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WORLDWIDE FINANCIAL MARKET PERSPECTIVES

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MR. PETER J. BONDY: Mr. Rotberg is the former Vice President and Treasurer of the World Bank and former Executive Vice President of Merrill Lynch & Company. He is an attorney by education. Gene is currently a consultant and has extensive international experience. He has provided much advice in the international arena, more recently, in the Eastern Bloc countries.

MR. EUGENE H. ROTBERG: First let me apologize; I am, as you just heard, a lawyer. I apologize because I am subject to all of the occupational hazards of a lawyer. That means, unfortunately, that at times I become much too adversarial. I have a sense of sureness which I assure you is not, in fact, the case. It is simply that given the time constraints, I don't have either the time or the interest in using elegant phrasing such as "It would appear that on balance one would suggest that it might be best if under certain circumstances one looked at it this way." I say that I will forego those comments, partly because of time constraints and partly because I suspect that you just don't want to hear that kind of stuff. I look at this audience and I see that some of you are managers of money and others of you supervise people who manage wealth, financial resources. Others of you, I suspect, develop benchmarks to measure performance. Others, I assume, assess how different kinds of portfolio produce different kinds of returns and still others are involved in asset liability management and a whole range of financial decision making.

Ideally I cannot speak to all of you, but what I'm going to try and do is simply share with you some experiences that I have had, perhaps from a rather narrow perspective, in the world of finance, about risk taking, management, and how we try to pretend that we are better than we really are. And, perhaps I can offer you some insights which may be relevant and which may, in your own minds, be relevant to some of your own environments. The subject of my remarks, in short, is uncertainty, vulnerability, and our capacity to understand and cope with risk.

I am going to talk first about volatility and review quickly the major developments over the last decade or two. Second, how most of us have tried to respond to that volatility. Third, how have the CEOs, the CFOs, and the policymakers handled a whole proliferation in the range of new financial products. Finally, I hope you will permit me to make some rather personal comments on risk and performance.

So let's begin and, just by way of perspective, talk a little bit about volatility over just the last decade or so. Just start with something like exchange rates. Over perhaps less

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than a decade, we have seen a Japanese yen rate compared to the dollar, 360 to the dollar, 170 to the dollar, stronger. Only five years ago, 320 to the dollar, 120 to the dollar. Enormous movements.

Interest rates for long-term bonds, over the last decade, 7%, 15%, down to 7%, up to 10%. Interest rates over the last decade for the short term U.S. treasury bill, 5-20%, back down again, back up again. The same for CDs and T-bills. A market with respect to interest-bearing instruments which in a period in the late 1980s for any given month, the market movement was as great as the entire market movement in the period of 1955-65.

We have seen basic fundamental changes in world patterns and volumes of financial savings. First into Organization of Petroleum Exporting Countries (OPEC), then Japan, back to Germany, into Japan, OPEC again. We have often seen the lifting of restrictions of nonresident activities in other national currencies. We have seen a tremendous increase with a premium on the need for liquidity caused in part by market volatility. We have seen recession, inflation, recession again. Most of you have seen tremendous increased competition among intermediaries for discretionary savings. Banks competing with investment banks, investment banks competing with nonbanks, nonbanks competing with insurance companies, insurance companies competing with pension funds, all seeking to tap into a pool of assets to manage and control. We have seen deregulation across national borders which permits institutions and individuals to sell their own currency and buy someone else's currency without restriction and that is indeed a remarkable development. We have seen not only the sale of the nation's currency by its financial institutions but also how a nation's savings can float and move out. For example France into Italy. Italian citizens can simply take their money and say no more money for roads and bridges and highways or schools, I choose to put it into Holland or Belgium and vice versa. Indeed a remarkable development. You have all seen it here in the United States. You will hear with increasing frequency for the next few months, as the data begin to come out, where Japanese resources have moved, disinvested from the United States, and reinvested dollars but in different instruments, in different places, and, indeed, in different countries.

We have seen also in recent years an LDC debt crisis. Developing countries unable and unwilling to pay clearly the principal and for the most part not even the interest on outstanding loans. We have seen a real estate crisis. This all puts enormous pressures on banks, hyping their very awareness of risk. They obviously know there is a thrift crisis with the fundamental causes not changed. We have seen proliferations of bad loans in banking industries from real estate investment trusts (REITs), to tankers, to LDC debt, to junk bonds, to futures, and options as the world opened up to them to be able to deploy their financial assets in ways not heard of in the 1960s and 1970s. And, for the most part, very, very little of it is marked to market. We have seen increased communication links and securitization. We have seen a tremendous proliferation of very complex financial products. We have seen also very high material rewards in certain sectors of the financial industry, and not all for getting it right with no symmetry and very uncertain punishment for getting it wrong. We have seen tremendous competitive pressures to manage other people's money and outperform. We have seen a desire to

maintain the good will of the new major stockholders where the new stockholder knows virtually nothing about the financial risk taken by the underlying operating company.

We have also seen a shift, and it is in this room, of the sophistication of intermediaries and of the clients of intermediaries. The fact is that for the most part, investment bankers and research panelists, whether in common stocks or in debt, were thought to be the providers of information, wisdom, subtlety, and financial engineering to the client base, primarily insurance companies and pension funds. That has changed. The fact is that for the most part, the client base is way out on the curve and has the tools and sophistication way beyond much of the expertise of the financial securities firm or the investment bank. We have seen, therefore, enough change and enough volatility to explain the reasons for most financial innovation and certainly, I would think, the reason why one must pay attention to risk and risk management.

Now, given that environment, I think it is fair to say that we have all been subject to a lot of code words. For the most part the code words vary. "Innovate" became a code word. "Leverage," and then the opposite, "protect," "hedge," "insure." All quite different approaches. Each institution, I suspect, begins to feel the pull depending on the risk averseness of management, the expertise of the most senior management (of which I will talk more later), as to whether they are more comfortable hedging, protecting, locking in the spread, or are willing to take unhedged, unprotected, unmatched, mismatched maturity, interest rate, or exchange rate risk. There are reasonable differences of opinion. My comment here is not to point out that the differences are reasonable. My comment is simply to suggest that I suspect that articulated debate among the competing forces for the most part has not yet occurred. Despite that policy debate, I would suggest that the human psyche and certainly the bureaucratic setting has not changed. The question simply remains: how do you cope with increased financial uncertainty in the competitive world?

In my field, I have spent most of my professional life trying to predict and work with movements of interest rates, exchange rates, and risk. Most managers deal with those subjects in an extremely uneven fashion. Although most of you are in a somewhat different setting than investment banks, perhaps you might recognize some aspects from your own experiences. What are they? I will use the word "we" not to imply that all of you are subject to this, but I ask you to simply accept it as a rhetorical device. Most of us respond to peer pressure. The fact is we are under tremendous pressure to develop a new form of immunization, a new form of asset allocation. We spend an awful lot of time trying to develop a new benchmark, trying to convince our superiors of the wisdom of that new benchmark. And, we spend an awful lot of time trying to figure how to beat the benchmark rather than how to maximize performance. We, I suspect, focus on looking good rather than being good. We develop new products and we buy new products because others do so, without a full awareness of the underlying risk or leverage about that product. We also want to capture rewards. We want to capture those rewards quickly and hopefully visibly. Conversely, most of us seek to put off blame or responsibility. We try, I suspect, to have a sense of certainty about us, of sureness, yet we increasingly try to hedge, balance, or insure until the competitive pressures become too great. Most of us are not comfortable saying "I don't know." Most of us are not

comfortable saying "I'm not sure" and we are even less comfortable admitting it to those who manage us or to whom we report. We rarely measure opportunities lost. Only visible mistakes, and sometimes not always then, are punished.

Bonds purchased at 8% when yields then rise to 12% are considered by some a mistake. It is not considered a mistake, however, when bonds are not purchased when the yield is 12%, and the yield then drops to 8%. That is not considered a mistake; that is just an opportunity lost; it never appears on our books.

Let me suggest to you what I mean. I would like to stop for a moment and use a series of quick hypothetical situations to get a sense of where you are. I am going to give you a series of rather simple portfolio decisions. To see how you feel about them, I would like a show of hands. Here is the first example. You buy a bond at par, yields are 8% the day you buy it. Shortly thereafter, perhaps within a year, for long-term bonds yields rise to 12%. The bond falls to 70 and you sell it. How many think you lost any money? Raise your hand. No one? I assume that those of you who did not raise your hand do not think you lost any money. How many think you haven't lost any money? Raise your hand if you lost no money. Does that surprise you? Ask yourselves why this audience would be split on that question.

Let me give you the second hypothetical situation. You buy the bond at par, the bond price drops to 70 and you don't sell it. How many think you have lost any money? Raise your hands. How many think you haven't lost any money? Again split. I consider that there is a feeling in this audience that half the audience thinks that you don't lose any money whether or not you sell it and half the audience thinks it doesn't make any difference whether you don't sell it or whether you've lost any money. If that is an accurate reflection of the way the world is, it might be telling you something about the care with which you make your initial decisions.

Let me put to you a third hypothetical situation. You buy a bond at 8%, that same bond, and the price is par. This time yields drop to 5% and that bond goes to 130. You sell it. How many think you have made any money? Raise your hands. How many think you have not made any money? Let me ask you something. In your personal portfolios, if you buy something at 100 and you sell it at 130, do you feel you made no money? If the answer is "my personal portfolio is different than my career portfolio," what is that telling you about either accounting conventions or the way you look at your fiduciary duties?

Let me present the fourth hypothetical situation. That bond you bought at 8% yield; yields having dropped to five, is now selling at 130. You don't sell it. It is at 130. On that day, how many of you think you have made any money? Raise your hands. How many think you have lost money? How many think you have not gained or lost any money since you have not sold it? This is an interesting group. Do any of you have personal stock market or bond market accounts? You get a monthly statement, and it says "net asset value of your portfolio, 130,000" or "130 million"? Do you think because it is marked to market, that you are indifferent whether it says 130,000 or 130 million?

Let me put to you quickly just another one or two more hypothetical situations. That bond is 8%, it is at par, you choose not to buy it. It is a long bond. Instead you buy short-term treasury bills. The yield drops from 8% down to 5%, the bond goes to 130, it goes with the slope of the yield curve. Let's assume that the treasury bill stays at about the rate you bought it, at 7%. It was just an enormous push in long-term yields. You're still earning your 7% on the treasury bills but you didn't buy that long-term bond. How many think that you have lost any money? How many think that you have not lost any money? It does not appear anywhere.

There are very few institutions which measure opportunities lost; clearly there are no institutions which do it as an accounting matter. There are fewer which even do it internally. Because as you can appreciate, the reciprocal to a measure of opportunity lost is perfection. You would have to have an index of perfection and anything less than perfection would be an opportunity lost and, therefore you lost money. I will talk more on that later.

The fact is that most financial intermediaries rely on very sympathetic accounting conventions. I guess the best verb I can use is that it "infects" us. A rolling loan gathers no loss. That is the way banks work. We need not show losses until we sell. The fact is, performance measures are sometimes designed to cover up error. As a matter of fact, there are some institutions which seek instruments and products where the accounting conventions are designed to not require marking to market. Banks keep LDC debt apart. We seek to maintain the fiction of the maintenance of their value. The fact is that we are very, very concerned about admitting to failure, mistake, or error. The admission unhappily is more important to us than the fact of being wrong. All of these matters, I suggest, inevitably cause us to perform with insufficient attention to credit and insufficient attention to market volatility because we have created a structure which makes it easy for all of us to do so.

On a more personal note, I was responsible for borrowing $100 billion. I borrowed $100 billion in my life. I negotiated 120 bond issues a year. I personally negotiated 1,500 bond issues in 20 different currencies from one day money out to perpetuity. Every morning when I went to work there was on my desk a run of the assets which I was managing. Those liquid assets on the assets side of the balance sheet, not the liability side, were $23 billion every morning in 18 different currencies. I tell you this by way of my next topic.

I cannot predict and could never predict, nor could my best and better colleagues, with any reasonable degree of certainty, either interest rates or exchange rates one day, one week, six months, one year, or five years in the future. Every salesperson, investment banker, and research person who brings those pieces of information to you can do it no better. If they could they would not be picking up the phone to call you. They would never work, they would never have to. They would simply go out and predict interest rates tomorrow morning, use futures or options or very highly leveraged instruments, and never work another day for the rest of their lives.

Second, in my own sense of the world, there is just as much risk in not investing as in investing, in being long as in being short or flat, and in taking positions as in not taking them.

Third, mistakes are always going to be made many, many times in executing an investment program.

Fourth, external forces outside our control, in fact, limit us and make returns highly unpredictable. Oil prices, recession, exchange rates, protectionism, politics, tax policies. Yet, I put it to you that we have created an environment in which we can hide our failures and yet at the same time try to maximize risk. The banks are the typical example. We look for things to give us support. Many of us look for quantitative support. For charting, probabilities, quantitative analysis. How many times have we also said to each other, how much is the loss? Will I be wiped out too quickly and too visibly if I make a mistake? We ask ourselves too often whether we will be found out, whether we will be discovered, whether we will be identified as a provider of wrong wisdom. How many of you know from your own experience that unique instrument which can protect, insure, or conversely leverage or arbitrage? But you know with assuredness that there is someone who does not understand that product, you don't want to be hassled, you know that your superiors do not understand it and will be afraid to admit to it. You therefore take an easier regression toward the mean in making the decisions that you make. We are subject to a herd instinct. We are clearly subject to the availabilities of rewards and punishment. We are subject to present pleasure for future pain. Let someone else pick up the pieces. We also ask ourselves conversely can I get away with hedging or matching? And, sooner or later will competitive pressures push for higher returns? My own bias is that these kinds of things which relate to our egos; our fears of discovery, our desire for rewards, our trying to avoid punishment, and the extent to which accounting conventions permit us to cover up or to look better than we are, in fact, have nothing to do with either interest rates, currency movements, or the availability of resources.

I want to briefly go through who the players are in this game. I suspect that most of you are not and do not work with traders. Let me talk about a trader in a securities firm. As I indicated, he can't predict rates better than you or I can. He is usually unwilling to hedge. He often keeps what he is doing from his senior manager, particularly if the instrument is leveraged or has an enormous amount of risk. He sometimes does not know the amount of risk that he is taking. He works with a very distorted compensation system. There is no symmetry; if the market goes up and he is right, it is the firm's money and he makes an enormous bonus. There is, conversely, no downside risk. If there is a massive loss, he loses the bonus and settles for $200,000 a year. The loss is 20 million on the other side. Conversely, if he makes 20 million he can take eight of it. He doubles his bets, which he could only do in a nonsymmetrical system, if he has made a mistake. He has an enormous sense of ego. He feels and says, "I live in a market-based economy. Why would someone pay me $2 million a year unless I can be right, unless I am in fact right?" He does not reach the opposite conclusion: "maybe I am being paid $2 million a year by mistake and I am not worth it in the first place." He would prefer to believe that he is, in fact, the center of the universe. He works increasingly in a narrow environment, a difficult one. Narrow spreads, low volume, low volatility, high

volatility, massive shifts in the market in which he operates. He turns that portfolio on a securities firm hopefully two to three times a day; he tries to move positions often of $20 billion. He rarely wants to see or ever talk to the CFO or the Treasurer. He's far more sophisticated than the most senior management or the CEO. He keeps it pretty quiet and close to the vest and, when he is under stress, he calls the salesman who calls you.

The salesman has a much narrower frame of reference. His job is very simple, he wants to sell you his positions. His spreads are very narrow; the profit margins are tight. He therefore invents new products and brings them to the insurance company or the pension fund industry. That is his job. He hopes that he is further out on the yield curve than you are. But increasingly, that has become not the case. You have become faster than he is.

As for the senior and middle manager, you can think of your own experiences. For the most part, the most senior manager, the CEO, his experience has probably been in marketing and sales. He does not want to hear about convexity, he does not know what the word means, and he barely understands the difference between price and basis points. Writings on the latest Markowicz models on efficient frontier are way outside of what he wants to know about. Second, he is afraid to ask. He is embarrassed to ask. Financial engineering is too complex for him. There is a lot of fear and a lot of insecurity and at first he can be fooled by accounting conventions which cover up mistakes. Later, he will begin to use the accounting conventions to make the firm or the institution look better than it is. For the most part, the senior managers are hostile to what are called quants. He considers them often too young, too overpaid, too much in control, too smart, too "in my day we didn't do it this way."

For the most part, reports are inadequate for most financial institutions. It is difficult for someone inside a company to capture the essence of risk, let alone someone who is examining the company from the outside. What does it mean to have a shopping center which is two thirds empty? What is the value of a private placement on a junk bond? A market value based reporting system, where the salesman is an intermediary or, as you are, ultimate clients, isn't there because the moment it gets there all of us know that one way or another the accounting profession will say, "once you are able to value that market, it goes public." So there is no incentive to even internally find those values out. Most CEOs and Chief Financial Officers rarely talk to traders or risk takers. Later the CEO of a business will ask for accounting miracles, I mean for manufacturing concerns. Then he asks for real miracles and then he says, if I can't sell cars I will "be financed" to make up for shortfalls. On the other side there were those who had pressure to hedge, protect, insure, and try to stick to selling cars or textiles rather than taking unmatched exchange rate positions. Some of you that battle as to whether to use financial engineering and/or accounting conventions to mask or to leverage, which is perfectly acceptable, will be in constant battle with those who wish to do spread trading, hedge and insure.

Let me conclude with just one person's own personal view on the management of risk and the management of financial institutions generally. It might be a little bit different for banks or insurance companies or pension funds or investment banks, but it is just one person's view. All risk taking should be explicit whether or not you share it with the

outside world. We must know what the word "risk" means no matter how complicated the instrument.

Second, everything always, everyday, should be marked to market. Even if it drives you up the wall to be able to do it. Just put it in your pocket but know what its value is. Because if you do, you will be more careful where you ultimately make your investments.

Third, all opportunities lost should be measured. The cost of not being perfect should be known and quantified.

Fourth, having said that and having admitted that being not perfect is a mistake, do not be so scared of admitting to failure and mistake.

Fifth, mistakes should never, never be punished. Not in the world of finance. By that I mean, a compensation system which rewards for higher rates of return has a very basic underlying assumption. It is simply that material rewards, money, bonuses, correlate with being able to predict stock market prices, interest rates, or exchange rates. It is my personal view, and I won't go into all the studies that I have done with my own colleagues, that such a compensation system is neutral at best and probably counterproductive to predicting either interest rates or share prices.

I will divide this room into three parts. The left side of the room I am going to give a lot of rewards to. I told you that I manage $23 billion every morning. You know how important it is for me to predict what the 30-year bond rate will be one year from now. Do you know how much money can be made with $23 billion on predicting the 30-year bond rate? I will tell you what I am going to do to this part of the room. You tell me within 20 basis points where the 30 year treasury is going to be one year from today and I will give you as your bonus and as your compensation, just think about it, a $5 million bonus. Think about what you are going to do with that information. Think about what your traders, your analysts, your economists will do. Think about the people you know; what are you going to do with that piece of information? Thirty-year bond, $5 million bonus, 20 basis points. I have given you maximum rewards. No punishment. You are going to be under a lot of stress.

For the right side of the room we are going to have maximum punishment. You have the same problem. I have this 30-year bond that I have to think about buying and my time frame is a year; I will not describe to you why it is a year but it is a year. Your punishment is one, if you are off by more than 20 basis points, you get fired, you lose your job. Two, if possible, I will blackball you from the world of finance for the rest of your life. I am going to ask you, by the way, if you want this job. You are going to have to mortgage your life, your soul, your family, everything. You are in deep trouble if you make a mistake. We are trying to get a sense of symmetry. You notice how hard, by the way, it is to get to symmetry. I can give you the $5 million but what am I going to take from you? Your kids? But you've got a lot of punishment. Think about how you're going to feel going to work everyday. By the way, this investment has to be made within a week or so. This is a liquid investment because it is going to be liquidated exactly one year from today, no more, no less.

The middle group, I have hired all of you. I said, "look, we have been working together for a long time, we are all old friends, your salary is $75,000 a year." You are all intelligent people. You all had the same training and you all have the same degrees in stock. This middle group, just do the best you can; predict interest rates; let me know what to do with the 30-year bond. It does not matter if you make it or do not make it. I'll feel good, you'll feel good, that's the end of it. All I can do in this time is put that set of three examples to you.

If you think about it, really ask yourselves whether you think that reward or that punishment is statistically, in any meaningful sense of significance, going to produce any difference in the quality of the result. That piece of information, the $5 million or the loss of job doesn't have a thing to do with interest rates. It has to do with what is in your head. And all I have put into your head is an awful lot of trouble and static.

So to observe politics, the budget, stuff that all of us know about, the Japanese, wholesale prices, commodity prices, exchange rates, it is all going to be in there. Do you want to have another piece of information in your head, $5 million versus loss of a job. Do you really think that piece of information is going to change you or is going to make you any different than this other group of just decent, normal people who are working for a living? I suggest that the center group outperforms both of you.

Next rule, sixth, the only perfect hedge is in a Japanese garden.

Seventh, understanding that we are not as smart as we think we are, despite the bonuses, is the beginning of the wisdom.

Eighth, doubling our bets is a recipe for disaster in a system where there is no symmetry for compensation.

Ninth, a manager avoids loss of $50 million and earns nothing while the rest of the world loses $50 million and the former has no profit, he invests at 7%, money costs him 7%, zero profit while the rest of the world has lost $50 million. If you must compensate, compensate him as if he made the best decision even if the firm does not show a nickel profit. Because he avoided loss, even though the avoiding of loss does not show up on the profit and loss statement. Risk affects us all.

Finally, I suggest that many new instruments are developed because of peer pressure. Pressure from issuers, from customers, from managers, from overseers of wealth with a desire to keep up. The fact is that most of those products are very poorly priced by your investment bankers. They have little academic rationale and the fact is that they have less market rationale. Most innovations and most financial engineering products that have been developed over the last decade typically involve a sharing of unknown risks, with future unknown benefits, at a price which is only market clearing. That is all it is. There is competitive pressure to simply sell that latest instrument to a client, like you, or to create the next one whether it makes sense or not as long as it is market clearing and a fee can be received.