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STERLING'S WORLD REPORT

The Productivity Payoff: Be Careful What You Wish For?

For years, economists have argued that the most important aspect of the economy's long-term prospects was the rate of labour productivity growth. Now that the U.S. has entered into a period of high productivity

growth, the reality is that it has been accompanied by other problems, including large job losses and financial market volatility.

It's ironic, because a surge in productivity growth is potentially such good news in the long run that it's as if we have all been handed the proverbial goose that lays golden eggs. The problem is that our political systems have been unprepared for the fact that the golden goose can also make a big mess on the front lawn.

We are optimistic that the surge in productivity is sustainable and expect that it will have enormous

positive consequences in the long run, both for investors and most participants in the economy. However, a key question is whether society and government can adapt to the stresses caused by the productivity revolution. Put bluntly, will a political backlash end up killing the golden goose? We don't think so. But how this turns out is likely to be extremely important to the markets over the next several years.

Why is Productivity a Big Deal?

Even small improvements in productivity growth can be of major importance over time for a very simple reason: the awesome power of compounding. For example, suppose optimists on productivity are right and the economy is capable of 3.5% productivity growth over the coming decades, compared to the 1.4% average growth of the two decades to 1995. Then the implications for wealth creation would be enormous, with real incomes doubling every 20 years instead of every 50.

Over the past five years, America's productivity has grown by an average of 3.3% – the fastest pace in decades (See Chart 1). This has occurred despite the recession of 2001 and sluggish growth thereafter. It has also occurred despite the sharp drop in investment in information technology since its late 1990s peak. The lesson is that productivity is not automatically boosted by

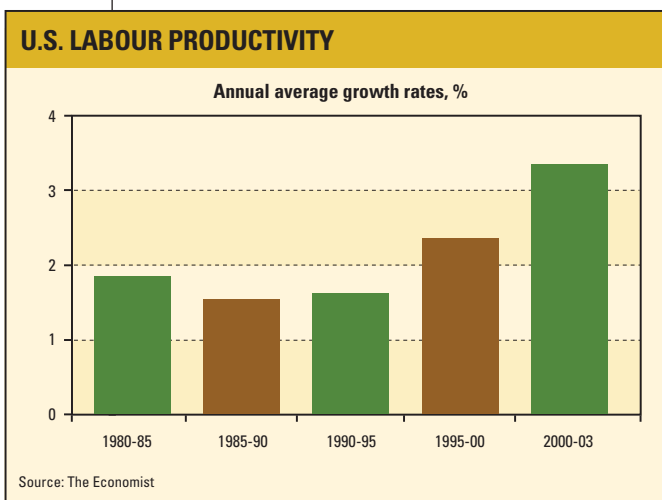


Chart 1: U.S. labour productivity has accelerated sharply over the past five years, reflecting the payoff from technology investments and the development of new business models.



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technology, but requires firms to adjust their business models and reorganize their operations before they reap the full benefits of new technologies.

If this surge in productivity can be sustained, it would be an enormously positive development. For example, most grim scenarios about serious government funding problems when the baby boomers retire are based – quite properly – on conservative assumptions about long-term productivity and overall economic growth. If higher productivity materializes, many of those problems will turn out to be much easier to deal with.

In the early 1990s, pessimistic economists such as Princeton University's Paul Krugman spilled much ink fretting about America's low productivity growth. In books such as *Peddling Prosperity* (1994), Krugman argued quite persuasively that high productivity growth is critical to long-term economic prospects:

"America has two great problems: slow growth in productivity, and rising poverty (which is the consequence both of inadequate productivity growth and of increasing income inequality). Everything else is of either secondary importance

or a non-issue. For example, the budget deficit matters only to the extent that it is a drag on our productivity growth. ... America's problem of international competitiveness is almost completely a non-issue."

One would think Prof. Krugman would be dancing in the aisles celebrating the recent news on productivity. One would be wrong. His latest book is called *The Great Unraveling: Losing Our Way in the New Century* and it contains a great deal of fretting about presumably secondary issues like America's fiscal deficit and Wall Street scoundrels.

The Job-Loss Recovery

One major problem with rapid productivity growth is that it can kill jobs before the "invisible hand" of capitalism creates new jobs. A related problem is that surging productivity can also contribute to financial instability and social tensions. The risk is that the political backlash to these issues is so substantial that politicians with easy "solutions" willfully destroy productivity growth. The disastrous imposition of trade barriers in the 1930s is a case in point.

In current circumstances, the problem in the U.S. is that the economic recovery has so far been not just a "jobless recovery" but has actually been a "job-loss recovery" (See Chart 2). For example, even though the prestigious Bureau of National Economic Research declared that the recession of 2001 ended in November of that year, the U.S. has lost more than a million jobs since then. Based on the history of previous economic recoveries, the economy by now should have generated somewhere in the vicinity of three million new jobs.

That hasn't happened this time around despite the huge amounts of monetary and fiscal stimulus that have been thrown at the economy. The culprit appears to be much faster productivity growth than policymakers anticipated. In effect, there are something like four million "missing

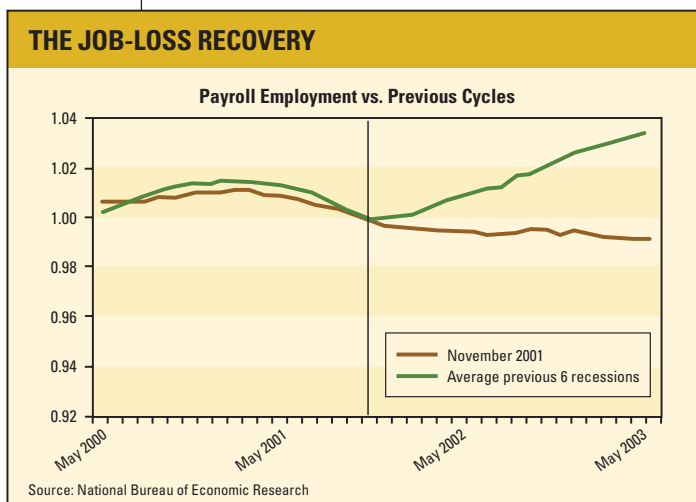


Chart 2: The dark side of the boom in productivity has been a loss of over a million jobs in the United States since the recovery began in November 2001 – in sharp contrast to other business cycles.

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jobs” since the recovery began – three million that normally should have been created and one million that have been lost. That has started to become a major political liability for President Bush and one that appears to have the administration casting about for other quick fixes – like a weaker U.S. dollar.

“New Era” Booms and Busts

Financial instability has also been associated with great surges in productivity in the past. For example, the railroad boom in the 1800s was associated with waves of financial market speculation and painful crashes. The automobile production boom in the 1920s was accompanied by a huge increase in productivity, but also financial speculation and then a market crash.

The problem with “new eras” is that entrepreneurs and investors alike often become overly optimistic. That leads to periods of over-investment followed by periods of painful retrenchment. We have just been through such an episode with the technology boom and bust, proving perhaps that there is nothing truly new under the sun. However, it is also worth keeping a sense of historical perspective, noting that the railroad boom that began in the first half of the

19th century did not end with the first financial market bust in the middle of the century. Many decades of development and related booms and busts followed, while the world’s underlying productivity grew substantially.

At the centre of these booms and busts have been optimistic, risk-taking entrepreneurs. Historically, they have been celebrated when they have made fortunes for themselves and others and demonized when times turned bad. Renowned Harvard economist Joseph Schumpeter rightly cast them as the heroes of the sometimes unseemly process of “creative destruction” that is the essence of capitalism and economic development.

Historically, social tensions have tended to rise when a small group of entrepreneurs get very rich, especially when the cast of characters included a number of scoundrels. This time around has been no exception, as episodes at companies like Enron, WorldCom, and Tyco have revealed. While lawbreakers clearly need to be punished, how aggressively should a society move to dampen all risk-taking behaviour in order to avoid the excesses of a small group of scoundrels? From a social point of view, one could conclude that the emergence of a few rascals during boom times is a small price to pay for elevated productivity brought about by entrepreneurial risk taking.

The respected British economist, Nicholas Kaldor, put it this way:

“The same forces which produce violent booms and slumps will also tend to produce a high trend-rate of progress. ... It is the economy in which businessmen are reckless and speculative, where expectations are highly volatile but with an underlying bias toward optimism ... [that] is likely to show a higher rate of progress, ... while an economy of sound and cautious businessmen ... is likely to grow at a slow rate. And Schumpeter’s hero, the ‘innovating entrepreneur,’ whom we dismissed so summarily and rather contemptuously

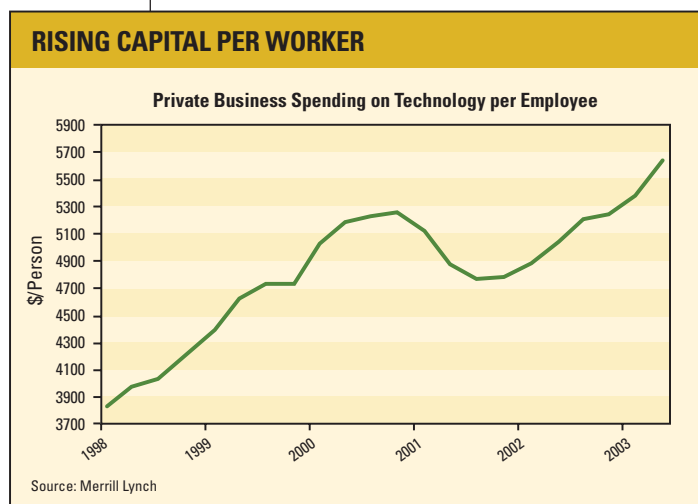


Chart 3: Firms continue to boost productivity by substituting cheap capital equipment and information technology for relatively expensive workers.



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at the beginning, is found after all, to have an honorable place, or even a key role, in the drama. ... He is a promoter, a speculator, a gambler, the purveyor of economic expansion generally, and not just of the 'new' techniques of production."

Over his long career, Prof. Kaldor was no fan of unregulated capitalism, but his insight about the importance of optimism and risk taking to a nation's economic dynamism is well worth keeping in mind.

We are encouraged that the political reaction in the U.S. to the financial market volatility and financial scandals of the last few years has so far been relatively restrained. A sizeable crew of rascals has been brought to court and accounting standards and corporate governance have been tightened up. However, pro-growth economic policies remain in place and perhaps the best indicator of "animal spirits" and risk taking, namely the Nasdaq stock index, is up over 50% from the bottom. The high-yield bond market and the corporate bond market have enjoyed massive rallies as well. Like the Nasdaq, these recovering markets are promising leading indicators of improving investment and eventually job creation.

As we noted in last month's *World Report*, corporate margins have been improving dramatically and profit growth has been extremely impressive over the last two quarters. Since profits are the lifeblood of the economic system, the ongoing recovery in corporate profits also augurs well for a broader economic recovery as well. The best cure for the problems caused by surging productivity is surging growth in demand, facilitated by accommodative monetary policy. And the Federal Reserve is on record signalling that it will keep a pro-growth monetary policy until it sees a sustainable recovery materialize. Remember too, that the Fed's charter includes two missions: price stability and full employment. With no current worries about inflation, it is clearly in a position to support strong growth that will boost employment.

Finally, we would note that the dizzying pace of progress in science and technology that seems to be at the root of the new industrial revolution is far from being exhausted – notwithstanding the "tech wreck" in financial markets. Businesses continue to invest in new technology (See Chart 3). And, as we show in Chart 4, "Moore's Law" is alive and well, as computer power appears to keep doubling every 18 months or so. Gordon Moore himself, a co-founder of Intel, recently projected the number of transistors per semiconductor chip reaching nearly 1 billion by the end of the decade. Currently, the highest-end chips pack about 80 million transistors per chip.

The bottom line is that the productivity revolution has survived the boom and bust of the last few years and there is every reason to believe that it is sustainable. If policymakers resist the urge to kill the goose that lays golden eggs, we think the pessimists will be wrong again.

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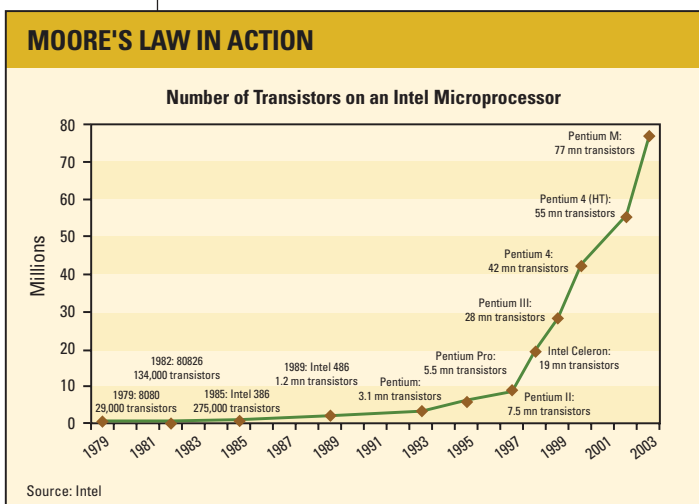


Chart 4: Computer performance is accelerating dramatically and Intel projects that the number of transistors per chip should reach close to 1 billion around the decade's end.