

RETHINKING FINANCIAL INNOVATION

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Abstract

Financial innovation is distinct as the act of creating and then popularizing novel financial instruments, technologies, institutions, markets, processes and business models – including the application of existing ideas in a different market context. Another approach to consider monetary advancement is regarding its capacity. Business analysts say that the general capacity of money related advancement is to decrease budgetary business sector flaws. Innovations might help to fill a gap in the products or services accessible to consumers (e.g. by giving another sort of secure Web assisted instrument) or to remedy the uneven characters of data accessible to contracting parties(e.g. through innovative pricing or risk estimation technology). They might also reduce market frictions, such as the high costs of transacting some products (e.g., ill-liquid securities such as equities in non-public companies), bring consumers together to recommend economies of scale or provide a novel way of communicating with potential consumers or vendors through some kind of marketing innovation. Above all, perhaps, financial innovation has to establish new ways for people to gain mutual advantage from complementary needs, e.g. the aspiration to borrow money, raise investment capital, or offset a risk, on the one hand, and the desire to lend, invest money or assume a risk in exchange for a fee, on the other.

Along these lines, the paper centers upon two greatest drivers of past advancement to manage account administrations, innovation and regulation, to see likely patterns in future development viz (a) Regulation as a driver of development (b) Technology as a driver of advancement.

The paper proposes the position that the essential obligation regarding the enhancement of monetary administration related development lies with banks and all other financial institutions. It gives scientific categorization of potential negative results and prescribes activities for organizations, industry bodies and controllers. For organizations, it prescribes upgrades to venture hazard administration strategies, new item affect evaluations, better plan of motivations, and

improved "customer introduction". These changes can materially reduce the odds of unintended negative consequences from innovation. Author concludes that industry groups can help foster and promote positive financial innovation to better serve societal and economic needs. Finally, the paper provides guidance to regulators on the best use of their limited resources, highlighting the ways in which they can allow financial innovation to flourish while reducing the risks for which they have primary oversight responsibility.

Keywords- Business, Financial Innovation, Technology

“The complexity and speed of financial innovation has reached the point where it is hard to grasp what is happening from moment to moment. Amateur investors and many professionals are wary of space-age trading strategies and kinky financial instruments.”

Peter L. Bernstein, (1992), Capital Ideas, Free Press.

Introduction

In India, reforms to improve the effectiveness and precision of the financial sector started early in the reform cycle that commenced in 1991 - in some ways anticipating the gains that would accumulate from the resultant flexibility in product and factor markets. However, the procedure of strengthening the financial institutions in terms of prudential framework, operational efficiency and regulatory / supervisory regime has been ongoing. It was also associated with the development of money, FOREX, Govt. securities and equity markets. The entire scenario is being changed by the pace of capital and credit reforms. The assortment of financial innovations with different terms and conditions, now bestow a wider choice of instruments that suits the needs of the investment portfolio.

Meaning of Financial Innovation

Much of the hypothetical and experiential work in financial economics considers an extremely stylized world in which there are a small number of securities (debt and equity, perhaps) and maybe a handful of trouble-free financial institutions (banks or exchanges). However, in actuality we may see a vast range of diversified financial assets, many different types of financial institutions and an assortment of techniques that these institutions carry on to do business. “**Innovate**” is defined in *Webster's Collegiate Dictionary* as “To introduce as or as if new,” with the root of the word deriving from the Latin word “**Novus**” or new.

Economists employ the word “**Innovation**” in liberal fashion to describe shocks to the economy (e.g., “monetary policy innovations”). Broadly speaking, “**Financial Innovation** is to trigger, create and then popularize new financial instruments as well as new financial technologies, institutions and markets.”

By “Innovation” we mean *product* or *process* innovation, wherein product innovations can be understood by new derivative contracts, new corporate securities or new forms of mutual investment products, and the process improvements can be associated with new means of distributing securities, processing transactions, or pricing transactions. In practice, even this bland segregation is not apparent, as process and product innovation are not always connected.

In research and development function, Innovation is an important tool for dispersal (or adoption) of new products, services or ideas. Innovation is possibly an extremely liberal term, in that most innovations are evolutionary adaptation of aforesaid products.

Since the start of the financial crisis, firms primarily focused on survival and then on complying with a blizzard of post crisis regulations. Financial innovation has taken a backseat to financial stability concerns. However, banks have largely tried to restore their financial condition and many of the major changes in regulations have moved into the implementation phase. Financial innovation has got its momentum over the years and taking this into consideration, the present research looks at two of the biggest drivers of past innovation in banking services, technology and regulation, to better understand likely trends in future innovation.

❖ **Regulation as a driver of Innovation**

Regulation raises the expense of money related exchanges by purchasers and different clients of monetary administrations. As monetary administration is exceedingly directed along numerous measurements, these confinements open various doors for advancements that lessen or bring down regulation expense. Budgetary advancements have long been utilized by money related firms to take part in what is in some cases called capital arbitrage, for instance, by making the appearance of exchanging danger from the bank to financial specialists. At one time banks were not permitted to open or obtain new workplaces crosswise over state lines and even confronted extreme breaking points on intrastate expansion in numerous states.

❖ **Technology as a driver of Innovation**

Strides in innovation have long been a critical driver of money related development. An early illustration of new data innovation (IT) that has essentially changed retail management of an account is the Computerized teller machine (ATM), which was initially presented in the 1960s and, after some refinement, experienced quick development in the late 1970s and 1980s (Ellen Florian). This proceeding of innovation has helped significantly change the general customer management of an account, subsequent to the mid 1970s, when

every single individual receipt were paper (money or paper cheques). Starting 2010, Loretta J. Mester reports that nearly 94 percent of all families utilized electronic types of installments, including ATMs, check cards, programmed bill paying, and shrewd cards. Another significant driver in budgetary advancement is the improvement of monetary innovation, particularly when joined with improvements in data innovation. Measurable models of credit danger have been fundamental to the advancement of present day markets for purchaser loaning.

Rationale of the Study

India has been maintaining one of the most elevated development rates among nations for a long while now, the motion of development has significantly moved in the last three to four years and the economy is relied upon to break shackles of middle-of-the-road development rate of around 6 percent to a high development rate of above 8 percent. It is seen that in spite of a most abnormal amount of inward asset era and access to outer borrowings, credit request crosswise over parts had grabbed fundamentally which bring about upgrading the rate of venture to new statures.

The Gross Domestic Product (GDP) in India was worth 2066.90 billion US dollars in 2014. The GDP estimation of India speaks to 3.33 percent of the world economy. Gross domestic product in India found the middle value of 550.27 USD Billion from 1970 until 2014, coming to an untouched high of 2066.90 USD Billion in 2014 and a record low of 63.50 USD Billion in 1970. Gross domestic product in India is accounted for by the World Bank Group. (Source World Bank 2015 Data)

From the above truths, it is obvious that GDP, Growth Rate and Inflation Rate of India are having some effect on the monetary development. Through our diagnostic study we are attempting to locate the individual and consolidated effect of the three variables GDP, Growth Rate and Inflation Rate on the money related advancement in India.

Objective of the Study

1. To study the impact of GDP and Growth rate on Financial Innovation in India
2. To study the impact of Inflation Rate on Financial Innovation in India
3. To study the combined impact of GDP, Growth Rate & Inflation on Financial Innovation in India.

Hypothesis of the Study

1. GDP, Growth Rate & Inflation Rate of India have an positive impact on Financial Innovation in India.

Research Methodology

Data analysis Tool: Multiple Correlation Analysis

Multiple Correlation is a tool to study three or more variables at a time. The effect of the independent factors on a dependent variable is studied. For that scale is as below:-

$$\begin{aligned}
 1. R^2_{x,yz} &= (r^2_{xy} + r^2_{xz} - 2r_{xy}r_{xz}r_{yz}) / (1 - r^2_{yz}) \\
 2. R^2_{y,xz} &= (r^2_{xy} + r^2_{yz} - 2r_{xy}r_{xz}r_{yz}) / (1 - r^2_{xz}) \\
 3. R^2_{z,xy} &= (r^2_{xz} + r^2_{yz} - 2r_{xy}r_{xz}r_{yz}) / (1 - r^2_{xy})
 \end{aligned}$$

GDP, Growth Rate and Inflation Rate of past nine years (2006-2014) as three

Independent variables.

R	=Multiple Correlation Coefficient
r	=Correlation Coefficient
x	=Growth Rate (NIFTY)
y	=Inflation Rate
z	=GDP Rate

Limitation

1. Data of past nine years (2006 – 2014) have been taken for analysis purpose
2. The growth rate values are as per NIFTY index. I have not considered SENSEX values

Data Analysis & Data Interpretation

Table I - Growth Rate data from year 2006-2014 [*Growth Rate (x) of Nifty Index.]

YEAR	X	dx = (x-X)	dx²	X²
2006	-10.14	-31.25	976.5625	102.8196
2007	64.44	43.33	1877.4889	4152.5136
2008	-15.04	-36.15	1306.8225	226.2016
2009	-15.57	-36.68	1345.4224	242.4249
2010	3.25	-17.86	318.9796	10.5625
2011	77.97	56.86	3233.0596	6079.3209
2012	6.91	-14.2	201.64	47.7481
2013	36.34	15.23	231.9529	1320.5956
2014	41.86	20.75	430.5625	1752.2596
TOTAL	190.02	0.03	9922.4909	13934.4464

[*Inflation (y)]

Table II - Inflation data from year 2006-2014

YEAR	Y	dy = (y-Y)	dy ²	y ²
2006	-64.39	-53	2809	4146.0721
2007	-14.89	-3.5	12.25	221.7121
2008	-5	6.39	40.8321	25
2009	13.16	24.55	602.7025	173.1856
2010	-11.63	-0.24	0.0576	135.2569
2011	0	11.39	129.7321	0
2012	5.26	16.65	277.2225	27.6676
2013	-25	-13.61	185.2321	625
2014	5.41	11.39	129.7321	29.26
TOTAL	-102.49	0.02	4186.761	5353.8943

Table III - Gross Domestic Product (GDP) data 2006-2014 [* GDP (z)]

YEAR	Z	dz = (z-Z)	dz ²	z ²	xy	xz	yz
2006	-8.3	-17.89	320.0521	68.89	-5725.73	-1232.442	22048.39
2007	9.09	-0.5	0.25	82.6281	-0.125	-41.31405	20.65703
2008	-28.33	-37.92	1437.9264	802.5889	-54526.2	-30434.17	1154064
2009	0	-9.59	91.9681	0	-881.974	0	0
2010	-6.98	-16.57	274.5649	48.7204	-4549.54	-807.297	13376.91
2011	100	90.41	8173.9681	10000	739008	904100	81739681
2012	-25	-34.59	1196.4681	625	-41385.8	-21618.75	747792.6
2013	33.33	23.74	563.5876	1110.8889	13379.6	26372.502	626083.2
2014	7.4	2.91	8.4681	156.25	24.6422	454.6875	1323.141
TOTAL	86.31	0	12067.2534	12894.9663	645343	876793.22	84304390

	x	y	Z
Mean	21.11	-11.39	9.59
s_d	33.203	21.57	36.62
R_{x,yz}	0.62	-	-
R_{y,xz}	-	0.04	-
R_{z,xy}	-	-	0.61

Result of the Study

1. **H₀**: As the Financial Innovation changes all three factors Growth rate, Inflation & GDP change in +I've direction.
2. **H₁**: Not in +I've direction.

The result concludes that the percentage change in Growth rate, will contribute to change Inflation & GDP simultaneously.

It is shown as follows:

3. **R_{x,yz}** = Fix Growth Rate there will be a +ive change in inflation and GDP i.e. 0.62
4. **R_{y,xz}** = Fix Inflation there will be a +ive change in Growth Rate & GDP i.e. 0.04
5. **R_{z,xy}** = Fix GDP there will be a +ive change in Inflation and Growth Rate i.e. 0.61

Future Trends of Financial Innovation

1. There should be a serious transparency
2. Mostly the products will be designed on the basis of liquid underlying assets
3. US and European financial institutions will be appraised more for their financial products—Regulators will focus on
 - a. Transparency
 - b. Liquidity

c. Valuation

4. Governance of Institutions designing products will be strained
5. Product designer will be look more and more towards behavioral finance
6. Financial e-commerce

Conclusion

As the Growth rate is expanding there is an expansion in Inflation and GDP of Indian Economy. Subsequently through analysis it is found that the GDP, Growth Rate and Inflation rate are having positive effect in contributing financial advancement in India. But it is a matter of worry as business sector is getting to be unpredictable step by step and dangers are expanding. Genuine such conditions support financial development and advancement however such a development is inorganic development. India being a creating nation must take after a long haul maintainable improvement arrangement. It is just possible when it keeps up low expansion rate.

We have to practice to some degree counter recurrent money related and monetary approaches with suitable outside part administration, guaranteeing an all around budgetary solidness – value security, low expansion, low swelling prospects and low swelling instability. It is just under these conditions, that speculations, developments and development can be kept up in a manageable way. We should keep on guaranteeing that the development push is maintained with price permanence.

The prospects in money related markets are conditioning some place and in the meantime heightening somewhere else. Both modification and the quickness of change in the budgetary markets would be distinctive tomorrow. Ceaseless investigation of extensions and qualities would request a brilliant spotlight on rising open doors, capability building, techniques for administration position in the open door zones and standards focused business practices. Money related advancement is seen as the "main thrust" of the budgetary framework towards its objective of enhancing the execution of what market analysts depict the "genuine economy". Along these lines, we need to create a culture, which embraces alteration and move ahead with an aim to lead.

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