


<b>Name:</b>	 <b>UPES</b> <small>UNIVERSITY OF TOMORROW</small>
<b>Enrolment No:</b>	

**UPES**  
**End Semester Examination, December 2024**  
**School of Business**

**UPES**

**Program: BCom Hons**

**Semester: V**

**Course: Commodity Trading and Risk Management**

**Time: 3 hrs**

**Course Code: FINC3052**

**Max. Marks: 100**

**Instructions: Attempt all questions**

**SECTION A**  
**10Qx2M=20Marks**

S. No.	Define the following terms in two lines	Marks	
Q 1	Butterfly spread	2	CO 1
Q 2	Swap	2	CO 1
Q 3	Limit order	2	CO 1
Q 4	American option	2	CO 1
Q 5	Trade compression	2	CO 1
Q 6	Counterparty credit risk	2	CO 1
Q 7	Margin call	2	CO 1
Q 8	Put option	2	CO 1
Q 9	Hedging	2	CO 1
Q 10	Open position	2	CO 1

**SECTION B**  
**4Qx5M= 20 Marks**

	Answer the following questions in brief		
Q 1	Margin is the deposit money that needs to be paid to buy or sell each contract in an exchange. Explain various kinds of margins?	5	CO 1
Q 2	Explain the role of MCX in trading.	5	CO 3
Q 3	Write down the functions performed by the clearing house of an Exchange	5	CO 1
Q 4	Explain the types of derivatives with the help of an example.	5	CO 2

**SECTION-C**  
**3Qx10M=30 Marks**

Q 3	<p><b>Read the case study below and answer the following questions:</b></p> <p><b>Risk Management Case Study: Sumitomo Derivatives Losses</b></p> <p>This article explains the causes of the losses and the impact on the financial world due to the Sumitomo Copper Derivatives trades caused by excessive manipulation by one of its key and trusted employees Yasuo Hamanaka. He was believed to be an expert in Risk Management. He had a star trader status and was vested with executive decision-making powers by the firm. Sumitomo owned large amounts of copper that was warehoused and stored in factories as well as numerous futures contracts. Hamanaka controlled 5% of the world's copper supply, which may sound like a very small and insignificant amount, but given the fact that copper is illiquid because it is physical in nature and the logistics of buying and selling it are not as simple as financial commodities, a five percentage holding is quite significant.</p> <p>Sumitomo also benefitted from the commissions on the other copper transactions that were handled by the company. Commissions were handled by the percentage of the value of the commodity being sold and delivered.</p> <p><b>Causes of the Losses</b></p> <p>There were some losses that Sumitomo had incurred just when Hamanaka had taken charge. He tried to recover the losses by taking huge positions in copper commodity futures on the London Metal Exchange. He tried to use the firm's large cash reserves to both corner and squeeze the market and kept the price artificially high for the entire decade leading up to 1995 and garnished premium profits on the sale of Sumitomo's physical assets.</p> <p>This of course attracted the attention of the exchange and it gave a warning to Hamanaka who then struck a deal via Merrill Lynch for USD 150 million, which enabled him to trade at LME. He borrowed money from several banks without any authorization from his seniors. He used the funds either to buy copper or pay for the collateral he was required to deposit at the LME to cover loss making positions. By 1990 he was reporting huge trading profits to the top management by showing invoices of the fictitious options trades which he had created through some nexus with some brokers. Whenever anyone attempted to short the market he would pour more cash into positions thereby sustaining the price and outlasting the shorts, simply because he had more cash. The long cash positions forced anyone shorting copper to deliver the goods or close out their position at a premium.</p>	<b>30</b>	<b>CO2/ CO 3</b>
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Unlike the US, the LME had no mandatory position reporting and no statistics showing open interest. Basically traders knew the price was too high, but they did not have the exact figures of how much Hamanaka controlled and how much money he had in reserve. In the end most cut their losses and had Hamanaka have his way. Nearly a decade after this market manipulation took place in 1995 due to the resurgence of the mining in China the price of copper started to revive which further inflated the prices. Sumitomo was exposed to losses because the market was headed for a big drop and shorting the positions then would result in an even bigger loss at a faster rate.

Analysts felt that the debacle was a result of Sumitomo's poor managerial, financial and operational control systems, which enabled Hamanaka to carry out unauthorized trading activities undetected by the top management. There was a lack of effective monitoring and supervision of his trading activities.

The sorts of risks that cause this loss are market risk, operational risk – supervision and fraud – market manipulation.

### **The Aftermath**

Analysts were concerned about the Sumitomo losses as it came after two major corporate disasters – Barings and Daiwa and felt that it would lead to a serious introspection among various financial regulators and trading firms to improve existing regulation and trading procedures.

Sumitomo was able to overcome the losses since it had a net worth of \$6bn and another \$8bn in hidden reserves. The losses estimated to be \$2.6bn amounted to only 10 per cent of Sumitomo's annual sales. Sumitomo was also able to prevent further escalation of losses by aggressive liquidation of its uncovered position under its new president Miyahara. Hamanaka was of course transferred out of his trading post.

Hamanaka was charged with forging one of his supervisor's signatures on a form and convicted. Sumitomo's reputation was tarnished as many people believed that the company could not have been ignorant of Hamanaka's hold on the copper market, especially because it profited for years from it.

Traders argued that Sumitomo must have known of Hamanaka's wrongdoing because the company threw more money at Hamanaka every time speculators tried to shake his price. Sumitomo responded by implicating JPMorgan Chase and Merrill Lynch as funders of the scheme, revealing that the banks had granted loans structured as future derivatives. Sumitomo, JPMorgan Chase and Merrill Lynch all were

	<p>found guilty to some extent. As a result, JPMorgan Chase's case on a similar charge, related to the Enron scandal and Mahonia Energy, was hurt. Meanwhile, Hamanaka served his sentence without comment. Since the copper market manipulation, new protocols have been added to the LME to make a repeat less likely.</p> <p><b>Questions:</b></p> <p><b>Q1. Explain the kind of business Sumitomo was involved in?</b></p> <p><b>Q2. What are the major reasons for the losses caused by Sumitomo?</b></p> <p><b>Q3. What was the learning from this debacle?</b></p>		
<p><b>SECTION-D</b> <b>2Qx15M= 30 Marks</b></p>			
Q4	<b>Answer the following questions in detail</b>		
a	<p>Explain a strategy with the help of an example in which the investor is expecting big price movements in underlying asset price but the expectation of decrease in price is more than an increase.</p> <p><b>OR</b></p> <p>Explain a neutral strategy with the help of an example in which the profit as well as loss potential, both are minimum.</p>	<b>15</b>	<b>CO 2</b>
b	The mission of the Commodity Futures Trading Commission is to promote the integrity, resilience, and vibrancy of the U.S. derivatives markets through sound regulation. Explain its functions and working.	<b>15</b>	<b>CO 3</b>