THE YEAR 2000 COMPUTER PROBLEM AND THE GLOBAL FINANCIAL CRISIS

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Y2k and the global financial crisis

- The year 2000 computer problem was the largest technical project in history

- It required global cooperation, and it was a great success

- The global financial crisis is the largest economic crisis since the 1930s

- It also requires international cooperation

The size of the y2k problem

- $500 billion was spent worldwide
- $100 billion was spent in the U.S.
- $10 billion was spent by the U.S. government

The size of the financial crisis

- The U.S. plans to spend at least $700 billion
- Governments in other countries also plan to spend large sums
- The cost to people through unemployment, lost savings and psychological stress will be far greater

Y2k and the financial crisis: similarities

- **The y2k crisis arose because a problem that was known to all programmers was forgotten**

- **Computer and software makers, users, journalists, and professors all failed to point out the need for action until very late**

- **The success of deregulation in the 1980s led to over- reliance on the market**

- **Financial innovations were not fully understood or adequately regulated**

Y2k and the financial crisis: similarities

- As work on the y2k problem progressed, the size of the problem (e.g., embedded systems) grew

- Although originally a technical problem, y2k was essentially a problem in perception

- As the financial crisis unfolded, additional countries and institutions were affected

- Although originally a failure of regulation, the financial crisis can be seen as a problem of perception

Which countries with suffer most?

- High tech countries (US and Europe) which started early?
- Low tech countries that started late (Africa)?
- Medium tech countries that started late (Italy)?

- Countries most over-extended (Iceland)?
- Where the problem is very large (US)?
- Countries that are slow to act and slow to recover?

International cooperation

- A fixed deadline
- Govt and business executives did not want their org. to fail
- Cost of repair was small relative to cost of failure

- No fixed deadline; feeling of urgency varies
- The actions taken are influenced by politics
- Costs are large and will probably be felt mostly by the poor

Cooperation via the internet

- Information on vulnerable equipment and effective solutions could be collected by a few and shared with many
- Due to inter-connections, any failure would affect others

- Solutions are political more than technical
- Countries will be tempted to protect local businesses at the expense of businesses abroad

Nature of the perceptual problem

- Once raised to consciousness, the nature of the problem was clear (embedded systems were added as a concern)

- How much preparation for failure is prudent (evacuation)?

- Many people still cling to "market fundamen-talism" (let companies go bankrupt)

- Is the greater threat moral hazard or inaction?

- What actions are required politically?

Response to failed perception

- Compile lessons learned

- A very similar problem is unlikely to recur

- Subcontract the organization's "nervous system"

- Make changes in regulatory bodies

- Govt regulation of the economy becomes more respectable

- Perhaps expand economic theory (and the philosophy of science)

Consequences

- Rise in importance of the IT sector
- New understanding of business processes and vulnerabilities
- Successful international cooperation

- Increased reliance on government regulation of the economy
- New understanding of the vulnerabilities of market economies
- New relationships among saving and consuming nations

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