

The Boom-Bust Capital Spending Cycle in the US: Lessons Learned

In an address at the Per Jacobsson Lecture during the Annual Meeting of the World Bank and the International Monetary Fund in late September, Managing Director of the Goldman Sachs Group and former President of the New York Federal Reserve E. Gerald Corrigan discusses the lessons to be learned from the recent US investment boom and bust

Good afternoon ladies and gentlemen. I am pleased and truly honored to have this opportunity to deliver the Per Jacobsson Lecture which has been among the headline events at the Annual Meeting of the World Bank and the International Monetary Fund for almost forty years. The topic of my remarks, namely, the lessons to be learned from the recent investment boom-bust in the United States is both timely and important for policy makers, business practitioners, and the public at large. In addressing this subject, I will draw on both my 25 years of experience as a central banker and almost 10 years in the private sector with Goldman Sachs.

I. What Happened and Why Did it Happen?

The first subject I want to cover this afternoon will be to identify the major proximate causes of the extraordinary run-up and subsequent collapse in technology-related investment spending during the second half of the 90's and into the first two years of the new decade. Hereafter this combination of events will be called the 'episode' for the shorthand reference. Obviously, it is not possible to capture in a few minutes the complexities and subtleties of an episode that scholars, practitioners and public officials will be examining for years to come. Yet, it is possible to capture at least some of the central highlights of what we have witnessed. At the risk of great oversimplification, I will describe the central forces driving the episode as consisting of three separate but related phenomena as follows: First, the burst of new technology experienced over this period with particular emphasis on its applications to the internet and to telecommunication; Second, the erosion of business practices; and Third, the 'hype' associated with the so-called 'new economy'. I will then comment briefly as to the consequences of the convergence of these three phenomena into a single overwhelming force; a 'perfect storm' if you will. Understanding how this perfect storm not only influenced, but dominated, behavior on a broad scale is central to our ability to

better understand, in retrospect, what might have at least moderated the episode and what might be done to help prevent or moderate future such episodes.

A. Technology:

Looking at the 90's as a whole it is reasonably clear that there were three forces at work that were certain to spur a substantial surge in capital spending. Two of these forces were major technological platform changes; First, the move to the so-called client server platform that dated roughly to 1990; and Second, the move to the so-called internet platform which dates roughly to 1995. While both of these platform changes were watershed developments, their implications for capital spending were, in some respects, working at cross purposes in that the former called for greater de-centralization while the latter pointed in the direction of more centralization. These two platform changes were certain to spur capital spending but were also certain to cause redundancies and inefficiencies in capital spending. To further complicate matters, however, industry also had to contend with a Third factor having enormous implications for capital spending on technology, namely the approach of Y-2K. Thus, even ignoring the profound character of the technological changes that were occurring, the stage was set for what was certain to be a binge in capital spending.

As we know, however, the technological changes we were seeing in the related areas of the internet and telecommunication were not your garden-variety events. Indeed, almost at once, the concepts behind the seemingly benign words 'browser' and 'broadband' were about to shake the very foundations of not only business practices but also the basics of how individuals communicate with each other.

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As these forces fed upon themselves, it should have been more clear than it was that the surge in capital spending was predestined to overshoot. One reason for that likely overshoot was the competitive fear of being left behind on the junk heap of technological obsolescence was so powerful that many companies felt compelled to push ahead with spending programs even when there may have been doubts as to the timing, if not the merits, of such spending programs. The resulting technologically driven momentum was, certainly in retrospect, astonishing. For example, between 1995 and 2000, in Europe and the US alone, more than \$2 trillion in bank and bond debt was plowed into the telecom sector alone. In the dot.com world, start-up companies went from garages to IPO's almost overnight.

The dot.com phenomenon was driven importantly by the view that the most successful of these start-up companies would significantly displace traditional vendors of goods and services to both consumers and businesses. Thus, these companies were seen as having the potential to grow at extraordinarily rapid rates. Indeed, the conventional wisdom seemed to suggest that across a portfolio of investments in such companies, a small number of winners would more than compensate for a much larger number of failures. But the failure rate was very high indeed as seemingly attractive business models were swallowed up by cash burn rates that ultimately choked off new sources of capital. At the same time traditional vendors of goods and services found very effective ways to complement their normal distribution channels through the use of the internet.

The dust has not yet sufficiently settled to permit even a rough tally of the extent of the direct financial damage caused by the excesses of the investment boom. This task will be a difficult one for many reasons including the fact that there probably will be some recoveries relative to today's depressed valuation levels and, over time, there remains the potential for substantial returns from further application of the underlying technology. Nevertheless, it seems quite clear that the direct costs of the excess spending on equipment and software in GDP terms over the second half

of the 90's will be the equivalent of a significant fraction of the roughly \$450 billion cumulative rise in such spending in real terms between 1995 and 2000.

B. The Erosion of Business Practices:

Driven in no small way by technology itself, the day-to-day conduct of virtually all businesses was becoming substantially more complex and especially so in financial terms. In ways that were not fully understood, these added elements of financial complexity contributed to a breeding ground for excesses and abuses which would become more evident when—as was inevitable—the bloom came off the rose. As examples, these financial complexities placed enormous pressures on an already complex rules based accounting system in the US that was ill equipped to cope with this ferocious pace of change. Similarly, the sensitivities to potential conflicts of interest began to erode—a problem that, regrettably, has taken on particularly distasteful dimensions in the financial sector. Finally, complexity was also producing strains on some of the pillars of corporate governance such as the ability of boards of directors to grasp highly complex issues relevant to their historic oversight—as opposed to managerial—responsibilities.

It is difficult to pinpoint the precise point in time when these and other pressure points produced the rupture that triggered the appalling abuses and outright fraud we have witnessed. However, symbolically a few benchmarks seem to me to capture the mood of the time. Among those benchmarks were the following:

- The pressures to produce clockwork like quarter after quarter increases in earnings even if that implied the willingness to push accounting practices to the limit or beyond.
- The shift in valuation conventions for high tech companies—especially in the dot.com sector—from earnings multiples to revenue multiples.
- The 'you had to be there' phenomenon whereby even the skeptics were driven by competitive forces and the fear of being left behind to modify behavior and

practice in order to secure their place on this rapidly changing landscape. As a seemingly trivial but revealing example, in the battle for skilled personnel, traditionally 'grey suit and white shirt' financial institutions (including Goldman Sachs) and law firms modified not only their compensation practices but their dress codes in order to compete for personnel with Silicon Valley and other tech centers around the country. It did not matter if you were an equipment vendor, a money manager, a stock analyst, or even the typical man or woman on the street. The pressure to be there—to talk the talk and walk the walk—was overwhelming.

Reflecting in part these and other factors, the slippage in sensitivity to basic business norms and practices gained momentum and in a few cases it hemorrhaged into the worst imaginable in terms of raw greed and unrestrained arrogance. However, even absent the extremes of Enron, WorldCom, Tyco, etc., the case for serious reform in a number of areas of business practice is compelling.

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C. The 'Hype' of the New Economy:

As the second half of the 1990's proceeded, the macro-economic and macro-financial performance characteristics of the US economy soared. Many macro-economic indicators reached or exceeded benchmarks that only a few years earlier seemed unthinkable. At some point—and I don't recall exactly when—the term 'new economy' became part of our daily vocabulary. Obviously, this was a term of art having somewhat different meaning to different people. However, the new economy seemed to most to have the following features: First, it was driven by technology; Second, it was producing a major structural change in such fundamentals as trend productivity and potential GDP growth. For some, the order of magnitude of the change was such that potential GDP growth was seen as moving from 2 ¼ percent or so in the years prior to 1995 to something approaching 4 percent. Third, the upward shift in growth potential, combined with the restraining effect of productivity growth on unit labor costs, implied a robust outlook for corporate profits as well as continuing restraints on inflationary pressures. And finally, the new economy seemed to hold the promise of budget surpluses as far as the eye could see implying the ample availability of both domestic and foreign savings to finance ongoing high rates of private investment thus reinforcing the virtuous cycle.

The euphoria associated with this vision of the new economy reached virtually every segment of our society, both public and private. Needless to say, for those who believed that the emerging performance of the US economy in the second half of the 90's would be sustained into the new decade, the stock market was the place to be. To be sure, there were a few skeptics, but by and large those skeptical views were drowned out by the almost daily drumbeat of events that seemed to confirm the miracles of the new economy.

Today, with the collapse of the stock market bubble, the evidence of corporate misdeeds and a few revisions to the past GDP data, it seems clear that the new economy was not nearly as new as it once seemed. As an example, it now appears that

the potential GDP growth rate is about 3%—much better than 2¼% but a long way from 4%. Nevertheless, if the passage of time confirms that potential growth has improved by three-quarters of a percentage point, that in itself would be a remarkable achievement for a \$10 trillion mature industrial economy. Yet, such an outcome does not alter the conclusion that the hype surrounding the late 90's version of the new economy played a major role in shaping the behavior and beliefs of vast segments of the business, household and governmental sectors of our society.

D. The Perfect Storm:

Any one of the three forces described above was quite capable of producing elements of economic instability. But as with the three storms tracked in the book and movie, "The Perfect Storm," when these three forces combined and interacted with each other, the result was a chain reaction of events with devastating consequences. Unlike the meteorological perfect storm—these will not dissipate quickly.

Call it a bubble or give it any label you wish, but whatever it is called, the episode of the late 90's had all of the classic trademarks of the boom-bust cycles that have characterized recorded economic and financial history for centuries. Only history will judge how this episode—in both its diagnostics and consequences—stacks up relative to others. However, we do not have to wait for the verdict of history to ask ourselves the question of whether, even now, we can identify lessons from this episode which can help avoid or at least moderate such episodes in the future.

Before turning to that discussion, let me forcefully address one crucial point immediately. Namely, I for one cannot conceive circumstances in which the post-bubble correction process in the United States will result in the multiyear economic paralysis which has essentially crippled the Japanese economy for the past decade. To be sure, as I speak the overhang of the late 90's—including the reaction to corporate abuse and excess—is taking its toll on economic activity both in conventional cyclical terms but also

because public confidence has been badly shattered. However, I do not anticipate that these pressures will be cumulative or long lasting. As I see it, the economy will grow sluggishly over the second half of this year, followed by growth of 3 percent or a bit higher next year. Indeed, even in the midst of today's gloom we should never underestimate the vitality of the US economy.

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II. Looking to the Future: Lessons for Public Policy and Private Action

The first question that arises in the policy arena is whether, in retrospect, there may have been public policy initiatives that could have prevented, or at least moderated, the episode. For example, some might suggest that deregulation in a number of industries went too far. This suggestion seems to me to badly miss the point in part because much of what we have seen in deregulation has been forced by technology but also because deregulation is pro-competitive and pro-consumer. That is not to say there may not be room for some regulatory fine-tuning here and there but the course of re-regulation would be counterproductive. Like it or not, the genie will not go back into the bottle.

Similarly, fiscal policy is not equipped to deal with this kind of problem except, perhaps, for some targeted changes in tax policy for which I have neither the experience nor the expertise to comment. Thus, in broad the policy arena we are left with monetary policy or regulatory policy, broadly defined, or some combination of both. Allow me to turn first to monetary policy.

Contemporary monetary policy is a remarkably flexible tool of macro-economic stabilization policy. It is also a blunt tool which, at the end of the day, works through interest rates and/or exchange rates. Because it is a blunt tool and for reasons of accountability and transparency, the policy goals for most central banks are stated in broad terms that are focused on price stability and/or sustainable economic growth, the latter of which is closely related to price stability. Not surprisingly, when asset price distortions or bubbles occur, the question often arises as to whether central banks should direct or target their policies at specific variables such as stock prices. My answer to that question is that the overall cost of seeking to target such variables by the use of interest rate policy would almost certainly impose crushing costs on other sectors of the economy that are not experiencing asset price inflation and, yield delayed and uncertain effects on the asset price inflation itself. Thus, targeting selective asset prices, or the single-minded

pursuit of a policy to burst an asset price bubble at any cost, seems to me to be fundamentally incompatible with sound and sensible monetary policy.

On the other hand, I believe a case can be made that there may be circumstances in which sharp and persistent increases in asset prices might justify a somewhat higher level of interest rates than would otherwise be the case if policy was focused only on the implications of these prices for the near term outlook. Needless to say, any such tilt in interest rate policy would have to be seen as being broadly consistent with core policy objectives and not as making particular asset prices a direct goal or target of policy. Obviously, a policy tilt involving somewhat higher interest rates would not be a panacea but one could speculate that such a policy might work in the direction of moderating—even if only at the margin—the bubble and its damage over the medium to the longer term. By way of analogy, I do not see this approach as fundamentally different from occasions in which when central banks introduce a similar tilt to policy due, for example, to the behavior of the exchange rate.

This point of view on my part is not new. In fact, I made this exact argument when I delivered the Roy Bridge Memorial Lecture in London in May 2000. I concluded that discussion with the following observation:

“What I have said carries with it a powerful implication. Namely, the task of checking selective asset price inflation should be left primarily to the market place and the private institutions and individuals that constitute that marketplace. In turn, that implies that market participants are going to have to exercise greater self discipline and prior restraints or they are going to have to be prepared to pay a hefty price for not doing so.”

Given that there are substantial limitations as to what monetary policy can and should do in the face of selective asset price inflation, the remaining major policy question is whether one or more elements of regulatory policy can materially help prevent or limit future asset price bubbles and the excesses of behavior that inevitably accompany such events. Here, I believe

that the answer is ‘yes’—especially if such regulatory initiatives are accompanied by supportive and complementary actions in the private sector.

Given the understandable public outrage about high profile cases of corporate abuse, to say nothing of the related serious damage to public confidence more generally that has emerged, it is not at all surprising that a sweeping agenda for reform has emerged. Broadly speaking, that agenda is directed at several areas of concern including the following:

- Strengthened independence for accountants and auditors;
- Improvements in accounting policies and practices;
- Multi-dimensional improvements and enhancements in corporate governance;
- Efforts to better rationalize approaches to executive compensation;
- Strengthened efforts to better manage potential conflicts including enhanced independence for research analysts;
- Enhanced public disclosure policies and practices for all listed companies.

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Literally dozens of institutions and individuals, both public and private, are contributing to efforts to shape and implement this agenda for reform. As a result, the initiatives that are on the table or already in place are far too numerous and far too detailed to cover in this lecture. However, two broad observations, as well as a few words on three specific aspects of the reform agenda are in order.

The two board observations are as follows: First, generally speaking, the reform efforts are working in the right directions and are proceeding at a rapid pace. Indeed, from my vantage point it is clear that we are already witnessing a constructive sea change in the attitudes and behavior throughout corporate America. Second, there is, of course, the danger of overreaction which brings with it the risk of counterproductive knock-on effects that can be detrimental to economic activity. Once such danger of particular concern is the risk that well intended reform gives rise to elements of risk aversion that in subtle but certain ways can choke off economic activity. The United States has a remarkable and long-standing track record of striking a reasonable balance in responding to economic and financial adversity so as not to undermine the creative genius of our economy. One would hope and expect that this pattern of reasoned response to adversity will prevail in this case as well, keeping in mind that reasoned response must include appropriate punishment for those who have broken the law.

As mentioned above, there are three particular aspects of the reform agenda that I want to mention in some detail. One relates to a particular aspect of corporate governance; another relates to accounting policies and practices, and the third relates to public disclosure policies and practices.

Turning first to corporate governance, there has, of course been a great deal of attention devoted to this subject with particular focus on the role of board of directors and especially the role of independent directors. There is, however, one critical aspect of corporate governance which is receiving surprisingly little attention. That relates to the independence and stature of the officials who are

responsible for core control functions including credit due diligence, risk management and especially corporate controllers. The latter includes the corporate officials who are responsible for accounting, the integrity of books and records, and most particularly in the financial institutions, the all important task of price verification.

In looking at the recent blockbuster cases of scandal and fraud, one common denominator is the extent to which these critical control officials were co-opted, or ignored when they either were, or should have been, in a position to know that things were badly amiss. It seems to me that common sense tells us in unmistakable terms that these officials must have the independence, the stature and the competence to stand for what is right and proper even in the face of enormous competitive and business pressures. I also know from my experience at Goldman Sachs that independence and strength in these critical functions contributes greatly to both commercial and cultural excellence. Therefore, it is an inherent responsibility of CEO's and boards of directors to insure that the officials responsible for these functions have the independence, the stature and, I might add, the compensation, to discharge their responsibilities with the highest degree of competence and integrity.

The second reform related topic I want to discuss relates to needed changes in the norms and standards that guide day-to-day accounting practices. This topic is related to, but distinct from, the various structural reforms in the accounting industry that are largely associated with the Sarbanes-Oxley Act of 2002 which was recently signed into law by the President.

As things now stand, accounting practices are a mixed bag of procedures, which have evolved over a long period of time both here in the United States and around the world. As examples, here in the US, financial institutions follow a dual system, based in part on historic cost and in part on fair value accounting models. Similarly, US GAAP is heavily rule based while UK and European models are primarily based on broad principles. Finally, the distinctions between US GAAP and

Japanese GAAP can produce sharply differing pictures of the very same business entities.

In these circumstances, the challenges of moving to a coherent global approach to accounting practices that are better able to reasonably reflect economic reality, both domestically and internationally, is truly formidable. Indeed, reconciling the legacy of the past with the needs of the future in a globally integrated world will require a considerable amount of time, hard work, skill and statesmanship but it must be done with all deliberate speed. Therefore, it is in our collective best interest to fully support the work of the International Accounting Standards Board in achieving this goal.

While on the subject of accounting practice, I want to acknowledge that there is one critical area in which my own thinking has changed materially since my days at the Fed. That change relates to the need to substantially accelerate the move to the universal adoption of fair-value accounting for all financial institutions.

Having learned the advantages of historic cost accounting and the perils of fair-value accounting for banks from the master, Paul Volcker, I am more than mindful that this subject is controversial and that there are both practical, policy and philosophical issues to be addressed in managing this transition. Without in any way diminishing these issues, the critical factor that has changed my thinking on this subject is the discipline associated with the need to mark-to-market all positions—on and off balance sheet—on a daily basis.

From my vantage point as co-chairman of the Global Risk Management Committee at Goldman Sachs, I have witnessed at first hand the ways in which fair value and mark to market accounting impose prompt discipline on business practices and risk appetites. Recognizing losses (and gains) as they occur constructively influences behavior in ways that I simply did not comprehend from the distance of my former lofty perch on Liberty Street.

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Having said that, one of the concerns that is often raised about fair-value accounting is that for many complex and/or long-dated or synthetic transactions fair value entails a considerable amount of judgment and subjectivity. Obviously there is truth to this observation but it is also true that any accounting system entails both judgment and subjectivity. More importantly, there are techniques, tools and governance arrangements that can provide a very high level of assurance that fair value practices are applied in an appropriate, disciplined and consistent manner. Indeed, the strong and independent financial controllers mentioned earlier—including their responsibilities for conducting independent price verification—are the critical ingredients in insuring that any accounting practices are applied in the appropriate manner.

Fair-value accounting for financial institutions is not an end unto itself; it is a means toward the end of more consistent and economically relevant financial statements and greater financial discipline. It will not prevent abuse or fraud; nor will it resolve the rules verses principles dilemma associated with all accounting systems. Finally, it will not overcome the need to adopt workable and pragmatic approaches to guide accounting practices for particular classes of financial services such as small business loans where there may never be either direct nor indirect techniques to mark positions to market.

The choice of the preferred accounting model for financial institutions comes to what is best, not what is perfect since perfection is beyond reach. Given the weight I personally assign to the model that comes closest to economic reality and provides the greatest discipline, fair value for financial institutions seems to me the way to go.

Before bringing this lecture to a close, I want to add one further thought and it relates to the subject of enhanced public disclosure. Clearly, enhanced transparency is a good thing and there are aspects of enhanced transparency that in the current environment are 'no-brainers'. As an example, the new disclosure policy that requires institutional research reports to disclose investment banking

relationships of the analyst's employer fits this description of a 'no-brainer'. However, there are also areas in which enhanced disclosure may be aimed at inherently very complex subject matter that is intended to help investors make informed judgments about the absolute and relative prospects for individual companies. Highly complex measures of market and credit risk exposures are cases in point. Here, there will often be a fine distinction between public disclosures that enlighten and those that may confuse. At a minimum, this requires that approaches to enhanced public disclosure must be highly sensitive to the law of unintended consequences and they must rely on a blend of quantitative and qualitative disclosures that, if anything, place more stress on the latter than the former.

Conclusion

It would be tempting to conclude these remarks with the words of that well known contemporary philosophy Pogo who observed, "we have met the enemy and it is us." While there is a good deal of truth to that quip, life is not that simple. Thus, I will wrap up with a few shorthanded points of substance as follows:

First, the euphoria of the second half of the 90's clearly got out of hand. The boom, like all booms, produced excesses in spending and excesses in behavior. That's the essence of any boom. What strikes me as different is the extent to which the excess in behavior in a relatively few instances took on the appalling dimensions we read about in our daily newspapers.

Second, the US economy has held up remarkably well in the face of considerable adversity, especially taking account of the tragedy of September 11, 2001.

Third, while the 'hype' associated with the new economy was very much over blown, the fact of the matter is that the US economy has achieved important structural improvements in recent years. These improvements bode well for the future.

Fourth, while spending on internet and telecommunication projects got way ahead of itself, these innovations are real and will continue to produce long-term benefits.

Fifth, the reform and cleansing effort—including the pursuit and prosecution of those who have broken the law—is well underway and is already producing clear benefits even if a great deal of hard work lies ahead, especially in regard to accounting practices.

Finally, despite the gloom of the day, I believe the US economy, and particularly its financial system, will emerge from all of this stronger than ever. On that upbeat note, thank you for your patience and attention. ■

CEO

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