Commodity Price Risk Management (CPRM) - Trends and Challenges for Corporates
Agenda

- Industry Challenges
- CPRM – A Business Case
- CPRM Maturity Model
- CPRM Trends
- What Should Companies Do?
Industry Challenges
Commodity Industry Challenges

In recent periods, companies across the supply chain have seen marked changes in the cost of commodities and within their business value chains.

Commodity producers

- Oil
- Mining
- Agriculture

Commodity converters

- Chemicals
- Metals & mill products
- Oil & gas (refining)
- Utilities

Commodity consumers

- Automotive
- Consumer products
- High tech
- Aerospace / Travel & logistics
- Industrial machinery & components

- Price volatility risks from uncertain core commodity and energy prices
- Changing patterns of global trade increasing supply chain complexity
- Changing commodity trading regulations
- Geopolitical risks and currency fluctuations
- Supplier and counterparty credit risk concerns
- Carbon offset/carbon credit markets and emissions trading
- Weather risks
- Expensive financing due to Trade Finance regulations on banks
**Commodities Supercycle**

The commodity cycle slowed down after the financial crisis but is not dead yet. The commodity prices are still significantly higher than those in 1990s.
Major commodities across agriculture, energy and metals have witnessed continued price volatility over the last few years making Commodity Price Risk Management (CPRM) a key priority for companies.
CPRM – A Business case

- Common Issues
- CPRM Business Case
**Common Issues Facing Commodity Companies**

Typical problems faced by companies with commodity exposure can be attributed to the organizational structure, controls and technological capabilities.

<table>
<thead>
<tr>
<th>Global Procurement</th>
<th>Exposure Management</th>
<th>Technology Sophistication</th>
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<tbody>
<tr>
<td>• High volume of contracts with multiple embedded commodity exposures</td>
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<tr>
<td>• Inefficient processes leading to difficulty in aggregating new contracts</td>
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<tr>
<td>Primary focus on value engineering with scant regard to the controls and corporate hedging guidelines</td>
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<td>Cost models are not tended to on a regular basis, which affect the true value of embedded commodity exposures.</td>
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<td>Inefficient data collection processes and limited analytical capabilities</td>
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<td>Individual spreadsheets for contracts, exposure, budget and demand data are not harmonized in formatting or content granularity</td>
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<tr>
<td>Analytical tools that sit on top of consolidated data are not fully mature and could benefit from increased sophistication</td>
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Limited trading oversight against corporate hedging guidelines

*Divided ownership of risk management activities and lack of coordination feeds operational inefficiencies and hinders proper risk management.*
**Commodity Management – A Business Case**

Investments in commodity management can drive shareholder value, ensure business continuity and minimize operational risks.

<table>
<thead>
<tr>
<th>Enhancing shareholder value</th>
<th>Managing commodity and business sustainability risks</th>
<th>Delivering operational enhancements</th>
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<tbody>
<tr>
<td>- Manage margins and profitability through cost control</td>
<td>- Manage the impact of volatility in commodity and raw material prices</td>
<td>- Drive process efficiency</td>
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<tr>
<td>- Predict price volatility and financial performance</td>
<td>- Utilize financial instruments to manage market exposure</td>
<td>- Support advanced commodity procurement, trading and risk management processes</td>
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<td>- Optimize cash flow by efficient working capital and inventory management</td>
<td>- Manage supplier and counterparty risks</td>
<td>- Increase analytics, reporting and visibility for stakeholders</td>
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<tr>
<td>- Increase share price by freeing up cash for capital investments or returning to shareholders</td>
<td>- Ensure business and supply continuity through term contracts</td>
<td>- Optimize manufacturing/distribution network to reduce transportation costs</td>
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<td></td>
<td>- Increase cost certainty to business allowing greater flexibility in product pricing</td>
<td>- Improve data quality and quantity for more informed strategic decisions</td>
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CPRM Maturity Model
**Where Does Your Company Sit?**

Commodity risk management profile of companies can be typically represented through the following broad approaches:

<table>
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<tr>
<th>Risk Appetite</th>
<th>Averse</th>
<th>Minimal</th>
<th>Open</th>
</tr>
</thead>
</table>
| **Characteristics** | • Cost containment  
• Limited to no hedging  
• Difficult to justify the upfront cost of implementing a risk management organization | • Price and contract management  
• Hedging programs with low degree of risk  
• Financial hedging tools are strictly limited to hedge effective tools validated by finance and auditors | • Independent full function Risk Management team  
• Adaptable financials and physical hedging  
• Active risk and limit monitoring  
• Physical logistics and risk systems |

<table>
<thead>
<tr>
<th>Risk Management Measures</th>
<th>1 - Physical hedging / Forward purchasing</th>
<th>1 - Supplier Contract Engineering / Physical hedging</th>
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<tbody>
<tr>
<td>2 - Trading strategy analysis, development &amp; approval</td>
<td>2 - Enhanced analytics and risk based performance measurements</td>
<td>3 - Market, credit, operational and liquidity risk metrics</td>
<td>4 - Use of financial hedging tools with hedge and non-hedge effectiveness</td>
</tr>
</tbody>
</table>
CPRM Maturity Path

- Opportunistic hedging to improve margins
- Governance framework, policies, processes
- Contract Engineering
- Price/Volume analytical tools
- Forward Purchasing
- Dedicated CPRM organization
- Understanding and mastery of financial tools
- Financial Hedging
- Layer price analytics into purchase timing
- Consolidated view exposure
- Flex price provisions in negotiation with suppliers
- In-House Financial Hedging
- Procurement Physical Hedging

PwC
CPRM Trends

- CPRM Trends
- An Enterprise view
CPRM Trends
As CPRM becomes more challenging, the following trends are becoming more prevalent:

**Organization**
- Companies are re-evaluating the linkage and roles of Procurement and Treasury
  - Consolidated view of commodity, FX and Interest Rate exposures
  - Centralized counterparty contracts, suppliers’ credit risk and liquidity needs

**Price / Cost Management Strategies**
- Sophistication of procurement strategies is increasing
  - Influx of ex-commodity traders in procurement
  - Hedging programs and strategies aggressively aligned with hedge accounting policies and treatments

**Risk Analytics**
- Key Risk Indicators and Quantitative Risk Management
  - Increased use of statistical analysis
  - Incorporating sophisticated risk measures

**Technology**
- CPRM vendors are pushing specialized products
  - Implementing CPRM or Treasury Management Systems (TMS) that support trading of both physicals and financials
  - Straight through processing, from procurement to risk management to hedge accounting, a desired feature
CPRM – An Enterprise View
Companies must take a holistic view of risk and contemplate enterprise wide measures including:

**Operating Model**
- Centralized CPRM functions
- Supply chain and procurement optimised and aligned to CPRM activities
- Treasury aligned to CPRM operations

**Risk Management**
- Quantitative risk measurement
- Sophisticated trading and hedging strategies
- Integrated scenario planning
- Enterprise and strategic risk management

**Governance and Controls**
- Enhanced internal audit role
- Clear accountability and decision frameworks
- Segregation of duties rigorously applied
- Trading controls and limits monitoring

**Technology**
- Integrated package applications
- Reference/Core Data management
- Straight through processing
- Real time reporting and exposure monitoring

Efficient operating model structure
Regulatory compliance
Structuring governance and controls
Reputation risk of fraud and control lapses
Managing commodity price volatility
Setting risk appetite and tolerance levels
Showing the value-add of CPRM activities
What should companies do?
What Should Companies Do?
Companies that manage commodity risk well exhibit traits substantially different than most organizations and, as a result, realize significant business value.

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<th>Business Practice</th>
<th>Realized Value</th>
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<tr>
<td>Align commodity risk management objectives to overall business objectives</td>
<td>Minimize cost of procurement for raw materials and energy requirements for manufacturing plants, transportation and other commodity consumption activities</td>
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<tr>
<td>Systematically identify and assess commodity risk across the organization</td>
<td>Reduce volatility in commodity costs, operating margins and income, driving share price appreciation</td>
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<tr>
<td>Manage commodity price exposure based on robust risk measures</td>
<td>Improve data quality and quantity for more informed strategic decisions</td>
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<tr>
<td>Explicitly embed commodity risk information in routine management processes.</td>
<td>Increase cost certainty to business allowing greater flexibility in product pricing (e.g., ability to provide customers with greater price certainty)</td>
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<tr>
<td>Risk levels and risk management program performance are actively monitored.</td>
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<tr>
<td>Risk management capabilities are viewed as a competitive advantage.</td>
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Next Steps

Companies must determine their risk appetite and ask the following questions:

**Category and Spend Review**
- Can you identify your total commodity spend accurately?
- Does your spend meet the budget and how does it compare against the competitors?
- Can the embedded exposures be identified in your portfolio?

**Risk Governance Review**
- Does your company have defined policies for procurement and hedging strategies?
- How does the company currently oversee compliance against risk and hedging policies?
- Are supply chain issues and counterparty credit risk affecting the procurement?

**Systems Review**
- Can you aggregate and report your contracts, data and positions accurately?
- Are your positions captured on spreadsheets or package trading & risk applications?
- Is it possible to generate a consolidated view of risk across the organization?
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