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In This Issue: Managing Pension and Other Long-Term Liabilities

Morgan Stanley

From Stock Selection to Portfolio Alpha Generation: The Role of Fundamental Analysis

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Photographs by Yvonne Gunner, New York










Trevor Harris: Good afternoon, I'm Trevor Harris, a Managing Director at Morgan Stanley, where I've worked for the last seven years. My main responsibilities at present are to provide better solutions in accounting, valuation, and risk analysis for our business units and clients. Before joining Morgan Stanley full time in 2000, I was the Jerome Chazen Professor of International Business as well as Chair of the Accounting Department at Columbia University's Graduate School of Business—and I continue to maintain close ties to the school. For the past two years, I've served as Co-Director, with Stephen Penman, of the school's Center for Excellence in Accounting and Security Analysis, which is the sponsor of this roundtable.

The creation of the center reflects Stephen's and my sense of the importance of bringing academics and practitioners together to learn from each other, and to develop innovative but practical solutions to many of the questions we all face. The center has sponsored a number of research projects as well as a series of roundtables on issues like accounting for pensions and executive stock options. This is the first of the center's events to focus directly on security analysis.

One important purpose of our discussion today is to help corporate executives get a better understanding of how many of today's investors evaluate and invest in their securities. We hear over and over from corporate managers that the market cares only about the next quarter's earnings. When valuing companies, investors are said to do little more than apply a relative P/E multiple to trailing or next year's projected EPS. There is also a widespread perception that investors' holding periods are short, in most cases a matter of weeks or months. All this leads to the conviction of many corporate executives that, for their companies to be appreciated by the market, they have to "manage" earnings, to deliver the numbers that Wall Street is looking for.

At the same time, however, academic research has produced evidence of investors' willingness to look beyond reported earnings and take the long view. Many academics argue that the market efficiently incorporates information into prices with the help of sophisticated asset pricing models—models that can be used to come up with more precise estimates of risk and cost of capital, which in turn are used in DCF valuations of companies and their stocks. My experience is that most successful investors—as opposed to traders—do not rely on simplistic multiples or short-term earnings in making their investment decisions. But they also spend little time worrying about getting the cost of capital exactly right or working with a sophisticated asset pricing model. So we wanted to hear from the investors themselves.

The main goal in setting up this roundtable, then, is to present corporate managers and academics with a more accurate picture of how influential and sophisticated investors really think and make decisions. To that end we have assembled a distinguished group of investors, a group that collectively manages over $200 billion of assets. I also want to point out that, in putting together our panel, we've aimed to get a representative sample of different investment styles, including representatives of long-short equity and cross-asset-class hedge funds—including both fixed income and quantitative-based funds—as well as the more traditional long-only equity investors.

Let me start by telling you a little about each of our panelists:

Andrew Lacey is Deputy Chairman of Lazard Asset Management. Andrew's focus is on U.S. and global investment portfolios on the long equity side.

Mike Corasaniti is Director of Research and Co-Portfolio Manager of Pequot Capital's Core Global long-short equity fund. Mike has a broad range of experiences, having worked a number of years at Neuberger Berman on the long equity side and then served as Director of Research of the boutique sellside firm Keefe, Bruyette and Woods.

Steve Galbraith is a Limited Partner and portfolio manager at Maverick Capital, a long/short equity hedge fund. Steve has worn many hats during his career. Starting as a very fundamentally based sellside sector analyst at Sanford Bernstein, he became the Chief Investment Strategist at Morgan Stanley, where he transformed strategy before moving to Maverick.

Mitch Julis and his business school classmate, Josh Friedman, are the founding partners of Canyon Capital Advisors, an alternative asset manager that pursues what they describe as a "multi-strategy" approach to value investing. They oversee a nearly $8 billion portfolio of corporate securities, both performing and distressed debt, equities, and hybrids.

Andrew Alford is a Managing Director at Goldman Sachs Asset Management. He is responsible for the equity long-short strategies managed by GSAM's Quantitative Equity Group. Andrew has co-authored a paper describing the Group's approach to fundamental-based quantitative investing that is called "Fundamentals

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Drive Alpha." He also co-authored two chapters in *Modern Investment Management: An Equilibrium Approach*, a book edited by Bob Litterman.

Michael Mauboussin became Chief Investment Strategist at Legg Mason Capital Management in 2004. Prior to that, he was Chief U.S. Investment Strategist at Credit Suisse First Boston Corporation. Michael is the co-author, with Al Rappaport, of *Expectations Investing*, which Harvard Business School Press published in 2001. He has a new book, called *More Than You Know: Finding Financial Wisdom in Unconventional Places*, that Columbia University Press is bringing out in a few months.

Henry McVey is a Managing Director and Chief U.S. Equity Strategist at Morgan Stanley. Before moving into that job, Henry was a fundamentals-oriented analyst who made a name for himself covering brokerage, asset management, and multinational bank stocks. As Chief Equity Strategist, Henry interacts with all kinds of investors—value, growth, indexed, and so forth—and part of his role in this discussion is to represent the views of the broad range of investors who are not represented by the other panelists.

Stephen Penman is George O. May Professor of Accounting at Columbia's Graduate School of Business and, as mentioned, Co-Director of the school's Center for Excellence in Accounting and Security Analysis. He is widely recognized as one of the leading scholars in financial statement analysis, and has written a well-received book on the subject entitled *Financial Statement Analysis and Security Valuation*, as well as numerous papers. Stephen will describe the current state of thinking in academia on issues of fundamental analysis and securities valuation.

So, again, the topic of our discussion is how sophisticated investors analyze companies, potential investment candidates. Or, to put this in terms that are more familiar to the investment community itself, we want to understand how investors use fundamental analysis to create abnormal returns—or what has become known in the trade as "alpha"—for their clients. As should become clear from this discussion, there are two main components to the process of generating alpha. First is the evaluation of individual stocks—and

I suspect we will spend most of our time on that. The second part of the process, which is often equally important, is combining the stocks into portfolios. Portfolio selection considers relative risks, concentration of holdings, and the investors' time horizon for generating excess returns. Because of differences in portfolio strategy, the same security could be a "buy" for one investor and a "sell" for another—which in turn raises questions about the meaning of the single ratings generated by sellside analysts, except perhaps as a signal of the analysts' convictions.

So, with the objective defined and the introductions behind us, let's now turn to Andrew Lacey of Lazard Asset Management. Andrew, would you start by telling us how you approach your investment analysis—how do you make decisions about what to invest in and how long to hold your positions?

Lazard Asset Management—Long Only

Andrew Lacey: We are a $77 billion global investment firm that pursues a variety of investment strategies. What they all have in common is a focus on fundamental research.

Many of our strategies start with the premise that companies create economic value mainly by earning returns above their cost of capital. And the message we try to give all our analysts—here and in London and Tokyo and Sydney—is to try and understand, with every business they look at, the returns on capital the business has generated in the past and the returns it's likely to generate in the future. Perhaps even more important, they need to understand the sustainability of those returns across the business cycle. The higher a company's sustainable returns above the cost of capital, the more it is worth. Our stock selection is driven by the goal of finding companies that demonstrate a compelling tradeoff between strong or improving financial productivity and cheap valuation.

In approaching valuation, we are not dogmatic about the use of one type of methodology. Instead we try to triangulate valuation targets based on historical absolute and relative multiples of a variety of financial measures. We also work with DCF and replacement cost models, and consider acquisition multiples in the mix.

As a framework, we typically put all of our different investment candidates into one of three buckets. One group of companies we refer to as "compounders"—companies with dominant industry positions and quality management teams that produce consistently high returns on capital over fairly long time periods. A second group are restructuring or management-change situations. The third are mispriced securities, where we expect the pricing to return to "normal," either in the short term or on a longer-term basis.

This three-part classification scheme is an important part of our portfolio construction process; it's what enables us to build portfolios for our clients that outperform our benchmarks with less volatility. Our main strategy for achieving lower volatility is to focus the bulk of the portfolios' invested assets on the compounders. If we can identify and then buy them at attractive valuations, we think we're taking out a lot of risk.

We view the restructurings and the mispricings somewhat differently. In those cases, we use milestones based on an investment thesis. We have less tolerance for missing those milestones, and we try to get the analysts and the portfolio managers to lay out those milestones as clearly as possible. Now there can be good reasons to allow milestones to shift over time. But this needs to be done with great care; changing your investment thesis in midstream is a fairly sure way to lose money consistently.

Harris: When you value the stocks you call "compounders," how far out do you go in terms of earnings and cash flow projections? Do you project cash flows just over the next year or two, or do you go out longer?

Lacey: Generally, we are interested in the shape, direction, and levels of a company's cash flows over the long term. However, in practice, when we discuss the fundamentals of a company and how the market is likely to value the stock, we focus on the two to three years immediately ahead. We've found that beyond three years, we're going too far into the fiction zone where people's models tend to have "garbage in, garbage out" problems. We do talk about issues that will affect the sustainability of a business model or return pattern over the longer term. But by focusing on cash flows two or three years out, we feel we're talking about cash flows that people have a reasonable amount of confidence in.

Harris: How long do you hold your positions, especially the compounders?

Lacey: We typically own the compounders for a long time. We have a set of "Select" portfolios that consist solely of stocks we view as potential compounders. These

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Andrew Lacey

portfolios are very concentrated, consisting of as few as 28 stocks and at most 40 positions. The annual turnover of those portfolios is in the 10-30% range, which implies an average duration of three to seven years.

At the same time, we have a set of "Strategic" and "Diversified" portfolios that include 40 to 70 stocks. We are more opportunistic with these portfolios, where the typical holding periods for stocks tend to run from one to three years based on annual turnover.

So, again our method is to start by identifying profitable companies—the kind we would consider taking large positions in. The next step is to determine whether the companies' expected profitability is fully reflected in the price, or whether there's a buying opportunity for us. And in making this second decision—namely, whether and *when* to buy—we use a thought process that has a rolling two- to three-year time horizon.

Harris: Do you use the same process when evaluating international investments? Are there any major differences in how you evaluate and set up your global and U.S. portfolios?

Lacey: Our Emerging Markets and European Small Cap Teams go through essentially the same process—that is, the use of fundamental research to identify companies with strong financial productivity characteristics that are trading at attractive valuations. We believe that this investment philosophy and process lead

to strong relative and absolute returns when viewed over a typical five-year market cycle.

Pequot Capital's Core Global Fund—Long-Short Equity

Harris: Now let's turn to Mike Corasaniti of Pequot Capital.

Corasaniti: Like Andrew at Lazard, we do a lot of different kinds of investing at Pequot. I'm going to talk primarily about the fund that I co-manage, which is a global long-short equity product.

Our investment approach is similar in ways to what Andrew just described. What we're trying to do is capture secular change within industries. And there are a number of ways to try and keep track of secular change. Our method is to look for industries that have undergone hard times and been starved of capital for a long time, anywhere from five to ten years. Such industries typically see a lot of bankruptcies and consolidating M&A, which results in layoffs and rationalization.

What we're looking for are the positive changes that come out of this restructuring process. We're looking for the signal that the worst is over, the industry has hit bottom, and, starting with a smaller scale and perhaps a different strategy, the companies that survive can generate profitable growth. Our experience suggests that, in industries that have been capital starved for five to ten years, it takes another seven to ten years for Wall Street and the buy side to basically blow the economics up in the industry by raising a lot of capital. But when that eventually happens, there are some very large moves; there's lots of money to be made.

How long does it take for secular change to unfold? The definition is once in a generation; it's roughly a 20-year process. And this means that while timing is somewhat important—you don't want to get in too early—so is a certain amount of patience.

So, we begin by identifying industries that have fallen on hard times and undergone extensive restructuring. Then, once we think we've identified an industry or a company in that category, we do an intensive "deep dive" on the financials within the businesses. And let me say that this analytical process has very little to do with reported GAAP earnings. We really couldn't care less about the next quarterly EPS, or if the companies are going to beat or miss the quarter.

In fact, reported earnings is almost totally irrelevant to our investment decision making. What we look at is the cash rate of return on total cash capital that we expect a company to earn. We also want to know whether managements have historically been effective stewards of investor capital. Have they made good decisions to reinvest capital within their business? Have their acquisitions ended up producing high returns? And, equally important, once the companies begin to generate a lot of profits and cash flow, do they return capital through dividends and repurchases when they've run out of good uses for it?

The list of businesses that fit this description is pretty short. And GAAP financial statements provide very little help in identifying such companies. Most management teams have persuaded themselves that the market wants them to beat the Street estimates by a penny, and to produce a smoothly rising earnings stream. But, as most corporate managers will tell you, consistently beating the market by a penny is much easier than producing consistently high returns on capital in the business. GAAP accounting gives managers so much latitude to make earnings targets that, when companies fail to hit their number, the market suspects that something must be terribly wrong. And that's why the market punishes companies that miss their targets by a few pennies.

But if you do the deep dive and get a good idea of the potential cash returns in the business, then you can get a much better sense of when a company has bottomed out and is about to turn the corner. Once we have a picture of the returns the business can generate, we then do a lot of *primary* research that is designed to confirm what we think we see in the financials. That is, if the financials are telling you this is an efficient operation, then you need to check out the shop floor. Now, if you go to the shop floor and there's junk all over the place, then the two things don't really match; the numbers lose their credibility.

Harris: So the primary research involves visiting the companies themselves. Does it involve anything more?

Corasaniti: Yes, it means visiting customers, suppliers, and even competitors.

Harris: Do you attempt to feed the information you get from these trips back into your pro forma estimates of earnings and cash flows?

Corasaniti: Yes. As I said before, you ask yourself whether what you learn from the visits matches your impression from reading the financial statements.

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Henry McVey: You said that you're looking for industries that have been starved of capital. But would you consider looking at a nascent industry—say, the foreign financial services industry, which may have a lot of unrecognized growth potential—and then trying to get in just before it takes off?

Corasaniti: Yes, we would—and in fact we would tend to put those opportunities in pretty much the same category of capital-deprived companies. Then, we would try to figure out what the company is worth, both on the upside and the downside. What do we think it's worth if we're right about our thesis? What do we think it's worth if we're wrong? This kind of analysis allows us to understand the risk we're taking.

Harris: Can you tell us a bit more about how you move from your deep-dive analysis to valuation of the company?

Corasaniti: We do a form of DCF analysis. But we tend to be very wary of DCFs with a lot of terminal value. Like Andrew Lacey, we like to realize our returns as quickly as possible. Our preference is for situations where you're buying in at a fairly low multiple of current or projected near-term cash flow, and where the inflection point of growth and accelerating cash returns is expected to come fairly soon, perhaps in the first 18 months following our investment.

Unless we're shorting a company, we don't pay much attention to private market values and what we think other companies would be willing to pay for it. But if we're short, then we have to worry about getting clipped in a take-out. But on the long side, as I said, we don't focus on private values.

We typically start our valuation analysis by asking ourselves, "What's the risk-free rate of return in the country we're involved in?" Then we look at comparable asset classes to determine the kind of premium over the risk-free rate we need to justify the risk of the investment. We ask questions like: What kind of bond yields does the company have and how do they compare to those of comparable companies? What kind of equity risk premiums do we think we should pay? What kind of equity risk premiums did that look like versus the premiums being set on other businesses with similar return and margin characteristics?

Harris: So, I gather you don't attempt to come up with precise hurdle rates or costs of capital, but instead try to look at ranges of hurdle rates and see how they affect the values you come up with?

Corasaniti: That's right. And one reason we look at the returns on different asset classes is that we're not just an equity fund. We also invest in corporate bonds and private companies. And by looking at the actual returns earned by different asset classes over various time periods, we can answer the question: Are we getting paid for the current valuation and getting a decent margin of safety to get paid for that risk relative to some other asset class? For example, one or two years ago, emerging-market equities looked outrageously cheap. But today the risk premiums built into their prices relative to the risk premiums on boring old U.S. equities do not provide the same margin of safety to compensate for the higher risk.

Harris: How long do you typically hold your long positions?

Corasaniti: It varies. Because we're looking for secular as opposed to cyclical change, we plan to hold our investments in some way, shape, or form for three to seven years. Our expectation is that, if we're right about the trend, our investment should start to work within nine to twelve months. We expect to see some signs, some indications that things are going the way that we believed they were going to go. But, in a number of big secular success stories we've been involved in, the stock turned out to be cheaper in the third year of the holding period than in the year we bought it. We eventually ended up earning a high return on investment in these cases. But it took a long time for the market to catch up with the underlying economic reality that we were seeing.

So, the length of our holding periods depends on how efficient the markets are, how focused they are on the change. In some cases, investors figure things out pretty quickly—and our holding periods for those investments tend to be closer to the three-year end of the range I mentioned. But, in other cases, we end up holding those positions for much longer.

Now, in today's markets, there's so much capital in the hedge fund industry that, as soon as something starts to go, the arbitrages close extremely quickly and then go in the other direction. You just have to be cognizant of that. And I would guess that our average holding period today is probably close to two years. But that shortening reflects a lot of risk management activity, cutting back on as opposed to eliminating our stock positions.

The Case of Maverick Capital

Harris: Now let's turn to Steve Galbraith of Maverick Capital. Steve, how do you make your investment choices at Maverick? Do you do the deep dives that Mike's firm does? And how does what you now do at Maverick compare with the sellside approach you took as Chief Strategist at Morgan Stanley?

Galbraith: When I was working with the large mutual-fund complexes served by Morgan Stanley, our job was basically to rank stocks—to classify them as overweight or underweight—and then build a portfolio on the basis of the rankings. We would say to ourselves, "GE is 3.3% of the index; am I going to be overweight or underweight GE?"

But Maverick's approach to portfolio construction is quite different. Now I spend virtually no time on things like tracking error or what a given stock's weight is in a different index. Instead, while looking for the best investment opportunities around the world, we are more cognizant of liquidity rather than an index weighting. There are roughly 2,200 stocks in the world that are liquid enough for us to invest in—and we define "sufficient liquidity" as trading more than $10 million in value a day. We then divide the world into seven industry sectors and one international sector—Latin America. Each of these sectors has a team

of investment professionals dedicated to uncovering those stocks we expect to go up or down the most in the period ahead. Maverick has a total of 45 professionals, which is very high by hedge-fund standards, particularly for a firm that manages just one portfolio.

Unlike Pequot, we invest only in a single asset class; we just do stocks. Our thinking is that each investment professional should be responsible for an average of about four or five positions and should know the ins and outs of those positions better than any non-insider. With this kind of focus, we think we should have a pretty good working knowledge of what is going on in our portfolio companies.

After our investment professionals come up with their recommendations—and, again, the recommended positions can be short or long—then I get together with Lee Ainslie, the Managing Partner of Maverick, and we allocate the firm's capital among these different positions. Again, the selection of individual portfolio positions that comes out of this process is very different from my work as a strategist at Morgan Stanley, where our long-only, index-cognizant requirement forced us to give at least some weighting to virtually every sector in the market.

Now, if you think about what Lee and I are doing in this role, we might be saying something like, "The opportunity set in tech—on a stock-by-stock basis—looks very attractive on a growth basis; let's move capital there and take it out of industrials." In having made this kind of sector call, if you will, we rely extraordinarily heavily on our investment professionals to come up with the specific positions within the sectors. What's been interesting to me is that, within each of our seven sectors, our people are looking for a dynamic strategy that tends to work especially well for that particular sector. For example, retail is one of our seven sectors, and it's run by a guy who consistently manages to find us positions with solid growth characteristics. Value investing in retail tends to be tough; the assumption of mean reversion that underlies value investing is less reliable in retail because when firms like Bradlee's and Caldor go bankrupt, the best *long* bet in that industry may be to take a position in a firm like WalMart that defies mean reversion for decades. So, almost "unconsciously," our retail sector has come to have a growth bias.

By contrast, our positions in the industrial sector look more like classic value investing based in part on the expectation of mean reversion. Our strategy there is to buy well-run companies with low price-to-book ratios and wait for their profits and values to come back.

So, this means that it's difficult to put Maverick's overall investment strategy into a conventional classification of value or growth. In fact a consultant once looked at our portfolio and found that from the late 1990s until the early part of 2000, we would have been characterized as a growth manager. And that's because Lee Ainslie—I was at Morgan Stanley then—had put most of the firm's long capital in the growth-like parts of the market. But in 2000, Maverick pretty quickly became a value manager—not consciously, but because the bottoms-up stories of the individual stocks led us there.

Today we're probably starting to look more like a growth investor again. We're looking for the compounders that Andrew was talking about. Henry McVey, the guy who succeeded me at Morgan Stanley, has lately been writing that the market doesn't seem to be showing enough appreciation of what he calls "the future growth value" of a lot of companies—and I tend to agree. Like Henry, we see those companies as being undervalued by the market.

So, our approach involves a high degree of concentration based on deep-dive research—we're running what amounts to a group of concentrated sector funds—within a globally diversified portfolio. We have 200 positions in total—100 long and 100 short. That feels pretty diversified. But when you break these names down by sector, we have 100 names in just eight sectors—and that's why I say we are effectively a collection of pretty concentrated sector funds.

Harris: Steve, given that you and Lee keep a lot of the decision-making authority at Maverick, how do you evaluate the performance of your professionals, and what kinds of incentives do you hold out for them?

Galbraith: Given the division of labor in our firm, the sector guys and gals have to trust the way Lee and I allocate the capital. And they need to believe that the process for evaluating their own performance is a fair one. They understand that their own compensation at the end of the year will depend in large part on the performance of Maverick as a whole. But they also need the assurance that they will be rewarded for their own performance as well as the firm's, especially since they don't have the autonomy or decision-making authority to put the

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Steve Galbraith

firm's capital behind their recommendations.

Harris: So, you and Lee decide how much capital to allocate to each of the sectors, but what about the individual positions within the sectors? Do you ever veto a position outright?

Galbraith: We have. The gals and guys at our firm who recommend these positions all know far more than we do about the sector and the individual companies. But

I'll sometimes be forced to say to one of our energy guys, "I'm sorry, I don't think we should be this long in energy. We started the year 600 basis points net long energy, and our plan is to cut that back to 300."

Harris: It sounds as if these decisions are very much driven by a focus on risk management?

Galbraith: That's right. Risk management is a big part of the oversight role at a hedge fund. As I said earlier, when constructing our portfolios, we think very hard about two things: one is maintaining liquidity—can we trade in and out of the stock?—and the other is limiting business investment risk. Our largest positions tend to be in companies with very stable business models—and the positions are sometimes as large as 5% of our total portfolio invested in one company. Our biggest positions almost always have a reasonable degree of predictability in them. In more volatile businesses, we would tend to take smaller positions.

Andrew Alford: Do you use an explicit risk model when you make these capital allocation decisions?

Galbraith: Our attempts to reduce our risks into a quantitative model haven't come to much as yet. We spend a lot of time looking at things like gross exposures, net exposures, beta-adjusted exposures, cap-weighted adjusted exposures, and geographical and sector exposures. So we have a lot of data about the risks we're taking. And every night before I go home, I look at the make-up of the portfolio to make sure nothing is extraordinarily out of whack. But whether we end up taking on a given position, and how large that position turns out to be, is finally a matter of judgment.

During the fund's 12-year existence, the net exposure of our overall portfolio has run between 40% and 60% net. That is, we run net long 40-60% of the market exposure, without a lot of variation. We would never run the whole portfolio long or short. And our gross exposure has run between 250 and 280%. So we operate with fairly high leverage. Now, the net exposures of individual sectors can range from zero to 100%. But, as I said, the net aggregate exposure of the entire portfolio almost never exceeds 60% and rarely falls below 40%.

Alford: Steve, why do you think your efforts to quantify portfolio risk haven't worked very well?

Galbraith: The exposure measures being used by risk management consultants have no clear relationship to any measure of investment risk that we care about. Ultimately, we think our biggest risk is stock selection.

When I started at Maverick Capital about two years ago, we were using the beta off the Bloomberg; but we wanted to see if they actually "worked." What we found was that these betas were good predictors of risk for tech companies, but they were poor for financials. As a result, we started using our own blended measures of beta—and we've created these measures pretty much on our own.

My basic problem with many of the quantitative risk models is their rigidity. The ultimate risk control is picking the right stocks, or at least enough of them to outweigh the effects of any bad ones. But the risk models I've looked at seem to be one-size-fits-all. They have no way of accommodating what we think of as our competitive advantage: our ability to identify mispriced stocks.

Harris: Andrew Lacey told us earlier that, when valuing companies, he doesn't put much confidence in earnings or cash flow forecasts that go out longer than three years. How far out do you look when valuing companies?

Galbraith: I personally don't spend a lot of time thinking about valuation and projecting cash flows. When taking our positions, we tend to ask ourselves what people are likely to be thinking about the business 18 months or two years hence. And I would argue that you can often get paid in that horizon if you've looked longer term.

My favorite example of this is Google. Today we can argue whether Google's in a bubble, but it was clear at the time of the IPO that it was a ridiculously cheap stock. In the months leading up to the public offering, there was not a lot of confidence that the company would soon be earning $9 per share in 2006—which they might—and so the $80 IPO was actually extraordinarily cheap.

Now that's not what we're calling a steady compounder, that's very rapid growth. But these kinds of investments don't come along very often. Most of our investments are positions in the compounders. And as I said before, when we think about such investments, our expectation is that we are getting in early, and that the market will catch on in about 18 months to two years.

McVey: It may happen sooner than that. From a valuation standpoint, the market appears to be shifting away from traditional value stocks to growth stocks whose future earnings may not yet be reflected in prices. With interest rates having moved up, there has been a major valuation "compression" in S&P 500 growth stocks that we think can now reverse. The biggest concern of investors in recent years was linked to the misallocation of capital, particularly the possibility of corporate *over*investment. Today, by comparison, there is a growing concern that corporations may not have invested enough, which will lead to a premium for growth.

So I think you get these transitions in terms of what people are looking for and changes in the dominant relative valuation metrics. Consistent with what Steve's saying, the number one call we get today is "Find me stocks right now that look expensive based on '06 earnings, but look cheap based on '07."

Harris: So in other words, something where the growth is expected to materialize after the tightening period ends?

McVey: That's right.

The Meaning of Multiples

Harris: Let me try and sum up what we've heard so far. Mike, Steve, and Andrew Lacey have all said that reported earnings is not a major focus. Both Andrew and Mike said that they pay attention to returns on total capital invested in the business, and to how capital is reinvested or returned to owners. And you've all indicated an interest in taking large positions in companies with management teams that have proven to be efficient users of investor capital.

Now, here's my question. When Steve and Henry talk about the compression of values and multiples, how do you factor these kind of metrics into your analysis and decision-making? How do we put expected changes in earnings and changes in multiples together into a single valuation framework?

I ask the question because I sense a lot of confusion about this issue. We often hear corporate managements and investment analysts talk in terms of P/E multiples, but I haven't heard much talk from the investors at this table about P/E multiples playing a role in their decision making. Do you think market- or industry-wide P/E multiples, together with reported EPS, really determine a company's value and attractiveness as an investment? Or are you using P/E multiples as a kind of shorthand for a deeper fundamental analysis of the sustainability, and risks, of a company's earnings or cash flow?

Corasaniti: We talk about multiples just because it's the common language. But I think of multiples mainly as a kind of shorthand for the reciprocal of the cost of capital, or the required rate of return, for a company with a constant stream of earnings. For example, if we could find a company with a P/E multiple of 12 that promised to earn the same cash flow stream in perpetuity—with no growth at all—I would conclude that that company has a cost of equity of a little over 8%.

Now, I know that this interpretation of a P/E multiple makes it an unreliable guide for comparing the values of two companies—particularly if there are notable differences in risk, or expected growth rates, or the so-called "quality" of earnings, all of which will affect the P/E multiple. But if P/E multiples are not very useful for valuing a company—or at best a starting point—it's almost impossible not to use multiples of some kind. We look at all kinds of multiples—price-to-enterprise value, price-to-EBIT, and enterprise value-to-EBITDA. And like Andrew Lacey, we "triangulate" the results of a lot of different valuation methodologies to make sure that they're all telling pretty much the same story. I think all of our approaches are pretty similar in this regard. We're all trying to get ahead of the curve, thinking to ourselves what are people going to pay for this stock a year from now. The P/E multiple, for all its limitations, can give you a very crude indication of the market's expectations—of the expected growth, and the amount of uncertainty or risk associated with that growth.

Galbraith: We do essentially the same thing, making use of every possible valuation methodology that can shed light on a situation. We try to get very specific about the industry we're operating in and then, like Andrew, we triangulate among the different approaches. By definition, we won't take either a long or a short position if our view is consistent with the consensus or what's embedded in the stock price. And I agree that a P/E multiple, provided you analyze it carefully, can help you understand the kind of expected performance that's implicit in the stock price.

In our firm, there are four major principles that apply both to fixed income investing and equity investing. At the investment level, it is ensuring the return of our capital and a high total return on our capital. At the company level, it is finding earnings power and staying power. Earnings power is essentially a measure of recurring or sustainable profits as a percentage of the company's capital base. Staying power is a credit-oriented concept designed to assess whether the company will be able to pay its bills under almost all possible scenarios, and where the money will come from.

So, to succeed in investing, you need to have good fundamental analysis that enables you to discover opportunities overlooked by the market—and you need the staying power to hang in there until the market wakes up.

Mitch Julis

Canyon Capital: From High-Yield to Value-Based Equity Investing

Harris: We've heard from three people who focus mainly on the equity side. Now let's turn to Mitch Julis, whose firm, Canyon Capital, invests heavily in high yield and other fixed-income securities. Mitch, is there anything fundamentally different about fixed-income and equity investing, or is one a natural extension of the other?

Julis: When I was working in Drexel's high-yield department during the '80s, I suggested applying Michael Porter's "five forces" concept to the due diligence process we did for high-yield issuers. Using the five forces framework to assess companies' competitive advantage is about as fundamental as you can get. At pretty much the same time, Michael Mauboussin was applying to equity analysis the focus on value drivers that was a variation of the old DuPont return-on-capital

framework and that became an important part of his book with Al Rappaport.

After the so-called St. Valentine's Day massacre in February 1990, when Drexel went bankrupt, a handful of high-yield people from Drexel and I formed a little boutique called Canyon Capital. We tried to recreate Drexel by doing everything that each of us did with one-thousandth of the people. And it didn't work very well.

But after three years of wandering in the desert, we began to focus solely on money management. And in trying to make the most of the fundamental analysis we learned at Drexel and afterward, we decided to take a multi-strategy approach to investing. Our innovation in this area was to integrate the principles of cutting-edge research on the equities side with what we had already learned on the fixed-income side.

One of these principles is the importance of risk management. And one of the most effective forms of risk management in investment is to ensure the return of your money as quickly as possible. Ensuring the return of capital helps you to limit your mark-to-market risk, which becomes especially critical when your capital is not locked up and you need staying power. Like any financial institution, hedge funds have to be concerned about asset-liability mismatches and be prepared at almost any time to withstand redemptions by their investing clients.

So, in our firm, there are four major principles that apply both to fixed-income investing and equity investing. At the investment level, it is ensuring the return *of* our capital and a high total return *on* our capital. At the company level, it is finding earnings power and staying power. Those are the four things we try to keep in mind when we make each investment, whether it's equity or debt.

Harris: Steve, you also mentioned liquidity as a major concern. Is that for the same reason Mitch is suggesting?

Galbraith: That's right. About a third of our capital today is locked up for three years or more, so we probably have a better liquidity profile than most hedge funds. But we still need to think about it. Remember what happened to Tiger Management. If Julian Robertson had kept his portfolio completely intact for six more months, he would have had an absolutely spectacular year.

Cash Flow vs. Earnings

Harris: Since we're talking about fixed income, let me put another question on the table. Both Mike and Andrew are equity investors, and they both said earnings are an unreliable measure of corporate operating performance, and they focus instead on cash flow returns on total capital. But Mitch, you're a debt guy, and you just used the expression "earnings power"; you didn't say "cash flow." That seems odd to me because in the debt world cash flow would seem to be even more critical because the payment of interest and principal requires cash at fixed times. Can you tell us why you focus on earnings?

Julis: Let me take one step back and then I'll come to your question. As I just said, as investors we're looking for the return of our capital and the return on our money. At the company level, we look at something we call "earnings power." Earnings power is one of the two main measures that Joel Greenblatt trumpets in his new book called *The Little Book That Beats the Market.* Earnings power is essentially a measure of recurring or sustainable profits as a percentage of the company's capital base. The other measure Greenblatt relies on is the "earnings yield," which is the reciprocal of the P/E ratio and gives him an idea how much he is paying for that earnings power. We also use an additional concept called "staying power," which is a credit-oriented concept designed to assess whether investors can feel confident that the company will be able to pay its bills under almost all possible scenarios, and where the money will come from.

Michael Mauboussin, in a recent piece posted on the Legg Mason website, does a great job of making the point that effective investing is really about having a good decision-making process. Whether you're on the equity side or the debt side, the idea is to make fundamentally sound decisions in a consistent way while ensuring you have the staying power to let the law of large numbers work in your favor. Charlie Munger, for example, says that one of the most important lessons he learned at Harvard was the concept of decision analysis and decision trees. He said that Warren Buffett essentially thinks in terms of decision trees, always laying out possible outcomes, assessing their probabilities, and then making decisions that effectively increase expected value while limiting major risks and possible losses.

So, to succeed in investing, you need to have good fundamental analysis that enables you to discover opportunities overlooked by the market—and you need

the staying power to hang in there until the market wakes up. This means knowing what game you're playing, what bets you're making and what payoffs you're trying to achieve. So, when you're doing your analysis of P/Es or value drivers, and evaluating credit ratios and Z-scores, you're constantly trying to reframe the questions and remind yourself, "Okay, how does this particular investment opportunity work in terms of my overall portfolio management? Am I competent to play that game based on my skills, the way that my capital is configured, and who the other players are? Do I really understand the rules of the game? Can I change them to my benefit?"

For example, if you're investing in sectors where things are fairly straightforward, and relationships are basically linear, then GAAP accounting works fairly well; it provides a useful guide to value. Accounting works well when there is a linear relationship between stocks and flows, when one year's earnings provides a good indication of the next year's. But if you're investing in the land that Bill Miller and Michael Mauboussin are constantly visiting, you have to learn to deal with complexity, non-linearity, network effects, and feedback loops. Here accounting earnings are going to provide a much less reliable guide to value. To deal with such cases, maybe the only approach is to set up your organization in a way that encourages people to dive deep and really understand the dynamics of earnings power and staying power.

Legg Mason Capital Management

Harris: Mitch has just given us a nice transition to Michael Mauboussin of Legg Mason. Michael, as someone who has recently moved from the sell side to the buy side, can you tell us how you approach the forward-looking, long-horizon investing that Bill Miller's team has become known for?

Mauboussin: Although I'm not going to talk specifically about what we're doing at Legg Mason Capital Management, what I'll say is completely consistent with our investment philosophy and practices.

My first point—and it's something that has come through in almost everybody's comments thus far, but I want to be very explicit about it—is that understanding the market expectations that are built into current stock prices is an important part of investment success. If you have that understanding, and you have good reason to believe that those expectations are wrong, then you've identified an investment opportunity. In this sense, decisions to invest are based on mismatches between what the market believes and what you believe. Viewed in this light, distinctions between growth stocks and value stocks are pretty much meaningless.

Based on my experience first on the sell side and now on the buy side, the single most common error is the failure to distinguish between the fundamentals of the company, which analysts tend to understand pretty well, and the expectations that are built into the price. A lot of analysts have a very difficult time straddling those two ideas, but I believe this distinction is critical to the approach of many great investors.

Now when we talk about "expectations," the natural question is, "expectations about what?" It's not the reported earnings and EPS we hear executives talking about all the time. I think the emphasis on EPS represents a fundamental misunderstanding of the system. But explaining my thinking here, and the idea of market efficiency that informs it, requires a bit of a digression.

As the theory is taught in academia, there are three basic ways to get to an efficient market. The first is the mean-variance proposition, the bedrock of all neoclassical economics, which says that returns vary pretty much directly with risks. Unfortunately, we now have a lot of evidence the world doesn't work this way; the returns on individual stocks just don't seem to correlate well with beta or any other measure of risk the academics have come up with. The second route to market efficiency relies on continuous arbitrage—the idea that there are lots of very smart people looking for pricing gaps and closing them. But here again, no one seems able to identify these arbitrageurs. And in very critical situations where there appeared to be fantastic investment opportunities—as in the case of the off-the-run versus on-the-run bonds during the Long Term Capital Management debacle—the arbs were nowhere to be found.

The third way of thinking about the market—and this is my favorite—is as a *complex adaptive system*. You can think of a complex system as having three layers. First, there is the diverse group of individual agents or investors. Second, there is some sort of aggregation mechanism—like the New York Stock Exchange. And finally there is a global system—what we refer to as "the stock market." The market reflects the aggregate knowledge of all investors, and hence is generally smarter than any individual investor.

One important insight from viewing the market this way is that there is

We clearly need to distinguish between the trading activity of active investors, and what the market reflects when setting stock prices. I like to say that investors make short-term bets on what are ultimately long-term outcomes. Even if there is a lot of buying and selling, that doesn't mean the market as a whole is shortsighted. But that's the kind of thinking that many executives fall into. I think that's a huge mistake, and it's one that can profoundly distort your decision-making. It can also become a self-fulfilling prophecy. If you spend all your time talking about the next quarter's earnings, then you will get investors who focus very heavily on quarterly earnings. As Warren Buffett says, companies eventually get the investors they deserve.

Michael Mauboussin

no *additivity*; you can't take the views of the individual agents and add them up to understand the market. The total is greater than the sum of the parts. One of my favorite metaphors for the stock market is an ant colony. If you wanted to understand the behavior of an ant colony, you would learn very little by interviewing individual ants; they have no idea of what's going on at the colony level; they have only local information and local interaction. Most individual investors, like the ants, have no idea what's going on—and even the pundits on TV or in the paper have very little idea of the underlying forces that are really moving the markets.

If you want to understand what matters to the market, you can ask individuals or you can study the market itself. The weight of empirical evidence—which is based on actual stock price behavior—suggests the market focuses more on cash flow than EPS. But despite this evidence, all the talk about earnings and EPS unfortunately does appear to influence the behavior of corporate managers. Most individual investors and pundits, as well as a great many sellside analysts, use the language of earnings and P/E multiples.

And what corporate executives hear tends to influence what they do. When this happens, the executives are succumbing to the fallacy of "availability": they focus on what is available as opposed to what is really relevant.

To give you a better sense of what a complex adaptive system is, and how it differs from the classic market efficiency story, let's move to my second point—that there are good reasons to believe that the degree of market efficiency varies over time. When viewed as complex adaptive systems, markets tend to be efficient when three conditions prevail. The first is diversity of investor sentiment and opinion. The second is when there is a well-functioning aggregation mechanism like the New York Stock Exchange that consolidates the different opinions. Third is the role of incentives. When participants are not only rewarded for being right but also penalized for being wrong, market pricing shouldn't get too far out of line. Good examples of this include decision markets like www.tradesports.com and pari-mutuel betting, where predictions tend to be very accurate over time.

Now, when do markets become inefficient? The answer is when one of these three conditions is violated. And by far the most likely to be violated is diversity; that is, when people start to think alike, you see all kinds of booms and busts. We saw the inflating and bursting of the Nasdaq bubble in the late '90s and thereafter. And the current real estate market could be another; everybody now wants to be involved in real estate. Emerging markets is another recent example.

Harris: When you say diversity, do you mean diversity of expectations?

Mauboussin: Of expectations, or of investment approaches. It could also be diversity of investment horizon or of capital resources.

But let me come back to the issue of investor time horizon that Trevor raised earlier. I really like what I heard Andrew and Mike say about their investment approaches—all except for one thing: I'm puzzled by their statements that they don't like their analysts to go out more than two or three years in their cash flow forecasts.

Think about a company like McDonald's, whose stock today is trading at about 17 times earnings. If I went to the CEO of McDonald's and said, "How do you think about building a new restaurant," would he say, "Well, we've got a great location but I'm only going to look at two years of cash flow because beyond that I have no idea what's going to happen"? Of course not; he would never build another restaurant if he did. He has to make some kind of reasoned, thoughtful judgment about the future. And that, of course, is what the stock market is doing. Just do the math. A 17 times multiple means that the market is giving McDonald's credit for many years of cash flows.

So, we clearly need to distinguish between the trading activity of active investors, and what the market reflects when setting stock prices. I like to say that investors make short-term bets on what are ultimately long-term outcomes. And even if there is a lot of buying and selling, that doesn't mean the market as a whole is shortsighted. But that's the kind of thinking that many executives fall into. I think that's a huge mistake, and it's one that can profoundly distort your decision-making. It can also become a self-fulfilling prophecy. If you spend all your time talking about the next quarter's earnings, then you will get investors who focus very heavily on quarterly earnings. As Warren Buffett says, companies eventually get the investors they deserve.

Now to my last two points. As Mitch suggested earlier in the context of high-yield bonds, there's almost no way to do intelligent valuation work without a good competitive strategy framework. In business school, you learn your DCF valuation in your finance class. Then you shuffle down the hall to the strategy class and learn about the five forces and value chains. And no one back in those days would say, "Well, we should be doing these things together and at the same time." But the longer I've been in this business, the clearer it's become to me that your competitive strategy framework should inform and help shape your valuation approach.

I recently attended a conference with 150 leading strategy academics. I think I was the only non-academic, and there was no discussion of valuation. The litmus test of a good strategy is whether it creates value, and so corporate strategists need to have a good grasp of the principles of valuation—and by that I mean not just DCF, but also the idea of real options.

And that brings me to my final point—and Mitch also alluded to this when he talked about Warren Buffett's decision trees—which has to do with the fallacy of setting price targets, or single point estimates of intrinsic value. I believe you should always think about investments in terms of probabilities—that is, possible ranges of values, with probabilities assigned to each value. You should say to

yourself "if A, then B." Mitch said that people like Warren Buffett do this more or less instinctively. That concept is also completely hardwired in Bill Miller's thinking and investment approach.

Thinking in terms of the probability distributions rather than just expected values is not only useful analytically because it forces you to consider different scenarios, it's also very important psychologically—and let me tell you what I mean. To start, entertaining various outcomes forces you to consider many scenarios you wouldn't otherwise. And those scenarios tend to provide excellent grist for debate.

Second, the approach provides psychological cover. A stock trading below expected value may embed a 20% chance that event XYZ will happen and the stock will turn out to be worth less than today's price. And this, of course, means that there is a one-in-five chance the stock *will* go down. The important thing is taking into account the 20% probability. Viewed in this light, an analyst's decision may have been a good one, even if the outcome is spoiled by an unfavorable draw from the distribution.

Galbraith: But couldn't you just capture this kind of scenario analysis by adjusting the discount rate and then coming up with a risk-adjusted DCF?

Mauboussin: You could, but if you do that you never really get a good sense of the risks you're taking. To reinforce the decision-tree mentality of Warren Buffett, it's much better—and analytically correct—to think through the different scenarios and assign different probabilities to them. You should reflect risk in the numerator—that is, in the potential cash flow streams—rather than in the denominator or discount rate.

Corasaniti: I agree with Michael about the value of doing probabilistic price charts and analysis. When I was with Neuberger Berman, it used to make no sense to me to produce ratings and standalone price targets. Life doesn't work like that. The sell side continues to use price targets, but investing in stocks is much more like going to the racetrack. It's a matter of looking at the odds, and then matching your own assessment of the probabilities against the market's.

And, in fact, we do both kinds of analysis; we do scenarios and we risk-adjust the cash flows to come up with single estimates of value. We do that on the upside and the downside. But I would say that the only sellside firm now doing that is Morgan Stanley's European group.

Julis: Inherent in using expected value as a decision criterion is the staying power to allow the law of large numbers to work while you make many "expected value" bets at a point in time or across time. Another way of saying this is that anyone whose method for measuring the payoff from an investment that is based on expected value is effectively assuming that he can either set up bets at one point in time that are independently distributed and provide the same expected value—or that such bets will become available over time. They're not always there; and when they are, they are sometimes highly correlated, or it's too hard to estimate the payoffs or probabilities. But when there are appropriate expected value bets, staying power allows the investor to weather a bad outcome along the way and not be taken out of the game.

So, for guys like us, where our capital can be pulled, we have to make sure that we build staying power around our expected value metrics. Emphasizing the quick return of your capital is how you protect the staying power of an investment organization.

Mauboussin: In our shop we talk about the "left-wall" and the "right-wall" on our distribution grid. We're looking for distributions that are skewed either up or skewed down. Left-wall has to do with things like the company's cash balances and discounts to tangible book value—things that would really place a floor on an investment's value. So the downside is limited, or at least manageable, while the upside is promising. The right wall applies mainly to fixed income investments, where you know that the most you can make is principal plus interest and your main worry is eliminating your downside.

Harris: When you think about that risk, though, are you focusing on individual securities or is this at the portfolio level?

Mauboussin: Both. The idea is that we communicate the expected outcomes and the associated probabilities for each stock to the portfolio managers. These outcomes and probabilities are what we debate at our research meetings. So, to come back to your question, the portfolio manager decides what to put in his portfolio; but he's also going to think about how his stock picks interact with everything else in the portfolio.

What I'm seeing at the moment with Morgan Stanley's clients is a kind of bifurcation of the valuation process. On the one side, given high levels of cash, we're seeing a huge focus on LBOs. This is creating an interesting environment that effectively rewards "bad" companies, particularly those with cash-rich balance sheets. On the other side of the process, we are seeing somewhat of a growth-at-any-price valuation mentality. The result is a fusion of different voices and perspectives that is creating an unusual spread in the marketplace.

In order to keep things simple, and bring some order into this chaos, we're using a pretty basic approach to valuation, one that attempts to distinguish between two sources of value: current operations value, or what we call "COV," and future growth value, or "FGV." And as Michael Mauboussin said earlier, the fulcrum for creating alpha is identifying companies where the markets' expectations about FGV differ sharply from your own.

Henry McVey

From Stock Selection to Portfolio Construction

Harris: Okay, so when you lay out your scenarios, you want to see how each scenario is expected to affect the value of an individual stock. At the same time, I would think you'd want to know how that scenario would affect the value of your entire portfolio.

Steve, that brings me back to a question I asked you earlier: how much of this scenario planning and risk management thinking takes place when you put your portfolio together? You've told me before that when you have these highly concen-

trated portfolios that are dominated by positions in just 25 or 30 stocks, your main risk management effort is to guard against the possibility of a few big negatives that can wipe out your return. And that's a big reason for your deep-diving research process—to minimize the possibility of big negative surprises.

Galbraith: Every year we seem to get 100% of our return from about nine stocks. And the response of our clients when I say this is, "Well, why don't you own just those nine stocks?" My response, of course, is that we have to own the 200 in order to get those nine.

Alford: Steve, your experience highlights the benefits of diversification, of spreading one's bets across several positions rather than concentrating too much risk in only a few stocks. After all, it's nearly impossible to completely avoid any losing positions, but hopefully the losers will be more than offset by the winners. Have you found this to be the case?

Galbraith: Statistically, our distribution of returns is fairly symmetric, but there's a skewness towards a positive outcome. Every year we have X number of clunkers and X + 5 huge winners—and everything else nets out around zero. One of the challenges in thinking about constructing portfolios—and I'd be interested in others' thoughts on this—is how much do we want people to focus on the individual names in the portfolio versus what is going on in names *not* in the portfolio. We want our people to be increasingly sensitive to both tails of the distribution. In other words, our whole M.O. is to try and get the 10% big winners on the long side and avoid the big losers on the short side. So we're trying to find incentive schemes to get people to make sure they're thinking hard about the tails. It's tough, though, because there is some risk aversion in the process and staying in the game is so lucrative.

Julis: Yes, it is a lucrative game—and that's why people behave the way they do. Just getting on the ladder is a great outcome; most portfolio managers are getting paid to play, not to win. We're trying to make sure people are reaching for the top rung on the ladder.

McVey: But if you think you have that problem, think about the incentives of most conventional, long-only money managers. Thirty-five percent of all long-only managers are in over 100 stocks. And the last time I checked, the correlation of the returns of such managers with the S&P was running at 0.998. This kind of closet indexing is quite predictable because the money management industry has some of the biggest misalignments of incentives of any industry in the world. People are paid not to win, but to keep assets under management and stay in the game—and that's one of the main reasons why most firms never get beyond groupthink. The other reason is that the pay structures for most managers have a 12-month horizon, which means that the idea that money managers have the flexibility to look out long term is contradicted by a basic reality of the business.

Mauboussin: Yes, but that's because of the way the pay plans are designed. But, as Steve was saying, some firms are trying to lengthen that horizon.

Galbraith: That's right. That's a problem we're trying to correct. And judging from some recent conversations with Bill Miller, you guys seem to have found an answer to this problem. If you look at how many days' volume Legg Mason represents for some stocks, it's unbelievable. And, as I said, we're trying to ensure that our analysts take a longer view. At the same time, we're also asking investors for lock-ups so we have a tenor match of investment horizons with our investors.

I think there is a real arbitrage opportunity for investors willing to look out three, four, or five years. It's tough to implement now; but I think that given time to work, this strategy would yield a high pay-off.

The Broader Market of Investors

Harris: Henry, as chief strategist at Morgan Stanley, how do you view the current investing marketplace, and how do you go about looking for investment opportunities?

McVey: Today you see everything from quants to fundamentals-based hedge funds to the long-only shops. This is very different from the '90s, which were dominated by the 401(k) business. That was more about being in business to grab retirement accounts. It was an asset accumulation game, not an asset management game—and they're very different businesses.

What I'm seeing at the moment with Morgan Stanley's clients is a kind of bifurcation of the valuation process. On the one side, given high levels of cash, we're

seeing a huge focus on LBOs—and this suggests that for a hedge fund that likes to make money by shorting bad business models, that may be a risky business to be in right now. Such funds run the risk that an LBO sponsor will come along and pay a premium for the right to take over and turn around a poorly run firm. At the very least, the increased probability of takeover puts a floor under the firm's value.

On the other side of the valuation process are the long-only funds that are benchmarked to the S&P, as well as investors like Mike Corasaniti and Andrew Lacey who are running global funds benchmarked against global comps. So you really are getting this fusion of different voices and perspectives in terms of valuation.

In order to keep things simple, and bring some order into this chaos, we're using a pretty basic approach to valuation, one that attempts to distinguish between two sources of value: current operations value, or what we call "COV," and future growth value, or "FGV." And as Michael Mauboussin said earlier, the fulcrum for creating alpha is identifying companies where the markets' expectations about FGV differ sharply from your own, whether on the low side or the high side.

As Michael was also suggesting, the key to expectations investing is to couple this principle with scenario analysis. And one reason scenario analysis is critical has to do with the level of cash on corporate balance sheets. With cash balances in corporate America now running at around 11% of total assets, it's hard for me to believe that anybody could pick a stock without focusing on the potential uses of those cash balances, and the re-investment risks associated with them. Does the company have good investment uses for the cash? If not, will they have the sense to pay it out in the form of buybacks or, better yet, higher dividends?

At bottom, then, our investment analysis at Morgan Stanley really has three elements. We start with a reconfiguration of the old DuPont analytical framework that breaks up a company's operating return on capital into two components: operating profit margins and operating capital turnover. The second step, as mentioned earlier, is to estimate the company's future growth value, which can be calculated by subtracting a company's current operations value from its total value. And the third step is to place this analysis into a scenario framework to see how changes in key macro or industry variables can be expected to affect the outcomes.

Lacey: Can you tell us a bit more about this concept of current operations value and how you calculate it?

McVey: COV is basically the discounted value of the current earnings stream assuming the company continues on its current growth trajectory. Any value over and above the COV is considered to be "future growth value," or "FGV," and to reflect the market's expectation of future growth opportunities. In basic industries, FGV is a pretty modest fraction of value, and in some cases it is even negative. But in growth industries like high tech, FGV can account for well over half—and in some cases as much as 80-90%—of a company's current value. And especially in cases where FGV is large, the investor's job is to set those expectations against his or her own, and then see if the difference is great enough to constitute an opportunity to buy or go short.

Fundamental Analysis in a Quant-Driven Investment Process: The Case of GSAM

Harris: Everyone we've heard from up to this point is what I would describe as a traditional stock-specific, fundamentals-driven investor. But, as we all know, many successful investors don't pay much attention to stock-specific fundamentals; or if they do, they use them in very different ways. Andrew Alford of Goldman Sachs Asset Management is a good example of a very successful "quantitative" investor. Andrew, can you tell us about your approach and how you go about constructing portfolios?

Alford: Our group uses a quantitative approach to manage portfolios of individual stocks, as Trevor mentioned. But our process for evaluating stocks involves extensive fundamental analysis.

We look at six broad alpha drivers—or investment "themes," as we call them—to assess the investment potential of each stock in our global investment universe. We then form portfolios by overweighting what we believe are undervalued stocks, and underweighting the overvalued stocks, relative to a portfolio's benchmark. The weightings themselves—that is, the overweights and underweights relative to the benchmark—depend on each stock's fundamental investment potential as well as the target risk level of the portfolio. The higher a portfolio's target risk, the larger the active weights. We use an explicit risk model, along with an optimizer, to construct well-diversified portfolios that maximize the expected return in excess of

To generate alpha, we have to identify mispriced securities, which means we need to focus our attention on those fundamentals that are not yet fully reflected in stock prices. In that sense, we're really trying to develop models of misvaluation, rather than models of valuation. Whereas valuations are based on investors' expectations of cash flows well into the future, misvaluations are based on mistaken market expectations, many of which get corrected fairly quickly. Hence, exploiting—and thereby eliminating—these misvaluations often involves a relatively short investment horizon.

Andrew Alford

the benchmark, net of estimated transaction costs, for the specified level of risk.

Julis: What kind of benchmarks do you set?

Alford: Since we track the fundamental characteristics of a large universe of global stocks, we're able to manage portfolios against a wide variety of standard and customized equity and cash benchmarks. The benchmarks are largely determined by our clients, as are the target risk levels. Our long-only and equity long-short portfolios are managed against benchmarks such as the MSCI World, a global index, the S&P 500, and the Russell 2000 small-cap index. Our global and single-region market-neutral strategies are managed against cash.

Harris: Could you tell us a bit about the fundamentals you use?

Alford: As I mentioned earlier, we evaluate stocks using six fundamental-based investment themes. The "valuation" theme compares a company's current stock price with measures of its intrinsic value; naturally, we prefer stocks that trade at a relative discount to our estimate of intrinsic value. The "profitability" theme attempts to determine whether a company is earning more than its cost of capital. The third theme, "earnings quality," breaks earnings into cash-based sources versus accruals, a less persistent—and potentially more subjective—component of earnings. "Management impact" assesses a company's management strategy and effectiveness as reflected in the company's investing and financing decisions. For example, the stock of a company that issues shares to acquire another business is likely to underperform the stock of a company that uses cash. The last two themes are "momentum" and "analyst sentiment." Momentum attempts to take advantage of any market underreaction to company-specific news such as earnings, product launches, and other corporate events. By trading on the basis of this underreaction to news, we hope

to profit from the subsequent drift in stock prices. Finally, "analyst sentiment" is a more subjective assessment of a company's prospects based on the views of Wall Street research analysts.

Harris: How did you come up with these six themes?

Alford: We selected the themes because they make economic sense, and because our research shows that they help forecast stock returns. As fundamental analysts, we aim to identify a broad set of stock characteristics, or "signals," that have a solid economic foundation. We're only interested in characteristics of companies that have a clear link to equity valuation—for instance, a company's competitive position, growth prospects, or quality of management.

As quantitative analysts, however, we believe it's also important to test the effectiveness of the signals to make sure they help forecast stock returns. If investors efficiently process the information in a signal—if they understand the signal's implications for equity values—then the signal will not help us forecast stock returns and will not help us generate alpha. Therefore, we spend a lot of time making sure the information contained in potential valuation metrics is not already impounded in stock prices. Our approach illustrates Michael Mauboussin's point earlier that investors need to distinguish between the fundamentals of a company and the expectations that are built into its stock price.

Many of our initial ideas are motivated by academic research in accounting and finance. The so-called "anomaly" literature has identified a rich set of fundamental variables that can be used to help predict stock returns, and several behavioral finance papers offer a theoretical explanation for why these fundamentals are not always reflected in stock prices.

Harris: What about the weighting you give to each of these themes; do they change over time?

Alford: The weights are based on a mean-variance optimization process that attempts to maximize the return from combining the themes while minimizing risk and portfolio turnover. In particular, we put more weight on themes that generate higher expected returns, have lower risk, provide greater diversification benefits, and require less turnover. Hence, the theme weights change over time as new information becomes available; but the changes in weights from one period to the next tend to be relatively small.

Harris: Would it be fair to say that what you're doing is much the same as the other people at this table, except that you're trying to aggregate your bets and look at it much more on a portfolio basis? The fundamentals that you're looking at—valuation, profitability, and earnings quality—are similar in many ways to the ones that Andrew Lacey was talking about earlier.

Alford: That's right. We're all looking at fundamentals. But to generate alpha, we have to identify mispriced securities, which means we need to focus our attention on those fundamentals that are not yet fully reflected in stock prices. In that sense, we're really trying to develop models of *mis*valuation, rather than models of valuation. Whereas valuations are based on investors' expectations of cash flows well into the future, misvaluations are based on mistaken market expectations, many of which get corrected fairly quickly. Hence, exploiting—and thereby eliminating—these misvaluations often involves a relatively short investment horizon.

Galbraith: Andrew, is there any room in your investment method—or within Goldman Sachs Asset Management as a whole—for qualitative considerations such as your assessment of the quality of management? Do you or other people at GSAM make use of any qualitative inputs in your decision-making process? Or is your method entirely driven by the numbers, by a trading rule?

Alford: Our "analyst sentiment" theme, even though it is a "quantitative" signal, is in fact based on a very subjective, or qualitative, assessment of the companies in our investment universe. The "analyst sentiment" theme complements the other five themes, which are more objective measures of corporate fundamentals. In addition, the process of selecting and defining the set of fundamental alpha drivers involves quite a bit of judgment.

The other portfolio management teams in GSAM follow a more traditional approach to analyzing stocks and constructing portfolios, but the quantitative group I'm part of is relatively independent of the more traditional teams.

Galbraith: This is a somewhat theoretical question, but do you think the

two approaches *could* be made to work together somehow?

Alford: I do. After all, we're all trying to get at the same factors—companies' fundamentals—and to achieve the same goal—to generate alpha for clients. In my opinion, there are more similarities than differences between quantitative and traditional approaches to fundamental analysis, and successful investors incorporate both approaches in their investment process. As a practical matter, however, blending the two approaches is challenging because traditional and quantitative analysts generally have their own views about the proper role of empirical analysis and, of course, risk management.

Galbraith: That's what I was thinking when I raised the issue. If you ask someone like Cliff Asness, he'll say, "If I knew anything at all about the company, it'd be a disaster. The minute I start applying anything qualitative, I'm going to screw it up." When I worked at Sanford Bernstein, we tried to mix the two approaches; they had their Dividend Discount Model, and it was all very quantitative. But it never seemed to come to anything. On the other hand, I do think somebody's going to crack the code and find a way to mix the two approaches.

Valuing the Corporate Pension Fund

Harris: Before we move to Stephen Penman, I wanted to get your views on a subject that is part of the main focus of this issue of our *Journal of Applied Corporate Finance*. That subject is corporate pension fund management—how the market values pension assets and liabilities, and how such assets and liabilities should be managed in order to maximize shareholder value. It's clearly a topic that I've had an interest in for a long time, and everyone seems to be talking about it right now.

Thanks in part to pension accounting, there's a lot of investor uncertainty about the effect of defined benefit pension plans on corporate earnings, cash flow, and capital. My question is this: Given the difficulty of making sense of the detailed disclosures about corporate pension plans, how do you incorporate pension assets and liabilities, and the related returns—if you think about them at all—into your fundamental analysis and stock selection?

Galbraith: In many cases, we do look at the pension plans. But my guess is that 90% of the companies where pensions could result in significant mispricing would end up being candidates on the short side. I think it's highly unlikely that you'll find a company that is undervalued because it's been overly generous in funding its pension. Our main use of pension analysis is to identify companies that are likely to fall into financial distress. So, it's on the short side of our book where we're doing the deep dives on pension accounting.

Julis: Let me try to frame this pension issue in a different way. Multi-strategy investing makes use of several analytical perspectives, particularly for an issue like pensions that we value investors wrestle with all the time. There is a big role for fundamental analysis, as we've all been saying—and there's some role for arbitrage types of analysis. And then you need to think in terms of aggregation and portfolio analysis to understand the bets you're making and the expected payoffs.

Now what does this mean in the context of a particular company? It means, for example, that when you look at a company like GE, you have to ask yourself: Can I take the earnings and return on capital at face value, or do I have to tear apart the company business unit by business unit to see where the earnings and returns are really coming from? And, Trevor, this is what you and Stephen Penman and others at Columbia did when you analyzed the structure of pension accounting. Your basic conclusion was the importance of distinguishing operating from financial results, of separating the pension operating costs—the costs associated with payments to retirees and accrual of benefits for current workers—from the returns earned on pension assets. Once you have separated these two components of pension accounting, then you can decide on the appropriate discount rate to use in valuing each. Although you should probably use a low discount rate—something near the risk-free rate—when valuing the liability stream, the discount rate for the assets will depend on their risk. And this means that, contrary to what pension accounting does, the income stream produced by an equity portfolio should be discounted at an equity-type discount rate.

But, again, the whole point of this exercise is to give investors greater insight into the quality of corporate earnings, which in turn is the key to their true underlying earnings power. If it turns out that your target company has repeatedly used high returns on pension assets to obscure poor operating performance, then that should

Our discussion today has not articulated a persuasive, broadly applicable, deep-dive fundamental analysis. Nor have the academics. That really is a question of how to handle the information, of how to convert business activity to numbers that provide a better guide to value. In my mind, that must be done through hard accounting numbers. Call it accounting for value. Our discussion today is sprinkled with complaints about GAAP accounting. Some are appropriate, for surely GAAP frustrates us; but account for value we must. Strategy must produce earnings, or cash flows along those outcome paths. I prefer accrual accounting, with an emphasis on "quality" earnings rather than cash flows, for the same reason we tell our students that accrual accounting rather than cash accounting provides a more reliable basis for business decisions.

Stephen Penman

make you reluctant to take a long position. And if the market doesn't seem to have caught on to the game, it might even be the basis for a short position.

Corasaniti: I think you have to do a thorough analysis of the pension for every company you're looking at. To the extent the present value of the liability exceeds the value of the assets, it reduces the enterprise value of the firm. And if companies are taking a lot of equity risk in their pension plan, that could be a concern.

So, to me, examining the pension assets and liabilities is just part of the work you have to do to understand the value of a company, where it has come from in the past and where it's going to come from in the future.

A View from the Academy

Harris: Now that we've heard from all the practitioners at this table, I'm going to ask Stephen Penman to wrap things up by giving us an academic perspective on what we've been discussing.

Penman: Fundamentalists in the tradition of Benjamin Graham tell us to distinguish what we know from speculation, and to put weight on what we know. Indeed, fundamental analysis is really a matter of sorting out what we know and applying it in investing. We are thus protected from getting carried away by speculation—and, indeed, we can sometimes profit from the misguided speculation of others. The discussion here this afternoon certainly has that flavor. All of you around this table are experimenting with alternative approaches, finding out what works and what does not work. The accumulated wisdom from around the table is a broad statement of "what we know" from experience—and I, for one, have found it very instructive.

I am also impressed by the variety of views and investment approaches at the table. We shun the short-term focus but are not quite sure how to weigh the short term versus the long term. Andrew Lacey's focus on "compounders" follows solid value investing principles, yet both he and Andrew Alford see reward to exploiting perceived short-term mispricing. Perhaps this is how it must be. Michael Mauboussin sees market efficiency—and inefficiency, too—as having complex origins. Henry McVey suggests that the reasons for market mispricing differ at different points of time. The practical investor must be adaptive. An investment approach that works under all market settings and conditions is elusive—and, as Steve Galbraith observes, there is surely room for blending approaches.

Academics are supposed to lay down a set of principles on which we can anchor our analysis of investing practices, and Trevor Harris has asked me to report from academia on what those principles are. To be frank, I do not think that academics have contributed much to active fundamental analysis, at least until recently. Of course the wisdom of Ben Graham is enduring, although much of that was garnered from practice. I think it fair to say that most of our understanding about active investing comes from journals like the *Financial Analysts Journal* rather than the more academic *Journal of Finance*.

Don't get me wrong. Modern finance research has made outstanding contributions to theoretical economics in the last 50 years, leading to financial engineering products that are now everyday tools. But when it comes to equity analysis, we fall short. Academic analysis requires rigor and that rigor requires assumptions that simplify a complex world. The very assumptions—no arbitrage or "market efficiency"—that led to the financial engineering products do not serve the alpha seeker. We know how to do relative pricing—to derive the value of the option feature of equity, for example—but academic research has not been very helpful in determining the value of the underlying, fundamental equity.

Research on asset pricing models built on no-arbitrage assumptions has a long history, and the CAPM certainly has currency in risk profiling and asset allocation. But "asset pricing" is a misnomer; these models yield the expected return for risk borne, not the price. They provide the denominator or discount rate rather than the expected numerator. Further, the endeavor contains a significant element of playing with mirrors. Common risk factors escape identification—the one-factor CAPM seems to have very little explanatory power—and measuring the expected risk premiums on these factors is almost a guess, building in speculation that the fundamentalist abhors. The pricing model most talked about in the past few years—the Fama and French three-factor model—is based on empirical correlations, with little theory backing it. Book-to-price is proposed as a risk characteristic simply because it correlates with returns, but simply labeling empirical phenomena is poor science. A fundamentalist might see book-to-price predicting returns for other reasons—including market inefficiency.

The investors around this table have rightly shunned these approaches. Steve Galbraith acknowledges that Maverick's attempts to reduce their risks into a quantitative model haven't come to much—which is understandable—and he rejects measures used by risk management consultants. Mike Corasaniti takes a very broad-brush approach. Mitch Julis's idea of analyzing risk through decision trees that model alternative outcomes with assigned probabilities is a better approach, one that was also endorsed by Michael Mauboussin and others here. After all, a primary risk in active investing is paying too much for expected payoffs, not the "systematic risk" supposedly captured in asset pricing models.

It is fair to say that, despite a generation of research in asset pricing, we have little idea about how to develop a cost of capital that stands up to empirical testing. Rather, most of the empirical research has documented so-called "anomalies," associations between various attributes and returns that are not explained by theory. The book-to-price and return relationship is one of them. For a disci-

pline built on no-arbitrage assumptions, this is disappointing—but to the extent this research holds out the possibility of alpha, it is the fodder for active investing. Andrew Alford's approach gives a nod to this research and extends it. These anomalies suggest a more sophisticated stock screening than the use of simple P/E or P/B screens. And, as Andrew Alford points out, with a focus on relative valuation it also avoids the elusive determination of intrinsic value. However, the escape from intrinsic value comes with a cost. One ignores information about fundamental value at one's peril; the suggestion earlier to combine these screens with deep-dive analysis of the business makes sense, particularly since most of these anomalies are observed from data mining the past.

Having said that, our discussion today has not articulated a persuasive, broadly applicable, deep-dive fundamental analysis. Nor have the academics. That really is a question of how to handle the information, of how to convert business activity to numbers that provide a better guide to value. For example, strategy is important, but strategy must be translated to value, as Michael Mauboussin insists—otherwise we are in danger of speculating too much about the value in strategies. In my mind, that must be done through hard accounting numbers. Call it accounting for value. Our discussion today is sprinkled with complaints about GAAP accounting. Some are appropriate, for surely GAAP frustrates us; but account for value we must. Strategy must produce earnings, or cash flows along those outcome paths. I prefer accrual accounting, with an emphasis on "quality" earnings rather than cash flows, for the same reason we tell our students that accrual accounting rather than cash accounting provides a more reliable basis for business decisions.

Further, if we are to understand mispricing, it probably has to do with investors mispricing accounting information. We are correct to be skeptical about reported earnings. But that doesn't alter the truth that everything that affects a firm must *eventually* show up in its financial statements. This anchors us. So if we model the elements of financial statements that reflect economic activity, we will capture value. While current GAAP earnings do not capture value, projected earnings must. Indeed, overstated reported earnings today must, by the construction of accounting, result in lower future earnings.

Recent academic research on accounting numbers has made some progress in showing how to translate earnings outcomes into a valuation. With an apology for accrual accounting, residual earnings models convert expectations about profitability and growth into a valuation. Abnormal earnings growth models convert expected earnings growth to a valuation. If we overlay the "decision tree" on such models, they can accommodate alternative scenarios and risk. The accounting structure on which these models are built introduces discipline, relationships that must be honored.

Consider, for example, the following relation which, given comprehensive income accounting, must always hold:

$$r = \left(\frac{B_0}{P_0}\right) ROE_1 + \left(1 - \frac{B_0}{P_0}\right) g$$

This says that the expected return, r, from buying a stock at the current price, P_0, is a weighted average of the next year's expected return on equity (ROE_1) and the expected growth rate, g. Note that the Fama and French book-to-price ratio, $\frac{B}{P}$, shows up here, but as a weight on profitability and growth (the short-term and the long-term). The expression separates what we know from what we are less sure about, as the traditional fundamentalists have advised us to do. Book-to-price ratios can be directly observed; and the analyst usually gets a good handle on forward ROE, especially with help from the DuPont analysis that Henry McVey alluded to. And thus the speculative part of the valuation, g, is isolated. It is that growth estimate which the analyst must beat up on—the "future growth value" mentioned by McVey and Galbraith. The expected return provided by this calculation expresses the market's mispricing, with a too-low price (given the expectations of profitability and growth) yielding a high expected return from investing at the current price. The focus here is on the expected return from active investing rather than the required return provided by an "asset pricing" model. This approach gives the analyst a screen that embeds appropriate intrinsic value analysis, along with the assurance that nothing important is missing from the screen. It combines fundamental analysis of the company with the understanding of the expectations built into the price that Michael Mauboussin is asking for.

In short, if one insists that a good decision making process is critical to effective investing, as we agreed today, this provides us with a framework. It packages all the elements that need to be considered—in short form here, admittedly—and it forces us to deal with the numbers, the fundamentals, in a coherent

way. This beats an "asset pricing" model, in my view.

One last point: Behavioral finance—the rationalizing of unexplained empirical regularities such as the so-called anomalies—shows some promise. We all have trouble understanding why markets may not be efficient, with academics brought up on the idea of rational economic man having particular difficulties. One would think that an equity market with so many presumably rational players, and with so much research, would produce sensible prices. Behavioral finance, with foundations in psychology and sociology, attempts to explain otherwise. The analysis thus far is quite conjectural, so we have to wait and see; but there is promise of combining sound fundamental analysis with an understanding of why, and when, prices may not reflect fundamentals.

Harris: Thanks, Stephen, for that summary and perspective. Let me wrap up with some takeaways. All of you use information from both financial statements and other sources to evaluate the longer-run economic performance of a company. You then assess whether the inherent economic value is reflected in the current stock price. But, in making this assessment, your focus is not on coming up with a precise valuation, but on identifying large price-to-value gaps and the risks associated with the valuation estimates.

I also find it interesting that while you all seem to prefer shorter payoffs if given the choice, the average holding period for everyone here except Andrew Alford is several years. The clear message to our corporate readers is that excessive focus on next quarter's EPS creates a process that attracts traders and newscasters, but does little to attract and retain investors like you. On behalf of CEASA, let me thank you all for sharing your insights with us.

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