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BUILDING NATIONS FUTURE IN GLOBAL DIS-EQUILIBRIUMS: ANTI-CRISIS PROGRAMS & PRIORITIES IN POST-CRISIS DEVELOPMENT IN TIMES OF RECESSION[1]

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Honourable President Islam Karimov, President of the Republic of Uzbekistan, Honourable Members of Parliaments, Mr. Rustam Azimov, First Deputy Prime Minister and Minister of Finance, Chairman of the Organizing Committee, Diplomats, Senior Government Officials, Professors, Corporate Heads, Journalists and Honorable members of the Organizing Committee at the Republic of Uzbekistan and the Cabinet of Ministers and other distinguished dignitaries on the dais, members of the this august audience and ladies and gentlemen, it is a matter of great privilege for me to have been invited to deliver the keynote address on " Building Nations Future in Global DisEquilibriums: Anti-Crisis Programs & priorities in Post-Crisis Development in times of Recession" at this prestigious policy international conference on "Outcomes of Anti-crisis Programs and Priorities of Post Crisis Developments", organized by the Cabinet of Ministers, Republic of Uzbekistan. At the outset I must congratulate the organizers for organizing this Meeting and selecting an extremely timely issues and having representation from around the globe. I would specially like to thank Dr. Rustam Azimov who has been kind to have extended the warm invitation to be present amongst you all and share my views on this pertinent topic.
I wonder as to what extent I would be able to justify this great responsibility of delivering this address. It

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is a very difficult task and a great responsibility. However, it would be my endeavor to be up to the mark as far as possible or to the expectations of the organizers and galaxy of intelligentsia.

Keywords: *financial crisis, recession, anti-crisis programs, post-crisis*

I. Introduction

There are over US$ 6 trillion worth of transactions that take place on a daily basis, which is equivalent to the total world trade every year. The persistent rise in the dispersion of current account balances of the world as a whole, wherein the sum of surpluses match the sum of deficits has grown substantially since the World War II. Since 1990, the un-regulated financial markets were set to induce growth for emerging and developed economies. However the economies have been hit one after the other with the fashion and need for market driven capitalist and liberalized economic systems. The emergence of the crisis in the last 20 years since 1982 beginning with USA (1982, 1989, 2007-08), India (1991), Russia (1992, 1998), Mexico (1994), East and South East Asian (1997), Brazil (1999), Argentina (2001) and the most recent financial turbulence observed in 2008 in US and Europe estimating an impact of over US$ 6 trillion with over US$ 3.5 trillion already proposed for bail out by the US Treasury clearly bringing forth the failure of Banking and Financial Institutions which serve as the back bone of an economy or life blood of an organization.

Nation's worldwide are en-tasked with responsibly to build sustainable future for all, while maintaining appropriate environmental discipline and stable socio-economic growth. The changing structure of world investment, trade, capital flow and the need for deeper integration, strengthening regulatory framework and signaling system is greater (Agarwal, Agarwal and Agarwal, 2006). Globalization has altered the economic frameworks of both developed and developing nations in ways that are difficult to comprehend. Innovation has seeded the need to finance development and growth in rural regions. Also the emergence of unregulated global markets appears to have moved towards a more stable and growth oriented economic globe. What is needed today is to develop sensitivity sensor systems to promote technology within the financial framework as an integrated approach to keep markets from busting and causing socio-economic panics.

Faced with these uncertainties, it is especially important that policymakers undertake the required policy adjustments for a sustained global expansion. As well, supervisory and regulatory authorities need to continue to strengthen energy financial market infrastructure to underpin the resilience of the ecosystem towards sustained development and clean tomorrow. In an attempt to build sustainable future of Nations in an inter-locked global economic environment it is critical to focus on the following issues –

a. inducing Economic Growth and Financial Development
b. reducing Financial Volatility
c. fostering Employment Growth
d. fostering Sustainable Environment
e. restructuring Pension Systems and Societal Setups
f. re-focus on Organic Agriculture
g. setting in Fiscal Discipline & re-orienting role of IMF
h. re-energizing multi-lateral trade agreements (WTO) along with bi-lateral FTAs

We have attempted to address some of the above mentioned issues in our paper.

II. The World Economy, Uzbekistan and Global Financial Turmoil

The current financial crisis and global economic slowdown has fostered the need for unprecedented international policy coordination globally with key role players as US, Europe, Russia, China and India. The regulators of developed and developing regions have to work closely with each other, actively participate in the international Financial Stability Forum and the standard-setting bodies operating under the aegis of the BIS, World Bank, IMF, UN and other international agencies. There needs to be a tight focus today between the monetary policy and the fiscal policy, especially in meeting of the liquidity and trade needs of our increasingly globalised financial markets.

Agarwal (2004) clearly forecasted and projected at the IFC Chile on 7th January 2004 that the World Economy is heading for serious financial turmoil with US slowdown and the projected Oil Shock. Agarwal also said that the financial architecture built in the 1950 is not robust and efficient to meet the dynamism of today. The projections of early 2004 which came forth to be true in mid-2004 for Oil Price rise and 2007-08 for Global Financial Turmoil are quoted below

"The slow down of the US economy has a compound effect on the growth of the world economy by adversely affecting the demand for the products of partner countries as well. The effect of the impending slow down will be more severe on the growth rate of world trade which is likely to reduce to nearly a fifth of the rate achieved in 2000 to around 2.7 and 5.2 per cent in 2001 and 2002, respectively."

"The volatility of oil prices is a highly destabilizing factor for the world economy. It is more devastating for oil importing developing countries than for other countries. Given the strong cartel in the form of OPEC operating in this market, it is not possible to rule out oil price shocks of the type faced in the early 1970s, early 1980s, early 1990s and 2000 or even in the future. It is imperative for international community to create a mechanism to regulate and stabilize oil prices at a certain reasonable and sustainable level. The intervention should bring the OPEC and other oil producers to observe some international discipline. Further, there should be some special fund to moderate the impact of volatility in oil prices for the poorer developing countries. The OPEC decision to cut output whenever oil prices tend to fall as witnessed in early 2001 indicates that oil prices will fluctuate around $ 30-35 per. barrel. Therefore, oil importing countries will have to adjust their economies to the new level of oil prices in the coming years."

"It is clear, however, that the challenges of globalization today and the resultant volatility in the international financial markets cannot be adequately handled by a system that was largely designed for the world 50 years ago. Changes in international economic governance have to keep pace with the growth of international interdependence."

"The world community need to consider the issues involving International Development Cooperation, Restructuring IMF, International Borrowing and Lending, Private Capital Flows, Portfolio Equity Flows, Short-term capital movements, Capital Account Convertibility and Domestic Resource Management, Strengthening banking and financial systems, more seriously to match them with the needs and requirements of home countries, regions and the world economy. Of course the financial systems as enumerated above need to be regulated controlled and developed to reap the fruits of financial developments in the world economy to provide stability in the financial markets and to make the world a better place for living. Finance would be required not only for construction and development of economies but also for reconstruction and rebuilding economies."

Fromlet (2005) rightly identified that China and India are the two biggest countries accounting for 40% of world population. Fromlet outlined the weakness and strengths of the two nations in sustaining the growth path adopted by them with one having deep routed democracy and the other with substantial autocratic controls fostering faster growth. Given that these countries started their opening and reforming processes at different times and chose different strategic approaches which is bringing them sharply up the global ladder in trade and investment. The long-term outlook for these two giants hence is important given that they provide a sustainable base for markets and production capacities.

The EMU and Euros introduction has had a remarkable achievement in the European Integration process. The run-up to the Euros establishment and the experience of the past decade have been associated with an unprecedented degree of policy coordination among the sovereign states within the Euro area, including cooperation in the areas of fiscal and regulatory policies as well as monetary policy (Bernanke, 2008). The integration process has been a shield and growth contributor to the Euro zone for the last one decade. However the Global Financial Meltdown, US$ depreciation against Euro and absence of Fiscal Control Mechanism creates pressures to de-stabilize the region and pose threats to the EMU system. Agarwal (1999) addressed on the challenges before integrating Europe suggesting the need for formulation of the European Constitution, which is finding place within Europe and European Institutions with the 1st draft of European Constitution submitted to the people in June 2004. The need for Europe to focus on global partnerships and interdependence to take care of challenges faced in last 4 years due to higher un-employment (i.e. blue & white collor workers), lower growth within the region, US recession, inflationary pressure within Europe leading to internal dissatisfaction with the integration process is extensively stressed in the work. Agarwal (2007) highlighted that these issues are a matter of concern, as they may cause de-stabilization of the Global Financial Stability & Development within Europe.

Recent travails brings' forth the pertinent need for the financial regulatory framework requiring fundamental reform (Agarwal, 2004) even though the financial architecture is broader than the government's regulatory and supervisory response. The new financial architecture needs to properly understand and account for the dynamic relationship between private-market actions and public-sector structures. The economy's financial architecture is said to be a function of the relationship among financial institutions and market participants that transfer capital and risk between borrowers and savers. But the architecture has to evolve to be a mix of prescriptions and postures of the Political bodies, the Administration, the financial regulators (including central banks), NGOs and academic research centers in a more dynamic and robust form.

2.1 Uzbekistan: The Socio-Economic Development & Growth

Uzbekistan has shown an impressive development since its independence in 1991. The nation has progressed slowly but steadily with the rightful implementation of "*The Uzbek Model*". Uzbekistan, a landlocked country, has been able to attain a gross national income per capita of about US$1,050 in 2009 (GNI, Atlas method) in short span of 19 years of independence. It is a resource rich nation having substantial reserves of gold, copper, natural gas, oil, uranium and extensive production of cotton. Uzbekistan also has well developed social and capital infrastructure, especially compared with countries with similar GDP/capita and/or neighboring countries. The country accounts for one third of the region's population, and an estimated 37% of Uzbekistan's population living in urban areas, with about three million inhabitants in Tashkent, the largest city and the capital. The country has a very young and rapidly growing well educated population with needs for growth and employment opportunities, especially in rural areas (2/3rd of population lives in Rural Uzbekistan).

The growth of the gross domestic product (GDP) in the year 2009, made up 8.1 percent. This was supported by industrial production at 9 percent, investments increase by 26 percent (including foreign investments increase by 68 percent), positive balance in the foreign trade turnover of more than US$ 2.3 billion, growth of average salary up 40 percent, and the real incomes by 26.5 percent. Uzbekistan's progress has been observed with a focus on self-reliance in both energy and foodstuffs, and for pursuing a policy of "localization" (i.e. encouragement and protection of domestic production). For any nation, which is in its inception stages, it is vital to follow this policy to enable it strengthen its socio-economic framework to induce long run sustainable productive growth. This is clearly visible with this policy having been successful in increasing value addition in industry from 14% of GDP in 2001 to 22% in 2008, following a decline of the industrial sector from 33% of GDP in 1991. This would also inturn lay down the foundation for Uzbekistan to bring out sustainable economic viability through a free market access in the future.

The Uzbek Model has brought in major progress, which has helped maintain fiscal discipline, resulting in low public debt and budget surpluses every single year since 2003. Economic Surveys clearly bring forth the large increases in net foreign assets, which have been mirrored in the growth of monetary aggregates resulting in continued inflationary pressures faced with raising international food prices. The central bank keeping bank-led global financial crisis and the increase of inflationary pressures, has managed to tighten monetary policy in 2005-08 via increased deposits from commercial banks, the resumption of the issuance of central bank paper, and the accumulation of government deposits. This led to a decline in growth of reserve money from 88% in 2005 to 37% in 2006 (broad money growth - from 54% to 37%), although this tendency was reversed slightly in 2007 when reserve and broad money grew by 45% and 46% respectively, but in 2008, again, reserve money and broad money declined further to 28% and 35% respectively (WB, 2010). The contraction in money supply in the last 5 years did induce reduced Growth, however improved macroeconomic supervision/stability enabled the central bank to follow a Inflation target policy as one of its monetary policy measures.

It can be clearly seen from the World Bank's country report that the consolidated fiscal position has strengthened in 2008, supported by strong revenue from the commodity sector (in particular with an increase in gold prices and large increases in Gas export prices). It is commendable to note that appropriate implementation of the "Uzbek Model" proposed by the Honorable President Karimov has led to a budget surplus despite global financial recession (since 2007) and despite the government's deliberate policy of reduction of tax burden on the non-commodity sector. The augmented fiscal surplus (i.e. consolidated budget and Fund for Reconstruction and Development) in 2008 as indicated by the World Bank Country Report remains unchanged in 2006-07 at about 5% of GDP, increased to 10% of GDP in 2008. Also, the total budget expenditures has seen a continuous decline as a share of GDP from 36% in 2000-2003 to 32% of GDP in 2008. This is clearly a joint outcome of the Uzbek Model and the Anti-crisis measures adopted by the country.

2.1.1 "The Uzbek Model"

The gradual approach to transition and state-led development aimed at import substituting industrialization and energy and food self sufficiency adopted by Uzbekistan has contributed to enable maintain growth in times of recession and have domestic orientation to wither away contagion effects of Global Financial Crisis. This approach resulted in a less painful economic and social transition than experienced in most countries of the CIS and, in recent years, strong macroeconomic performance. Under the Uzbek Model the government has a policy of high public spending in health, education and road sector to improve standard of living and equitability in the socio-economic societal framework.

The Economic growth of Uzbekistan has accelerated from around 4% in 1996-2003 to over 7% in 2004-06 and to over 9% in 2007-08, largely (but not exclusively) driven by external demand (WB, 2010). This growth performance has been accompanied by an annual per capita GDP growth, from 2% in the late 1990s to 6% in 2004-06, to over 7% in 2007-08, and to 8% in first half of 2009 as a result of boast of international confidence, exports (gold, gas and cotton) and decline in the population growth rate from 2% from 1996-99 to 1.3% between 2000-08. There has been a significant increase of remittances and other transfers to Uzbekistan at 8-10% of the GDP in 2005-08 from labor migrants in Russia, Kazakhstan and other countries have contributed to the support of living standards of the Uzbek population, particularly among low income and poor families. However, despite the reported high economic growth, employment generation and private consumption have lagged and there has not been a commensurate reduction in poverty in recent years. The national poverty level (defined as percentage of population consuming less than 2,100 calories per person per day) dropped by just 3.9 percentage points from 27.5% of the population in 2001 to 23.6% in 2007. This is the next challenge for the government to enable bring true fruits of the Uzbek Model to the nation and its people for equitable sustained growth.

The Model has been able to provide for the foreign exchange reserves to go more than triple, since 2004 level. The Reserves are more than US$9 billion in 2008 (equivalent of 11 months of next year's imports), which in turn provide for a financial cushion against financial crisis in 2009-10. A zero net external borrowing policy followed since 2001, and total outstanding external debt declined from 64% of GDP in 2001 to 14% in 2008, and projected to decline further to 13% in 2009, and total debt service payments in percent to exports also declined to less than 8% in 2008 are positive outfall of the economic development via the Uzbek Model. Despite some increase in recent years, actual foreign direct investment has remained one of the lowest among the transition economies relative to the size of the economy at 3% of GDP on average in 2006-08.

The "Uzbek model" in expected to formulate a transition from the old command and administrative distribution system to the market driven economic system of governance built on the five renowned principles and strategy of consistent and step-by-step reforms and evolutionary development of state and economy. Key observations marking the success of financial development in Uzbek economy (Karimov, 2010a) are

- volume of capital sufficiency of Uzbek banks exceeds 23 percent, i.e. it is almost as high as three times the international standards set by the Basel Committee.
- 14 commercial banks of the republic, whose assets in total make up more than 90 percent of the banking system, have received the high rating point "stable" from the leading international rating companies such as "Fitch Ratings", "Moody's" and "Standard and Poors".
- total assets of banks are two fold of the amount of funds in the accounts of population and legal entities, while ensuring their full protection and guaranteeing the timeliness of payments.

The aggregate current liquidity of the banking system is ten times more the current obligations of banks on foreign payments. In other words, the solid "safety cushion" of the entire banking system is established.

- 240 bankrupt enterprises have been revealed in the country, including the large enterprises, of which at the moment 154 have already been realized to new owners. 86 bankrupt enterprises have been transferred to the balance of commercial banks.
- repay the credit debts to the budget and appears on wages worth total sum 1 trillion UZS, as well as establish on the basis of bankrupt enterprises over 100 new types of productions and additionally create more than 17,000 jobs.
- more than 840 projects were implemented in 2009 as part of the large-scale localization program, which has permitted to increase the volume of manufacturing of products being localized as compared to the year 2008 to 2.3 times.
- production of over 120 new types of goods, from amongst which there are the oil and gas equipment, produce of chemical industry, component parts for the car making industry and

many others. 2,000 new jobs have been created as a result of this initiative.

- effort to replenish their circulation funds of the exporter enterprises received soft loans worth in total 233 billion UZS in 2009 itself, which has paved way to prevent shrinking of production due to temporary difficulties in terms of exporting their products.
- benefits on the income tax and single tax payment for the enterprises of the light and food industries specialized in the output of consumer products. In 2009 the single tax payment for the small industrial enterprises was reduced from 8 to 7 percent; the amount of fixed tax for individual entrepreneurs was also reduced on the average for 1.3 times.
- 690 investment projects during 2009 in the framework of the Investment program and sector programs of technical modernization, of which 303 projects were successfully completed. In the whole, 22 large production facilities were commissioned in the country, of which 8 facilities – in the oil and gas, chemical and metallurgical industry, 9 – in the machine building and 5 – in the construction industry.
- implementation of the strategic investment projects on construction of the "Novoangren-Uzbekistan" Power Transmission Line-500 with substation, 165-km-long "Ahangaran-Pungan" trunk gas pipeline through the Kamchik mountain pass, as well as of the "Guzar-Surhan" high voltage power transmission line which has in fact completed creation of the single power and gas systems in the scope of entire country.
- commission of 217 kilometers and undertook a complete overhaul of 538 kilometers of automobile roads as well as 19 bridges. More than 280 billion UZS at the expense of the country's Road Fund were channeled to accomplishment of such works. The projects attracted the soft loans of the ADB worth US$56 million to procure the road construction techniques.
- on improvement of reclamation condition of lands 840 kilometers of collector and drainage networks have been commissioned in 2009 along with 250 drainage wells, 15 units of reclamation pumping stations and constructions. In total 130 billion UZS have been channeled for implementation of projects on improving the reclamation state of lands. As a result the reclamation condition of over 240,000 hectares of irrigated land has been improved, which allows to raise the level of crop yield and increase the incomes of farmers.
- over 940,000 new jobs were created in 2009, of them around 500,000 in rural areas. More than 390,000 new jobs were created in the sphere of small business, including 270,000 in the services sector.
- apart from the above 130,000 new jobs were created from home-based labor in cooperation with industrial enterprises and carrying out the work at home on contractor basis.

The above clearly outline the benefits of the Uzbek Economic Model and the Anti-Crisis Program. These have been well recognized by competent international financial and economic institutions such as the IMF, WB, ADB and several other leading financial institutions of the world through their reports and economic surveys (ADB, 2008; Karimov, 2010a; WB, 2010).

2.1.2 The Parliament "Oliy Majlis"

In any democratic economic system, the parliament plays a pivotal role in the socio-economic growth of its people and the economy. It is hearting to see that a special place has been reserved in the lawmaking activity of Oliy Majlis to the issues of normative and legal support of structural transformations in the economy taking place in the country, further to creation of a favorable investment climate, modernization, technical re-equipment of production, as well as development of the country's banking and financial system. During this period of global economic sluggishness the entire package of legislative acts has been adopted, which envisage the consolidation of legal protection of private ownership, establishment of a powerful class of owners in the country, consolidation of farming, ensuring further liberalization of economy, creation of favorable conditions for development of small business and entrepreneurship, as well as establishment of a ramified market infrastructure (Karimov, 2010b).

The smooth process of election to the Legislative Chamber, Jokargy Kenes of Karakalpakstan and local Kengashes (Councils) that took place on December 27, 2009, as well as the runoff elections to those bodies on January 10, 2010 is a clear evidence of the confidence of the Uzbekees in the governance and its growth models. The state of general activeness of voters, state of openness, transparency, observance of norms and requirements of domestic and international legislation, which have taken place in the elections, are noted in those assessments and commentaries, which became yet as another confirmation of the fact that how truly enormous steps our society has made for over the past years on the way of democratic transformations, ensuring freedom of choice for everyone and for establishing strong civil society (Karimov, 2010b). The elections demonstrated the high socio-political culture of the population, growing level of its political and civil self-consciousness, its broad support of our progressive advancement along the way of deepening reforming and modernizing the country. Most importantly, the elections have once again demonstrated that all radical changes and transformations taking place in our state – this is a process, which has acquired an irreversible nature.

The activity of the country's bicameral parliament elected for the first time in 2004 coincided in its time with the important period in our life notable for its deep transformations, dynamic processes of consistent reforming and liberalizing all spheres of political and socio-economic life, democratic renewal and modernization of the country. It is heartening to note that Uzbekistan has adopted more than 250 laws of a profound significance in deepening the socio-political and socio-economic reforms being carried out in the country. Also the implementation of the "Uzbek Model" and the "Anti-crisis program of measures for 2009-2012" directed to minimize the negative consequences of the global financial and economic crisis through the ages of the parliament, allowed Uzbekistan to show surplus instead of budget deficits and increase in the real incomes of the people.

The clear vision of President Karimov and the growth path being observed by Uzbeksitan is expected to fulfill the dream of the leaders and founders of Uzbekistan to build the Nation *"From a strong state towards a strong civil society"*, with just social-economic and socio-political reforms. The role to strengthen the role of citizens in governing the country is vital for a robust economic growth and social upliftment in a democratic society.

2.1.3 Anti-crisis program of measures for 2009-2012

The Anti Crisis Action Programme 2009-2012 is a stimulus package introduced in January 2009 to reduce the impact of the contagion impact of global recession on the Uzbek economy with the support to the banking system, export companies (through preferential credit and tax rebates) and employment.

The program focus has been to implement concrete measures to support the exporter-companies in ensuring their competitiveness at foreign markets given the rapid worsening of current conditions, creation of additional incentives for exports, in particular:

- allotting them the privileged credits to replenish the circulation funds with a term of until 12 months on the rate which does not exceed 70 percent of the refinancing rate of Central Bank;
- relieving the companies with foreign investments, which produce the finished goods, from levying all types of taxes and duties to the budget but for a value added tax (till 2012);
- restructuring the sum of overdue and current debts on the bank credits and writing off the penalty fees on the payments to budget, and rendering other no less important benefits and preferences." (MFA Uzbekistan, 2009)

In addition, support for food and consumer goods producers was envisaged through the programs of broad system of incentives for the local producer-companies for production of food and non-food consumer goods (until January 1, 2012) with the following tax and customs benefits are offered

- decreasing the single tax payment rate by 50 percent to micro-firms and small companies, which process meat and milk with a purposeful channeling of the released funds to undertaking a technical re-equipment and modernize production;
- relieving companies, which produce particular types of finished non-food goods, from paying an income and property tax, single tax payment for micro-firms and small companies.

The sources of financing for the Anti Crisis Program was proposed to be as follows

- own financial assets of companies and enterprises for a total amount of US$ 8.2 billion
- credits of the Reconstruction and Development Fund[1] of the Republic of Uzbekistan worth US$ 2.5 billion dollars and
- foreign investments and credits totaling US$ 13.5 billion.

[1] The Fund was established in 2008 with an authorized capital of about US$ 3.2 billion. The Fund plays a very important role in implementing the strategically important projects along structural transformation and modernization of economy, as well as establishment, firstly, of the production infrastructure. In the nearest perspective we are going to take the Fund's assets up to US$ 5 billion. For over the past two years the Fund allocated credits worth more than US$ 550 million to finance and co-finance tens of large industrial and infrastructure facilities.

2.2 Oil Volatility Factor

The volatility in the oil prices is also a highly destabilizing factor for the world economy. It is more devastating for oil importing developing region of the world than for the others. Given the strong cartel in the form of OPEC operating in this market, it is not possible to rule out oil price shocks of the type faced in the early 1970s, the early 1980s, the early 1990s, 2000 and 2004-2008 or even in the future. It is imperative for international community to create a mechanism to regulate and stabilize oil prices at a certain reasonable and sustainable level. It is commendable to see the efforts made by the OECD and other international agencies to bring forth suggestions to streamline the global oil shocks (OECD Observer, November 2004 & other eds). Also, we at the Indian Institute of Finance (IIF) have been working extensively to provide possible solutions to economies and international agencies since 1987. Some of our suggestions and research forecasts have been very apt and have helped nations to build shields against oil shocks. A recent forecast by Prof. J. D. Agarwal, indicated that oil prices were expected to shoot up, hence economies and international agencies needed to initiate effective steps to offset the shocks. Suggestions to this effect were also considered in his paper, which appeared in Finance India, March 2004. This piece was written in December 2003, when no market indication of such a scenario was visible. Three suggestions which have been made by IIF at various forums are,

- firstly, to create an Oil Pool Account in 1990-91 by J. D. Agarwal, which was duly initiated by India and some other countries, has helped India live with the shock which the world has seen in the last two years and
- secondly, to development more active derivative markets (both financial and commodity) with products on oil (OECD Observe, July 2005) and their use by markets globally would help to bring discipline to the oil market and a reduction of pure dependence on OPEC or a select few nations.
- thirdly, to strengthen domestic currency specially in a case like India, where market pressures are there for the INR to appreciate countered by the RBI and the MoF, as most countries suffer on account of imports bills from Oil, which are purely in-elastic in nature. Incase of India itself, we only produce about 36% of Oil Consumption needs. The balance 64% is imported from diferent parts of the world in the Arabic Region, US, Russia, South East Asia and others.

It was high time that the global economies and the developed world understood the severity of high oil prices which had led the world economy to observe a steep rising inflationary trend. In such a scenario, the above suggested means or other mediums need to be adopted immediately to stabilize and bring down the oil prices to an appropriate sustainable level of around US$ 40 – US$ 50 per barrel (happen in by end of 2009) given that Jet light fuel (air-travel fuel) was hovering around US$ 18-20 per barrel then. In 2010, it is expected to stabilized around US$ 55 per barrel.

2.3 Money Laundering, Financial Markets & the Real Estate

Money Laundering is generally characterized by the intensity of fluctuations affecting the price in financial markets and generation of illegal money and a facilitator breading terrorism in the long run. In a global financial environment of global imbalances, economic sluggishness/slowdown in Developed regions, Pension Problems, Un-employment on a rise the buoyancy in the Real Estate Market, The Capital Markets and the Bullion Market are a cause of concern and are required to be checked (Agarwal & Agarwal, 2008). Estimates arising from forecasts bases on regression lines and those of economic intelligence units indicate that globally Money Laundering amounts to more than US$ 2 trillion to US$ 2.5 trillion annually (i.e. about 5-6% of World GDP 2006 [44.444 trillion]) (Fabre, 2005; Agarwal and Agarwal, 2006), through formal channels. Our earlier estimates show that the money laundering magnitude with the banking sector along in 2004 was around US$ 500 billion to One Trillion (Agarwal and Agarwal, 2004). Money-laundering not only economically destabilizes an economy but also exposes it to terrorist attacks, threatening the integrity and sovereignty of the nations concerned. It conceals the huge, illegal profits generated by unscrupulous organized criminal groups in various fields of crime. Money laundering generally involves a series of multiple transactions used to disguise the source of financial assets so that these assets may be used without compromising the criminals who are seeking to use the funds.

The Real Estate has been one of the most common and the simplest means to launder money for over a century now. The last two decade (1995 onwards) has seen leaps and jumps in the real estate markets globally (Banker, 2005; Baker and Rosnick, 2005; Schneider, 2005; FCEN Report, 2006; The Economist, 2007) to the tune of over 300% increase in the real estate prices in prominent urban cities and about 100% as an average of the global economy in general. Is this rise in tune with a fundamental basis for the Real Estate price increase is a question to be asked. Also it is interesting to note that this steep rise in the Real Estate markets till the early 2008 has been coupled with a high degree of correlation with the sharp rise in capital markets, the bullion markets and the international flows globally particularly in the last 3 years.

2.4 US & the Foreign Policy

A 200 year old nation has not only provided the waive for modern financial system (since early 1900s), but has also emerged to be a world leader in structures, strictures and policy frameworks adopted by the World Economy and its global institutions. In the last 15 years post emergence of a single polar world, it is visible that the US role play extensively enhanced in global issues with deep interest in different country policies and alliance they adopted. This came as a resultant of the US growth in the post World War scenario, which got factored in by the services sector having an average contribution to over 70% of US-GDP through the re-building of Europe and War torne nations. The US policy framework had greatly shifted from domestic growth focus to foreign policy led growth (post 1970s) as an outcome of their role play getting inception with the Bretton Woods System (July 1944)

The emergence of the Global Financial Crisis having clear routes in US and the US President-Elect Obama coming in place, will foster needs for US to bring extensive re-structuring of their domestic economy, labour markets and financial architecture (Agarwal, 2008c). This can be also observed if we look at the electoral mandates and the addresses made by Barack Obama after election as President Elect. This would enlighten a strong life support the US ailing economic framework and give breathing space for Nations under extensive stress and/or purview by US, to develop their independent policies to induce growth and meet with the current Financial Turmoil, not having US as a parenting figure around them.

III. Post Crisis Development

The fiscal burden due to recession has gone to double and some countries to triple the value as against what they were in the beginning of 2008. Fiscal concerns were already troubling large number of Emerging Markets and developed nations since the mid of 1995 with the emergence of crisis / recessionary scenarios in different parts of continents.

Fiscal order in an economy is vital for Monetary economics to bring fruits from a healthy economic environment. There is excessive fiscal spending taking place in the last 3 years given the elections being done in various Nations bearing impact on financial and trade orientations in the World Economy. If we look at election periods in US, France, Russia, India, and almost all nations worldwide, we would find that the fiscal budgets and spending go steeply up crossing all charts for previous trends. Special packages and schemes are introduced to energise the environment and show growth in nations, not to mention the excessive spending on security of the electorates and the election procedures. These are seen as vital to establish confidence within the society; however these act as a major cost to the growth and development of the Nation’s socio-economic framework in establishing a sound financially equitable growth structure.

Some of the key measures suggested by us at various forums of the Italian Parliament, Finland Parliament, OECD Forums, Global Forum Sweden, ADB Forums and international agency to induce growth and reduce the impact of Global Financial Turmoil at conferences addressed since 2006 have been

1. Employment Growth and Economic Development Model (see Appendix A3.1)
2. Setting in Fiscal Discipline & re-orienting role of IMF (see Appendix A3.2)
3. World Energy Fund : Sustainable Environment and Development (see Appendix A3.3)
4. Restructuring Pension Systems and Societal Setups (see Appendix A3.4)
5. European Fiscal Policy Board : To avoid De-stablization within Europe due to inflationary pressures (see Appendix A3.5)
6. Restructuring of IMF (see Appendix A3.6)
7. Private Sector Initiative: Replicating India’s Chit Fund Concept in Banking & FI Industry (see Appendix A3.7)
8. Re-energizing multi-lateral trade agreements (WTO) along with bi-lateral FTAs (see Appendix A3.8)
9. Re-focus on Organic Agriculture (see Appendix A3.9)

In the “Uzbek Model”, Uzbekistan needs to inculcate some of the following institutional measures to further strengthen the socio-economic-financial framework and harness the growth potential it has for sustained economic growth of over 8% for the next decade

- Introduce Rolling 5 Year Plan for sustaining macroeconomic stability and for managing vulnerability to shocks.
- Boosting Agricultural Productivity (Agarwal, 2009; WB, 2010)
- Improving Business Climate. (WB, 2010)
- Responsive social service delivery systems that reach the poor as done through the Tunisia Solidarity Fund[1](Agarwal, 2007, 2009)
- Improving Accountability and Transparency. (WB, 2010)
- Improving Regional Cooperation within Asia (i.e Central Asian, South Asia and East Asia) (Agarwal, Agarwal & Agarwal, 2006)

Conclusion

We feel that regaining lost glory of mutual respect in jointly shouldering towards a peace loving harmonious growing global society is the demand of the hour. While addressing various Parliamentary, Governmental and International Agency forums we have stressed on better ties between India, Uzbekistan and the global village. We have also stressed on the need to address some of the key issues before synerysing ties to improve confidence, maintaining positive outlook and realign political will for developing a progressive inter-regional focus for business, trade and societal interactions.

The efforts by central banks, regulatory bodies, governments and international agencies around the world to increase the availability of liquidity have contributed to tentative improvements in credit market functioning. However, the continuing volatility of markets and recent indicators of economic performance confirm that challenges remain. US needs to undertake major hard steps to rectify its financial turmoil, which has accumulated for over 2 decades and is having spill-over effects building costs for other nations (Agarwal & Agarwal, 2001; Agarwal, 2007). Hence policymakers need to monitor developments closely, and stand ready to take additional hard steps should conditions warrant. We feel that close working relationships between central banks, governments, international agencies and the academic world considering World Economy as a single entity and rising above country specific selfish interests can help build a Sustainable Financial World tomorrow.

Financial literacy has become a more frequently discussed topic, particularly in the United States (Fromlet, 2008). The in-appropriate use of Derivatives and the Global Financial Turmoil supports the view that Financial literacy amongst the households, corporate and policy makers has not been appropriate. Hence there is further need to have an increased focus on financial literacy which must be regarded as a logical development, since conditions for understanding financial markets have changed quite dramatically in the age of accelerating globalization (Fromlet, 2008 ; Agarwal, 2008b). Fromlet's survey findings also indicate that markedly better financial literacy has the capacity to improve macroeconomic growth on three grounds. The first is related to modern growth theory and the positive impact of investment in human capital on GDP. The second comes via an improved balance between savings and consumption. The third comes via avoiding bubbles and financial exuberance as a consequence of clearly increased financial literacy, a positive contribution to economic growth.

The World Economy is moving towards a new economic order. With the strong presence of US, Europe, Russia, China and India as key role players in the global economic framework, we may see a re-emergence of a multi-polar economic globe. The difference this time will be that each of these nations will have their edges different from the others. This is unlike the time when it was a bi-polar world with US and Russia being at the helm of affairs based on military might. What seems to be

Emerging as edges within these nations is US for its high-end technology & military structures, Europe for its financial strengths; Russia for natural resource extraction and military structures; China as a production hub and India as a Market. This would distribute the production centers, the market centers, the financial centers, the military structures to different regions within the World Economy. If we are really looking at building a stable and growth oriented future for Nation's in the global village, then we need to free ourselves of barriers and allow the market mechanism to freely flow and be part of this large society.

The Uzbek Model of Economic Development has been a reform process for the nation's

[1] The fund created based on the concept to meet needs of employment, poverty reduction and increase in education (a) In 1997, Tunisian Solidarity Bank (for micro-credit finances for education and SMEs) ; (b) In 1999, National Employment Fund (21-21 Fund).

economic stabilization. Several phases of this process brought about miraculous effect in Uzbekistan's economy. The main objective of the model has been to create conscious instrument for purposeful economic development of Uzbekistan. The GNP growth, wages and the potential resources and sources of economic growth like investment, fuel, financial, energy, crediting, material resource were the initial areas this model stressed on. Further the aspects related to price, currency, fiscal money and foreign economic policies were also added. The industrial and agricultural sectors are given equal importance for the developmental programmes. The government-led industralization and import substitution programs have induced growth with a focus on utilization of (a) cash crops and natural resources (including energy and non-ferrous metals) and (b) public capital investment. This has contributed to the economies success in mitigating and reversing the output decline post independence since 1991 (Zettelmeyer, 1998).

We would like to lay stress again, that we first and foremost need to take care of the social security facilities/non-conforming systems existing in the economy towards the fulfillment and maintenance of the Senior Citizen's Dignity, Environment and a Social equilibrium in the society if we truly want to build Nations' future.

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Appendix A3.1 Employment Growth and Economic Development Model

Economic growth is extensively dependent on Employment growth. Many developed economics have shifted these resources to only one segment namely Services. The GDP contribution of services sector is between 60-80% for most developed economies in the last 3 decades. It is important that there is homogenous distribution of other sectors – agriculture and industry to contribute and have sustainable economic growth. This is despite the fact that corporations see economically benefiting externalities in economic havens, low cost economic zones and developing regions of the world. It is important that the government steps in to create avenues for domestic and foreign participants contribute in the growth of the three sectors to have homogenous contribution to the GDP with small year-on-year variations. Some of the Growth Key Model's are

a. Chanakya / Kautilya (4th Century BC)
b. Agarwal (1974, 1988) - Goal Program Model for decisions under Risk and Uncertainity
c. Agarwal and Agarwal (2005) - Inflation, Savings and Financial Development
d. Agarwal, Agarwal & Solojentsev (2008) - Human Resource Capacity Building Model in Venture Capital
e. Ilyina and Samaniego (2009) – Multi-Industry Model for Growth with Financing Constraints

Venturing and adapting economic systems to fast changing market orientations in troubled times in different regions of the world have been observed to play critical role in inducing economic growth and boasting employment. Agarwal (1974, 1988) Goal Program Model for decisions under Risk and Uncertainity and Agarwal, Agarwal & Solojentsev (2008) Human Resource Capacity Building Model in Venture Capital funded ventures provide solution to enable organizations adapt to fast changing environments. The genesis of modern venture capital in existing literature is traced to the activity of Spanish Queen Isabella of Spain who sponsored the voyage of Christopher Columbus. DuPont (1919) is regarded as the first modern day venture. DuPont purchased thirty eight percent of equity interest in General Motors. IBM was established in 1924 by a group of wealthy individuals by merging a few smaller companies. Ralph Flanders, president of Federal Reserve Bank of Boston proposed creation of fiduciary funds which would enable institutional investors to invest five percent of their assets in equity of new ventures. Xerox Corporation is an excellent example of corporate venture finance whereby Haloid Corporation invested in the technology developed by Chester Carlson and Battelle Memorial Institute. The first venture capital firm in California – Draper, Gaither and Anderson was founded in 1958 and led to development of formal venture capital firm in Silicon Valley and San Francisco (Florida and Kenney, 1988).

In India, Chankaya (350-283 BCE) a Professor at Takshashila University on being thrown out by the Nanda King ventures in to make a boy wandering in the streets the first Maurayan Emperor Chandragupta. Chandragupta Maurya (340 BC - 298 BC) reign is remembered for defeating Alexander's Macedonian Satrapies, Nanda Empire and Seleucus and for unifying India. The period of Mauryan Empire (322 BC - 185 BC) is regarded as the Golden Age in Indian History with trading done in Silver Panas. Taksha, an ancient Indian king ventured into creating a centre of advanced learning called Takshashila (5th century BC) for teaching of Vedas and advanced knowledge in eighteen arts including archery, hunting, elephant lore, law, medicine and military science. The Nalanda University (1197BC-527 BC) was the first university to be setup in the world housed over 10,000 students and over 2,000 teachers on the campus. The Nalanda University attracted students and scholars from all across the globe in a period when global information flow and transportation was negligible. The idea of Pandit Madan Mohan Malaviya to set up a Hindu University which will spread oriental learning and theology contributed to the development of the prestigious Banaras Hindu University (1915), a centre of excellence even today. Kashi Naresh and Sri Rameshwar Singh Bahadur, Maharaja of Darbhanga funded this venture. In agriculture the share cropping institution (in which input costs and output revenues are shared by cultivator and land owner) of land tenancy lead to development of entrepreneurship in Indian farmers. Share cropping form of land tenancy promoted farming in a number of non conventional items including tobacco. Most of the MBA's offered do not focus on a number of financial issues which have attained vitality post 1985 with organization failures due to poor management and understanding of Finance. There exists an over-emphasis on other streams of management which were on the peaks of organizational success in the 1950 to 1980s leading them to create general MBAs with specialization in only one semester having two to four papers in specific management discipline. Indian Institute of Finance recognising this need pioneered business finance education in India in 1987.

Table 1 Genesis of Select few Key Venture Finance Projects

The current research traces the genesis of Venture Finance in India to fifty century BCE Classical Venture Finance, which can be traced to development of Nalanda University, Takshashila, Mauryan Empire and in recent times to Biocon and VLCC. Corporate Venture Finance can be traced to emergence of Alexandra Cotton Mill, Benaras Hindu University, Yarn and Jute Mill of Goenka, Lijjat Papad, Infosys and Kshema Technologies. Institutional Venture finance started in late 1980s with the development of TDICI in 1988.

Year	Venture	Venture Finance Provider / Contributor	Country
527	Nalanda University (527BC to 1197)	Kumaragupta	India
518	Takshashila	King Taksha	India
350	Chandragupta Mauryan Empire (350-283	Chankaya (Kautilya)	India
1492	Christopher Columbus expedition (Colonization)	Isabella, Queen of Spain	Spain
1869	Alexandra Cotton Mill	Jamsetji TATA	India
1906	Xerox	Haloid Corporation	US
1908	General Motors	DuPont (VF in 1920)	US
1915	Banaras Hindu University (Oriental learning and Theology)	Kashi Naresh and Sri RS Bahadur, Maharaja of Darbhanga	India
1919	Yarn and Jute Mill	Ramnath Goenka	India
1924	IBM (Punched Card)	TMC (1896), CSC(1891) and ITRC (1900) merged	US
1926	Bajaj motors (Motor Vehicles)	Seth Bachhraj	India
1938	Eastern Airlines and Douglas Airlines	Laurance Rockerfeller funded Venrock	US
1946	Amul	Gujarat Co-operative Milk Marketing Federation Ltd.	India
1950	Share cropping farming institution (Tobacco)	Landlords and farmers	India
1957	Digital Equipment Corp. (now HP)	Georges Doriot, Ralph Flanders and Karl Compton/ ARDC	US
1959	Fairchild Semiconductor (Practical integrated circuit)	Laurance Rockefeller funded Venrock	US
1959	Lijjat Papad	Shri Mahila Griha Udyod	India
1960	Florida Foods Corporation (Nutritional one minute juice)	J.H. Whitney and Company	US
1962	Reliance Commercial Corp.	Dirubhai Ambani	India
1968	Intel (X86 Microprocessors)	Robert Noyce and Gordon Moore	US
1977	Oracle (Database software)	Larry Ellison, Bob Miner & Ed Oates	US
1978	Microsoft, DOS (Disk Operating System)	Bill Gates and Paul Allen	US

Year	Venture	Venture Finance Provider / Contributor	Country
1978	Biocon	Biocon Biochemical Ltd. (Ireland) and Kiran Mazumdar Shaw	India
1981	Infosys	Sudha Murthy	India
1984	Cisco (Router)	Len Bosack and Sandy Lerner	US
1987	Business Finance Education in India	Indian Institute of Finance	India
1987	3i Group	Bank of England	UK
1989	VLCC	Vandana Luthur and family	India
1992	MASTEK	ICICI and UTI promoted TDICI	India
1994	Amazon.com (Online Book store)	Jeffrey P. Bezos	US
1994	Yahoo (Search Engine)	Sequoia Capital	US
1996	Hotmail (Free Webmail service)	Draper Fisher Jurvetson	US
1997	Kshema Technologies (Customised IT Services)	Anant Koppar	India

Source: Self Formulated from Historical Archives, Encyclopaedias & Wikipedia

3.1 Modelling Human Resource Capacity Building in Venture Capital funded ventures

3.1.1Human Resource Capacity Building Model

The production function in any firm requires two critical inputs i.e. Capital and Labour. In a venture capital funded venture, human capability augmentation takes place at one end with capital provider and on the other hand with the capital receiver. Labour in a venture capital firm includes both office and administrative staff and floor level workers. As in the consumer theory the objective of a firm is to maximise output represented by

Maximise F (K, L) (4.1)

Where K is capital and L is labour

Subject to the cost constraint $wL + rk = C_0$ (4.2)

For cost minimisation the necessary condition includes that the marginal products of all production inputs must be equal when these marginal products are adjusted by the unit cost of each input i.e.

$MP_L/w = MP_K/r$ (4.3)

So to minimise the cost and for achieving the results as represented by equation 4.3 both the capital provider and receiver must ensure that human capabilities are engaged in a manner that provides the maximum output to an economy

As per the linear programming format of the Stochastic Goal Programming Model (Agarwal, 1976) a firm will try to

Minimise $C = (P_i d_i^+ + P_i d_i^-)$ (4.4)

Subject to $ax_i + u_i x_i + d_i^- - d_i^+ = b_i$ (4.5)

$x_i, d_i^-, d_i^+ > 0$ (4.6)

where P_i refers to priority coefficients, $d_i^{+/-}$ refer to positive and negative deviational variables, u_i is a random variable which is normally distributed with mean zero and variance-covariance matrix ∑, "a" is a matrix of fixed coefficient representing row vector, x_i are the column vector and b_i is a function of all the goals i.e. Given that a venture capital firm receiver and provider desire to achieve particular goals ($x_1, x_2,$, x_n) then $b_i = f(x_1, x_2, \ldots, x_n)$

Now by using equation 4.1 to 4.6 for Human resource capacity building a priority based model is proposed. The extent to which human personnel are employed depend on the priority the venture capital provider and receiver pay to each of the below mentioned variables. Therefore a priority based model for the pre investment phase is as follows.

3.1.2 Pre Investment Human Resource Capacity building Model

Schumpeter (1942); Baumol (1968); Leibenstein (1968); Tyebjee and Bruno (1984); Drucker (1985); Kirzner (1985); MacMillan; Zemann and Narasimha (1987); Rumelt (1987); and Teece (1987) have elaborated on the functions of an entrepreneur and how his functionality is different from that of a manager. However, there exists very little empirical evidence on how does an entrepreneur lead to human resource augmentation in a new venture. With increasing large scale retrenchment in the light of global financial crisis of 2008 it is important how does an entrepreneur can involve such retrenched staff and help tackle increasing unemployment and contribute to growth in the real sector. Entrepreneur has been kept as the alpha coefficient in our model because of the ability to combine tangible and intangible resources in novel fashion (Kirzner, 1973) and can specialise in development of new business activities (MacMillan, Kulow and Khoylian, 1989). Akerlof (1970) discussed the Information asymmetry problem in the used car market. In venture finance information asymmetry also arises between the entrepreneur and the VC firm. The entrepreneur is reluctant to share the entire details of the project with the finance provider and the investor in a new venture tries to know more and more about the venture. This contributes further in hiring of more individuals to prevent adverse selection by the fund provider. During the pre investment phase human resource has to be employed by the venture capital provider for accepting, screening, negotiating, drafting and signing on the contract. The entrepreneur has to employ human personnel that can help in preparation of proposal

$$\text{Maximise } HRCB_1 = \alpha + P_1^{+/-} DPS + P_2^{+/-} DAS + P_3^{+/-} DSS + P_4^{+/-} DNS + P_5^{+/-} DM \quad (4.7)$$

where, α = Entrepreneur and/ or innovator

DPS[1] = Deal proposing staff

DAS [2] = Deal accepting staff processing both solicited and unsolicited proposals

DSS[3] = Deal screening staff undertaking technical and economic feasibility of the venture

DNS[4] = Deal negotiating staff

DM[5] = Deal makers who may or may not form the board of the new venture

3.1.3 Post Investment Human Resource Capacity building Model

$$\text{Maximise } HRCB_{1+} = P_6^{+/-} PDS + P_7^{+/-} \text{-} LS + P_8^{+/-} MS1 + P_9^{+/-} \text{-} MS_2 + P_{10}^{+/-} \text{-} RS + P_{11}^{+/-} \text{-} OS + P_{12}^{+/-} ES + P_{13}^{+/-} FS + P_{14}^{+/-} \text{-} PIMS + P_{15}^{+/-} \text{-} SDMS + P_{16}^{+/} HHS + P_{17}^{+/-} LS + P_{18}^{+/-} CCS + P_{19}^{+/-} SLS + P_{20}^{+/-} \text{-} EDS \quad (4.8)$$

where, PDS = Product/service development staff

LS[6] = Labour for manufacturing the product or employees for providing service

MS 1 = Managerial Staff supervising the line function

MS_2 = Marketing staff commercialising the new product/service

RS = Research staff reviewing the product/service (including receptiveness in the market) and
suggesting changes for further development

OS = Operational staff taking both order and sales

ES = Evaluation staff (ensuring quality and cost control)

FS[7] = Finance staff (managing the future liquidity requirements of the venture)

PIMS[8] = Post investment monitoring staff of the venture capitalist

SDMS[9] = Strategic decision making staff may serve on the board of the new ventures

HHS[10] = Head Hunting staff

LS = Legal services staff taking care of patents

CCS = Customer care staff

SLS = Supplier liaison staff

EDS[11] = Exit determining staff of the venture capitalist

Equation 4.7 and 4.8 may be solved a linear regression equation or as a Linear Programming problem with equation 4.3 as the constraint. The aggregate effect of venture financing on employment growth may be seen by drawing an analogy with the Keynesian Multiplier. The total Human Resource capacity building will be much larger than what is purported by equation 4.7 and 4.8. This is because each factor outlined in equation 4.7 and equation 4.8 may hire other individuals for fulfilling their

[1] Tyebjee and Bruno (1984)
[2] Tyebjee and Bruno (1984)
[3] Tyebjee and Bruno (1984)
[4] Tyebjee and Bruno (1984)
[5] Tyebjee and Bruno (1984) ; Gompers (1997)
[6] Kortum and Lerner (2000) ; Ljungqvist and Lu (2004)
[7] Bygrave, Hay, Ng and Reynolds (2003)
[8] Maula (2005)
[9] Gompers and Lerner (2001)
[10] Gompers and Lerner (1999) ; Hochberg, Ljungqvist and Lu (2004)
[11] Zahra, Yavuz and Ucbasaran (2006)

responsibilities effectively. Hence, to understand the aggregate effect on the economy the total Human resource capacity building is given by

$$AHRCB = 1/1- b_H Ap \qquad (4.9)$$

Where, p represents the entire set of twenty factors mentioned in equation 4.7 and equation 4.8. b_H is representing marginal propensity to hire.

3.1.4 Employment Market Equilibrium Model

The pre and post Human Resource Capacity Building (HRCB) investment model can be extended to *k* factors using the Employment Market Equilibrium Model, which is represented as

$$<D = a + P_{1,1}^{+/-} p_1 \ldots\ldots + P_{i,k}^{+/-} p_k + G_i \qquad (4.10)$$

$$N$$

$$\wedge P i,k + /-$$

Subject to $* = 1 \qquad = 1$

$$0 < P_{ik}^{+/-} < 1 \qquad i = 1,2,\ldots., N$$

where, <D is the equilibrium level of employment, p represents the factors mentioned in equation 4.7 and 4.8 and G_i is the random or unexplained employment augmentation with $E(G_i) = 0$.

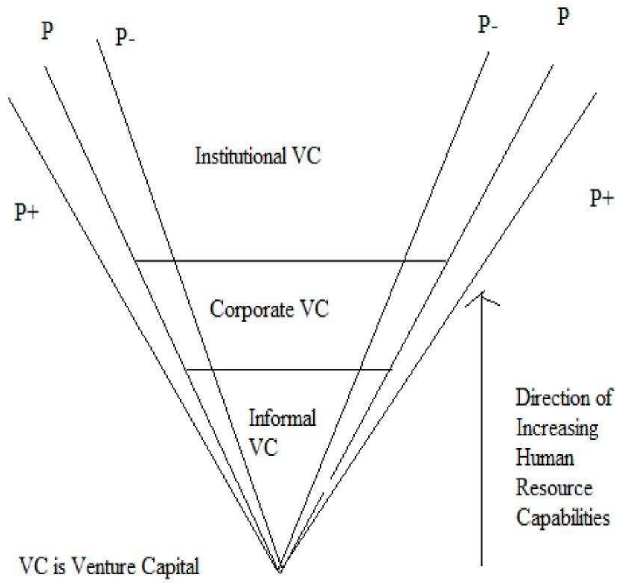
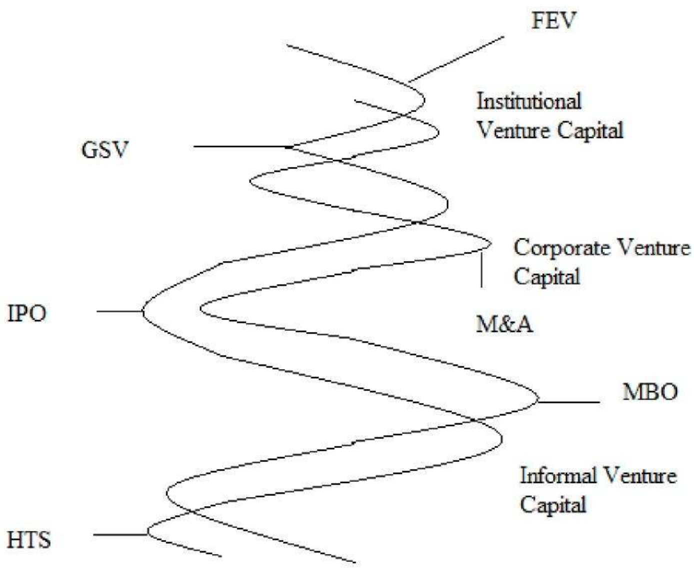


Figure 1 Micro-Economic Perspective of the Human Resource Augmentation at firm level

The Figure 1 below explains the total human resource augmentation for a new venture. An informal Venture Capital (VC) includes a wealthy individual or a business angel, corporate VC may use the services of a larger number of individuals forming part of the corporate structure and in case of an institutional VC a larger set of individuals forming part of the pension funds or insurance companies or other financial institution may employ a much larger set of individuals for searching and financing profitable ventures.



Note: HTS = Hostile Takeovers Staff
MBO = Management Buyout
P = Purchase of stake by Public by Initial Public Offer (IPO)
M&A = Mergers and Acquisitions
GSV = Government Supported ventures
FEV = financially engineered ventures

Figure 2 Macro-Economic Perspective of the Human Resource Augmentation Spiral at international level

The above Figure 2 depicts the evolution of Human Resource capacity building in a venture financed firms that has taken the shape of a spiral. Informal Venture Capital (VC) being the oldest has the largest number of individuals hired. The number of firms going for informal VC is the highest. Also, the processing activity in an informal VC is least cumbersome and time consuming. Informal VC further added to development of specially hired individuals who are constantly looking for opportunities of Hostile takeover. The conflict between the entrepreneur and the venture capitalist lead to management buyout (MBO). For undertaking MBO especially skilled managers were hired by the entrepreneur. With a need for a more formalised structure of venture capitalism, corporate venture capitalism developed. This form of venture capitalism augmented hiring of staff which could assist in undertaking Initial Public Offer (IPO) and Mergers and Acquisitions (M&A). With lesser number of firms financed by Corporate VC the human resource base for corporate VC is smaller than that of Informal VC. With government taking note of the contribution of venture capital funded firms helped developing Institutional VC firms. This further promoted the growth of a new profession of financial engineers who would develop new financial instruments, processes and help in solving problems in finance by either restructuring or undertaking risk management. The spread of the spiral shows the total contribution to Human resource capacity building.

3.1.5 Assumptions of the VC-HRCB Model

The model is an abstraction of the real world for employment capacity building and is based on some assumptions.

The assumptions have been included to make the model more tractable from mathematical point of view. The HRCB

Model assumptions are as follows

Assumption 1: Firm will try to maximise marginal productivity of all employed factors.
Assumption 2: Venture Capitalists and individuals employed in new ventures are rational.
Assumption 3: Entrepreneur / Innovator are necessary for all new ventures.
Assumption 4: Employment markets are competitive i.e. employment market is in equilibrium.
Assumption 5: The model is applicable for one period time horizon. The results will be affected

by a different assumption as regards time period.

Assumption 6: There exists an employment exchange market for hiring of skilled individuals i.e. there is no constraints as regards the availability of employees with a particular skill set.

Assumption 7: Firms hire and retrench employees during the lifetime of the firm.

Assumption 8: The supply of entrepreneurs is limited in the economy.

The assumption 5 can be relaxed by adopting a dynamic modelling approach.

3.1.6 Limitations of the VC-HRCB Model

The following limitations have been observed in the Model

1. Testing the model for short periods may not give suitable results.
2. The model assumes static relationship which may be dynamic.
3. The model believes that the employment capacity building is a simple structural form because it is mathematically tractable.
4. The model does not the find the covariance among mentioned factors i.e. how does one factor affect employment augmentation in other factor.
5. Enormous data requirement limits the use of the model (as each regression for finding priority coefficient will require 21 inputs).
6. Unidentified factors contributing to HRCB may still remain.

3.1.7 Life Cycle Hypothesis for a Venture Capital provider and Innovator/Entrepreneur

Life Cycle Hypothesis states that a venture capital provider will invest in a venture and continue to stay with it till it is successful and then exit for profits. An entrepreneur in a VC funded enterprise continues to either stays with the successful venture or undertakes an exit for profits. After exiting the successful venture the entrepreneur either becomes an Angel Investor promoting innovation based ventures or starts a new innovative venture along with venture finance providers. (see Figure 3).

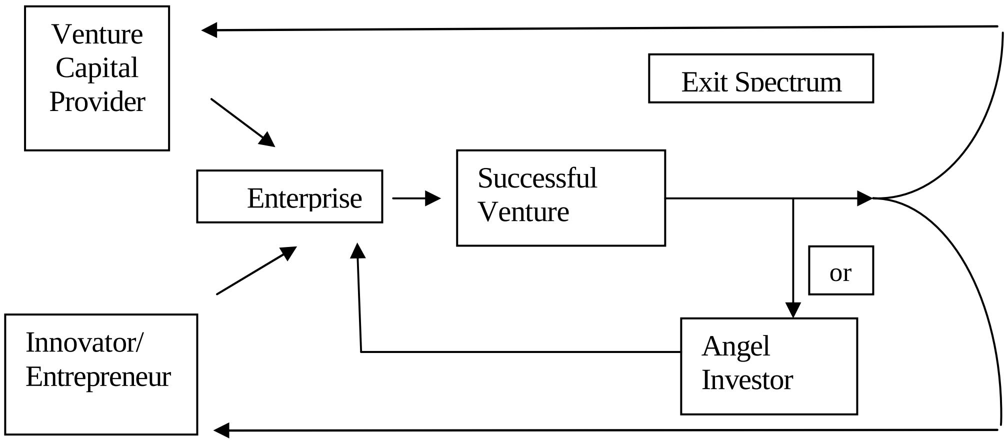


Figure 3 Life Cycle Hypothesis for a Venture Capitalists, Innovator and Entrepreneur

The hypothesis has been observed for a number of successful entrepreneurs including Jamsetji TATA (India), Ramnath Goenka (India), Anant Koppar (India), Gurbaksh Chahal (US), Sabeer Bhatia (US) and Sunil Bharti Mittal (India). They entered new ventures with support from business angels and later exited for profits. Their super ambitious genes prompted them to start new venture again and later exit for enormous profits. Such entrepreneurs either continue to remain in the cycle or exit it by becoming angel investors themselves. For example, in 1869 Jamsetji TATA converted a bankrupt oil mill in Chinchpokli into a profit earning cotton mill called Alexandra mill. He exited the business after two years to fulfil his dreams in the areas of iron and steel, education and power. Ramnath Goenka in 1919 ventured into trading of yarn and jute and later exited to establish Indian Express in 1936. In 1960 Ranjit Singh and Gurbux Singh who were employees in a Japanese pharmaceutical company ventured into forming Ranbaxy by borrowing a large amount of money from Bhai Mohan Singh. In fact, the name Ranbaxy is formed by merging the names of the two entrepreneurs. This Pharmaceutical business was later acquired by the financier Bhai Mohan Singh when both Ranjit and Gurbux could not pay their dues. Recently, the present CEO Malvinder Mohan Singh exited this profitable venture by selling the promoter's stake of 34.82% to Japanese pharmaceutical company Daiichi Sankyo (www.livemint.com).Anant Koppar (1997) established Kshema Technologies as a software service industry for Industrial automation, healthcare, life sciences and mobile telephony. It was acquired by Mphaisis in a stock-cum-cash deal. Sunil Bharti Mittal started to make crankshafts for local bicycle with money borrowed from his father. Mr. Mittal later exited to create successful ventures like manufacture of push button telephones and now Airtel. Bharti group has also ventured with Rothschild family for fruit and vegetable processing and exports. Gurbaksh Chahal (US) made his way from rags to riches as he earned US$ 3,00,000 a month from Internet advertising company he founded at his home. He exited in his first venture (Click Agent) in 2000 by selling it for US$ 40 million. His second venture, Blue Lithium was bought by Yahoo for US$ 300 million. Now the young entrepreneur is planning a new venture of developing a reality TV show in India. Sabeer Bhatia (US) venture provided free email service and tried to earn revenue by advertising on website. Later, Draper Fisher Ventures (DFV) invested US$ 3,00,000 in this project in 1996. DFV later exited by selling it to Microsoft for US$ 400 million. Mr. Bhatia is also regarded as an angel investor for NeoAccel.

Appendix A3.3 Sustainable Environment and Development

Changing Climate is raising alarms towards the usage of Energy and attainment of Sustainable Development globally. It is difficult to comprehend as to the certainty of how technological possibility will play out in the future to provide a balance for the need for survival vis-à-vis embracing the environmental concerns. Given the attention attained by the need for energy and the impact of climate change due to pollution, one can say with assurance that developments in energy markets will remain central in determining the longer-run health of national economy and societies. The experience of the later half of the last century affirms that market forces play a key role in conserving scarce energy resources and directing those resources to their most highly valued use. The productive capacity of the future can no longer be based on market forces alone. They would have to consider the cost to the society and the future, which would enforce the creation of Green Energy and their productive use for sustainable development. Hence energy and climate change issues present policymakers and citizens with difficult decisions and tradeoffs to be made outside the market process.

Effects of a changing climate are widely observable with the temperatures and sea levels on a steep rise with melting of ice and snow covers (Fralkenmark, 2007). The consequences could be catastrophic for the natural world and society. A large number of scientific studies indicate that due to the release of green house gases (such as carbon dioxide and methane) and wars, the impact on atmosphere by human activity post 1920 has been the primary cause of the drastic climatic change. One cannot do away with the effect of war situations and bombings done in the last 2 decades contributing to temperature variations, seismic disc movements and ozone depletion. Increase in Air-traffic and Airplanes travel at very high altitudes has also impacted on global warming. IATA predicts another 500 million passengers will take to the skies by 2010, with jet aircraft emitting 23 kg of CO2 per 100 passenger per km, raising the risk to nature and mankind. Not only is the CO2 emission a problem but also the Nitrogen dioxide from airline engines leads to formation of ozone leading to creation of cirrus clouds enhancing green-house effect contributing to global warming. In Europe it-self it is estimated that emissions from air travel increased by 73% between 1990 and 2003 (Philip, 2007). We need to secure a profound change in the way we generate and use energy, and in other activities that release these gases.

The unprecedented combination of climate change and associated disturbances like flooding, droughts, wildfires, insects and other drivers like land use change, pollution and over-exploitation of resources would lead to shift in agriculture productivity and economic growth globally. Even though agriculture is one of the smallest percentage contributors to the GDP pie, it holds the prime place in the Growth chart of nations. Moving to Green Technology for energy needs globally at the earliest possible is the only given solution to this complex problem. It is also important to note that Green Technology (based on renewable sources) is not only cheaper but also more labour intensive (both skilled and un-skilled) in the long run than the non-renewable sources of energies in use. We believe that this would enhance the employment and reduce the tense atmosphere due to Un-Employment & Aging Population as well (especially in the Developed regions of the World). The Nobel Peace Prize 2007 to IPCC; the Al Gore's initiatives; The Global Forum 2007; The OECD Forum 2008 and the SIWI's Water Awards every year for last three years have sent very powerful messages to the global community on the climate change and appropriate water management for developing an appropriate balance between a healthy ecosystem and sustainable growth.

4.1 Finland and Nordic Initiative

Finland, Sweden, and other parts of the Nordic Region are endowed with large terrains of Green belts (with forests land coverage being over over 85% in Finland, over 70% in Norway and over 50% in Sweden). The environment friendly parliamentary view and stagnant population in the region have enabled maintain the rich Green heritage. It is commendable to see the Nordic commitment towards environment, which is clearly visible from the decision to do away with the fossil fuels from the energy mix by 2020 through introduction of referendum since 1980 beginning with Sweden to move away from Nuclear Energy. This is despite the fact that Nordic's electricity consumption has been rising and it has one of the world's highest individual levels of energy consumption of about 18,000 kWh/head. Today, just under 50% of domestic energy production in Nordic region is based on nuclear, about 40% on hydro and 8% via fossil fuels. The Nordic Region introduced nuclear energy into it's energy mix in 1965 to substitute fossil fuels. The moves towards Green Energy in the 1970s and towards Green Renewable Energy now by the Nordic countries are both because of ecological and economics reasons (i.e. due to Oil shocks of the 1970s and those posed 2004 onwards).

4.2 India Initiative

India is in need for huge energy requirements for sustaining the growth induced with increased trade, commerce and international presence in the country. Currently India's energy mix is a combination of hydro-power, bio-energy (wind, bio-gas, bio-diesel and others), solar, coal and nuclear energy. As far as economics of operations for energy creation and distribution are concerned, India have proved that it competes equally with the best, be it in the production of nuclear power , heavy water, bio-energy or nuclear fuel.

It is also interesting to note that 31% of India's primary energy comes from bio-energy that include agricultural and forest waste, wood chips, animal waste and bio-fuels. In India, Bio energy (non-commercial) is second only to coal, which accounts for just over a third of India's primary energy mix. Estimates show that about 70% of India's domestic energy need is met by bio energy. It is expected that 25 years from today taking the bio-fuels and renewable sources of energy, the share of non-conventional energy in our energy mix is expected to be 12-15% in the very least. Bio-energy's potential over the next 25 years, is about 2.5 times the combined potential of hydro, wind and nuclear. It is estimated that 60 million hectares for energy plantations, commercially grown bio-energy could yield 29-35% of India's primary energy requirements even 25 years from now. Inclusive of non-commercial bio energy, the share could be 39-45% (Sethi, 2007).

Apart from Bio-energy, India also enjoys being a Solar rich receipt. Scientific calculations show that about 7-8 million hectares under solar cells could give India energy independence even 25 years from now. From a forest conservations perspective, 2.25 million hectares under solar cells with 15% conversion efficiency could yield the same energy as 60 million hectares of wood plantations would yield.

To enable make the reach of Solar and Bio-Energy to the larges, the governments would have to promote and develop schemes to involve industries and government projects. One of the clear ways is to grant the request of the Industry for approving the R&D outlays as deduction from taxes due and that this fiscal incentive be made tradable. Also all the bio-fuels or bio-chemicals should be subjected to a very low tax or be exempt from taxes that are imposed on fossil fuels or fossil based chemicals to involve the SMEs and large industries to move towards Clean Renewable Energy sources.

4.3 World Energy Fund

The concerns and debates in the last five years on Energy and Climate change need to be addressed. It is vital that international agencies like the UN, IEA and World Bank take steps to give directions to nations and international society for developing means for appropriate actions to curb environment pollution providing for sustainable sources for development and growth globally.

Based on the concept of the UNs World Solidarity Fund, so created in December 2002 on the suggestion of Tunisian President Ben Ali (in December 2000 at UN Forum), we would like to propose the creation of a World Energy Fund to meet the needs and smooth transmission for change over to Clean Energy by industries globally.

The World Energy Fund may function by engaging in

- ♦ focus through
  - Purchase of Technology Patents for Clean/Green Energy to enable cheaper industrial usage by the industries globally (especially in developing regions of the World)
  - Promote Bio-Energy Sources (Bio-Diesel / Bio-Gas) and Solar Energy for Household energy consumption needs.
  - Governments to move forward than just Kyoto Protocol to sponsor or further projects which are based on Green Energy Sources for their Future Power needs.
  - Green Fuels to be Tax Free for a period of 5-10 years.
  - develop capital market financing energy products to finance Green Technology.
- ♦ finance the Fund through
  - Seeking donations (organization, international agencies & governments)
  - Introduce Pollution Tax (country/sector basis)
  - Fee from Use of Patents (purchased)
  - Environment Tourism (In Sweden over 3 million Sweds have visited Swedish Nuclear Plants (HT-Reuters, 2007))

The global world and economies are faced with challenges to counter climate change, energy and sustainable development. Though it is the responsibility of every citizen of the global world to fight against such environmental socially-ill, however the duty primarily rests on the shoulders of governance bodies and international agencies to play a proactive role in clearing the menace and providing directions to industry. With the changing structure of world investment, trade, capital flow and the need for deeper integration, strengthening regulatory framework and signaling system is greater. Globalization has altered the economic frameworks of both developed and developing nations in ways that are difficult to comprehend. Also the emergence of unregulated global markets appears to have moved towards a more stable and growth oriented economic globe. What is needed today is to develop sensitivity sensor systems to promote green technology within the financial framework as an integrated approach to keep markets from busting and causing socio-economic environmental panics. Faced with these uncertainties, it is especially important that policymakers undertake the required policy adjustments for a sustained global expansion. As well, supervisory and regulatory authorities need to continue to strengthen energy financial market infrastructure to underpin the resilience of the ecosystem towards sustained development and clean tomorrow.

Appendix A3.4 Restructuring Pension Systems and Societal Setups

Financing life has been the issue for ages. One desires and dreams of a comfortable flourishing life for their family and to have a better standard of living. This is normally the underlying for all financial planning of the future. We find that demographic, social, economic and political changes in recent times have stimulated the political and academic debate about how to provide and pay for the care of masses and the older generation in particular. This has been a rising concern for almost all developed nations and the emerging economies with an extreme shift in proportion of older generation within the demographic setup. India fortunately is blessed to be a young nation with over 60% population young and below 40 years of age. Increased public awareness of means-testing for care and consequent asset loss has also increased globally and in India. This has pushed the issue up the economic socio agendas. However, evidence about what people think requires an appropriate balance of responsibility between the individual and the state, for meeting future needs. It has been found that there has been increased use of personal financial resources to secure later part of one's life and in establishing how these vary with personal and socio-economic circumstances in the given nourishing environment. The state needs to see that there is an appropriate mix of personal and state resources in place to enable develop a self-financed market oriented financing product and service.

Time has seen systems emerge from self sustaining traditional cyclic to governmental social security systems and the private pension funds. The global village has addressed the ups and downs in these systems over their evolution in the last century. The self sustaining traditional cyclic system seems to have prevailed over the rest, given the test of time. You may be wondering what I mean when I say the "self sustaining traditional cyclic system". I am again coming back the personal financial resource management mechanism. It is a medium via which the parents invest in their children to enable them serve as social security for them in old age and further develop a secure future for their children. This is a never lasting cycle, which is a success by far. The western societies, both American and the European, have been trying to explore the mystery of this age old *Bhartiye* culture and civilization (aging over 8000 years). These young societies though economically sound have not been able to evolve a self-sustained economically balanced social security. Hence, they have not only tried to understand but also adopt many of our traditional systems of life, as is evident from their shift of belief, values and the East look policies.

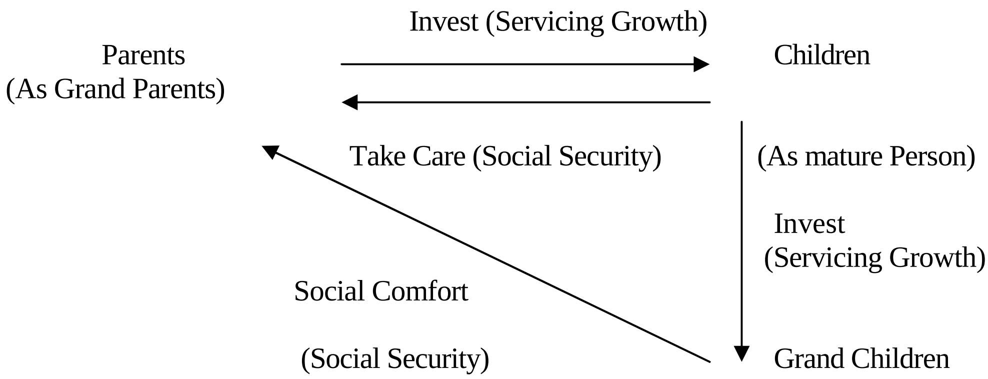


Figure 1: Self Sustaining Traditional Cyclic System

We feel the Social Security for India cannot be in align with the developed nations and the Western philosophy as we have more than 400 million[15] (35% of India's population) in the un-organized sector. Not only this, but also it is well evident from Federal Reserve documents and research studies that the total burden of the formal social security system and the payments their off are posing tremendous problems for a rich nation like US. This problem is not their with the US only, UK, Japan, Germany, France and many other developed nations are facing the same tune due to mis-management of

[15] Vineeta Rai, Chairperson, Provident Fund Regulatory and Development Authority (PFRDA) interview in Asia Insurance Post, June 2004

social security funds and non-servicing population (young). In our understanding from literature in Europe similar systems did exist till as recently as the last 1960s, but had dissolved given the capitalistic market driven systems taking hold in the society.

A well articulated book by Noriyuki Takayama on “Taste of Pie: Searching for Better Pension Provisions in Developed Countries” has tried to also explore, explain, evaluate and suggest on the prevalent social security systems and their role in financing old age towards comfortable living. The need to earn more with a belief of larger sum assuring late periods of one’s life has emerged out of the materialistic lifestyle of the west. Within Asia these systems have turned to be investment avenues for financing of future family needs than to provide for social security. As within an Asian’s mind the true social security is with their future generation (grandchildren and children) secured, rightly so.

Given this one must not push aside the need for financial funds to secure a healthier late life. The complexities of stress, economic competition, efficiency and Darwin’s concept of survival of the fittest have generated the need to think in a more economic than social way for a better life ahead. The thorny question of retirement which lies before us is as to how are we going to finance it. Before we move on to this, we would like all of us to think, as to what have we done to ensure a secure future. Some of the responses which come to our minds are that we have initiated savings; have made investments in bonds, securities (in treasury bills/government bonds) and real estate; setting up of a business (i.e. by entrepreneur). These are certainly some of the well known means of financing finances for the future, but not the means to secure or finance life.

What we most need to do is to provide for a secure flourishing and growth oriented future for the family. We must not forget that “A rising sun is always looked upon”. What is important at this stage is that the Senior Citizen of any country deserves to live with dignity, which they have rightly earned over their life span. The Governments need to see that the “Senior Citizen’s Dignity” is not brought to shame with any of its policy prescriptions, which at times tend to get influenced by the market driven economic systems. The cultural and civilization beliefs are important and must be tightly held for a robust socio-economic system. We all need to respect and honour the same, given that the formal social security systems (both public and private) have failed to provide the masses their dues in market driven economic systems.

Amongst the commonly known financing strategies for Retirement these are

• Annuity Products[16]
• Investment in Gold / Silver
• Real Estate
• Deposits (Bank FDs, Equity, Pension, RBI Bonds, Mutual Funds)
• Social Security / Pension Fund Account
• Debt Financing (financing current needs via Debt and hedging it against future incomes)
• Creating future value (by setting up smaller business options)
• Government Bonds (tax-free and taxable)
• Fixed Deposits in the Banks and Financial Institutions
• Post Office Schemes (Monthly Income Schemes & Term Deposits)
• LIC Schemes
• GOI Special Senior Citizen Pension Schemes
• Mutual Fund Schemes

governments may want to consider implementing a few other options from those mentioned below for the benefit of the masses at large. They may want to explore the possibility to directly or with private participation setup

• Re-Employment Pension Fund
• Social Security Account as Monthly Deposit Scheme
• Stable Policy of Pension Fund Rates

Whenever the rates on Pension scheme need to be changed, they need to be done on deposits from the current year onwards and not from retrospective effect, as the expectations, confidence in the system and planning of the masses gets hay way. One must understand that confidence once shaken is difficult to build up, which results in economic sluggishness and failure for future products/schemes.

• Post Office Retirement Scheme

[16] A life annuity is an insurance product that pays out a periodic amount for as long as the annuitant is alive, in exchange for a premium

Appendix A3.5
European Fiscal Policy Board :
To avoid De-stablization within Europe due to inflationary pressures

Agarwal (2007) had re-emphasised the need to set-up a Fiscal Policy Board (as proposed in his work of 1999) to bring in equilibrium in the European Fiscal affairs leading to inflationary pressures in Europe. The Fiscal Policy Board would comprise of Ministers of Finance of EU member states as their board members and Secretary Ministry of Finance to be the Deputies. The role of the Fiscal Policy Board would be to stream line and develop a plan for smoothing the Fiscal Policy within Europe to avoid inflationary pressures and de-stabilzation of Europe and the integration process (as observed in India & USA). The suggestion was seconded by Dr. Jean-Paul Fitoussi, President OFCE-Parigi, France and other speakers at the ER forum at the Italian Parliament.

While addressing on the challenges before Europe at the Italian Parliament (on 19 September 2007), the Global Forum 2007 (on 5th November 2007) and Swedish Regional Council Group of Ministers/Ambassadors in (16th November 2008), we were happy to see that the suggestion of Agarwal (1999) to formulate the European Constitution is finding place within Europe and European Institutions with the 1st draft of European Constitution submitted to the people in June 2004. He stressed the need for Europe to focus on global partnerships and interdependence to take care of challenges faced in last 4 years due to higher un-employment (i.e. blue & white collor workers), lower growth within the region, US recession and inflationary pressure within Europe leading to internal dissatisfaction with the integration process. Prof. Agarwal highlighted that these issues are a matter of concern, as they may cause de-stabilization of the Global Financial Stability & Development.

Appendix A3.6
Restructuring of IMF

Agarwal (2004) proposed that there is an urgent need for restructuring the IMF to handle the financial crisis faced by various nations in a more meaningful way. First, there is a need for considering in a systematic fashion, not only the role of world institutions, but also of regional arrangements. Accordingly, regional monetary funds to monitor, regulate and suggest measures to countries of the region may be set up. Regional Monetary funds should be set up to assist developing countries in different regions for meeting their temporary liquidity problems and to help them avert default which may perpetuate the crisis by shaking the confidence in these economies. An attempt was made in this regard in 1997. The Japanese government had proposed to set up an Asian Monetary Fund (AMF) first in 1997 to monitor the region's economies and provide early warning to the respective governments on the impending crisis. It could also provide speedy assistance to deal with the crises in their early stages so as to prevent them from spreading. AMF could also be a significant step towards decentralization of international monetary and financial decision making that is presently concentrated in the Washington, DC. Regional Monetary Fund could understand region specific issues better that IMF. However, despite strong support within the region, the proposal for an AMF did not get far. It was opposed by the United States and IMF, as it posed a threat to the monopoly of IMF. However, in 1998, Japan proposed the Miyazawa Plan at the Annual IMF-World Bank meeting, which is a more modest proposal. It seeks to provide a US$ 30 billion package for the region for short-term trade financing as well as recovery through long-term projects. It was suggested that the Japan Export-Import Bank, the World Bank and the Asian Development Bank could jointly take part in the initiative. Agarwal in his keynote address in Chile on "Volatility of International Financial Markets: Regulation and Financial Supervision" proposed that "India can take initiative to form a regional IMF- SAARC Monetary Fund to assess and help the member countries of this region". Later during the same year the proposal was seriously considered by the government and the honourable PM Shri Atal Bihari Vajpai proposed the idea for the formulation of the Monetary fund at the SAARC meeting in Pakistan (November 22-23, 2004).

Secondly, there is an urgent need to review the working of IMF as IMF package of reviving economies is often counter productive for most of the countries approaching IMF. Often IMF prescribes the same set of conditionalties to every economy which have quite diverse requirements and needs. For instance, the IMF package uniformly insists on belt tightening, devaluation and demand compression measures that affect growth adversely and hence make recovery even more difficult and aggravates volatility in financial markets. Furthermore, despite a widespread recognition of the role played by the capital account liberalization in accentuating the crisis, the IMF has been pushing the affected countries towards accelerated capital market liberalization in the wake of the crisis. IMF often adopts a short sighted and rather inflexible approach to crisis management. Malaysia decided to withdraw from the

IMF Program soon after it was initiated to the program after the crisis. Instead, Malaysia adopted an unorthodox approach to dealing with the crisis that included imposition of capital controls although temporarily and the adoption of a fixed exchange rate regime. More importantly, Malaysia's approach also included lower interest rates and fiscal expansion or pump priming by the government as against belt tightening measures and balancing of budget included in the IMF package. As a result, Malaysia did not suffer the kind of social consequences that other affected countries did and the recovery was rather quick with a 5.8 per cent growth of GDP in 1999 and 8.5 per cent in 2000, compared to much lower rates of growth achieved by Thailand, Indonesia and the Philippines under the IMF program.

Thirdly, there is also need for revival of SDRs Allocation. Special Drawing Rights (SDRs) were established by the IMF at the end of the 1960s to supplement international liquidity. SDRs were supposed to become the principal reserve asset. However, the allocation of SDRs has been abruptly halted since 1981, thus adversely affecting the ability of developing countries to supplement their reserves and making them vulnerable to the liquidity crisis. They have been forced to borrow on onerous terms to augment their international reserves. The institution of SDRs continues to be relevant, especially for developing countries and it should be restored as soon as possible by the IMF. There is, therefore, need for a thorough reform of the IMF's working and bringing flexibility into the package that keeps in mind the specific needs of the affected countries.

IMF is currently viewed as a single global institution with no alternatives. It should rather become an apex institution with a network of regional or sub-regional monetary funds observing monetary and economic stability of the regions and equitable growth in world investments.

Appendix 3.7

Private Sector Initiative: Replicating India's Chit Fund Concept in Banking & FI Industry

With the failure of FDIC to provide for funds and the US Government not approving the US$ 700 billion fund in August 2008, it was observed with 10 major Banks of US and Europe coming forth to setup a joint fund of US$ 70 billion with each bank contributing. The group of global commercial and investment banks, included Bank of America, Barclays, Citibank, Credit Suisse, Deutsche Bank, Goldman Sachs, JP Morgan, Merrill Lynch, Morgan Stanley, and UBS. This step was initiated to help enhance liquidity and mitigate the unprecedented volatility and other challenges affecting global equity and debt markets (ET, 2008). These banks would work together

1. First, to assist in maximizing market liquidity through their mutual commitment to their ongoing trading relationships, dealer credit terms and capital committed to markets.
2. Second, to establish a collateralized borrowing facility, which ten banks (Bank of America, Barclays, Citibank, Credit Suisse, Deutsche Bank, Goldman Sachs, JP Morgan, Merrill Lynch, Morgan Stanley, and UBS) have committed to fund for US$7 billion each ($70 billion in total). The facility will be available to these participating institutions for liquidity up to a maximum of one third of the facility for any one bank. It is anticipated that the size of the facility may increase as other banks are permitted to join the facility.
3. Third, to help facilitate an orderly resolution of OTC derivatives exposures between Lehman Brothers and its counterparties. This effort included opening the OTC derivatives market for trading this Sunday afternoon

The fund so setup could be sought by any bank or financial institution in difficulty of credit needs for short term to enable avoid failures of banks and financial institutions taking place one after the other in the last 6 months, at a rate decided by the member banks. This is a very traditional form of financing operations followed all over Indian by Indian indigenous Business Men, where they are in-capacitated to seek loans from banks/FIs due to non-formal structure of business and weak balance sheets. Hence few of them come together to pour a fixed amount of fund referred to as the Chit Fund, which can be utilized for a short duration by any of the members contributing to the Chit Fund at rate higher than the bank lending rates. This mechanism is illegal and not approved by the RBI and the Government, however has been function and still does all over the country. The step undertaken by the Banks is a replication of the same concept within the Banking and Financial Industry.

Appendix A3.8

Re-energizing multi-lateral trade agreements (WTO) along with bi-lateral FTAs

The WTO seems to have phased out with its role getting biased in the Globalisation process. However Globalisation has helped the per-capital social enrichment at all level in both developed and developing worlds at a much faster pace in a short span of 2 decades as against the earlier socio-economic smoothening which normally took centuries. Given the establishment of bi-lateral trades post 2000 and the Doha round, the importance of trade and inter-dependence of nations has come forth. Hence it is vital that the WTO framework get back into functionality if the World Economy would like to see fruits of the globalisation process initiated and laid foundation 2 decades back. Given the growth in the levels of FTAs signed post 2000, the WTO may want to consider re-orienting its structure to given appropriate place to FTAs within the WTO Framework. This would enable both sets of Trade relationships exists mutually benefiting the consumers, enhance trade and society at large.

Appendix A3.9
Re-focus on Organic Agriculture

Nations around the globe are seriously concerned to develop both the agriculture and the rural areas. As these are suppose to be the central point of the economy with majority of people living in rural areas and dependent on agriculture. Development of agriculture is the precondition of industrialization. It is the agriculture and rural areas feeding the industry with raw materials and these sectors are also the major consumers as these are spread widely and have larger section of population living there.

Agriculture and rural development has not attracted the desired investment and the financing pattern is largely traditional. Also the return on investment is very low, which makes it dis-lucrative for masses to stay in agriculture and related industries. Hence, it is either left to the individuals living in rural areas, engaged in agriculture or the state and the local bodies. The corporates and major banks and financial institutions have played marginal role i.e. to the extent the state facilitated or asked them to involve themselves assisting these two sectors. The state and the governments have their own budgetary constraints. Lately the World Bank, and other international financial institutions are focusing on financing and investment in the agriculture and rural development. The strategies suggested and the policies adopted in the developed economies and developing economies with special reference to Hungary and India would be traced and highlighted. A new strategy in the changed paradigm is also suggested

While there are massive technological innovations in the technology (technological change) in agriculture with respect to methods of cultivation, seeds, development, difference use of land, soil testing, fertilizer, use of equipments etc almost all over the world yet larger part of agriculture despite impressive innovations is bound by tradition and traditional technology for various reasons. The funding available to agriculturists, their resource position, education, dependence on nature and natural resources, poor returns on investment and such other factors has not attracted desired investment and other resources in this most natural occupation of the world. Most of what is practiced is learnt from ancestors, villagers and the fellow agriculturists particularly in the developing economies of the world. What feeds the world and the nation unfortunately is not fed the same way in a reciprocal way by society.

Agriculture and rural areas and the people engaged and living there do not enjoy the status which is enjoyed by their counterparts in cities and metropolis. Poor infrastructure, weak social facilities such as high quality education, health, clubs and other social activities are missing in rural areas almost in the whole world economy. As a result their quality of life is generally low as compared to their counterparts. Given the current Global Financial Meltdown, China has introduced special schemes to motivate its people to engage themselves in Agriculture and Agro-based industries. Given the importance of Green and Clean food due to biological problems (weak immune system) and diseases emerging in large part of Western Developed Region, the organic agriculture has gained substantial importance and become the need of the hour.

Some of the emerging needs for enhancing innovations and development for both rural and agricultural regions are

- innovations to meet climate change
- innovations to meet energy needs through renewable sources
- creative means to counter un-employment
- needs to be globally inter-connected simultaneously taking care of global financial disturbances (spillover effects)
- inducing non-inflationary growth
- innovations to counter terrorism and money laundering.