GLOBAL FINANCIAL

STRATEGY

# **Corporate Finance**

## **Salomon Brothers**

Financial Strategy Niso Abuat (212) 783-7328

Eckhard Arndt Rajiv Guha Jean Hom Mike Kurinets Eric B. Lindenberg

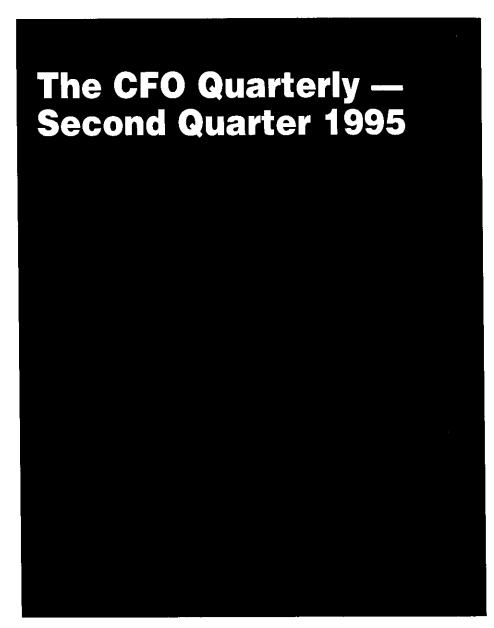
Equity Capital Markets/Syndicate Chris Innes Andrew MacInnes

Economic & Market Analysis John Lipsky

Fixed Income Capital Markets Howard Hiller

Liability Management Bo Thiara Marwan Marshi

Mergers and Acquisitions Terence Kawaja



The authors would like to acknowledge Peter Conroy, Robert DiClemente and Bill Koch. We would also like to thank Mike DeMeo and Pamela Johnson for their substantial assistance in the preparation of this report and Suzan Tuncsiper for her editorial assistance.

## **Salomon Brothers**

Financial Strategy Niso Abuaf (212) 783-7328

Eckhard Arndt Rajiv Guha Jean Hom Mike Kurinets Eric B. Lindenberg

Equity Capital Markets/Syndicate Chris Innes Andrew MacInnes

Economic & Market Analysis John Lipsky

Fixed Income Capital Markets Howard Hiller

Liability Management Bo Thiara Marwan Marshi

Mergers and Acquisitions Terence Kawaja

# The CFO Quarterly — Second Quarter 1995

## TABLE OF CONTENTS

## PAGE

Introduction and Summary	1
Economic, Policy and Market Trends	3
Fixed-Income Market Trends	5
Fixed-Income Liability Management Trends	9
Fixed-Income Derivative Trends	11
Equity Market Trends	17
Equity Derivative Trends	20
Mergers and Acquisitions Trends	23
Related Salomon Brothers Research Publications	25

## FIGURES

1.	30-Year U.S. Treasury Yields, 03 Jan 93-31 May 95	4
2.	Total Rates of Return of Selected Asset Classes, 1Q 94-1Q 95	4
3.	Summary of Economic Forecast, 2Q 95	4
4.	Changes in U.S. Treasury Yields, Oct 94-May 95	5
5.	Spread Between Five-Year Treasury Yields and Three-Month LIBOR, Jan 92-Jun 95	6
6.	Monthly Corporate Debt Issuance, Jan 94-May 95	6
7.	Principal Amount of Corporate Securities Called in the Salomon Brothers Broad	7
	Investment-Grade (BIG) Bond Index, Jan 94-May 95	
8.	Selected Put Bond Issuances, 1995	8
9.	U.S. Treasury Yield Curves	11
10.	Interest Rate-Implied Volatility, Jan 93-May 95	11
11.	30-Year Minus Ten-Year Treasury Yields, Jan 79-May 95	12
12.	Ten-Year Minus Three-Year Treasury Yields, Jan 79-May 95	12
13.	Three-Year Minus Three-Month Treasury Yields, Jan 79-May 95	13
14.	Interest Rate Swap Spreads, Jan 95-May 95	13
	Cost Profile of Two Call Warrants, a Forward Swap, and an Unhedged Scenario	15
16.	Savings Relative to the Expected Forward Borrowing Rate From Selling Warrants Struck at	16
	Different Yields	
17.	Total Equity Issuance, 1Q 94-2Q 95	17
18.	Total IPO Issuance by Issuer Category, 1Q 95	17
19	U.S. Corporations — Mix of Repackaging Transactions, 1993-1994	18
20.	Equity-Linked New Issuance by Product Type, Jan 95-Apr 95	19
21.	Cashflows in the Convertible Market, 1995	19
22.	Equity Market Capital Flows, Jan 94-Mar 95	19
23.	Daily Volume Weighted Average Price and Cumulative Average	21
24.	Risk Reduction Achieved by Averaging	21
25.	Ten Largest M&A Transactions Announced in the First Quarter of 1995	23

#### INTRODUCTION AND SUMMARY

# Economic, Policy and Market Trends

Overall growth prospects for the industrial economies have weakened sooner than had been expected. U.S. growth will be below trend in 1996 as Europe slows to trend and Japan remains stagnant in the wake of the yen surge. The Federal Reserve is expected to ease policy somewhat over the second half of the year, reflecting the sharper-than-expected economic slowdown so far this year, prospective second-quarter production cutbacks and improvement in inflation expectations. With German economic growth moderating and money supply stagnating, a new Bundesbank rate cut this year now appears more likely than not. Political gridlock so far has thwarted serious deregulatory efforts that could dent Japan's structural surplus, and no solution is likely anytime soon.

# Fixed-Income Market Trends

The three ingredients for bond market gains arrived, somewhat unexpectedly, in the first quarter of 1995: an improved inflation outlook, the apparent end of Fed tightening, and a weakening economy. Investor demand for corporate securities reached a feverish pace, keeping spreads near historical lows. However, the end of May brought a spurt of supply, and investor enthusiasm was tempered by product overload and coupon "sticker shock." Corporate treasurers who: (1) are unable to tap the market currently; (2) have refinancing opportunities in the future; or (3) believe spreads will improve after May's temporary dislocation are using hedging strategies to lock in attractive Treasury rates now.

#### Fixed-Income Liability Management Trends

The U.S. dollar's recent, unprecedented declines against the Japanese yen, and to a lesser extent against the Deutschemark, have chagrined many liability managers. Sovereign governments or multinational corporations with unhedged U.S. dollar cash revenues and yen or Deutschemark liabilities have been particularly hard hit. As a result, global debt issuers have become acutely aware of the risks embedded in their multicurrency debt portfolios. Following the example of asset managers, liability managers are now beginning to manage their risks by quantifying their objectives and risk preferences, by setting performance benchmarks, and by applying analytical techniques to maximize their objectives while minimizing their risks.

#### Fixed-Income Derivative Trends

Compared to the end of 1994, the current market environment can be characterized by a flattening yield curve at the short end, a slightly steepening yield curve at the long end, increasing interest rate volatility, and tightening swap spreads. Issuers can take advantage of the currently tight swap spreads by: (1) fixing short-term floating-rate debt; (2) hedging future debt issuances with forward swaps; or (3) using swaptions to manage risk in their swap and callable debt portfolio.

#### **Equity Market Trends**

Equity issuance volumes in the first quarter of 1995 were significantly below levels of a year earlier, in spite of record-high equity market valuations. Notably absent from the offering calendar were large foreign transactions, especially privatization offerings, as well as offerings of real estate investment trusts (REITs). A large component of the equity new issue calendar has been made up of equity carve-outs. Equity carve-outs and other repackaging strategies have been very popular in recent years as a way of enhancing shareholder value and, in many cases, divesting non-core assets.

# Equity Derivative Trends

Companies have increasingly been using stock repurchase programs as a means to enhance shareholder value. This increased activity has led companies to focus on improving and fine-tuning the performance of stock buyback programs. Some managers benchmark their performance by comparing their average daily repurchase cost against an objective index. For legal reasons, such as being blacked out of the stock market during certain periods, companies cannot easily replicate or attempt to outperform an index by themselves. Consequently, an indexed stock buyback program executed by an agent may be the best means of executing a stock buyback program.

#### Mergers and Acquisitions Trends

The mergers and acquisitions (M&A) environment continued at its brisk pace in the first quarter of 1995 — at a level over 50% more than the volume in the first quarter of 1994. Global consolidation in the health care industry dominated M&A activity. As hostile deals represented a substantial and growing portion of total activity, equity was the predominant choice of currency — except among the larger transactions.

#### ECONOMIC. POLICY AND MARKET TRENDS

Question 1:

What is the economic growth outlook for major industrialized countries?

Answer 1:

- Overall growth prospects for the industrial economies have weakened sooner than had been expected.
- Interest-sensitive U.S. spending has slowed sharply so far this year. Although no recession is likely, the United States has entered a period of below-trend growth that may persist into 1996.
- Europe's currency crisis has imposed unintended restraint, partly through forced monetary tightening in several countries. With the Deutschemark still relatively strong, the Bundesbank's earlier rate cut will not be sufficient to offset this restraint. As a result, growth is slowing to trend especially in the core countries, but prospective policy stimulus should prevent any substantial dip.
- Japan will remain stagnant in the wake of the yen surge.

Question 2:

What are the economic policy prospects for major industrialized countries?

Answer 2:

- The Federal Reserve is expected to ease rates as early as the second half, reflecting the sharper-than-expected economic slowdown so far this year, prospective second-quarter production cutbacks and improvement in inflation expectations. Although consumer price inflation is edging higher, leading inflation indicators suggest that price pressures will be contained and partly reverse over the medium-term. A convincing turn toward U.S. fiscal tightening could hasten Fed rate cuts.
- In Germany, the Deutschemark's 3% trade-weighted rise thus far this year has dampened growth prospects and reduced inflation worries, despite larger-than-expected wage gains. With German economic growth moderating and money supply stagnating, a new Bundesbank rate cut this year now appears likely. In France, initial indications suggest that the new French Government of President Chirac favors deficit reduction in the hope that this will allow for lower short-term interest rates and a stable currency. Near-term, monetary policy tightening appears likely in Spain and Italy in response to rising inflationary pressures. Italy appears likely to implement modest pension reform and may follow with another restrictive budget for 1996. Nonetheless, the Italian lira's decline over the past year will boost Italian inflation substantially, and eventually could compel a sharp policy tightening that would weaken Italian growth prospects. Prospects for decisive fiscal and structural reforms in most continental European countries remain unfavorable.
- In Japan, earthquake reconstruction will proceed slowly. The fiscal response to the strong yen so far has been limited, despite Government efforts to magnify the announcement effects of the latest stimulus package. The Bank of Japan's recent cut in the official discount rate to a record-low 1% is not expected to generate a quick economic response. Political gridlock so far has thwarted serious deregulatory efforts that could dent Japan's structural surplus, and no solution is likely anytime soon.

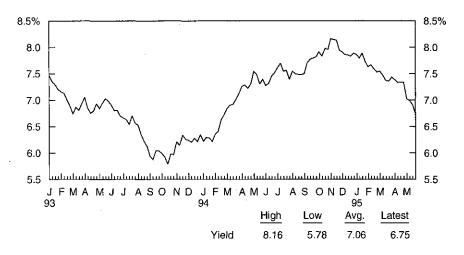
Question 3:

How have the major markets performed in 1995?

Answer 3:

• As Treasury yields kept inching down in the first quarter of 1995 (see Figure 1), total rates of return for selected U.S. asset classes were all strongly positive (see Figure 2). Emerging markets returns were sharply down, primarily resulting from the aftershocks caused by the Mexican currency crisis.

Figure 1. 30-Year U.S. Treasury Yields, 03 Jan 93-31 May 95



Source: Salomon Brothers Inc.

Figure 2. Total Rates of	Return of Selected	Asset Classes	, 10 94-10 95		
Asset Class	1Q 95	4Q 94	3Q 94	20 94	10 94
Treasury	4.68%	0.34%	0.35%	-1.04%	-3.03%
Corporate	5.73	0.43	0.68	1.41	-3.24
Mortgage	5.27	0.44	0.79	-0.54	-2.10
High Yield	5.90	0.03	1.29	-0.45	-2.09
Emerging Markets	-11.10	-8.15	14.25	-1.50	-19.09
S&P 500	9.02	-0.74	4.15	-0.34	-4.43

Source: Salomon Brothers Inc.

#### Question 4:

#### What is the market outlook?

#### Answer 4:

- With the United States headed for below-trend growth, the resulting capping of U.S. inflation expectations should underpin bond yields over recent losses. However, with long-term Treasury yields already below 7%, significant new yield declines probably await evidence of easing inflation pressures and/or new fiscal tightening.
- Diminished German growth prospects also will permit a modest decline in Bund yields in coming months. Following the recent outperformance of high-yielding markets, some upside remains near term as the German interest rate outlook remains benign.
- The dollar's decline appears to be at an end, and some modest further gain appears likely versus European currencies in coming months as expectations rise of further Bundesbank ease. While there is little reason to expect significant new dollar declines versus the yen, there also is limited reason to look for a significant dollar rally until the Japanese current account surplus (in dollar terms) is confirmed to be on a significant downtrend.

Figure 3. Summary of Economic Forecast, 2Q 95					
	Growth	Monetary Policy	Fiscal Policy		
United States	Below Trend	Easier	Possible Tightening		
Core Europe <sup>a</sup>	Trend	Easier	Mixed		
Japan .	Stagnant	Easier	Easier		

a includes France, Germany and the Benelux countries.

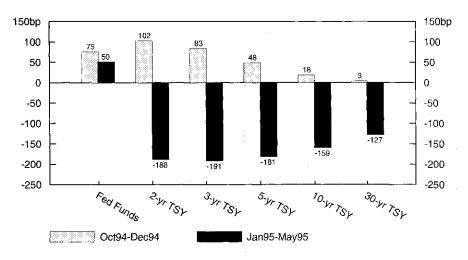
#### FIXED-INCOME MARKET TRENDS

Issuer and investor strategy shifted in response to the market's unexpected reversal of fortune. The pace of debt issuance has risen, but remains capped by the refinancing of high-coupon debt that had already occurred in 1993. Issuers are actively looking at strategies to term out commercial paper, prefund capital spending and refinance future maturities/calls. Hedging strategies are available for issuers who are unable to tap the market quickly. Callable and putable bonds remain attractive structural alternatives.

The May jobs report confirmed a broad economic slowdown and increased the odds of Fed easing.

Sea change in the bond market. The sudden and dramatic rally in the Treasury market caught most investors off guard. Few expected the economy and the market to turn so quickly and with such force (see Figure 4). An economy that grew by 5.1% in the fourth quarter of 1994 wilted to under 3% in the first three months of 1995 and is expected to deteriorate significantly in the current quarter. Market anxieties about inflation have receded, and the Fed's next move is now broadly expected to be an easing. Other technical factors like short-cover-inspired buying of Treasuries, sector shifts out of mortgages and the flow of capital out of the emerging market sector all added fuel to market momentum.

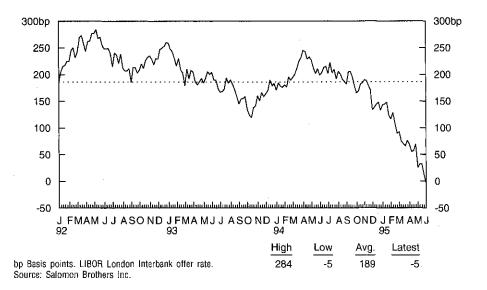
Figure 4. Changes in U.S. Treasury Yields, Oct 94-May 95



bp Basis points. Source: Salomon Brothers Inc.

A flat yield curve at the short end allows borrowers to term out commercial paper at a minimal cost. Liquidity on sale. The shape of the Treasury yield curve has also shifted dramatically in the last five months. The front end of the curve has collapsed, with the spread between five-year Treasury yields and three-month LIBOR narrowing from 152 basis points on January 9, 1995, to -5 basis points on June 1, 1995 (see Figure 5). The message for corporate borrowers is a simple one: the cost of achieving longer-term liquidity is minimal. A company with a LIBOR-based bank borrowing can term it out for five years at a cost of 20 to 25 basis points in the swap market (as of June 1, 1995). For companies that are net borrowers facing limited access to the capital markets, this strategy reduces overall corporate risk at a minimum cost.

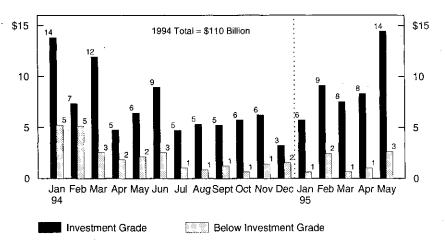
Figure 5. Spread Between Five-Year Treasury Yields and Three-Month LIBOR, Jan 92-Jun 95



Corporates rallied initially, but supply pressure is causing spread dislocation.

Corporates maintain the pace. Defying common wisdom, corporate bonds matched or bettered the Treasury market performance, despite the sharp rally. Financing spreads neared historical lows as pent-up demand guaranteed a healthy technical tone. As supply met demand, spreads widened. Partially as a result of these developments, monthly corporate debt issuance revitalized, reaching levels not seen since January 1994 (see Figure 6).

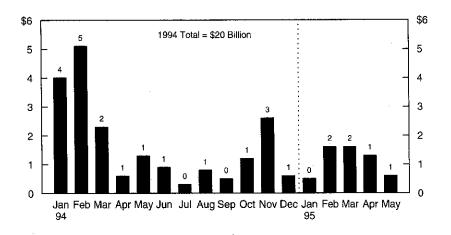
Figure 6. Monthly Corporate Debt Issuance, Jan 94-May 95 (Dollars in Billions)



Notes: Includes industrial, financial and utility companies only. Excludes medium-term notes and Yankees. Sources: Securities Data Co. and Salomon Brothers Inc.

Similarly, corporate call activity also increased in February, March, and April (see Figure 7); however, following the refinancing avalanche of 1992-93, the amount of high-coupon callable debt remains limited. The only sector of the investment-grade fixed-income market that suffered was mortgage-backed securities, where fast-moving rallies can exaggerate prepayment risk. The spread widening in mortgages only helped to make a more compelling case for intermediate-term Treasuries and noncallable corporates.

Figure 7. Principal Amount of Corporate Securities Called in the Salomon Brothers Broad Investment-Grade (BIG) Bond Index, Jan 94-May 95 (Dollars in Billions)



Source: Salomon Brothers Inc.

Further improvement in rates are limited until the Fed turns accommodative.

Where do we go from here? Rates do not go down forever and investors do not buy bonds indefinitely. The "buying panic" of the last few months will eventually moderate, new trading ranges will be established and economic fundamentals — along with Fed policy — will determine where the Treasury yield curve goes from here. Salomon Brothers's economists believe that the economy likely will rebound to the  $1^1/2\%-2\%$  range in the second half of 1995, tempering the enthusiasm of bond bulls who see the risk of recession around the corner. With long bonds threatening the  $6^1/2\%$  barrier, yields appear fairly valued relative to inflation expectations.

A flatter yield curve significantly reduces the "cost" of hedging.

Hedge strategies for the corporate borrower. Companies that are unable to tap the market currently for legal/administrative reasons (e.g., SEC review), have a well-defined financing need in the future (e.g., high-coupon bond call or maturity) or believe that spreads will narrow in the near term, are using hedge management strategies to lock in attractive Treasury rates today. The cash Treasury market provides a simple execution mechanism for the corporate borrower: Treasuries are sold "short" and the proceeds are invested in the repo market. The effective negative carry — corresponding to the difference between the Treasury and repo rates — causes the "forward" rate at which the issuer can lock in to be a premium to the current or "spot" rate. The flattening of the short end of the yield curve has significantly narrowed this "forward yield premium," creating an attractive risk-reward trade-off for the issuer.\(^1\)

Premiums for long-term callable bonds average 20 basis points — a small price for future flexibility.

Callable bonds: A tax-charged opportunity for issuers in a flattening yield curve. Callable bonds offer issuers maximum flexibility to respond to an improving interest rate environment or a changing balance sheet.

The spread premium that investors demand for call provisions in new corporate bonds is currently below its "theoretical" value because: (1) investors have not yet adjusted their option valuation for the flatter yield curve; and (2) investors stretching for yields in a narrow-spread environment often prefer call risk to credit risk.

<sup>&</sup>lt;sup>1</sup> See Hedging and Financing Strategies for the Corporate Borrower, Janet Showers, et al., Salomon Brothers Inc. February 1989.

In addition, callable bonds offer issuers an attractive — and often hidden — tax advantage that is typically worth about eight to 12 basis points.<sup>2</sup>

Put bonds remain popular with investors and issuers.

Call risk and put bonds. Although less dramatic than mortgage prepayment risk, corporate bond investors are also beginning to refocus on the inherent risks of higher-coupon callable bonds in a rallying market. Bonds with long final maturities can quickly begin trading like short-term securities as the risk of a near-term call becomes a real threat. This shift in duration can upset the portfolio manager's asset-liability management strategy and significantly impact his ability to keep pace in an improving market.

One solution to this problem is to create a hedged portfolio of callable and putable bonds.<sup>3</sup> For this reason, investor appetite for putable bonds has remained strong and investors can take advantage of this structure to create securities with 6+% coupons. Buyer demand for putable structures accounts for the attractive pricing and the recent wave of new offerings (see Figure 8).<sup>4</sup> This supply has caused investor appetite to weaken.

Figure 8. Selected Put Bond Issuances, 1995 (Dollars in Millions)

Issue Date	Principal Amount	Issuer	Moody's/S&P Rating	Coupon	Structure	New Issue Spread to Treasuries
06 Jun 95	\$150	Cincinnati Gas & Electric	Baa2/BBB	6.900%	6 30 Put 10	73bp
05 Jun 95	150	Eaton Corp	A2/A	6.500	30 Put 10	50 `
05 Jun 95	150	Ingersoll-Řand	A2/A	6.480	30 Put 10	45
01 Jun 95	250	Union Carbide	Baa2/BBB	6.790	30 Put 10	58
25 May 95	150	Travelers	A2/A+	6.875	30 Put 10	53
23 May 95	300	Service Co International	A3/BBB+	7.000	20 Put 7	55
16 May 95	175	Philips Electronics NV	A3/BBB+	7.125	30 Put 7	65
19 Apr 95	400	Grand Metropolitan	A2/A+	7.450	40 Put 10	38
19 Apr 95	250	First Union Bank	A3/A-	7.500	40 Put 10	58
14 Mar 95	100	Anadarko Petroleum	A3/BBB+	7.250	30 Put 5	32
23 Feb 95	125	Johnson Controls	A2/A	7.700	20 Put 10	44
15 Feb 95	200	News America Holdings	Ba1/BBB-	8.500	30 Put 12	108
06 Feb 95	300	Associates Corp of N.A.	A1/AA-	7.750	10 Put 5	38
03 Feb 95	200	Commercial Credit	A1/A+	7.875	30 Put 10	42

bp Basis points.

Sources: Securities Data Co. and Salomon Brothers Inc.

<sup>&</sup>lt;sup>2</sup> See Issuing Corporate Callable Bonds — The Time Is Right, Niso Abuaf, et al., Salomon Brothers Inc, May 3, 1995.

<sup>&</sup>lt;sup>3</sup> See Bond Market Roundup: Strategy, "Cusp Bonds in Combination," Salomon Brothers Inc., May 26, 1994.

<sup>&</sup>lt;sup>4</sup> For the issuer's perspective on putable bonds, see *Issuing Corporate Put Bonds*, Niso Abuaf, et al., Salomon Brothers Inc, July 1994.

#### FIXED-INCOME LIABILITY MANAGEMENT TRENDS

The Growth of Multicurrency Liability Management. The U.S. dollar's recent, unprecedented declines against the Japanese yen (and to a lesser extent, against the Deutschemark) has chagrined many liability managers. Sovereign governments and multinational corporations with unhedged U.S. dollar cash revenues and Japanese yen or Deutschemark liabilities have been particularly hard hit. As a result, global debt issuers have become acutely aware of the risks embedded in their multicurrency debt portfolios.

With the globalization of virtually all markets, corporations can generate revenues in a wide mix of currencies while also generating liabilities in a possibly different wide mix of currencies. Further, the growth trend towards corporate repackagings, such as equity carve-outs, spin-offs, and split-offs, suggests that each newly repackaged entity may have a separate set of liability management objectives from the parent. All of these developments indicate that to deal with the current environment, corporations should develop rational multicurrency liability management guidelines. The essential building blocks of a multicurrency liability management program are summarized below:

Components of Multicurrency Liability Management. The fundamental parameters of multicurrency liability management can be summarized in six principal categories:

- Cost Objective the objective function is to minimize the cost of debt.
- Risk Objective the objective function is to minimize the variability of the cost of debt.
- Planning/Strategic Horizon the period over which the issuer defines, analyzes and evaluates its long-term financial policy objectives. This generally ranges from five to ten years.
- Performance/Tactical Horizon the period over which the issuer will evaluate its progress toward its objectives while in the planning horizon. This horizon can range from three months to one year, depending upon the nature of the organizational elements responsible for liability management and the degree of uncertainty in the economic inputs.
- Cost Measure the average cost of the cash flows is assessed by some measure, such as the implied debt cost. The measure is normally denominated in the local "numeraire" currency and in either a marked-to-market internal rate of return (yield), a book yield, or a present-value currency cost.
- Risk Measure the cost of a portfolio cannot be characterized by a single number, but rather by a probability distribution. Traditionally, performance risk is expressed in terms of variance, which is a measure of a distribution's dispersion around its mean.

While these conceptual categories form the building blocks of the liability management process, they do not become practical unless they are incorporated into a vehicle which can be used by liability management portfolio managers. This is accomplished by synthesizing these concepts into a benchmark against which the existing liability portfolio can be managed and evaluated.

**Liability Management Benchmarks.** Borrowing from the discipline of asset management, liability management has discovered the efficiency of managing cost and risk objectives by establishing a benchmark portfolio reflecting the issuer's strategic objectives.

- Once the appropriate benchmark portfolio is specified, the existing portfolio can be managed and performance evaluation measured in terms of the deviation from the cost of the benchmark.
- The liability management benchmark is a debt portfolio which represents the "idealized" liability structure for the issuer.
- The construction of such an idealized benchmark portfolio is accomplished by selecting financial instruments which best express the strategic objectives.

Analytical Methodology. The usefulness of the benchmark in a liability management planning function requires access to cutting-edge fixed-income analytics. Ideally, such an analytical methodology should be able to perform three broad functions:

- It should provide a stochastic process by which a large number of potential future foreign exchange rate and interest rate yield curve environments can be generated. This provides a "global scenario" in which the performance of the benchmark portfolio, the existing liability portfolio, potential liability management transactions, and potential new financing transactions can be evaluated under simulated future market conditions.
- The analytical methodology should be capable of generating the cash flows and therefore the financial performance of any financial instrument under any future market condition. This provides for consistent and precise valuation of the benchmark, the existing portfolio, any contemplated liability management transactions, and any contemplated new issuance transactions under all of the randomly generated market environments.
- The analytical methodology must be capable of altering the debt portfolio's cost/risk characteristics through a wide range of cash- and synthetic-market transactions. By implementing an optimization process that evaluates the expected cost and risk for every new portfolio achieved through these capital market transactions, the optimal restructured portfolio can be achieved.

In summary, an analytical methodology which rigorously analyzes an issuer's debt portfolio within the context of the issuer's objectives and risk preferences can greatly enhance a liability portfolio's performance.

#### FIXED-INCOME DERIVATIVE TRENDS

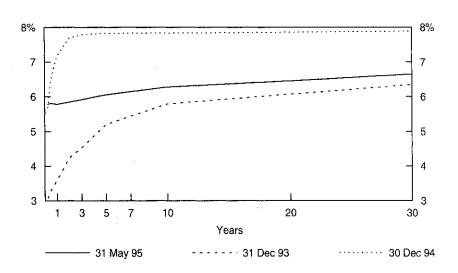
Question 5:

What are the major characteristics of the current U.S. dollar fixed-income environment?

Answer 5:

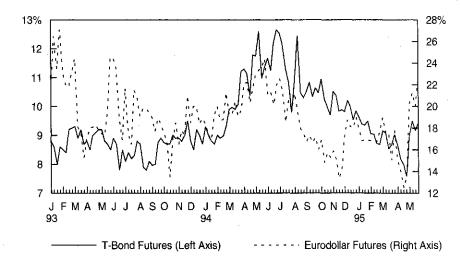
• In comparison with the end of 1994, the current market environment can be characterized by a flattening yield curve at the short end, a slightly steepening yield curve at the long end and increasing interest rate volatility (see Figures 9 and 10).

Figure 9. U.S. Treasury Yield Curves



Source: Salomon Brothers Inc.

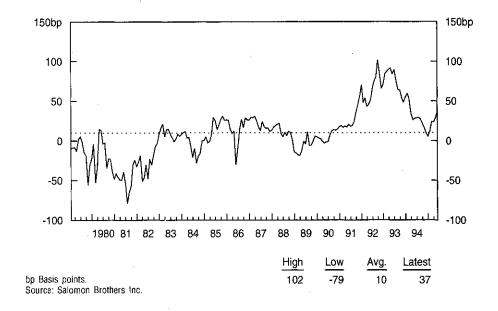
Figure 10. Interest Rate-Implied Volatility, Jan 93-May 95



Source: Salomon Brothers Inc.

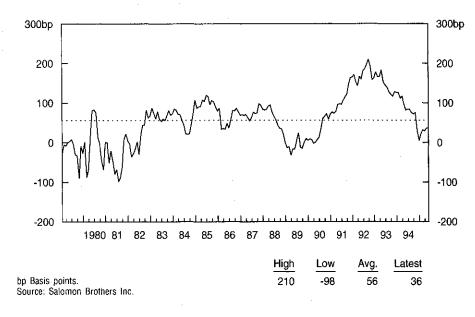
• The 30- to ten-year Treasury spread has continued to widen, although it is nowhere near 1992 levels. It now stands around 37 basis points — its highest level in more than 12 months (see Figure 11).

Figure 11. 30-Year Minus Ten-Year Treasury Yields, Jan 79-May 95



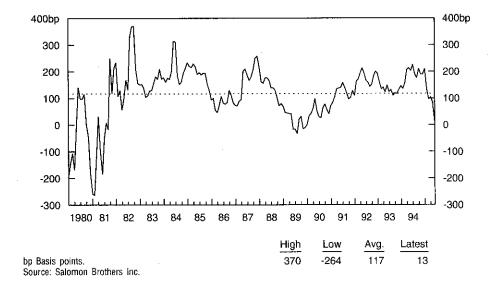
• The ten- to three-year Treasury spread has remained somewhat static since the beginning of 1995, ranging between 30 and 35 basis points. It currently stands around 36 basis points (see Figure 12).

Figure 12. Ten-Year Minus Three-Year Treasury Yields, Jan 79-May 95



• Unlike the 30- to ten-year and the ten- to three-year Treasury spreads, the three-year to three-month Treasury spread has been significantly more volatile, starting the year at more than 200 basis points and drastically narrowing to its current level of 13 basis points (see Figure 13).

Figure 13. Three-Year Minus Three-Month Treasury Yields, Jan 79-May 95



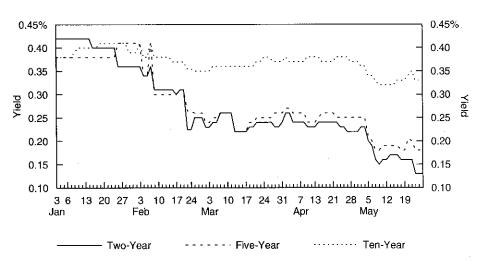
Question 6:

Answer 6:

How can issuers take advantage of the recent narrowing of swap spreads?

With the recent bond market rally, interest rate swap spreads have declined concurrently with interest rate levels<sup>5</sup> (see Figure 14). Most of the tightening has materialized at the short end of the swap curve, largely due to the rally in the Eurodollar futures market.<sup>6</sup> Issuers can take advantage of these tight swap spreads by: (1) fixing short-term floating-rate debt; (2) hedging future debt issuances with forward swaps; or (3) using swaptions to manage risk in their swap and callable debt portfolio.

Figure 14. Interest Rate Swap Spreads, Jan 95-May 95



Source: Salomon Brothers Inc.

<sup>5</sup> The swap spread is defined as the spread over the appropriate maturity Treasury whose sum makes up the swap rate. This is the rate at which a company can exchange fixed payments for floating LIBOR payments over the appropriate maturity Treasury.

<sup>6</sup> Short-term swaps (up to 5 years) are hedged by swap dealers using this market. Thus, if the market participants believe — as they currently do — that future short-term rates will decline, the near-term contracts will rally (resulting in an inverted futures curve), in turn causing the swap spreads to narrow.

Companies seeking to add more fixed-rate debt to their liability portfolio should consider swapping their short- to intermediate-term floating-rate debt (term-LIBOR floaters/commercial paper) for fixed-rate debt. This strategy should be especially attractive to those companies whose corporate spreads have not rallied to the same extent that swap spreads have during the current bond market rally. The recent inversion seen at the short end of the swap curve provides an unique opportunity for the issuer to follow such a strategy.

For those companies planning to issue new fixed-rate debt in the near future and hedge against future interest rate increases, forward interest-rate swaps seem particularly attractive. The forward swap becomes effective at the time of the issuance and has a maturity equal to that of the new issue. At the time of issuance, the company unwinds the swap. If fixed swap rates increase, the swap closes out at a profit, decreasing the effective interest cost. Tight swap spreads make this strategy more appealing since the company is taking a position that swap spreads will widen. Thus, even if Treasury yields remain unchanged over the hedge period while swap spreads revert back to higher levels, the company will make a profit. It should be noted that the company locks in the **forward** swap spread, not the current spread. However, the forward drops in the swap spreads are not as severe as they have been in the past. Indeed, in the current environment, using forward swaps may provide the issuer with a better hedge result than the traditional Treasury hedge would.

In a Treasury hedge, the issuer locks in the forward Treasury rate by shorting the appropriate maturity benchmark at the forward price and purchasing the Treasuries on the new issue date at the then-prevailing market price. Typically, the extra forward drop seen in forward swaps versus Treasuries seen in short-dated (up to a year) hedges convince issuers to stick with the Treasury hedge. However, the current opportunity to take a position on swap spreads, as well as the large borrowing demand for most of the benchmark Treasury issues (which increase the cost of carry), give the forward interest rate swap hedge relative value. This advantage should be the greatest for those companies whose corporate spread is positively correlated with swap spreads, as a natural hedge exists between the two components.

Issuers can also take advantage of the unusually tight swap spreads by taking positions in the swaption market. By purchasing a payor swaption (option for the right to pay fixed) or selling a receiver swaption, the company can benefit from a widening in swap spreads. However, given the recent spike in volatility, issuers may be inclined to sell volatility instead of buying it. Hence, selling a receiver swaption appears to be a good relative value strategy for companies actively managing their liability portfolios. This makes particular sense for issuers who are counterparties to swaps where they receive fixed and pay floating. Any widening in swap spreads would result in a loss on the swap; therefore, in selling receiver swaptions, the company hedges this risk and takes advantage of high volatility.

This strategy also makes sense for companies who currently have outstanding callable debt issues. The call option in callable bonds is economically similar to a receiver swaption; thus, by selling the swaption, the issuer sells the optionality inherent in the outstanding bonds. However, with the high swaption volatility and low swap spreads, this strategy should provide significant value to the company. The issuer is implicitly long its own spread through the call option it owns and short swap spreads with the sale of the swaption. In executing such a trade, the company is arbitraging between the corporate and swap market spreads, as well as volatility.

#### Question 7:

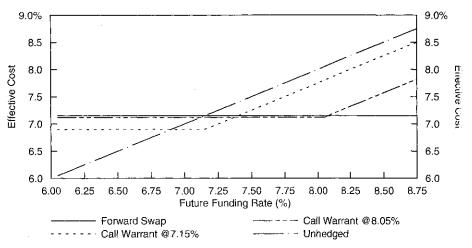
Answer 7:

How can an issuer use call warrants to hedge its future expected borrowing cost?

A *call warrant* is similar to a long-term interest rate call option. The difference is that call options are written by dealers and investors based on existing bonds, but bond warrants are issued by corporations in the process of managing their debt portfolios, with the underlying bonds not issued until the warrant is exercised.<sup>7</sup> For example, an issuer may sell investors an option to buy a ten-year bond at the issuer's expected future funding level of 7.15%, five-years forward. If in five years the ten-year funding rate for the issuer falls below 7.15%, the holder will exercise the call warrant and purchase the new bond from the issuer, yielding 7.15%.<sup>8</sup>

On the other hand, in a forward swap, an issuer agrees to pay fixed (receive floating) in a swap which becomes effective on a future date. If rates rise (fall), the unwind value of the swap decreases (increases) the issuer's future borrowing cost. Thus, regardless of the direction of interest rate movements, a forward swap locks in the issuers borrowing cost<sup>9</sup> (see Figure 15).

Figure 15. Cost Profile of Two Call Warrants, a Forward Swap, and an Unhedged Scenario



Source: Salomon Brothers Inc.

Figure 15 shows that if either call warrant is exercised, the resulting issuer's cost of funds is lower than the issuer's expected future borrowing rate of 7.15% (which can be locked in with a forward swap). For the call warrant struck at a 7.15%, this savings relative to the forward rate is 26 basis points, while the savings is only three basis points for the call warrant struck at 8.05%. This substantial difference in savings occurs because the call warrant which is struck at a lower yield offers less protection in a rising interest rate environment than the call warrant struck at a higher yield. Stated differently, if the call warrant is sold at a "low" strike, the warrant is less likely to be exercised and thus is more likely that the issuer will have to borrow at a high interest rate level. This extra exposure can be *traded* for the lower cost of funding relative to the forward rate, in case the call warrant is not exercised.

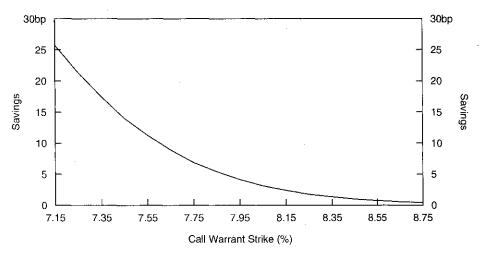
<sup>7</sup> See Bond Warrants: An Effective Tool for Portfolio Management, Y. Y. Ma, et al., Salomon Brothers Inc, February 1992, for a detailed discussion of bond warrants.

<sup>&</sup>lt;sup>8</sup> The amortized value of the premium received from the sale of the call warrant actually reduces the issuer's future borrowing level to lower than the implied future borrowing level.

<sup>9</sup> It is important to note that in a forward swap, the issuer remains exposed to widening credit spreads and/or tightening swap spreads:

For the call warrant which is struck high relative to the expected future borrowing rate, the *savings* relative to the forward rate are slight because the warrant has a high probability of being exercised and consequently offers the issuer high interest rate protection, much like the forward contract. Therefore, through call warrants, the issuer has an effective vehicle of trading interest rate exposure against savings, relative to the expected borrowing rate. Figure 16 shows that as the strike on the call warrant rises and interest rate protection increases, the issuer's funding level converges on where it would be if the hedging vehicle were a forward swap.

Figure 16. Savings Relative to the Expected Forward Borrowing Rate From Selling Warrants Struck at Different Yields.



bp Basis points. Source: Salomon Brothers Inc.

#### **EQUITY MARKET TRENDS**

Equity issuance volumes in the first quarter of 1995 were significantly below year-ago levels, despite record-high equity market valuations. Notably absent from the offering calendar were large foreign transactions (especially privatization offerings), as well as REIT offerings (see Figures 17 and 18). A large component of the equity new issue calendar has been made up of equity carve-outs. Equity carve-outs have been very popular in recent years as a way of enhancing shareholder value, and in many cases, as a way to divest non-core assets. To date, the largest 1995 carve-outs have been Nabisco Holdings by RJR Nabisco, PMI Group by Allstate and NYNEX Cablecomms by NYNEX.

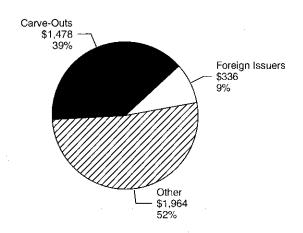
We expect issuance volumes to increase significantly from the second quarter through the end of the year as yields remain at relatively low levels, encouraging investors to search for higher returns in the form of REITs. Moreover, the second half of 1995 portends to see multiple privatization offerings out of Australia, Canada, France, Italy and other European countries.

Figure 17. Total Equity Issuance <sup>a</sup> , 1Q 94-2Q 95 (Dollars in Billions)						
	10 95	40 94	30 94	20 94	1Q 9 <sup>2</sup>	
Common Stock and Convertibles	\$8.7	\$8.5	\$6.8	\$8.1	\$15.1	
IPOs, Excluding REITs	3.8	6.5	4.2	6.6	6.3	
Initial Public Offerings of REITs	0.0	0.1	0.8	2.5	2.0	
Total	\$12.5	\$15.1	\$11.8	\$17.2	\$23.4	

<sup>&</sup>lt;sup>a</sup> Equity issuance excludes Rule 144A transactions and closed-end investment funds, 1PO Initial public offering, REIT Real estate investment trust.

Sources: Securities Data Co. and Salomon Brothers Inc.

Figure 18. Total IPO Issuance by Issuer Category, 1Q 95



IPO Initial public offering. Source: Securities Data Co.

**Equity carve-outs and other repackaging strategies** in the public equity markets (including spin-offs, split-offs and targeted stock) totaled approximately \$59 billion for the 1993-94 period (see Figure 19). This high level of activity is continuing in 1995, with a number of transactions already completed and many more announced for the first few months of the year. Allstate, RJR Nabisco, Kmart, Boise Cascade and NYNEX each successfully completed equity carve-outs of PMI Group, Nabisco Holdings

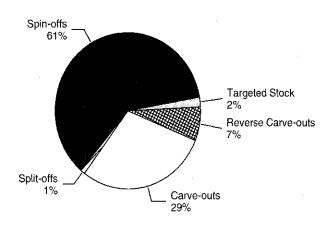
<sup>10</sup> See Repackaging Corporate Assets, Andrew MacInnes, et al., Salomon Brothers Inc, May 1995

The Borders Group, Boise Cascade Office Products and NYNEX CableComms, respectively.

In April 1995, The Limited announced plans to carve out two of its retailing divisions; as a result, the company watched its stock price jump by 13% on the announcement date. Similarly, when James River and Beverly Enterprises announced spin-offs of subsidiaries, respective stock prices rose by 13% and 15% that day. Other companies that have also taken steps down the road to completing a spin-off include Promus Companies, Masco Corporation, The Travellers Group, Kimberly Clark, Hilton Hotels and ITT Corporation.

Interest in the concept of targeted stock surged as US WEST announced that it would be dividing its businesses into two, both of which would be tracked by targeted stock. CMS Energy received approval from its shareholders to create a new class of targeted stock to track the performance of its Consumers Gas Group. In the secondary market, two large, secondary offerings of targeted stock also were completed without difficulty: In April 1995, the Howard Hughes Medical Institute completed a \$578-million offering of GM-Hughes shares; in early June 1995, two General Motors' pension plans completed a \$1.6-billion offering of GM-EDS shares.

Figure 19. U.S Corporations - Mix of Repackaging Transactions, 1993-94

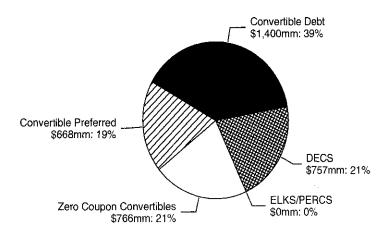


Source: Salomon Brothers Inc.

Issuance of equity-linked securities has also fallen from levels seen one year ago. Dividend Enhanced Convertible Securities (DECS) continue to be popular with issuers, both as a tool for monetizing equity positions and as a high equity-content financing vehicle. DECS were created two years ago by Salomon Brothers. Allstate issued \$315 million of Exchangeable DECS simultaneous with its equity carve-out initial public offering of PMI Group. Instead of issuing the traditional convertible preferred securities, many issuers have turned to Equity DECS to achieve much greater treatment from the rating agencies, or to tax-advantaged convertible preferred securities to achieve lower cost financing without materially decreasing the equity treatment of the securities. Zero-coupon convertible debentures in the form of LYONS<sup>11</sup> enjoyed a one-time comeback as Roche Holdings completed a \$766-million offering (see Figure 20).

<sup>11</sup> LYONS, Liquid Yield Options Notes is a service mark of Merrill Lynch.

Figure 20. Equity-Linked New Issuance by Product Type, Jan 95-Apr 95 (Dollars in Millions)



Source: Securities Data Co. Includes Rule 144A transactions.

Equity and convertible market flow of funds have been such as to add significantly to portfolio managers' cash holdings, providing significant fuel to the stock and bond market's rally (see Figures 21 and 22). Cash is growing by virtue of the low level of new issuance, a troughing of mutual fund redemptions (because of the rally in stocks and bonds), and by the high number of convertible securities being called for redemption and settled for cash or forcing conversion.

Figure 21. Cashflows in the Convertible Market, 1995 (Dollars in Millions) May 1995 YT. Jan Feh Income Earned (Dividends, Interest) \$368 \$325 \$420 \$339 \$365 \$1,81 Cash Redemptions 258 384 Forced Conversion 261 1,158 1,552 1,317 761 5,040 Total Redemptions 493 1,199 1,810 1,701 5,732 2,040 1,126 Cash Inflows 861 1,524 4,279 7,543 New Issues (Outflows) 1,148 100 755 1,569 1,336 3,57 3,524 **Net Cash Flows** (287)1,424 471 (210)3,97

Source: Salomon Brothers Inc.

Figure 22. Equity Market Capital Flows, Jan 94-Mar 95 (Dollars in Billions)

	Equity Issuance <sup>3</sup>	Mutual Fund Net Inflows	Differenc :
Jan 94	\$6.4	\$17.6	\$11.2
Feb	8.2	14.4	6.2
Mar	8.4	6.6	· -1.6
Apr	6.4	11.3	4.3
May	4.3	11.8	7.5
Jun	6.6	7.7	1.5
Jul	3.8	9.2	5.4
Aug	4.0	14.1	10.3
Sep	3.8	8.1	4.8
Oct	4.3	9.3	5.3
Nov	6.0	3.0	-3.0
Dec	4.3	5.4	1.5
Jan 95	3.5	6.2	2
Feb	4.3	8.7	4.4
Mar	4.8	7.2	2.4

a Excludes investment funds.

Source: Investment Company Institute.

#### EQUITY DERIVATIVE TRENDS

Question 8:

Why should companies index a stock buyback program?

Answer 8:

With the continued growth in corporate stock repurchase programs, there has been increasing interest in improving and fine-tuning the performance of these programs. Managers who benchmark their performance are doing so by comparing average daily repurchase cost with the daily volume-weighted average price (VWAP). Managers tend to evaluate their overall program by comparing blended cost with the average of the daily VWAPs over the life of their program. Managers try to beat the VWAP by purchasing stock only on days when they view the price as cheap (based on technical factors and internal price targets). In addition, many companies sell put warrants struck at their target repurchase price to reduce the cost of shares repurchased.<sup>12</sup> However, given the difficulty and management time associated with establishing day-to-day price targets, more companies are finding that the lowest cost alternative is to target a fixed number of shares each day and replicate the VWAP rather than to actively manage around a stock price target. This indexed-based approach produces the most consistent results over time.

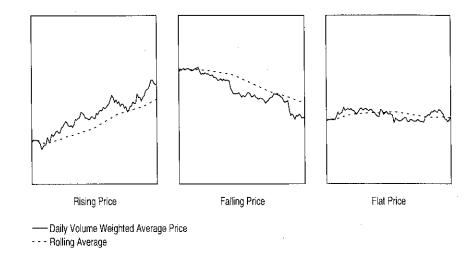
Just as many pension fund managers link the majority of their investment portfolio to market indexes to provide consistent returns, companies should consider indexing a core portion of their repurchase programs. Why index? Simply because it is a conservative approach that assures a repurchase cost equal to a true market average.

For example, Figure 23 illustrates three different stock price paths. In the rising price scenario, the company achieves the lowest cost if all of the stock is purchased early in the program. However, companies with price targets may quickly find themselves priced out of the market. Indexing over the same period results in an average cost per share which is several dollars below the closing market price. In the falling price scenario, the company's stock price steadily drops. The longer the purchases are delayed, the lower the cost is per share. In the flat price scenario, the stock has very little movement up or down, and the indexed approach results in an average cost per share comparable to the closing price.

The difficulty for management arises in deciding which scenario their company is in on a day-to-day basis, as well as over an intermediate period of time (e.g., three months). This is why indexing the company's buyback program to the average price improves performance by lowering variability of results and by reducing management time.

<sup>12</sup> See Stock Buybacks: Strategy and Tactics, Peter Blanton, et al., Salomon Brothers Inc. November 1994.

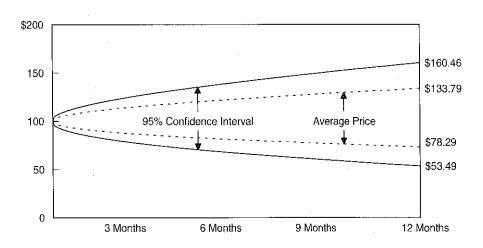
Figure 23. Daily Volume-Weighted Average Price and Cumulative Average



Source: Salomon Brothers Inc.

The benefits of indexing also can be illustrated by considering the possible price paths implied by a 25% stock price volatility. Figure 24 illustrates the upper and lower price ranges for a stock price over one year, based on a 95% confidence interval. Averaging stock prices on a daily basis narrows the range of expected prices by 44%, which means a higher degree of price certainty.

Figure 24. Risk Reduction Achieved by Averaging



Source: Salomon Brothers Inc.

As mentioned above, the easiest method for achieving the benefits of indexing is to purchase a fixed number of shares each day at the average price. One limitation is that, as with any repurchase program, the ability to achieve a true average is complicated by "blackout" periods when the company has to be out of the market. In addition, a daily buying program still consumes some administrative time without any guarantee that actual executions meet the market average (although this can be addressed by

2.

purchasing stock at regular intervals throughout each day). Despite these limitations, management should consider indexing the core portion of any repurchase program as a means of lowering costs and increasing price certainty.

A complementary options strategy to an index-based buying program is the purchase of Asian-style call options to cap the cost of the program. The payoff on an Asian option is based on the difference between the average stock price over a predetermined period of time and the strike price. This means that to the extent that the average market price is higher than the strike price, the company would receive a payoff at maturity for the difference. The main benefit of Asian call options is that they are considerably less expensive then European-style calls (whose payoff is based on the closing price at expiration). For example, for a company with a \$50 stock price, the value of a six-month Asian call struck at \$60 would be \$0.15, compared with \$1.05 for a European call option. 13 By combining the purchase of these Asian calls with an index-based open market program executed at the average market price, the company would be assured that its repurchase cost would be the lower of: (1) the average market price plus the \$0.15 option premium; or (2) \$60.15 (strike price + option premium).

<sup>13</sup> Assumes a stock with no dividend, volatility of 25% and a 1-year interest rate of 6.2%. Also, the value of an American-style call would be the same as the European-style call since the stock has no dividend.

#### MERGERS AND ACQUISITIONS TRENDS

The M&A environment continued at its brisk pace in the first quarter of 1995. Over 1,700 transactions totaling \$73 billion were announced, over 50% more volume than in first quarter 1994. This level brings the volume over the last 12 months to \$343 billion, the highest level for any such period in history and 58% above the prior 12-month period.

Figure 25. Ten Largest Merger and Acquisition Deals Announced in the First Quarter of 1995 (Dollars in Millions)

Date Announced	Acquirer/Target	Industry	Value	Туре
28 Feb 95	Hoechst AG/Marion Merrell Dow Inc.	Health Care	\$7,121	Tender/Merger
21 Feb 95	Fleet Financial Group/Shawmut National Corp	Financial Services	3,601	Stock Swap
09 Jan 95	Pillsbury Co./Pet Inc.	Food	2,610	Tender/Merger
17 Jan 95	Time Warner/KBLCOM Inc.	Media	2,200	Divestiture
10 Mar 95	Union Pacific Corp./Chicago and Northwestern	Transportation	2,197	Tender/Merger
28 Feb 95	YPF SA/Maxus Energy Corp.	Energy	1,745	Tender/Merger
03 Feb 95	National Australia Bank Ltd./Michigan Natiogal Corp.	Financial Services	1,685	Tender/Merger
08 Mar 95	Wellpoint Health Networks Inc./Health Systems Int'l	Health Care	1,658	Stock Swap
26 Jan 95	Vencor Inc./Hillhaven Corp.	Health Care	1,639	Stock Swap
28 Mar 95	Ingersoll-Rand Co./Clark Equipment Co.	Capital Goods	1,450	Tender/Merger

Source: Investment Dealers Digest.

Global consolidation in the health care industry dominated the M&A activity. Sixteen of the 40 largest deals in the last year were announced in the health care arena, representing almost \$60 billion in value.

- This hectic pace was maintained in the first quarter with \$16 billion of new transactions announced (excluding withdrawn bids). The activity extends across all sectors products and services both in the United States and internationally.
- Pharmaceutical companies continue to consolidate and globalize. European buyers have been expanding their access to the U.S. market (Hoechst/Marion Merrell Dow and last year's Roche/Syntex), or merging for global scope (Glaxo/Wellcome). In the United States, companies are seeking to expand market access and distribution channels to provide full-line formularies and distribution for managed-care buyers. Over \$40 billion of drug company mergers have been announced in the last year.
- The headlong consolidation of hospitals, led by the rapid rise of Columbia HCA, likely will slow as the number of large potential targets declines. Nonetheless, this sector will remain extremely active as not-for-profits and smaller hospital entities are swept up.
- Other service sectors home health care, physicians' groups and long-term care are also consolidating, generally in order to cut costs and provide a fuller array of products for the managed-care environment. Important deals include Abbey/Homedco, Coram/Lincare and Coram/Caremark in home health, and Vencor/Hillhaven and Horizon/Continental in long-term and rehabilitative care.
- HMOs also continue to consolidate, with the major national companies acquiring regional HMOs to diversify geographically, to cut costs, and to gain new markets for successful product lines. The largest deal of the first quarter was the merger of WellPoint and Health Systems, with a value of \$1.7 billion.

Equity was the predominant choice of currency, except among the larger deals. Equity consideration was utilized in 63% of first-quarter transactions versus 37% for cash. Equity consideration comprised only 25% of the total deal value, however, implying a higher use of cash in the larger deals.

Hostile deals represent a substantial and growing portion of total activity. 17 transactions representing over 15% of the total dollar volume were announced in the first quarter. This is twice the relative level of hostile activity in 1994. The average size of these unsolicited transactions was \$650 million, compared with \$43 million for all transactions.

Financial buyers have not yet played a major role in the M&A market. Financial buyers represented less than 1% of the first quarter's total activity.

Cross border activity remained strong. Almost one third of the first-quarter deal volume resulted from foreign acquirers.

#### RELATED SALOMON BROTHERS RESEARCH PUBLICATIONS

- Four Pillars of Faith, David Shulman, et al., Salomon Brothers Inc, June 1995.
- International Market Roundup, John Lipsky, et al., Salomon Brothers Inc, June 9, 1995.
- Bond Market Roundup: Strategy, Janet Showers, et al., Salomon Brothers Inc, June 9, 1995.
- Comments on Credit, John Lipsky, et al., Salomon Brothers Inc, June 9, 1995.
- Structured Products Weekly, Ravit Efraty, et al., Salomon Brothers Inc, June 9, 1995.
- Issuing Corporate Callable Bonds The Time Is Right, Niso Abuaf, et al., Salomon Brothers Inc, May 3, 1995.
- Repackaging Corporate Assets, Andrew MacInnes, et al., Salomon Brothers Inc, May 1995.
- Stock Buybacks: Strategy and Tactics, Peter Blanton, et al., Salomon Brothers Inc, November 1994.
- Issuing Corporate Put Bonds, Niso Abuaf, et al., Salomon Brothers Inc, July 1994.
- The Issuer's Guide to Equity Carve-Outs, Peter Blanton, et al., Salomon Brothers Inc, July 1994.
- The Universal Shelf The CFO's Toolbox, Niso Abuaf, et al., Salomon Brothers Inc, April 1994.
- Equity Put Warrants: Reducing the Costs and Risks of a Stock Repurchase Program, Kevin L. Thatcher, et al., Salomon Brothers Inc, April 1994.
- Hedging Executive Stock Options, Tad Flynn, et al., Salomon Brothers Inc, February 1994.
- Bulletin on DECS: Mandatorily Convertible Securities, Salomon Brothers Inc, January 1994.
- The Investor's Guide to DECS, Anand S. Iyer, et al., Salomon Brothers Inc, January 1994.
- Understanding the Value of Volatility, Joe Elmlinger, et al., Salomon Brothers Inc, January 1994.
- Pricing of Interest Rate Swap Default Risk, Eric H. Sorensen, et al., Salomon Brothers Inc, October 1993.
- Executive Stock Options: Benefits, Costs and Implications for Investors, Eric H. Sorensen, et al., Salomon Brothers Inc, October 1993.
- The Issuer's Guide to Convertible and Equity-Linked Securities, Peter Blanton, et al., Salomon Brothers Inc, October 1993.
- Which 30-Year Benchmark?, Janet Showers, et al., Salomon Brothers Inc, October 1993.
- Bulletin: 50- and 100-Year Bonds, Eric Lindenberg, et al., Salomon Brothers Inc, September 1993.

- The Executive's Guide to Foreign Exchange Exposure Management, Niso Abuaf, et al., Salomon Brothers Inc, September 1993.
- Ready or Not: FAS 115 and Marketable Securities Accounting, Arthur Fliegelman, Salomon Brothers Inc, August 1993.
- Hedging and Financing Strategies for the Corporate Borrower, Janet Showers, et al., Salomon Brothers Inc, February 1989.
- Efficiency and Optimal Bond Refunding, Salomon Brothers Inc, March 1987.

Salomon Brothers Inc and/or its affiliates ("The Firm") has an investment banking relationship with certain of the companies noted in Figures 8 and 25. Within the past three years, the Firm has managed a registered public offering of securities for a number of these issuers. The Firm may at any time issue options on such securities of any firm listed in this report. The Firm actively trades all such options and securities for its own accounts and those of its customers. Accordingly, we may at any time have a long and/or short position in such securities.

Although the information in this report has been obtained from sources that Salomon Brothers Inc believes to be reliable, we do not guarantee its accuracy, and such information may be incomplete or condensed. All opinions and estimates included in this report constitute our judgment as of this date and are subject to change without notice. This report is for information purposes only and is not intended as an offer or solicitation with respect to the purchase or sale of any security. This publication has been approved for distribution in the UK by Salomon Brothers International Limited, a member of the SFA.

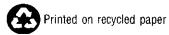
© Salomon Brothers Inc 1995

# **Salomon Brothers**

Salomon Brothers Inc (404) 827-7600 (617) 346-9000 (312) 876-8700 (214) 880-7300 (213) 253-2200 (212) 783-7000 (415) 951-1777 822-754-6500 886-2-719-6647 Atlanta Boston Chicago Dallas Los Angeles New York San Francisco Seoul' Taiwan' AFFILIATES Bangkok 662-263-3800 Salomon Brothers Asia Pacific Ltd." 861-5**0**5-5260 **Beijing** Salomon Brothers China Limited Frankfurt 49-69-2607-0 Salomon Brothers AG Hong Kong 852-2501-2000 Salomon Brothers Hong Kong Limited Salomon Brothers Hong Kong Futures Limited Salomon Brothers Hong Kong Nominee Limited Salomon Brothers Asia Management Services Limited **London** 44-1-71-721-2000 Salomon Brothers International Limited (SFA Member) Salomon Brothers U.K. Limited (SFA Member) Salomon Brothers U.K. Equity Limited (SFA Member) 34-1-31**0**-3000 Madrid Salomon Brothers International Limited\* 61-3-9-650-8555 Melbourne Salomon Brothers Australia Limited\* Milan Salomon Brothers SIM S.p.A. 39-2-430-0911 **Osaka** 81-6-252-9611 Salomon Brothers Asia Limited\*\* Paris Salomon Brothers SA 33-1-47-63-7907 **Singapore** 65-359-Salomon Brothers Singapore Pte. Limited 65-359-0200 61-2-232-4455 Sydney Salomon Brothers Australia Limited **Taipei** 886-2-719-6647 Salomon Brothers Taiwan Limited 81-3-5255-4111 Tokyo Saiomon Brothers Asia Limited Salomon Brothers AG\* Taranta (416) 866-2300 Salomon Brothers Canada Inc. Zug 41-Salomon (International) Finance AG 41-1-366-4111 **Zurich** Salomon Finanz AG 41-1-366-4111

X N M (211) 1995-R2140

Representative Office\* Branch Office\*\*



First Class Mail US Postage Paid New York, NY Permit No 8155