

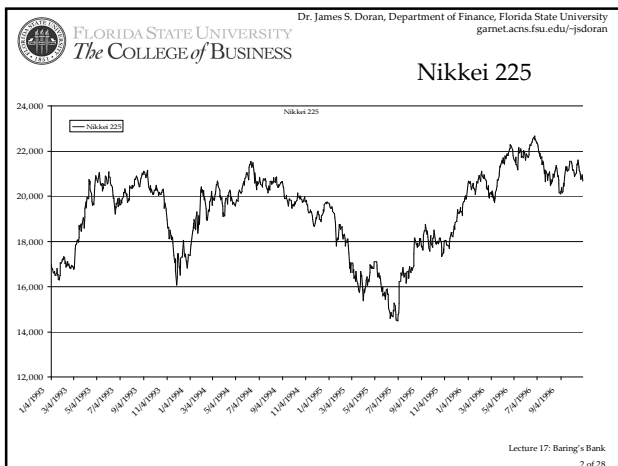
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Nick Leeson and Baring's Bank

Lecture 17: Baring's Bank

1 of 28





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SIMEX and OSE

Nikkei Futures: Differences between SIMEX and OSE

	SIMEX	OSE
Contract unit	500 times index	1000 times index
Minimum fluctuation	¥5	¥10
Daily price limit	5% and 10% for 15 minutes	About 3%
Customers' margin	10%	30% (13% cash)
Members' margin	10%	25% (10% cash)
Commission costs	0.030 (trading value ¥1 billion)	0.080 (trading value ¥1 billion)
Trading system	Open outcry	Auction

Source: OSE (1993); SIMEX (1993).


Daily Average Trading Value (Billions ¥)

Year	TSE Cash Market	OSE Nikkei Futures	TSE TOPIX Futures	SIMEX Nikkei Futures	OSE Nikkei Options
1990	145.5	1604.1	291.8	53.9	14.4
1991	76.1	2181.8	128.3	36.8	22.4
1992	63.0	890.1	75.2	122.9	16.5

Source: OSE (1993); SIMEX (1993).

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3 of 28



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Index Arbitraging


Price Difference between OSE and SIMEX

Distance Group	Number of Observations	Price Difference between OSE and SIMEX				
		Mean	Median	Minimum	Maximum	SD
−¥600 < D < −¥550	108	−0.0114	−0.0101	−0.1399	0.1344	0.0541
−¥550 < D < −¥500	107	−0.0010	−0.0031	−0.1100	0.1597	0.0569
−¥500 < D < −¥400	186	−0.0145	−0.0220	−0.1167	0.2502	0.0548
−¥400 < D < −¥250	517	−0.0001	0.0000	−0.3123	0.1787	0.0514
−¥250 < D < −¥100	1481	−0.0070	−0.0079	−0.2244	0.2167	0.0484
−¥100 < D < −¥100	4466	0.0015	0.0017	−0.3122	0.3272	0.0557
¥100 < D < ¥250	2004	0.0028	0.0045	−0.5839	0.2667	0.0620
¥250 < D < ¥400	617	0.0133	0.0133	−0.2518	0.2432	0.0615
¥400 < D < ¥500	39	−0.0198	−0.0213	−0.1791	0.1223	0.0749
¥500 < D < ¥550	54	−0.0146	−0.0105	−0.1396	0.1091	0.0669
¥550 < D < ¥600	81	−0.0277	−0.0251	−0.1898	0.1037	0.0619

Notes: Price difference is defined as $PD_{it} = (F_t - F_t^s)/F_t^s$, where F_t^s is the average futures price in minute t on day d on the OSE and F_t is the average futures price on SIMEX in minute t on day d. Distance (D) is defined as $(F_t^s + F_t)/2 - B_t$, where B_t is the base price (the closing price on the previous trading day). The numbers in the table are percentages.

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4 of 28



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Values

- One futures contract
 - 500 times the index
 - 1000 times the index
- If the Index is 19,723 on December 30, 1994 and then 18,102 on February 20 1995,
 - One long position loss in value is?
 - ¥810,500 or \$8,105

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5 of 28



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Summary

- Baring's lost \$1.2 Billion and went into Chapter 11
- Why?
 - Nick Leeson and his speculative bets in futures over a three year period

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6 of 28




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Nick Leeson & Barings

- Worked at the Singapore Branch
- Came from humble beginnings
- Dealt in Nikkei 225
- 10-year Japanese bonds



- Bank founded in 1763
- Catered to Royalty
- Financed Louisiana Purchase

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 7 of 28




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How did it start

- Sent to Indonesia to clean up the back office
- 88888 Account
 - Helped with discrepancies and regulatory filings
- Became head of derivative trading at BFS
- Bonus was twice as large as annual salary
 - 50,000 pounds and bonuses of 130,000 and 450,000

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 8 of 28




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What did he do

- Both contracts were traded on the Osaka exchange and the SIMEX
- He tried to take advantage of arbitrage between the two markets
- Why did loses occur
- Because of the 88888 account
- The account did not appear in reports to control traders
- But they did go to the exchanges for margin calculations
- Think of time delays and short selling

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 9 of 28



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This allowed for opportunity

- Baring's had strict trading limits
- In one year Leeson started reporting enormous profits
- Altered daily performance reports
- How?
- Why?

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 10 of 28



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What was manipulated

- He was supposed to trade on both exchanges
- When he went over the limits or had losses he assigned them to the 88888 account
- He started speculating
- He was long two to three time the equivalent short position

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 11 of 28



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What were the trades

- Leeson initially used leverage
- The big profits allowed him free reign from management

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 12 of 28




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Doubling Strategy

- After the cooling in 1994
- He focused on Japanese futures and bond contracts
- He bet stocks and interest rates would rise as the market was falling
- He didn't sell to neutralize exposure
- He doubled instead

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 13 of 28




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The coin flip

- Head's wins, tails loses
- \$1 dollar bet for a \$1 win
- If seven tails came up, it would require \$128 for the \$1 profit
- Why is this so dangerous?
 - A riddle: A lily pad is placed in a pond. Each day after the lily pads double. On the 30th day the pond is completely covered and all life ceases. A warning bell sounds when the pond is half full, when does it ring?

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 14 of 28




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A lesson not learned

- The doubling strategy had saved him once
- The 8's account was \$6 million in the red
- The next go around he lost over \$100 million
- But now what problem arose?

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 15 of 28



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Where was Baring's in all of this

- The margin was \$354 million in December 1994
- \$835 million next month
- \$1.2 billion in 1995

- What was the size of the position
- Futures were 8%
- Bond futures were 24%

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 16 of 28



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The Margin Account

- Recorded fictitious trades
- Falsified records
- Sold straddles- this helped generate funds

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 17 of 28



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Timeline

- December 1994
- Leeson had lost 208 million pounds
- Japanese stocks never rose above 19,000
- Earthquake in Kobe on January 17th 1995
- Nikkei fell to 18,950

- Leeson, in response, went long 20,000 futures
- Total Position: 61,000 futures
- Next Monday: Nikkei 17,950
- Losses: 850 million pounds

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 18 of 28



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Possible recovery

- If Nikkei went to 19,000 Baring's would have been alright
- In July the recovery occurred
- However, in February, Leeson took a vacation
- When the auditors came, it was too late
- ING bought Baring's for a pound
- Lesson was arrested for fraud and set to jail for 3 ½ years

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20 of 28
