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Introduction

James Bolden, executive vice president of Mobaco, one of the world's largest integrated oil companies, was sitting in his suite at the Metropol Hotel in Moscow. He had a complex decision to make. At the time, in the fall of 1997, Mobaco had beaten all the competitors in the "New Big Game" and was on the verge of formally announcing an alliance with Gazprom, the world's largest gas company. However, several issues remained outstanding and had to be resolved quite soon; the deal took more than a year to materialize and the patience of the Russian partners, not used to such long periods of negotiations, was starting to wane.

In order to conclude the alliance, Mr. Bolden had to agree to make a large cash investment in Gazprom. The amount of this investment had been settled at $1.2 billion, but the actual Gazprom securities that Mobaco would acquire were yet to be negotiated. Mobaco's first preference was for a bond with a relatively short term. While Gazprom would agree to a bond, its term would have to be 10 years and the interest rate could be no more than 8%. Under Mobaco's capital budgeting procedures, an investment as risky as this would have to earn an expected return of at least 15%. This suggested that a conversion privilege or warrants on Gazprom's stock would have to be added.

Gazprom's stock was publicly traded, but its price varied significantly, depending on whether the shares were traded domestically or internationally, and Mr. Bolden was having difficulty reconciling either price with his own discounted cash flow analysis. These value differences were troubling, and Mr. Bolden was trying to decide where they came from. Did they reflect different information or different interpretation of the limited information available? Were they somehow a product of Russia’s unusual economy? If Mobaco were to invest in Gazprom's stock, it first had to establish a valuation that would be acceptable for both parties. Furthermore, Russian law prohibited foreigners from owning more than 9% of Gazprom. With existing foreign ownership at approximately 4% and more foreign issues contemplated, both Mobaco and Gazprom had to be careful not to overstep the legal limit.

Russia

With a land area of 16.9 million square kilometers, Russia is by far the world's largest country in geographic extent. It covers nine time zones and stretches from arctic regions of the north to the sub-tropical climate of the Black Sea. Its population was 147 million people in 1997. Russia had been the central component of the Soviet Union, the world's primary advocate of communism and a major military power, which was formed in 1917 and was dissolved in 1991.

Following the collapse of the Soviet Union, Russia suffered one of the most severe economic depressions any country has known in the twentieth century. In several years, the entire population saw its savings disappear in a whirlwind of hyperinflation, while the formerly command-controlled industries started to disintegrate. Exhibit 1 shows the collapse of GDP and the inflation, which finally seemed to have come under control in 1997.

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* This case was written by Alexei Evgenev and Professor David O. Beim of Columbia Business School.

As the regime changed from communist to quasi-democratic, the old industries found themselves in dire need of reorganization. The formerly state-owned enterprises were saddled with huge social infrastructures: hospitals, housing, etc. that were not easy to abandon because they functioned as the society's only social safety net. Yet there were no more guaranteed state orders, and budgets were being cut everywhere. Some ambitious people left to start their own small businesses. Organized criminal groups moved into a vacuum of power and controlled some of the enterprises. Productive equipment was mostly outdated and uneconomical. The Russian military, which funded by some estimates more than half of Russia's industrial production and a huge part of its science, saw its budget decrease by 90% in just five years.

Furthermore, in the new Russian economy internal payments were gridlocked, and no one seemed to pay their bills. Barter arrangements were becoming the dominant form of trade. Intercompany debts were not settled, and taxes were accrued but rarely paid. Increasingly, workers were not being paid either. Companies reported net income but no one seemed to have sufficient cash. Market reforms appeared to have been made; yet markets were not functioning normally. This extraordinary system was analyzed in an important article by Gaddy and Ickes published in 1998 in *Foreign Affairs* entitled "Russia's Virtual Economy" which can be obtained from www.foreignaffairs.org.

However, one part of the old system had a potential to survive and even prosper in the new environment: natural resources, in particular oil and gas. The Soviet Union had been dependent on oil and gas for hard currency earnings throughout the 1970s and 1980s, and the situation had changed little in the 1990s. With approximately half of its hard currency revenues coming from the oil and gas sector, the Russian economy was highly dependent on natural resource production. So however pessimistic one might be about the Russian economy, one could find Gazprom an interesting opportunity.

Gazprom

Gazprom was Russia's largest enterprise and the world's largest gas producing and exporting company. It traced its roots to 1943 when Glavgazprom was set up to build a pipeline from Saratov to Moscow. However, its importance was minimal until 1961 when the Punga field in Western Siberia was discovered and the region was established as the world's richest gas area. In 1963 the Urengoi field was discovered with initial proved reserves of 6,700 billion cubic meters (bcm). Since these gas fields were located in very remote areas with harsh climatic conditions, the scope and complexity of the exploiting them were unprecedented.

In 1965 the Soviet Ministry of Gas Industry was established and absorbed Glavgazprom. Several years later, Russia started exporting gas to Eastern and Western Europe. This business grew at a rapid pace for almost three decades, developing new fields, laying new pipes and entering new markets. In August 1989 the state enterprise Gazprom was established, based on the former Ministry of Gas Industry. In June 1992 a Presidential Decree confirmed Gazprom's rights to virtually all western Siberian gas reserves. In November 1992 a decree on incorporation and ownership of gas industry assets followed. Finally in February 1993 the Russian joint stock company Gazprom was established and in April 1994 its privatization began.

Russian privatization was voucher-based, with each eligible citizen receiving a voucher book that could then be used for bidding in privatization auctions. Privatization was heavily tilted in favor of insiders, i.e. the managers and workers in the privatized enterprises. The Russian Ministry of Finance approved Gazprom's privatization in May 1993. Under the plan, 40% of the company was left under state ownership, of which 35% was held in trust by Gazprom's management. Another 28% of the stock was sold in closed auctions to residents of Gazprom's production areas in proportion to the value of fixed assets located there. A further 15% of Gazprom's stock was sold at closed auctions to workers and management at a discount price, while Gazprom acquired 10% at par value for subsequent sale to investors. Finally, 5% was sold in a closed cash auction to residents of northern Russia, 1% was transferred to the charter capital of Rosgazifikatsiya and 1% was sold on Vladivostok Stock Exchange.

Thus in the course of two years almost 60% of the company's stock was transferred from state to largely insider private ownership. Exhibit 2 shows the initial distribution of shares and also the rather different distribution that prevailed as of June 1997. From 1994 onward Gazprom was aggressive in international markets, setting up a number of joint ventures for exploration, production and distribution both domestically and internationally. It initiated reorganization and ambitious maintenance and upgrading programs. At the same time it integrated both vertically and horizontally and diversified into some unrelated areas.

In the course of the difficult transition period, Gazprom was quite successful. It remained a profitable company, accounting for 5.6% of Russia's GDP and 20% of the federal budget collection. It weathered the economic downturn quite well, with gas production falling from its peak in 1991 by only 7% compared to oil production, which fell by 45% from its peak in 1987. Exhibits 3, 4 and 5 show the income statement, balance sheet and cash flow statements of Gazprom for 1996.

Gazprom stock

Following the privatization, Gazprom's stock was almost totally illiquid. This was a result of extremely strict trading rules that were established in an attempt to control the secondary market. Foreign ownership was capped at 9% and any acquisitions by foreigners required the written permission of Gazprom. In addition to that, Gazprom asserted the pre-emptive right to purchase any of its shares offered in the secondary market. Anyone wishing to sell Gazprom stock had to offer it to Gazprom first. After that, Gazprom could exercise its right and purchase the stock within 30 days, otherwise the shareholder was free to sell the stock within 90 days at a price no lower than the price which it offered to Gazprom. These measures effectively dried up the secondary market for Gazprom's shares. There were, of course, ways around these rules; for instance one could create a dummy holding corporation, which then could be resold.

In a restrictive environment with a weak legal structure in place, a flurry of semi-legal activity occurred. To bring the "gray market" under control and to gain access to foreign investors, a more organized trading system was needed. In March 1996 Gazprom authorized the newly-formed Federal Securities Corporation to start conducting regular auctions. This had an immediate effect on stock's liquidity and dramatically increased its price (from Rb 407 (US$ 0.08) in March 1996 to Rb 3,750 (US$ 0.65) in May 1997).

This also resulted in some interesting arbitrage opportunities. Since most of the auctions took place in Moscow and most of the stock was held by employees of Gazprom and residents of remote production areas, an enterprising individual could get onto a train, take a 5 day ride, fly a helicopter to the production areas beyond the Polar Circle and trade Gazprom's stock for a couple of bottles of vodka. Upon return to Moscow, the stock could be resold at a significant premium. This continued until most of the stock was transferred from the people originally meant to hold it to arms-length investors. Gazprom also bought back some of its stock at low prices.

In October 1996 a new chapter was opened in Gazprom's market development with the successful placement of its shares in the form of American Depositary Shares (ADS). The global offering was three times over-subscribed, even though it was priced at 300% premium to the local shares. A total of 27.3 million ADS (each representing 10 shares) were sold after a 15% green-shoe option was exercised. Large international investors acquired most of the ADS. Over time, the premium of ADS over local shares fluctuated between 50% and 500%. Even though Gazprom claimed that ADS represented the same class as local shares, effectively two classes of shares were created since investors never were able to change the form of their investments.

Some investors attempted to profit from the arbitrage opportunity. The most notable example was Hong Kong-based Regent Pacific, which tried to set up an offshore fund of $200 million called Regent Gaz for investing in Gazprom's local shares. This drew an immediate and fierce reaction from Gazprom's management, resulting in the eventual dissolution of the fund. To quote an American fund manager based in Moscow, who preferred to remain anonymous: "Nobody wants to mess with Gazprom. If they blacklist you, you will never be able to get a piece of their business. That's not something you want to do". Following numerous arbitrage attempts, Gazprom sent a further signal that its strict trading rules would be enforced. This further increased the premium in the ADS price.

Gazprom's markets

Gazprom sold its gas in four different markets: (1) the Russian internal market, (2) the countries of the former Soviet Union (FSU), (3) Central Europe and (4) Western Europe. In 1996 the breakdown of sales was as follows: 304 bcm were sold to domestic consumers, 73 bcm were sold to FSU countries, 48 bcm were sold to Central European countries, while 75 bcm were sold to the Western European markets.

While largest in terms of volume, the Russian internal market was less significant in terms of revenues. The government set domestic prices at a fraction of the world price. During the late 1990s, domestic gas prices were increased from ridiculously low to merely somewhat low. Exhibit 6 shows the evolution of gas prices in the European, Russian industrial and Russian residential markets.

But more important than price was the problem of non-payment and barter. Only 75-80% of the company's sales were paid for in any form, and only 20% were paid in cash. The rest was paid for in heavy machinery, pipes, oil, paper, beer and other products. Gazprom accepted accounts receivable which it then cancelled against its accounts payable to the same customer. Gazprom had to create trading companies to facilitate disposal of the products it received in payment. It even created a special subsidiary, Mezhregiongaz, exclusively responsible for monitoring domestic supplies and directly dealing with the customers. One has to note, however, that by the Russian standards a 75-80% collection rate for an industrial company was excellent; others managed to get only 20-30%. This was a result of Gazprom's control of the pipelines, as it could cut off at least the smaller of the non-paying customers or reduce their gas supply at will.

On the other hand, Gazprom still had close links with the government and had a "moral obligation" to supply ailing Russian industry. The privatized oil companies were not as heavily controlled and could divert more of their production to exports. The domestic oil price therefore bore a much stronger resemblance to the world price. This price imbalance led to excessive consumption of gas: the share of gas in nation's energy balance grew from 40% in 1986 to 52% in 1995, the highest gas utilization rate in the world. Total domestic consumption of gas is shown by year and by category of user in Exhibit 7.

Gazprom's largest debtor was the state. This is not surprising, since more than 40% of Gazprom's domestic gas was used for power generation, which was state-owned, and public finances were in shambles. Gazprom could not easily cut the large state plants off and the government was in no hurry to pay off its debts. To make matters worse, the state insisted on Gazprom paying its tax bills on time and refused to net them against government obligations.

Central Europe was Gazprom's first export market, with exports to Czechoslovakia commencing in 1967. However, for 30 years gas had been supplied to this region at significantly discounted prices, effectively subsidizing socialist regimes and their inefficient economies. It was expected that this would end in the 1990s as the countries of the region started their transition to a market economy. However, since gas played such a large role in their energy and industrial policies and the infrastructure was already in place, it was virtually impossible for them to switch in the short term from Gazprom to another gas provider or to an alternative fuel. Gazprom's export pipeline went through the countries of Central Europe, and the marginal cost of adding local customers was negligible, while building an alternative pipeline would have been prohibitively expensive. Gazprom's exports to Central Europe and its joint ventures and subsidiaries in Central Europe are shown in Exhibits 8 and 9.

Due to restructuring in the economy, gas demand in Central Europe fell somewhat, but then recovered as some of the transition economies began to overcome their problems. During the period of downturn, though, Gazprom bought into local gas distribution systems, further strengthening its grip on the market. The old subsidized supply contracts expired in 1998, allowing Gazprom to charge Central European countries the full market price. Revenues from this market were therefore expected to grow by about 30-40% in the late 1990s.

Western Europe had been Gazprom's main source of hard currency revenues for 20 years. In the Soviet times, revenues earned on the export markets were typically used for acquiring technology and building up the infrastructure ("gas for pipes"). The volume of trade reached a very respectable 75 bcm in 1996, making Gazprom the biggest gas exporter in Europe. Gazprom sold its gas to six Western European countries: Austria, Finland, France, Germany, Italy and Switzerland, plus Turkey.

Gazprom had been developing Western European markets very aggressively, selling more gas to its existing customers and acquiring new customers along the way. Gazprom was reported to be close to closing more long-term contracts with Greece, the Benelux countries, Sweden and Spain. The company increased its long term contract portfolio from 1,450 bcm on January 1 1996 to 2,188 bcm as of January 1 1997. These long-term contracts had a remaining duration of between 12 and 21 years. Gazprom's contracts were typical for the European market, having such features as no rights for re-export, a take-or-pay clause and no unilateral termination right. The gas price was set according to a formula that reflected current and past gas prices for the period, as well as the price of a pre-negotiated set of competing oil products. With the increasing popularity of gas and intensifying competition for gas supply, these formulas would probably move more firmly toward market prices fully equivalent to oil. Gazprom's exports to Western Europe and its joint ventures and subsidiaries in Western Europe are shown in Exhibits 10 and 11.

Gazprom's exports to the Former Soviet Union countries were shrinking by 3-5% a year in the late 1990s, due to the continuing economic contraction in the region and the countries' inability to pay. The export emphasis had shifted westwards very significantly: while in 1991 exports to the FSU countries (107 bcm) were comparable to those to Europe (105 bcm) by 1996 the picture had changed significantly: exports to Europe comprised 117 bcm compared to 73 bcm to FSU countries. Gazprom's exports to the FSU countries are shown in Exhibit 12.

Political and economic realities of the region forced Gazprom to use short-term (up to one year) contracts in FSU countries. Baltic states (Latvia, Lithuania and Estonia) were traded with on a cash-only basis. Due to political considerations, Gazprom was forced to extend credit to other countries of the region, resulting in non-payments more often than not. The Ukraine was Gazprom's biggest FSU customer and also its biggest debtor. Its debt at different times reached as much as $5 billion, mostly as a result of inability to curb its demand in the changing economic environment. The situation was further complicated by the existence of several different Ukrainian gas distribution companies. Furthermore, 90% of Gazprom's exports to Europe (except for Finland) passed through the Ukraine.

There were several occasions when Ukrainians diverted Gazprom's export gas for their own use, following a cut in the supply level as a result of non-payment. However, the Ukraine could not afford to cause a serious disruption to Gazprom's European exports. Annual transit fees that the Ukraine received from Gazprom (in gas) were estimated at $1.5 billion in 1996. Additionally, the Ukraine depended heavily on Russian imports and any diversions from Gazprom could have very serious political and economical consequences. However, in order to quell customers' fears in Central and Western Europe, Gazprom had arranged for several large underground gas storage facilities in those regions to assure uninterrupted supply. The interplay of all these factors meant that Gazprom was paid in cash for at most half of its FSU exports.

Gazprom's assets

Gazprom owned the rights to 23% of world's total proven gas reserves. In the beginning of 1997 Gazprom had 33,400 bcm of A, B and C1 gas reserves. According to the Russian classification system, A, B and C1 include volumes of gas fields under development and volumes of gas fields where field boundaries had been defined by delineation drilling. A Western audit of Gazprom's reserves was to be delivered in 1998. The audit ultimately showed Gazprom's reserve estimates to be quite accurate (within 8%). In addition to natural gas, Gazprom had control over gas condensate and oil reserves of approximately 2,000 million tons. In 1996 the company produced 564.7 bcm of gas, 7.6 million tons of gas condensate and 960,000 tons of oil.

In terms of barrels of oil equivalent (BOE) Gazprom controlled more assets than any other company in the world. Iran's gas reserves were 60% of Gazprom's, but the entire Middle East had fewer gas reserves than Gazprom. Six out of eight world's largest gas fields are located in Russia and controlled by Gazprom. The company's reserves were constantly being revised upwards as a result of continuing prospecting. Gazprom spent significant amounts of money on exploration, and in 1996 alone Gazprom enhanced its reserve base by 1,000 bcm through exploration, reserve revisions and acquisitions. It was expected that Gazprom's reserves would continue this upward trend, especially liquid hydrocarbons (oil and condensate), which had been systematically underestimated in the past due to the focus on gas.

The majority of Gazprom's reserves were located in Western Siberia and required extensive infrastructure, both physical and social. Their extraction also required a well-developed system of pipelines. One therefore had to adjust the economic value of Gazprom's reserves for the high cost of exploitation. While there were some gas liquefaction and condensation technologies that could possibly simplify the transportation of gas, they were still too complex to be used commercially in the difficult conditions in which Gazprom operated.

Gazprom's extensive gas reserves would have little value without the infrastructure necessary to extract and transport them. Gazprom owned the world's largest gas transmission system: 150,000 km of high-pressure pipelines serviced by 249 compressor stations with the nominal installed capacity of 40.3 mw. The general direction of the pipeline was from east to west, spanning the entire continent. The main pipeline was linked with smaller ones, allowing for more flexible and efficient service. This infrastructure accounted for most of Gazprom's capital investment. It was estimated that over the next 5-6 years depreciation charges alone would represent $3.5 - 6.5 billion.

The transmission network's efficiency was assessed by 13 international gas consultancies in 1995 and was deemed to be satisfactory, both in terms of operational reliability and security. System losses in 1995 accounted for 1.4% and a further 46 bcm were consumed by the compressor stations. While there were no serious faults in the system, it suffered from sporadic bottlenecks and quality deficiencies, mostly due to inadequacy of Russian construction practices. Gazprom worked continuously to improve the network's efficiency and reduce downtimes. The failure rate went from 0.58 failures per 1,000 km of pipes in 1985 to 0.21 failures in 1996. Since most of the pipeline was laid in 1970s and 1980s, the average age of the network was about 15 years in the late 1990s, which is acceptable by international standards. Gazprom conducted extensive rehabilitation, maintenance and replacement work in order to keep the network in a good condition. It gained significant amounts of gas otherwise lost in transportation from improvements in network efficiency. Gazprom contracted Italian Tragaz for the modernization and rehabilitation of 161 compressor units to further improve the system's capacity and reliability.

Gazprom had a number of projects intended to develop its existing reserves and to increase the flow in its pipelines. The flagship project was the construction of the Yamal-Europe pipeline and related development of the huge Yamal gas field, plus the entire infrastructure required to transport this gas. The infrastructure part of the project had already started; sections of the pipeline were being constructed in Poland, Belarus and Germany (note the circumvention of the Ukraine). Development of the reserves could take place rapidly or slowly, depending on the state of Russian economy and domestic demand. In case domestic demand stayed at the current level or went down, Gazprom would most likely be able to supply the new pipelines from existing sources. The cost of putting in place a Western Russia-Belarus-Poland-Germany pipeline (two 1,659 km 56" pipelines) pales in comparison to the cost of developing the new field and building a new trans-Siberian pipeline ($6.7 billion versus $32-35 billion, of which $23 billion is pipeline construction). The new trans-Siberian pipeline would be huge even by Gazprom's standards (triple 56" pipeline, 2,462 km long).

Gazprom was also hoping to develop Russia's large offshore gas reserves to meet the demand for gas. However, because of its lack of experience in offshore production and huge capital costs required, it was unlikely that any production would start before 2005. The company was also looking into building a pipeline to Finland and then expanding it through Scandinavia and possibly into Germany. This would allow Gazprom to enter a new market and save significantly on transit charges. Finally, following a $13.5 billion contract signed with Turkey, Gazprom was planning to build a 400 km undersea pipeline to supply Turkey directly from Russia's southern shores. With all of these projects and existing infrastructure in need of constant repair, yearly capital expenditures would remain at the $9-10 billion level for several years before slowly declining.

Besides pure exploration and production Gazprom was involved in a number of other activities, both related and unrelated. In 1996 the company produced 7.6 million tons of gas condensate and 960,000 tons of crude oil. Gazprom's six processing plants produced 541,000 tons of gasoline, 1,100,000 tons of diesel fuel, 579,000 tons of LNG and 2.24 million tons of crystallized sulfur. Gazprom was building a 300,000 tons/year ethylene plant in cooperation with BASF, as well as a 680,000 tons/year methanol plant.

Gazprom owned a number of construction and machinery building subsidiaries. It also inherited a number of research institutes involved in a number of areas related to gas industry. Gazprom was one of major shareholders in Imperial Bank, one of the largest banks in Russia. It also had its own Gazprombank, which performed clearing operations between the subsidiaries. Besides banking, Gazprom was involved in a number of other businesses, which in a normal country could have been contracted out, such as airline, telecommunications, truck manufacturing and security services. A full list of Gazprom's domestic subsidiaries and joint ventures is given in Exhibit 13.

Governmental relations

Since the gas industry was critical to the country's economic health, the Russian government was heavily involved in dealings of Gazprom. Former Russian Prime Minister Viktor Chernomyrdin was a former CEO of Gazprom and its largest shareholder. The intertwined relationship was not a simple one.

As Russia's largest corporate taxpayer Gazprom was often leaned upon quite heavily. Whenever the Russian government ran out of money, it would step up its tax collection efforts. Since the Russian tax system was very new and its legal underpinnings were weak, the government turned most naturally to its easiest target, in which it still maintained a 40% interest. This power, however, had to be used sparingly so as not to kill the goose that laid golden eggs. While it was hoped that the statutory tax rate would someday fall from 55% to a more normal world level of 35%, the constant needs of the Russian government made this unlikely in the near term.

Gazprom played an important role in the political landscape as well, especially in relations with the FSU countries. Their obligations to Gazprom were used as pawns in different political games, ranging from sovereignty disputes to Black sea fleet division. For instance, Gazprom could be “advised” to supply gas to a friendly regime without concern for the payment. However, as the Russian government became more sophisticated and the relationships with the former republics normalized, these practices became less frequent.

Gazprom's domestic pricing was heavily regulated, resulting in a price disparity between domestic industrial and residential consumers. Industrial customers paid 2.5 times more than the residential, but that still amounted to less than half the world price. A system of discounts and incentives supported selected types of customers. In addition, the price was somewhat differentiated depending on the proximity to the production regions. Finally, Gazprom had recently been granted a right to offer up to 40% discounts to pre-paying customers. The current “blended” domestic price was around $38 and was expected to grow by 5-10% a year.

Following its privatization, Gazprom retained "the moral obligation to supply domestic customers under any circumstances". This resulted in the company’s being unable to cut off the non-paying customers, especially utilities. From the government's point of view this made sense; social unrest would be unavoidable if the heat were to be cut off in the middle of the winter. For the company's shareholders, whose objective was to maximize the performance of the company, this simply acted as an expensive additional tax.

The government incurred large portions of Gazprom’s accounts receivable, and this was rapidly becoming the government's favorite source of financing. In the past it had allowed the company to offset its tax obligations against the government debts, but this practice had come to an end and showed no signs of being revived.

The valuation problem

James Bolden felt that the risks of the Russian environment required a rate of return of at least 15% and preferably higher. If Mobaco made its required $1.2 billion cash investment in exchange for a Gazprom bond bearing an interest rate of 8%, a number which had been discussed during negotiations, then the total return which Mobaco would get on its Russian project would be a somewhat unsatisfactory 12%. Higher returns might be possible with a stock investment or a bond with a conversion privilege or option on Gazprom stock, but framing this required a view on the stock's present and likely future value. Unfortunately, even the stock’s present value was subject to dispute.

He contemplated the aggregate value of the Gazprom stock as traded in the local and the international markets at several points during the past year, as shown in Exhibit 14. The disparity was huge and also volatile, ranging between five times and two times difference within a single year. He could only scratch his head in amazement. Finance theory said that such things were not supposed to happen. What could possibly account for it, and which one should he focus on?

Mr. Bolden's staff had put together the summary comparison of gas companies in a few other countries as shown as Exhibit 15. Mr. Bolden knew that he needed some guidelines to interpret the market prices of Gazprom's stock, and he hoped that this comparison would help him. However, it seemed that conditions in Russia were quite different from those in the other countries, so it was not obvious whether any simple ratio analysis based on foreign comparables would be useful. But were the Russian comparables any more useful?

He also had been given five-year financial projections, translated to dollars, of Gazprom's income statement and balance sheet, but was not sure how to translate these numbers, shown in Exhibit 16, into cash flow. In this environment, wouldn't any free cash flow be pre-empted by the government? Did the shareholders really own any cash flow in this cash-starved economy? More generally, could the financial statements for Gazprom be relied upon to correctly reflect the company's financial condition? The unusual circumstances of barter and nonpayment seemed to undermine the application of standard cash projections and discounting, but Mr. Bolden was quite unsure what adjustments he would need to make to take this into account. And time was running out.

Exhibit 1:

Summary of Russian Economic Performance

	Change in GDP	Inflation
1991	-13.0%	n.a.
1992	-15.0%	n.a.
1993	-9.0%	875%
1994	-14.0%	307%
1995	-4.0%	197%
1996	-5.0%	48%
1997	0.4%	7%

Source: Goskomstat, International Financial Statistics

Exhibit 2:

Shareholding Structure

Privatization Plan	
Treasury Stock	10%
Residents of Yamal	5%
Residents of production regions	29%
Management and employees	15%
Rosgazifikatsiya	1%
Russian Federation	40%
	100%

As of June 1997	
Treasury Stock	10%
Russian Federal Property Fund	1%
Russian Corporate	16%
Russian Investors	2%
Russian Individuals	30%
Rosgazifikatsiya	1%
Russian Federation	40%
	100%

Source: Company data

Exhibit 3:

Gazprom Income Statement, 1996
(billions of rubles)

Net Sales	126,239
Operating Expenses	94,617
Gross Profit	31,622
Net Other Income*	-10,933
Income before taxes	20,689
Taxes	11,300
Net Income	9,389
Minority Interest	-409
Net Income and minority interest	8,980

*includes monetary effects

Source: Company reports

Exhibit 4:

Gazprom Balance Sheet
(billions of rubles)

Assets	As of Dec. 31 1995	1996
Cash and equivalents	7,529	7,665
Accounts receivable	59,635	79,045
Inventories	17,246	21,829
Other	6,938	2,080
Total current assets	91,348	110,619
Net property, plant and equipment	344,563	375,303
Investments	11,946	18,887
Other	238	1,265
Total long-term assets	356,747	395,455
Total assets	448,095	506,074
Number of rubles that = $1.00:	4,640	5,560

Liabilities and shareholders' equity	As of Dec. 31 1995	1996
Accounts payable	21,474	36,605
Taxes payable	29,510	54,642
Short-term loans + current LTD	2,096	3,407
Total current liabilities	53,080	94,654
Long term debt	8,230	15,042
Deferred taxes	8,271	7,680
Provisions for liabilities	1,642	2,662
Total long-term liabilities	18,143	25,384
Minority interests	1,346	1,755
Share capital	237	237
Treasury stock	0	-577
Retained earnings	375,289	384,621
Total shareholders' equity	375,526	384,281
Total liabilities and equity	448,095	506,074
Common Shares	23,674 mm	
Local Stock Price	$1.43	
ADS Price*	$20.58	

*Each ADS represents 10 local shares

Source: Company reports

Exhibit 5:

Gazprom Cash Flow Statement, 1996
(in billions of rubles)

Cash flow from operating activities	
Net income	9,389
Depreciation and amortisation	18,671
Increase in accounts receivable	-19,410
Increase in inventories	-4,583
Decrease in other current assets	4,858
Increase in accounts payable	14,929
Increase in taxes payable	24,541
Increase in provision for liabilities	1,020
Increase in other long-term assets	-1,027
Increase in equity in subsidiaries	-377
Net cash from operations	48,011
Cash flow from investing activities	
Capital expenditure	-50,490
Investments	-6,350
Net cash from investing activities	-56,840
Cash flow from financing activities	
Increase in loans	8,123
Dividends paid	-224
Purchases of treasury shares	-817
Sales of treasury shares	1,883
Net cash from financing activities	8,965
Change in cash balance	136

Source: Company reports

Exhibit 6:

Gas Prices

(in U.S. $ per 1000 cubic meters)

	European	Russian Industrial	Russian Residential
Jan-94	88	12	0
Apr-94	88	14	0
Jul-94	88	15	0
Oct-94	88	13	0
Jan-95	90	14	3
Apr-95	90	19	3
Jul-95	90	38	3
Oct-95	90	52	12
Jan-96	92	48	11
Apr-96	92	45	10
Jul-96	92	43	10
Oct-96	92	43	9
Jan-97	92	42	18
Apr-97	92	41	18
Jul-97	92	40	18
Oct-97	92	40	20

Source: Company data

Exhibit 7a:
Domestic consumption of gas
(billions of cubic meters)

1991	392.3
1992	371.4
1993	349.5
1994	317.8
1995	306.1
1996	304.1

Source: Company data

Exhibit 7b:
Domestic consumers of gas, 1996

Power generation	41%
Industry	28%
Municipal	8%
Households	9%
Other	14%

Source: Company data, Goskomstat

Exhibit 8:
Exports to Central Europe
(billions of cubic meters)

	1991	1992	1993	1994	1995	1996
Bosnia, Croatia, Bosnia	4.3	3.0	1.7	2.2	2.0	1.9
Bulgaria	5.7	5.2	4.8	4.7	5.8	6.0
Czech Republic	7.8	7.3	7.5	7.9	8.6	9.4
Hungary	6.0	4.8	5.7	5.3	6.3	7.7
Poland	7.2	6.7	5.9	6.2	7.2	7.1
Romania	5.4	4.6	4.6	4.5	6.1	7.2
Slovakia	5.9	5.5	5.7	5.9	6.3	7.1
Yugoslavia	0.0	0.0	0.0	0.0	0.0	2.1
Total	42.3	37.1	35.9	36.7	42.3	48.5

Source: Company data

Exhibit 9:
Joint Ventures and Subsidiaries in Central Europe

Country	Name	Gazprom share	Partner	Main activities
Bulgaria	TopEnergy	50%	Bulgargas	Gas transmission and distribution
Hungary	Panrusgaz	50%	MOL (35%)/DKG East (15%)	Gas distribution
Poland	Europol Gaz	48%	POGC (48%)/ Gaztrading (4%)	Construction of the Belarus-Poland pipeline
	Gaztrading	48%	POGC	Gas distribution
Romania	WIROM	25%	Romgaz 50%/WIEH 50%	Gas distribution
Serbia	Progress Trading	50%	Progress	Gas distribution
Slovenia	Tagdem	7.60%	Petrol	Gas distribution

Source: Company data

Exhibit 10:
Exports to Western Europe
(billions of cubic meters)

	1991	1992	1993	1994	1995	1996
Austria	5.2	5.1	5.3	4.7	6.1	6.0
Finland	2.9	3.0	3.1	3.4	3.5	3.7
France	11.4	12.1	11.6	12.2	13.0	12.4
Germany	24.4	22.9	25.7	29.6	32.1	32.9
Italy	14.5	14.1	13.8	13.8	14.3	14.0
Switzerland	0.4	0.4	0.4	0.4	0.4	0.4
Turkey	4.1	4.5	5.0	5.1	5.7	5.6
Total	62.9	62.1	64.9	69.2	75.1	75.0

Source: Company data

Exhibit 11:
Joint Ventures and Subsidiaries in Western Europe

Country	Name	Gazprom share	Partner	Main activities
Austria	GWH	50%	OMV	Trading
Finland	Gasum Oy	25%	Neste Oy	Gas distribution
	North Transgas Oy	50%	Neste Oy	Feasibility study of trans-Baltic pipeline
France	Fragaz	50%	Gaz de France	Gas distribution
Germany	Wingas	35%	Wintershall	Gas transmission and storage
	WIEH	50%	Wintershall	Gas distribution
	Zarubezhgas	100%		Gas distribution
	Ditgaz	49%	Wintershall	Gas distribution
	VNG	5%	Ruhrgas, Wintershall British Gas, Elf	Gas transmission and distribution
Greece	Prometheus Gas	50%	DEPA	Gas distribution
Italy	Promgas	50%	SNAM	Gas storage and distribution
	Volta	49%	Edison	Gas transmission and distribution
Turkey			ABB/Etnes	Construction of 860 MW station in Ankara
UK/Belgium	Interconnector	10%	British Gas, Elf BP, Conoco, others	Gas transmission

Source: Company data

Exhibit 12:
Exports to Former Soviet Union
(billions of cubic meters)

	1991	1992	1993	1994	1995	1996
Belarus	17.3	17.3	16.4	14.3	12.9	13.7
Estonia	0.9	0.8	0.4	0.6	0.7	0.8
Georgia	1.0	0.8	0.5	0.3	0.0	0.2
Kazakhstan	2.0	0.7	1.2	0.4	0.0	0.4
Latvia	1.6	1.6	0.9	1.1	1.2	1.1
Lithuania	3.3	3.2	1.8	2.1	2.5	2.6
Moldova	3.4	3.4	3.1	3.0	3.0	3.2
Ukraine	78.1	78.1	54.7	57.0	52.9	51.0
Total	107.6	105.9	79.0	78.8	73.2	73.0

Source: Company data

Exhibit 13:
Domestic Subsidiaries and Joint Ventures

Company	Ownership	Main activity
Bank Imperial	15%	Banking Services
Burgazgeoterm	n.a.	Drilling
Central Telecommunication Station	100%	Telecommunications
Central Dispatching Division	100%	Gas transportation monitoring
Gazexport	100%	Gas exports
Gas Supervision Dept. of Russia	100%	Pipeline inspection
Gazflot	100%	Sea shipping and offshore production
Gazpromavia	100%	Airline
Gazprombank	100%	Banking Services
Gazkompromselstroi	100%	Construction
Gazavtomatika	n.a.	Engineering
Gazkomplektimpex	100%	Imports and exports of equipment
Gazenergoservis	n.a.	Compressor maintenance and repairs
Gazstroidetal	n.a.	Equipment manufacturing
Gazobezopasnost	100%	Security services
Gazmash	n.a.	Equipment manufacturing
Informgaz	100%	Data processing
Novourengoi Gas Chemical Complex	100%	Ethylene production
Spetsgazavtotransport	n.a.	Truck Manufacturing
Promgaz	n.a.	Equipment manufacturing
Rosshelf	100%	Offshore exploration and production
VNIIGAZ	100%	R&D

Source: Company data

Exhibit 14:
Aggregate Market Value
($ billions)

	Jan-97	Apr-97	May-97	Jul-97	Sep-97	Oct-97
Local	11.80	13.00	13.80	14.20	24.90	33.10
ADS	54.50	33.10	47.30	40.20	56.80	66.30

Common shares outstanding 23,674 m

Exhibit 15:

Valuation benchmarks

	Market cap ($ bn)	Price / Earnings 1995	Price / Earnings 1996	Price / Earnings 1997E	Price / Operating Cash Flow 1995	Price / Operating Cash Flow 1996	Price / Operating Cash Flow 1997E
Enron (USA)	9.0	18.9	17.0	14.8	10.9	10.1	9.5
Pacific Gas & Electric (USA)	9.6	7.8	13.4	13.0	3.0	3.7	3.4
British Gas (UK)	13.4	9.0	12.9	13.2	3.6	4.6	4.5
Petronas Gas (Malaysia)	5.7	22.2	19.9	17.2	14.8	14.1	12.5
ENI (Italy)	41.6	16.3	16.2	14.0	6.0	6.1	5.8
Exxon (USA)	128.2	20.2	18.5	18.7	10.3	9.8	9.7
LUKoil (Russia)	14.4	n.a.	19.2	17.8	25.9	14.7	15.9
Tatneft (Russia)	1.5	0.1	n.a.	11.0	n.a.	4.3	4.2

	1995 Price/Book	1995 ROIC	1995 Debt/Cap	1996 Debt/Cap
Enron (USA)	2.2	12%	69%	65%
Pacific Gas & Electric (USA)	1.0	10%	90%	93%
British Gas (UK)	1.1	13%	39%	95%
Petronas Gas (Malaysia)	5.0	19%	49%	43%
ENI (Italy)	2.9	12%	77%	58%
Exxon (USA)	3.0	14%	19%	15%
LUKoil (Russia)	2.0	n.a.	5%	-1%
Tatneft (Russia)	0.3	n.a.	1%	n.a.

	BOE Reserves	BOE Production
Enron (USA)	14.6	168.3
British Gas (UK)	12.0	457.6
ENI (Italy)	97.0	117.1
Exxon (USA)	9.4	128.8
LUKoil (Russia)	1.8	37.0
Tatneft (Russia)	0.2	
Gazprom Production in BOE		1.58
Gazprom Reserves in BOE	240	

Exhibit 16:

Projections for Gazprom

(in millions of U.S. dollars)

Income Statement	1996	1997		1998		1999		2000		2001		2002	
Sales Distribution	Actual	Price	Volume	Price	Volume	Price	Volume	Price	Volume	Price	Volume	Price	Volume
Russia	304	38	300	42	290	46	280	51	270	57	260	65	250
Former Soviet Union	73	60	70	65	65	70	60	75	55	80	50	80	45
Western Europe	75	81	85	85	100	90	120	95	140	100	150	100	170
Central Europe	48	81	60	85	80	90	100	95	120	100	140	100	155
	500		515		535		560		585		600		620
Volume growth			3%		4%		5%		4%		3%		3%
Revenues	22,746	27,345		31,647		36,874		42,481		47,820		52,350	
Operating Expenses	17,048	20,495		23,720		27,638		31,840		35,841		39,237	
Gross Profit	5,698	6,850		7,927		9,237		10,641		11,979		13,113	
Other Income/Expense	-1,970	-1,500		-1,000		-500		0		0		0	
Income Before Taxes	3,728	5,350		6,927		8,737		10,641		11,979		13,113	
Taxes @ 55%	2,036	2,942		3,810		4,805		5,853		6,588		7,212	
Net Income	1,692	2,407		3,117		3,932		4,789		5,390		5,901	
Depreciation	3,364	3,500		4,000		4,500		4,500		4,500		4,500	
Capital Expenditures	9,097	10,000		10,000		9,000		8,000		8,000		8,000	

Balance Sheet	1996	1997	1998	1999	2000	2001	2002
Assets							
Total current assets	19,931	23,962	27,731	32,312	37,225	41,903	45,873
Total long-term assets	71,253	77,753	83,753	88,253	91,753	95,253	98,753
Total assets	91,185	101,715	111,484	120,565	128,978	137,156	144,626
Liabilities and shareholders' equity							
Total current liabilities	17,055	25,178	31,830	36,979	40,603	43,391	44,960
Total LT liabilities + minority interest	4,890	4,890	4,890	4,890	4,890	4,890	4,890
Total shareholders' equity	69,240	71,647	74,765	78,696	83,485	88,875	94,776
Total liabilities and shareholders' equity	91,185	101,715	111,484	120,565	128,978	137,156	144,626
Sales/Assets	0.249	0.269	0.284	0.306	0.329	0.349	0.362
Gross profit/Equity	8.2%	9.6%	10.6%	11.7%	12.7%	13.5%	13.8%
Net income/Sales	7.4%	8.8%	9.9%	10.7%	11.3%	11.3%	11.3%

Peregrine Investments Holdings Ltd.*

Introduction

Philip Tose's career as an investment banker began on a racetrack in England in 1968. The son of a London banker, Mr. Tose, then in his twenties, decided to pursue his fortunes behind the wheel of a Formula 3 race car. He was enjoying moderate success, traveling in Europe with top level Grand Prix racers, when one day, at 26, his car spun out of control on a wet track in Brand's Hatch, England and crashed into a barrier. As the car skidded, its steering wheel became jammed under Mr. Tose's leg and when it stopped, he found his leg shattered and twisted oddly behind his body. The car was a heap. After reconstructive surgery on his leg and four months in the hospital, his father called him into his London office and demanded that he sign an agreement to quit racing and become a banker.

Thirty years later, on January 12 1998, Mr. Tose, still limping from that 1968 accident, found himself in a crash of a different sort. Not long after going to work for his father at Vickers da Costa, a London brokerage, Mr. Tose moved to Hong Kong to set up an Asian operation for the merchant bank. After Vickers da Costa was taken over by Citibank, he teamed up with a colleague, Francis Leung, and the two started their own investment bank: Peregrine Investments Holdings. In ten years, they built Peregrine into Asia's leading regional investment bank outside of Japan, with assets of more than $5 billion at its height. By 1997, the bank had become a local rival of Wall Street's bulge bracket firms like Goldman Sachs and Morgan Stanley, who were competing hard for equity business in China, and it had built Asia's largest regional debt business. But on that January day, with Asia's currencies in chaos and Peregrine's creditors wavering about its exposure to regional debt, Mr. Tose was forced to place the investment bank into the hands of liquidators. Peregrine, which had become a symbol of the rise of Asia's tiger economies, lay in a heap like his Formula 3 race car 30 years earlier.

Some years before Peregrine's collapse, reflecting on his days as a racer, Mr. Tose told a group of visiting Harvard Business School students, "Whenever I came out of a corner at 150-miles-an-hour in one piece, I knew that my risk management systems were intact." In fact, many local bankers wondered whether those systems were intact in the months leading up to Peregrine's collapse. A relatively new bond operation had huge exposures to some of Asia's hardest hit economies during the meltdown of 1997. But Mr. Tose said the collapse of Peregrine was beyond his control. After all, the financial maelstrom that had sent the Indonesian rupiah from 2,500 versus the U.S. dollar to more than 11,000 versus the dollar in a matter of months could not have been predicted by even the most sophisticated risk management models, many of which Peregrine had in place. "We got caught in a completely unprecedented meltdown," Mr. Tose said just days after Peregrine's collapse.

Was that the case? Had the track simply become too wet for any regional investment bank to navigate, as Mr. Tose argued after Peregrine's fall? Or were the machine and its drivers ill-equipped? And if they had survived, was this machine in any shape to drive again? These were not inconsequential questions in the days leading up to Peregrine's demise and in the months since. The investment bank, in fact, did have a chance to survive. Financial institutions don't just collapse. They fail when their creditors let them fail, or their regulators shut them down.

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* This case was written by Jon Hilsenrath under the supervision of Professor David O. Beim of Columbia Business School.

Peregrine's rise

When Mr. Tose came to Hong Kong in the early 1970s, he set his sights on the colony's new local entrepreneurs, rather than focus on the old colonial trade houses like Jardine Matheson, which were the target of most British merchant bankers. Mr. Tose had concluded long before many others that Hong Kong's future lay not in these old trading houses, which made their fortunes in the 19th century opium trade, but in the Chinese themselves. One of his first discoveries at Vickers da Costa was Li Ka-shing, a Chinese entrepreneur who was on his way to joining the ranks of Hong Kong billionaires through his vast investments in the former colony's budding property market. Mr. Tose wrote a research report on Mr. Li's property company, Cheung Kong Holdings, and quickly won the business of the rising tycoon.

By the time Mr. Tose had set off on his own in 1988, he and his partner, Francis Leung, had built up a network of local connections who promised them both startup capital and business once the investment bank was off the ground. When Tose launched Peregrine with $38 million in startup capital, his list of investors read like a Who's Who of Hong Kong's business elite, including local tycoons like Mr. Li and Gordon Wu, an infrastructure developer. In return for their support, Mr. Tose promised Hong Kong business executives an ability to deal directly with a banker who could make decisions on the spot. He disdained the hierarchical structures and the checks and balances of his Western competitors. Indeed, he had fled London years earlier because he found the atmosphere too stultifying. Instead, he sought to build an investment bank at the outset that could act quickly and decisively. When Li Ka-shing sought to raise nearly $700 million in early 1996, for instance, he gave Morgan Stanley just 20 minutes to evaluate his plan, and Morgan Stanley rejected it. But when Mr. Li went to Mr. Tose, he took the deal in two minutes and placed it with local investors. "Francis and myself are able to make decisions very quickly and commit the firm's capital very quickly," Mr. Tose reflected after the deal. "The people who work with us understand our culture and philosophy on doing business. They feel they can come to us or ring us up at any time to get bottlenecks unblocked or deals done."

If Peregrine was known as fast-moving deal maker, it also became known as an autocratic operation, mirroring in many ways the Chinese enterprises whose business it courted. Like Mr. Li's Cheung Kong, many of these enterprises were run by their founders. Mr. Tose and Mr. Leung were Peregrine's founders. They brought in much of the investment bank's business, and they made many of its decisions. As such, the culture of Peregrine in many ways grew out of the race car driver's own personality. It quickly became known in Exchange Square – Hong Kong's equivalent of Wall Street – as an investment bank that was willing to take big risks. And its bankers were known for their brashness.

Sometimes that culture got Mr. Tose in trouble. In 1993, Hong Kong regulators censured Peregrine for trading irregularities. The bank also made forays into Asia's financial backwaters that proved to be big embarrassments. Authorities in Bangladesh arrested a Peregrine employee in what Mr. Tose called a political witch-hunt. Another staffer was jailed in Vietnam. And a Burma venture ended up in a bitter lawsuit with a New York partner. Mr. Tose himself caught flak for saying in a speech to visiting U.S. business students that the main reason that China's economy had outstripped India's was because China's government was not burdened by the tethering of a democracy.

Despite these episodes, Peregrine's ability to raise equity capital for well-connected clients in Greater China became its trademark and a source of growing profits. While Mr. Tose nurtured Hong Kong clients, Mr. Leung built a presence for Peregrine in China. Mr. Leung's breakthrough deal came in 1990, when he helped Larry Yung, a mainland contact and a Peregrine investor, transform a sleepy Hong Kong property company called Tylfull Co., into the listed investment arm of China International Trust and Investment Corp. (CITIC), China's leading investment trust company. CITIC transferred airline and property assets into the new company, called CITIC Pacific, creating Hong Kong's first red chip, named for its close connections to China, and a strange new term in investment banking – asset injection – that would later fuel a mad speculative rush into the sector. Asset injections, it was reasoned, were a cheap way to get access to China's growth potential.

With the help of Yung, the "princling" son of vice president Rong Jiren, and other well-connected contacts, Mr. Leung and a small team of investment bankers set out scouring Shanghai and the southern province of Guandong for opportunities to expose mainland companies to international equity markets. The timing was strained, because investors turned negative about China after the Tiananmen Square massacre. And the effort was difficult because their audience, a little more than a decade into economic reform, was still unschooled in the ways of open financial markets. "At that time, they had no idea what are investment bankers, what is corporate finance, what is the role of lawyers," said Alex Ko, who was a part of Mr. Leung's original team.

Like Mr. Tose, Mr. Leung was a hands-on manager, who recalled 13 hour journeys traveling on rickety Chinese trains into remote provinces in search of business. He was known to call colleagues late at night to discuss details of a deal. But his roots could not have been more different than Mr. Tose's. The only one of five children to go to college, he grew up in a tiny stone shack near an industrial site in Hong Kong, sharing a bed with his brother. As a teenager, he worked as a messenger boy who lugged electronic equipment around factories, and later, when he moved to Toronto where he earned a college degree and an MBA, he worked as a bus boy for extra cash.

Mr. Leung was a "mid-level guy" doing property deals at the investment banking arm of Hongkong & Shanghai Banking Corp. in 1985, when Mr. Tose approached Mr. Leung's colleague, Francis Yuen, a young, fast-rising banker, in hopes of luring away a group to build a new team at Citicorp. Mr. Leung went and rose quickly, within a year leading or taking part in large deals. After the 1987 stock market crash, Mr. Tose's Citicorp team broke up. Mr. Yuen went on to become the chairman of the Stock Exchange of Hong Kong. Three other colleagues set up their own firm. But Mr. Leung stuck with his British mentor, who gave Mr. Leung "a lot of autonomy" and opened him up to a world of powerful people.

By 1996, in fact, the equity team had propelled Peregrine to the top of Asia's equity market league tables. That year, Asiamoney Magazine listed Peregrine as the region's top arranger of initial public offerings and private equity placements. It raised $3.2 billion for clients, mostly Chinese and Hong Kong clients nurtured by Mr. Leung and Mr. Tose, outstripping competitors like Morgan Stanley and Goldman Sachs by $2 billion.

The bond operation

By 1997, however, Peregrine was moving quickly beyond its roots as an equity house. In 1994, it had pushed into the fixed income business by hiring away a team of 15 executives from Lehman Brothers. Mr. Tose had decided that to become a true regional powerhouse, he needed to establish a presence in Asia's immature bond markets before they developed. Leading the group was a young, intense and ambitious executive named Andre Lee, then just 31 years old. Mr. Lee, a Korean-American, had risen quickly through the ranks at Lehman Brothers by nurturing his connections in Seoul. After graduating from Colgate University in New York in 1985, he began his professional career humbly by selling Japanese industrial sewing machines to garment factories in New York City's immigrant neighborhoods like Chinatown, Brooklyn and the South Bronx. By 1989, Mr. Lee was intent on making a name for himself on Wall Street. After several rejections, he answered a newspaper advertisement and took a job as a trainee in the retail brokerage unit at Shearson Lehman Brothers. "I was really just looking for a way into the industry," he reflected in mid-1997. "My real goal was to do business with Korean institutions." Before long, he was doing just that. To the consternation of some of Lehman's own bond salesman, Mr. Lee had reached outside the equity brokerage business and begun, on his own, selling US Treasury bonds to Korean bankers who had taken him under their wing. "I didn't know anything about the bond market at the time," he would say later. But his Korean clients, several of whom were being approached by Lehman's actual bond salesmen, explained the business to him and helped him book large orders. Despite the complaints his actions generated, he was moved out of the equity business and hired as a salesman on Lehman's institutional bond market team and soon after that transferred to Hong Kong.

"It was difficult," Mr. Lee later reflected later, in an interview with Euromoney magazine, on his first months in Hong Kong. "Very few banks in Korea were actually buying bonds other than floating-rate notes, and Lehman decided to get out of that business about three months after I arrived in Hong Kong. The only thing I could sell was straight bonds and Koreans just wouldn't buy straight bonds, so I was left to my own devices to figure out ways to do business with Korea. I ended up taking the route whereby I tried to focus on doing private placements, which again, I guess, wasn't supposed to be part of my menu."

Asia's fixed income markets were nothing like the deep, mature bond markets of the U.S. in which Mr. Lee first learned his trade. The fixed income market had long been dominated by banks. By some estimates, more than 80% of the credit extended in Asia was extended by banks, through direct or syndicated loans. The remaining 20% was a mish-mash of Yankee bonds, sold to U.S. investors; Eurobonds, sold to a more global base; samurai bonds, denominated in yen; dragon bonds, sold within East Asia, and short-term paper. There were many reasons for the immature state of the market. For one, the infrastructure wasn't there. Clearance and settlement systems were almost non-existent. Tax codes were confusing on how fixed income paper would be treated. And most Asian corporations were not rated by international credit rating agencies, like Moody's and Standard & Poor's. Furthermore, because Asia's pension systems were not well developed, the region did not have a natural base of institutional bond investors. And because most of Asia's tiger economies ran fiscal surpluses, the bond markets did not have government benchmarks like a U.S. Treasury off which bonds could be priced. Almost every Asian country lacked any discernible yield curve. And by borrowing directly from banks, Asia's many family-run corporations could avoid much public financial disclosure about their tightly controlled companies.

But in 1992, Mr. Lee sold his bosses in New York on a plan to develop local currency bond and money market instruments. In Mr. Lee's view, and in the view of many others, Asia's bond markets were bound to develop as the region's economies grew larger and its needs for infrastructure spending expanded. Indeed, a few years later the World Bank would estimate that by 2004, East Asia's bond markets would grow to more than $1 trillion. According to Mr. Lee's plan, trading in these local currency bonds would be greased by the development of currency swap markets which would allow investors to swap the proceeds of, say, an instrument denominated in Thai baht, into the currency of their choice. This market, in turn, would be underpinned by the fact that central banks in the region sought to peg their currencies to the U.S. dollar, providing a source of stability.

The early days were not easy. "There were a lot of doors that I knocked on which were promptly closed, trying to convince people that it would make sense to buy a Thai baht bill of exchange from a bank and swap it for US dollars and achieve a higher yield than they could find elsewhere," Mr. Lee told Euromoney. But by March of 1993, he had found his first issuer in the International Finance Corp. of Thailand. And by late in the year, with long-term interest rates in the United States falling, his efforts at Lehman Brothers took off, as investors sought higher yielding investments and turned to Thailand to park their cash. In short time, Mr. Lee and a team of 15 colleagues moved to Peregrine, where he was given the opportunity by Mr. Tose to build the investment bank's fixed income business from scratch.

Mr. Lee was just five years into his career as a financier. He came with a reputation as a hard working innovator in the market. But he also left behind rumors that Lehman Brothers had been saddled with a loss-making inventory of fixed-income instruments. (He denied this.) The challenge of starting up a fixed-income business at Peregrine was even more daunting than his efforts at Lehman Brothers. He reflected to Euromoney:

"It was like learning how to build an investment bank from scratch. We didn't have telephones; we didn't have a desk. We had no funding lines. We didn't have custodians; we didn't have relationships with banks. There was just so much we didn't have. We didn't have accountants; we didn't have a P&L function. All these things that I guess we took for granted at Lehman, that Lehman had built over 100 years or so, Peregrine just didn't have."

But Mr. Lee soon discovered that if Asia's bond markets, and Peregrine's fixed income department, were undeveloped, they did not suffer from a lack of eager borrowers. The region, particularly Thailand and Indonesia, had many corporations who were eager to catch the wave of foreign capital that had been rushing into Asia for several years, helping to fuel its phenomenal growth rates. Lee's strategy was to target the second-tier companies that didn't yet have the clout to tap international Yankee Bond or Eurobond markets, and to grow Peregrine with them. He also found a source of capital in a familiar place, Korea, where domestic interest rates were falling and forcing Korean bankers to look further afield for more attractive yields. With currencies pegged to the U.S. dollar, Lee brought them Indonesian and Thai instruments, issued by companies with no credit ratings, that yielded 15% or more.

The strategy began to bear fruit in the second half of 1995, when Peregrine syndicated a 3-year, $175 million floating rate note for PT Citra Marga Nusaphala Persada, an Indonesian toll-road operator that was controlled by President Suharto's daughter, Siti Hardiyanti Rukmana, or Tutut, as many called her. The deal happened after Peregrine had arranged short-term commercial paper loans for the company several months earlier. It would be a prelude to an explosion of issues from Southeast Asia's second-tier companies. His group was driven, working many 16 hour days, seven days a week as they built a market from nothing. Despite all of the infrastructure problems, between 1994 and 1996, he helped scores of unrated Asian companies raise $36 billion, effectively transforming Peregrine in just three years into Asia's leading junk bond house and turning Mr. Lee into the presumptive king of Asia's bond markets.

In the process, the bond operation became a driving force on Peregrine's income statement. By 1997, it had more than 200 employees, including one of Asia's most respected credit and foreign exchange research teams. And the group, which originated debt and traded in it actively, accounting for nearly a third of the investment bank's profits by 1997.

In many ways, Mr. Tose sought to nurture Mr. Lee the way he nurtured Mr. Leung, by offering him great autonomy and encouraging his ambitions. But Mr. Lee's autonomy was far greater than Mr. Leung's, because Mr. Tose brought very little experience to the fixed-income business, and little oversight to its operations. In an interview in mid-1997, he said flatly, "I don't manage that business." But Mr. Tose and Mr. Lee appeared to develop an increasing admiration for each others' work, often settling down to lengthy, private conversations about the future of the firm in Mr. Tose's office. Some believed that Mr. Lee, not Mr. Leung, was being groomed to eventually succeed Peregrine's founder at the top of the bank. In the process, Mr. Lee developed an autocratic style that mirrored in many ways the style of his boss. He was known to lock employees out of morning meetings when they arrived late and to circulate long memos written in the tone of a rambunctious football coach. In one memo as Indonesia's currency unraveled in August 1997, he complained, "Why does a country with 7% plus GDP, 5% plus inflation, manageable external and domestic debt, with stable commodity prices have to see one quarter of its domestic wealth disappear? To appease some snot-nosed 26-year-old (foreign-exchange) trader at a Eurofag bank in Singapore."

Mr. Lee also quickly became Peregrine's highest paid employee, topping even Mr. Tose. In 1996, he was estimated to have earned more than $5 million in salary and bonus. Tose later explained the compensation plan for the fixed income department to Euromoney magazine: "Fixed income tends to be run much more along American investment-banking lines. Salaries are relatively low, and the bonus packages are relatively high. Therefore good producers earn significant amounts. Bad ones just get their salaries." Mr. Lee was a producer. Before long, he moved into a luxury townhouse in an exclusive neighborhood on the south side of Hong Kong island, and was rumored to have stationed a red Ferrari in Seoul for his frequent visits to the Korean capital. Ironically, a friend crashed the car soon after it was purchased, according to local press reports.

1994-1997: An organization in flux

It was not lost on Mr. Tose that Peregrine's stunning growth meant that the organization would have to change, too. To convince clients and Peregrine's creditors that he was prepared to compete in the big leagues of investment banking, Peregrine needed to drop its swashbuckling image, and develop the systems and controls that helped financial institutions navigate volatility in markets and rein in renegade employees. Mr. Tose learned that lesson in 1995 when he tried to acquire the fund management arm of a large U.S. insurance company. He was turned down, according to the Far Eastern Economic Review, because the firm feared Peregrine's reputation would frighten off its pension fund clients.

Reputation and style became increasingly important themes for Peregrine, because Mr. Tose realized that in order to continue to compete in the fixed income markets, Peregrine would need to expand its capital base. This was especially important in Asia's illiquid bond markets, because Peregrine was often willing to place offerings on its own books before lining up investors, known in the industry as doing "bought deals," much like the commitment Mr. Tose had made to Cheung Kong when asked to place new shares in early 1996. In addition to a strong capital base, Peregrine needed to secure the confidence of creditors to finance its fast-growing balance sheet. And on derivatives trades, many counterparties would only deal with well-capitalized banks, forcing Peregrine to seek guarantees from highly rated banks. As a result, Mr. Tose increasingly needed to strike a difficult balance between culture, reputation and organization. "I hope that we will never lose the aggressive posture that we have today," he said in an interview in mid-1997. "We have to fight for everything we get, because we are not as large as some of our competitors. But I also hope that people realize that we are not just massive risk takers."

To soften the image, Peregrine's 1996 annual report featured a fencer on its cover, rather than the trademark predatory falcon after which the company was named. But many of the other changes were more than cosmetic. In 1995, for instance, he reorganized the investment bank along product lines, to rein in satellite offices and joint ventures around the region that had begun to operate like fiefdoms. That effort became a new source of tension within the organization, as executives outside of Hong Kong lost the authority to command deals autonomously. Another source of tension was also brewing in the organization between the equity side of the business and the fixed income side of the business. From his first days at the organization, Mr. Lee says he felt besieged by shaken egos and suspicious glances from other investment bankers. Many of them, in fact, wondered whether he had the wherewithal to build the organization, and change it, at the fast pace he and Mr. Tose were moving.

Against this backdrop, Mr. Tose tried to build a risk management operation. John Lee, a Brooklyn native and the group's treasurer, had been hired by Mr. Tose from Lehman Brothers, as part of the move that brought Andre Lee's fixed income team to Peregrine. Early on, John Lee's highest priority appeared to be the widening of Peregrine's access to creditors to help finance the rapid expansion of the investment bank's balance sheet. He launched a commercial paper program and raised $120 million by issuing 3-year floating rate notes in 1996. He also was Peregrine's lead player in an effort to secure a credit rating from an international rating agency. In this case it came from the Japan Bond Research Institute, which gave Peregrine an investment grade rating in early 1997, an accomplishment in which Mr. Tose took great pride.

John Lee also became increasingly involved in overseeing Peregrine's risk management procedures, though he did not formerly have that responsibility until early 1997. He helped set up a Group Market Risk Management department, which monitored market risk on a daily basis using the industry-standard Value At Risk, a management tool which estimates the likely maximum loss of a portfolio using the historical volatility of financial instruments. A Commitments Committee to oversee debt and equity underwriting operations and a Group Credit Risk Committee to evaluate the creditworthiness of clients also met "periodically or on an as needed basis," according to Peregrine's annual report.

One result of these changes was to further centralize the operations of Peregrine, and to concentrate decision-making into the hands of a key few executives. "One of the key things that I learned from Barings is how important the central treasury function was," Mr. Tose said months before Peregrine collapsed. "No money can be paid out without me knowing about it. It's all centralized. There is one treasurer, one treasury function. People can't spend money without us knowing."

Mid-1997: Asia unravels

By mid-1997, Peregrine appeared to be on top of the world. With Hong Kong's handover to China approaching, the red chip market pioneered by Mr. Leung was booming, and Peregrine was reaping many of the gains. When the investment arm of the Beijing municipal government listed its own company on the Stock Exchange of Hong Kong, it chose Peregrine and Morgan Stanley to underwrite the deal, and the listing generated so much interest in Hong Kong that local investors lined up for hours outside of the Bank of China just to get their hands on a copy of the prospectus. In June, Mr. Tose was named by Time Magazine one of Hong Kong's 25 most influential people. The magazine also included two of Mr. Tose's patrons on its list: Li Ka-shing and Larry Yung. And the fixed income business was continuing to grow at phenomenal rates, by mid-year more than doubling its contribution to operating profits from the previous year. Rumors began circulating in Exchange Square that Peregrine was becoming overextended, but Mr. Tose dismissed these rumors as nonsense. "There is a lot of jealousy in this town," he said in the days leading up to the Beijing Enterprises listing.

In fact, a storm was brewing in Asia, and its ferocity would astound even the region's gloomiest prognosticators. At that point the storm was circling over Thailand, whose banks and finance companies had large quantities of non-performing assets, just as its exports slowed, putting pressure on the nation's U.S. dollar reserves. For many months, hedge funds and the proprietary trading desks at investment banks had been profiting on what were known as carry trades. In essence, they sold their U.S. dollars for Thailand's local currency, and enjoyed the high interest rates they could earn in local deposits. With the currency pegged, a high return in dollars appeared almost certain. Local corporations and local finance companies had essentially made the same bet, borrowing low-rate U.S. dollars to finance local investments - typically grand property projects - with the apparent security of a stable currency. But by late 1996, the hedge funds and trading desks had begun unwinding those carry trades, concerned that Thailand's financial system had become unstable. The local borrowers also began to scramble for U.S. dollars, further depleting Thailand's reserves. By July, the central bank's reserves were exhausted after futile attempts to prop up the currency. It had turned to the International Monetary Fund for assistance and the baht was devalued.

The financial chaos that ensued had a panic quality. Asia's remarkable economic growth rates had been fueled in part by an influx of capital from Western bankers and Western institutional investors. The devaluation of the baht set off a swift reassessment of the risk that came with those investments, forcing creditors and investors to cover their foreign exchange exposures just as local borrowers scrambled for dollars to pay off loans. Investors and bankers had become increasingly concerned that their capital was being put to use in projects that did not generate very inspiring returns and that local banks, many operating on an assumption that they would be supported by their central banks, had become fundamentally unstable. At the same time, many local investors in the region sought to protect their wealth by moving it off-shore.

The actual problems varied from country to country: from an overheated property market in Thailand to an over-leveraged, inefficient corporate sector in Korea, to a corrupted political system in Indonesia. But the result was similar throughout the region in the ensuing months: currencies collapsed (with the exception of Hong Kong, Singapore and China), stock markets imploded, and credit dried up.

By then, Peregrine had become much more vulnerable than it appeared on the surface. Its balance sheet had swollen from \$3.1 billion at the end of 1996 to \$5.3 billion in a matter of months. It too carried substantial foreign exchange risks (dollar borrowing financing local currency assets). That is to say nothing of the off-balance sheet items that flowed out of the investment bank's derivatives operations, such as currency and interest rate swap agreements that Peregrine had in place with now struggling customers.

Peregrine had foreseen the trouble that was heading for Thailand. In late 1996, after generating 40% of his business in Thailand, Andre Lee decided to shut down the origination business out of Thailand completely, convinced that the currency was heading for a rough ride. But he continued to push headlong into Indonesia, even as investors, particularly the Korean banks, had become increasingly reluctant to buy the unrated paper in which Peregrine specialized. That forced the investment bank to hold its "bought deals" on its own books just as the region was heading for trouble.

Mid-1997: Not so steady, not so safe

By mid-year, Andre Lee was in the process of cementing perhaps the most troubling and damaging financing of his short career, one that many found emblematic of the way the fixed income department operated. His counterpart was an Indonesian wheeler-dealer named Jopie Widjaja, president of PT Steady Safe, an Indonesian taxi company which charged local drivers the equivalent of about \$7.50 a day to lease from its fleet of about 1000 blue and gray taxis. Mr. Widjaja had made a name for himself as the first Indonesian to try a hostile takeover on the Jakarta Stock Exchange. But he was known more widely for the close ties he had forged with President Suharto's daughter, Tutut, who controlled many of Jakarta's prime transportation projects through PT Citra Marga Nusaphala Persada, the transportation company she ran. That was the same company from which Andre Lee had his breakthrough deal at Peregrine in 1995.

In July, Steady Safe and Citra Marga entered into an unusual transaction in which Steady Safe would purchase a 20% stake in Citra Marga. Tutut, in turn, would become chairman of Steady Safe and place three allies on Steady Safe's board of directors. Call it a reverse takeover. She took seats on his board, but placed no equity in Mr. Widjaja's operation. However he deemed the connection with the President's powerful daughter as ample cause for the strange terms of the deal, expecting the arrangement to reap lucrative new contracts for the expanded transportation company he envisioned, one that would operate not just in local taxis, but also in ferries and trains.

Peregrine had already been lined up to help provide the cash for the acquisition and the expansion that was expected to flow out of it. Under the plan, Steady Safe would issue at least \$265 million in short-term promissory notes in several tranches for three purposes: 1) to help finance the acquisition of the Citra Marga stake, 2) to pay off a loan due to HSBC Holdings PLC and 3) to fund the expansion. The HSBC loan had to be refinanced because the transaction with Citra Marga would have violated Steady Safe's loan covenants with its banker. Peregrine filled in the gaps, and as he had with Citra Marga years earlier, Andre Lee planned eventually to refinance the short-term loans with a sale of long-term notes, sealing more business. Steady Safe also had filed an application with Indonesia's securities regulator to issue additional shares to help reduce its debt load. Peregrine would be the underwriter for that deal, too.

While other international investment banks were also after Steady Safe's business, in Jakarta many local analysts were suspicious of the company, which was already highly leveraged, capitalized as it was with about twice as much debt as equity. More troubling, Steady Safe's revenues were entirely based in local currency, the rupiah, yet its obligations were in U.S. dollars, just as pressure mounted on the Thai baht. Had Andre Lee consulted his Jakarta office about the transaction, those concerns might have become more apparent to him, but relations between the head office in Hong Kong and the regional offices had become increasingly frayed. Months after the transaction, Peregrine's Jakarta representatives said they knew nothing about Peregrine's relationship with Steady Safe. Andre Lee and his Hong Kong-based lieutenants had worked the transaction out of their Jakarta hotel rooms, as they had many other transactions in the months after Mr. Tose reorganized Peregrine's operations along product lines. In the end, Peregrine held most of Steady Safe's promissory notes on its own books, as its network of investors had become increasingly reluctant to hold any Indonesian securities.

By August, Asia's financial markets and Peregrine became unglued. By then it was apparent that the devaluation of the baht would not be an isolated incident. In the third week of August the Indonesian rupiah was devalued and the Malaysian ringgit was beginning to free fall. Rumors began to circulate that Peregrine had huge currency exposures to the region, and faced large currency losses in rupiah. In fact, its fundamental problem was credit exposure to borrowers whose many problems included currency imbalances. By some estimates, Peregrine had held a corporate bond portfolio as large as $3 billion – two-thirds of its assets – at its height. It was filled with credits from companies which were suddenly struggling to pay off their U.S. dollar debt as their own currencies depreciated in value and their bankers reined in credit. Andre Lee, meanwhile, worked furiously to restructure the fixed income business. According to the Asian Wall Street Journal, in an August 20 email to his bond department staff, he said: "We need to put our existing staff in order." He said the department would set up a new team to search for credit problems, and the group would become cautious in arranging new issues. "The focus then becomes on doing deals that we can REALLY SELL."

Compounding problems, Hong Kong's red chip stocks, which had soared in the months leading up to and after the handover to China, had begun to implode. Equity investors had become increasingly suspicious about the chances that mainland authorities would actually hand over assets to their Hong Kong-listed associates at hugely discounted prices, as so many had expected. So another important source of income for Peregrine, Francis Leung's China equity business, went into decline.

Rumors were intensifying about Peregrine's financial health. They had made Peregrine's creditors nervous, and some started to pull their credit lines to the bank just as it was trying to shrink its balance sheet by selling off assets into increasingly illiquid markets. The timing could not have been worse. While Mr. Tose pinned the rumors on Peregrine's jealous rivals, Andre Lee suspected that some of the rumors were coming from the investment bank's own equity department. Relations between the two departments had become that strained. Indeed, the tension within Peregrine over the fixed income business reached the highest levels of the investment bank. When asked by a Euromoney reporter to respond to complaints by some senior Peregrine executives that they were kept in the dark about the company's fixed income exposures, Mr. Tose responded: "What the hell's it got to do with them? Why don't they get on and do their business?" He added, "They don't understand the business."

In October, with Hong Kong's stock market crashing, Mr. Tose took two extraordinary steps. First, he announced that he had hired Kroll, a private detective agency, to locate the source of the rumors and to put an end to them. Second, he announced a series of steps to try to ease public concerns about Peregrine's financial standing, revealing that Peregrine planned to reserve $35 million against possible write-offs from its bond portfolio, on top of the $25 million that had been reserved at mid-year. He issued a press release offering an overview of the investment bank's positions. He also announced plans, by mid-December, to release income results through Oct. 31 and to push Peregrine's financial year-end to Nov. 30 from Dec. 31, making fully audited accounts available by January. (Hong Kong companies are required to release fully audited accounts only for their financial year-end. Income statements are required at mid-year, but balance sheets and cash flow statements are not. These disclosure requirements can leave investors in an information vacuum on a company's financial standing for months on end. In Peregrine's case, they would not have seen a balance sheet for another six months had Mr. Tose not acted.)

Yet Peregrine's problems mounted, and its bond portfolio wasn't shrinking nearly as fast as it needed to. By Oct. 31, the face value of the bonds and notes it held, by then mostly Indonesian credits, stood at more than $1 billion. Their market value was clearly much smaller than that. Its largest holding was Steady Safe, at $265 million, a third of its adjusted share capital.

The rescue

In the midst of these challenges, Mr. Tose had been in discussions with the Zurich Group –a Swiss insurance giant with a pristine credit rating – about cooperating in a direct investment fund. Leading those talks for the Zurich Group was an American hockey buff named Steven Gluckstern. Mr. Gluckstern, a stocky man who wore a thick beard and mustache, had moved quickly up the ranks of Wall Street in the 1980s and landed for a while under the tutelage of investor Warren Buffett. Mr. Gluckstern pioneered the use of investment banking techniques in the insurance industry. He joined the Zurich Group after Mr. Buffett rejected a plan to set up a Bermuda-based "finite risk" reinsurance business in 1987. In late 1997, he was working both ends of the globe, positioning himself to buy a controlling stake in the New York Islanders, a professional hockey team, and looking for direct investments in shell-shocked Asia. (He was already a joint owner of another professional hockey team, the Phoenix Coyotes, which he moved from Arizona from Winnipeg in 1996.)

By late October, it had become clear that what Peregrine needed was a direct investor itself, one with access to significant amounts of capital and one with enough clout in international financial markets to settle the concerns of Peregrine's creditors. In many ways, the Zurich Group was a perfect fit for the situation. Mr. Gluckstern specialized in financial institutions, and the Swiss insurance group, with a reputation for conservatism, could help ease investors' suspicions that Peregrine was an organization that never grew out of its buccaneering ways. And Mr. Gluckstern was eager to find assets in the region while prices seemed cheap. In Peregrine, he found an investment bank with a known franchise and extensive contacts throughout Asia. On Nov. 16, both sides announced that the Zurich Group would invest $200 million in newly issued preferred shares that could be converted into a 24% equity holding and the Swiss group would be given three seats on Peregrine's nine-member board of directors.

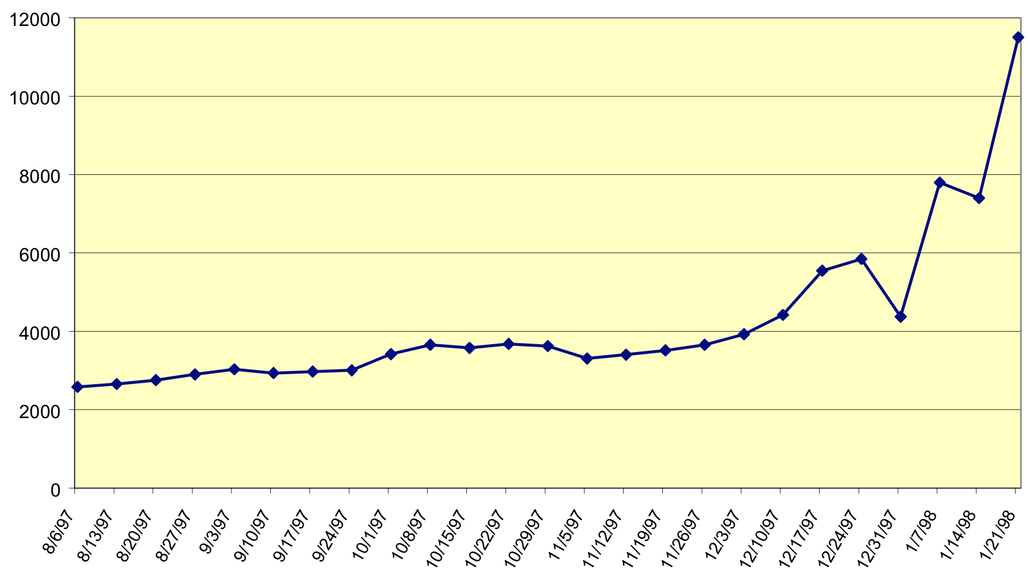
For Mr. Tose, who had boasted for years about Peregrine's ability to compete with the best and the biggest from the West, the transaction was a letdown. In a December interview, Mr. Tose insisted that Peregrine remained an independent investment bank. When asked about the three executives the Zurich Group would have on Peregrine's board of directors, Mr. Tose remarked, "So what? We don't run the company through the board. We never have, and never will."

Despite his obviously mixed feelings, it was clear to Mr. Tose that he needed the partnership to put an end to concerns about Peregrine's financial health. The deal was contingent on the Zurich Group completing several weeks of due diligence. With the rupiah continuing to sink, the clock for Peregrine had begun ticking.

The collapse

By December, Peregrine had signed up another investor: First Chicago NBD Corp., which was also the investment bank's largest creditor. First Chicago agreed to invest $25 million into Peregrine, an important vote of confidence. But events in the region were spinning further out of control, beyond the expectations of most observers. To appreciate the extent of the chaos, consider this. When Mr. Gluckstern and Mr. Tose agreed on the investment, the rupiah stood at about 3,600 to the U.S. dollar. In performing stress tests on Peregrine's portfolio, his team of analysts used a value-at-risk approach to assessing the downside. They looked at the currency and its historical volatility and they calculated how far it would move if it weakened by a measure of two standard deviations from its present level. Statistical models suggested that there was a greater than 90% chance that the rupiah would not weaken beyond 5,000 rupiah to the dollar, based on its historical volatility. When a local economist suggested that Mr. Gluckstern plug a rupiah at 10,000 into his financial models of Peregrine's portfolio, he hesitated. Such a move was beyond any historical precedent for volatility, representing a shift of more than 6 standard deviations, which the models said carried a probability of a tiny fraction of one percent. In fact, the rupiah plunged further, particularly during January 1998 (see Figure 1).

Figure 1
Indonesian Rupiah per Dollar



If Mr. Tose was concerned, he certainly didn't show it. On Dec. 24, with Asia's markets sinking rapidly, he went on a vacation tour of the palaces of Rajasthan, India, according to the Far Eastern Economic Review. But soon after he left, both Moody's and Standard & Poor's downgraded their ratings on Indonesian debt to junk bond status, pushing sovereign Indonesian debt into the realm of Steady Safe. The downgrades helped to drive institutional investors completely out of Indonesian debt, since many were barred by their official mandates from holding non-investment grade securities, further weakening the currency.

At the same time, Steady Safe was heading for trouble. In early January, the Indonesian securities regulator demanded that Steady Safe postpone its plans to raise equity in a five-for-one rights issue. Tutut, Mr. Widjaja's well-connected link to the Suharto administration, was not to be heard from. By early January, with payments on its promissory notes looming, the market capitalization of Steady Safe's stock had sunk to less than $4 million and the price of most cab rides had sunk to a few cents in U.S. dollar terms. Its debt could not be sold at almost any price.

By now Peregrine's exposure to Steady Safe had been widely reported in the press, raising new concerns about the investment bank's risk management procedures. Many of Peregrine's senior executives, including Francis Leung, its second-in-command, said they had known nothing about the Steady Safe loan until months after it had been completed. Mr. Leung, Peregrine's managing director, would later say he was too busy with his China business to pay attention. John Lee, Peregrine's head of risk management, also said they knew nothing of the Steady Safe holdings until months after it had been completed. In a letter to the Asian Wall Street Journal after Peregrine collapsed, John Lee said the bond department, "advanced funds gradually to this company by purchasing securities over a long period of time and settling them through the operations department as normal securities purchases." After the collapse, John Lee also complained that he had little time to fix Peregrine's risk management procedures after being given that responsibility in early 1997. "In between an extensive travel schedule and addressing other 'fires' in the organization, I recruited staff and moved to gain control and consolidate various credit functions… Many said it was unfortunate I could not have been given this responsibility earlier." Andre Lee later disputed many of these arguments. "Fixed income complied with normal reporting lines," he told Euromoney magazine. "The reporting lines on Steady Safe were no different than on other deals. Everyone within the firm who needed to know about the deal knew."

While questions about Steady Safe mounted, Peregrine's stock was sinking fast. That placed Mr. Gluckstern in a dilemma. The November deal valued Peregrine at HK$8 per share, but by early January, the share price had fallen to HK$4.375. The deal would clearly need to be renegotiated. But now there was an additional dilemma. Hong Kong's listing rules require that investors who buy more than 35% of a company's shares make a general offer for all of the shares. If Mr. Gluckstern invested the planned $200 million, he would move over that limit, meaning he had to reduce his offer.

As the rupiah plunged toward 11,000 to the U.S. dollar, Mr. Gluckstern's team spent several long nights in early January analyzing the pros and cons of staying in the deal. The group had developed its own concerns about Peregrine's culture, but was still attracted to the franchise. He came up with a new offer of $175 million, but refused to deliver the funds until the following week, just as Peregrine faced payments on obligations to creditors. Peregrine would need $60 million for three or four days until Zurich's investment arrived. The new arrangement acted essentially as a test of the willingness of Peregrine's creditors, particularly First Chicago, to stand by its side for a few more days. First Chicago was a secured creditor and when they wavered, the deal fell apart.

By Friday, Hong Kong's securities regulators demanded that it stop dealing in the local stock and futures markets. During the weekend, Mr. Leung and Mr. Tose searched frantically for new investors, looking primarily among their clique of mainland contacts. But in these volatile markets, none dared to step forward. On Monday, January 12, Peregrine filed for liquidation.

A day later, Mr. Tose walked with his trademark limp into a room filled with reporters, Mr. Leung at his side. He explained with his voice wavering how he learned by telephone at 5 a.m. on Jan. 9 that the expected credit line had been pulled. "We got caught as a result of our illiquidity and a meltdown in currencies," he said, continuing later, "It's very sad, but those are the facts. Now I'd like a bit of peace and quiet."

Exhibit 1:

Six-Year Financial Summary
Expressed in HK$'000

	1991	1992	1993	1994	1995	1996
Turnover	1,855,062	4,237,968	11,437,982	28,900,979	84,389,315	175,523,618
Profit before taxation	360,075	778,467	1,028,212	778,534	1,101,543	1,024,170
Profit attributable to shareholders	318,254	676,058	855,555	650,734	1,009,612	855,645
Total assets	4,181,450	6,258,626	7,262,548	13,840,746	14,602,443	24,190,188
Total liabilities	1,116,815	2,799,047	3,162,024	9,141,484	8,713,301	17,499,783
Total shareholders' funds	3,064,635	3,459,579	4,100,524	4,699,262	5,889,142	6,690,405
Earnings per share - Basic (HK$)	1.026	1.313	1.647	1.208	1.657	1.358
- Diluted (HK$)	n/a	1.136	1.426	1.067	1.555	1.272
Dividends per share (HK$)	0.415	0.525	0.600	0.500	0.530	0.530
PROFITABILITY						
Return on Assets	7.6%	10.8%	11.8%	4.7%	6.9%	3.5%
Return on Equity	10.4%	19.5%	20.9%	13.8%	17.1%	12.8%
LEVERAGE						
Equity / Assets	0.733	0.553	0.565	0.340	0.403	0.277

Exhibit 2:

Balance Sheets
as at 31st December

	1996 *HK$'000*	1995 *HK$'000*	1994 *HK$'000*
Fixed assets	1,066,150	128,450	105,334
Properties held for development	1,390,411	-	-
Interests in subsidiary companies	-	-	-
Interests in associated companies	1,320,914	1,861,366	2,459,785
Other investments	1,630,731	1,036,228	981,575
Other assets	90,912	78,855	61,229
Deferred expenditure	23,632	29,654	37,031
Long-term loans receivable	32,502	-	-
Current assets (1)	18,634,936	11,467,890	10,195,792
Total assets	24,190,188	14,602,443	13,840,746
Deduct:			
Current liabilities (2)	12,597,821	6,569,922	7,460,826
Long-term liabilities	3,042,905	1,955,268	1,547,600
Minority interests	1,859,057	187,326	130,270
Deferred tax	-	785	2,788
Total net assets	6,690,405	5,889,142	4,699,262
Representing:			
Share capital	379,148	375,352	333,231
Reserves	6,311,257	5,513,790	4,366,031
Total shareholders' funds	6,690,405	5,889,142	4,699,262

NOTE(1)	**1996**	**1995**
Long-term loans	1,077,803	1,351,337
Listed securities (a)		
Hong Kong	1,674,736	57,013
Other	438,792	1,178,279
Trading account assets	7,311,782	3,165,332
Securities purchased under resell agreements	115,528	308,990
Accounts receivable	5,256,016	2,353,942
Trust accounts	251,462	329,959
Prepaid taxes	20,503	
Commercial paper and treasury bills	125,081	1,230,228
Cash balances	1,583,287	1,492,810
Deposits for property acquisitions	65,613	-
Properties held for sale	707,018	-
Stocks	6,474	-
Current portion of loans receivable	841	-
	18,634,936	11,467,890

Exhibit 2, cont.

(a)	**1996**	**1995**
Market value	2,141,995	1,244,641

NOTE (2)	**1996**	**1995**
Bank loans and overdrafts	955,811	29,179
Other loans	1,580,867	474,124
Securities sold under repurchase agreements	598,172	347,624
Securities sold, not yet purchased	200,447	248,331
Commercial paper	3,905,158	1,921,650
Unclaimed dividends	2,207	2,975
Accounts payable	4,514,640	2,988,392
Trust accounts	251,462	329,959
Taxes due	124,007	51,521
Proposed final dividend	177,166	176,167
Deposits received on properties	287,884	
	12,597,821	6,569,922

Exhibit 3:

Consolidated Profit and Loss Account

For years ended 31st December

	1996 *HK$'000*	1995 *HK$'000*	1994 *HK$'000*
Turnover	175,523,618	84,389,315	28,900,979
Operating profit	848,613	902,066	344,427
Operating profit is stated after crediting/ (debiting) the following exceptional items:			
Profit on disposal of associated companies	-	843,744	-
Loss on disposal of other investments	-	(65,963)	-
Provision for losses in long-term investments	-	(113,885)	-
Share of results of associated companies	175,557	199,477	434,107
Profit before taxation	1,024,170	1,101,543	778,534
Taxation	104,974	(107,496)	(140,676)
Profit after taxation	919,196	994,047	637,858
(Profit)/Loss attributable to minority shareholders	(63,551)	15,565	12,876
Profit attributable to shareholders	855,645	1,009,612	650,734
Dividends	(334,990)	(333,079)	(294,656)
Retained profit for the year	520,655	676,533	356,078
Earnings per share			
Basic	HK$1.358	HK$1.657	HK$1.208
Fully diluted	HK$1.272	HK$1.555	HK$1.067

Exhibit 4:

Consolidated Cash Flow Statement

For years ended 31st December

	1996 HK$'000	1995 HK$'000	1994 HK$'000
Net Cash Outflow from Operating Activities	(874,105)	(629,428)	(936,160)
Return on Investment and Servicing of Finance			
Interest received	562,710	393,299	244,143
Interest paid	(632,036)	(391,145)	(156,583)
Dividend received	32,219	69,621	67,240
Dividend paid	(334,759)	(312,897)	(325,080)
Dividend received from associated companies	37,115	51,869	108,939
Dividen paid to minority shareholders	(65,312)		
Net cash outflow from return on investments and servicing of finance	(400,063)	(189,253)	(61,341)
Taxation			
Taxation paid	(9,522)	(29,831)	(95,404)
Investing Activities			
Purchase of fixed assets	(199,590)	(81,048)	(81,469)
Increase in interests in associated companies	2,133	(208,699)	(367,773)
Increase in other investments	(662,944)	(561,280)	(548,194)
Increase in other assets	(12,057)	(17,626)	(10,773)
Increase in properties held for development	(239,541)		
Increase in loans receivable	(15,478)		
Increase in pledged time deposits	(179,125)	(54,269)	
Acquisition of subsidiaries (net of cash and cash equivalents acquired)	(494,081)	(8,133)	15,490
Purchase of additional shares in subsidiaries	(45,178)	(3,737)	-
Sale proceeds on disposal of associated companies	-	1,745,279	-
Sale proceeds on disposal of property interests	63,152		
Sale proceeds on disposal of other investments	457,053	461,355	110,000
Sale proceeds on disposal of fixed assets	4,889	11,867	378
Net cash inflow/(outflow) from investing activities	(1,320,787)	1,283,709	(882,341)

Financing

Issue of ordinary shares	50,780	599,093	240,554
Issue of notes	1,043,941	463,920	-
New bank and other loans	43,117	-	-
Issue of convertible bonds	-	-	1,547,600
Redemption of convertible bonds	-	(38,823)	-
Expenses in relation to issue of convertible bonds	-	-	(42,769)
Repurchase of own shares	-	(21,776)	-
Capital contribution from minority shareholders	2,112	75,692	53,049
Net cash inflow from financing	1,174,444	1,078,106	1,798,434

Exhibit 5:

Operating Profit Before Tax and Administrative Expense

PRINICIPAL ACTIVITIES	1996	%	1995	%
Equity Products	284,652	28%	169,423	16%
Fixed Income Products	381,499	37%	158,220	15%
Direct Investments	45,653	4%	(23,643)	-2%
Asset Management	(26,937)	-3%	(18,945)	-2%
Property Investment	65,484	6%	-	0%
Investment Trading	145,803	14%	702,047	66%
Foreign Exchange and Commodities	-	0%	(23,296)	-2%
Other	128,869	13%	107,568	10%
TOTAL	1,025,023	100%	1,071,374	100%

Exhibit 6:

Directors and Share Distribution

LIST OF DIRECTORS

Philip Tose	Andre Lee	Timothy Gray
Francis Leung	Alex Adamovich	Judd Clark Kinne
Peter Wong	Russell Leiman	Alex Ko
John Lee	Anderson Whamond	Anthony Loh
Alan Mercer	Bruce Seton	Paul Pheby
Peter Fu	Warren Allderige	Francis Bruce Pike
Andrew Jamieson	Ramon Arnaiz	Timothy Voake
Frederick Kinmonth	Mark John Crosbie	

DIRECTORS INTERESTS IN SHARES

Person or Entity	Number of Shares	Number of Warrants
Francis Leung	520923	52092
Philip Tose	345861	34586
Peter Wong (*)	650000	65000
The Kwong Sang Hong International Ltd		
Alan Mercer (#)	70,000	
Philip Tose	250,000	

DIRECTORS INTERESTS IN OPTIONS

-	Date Granted	Number of Options	Price Paid on Exercise of Option
Francis Leung	8-Feb-94	500,000	$17.20
	26-Jan-95	250,000	$7.90
	5-Feb-96	250,000	$11.90
Alan Mercer	8-Feb-94	100,000	$16.30
	26-Jan-95	200,000	$7.90
	5-Feb-96	200,000	$11.90
Philip Tose	8-Feb-94	500,000	$17.20
	26-Jan-95	250,000	$7.90
	5-Feb-96	250,000	$11.90
Peter Wong	13-Jan-93	450,000	$7.95
	8-Feb-94	230,000	$17.20
	26-Jan-95	250,000	$7.90
	5-Feb-96	250,000	$11.90

* Deputy Managing Director in charge of finance, Mr. Wong came with Tose from Vickers.
# Mr. Mercer was Group Legal Counsel.