

FINANCE  
*AND THE*  
COMMON  
GOOD

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# Complexity, Culture, and Bank Privatisations

By Roland Kupers

The casual justification for the privatisation of banks nationalised during the 2008 financial crisis – among which ABN AMRO – is often simply that ‘they belong in the market’. Through this somewhat circular argument, we may be missing an opportunity to change, and indeed even improve, the system of finance. When one applies a complex-systems lens to finance, other options come into view that might be considered. However, those options cannot become part of the policy debate, if this debate is not preceded by a conversation on the nature of the system, and on its uncertainties.

A brief recap of the events surrounding ABN AMRO. In 2007, the Royal Bank of Scotland, Fortis and Banco Santander pooled their resources and together bought Dutch bank ABN AMRO for the sum of €72 billion. They then proceeded to divide the bank into segments. During the financial crisis, in October 2008, the Dutch government nationalised the various Dutch assets belonging to the bank. Along with further funding provided to the ailing bank, the total cost of this manoeuvre would raise the national debt burden of the Netherlands by some €30 billion (Centraal Bureau voor de Statistiek 2015). In addition, the British and Spanish governments would need to spend billions to reinforce banks of their own – those that had absorbed pieces of the former ABN AMRO. Understandably, this created strong pressure on subsequent Dutch governments to recoup some of these costs through an early privatisation. While the pressure was essentially political in nature, the argument presented was a simple one: the bank belongs back in the market.

This argument sidesteps an essential debate on the systemic aspects of finance. It also misses a potential opportunity to improve it. Unpacking these arguments allows us to explore our assumptions about the financial system, and to see what other options may exist.

## Markets are social constructs

Free market advocates often present markets as something of a natural phenomenon, where an invisible hand organises things. The fewer rules and regulations, the better it will function, so the argument goes. But markets are not natural systems. They are a human creation, within which self-organisation occurs. The market is designed through rules - and we can reflect on its design, its path dependencies and its history. It is this design and history that largely determines the type of self-organisation that occurs within the complex system of the market, including the occurrence of repeated financial crises. This is not to express any political position on privatisation; it is simply an encouragement for precision.

It is not just that the financial system is prone to crises; those crises have also had a deep influence. The Economist published an extensive report a few years ago, entitled ‘The Slumps That Shaped Modern Finance’. The report lays out how finance is not merely prone to crises, but is in fact shaped by them (The Economist 2014). It describes how five previous, devastating financial slumps - starting with America’s first crash in 1792 and ending with the world’s biggest in 1929 - highlight two big trends in financial evolution. The first is that the institutions that provide the scaffolding for the system, such as central banks, deposit insurance companies and stock exchanges, are not the products of careful design in calm times, but have often been cobbled together at the bottom of financial cliffs. The second is more troubling: each and every crisis ends by entrenching public backing for private markets, and those parts of finance that are deemed essential are given more state support. It is an approach that may appear sensible and even reassuring at a time of crisis, but every single time more risk is transferred to the state, and less risk remains with private capital. Post-crisis, some of this transfer may be reversed, but never all of it. The consequence of this ratcheting mechanism is that investors are increasingly insulated from risk.

It all starts with the crisis of 1792, when a young Etonian called William Duer essentially blew up the financial market and ended up in prison. He had in fact conned so many people that he described prison as the safest place for him to be. The first secretary of the treasury of the US, Alexander Hamilton, then bailed out the financial system and followed up on this by carrying out a number of operations similar to the ones we witnessed in 2008. The basis of his operations was to gradually socialise more risk while continuing to fully privatise returns.

This analysis is simply the description of the outcome of a series of decisions taken over the course of more than two centuries, each of them with its own internal logic. Cumulatively, however, those decisions have shaped the financial industry as we know it today. As a result, it is simply not accurate to refer to a free market in finance the way it is commonly done in policy debates. Meanwhile, the ‘existence’ of a free market remains the essential justification today for the privatisation of banks.

### **Complexity**

In a 2014 book (*Complexity and the Art of Public Policy*), David Colander and I discussed the origin of this constrained view of markets that underpins many policy narratives. We met at a climate policy conference in Berlin, and shared a plane ride home. We were both uncomfortable with the way solutions were being framed for climate issues. Some people argued for lots of state regulation in order to mitigate excessive warming, while others argued that market forces would deliver more efficient solutions, as long as they were given the right incentives. As with the privatisation of ABN AMRO, there seemed to be only two possible solutions: state or market, with the latter option being the default one.

The reason David and I were uncomfortable with the market/state dichotomy is that we both have a deep interest in the science of complex systems. Complexity has developed over the past several decades, to the point where most university faculties now offer complexity programmes. Complexity is one of the core themes of Dutch research funding (Vermeer 2014).

Unfortunately, the discipline was given an awkward name. To many people, complexity is a negative thing. There are consultants who dedicate themselves to the elimination of complexity. Let me therefore first elaborate on the term itself. In Latin, ‘plexus’ means ‘to braid’. One could associate the discipline of complexity with the image of a fair maiden with meticulously braided hair or, say, Julia Timoshenko with her signature braids. Complexity is the science of braided or interconnected systems. They are spaghetti-like structures such as your immune system, a city, or a financial system.

We can contrast the idea of ‘complex’ with that of ‘complicated’: a garden is complicated, while a tropical forest is complex. If you remove a flowerbed from your garden, it performs just fine. The garden is really just a collection of plants with no essential interconnections between them. The whole is exactly the sum of its parts. Or as Blaise Pascal famously said: ‘Je tiens impossible de connaître les parties sans connaître le tout, non plus que de connaître le tout sans connaître particulièrement les parties’<sup>1</sup> (2015: 165). In a tropical forest, on the other hand, plants and animals depend on each other for survival. Remove a few species, and the whole system could collapse. The system’s properties are defined both by its parts and by interconnections between those parts. The whole is more than the sum of its parts, when considered in a scientifically precise sense.

The story of the discipline of complex systems started in 1986 when Citibank sponsored a conference to come up with a better theory of finance and economics. Ken Arrow and Murray Gell-Mann, Nobel Laureates in Economics and Physics, each picked a team of leading thinkers. They assembled in Santa Fe, New Mexico, to explain their theories to one another. The conclusion was properly formulated by one of the physicists present, who described economics as a ‘Cuban car, lovingly maintained, but with hopelessly outdated technology’ (Beinhocker 2006). This was in 1986. Since then, considerable progress has been made in analysing the economy as a complex system. Very little of that, however, has thus far had an impact on policy considerations (Arthur 2014). We are still all too often in the ‘Cuban car’ era.

Let us consider a number of examples that demonstrate how taking a complex systems lens changes policy choices. Imagine that the network of banks is like the garden from our earlier example. If all the individual flowers are healthy, the garden is healthy as well. This means that the central gardener, or in this case the central banker, must watch over the health of all individual banks to ensure the health of the overall system. However, if the banking system is more like a tropical forest, we are dealing with a different matter entirely. The central bank must then be accountable for the stability of the system as a whole, with less concern for the individual banks (May, Levin, and Sugihara 2008).

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<sup>1</sup> Trans: ‘I hold it equally impossible to know the parts without knowing the whole, as it is to know the whole without knowing all the parts’.

Of course, the network aspects of the financial system were both knowable and known before 2008 (cf. Pröpper, Van Lelyveld, and Heijmans 2008). However, it was not until after the crisis that the full deficiency of financial modelling was articulated. In 2010, Jean-Claude Trichet stated that ‘scientists have developed sophisticated tools for analysing complex dynamic systems in a rigorous way. These models have proved helpful in understanding many important but complex phenomena. [...] I am hopeful that central banks can also benefit from these insights in developing tools to analyse financial markets and monetary policy transmission’ (Trichet 2010).

European banks are subject to stress tests, but these tests treat interconnections only as an additional factor to the health of individual banks. This disregards an essential element, namely that the network structure creates complex feedback loops between banks. Equally, the ongoing debate on the right level of leverage presumes that our understanding of the system is such, that *it is actually possible* to decide whether 13% of leverage is better than 4%, or even than 40%. However, while the increase of leverage requirements is a pragmatically motivated improvement, we do not actually know whether it is adequate. Our models are out of date. No one is to blame for this: it is just the current state of the art. Acknowledging this uncertainty is essential to progress.

Complexity science has made some headway, but not nearly enough. Famous physicist Stephen Hawking opined that complexity will be the main science of the 21st century. As such, there is still time. At the very least, however, we should stop justifying policy decisions that are based on models we know to be inadequate.

Developing a better understanding of the way the financial system works requires us to ask new questions. For instance, triggered by the steady flow of large fines and criminal convictions, Ernst Fehr and colleagues at the University of Zurich set out to explore whether bankers are more dishonest than average citizens. What they found is both surprising and interesting: ‘Employees of a large international bank behaved by-and-large as honestly as the rest of us. But in tests designed to mimic the competitive nature of their profession, many of the bankers began to act dishonestly’ (Cohn, Fehr, and Maréchal 2014). In other words, you can trust a banker during a private dinner in the evening, but certainly not at the bank during the day. People’s social norms are not fixed, but are largely formed based on the individual’s context. What Fehr and his colleagues found indicated that banks foster and spread perverse social norms. Meanwhile, traditional economic models assume that social norms and the preferences of individuals are fixed. While it is no secret that this is a crude approximation at best, this assumption is grounded in the fact that it makes models mathematically more tractable. It will require innovative complex systems models to start to contend with context-dependent preferences.

Another complexity insight is that diverse systems are more resilient under uncertain circumstances (De Nederlandsche Bank 2015). Diversity applies at multiple scales, ranging from individuals to companies. The Dutch financial system has one of the highest concentrations and lowest diversity rates of banks in the European Union. Its financial sector is also relatively large (European Central Bank 2017). These are not the characteristics of a stable and resilient system.

Of course, banks do not exist in isolation. They have also initiated substantial change programmes of their own accord since the 2008 crisis. This applies both to central banks and private banks, such as ABN AMRO. The latter is today also a very different company from when it was sold in 2007: it is smaller, more local, and has an evolving internal culture.

The crises of 1720, 1792, 1825, 1837, 1929, and 2008 show how financial markets are all too often the result of design through panic. There are scant grounds for describing them as truly free markets that are best left to flourish on their own. Our fundamental understanding of the financial system is rapidly evolving, but between cultural issues, diversity, and size, the Dutch financial sector cannot reasonably be described as having achieved a desirable and stable end state. One of the roles of the government is to ensure a healthy financial system. The privatisation of a formerly nationalised bank – for example, ABN AMRO – would require far more rigorous argumentation as to how this would contribute to a less risky financial system. The public is not well served with a limited justification for a return to ‘business as usual’.

Privatisation has clear benefits for the finances of the state – however, the price of the potential loss of a powerful instrument of reform has not been quantified.

### **What are the alternatives?**

Central banks could be more explicitly tasked with managing the health of the network of banks, rather than only looking after individual banks. Fortunately, more progressive central banks such as DNB, EUR and UK all have complexity programmes up and running, and are actively exploring these new models of governance. Policy makers will also have to adjust their perspectives.

The fact that so much risk has been effectively removed from the financial system – by shifting much of the entrepreneurial risk to the state – raises the question of how ‘private’ the banking industry really is. The simple statement that the state is not a banker may well be an oxymoron.

Consider a norms policy for banks. We met William Duer, the culprit of the 1792 crisis, and may assume that he acquired even worse personal norms during his time in prison. Similarly, banks as institutions seem to stimulate wrong behaviour. If the state controlled and owned an important player in the financial system, this could be an excellent tool to address this problem across the sector; owning a bank (as state) would be a tool to evolve norms. This is by no means a simple task, but it is an essential one.

A complex system requires diversity in order to remain healthy. A system like the Dutch, with a small number of large private banks, makes for a poor structure. How can we increase diversity? We must vary both size and ownership structure. Again, owning a bank is helpful to the state, especially if new insights lead to the desire to create smaller banks with differing business models.

From a complex systems perspective, it is clear that privatisation should be preceded by a far richer debate on the nature and dynamics of the financial system. Furthermore, an explanation must be given on how privatisation would contribute to the construction of a more resilient banking system.

What we currently know about the nature of systems indicates that adding yet another big private player to the Dutch banking system most likely will not increase its resilience. It also means a missed opportunity to actually re-engineer the system from within. The consequences for the future are likely to be either more heavy-handed regulation, or waiting for the next bail-out.

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