New Technology and the Banking Sector

- My job today is to try to frame a set of issues to which our panelists from the world of high technology can respond. I'm going to do that in the U.S. context, since that is the area I am most familiar with. I want to start with the impact of technology on the economy more broadly, and then suggest some issues related to banking and financial industry more generally.
- There is no doubt technology spending is a key driver for economic growth in the U.S. Real business fixed investment has grown at a rate of 12 percent over the past year, but within that, spending on computers, taking into account the decline in the cost of computing power, increased 64 percent. Lest you think this is a one-year wonder, the average annual growth rate in real spending on computers over the last four years was 50 percent.
- There is also no doubt that this investment in technology underpins the U.S. economy's strong productivity growth--for the last year productivity growth has averaged about twice what is thought to be its long term trend (2.7 vs. 1.3 or so). While there are lots of measurement issues especially in a service-driven economy like that of the U.S., this level of productivity growth has to be playing

some role in the economy's low inflation rate in the face of tight labor markets.

- So a major question is whether or not productivity improvements aided by technology spending are temporary—i.e., mostly cyclical—or permanent—mostly structural. Is it possible for an economy to be truly changed structurally at least in part by technology so that it is capable of growing at faster rates with low inflation, or is that economy simply at a particularly good point in the business cycle?
- I don't have the answer to this question, but I think it's a question for the financial services industry as well. Has technology spending to date simply allowed financial firms to deal with new things, or cyclical pressures, or has there been real structural change?
- Generally speaking, banks have been major users of technology for a long time. Banks were some of the first users of computers, and in payment, accounting, and custodial services most banks have major system infrastructures—big computers, complicated software, lots of people. In the United States, in 1992—not a particularly good year for banks—the financial services industry accounted for only 4.1 percent of plant and equipment spending overall, but for 14.3 percent of total

investment in computers, nearly 18 percent of investment in storage devices, and 22 percent of computer data processing services.

- More recently—in the late 90s—the financial industry more generally, and banks specifically have undoubtedly been heavily represented in technology spending as well. Has real structural change occurred?
- In my view, the jury is out on this question. Certainly technology has transformed telecommunications and information systems increased the pace and reach of trading systems, made the design of complicated new instruments feasible, and improved risk management, among other things. But the welter of back office payment, processing, and accounting systems have not been equally transformed.

But such a transformation may be both inevitable and necessary. Technology is no longer simply a business tool; it now can act as a driver of business strategy as well. It is not simply a means to an end—it can create its own ends in terms of making the once only barely imaginable, commonplace. A couple of examples:

--Telebank—a fully-insured, full-service commercial bank operating in the United States solely over the Internet.

--Amazon.com—a full-service book and video store operating without inventory and providing superior customer service.

--E trading—completely on-line retail stock trading through the internet.

- These examples are not just interesting anecdotes—they represent instances of firms completely reshaping how customers see their industry in terms of service and convenience by using technology to create a whole new process to deliver products and services. Telebank, whether you like it or not, is a revolution, not an evolution, of banking process, just as e-trading could make the stockbroker obsolete.
- What does this say about technology and the banking sector?
  1. In my view, banking is an industry that despite its long use of technology can evolve significantly in terms of its overall use of technology.
  2. However, banks have large investment in capital, people and existing technology. Thus an evolution could very well be slow.
  3. In the meantime, banks face real competition from information service providers who can reshape how

customers see banking services and the role with which such services are provided.

4. This challenge is real, and likely to drive intensive technology spending by U.S. banks for some time going forward.

5. Finally, such spending could change the structure of banking quite profoundly, and in ways I, as a regulator, find thought-provoking, if not disturbing.

- In that regard, some thought also needs to be given to the larger questions that technological change in the banking industry presents. Let me suggest a few:

  --Will technology make traditional financial intermediaries irrelevant by reducing their services to mere commodities? Does this matter?

  --What new opportunities does technological change bring? For example, E-trade type services allow entry into retail brokerage without the brick and mortar expense of retail outreach. How should these new services by regulated, if at all?

  --How does technological change affect the regulation of financial services? How does it affect the public safety net that promotes financial stability?

- Again, these are questions to which I don't have answers. It is my hope that our panelists today will suggest

perspectives on these issues, and more fully explore how technology is transforming banking, and the economy more generally.