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सीएबी कॉलिंग
CAB Calling

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Building Capacity for Inclusive Finance

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Contents

मुख्य संपादक की कलम से

From the Desk of Editor-in-Chief

प्रिय पाठकगण

महाविद्यालय ने 28 सितंबर 2019 को अपनी स्थापना के पचास वर्ष पूरे किए है। भारतीय रिज़र्व बैंक ने राज्य / केंद्र और शहरी सहकारी संस्थाओं के प्रबंधकीय कर्मियों के लिए प्रशिक्षण कार्यक्रम संचालित करने हेतु सितंबर 1969 में पुणे में एक सहकारी बैंकर्स प्रशिक्षण महाविद्यालय की स्थापना की थी। जैसाकि वाणिज्यिक बैंकों ने कृषि को बड़े पैमाने पर वित्त देना प्रारंभ किया था इसलिए महाविद्यालय ने वाणिज्यिक बैंकों के अधिकारियों के लिए कृषि बैंकिंग पर पाठ्यक्रम प्रारम्भ किए। महाविद्यालय की प्रशिक्षण गतिविधियों का कवरेज सहकारी बैंकिंग से भी परे काफी हद तक विस्तारित हुआ और इसमें वाणिज्यिक बैंकों और आरबीआई के स्टाफ सदस्यों की प्रशिक्षण आवश्यकताओं को समाहित करते हुए कृषि बैंकिंगऔर वित्त पर अधिक बल दिया गया। वर्ष 1974 में सहकारी बैंकर्स प्रशिक्षण महाविद्यालय का नाम बदलकर कृषि बैंकिंग महाविद्यालय कर दिया गया। पिछले कई वर्षों के दौरान महाविद्यालय की क्षमता निर्माण की पहल का विस्तार हुआ है और वर्तमान में महाविद्यालय बैंकरों और वित्तीय संस्थानों के अधिकारियों की कृषि वित्त, एमएसएमई वित्त, वित्तीय समावेशन और वित्तीय साक्षरता, सहकारी बैंकिंग के क्षेत्र में क्षमता

Dear Readers

The College completed fifty years of its establishment on September 28, 2019. The Reserve Bank of India had set up a Cooperative Bankers' Training College at Pune in September 1969 for conducting training courses for the managerial personnel of State/ Central and Urban Co-operatives banks. As commercial banks started financing agriculture on a considerable scale, the College introduced courses in agricultural banking for Officers of commercial banks. The coverage of training activities of the college expanded considerably beyond cooperative banking and encompassed training requirements of personnel of commercial banks and RBI itself and the emphasis was on agricultural banking and finance. The Cooperative Bankers' Training College was renamed as College of Agricultural Banking in 1974.Over the years, the capacity building initiatives of the College have expanded and it is currently engaged in capacity building of bankers and officers of financial institutions in the area of agricultural finance, MSME finance, financial inclusion

निर्माण कर रहा है तथा बैंकों और आरबीआइ के अधिकारियों के नेतृत्व कौशल का विकास कर रहा है। महाविद्यालय द्वारा एनबीएफसी के अधिकारियों के लिए नियामक पहलुओं पर प्रशिक्षण कार्यक्रम भी आयोजित किए जाते है।

महाविद्यालय के स्वर्ण जयंती समारोह के अंतर्गत विभिन्न गतिविधियों का आयोजन किया गया था जिसमें प्रख्यात व्यक्तित्वों के स्वर्ण जयंती मेमोरियल व्याख्यान, विषयगत सम्मेलन, स्कूल और कॉलेज के छात्रों के लिए वित्तीय साक्षरता और जागरूकता हेतु प्रश्नोत्तरी प्रतियोगिता और निबंध प्रतियोगिता शामिल थे।

इस विशेष अंक में डॉ ए. वासुदेवन, भारतीय रिज़र्व बैंक के पूर्व कार्यपालक निदेशक, श्री एच आर खान, भारतीय रिज़र्व बैंक के पूर्व उप गवर्नर और डॉ अशोक दलवाई, IAS, सीईओ, नेशनल रेनफेड एरिया अथॉरिटी (NRAA) एवं अध्यक्ष सशक्त निकाय, किसान आय दोहरीकरण, भारत सरकार के स्वर्ण जयंती मेमोरियल व्याख्यान और महाविद्यालय द्वारा आयोजित स्वर्ण जयंती गतिविधियों और भारतीय रिज़र्व बैंक द्वारा जारी किए गए महत्वपूर्ण परिपत्रों की संक्षिप्त जानकारी दी गई है।

- **मधुमिता सरकार देब**

and financial literacy, cooperative banking, and leadership skills for officers of Banks and RBI. It also conducts training programmes on regulatory aspects for officers of NBFCs.

As part of the Golden Jubilee Celebrations of the College, activities were organised which included golden jubilee memorial lectures by eminent personalities, thematic conferences, financial literacy and awareness for school and college students through quiz contest and essay competition.

This special issue contains the golden jubilee lectures delivered by Dr. A. Vasudevan, former Executive Director of RBI, Shri H.R Khan, former Deputy Governor of RBI and Dr.Ashok Dalwai, I.A.S, CEO of National Rainfed Area Authority (NRAA) and Chairman, Empowered Body, Doubling of Farmers' Income, Government of India and a brief write up on the golden jubilee activities organised by the College and the gist of important circulars issued by RBI.

- **Madhumita Sarkar Deb**

Feature Articles

Some Thoughts on Macroeconomic Sustainability: The Case of India[1]

- *Dr. A. Vasudevan*

Introduction

Much of the discussions on macroeconomic policies in India relate to macroeconomic stability rather than the issue of macroeconomic sustainability or economic sustainability, to be brief. The discussions tend to show a marked preference for growth to move up in a stable manner consistent with the economy's potential along with tolerable and stable levels of external current account deficit, fiscal deficit, and inflation. Such a preference is not without some tangible reasons. It would, for instance, give a sense of confidence in the country's economic prospects. It would also help generate credible expectations about the conduct of economic policy. International credit ratings too tend to go up and foreign exchange flows in the form of foreign direct investment and portfolio investment would increase. If such a phenomenon prevails over a period of, say 4-5 years, it is regarded by many analysts as sustainable.

But this is not the way economic sustainability should be viewed, going by the literature of recent times. Today we use the expression, 'economic sustainability' as the same as the expression, 'sustainable development' which is most frequently found in the literature.

We shall at the outset of today's presentation deal with the meaning and content of economic sustainability. We then discuss about the prevalent view that economic sustainability would be realized over the medium to long term, should countries pursue sound macroeconomic policies such as fiscal and monetary and exchange rate policies. Our approach is essentially India centric. Hopefully, it could be generalized to be of relevance for many countries of the world.

The Idea of Sustainability

The idea of sustainability has caught on in a markedly significant way, from about the latter half of the 1980s. Studies on sustainability focus on overall economic development as a goal that is achievable in the medium to long term period. Each country could adopt such a goal with a set of policy measures that is perceived to be deliverable. Perceptions, however are, as

[1] Based on the lecture delivered by Dr. A. Vasudevan, former Executive Director, Reserve Bank of India on February 13, 2019 at the College of Agricultural Banking (CAB), Pune to commemorate the Golden Jubilee Year of the College.

we know, would have different degrees of success. A set of policy measures may fail wholly or partly in some countries and may succeed wholly or partly in some other countries. Inter-country comparisons would in such an event provide an idea of which of the measures would have a good probability of success and which would have zero or limited success. But one could ask, success with respect to what. Should one have a set of criteria for making a determination of what success entails? Often times, one of the criteria is the rate of real growth. Another criterion could be inflation. Yet another could be fiscal position. In fact, all the macroeconomic indicators could be cited as useful criteria for making a judgment of successful set of macroeconomic policies. Such a broad spectrum of criteria, however, would make a mockery of the entire exercise if the public does not believe in it and destabilize governments in power in democracies.

Sustainability as an idea goes beyond its measurement in terms of growth defined as changes in real GDP from year to year. Sustainability means development. And development can be described in a common person's language as 'growth plus'. And that is precisely well captured by expressions such as sustainable development or simply economic sustainability.

Economic Sustainability

In early 1990s, sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own ends" (UN Commission on Environment and Development, 1992). Since then, however, sustainable development or economic sustainability has been broadened to view the future from current or contemporary situations and the challenges that societies face or are likely to face. Economic sustainability involves a dynamic process that needs to ensure that people realize their potential and improve their quality of life, protecting and enhancing at the same time the ecosystem, in particular earth's life support system. Such a dynamic process is understood to refer to several aspects or components such as fairness and equity, care for environment and respect for ecological constraints and for what is in store for the future.

It is possible to view each of the aspects in different ways. To take for example, fairness or equity. What is fair and equitous for one may not appear so for another. This may be the case also in respect of several other aspects of economic sustainability. But it is necessary to reconcile different viewpoints so long as no one aspect entails inter-generational and intra-generational burden and so long as there are no societal protests and violence. What this implies is that people's participation and partnership are critical for realizing sustainability and should therefore be considered as an aspect or component of economic sustainability.

The above-said reconciliation, however, may not be considered as credible unless economic sustainability is identified in measurable units or numbers. This calls for collection and collation of economic and other related data on each of the aspects. Where data for some aspects of sustainability are not available, one may use proxies and assign to them some numbers on the basis of some sample information that is considered credible. The collected data would have to be analysed in terms of their historical trends and their potential to reach the maximum possible or optimal levels or more correctly, 'states'. In other words, there would be different states of optimality of the aspects under view. If the obtained optimal states of the aspects of economic sustainability are in line with the estimable potential of the aspects, they may be regarded as sustainable states. Then we proceed to ask as to whether they could be rendered consistent among themselves. Once the consistency test is found to be successful, they may be pooled together to derive an integrated and a single state that could be labelled sustainable development of the economy. Such a task, huge as it is, could perhaps be performed by a gigantic computer and facilitate construction of a model or a design for purposes of policy. However, one needs to introduce caution here. There is no guarantee that such a single state of economic sustainability would have a fairly life span. What if there are deviations from such an overall state of economic sustainability? What if there are no automatic adjustment mechanisms to bring the economy back to the original state of economic sustainability in the event of deviations?

The state of economic sustainability is different from the idea of general equilibrium (GE) that was first expounded by Leon Walras in the 19th century. GE will occur when all markets including those for goods and for finance determine the price at which demand and supply meet. Prices rather than quantities matter most in GE. Whereas the state of market competition and technology developments do not matter. There will be no uncertainty. Besides, there will be no lack of information and knowledge. Assumptions such as these have made equilibrium analysis not useful from policy angle.

Sustainable development cannot be realized in the short run even if some of the markets show points of equilibria. Sustainability is possible only in the medium to long term and when achieved through conscious and deliberate State intervention and public participation, would have a huge economic impact on the well-being of people at large.

This is not to say partial equilibrium (equilibrium in some markets) would not serve any purpose. In fact, it could act as a signaling mechanism to suggest that movement to sustainable states of the aspects of overall economic sustainability would have to be a part of human endeavor. For instance, poverty reduction, an aspect of sustainability, would not be possible without improvement in real growth in those activities that facilitate increase in the volume of those goods that would be rendered available at affordable prices which in turn would have positive impact on overall real growth and consumer prices. To take another example, fairness and equity would not be possible under unregulated and unfair market competition. More often than not, this aspect would require exercise of fiscal and monetary policy interventions in addition to structural policy measures.

Why then economic sustainability is not pursued by countries that follow the rule of law and the sanctity of contracts and accept that information asymmetries should be eschewed? The answer lies in the fact that adoption of economic sustainability as a goal requires commitment to the cause on the part of the authorities, sound governance of institutions and periodic check-up of societal preferences. These conditions are tough to follow and are not easily amenable to modelling the way computable general equilibrium (CGE) models or dynamic stochastic general equilibrium (DSGE) models are constructed in many central banks and other policy making bodies. Even the CGE and DSGE models while they help to understand economic phenomena, they could not predict the global fiscal crisis in 2008. In the event, these models are being improved with more realistic assumptions that are expected to eliminate possibilities of recurrence of market failures. This is work in progress and is relevant particularly when the financial sector in many countries of the world is experiencing stresses. These models may therefore need to be supplemented at this stage by new class of models including the behavioral models which, one hopes, would move closely towards realizing economic sustainability.

It is important that model results are given respect by policy makers. But they should not be blindly accepted without verification and without reference to the virtual economic events, diversity of behavior of economic units and institutional constraints. Policy makers have to willy-nilly go by their judgments as well. This is akin to policy matrix building wherein policies are juxtaposed against expected outcomes based on theoretical assumptions of such linkages.

The India Case

Policy matrix building has been in existence in most countries since the 1950s. The five-year plans of the past represent such exercises. The matrices do not pretend to achieve economic sustainability. This is not to say that no work has been done on some of the aspects of sustainability. There are individual studies on environment and ecological balances in India and a large number of experiments such as the 'chip ko' movement in the 1970s for planting of trees and afforestation have taken place. Community development programs of the 1950s and cooperative movement in the 1930s and 1940s particularly in Maharashtra and some parts of southern part of India, could be cited to show case people's participation and partnership. Studies on fairness and equity can be found right from the 1960s with eminent economists such as V K R V Rao, P R Brahmananda, D R Gadgil, Pitambar Pant of the Planning Commission making contributions based on data and analytics on the subject. Poverty studies soon followed. The classic work of two brilliant Pune economists, V M Dandekar and Nilkantha Rath brought out in the early 1970s was followed by many others including B S Minhas, P K Bardhan, and S D Tendulkar, to name a few.

Studies on individual aspects of economic sustainability are useful but they still do not provide a wholesome picture of what development entails. One thing, however, is certain. Without growth, employment opportunities do not arise. Nor will there be reduction in poverty and inequalities. It is no wonder therefore, that most works in India, especially since about the 1990s, tended to concentrate on realizing relatively high growth in real GDP over the medium term with policy interventions. In the 1990s, overall growth was as much as 5.8 per cent (based on 2004-05 base with GDP at factor cost) and in the 2000s (on the same basis), growth was much higher at 7.2 per cent. The higher growth rates were driven by the services sector and industry. Agriculture sector for instance gave a measly 2.5 per cent growth in the 2000s. Agriculture's growth in later years seemed to be much less. The difference between the growth rates in the services sector and industry also seemed to have widened in recent years with the services sector growing at 8-9 per cent on the average compared with the industry sector growing at only 5-6 per cent.

Endeavors to accelerate growth have led to publication of both nowcasting and forecasting reports of real growth at frequent intervals. These estimates, however, are not the same as estimations of potential growth. Many approaches to estimate potential growth exist but the most popular one is the Hodrick-Prescott (HP) filter that smoothens the trends.

For India, filters generally point to 6-7 per cent as achievable potential growth. However, the figure of 8 per cent real growth pops up every now and then as achievable or as requisite growth. Why does the 8 per cent come up in discussions on growth? Is it because it was achieved some time in the past and therefore could be used as a good enough goal? Or, is it because about 12 per cent nominal growth is considered as needed to mobilize enough revenues for meeting the growing Government expenditure needs so that with a 4 per cent tolerable inflation, an 8 per cent real growth could be accommodated? It may be recalled that the 4 per cent average inflation rate over the medium term was first suggested by S Chakravarty Committee in the mid-1980s and affirmed by Urijit Patel Committee report in 2013 as tolerable.

Achieving 8 per cent real growth year after year would, however, be difficult without favorable climate for domestic investment, and favorable external environment. The latter cannot be taken as given even if policy measures for promoting domestic investment are regarded as or understood to be conducive. However, questions still remain about the quality and effectiveness of domestic policy efforts because economic policy transmission mechanisms have never been conclusive about the assumptions behind the given or announced policy measures and the expected outcomes. Besides, what is the guarantee that nominal growth rate of 12 per cent composed of real growth of 8 per cent and inflation of about 4 per cent would give rise to enough revenue resources? What if external environment suddenly turns out to be so unfavorable as to nullify the anticipated offsetting domestic policy initiatives? Is there sufficient governance capacity to implement quickly the announced policy initiatives? Moreover, how can one assure that private investment demand would be forthcoming to the expected extent even when policies are considered to be investment-promoting? Empirical works on each of these questions do not provide unequivocal answers. Again, the link between public investment and private investment has become weaker as economies have become much more open since the 1990s and less dirigiste. 'Sudden stops' could occur even if policies are deemed to promote domestic investment, if there are biased international ratings and changes in the political climate.

We need not be too rigid about the much talked about growth of 8 per cent for India. One should instead focus on balanced sectoral growth. Currently, the share of the services sector in GDP has been very large and the share of manufacturing has been generally sticky. If the services sector registers a still higher growth and the rest of the activities registers only lower or moderate growth rates, India's growth could still be 8 per cent—an outcome that is not necessarily a desirable one. Policy making would need to promote and improve absorption of excess labor from agriculture into manufacturing and to examine as to whether the physical space to increase the share of services sector further exists and more labor absorbing than hitherto. Improving employment opportunities is important for improving chances of increasing incomes of households thereby reducing the incidence of poverty. This calls for shift in the pattern of public investment, a shift that would necessitate a rethink of the well-known idea of annual growth as a function of investment rate under conditions of constancy of technology and productivity.

Is this possible? It looks that perspectives of development would require that even if investment rate is around 30 per cent as at present, technological changes have to take place by India-centric innovations that could make use of new methods including artificial intelligence, if desired, and promote employment as also by incentive schemes that help augment productivity and improve employment opportunities. Such innovations are particularly needed most in activities that fall outside agriculture. As of now, such R & D expenditures are limited (Some estimate suggest that they amount to about 1 per cent of national income). As of now the focus is on adaptations of technologies available abroad but experience in this regard in so far as creation of jobs is concerned, has not been as much development-oriented as is required. Innovations are needed to enable use of production techniques that are labor intensive and productivity enhancing. This idea of deliberate choice of techniques is not novel: it had been much discussed in the mid-1950s in India by some eminent economists like A K Dasgupta, Amartya Sen, B V Krishnamurthi and Charles Bettleheim among others.

A sharp shift in the pattern of public investment is required at this juncture to ensure that development is pursued as the goal. The State will have to sharply increase expenditures on defense and security, public health, primary and secondary education, training facilities to augment skills, physical infrastructure to facilitate private investments and on schemes that impact positively on environment and ecology and promotion of equity. Resources to fund such schemes would be not only through taxes and other sources that are often described as non-inflationary, but also through large scale divestments of most public enterprises in as short a period as possible.

This however is not the case currently. The faith in the pursuit of growth has constrained pursuit of universal common good as well. Take for example the case of India's commitment to meeting the minimum requirements for reducing carbon emissions despite the presence of known ill effects of global climate change. The approach followed by India in this regard is based on negotiations in the comity of nations with regard to the amount of monetary resources that she should commit herself to for addressing the problems of climate change on a global scale vis-à-vis the commitments of other countries, in particular advanced countries where carbon emissions are presently high. As it happens in international diplomacy, every country tries to minimize their monetary commitments to the requisite total monetary resources for the given purpose. India's carbon emissions as of now are lower than the emissions of advanced countries but given the increasing use of petroleum resources in her pursuit of growth, estimations of future emissions seem to be conservative. Prima facie, her approach looks reasonable but not necessarily from the development perspective where securing productivity of labor which depends on health and increasing job opportunities, are paramount. Reducing carbon emissions is a universal public good and in the case of India, this public good has to be pursued with vigor for the well-being of the vulnerable sections of people who cannot afford adequate health care as much as the financially better placed.

The constraints posed to the pursuit of the goals of economic sustainability are attributable largely to our current pattern of public investment and the resultant policy set. So far, we tended to rely on high growth with the help of macroeconomic policies and on a gradual approach to areas where welfare maximization is possible. It is often implicitly taken for granted that high growth would over time lead to overall well-being of the people. If macroeconomic indicators remain at expected or targeted levels on a stable basis for a medium term, policy sustainability is assumed to have been achieved. Even here, achieving fiscal sustainability is given the first and foremost priority. Other areas of macroeconomic policy, namely, the monetary and exchange rate and reserves management are pursued essentially in terms of rules and/or framework or principles.

Fiscal Sustainability

Fiscal sustainability is viewed in terms of certain ratios of nominal GDP. The Committee that was chaired by N K Singh to review the experience with the operation of the Fiscal Responsibility and Budget Management (FRBM) Act 2003 proposed, in its report of April 2017, three ratios, representing stock, flow and composition. The first--the stock ratio--is about debt to nominal GDP. The second, the flow ratio, is the familiar fiscal deficit to nominal GDP. And the third, the composition ratio is the revenue deficit to GDP. The latter two are substantive ones in that they are widely used in and by international policy making bodies such as the International Monetary Fund (Fund or IMF) and the World Bank (WB). Some public finance experts both in India and abroad use yet another ratio, namely, the primary deficit to nominal GDP as the most desirable one to decipher Government's contribution to promoting fiscal prudence without placing the burden of debt on future generations. Primary deficit to nominal GDP ratio has gained currency since the 1980s when some countries defaulted on their loans (Mexico 1n 1982 is an excellent example) or found difficulties in servicing even interest payments on scheduled dates on their domestic and foreign borrowings (Brazil is yet another example in this matter).

Let us consider the ratios proposed by N K Singh Committee as best guideposts in the Indian case because they are not accepted in full by the Government. The guideposts cannot be regarded as 'targets' in the strict sense of the term but could well represent what may be called, the revealed preference of the Government of India. The public debt to GDP is placed by the Committee at 60 per cent to be realized by 2023. This is regarded as a medium-term anchor that is required for realizing fiscal sustainability. It should be viewed in broad terms to include a number of conditions. It should in fact be concerned with primary balances and their ability to stabilize debt with reference to (a) the baseline scenario, and (b) shock scenarios. The level of debt under this approach would have to be consistent with low rollover risk that does not jeopardize potential growth. But debt sustainability takes enormous time and is always surrounded by uncertainty especially about the additive shocks to debt dynamics and about such parameters as future interest rates. Besides, there has to be a threshold for debt that is not an estimate or an average debt of past periods. It has to be based on assumptions such as fiscal multipliers, interest and growth rates that are always surrounded by uncertainties about their path.

The 60 per cent debt to GDP ratio for India mentioned above is much lower than the internationally accepted threshold level of debt of 90 per cent for developing countries. The IMF and World Bank have reportedly stated recently that the Indian performance with regard to public debt to GDP ratio has been the best among emerging countries. The Centre's debt to GDP ratio at about 46.5 per cent in March 2018 is only slightly higher than 45.5 per cent recorded in the preceding year. This ratio is higher than the recommendation of N K Singh Committee that the desirable public debt to GDP to be attained by 2023 should be 40 per cent in the case of the Centre and 20 per cent in the case of all the States put together. The recommended ratio, one tends to think, may not place the burden of payment of interest at periodic intervals and repayment pf the principal debt amounts on future generations. Even inter-generational burden may not be felt if it is ensured that the burden of debt falls more on the sections of population that are relatively well off. For example, increasing indirect taxes to ease the debt burden would be a regressive act. A progressive direct tax regime that does not adversely impact incentives to save and invest, would be a better policy option to shift the debt burden from the relatively worse off to relatively well-off members of the society. Again, public expenditures may be incurred in relatively large amounts on items that would greatly enhance the welfare of lower economic class. Tackling the challenge of debt burden is a test of the governance capacity of the Central Government and RBI's prior announcement of the path of interest that it will follow in future.

It is important to note that debt/GDP ratio recommended by N K Singh Committee is supported by what has often been referred to as the 'operating target' of fiscal policy, namely the ratio of fiscal deficit to GDP. Since the fiscal deficit of the Centre is predominant, given the fiscal federalism, the broad Indian agreement is that the ratio of Centre's fiscal deficit to GDP, according to N K Singh Committee, should be 2.5 per cent by 2023 to help achieve the Centre's public debt to GDP ratio of 40 per cent. In addition, the Committee felt that consistency exercises showed that the revenue deficit to GDP, the third important ratio, should not exceed 0.8 per cent by 2023. There is no specific preference for the ratio of primary deficit to GDP but it is understood in the public finance literature that the ideal rule in this regard should be zero. Many Indian economists and policy makers also endorse such a rule for adoption.

The said three ratios favored by N K Singh Committee, it is often said, may not be specified for each of the years or in terms of smooth trajectories from the starting date to the end period of the medium time horizon. To give an element of flexibility, escape clauses have been provided. Thus, for example, gross fiscal deficit to GDP need not be rigid: it should be such as to accommodate counter cyclical issues or to address national emergencies.

The Indian 'operating target' of fiscal deficit to GDP ratio as prescribed by N K Singh Committee at 2.5 per cent by 2023 is not far off from the 3 per cent target stipulated by the Maastricht Treaty for the members of the European Union. And not unsurprisingly, the Government of India has not committed itself to the 2.5 per cent operating target of fiscal policy. It always referred to only 3 per cent ratio as a target to achieve.

What is the historical experience with the fiscal deficit to GDP ratio? The data right from 1990-91 onwards to 2018-19 (29 years) shows that the Centre's gross fiscal deficit to GDP has shown decline from 7.61 per cent in 1990-91 to 3. 4 per cent by 2018-19, going by the interim budget estimation. The secular decline in the ratio is impressive. However, the decline in the ratio over the last 29-year period, is not a smooth one. For example, the ratio was 6-7 per cent on three occasions, 5-6 per cent on 10 occasions, 4-5 per cent on 7 occasions, and 3-4 per cent on 7 occasions. The only time it was within 2-3 per cent was in 2007-08, a year before the general elections of 2009, reflecting the likely possibility of postponement of some of the budgeted expenditures to the subsequent year. No wonder the ratio of gross fiscal deficit to GDP went up in the subsequent two years, to 5.99 per cent in 2008-09 and 6.46 per cent in 2009-10. But from 2011-12 the ratio declined consistently from 5.91 per cent to 3.33 per cent in 2018-19. The experience of the 8 years from 2011-12 gives hope that one could have a trajectory of gradual decline in the ratio of fiscal deficit to GDP to a level that could be regarded as 'maintainable' and therefore in a somewhat lax sense, sustainable.

The revenue deficit to GDP ratio which was pegged by N K Singh Committee report at 0.8 per cent for the terminal year of 2023 was never achieved in the 29 years from 1990-91. It was 5-6 per cent on one occasion (2009-10). On 4 occasions, it was 4-5 per cent. The ratio was 4-5 per cent again in 4 other years. In 13 years, the revenue deficit to GDP was as much as 2-3 per cent. On only 2 occasions was this ratio at 1-2 per cent. In the 8 years since 2011-12 it ranged from the high of 4.51 per cent in 2011-12 to the low of 2.07 per cent in 2016-17. The ratio has been sticky at over 2 per cent but less than 3 per cent since last 5 years, an experience that poses a challenge to policy makers, should they seek to reduce it to 0.8 per cent by 2023.

The gross primary deficit to GDP ratio ranged from 3-4 per cent on 2 occasions, 2-3 per cent on 3 occasions, 1-2 per cent on 10 occasions and 0-1 per cent in 10 years during the 29-year period beginning 1991. What is interesting is that it was negative in 4 years (2003-04, 2004-05, 2006-07 and 2007-08), the years before the eruption of the global financial crisis. In the last 8 years from 2011-12, however, this ratio has been generally on decline from 2.78 per cent in 2011-12 to 0.26 in 2018-19.

What is remarkable is that the three ratios mentioned in N K Singh Committee report have shown declining trend in the 8 years from 2011-12. This cannot be regarded as some stroke of luck. It shows that policy makers have consciously tried to bring about fiscal discipline. Does this give a clue about the critical 40 per cent public debt to GDP ratio for the Central Government by 2023?

The important debt indicator of the Central Government is provided on time series data basis in the RBI's annual publication, the Handbook of Statistics on the Indian Economy, in terms of liabilities composed of domestic liabilities and external liabilities. External liabilities have been in the range of 2-3 per cent of GDP since 2014-15. This is a major achievement in the light of the fact that this ratio was as high as 15.62 per cent in 1993-94. Domestic liabilities of the Centre relative to GDP have ranged from 43.79 per cent (1996-97) to the high of 54.96 per cent (2004-05). Since the last 8 years, domestic liabilities to GDP ratio has generally shown a declining trend but rarely came below 46 per cent. In other words, the ratio has to be brought down at least by 7 percentage points from the level of 2018-19 to 40 per cent by 2023. This is not easy because it is not possible to establish one to one correspondence between fall (rise) in deficit indicators to fall (increase) in the debt indicator. For example, debt defaults, delayed repayments of principal amounts owed, debt renegotiations and debt forgiveness which have occurred in many periods of human history of many countries, could vitiate the relationship, if any, between the two sets of indicators. In the Indian case, however, debt repayments have been on schedule, giving us an envious reputation of being a good borrower. This reputation however should not make us complacent and allow ourselves to slip from the avowed objective of pursuing fiscal prudence. For, budgetary practices in India have been such that fiscal deficits are often made to look favorable by a number of operational practices. One such practice that is widely used, is the postponement of expenditures, especially the capital items, to subsequent budget years. A more pernicious practice put into effect sometimes along with postponement of expenditures is to borrow from the deposits accumulated under the small savings schemes or to force some of the public enterprises to borrow to fund their operations or to push some of the Government's borrowings to the books of public enterprises.

In addition, Government guarantees for repayments of debt of households and private and public corporate sector which are in reality contingent liabilities have also been high. Contingent liabilities form off-budget item. Such guarantees should, however, be taken only to the extent that repayments of the guaranteed amounts are not honored. Budget makers should work out risks in the provision of guarantees but this is easier said than done. More often than not, the whole guaranteed amount is taken as part of total liabilities.

Even if budget practices are sound, fiscal sustainability in the case of India could be in jeopardy if green growth with equity, inclusive justice and the need for poverty reduction and accelerating social and economic infrastructure that are critical for improving the well-being of the people is not given sufficient emphasis. Commitment to such goals would also mean that growth as it is currently understood would need to be higher than 8 per cent. We have already dealt with the factors that would help improve development prospects. To recall, investment rate could be stable at the present level and yet development could be realized to a significant extent with a change in the pattern of investment and a strong push for use of original and innovative technology. This is not to say that fiscal actions and other interventions are not relevant: they in fact should supplement actions that shift the investment pattern and promote technology and innovations. Here the role of monetary and exchange rate and reserve policies also matter but whether they help realize economic sustainability is a question to which we turn now.

Monetary and Exchange Rate Sustainability

Monetary policy is largely guided by market trends, short term market expectations and market behaviour. In other words, short term considerations score over medium-term considerations in monetary policy making. The main goals of monetary policy are the familiar ones, viz., inflation control and provision of money to fund liquidity gaps so that economic activities are adequately promoted. The latter may for simplicity's sake be called growth consideration. Central banks wield instruments that have got to do with rate and quantity variables depending on the policy framework of their choice. If it is inflation targeting, the focus would be mainly on the determination of interest rate and less on growth consideration. The interest rate that central banks determine has to be in line with market expectations and should be positive in real terms to have a decisive positive impact on growth. If the objectives are dual, then liquidity considerations would tend to be as critically important as inflation control depending on the available data of growth, inflation and a host of other macro indicators. And much of the liquidity gap is closed through open market operations.

India has agreed to have flexible inflation targeting as the monetary policy framework in 2016. The policy framework has been put into operation since 2017 with the formation of Monetary Policy Committee. Let us look at the legal position about the policy framework. The RBI Act 1934 was amended by the Finance Act 2018 with effect from June 27, 2016. The Preamble states that the Reserve Bank of India (RBI) was constituted "to regulate the issue of Bank notes and the keeping of reserves with a view to securing monetary stability" and "generally to operate the currency and credit system of the country to its advantage". Monetary stability will not thus be possible without regulation on two fronts—the issue of currency and keeping of adequate foreign exchange reserves. The Act further stated as part of the Preamble that "it is essential to have a modern monetary policy framework to meet the challenge of an increasingly complex economy" and proceeded to state that "the primary objective of the monetary policy is to maintain price stability while keeping in mind the objective of growth" (italics added). The growth consideration is touched upon as what one might call the secondary objective since it is only to be kept 'in mind' by monetary policy makers while pursuing the price stability objective. There is no mention of economic development in the RBI Act.

Going by the developments in monetary policy theory, the implicit suggestion of the Act seems to be that all monetary policy should do is to ensure that nominal interest rate is determined with reference to (a) output gap and (b) inflation gap. With regard to (b), it is enough if the actual inflation rate is not different from the target inflation rate so that growth would be optimal. Such an inflation rate is the threshold rate. On (a) together with (b), there is a rule known as the Taylor rule.

With regard to (b), most empirical works on the threshold rate of inflation for India point out that such a rate would be 6-7 per cent. However, the official policy target of inflation is 4 per cent on the average over the medium-term. Actual inflation rate in a year, as the RBI suggests, could be in a range of 4 percentage points between 2 to 6 per cent within the determined medium term.

As regards price stability in the case of India, inflation targets have to be provided and here the RBI Act in Chapter F (45 ZA) states: "The Central Government shall, in consultation with the Bank, determine the inflation target in terms of the Consumer Price Index, once in every five years" and the Central Government would notify the inflation target once it is determined, in the Official Gazette (emphasis added).

Under inflation targeting, the threshold rate of inflation would be 4 per cent which means that optimal real growth will have to be at least 8 per cent if nominal GDP should be 12 per cent to mobilize enough resources to fund Government's committed expenditures. It is important to note in this context that nominal GDP has been growing since 2012-13 at an average of about 11.5 per cent per year. In case the recorded inflation rate is 2 per cent, then the economy would have to grow at two-digits, a point that cannot be taken as given and for granted. Willy-nilly, the threshold rate of inflation target has to be around 4 per cent a year. But will it automatically provide optimal growth? Would the interest rate determined by the

Monetary Policy Committee be helpful in ensuring that growth is optimal and be consistent with the recommended target of debt to GDP ratio? How about the third element in the Taylor rule, namely the equilibrium real interest rate? Will it give rise to problems in the determination of nominal interest rate and implicitly the derived therefrom the real interest rate?

The above questions raise issues about the way the real interest rate is worked out of the determined nominal interest rate and its consistency with the inflation target. Should inflation target attainment be considered as critical or whether nominal GDP target of about 12 per cent is critical for pursuing the flexible monetary policy framework? The inflation targeting versus nominal GDP targeting is in fact has been a subject of serious discussion in the general literature on macroeconomic policy in recent years. And this question would arise in a more open fashion in India too. It will assume importance now in view of the high inflation volatility partly caused by volatility in food and oil prices and partly because of volatility in external demand for India's goods and services. Oil prices and external demand cannot be estimated, being outside the control of India's policy makers. Higher the oil prices and lower the external demand, external current account imbalance would go beyond the manageable, if not sustainable level, of about 2 per cent of GDP, as suggested by Rangarajan group in the early 1990s. Any breach of this level would have implications for both the stock of foreign exchange reserves and management of foreign exchange rate that is credible and in line with the desired real effective exchange rate. India's managed float system, however, has worked reasonably well irrespective of the behavior of fiscal deficits and inflation in the last 29 years or so. Foreign investor sentiment has also been favorable in view of the fairly high growth rate, low inflation and well managed foreign exchange rate regime.

One must however recognize that monetary policy in India has so far followed wisely a number of indicators in its pursuit of inflation control, showing interest at the same time in bank credit developments. This does not mean that there are no policy rules for RBI to follow but the Bank has not blindly followed any one rule, given the many uncertainties.

The general literature on monetary policy shows that the one rule that has gained much attention in recent years is the Taylor rule. RBI is aware of the rule in that it does look into the two crucial components of the rule, viz., the output gap and the inflation gap but has refrained to determine the nominal policy rate (the Repo rate) on the basis of only these two gaps. Nor does the RBI give any clue about what it considers as the equilibrium real interest rate that forms the third component of the original Taylor rule. In general, the Repo rate that is statutorily considered as the policy rate, has been around the money market rate. In other words, the official rate is generally market related. It is not, however, clear whether this is the ideal position to take because as yet, there is no definite empirically-proved interest rate transmission channel of monetary policy. A large number of studies on India's transmission mechanism on the other hand seem to suggest that credit channel works better than exchange rate or interest rate channels. But credit has so far been relatively insignificant for activities that are related to ecological balance and environment. Nor is there any significant move towards sanctioning and disbursal of bank credit towards realization of equity. Besides interest rate determination, monetary policy may have to focus on liquidity requirements for funding not only output-generating activities and service sector but also financial sector. The financial sector has not been given as much attention as it deserves in most discussions of monetary policy making in India. This may have to do with the unsuccessful efforts so far to weave macro-prudential issues with monetary policy making exercise.

What does this analysis suggest? Monetary sustainability is not as relevant as fiscal sustainability for attainment of overall economic sustainability. Nevertheless, it is important to pursue monetary and exchange rate policies in a flexible manner without being nutty about any targeting approach to attain the ultimate policy goals. Most central banks know that monetary policies have to be pursued with the use of the art of the possible and not place them on the high pedestal of a definitive science. It would have to be much more broad-based than what inflation targeting would suggest.

Perspectives

Economic sustainability is the need of the hour because it brings to the fore the important face of development and humanize societies confronted with a range of challenges that go beyond economic issues. Macroeconomic policies such as fiscal, monetary and exchange rate and reserve management policies deserve a revisit should we value the content and character of economic sustainability. The green component that lays emphasis on ecological balance and clean environment as also equity and poverty reduction will need to be measured in terms of some credible units for policy makers to make effective contribution to the overall well-being of the people. It is important to recognize that economic sustainability in the case of India cannot be realized in the short run. It would be reasonable to expect its near-realization over the medium term or elongated medium term if there is public participation and partnership with the ecosystem along with sound governance.

The times ahead are exciting.

Thank you for your patience.

Opportunities and Options in Digital Financial Inclusion in India: A 9-I's Perspective[2]

- ***Harun R Khan***

Principal, College of Agricultural Banking (CAB), faculty members and friends from the CAB family, distinguished invitees from different institutions and colleagues from and the RBI, it gives me great pleasure to be here again in Pune at CAB for which I had long and loving memories including my stint as the head of this illustrious institution. The topic I have chosen for today's lecture has a great relevance to this institution. The whole idea of expanding banking for the unserved and underserved segments of people beyond the bank branches through the Business Correspondents (BC) network supported by ICT infrastructre was discussed intensely here in 2005 when as the Principal of CAB I had chaired the Internal Group on Rural Credit and Micro Finance set up by RBI. The recommendations of the Group, often referred to as the Khan Committee, culminated in issue of series of guidelines by RBI. Since then there have been several developments in pursuit of financial inclusion, the most significant being the opening of about 350 Jan Dhan bank accounts during 2015-17 in a mission mode. We are, however, still facing the challenges for improving the last mile connectivity and accelerating the pace of financial inclusion in a meaningful way. This has assumed greater significance as we focus on upscaling digitalisation of financial services, particularly for the disadvantaged and financially underserved groups. The country is poised to take great leaps as a digital super power; a recent McKinsey study of 17 matured and developing countries shows India's position in terms of digitization of the economy as the second following Indonesia. We have also made impressive progress in the recent years with digitization happening rapidly in banking and payments space. For example, in the last five years, the digital transactions have gone up ten times, particularly more rapidly post demonetization of November 2016. In the year ending March 2019 the volume of digital transactions has registered a growth of more than 50% over and above the growth of more than 100% in the previous year. This, however, is not considered enough as we are still behind many countries in terms of digitization of financial transactions. For example, our per capita

[2] Based on the lecture delivered by Shri Harun R Khan, former Deputy Governor, Reserve Bank of India on June 24,2019 at the College of Agricultural Banking (CAB), Pune to commemorate the Golden Jubilee Year of the College.

non-cash transactions, or cashless transactions, is still very low and the average for the disadvantaged rural groups the figure will be much lower. As has been highlighted in the recent report of the Committee on Deepening of Digital Payments (CDDP) of RBI(May 2019) (Chairman : Nandan Nilekani and other members : Harun R Khan, Kishore Sansi, Aruna Sharma and Sanjay Jain) (Nilekani Committee) in 2017 the per capita non-cash transactions in Singapore was 782 (rounded off), in Sweden which is one of the most advanced in terms of use of digital channels it was 498, followed by the US at 474, Euro-area at 187, Russia at 178, Brazil at 149, China at 98, South Africa at 79 and Indonesia at 34; however, India was way behind with a per capita non-cash transactions at a meagre figure of 22. Although most adults have bank accounts which can be digitally enabled and most credits can happen digitally the problem of digital debits, particularly for the customers in the rural areas for meeting their transaction requirements, remains a big challenge. Thus, we still have a long way to go. Hence, it is imperative to closely look at the opportunities and options to scale up digitalisation of financial inclusion substantially in a sustained manner.

To provide sharper focus on certain critical aspects of Digital Financial Inclusion (DFI), I would like to organize my perspectives into nine key thrust areas; 9-Is. These nine areas often overlap with one another but putting them into separate buckets will help us to appreciate the important areas requiring intervention for speedy and sustainable DFI. These 9-Is are; **Inspiration** flowing from conviction about and commitment for financial inclusion in general and DFI in particular; **Infrastructure** that is robust and responsive for accelerating DFI; **Innovations** which could reach the disadvantaged groups and be relevant for them; **Interoperability** challenges and choices for customer convenience**;** **Incentives** that would pull the users and other stakeholders to faster adoption of digital financial services and push the government / regulators to take initiative for meaningful DFI; **Insurance** in terms of security and sustainability of digital financial services; **Involvement** covering the efforts of multiple stakeholders /agencies in a coordinated manner; **Information** dissemination on DFI through effective communication and confidence building among first time/ early users of digital financial services; and , finally, **Insights** based on reliable and near real-time data and analytics leading to follow-up action and intervention. Let me now briefly discuss each of these 9-I's in some detail.

I.Inspiration: Conviction & Commitment

We all know by now that financial inclusion promotes economic growth as well as financial stability. Equally important to note is that financial inclusion should be taken up as profitable business proposition and not as charity or Corporate Social Responsibility (CSR) activity. To set a slightly different context let me refer to an important idea developed by a leading socialist leader and academician of 1960's and 70's, Kishan Pattanaik , who had espoused the concept of "outer proletariats"; they are not part of the formal economy and whatever they earn or save or invest all of that are outside the formal economy. Neither they benefit from such exclusion as they are deprived of opportunities of safe savings, low cost credit, remittance, risk mitigation through insurance and other welfare benefits delivered by the government nor the economy gains by not including them into the formal financial system. By not including them into the formal financial system it losses out the fruits of their economic activities and the big chunk of savings by way of stable deposits from a large number of small customers, opportunities available in mass market micro credit, insurance and investment products whose penetration levels, more so among the disadvantaged groups, are very low in comparison to most countries and efficient and fool proof delivery of government welfare benefits like subsidies and monetary incentives. At the macro level meaningful financial inclusion fulfils the objectives of inclusive and sustainable socio-economic growth and development encompassing self-employment and poverty reduction. Hence, the focus should be on bringing such "outer proletariats" into the mainstream. Hence, financial inclusion becomes critical for mainstreaming the marginalized sections who need formal financial services in an acceptable, accessible, affordable and assured manner

Thus, financial inclusion of extending banking to the poor will not mean poor banking rather a profitable proposition. In the current context, for example, better placed corporates will largely move to the bond market and other corporates facing the headwinds of over-stretched balance sheets and business cycle vulnerabilities will not be acceptable credit risk for the banks who are also facing capital constraints for big ticket corporate advances. The middle segment is also not in great shape. Hence, the large number of hitherto marginalized people at the bottom and just above the bottom of the pyramid and small entrepreneurs /business units provide big business opportunities to the banks and the financial institutions. There are, however, multiple barriers to financial inclusion from the supply and demand sides due to physical, cultural and sociological factors. DFI helps to overcome many of these barriers As we know in case of DFI, besides the advantages of larger coverage (i.e. large number of people living in rural and remote areas can be served in an efficient manner), convenience (of anywhere anytime financial transactions without having to deal in cash), and confidence (in terms of real-time access to one's account showing the transactions and balances), there is also great benefit of lower cost as low ticket digital financial services cost much less compared to the brick and motor base banking transactions and even the agent banking. The cost is less not only for the providers but also for the users. The target customers, for example, do not have to travel and spend long hours at the bank branches for availing of the banking services as with digital banking s/he will feel, *bank apne muthi mein* , that is, banking anywhere and anytime. Here one comes across the gender dimension of DFI as women in traditional societies like the rural India will be able to do financial transactions digitally from their homes or workplaces in a transparent and safe manner. As the habit of digital financial transactions of the new customers grows the question that would arise is how to create more products suitable and appropriate for them so as to sustain their interest in continuing digital transactions. The answer lies in harnessing the digital foot-prints. It is possible to analyse and understand the financial history as also the behaviour of the customers from the data generated through digital financial transactions. Banking experience over the years has taught us that collateral is a myth and it is the cashflow and the character of the customer which matter the most. Thus, we can analyse the pattern and behaviour through the digital transaction data to assess the credit worthiness and cash flow mis-matches of the customers and design and offer products accordingly.

As I have mentioned earlier. we have made impressive progress in DFI so far; for example, digital transactions in terms of volume and value have gone up substantially in the recent years, particularly very rapidly in the post demonetization phase. Even as digital transactions have been going up substantially, cash transactions, which entail visible and invisible cost for all, have not come down sharply; in fact if we look at an important measure of this,i.e. currency to GDP ratio, after dipping in the post demonetization phase it has been going up from 8.7% in 2016-17, to 10.7% in 2017-18, and to 11.2% in 2018-19, not very different from the pre-demonetization trend of 11.5 to12 %. Given the social, cultural, and other contextual factors and, particularly in the case of unbanked and underbanked population groups, the goal realistically should not and cannot be a "cashless" society but "less-cash" or "cash-lite" economy because it is difficult to conceive of totally cashless financial system. Hence over the next few years the aim should be bring down the currency to GDP ratio to the global median level of about 7%. In our journey of upscaling digitalization of financial services, particularly for the new entrants to the financial inclusion space, we should both strategically and tactically traverse the path of "phyigital" i.e., physical and digital: brick and click; mortar and mouse; this approach to financial inclusion should be considered appropriate, especially in the transition phase.

II. Infrastructure: Robust and Responsive

As we know physical, digital and the public good infrastructure which should be robust and responsive to the requirements of a large country with very large population has been expanding rapidly but there are gaps which need to be filled in. One of our major achievements in the recent years has been the JAM; the trinity of Jan Dhan Accounts, Aadhaar based national unique identity infrastructure, and the mobile phones. According to the World Bank Global Findex of 2017 (published in 2018) 80% of the population of India have bank accounts compared to just about 50% in 2014 and the number could be little more now. Jan Dhan Accounts which are small value KYC-lite accounts of low-income population were opened in a mission mode between 2015-17 and their number is more than 350 million and along with them nearly 290 million Rupay debit cards were issued. The Jan Dhan accounts, which were mostly dormant, are now seeing increasing level of transactions. While most of these accounts can be enabled for digital transactions the share of digitally active accounts is very minimal, more particularly in the rural areas. This is partly because matching infrastructure is not available. Aadhar, one of the most visible public identity programmes of India and unique in the world, has also faced some challenges in the recent times in terms of security, safety and legality.

Out of 123 mobile phones only about 37% are smart phones and in rural areas, the percentage is very low at about 8%; in case of women it is even less than 3%. Most digital products like mobile banking or UPI are unfortunately built around smart phones. The need of the hour is to have a device which is something between a smart phone with limited features and ordinary feature phone with some smart phone attributes, say a smart phone-lite,i.e, a cell phone with three to four elements of smart phone and more affordably priced at around Rs.2 to Rs. 3000. Till such time such a device is available we need to work around the ordinary feature phones which can be enabled for basic banking transactions.

We have more than 900 million debit cards and 50 million active Kisan Credit Cards (KCCs), the latter being more of a misnomer as most of them are passbooks and not actually cards. However, due to lack of adequate and reliable acceptance infrastructure their usage has been low. KCCs can be cited as an example in this regard. We have been making efforts for rapid digitization of KCC transactions since long; however, there has been no significant success here. The primary reason is the non-availability of Point of Sale (POS) devices, particularly in the rural areas. Although in the post-demonetization the number of POS machines has gone up to 3.7 million we still have a long way to go. The average penetration of POS, as per 2018 data, in India is 2550 POS per million population whereas in China it is about 18000, Australia about 40000 and Singapore about 33000. In this context, I would like to refer to the recommendations of the Nilekani Committee which has recognized that expansion of acceptance infrastructure has been very low in relation to the cards issued primarily because the cost and incentive structure is biased against the acquirers and the merchants. The suggestions of the Committee include periodic interventions by the regulators to address the interchange fees and other related issues so as to create a level playing field for both the issuers of cards and the acquirers of acceptance infrastructure and the creation of an Acceptance Development Fund for populating Tier III to Tier VI areas with POS machines so that the cards can increasingly be used for digital transactions. The contributions to the Fund can come from the issuers from out of the interchange fees and support from RBI and the Government. QR codes, which provide an asset lite low-cost acceptance infrastructure, can be an alternative; however, the obstacles here are the education of the merchants for its acceptance and inadequate penetration of smart phones. Therefore, there is a need to create an end to end acceptance eco-system for enabling users of KCCs to shift from cash to digital transactions. The other important issue is that of connectivity, in terms of availability as well as speed of internet. As per the Speed Test Global Index India is placed at 69 out of 139 countries for average fixed broadband speed and at 120 out of 178 countries for average mobile internet speed. Thus, there is a lot of catching up to be done to reach a high-speed environment like that of 5G as many areas are still poorly served even in 2G space. There are ambitious programmes like Bharat Net of National Optical Fibre Network aimed at covering all the 2.5 lakh village panchayats by connecting them with a speed of 100 MBPS; however, the progress so far has not been very impressive. If implemented properly and quickly it could be a game changer for rural India for digitization in general and digital financial inclusion, in particular.

For easy onboarding of customers, particularly disadvantaged groups, who often lack the required documents to establish their identity and address, it is important to have a simple yet reliable Know Your Customer (KYC) infrastructure, both in legal and physical terms. We have taken great initiatives to have the infrastructure of e-KYC based on Adhaar and centralized KYC (C-KYC) of CERSAI (the Central Registry of Securitisation Asset Reconstruction and Security Interest of India). Achieving the desired scale speedily has, however, not happened; hence, the governance structure of CERSAI and technical, regulatory and operational issues surrounding uploading of KYC data to the CERSAI server should receive focussed attention. In case of Adhaar based e-KYC Government and the regulators will hopefully put in place a workable framework following the passage of Adhaar Act post Supreme court judgement in this regard.

The regulatory framework has to be responsive and responsible enough to shepherd the evolution of DFI by balancing innovation and risk and reducing the regulatory burden, particularly in the early stages of product evolution. For example, when the SHG (Self-help Group)-Bank movement, which was something unique at that point of time, started in our country Reserve Bank allowed the linkage of such SHGs with the banking system even though the they were not registered entities and adopted a light-touch regulatory approach. This helped the programme to grow by allowing time for the experiment to reach some level of maturity before stricter regulations could kick in. Quite often technology moves faster than regulation, thereby revealing the gaps in regulatory capacity. Hence, the regulators need to have a collaborative and consultative approach in relation to all the stakeholders so that the process of ever-changing finance space evolves in safe and smooth manner.

Finally, we need to acknowledge the criticality of robust infrastructure for cyber security in terms of state-of-the-art institutions at the national level and at the level of the regulators and the individual players. A world where no cyber frauds or attacks can take place is a utopia. Since cyber fraudsters always try to move ahead of the capacity of agencies charged with surveillance and regulation such incidents will continue to occur. We cannot give up travelling on a vehicle on the highway because accidents can happen but should provide for proper system of navigation checks and traffic controls for minimizing the chances of accidents. Similarly, we need strong institutional infrastructure to monitor and provide guidance for prevention of cyber-attacks and facilitate the management of the fall-outs of such attacks. This assumes importance as we scale up the digital transactions, more so with the rapid influx of first-time users who are neither financially educated nor digitally literate. This is one area where regulators are taking proactive steps; for example, RBI has mandated training of directors/ top management of the banks in the area of cyber security at the Institute for Development and Research in Banking Technology (IDRBT). As cyber frauds and attacks are occurring quite often, some of which originate within and some from outside the country, we have to fast forward the proposal of establishing FIN-CERT (Computer Emergency Response Team for the Financial Sector) at the national level.

III. Innovations: Reach and Relevance

Several innovations have taken place in the last few years in use of technology to further financial inclusion. Let us start with the handheld devices. When the report of the Internal Group on Rural Credit and Microfinance was being prepared we had to address the issue of creating a structure for doing banking business outside bank branches through door step agents the difficulty arose as in terms of the Banking Regulation Act no banking business can be undertaken outside bank branch premises and no one other than a bank can use the term, "bank", "banker" or "banking". However, through a wider interpretation of statute, the Group recommended the concept of "Business Facilitators" (BFs) and Business Correspondents (BCs) for doorstep mass banking. This was in a sense a case of regulatory innovation. It may not be out of context here to mention here the agent-led small/pigmy deposits schemes of some of the banks which were introduced decades ago. The product was quite useful for people who couldn't come to bank branches for their deposits but it died an unnatural death due to problems of reconciliation of deposits placed by the customers and balances appearing in the books of the bank with many frauds being committed by the collecting agents. To avoid such problems associated with agent banking need was felt to marry ICT solutions to the BC model. Here the handheld devices came handy as BCs will have to capture the transaction data online same day or in the case of lack of connectivity upload the data offline in the next 24 hours and then transmit to the bank server. Thus, the transactions are reported to the banks on real/ near real-time basis, leaving much less scope for delays in reconciliation and committing frauds. Since then we have had many technological breakthroughs and new delivery models from UPI (Unified Payment Interface) for funds transfer to Artificial Intelligence (AI) based credit under-writing. One issue that arises in this context is that people are more comfortable with voice-based interfaces and their acceptance level goes up if messaging happens in vernacular languages. Given the large number of languages used in India this will of course be very difficult. Technologies like the translation packages developed by Pune based C-DAC are, however, available to address this problem. In the financial inclusion space there are many other possibilities of technological innovations like AI-based digital identity, off-line onboarding of customers, facial recognition linked offline merchant transactions and mass market financial advisory services. Here we need to focus on Fin-techs which can be harnessed to tap these and other opportunities in DFI space. Fin-techs are generally used in the fields of payments, savings, insurance, financial advisory, and distribution services, etc. Unfortunately, their focus has been mostly on metros, the tech savvy and the affluent class. According to a study conducted by Micro Save and the IIM-Ahmedabad, the affluent class to which the Fin-techs are targeting are all millennials seeking financial independence, they are basically professionals, have smart phones, value comfort and convenience of technology, consume a lot of internet time for variety of purposes, and, more importantly, they don't want to visit bank branches. Similarly, not many innovations have happened around feature phones which are used by most of the poorer/ disadvantaged groups. Fin-techs have not made much head way in targeting the bottom of the pyramid or just above the pyramid clientele.

In context of technological innovations let me briefly touch upon the experiments with Regulatory Sandboxes (RS) started by the Financial Conduct Authority of UK in 2015-16.RS refers to live testing of useful innovative products or services, mainly by the Fin-techs, in a controlled regulatory environment that may provide some regulatory relaxations; based on such field experiments full scale rollout of such innovative products will be permitted with or without regulatory changes along with safeguards against different risks for the customers The RBI had set up an Inter-regulatory Working Group (WG) in July 2016 to look into and report on the granular aspects of FinTechs and its implications so as to review the regulatory framework. The report of the WG was released on February 08, 2018 for public comments. One of the key recommendations of the WG was to introduce an appropriate framework for a RS. The draft on enabling framework for regulatory sandbox was issued in April, 2019. . We need to move fast and issue the final guidelines quickly. There are some aspects that need to be examined in the context of the draft guidelines on RS. These pertain to (i) credit information that would help in many ways in improving credit under writing standards, (ii) data architecture focussed on data privacy ,and (iii) customer consent. The last one assumes special significance for the people from the disadvantaged groups because they may not be aware about what they are giving consent for. There is, therefore, a need for an explicit framework of consent and to ensure that people understand the most important terms and conditions When entities are allowed to participate in the regulatory sandbox these aspects need to be taken care of.

In the context of technological innovations it is important to keep in view the imperative that they need to be married to sound business models. Digital innovations should be seen as the means to the end of conducting mass market banking in a profitable yet prudent way. Here again we could keep in view the "phygital" approach. For example, in the urban areas where there are thick populations, we can have digital kiosks, with one or two staff and have different timings so that people can visit in the morning and evening and the other could be expanding the digital inclusion in the rural pockets/weekly village markets through Wi-Fi enabled mobile vans for doing transactions nearer to where customers live or work. This will enable people to gain confidence in and familiarity with digital modes of transactions. The whole issue is to contextualise technology in the prevailing social and cultural milieu. The regulator has a role here in balancing innovation with responsibility. One area which probably the RBI can examine is the Central Bank Currency. People still have fancy for currency and same time the regulators and the Government prefer them to go digital. One solution increasingly being aired is so why not have Digital Fiat Currency so that we don't have to print currency and move them engaging security force, can protect money as a public utility, facilitate financial inclusion by allowing people access to free/ low cost basic bank accounts with the central bank, encourage competition for providing better services by the commercial banks vis-vis the free bank accounts that could be offered by the central bank , obviate the necessity of deposit insurance and overcome the need to rely on indirect control over money supply for monetary transmission. Some central banks have started discussing this concept and researching on the possible use of digital fiat currency; therefore, this is a concept we should have a serious look at in the near future.

IV. Inter-operability: Choices and Challenges

In the context of DFI interoperability is very important as it provides a collaborative and ubiquitous payment system with customers accessing multiple digital access points for seamless transactions. This greatly enhances customer choice and convenience. We have examples which show the potential of simple yet scalable models which can speed up DFI: inter-operable BCs and micro ATMs being used by them for offering services of all the banks. It can thus increase the volume of business at the BC points; for example, a BC of bank X being able to undertake transactions of the customer of bank Y and thereby contribute to the viability of the BC network due to increased volumes. Besides customer convenience micro ATMs using Aadhaar based biometric authentication and thereby obviating the need for cards can also facilitate delivery of digital financial services in a bank agnostic manner; however, we need to have well defined inter-operability standards. BCs can become an efficient Digital Assistants who can provide digital financial literacy inputs to new customers cutting across banks. Of course, QR code based mobile phone is another way of achieving inter-operability. In the space of pre-paid instruments (PPIs) interoperability has been enabled by the regulators and will greatly enhance convenience of the customers as they will be able to transfer funds across wallets, bank accounts and merchant networks. This could facilitate digital payments for financial inclusion with easy access to different products, especially facilitating merchant transactions under UPI 2.0. There are, however, some issues relating to limits and KYC processes which need to be addressed to achieve the full potential of such interoperability. UPI is the latest and most visible example of interoperable payment transactions using a simple virtual address or unique mobile phone number. UPI can overcome the need of merchant acquisitions as payments can be made to the merchants linked to bank accounts and having virtual addresses. UPI is rapidly gaining traction with volumes surging every passing day but to make it more acceptable to the customers more use cases need to be built, additional features like facility for recurring payments like loan EMIs through e-mandates added and merchants encouraged to use UPI through low cost asset light acceptance structure like the Bharat QR which need to be populated speedily.

Another area of interoperability, which is now being talked of quite often, particularly in Europe, is Open Banking system which seamlessly allows customers to share their financial transactions data with other banks and non-banks by using Application Programming Interface(API). Other banks, Fin-techs and non-bank third party service providers riding on such data can provide competitive products to the customers who can, thus, reap the benefits of the digital financial footprints they create. This can lead to deeper financial inclusion. Some private banks in India have started to provide API platforms but their efficacy is yet to be assessed. Here it is important to recognise the challenge, such as, the need for technological innovations to be accompanied by well aligned commercially viable business models, evolution of standardised guidelines and data sharing protocols, availability of round the clock support system and the mechanism for constant monitoring of cyber security breaches arising from interconnectedness among several players. In a sense UPI is an example open banking initiative of the National Payment Corporation of India (NPCI) but products based on UPI data are not so much visible.

To provide better choice of acceptable and affordable products to low ticket customers and compel the incumbent banks to offer better quality services to such customers the proposal of account portability, which could be considered as the logical next step of interoperability, can be revisited. Account portability was difficult some time back; however; since c-KYC is now available and there are ways to handle the technical issues this an idea whose time perhaps has come.

V. Incentives: Pulls and Pushes

Right kinds of incentives are important for promoting digital financial inclusion, more so in its early phase of evolution. The incentives should comprise both “pull” and “push” factors. Further, incentives need to be there for all the stakeholders and others connected with digital transactions. As far as consumer or users are concerned, the behavioural changes will happen once they feel the same ease in doing digital transactions as in the case of cash transactions. They should get a feeling of comfort and convenience of cash like transactions and benefit in terms of cost savings, perceived and real and other non-monetary incentives. For example, take the case of USD based mobile banking done through simple feature phones. This was meant to provide last mile digital connectivity to large part of the population who still use feature phones. Yet this could not be scaled up as the process is cumbersome for the customers, there is multiple transaction failures and steep telecom charges for several steps involved in a transaction. Let us also take the earlier example of digitization of KCCs. Besides non-availability of POS infrastructure and awareness the absence of any incentives like cash backs and loyalty bonuses for digital transactions, at least during the early stages of issuance of cards, has converted the product into an easy instrument for cash withdrawals, which often happen in one go to the extent of limit available. Similarly, in the case of Aadhaar Enabled Payment System (AEPS), which allows transactions at the micro-ATMs available at the BC points, lack of cash back / loyalty incentives and the difficulty of having to remember once 12-digit Aadhaar number have led to its muted acceptance. Of course, the whole issue of inter-change fees / Merchant Discount rate(MDR), as mentioned earlier, affects the behaviour of the merchants and, in turn, that of the customers needs to be addressed so that every stakeholder in the card payment space has an incentive (for example, fair and optimal sharing of MDR) for facilitating card transactions at POS. Particularly in the rural and semi-urban areas cultural incentives like the gifts of digital money during festivals that touch the sentiments of people can also be offered as has been tried in other countries.

We also need to understand that it is not just the cost that deters people from doing digital transactions. The reason why people are not pulled towards digital transactions on a sustained basis could be the absence of tangible benefits associated with doing such transactions apart from the convenience factor. Data, as we know, is treated as a new oil and, as some other say, new water and this needs to be used to facilitate flow of credit to the regular users of digital financial services. Analysis and understanding the digital footprints can provide enormous potential for different product offerings. Here the use of Artificial Intelligence (AI) can be an important tool. Similarly, dis-incentives for use of cash in a calibrated manner. Simultaneously easy availability of cash-in and cash-out infrastructure as a back-stop will push the people to increased use of digital modes of transactions.

Big push for DFI can and should also come from the regulators like RBI and the Government. RBI and the Government spent huge amounts for printing, distribution and safety and security of currency storage and movements. Government saves a lot of name by routing the transfers of subsidies to the bank accounts by way of Direct Benefit Transfers (DBT) and, thus, eliminates the problem of ghost accounts. Government also has a positive bias for formalization of the economy by reducing cash transactions so as to improve tax compliance and associated fiscal benefits. Similarly, Government benefits enormously by way of cost saving and easy reconciliation and accounting when it receives money digitally. In the case of DBT transfers non-cash/digital credits are now happening seamlessly and this would become much more relevant as Government scales up their transfers to citizens, for example, welfare payments to farmers and possibly when the Universal Basic Income (UBI) transfer schemes become reality. The problem, from the point of view of DFI, is the digital/ non-cash debits at the last mile after the digital credits hit the bank accounts. Hence, government/ RBI can push people to digital modes through expenditure on digital infrastructure, for example, creation of the Acceptance Infrastructure Fund mentioned earlier and incentives for both people to merchant and people to Government digital transactions

VI. Insurance: Security and Sustainability

In digital transactions insurance meaning safety of customers in relation to increasing risks of cyber frauds, transaction failures and Denial of Services (DOS) assumes a lot of significance. This is particularly so for the first time or early users of digital financial services as even loss of small amounts could mean a lot to poor customers and in such a situation they will perceive it safer to revert to use of cash. Hence, it is very critical to have strong security systems which are upgraded continuously at the level of financial services providers and their partners. In addition, they should also have robust and near real time fraud management systems and processes.

Equally important is the customer protection for sustainable DFI. We often hear about “responsible” financing and this equally applies to digital lending and other digital product offerings. We receive frequent offers of loans in a few minutes. Such instant products could be based on improper credit underwriting standards and may, therefore, lead to over leveraging of the borrowers with all its adverse fall-out for the gullible customers who could then lose their faith in the system and the poor quality of loan assets for the lenders. Therefore, loan products to small customers need to be provided in a prudent and responsible manner because once customers get into financial difficulty and lose trust in such financial offerings it could be the end of their digital financial journey.

Concerted efforts are being made to scale up digital transaction volumes; for example, Government has now set target of 30 billion digital transactions for 2019 on the top of the target of 25 billion last year and the Nilekani Committee has suggested speeding up of per capita digital transactions to 10 times over the next three years. In this context, we have to assess if the current consumer grievance redressal system will be sufficient in relation to the likely surge in digital transactions leading to mammoth number of grievances and complaints; particularly as more and more digitally not so literate customers get into financial inclusion space in digital modes. Hence, we need to have very efficient, effective and ubiquitous complaint redressal mechanism covering different channels and service providers. The process should be simple for the customer who should be able to report their grievances across all the touch points of the payment eco system – ATMs, POS, BC Points, mobile apps, net banking platforms, helplines, call centres, etc. and get the matter resolved in a time bound manner. As several entities are involved in the digital transaction chain someone, say, the bank having the customer account, i.e., the issuer, may have to coordinate among them to resolve the complaint. Technology supported Online Dispute Resolution (ODR) mechanism should be the first level in complaint redressal framework followed by internal redressal authority / internal ombudsman of the financial institution providing the service and finally the appeal should move to the Digital Ombudsman being set up by the RBI.

Here one more aspect we need to bear in mind is the quality and appropriateness of communication with the customers. Most service providers, for example, use call centres for redressal of customer grievances. The call centres should have the capability to calibrate their communication styles keeping in view the geographical locations, educational standards and cultural background of the customers. For example, while explaining the matter to semi-literate rural customers if too much of technical jargons are used without any empathy it could lead to their alienation. Hence, when call centre staff deal with the customers the choice of language, tone and temperament, voice quality, etc. will matter a lot; the idea is that when a customer contacts a call centre s/he should have a pleasant experience.

Increasing use of technology without adequate Business Continuity Plan (BCP) can frustrate the very purpose of digital inclusion for which technology is being used. Let me share with you a recent experience when I was in Bhubaneshwar during the cyclone Fani. I had to make payment in a hospital for an emergency but neither the POS was working for card transactions nor the nearby ATM had any cash to dispense. Connectivity was not there for more than a week. This led me to think about the criticality of the business continuity for digital financial services. If continuity is not maintained people may tend to go back to the habit of cash transactions and may also start hoarding cash for emergencies. This underscores the importance of an efficient cash-in and cash-out arrangement covering different touch points like the branches, ATMs, /merchant outlets as the back-up. As disasters and natural calamities are going to recur frequently, mainly due to climate changes, we need to have robust business continuity arrangements. For example, telecom service providers are required to erect towers that could withstand a very high wind speed in sensitive / coastal areas and follow certain maintenance protocol. There is, however, need to have a proper system of audit and accountability to ensure compliance with these requirements. Similarly, we need to have back-up infrastructure and portable VSATs for sensitive zones to restore connectivity for digital business continuity quickly after a disaster strikes. This is very important to sustain interest and trust of people as they migrate from cash based to digital transactions.

VII. Involvement: Coordination and Coverage

Multiple stakeholders are engaged in the space of DFI; they are the financial service providers like banks and their partners and agents like the BCs, non-bank entities like NBFC-MFIs, other MFIs, Government departments/agencies, primarily the Department of Financial Services, the

Ministry of Electronic and Information Technology (MeitY) and the Department of Telecom at the Central Government level, regulators and development agencies like RBI, NABARD(the National Bank for Agriculture and Rural Development) and SIDBI(the Small Industries Development Bank of India), NPCI(the National Payment Corporation of India), telecom and other technology service providers and industry and trade associations. While each of them is involved with varying degree of intention and interest there is a need for high level of co-ordination and collaboration for achieving synergistic results. The existing institutional mechanisms like the State Level Banker Committees (SLBCs) and the District Level Coordination Committees (DLCCs) could be harnessed for bringing in the proactive participation of all the stakeholders at the state and district levels. At the national level formulation and implementation of a strategic digital financial plan in a collaborative and coordinated manner as a critical element of the overall financial inclusion roadmap should be guided by the Financial Inclusion Sub-committee of the Financial Stability and Development Council(FSDC), the forum comprising the Ministry of Finance and the financial sector regulators.

In the financial inclusion space, we have the potential to harness a large institutional network of commercial banks in the public and private sectors, foreign banks, co-operative banks, the Regional Rural Banks (RRBs) and now the Small Finance Banks (SFBs) and the Payment Banks (PBs), the underlying philosophy being that of a multi-agency approach based on *let hundred flowers bloom*. While some of the new generation private sector banks have launched digital products suited for DFI, except a few, they have not shown eagerness to participate whole heartedly in DFI initiatives for meaningful financial inclusion. Most of the Public Sector Banks have been deeply involved in financial inclusion initiatives, partly following the directions from the Government as their owners; see for instance, how they were engaged in opening of massive number of Jan Dhan accounts in a mission mode; however, making the accounts digitally enabled and the account holders active digital users have not seen similar zeal. Foreign banks have been almost non-existent in this space. As many of them have high level of capability for digital offerings they could be incentivised to be actively involved in DFI by giving them some credits under the Priority Sector Lending requirements which most of them find difficult to comply with. It is well known that the co-operative banks in early part of 20th century and the RRBs in mid-1970's were created with the primary purpose of financial inclusion but DFI seems to have largely bypassed them with very few of them, for example, offering customer friendly digital products; same is the case with the recent innovation of UPI which have not been adopted by them. Their low level of involvement is because of issues relating to capacity to bear the cost of hardware and software including the business continuity and security setups, inadequate specialised man-power, lack of active support from the sponsor banks, etc. Reduced cost of technology, low cost of data storage on cloud and accessing digital public infrastructure like Aadhaar database, Bharat Net and Digi Locker open up new opportunities for RRBs and cooperative banks for digital offerings. For their deeper involvement in DFI with all its positive benefits of retaining and expanding their customer base and serving them in a cost effective and convenient manner there is an urgent need to have a strategic road map for DFI for them with financial and technical support of NABARD and the IFTAS (the Indian Financial Technology and Allied Services).

The other vital institutional infrastructure, which can be harnessed is the wide network of the BCs, their official number being staggering 5,40,000 although many of them may be inactive, created for expanding access to banking to the underbanked population through the door step agents by leveraging technology. The experiment started with a lot of promises but the performance has been mixed. The main issue is how do we ensure their active involvement in financial inclusion by creating viable models to make them sustainable. In the specific context of DFI one option could be is to make the BCs Digital Assistants. Digital Assistants can play a very important role in educating and enabling new customers to start and continue digital financial transactions in an assisted mode before they gain confidence to move into self-service mode. The performance evaluation of such Digital Assistants and their remuneration could be based on number of first-time users they bring into digital space and the number of digital transactions done by such customers at the POS and BCs points. Payment Banks, which are yet to come up with a viable business models, can also be involved in digital initiatives of the commercial banks under mutually acceptable partnership models.

Involvement of national level non-government organisations like the India Stack group working on open digital infrastructure platform to promote ‘’presence less, paper less, and cash less” services, NASSCOM (the National Association of Software and Services Companies) supported iSPRIT involved in the promotion of India Stack applications and other dedicated NGOs who have taken up the advocacy and awareness creation responsibilities can help in fast forwarding DFI.

There is also an international dimension of involvement when we engage with the global bodies/alliances for sharing experiences and learning the emerging models being experimented elsewhere. Such global partnerships will help in evolving and emulating the best practices and principles, such as, the High Level Principles for DFI published by the Global Partnership for Financial Inclusion (GPFI) of G-20 and the Payment Aspects of Financial Inclusion supported by the World bank and the Committee on Payments and Market Infrastructure (CPMI) of the Bank for International Settlements (BIS). Active engagements with the global forums, such as, the Consultative Group to Assist to the Poor (CGAP), the Alliance for Financial Inclusion(AFI) , the UN supported Better Than Cash Alliance (BTTA), CPMI and the global standard setting bodies will help us not only to gain insights to the emerging trends and practices but also showcase our achievements like the national digital identity programme of Adhaar, mass banking access programmes like the Jan Dhan and innovative digital products like the UPI.

VIII. Information: Communication and Confidence building

Easy access to information about availability of digital finance products and safe ways of their use is very critical for the and the potential new beneficiaries of DFI as for most of them the level of financially literacy is very low; once study shows the average financial literacy ratio in India is only 24 percent and it would be still lower in terms of digital financial literacy. Multiple mediums and channels can be used for spreading digital financial literacy. What is important is the content of the communication and how the target customers comprehend them. Here a segmented approach would be useful as focus of information dissemination has to be different for different target groups like new to digital financial services, people having only basic feature phones, students, farmers, women, elderly people, physically challenged, etc. Communication should aim at delivering simple and easy to understand information about digital finance products without technical jargons. It should preferably be in vernacular language. Often high impact messaging can prove to be very useful in changing customer behaviour. We have a parallel, for example, in the case of advertisement for mutual funds; *mutual funds sahi hai* (Mutual Fund is the right choice). In the DFI space we can have something like *Digital Ka Raasta Hai Sahaj Surakshit Aur Sasta* (Digital banking is simple safe and affordable). Such messaging should be accompanied by robust digital infrastructure and active involvement of all the players at the ground level.

Given their regular interactions with the customers digital financial education of the front line staff of banks, in particular, those of the Public Sector Banks, RRBs, co-operative banks and the SFBs and other associate staff like those working at the call centres is very important in spreading awareness about digital financial products and providing support to the new users by promptly responding to their queries and doubts. As mentioned earlier, BCs can be properly trained and incentivised to act as Digital Assistants to the new users of digital financial products. As they have the reach their involvement can be very useful for communication and confidence building and they should be adequately remunerated for such awareness spreading activities.

High impact confidence building and familiarisation programmes involving simulated exercises in an assisted mode can also make a lot of difference. We can employ carpet bombing in certain areas where a lot of transactional activities happen, for example, weekly village *mandi/haat*. Similar programmes can be done at places where and when there is a large foot falls of people. We could create an end to end infrastructure for digital payment in such places and encourage people to try out digital transactions; they can be attracted with small gifts for joining such exercise. We would have to repeat such programmes for a few times for a recall value. Local banks, BCs, NGOs, bank sponsored Financial Literacy and Credit Counselling Centres (FLCCs), NGO led Centres of Financial Literacy (CFLs) and technology service providers should be roped in for such programmes. People here should be given hands-on experience of simple, digital finance products like card banking, mobile banking, internet banking, UPI and the use of micro ATMs along with the tips for safety and security. A lot of agencies like the RBI, other regulators, NABARD, banks, NGOs and Government agencies are involved in this area. For example, the RBI has conducted many e-BAAT (Electronic Banking Awareness And Training) programmes along with banks and other agencies in many rural and semi urban areas to promote mass adoption of digital banking. NABARD conducts similar programmes in rural areas. Such efforts need to be synergized in a co-ordinated fashion. The collective communication efforts could be integrated under the aegis of the National Centre for Financial Education (NCFE), jointly set up by the financial sectors regulators; NCFE or the Indian Bank Association (IBA) could also conduct periodic surveys to assess the impact of such interventions. Funding of NGOs and similar entities engaged in such awareness activities should be linked to performance-based parameters. Existing agencies like FLCCs/CFCs should be revitalized for undertaking target oriented digital financial literacy programmes. Similarly, digital financial literacy programmes should also be integrated into the ambitious national digital literacy initiatives and schemes like the Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDSA).

IX. Insights: Analysis and follow-up Action

As we scale up the efforts to substantially increase digital foot-prints in the financial inclusion space it is imperative to have comprehensive, consistent and near real time data on DFI outcomes for analysis, assessment and follow-up action. Here the regulators and the financial institutions can rope in academic institutions and market research organizations. A lot of data is published by MeitY, RBI, NITI Aayog, etc., on progress of DFI but they are not really near real time and are marked by inconsistencies. The Nilekani Committee has recommended that RBI should be the single point source for collection and dissemination of DFI data. Further, the data coverage has to be clearly defined; for example, while the customer transactions within the same bank should be out of digital payments data so also the funds transfers done through mobile or internet banking and already captured under NEFT(the National Electronic Fund Transfer), closed loop PPI transactions should come under the remit of digital payment data .

The Nilekani Committee has also recommended introduction of a Digital Financial Inclusion (DFI) Index. Such index can be used to track the transition of customers from being unbanked, to banked, to active bank user, digitally enabled users and finally to active digital users. This index could help us to monitor the ground level situation in different areas (district wise, block wise, panchayat wise, etc.) in terms of digital infrastructure, access to fand usage, both quantitatively and qualitatively, of banking and payment and other financial products like insurance, pension etc., and behavioural and cultural insights into adoption of digital culture leading to targeted interventions. Such granular data can be generated by a common and reliable central source like the RBI and shared with the SLBCs/DLCCs to identify areas where more efforts are required to be made for supply of and demand for digital financial services. A Standing Committee on Digital Payments of the SLBC should be entrusted with analysis of such data and initiation of follow-up actions involving all the stake holders. Periodic surveys on qualitative and quantitative coverage of DFI and impact of different DFI focussed programmes in different areas through national level institutions like NCFE or the IBA can be very useful for providing the feedback for the mid-course corrections.

To sum up, let me recount the 9 *sutras* or key thrust areas for successful and sustainable digital financial inclusion : (i) conviction about benefits of DFI and commitment to accelerate DFI initiatives following a "phygital" path in the transition phase; (ii) robust and reliable digital payment infrastructure by building upon JAM trinity with bias towards expansion of less costly and convenient infrastructure and rapidly scaling up reliable and high speed connectivity network in the rural areas;(iii) fostering innovations in technology focussing on areas relevant in the financial inclusion space through Fin-techs and other methods including collaborative use of Regulatory Sandbox framework of RBI and aligning technological innovations with socially useful and commercially viable business models ;(iv) incentives for the users and all other stake holders so as retain their skin in the game and calibrated disincentives against excessive use of cash; (v) scaling up the existing mechanisms and models of interoperability and focussing on open banking with API applications supported by business strategy and unification and standardization of technical requirements; (vi) insurance by way of safety and security for the customers in relation to cyber risk, technology risk, overleveraging risk and business continuity risks through regulatory oversight and national and global collaborative initiatives and protection of early users against irresponsible digital financial services; (vii) coordinated involvement of all the stakeholders in the national strategy for financial inclusion using the digital tools and proactive engagement of agencies like SLBCs/DLCCs at the ground level in furthering DFI in a meaningful way; (viii) information dissemination aimed at creating awareness about digital financial services through easy to assimilate and high impact messaging and hands-on familiarisation programmes for the customers and the front-line staff of the financial institutions ; and ,finally,(ix) gaining insights into progress achieved in digital financial inclusion so far, both quantitatively and qualitatively, and the emerging trends through near real-time, reliable, consistent and comprehensive data for well targeted interventions by using a Digital Financial Index.

At the end, I would like to re-emphasise that we are into very interesting times when we can unlock the emerging opportunities and options to scale up digital financial services to an unprecedented level to achieve broader and deeper financial inclusion. I would also like to add that as we traverse this exciting journey of digital financial inclusion we should not lose sight of both the real benefits and the possible risks to the target groups of disadvantaged and poor people who should genuinely believe in the slogan: *Digital Ka Raasta Hai Sahaj Surakshit Aur Sasta.*

Thank you very much for your attention.

Doubling of Farmers' Income – Role of Banks[3]

- ***Dr. Ashok Dalwai, I.A.S***

Good Afternoon to all of you!

College of Agricultural Banking (CAB) has been associated with the bankers, who in turn are closely associated with the lives of farmers in India. Participants from many other countries, especially from Asia and Africa may have come here over the last 50 years, and benefited from the rich learning ambience here. On the Occasion of the Golden Jubilee Year of this prestigious College of Agricultural B00anking, I would like to wish the very best. Let us all together congratulate the Principal and her colleagues, as they celebrate the 50th year of not just its existence, but valuable contributions to the society and development of India. Let all of us here in this hall wish them many more years of service in uplifting the quality of lives of our people. As we cheer them by way of thunderous applauds, let us also remember with gratitude all those who have built this reputed institute, and imparted it a tapestry of rich culture and traditions, that has sustained the service motto of RBI's College of Agricultural Banking.

Introduction

The Doubling of Farmers' Income (DFI) emanated from the vision of the Hon'ble Prime Minister who for the first time articulated this at a public meeting at Bareilly in February, 2016. The commitment of the Government of India (GOI) to this particular vision came to manifest itself in its inclusion as a budgetary announcement for the year 2016. Immediately thereafter, the Government constituted an Inter-Ministerial Committee (IMC) in April, 2016 to recommend a Strategy for Doubling of Farmers Income. The members of the Inter-Ministerial Committee were drawn from different Ministries and Departments of GOI, as also from organizations like NABARD, and non-official members including a Member of Parliament (MP). This Report has been participatory in the sense, that the Committee co-opted a large number of people from different backgrounds, representing agricultural scientists, academicians, international science bodies, bankers, traders, & industry bodies, farmers' bodies, NGOs and farmers themselves. The

[3] Based on the lecture delivered by Dr. Ashok Dalwai, I.A.S, Chief Executive Officer, National Rainfed Area Authority (NRAA) and Chairman, Empowered Body, Doubling of Farmers' Income, Ministry of Agriculture and Farmers Welfare, Government of India on October 4, 2019 at the College of Agricultural Banking (CAB), Pune to commemorate the Golden Jubilee Year of the College.

task was to recommend various strategies to double the income of farmers within the specific time frame of 6 to 7 years beginning 2016-17 and ending in 2022-23. Recognizing that the stopwatch had already started ticking a few days before its own birth, the Committee realised that it had no luxury of time. We, therefore, got down to work forthwith and began rolling out recommendations parallel to our work on final Report. These recommendations found acceptance and were shaped into policies and activities from budget to budget. Our final Report submitted in August, 2018 came to be accepted by the Government. Reflecting its seriousness, the Government constituted an Empowered Body with a mandate to guide, monitor and supervise implementation of DFI strategy.

Details of the Report

The DFI Report has been considered as the first comprehensive agricultural report, not just in India but at the Global level also. The report is comprehensive containing detailed examination of multiple issues, and is drafted into 14 volumes. The Committee adopted an *a priori* approach, with a view to make evidence based recommendations. The first 13 volumes contain examination of all relevant issues based on facts and information, which a wholesome strategy is made for doubling farmers' income. The 14th volume consists of comprehensive recommendations which are dynamic in nature. Different stakeholders in various domains can read these volumes, interpret them and then based on data, information and the direction that the report is showing adopt appropriate interventions in addition to what we have suggested. The policy makers and programme designers would benefit from a reading of relevant volumes and chapters therein to put flesh into the suggested action points.

Volume I and II

Volume I - "March of Agriculture since Independence"

Volume II - "Status of Farmers' Income and Strategies for Accelerated Growth"

These two volumes deal with the status of agriculture in 1951 and the status when the Committee started writing the report. They analyse and come out with what should be the growth rate for the farmers' income to double. They among others talk about the correlation between income and capital investment. They talk about the sources of growth and interventions that are necessary for achieving the desired growth rate. The growth rates are worked out at national level as well as for each state, keeping in mind that agriculture is a state subject. The growth targets and initiatives required for doubling farmers' income for each state would be different and the state governments will need to stitch their strategy according to the overall direction shown by the report.

Volumes III and IV

These are two more important volumes, that take the marketing challenges head on, recognizing post-harvest management as an urgent and crucial issue in the current context.

Volume III - "Post-production Interventions: Agri-logistics"

Volume IV - "Post-production Interventions: Agriculture Marketing"

Volumes III and IV are inter-linked. If we look at the previous Commission Reports on Agriculture in India starting from the Report of the Royal Commission on Agriculture - 1928, National Commission on Agriculture - 1976 and National Commission on Farmers - 2007, we will realize that post-harvest management finds place almost at the end of these reports. The present Committee, after having analyzed the challenges posed by the agrarian crisis, thought that the situation needs to tackle the post-harvest aspects on priority. That is why these two volumes were dedicated to post harvest management, and incorporated right at the beginning. Volume III deals with Agri logistics. While efficient markets are necessary, it is not a sufficient condition. We may have a very good price discovery, thanks to marketing efficiency. But for these prices to be transferred to the farmers, we require a pipe line to convey their produce to the markets. The farmers cannot take advantage of the new market structure that the Committee proposes to create, unless agri-logistics is well in place and is accessible to the farmers. Volume IV deals with markets in 360^{o} and suggests a new and more robust market architecture.

Volumes V and VI of the Report

Volume V - "Sustainability Concerns in Agriculture"

Volume VI - "Specific Strategies for Sustainability in Agriculture"

The agricultural policies pursued since the roll out of the Green Revolution technology have left certain deleterious effects. Soil, atmosphere and water are polluted. At the consumer level food security was the issue and was met, but we left them nutrition deficient as manifest in high infant mortality rate, maternal mortality rate, anemia among women and several nutrition related diseases. The farmers, who are the principle stakeholders, were left poor. It appears as though agriculture growth and farmers welfare are inversely related to each other. Higher the growth, negative have been the terms of the trade for the farmers. As manifest by the average farm house hold income, they stand on the lowest rung of income hierarchy. The NSSO survey 2012-13 showed that, the average income of an agricultural household was Rs. 6,426/- per month while the average monthly consumption expenditure was Rs. 6,223/-. When this is the case, they cannot meet requirements beyond biological security i.e., they cannot travel, they cannot take care of family education, cannot secure their health and meet medical expenses and so on. We have essentially left the farmers poor, and below an accepted threshold level of welfare. Simultaneously, the ecology has been left all the more tired. This happened because we did not prioritise sustainable approach in choosing technologies and management practices. Today, if we see the agricultural situation in the Indo-Gangetic plains, which is considered to be food basket of our country, the marginal rate of return on investment is declining. That is, for each incremental unit of output, we need to add more and more of inputs (fertilizer, water, pesticides). Obviously farming is not a profitable activity any more in such areas. Added to this scene, is the issue of climate change which is already manifesting itself with high frequencies of extreme weather events. The Volumes V and VI present an alternate approach to production system, that can effectively negotiate challenges of sustainability.

Volume VII - "Input Management: Resource Use Efficiency & Total Factor Productivity"

Volume VIII - "Production Enhancement through Productivity Gains"

Volume VII deals with resource use efficiency, which is very important when agriculture needs to be treated as an enterprise. Volume VIII looks at production gains across all agricultural sub sectors like crop husbandry, horticulture, fisheries, dairy etc. In each of these sub sectors there are again various segments. Unless we recognize each of these, we will not be able to make progress for raising optimal volume of produce and optimal value thereof from the perspective of farmers' income. This is necessary because we cannot bring any additional area under agriculture. On the contrary, the cultivated area may get squeezed because of demand for land for other purposes like industry and infrastructure. The only alternative is, to achieve higher productivity, whether it is in crops, fisheries or dairy.

Volume IX - "Farm Linked Activities and Secondary Agriculture"

We are all in know of the three sectors in the economy, namely, primary, secondary and tertiary. Agriculture is a primary sector, but its delineation into primary and secondary agriculture need to be recognized and policies accordingly framed. If agriculture remains and is practiced only as primary agriculture which focuses on just the principle produce like grain or fruit for example, the result is limited scope to the farmer for generation of jobs and incomes. Hence, this volume develops the concept of secondary agriculture, that defines ways of converting the slack in land use and human capital into inputs for enterprise development. The principle, that deserves this is 'wealth from waste'.

Volume X - "Risk Management in Agriculture"

The farming profession suffers from relatively higher degree of risk, all along the agricultural value system inclusive of pre-production, production and post-production phases. As is said, agriculture remains at the mercy of both monsoons and markets. Negotiation and management of risks are critical for generation of profits. This volume discusses elaborately different approaches.

Volume XI - "Empowering Farmers: Extension & Knowledge Dissemination"

Extension is the last mile activity, which is as of now very weak in our country. The last robust extension system in India was Training & Visit (T&V) system over the period of 1970s to 90s. Today there exists scope for paradigm change in the extension domain i.e., extension need not be only manpower based; it can be an optimal blend of manpower and technology. This new landscape is discussed in this volume with a view to ensuring universal coverage of farmers in real time and at cost efficiency.

Volume XII - "Science for Doubling Farmers' Income"

A lot of the science as practised today is for the sake of publishing papers. We need science for delivery. Science for delivery means reorientation of scientific advances to meet the requirements of farmers and the nation, while respecting the concerns of ecology. When the nation was crying for food security, farmers responded positively and with speed. Today nation wants nutrition security. Mother earth wants ecological security. And farmers want income security. So there are different stakeholders with different demands, and apparently each of these demands contradicts the other. So the scientists have to provide us the right answers by reconciling the competing demands of different stakeholders for efficient and effective delivery.

Volume XIII - "Structural Reforms and Governance Framework"

This volume deals with structural reforms and governance framework. Structural reforms as we realize is to bring about a fundamental change in the way the system works. It talks about systemic changes. The initiatives suggested in various volumes, will deliver when well integrated and coordinated in implementation. This will bring about operational efficiency. Today our agricultural system is probably working at 40 per cent of its efficiency. But if we want to double the income of the farmers in a short period of 7 years, we cannot be working our business in as usual a way as before. It has to be at an accelerated pace. In fact in Volume II, the Committee has explained two scenarios. One is, what if we continue to work on all the seven sources of growth at the pace registered between 2003-04 and 2011-12. Our estimates show a change in income to the extent of 66 per cent. But if our aim is to increase the income by 100 per cent, then we need to do business at a more aggressive pace. That will call for structural reforms relating to land, markets, legal provisions relating to inputs like seeds, pesticides etc. This volume suggests certain structural changes and governance framework. As I already told you, linear growth cannot double farmers' income. We need to remove various structural constraints.

This volume also deliberates upon governance issues, with a view to achieving efficient delivery at field level. Normally we frame good policies, but when it comes to implementation we experience laxity and gaps. If we are able to check such deviations, we can achieve the desired results. For instance, potential yield claimed of a new variety when released by a scientist is seen to dilute in steps down the line. These include yields claimed at research level, yield claimed at front line demonstration (FLD) level and yield obtained at the farmer's level. By the time the variety reaches the farmer, there is a slippage in the yield potential claimed for that particular variety. A certain level of yield claimed at the research level, when it comes to the front line demonstration carried out by Krishi Vignan Kendras (KVKs) to popularize a new variety, one can see slippage in it at this stage itself. The FLDs by the KVKs are carried out with recommended package of practices, and even then there is a slippage. When that demonstrated variety is transferred to the farmers' field, there is a huge slippage. The Committee finds the gap between the FLD yield and farmers' field yield (FFY) anywhere in the range of 25 to 40 per cent. This is, of course an average. It could be more and it could be less also. The reason could be either that the technology is not transferred properly i.e., the farmers were not taught the right agronomic practices, or they did not have access to various inputs including credit. The gap is very high, because not every farmer has access to institutional credit. Those who are having access may not be using the loan for the purpose of cultivation. In sum, it reflects on the weakness in the implementation system. Hence implementation is very important, if we want to achieve doubling. If we can bridge the gap between the yields at FLD and at farmer's level then there will be increase in the agricultural production by around 25 per cent even at the existing level of technology. That means the nation will stand to reap almost 70 million tonnes of additional food grain production and 80 million tonnes of additional fruits and vegetables from the same area under cultivation. Only good implementation will take us two steps forward.

Agriculture is an ecosystem like any other enterprise. Multiple issues dealt in the thirteen volumes constitute the components of this ecosystem. If we want to achieve higher income for the farmers, we need an ecosystem approach and not a compartmentalized and segmented approach. We need to wear a comprehensive hat and bring all the players together.

Volume XIV - "Comprehensive Policy Recommendations"

The Committee while working on the report, focused on delineating specific recommendations, and categorized them into actionable points. So Volume XIV comprises definitive action plans divided into short term and long term, besides assigning task to the Ministry, Department, Organization, Division and the like responsible for it.

All the 13 volumes and the 14th volume which contains recommendations stitch up the overall framework for Doubling of Farmers Income. The Bankers' role comes in financing both the production and asset creation activities, supporting startups and adoption of technology, promoting logistics etc. The role of credit and status as of now in farm sector, and the contributions that the Bankers and Financial Institutions can play have been talked about in detail at appropriate places.

Approach of DFI Committee

Net positive return to the farmer- Fulcrum Equation: The entire DFI strategy works on increasing the net positive return for the farmer which depends on three variables, namely, gross output, prices and cost of production. Higher gross output can be realized by higher productivity which when multiplied by remunerative prices gives gross income. The gross income minus the cost of production, lowered in an efficient system gives us an increase in the net positive return. The strategy aim at working on these three variables and achieve higher profits for the farmer. If these three variables have to operate on a sustainable basis, they should be supported by sustainable technology and risk management interventions, besides good governance.

Change in name of the Ministry to bring focus on farmer

All along, the aim of the Ministry of Agriculture was primarily to produce food, fiber and fodder for the country. These outputs were with reference to the consumers. The farmer-the principal stakeholder did not appear important in the scheme of things. It was important to recognize explicitly, that farmers' interest were important. Hence, our Ministry came to be re-christened as 'Ministry of Agriculture and Farmers' Welfare' (MoA&FW). Many states have also adopted this change or a variant of this by now. The farmers are the actual clients of an agricultural ministry. Following this, policies, programmes & research strategies of the MoA&FW are now being re-oriented keeping the farmers in focus.

Primary Pillars

Farm and Non-Farm income

As per the NSSO survey for the agricultural year, 2012-13 a farmer's income comprises two components viz., farm income and non-farm income in the ratio of approximately 60:40. Today many people feel that the farming is not viable, because the ratio of income that is coming from farm is very less. Small and marginal farmers get only 30 to 35 per cent farm income, and the dominant rest coming from non-farm income. That means, they depend more on non-farm income than the farm income. Whereas, the large farmer would be deriving around 85 per cent of the income from farming. The implication is that the farming is viable for a large farmer or a semi medium farmer, but not for a small farmer. Logically, therefore, in doubling of farmers' income, the Committee also strategizes an emphasis on increasing the income ratio from farming, for small and marginal farmers. They constitute 86 per cent of the farming community of our country.

Supply chain management – Fork to Farm

The Committee has also deliberated about a change in the supply chain management. The supply chain management for the last 30 years has been modeled on the basis of 'Farm to Fork'. That means we are not producing what the market wants. Hence, the Committee called for reversing the same as 'Fork to Farm' approach. The new approach entails study of what the market wants, and make efforts to produce accordingly.

Food loss

A study by the Central Institute of Post-Harvest Engineering and Technology (CIPHET) indicated that the food loss was in the country was of the order of Rs. 93,000 crore in 2012-13. If only we can check such food loss, we will be transferring the like amount into farmers' pockets and into agricultural economy even without producing more. We have failed to maximize value capture for the farmers on account of absence of agri-logistics, poor support infrastructure, inefficient marketing structure and absence of commodity aggregation.

Food loss and Food Waste

When farmers invest in agriculture to produce more, there is also a charge on the ecology. Agricultural activities release methane, carbon dioxide and other greenhouse gases (GHG) contributing to the climate change. Agriculture accounts for a share of about 23 per cent of the total quantum of GHGs emitted from all sources. Unfortunately, harvested produce in India is let to decompose because it is not conveyed in time to consumption centres. This releases GHGs and adds to the already heavy stockpile of it. If the total quantum of food loss in the world is taken into account, it will rank no 3 (three) in the total contribution to the GHGs, after China and US. India follows next. There is a difference between food loss and food waste. Food loss is a technological issue. It happens because we don't have robust agro-logistics that efficiently connects food production & consumption zones.

In contrast, food waste is an ethical issue, which you and I do every day. This occurs when we do not eat everything that we serve on our plates. Food waste is more in western societies. But food loss is much more in India compared to the western societies. Because, western countries have got better agri-logistics and better technology. It is important to reduce this food loss and DFI Committee elaborates on the type and magnitude of agri-logistics needed.

Income Revolution

Green revolution, Blue revolution and such others mostly emphasize on production, without pre-determined focus on the extent of benefit to the farmer, and is a matter of concern. The Committee, therefore, suggests Farmers Income Revolution or Income Revolution in short. Income revolution happens only when the produce gets converted into value in favour of the farmers. Such a re-orientation will entail practice of agriculture as income-centric, and not just as production-centric. It is now time for all of us concerned with agriculture to bring 'farmer' into our focus and begin to popularize the term 'Income Revolution'.

Sources of Income Growth

Farm sector

The Committee identifies seven sources of growth for an uptick in farmers' income. Of these six lay within the agricultural sector. These include increase in crop productivity; increase in livestock productivity; increase in cropping intensity; improved resource use efficiency for cost reduction; and increase in real prices on the farm produce.

In relation to reduction in cost of production let us take the example of soil health cards. These cards contain field test results for 12 parameters i.e., macro nutrients, secondary nutrients micro nutrients and certain physico-chemical properties. So every farmer knows what is the nutrient status of his soil, and therefore can practice balanced fertilizer management. In the absence of such an evidence based management, farmer was applying a fixed amount of fertilizer blindly. The soils are getting toxic, loosing biological activity and organic carbon is declining. While on the other hand some soils, may not get enough nutrients though they require, because farmers have no access to evidence. Reports suggest that the soil test based fertilizer application can increase the productivity by 8 to 10 per cent and help reduce the cost on account of fertilizer by 5 to 7 per cent. This is just only one example that illustrates how profits can be raised for the farmers. Likewise micro irrigation brings down water use 50 per cent and productivity goes up by 30 per cent. On both these accounts the farmer benefits. He does not have to spend too much of money but he gets additional yield and additional income. The cropping intensity also goes up. When these benefits are combined with increased real price transfer to the farmer on his produce, seeds of income revolution are sown. We have rolled out an online trade platform called eNAM to connect the physically dispersed markets and enhance competitiveness in price discovery. A study in Karnataka on their own online trade platform called ReMs, showed that it helped the farmers gain 135 per cent higher prices, and therefore better income because of higher price discovery through on-line trade in the APMCs.

Non- Farm sector

The aspects relating to the six sources of income, that we discussed lie within the Ministry's domain, but income realization from the seventh source is predicated upon the opportunities available in the manufacturing and service sectors. We have identified shift of people from farm to non-farm sector as the seventh source. Further growth in non-farm income also is linked to economic growth in the non-agriculture sector. Our Committee has assumed a certain growth rate based on past and current trends.

Growth rate in farmers' income

If we need to double the farmers' income by 2022, we need to grow at 10.4 per cent per annum. If is a stiff growth rate. Non-Farm income also has to grow at 10.4 per cent at par with that in farm income. Based on historical data we find that non-farm income is growing at around 3.5 per cent. We have assumed that it may pace up and grow at 5.7 per cent. So, at 10.4 per cent of farm income growth at 5.7 per cent of non-farm income, we will actually end up at Rs.1,72,000 per agricultural household per annum by the terminal year 2022-23 at 2015-16 prices. But, if both grow at 10.4 per cent, the income would be Rs.1,92,000/-. The Committee has extrapolated the NSSO's 2012-13 income estimates at 2015-16 prices, and fixed the same as benchmark we shall evaluate the income achievements in 2022-23 and compare with benchmark data. That means there are quantifiable benchmarks and target figures.

Distinction between Growth of Income and GDP

When agriculture is growing at 3 per cent to 4 per cent and even sometimes lesser, then how would the target of 10.4 per cent be achieved is the question, quite often debated in public fora. Here we need to distinguish between growth of agriculture sector and that of farmers' income. Let us say, we don't produce more than we do now. Yet farmers' income can increase, simply by reducing food loss and ensuring better prices on farm produce. So agricultural growth i.e., GDP or GVA talks about the summation of the values of total production in different sub sectors in a given year. GVA differs from GDP in that it is value of that production less the taxes and less subsidies. What we are interested in, is the income of the farmers and increase thereof. At the same agricultural growth rate we can have higher farmers' income provided we reduce his cost of production, we give him higher real prices and save on food loss. To these parameters, if we add higher production naturally the income would be much better. It is, therefore, possible to achieve the targeted 10.4 per cent growth rate in farm income, but may not be in the rate of agricultural growth. Agricultural growth probably would be around 5 per cent but income growth can reach the targeted 10.4 per cent.

Agricultural Markets - APMC

APMCs have become opaque over the years. APMCs under the respective State Acts have the power to notify the commodities, as also the area. The farmers have to necessarily transact their produce at that particular APMC. This is restrictive and does not serve the interests of farmers. This regulation subjects the farmer-producers to neigh-monopolistic practices of a limited number of traders at the market. The DFI Committee suggests dismantling of the existing structure, and recommends adoption of a liberalized market architecture. The new APLMC Act, 2017 shared as a Model Act with the states talks about competitive marketing environment. There can be multiple APMCs in the same area owned by state government, private individuals/ corporates or by cooperatives. The farmer, based on where he gets efficient and transparent services, can sell his produce. The new Act emphasizes that the power of the APMC shall be confined to the boundary wall of that particular APMC, and stop being market *zamindars*, that now they are.

Region-wise target growth rates

The growth rate is worked out at national level as well as for individual states. Those states as in Central India, Eastern India and North-East lagging behind will have to grow at a more aggressive pace bridge the relative gap vis-à-vis the better off while achieving the income doubling target. Within the state, the Committee wants the governments to focus more on small and marginal farmers. Certain strategies are suggested in this context. The small farmers are not able to reach the market because of small lot size of their produce. Since production is growing, the marketable surplus ratio is increasing. That means even a small farmer also is left with some marketable surplus which he wants to sell in the market. However, he is not able to do so for various other reasons. Suppose he joins FPO or accesses Gramin Agriculture Markets (GrAMs), the decentralized aggregation platforms, then the small farmers also would be able to transact more efficiently and thereby benefit from the markets.

Doubling of income in small farms

Small farm is not the problem. In fact small farms are efficient in production. The main problem is that the volume of transaction is very low. The rate of return in agriculture vis a vis industry is much higher. But the farmers are poor because they cannot earn enough margins from the low volumes of transactions. It is apparent, that small farm is a challenge from the point of view of income, and not from the perspective of production. Mobilization of farmers into FPOs and aggregation of their produce by creating an aggregation platform is the way out. The APMCs are not enabling aggregation. Firstly, they are situated at a distant location, and secondly, there is no facility for aggregation. So the Committee has suggested Gramin Agricultural Markets (GrAMs) which will be set up in a radius of 6 to 7 km from the farm gate, so that the farmers can take their small lots of produce to those places and through some institutional mechanism they are able to aggregate it. Once the produce is assayed, cleaned, sorted and graded to be finally aggregated, it can be transacted in a more efficient manner.

Capital investment

Now let us move to the subject of capital investment where bankers have a role to play. Capital investment in agriculture has a direct correlation with its growth rate. The Committee has worked out the rate of growth necessary in capital investment if doubling of farmers' income has to be achieved. This has been worked out state-wise, as also for the nation by using the methodology of ICAR (Incremental Capital Output Ratio). It would help us to remember, that there two categories of investments viz., investments **'In'** agriculture and investments **'For'** agriculture. When we say investment 'in' agriculture, it means activities like land development, creating small irrigation sources, purchasing dairy animals, establishing fish pond etc. This is directly going into individually owned farms. The investment 'for' agriculture is the support system that the government builds and serves the larger community over a larger region. These investments are made on such things as a good road, larger irrigation projects, new markets, warehouses etc. These are mostly public sector investments. However, we need both private sector and public sector investments.

Further, the private sector investment has two categories- one is that invested by the farmers themselves, and other one is that made by the corporate sector. Majority of the investments in the private sector i.e., around 98 per cent is contributed by the farmers themselves, and lot of this is being financed by banks. The corporate sector investment is as low as about 2 per cent and has to be scaled up by adopting a facilitative policy. However this is not to blame the corporate sector. The corporate sector is there for business, and it is for the government to create conditions that make a business case for them and facilitate crowd in of private corporate sector investments. The corporate sector can invest in marketing, warehousing, cold chain, contract farming, processing and transportation. Banks and other financial institutions can play an important role here. The Committee shows the need for increase in growth of private sector investments from the current level of 9.15 per cent to 12.5 per cent between 2016-17 and 2022-23.

Likewise public sector investment which had been decreasing after rollout of economic liberalization beginning the 1990s, picked up from the early 2000s. In 2003-04 bankers were given a new target to double the credit flow in agriculture sector. In 2015-16 it had reached a growth rate of 12.54 per cent. This has to grow at 16.8 per cent to support the doubling strategy as per our estimates. This growth rate is not difficult to achieve. However, more important than simply making investments, is capital use efficiency. In our country we are used to seeing projects starting and lingering on for years on end. Capital use efficiency means that the investment bears results as early as possible, as per targeted time schedule. The Accelerated Irrigation Benefit Programme (AIBP) launched in 1995-96 has left many unfinished irrigation projects. In 2014-15, the GOI found 151 incomplete irrigation projects which had been languishing for more than 2 decades. Proportionate command area was created, even after spending substantive amount. So the GOI created a corpus fund of the size of Rs. 80,000 crore to complete 90 AIBP irrigation projects by December 2019, which will add 7.6 million ha. to the command area. And the remaining projects will be taken up thereafter. This drives home the point that capital investment must be made with respect for time schedule.

Diversification of agriculture

India's agriculture is diverse. Indian farmers produce 1.3 billion tonnes of commodities. We normally tend to highlight only food grains. The main staples i.e., paddy, wheat & maize occupy 44 per cent of the gross cultivated area. But in terms of agri-GDP their contribution is only 19 per cent. This is good for the consumers but bad for the farmers. But on the other hand, horticulture which accounts for only 12 per cent of the gross cultivated area, is contributing to 24 per cent of the agriculture-GDP. Farmers therefore need to diversify farming into high value crops and activities like horticulture, planation crops, dairy, fisheries etc. However, this has to be done without compromising the food security of the nation. If we increase the productivity of agriculture and get more production from less area, the surplus area can be used for high value crops or activities.

New mandate of the Ministry - Nutrition

That brings us to the issue of the currently perceived and pursued mandate of Agriculture Ministry, and the need to redefine it. The first mandate of course will be food security with more focus on nutritional security. As majority of the population in India are vegetarians, we need more of pulses, and other animal sources for proteins. Further, from the view point of our population's health, our production system must cater to requirements of all the macro- and micro-nutrients, and not just carbohydrates that come from cereals. Our cropping pattern, therefore, needs to be redefined. When farmers produce more of what is deficit today, market situation will be more favourable.

New mandate of the Ministry - Sustainable agriculture

The Committee also discusses and suggests the option of a circular economy. While the industry utilizes non-renewable fossil resources & fossil fuels the agriculture production system is something that can offer renewable resources for the industry & energy sectors. When agriculture production is linked to these new sectors of economy besides food & nutrition security, the markets get diversified and expanded passing way for a new demand-supply equilibrium to the advantage of our farmers.

Take corn for example. It can produce large number of intermediates and feed into manufacturing sectors. As we know, the agriculture sector has the capacity to produce in a renewable form. For the farmer, the advantage of this is that his market expands. Then the farmers' market is not just food market but the market is diversified to include energy producing system; and a manufacturing systems like cosmetics, pharmaceuticals, textiles, paints, paper etc. Then automatically horizontal expansion of markets will happen, and then demand supply equilibrium struck to the advantage of farmers.

Wealth from waste

Today, the unfortunate norm is produce and waste. To illustrate, the cotton farmer raises the crop for lint, with no care for the cotton stalk. That, scope exists to use it to convert it into wealth is not perceived. Conversion of waste to usable products involves technology, skilling of people, capital investment, loans to the farmers and such other facilitation, so that natural resource based enterprises can be promoted at farm and village levels. This is a value addition proposition.

For instance, in the Indo-Gangetic Plains, farmers burn the paddy straw in the month of October to get the land ready for the winter wheat cultivation. They burn straw because they get a window of only about 20 days to prepare the land. The burning adds to the already high levels of pollution besides negatively impacting the soil health. Government has initiated a plan to check this by supporting the farmers to make bales of straw and transport the same to bio-methanation plants for generation of bio-fuel. Agricultural products and by-products offer immense scope to promote secondary agriculture activities.

Minimum Support Price

The Government notifies MSP for 25 commodities every year. With effect from 2018, the new MSP policy is based on the principle of a minimum of 150 times the cost of production. More importantly, the Committee recognized that MSP gains credibility only when procurement is undertaken, whenever prices in the market dip below MSP. The Committee's suggestion was that procurement should not be limited to paddy & wheat, as has been the practice and cover others like pulses, oilseeds, millets etc. We now see jump in pulse procurement to around 20 per cent, and about 10 per cent in case of oilseeds vis-à-vis the production.

Agri Trade Counsellors

Agri Export Policy has now been announced for the first time with a view to doubling the value of export by 2022. Further, the Committee has suggested that we should have Agri-trade Counsellors in all the Indian Embassies abroad to guide our exporters and importers. The US Department of Agri (USDA), for example, is manned by Foreign Agricultural Service officers whose only job is to promote the agricultural trade of their country. India has got only one Agri trade counsellor in Brussels who looks after the entire Europe. Apart from this one position, we have nobody in the world to take care of our trade. Our Committee recommended that we should have an Agri trade counselor in at least top 10 export destination countries to being with. There has been a positive response and government has created Agri Trade Councils in 10 embassies, and has appointed an officer.

New market architecture

We need to expand the market territorially, apart from functional expansion. It is important that we help the farmers to gain from wider range of markets, encompassing both domestic and export markets. A new market architecture has been suggested. APMCs are nothing but primary and secondary wholesale markets. Not every farmer is able to reach them. The Committee has suggested aggregation platforms within a radius of 5-6 kms. We have recommended constitution around 30,000 markets including 10,000 wholesale markets and 20,000 aggregation platforms. The Government in its 2018 Union Budget has announced setting up 22,000 aggregation platforms called GrAMs (Gramin Agricultural Markets). There will be assaying facility, cold stores and dry storage facilities. The produce can go through primary processing and sold directly or aggregated for transport to wholesale markets. The exporters, bulk purchasers and the like can come there and directly purchase from the farmers. These aggregation platforms will be outside the purview of APMCs. This deregulation will help the farmers.

Agri-exports

The Committee has recommended a target of USD 100 billion for agri-exports by 2022. The GOI has initially set a target of USD 60 billion to be achieved by 2022. When we talk of marketing, it should mean both domestic and export. Netherlands which is geographically just about 40,000 sq km is the second largest exporter globally, next only to USA. India is around 80 times their size geographically, but we are nowhere near Netherlands in agri-exports. India ranks 7th and accounts for only 2.2 per cent of the global trade in agriculture. With robust agricultural production, it is for traders, exporters, post-harvest managers, bankers, processors to take the baton forward to help farmers capture value. This is the new requirement of Indian Agriculture. MSP based procurement cannot be a sustainable solution. If the government starts procuring everything, where would they sell it, and how would they make such procurement and distribution viable? We need to build strong market forces. MSP is minimum support price and is not necessarily the remunerative price. MSP procurement operates where and when markets fail. All our efforts should therefore be directed towards creating a more competitive transparent and strong markets, so that farmers are able to realise competitive prices on their produce. Our Committee has suggested to undertake procurement up to a maximum of 40 per cent whenever market price dip below MSP. However, Government has accepted 25 per cent as the outer limit. This itself is a boon for farmers.

Agri logistics

This is a critical component of post-harvest management, and we need to build integrated storage & transportation systems for both perishable and non-perishable commodities. For perishables like fruits & vegetables, we need integrated cold chain system, and not just cold stores, that we have been promoting. We have got enough cold stores and we are globally at the top in terms of total capacity of cold storage constructed. But the development of cold stores was not done in an integrated manner. We need proportionate capacities of pack houses and reefer transportation systems. Our Committee therefore recommends more number of pack houses and reefer vans and other integral components for efficient & seamless transfer of perishables.

Risk management

Agriculture is one of the riskiest of enterprises, and needs both technological and financial products to negotiate production & post-production risks. Karnataka has built a decentralized system of agro-met stations at sub taluka level. The state captures the basic weather parameters in a consistent manner and feeds the data into the central server. The central server uses big data analytics and communicates the weather forecast interpretation to the farmers. In addition to ICT, emerging technologies like sensors, drones, robotics, IoT etc., have been suggested by the Committee. Any information shared in advance will help the farmers to undertake preventive measures and reduce the impact of the expected adverse event. A Livestock insurance scheme on the lines of PMFBY has also been recommended by the Committee. The Committee has also suggested creation of credit guarantee fund on the lines of what has been done for MSME sector in 2003-04, so that banks & financial institutions will gain greater confidence in leading to the agricultural sector.

Land and farmer

Land and human resource are the two basic assets that our farmers own. Extension services should be geared to provide the farmers more of market related information. Agriculture should be reoriented from production-centricity to income-centricity. A person who owns cultivated land alone is defined as the farmer in our country. But a substantive proportion of land is leased out. Since lease is not legally recognized, actual cultivators are deprived of scheme benefits & credit. Hence we need to recognize lease.

The Committee has recommended that ownership need not be the sole criteria to define the farmer. Anybody who uses land or water resources for production, either as a owner or as a lessee or as a licensee etc., should be recognized as a farmer. By using IT, we should be able to maintain a centralized dynamic database and reach out all the benefits to them. To impart scales of economy to agricultural operation and enhance efficiency at all stages of agricultural value system, we have suggested farmer producer organizations (FPOs), and government is now targeting formation of 10,000 FPOs by 2022.

Summing up

These are some of the dimensions in the Doubling of Farmers' Income which I thought I will share with you. I have not focused much on role of banks, and taken more of your time to share my thoughts on the overall strategy for doubling farmers' income. As Bankers, you have a very critical role of promoting easy access to institutional credit for both production and asset creation activities. Your credit will be needed at all stages of agricultural value chain. It will also be required to promote secondary activities. I do not wish to circumscribe your role. As a professional in banking, management and agricultural sciences you can play a bigger role in contributing inputs, for formulating policies and programmes. You can help in building knowledge, skills and awareness levels among farmers. I am confident that you as a banker can contribute to farmers' welfare in multiple ways.

I end by reiterating that "with the end of the Green Revolution, there is a need for bringing about an **Income Revolution** for farmers".

Gist of Important Circulars

Inclusion of "India Post Payments Bank Limited" in the Second Schedule of the RBI Act, 1934

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11623&Mode=0)

The Reserve Bank of India advised on July 3, 2019 that the "India Post Payments Bank Limited" has been included in the second schedule of the Reserve Bank of India Act, 1934. The India Post Payments Bank Limited has been included vide Notification DBR. NBD. (PB-IPPB).No.9980/16.13.215/2018-19 dated May 27, 2019 and published in the Gazette of India (Part III-Section 4) dated June 22-28, 2019

Lending by banks to NBFCs for Onlending under PSL

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11659&Mode=0)

As stated in the Statement on Developmental and Regulatory Policies released along with the Third Bimonthly Monetary Policy for 2019-20 on August 7, 2019, the RBI decided that bank credit to registered NBFCs (other than MFIs) for on-lending will be eligible for classification as a priority sector under respective categories subject to the following conditions:

i) Agriculture: On-lending by NBFCs for 'Term lending' component under Agriculture will be allowed up to ₹10 lakh per borrower.

ii) Micro and Small Enterprises: On-lending by NBFC will be allowed up to ₹20 lakh per borrower.

iii) Housing: Enhancement of the existing limits for on-lending by HFCs vide para 10.5 of our Master Direction on Priority Sector lending, from ₹10 lakh per borrower to ₹20 lakh per borrower. Bank credit to NBFCs for on-Lending will be allowed up to a limit of 5 percent of individual bank's total priority sector lending on an ongoing basis

Interest Subvention Scheme for KCC to Fisheries and Animal Husbandry Farmers

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11669&Mode=0)

The RBI advised on August 26, 2019 that the Government of India has issued operational guidelines of the Interest Subvention Scheme for Kisan Credit Card facility to fisheries and animal husbandry farmers for a period of two years i.e., 2018-19 and 2019-20 with the following stipulations:

i) To provide short-term loans upto Rs. 2 lakh to farmers involved in activities related to Animal Husbandry and Fisheries.

ii) To provide an additional interest subvention of 3 percent annum to such of those farmers repaying in time i.e. from the date of disbursement of the working capital loan upto an actual date of repayment by farmers or upto the due date fixed by the banks for repayment of loan, whichever is earlier.

iii) To ensure hassle-free benefits under Interest Subvention Scheme, banks are advised to make Aadhar linkage mandatory for availing short-term loans for Animal Husbandry and Fisheries in 2018- 19 and 2019-20. The Interest Subvention Scheme is being put on DBT mode on 'In Kind/services' basis and all short-term loans processed from 2018-19 are required to be brought on ISS portal/DBT portal.

Free ATM transactions- Clarifications

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11661&Mode=0)

The RBI issued a clarification on August 14, 2019 clarifying that ATM transactions that fail on account of technical reasons like hardware, software, communication issues, non-availability of currency in the ATM; and other declines ascribable direct/ wholly to the bank/service provider; invalid PIN/validations; etc., shall not be counted as valid ATM transactions for the customer. Consequently, no charges therefor shall be levied for such transactions. Non-cash withdrawal transactions such as balance enquiry, cheque book request, payment of taxes, etc., which constitute 'on-us' transactions shall also not be part of the number of free ATM transactions.

Processing of e-mandate on cards

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11668&Mode=0)

The RBI on August 21, 2019 decided to permit processing of e-mandate on cards for recurring transactions (merchant payments) with Additional Factor of Authorization (AFA) during e-mandate registration, modification and revocation, as also for the first transaction, and simple/automatic subsequent successive transactions, subject to certain conditions. The maximum permissible limit for a transaction under this arrangement is ₹2,000/-.

Cash Withdrawal at PoS Devices

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11672&Mode=0)

The RBI has reiterated the instructions issued in its circulars dated July 22, 2009, September 5, 2013 and August 27, 2015 on cash withdrawal at Points-of-Sale (PoS) devices to provide for cash withdrawals at PoS by card-holders. The instructions outlined in the circulars limit cash withdrawals to `1000/- per day in Tier I and II centres and `2000/- per day in Tier III to VI centres and customer charges, if any, on such cash withdrawals to not more than 1% of the transaction amount.

RTGS- Increase in operating hours

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11667&Mode=0)

The RBI on August 21, 2019, decided to increase the operating hours of the Real Time Gross Settlement (RTGS) system for customers and banks. The RTGS system would be now available from 7.00 am onwards.

Classification of Exports under PSL

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11692&Mode=0)

The RBI on September 20, 2019 decided to effect changes in para 8 of the "Master Direction on Priority Sector Lending Targets and Classification" dated July 7, 2016 (updated as on December 4, 2018) with the objective to boost credit to the export sector. It has been decided to: i) Enhance the sanctioned limit, for classification of export credit under PSL, from ₹250 million per borrower to ₹400 million per borrower and, ii) Remove the existing criteria of 'units having turnover of up to ₹1 billion. The existing guidelines for domestic scheduled commercial banks to classify 'Incremental export credit' over the corresponding date of the preceding year, up to 2 per cent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher under PSL will continue to be applicable subject to the criteria mentioned at (i) above.

Revision in Proforma and Reporting of Bank / Branch details under CISBI

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11710&Mode=0)

The RBI has decided to put in place a new reporting system 'Central Information System for Banking Infrastructure (CISBI), to replace the legacy MoF system. This has been done with the objective of being consistent with the needs of branch licensing and financial inclusion policies as well as the need for requisite coverage of additional dimensions and features. All the past information reported by banks has been migrated to CISBI and additional information should be reported in CISBI henceforth. The portal contains the relevant circulars, user manuals and other relevant documents to facilitate reporting. The RBI has provided login credentials to Nodal Officers of banks for submitting their information in CISBI. Access to the portal can also be sought by making e-mail request at mofbsd@rbi.org.in.

Expanding and Deepening of Digital Payments Ecosystem

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11707&Mode=0)

The RBI has decided that all State/UT Level Bankers Committees (SLBCs/UTLBCs) shall identify one district in their respective States/UTs on a pilot basis in consultation with banks and stakeholders. The identified district shall be allotted to a bank having significant footprint which will endeavour to make the district 100 per cent digitally enabled within one year to enable every individual in the district to make/ receive payments digitally in a safe, secure, quick, affordable and convenient manner. This would, inter alia, include providing the necessary infrastructure and literacy to handle such transactions. SLBCs/ UTLBCs shall endeavour to ensure that to the extent possible, districts identified are converged with the 'Transformation of Aspirational Districts' programme of the Government of India. The allotment of the identified district to a bank should be done, as far as possible, through mutual consultation and voluntary acceptance by the bank. SLBC/UTLBC Convenor Banks are advised to monitor the progress made in this regard on a quarterly basis and report the same to concerned Regional Offices/Sub-Offices of the Reserve Bank of India.

Large Exposures to CRILC – UCBs

(https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11768&Mode=0)

The Reserve Bank of India on December 27, 2019 advised Primary (Urban) Co-operative Banks (UCBs) having total assets of ₹500 crore and above as on March 31 of the previous financial year to report credit information, including classification of an account as Special Mention Account (SMA) to the Central Repository of Information on Large Credits (CRILC). The SMA data should be reported on all borrowers having aggregate exposures of ₹5 crore and above with the concerned UCB. The UCBs have been mandated to submit quarterly reports to the CRIL-C maintained by the RBI with effect from December 31, 2019. UCBs should take utmost care about data accuracy and integrity while submitting the information/data on large credit to the RBI, failing which penal action as per the provisions of the Banking Regulation Act, 1949 may be taken.

Board of Management in Primary UCBs

(https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=49017)

The Reserve Bank of India on December 31, 2019 implemented the suggestion of putting in place a Board of Management (BoM) in addition to the Board of Directors (BoD) in Urban Cooperative Banks (UCBs). The Expert Committee on Licensing of New Urban Co-operative Banks (UCBs), 2011 chaired by Shri Y.H. Malegam had suggested the constitution of BoM in UCBs. The guidelines provide that the BoD of UCBs with deposit size of ₹100 crore and above, other than Salary Earners' Banks, shall constitute the BoM. It shall be mandatory for such banks to constitute a BoM for seeking approval to expand their area of operation and/or open new branches. These UCBs will also require prior approval of RBI for appointment of their CEOs

Campus Capsule

Trainings and Conferences

National Conference on Lead Bank Scheme (Celebrating 50 years of the LBS): July 19, 2019

The Lead Bank Scheme has entered into 50 years of its existence in 2019. To commemorate this occasion Financial Inclusion and Development Department, Central Office and College of Agricultural Banking, Pune (CAB) jointly organized the National Conference on Lead Bank Scheme on July 19, 2019. The objective of the conference was to provide a platform for the stakeholders to deliberate on the contemporary relevance of the Lead Bank Scheme, reflect on the role of Lead Bank Scheme in catalysing economic development and strategize and discuss ways to improve the effectiveness of the scheme in meeting its objectives. Around 50 delegates, including conveners of SLBCs, heads of priority sector divisions of scheduled commercial banks, senior officers from small finance banks and payment banks, chairmen of select RRBs, and senior officials from RBI and NABARD attended the Conference. The speakers included Shri B Ramesh Babu, Deputy Managing Director and COO of State Bank of India, and Shri H. R. Dave, ex-Deputy Managing Director, NABARD.

Train the Trainers' Programme for officers of DCBS, ROs: July 15-19, 2019

The objective of the programme was to build capacity of officers of DCBS, Regional Offices for conducting training programmes for UCBs and statutory auditors of UCBs at the Regional Office level and to equip them with knowledge & skills for handling sessions in training programs conducted by ROs. Twenty two officers from different ROs attended the program.

Programme on Regulatory Aspects for Non-Banking Financial Companies for officers handling compliance and audit in NBFCs: August 26-27, 2019

In the absence of a dedicated channel for NBFCs the programmes for NBFCs are being conducted by MIC. The first programme for the year 2019-20 for NBFCs was conducted in August, 2019. The objective of the programme was to impart knowledge regarding the various regulatory and compliance requirements under the RBI Act and the directions / guidelines issued thereunder, to create awareness about new modes of lending being used by NBFCs. and to discuss about the emerging trends in the NBFC sector. Thirty officers from different NBFCs attended the programme.

Mid-Career Mandatory Training Programme – Level 1 – Leadership Module

The College conducted MCMTP on Leadership Module during July 1-5, 2019 and August 19-23, 2019. The programme consists of the five modulesviz; Personal Effectiveness, Inter-Personal Effectiveness, Empowering Leadership, Leadership in Action, and Leadership Strategies. The objective of the programme is to enable the participants to gain knowledge and insights about their own personality and that of others, which they can leverage to build efficient teams; develop the capacities and skills required to build constructive and effective relationships; develop the attitude/orientation to leverage awareness of self and others etc. One hundred forty one grade C officers attended the programmes.

Customised training programme for Canara Bank

The College has accepted the request of Canara Bank to conduct five Customized training programme for 150 Agricultural Field Officers (AFO). The programme has been designed in consultation with the bank. The objectives of the programme are to impart knowledge on GoI Polices, regulatory guidelines on agri lending, and enhance skills for appraisal of agricultural projects. The programme consists of five modules viz; overview of agricultural sector and policy initiatives, appraisal of agricultural projects; high tech farming; financing agro-processing activities and alternative credit delivery mechanism and legal aspects of agri lending . Case exercises on appraisal were included for enhancement of appraisal skills. The first such programme was conducted from August 05, 2019 to August 09,2019 and 29 officers attended the programme.

Training of Trainers (ToT) programme on Agri-finance: November 25 to 27, 2019

The Training of Trainers Programme on Agri-financing was conducted during November 25-27, 2019. The objectives of the programme were to impart knowledge regarding developments in agricultural sector and agrifinancing, enhance skills of the participants and build their aptitude for capacity building. Fourteen officers from different banks attended the programme.

Conference on Financing Agri Exports: October 03 to 04, 2019

A Conference on Financing Agri Exports was organized during October 03-04, 2019. The objective of the Conference was to provide a platform for bankers to interact with the various stakeholders on different aspects of agri exports and share the best practices and success stories in agri export financing. Forty five delegates, consisting of senior officers of Commercial Banks, RRBs, State Cooperative Banks, select officials from RBI, NABARD and academicians from select colleges attended the conference. Dr. Ashok Dalwai, delivered the Golden Jubilee Lecture on “Doubling of Farmers' Income- Role of Banks” on October 04, 2019. He gave a detailed presentation on various strategies and recommendations for increasing income of farmers which are contained in the 14 volumes of the report submitted by the Committee on Doubling Farmers’ income set up by the GoI. He mentioned about various interventions suggested by the Committee in post-production, agri-logistics, agriculture marketing, improvement in crop and livestock productivity, input management, resource use efficiency, diversification towards high value crops, sustainability concerns in agriculture, farm linked activities and secondary agriculture, empowering farmers through extension and knowledge dissemination, structural reforms and governance framework and risk management in agriculture. He exhorted the bankers to focus on extending credit to small and marginal farmers and also term lending to strengthen post-harvest infrastructure and better access to markets. He concluded the lecture by reiterating that “with the end of the Green Revolution, there is need for a bringing about an Income Revolution for farmers”.

Workshop on Priority Sector Lending Certificates (PSLC): September 30 to October 01, 2019

In the meeting of the sub-committee of CAC held on September 09, 2018, it was suggested by FIDD, Central Office to conduct a workshop on PSLC for the officers of UCBs to enable them to trade on the platform. The first workshop of PSLC for one day was conducted in February 2019. Based on the feedback of the participants, the workshop was continued in the current academic year and the duration was increased from one day to two days. Thirty one officers from UCBs attended the workshop. The objective of the workshop was to impart knowledge about relevant regulatory guidelines on Priority Sector and PSLCs for UCBs, build skills for trading in PSLCs in e-Kuber and to sensitize participants about the benefits of PSLCs.

Inspection Oriented Programme for the Officers of DCBS/ DCBR of RBI: October 14 to 25,2019

The objective of the programme was to enhance the knowledge of the inspecting officers regarding the statutory and regulatory guidelines relating to UCBs and understanding of critical areas pertaining to the statutory inspections and to hone the skills required for conducting statutory inspections of UCBs with special focus on the understanding and analysis of financial statements, format of inspection report, computation of CRAR/ Net Worth, and preparation of Annexures (I – VII), and writing of inspection report. Twenty four officers from different regional offices attended the programme.

Programme on Currency Management for Officers of Urban Cooperative Banks: November 18 to 19, 2019

The Programme on Currency Management for Officers of Urban Cooperative Banks was conducted from November 18-19, 2019. Twenty five officers of UCBs attended the programme**.** The objective of the programme was to impart knowledge on various aspects of currency chest management and reporting.

Programme on Asset Liability Management and Investment Management for officers of UCBs (Pune and Bengaluru)

Erstwhile DCBS, Central Office advised the College to conduct off-site training programmes on topics like ALM and investment in six states, viz., Andhra Pradesh, Telangana, Maharashtra, Karnataka, Gujarat and Assam as directed by the sub-committee of the Board for Financial Supervision. Two programmes were held in Pune and Bengaluru during October and November 2019. A total of ninety three participants attended these programmes.

Customized Programme on MSME Financing for Officers of UCO Bank: October 14 to 16, 2019

A customized programme on MSME financing was conducted for 15 officers in the grade of AGM and above of UCO Bank on the basis of request received from the bank. The objective of the programme was to impart knowledge on various RBI guidelines on MSME financing, recent developments in MSME finance and to enhance skills with regard to assessing the credit requirements, monitoring of loans and advances, and revival and rehabilitation of MSME units under stress.

3rd Programme on Digitalization and Financial Inclusion (in collaboration with CICTAB): November 18 to 22, 2019

The College conducts two programme for personnel of banks and financial institutions of SAARC countries in collaboration the Center for Internal Co-operation & training in Agricultural Banking (CICTAB) programme, every year. A programme on Digitalization and Financial Inclusion was conducted between November 18 and 22, 2019.Eighteen representatives of different institutions from Nepal, Sri Lanka and Bangladesh attended the programme. The objectives of the programme were to impart knowledge about various initiatives on digital financial inclusion and use of technology in promoting financial inclusion in India.

Mid-Career Mandatory Training Programme (MCMTP) — Level I: HRMD, CO, had advised the College to conduct MCMTP – Level 1(Leadership Module) and Assessment Centre for all Grade C officers in the Bank who are expected to come under the zone of consideration for promotion to Grade D for panel year 2020, before the start of the selection process. Accordingly, during July-October, 2019, the College conducted seven iterations of MCMTP-Level 1 (Leadership Module), covering a total of 181 Grade C Officers. Of these, two iterations were held during September-October, 2019. Further, during September-October, 2019, ten Assessment Centres (ACs) were conducted at the College, which covered 173 Grade C Officers. The ACs were conducted with the help of an external agency M/s Chatura Knowledge Networking Pvt Ltd., Pune and three assessors of the Bank.

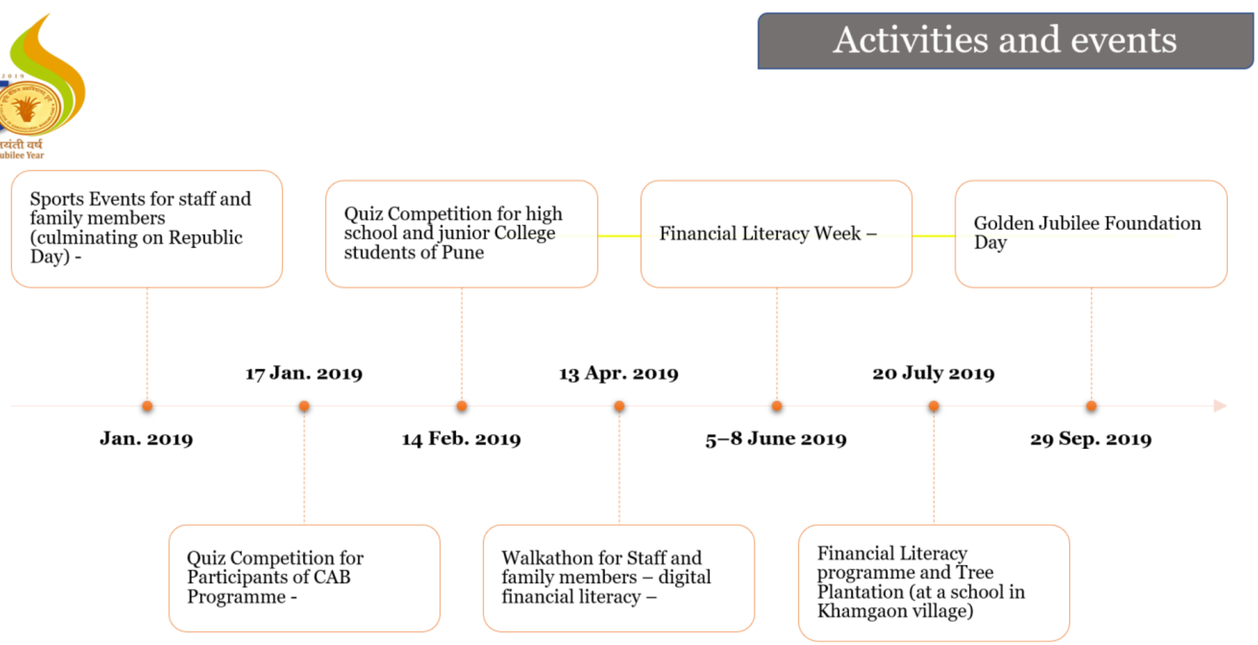
Development Centre Workshops (DCWs): Three DCWs for Gr B (DR) Officers of RBI were also conducted during the period October - November 2019. Forty-five Grade B (DR) officers attended these workshops. All the DCWs received good ratings from the participants.

Golden Jubilee Celebrations

Golden Jubilee Celebrations

Following the enactment of Banking Laws (Application to Cooperative Societies) Act, 1965 with a view to extending some provisions of the Reserve Bank of India Act 1934 and Banking Companies Act 1949 to cooperative banks, the RBI set up a Cooperative Bankers' Training College in Pune in the year 1969 for conducting training programmes for the personnel of State, Central and Urban Cooperative Banks. Post nationalisation as commercial banks started financing agriculture on a considerable scale, the College introduced courses in agricultural banking for officers of commercial banks. Further the College also started conducting training programmes for its officers. As the coverage of the training programmes expanded beyond cooperative banking, the name of the College was changed to College of Agricultural Banking in 1974.

As part of the Golden Jubilee Celebrations of the College, activities were organised which included golden jubilee memorial lectures by eminent personalities, thematic conferences, financial literacy and awareness for school and college students through quiz contest and essay competition. Some of the important activities are mentioned below:



Golden Jubilee Lectures

13 Feb. 2019
Some Thoughts on Macroeconomic Sustainability – The Case of India by Dr. A. Vasudevan, former Executive Director, RBI

24 June 2019
Progress and Prospects of Digital Financial Inclusion in India : A 9 I's Perspective by Shri H.R Khan, former Deputy Governor, RBI

25 June 2019
Lending Profitably to Priority Sector by Shri Suresh N. Patel, former MD&CEO, Andhra Bank

4 Oct. 2019
Doubling of Farmers' Income- Role of banks by Dr.Ashok Dalwai, I.A.S

वित्तीय क्षेत्र में क्षमता निर्माण एवं विकास

कृषि बैंकिंग महाविद्यालय (सीएबी) की स्थापना भारतीय रिज़र्व बैंक द्वारा 1969 में ग्रामीण एवं सहकारिता बैंकिंग में प्रशिक्षण प्रदान करने के लिए की गयी थी। तत्पश्चात, भारतीय वित्तीय क्षेत्र की बदलती आवश्यकताओं को पहचानकर, महाविद्यालय ने सूचना प्रौद्योगिकी, मानव संसाधन प्रबंधन, साधारण बैंकिंग और गैर-बैंकिंग वित्तीय सेवाओं जैसे क्षेत्रों में प्रशिक्षण प्रदान करने के लिए अपना दायरा बढ़ाया। महाविद्यालय कई अंतर्राष्ट्रीय संस्थाओं जैसे एफएओ, अपराका, सिकटैब, यूएनडीपी एवं कॉमनवेल्थ सेक्रेटेरिएट के सहयोग से भी प्रशिक्षण कार्यक्रम आयोजित करता आ रहा है। महाविद्यालय ने विकास बैंकिंग में उत्कृष्टता के अंतर्राष्ट्रीय केंद्र के रूप में ख्याति प्राप्त की है। भारतीय वित्तीय क्षेत्र की वर्तमान चुनौतियों के मद्देनज़र महाविद्यालय ने ग्रामीण विकास एवं सहकारी बैंकिंग के अलावा महाविद्यालय, विभिन्न संस्थोओं (राष्ट्रीय व अंतर्राष्ट्रीय) के लिए उनकी विशिष्ट आवश्यकता के अनुसार भी प्रशिक्षण कार्यक्रम आयोजित करता है।

महाविद्यालय, समय की मांग के अनुसार वित्ती य क्षेत्र में क्षमता निर्माण एवं विकास के लिए प्रतिबद्ध है।

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College of Agricultural Banking (CAB) was established by the Reserve Bank of India in 1969 to provide training inputs in Rural and Cooperative Banking. Subsequently, recognising the changing needs of the Indian financial sector, the College has expanded its scope to provide training in other areas like Information Technology, Human Resource Management, General Banking and Non-Banking Financial Services. The College also conducts programmes in collaboration with international agencies like FAO, APRACA, CICTAB, UNDP and the Commonwealth Secretariat. It has earned acknowledgment as an international centre of excellence for development banking. The College also conducts customized training programmes for institutions, both national and international, as per their specific requirements.

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