

# E-finance and the politics of transitions

Steve Weber and John Zysman

## 1. The core question

The introduction of e-finance allows the modification of old marketplaces and the creation of new ones. It is a moment of transition between marketplace systems. Governing that transition will be critical. The crucial question is how to accommodate financial market experimentation without putting the system itself at risk. This brief research note describes a project in progress to address this.

The emerging digital data network technology creates possibilities for innovative business strategies and organisations, a set of innovations loosely called “e-finance”. Importantly, more than one possibility exists as regards how these technologies can be used, and how they will create as well as alter markets. In a sense the “dotcom” era represents a set of business experiments in the use of new tools. These “tools for thought” permit the manipulation, transmission and storage of information. The past five years have seen a sequence of experiments with online business and markets.<sup>1</sup> While most of those companies failed, the experiments have been instructive. We learned that online systems do not simply push aside or replace social institutions. Institutions and business channels that reflect and create social life are not so easily disintermediated, displaced or made irrelevant by new communication arrangements. Even the most visible experiments, such as Amazon.com, have not been unadulterated successes. Some investors who helped sponsor Amazon, and made a good deal of money doing so, drew the conclusion at the time that the underlying model would not be easy to implement as a sustainable business. They should, they concluded, avoid taking on similar investments.

The dotcom euphoria created a sense that the world would be transformed and that the equipment and networks that underpinned the experiments would grow continuously. When the collapse came, it did more than cut down a swathe of businesses. By influencing the anticipated demand for telecommunications data services, it helped burst the data network bubble. In the United States new network providers collapsed and equipment makers who supplied the networks were devastated. Employment, housing markets and entire regional economies were influenced by the crash of the dotcoms and the concomitant network decline.

The traditional notion, of course, is that if the financial market experienced sudden and broad collapses, as were seen with the dotcoms in other sectors, then the integrity of the entire economy would be affected. While single bank collapses, even very large ones, are not in themselves dangerous, if a set of large financial institutions collapsed the consequences could be quite significant.

## 2. E-finance, experiments and risks

Thus the issue becomes how the financial community should accommodate experimentation and innovation based on the new digital technologies without placing the economy itself at risk. This raises questions about the balance to be sought between innovation and risk, the appropriate governance system to manage this transition and the required rules. To begin to answer these questions, one must ask:

- Which features of financial experimentation put individual firms at risk?
- Which features of the set of experiments would put the system at risk?

---

<sup>1</sup> See Cohen et al (2000) and Cohen and Zysman (2001) and Zysman and Weber (2001).

The difficulty is that the risk profile in this era of e-innovation is not easily knowable or predictable in any single market and is complicated by the connections among them. The technologies change the way in which markets can operate and firms can be organised. The financial innovations facilitated by the electronic network technologies represent four sorts of experiments, encompassing consolidation of firms, aggregation of activities, the creation of entirely new products and markets, and the entry of newcomers. But categorising the sets of innovations does not tell us enough about the risks and how to regulate them.

Clearly, the key to our analysis is understanding the risks that come in the period of transition. Can one, a priori, determine which innovations or experiments represent significant risks to the financial system and to its constituent markets? Hence, as an exercise, rather than trying to reason out a set of basic principles – which in retrospect would have been a better strategy – we set out to try to infer principles from a set of cases. The risks, we posited, differ depending upon the starting point – that is, the initial marketplace into which electronics are introduced. The difficulty is that we did not get very far in establishing a schema by reasoning through our inductive method from the initial market structure and the innovation to predictable risks and policy implications.

We compared three cases; the Nasdaq market, a firm called E-bondtrade.com and eBay. We asked what were the initial market arrangements, and what happened to the structure and dynamics after the introduction of electronics? The quality of the players in the market, the terms of their entry and the types of products or market innovations they introduced were all critical. But we were drawn continuously to the question of how the new products, players and strategies affected the rules for transactions and their execution.

Since this is just a brief research note, we do not present our results fully, but point to the texture of each of the three cases.

## **2.1 Nasdaq**

This is a fragmented, lightly regulated OTC market with no formal marketplace and assets of uncertain quality that became a relatively transparent, liquid, formal marketplace with highly regulated underlying assets, where the rules evolved to limit risk to investors. There were at least four new risks:

- Transparency: is competition a sufficient “regulator” of behaviour?
- Who owns vs who regulates the marketplace?
- Does electronic trading “re-fragment” the market?
- Will market-makers be pushed out of business?

## **2.2 Ebondtrade.com**

This huge, diverse market of municipal bonds with local marketplaces, standardised assets and opaque pricing became a more transparent, but still highly complex, market with greater possibilities for secondary trading. The new risks include:

- Will transparency that reveals the complexity of the market exacerbate market failure?
- What will be the consequences of competing marketplaces?
- Is accreditation of dealers necessary or is functional transparency sufficient?
- What will be the consequences of the development of a secondary market?

## **2.3 eBay**

A large number of illiquid marketplaces with high search costs and assets of uncertain quality became a centralised marketplace where a reputation system for monitoring the quality of the transactors substitutes for regulation of the underlying assets. The new risks include:

- Will the situation described in Akerlof’s “lemons model” apply due to adverse selection and low barriers to entry?

- Will the reputation system fail, either technologically or behaviourally? The reasons for failure could include lack of contribution to reputation record, which is a public good, or manipulation of selection bias.
- Are there significant counterparty risks and costs of mediation?
- Are autonomous fulfilment services sufficiently reliable?

### 3. The policy debate

Our frustration was that we did not reach general and systematic conclusions about risk and how the e-finance environment altered the trade-off between risk and innovation confronting regulators. The policy debate plays out around three sets of issues;

- Market dynamics: The interaction of all the players within the institutional structure that forms the marketplace. Too much of the debate focuses on market dynamics and competitive strategies and not enough on how the rules of the marketplace set the balance of risk and innovation.
- Market structure: The identity of the players and what they own and trade.
- Marketplace: The institution that creates the exchange forum with its rules and procedures. All markets rest on rules about who can play and how.

All three cases in one sense or another directly touched the question of the basic rules of the game. The real risks, we suspect, come when the rules of the game are radically and unpredictably altered.

The way the e-innovations are implemented in this transition turns not just on the market strategies, but also on the rules for the marketplace that are created. The transition to the new marketplace means setting new rules, which influences the winning market strategies. The balance of financial market outcomes hinges not just on the regulation of finance directly, but also on the regulation of telecommunications. For example, broadband access, driven by telecommunications regulation, will influence the variety of possible consumer experiments.

By formulating in this way, we found ourselves on more solid ground. When we reviewed the e-innovations against studies of transitions and financial market innovation in Europe, the United States and Asia, we concluded that the real risks to the market system came under two circumstances.

First, risks emerge when the consequences of a rule change for market dynamics and market equilibrium can not be properly judged. This is not so easy, and even firms seeking to take advantage of rule changes often judge incorrectly the consequences for markets and for the risk they themselves are taking on. The California energy debacle, which was encouraged by the energy industry, hinged on misjudgments about what now seem inevitable and obvious consequences of the rules in a deregulated energy marketplace. New rules intended to foster innovation or efficiency often create new risks along the way. This implies clearly that innovations need to be evaluated for the changes they imply in the market system and deviations they represent from established principles of sound market operation.

Second, initial mistakes in setting rules, which engender risk in the system, often cannot be fixed quickly enough. Sometimes this is because an initial reform does not contain the authority to respond to the unexpected market consequences. This is more likely when the regulatory reform is legislated without clearly defining what executive or regulatory body can fine-tune the rules once the market consequences of the initial reforms are evident. In other instances, effective rules could not be established when the question of who won and lost from innovation could not be politically resolved. In our view, the consequences of similar Japanese and French moves from a credit-based administered price financial system to a more market-oriented financial system reflect differing capacities within the politics of regulation for settling in a stable and prompt way the winners and losers from the reforms.

E-finance allows the modification of old marketplaces and creation of new ones. The question is: how does this affect the shape of the market and its inner dynamics? What conclusion did we reach from our struggle with this paper to infer from the explosion of online business and market experiments some principles for regulators to balance the resulting risks and innovation in financial markets? The array of market innovations must be understood for their potential impact on the underlying rules of the

financial markets. The question of balancing risk and innovation turns critically not on the innovations themselves but on maintaining robust processes of rule-making that apply critical and established principles in flexible ways to new circumstances.

## References

Cohen, S, J De Long and J Zysman (2000): "Tools for thought: what is new and important about the 'e-conomy'?", Berkeley Roundtable on the International Economy, *Working Paper*, no 138, February (brie.berkeley.edu).

Cohen, S and J Zysman (eds) (2001): *Tracking a Transformation: E-commerce and the Terms of Competition in Industries*, Brookings Institution, forthcoming.

Zysman, J and S Weber (2001): "Governance and politics of the internet economy – historical transformation or ordinary politics with a new vocabulary", in N Smelser and P Baltes (eds) *The International Encyclopedia of the Social and Behavioral Sciences*. Elsevier Science Limited.