Factors Affecting the Use of Hedging with Futures by Commodity Producing Firms: A Multi-Factor Risk Management Approach

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University of Manitoba
<table>
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<tr>
<th>Year</th>
<th>No. Contracts Cleared</th>
<th>Percent Change</th>
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<td>1993</td>
<td>339,075,626</td>
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<td>395,313,480</td>
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<td>2011</td>
<td>3,056,541,757</td>
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Source: The CRB Commodity Futures Yearbook, 1994-2012, John Wiley & Sons, New Jersey
FACTORS AFFECTING THE USE OF HEDGING WITH FUTURES BY COMMODITY PRODUCING FIRMS

1. INDUSTRY CHARACTERISTICS
2. BUSINESS OPERATION CHARACTERISTICS
3. MANAGEMENT CHARACTERISTICS
4. FUTURES HEDGING COSTS
5. SUBSTITUTE RISK MANAGEMENT INSTRUMENTS
Figure 4.1 Factors Influencing the Use of Futures Hedging by Commodity Producing Firms

1. INDUSTRY CHARACTERISTICS

Subfactors:

INCREASE (+)
- Output price volatility
- Input price volatility
- Foreign currency volatility

DECREASE (-)
- Price regulation in industry
- Natural hedges in industry

5. SUBSTITUTE RISK MANAGEMENT INSTRUMENTS

Subfactors:

INCREASE (+)
- Government Programs

DECREASE (-)
- Government programs
- Use of forward contracts
- Use of options contracts

USE OF HEDGING WITH FUTURES BY COMMODITY PRODUCING FIRMS

4. FUTURES HEDGING COSTS

Subfactors:

DECREASE (-)
- Futures margin costs
- Basis risk costs
- Hedging transactions costs

2. BUSINESS OPERATION CHARACTERISTICS

Subfactors:

INCREASE (+)
- Size of operation
- Tax progressivity

DECREASE (-)
- Vertical integration level of operation
- Diversification level of operation

3. MANAGEMENT CHARACTERISTICS

Subfactors:

INCREASE (+)
- Manager’s risk aversion level
- Management’s information level
- Management’s equity holdings

DECREASE (-)
- Diversification of investors’ portfolio
1. INDUSTRY
CHARACTERISTICS

Subfactors:

INCREASE (+)
• Output price volatility
• Input price volatility
• Foreign currency volatility

DECREASE (-)
• Price regulation in industry
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USE OF HEDGING WITH FUTURES BY COMMODITY PRODUCING FIRMS
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Subfactors:

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**DECREASE (-)**
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   - Management’s equity holdings
   
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   - Basis risk costs
   - Hedging transactions costs

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