYMEX Steel
- LME Steel
- EIA Flat Tax On-Highway Diesel
- Energy

# Two Businesses . . .

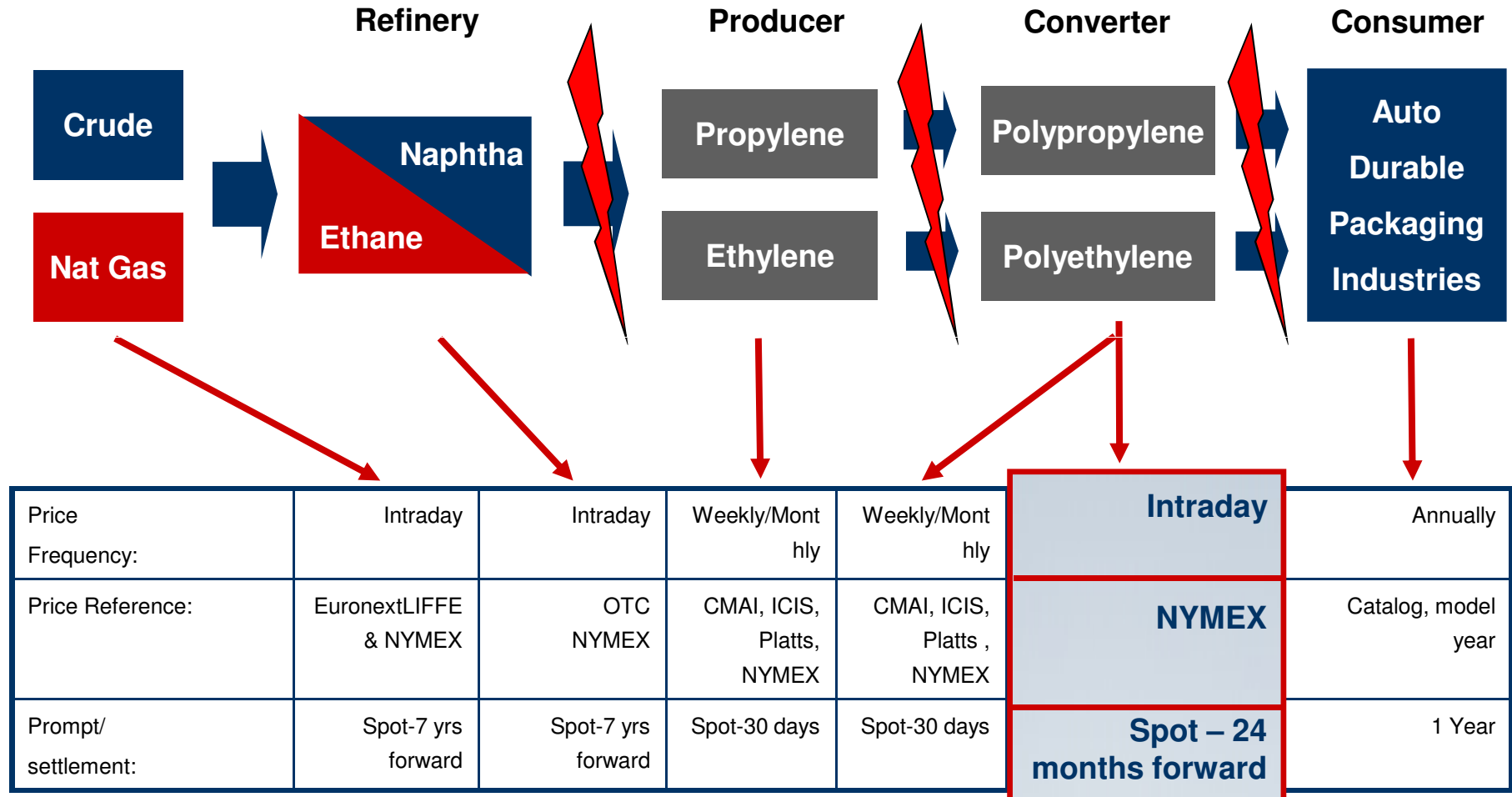
- producer problems
  - variable revenues, fixed costs, clients want pricing options
- fabricator/processor problems
  - variable margins, clients want fixed pricing, inventory risks
- consumer problems
  - budget price/cost, semi-fixed sales price (can't pass on metal costs)
- two businesses
  - mining/fabricating/manufacturing & **COMMODITIES BUSINESS**



# Volatility equals risk for the polymer industry – Vol. range from 35 – 60%



# The Problem: Flawed Price Discovery Chain



## NYMEX vs. LME

- LME exclusively a Futures Exchange
- Didn't have capability to clear Swaps – most of the liquidity in polymers
- Bag contract and high costs limited Futures trading
- LME didn't own its clearinghouse
- NYMEX product portfolio captures the Petrochemical value chain
- NYMEX NGLs offering very successful – natural expansion into polymers
- Clearport functionality allows product launches quickly & effectively
- NYMEX brand recognition

# Benefits to Hedge using NYMEX Plastics Futures & Swaps Contracts

- Reduce / eliminate volatility
- Achieve standard cost allowing increased accuracy in financial planning
- Bring value to clients with creative pricing solutions
- Differentiate service in the marketplace
- Launch new programs with financial certainty
- Defend market share by locking in hedged business

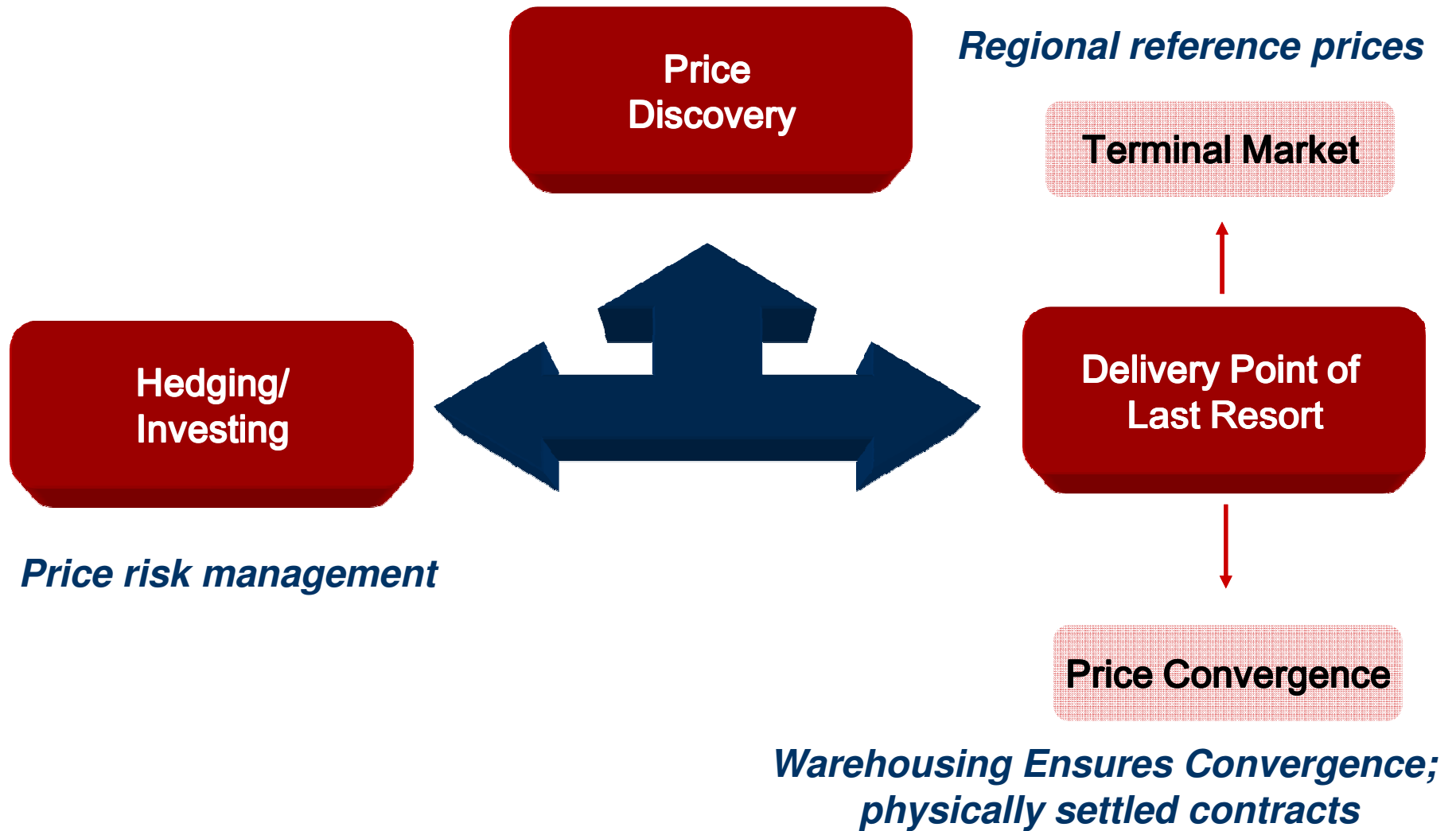


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# Price Formation & the role of Futures Exchanges



# Roles of a futures Exchange



# Contract Specifications – NYMEX -Futures

Polypropylene  
Homopolymer general  
purpose injection  
molding grade, melt flow  
rate 3.5,12, 20

High Density Polyethylene  
Melt .35; Density .953



- 47,000 lbs. contract size
- Producer standard anti-oxidant package. No additional additives ('barefoot')
- Delivery Houston Hub

# Contract Specifications – NYMEX - Swaps

Polypropylene

Linear Low Density &  
High Density Polyethylene



- 47,000 lbs. contract size
- Settles at the end of the contract month against Month Average of PCW Daily Settlement Price Houston Hub

# Contract Specifications – NYMEX - Swaps

Ethylene

Polymer Grade Propylene



- 100,000 lbs. contract size
- Settles at the end of the contract month against Month Average of PCW Daily Settlement Price Houston Hub

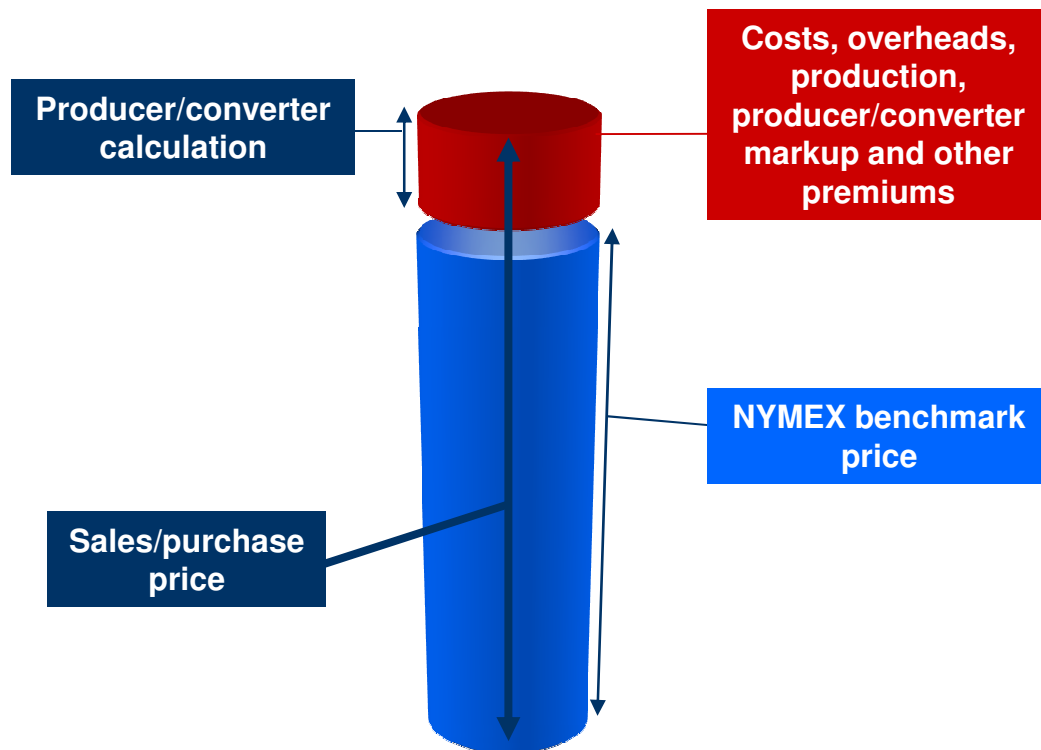
# Why NYMEX for pricing?

**Transaction-based**

**Transparent  
benchmark**

- **Independent of the market**
- **If you are active in the market you are part of the price discovery process**
- **Prices are derived from actual bids/offers and trades**
- **Feedback from market participants confirms strong correlations**

# Exchange pricing structure



- Exchange benchmark price
  - reflects the base grade of polymer
  - reflects general movements in the price of that polymer type
  - referenced in sales and purchase contracts
- Premiums added above Exchange price for:
  - different brands
  - different grades
  - different locations
  - additives
  - delivery to customer

# Status of the Market

- Significant adoption in North America
- Market participants include – Major Resin Producers; Merchants Converters and End Users
- End Users (e.g. Consumer Product Goods Co., etc.) are driving adoption and participation
- Correlations are strong
- Resin Producers, Merchants, Converters now pricing commercial contracts basis NYMEX/PCW
- Physical delivery mechanism works

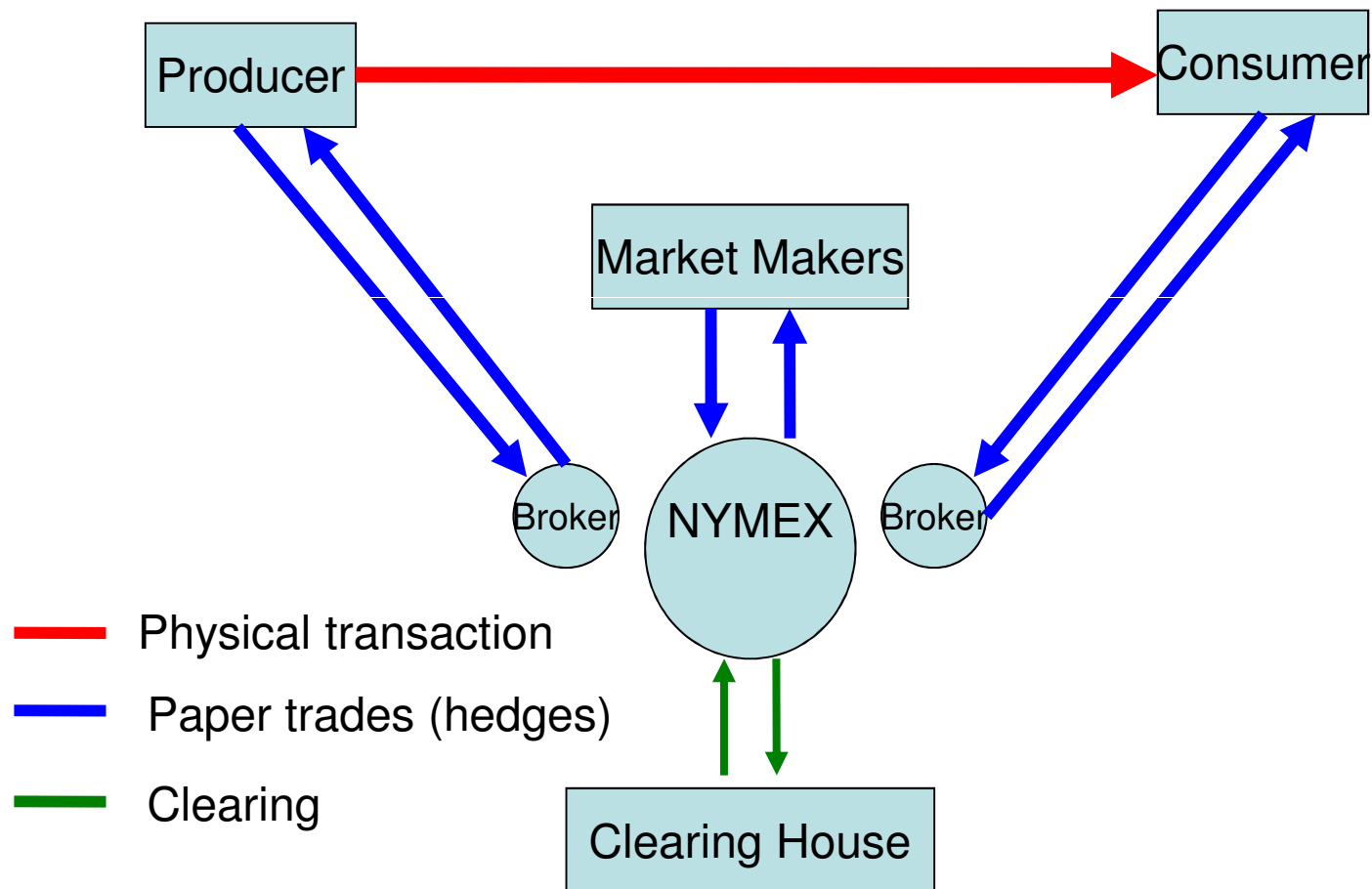
# Hedging Strategies

- Price Fixing Buy Hedge
  - *eliminate exposure to rising resin costs*
- Price Offset Hedge
  - *respond to a clients request for fixed price*
- Hedging Ins & Outs
  - *reduce exposure and improve return on polymer trading activity*
- Making & Taking Delivery
  - *customer / supplier of last resort; improve creditworthiness of transaction*
- Feedstock to Polymer Hedge
  - *guarantee minimal margin between monomer and polymer*

# Futures & Swaps

- A **Future Contract** is binding standardized contractual agreement, to buy or sell a particular commodity at a pre-determined price in the future. Futures contracts may be settled financially or by making or taking physical delivery
- A **Swap Contract** is binding standardized contractual agreement (mirrors Future Contract), to lock in a buy or sell price of a particular commodity in the future. Swap contracts are only settled financially

# NYMEX Trading Schematic



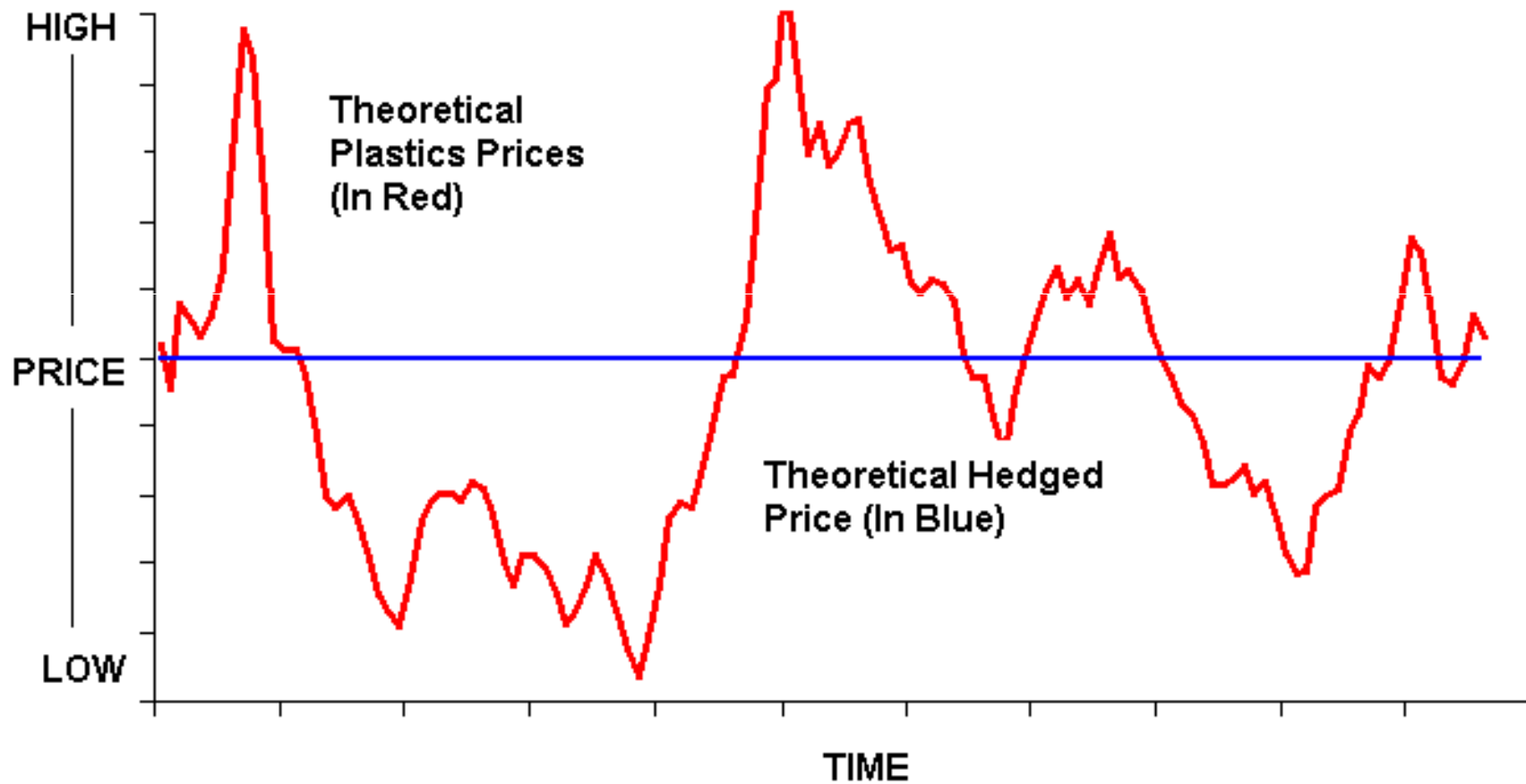
# Hedging vs Speculation

- A **hedger** has a plastics price exposure inherent in its producing, consuming, processing, or trading business and buys or sells plastics futures contracts with the goal of reducing or eliminating price risk
- A **speculator** starts w/o price exposure, buys or sells plastics futures contracts with the purpose of taking on plastics price risk.

# Key Hedging Concept

- **Net buy price =**  
Price paid to supplier + (-) Hedge Losses (Gains)
- **Net sale price =**  
Price on sale to customer - (+) Hedge Losses (Gains)

# Impact of a Price Fixing Hedge



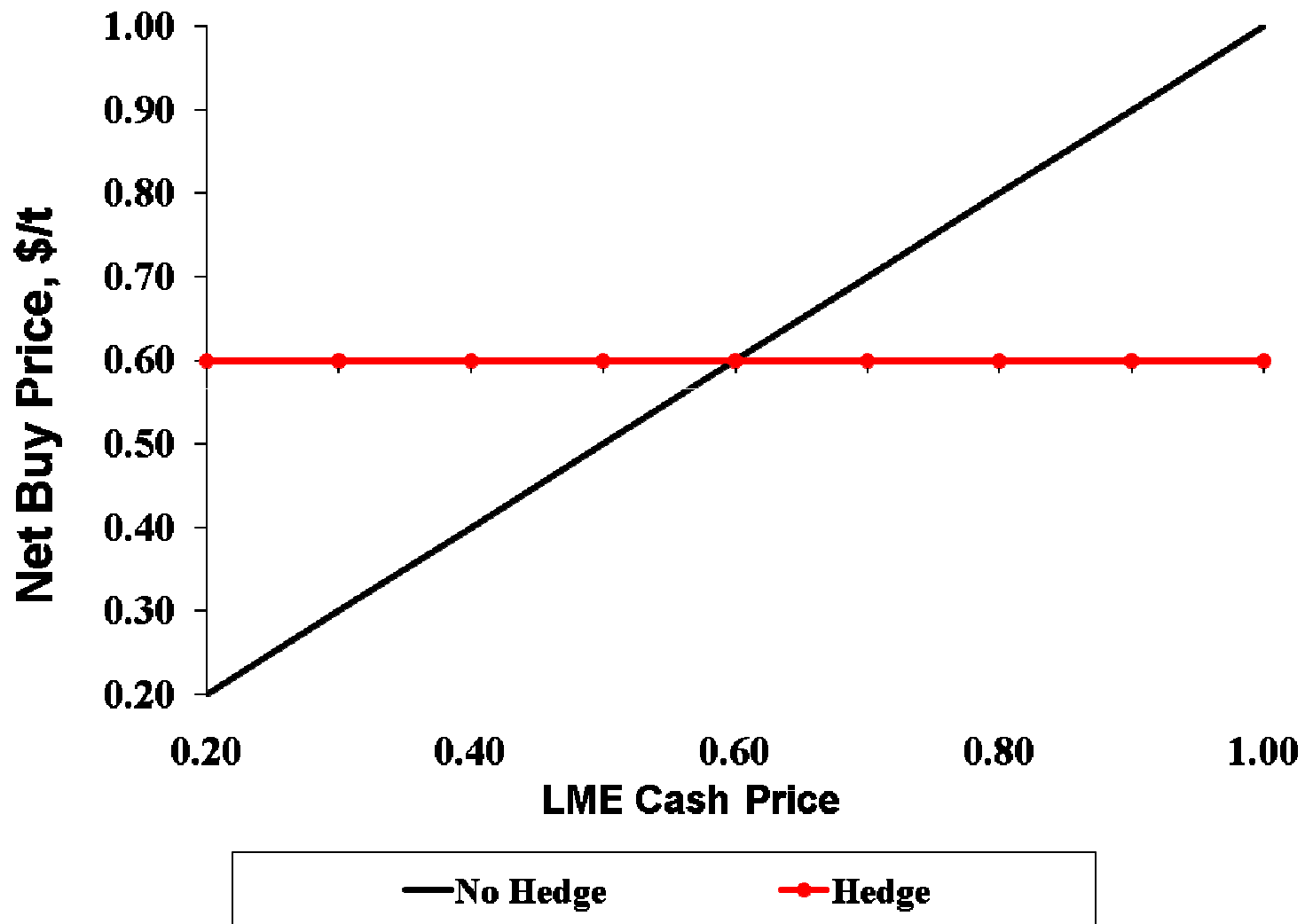
## “Buy Fixing Price” Hedge – *Resin user wants to lock in future buy price*

- Situation:
  - Company sets a standard cost for PP (del. December ‘11)
  - Company to lock in standard cost of PP now for December ‘11 resin production requirements
- Opportunity Cost: price decreases; Risk: price increases
- Market Structure: **Cash = .60/lb, December ‘11 futures = .60/lb**
- Strategy:
  - Buy December ‘11 NYMEX PPP (Polypropylene Swaps)
  - Swaps liquidate automatically at December ‘11 average of daily PP settlement price

## “Price Fixing Buy” Hedge

	PP falls: \$0.55/lb.	PP rises: \$0.65/lb.
Dec. '11. Resin Buy (2)	.55	.65
Dec. PPP Buy (1)	.60	.60
Dec. PPP Liq.	.55	.65
Hedge P/L	-.05	+.05
<b>Net Buy Price</b>	<b>\$0.60</b>	<b>\$.60</b>

# Converter “Price Fixing Buy” Hedge



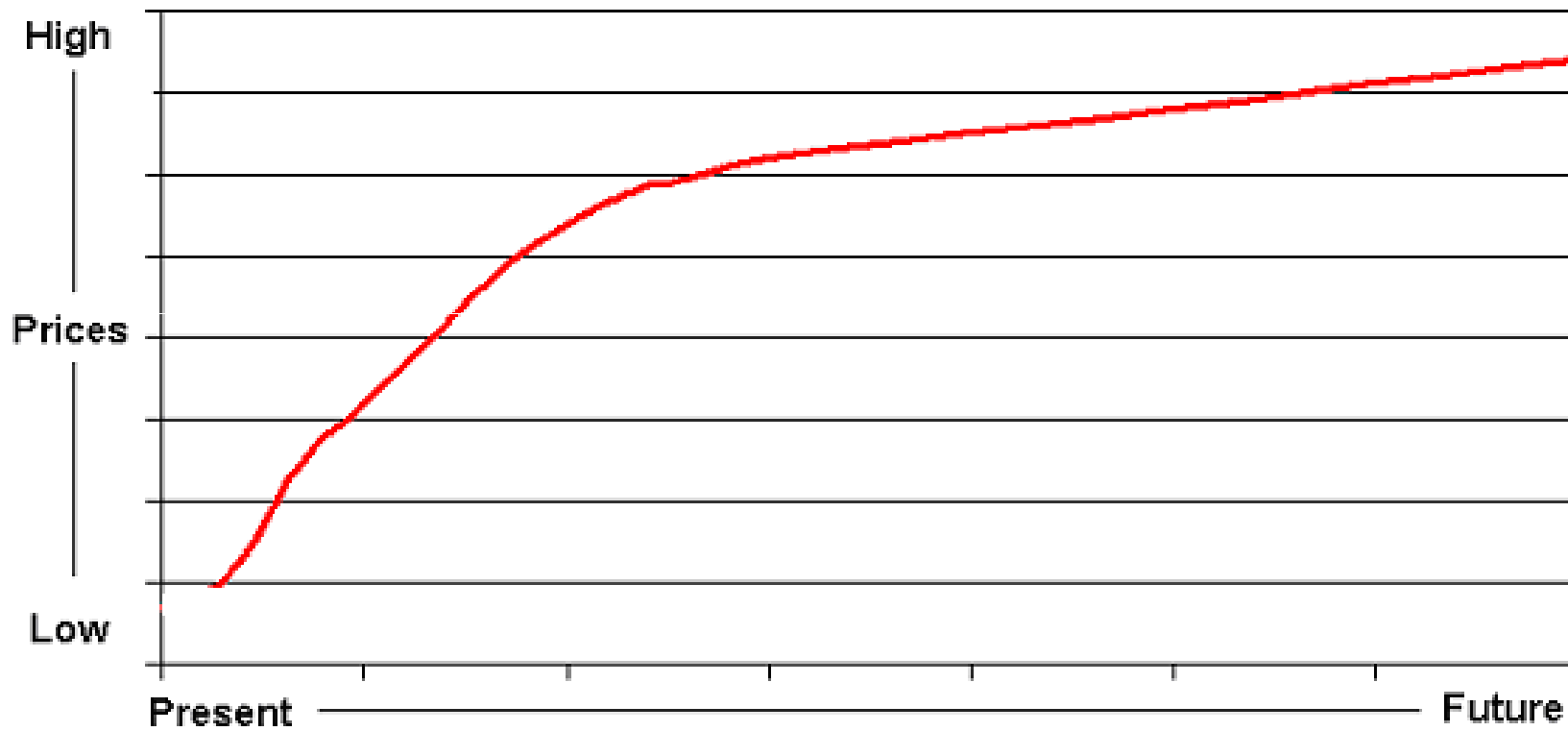


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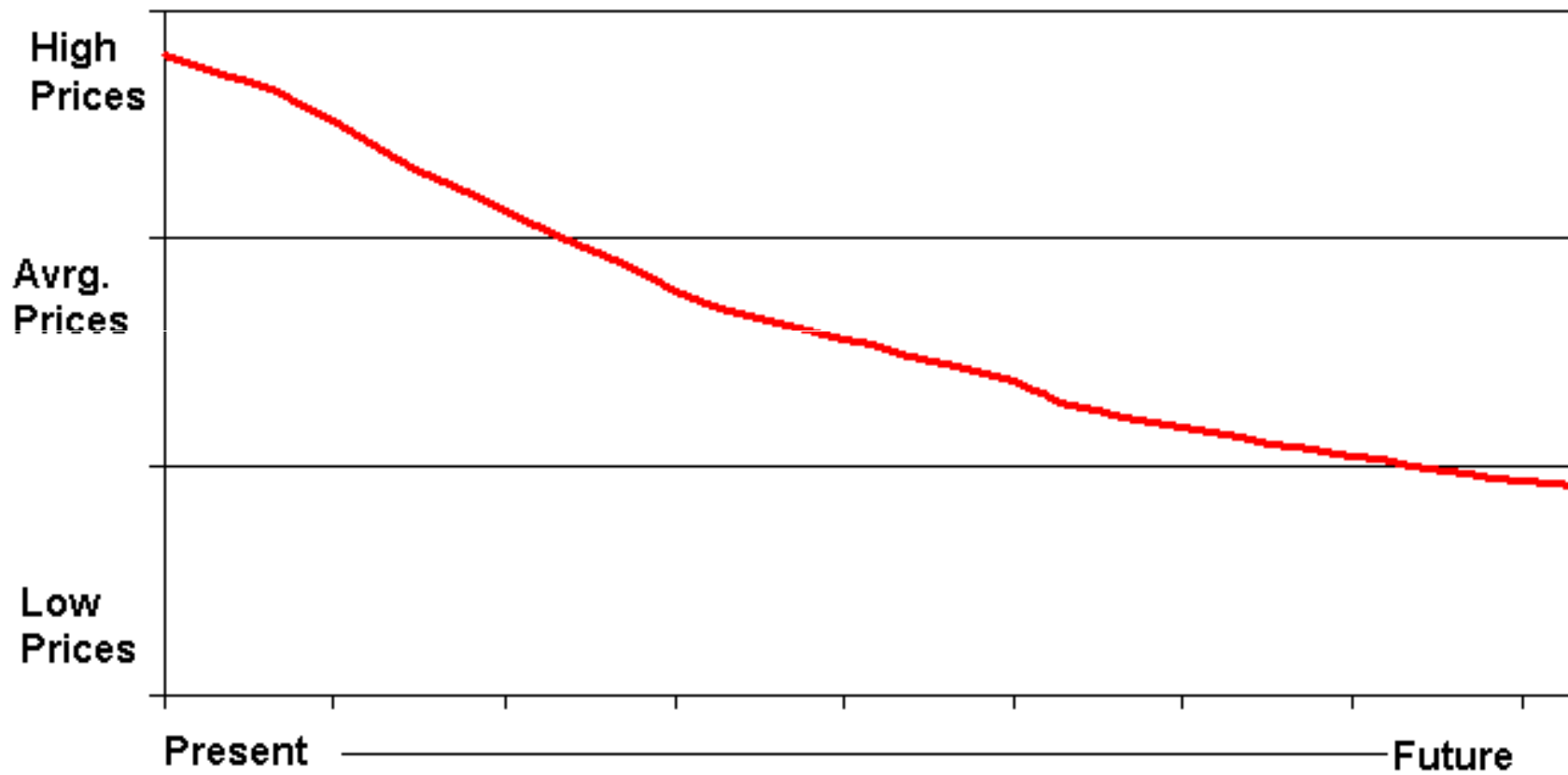
# Futures Dimension



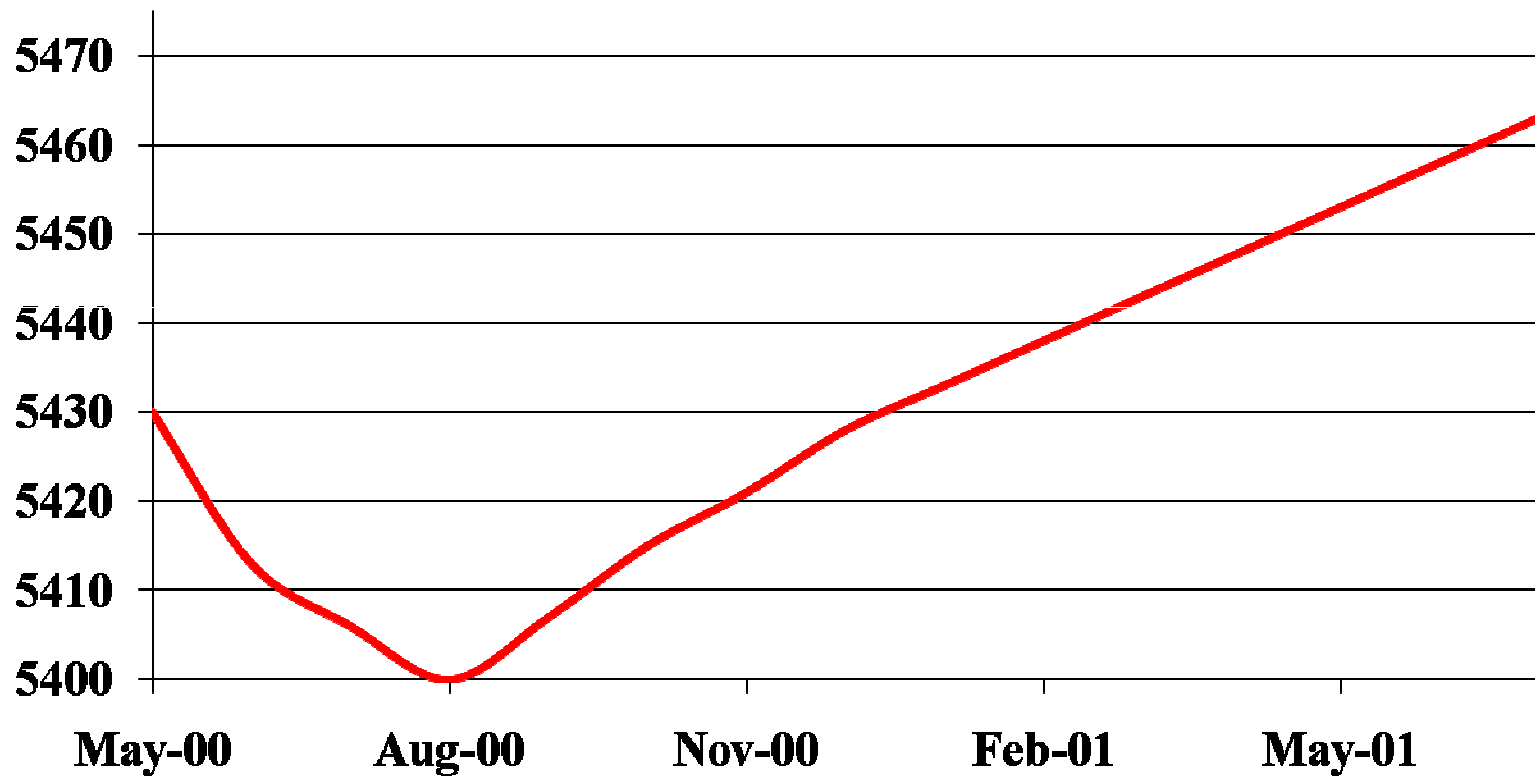
# Contango Market Structure



# Backwardation Market Structure



# Contango and Backwardation Market *Tin Futures Prices*



# Polymer Market Dynamics - 2011

- Macro global economy improving – IP est. 4.8%
- Commodity super cycle will continue – elevated prices; increased volatility
- Higher Highs & Higher Lows
- Relative value of NG vs. CL will benefit U.S. PE producers
- Refineries will significantly impact propylene monomer prices

## Summary

- North American adoption accelerating
- Correlations Strong – Producers are emerging to price basis NYMEX/PCW
- Commodity Super Cycle to continue
- Producers very disciplined
- Inventories low
- Feedstocks more volatile

# Hedging Costs

- Three Cash Flow Consequences
- Commissions – \$25.00/side
- Initial Margin – good faith deposit approx. \$2200/contract.; returned when contract closed out
- Variation Margin – obligations when company's buy/sell price and daily market prices show a marked-to-market loss.

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