

The Global Economy: Strong Fundamentals versus Financial Vulnerabilities

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Andrzej K. Koźmiński, Rector of WSPiZ: Ladies and Gentlemen, dear friends and students. I see so many smiling, young, pretty faces. We are honored to host today a very special speaker in the series of our Distinguished Lectures - Professor Jacob Frenkel, Chairman of Merrill Lynch International, former Governor of the Bank of Israel between 1991 and 2000, and former Director of the Research Department and Economic Counselor of the International Monetary Fund. Professor Frenkel is an excellent person to ask touchy questions. For your benefit, the floor will be open for discussion after the presentation of our guest. I would also like to say that Professor Frenkel is an eminent economist, whose list of prestigious publications is very long. He has spent many years at the University of Chicago, the Mecca of economists. Unfortunately, he does not teach any more. Nonetheless, he has accepted an invitation to become a member of the International Corporate Advisory Board of our school. To introduce our speaker more in detail I give the floor to Professor Grzegorz W. Kolodko.

Grzegorz W. Kolodko, Director of TIGER: Good morning everybody. Welcome Jacob. It is my great privilege to have with us today Professor Jacob Frenkel, one of the leading contemporary economists who have contributed so much to economic thought. He has secured his place in history already at such a young age, which is remarkable proof of his scientific and professional achievements.

When we met about 12 years ago, Professor Frenkel's contribution to the theory of macroeconomics was already acknowledged worldwide. Hence, it is a great privilege to host Professor Frenkel here today. Professor Jacob Frenkel is the Chairman of Merrill Lynch International, as well as the Chairman of Global Financial Institutions and Sovereign Advisory Groups. He is also a member of the Office of the Chairman of Merrill Lynch & Co., Inc. Another very important position that Professor Frenkel holds is the Chairman and CEO of the Group of

Thirty, which will gather again next Tuesday in New York. Between 1991 and 2000 he served two terms as the Governor of the Bank of Israel.

Prior to this, between 1987 and 1991, Professor Frenkel was Economic Counsellor and Director of Research at the International Monetary Fund. During this time we had a chance to work together. To this day I very much appreciate this time we had to work together on many issues including the financial policies and macroeconomic framework for the earlier stage of post-socialist transformation to the market economy, which was quite a new issue as well for the Research Department of the International Monetary Fund at that time.

Professor Frenkel was a member of the G7 Council and he is currently a member of the Advisory Committee of the Institute for International Economics, the Board of Directors of the Institute for International Finance, both based in Washington D.C., and a Distinguished Member of the Advisory Committee of the Korean Institute for Global Economics. During 1995-1996 Professor Frenkel served as Chairman of the Board of Governors of the Inter-American Development Bank and during 1999-2000 as Vice Chairman of the Board of Governors of the European Bank for Reconstruction and Development.

Professor Frenkel was born in Israel in 1943 and holds a BA in Economics and Political Science from the Hebrew University of Jerusalem and his MA and PhD in Economics from the University of Chicago. Our students are very familiar with a certain expression, very popular in the field of economics and management, that of “the Chicago boys.” Now you have the privilege to see one of the best of them all, that is Professor Frenkel. He also held the position of the David Rockefeller Professor of International Economics at the Department of Economics at the University of Chicago, which was his faculty from 1973 to 1987, when he joined the IMF. He also served as the editor of the Journal of Political Economy and I must stress that serving at this position Jacob was the youngest ever editor of this famous leading journal in the fields of economics. Since 1991 he has also been on the faculty of Tel Aviv University, where in 1994 he served as the Weisfeld Professor of the Economics of Peace and International Relations.

It is well-known that Professor Frankel is the author and co-author of a number of books, papers, and articles. His contribution to economic literature is really very impressive and I would like to encourage our students to continue studying and reading the papers and books edited and written by Professor Frenkel. Furthermore, from an *ex-post* perspective, that is the more we look back, the more we see Professor Frenkel’s real contribution to economics - Professor Frenkel has stepped forward to reveal what is now a fundamental part of our current economic knowledge. His great contribution is to the monetary approach to the balance of payments and the relation

between the exchange rate and the balance of payments. Actually, it was in the 1970's that Professor Frenkel first introduced his theory of the balance of payments into macroeconomics.

The second great contribution of Jacob to economic theory, I think, is his comprehensive analysis of fiscal policy, and especially of the intertemporal implications of this policy for economic stabilization and long-term growth. The third contribution of Professor Frenkel, is his analysis of capital flows. From all these contributions we have learned a great deal and I think that even now, when acting as a Chairman of Merrill Lynch International, he may also gain from his previous theoretical contributions dealing with the very many issues on the global economic scene, that is now as a banker, or manager rather than a researcher. Yet I am hoping that Professor Frenkel will contribute still more to economic theories in the future.

Central bankers love to listen to Professor Jacob Frenkel. But when I was attending a certain, very prestigious conference; one of the most important central bankers in the world said that the biggest nightmare for central bank governors around the world is the fear that the media may accuse them of being too soft. So for that reason they love to be too hard. The second fear they have is to follow a speaker of such caliber as Professor Jacob Frenkel. Nobody wants to take the floor after a lecture or presentation of Professor Frenkel because he is so great. He is so good at public speaking and giving presentations that hardly anybody can match his ability to communicate and to explain his point of view. I am very happy that I have the chance to speak, Jacob, before you. Welcome again and please the floor at the Leon Koźmiński Academy of Entrepreneurship and Management belongs to you. Welcome.

Jacob A. Frenkel: Thank you very much. After such a kind introduction I think the best thing for me is to say: "Thank you. It was very nice to be here. Goodbye." But then I would disappoint you. This introduction was indeed very kind and I am told that the best way to start the presentation is with a light remark. So let me make a light remark a propos this excessively kind introduction.

There was once a gentleman who was invited to receive a special honor. He was introduced as the great man who had discovered oil in Nebraska, and had made billions of dollars. When he came to the podium he said: "Thank you very much for the introduction but I want to make a few corrections. First, it was not Nebraska, it was North Dakota. Second, it was not oil, it was coal. Third, it was not billions of dollars, it was millions of dollars. Fourth, it was not me, it was my brother. Fifth, he did not make money; he lost money. But since I now have the microphone, let me in any event make some remarks."

It is indeed a great privilege for me, not just pleasure but a real privilege, to come to Poland, to be here at the Leon Koźmiński Academy of Entrepreneurship and Management. To the audience composed mainly of young people with the future ahead of you: I am not sure you can fully appreciate the extraordinary revolution of being members of this kind of institution, an institution that could not have been here just a few years ago. An institution that is private, free enterprise, global, not closed, with one element of excellence leading it. Those who sit here at the podium, Professor Andrzej Koźmiński, the Rector of WSPiZ and Professor Grzegorz W. Kolodko, the Director of TIGER, represent that excellence. I really appreciate this opportunity very much.

Let me come immediately to the subject of my remarks. The title of the talk is: “The Global Economy.” Then there is the subtitle: “Strong Fundamentals vs. Financial Vulnerabilities.” The first question is what do we mean by the global economy, because the markets are now integrated and the economy is global. I guess one would want to immortalize some remarks thinking that they will not be obsolete in five minutes. But the dynamics of knowledge and the dream of a researcher is to make his remarks obsolete -- and that is the name of progress.

The global economy means different things to different people. Markets are global. Knowledge is global. Information is global. Technology is global. And even values become more and more global. And obviously there is a growing consensus of what does it mean to do good economics vs. bad economics, what is the recipe or general direction for success.

For me this is the concept of the global economy: an economy in which time shrinks, history is transformed into the present through memories and knowledge, the future is transformed into the present through expectations, and capital markets are capable of moving the future and the past into the present. So in a way, the point in time in which we operate is not just a single point in a long line of the scale of time, but really it is a culmination of all the history and all of what we believe expectations about the future will be. The mechanism by which we bring the past and the future into the present is the capital market. That is the machinery that enables you to translate assets and values and streams into the present. That is why when people are taking too lightly the implications of what they do today, because they say: “Well, that is OK. We can correct it tomorrow”, that is a big mistake, an analytical mistake, a conceptual mistake. Because what you do today has implications on the way you are perceived by others, on the way in which your very policies are interpreted by those who you expect to impact. In short, the present is a very important point in time.

Technology has linked together halves of the world. We are close to a world without geography, close to it. Capital markets have linked past and future. We are close to the world without time. Currencies are being unified. We are close to the world of the end of multiple currencies. I am not sure whether human beings will ever be able to bring us to the end of the era of the nation-state but we are close to becoming a big whole. Then when there is a big whole, there is always a problem. After all societies are different, after all histories do differ. How can you make sure that you have integration while at the same time maintaining your individual or national identity? That is a challenge of globalization.

My theme is that you do not need to give away your own personal history and your own values and identity, but you must recognize that you are part of a system that has global rules of the game. The rules of economics are much more universal than borders will define, and are better interpreted. Before I go to discuss how they work let me make one more light remark in this regard.

There were two brothers, in America they were called Sam and Joe. One day Sam was picked up by a friend in a car and as they were driving they arrived to a red light. The driver pressed on the gas and crossed the intersection. Sam said: "What are you doing? You just crossed a red light!" and the driver said: "Do not worry, my brother always does it." They went on and they reached the next red light and he pressed on the gas and crossed: "What are you doing?" – "My brother always does it." When they went on and they arrived to a green light he pressed on the brakes and stopped the car. "What are you doing?" – "I never know, my brother may come from the other side."

That is an important point, which is: the role of globalization is not to induce change the way your brother drives. If he is used to going on the red light - fine. If he is stopping at the green light – fine - as long as you know the rules of the game. Once you know the rules of the game you are part of the global economy. Because you will interpret it, you will take it into account. Globalization does not require identity of behavior, but it requires complete internalization of the knowledge of what is happening there, and how we can behave accordingly.

There was a story about the butterfly. This is a serious story. A scientist/author called James Gleick wrote a book some years ago named "Chaos", related to the development of chaos theory. The story in the book describes a small butterfly in the Pacific Ocean that is waving his wings. As you know physicists start with some assumptions and they say: "Suppose that there was no friction at all. How will these waves behave?" Well, they start in the Pacific. Then there is suddenly great amplitude and those waves become a storm, and when they cross the ocean

there is a huge storm all over the world. This is the butterfly theory of storms. The question that you ask yourself is: there are so many butterflies and yet we do not see these big storms, which led to the theory of chaos. And the answer is: the assumption that there is no friction is of course unrealistic and therefore we understand now why the storms do not get created.

How does that bring us to economics? With globalization, with the removal of constraints and restrictions on capital movements, our world has become more and more frictionless. The degree of friction has diminished. We are moving more and more towards the syndrome of the butterfly effect. Therefore many of the issues that are addressed today about the impact of shocks in one part of the world, have an impact on economic reality in another part of the world. Many of these issues are much more relevant today than ever before, because we have moved more and more towards the butterfly frictionless world, the world in which small storms get amplified into large storms. This is the reason why some people say: “We do not like the frictionless world. Let’s put sand in the wheels of this machine, let’s prevent the machine from moving too much.”

I am not going to speak much about it today but I can tell you there is no greater fallacy than the sand-in-the-wheels approach that attempts to prevent the implications of capital flows. I am not sure how many of you have followed this debate, but in the post-Asian crisis in 1997 where a lot of storms took place, some countries said: “Let’s block capital flows, let’s put sand in the wheels in order to block the destabilising capital flows.” This is of course a fallacy. It is a fallacy that is the same as those who want to go on a diet in order to stop bad cholesterol, with the hope that the good cholesterol will still come. There is no way to separate good capital flows from bad capital flows and sand in the wheels is the wrong approach.

Let me take you now to the issue of today. As you are aware the world economy has undergone a significant slowdown. Because it is a global economy it does not matter much where the slowdown started because it has diffused throughout the world economic system. The question that arises is where are we and where do we go? Like always when you are on a train, when you want to know where you are going; you basically ask where does the locomotive go. The world economy train has today a major single locomotive. It is the U.S. The reason, therefore, why I want to talk with you a little bit about the United States, is not in order to make you experts about the U.S. economy but as passengers on important cars in this train you had better know where the locomotive is and where it goes.

Question: is the United States in deep crisis? Answer: Depends whom you ask. If you go to Wall Street, the place where bankers are, you get the feeling that something is wrong. You get a feeling that there are a lot of uncertainties and you do not even know where you are, you do not know, therefore, where you are going. If you cross the street, and go to Main Street, from Wall

Street, namely if you look at the economy from the perspective of the real economy rather than the financial economy, you get a different impression. We have a puzzle. After all financial markets are supposed to be the mirror of the real economy. The mirror does not look good, but the real economy is perhaps looking better. Which one is the correct one? Is it the mirror or is it the real economy? One of the things I want to discuss with you is precisely this issue.

You can see that the real economy in the United States has many of the characteristics of a strong economy. It is an economy that is very competitive. It is an economy that is deregulated. It is an economy with a well-functioning financial system, reflecting the well functioning process of financial intermediation. It is an economy that is very productive; low inflation; fiscal flexibility; a decisive monetary policy.

US Economy: Strong Fundamentals

- **Competitive and deregulated**
- **Robust financial system**
- **Technology / information revolution**
- **High productivity**
- **Low inflation**
- **Fiscal flexibility & relatively low public debt**
- **Decisive Fed policy response**

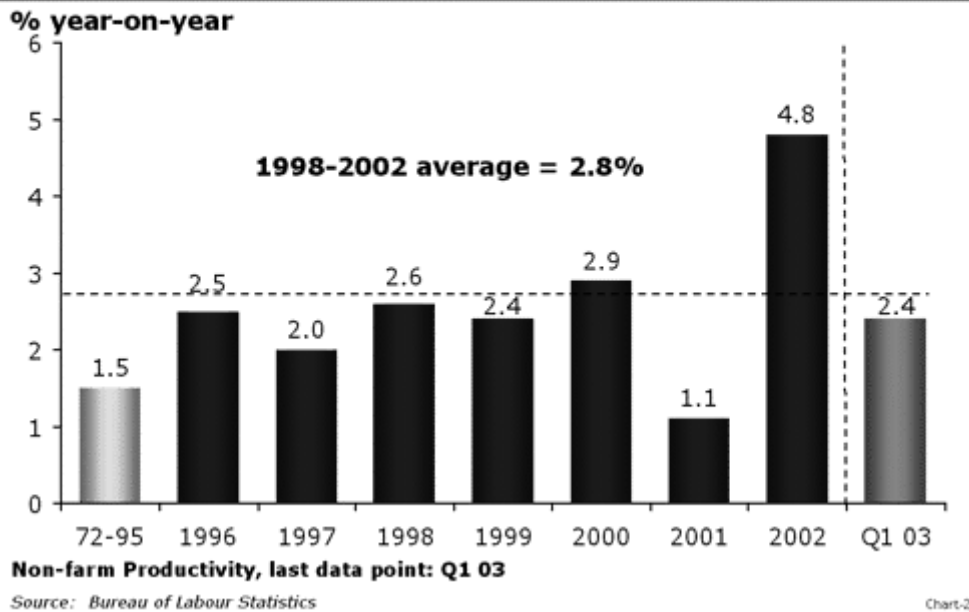
But Concerns From Financial Markets About Deflation

Chart-1

These characteristics of the real economy are not shared by Wall Street analysts. The person in Wall Street tells me that I should be much more pessimistic than is warranted by the real economy. So let me take look a little bit about what are the real elements of this economy. Why should one be more optimistic?

I look at productivity, which is the *sine qua non* of good economic performance. When you have a deregulated economy, a competitive economy, you see what happens to productivity.

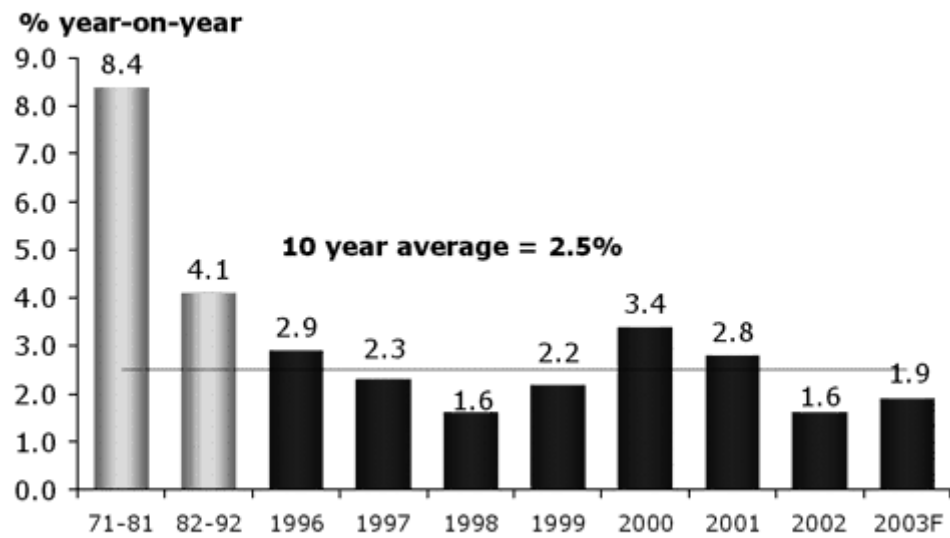
US Economy Enjoys Healthy Levels Productivity



Yes, people say that the productivity has shrunk with the collapse of the dotcom/telecom, but that is not the case. In the decade from the early 1970s to 1995 average productivity was 1.5 percent per year. This was 25 years – a quarter of a century. Then we move to the decade of the 1980s and productivity went up to about 2.5 percent. Then we move to the decade of the 1990s and productivity went up again to 2.5 percent and a little more. And, in 2002 we have productivity increases in the region of 5%. No modern economy can sustain such a productivity gain. Of course people may ask where did it come from. That is the technological revolution. That is the information revolution. Whatever it is, this economy has very strong fundamentals.

Not only does it have strong fundamentals - this rapid productivity is associated with stable prices.

In a Low Inflation Environment

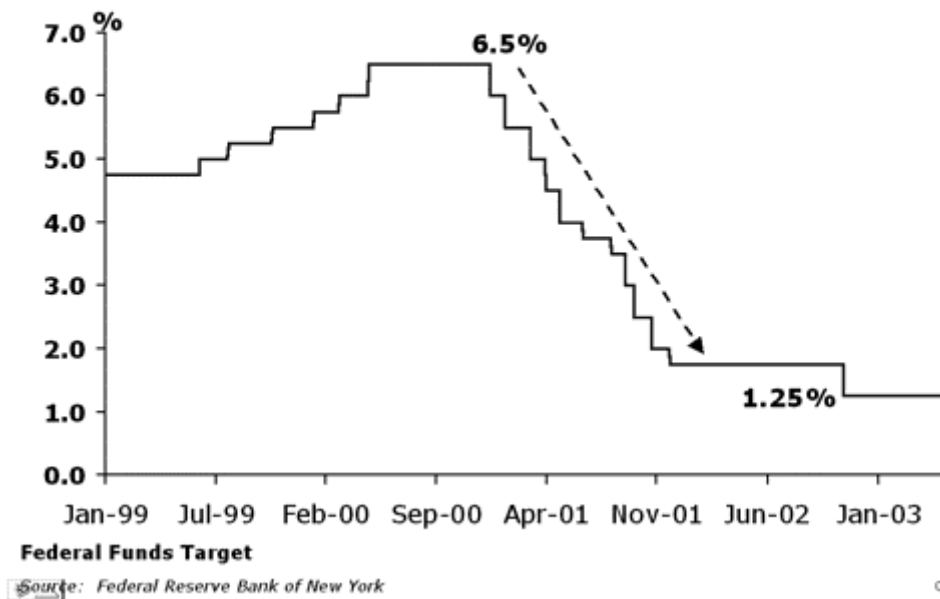


Source: Bureau of Labour Statistics, Merrill Lynch forecast

Chart-3

Just in the decade of the 1970s inflation was close to 10 percent. When we go to the decade of the 1980s inflation was 4 percent. Then now – hardly any inflation. Moreover, the great achievement on the inflation front has enabled the Federal Reserve to lower interest rates in a dramatic fashion.

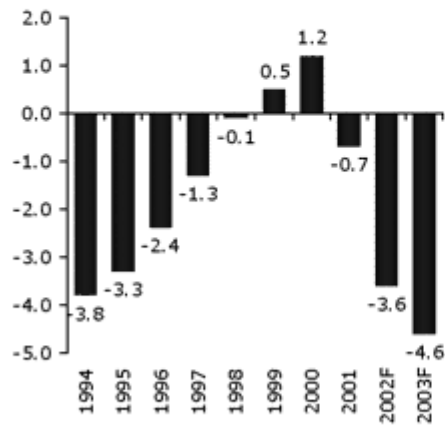
Decisive US Fed Rate Cuts



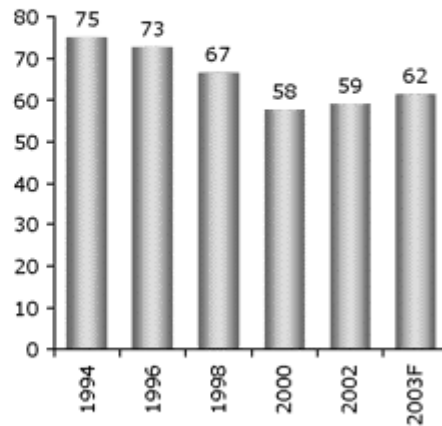
A huge reduction from 6.5 percent to a 1.25 percent interest rate and all within the last two years. You may ask yourself: “Is the Fed irresponsible or is it responsible?” My theme would be that the Fed is very responsible. They can lower the rates because they prepared the umbrella before the rain – they have established the conditions of price stability, which in turn enabled the sharp rate reduction.

Reinforced by Sound Fiscal Policy

US Budget Balance as % of GDP



US Gross Public Debt as % of GDP



Source: IMF World Economic Outlook, April 2003

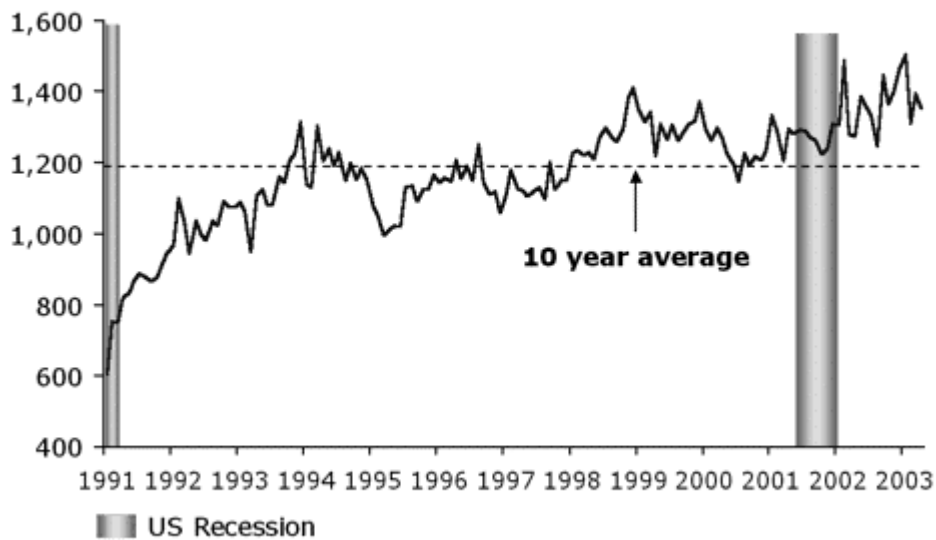


Chart-5

They were sufficiently in stability mode, sufficiently in fiscal consolidation mode so that their ammunition was full and when they needed to lower interest rates they could do it without triggering any inflation.

This looks like a resilient economy. Continuing the “tour” of the real economy, we may follow the principle “If I want to understand how an economy works,” one needs to look at an important sector called housing.”

Robust US Housing Starts



Source: Census Bureau; Single-Family Housing Starts, 000s, SAAR, last data point: Apr 03

Chart-6

If you look at housing, at least in America, you see that there was a significant rise in housing starts. You remember in the early 1980s there was a recession and in this recession, indeed, housing starts were very low. Thereafter, housing starts have been going up and up and up even during the recent period which is a so-called recession. Do we really have a recession? Or is it just a slowdown? Then we continue the tour and examine the evolution of housing sales - the same story.

US Home Sales Still Strong



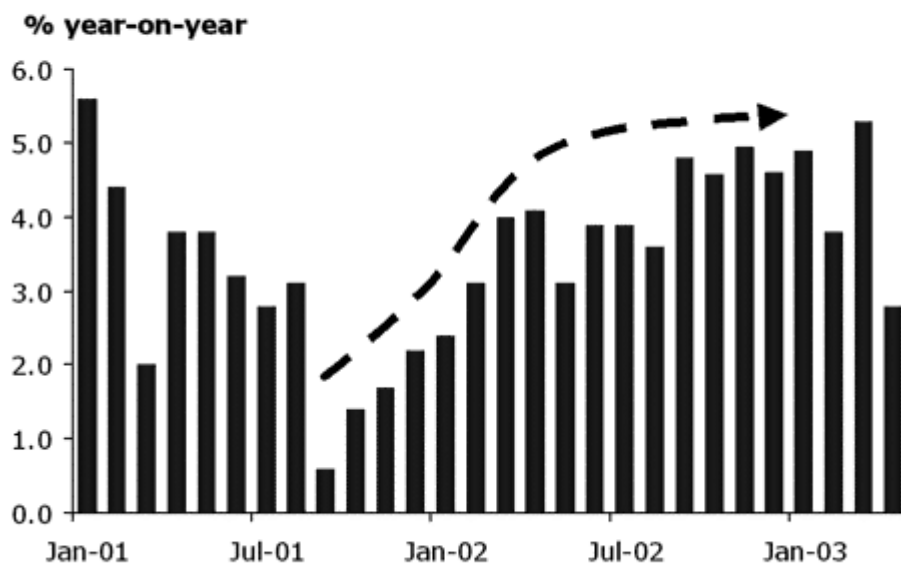
Source: Census Bureau; Existing Home Sales, 000s, SAAR, last data point: Mar 03

Chart-7

The housing sector while at strong levels is currently showing signs of fatigue, though far from a collapse.

Then we continue the tour and examine what do consumers do. Do they stay at home? Or do they spend?

US Retail Sales Show Fatigue

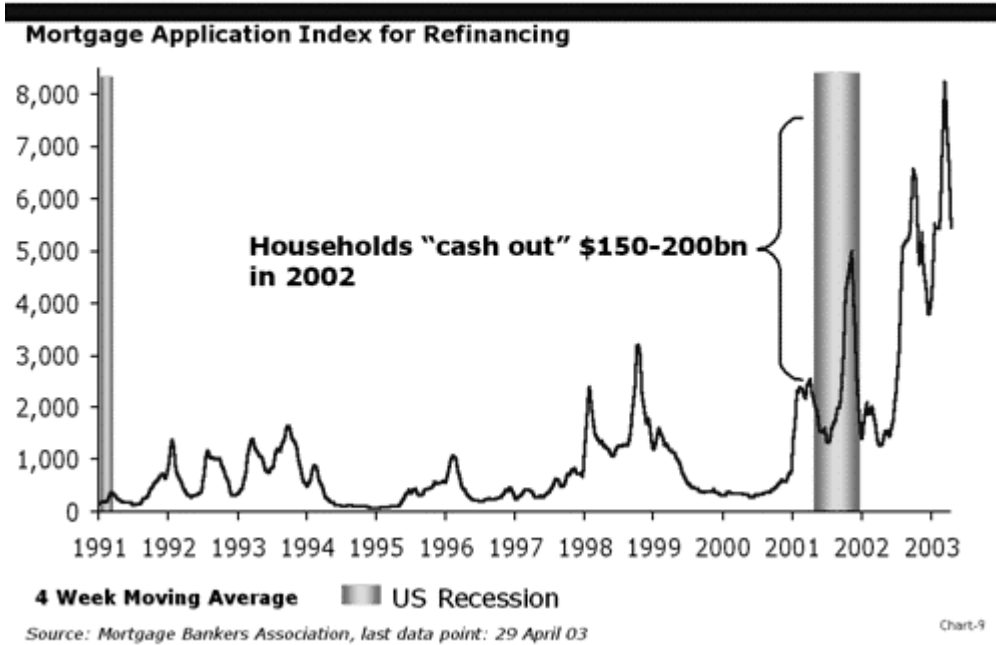


Source: Census Bureau, Retail Sales ex-autos, last data point: Apr 03

Chart-8

Then we look and see that U.S. retail sales have risen, in spite of a recent drop, households getting vital support from low oil prices and mortgage refinancing.

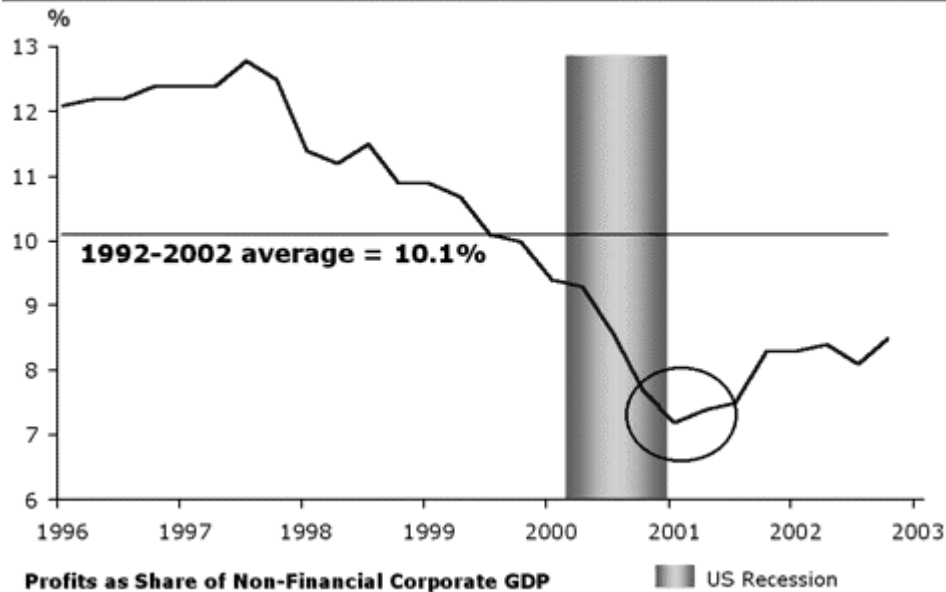
Mortgage Refinancing Supports Consumption



The rate of growth of retail sales did come down sometime in the middle of last year but then they go up again.

Continuing the tour of the real economy we examine developments of corporate profits.

Corporate Profit Crunch Starts to Ease

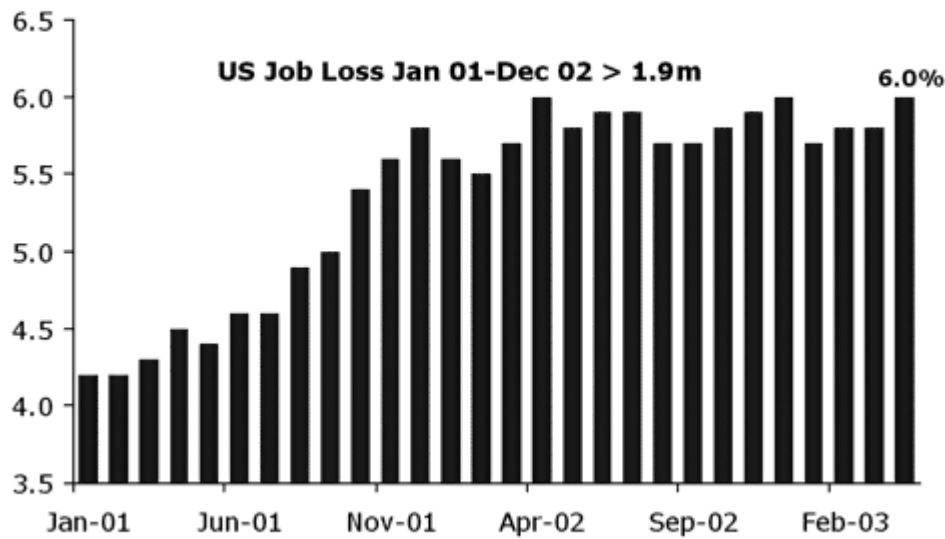


Source: Bureau of Economic Analysis, last data point: Q4 02

Chart-10

Here we note that U.S. corporate profits have declined significantly. It is this that underlined the feeling of the recession. Faced with this profit crunch, the business sector had to reduce costs by cutting down labor cost. This continues to happen and is a reflection of the flexibility of the US economy.

Companies Lay Off Workers to Cut Costs



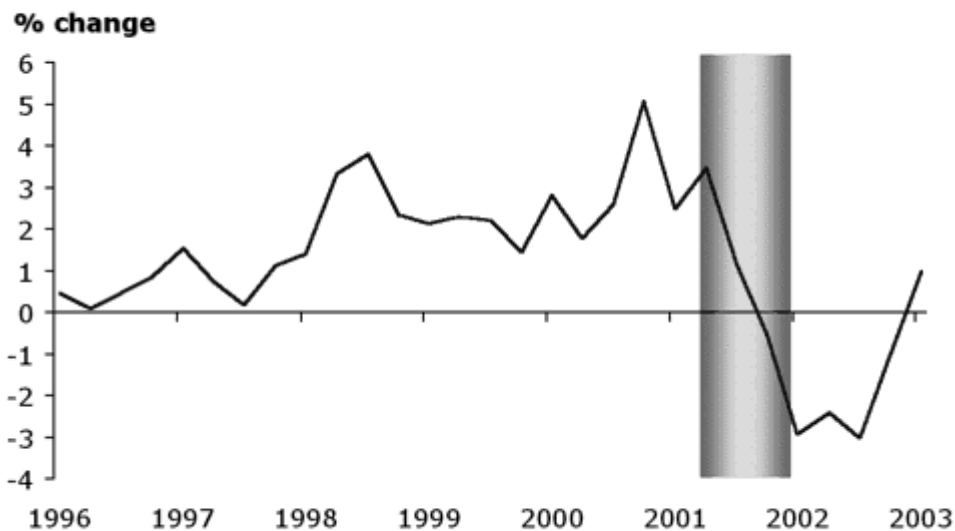
SA Unemployment Rate, as % of Total Civilian Labour Force

Source: Bureau of Labour Statistics, last data point: April 03

Chart-11

Improving productivity and cutting down labor costs proved to be the efficient way to cut cost in a sustained manner. As a result, unit labor costs, which are the most important element of cost, have declined.

Unit Labour Cost Pressures Remain Low



■ US Recession

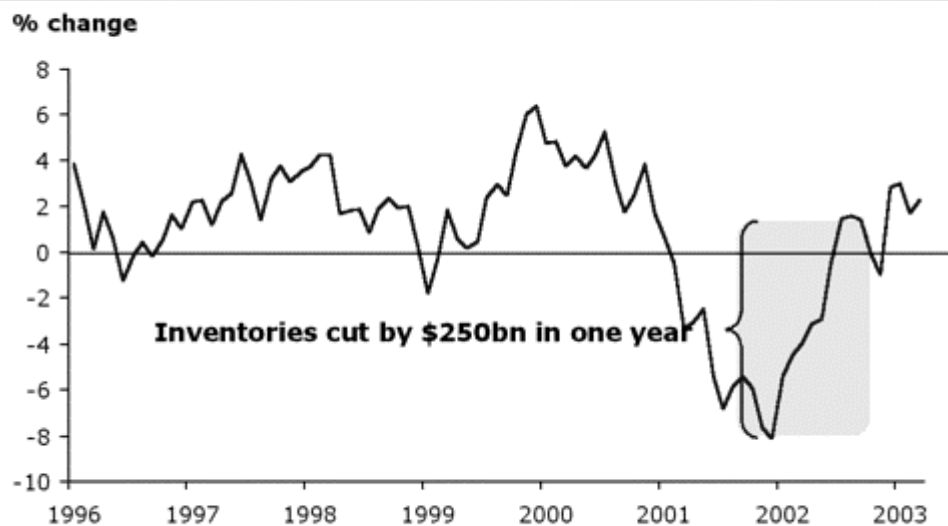
Source: Bureau of Labour Statistics; Unit Labour Costs, Non-farm Business Sector, last data point: Q1 03

Chart-12

Even if I finish the lecture now that would already have been a lesson. The lesson is: an economy that is confronted by a shock that affects profits, if it is capable of having the flexibility in the labor market that enables you to cut your labor force, or to change the wages accordingly, this economy will not have a long and deep recession. It can have slowdowns but not deep because this decline in unit labor costs is the key to its ability to take off again.

The fact that we have had a technology and information revolution enables entrepreneurs to manage their inventories very effectively. Generally, inventories are a waste, lying on the shelves. If you do not have information, and you do not know whether you are holding too little or too much, normally this is a disruptive thing. The great invention of computers and managerial ability to run inventories under the so-called. “Just in time inventory management.” This is the key point of a flexible economy.

US Inventory Adjustment at Record Pace



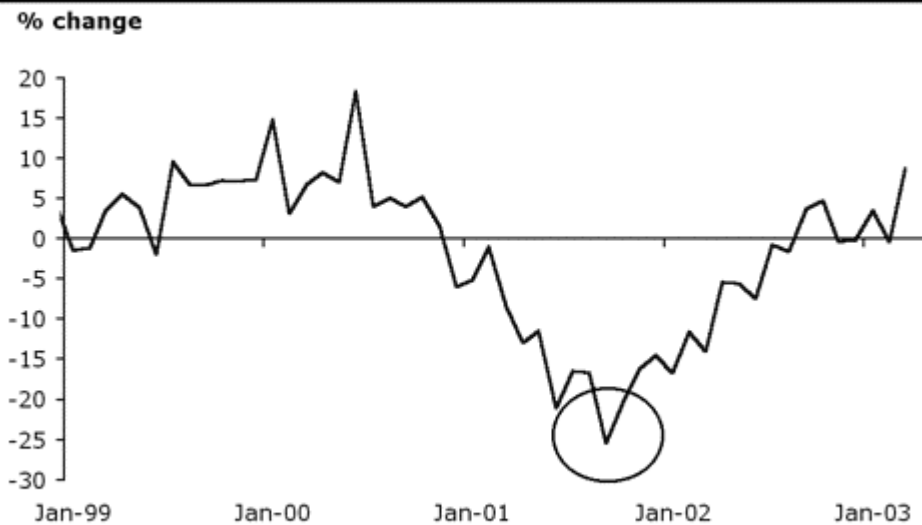
Manufacturing & Wholesale Inventories, 3 Month % Change, Annualised

Source: Census Bureau, last data point: Mar 03

Chart-13

Indeed when you look at the dynamics of inventories in the U.S., you can see that when the slowdown started, immediately inventories fell dramatically. V-shaped profile since 2002 shows the responsiveness of the US economy. How will inventories be built up? Straight from the production line. The ability to adjust quickly through inventory changes is a key to the flexibility of the U.S. economy. In fact we already see significant signs of capital spending.

Capital Spending Leads a Modest Recovery



New Orders of Non-Defense Capital Goods, % change year-on-year

Source: Census Bureau, last data point: Mar 03

Chart-14

Against this background from the real economy we need to understand the cause for concern in financial markets. I turn next to a discussion of the vulnerabilities and the reason for concern.

Vulnerable Financial Markets and Corporate Crisis

- Bankruptcies of Enron, WorldCom, Global Crossing, Adelphia & others triggered equity market fall
- Widespread doubts about US accounting & corporate governance standards
- Investors reduce holdings of US assets and USD

Financial Market Stress May Affect Real Economy

Chart-15

For this I want to start with an anecdote.

You all remember what happened on September 11, 2001. Shortly after the disaster of September 11, 2001 a questionnaire was issued to consumers and households in New York. The questionnaire had three questions, based on the assumption that the U.S. was likely to undertake some military action in Afghanistan. At the time, it was not yet known what would happen. First question: Suppose that U.S. actions in Afghanistan prove successful. Would you plan to take your family on holiday next summer? And the answer was yes. Second question: Suppose that when next summer comes, you realize that the operations were unsuccessful. Would you then plan to take your family, here in the U.S., for holiday? The answer was yes. Third, and most important question: Suppose that next summer comes and you do not yet know if the actions were successful or not. Will you then take your family on holiday? The answer was no.

When you think about that it looks like a paradox. If you win the war, you take a holiday. If you lose the operation you still take a holiday. But if you do not know if you win or lose, you stay home. But if you think a little deeper you see that it is not a paradox at all. It is a deep psychological - philosophical distinction between the concept of risk and the concept of uncertainty. There was a famous economist and philosopher Frank Knight, who years ago drew this distinction between risk and uncertainty.

Risk is something we always live with. When you get up in the morning, there is a probability distribution reflecting the chance for a rainy day. Likewise, there is the risk, according to probability distribution for a car accident. You know the parameters of this probability distribution. You can even buy insurance, or take an umbrella. This is the way we live.

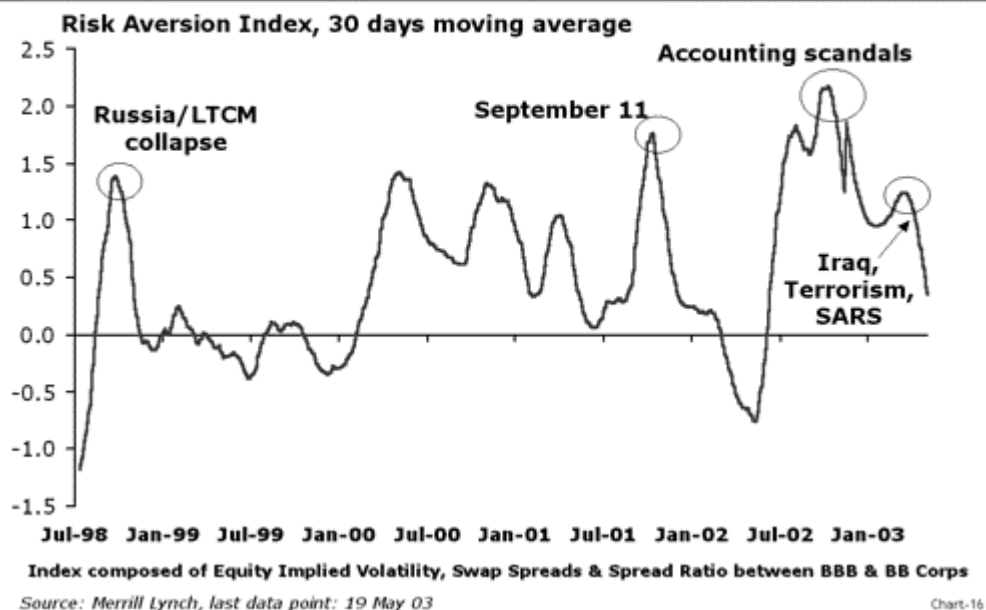
Uncertainty is much more complicated. There, you do not even know the probability distribution. You do not know the possible outcomes. What do you do in a world in which you do not know the shape of the probability distribution? You go back to the bunker. You wait for the storm to pass. You do not make decisions. You do not even know how to assess situations. You assume that by definition the state of uncertainty is a transitory state, a temporary state. But the more evidence accumulates you will eventually be able to learn about the shape of its distribution, to parameterize it and go back to the more familiar world of risk where you conduct business, where you invest. This is the reason why immediately after September 11, people went to the bunker because they did not know what world they lived in. Suddenly investment plans were curtailed, boards of corporations became risk averters. Risk committees were paralyzed. Nobody wanted to take positions waiting for the storm to pass. Of course forecasters

immediately downgraded their forecast for the future. Everyone competed with each other about who would be more pessimistic about the future.

Of course when you are in the bunker, you forget the periscope and you only look at each other's faces and see gloom. It is contagious. Indeed November and December 2001 were the worst months of the year. Financial markets, that are the mirror of so-called real economy, reflected it. Did the U.S. become less competitive? Did the technological know-how disappear? Did the information go away? Did price stability disappear? Did productivity go away? No! But the perspective from the bunker was that type of a perspective. Of course this is the time when you start to draw a distinction between those who look at fundamentals and those who look at the mirror and occasionally get confused.

This is the reason why when you look at the vulnerability of financial markets and on top of it you add the fact that there are some doubts, there are bankruptcies, there is dissatisfaction, there is some corruption - nobody knows what is happening. This is the reason why at that stage suddenly you get two different pictures of the same reality. One is the gloom and the other is the optimism. This was the time in which the picture of the world economy based on fundamentals diverges to a significant degree from the picture of the same economy based on financial markets. In fact when you construct a synthetic measure of risk aversion measured from bond and equity markets, you can see how much this measure went up. Also, how it has declined following recent events in Iraq.

Risk Aversion in US Markets



You can see that in 1998 with the collapse of Russia and LTCM, you see it after 9/11, you see what happened in the wake of the accounting scandals in Wall Street.

We are now in the situation where financial markets become more color blind. In what way? There is a concept, which is called spread. You can take a very good security, say a 'AAA', and you look at its yield vs. a more risky security. Obviously the spread is high, because investors need to be compensated for the risky position they take.

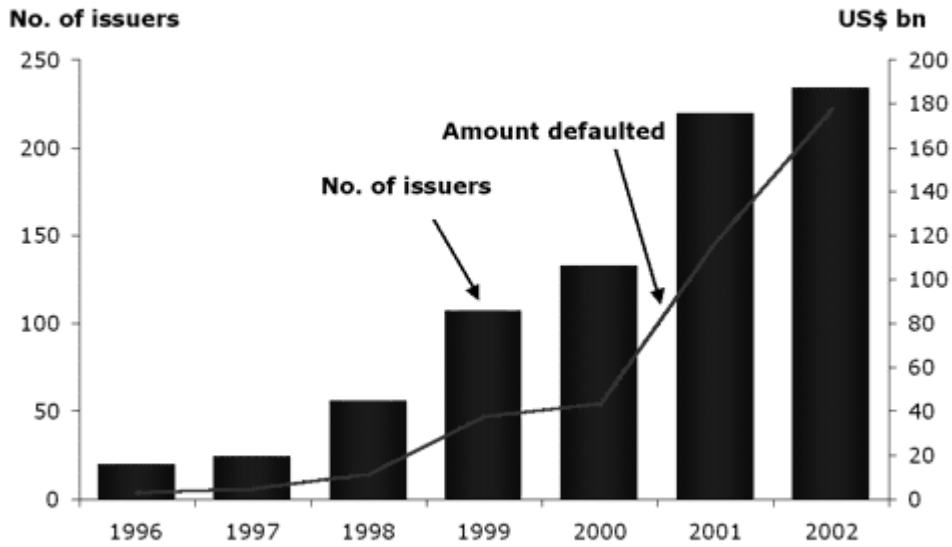
US Corporate Risk Remain: Flight to Quality



What you see now is that recently different “spreads”, measuring very different risks have converged. Investors become color blind. They say: “It is either AAA or non-AAA and I do not care if it is BBB or a lot worse.” There is a flight to quality. It is in this case that an investor basically says: “I am a more avid risk averter than what I used to be. I am only interested in things that are safe.”

Why? Because indeed when I look at defaults in the corporate market I see that globally we have more and more defaults. In 2002, around 180 billion dollars of rated bonds were defaulting globally.

Corporate Bond Defaults Rise Globally

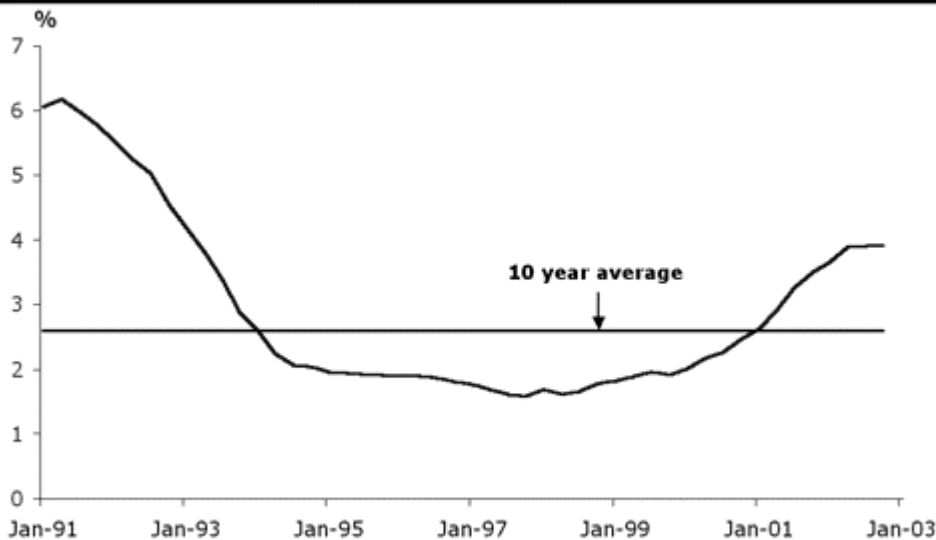


Source: Standard & Poor's

Chart-18

U.S. loans going into arrears have declined through 1990-1997, and have climbed up ever since.

US Loan Arrears Are Rising



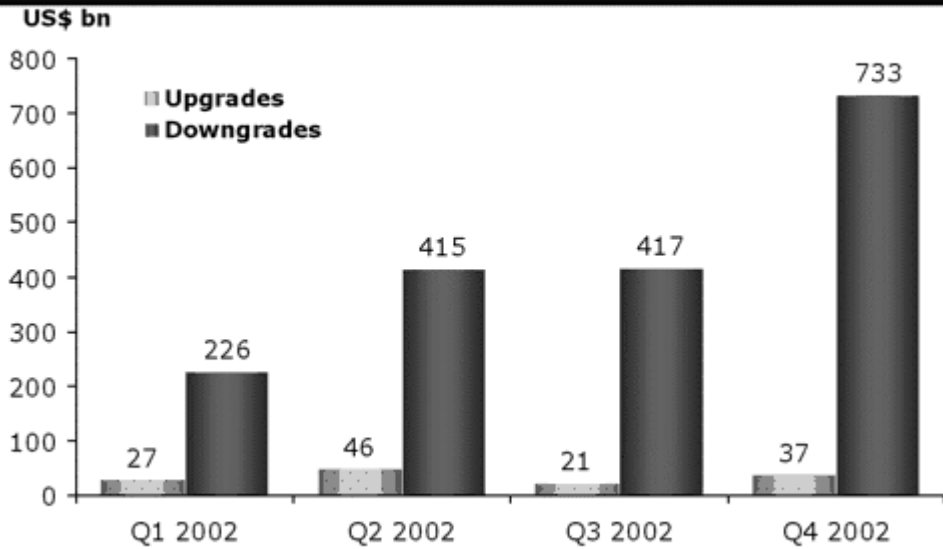
Commercial & Industrial Loans Past Due 30 Days or More, as Percent of Loans SA

Source: Federal Reserve Board, last data point: Q4 02

Chart-19

Indeed corporate credit ratings are worsening. Rating agencies downgraded ratings of U.S. corporates much more than upgraded.

US Corporate Credit Ratings Worsen



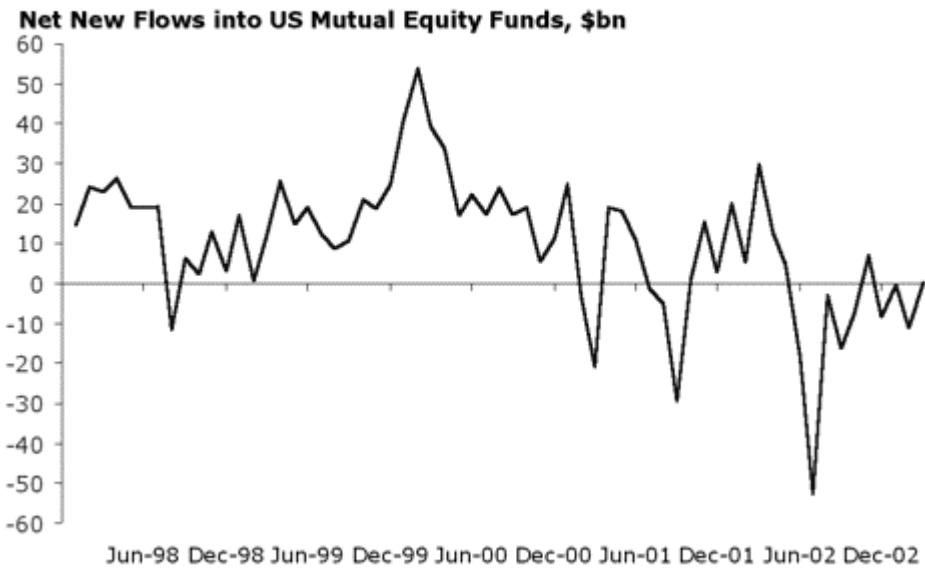
US rating actions by value

Source: Standard & Poor's

Chart-20

And what we see is that in 2002 we have \$1.8 trillion dollars worth of bonds of corporations that have been downgraded. And very few upgraded. The world is now viewed as more risky. More risky, so that indeed people have less focus on the U.S. economy.

US Investors Reduce Equity Holdings



Source: Investment Company Institute, last data point: March 03

Chart-21

What do we do? Fewer resources are flowing into the US. Less bonds, less money into stocks. There is a flight to a different direction. Indeed when all this happens you can see that the dollar weakens and it starts having implications.

Foreign Investors Withdraw from US Markets



Source: Federal Reserve, last data point: February 03

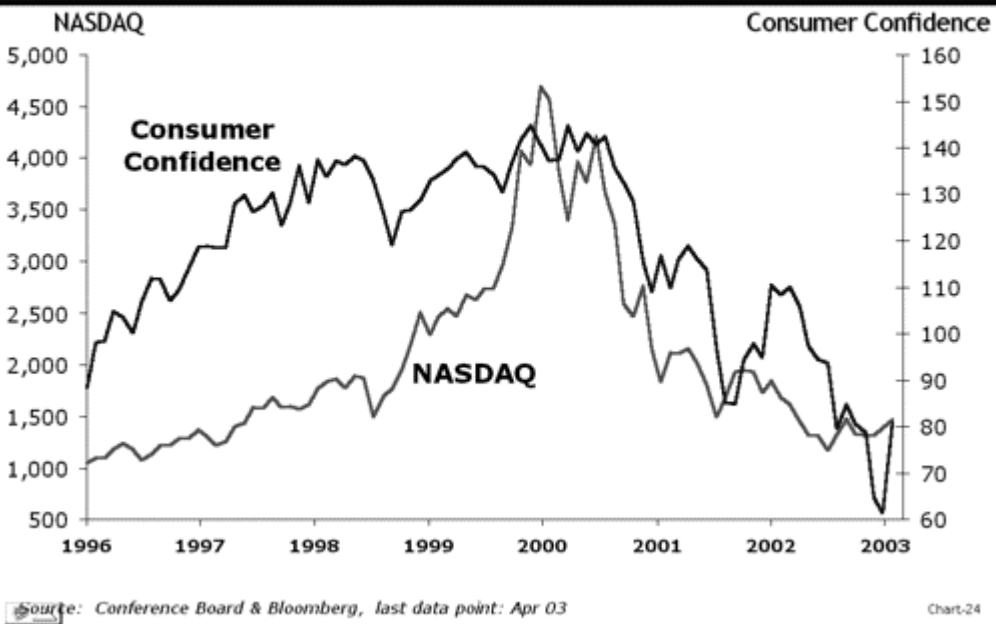
Chart-22

US Dollar Weakens

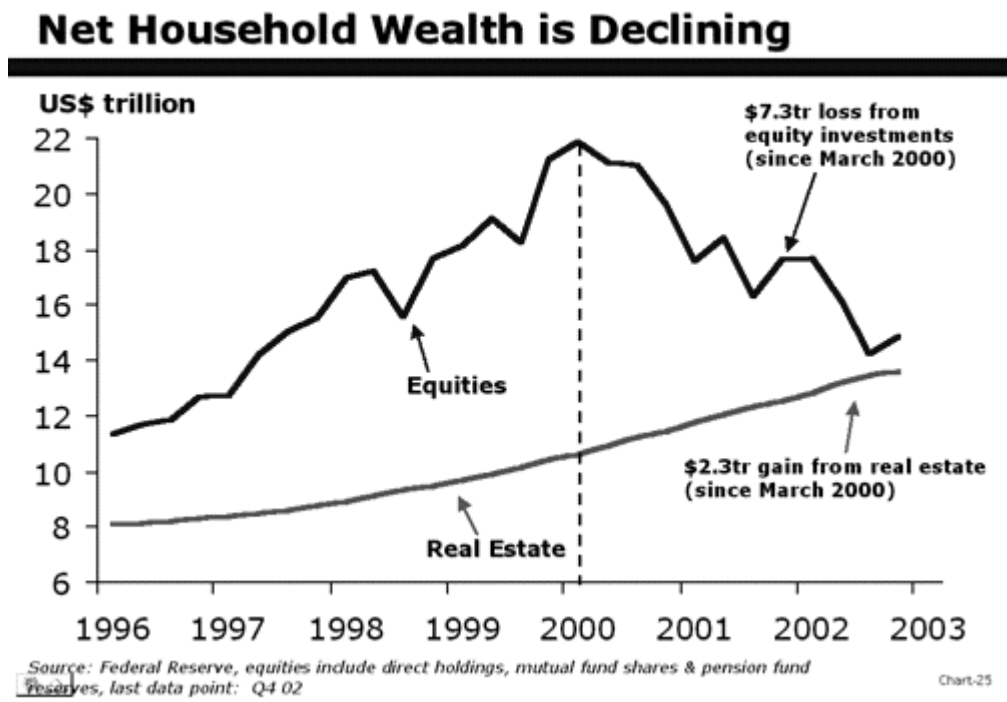


On top of it the guy in Wall Street tells you: “I am worried, in spite of what you told me, I am worried”, he says: “Look, we had a NASDAQ, the stock market of high-tech.”

Burst of Tech Bubble Affects US Consumers



It had seen a big boom and then suddenly it collapsed. Not only did it collapsed, it carried with it consumer confidence, because consumer confidence is strongly correlated with the stock market. Therefore the Wall Street guy says: “Even though NASDAQ is a financial market, the real economy depends on the consumers. Here consumer confidence has been hurt.” The consumers have lost so much wealth. Of course an important part of wealth is housing and this went up, but still there is an issue.



This is the major debate between Wall Street and Main Street, those who look at the financial markets and those who look at the real economy. That is basically the debate that we will need to address and ask where do we go next.

As far as economic growth is concerned, we note that there has been a slowdown all over the world but we also note that the trough, the bottom is behind us.

2002 Global Growth Pattern

Merrill Lynch Forecasts, May 2003

	2001		2002				2003F	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
United States	-0.3	2.7	5.0	1.3	4.0	1.4	1.6	1.8
Euroland	1.4	0.6	0.4	0.8	1.0	1.3	0.8	0.6
Japan	-1.3	-3.0	-3.8	-0.2	1.8	2.6	2.8	-0.4

Chart-26

Global Growth Outlook

Merrill Lynch Forecasts, May 2003

	2000	2001	2002E	2003F
World*	4.0	1.2	1.9	2.2
US	3.8	0.3	2.4	2.1
Euroland	3.5	1.4	0.8	0.6
Japan	2.4	-0.2	0.2	0.2
Asia Pacific (ex. Japan)	6.7	4.0	5.6	5.1
Latin America	4.1	0.0	-0.7	1.5

(*) IMF forecasts

Chart-27

The United States reached the bottom of the cycle in the third quarter of 2001. Euroland reached it at the beginning of 2002 and so did Japan. The story of Japan is a complicated story, I will not elaborate on it today. The recovery in the U.S. is going to be quicker than the recovery in

Europe. Why? Because the U.S. is so much more flexible, more competitive, more deregulated and more open. This means that while competition maybe something difficult and not always liked, when it begins to bear fruit the cycles will be shallower.

Let me tell you a story about competition. When I was in the public sector, one of my missions was to open up the economy to competition and everyone came to me and said: “But if you open up the economy you will drive us out of business. We need protection.” I told them the story about the bear. Two friends went to the mountains. The mountains in Wyoming have some bears. They were resting under the tree and suddenly a bear came. One of the guys went to his backpack and took his running shoes and put them on. His friend asked him: “Why are you putting the running shoes. Do you expect to run faster than the bear?” The answer was: “I do not need to run faster than the bear. I only need to run faster than you.” That is an important message about competition. You do not need to be better than the best to survive in this world. You only need to be a little better than your next-door neighbor. That is all you need. In a global economy with competition everyone is getting better off, provided you know what the issue is.

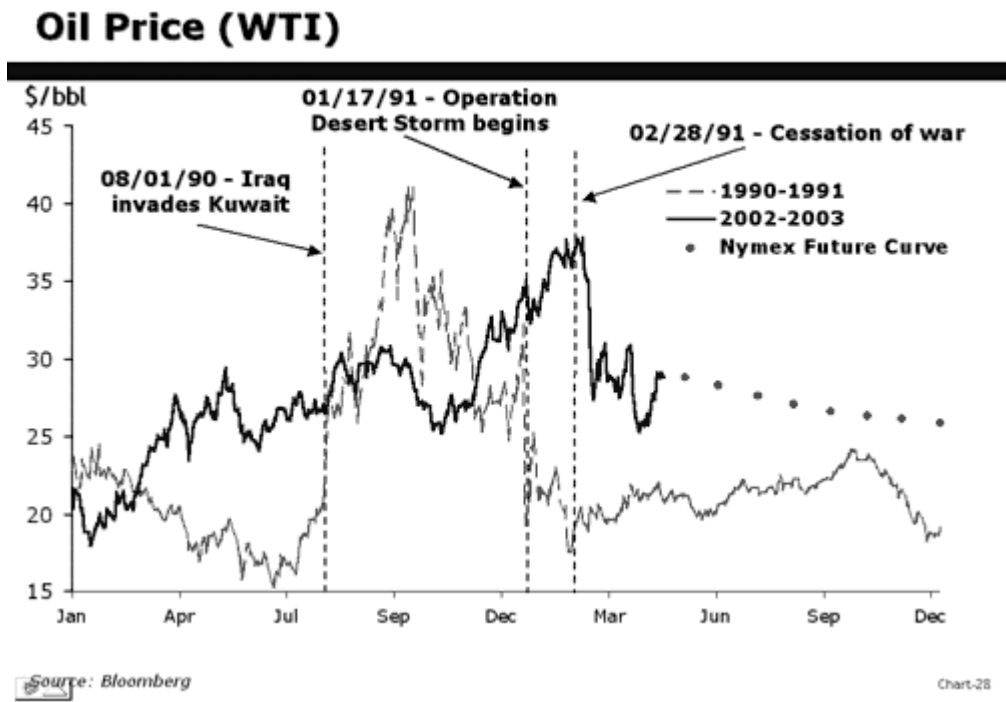
Based on all of this, current forecasts project that global growth will be a bit higher in 2003 than 2002. There are, however, sources of vulnerability and uncertainty. There are risks to the forecast. For example: One such risk was the war in Iraq.

There were various mechanisms by which a war in Iraq could have impacted the real economy. It affected the course of asset prices in general. We already know how asset prices get transmitted internationally. It affected oil prices and that is a very important channel. Oil is an important part of both prices and costs.

Now you are here in late May 2003 and we are asking ourselves what has been the impact on oil prices. How would you, as economists and businessmen; how would you think about that? We are now sitting today on a specific date in May - the 21st of May, and we know what is the price today - we know there might be a disruption. I ask you what is likely to be the price of oil tomorrow, the day after, in a week or a month.

One could argue that if you are worried about the price of oil, remember that the price of oil reflects the current level of production and if indeed there is a disruption to this, it will affect production. But do not forget, in the U.S. and in Europe and elsewhere there are amounts of strategic reserves – billions of barrels. If indeed policy-makers set their mind to say: “Whatever happens we do not want to allow the price of oil to be disrupted”, there is a mechanism that can be used. One can also rely on the markets that offer forward contracts.

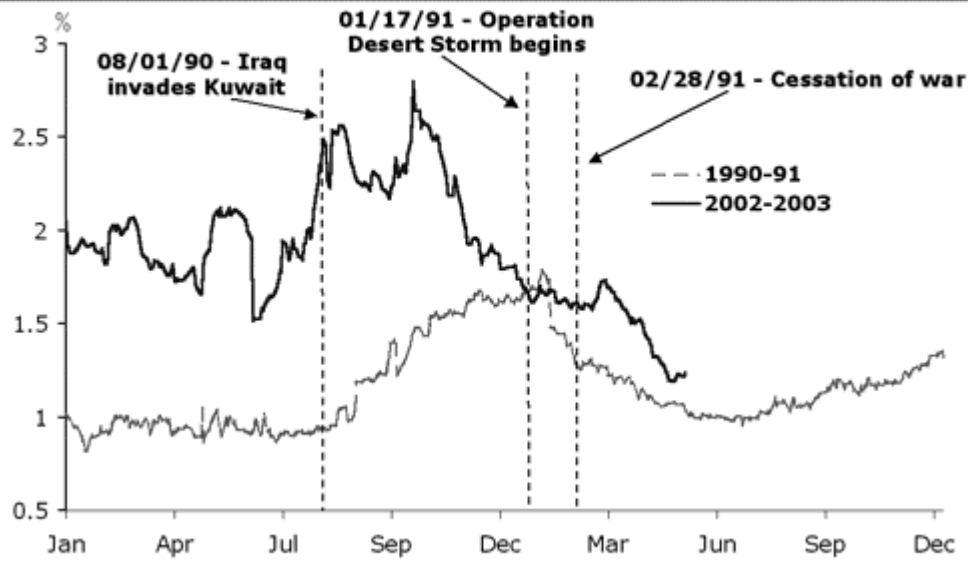
If I wanted to learn from history concerning the impact of hostilities on the price of oil, I could look at the previous case of 1991: The Gulf War.



There are some critical dates on this chart. Date number one is the start of Gulf war. On the 1st of August Iraq invaded Kuwait. The second critical date is the 17th of January, which was immediately after the expiration of the ultimatum that was given at that time to Saddam Hussein. The activities started. It happened very quickly – on the 28th of February it was over. This is the calendar of the previous war. This the way the price of oil behaved during that previous war. It was relatively low and then when Iraq invaded Kuwait suddenly the price started to go up, reaching a peak. At this point the U.S. started to speak loudly and proclaimed: “Gentlemen, there are going to be consequences. If you do not withdraw by January 15, we will start an operation.” That very announcement started a decline in the price of oil. When the activities started on the 17th of January the price of oil went down even more and then remained low. This has been the story of the price of oil for both the first Gulf war and the war in Iraq.

The same story applies to measure risks.

BBB-AAA Spreads



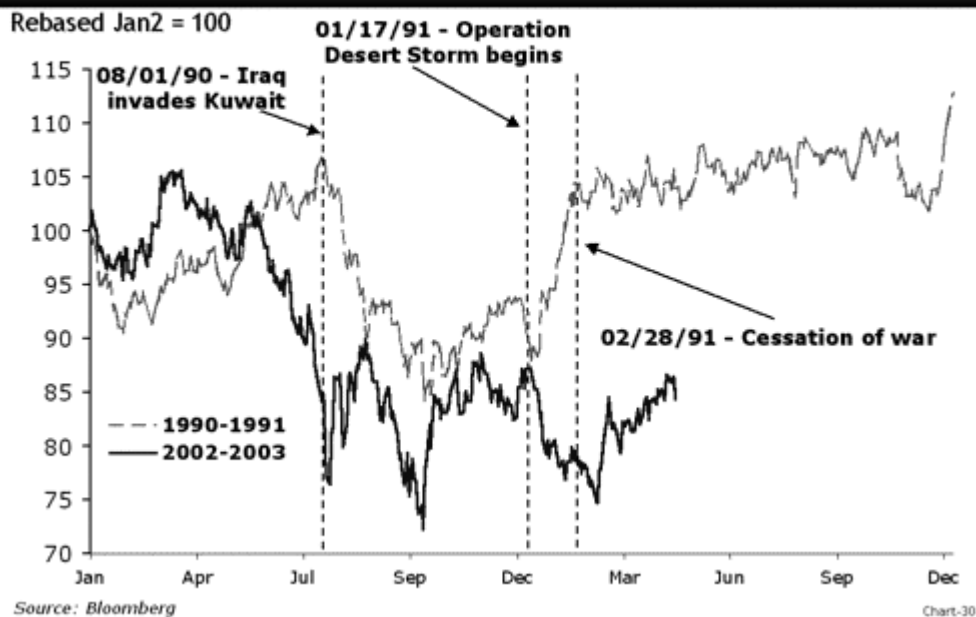
Source: Bloomberg

Chart-29

The spread between BBB and AAA-rated bonds is a measure of risk. Up to the start of the invasion of Kuwait it was low. The invasion of Kuwait meant that the risk went up. The operations were relatively short and measures of risk went down again. Indeed as we look at it today, this is where we are.

A similar analysis can be carried out on the basis of stock prices as measured by the Dow Jones.

Dow Jones



The newspapers at that time said: “There is going to be an invasion of Kuwait. There is going to be a rise in the price of oil. The world will go into recession.” The Dow Jones collapsed. Then the U.S. started to make its proclamations. Operation started. They were quick activities. The Dow Jones started its upward trajectory.

EUROLAND:

The Europe challenge is a fantastic opportunity for Poland. It is not a problem - it is a challenge and opportunity. Just look at what happened to your rating the moment a political decision took place. History will record this process that you are undergoing now as one of the most important processes for your country’s recent history. For somebody who followed the Polish economy throughout the 1990’s (since 1989), one can only admire things that are happening and the degree of transformation that has taken place. The degree of transformation is important, because the challenge is in the micro as well as in the macro and the achievements are extremely impressive.

But if you look at Europe at large, it is much less flexible than the United States.

Euroland Economic Outlook

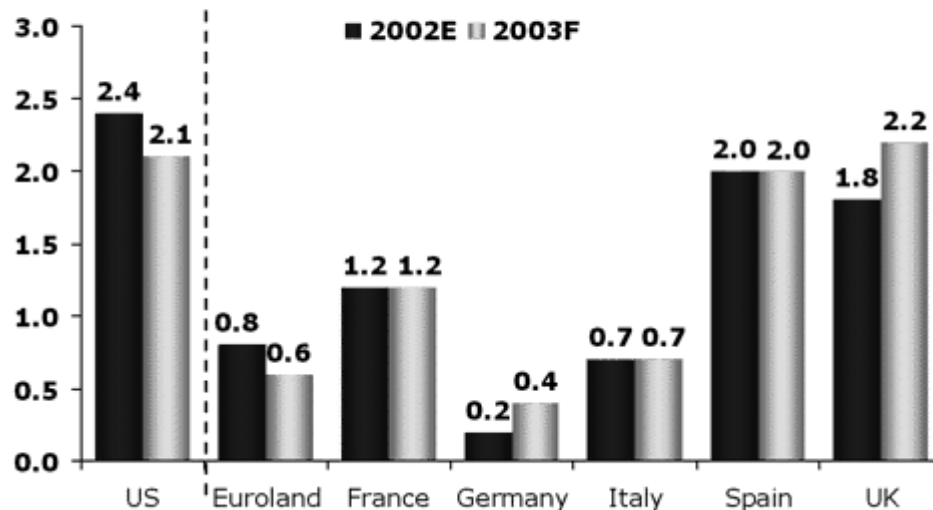
- Euro strength & US weakness dampen growth prospects
- Fall in equity markets has been more severe than in US
- Business & consumer confidence are falling
- Decline in unemployment has stalled
- Structural measures are essential for future growth
- Inflation above target restricts ECB's ability to cut rates

European Recovery Lags Behind US

Chart-31

Euroland Recovery Lags Behind US

% Real GDP Growth



Source: Merrill Lynch forecasts

Chart-32

As a result the European recovery will lag the United States. What I feel is that if things are done properly and the U.S. locomotive of the train indeed is going to move in the direction

we are talking about then the train will go along. But the issue is how can each country prepare itself to enjoy the recovery led by the locomotive.

JAPAN:

There is another part in this presentation dealing with Japan.

Japan Economic Outlook

- **Modest signs of cyclical recovery, led by export sectors**

- **Sustained recovery requires stronger domestic demand, structural measures and strengthened financial sector**

- **Accommodative macro policy stance:**
 - **Tax cuts planned despite large public debt**
 - **BoJ injects liquidity**

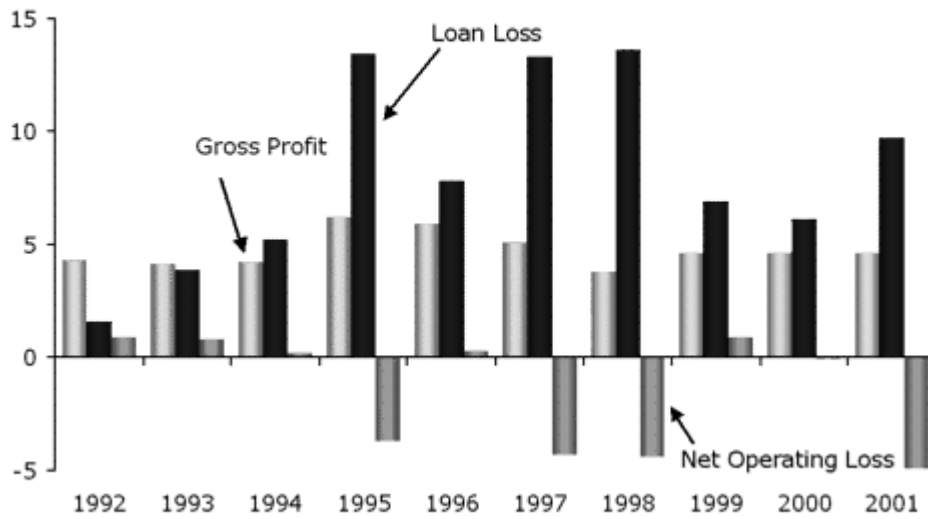
- **Need more decisive steps to solve banks' bad loans crisis**

Japan Expected To Post Slow Growth In Late 2002

Chart-33

Japanese Bank Loan Losses Outpace Profits

Yen trillions

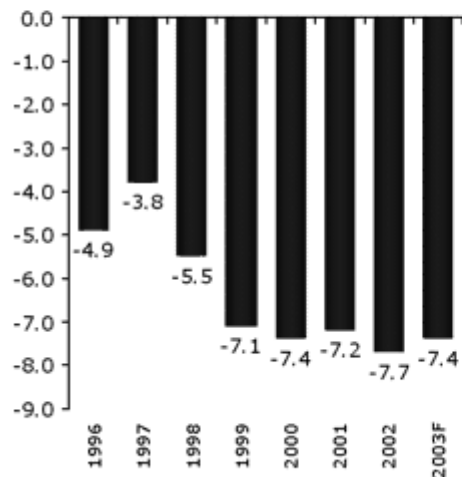


All Commercial Banks, FY 2001
Source: Financial Services Agency

Chart-34

Fiscal Laxity has Created Public Debt Problem

Japan Budget Balance as % of GDP



Source: IMF World Economic Outlook, April 2003

Japan Gross Public Debt as % of GDP

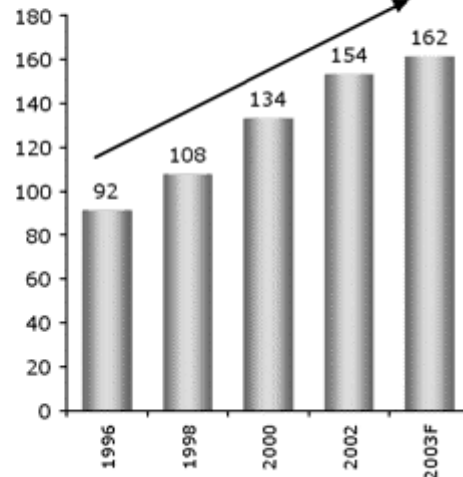


Chart-35

It highlights Japan's recession not just as a macroeconomic problem but as a financial problem. The financial sector in Japan must be rehabilitated since it is the *sine qua non* in a

process of economic growth. Japan has been operating without financial intermediation for many years and we should not be surprised that it has had such a long recession.

Why is it important to have a sound banking system? There are several reasons. First, the implications of policies are transmitted into the economy through the banking sector. If you raise interest rates in the central bank but the commercial banks do not do the same *vis à vis* the final borrower, the transmission does not work. Vice versa, when you lower interest rates and the commercial banks do not lower their interest rates the transmission does not work. So the banking system is important. I had to raise interest rates very significantly and my colleagues came to me and said: “But if inflation is high, thereby requiring a rise in interest rates, one needs to be aware that banks may suffer.” The health of the banking sector may constrain policymaking. If you want to have degrees of freedom in conducting policy, make sure you have a strong and sound banking system. Furthermore, today the most important vehicle for countries entering capital markets is their financial sector, primarily the banking sector. If you look at Japan, until they solve their banking sector, they will not recover. If you look at the Asia crisis of 1997, because the financial sector was not well organized, transparency was not there, a crisis emanated in addition of course to moral hazard and things of that type.

Before concluding this presentation let me just make two final comments concerning two important regions in the world. The first: non-Japan Asia and the second: Latin America. The outlook concerning these two regions is summarized in charts 39 and 40.

Asian Economic Outlook

- **Growth slows across Asian region:**
 - **Headwind of SARS**
 - **Decline in China's Economic Activity**
- **Countries with strong policy frameworks recover more quickly**
- **High level of foreign reserves and current account surpluses have reduced vulnerability**
- **Incomplete corporate and bank restructuring**

Slower Growth In 2003



Chart-36

Latin America Economic Outlook

- **Smaller fiscal deficits and lower inflation are key**
- **Corporate governance and political stability remain critical factors**
- **Region vulnerable to capital outflows**
- **Argentina: needs to be reborn**
Brazil: faces a period reforms
Mexico and Chile: relative bright spot

Outlook Reflects Domestic Policies and US Growth

Chart-37

In conclusion, we need to establish which perspective is the more appropriate force assessing the prospects for the world economy: the more positive perspective based on the real economy and the fundamentals or the more gloomy perspective based on financial markets. It is

here that we see a distinction between an economist that is focused in his assessment on fundamentals, vs. a financial economist who bases his analysis on market data – it is here that the two perspectives clash. If you only look at financial markets you get one answer. If you look at fundamentals you get a different answer. Those of us who come from an economics training (like myself) believe in models, believe in the fundamentals and believe that at the end of the day the financial picture will reflect the true economy rather than the other way around.

I will make one last point and conclude with a lighter story. The same friend that was driving earlier came back to drive again. This time he was driving in Paris around the *Arc de Triomphe*. Very difficult to find a parking place there. This guy, who by the way was an atheist, was driving around the *Arc de Triomphe* half an hour and could not find a parking place. In his despair he raised his hands and he said: “God, if you are there, please find me a parking place. If you find a parking place for me I promise I will believe in you and I will go to church every Sunday and I will do everything my parents told me to do.” He did not finish this thought and suddenly a car pulled out and a beautiful parking place opened up. The guy took the spot and raised his hands and said: “God, no need! I found a parking place!” this guy did not understand the model. He did not understand the cause and effect, he did not understand the fundamentals.

In economics many of us base forecasts not on the fact that there is no parking and then suddenly there is one, but base them on fundamentals. On what is *sine qua non* for a good economy. What is the key for productivity. Why is it important to promote education as the key for growth. Why is it important to take buildings that were industrial structures and transform them into institutions of higher learning? Why is it good? What makes the difference between winners and losers? Why is it important to understand the micro level? Why is it important to make a pre-commitment for some targets for the year 2004 and 2005? Why is it the case that having credible commitments enables one to join the train? Why is it the case that the budgets that are worked on in order to bring you to this train need to be supported? Those are all the fundamentals. If you believe in the fundamentals you do not say: “No need, I found one” because you say: “Thank you, I earned it.” Thank you very much.

Andrzej K. Koźmiński: Thank you Jacob. You really earned what you got. Thank you very much for this wonderful presentation and I will ask Professor Kolodko who is much more knowledgeable about the economy than myself to lead the discussion.

Grzegorz W. Kolodko: Thank you Rector. As I said before it is extremely risky to take the floor after Jacob Frenkel so I would only encourage you to raise questions, to make points and simply

to take advantage of Professor Frenkel being with us this morning. I believe we still may have 20-25 minutes. Please, do introduce yourself because it is not only important who is answering the question, but it is also important who is raising the question.

Radek Cielicki: I would like to ask you, Professor, do you believe more in the financial markets, that is, do you believe more in the Wall Street approach or the Main Street approach?

Jacob A. Frenkel: I believe very strongly in the Main Street approach – that is in the fundamentals. If you ask me about timing that is going to be much more difficult because economists are much better in determining the direction and not as good in determining exact timing. For a variety of reasons, not the least of which is the fact that time is very non-linear in a world in which capital markets are very operational.

In 1995 there was a crisis in Mexico. It was called the tequila crisis. A lot of investors got frightened and ran out. Where did they go? Normally at that time a lot of them went to Asia. In 1997 there was a crisis in Asia. Lots of investors got scared. Where did they go? To Mexico. Then people said: “My goodness, don’t they have memory?” I remember people said that there are two types of investors: those with short memories and those with no memories. If you think about it deeper, if you spoke to them – they are very intelligent people – they said: “Aha, the Mexico that we left in 1995 is not the same Mexico that we returned to in 1998-2000.” In fact the only thing that it has in common is the name of the country. When policies change you become more attractive. When policies change in the other direction you are becoming less attractive. That is the beauty of non-leading countries. It is a fantastic opportunity because at the end of the day resources and capital must find a parking place and we are continuously in a beauty contest, we are continuously in a referendum. Albert Camus once said that one should never wait for the day of judgment because it is with us every day. The capital market is the one that conducts referendums every day. That is why time is non-linear. I cannot therefore tell you how quickly things will change but the direction is there precisely because of the fact that the fundamentals are there. So I am the fundamentalist. That is why I am not an atheist.

Marcin Piątkowski, TIGER: Dear Professor Frenkel, my question is about when the expectations of the markets will catch up with reality. The American analogy is very fitting to the Polish example because what we experience right now in Poland is a situation where the real economy is running faster and faster every month, whereas financial markets and the stock

exchange are much more pessimistic and skeptical about the prospects. My question is what determines the gap between the expectations and reality.

Jacob A. Frenkel: There are two questions that are implicit. One is having an answer in the scale of time, mainly when will it happen. The other is a deeper question, which is what needs to be done to ensure that it happens. I will basically focus on the second.

The nature of financial markets by definition is that they are capable of changing very rapidly, up and down. They can do it because they reflect changes in perceptions, they reflect expectations and you do not need much to change your expectations. Especially when you extrapolate a small change in the future and reflect it in today's prices, there is a lot of amplitude. That is the essence of the overshooting hypothesis of financial markets. Financial markets by definition exaggerate both the optimism and the pessimism. The issue is however how to insure that the amplitude gets smaller and that it moves in the right direction.

My answer is a very simple one and the old-fashioned one: steady as you go. Do not implement the economic policies in order to affect market perceptions and financial markets but recognize that your economic policies influence market perceptions and market prices. Your economic policies have to be set by the real targets. How do you secure sustainable growth? There are no shortcuts to the sustainable way. This again implies the need for competitive markets, privatization, innovations, removal of distortions, and removal of monopolies. Those are the kind of things that will enable you to do it in the right way. Once you are there and you stick to it, it is not viewed as episodic but rather fundamental -- that is the recipe. On top of it, and that is where Poland now has a fantastic opportunity, because you have the capability of demonstrating that you can be hooked to a huge train, and you were invited by the locomotive of this train. I cannot exaggerate by saying time and again, the process of joining the EU this will prove to be a historical turning point for Poland. I envy those policy-makers that have the opportunity to participate in such historic event because there is nothing greater than that.

You know, people speak about a crisis. Every time people speak about a crisis, I want to take you to China. How many of you speak Chinese? Good. Then I can tell you something and you cannot say that I am not telling you the truth. In Chinese the word "crisis" is composed of two characters. One character is: danger. The other character is: opportunity. It comes together. Crisis means: beware - there is a danger there. But that is not the end of the point. Because those who say: "Danger, go to the bunker" will not know what happens there. A complete meaning, an operational meaning of the concept of crisis is the opportunity. Make something of it, seize this

opportunity, and make it better. In your case be ready in the right way to join the European process.

I can tell you one thing. I have never been in a university where the deputy prime minister is the one who gives the microphone to the speakers.

Andrzej Bolesta, TIGER: Having observed your communication skills I am actually puzzled why you stopped teaching. My other comment has to do with the story you told about the two local entrepreneurs being threatened by foreign competition and your illustration of the bear in Wyoming. I can only add that they should thank God they were in Wyoming because if they were in Alaska, bears sometimes gather in groups and being just faster than your neighbor is not enough.

Jacob A. Frenkel: Well, I think that indeed it is very important that Poland is closer to Wyoming conceptually than to Alaska.

I do miss the teaching. I assume at some stage I will be back there. Before the meeting with Professor Koźmiński and Professor Kolodko we agreed that once a professor, always a professor. I guess that all professors may be comforted being described as such.

Daniel Lavy: I believe in freedom of speech but sometimes when I watch the news it seems that all these news organizations are causing everybody to be uncertain and hence, they are the cause of the uncertainties in the economy. I would like to know your thoughts on the modern media in the world economy.

Jacob A. Frenkel: I think that it is a very important point. It's embedded in a deeper issue, which is: does the media report the news or does the media create the news. There is a famous dictum of an editor of a major newspaper in the U.S. that hired a journalist and told him: "Remember, I am hiring you to report the news, not to make the news." Having said all of this there is only one way to think about it. First, of course one needs to have ethics of communication and ethics can be best enforced by the discipline of the market. Of course the communication industry needs to be regulated but at the end of the day a magazine that gets the image of a sensational untrustworthy magazine will choose and find the readership that it deserves.

Second characteristic that is needed is openness: openness, openness and education. A wise man once said, I am not sure if it is true historically but it does not matter because the point is relevant, that the thing that destroyed the iron curtain was the silver screen. The point basically is: information about alternative ways, about alternative mechanisms, not forcing the two brothers to drive the same way but knowing the way that the other brother drives –for intelligent people, this is all that we need. We need to protect it as much as we can.

Krzysztof Oblój: I have a question related to financial vulnerabilities and the corporate governance problem. It was assumed that capital markets, on the one hand, and control systems through the boards would ensure proper performance and behavior. It did not work this way and therefore there is a trend to implement, on the one hand, legal additional controls and, on the other hand, we are just doing this in Poland, courts of bad practices. What is your opinion about this multiplication of instruments? Will they be effective?

Jacob A. Frenkel: That really touches on one of the most important issues today because they do not only affect the world economy and the U.S. economy, but they have proven to be one of the major challenges to the entire capitalistic system the way we know it. The question addresses the issue of boards of directors and corporate governance. I will not go now into what it meant and what is the Enron scandal. The issue is; where do we go from here? I think that definitely there have been a lot of improper things done, but we must recognize that there were a lot of incentives for these improper things to be done. Let me take three minutes with your permission to highlight for you one of the incentives.

There was the invention of the dotcom companies. They did not produce a single penny or dollar of earnings but they had an idea. They had an idea and it was clear that if they were successful they would be very successful, but it would take a lot of time. How did they manage to recruit people to work for them? They did not have cash to pay. So what did they do? They gave options and said: “Instead of getting a salary, the directors of the company, and also the executives of the company will get options so that our well-being will depend basically on the price of the share. If the price of the share is rising then the options that are given at a fixed price will be worth a lot and vice versa.”

What incentive did such a system provide? The system provides an incentive to maximize share prices. If on top of it the accounting practices are such that granting these shares is not counted as an expense then it looks like a money making machine. You give shares and you give options, it is not cost – if you sell one dollar you have already profits. Everyone is interested to see the price of the share going up. When? – Today, not in the medium term. There is a lot of incentives to have a short termistic approach, to maximize the price of the share today even at the expense of the long-term viability. It is perfectly legal. Even the system is within the law.

What happened then was the following. These elements became commonplace in some areas, such as the dotcom industry. My neighbor was working in a company that produced and sold commodities. He saw his neighbor making lots of money with his options and said: “Me too, why not?” Suddenly, because that was the only way to recruit people, that system became generalized. You needed a needle to poke a hole in this balloon. Then suddenly everything collapsed.

The reason why I am optimistic about it is that it has been so dramatic and so profound that the political system has recognized its potential disruptive power. Therefore in a very short period of time Congress has addressed this matter, the legal system has addressed this matter, the supervisory system has addressed this matter, the accountants associations have addressed this matter, the various trade groups have addressed this matter. Corporations are changing now the

way in which compensation is paid. I am sure that there will still be a lot of difficulties but I am also sure that once this storm is over we will have a healthier system.

You ask whether it makes sense to have a multiplicity of anchors to keep you there. I think that at the present time probably one should be very careful not to have another earthquake. In the longer run we need however to make sure that we do not overshoot and tie ourselves too much. Because if you overshoot and you constraint yourself too much then there is a problem. Let me give you one last anecdote and you will see what I have in mind.

When I came to my previous job as governor I invited the bank supervisor who was reporting to me and asked him to tell me what would be a successful term of his job as a supervisor. He told me: "If I do not need to close a single bank then I will know I succeeded." I told him that I was not sure he was right because there are some banks you need to close and some banks that you do not need to close. Small problems may become big problems. When you have a "too large to fail" situation you forget that all "too large to fail" problems have started from "too small to be bothered with" problems.

The issue is: how much risk you want to take as a policy-maker. We know one thing – we will have crises. That is always the case. The only question for the public policy issue is: should we design a system that is capable of eliminating three out of the next four crises or should we design a system that is designed to eliminate four out of the next three crises? It is not a game of words - there is a big difference. If you eliminate four out of the next three crises you have over-intervened, you have prevented free enterprise from operating - you have over-regulated. You will look good because no bank has been closed during your regime. But you have not allowed free enterprise to thrive. If you have eliminated three out of four crisis then, yes, life is risky but you should be able to handle it. I think that is a very important issue - what systems we want, and knowing that we will never be able to eliminate all risk.

My former colleague, Bob Lucas, knew that I was always running to airports, and once asked me: "How many times did you miss a plane in your life?" I told him that I never missed a plane. He said: "Well in such a case you are wasting a lot of time in airports." Think about it.

Marcin Walaszko: I would like to ask you about one fundamental. Back to your forecast of U.S. growth, how much do you think this growth is being driven by growing governmental spending compared to cuts in spending in Europe and Japan?

Jacob A. Frenkel: The share of government spending in the United States is lower than in many other parts of the world. Additionally, in 1999 and 2000 there was a surplus in the budget. These

surpluses were associated with a reduction in U.S. public debt, and they were the umbrella prepared before the rain, so that when the shock came and the slowdown occurred, there was enough ammunition to have a significant increase in government spending. Together with a tax cut, this provided the stimulus that made the slowdown shallower and the recovery possible. But do not misunderstand it, it does not mean that a budget deficit is the way to growth. What it means is that if you have created sufficient umbrellas you can use a flexible fiscal policy in the right way.

The question that you asked me was: what is the role of government spending in the U.S. In explaining this I would view it in two dimensions. The proportion of U.S. spending relative to GDP is relatively low. The flexibility of the fiscal system in the U.S., which was earned in previous years, is relatively high. This is an asset that has now bore fruit. This, together price stability has enabled the Fed to have such a significant and sharp reduction in interest rates, which comprise the policy response. Thank you.

Grzegorz W. Kolodko: Thank you Professor Frenkel. When you were talking about this guy taking his jogging shoes in Wyoming trying to run from a bear I thought about taking my running shoes and running in Manhattan not far away from the Merrill Lynch office. You know what, though I took the 8496th position in the New York marathon, I still left another 23 thousand guys in their running shoes behind me.

Jacob A. Frenkel: And you ran much faster than the many millions who did not participate.

Grzegorz W. Kolodko: What I mean is what is most important for us here, in a relatively small economy, is not to run at the fastest possible speed, but rather just run faster than other EU accession countries and emerging markets. I am happy that next year our rate of growth will be higher than any other country you referred to, except for Asian countries with the exception of Japan. We will keep running faster, especially after receiving such insight from you today that will particularly benefit our students.

A second comment I would like to share with you is that after this splendid lecture you are still expected to answer a couple of questions from our people. Going back to the question our colleague has raised, I hope that they will report what you are saying in such a way that they will not make the markets react, but rather they will only inform the markets what Professor Jacob Frenkel has said.

Thank you very much again for your distinguished lecture and thank you all for your participation, comments and answers. Please, do come again.

Andrzej K. Koźmiński: Professor Frenkel, you have a standing invitation to visit Leon Koźmiński Academy again.