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The Honorable Alan Greenspan
Chairman, Board of Governors
Federal Reserve System

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Questioners: Henry Kaufman
Henry Kaufman & Company, Inc.

John Lipsky, Chief Economist
Chase Manhattan Bank

Introduction

Chairman William J. McDonough

Ladies and gentlemen, good evening. Welcome to the 364th meeting of the Economic Club of New York in this, the 93rd year of the Club's history. In those 93 years, there is only one person who has addressed this club more than twice. This is Alan Greenspan's fifth appearance before the Economic Club of New York. (Applause) We are indeed fortunate that the President of the United States showed the great wisdom of nominating Chairman Greenspan for a fourth term. (Applause) And we are even more fortunate that this very distinguished civil servant has decided to serve his country yet again. Ladies and gentlemen, join me in welcoming to the Economic Club of New York for an unprecedented fifth time, the Honorable Alan Greenspan. (Applause)

The Honorable Alan Greenspan

Chairman, Board of Governors

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Thank you very much Bill. As a former executive of this organization, I can tell you that the reason I have been invited so many times is nobody got it the first time. (Laughter) I shall proceed this evening with the presumption that if I want to be invited back for a sixth time, I'd better not say it as clearly as I usually do. (Laughter) Anyway, it's a real pleasure to be back with a lot of friends who I rarely see – whom I've known for years – except in this particular organization. And it's really very impressive to see everyone sort of whom I've known for 40....(Recording issue).......just keeps changing and keeps it interesting. Indeed, we are within weeks of establishing a record for the longest economic expansion in this nation's history. The 106-month expansion of the 1960s, which was elongated by the Vietnam War, will be surpassed in February. (Applause) Nonetheless, there remain few evident signs of geriatric strain that typically presage an imminent economic downturn.

Four or five years into this expansion, in the middle of the 1990s, it was unclear whether, going forward, this cycle would differ significantly from the many others that have characterized post-World War II America. More recently, however, it has become increasingly difficult to deny that something profoundly different from the typical postwar business cycle has emerged. Not only is the expansion reaching record length, but it is doing so with far stronger-than-expected economic growth. Most remarkably, inflation has remained subdued in the face of labor markets tighter than any we have experienced in a generation. Analysts are struggling to create a credible conceptual framework to fit a pattern of interrelationships that has defied conventional wisdom based on our economy's history of the past half century.

When we look back at the 1990s, from the perspective of say the year 2010, the nature of the forces currently in train will presumably become clearer. We may conceivably conclude from that vantage point that, at the turn of the millennium, the American economy was experiencing a once-in-a-century acceleration of innovation, which propelled forward productivity, output, corporate profits, and stock prices at a pace not seen in generations, if ever.

Alternatively, that 2010 retrospective might well conclude that a good deal of what we are currently experiencing was just one of the many euphoric speculative bubbles that have dotted human history. And, of course, we cannot rule out that we may look back and conclude that elements from both scenarios have been in play in recent years.

On the one hand, the evidence of dramatic innovations – veritable shifts in the tectonic plates of technology – has moved far beyond mere conjecture. On the other, these extraordinary achievements continue to be bedeviled by concerns that the so-called New Economy is spurring imbalances that at some point will abruptly adjust, bringing the economic expansion, its euphoria, and wealth creation to a debilitating halt. This evening I should like to address some of the evidence and issues that pertain to these seemingly alternative scenarios.

What should be indisputable is that a number of new technologies that evolved largely from the cumulative innovations of the past half century have now begun to bring about awesome changes in the way goods and services are produced and, especially, in the way they are distributed to final users. Those innovations, particularly the internet's rapid emergence from infancy, have spawned a ubiquity of startup firms, many of which claim to offer the chance to revolutionize and dominate large shares of the nation's production and distribution system.

Capital markets, not comfortable dealing with discontinuous shifts in economic structure, are groping for sensible evaluations of these firms. The exceptional stock price volatility of most of the newer firms and, in the view of some, their outsized valuations, are indicative of the difficulties of divining from the many, the particular few of the newer technologies and operational models that will prevail in the decades ahead.

How did we arrive at such a fascinating and, to some, unsettling point in history? The process of innovation, of course, is never-ending. Yet the development of the transistor after World War II appears in retrospect to have initiated an especial wave of innovative synergies. It brought us the microprocessor, the computer, satellites, and the joining of laser and fiber-optic technologies. These, in turn, fostered by the 1990s an enormous new capacity to disseminate information. To be sure, innovation is not confined to information technologies. Impressive technical advances can be found in many corners of the economy.

But it is information technology that defines this special period. The reason is that information innovation lies at the root of productivity and economic growth. Its major contribution is to reduce the number of worker hours required to produce the nation's output. Yet, in the vibrant economic conditions that have accompanied this period of technical innovation, many more job opportunities have been created than have been lost. Indeed, our unemployment rate has fallen notably as technology has blossomed.

One result of the more-rapid pace of IT innovation has been a visible acceleration of the process of so-called “creative destruction,” a shifting of capital from failing technologies into those technologies at the cutting edge. The process of capital reallocation across the economy has been assisted by a significant unbundling of risks in capital markets made possible by the development of innovative financial products, many of which themselves owe their viability to advances in IT.

Before this revolution in information availability, most 20th century business decision-making had been hampered by wide uncertainty. Owing to the paucity of timely knowledge of customers’ needs and of the location of inventories and materials flowing throughout complex production systems, businesses, as many of you well remember, required substantial programmed redundancies to function effectively.

Doubling up on materials and people was essential as backup to the inevitable misjudgments of the real-time state of play in a company. Decisions were made from information that was hours, days, or even weeks old. Accordingly, production planning required costly inventory safety stocks and backup teams of people to respond to the unanticipated and the misjudged.

Large remnants of information void, of course, still persist, and forecasts of future events on which all business decisions ultimately depend are still unavoidably uncertain. But the remarkable surge in the availability of more timely information in recent years has enabled business management to remove large swaths of inventory safety stocks and worker redundancies.

Information access in real time – resulting, for example, from such processes as electronic data interface between the retail checkout counter and the factory floor or the satellite location of trucks – has fostered marked reductions in delivery lead times and the related work hours required for the production and delivery of all sorts of goods, from books to capital equipment.

The dramatic decline in the lead times for the delivery of capital equipment has made a particularly significant contribution to the favorable economic environment of the past decade. When lead times for equipment are long, the equipment must have multiple capabilities to deal with the plausible range of business needs likely to occur after these capital goods are delivered and installed.

With lead times foreshortened, many of the redundancies built into capital equipment to ensure that it could meet all plausible alternatives of a defined distant future could be sharply reduced. That means fewer goods and worker hours are caught up in activities that, while perceived as necessary insurance to sustain valued output, in the end produce nothing of value. Those intermediate production and distribution activities, so essential when information and quality control were poor, are being reduced in scale and, in some cases, eliminated. These trends may well gather speed and force as the internet alters relationships of businesses to their suppliers and their customers.

The process of innovation goes beyond the factory floor or distribution channels. Design times and costs have fallen dramatically as computer modeling has eliminated the need, for example, of the large staff of architectural specification-drafters previously required for building projects. Medical diagnoses are more thorough, accurate, and far faster, with access to heretofore unavailable information. Treatment is accordingly hastened, and hours of procedures eliminated. Indeed, these developments emphasize the essence of information technology – the expansion of knowledge and its obverse, the reduction in uncertainty. As a consequence, risk premiums that were associated with all forms of business activities have declined.

Because the future is never entirely predictable, risk in any business action committed to the future – that is, virtually all business actions – can be reduced but, of course, never eliminated. Information technologies, by improving our real-time understanding of production processes and of the vagaries of consumer demand, are reducing the degree of uncertainty and, hence, risk. In short, information technology raises output per hour in the total economy principally by reducing hours worked on activities needed to guard productive processes against the unknown and the unanticipated. Narrowing the uncertainties reduces the number of hours required to maintain any given level of production readiness. In economic terms, we are reducing risk premiums and variances throughout the economic decision tree that drives the production of our goods and services. This has meant that employment of scarce resources to deal with heightened risk premiums has been reduced.

The relationship between businesses and consumers already is being changed by the expanding opportunities for e-commerce. The forces unleashed by the internet are almost surely to be even more potent within and among businesses, where uncertainties are being reduced by improving the quantity, reliability, and the timeliness of information. This is the case in many recent initiatives, especially among our more seasoned companies, to consolidate and rationalize their supply chains using the internet.

Not all technologies, information or otherwise, however, increase productivity – that is, output per hour – by reducing the inputs necessary to produce existing products. Some new technologies bring about new goods and services with above average value added per work hour. The dramatic advances in biotechnology, for example, are significantly increasing a broad range of productivity-expanding efforts in areas from agriculture to medicine.

Indeed, in our dynamic labor markets, the resources made redundant by better information, as I indicated earlier, are being drawn to the newer activities and newer products, many never before contemplated or available. The personal computer, with ever-widening applications in homes and businesses, is one. So are the fax and the cell phone. The newer biotech innovations are most especially of this type, particularly the remarkable breadth of medical and pharmacological product development.

At the end of the day, however, the newer technologies obviously can increase outputs or reduce inputs and, hence, increase productivity only if they are embodied in capital investment. Capital investment here is defined in the broadest sense as any outlay that enhances future productive capabilities and, consequently, capital asset values. But for capital investments to be made, the prospective rate of return on their implementation must exceed the cost of capital. Gains in productivity and capacity per real dollar invested clearly rose materially in the 1990s, while the increase in equity values, reflecting that higher earnings potential, reduced the cost of capital.

In particular, technological synergies appear to be engendering an ever-widening array of prospective new capital investments that offer profitable cost displacement. In a consolidated sense, reduced cost generally means reduced labor cost or, in productivity terms, fewer hours worked per unit of output. These increased real rates of return on investment and consequent improved productivity are clearly most evident among the relatively small segment of our economy that produces high-tech equipment. But the newer technologies are spreading to firms not conventionally thought of as high tech.

It would be an exaggeration to imply that whenever a cost increase emerges on the horizon, there is a capital investment that is available to quell it. Yet the veritable explosion of high-tech equipment and software spending that has raised the growth of the capital stock dramatically over the past five years could hardly have occurred without a large increase in the pool of profitable projects becoming available to business planners. As rising productivity growth in the high-tech sector since 1995 has resulted in an acceleration of price declines for equipment embodying the newer technologies, investment in this equipment by firms in a wide variety of industries has expanded sharply.

Had high prospective returns on these capital projects not materialized, the current capital equipment investment boom – there is no better word – would have petered out long ago. In the event, overall equipment and capitalized software outlays as a percentage of gross domestic product in nominal dollars have reached their highest level in post-World War II history. To be sure, there is also a virtuous capital investment cycle at play here. A whole new set of profitable investments raises productivity, which for a time raises profits – spurring further investment and consumption. At the same time, faster productivity growth keeps a lid on unit costs and prices. Firms hesitate to raise prices for fear that their competitors will be able, with lower costs from new investments, to wrest market share from them.

Indeed, the increasing availability of labor-displacing equipment and software, at declining prices and improving delivery lead times, is arguably at the root of the loss of business pricing power in recent years. To be sure, other inflation-suppressing forces have been at work as well. Marked increases in available global capacity were engendered as a number of countries that were previously members of the autarchic Soviet bloc opened to the West, and as many emerging-market economies blossomed. Reductions in Cold War spending in the United States and around the world also released resources to more productive private purposes. In addition, deregulation that removed bottlenecks and hence increased supply response in many economies, especially ours, has been a formidable force suppressing price increases as well. Finally, the global economic crisis of 1997 and 1998 reduced the prices of energy and other key inputs into production and consumption, helping to hold down inflation for several years.

Of course, Europe and Japan have participated in this recent wave of invention and innovation and have full access to the newer technologies. However, they arguably have been slower to apply them. The relatively inflexible and, hence, more costly labor markets of these economies appear to be an important factor. The high rates of return offered by the newer technologies are largely the result of labor cost displacement, and because it is more costly to dismiss workers in Europe and Japan, the rate of return on the same equipment is correspondingly less there than in the United States. Here, labor displacement is more readily countenanced by both law and culture, facilitating the adoption of technology that raises standards of living over time.

There, of course, has been a substantial amount of labor-displacing investment in Europe to obviate expensive increased employment as their economies grow. But it is not clear to what extent such investment has been directed at reducing existing levels of employment. It should always be remembered that in economies where dismissing a worker is expensive, hiring one will also be perceived to be expensive.

An ability to reorganize production and distribution processes is essential to take advantage of newer technologies. Indeed, the combination of a marked surge in mergers and acquisitions, and especially the vast increase in strategic alliances, including across borders, is dramatically altering business structures to conform to the imperatives of the newer technologies.

We are seeing the gradual breaking down of competition-inhibiting institutions from the keiretsu and chaebol of East Asia, to the dirigisme of some of continental Europe. The increasingly evident advantages of applying the newer technologies is undermining much of the old political wisdom of protected stability. The clash between unfettered competitive technological advance and protectionism, both domestic and international, will doubtless engage our attention for many years into this new century. The turmoil in Seattle last month may be a harbinger of an intensified debate.

However one views the causes of our low inflation and strong growth, there can be little argument that the American economy as it stands at the beginning of a new century has never exhibited so remarkable a prosperity for at least the majority of Americans. Nonetheless, this seemingly beneficial state of affairs is not without its own set of potential challenges. Productivity-driven supply growth has, by raising long-term profit expectations, engendered a huge gain in equity prices. Through the so-called “wealth effect,” these gains have tended to foster increases in aggregate demand beyond the increases in supply. It is this imbalance between growth of supply and growth of demand that contains the potential seeds of rising inflationary and financial pressures that could undermine the current expansion.

Higher productivity growth must show up as increases in real incomes of employees, as profit, or more generally as both. Unless the propensity to spend out of real income falls, private consumption and investment growth will rise, as indeed it must, since over time demand and supply must balance. I'll leave the effect of fiscal policy for later. If this was all that happened, accelerating productivity would be wholly benign and beneficial.

But in recent years, largely as a result of the appreciating values of ownership claims on the capital stock, themselves a consequence, at least in part, of accelerating productivity, the net worth of households has expanded dramatically, relative to income. This has spurred private consumption to rise even faster than the incomes engendered by the productivity-driven rise in output growth. Moreover, the fall in the cost of equity capital corresponding to higher share prices, coupled with enhanced potential rates of return, has spurred private capital investment. There is a wide range of estimates of how much added growth the rise in equity prices has engendered, but they center around 1 percentage point of the somewhat more than 4 percentage point annual growth rate of the GDP since late 1996.

Such overall extra domestic demand can be met only with increased imports – net of exports – or with new domestic output produced by employing additional workers. The latter can come only from drawing down the pool of those seeking work or from increasing net immigration. Thus, the impetus to spending from the wealth effect by its very nature cannot persist indefinitely. In part, it adds to the demand for goods and services before the corresponding increase in output fully materializes. It is, in effect, increased purchasing power from future income, financed currently by greater borrowing or reduced accumulation of assets.

If capital gains had no evident effect on consumption or investment, their existence would have no influence on output or employment either. Increased equity claims would merely match the increased market value of productive assets, affecting only balance sheets, not flows of goods and services, not supply or demand, and not labor markets. But this is patently not the case. Increasing perceptions of wealth have clearly added to consumption and driven down the amount of saving out of current income and spurred capital investment.

To meet this extra demand, our economy has drawn on all sources of added supply. Our net imports and current account deficits have risen appreciably in recent years. This has been financed by foreign acquisition of dollar assets fostered by the same sharp increases in real rates of return on American capital that set off the wealth effect and domestic capital goods boom in the first place. Were it otherwise, the dollar's foreign exchange value would have been under marked downward pressure in recent years. We have also relied on net immigration to augment domestic output. And finally, we have drawn down the pool of available workers.

The bottom line, however, is that, while immigration and net imports can significantly cushion the consequences of the wealth effect and its draining of the pool of unemployed workers for awhile, there are limits. Immigration is constrained by law and its enforcement; imports, by the willingness of global investors to accumulate dollar assets; and the drawdown of the pool of workers by the potential emergence of inflationary imbalances in labor markets. Admittedly, we are groping to infer where those limits may be. But that there are limits cannot be open to question.

However one views the operational relevance of a Phillips curve or the associated NAIRU, the non-accelerating inflation rate of unemployment – and I am personally decidedly doubtful about it – there has to be a limit to how far the pool of available labor can be drawn down without pressing wage levels beyond productivity. The existence or nonexistence of an empirically identifiable NAIRU has no bearing on the existence of the venerable law of supply and demand.

To be sure, increases in wages in excess of productivity growth may not be inflationary, and destructive of economic growth, if offset by decreases in other costs or declining profit margins. A protracted decline in margins, however, is a recipe for recession. Thus, if our objective of maximum sustainable economic growth is to be achieved, the pool of available workers cannot shrink indefinitely. As my late friend and eminent economist, Herb Stein, often suggested: If a trend cannot continue, it will stop. (Laughter) What will stop the wealth-induced excess of demand over productivity-expanded supply is largely developments in financial markets.

That process is already well advanced. For the equity wealth effect to be contained, either expected future earnings must decline, or the discount factor applied to those earnings must rise.

There is little evidence of the former. Indeed, security analysts, reflecting detailed information on and from the companies they cover, have continued to revise upward long-term earnings projections. However, real rates of interest on long-term BBB corporate debt, a good proxy for the average of all corporate debt, have already risen well over a full percentage point since late 1997, suggesting increased pressure on discount factors.

This should not be a surprise because an excess of demand over supply ultimately comes down to planned investment exceeding savings that would be available at the economy's full potential. In the end, balance is achieved through higher borrowing rates. Thus, the rise in real rates should be viewed as a quite natural consequence of the pressures of heavier demands for investment capital, driven by higher perceived returns associated with technological breakthroughs and supported by a central bank intent on defusing the imbalances that would undermine the expansion.

We cannot predict with any assurance how long a growing wealth effect – more formally, a rise in the ratio of household net worth to income – will persist, nor do we suspect can anyone else. A diminution of the wealth effect, I should add, does not mean that prices of assets cannot keep rising, only that they rise no more than income. A critical factor in how the rising wealth effect and its ultimate limitation will play out in the marketplace and the economy is the state of government, especially federal finances.

The sharp rise in revenues, at a nearly 8% annual rate since 1995, has been significantly driven by increased receipts owing to realized capital gains and increases in compensation directly and indirectly related to the huge rise in stock prices. Both the Administration and the Congress have chosen wisely to allow unified budget surpluses to build and have usefully focused on eliminating the historically chronic borrowing from social security trust funds to finance current outlays.

The growing unified budget surpluses have absorbed a good part of the excess of potential private demand over potential supply. A continued expansion of the surplus would surely aid in sustaining the productive investment that has been key to leveraging the opportunities provided by new technology, while holding down a further reliance on imports and absorption of the pool of available workers. I trust that the recent flurry of increased federal government outlays, seemingly made easier by the emerging surpluses, is an aberration. In today's environment of rapid innovation, growing unified budget surpluses can obviate at least part of the re-balancing pressures evident in marked increases in real long-term interest rates.

As I noted at the beginning of my remarks, it may be many years before we fully understand the nature of the rapid changes currently confronting our economy. We are unlikely to fully comprehend the process and its interactions with asset prices until we have been through a complete business cycle. Regrettably, we at the Federal Reserve do not have the luxury of awaiting a better set of insights into this process. Indeed, our goal, in responding to the complexity of current economic forces, is to extend the expansion by containing its imbalances and avoiding the very recession that would complete a business cycle.

If we knew for sure that economic growth would soon be driven wholly by gains in productivity and growth of the working age population, including immigration, we would not need to be as concerned about the potential for inflationary distortions. Clearly, we cannot know for sure, because we are dealing with world economic forces which are new and untested. While we endeavor to find the proper configuration of monetary and fiscal policies to sustain the remarkable performance of our economy, there should be no ambiguity on the policies required to support enterprise and competition.

I believe that we as a people are very fortunate. When confronted with the choice between rapid growth with its inevitable insecurities and a stable, but stagnant economy, given time, Americans have chosen growth. But as we seek to manage what is now the increasingly palpable historic change in the way businesses and workers create value, our nation needs to address the associated dislocations that emerge, especially among workers who see the security of their jobs and their lives threatened. Societies cannot thrive when significant segments perceive its functioning as unjust.

It is the degree of unbridled fierce competition within and among our economies today – not free trade or globalization as such – that is the source of the unease that has manifested itself, and was on display in Seattle a month ago. Trade and globalization are merely the vehicles that foster competition, whose application and benefits currently are nowhere more evident than here, today, in the United States.

No one likes competition. Certainly I did not when I was a private consultant vying with other consulting firms. But the competitive challenge galvanized me and my colleagues to improve our performance so that at the end of the day we and, indeed, our competitors, and especially our clients, were more productive.

There are many ways to address the all too real human problems that are the inevitable consequences of accelerating change. Restraining competition, domestic or international, to suppress competitive turmoil is not one of them. That would be profoundly counterproductive to rising standards of living. We are in a period of dramatic gains in innovation and technical change that challenge all of us, as owners of capital, as suppliers of labor, as voters and policymakers. How well policy can be fashioned to allow the private sector to maximize the benefits of innovations that we currently enjoy, and to contain the imbalances they create, will shape the economic configuration of the first part of the new century. Thank you very much. I look forward to questions. (Applause)

QUESTION AND ANSWER PERIOD

CHAIRMAN WILLIAM J. MCDONOUGH: Thank you, Alan. As is the custom of our club, we have two questioners. And since he's done a rather good job for the five times that Chairman Greenspan has spoken, our first questioner will be the distinguished Dr. Henry Kaufman, who began his life and has been such a formidable success because he started at the Federal Reserve Bank of New York. The other questioner is the Chief Economist for the Chase Manhattan Bank, John Lipsky. We will begin with Henry and then the questioners will alternate. Dr. Kaufman.

HENRY KAUFMAN: Thank you, Mr. Chairman. I'd like to ask Alan Greenspan to elaborate just a little bit on the wealth effect. Is this wealth effect symmetrical in terms of the impact on the economy going up, going down? In other words, if equity prices rise 10, 20, or 30%, does that have the same economic effect on the way down, if equity prices fall 10 or 20 or 30%? And doesn't it hinge also, to some extent, on the magnitude of the change in equity prices?

THE HONORABLE ALAN GREENSPAN: As far as we can judge, Henry, the results are symmetrical. The evaluations that one can make of the wealth effect, however, require that we learn a good deal more about the details. For example, it's not clear that unrealized capital gains have the same impact as realized capital gains. One may suspect, although it is very difficult to prove, that when you have stocks that are rising sharply and whose pattern is highly volatile, the propensity to spend out of those gains is very significantly less than would be the case for gains in stocks or homes or other assets in which the gains do not seem to be variable. So it probably is the case and yet we do not know because we don't have enough information that it matters whether or not the capital gains are coming from speculative, very rapidly changing stocks or what we call the old line, more mundane types of assets. So there's a great deal that we do not know about the wealth effect. And one of the reasons is that the wealth effect, in a sense of being a significant element in the economy, is a relatively new phenomenon. The ratio of household wealth, net worth, to income is significantly above any time that we have data going back into the 1920s. In short, there's something different about this phenomenon which is not, does not allow it to be subject to the types of economic analysis that we are able to impose when we have long histories of relationships. So we are feeling our way and we are learning a great deal about it, and in ten years from now, in 2010, we will know a great deal more.

JOHN LIPSKY: Mr. Chairman, first, I want to thank you for your thoughtful and incisive remarks. Consumer price inflation in the United States accelerated last year to about 2.6% from 1.5% in '98. At the same time, core CPI notched only a 2.1% rise, more or less, down from a 2.4% increase in the previous year. Now some claim that the rise in the overall CPI represents temporary factors while the core CPI confirms that the disinflationary trend of the 90s remains intact. In your view, will the 90s disinflation prove to be durable? Or is the best news on inflation behind us at least for now? And what is the Fed's role in determining the answer to that question? (Laughter)

THE HONORABLE ALAN GREENSPAN: John, I know that you and Henry have spent a good deal of time, probably this afternoon, thinking up unanswerable questions. I spend an equal amount of time thinking up non-answers. (Laughter and Applause) Let me just say parenthetically that I think that the Consumer Price Index is not a particular index which tells us the most we need to know about consumer inflation. And the reason is mainly that it is weighted very unusually. It is weighted on the basis of consumer surveys rather than the very detailed and far more accurate data that we have on what people actually buy. And if you, I'm sure you are acutely aware, the amount of alcohol and tobacco consumed on those consumer surveys is an exceptionally small fraction of what we know is actually consumed. (Laughter) The reason this is important is that it tends to distort the structure of the index in a manner which makes those areas of consumer spending, such as housing, where the productivity growth is less than on average, become disproportionate in the Consumer Price Index. And therefore we have tended to drift away from the CPI and more to the so-called Implicit Deflator of personal consumption expenditures, largely because it's a far more sophisticated, far more accurate, and far more usable mechanism. I knew I'd get an answer in...doesn't say terribly much, but I tried.

HENRY KAUFMAN: Mr. Chairman, are margin requirements on stocks an obsolete requirement? Or are there some circumstances under which the Fed would resort to this particular facility?

THE HONORABLE ALAN GREENSPAN: Henry, we've given considerable thought to that and, indeed, if you take a look at the data that were released today from the New York Stock Exchange, it shows that margin credit went up again very sharply in the month of December following a very large increase in November. Something clearly is going on in the area of margin credit in the financing of stocks, mainly by smaller investors. We have been quite reluctant to deal with anything that requires changing the margin requirements which we have by law and have not changed since 1974. The reason basically is that with the sophistication of the financial system that has emerged in the last 20 years, margin requirements, as we at the Federal Reserve can affect them, affect only the smaller people, the smaller investors, those who do not have access to other sources of finance. It's clearly not to our advantage and our judgment to be imposing credit restraints which discriminate against small investors when large investors have no constraints at all. There is no evidence to suggest that margin requirements have any effect on the level of stock prices. So we could go through a lot of actions under the law and go through various changes, or could have gone through various changes over the years, with margin requirements. We chose not to because we thought that the whole notion of the limited type of margin requirement that we have is an anachronism and it's strictly a type of discriminatory allocation of credit that we think is inappropriate. Having said that, I wouldn't want to deny that we do see fairly substantial increases in credit. Margin credit is now well over $200 billion. It's still obviously significantly related to the level of stock prices, but relative to stock prices, it's gone up in the last two months quite appreciably. So it's clear that there is something going on but it's, I think, a mistake to use ineffective instruments which may appear as though they do something when indeed all of the evidence suggests they do not.

JOHN LIPSKY: Mr. Chairman, as of May last year the FOMC began announcing its policy bias in the press statement released at the conclusions of its meetings. Do you consider that the public announcement of the bias has been helpful in clarifying the Fed's policy goals and procedures? And more broadly, what is the appropriate degree of openness of Fed deliberations and decision-making?

THE HONORABLE ALAN GREENSPAN: John, as you know, it's always been our view that in a democratic society, unelected officials such as ourselves must be fully accountable to the electorate and to their representatives. And indeed, our view is that we should make available as much as we can about our deliberations, the motives of what we do, our analysis, and why we do certain different things at different times. We also, however, have a mandate from the Congress to create effective policy. And those two goals do not always coincide. I mean obviously if we are going to do full disclosure of everything we do, we might as well do it with television cameras, real time, and unless human nature has changed recently, my suspicion is that would not be a terribly effective form by which decisions would be made. There are a few people out there who will say precisely the same thing whether the cameras are on or whether they're not. But they are regrettably too few. And were the world different, I would say we ought to do it in the open. We cannot. And therefore, what we are doing is trying to find the proper balance. And one of the issues that is involved here is how do we communicate over and above our very specific decisions when we move the federal funds rate or the discount rate and try to indicate what the general view of the Federal Open Market Committee is because a central bank's job is not strictly to affect, in a short period of time, with small changes, overnight funds or the interest rates on overnight funds. We impact by our actions a whole term structure of interest rates which affect the economy. And as a consequence of that, implicit in all markets are expectations about what the central bank will be doing in the future. It is not to our advantage and indeed with very rare exceptions – and there are exceptions – it is very useful for the market to know what we're doing, anticipate what we're going to do, and have a general sense that they are not surprised by their central bank. I say not always because there are rare occasions, and 1979 was one of them, and indeed I could mention a few occasions when I've been on the Federal Reserve Board, where it has actually been desirable from the point of view of effective monetary policy, to do something that the market does not expect. But as a general rule, that is not the case. This whole discussion we are having with respect to the bias, so to speak, is to try to bring out in the open a particular vehicle which we employed in our deliberations to focus on how we as a group would reach a consensus. It is turning out that it is not as simple as we thought. In other words, I shouldn't say that we thought, we knew that there were risks in how the markets would respond to a publication of bias. And indeed, we found that out and we are in the process of endeavoring to incorporate what we learned in that process into a new way of coming at this issue and we will release, very shortly, a whole set of actions which we will use to focus on this question. And we will do it before the next FOMC meeting.

HENRY KAUFMAN: Mr. Chairman, an increasing portion of financial assets are moving into institutions that are now large financial conglomerates. Doesn't this suggest that an increasing portion of the financial market is becoming too big to fail? And how do you, as a central banker, come to grips with the moral hazard issue on the one hand and systemic risk on the other?

THE HONORABLE ALAN GREENSPAN: Well, Henry, as you know better than anybody, including me, the problem of moral hazard and the too-big-to-fail issue is one which is, it's one of the most difficult problems central bankers have. I do think we are fortunate, as a central banking community, to recognize this process and problem, whereas it really hadn't been recognized before. I do think that it is crucial that we do not find ourselves, irrespective of the size of organizations, in stipulating that any institution is too big to fail. It may be, and indeed I suspect there will be occasions, when we will want to stretch out a liquidation of a particular institution in order to avoid a systemic breakdown of the total system. But under those conditions, almost assuredly, equity holders will be completely wiped out and in many instances creditors will get haircuts as well. But the one thing we are aware of is that if we are ever in a position where there is a general sense that the central bank is there to bail out financial institutions, we will very rapidly undercut the viability of that system and I think in short order create the very types of crises which we're endeavoring to fend off.

JOHN LIPSKY: Mr. Chairman, I'd like to turn to the international arena for a moment. You have noted in the past that Japan's economy has suffered substantially from the weakness of that country's financial system. How would you rate the progress made so far in Japan's financial reform? Could you also assess Japan's prospects for economic recovery and for greater yen stability?

THE HONORABLE ALAN GREENSPAN: There has been some progress lately, but the last ten years have not been exemplary. It's fairly clear if one looks back at the bursting of the bubble at the end of the 1980s in Japan, that the sharp decline in property values in Japan, which have now reached, for certain commercial properties, 20% of what they were back then, have debilitated the commercial banking system because, to a very substantial extent, those commercial real estate assets were the collateral for a very substantial amount of the expansion of bank lending in Japan. It is really quite remarkable that the sharp decline did not up-end the Japanese economy which it did not. I mean unemployment moved up very slightly. And indeed, in my judgment, had they addressed the problem – which they're now really getting to – early on, in the first few years of the 1990s, I think the Japanese outlook now would be very materially different. There is a structural problem which the Japanese are also beginning to recognize currently – namely that if you have financial intermediation in which banking is the predominant and in some cases the only form of intermediation, you have very materially reduced the flexibility of the system. I've argued that one of the reasons for the East Asian crisis is the lack of redundancies of financial intermediation, multiple sources. For example, in the United States we have a system in which when the capital markets fail, the commercial banks moved in as indeed what happened in the fall of 1998. In 1990, when we had the crisis in banking where lending, as you know, froze up completely, we had a very significant secondary mortgage market and very good capital markets, and they moved into the breach. It is interesting that in the United States in the 19th century when banking was our only financial intermediary, whenever there was a crisis in banking, the economy went down. That has not happened in the United States despite all those headwinds we had ten years ago. It has happened in Japan. It has happened in East Asia. And the Japanese are recognizing fairly readily, as indeed I might add the Europeans are too, that having capital markets with banks is a crucial element in absorbing the inevitable shocks that occur in market economies. And in my judgment, the handling of that banking problem in the early 1990s, as I've said enumerable times, is not the Japanese shining hour. But to their credit, they have recognized it; they are beginning to move in an appropriate direction. They are moving non-performing assets out of the banks, and they are essentially creating the type of system that when they get through all of this reform, they will have a far more viable system. On the issue of your last question about where the Japanese economy is going, I think it's going to depend very crucially on the extent of this type of reform. Because unless the banking system, unless the total financial system is made more viable, it is going to be very difficult for them to restore the extraordinary rates of growth which brought the Japanese economy from literal devastation at the end of World War II to the second largest economy in the world.

CHAIRMAN WILLIAM J. MCDONOUGH: Can we have the last question from each of the questioners.

HENRY KAUFMAN: Thank you. Mr. Chairman, what is your assessment, your latest assessment of the quality of bank lending and the quality of bond issuance in the open market?

THE HONORABLE ALAN GREENSPAN: Well, the data, as you know, point to some deterioration in credit terms in bank lending. It's not as though we are dealing with a level of potential non-performing loans that are worrisome, but after a period of significant decline in all various measures of risk in commercial banking, we're beginning to see it flatten out. And I think all veteran bankers know that bad loans are almost never made at the bottom of a recession. They're always made at the top. And we've had a long enough period, in fact, as I indicated in my prepared remarks we are within weeks of a record, we have had such an extended period of expansion that there almost surely is a good deal of stuff that's on the books of banks that in retrospect a lot of lending officers are going to be very sorry about having initiated. Having said that, we are nowhere near the levels of serious concern. Bankruptcies which had risen very sharply and have been tied to a large extent to credit card difficulties have turned down in a fairly measurable way. All of the various measures that we had of non-performing loans and defaults are still very low. But the early edge of questions of quality are beginning to be evident, and I think you're getting a number of people, amongst the bank regulators, control of the currency, as well as in the FDIC, raising questions which I think are probably going to be raised increasingly as this process goes on. We have a remarkable banking system. As I said in answer to John's question, we have a remarkable financial system. It is flexible. It is capable of absorbing shocks. It is producing the types of products that no other banking system has been able to produce, and we are clearly at the cutting edge of all technologies. So that while we do have clear emerging problems, overall I think we ought to be terribly pleased with the state of our banking system. But it's precisely because of that, that I think increased scrutiny and increased awareness of our lending practices are clearly necessary.

JOHN LIPSKY: A final international question, Mr. Chairman. Last year marked one of the revolutionary monetary events of our time – that is, the creation of the euro. Already in its first year, issuance of euro-denominated international bonds has exceeded that denominated in U.S. dollars. Does the emergence of a real alternative to the dollar represent a benefit or a burden to the United States? And how will the emergence of the euro as an international reserve currency influence the Fed's monetary policy options?

THE HONORABLE ALAN GREENSPAN: John, I think that the emergence of the euro is a very positive factor in the world financial system. It clearly does not eliminate all internal credit risk within the European Community. It does, however, eliminate currency risk, and that is a very big part of total risk. And as a consequence of that, the bid-ask spreads between a number of the instruments have narrowed quite appreciably. Not as much as our Treasury markets, because we not only have a single currency, but we also have a single government issuance vehicle which means that we have a remarkable financial system buttressed by riskless instruments in fairly large volumes. So it's fairly apparent that the euro has unquestionably improved the European financial system. And one can see it by a good deal of the cross-border endeavors in some cases, but actualities in others, of mergers, acquisitions, and the rationalization of various different types of economic structures. And that would not have happened, indeed did not happen, even when we had the exchange rate mechanism and a sense of relatively stable currencies before the euro. But what the euro has done is created a potential situation in which competition can be very significantly enhanced. I mentioned that the dirigisme type of government actions in Europe have been a longstanding way in which government dealt with business, and it's been a factor which has undercut competitive pressures. The euro is making that increasingly difficult to implement. And as a consequence, it is inducing a form of competitive structure within the European Community that must invariably, must improve the viability of that economic structure. To the extent that the euro becomes a far more formidable force in the world economy, it's to the benefit of everybody, especially the United States. I know we tend to think of the question of Europe being a competitor and if they lose, we win, but this is not a zero sum game. To the extent that Europe prospers, so do we. And to the extent that Europe and we prosper, so does everybody else. And it strikes me that the advent of a euro which is something which I would never have forecast would have been successful, say ten or twelve years ago when it was first discussed – figuring that it is just too difficult politically to create something as radical as that – they have done it. They have done it in a way which has been almost seamless. And my suspicion is that, again looking back from the year 2010, we will find that that was one of the major important monetary events of the 20th century. Thank you very much, ladies and gentlemen. (Applause)