

Understanding the New Economy: Systems not Silos

by William White¹

I do not have much time so let me make just two points. My focus will be on the word “understanding” in the title of this session. It will not be on defining the characteristics of a possible “new economy”. Indeed, if we argue as I do, that the economy is a complex adaptive system then, almost by definition, it is literally impossible to predict exactly how it might evolve.

My first point is that there are significant benefits to policymakers from understanding that the economy is not a machine, reducible to its component parts, but rather a complex, adaptive **system** (CAS). CAS have been well studied by other disciplines that can provide many lessons to economists. My second point is related. Failing to embrace that understanding, essentially our current **silos** approach, has led us to the current, increasingly desperate, state of affairs, where the stock of problems (global debt levels and atmospheric Green House Gases) has risen, even as the stock of political good will needed to achieve solutions has fallen. In a nutshell, we must replace the current silos approach to policy with a systems approach that puts stocks front and centre.

The Benefits of a Systems Approach

Beginning with the understanding that the economy is a complex adaptive system (CAS) leads directly to some simple policy lessons for

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both central banks and financial regulators. That embracing complexity leads to simple conclusions might seem paradoxical, nevertheless it is true. These lessons could help policymakers to better prevent economic and financial crises, to better monitor the buildup of stress within the system, and to better manage crises when they do happen

a) Better efforts to prevent and minimize the costs of crises

While it is well known that CAS break down regularly, according to a Power Law, it is also clear that structural changes can reduce the incidence and costs of those breakdowns. Policymakers are not obliged to just accept whatever the market throws at them. The stability of the economic and financial system can be improved by building in redundancy, by relying on modular development and by stripping out unnecessary complexity. Efficiency is important but it is not everything.

Since CAS cannot be fully understood, policies directed to maximizing benefits are not feasible. Rather policy should be directed to avoiding really bad outcomes: minimaxing not maximizing.

Since CAS are path dependent, stocks matter. Both fiscal and monetary policies should be conducted in a more symmetrical way over the cycle to avoid the buildup of sovereign debt (fiscal policy) and private debt (monetary policy). Small economic downturns, which redress stock imbalances, should be tolerated as the price to pay to avoid bigger problems (both economic and political) later on.

Adaptive behaviour in CAS implies that the transmission mechanism of monetary policy will change constantly. For financial regulators, adaptation implies constant attempts at evasion. More emphasis should therefore be placed on principle-based regulation, on self-discipline (including criminal penalties) and market discipline (requiring better accounting and auditing).

In CAS the interacting behaviour of heterogeneous agents is crucial. Central banks and financial regulators need to pay more attention to the distributional implications of their policies.

b) Better monitoring for signs of systemic stress

In CAS the “trigger” for a crisis could be anything. Focus less on possible triggers than on identifying signs of growing systemic stress. That said, new evolutionary developments should be monitored carefully as possible sources of financial stress.

In CAS there are likely to be numerous indicators of growing stress. Observing that inflation is under control does not mean that all is well. Similarly, a healthy financial system is not sufficient to ensure overall macro economic stability. Imbalances can accumulate in other sectors of the economy as well.

Adaptive behaviour in CAS implies that tomorrow’s crisis will unfold differently from the previous one. Expect the unexpected.

c) Better management of future crises

Accepting that CAS always break down, in spite of best efforts at prevention, implies always being prepared. This has both an ex ante and an ex post component.

Ex ante, it is important to ensure that LOLR facilities are assured, that deposit insurance is in place, that MOU have been signed and that war games have been played. Adequate attention needs to be paid to insolvency procedures for all economic agents, including financial institutions. Ex post, given that in CAS all crises are different, the authorities need to have sufficient flexibility to adapt to new circumstances.

The Costs of a Silo Approach

The fundamental problem is that economic policies to date have been based on silo rather than systemic thinking. Keynes, in the Preface to the General Theory, summed up the danger beautifully: “It is astonishing what foolish things one can temporarily believe if one thinks too long alone”. Silo thinking to date has led to “false beliefs” by groups of agents within their respective silos. Moreover, it has led to dangerous (destabilizing) “institutional linkages” between individual silos. Consider a few examples that prevailed before the 2008 crisis and still seem to prevail today.

As to **false beliefs**, borrowers seem to believe that borrowing is a sustainable alternative to earned income. Lenders seem to feel that lower volatility means the world has become a permanently less risky place. Regulators seem to feel that if individual institutions are all healthy, the financial system is healthy. Central banks seem to feel that, if consumer prices are stable (low inflation) macroeconomic stability is assured. Academic economists seem to feel that their highly simplified models have relevance to the real world. Worse, these models assign no specific costs to environmental degradation and no importance to distributional issues. Politicians seem to feel that “trickle down economics works. All of these propositions are “false beliefs” which, while comforting in the short-term, imply an unacceptable willingness to ignore sustainability issues.

As to **institutional linkages** between agents, only the most worrisome can be noted here. The relationship between lenders (bankers) and regulators often seems close to regulatory capture. Bankers often seem to wield inappropriate influence (lobbying) over politicians. Financial regulators and fiscal authorities (since around 2011) have had their foot on the brake while the central banks have been pushing the

accelerator. Regulators have also been too influenced by academic theories that markets are “efficient” and central banks by theories that economies self stabilize. Finally, borrowers (voters) consistently vote for policies that promise easy answers and a short-term payout. All of these linkages seem likely to induce positive feedback loops (or weaken negative ones) which also contribute to unsustainability.

All of the above factors likely contributed in some way to the cumulative build up of debt in the global economy and to the global crisis which broke out in 2008. A rather simpler narrative, also based on systems thinking, highlights three separate trends which each promised increased economic efficiency. However, these three trends interacted disastrously to produce a quite different systemic outcome.

First, globalisation and the return to global markets of previously “command and control” economies constituted a persistent (and continuing) positive supply side shock. Second, the conduct of monetary policy was “improved” by a heightened focus on price stability. Third, financial market deregulation and evolution, leading to a vast expansion in the variety and availability of financial services, was also considered to be welfare enhancing.

Unfortunately, the first development pushed down prices leading to ultra-easy monetary policy on the part of central banks. This increased the demand for credit and debt, even as financial market developments were increasing the supply. The boom thus generated culminated in a decade long bust, with the collapse of the sub-prime mortgage market in the US being a triggering (not causal) event. In short, the system behaved totally differently from what might have been expected by simply adding up the efficiency gains promised by each separate development.

Since the crisis, major central banks have essentially doubled down on the policies they were following pre crisis. Their ultra-easy monetary policies have proved less effective than originally expected, in stimulating aggregate demand, but they have had a wide variety of unintended and undesirable consequences. Not least, the BIS estimates that non-financial debt in 2018, as a percentage of GDP, was over 30 percentage points higher than in 2007, itself a record. New threats to financial stability have also emerged, as have threats to potential growth in the future.

Post crisis developments differ from developments pre-crisis largely due to debt problems having spread from the advanced to the emerging markets, and to the sources of finance having moved away from more heavily regulated banks. Current debt overhang problems might trigger another crisis, but they will certainly aggravate any downturn coming from another source. Moreover, the buildup of private sector debt (due to asymmetric monetary policy) and the buildup of public sector debt (due to asymmetric fiscal policy) implies that further recourse to traditional policy instruments will be much constrained.

The Climate Change Complication

These debt stock problems come at an inconvenient moment from an environmental perspective. After decades of ignored warnings, it is becoming increasingly appreciated by government and citizens that the stock of Green House Gases (GHG) is rising dangerously fast. Moreover, many other environmental problems must be added to concerns over global warming. Solving these environmental problems will likely require a significant commitment of real resources, or at the least a significant reallocation of real resources.

The question then becomes, what is the best way to free up those resources against a backdrop of debt levels that already seem dangerously high? An important part of the answer must be bankruptcy and restructuring procedures that work efficiently and facilitate needed reallocations of both labour and capital. In this regard, the sooner the problem of “stranded” energy (high carbon) resources is recognized the better. The greatest danger is the suggestion that all these real problems can be papered over with continued monetary expansion. This might well lead to sharply higher inflation, particularly if bad demographics and global warming act as significant negative supply side shocks.

If the stocks of debt and GHG constitute a growing problem, it is worrisome that the stock of political “good will” seems to be declining. Dealing with each problem will have significant distributional implications (who pays?) which requires “good will” if orderly outcomes are to be achieved. This problem exists at both the national and international levels. Unfortunately, the problem has grown in part because of decisions taken about macroeconomic policies, underlining once more the importance of systemic interactions and unintended consequences.

At the national level, governments must lead the search for solutions, but trust in government has never been so low. While populism has many sources, the perception that governments are governing in the interests of “elites” is widespread. In part, it reflects the decision of many governments to bail out the creditors during the last financial crisis rather than demanding that debts be written off or restructured at the creditors’ expense. In part, it reflects the perception that income and wealth inequality is growing, the latter due in part to ultra-easy monetary policy.

At the international level, trust between governments also seems at a recent low. It can be argued that “currency wars” have been going on for decades, as central banks act to depreciate their currencies or try to stop them from rising. More recently this has morphed into “trade wars”, led by the current US administration. The fact that the US and China are now vying for hegemon status is also not helpful, since this reduces the room for compromise. History teaches us that moments of secular transition are always dangerous.

A Concluding Comment

All desirable policies begin with an analytical issue; what should be done? In a fundamental sense, we need a paradigm shift that recognizes the economy as a complex, adaptive system inextricably linked in with the environment. Unfortunately, we remain very much in a “muddling through” mode, with no dramatic suggestions for reform yet having broad support. There is no appetite for significant debt and bank restructuring, nor for questioning the benefits of “still more” easy money, nor for international monetary reform. While the recent IPCC report on global warming calls for net zero emissions by 2050, emissions are still rising strongly not falling.

Why is this so? All paradigm shifts are hard to achieve, as Thomas Kuhn pointed out a half century or so ago. Intellectual capital built up over a lifetime is not easily jettisoned. Moreover, rethinking implies the possibility or even admission of previous error. This is a particular problem for policymakers, not least central banks. More recently, Daniel Kahneman has noted that big shocks to prior beliefs more typically result in a retreat into those old beliefs rather than the opposite.

Perhaps still more important, everyone is now aware (or should be) of the shortcomings of their previous beliefs, but there is generally no

agreement yet on what beliefs should replace them. Further, if a wide variety of false beliefs contributed to the severity of the crisis, then each agent finds it easier to accept the view that the root of the problem lay with others. Central banks, for example, would still prefer to believe that regulatory shortcomings were the primary problem, thus implying their own contribution was of no great significance. Finally, the complexity of the interactions between the various sets of economic agents militates against radical change and favors the status quo. Rethinking and reforming the institutional linkages is really hard work, and it is work that vested interests would also prefer to avoid.

In short, getting the needed paradigm shift will not be easy. Subsequently getting action, in the face of the “goodwill problem” noted above, will be no easier. There is a lot of work left to do. The OECD, via the NAEC initiative, has already made a significant contribution to these efforts and should be congratulated for doing so.