July 18, 2002

Professor DeLong:

I saw today's article in the WSJ purporting to summarize some of your ideas on difficulties in managing the economy and had a few comments. I'm sorry if they are somewhat disorganized.

1. I'm not sure that the pace of technology evolution is more rapid today than, say, 80 or even 50 years ago. It just seems that way. Electricity and automobiles in the 1920s, and exploitation of the technological advancements during World War II and transistors in the 1950s were arguably as signficant then as information technology and biotechnology seem now.

2. I am also concerned that productivity increases attributable to information technology are not real. I believe that information technology products and enterprises are overvalued because the intellectual property on which they are based is illusory. Informatin technology products are commodities that are, for a variety of reasons, being bought and sold at unsustainable prices. This, I fear, is distorting productivity measures.

Both Microsoft and Sun make and sell office suites. (Sun's is called StarOffice. I assume you are familiar with the Microsoft product.) I use both, and although each has its advantages and disadvantages, they are essentially interchangable. For reasons that have been endlessly debated in the courts and the media and that are not relevant to this comment, Microsoft's sales share is much greater than Sun's. But, Sun's price is much lower. In fact, I obtained the product from Sun for free, although I understand that Sun is now charging a nominal amount, Microsoft Office, of course, costs hundreds of dollars.

Microsoft and Sun each claim patent protection for their products, yet their products are in many ways effectively identical. Whatever the PTO may have granted, neither company controls intellectual property of any value. And, the marginal variable cost for each product is essentially $0. These are classical commodities. I'm not an economist, but logic suggests that the sustainable price for the products should be the same and should not be much greater than the per unit cost of goods (which in this case will have only a very nominal marginal component)of the most efficient producer plus the per unit cost of capital of the most efficient producer. To the extent that the market prices are in excess of this amount, they are unsustainable.

This analysis can be applied to all software companies, not just Microsoft and Sun, and extends to so-called "enterprise management" programs. And, it applies to hardware and semiconductors as well. Moore's infamous law proves the point. If Moore is right and prices are falling 50% every 18 months (while performance doubles), there is a severe market price distortion.

Also, for various (and I believe irrational) reasons that are not relevant here, information technology consumers are purchasing goods and services of no value to them. In fact, most are purchasing goods and services of negative value. There is a preoccupation with "functionality" and clock-speed performance that has consumers purchasing technology that affords them no benefit and merely imposes on them unnecessary maintenance and efficiency costs (training, etc.). As a society, we are purchasing Ferraris to go pick up the mail. I am concerned that productivity statistics are misstated to the extent they are based on goods sold at unsustainable prices and goods and services that are unnecessary and of negative economic value to consumers.

3. While information technology has improved information quality to some extent, the improvement is less dramatic than commonly believed. Inventory cycle times have decreased, but virtually all information management systems are easily circumvented by the users.

Example: My firm has a great document management system that puts every document in a database by client and matter. Except, of course, that users all too often enter "99999/9999" to avoid having to look up the client matter numbers.

Example: I ask a cashier at a major home center to add two sacks of peat moss to my purchase. She asks me if they have any. To avoid having to walk all the way outside the building, I ask her to check her computerized inventory, which indicates they have 782 units. Figuring that the figure couldn't possibly be that far off, we conclude the transaction. You can guess the rest. Yup, none in stock.

So, I hope I never ride on an elevator that relies on the "stabilizing counterweight" of information technology at its present level of development.

4. The WSJ article attributed to you certain comments about government's capacity to make sound economic decisions. Now, I realize you're a Democrat. I'm not. But, I do not think anyone has any idea of what the costs of the Bush tax cut will prove to be. (Similarly, I would view any attempt to quantify their benefit as equally specious.) There was also a reference to Japan in this regard, which may or may not have originated with you. While to some extent the consequence of government policy decisions, Japan's problems are also the result of private sector accounting abuses that vastly exceed anything we've seen in our large public companies to date. I generally believe that government is inefficient and that less government is always preferable to the alternative, but I think it unfair to blame the Japanese government for the consequence of decisions it had to make based on the reported results of Japanese companies.

5. Final point - Disclosure and regualtion of accounting. Let me add some new comments to the debate based on my past experience as counsel at several public companies. Outside auditors confirm the fairness of the presentation of corporate performance at the enterprise level. Corporate management compiles the financial data from the businesses that comprise the enterprise and prepare the presentation. Business unit management presents financial results to corporate management. Internal auditors police the accounting and reporting systems at the business unit level.

Outside auditors, operating at the enterprise level, do not address items that are not material. This is a huge problem. The materiality threshold prevents the auditors from really learning the intricacies of the business. Management understands the business in a way that the auditors never will. So, in debates about proper presentation of particular items, all the auditors can do is argue over proper application of the accounting rules as written. Management can argue the rules or, when it happens to be more beneficial, the fairness of the presentation.

Management does not volunteer information. It answers the questions the auditors ask. Sometimes those answers, while technically truthful, do not provide the auditors with the information necessary to fully and fairly evaluate the issue. Corporate management, in turn, suffers a similar problem to a lesser degree. Corporate management relies on business unit management for financial performance information. And, business unit management knows more than corporate management does. Again, questions that are asked are answered, but information is not volunteered.

And, whatever one may think of corporate management's compensation, the incentives for business unit management to push the envelope are usually vastly greater than for corporate management. Business unit management is working toward bonuses, and business unit management is less likely than corporate management to be overpaid to start with. These guys need their bonus payments to make their mortgage payments. The internal audit function is totally ineffective. Their status in the heirarchy is not great, they do not have easy access to information, and they are charged with auditing their employers.

Unfortunately, I fear we need outside auditors at all levels, even though it will be costly and will benefit a profession that has not exactly acquitted itself with distinction. I am also concerned that the scandals we have seen to date might pale by comparison to what comprehensive audits of many public companies would reveal in terms of cost accounting, inventory valuation and revenue recognition abuses at the business unit level.