

Different Approaches to the Financial Crisis

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Abstract

The economic crisis has exposed shortcomings in standard economic theory and provided an impetus for new economic thinking. But the theoretical debate in the wake of the crisis has been unduly constrained by the terms of the mainstream approach to economic theory. Like any approach, it is characterised by a way of framing reality, giving meaning to terms and setting criteria for good argument. It also determines how any economic theory is understood, whether from the history of economic thought or from the contemporary literature. But there are other approaches to economics which would open up the field to a much wider range of possibilities for new economic thinking. Addressing the challenge that any reader bases her understanding on her own approach, the purpose of this paper is to attempt to explain what it means to consider different approaches and why it matters for policy. This is done by discussing two features of the financial crisis which pose particular problems for economic theory. These are the role of changing market sentiment in driving asset prices on the one hand and the breakdown of trust relationships in banking on the other (the moral hazard issue). We will see how these are addressed by mainstream theory and by alternative approaches. First, market sentiment is discussed within the mainstream rational-optimising framework, where risk is quantifiable, and compared with the Keynesian approach based on the general uncertainty of knowledge, where reason, evidence and sentiment are integrated. The moral hazard issue is then discussed in its mainstream form in terms of rational opportunism and in its institutionalist form in terms of the foundation of social relations (including relations between institutions) in trust. It is shown that different ways of approaching theorising in each case imply different policy measures. It is argued further that an exclusively deductive mathematical approach to analysis of market sentiment and trust is unduly limiting and that a more pluralist approach would more fully address the issues.

Keywords: methodological approach; market sentiment; trust; banking

Introduction

The financial crisis which began in 2007 has sparked an unusual degree of reflection on the state of economics. For many economists, it was challenging to explain the crisis. Mainstream theory had been founded on the presumption of underlying stabilising tendencies in competitive markets. But the authorities were required to act without waiting until the dust had settled in academic economics. In the process reference was made to theories outside the mainstream which addressed problems arising from markets not equilibrating at the full employment level and to figures from the history of economic thought. Thus Keynes was invoked in support of expansionary fiscal policy, while Minsky's theory of financial instability was invoked in support of the supply of liquidity to the financial system. Reference was also made to other older literatures for alternative explanations of the crisis, notably the Hayekian literature which focused on interest rates having been held below the natural rate.

Now a range of explanations for the crisis has been developed within the mainstream which retains the foundation of a presumption of equilibrating competitive markets. These explanations refer to factors which inhibited this equilibrating process, particularly information asymmetries, irrational behaviour and state

interference in the form of the lender-of-last-resort facility. The policy solutions follow directly in the form of removing these factors to prevent a recurrence of crisis – that is, making reality more like the standard model. The policy of fiscal expansion has generally been reversed, the focus returning to the supply side, while concerns are raised about expected inflationary effects of quantitative easing.

Much of the public debate about reform, as expressed for example in the pages of the *Financial Times*, has taken a wider purview and indeed at times has actively questioned the conventional mainstream approach to economics. Yet there has been little coverage of what would actually be entailed by opening up the question of other ways of approaching economics. The purpose of this paper is to draw attention to the possibility of re-examining not just theory but also theoretical approach as a way of addressing policy in the light of the crisis and to consider how that might impact on policy advice. To consider the question at this level of approach is justified by the challenges posed by the crisis, but is justified further by the fact that theory within some non-mainstream approaches had anticipated the crisis and were able to explain it as it evolved. Some wider reflection on economics is called for.¹

The mainstream approach is characterised by an insistence that arguments be expressed (or capable of expression) in terms of formal deductivist mathematical logic. But this is not the only possibility; there is a range of alternatives, some of which employ some form of formal mathematical expression to some degree. But the critical difference is that mathematical formulation does not fully define these approaches. It is not a matter of abstraction or not: any theory and any theoretical approach inevitably require abstraction. Theory abstracts from variables thought to be less important to the question at hand. Theoretical approach goes much further. It employs particular ways of understanding, and therefore categorising, the subject matter, giving particular meanings to terms (such as ‘rationality’), and specifying the range of acceptable forms of argument. Thus any approach is based on a process of framing the subject matter, where framing involves ‘selection, emphasis, exclusion and elaboration’ (Weaver, 2007, p. 143). Not only does this abstraction provide the terms within which theory currently develops, but it also provides the terms in which older ideas are understood. There is no sense in which any approach can replicate reality; each approach to knowledge is an abstraction from reality and therefore incomplete in a variety of ways. Yet, as we shall see, different approaches involve a different approach to abstraction itself, and therefore a different relation with reality.

For any economist, deciding on one approach or another is necessary for knowledge to be developed, to inform policy. The choice to adopt one approach involves putting higher value on what that approach allows relative to what it precludes. But, while reasoned justifications can be made, there is no absolute basis for choosing one approach over another. Choice for economists, as for economic agents (on which more below), requires the exercise of judgement.² Study of the history of economics provides basic material for developing the capacity for judgement, showing how different ideas have developed in different contexts in order to address particular problems. But it also provides material on different approaches to economics. Without understanding what is involved in difference of approach, ideas from the history of economics can become distorted by modern frameworks. Thus, for example, only Keynes’s fiscal stimulus policy, Minsky’s idea of systemic risk through interconnectedness of portfolios and Hayek’s idea about interest rates have been picked up following the crisis, out of their much broader theories. But the different approaches within which these particular ideas were embedded have been ignored since they *do not make any sense* within a mainstream framework (because they are not compatible with the mainstream deductivist methodology).

¹ Dow (2012a) provides foundational material for such a reflection.

² Of course such choices are not entirely ‘free’; any discipline involves its own institutions and educational frameworks which encourage particular approaches to the discipline.

There is an inevitably reflexive element in analysing the framing of the crisis in this paper, since, as an analyst, I have my own framing. This framing inevitably pitches the argument in favour of the alternative approaches which I will explore below as better addressing the problems posed by the crisis than the mainstream approach. It is important therefore to reiterate that all approaches have their limitations since they each abstract in some way or another. Nor do I want to suggest that these alternative approaches are complete in their own terms. Indeed according to these approaches, theory is provisional in the face of an evolving subject matter. While enumerating some of these limitations would require further exploration from other perspectives, the aim here is the more limited one of illustrating what is entailed in taking different approaches, albeit from one meta-methodological approach.

While it could be argued that any analysis should start with reality (framed in some way) if it is to be useful for policy-makers, this itself involves some circularity. First, this in itself involves an approach which relies more on induction than the more deductivist methodology of mainstream economics. By this is meant, not pure induction, since understanding of evidence is conditioned by theory, but that theory is grounded in evidence and is regarded as provisional in the face of future evidence, or evidence from different contexts. Further, reality will be understood differently by different groupings of economists (as well as policy-makers, and indeed political parties). Nevertheless it seems the best place to start, even if (as with Debreu, 1991) the conclusion is that reality is best addressed by abstract theory for universal application. The motivation is to open up the discussion beyond the mainstream approach, which involves starting with a particular theoretical framework, seeing how to adapt it to current circumstances and ultimately considering policy to make behaviour and market structure more consistent with the framework. The issue of different ways of understanding reality (different ontologies) will be addressed in the course of the analysis below.

Broadening the discussion to encompass different approaches could be understood in terms of widening the choice from which some new standard theory and theoretical approach are selected. But that in itself would reflect a particular approach. Methodological pluralism is a different approach which argues for actively fostering diversity of approach on the grounds that, as in biology, the capacity to adapt in the face of further environmental threats is enhanced. This is often misunderstood as 'anything goes'. But to consider pluralism in this way is to continue in the dualistic (either/or) approach of mainstream economics: there is only one best approach (Dow, 1990). Pluralism in its own non-dualistic terms rather involves opening up the possibility of a range of approaches. The range of possibilities is structured according to the conventions adopted by different schools of thought in economics (Dow, 2004).

The strong implication of methodological pluralism is that economists should stand ready to justify whatever approach they take. Where new thinking is constrained to fall within the mainstream approach, the implicit assumption is being made that economics is defined by that approach and thus it requires no justification. It is normal for non-mainstream economists to justify their approach in relation to their understanding of the subject matter and in relation to an alternative approach – normally mainstream economics – i.e. they are naturally pluralist to some degree. But it would be a major step forward were mainstream economists to attempt to justify their deductivist formalism, and in particular the exclusivity of this methodological position, in relation to the subject matter and in relation to some non-mainstream alternative(s). In particular this would require mainstream economists to address the implication of their methodology that the economy is a closed system (Lawson, 2009).

In order to explain the nature and implications of different possible approaches, we will focus here on two aspects of the financial crisis which require a policy response but which pose particular challenges for theory:

- a. *The scope for changes in market sentiment to drive asset prices.* While the long boom in asset markets had been taken to reflect rising 'true' value, this assumption was increasingly questioned as the weak basis for risk assessment in particular markets came under scrutiny. At the worst points in the crisis markets found it extremely difficult to assign values and banks chose as liquid a stance as possible, to the extent that the interbank market actually froze. On reflection, market sentiment was seen to have driven asset prices up and then drove them down. How can swings in market sentiment be explained theoretically and what is the policy scope for taming these swings?
- b. *The central importance of trust between the state, the banks and the public.* The banking crisis emerged as banks lost trust and then depositors lost trust, in particular in banks (and implicitly in the central banks' support of these institutions), while central banks lost trust in banks' willingness to behave prudently. The payments system, and thus the social fabric, were threatened. An important challenge therefore is to restore that trust. What theoretical approach can inform such policy?

We will consider different methodological approaches to considering each of these issues and the very different policy prescriptions which follow. In both cases we compare the mainstream approach with that of non-mainstream schools of thought. We compare it mainly to the (Post) Keynesian approach in the case of market sentiment and mainly to the institutionalist approach in the case of trust and moral hazard.

The role of market sentiment

Greenspan (*Financial Times*, 27 March 2009) expresses the theoretical challenge posed by market sentiment as follows: 'We can model the euphoria and the fear stage of the business cycle. Their parameters are quite different. We have never successfully modelled the transition from euphoria to fear.' The crisis was the outcome of ever-increasing leveraging on the part of all sectors on the basis of confident expectations of continuing rises in asset prices, what Greenspan here refers to as 'euphoria', and of continuing financial stability. When these expectations were not met for some assets, asset sales and defaults (due to high leveraging) added fuel to the reversal in asset prices and to the increasing reluctance of banks to supply liquidity. This was exacerbated by the banks themselves now holding and trading in assets whose prices were reversing. Market sentiment changed from euphoria to fear. Before considering how this transition might be modelled, we need to consider how it may be conceptualised first, then theorised and then, possibly, modelled. Forecasting turning-points is widely regarded as a major challenge, but for many outside the mainstream the goal of formally modelling market sentiment is itself misplaced in any case.

The terms Greenspan used are psychological, and behavioural finance has done much to introduce conceptualisations from psychology into the analysis of financial markets. But, because the stated aim, or at least the outcome, has been to incorporate psychology into the existing formal mainstream framework of rational choice theory (see e.g. Kahneman, 2003; DellaVigna, 2008), the conceptualisation has necessarily been constrained in a particular way, either as cognitive limitations or as unconventional preferences (see further Dow, 2011). Rationality is defined as the logical pursuit of given goals, such that anything which falls outside such behaviour is defined as irrational (and to be limited or discouraged by policy). The benchmark is full information, including information about objective risk, so there is a concern with cognitive limitations which limit the absorption of information and thus estimation of risk, on which rational decisions are based.

The more activity is dominated by professional players in financial markets, with the fullest information and the least distraction by unconventional preferences and irrational behaviour, the better the chance of markets not deviating from their equilibrium path.

But recent experience suggests that market players themselves can find it difficult to price assets; indeed this is the normal pattern when markets undergo structural change, as evidenced earlier by the collapse of Long-Term Capital Management. To contemplate an objective risk measure, which markets are to identify, is to presume that the future is knowable, at least stochastically, as presumed by mainstream theory. Unpredicted structural change challenges such a presumption. The more general case is rather some degree of fundamental uncertainty, or unquantifiable risk, which looms large particularly when current conventions of risk assessment are challenged by events.

Keynes (1921; 1937) provided a theory of behaviour under uncertainty to explain, not only how we (as agents or as theorists) cope with uncertainty but also how we are able to take positive action under uncertainty. He pointed out that it would not be rational (in the strict mainstream sense) to make any positive decision to invest under uncertainty. While, rationally, we draw on theory and evidence based on past experience as far as possible, this cannot be sufficient to guide action with respect to an uncertain future. Further, deductive reasoning cannot explain why a set of expectations could change from Greenspan's euphoria to his fear. We make up the gap left by uncertainty by drawing on conventional judgements (Davis, 1994) and by exercising (or not) animal spirits (Dow and Dow, 2011). Neither of the latter is grounded in rational choice theory as defined by mainstream economics and indeed would be classified as irrational.

But to accept that classification in terms of rationality is to accept the bounds of that approach to theory. For Keynes, as for Hume and Smith, and indeed for much of the psychology literature, cognition and sentiment are not a mutually-exclusive dual, but rather are interdependent (Dow, 2011). Thus reason requires a foundation in conventional belief (just as the Bourbaki project found that deductive mathematics cannot be constructed as a self-sufficient system) and must be combined with the exercise of the imagination, along with emotion, to motivate behaviour. Far from being something necessarily to be discouraged, some sentiment (or emotion) is necessary for decision making.

Animal spirits are necessary for firms' investment decisions, given uncertainty, and also for market leaders who trigger changes in market sentiment by making bold moves against the market. But for most market players it is (informed) conventional judgement which is most important. While individuals are the unit of mainstream analysis (with possible, though logistically limited, modification to incorporate other-regarding behaviour), other approaches understand individual identity in relation to society (Davis, 2003). Rather than a basically selfish atomistic individual constrained by society, Smith (1759) in the *Theory of Moral Sentiments* analysed individuals whose behaviour is in reference to society's judgements or an imagined impartial spectator who judges behaviour. (This does not presume unselfish behaviour, but rather behaviour which is aware of the consequences for others, and takes this into account in varying degrees.) In the absence of certain knowledge, a successful society therefore evolves in such a way as to enable action in spite of uncertainty. Institutions are formed and conventions established which provide a stable foundation for decision making (van der Lecq, 1998).

Conventions may be challenged by events – they too evolve – and this is particularly the case for conventional judgements. In Keynes' terms, confidence in the conventional low assessment of risk increased as markets followed a relatively stable path up to 2007. This psychological state had real consequences in employment, production and expenditure. Conventional judgements were part of the reality, in turn affecting the reality, and reinforcing themselves reflexively as asset prices continued to rise (Soros, 2008). Market players framed the reality in terms of mainstream theory, which suggested that rational market behaviour was expected to produce the pricing of assets in line with true risk and the best outcome for society (or at least

this framing was used rhetorically). But conventional risk assessment was thrown into disarray with the crisis and it took some time for new, more wary, conventions to become established.

Let us now consider the implications of this way of understanding the nature of behaviour in financial markets, first for approach to theory and then for policy. As far as theoretical approach is concerned, questions arise about the scope for deductive logic (which relies on the certain, or certain-equivalent, knowledge as to the truth-value of premises). If the nature of the economic system is such that it does not behave in a law-like way which allows confidence in quantification of risk, then uncertainty is the general case. To focus on law-like behaviour and quantifiable risk is therefore to focus on what for Post Keynesians is a special case, with uncertain scope as to application. In particular, the mainstream approach is to attempt to capture behaviour in a deductive mathematical system. This approach has the advantage of clarity and consistency within itself, where the aspects of reality under consideration are made commensurate by mathematics, but at the cost of limiting what can be considered (Chick and Dow, 2001).

Much follows from the centrality of the concept of rationality, by its special definition, in mainstream economics. Just as economists are seen as rationally constructing deductive models of stochastic relationships, so economic agents rationally optimise on the basis of risk assessments based on stochastic relationships. But if in fact behaviour is based on conventional judgements, eg about risk, which are subject to non-deterministic (but not stochastic) shifts, then the case is strong for theory to address the factors underlying those conventions and shifts in the conventions. Just as Keynes argued that, in society, our behaviour is based on knowledge derived in a plurality of ways from a plurality of sources (with input from emotions), so also the analyst may usefully draw knowledge in a pluralist way. Mathematical models play a part, as a way of expressing partial arguments in a clear way. But because uncertainty, conventions and emotions, as well as non-deterministic evolution of institutions, cannot be modelled in the conventional deductivist way, any argument based on a formal, closed model is inevitably partial and requires putting together with other lines of argument and different forms of evidence, in order to increase weight of argument (Lawson, 2009). It is worthwhile to consider that, while Keynes referred to the usefulness of formal models, he nevertheless warned about the importance of keeping in mind the closures which models require, but which need to be relaxed for application of the model's conclusions:

[I]n ordinary discourse, where we are not blindly manipulating but know all the time what we are doing and what the words mean, we can keep 'at the back of our heads' the necessary reserves and qualifications and the adjustments which we shall have to make later on, in a way in which we cannot keep complicated partial differentials 'at the back' of several pages of algebra which assume they all vanish. (Keynes, 1936, pp 297–8)

From a mainstream perspective, which effectively defines the subject by what can be dealt with by means of deductive (mathematical) logic (see e.g. Blaug, 1999), anything else falls outside the discipline. This parallels the conclusion that anything which falls outside the particular definition of rationality is irrational and therefore to be avoided. But the argument for taking a broader purview of possible methodological approaches (pluralism, as outlined above in the Introduction) is particularly strong for policy makers who are required, not just to analyse, but to take positive action. Central bank publications have been addressing uncertainty increasingly frequently (see e.g. Aikman *et al.*, 2010 for a recent discussion). While policy-makers need to decide on their own overall approach and thus range of methods, there would also be benefit in increased awareness of what other approaches can offer. Each approach has its own strengths and weaknesses, and unanticipated developments might call for guidance from alternative approaches. As Keynes (1921) argued, confidence in judgement is higher the more different types of evidence (and

reasoning) support that judgement. Further, the Monetary Policy Committee (MPC) of the Bank of England (1999) has explicitly referred to the pluralism they employ in the sense of a range of methods (see further Downward and Mearman 2008).

But, while the MPC had access to a range of evidence on market sentiment, based on different methods, the potential for crisis was either not picked up or not sufficiently highlighted. What was required instead was that market sentiment be taken seriously. From the mainstream perspective, market sentiment is either a form of short-cut rationality or else something to be ignored or eliminated as irrationality. The only policy response on market sentiment has been to make markets more transparent, with fewer incentives and constraints distorting market behaviour, to allow markets to be more efficient. The Post Keynesian approach is rather to understand market sentiment as the normal mechanism for market judgement in the face of uncertainty. Theory used to understand developments in financial markets should therefore include analysis of decision-making under uncertainty, including any changes in the institutional environment which might alter the process of arriving at, and perpetuating, judgements. This would suggest input from 'old' institutionalist theory (Rutherford, 1994; Hodgson, 1999) and 'old' behavioural theory (Earl, 1989; Sent, 2004) which (unlike the 'new' versions of this theory) are not constrained to analyse behaviour in terms of rational optimisation by atomistic individuals.

These other theoretical approaches would aid understanding of market sentiment and what causes it to change, but also point to possible policy intervention in order to stabilise markets. Conventions may depart from what the authorities regard as reasonable (rather than narrowly rational) judgement, and psychological theory can inform the analysis (see e.g. Tuckett, 2011). This implies the need for mechanisms for monitoring market sentiment and for designing monetary policy (especially communication of monetary policy) to moderating market sentiment when it is judged to be lacking a grounding in reality. What will be required will depend on particular circumstances since market sentiment does not lend itself to universal theorising. But to take the current circumstances (in late 2011) as an example, the authorities are trying to calm volatile market sentiment by reassurances that fiscal austerity packages will resolve budgetary problems, rendering sovereign debt instruments secure (as mainstream theory would suggest). While these policies may have been encouraged by markets' own initial framing of a budgetary deficit problem, governments could have attempted to put that framing into historical perspective, calming markets and reducing pressure for austerity measures. But if the real outcome of austerity measures at a time of weak economic conditions amid efforts by the private sector to draw down debt in fact turns out to be low growth and worsening budgetary conditions, accepting the markets' framing will have proved counterproductive. While market sentiment makes up for insufficient evidence and understanding, evidence and understanding nevertheless do influence market behaviour. If market sentiment is simply one, integral, part of the cognitive process, then it is not purely psychological.

The role of trust

The Keynesian theory of knowledge under uncertainty outlined above emphasises the role of (socially) conventional knowledge. But the functioning of the economy in general, and of monetary policy and financial sector reform in particular, require the presence of a key social convention: trust. A major challenge posed by the banking crisis has been how to address the general breakdown of trust between the central bank, the banks and the public.

Trust has been the subject of new literature within the mainstream, particularly in the form of trust games, where the responses of other parties to incentives are not known with certainty (Berg, *et al.*, 1995).

But, as Hughes (2011) shows, conceptually trust in this approach either collapses into rational optimising behaviour (within these circumstances) or it is irrational (and thus to be discouraged). At best, other-regarding behaviour can be incorporated by placing the pay-offs to others in each others' utility functions in a calculative way. But this is different from trust. Here again we see the choice of approach determining the scope of theory.

The Hume/Smith/Keynes approach outlined above takes other-regarding behaviour as a starting-point rather than a modification. Indeed according to this approach, market economies could not function without social conventions, the most important of which is trust. Rather than the calculative trust of the game theory approach, this conceptualisation sees trust as an alternative to calculation (where calculation would not be possible, given uncertainty). Hughes (2011) argues that trust refers to expectations with respect to agency (the actions of identifiable agents or organisations). Confidence rather refers to the successful build-up of trust with respect to the structure of organisations. But when confidence in structure is challenged, as during the crisis, the issue reverts to one of trust, and thus agency. What is at issue now is the agency of central bankers, bank CEOs and the borrowing and investing public.

Since confidence and trust are built up as a result of extensive periods of experience, and this is evidently the case with banking, a historical approach can contribute to our understanding. As Chick (1986; 1993; 2008) demonstrates within her stages-of-banking-development framework, fractional reserve banking emerged as a result of the convention emerging of using bank liabilities for payments, a convention which relies on confidence in the banks managing their assets prudently. From a narrow rationalistic perspective, fractional reserve banking should not work, since it relies on what cannot be strictly rational expectations as to risk of bank collapse. Instead it relies on a socio-psychological convention; the more confidence builds up, the less the possibility of bank failure is contemplated.

Central banking develops as the potential for instability in banking becomes recognised as a threat to the maintenance of confidence and thus to the successful working of the system. Central banks use banking regulation, and supervision and monitoring with respect to this regulation, to promote prudent bank behaviour. In addition, the central bank stands ready to supply liquidity to any bank in trouble through the lender-of-last-resort facility. The existence of this facility encourages confidence which in turn reduces the need for it to be brought into play. The banks are therefore providing a public good in the form of the liquidity of their liabilities, with the support of the central bank.

But there are tensions between the profit-seeking behaviour of banks and the central banks' need for them to behave prudently. Maintaining a balance between these tensions, which might in the past have rested on personal relations between bank Governors, was challenged in recent decades by the growth in scale and complexity of the banking sector. Banking now included a much wider range of functions than deposit-taking, direct lending and safe investments. Banks had been given more latitude to pursue profits in the 1980s with deregulation. But restrictive reregulation in the form of capital adequacy requirements had the unintended consequence of encouraging banks to seek profits off balance-sheet by securitisation and by activities in derivatives markets which were important ingredients in the build-up to the crisis. While banks continued to supply the bulk of society's means of payment, with the lender-of-last-resort facility still in place, they were exposing themselves to increasing degrees of risk. With growing awareness of that risk (and the weakness of knowledge as to the extent of risk) trust between banks, as expressed by inter-bank lending, broke down and so the confidence in the market's capacity to supply liquidity broke down. The public's confidence in some banks broke down (amid general uncertainty about deposit insurance protection) leading to bank runs which led to a contagious lack of confidence in banks more widely. Both banks and the public in the initial crucial stages were unsure as to whether the central bank would use the lender-of-last-resort facility, further damaging confidence. Unlike the systemic risk which arises from interconnectedness of highly-

leveraged portfolios, the systemic risk here refers to the loss of confidence in one bank spreading to others exposed to similar forces, something which does not lend itself to capture by deductive reasoning.

The mainstream approach to theory suggests that the resulting policy issue be addressed in terms of moral hazard: the unintended effect of insurance as encouraging the taking on of increased risk (where there is some limit on the scope for monitoring that risk) (see further Dow, 2012b). In spite of the term 'moral', the issue is one of rational optimising behaviour, under asymmetric information. Because such behaviour is not other-regarding, it is opportunism. It may be regarded implicitly as immoral because, by impeding markets from finding the social optimum, the outcome is a reduction in social welfare; but because this outcome is an unintended consequence, it may not be regarded as immoral. In any case, morality is equated with rationality in this approach; the impartial spectator, which Smith discussed as a mechanism for promoting moral standards, is discussed by behavioural economists as a mechanism for ensuring rational choice (see Ashraf *et al.*, 2005).

The policy implications of this theoretical approach are, first, that opportunities for moral hazard be limited by regulation, hence the proposal to limit banks to their traditional functions to limit the scope for opportunistic behaviour. Second, in the spirit of calculative rational behaviour, financial incentives (bonuses etc) would be regulated in such a way as to incentivise more prudent behaviour on the part of bank management and employees. Third, the scope for irrational behaviour among borrowers from banks would be promoted by 'nudging', as a substitute for the impartial spectator (Thaler and Sunstein, 2009). Trust between central banks, the banks and the public would be restored, ie it would be seen to serve calculative self-interest to trust.

But if we go back to the more general theory of knowledge under uncertainty, where social conventions, including trust, are essential building blocks for market activity, some important elements have been excluded from the mainstream theoretical approach. First, alternative approaches suggest that important influences on behaviour are non-calculative and thus not amenable to modelling as optimising behaviour. In particular, behaviour which observes moral norms with respect to trust, and then the breakdown of such behaviour and the breakdown of trust, are difficult to capture fully in a deductive framework. Indeed confidence entails quite the opposite of calculation, reducing the need even to pay attention to the possibility of bank failure.

Theories as to social conventions, and the nature and role of trust, have been explored by 'old' institutionalist theory, while the role of confidence in the development of banking has also, as we have seen, been analysed within the evolutionary approach. Finally, since some social conventions involve moral judgement, e.g. as to standards of fairness, it is important for economic theory also to be able to address such considerations. Notions of fairness effectively fall outside the realm of rationality in the mainstream framework (Akerlof and Shiller, 2009). Nevertheless, much of the public policy discourse surrounding the crisis has focused on issues of fairness. This is evidence of the other-regarding behaviour analysed by Adam Smith. Fairness issues may be raised for selfish or unselfish reasons (reflecting concern over one's own relative position, or that of others). The point is that it is an issue for individuals understood as members of society. Similarly, in the financial sector, employees may respond to bonuses as relative indications of standing, rather than being incentivised by absolute amounts. Since such considerations are important to the internal running of organisations, as well as to relations of trust between central banks, banks and the public, a theoretical approach is needed which can address them, in order to inform policy. Indeed, since corporate culture and issues of governance have arisen as sources of problems within financial institutions which gave rise to the crisis, a theoretical approach is required which focuses on institutions too in terms other than incentives based on (narrow) rational, fully-informed calculation. Behaviour within and between organisations, as between individuals, involves social empathy and uncertainty.

According to this alternative approach, moral hazard involves a wider range of issues surrounding the breaking of trust than the mainstream definition. If the banks had risked the trust of the central bank (as well as other financial institutions) by their opportunistic behaviour, the central bank also risked the trust of the banks by not clearly standing by the lender-of-last-resort facility from the start. Where trust is the outcome of conventional judgements with respect to long experience, it is not calculative, but nevertheless an important element in relations within the economy. Breaking with the conventional behaviour which underpins trust bears the serious risk of breaking trust, requiring new prolonged experience for trust to be restored.

A return to traditional banking is being considered as a response to the moral hazard and fiscal problems associated with the lender-of-last-resort facility being provided to large banks. Since it is the deposits of retail banks which perform the vast bulk of money functions and therefore it is retail banking which requires central bank support, the mainstream proposal to separate retail banking off from investment banking is shared by this non-mainstream approach. But it would be important in addition, from an evolutionary perspective, for a clear commitment to be made to continuing to make the facility available to these narrower banks. In principle, if these traditional banks were to fail, deposit insurance would protect depositors. But, given uncertainties over the insurance process, exacerbated by differences in national regulation and practices in a global banking environment, it is hard to see how confidence would in fact be restored without such a commitment. Given uncertainty, particularly in the kind of circumstances where a bank might fail, rational calculation would not in fact justify trust. Rather, as the evolutionary approach demonstrates, it takes time, reassurance and experience for society to restore a (non-calculable) convention of trust.

The more general policy implication, that efforts be made to rebuild trust between central banks, banks and society at large, is difficult to tie down further as a general principle (rather than with respect to particular local circumstances, including institutional history). But this does not invalidate it if the goal is not to seek universal policy prescriptions. Further this alternative approach requires a change of mindset from basing policy on financial incentives and constraints as they affect the individual and the individual firm and turning to addressing issues of fairness and wellbeing at a societal level.

Conclusion

The aim here has been to point out that there are different possible approaches to economics which can inform policy (not just different theories within one approach). Each starts from its own view of the nature of the economy, categorises it accordingly, and established criteria for good argument. It has been suggested that a deductivist approach dominates mainstream economics and mainstream economic policy (in spite of challenges from evidence). But this should not be regarded as the only option. For all its attractions, this approach limits coverage of important issues which have arisen with the crisis. The starting point of rational optimising individual behaviour limits the scope for understanding market sentiment (indeed any sentiment, e.g. with respect to fairness), and how it may change. It also limits the scope for analysing trust, and considering how it may be restored. All approaches inevitably are limited by the very nature of theoretical abstraction (far less framing). But, just as non-mainstream economists actively justify their methodologies, so should mainstream economists. We have attempted here to illustrate ways in which two alternative approaches address these limitations.

To argue for consideration of different approaches is to argue for methodological pluralism. This is not at all to advocate that 'anything goes', but rather that reasoned judgement be applied to considering which is most useful among the range of possibilities within which different sets of economic theory have

been developed. (These approaches each represent a set of conventions among groups of economists as to how to build knowledge.) We have illustrated the meaning and significance of difference of approach in terms of policy to address the crisis. For policy-makers, judgement is required in considering the applicability of particular, inevitably partial theories (Dow, 2012c). But it is the duty of economists to explain these theories in terms of the approaches which have generated them and to justify the approaches as well as the theories. In particular, the *onus* is on mainstream economists to justify their theories in relation to what is being assumed about the nature of the subject matter.

Since the mainstream approach prioritises argument expressed in deductive mathematics, methodological pluralism also refers to the possibility of different types of argument (plurality of method); deductive mathematical reasoning itself precludes a wide range of subject matter which can more readily be analysed using a range of other methods (possibly alongside partial mathematical models). The issue is whether a deductive mathematical model can be sufficient argument in itself, or whether it can only yield partial arguments for input with other forms of argument. If the latter is the case, then the role of judgement, in choosing strands of argument addressed to a particular context, and considering how to put them together, becomes central.

As suggested earlier, the best place to start in exercising judgement is an account of the reality to be analysed. On this basis, emphasis was placed here on the significance of fundamental uncertainty, for agents and for economists, which society addresses by developing conventions. But the urge to action requires animal spirits in spite of uncertainty. It is to be hoped that the extreme circumstances of the crisis may fire up the animal spirits of economists to reconsider and challenge their own conventions in a constructive way.

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