

Outlook for 2012: Global Interest Rate Hurricane – What Next?

In 2011, interest rate markets for Greek government bonds bolted and interest rates skyrocketed raising the specter of a sovereign debt crisis for the whole of Europe. Overall, interest rates around the world have remained at record lows thanks to the maneuvering of central banks; 10-year US treasuries for example pay less than 2 percent.

Investors are increasingly impatient and there is a rapidly growing demand for equity capital that has to be pumped into the economy to salvage balance sheets. Governments and central banks are already fully leveraged and do not have sufficient resources to keep interest rates low indefinitely. Fixed income markets around the world will unravel; this will send shock waves across the global economy.

Today, there are globally 212 trillion USD of financial assets, which includes 158 trillion of debt, see the 2011 McKinsey Global Institute report. The debt is 3.5 times bigger than the world annual product of 45 trillion.

As soon as interest rates start to increase, then the prices of bonds drop. The economic impact of the price decline will be daunting due the sheer size of the 158 trillion of outstanding debt.

Because yields are now lower than 2 percent, the drop in market value will be massive; depending on the duration of the debt the decline may be bigger than 50 percent. If banks hold the debt, then the losses have to be covered with fresh equity capital; at a time of slow or even negative economic growth this cannot be done. Forced asset sales put further pressure on asset prices creating a viscous circle of rising interest rates and declining asset values. This results in an equity trap, wherever more equity capital is needed. To salvage the situation governments and central banks need to raise in excess of 20, 30 or even 40 trillion USD of equity to restructure the balance sheets of banks, pension funds, government entities, companies, etc; this kind of money does not exist. How the crisis will unfold, depends on the flapping of the wings of the butterfly and cannot be predicted.

The global economy has gone beyond the point of no return and cannot be salvaged by traditional measures. The interest rate hurricane will trigger a global sovereign debt crisis shaking the foundations of modern society. It is too late to prevent the hurricane; but we can start to set the foundations for a better future. In the following, I give an overview of the major initiatives that we need to take to reform the economic and financial system.

Ethics Are A Necessity

The global economy would not be at this precipice, if ethical values had been at the center of our daily lives, both professional and private. Today, we are free to maximize profits and enjoyment, as long as we remain within the rule of law, be it as hedge fund manager, banker, and researcher in a pharmaceutical company or marketing manager in a multinational company or simple consumer. In pursuit of profit we are allowed to close our eyes to the economic, environmental and social consequences, short- and long-term.

Our society is an emergent system with a complex network of cross interactions and feedback processes, where we impact each other by our behavior. Our actions have information content, which is propagated through the economy. Depending how we behave, we transmit different information across the economic system. If we are unethical and pretend to be oblivious to certain consequences of our actions, we send the wrong signal through the economy. This is similar to a game of sports, where the players tweak the rules. Sports can only be meaningful, if the players stick to the rules. In our activities, we need to be ethical at all levels. Our whole behavior needs to be in the best interest of society. This is true for lawyers, researchers, bankers, and hedge fund managers, consumers, literally everyone. If an activity is not in the best interest of society, we are not allowed to embark on it, whatever the expected profitability or personal satisfaction. If bankers know that certain financial instruments are toxic or may become toxic, then they are not allowed to issue them, whatever the underlying bonus scheme.

Doctors swear the Hippocratic oath to share their knowledge, never to do harm and only do well for their patients. We need to do the same, whatever our profession or role in society. If we pursue ethical values, then hedge fund managers will not deploy investment strategies that destabilize financial markets and marketing managers will make sure that the product descriptions are really relevant and will not sell products that are damaging. Ethics also implies that society needs to renege any form of violence; society is a dynamic emergent system that builds on interactivity. The process of interaction is cut short if there is violence.

Launch Of Publication Platform With Prizes

Scientific progress, especially in natural sciences, has been spectacular over the past 20 or 30 years. The discoveries fuelled the unprecedented economic growth of the recent decades. This has led to a rapid increase of the environmental pressure creating the need for ever more rapid scientific progress.

We need to make scientific research more productive. I propose to invert the process of funding of scientific research. Today, a researcher first applies for a grant and then if he is lucky gets the funding to start the research work. This setup has fostered the development of an extensive network of cronyism, where researchers around the world support each other to get access to research funds. There is a huge overhead of application forms and administration that distracts from the actual research and induces researchers to go for projects that are fashionable from a funding point of view, but not necessarily rewarding in terms of actual discoveries.

I propose to create a publication platform for manuscripts available in public domain, where researchers submit scientific papers and are able to win research prizes. The system is similar to how sportspeople are rewarded for their efforts. There are cascades of prizes, small and big. Students can start a scientific career by winning small prizes as a reward for their student papers. Eventually, they can win really large prizes that they can use to fund big research projects. The advantage of this approach is that no time is lost for the extensive application forms and prize money rewards actual work done and not works in the distant future.

The publication platform will be generic and offer prizes beyond traditional scientific research. Prize money will be available for textbooks, monographs, but also literature and poetry, etc. The publication platform will pave the way for texts to become available in public domain. It is possible that in a short period of time all book manuscripts will be freely available over the

internet. Companies will use their advertising budgets to sponsor the prizes providing further impetus to this movement.

Develop Dynamic Economic Theory

The established economic theories fall short in terms of explanatory content and are not sufficiently powerful. Restrictive assumptions, such as the existence of the rational economic man, and unrealistic frameworks, such as market efficiency, have outlived their usefulness. We need to embrace a dynamic view of economic systems using concepts such as intrinsic time; an event-based approach to time that is based on a relativistic and dynamic analysis of economic processes. The new approaches include a fractal perception of economic activity with a view of the self-similarity at multi-levels or the concept of emergent systems as a tool to explain complex group behavior.

As is the case for natural sciences, researchers need to build their theories bottom up; first focusing on a rigorous description of observed data and then in an iterative process to develop models that explain the economic phenomena; not top down as is current practice, where economists formulate theories in abstract and then look for data that provides empirical confirmation.

Historically, economic research was viewed as a traditional social science that requires small research budgets. With the digitization of the economy and the explosion available economic and market data, economics has turned into a quasi-natural science that calls for a different type of quantitative research that is cost intensive; as we take it for granted for natural sciences. We need to increase the research budget for economics by a factor of 10 and more.

Create E-certificates Economy

The global financial system is built on top of outdated business logic with batch-based processes that can only be executed once every business day. The arcane business procedures make it impossible to introduce instantaneous settlement and second-by-second interest rate payments, which are essential ingredients for an efficient financial market system. We can solve the issue by introducing e-certificates as representations of underlying financial assets. E-certificates are instantaneously tradable and transferable.

In the last 600 years, notaries played a pivotal role in economic development. The notaries maintained registries of properties of land thereby creating transparency of property rights. The existence of certified registries made the transfer and sale of property simple and straightforward and was a catalyst for economic development.

In analogy to notaries, we need to set up entities that issue electronic certificates for financial assets. The electronic certificates are the equivalent of an entry in the register of the notary. The owner of the e-certificate is the owner of the underlying financial asset. Selling and buying the e-certificate renders automatic transfer of the underlying financial asset. E-certificates provide transparency of ownership and offer the ability for instantaneous transfer.

It is no big deal to build a network of issuers of electronic certificates; the basic technology exists. E-certificates can unlock the equity that is today inaccessible due to the operational inefficiency of the financial system.

Launch Internet Exchange For E-certificates

In parallel with creating e-certificates we need to launch an internet market to trade the e-certificates. This is not a big step. The internet is already today a large market place for a huge variety of assets and services. The new exchange should become the market par excellence for e-certificates. Just as the internet today is ubiquitous and provides us information, wherever we are, the internet exchange will be accessible from everywhere and provide instantaneous liquidity for e-certificates, whatever the underlying asset.

The new internet exchange will revolutionize the liquidity of financial markets and create the foundations for an alternate financial system. In the same way that it is today easy to upload new information on the internet, it will be straightforward to issue new e-certificates for financial assets. This will be the engine powering the financial system.

Build Global Information System

Today, there is no ubiquitous weather forecasting service for the economy and financial markets. We rely as private individuals or professionals on disparate sources of information to get a view of overall economic development, market movements and bigger trends in politics and environmental issues.

Weather forecasting services are an integral part of our everyday lives and we cannot today live without them; we need the same kind of service for the economy and financial markets. I propose to create a Wikipedia like network of contributors around the world. They will collect digital data for financial markets, the real economy and environment and cooperatively build information services that analyze the collected data and generate real time forecasting and risk services accessible to everyone.

The global information system will be a efficient source of information for decision makers increasing and enhancing the efficiency of the internet market and businesses and consumers of the real economy. The technology for such a service already exists; we only need a minimal investment to get the platform going. Wikipedia revolutionized the availability of encyclopedia-like information available over the web and was launched and continues to operate on a shoestring budget. The same can be done with the global information system; a small budget is sufficient to kick start the project.

Price Stabilizing Investment Strategies

Liquid financial markets are inherently unstable: imbalances of supply and demand lead to price spikes, which trigger margin calls for traders in losing positions; the closeout of the positions further increases the imbalance of supply and demand and drives the price move further. Occasionally, this feedback process triggers whole cascades of margin calls that destabilize the market.

Today, there are only market insiders, who are fully aware of the price instability. Frequently, they use their knowhow to trigger such price cascades and earn an extra profit. It is possible to address this inherent price instability by allocating assets to investment strategies designed to cushion excess price moves and stabilize the market dynamics.

Every complex system needs to allocate significant resources to maintain stability. The human body is an example: The heart has a stabilizing function; it pumps 5 liters of blood every

minute to transport oxygen to our cells and extract toxic waste from these cells. So every 12 minutes and around the clock, the heart pumps as much blood as the body's weight. This is very impressive. Financial markets can be stabilized through investment strategies that identify and counter-act imbalances of supply and demand. The return generated from these investment strategies is a reward for contributing towards price stability and increasing overall economic efficiency.

Today, 95 percent and more of financial assets are invested in buy and hold or trend following strategies. These strategies contribute to price instability. This is a huge tax on the global financial system. We need to change this and invest the bulk of our assets into price stabilizing investment strategies.

Luckily, these investment strategies offer consistent profitability and are scalable. There is even a positive feedback loop, because increased liquidity reduces spreads, which creates additional potential for more stabilizing investment. These investment strategies provide market liquidity for the new e-certificate market.

A New Generation Of Political States - Large Corporations

The hurricane in the fixed income markets will undermine the fiscal stability of governments and for many countries lead to a sovereign debt crisis. In many countries, governments spend 40% and more of gross domestic product. For the US it was 38.9% in 2011. Governments will be forced to cut expenditures drastically, but this will leave many key tasks undone. Even worse, there are many more tasks, such as the environment and education that are waiting to be addressed by government-like institutions. How do we get around this bottleneck?

We need to leverage the potential of large corporations, the Google, Apple, etc. of this world. Let me explain: These large companies are in many ways similar to the territorial states that emerged in the 17th century. These states were a private enterprise controlled by the king and his family. The territory of state and its inhabitants were the captive market of the state. The Google and Apple-like companies control virtual territories; for Google it is the advertising space; for Apple it is the Apps space etc.

In the 18th century a democratic movement transformed traditional business-like kingdoms into democratic states, as we know them today. The government was made accountable to its people and democratic processes were put in place to give a voice to the people's interests. We need to do the same with the large corporations: we have to make them accountable to their customers, their user base.

The corporate states need to embrace democratic procedures and give their customers, whom they survey regularly, a democratic vote, where the opinions voiced in these surveys have relevance in shaping the corporate strategy. We need corporate democracy, just as we request political democracy for national states.

The corporate states are well positioned to take over tasks that have traditionally been relegated to territorial states. They have solid balance sheets; they have excellent domain expertise in their specific markets and last but not least are internationally active, so they can roll out initiatives rapidly on an international level. In many areas, particular the environment, this is an essential capability.

Accept Jobs As Financial Assets

Full employment is a prerequisite for a healthy and vibrant society. If individuals do not have the opportunity to work, they are disenfranchised. Today, there is persistent unemployment around the world and the pending crisis will make things a lot worse.

The high unemployment rates indicate that anyone lucky to have a job owns something intrinsically valuable. I propose that we acknowledge this development and accept jobs as a financial asset; such a development would help unlock the labor market. A similar development has occurred in the Middle Ages in the context of land. Property of land evolved from an employment contract between king and farmer, where the contract specified, where the farmer could till the land. Eventually, the title to the land turned into a financial asset that could be traded. Something similar needs to happen with employment contracts.

Today, employment contracts are long-term contracts with an intrinsic value due to the sizeable investments related to creating and maintaining a job. We need to accept this development and acknowledge that an employment contract is a financial asset that potentially can be bought and sold. An advantage of such a development is that employees acquire a direct financial interest in their job and transform traditional companies into quasi cooperatives. At the same time the ability to sell jobs for a given amount of money, creates a new source of capital to raise money for expansion, so makes it easier for corporations to expand production. Just as for regular property, it will be possible to get mortgages to fund the purchase of jobs.

Governments have tried to protect as many jobs as possible. This has paralyzed international collaboration and has been the major driver behind the low interest rate policy of central banks. The low interest rate policy has had the effect of reducing the market value of time with negative effects on resource allocation. We can unlock the labor market by accepting jobs as investable financial assets. We thereby increase the flexibility of the labor market and lay the foundation for solid economic development.

Outlook

In the coming year, we need to fasten our seat belts. The global economy has reached a point of no return, where frantic diplomacy by top politicians cannot change the underlying facts; we have reached a dead end and do not have the equity capital to restructure the balance sheets of our indebted economies. We need to embrace change. The core concepts are: introduce ethics at all levels and embrace non-violence; researchers need to be rewarded with prizes like sportspeople for their successes; we need to invest in the understanding of the dynamics of the economic system; the legacy infrastructure of the financial industry needs to be replaced with electronic certificates for financial assets and an internet exchange; build a global information system for the economy and financial market, a kind of economic public weather service; allocate assets to market stabilizing investment strategies; democratize large companies and transform the Google and Apple's into corporate states and transform the labor market by treating jobs as financial assets. These initiatives are not rocket science; it can all be done with current technology; so let us roll up our sleeves and get to work

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