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Current Global Financial Crisis

Since the outbreak of the global crisis in mid 2007, there has been an extensive discussion on root causes. Some blame the greed and corruption of financial actors. Others put the blame on central bankers for easy money or regulators who remained idle as too much risks accumulated in financial markets. According to advanced economies, global imbalances have been caused by emerging surplus countries that keep their currency undervalued and their domestic consumption restricted. Surplus countries, on the other hand, held deficit countries responsible for imprudent and reckless overspending.

It is unfortunate that all these arguments and counter arguments, which may be valid in their own way, prevents a more general discussion on the deep-seated conflicts and contradictions in the global economic, social and political paradigm upon which the world order is built. To put it another way, the problems we face today do not arise from some operational failures, but from the system itself and the underlying philosophical framework.

Let me start with the theoretical foundations of the existing financial architecture. Rational expectations theory suggests that expectations about the future reflect the entire cumulative knowledge available. The inaccuracies in expectations should be coincidental, not systemic. Otherwise, this information would already be included in the pricing decisions. However, the history of financial crisis is nothing but the history of adaptive expectations and irrational exuberance which result in over-inflated asset prices. Think of the Tulip-mania of the Netherlands in the 17th century; British South Sea Company and French Mississippi bubbles in the 18th century, the "Buying now and paying later" attitude prior to the Great Depression, the internet boom and the "New Technological Age" of the late 1990s, and more recently the financial innovations prior to the crisis that presumably made risk disappear from balance sheets. There is a close and one-to-one relationship between asset bubbles and rapid credit expansion, but yet asset bubbles form systematically over and over gain any way. Aggregate demand shocks and involuntary unemployment have also been

observed during crises, both of which are the anathema of main stream freshwater economics.

Recent developments have brought significant and radical paradigm shift defying conventional rules. The conventional paradigm before the crisis assumed that markets always clear and therefore there is no need for exogenous correction and hence less is the best as regulation is concerned. Deregulation process that gained pace during the last quarter of 20th century has augmented the role of pricing mechanism in the equilibration of the markets. But this mechanism is proven to be far from sufficient to facilitate an efficient decision-making process that maintains the trade-off between long-term tail risks and short-term financial gains. This situation spurred myopic behavior of the overconfident market players, and immediate gains were preferred over the collapse of the financial system in the long term. In the aftermath of the crisis, policy makers in the US and Europe have gone through a radical transformation and become in favor of quite comprehensive and intrusive regulations, ranging from Volcker's rule that advocates a complete separation between retail banking and investment banking, to central clearing for over the counter derivatives and furthermore to financial levies. Some EU countries put measures to regulate trading in sovereign credit default swaps and short selling. The problems in EU regarding the sovereign debt are blamed on financial markets which were described as pack of wolves by some EU officials. Since the breakout of the Greek crisis, the authorities have been conducting a witch-hunt against speculators, who once assumed as untouchable because of their critical role in complete markets.

We have witnessed a similar shift in other issues such as accounting standards and rating agencies. As you may recall before the crisis, the accounting standards were based on "fair value" models and rating agencies were incorporated in the BASEL II framework, under the assumption that the invisible hand of markets would provide the perfect guidance. It turned out that fair value models inflated the financial bubbles in good times and contribute to the vicious cycle in bad times. It is no surprising that IFAS is now advocating the adoption of "historical price" models to prevent cyclical shifts in balance sheets. Rating agencies, on the other hand, have received so much

criticism that, heated discussions are ongoing about disregarding their ratings all together from financial regulations.

Another drastic move came from across the Atlantic. IMF, a champion of free markets, has discussed in a recent study that, capital controls are a “legitimate” tool in some cases for governments facing surges in investment that threaten to destabilize their economies. It is argued that capital controls on certain types of inflows might usefully complement prudential regulations to limit financial fragility and can be part of the toolkit.

These shifts in opinions and perceptions, though radical, are not unprecedented. Looking at the responses of policy makers to the crisis, one can easily find quite few similarities between what is happening today and what happened in 1930s. As you may recall, the 1920s was the period of ever increasing liberalization and deregulation, but in the aftermath of Great Depression it was replaced quite radically by capital controls, regulations, and trade barriers. The same pendulum swing from on extreme to another is happening today. In fact, it is quite fair to argue that uncoordinated, reactionary and self-interested measures proposed or undertaken by policy makers today carry the risk of repeating the past mistakes in the near future.

In our efforts to rebuild a new system, we shouldn’t look for quick fixes. We need to recognize and then address the fundamental problems starting from conventional wisdom on human behavior. The concept of homo economicus is based on cost and benefit analysis performed quite rationally. The utility maximizing behavior implies that humans maximize the expected sum of net present value of the utility over time. Empirical evidence suggests that there is a fundamental problem in the overlapping generations model on which we build micro level optimization decisions. Let me go over its underlying principles one by one:

1. Summation means the agent is able to recognize and assess all possible outcomes.
2. The emphasis on expected utility assumes that the agent considers both the probability of an event and the consequent payoff/cost

3. Net present value implies the agent discounts the future, and the discount factor is continuous.

The problem is, human nature violates all three principles;

1. Humans are not capable of recognizing all possible alternatives, even if it is a finite number. That's why they need abstractions – to shrink immensely complex real life situations into smaller and manageable abstract prototypes – in fact this is also what we do as economists. We recognize our own shortcomings and use abstracts for a better understanding of the real world but quite interestingly when it comes to individuals we assume that they are super humans.

2. Human nature cannot comprehend the meaning of small probabilities even if the outcome is extreme. For example, the probability of having a car accident is on a given day is very small, may be one in a million. But the consequence is extreme, injury or even death. Thus, if you multiply a very small number with infinitely large cost (e.g. death), the expected cost should always outweigh the inconvenience of using seat belts. Then, why we need traffic regulations and heavy fines to motivate its use? Because it is extremely demanding for human beings to fully comprehend and deal with tail events. Insurance deals underwritten by AIG on credit defaults are another perfect example of ignoring realization of tail events. One can put CDS contracts on US sovereign debt under the same category as well.

3. Humans are focused on immediate costs and rewards. This is not simply the issue of having the appropriate discount factor calibrated to match the reality. If that were the case, we should have paid more attention to extreme events of the future regardless of how distant they are. The problem is many people not only discount but simply ignore extreme events of the future. In other words for many people discount factor is not continuous, but discrete. Discrete term preference may cause jumps in decision variables from one extreme to

another. There is certainly more room for additional research in this area, especially for behavioral economists.

Due to aforementioned vulnerabilities of our mind, we rely on simple abstracts, ignore tail events, and become overconfident (ignoring the cost of extreme failures). It is not that we do not take lessons from disasters or forget these lessons. The problem is we ignore these lessons because extreme events are not part of simple abstracts; they occur with very small probability and even if they are likely to happen, they would take place far in the future. That is why we need regulations, traffic police, social security system, financial regulators and of course central banks.

New Global Order and The Global Financial System

As you may know, akin to Mundell's impossible trinity theory, Dani Rodrik1 argued that democracy, national sovereignty and global economic integration are mutually incompatible. We can combine any two of the three, but never have all three simultaneously and in full. The problems we face today may be seen as a manifestation of this conflict. Policy makers are quite willing to assume the benefits of globalization, but reluctant and sometimes quite hostile to give up their grip over national policies, in part fearing backlash from voters who insist on saying the final word in democratic societies. Although the resistance of all parties is understandable, the current global institutional framework, or lack thereof, in this age of globalization is unsustainable. We should either give up globalization or build new institutional and regulatory scheme of global scale.

The main element of the new global financial architecture is the establishment of a global institution capable of a high degree of representation. G-20 different from G-8, represents two thirds of the world population and around 90 percent of world GDP including both advanced and emerging economies around the globe. Unlike the Great Depression, such institutions were used extensively owing to the need for global coordination and cooperation. They have enabled joint effort on a global scale

against the cross border institutions creating systemic risks and regulatory arbitrage originated in the off-shore banking hubs and tax havens.

On the other hand, International Financial Institutions (IFIs) are standing before us as the building blocks of the new global financial architecture. These institutions have been assigned new roles and responsibilities while their resources were increased substantially. IMF is now responsible for setting up global surveillance systems as an addition to its existing duties. Beyond the country-based problems, IMF is now tracking the global macro imbalances. It is predicted that with its resources of more than 1 trillion US Dollar, IMF will take the role of global quasi central bank in the future if it can manage to establish an unconditional financial safety net. This will also alleviate the need for emerging economies to keep huge reserves as insurance and further feed the macro imbalances.

In the process, the membership of the Financial Stability Board, which was established to develop and implement strong regulatory and supervisory policies, has been enlarged to consist of all the members of the G-20. Besides, a quota reform has been implemented to enhance the influence of the dynamic under-represented emerging market countries in the IFIs. In the local scale, plans to assign Central Banks more active role in preventing the systemic risks and asset bubbles are being discussed.

As of late, the work is under way for the regulations on the institutions classified as “too big to fail” or as they have recently been named SIFIs (systemically important financial institutions). These institutions are asked to pay extra costs considering the risks they pose against the system. They are even encouraged for divestiture. From the perspective of the global order, the current crisis has shown us that the large accumulation of influence in these companies have incurred irreparable problems to the system due to the lack of market control.

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[1] Rodrik, D., “How Far Will International Economic Integration Go?” Journal of Economic Perspectives 14 (1), pp. 177-186, 2007.

As a result, the quest for a new global order continues both in theoretical and practical levels. The predictability, balance, permanence and sustainability of the new global order will depend on the cooperative and coordinated efforts to establish a well-represented infrastructure. Obviously the feasibility and the sustainability of a global order are the most challenging issues. Depending on the comparative evaluation of the previous successful and failed attempts in the history, we can derive core principles to describe a feasible and sustainable order. My personal observation and conclusion is that three pillars which are necessary for the stability and the sustainability of such an order are freedom and democracy, equity and rule of law and universality and participation.

The Role of Central Banks in New World Order

Until recently when you asked the primary mandate of central banks, the typical response would be price stability. However, the history tells us that central banks were founded for quite different reasons in many countries. For instance the Bank of England was founded in the 17th century to cover the financing need of the British Government during its war against France. Likewise, Bank de France was created in the 19th century during the Napoleon Wars against the Great Britain. These institutions had the privilege of issuing banknotes in exchange for providing funds for treasuries. In other countries, providing stability in financial markets was the paramount concern. For example, the need for a lender of last resort following panics and crashes during the early 20th century led to creation of the Federal Reserve system in the US.

The concept of price stability was not brought to the foreground during the initial stages of central banking, because there was not much concern for inflation in many advanced economies. The value of money was well-protected thanks to the use of gold standard. As Friedman once said, "Inflation is always and everywhere a monetary phenomenon." Therefore, permanent inflation should not be a concern as long as long term money supply expands in parallel to long term money demand. In this context, inflation concerns were kept in the background in many countries under the gold standard during the 19th and most of the 20th century. With the collapse of

gold standard in early 20th century and its successor (the Bretton Woods System) in 1973, we have entered the era of fiat money. In the absence of a solid anchor like gold, the only mechanism left behind to support the value of the fiat money was the credibility of central banks. This brought out the issue of price stability in the foreground of central banking.

Our initial experience with fiat money was not promising. In the late 70s, many countries including advanced economies experienced rapid monetary expansion and as a result very high inflation rates, in many instances in double digits. 1981 was the turning point of central banking. The Federal Reserve, under the leadership of its chairman Paul Volcker, engaged in a very tight and painful monetary tightening, despite the harsh criticism from the US administration and the real sector. As inflation rate in the US gradually declined to low single digits, the Federal Reserve earned the reputation of an uncompromised inflation fighter, which gradually extended to other central banks in advanced economies as well. This was also the period in which many central banks gained operational independence. Over time it became a conventional wisdom among policy makers that the most important and long lasting contribution of central banks to long term growth and financial stability is to establish and sustain price stability. After the triumphant results monetary policy achieved during the "Great Moderation", this unity of mandate has gone far beyond a policy tool to ensure the wealth and the prosperity of nations but it has become almost an ideological obsession.

As the issue of financial stability has gained critical importance during the recent global crisis, central banks are asked to address directly not only price stability but also financial stability as well. As I explained before, to maintain smooth functioning of the financial system has been a concern of many central banks since their foundation. In fact, that is the reason we are called as "the bank of banks" or "the lender of last resort" for financial institutions. However, over time as the financial system get more complicated and expanded exponentially, its supervision and regulation has been partially transferred to other institutions, which is also the case in Turkey.

The challenge faced by central banks is to establish a framework that combines both price stability and financial stability as primary mandates even at times they conflict with each other and identify the policy instruments to target both. As you know central banks have typically used short-term interest rates as their primary policy instrument. However, the "Tinbergen Rule2" suggests that this one instrument could be deployed to achieve only one target, which is conventionally recognized as price stability. Addressing both price stability and financial stability simultaneously necessitates a second set of policy tools. This second instrument may be in the form of the regulation of financial activities. The question is that whether financial stability responsibility should be assumed solely by central banks. The downside of this option is that central banks may turn out to be too inflexible or in conflict with themselves, which eventually led to failure in both objectives. More importantly, central banks may lose their independence and get politicized. Make no mistake, politicization of a central bank might not necessarily stem from politicians. If it becomes the sole authority in financial regulation, the nature of new mandates would force central bank function in political sphere. Eventually the bank would find itself in a position that requires taking political stance.

Let me elaborate on this last issue further. As discussed by Sargent and Wallace in "Some Unpleasant Monetarist Arithmetic3", a permanently higher government deficit as in the case of unprecedented stimulus following the global crisis must eventually be accommodated by an increase in the monetary base. In this case, the choice which faces central bank is not whether to monetize public sector deficit but when, sooner or later. In the long run according to unpleasant monetarist arithmetic, the growth in money stock is governed by the fiscal deficit.

Despite all the reservations regarding the effectiveness of monetary policy and arsenal that central banks have, in case of a financial crisis and a need to bail out financial institutions, central banks would intervene, regardless of their initial rhetoric

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[2] Tinbergen J., On the Theory of Economic Policy, Amsterdam: North Holland, 2nd edition, 1952.

[3] Sargent, T. J. and W. Neil, "Some Unpleasant Monetarist Arithmetic", Federal Reserve Bank of Minneapolis, Research Department, 1982.

that suggest otherwise. This was the case in UK as the sub prime mortgage problems emanating from the U.S. seriously impaired the financial sector. You may recall, when the Northern Rock Bank, one of the UK's largest mortgage lenders, faced problems due to its exposure to subprime CDO market, the initial declaration indicated that there would be no bail out. However, after a few days the Bank of England agreed to give emergency financial support to the Northern Rock to prevent cascading of bank failures. A similar episode also experienced in Europe. In order to address disruptions in markets and eliminate the substantial repercussions inside the Europe, ECB has intervened in Euro zone government bond markets and started bond purchases full of ambiguities, despite the previous statements from the Bank's part.

When we look at the difference between financial regulators like Banking Regulation and Supervision Agency (BRSA) and the central bank, we see that the main difference is the central bank's capability of printing unlimited amount of money. Therefore, if central banks become the sole authority as financial watchdog, they definitely would face time inconsistency problem. In case of a financial meltdown, they would find themselves in an impossible situation. If they try to keep their promise to protect the value of money, they would fail in their role as financial regulator. If they use printing machine to bail out banks, they would not be able to protect the value of money they print. At the end even they protect de jure independence; they would de facto lose it. There is only one solution to this dilemma: to make sure that financial crisis never happens. Therefore, in order to protect their independence central banks would choose to over regulate, which would be a sub optimal decision itself.

Is there an alternative? As a result of the developments of the past two years, the appropriate scope of central bank policy actions in a crisis is now a matter of significant public discussion, one that is taking place in the context of a wider debate over financial regulatory reform. Walter Bagehot's dictum effectively addresses key economic objectives of society and thus continues to provide a useful framework for the formulation of central banks' policy actions in a crisis. We can summarize the Bagehot's dictum as follows: The central banks should extend credit to private sector

in need (at punishing rate) but never to public sector. Because, private sector would engage in productive activities and pay off the debt, governments do not. By lending freely, the central bank may be able to quell powerful panic-driven demands for liquidity and their potentially untoward effects on the economy. Providing a virtually unlimited source of liquidity to institutions can avert the fire sales that can lead to decreases in asset values, reductions in wealth, and ultimately to a costly contraction in economic activity. And providing liquidity can enable a continuation of the lending by financial institutions that is necessary to support activity at the economy's potential. We might call this the macroeconomic rationale for Bagehot's dictum--promoting the full employment of resources.

The problem today as compared to 19th century is that financial institutions are no longer equity based institutions operating with small leverage (i.e. like typical banks in the 19th century). They are over leveraged, engaged in speculative transactions; the difference between deposit banks and investment banks is blurred. Therefore, according to Bagehot principles credit extended to banking sector is as unacceptable as extending credit to the government. As a central banker I fully support Paul Volcker, who is also a central banker, to protect central bank independence. Commercial banks would provide customers with depository services and access to credit. They would be highly regulated, but also benefit from lender of last resort of facility of the central bank. Securities firms, on the other hand, would have the freedom to take on more risk and practice trading, be subject to less regulation and be regulated and supervised independent public agencies. Their clients, creditors and shareholders would know that they would fully assume the risk of their operations. To prevent moral hazard problem, these institutions would stay out of the central bank’s sphere, unless they have enough high quality collateral.

Last but not the least, if we want the term “financial stability” not to turn into an oxymoron, let the financial activity be more of equity nature than a complex and continuous selling and reselling of the liabilities to such extend that at the end no one is able to figure out neither the real debtor, nor the debt itself. And we should always keep in mind that scope and field of application of the very first law of thermodynamics which says; “energy (read as risk) can be neither created nor

destroyed. It can only change forms or place" is not limited to mechanical kind of engineering, but this reality holds true for the financial type of it, as well.