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Highlights

Global Economic Scenario | Budget 2018-19

GST and Demonetisation

Behavioural Biases of Indian Investors

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The articles will go through a review process before publication. The issues are themed on Marketing, Finance, Organisational Behaviour & Human Resources (OB & HR), Information Technology & Operations (IT & Operations), Strategy, Economics and Management. The publication caters to academicians and practitioners in corporate and government organizations and departments.

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The article should be non-technical and should be of around 2500 - 4000 words. The research articles may be upto 7000 words. But no mathematical expressions or technicalities of methods should be contained in the main text. It should be typed in MS Word in Times New Roman 12 with paragraph spacing 1.5. Figures and simple, small tables can be incorporated. There should not be any notations or equations, at least in the main text. If required, it may be put in Appendix. The article should also contain a short abstract of 150 – 200 words. Full forms of each abbreviation should be mentioned at first instance. All figures and diagrams should be in black and white. Send your manuscript along with your name, institutional affiliation, email ID and contact number to the editorial office at imikonnect@imi-k.edu.in mentioning the area viz. Marketing, Finance, OB & HR, Economics, Strategy, IT & Operations, Management Education, Others or Themed Issue.

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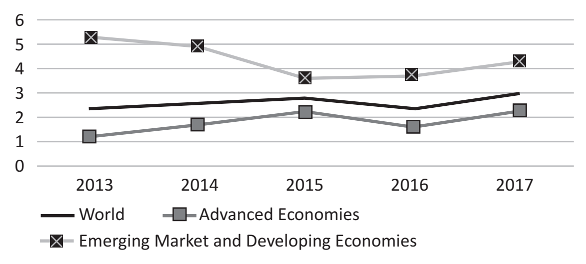
Global Economic Scenario*

Introduction

The pickup in the global activity that started in early 2016 continued at almost the same pace reflecting firmer growth in domestic demand in advanced economies and China and improved performance in other large emerging market economies. Global GDP growth has picked up from 2.4 per cent in 2016 to 3 per cent in 2017[1]. The global economic recovery is aided by marked recovery in investment and trade with favourable financing conditions and the dissipating impact of the earlier commodity price collapse. Despite risks of the possibility of financial stress, increased protectionism and rising geopolitical tensions, economists are hopeful that the recovery will be sustainable.

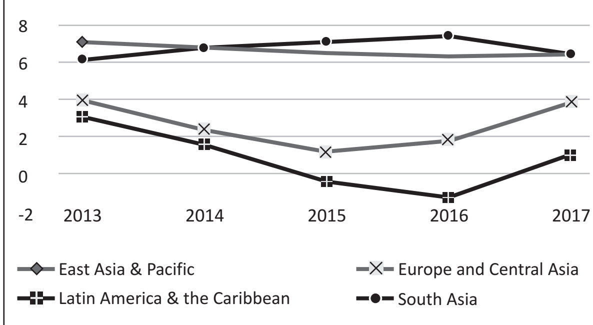
The growth of the economy in advanced economies recorded an increase from 1.6 percent in 2016 to 2.3 percent in 2017, while during the same period, the emerging market and developing economies experienced an increase in GDP growth from 3.7 to 4.3 per cent **[Chart 1.1]**.In United States growth was supported by private investment while private consumption also continued to grow at a robust pace. In Euro Area and Japan, stronger private consumption, investment and external demand boosted the overall growth momentum. Growth in most of the other advanced economies except United Kingdom is quite significant backed by both domestic and external demand. Among emerging markets and developing economies, Asian countries continue to account for over half of world growth. In India growth slowed due to uncertainty related to demonetisation followed by mid -year introduction of Goods and Services Tax (GST). But higher external demand boosted the growth of other emerging market economies in East Asia. While East Asia and the Pacific maintained economic growth rate of above 6 per cent, South Asian countries suffered a setback with growth falling from 7.5 to 6.5 per cent from 2016 to 2017 **[Chart 1.2]**. However, GDP in Latin America and the Caribbean reversed its downfall and recorded a positive growth rate of 0.9 per cent during 2017.

Chart 1.1: Real GDP Growth in Different Regions



Source: *Global Economic Prospects, World Bank, several issues*

Chart 1.2: Real GDP Growth in Emerging Market and Developing Economies



Source: *Global Economic Prospects, World Bank, several issues*

*Editorial Team, IMI Konnect

We acknowledge the research assistance provided by Ms. Poulami Chakraborty

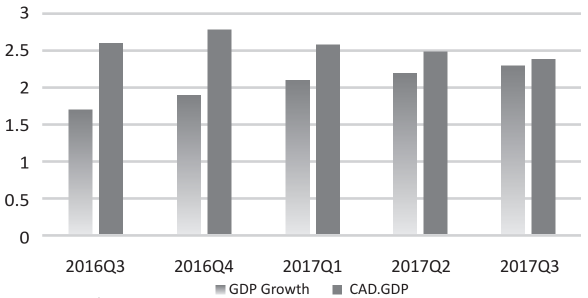
[1]World Bank Global Economic Prospects, January 2018

Advanced Economies

The US

The recent pickup in growth of the US economy is backed by private investment, robust consumption and increase in exports. Policies like lowering the statutory corporate tax rate and income tax cuts is likely to boost the economy in near future. GDP growth in US was at around 1.7 percent in the last quarter of 2016 a nd gradually improved to around 2.3 percent in the last quarter of 2017-18 (till January, 2018). The increase in Industrial production over the last four quarters is quite significant starting from -0.6 percent in last quarter of 2016 to 3.4 percent in the 4th quarter of 2017-18 (till Jan, 2018) **[Chart 2.1]**. Unemployment rate also

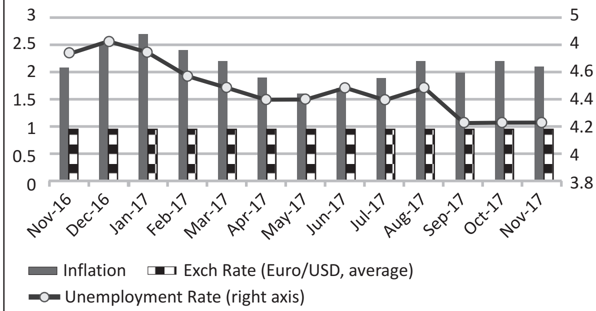
Chart 2.1: US GDP Growth and Current Account Balance



Source: The Economist

decreased slightly from 4.6 percent to 4.1 percent over the last four quarters **[Chart 2.2]**. Current account deficit as percentage of GDP did not change much, revolving around 2.5 to 2.6 percent. The depreciation of the US dollar so far in 2017, if not reversed, would similarly contribute to reducing the United States' net external liability position. United States being net creditors in foreign currency and net borrowers in domestic currency, an exchange rate depreciation implies improvement in the net external position through an increase in the domestic-currency value of net foreign-currency

Chart 2.2: Trends in Key Macroeconomic Variables in US



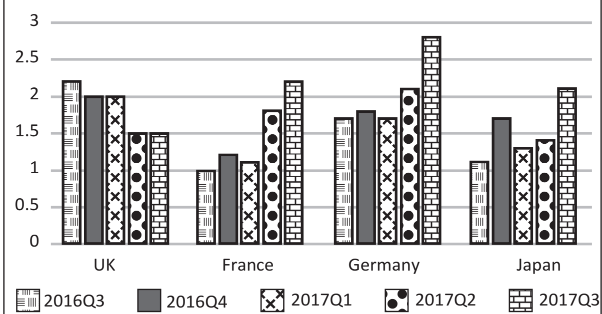
Source: The Economist and www.x-rates.com

assets. Owing to weaker fuel prices and negative shocks linked to cell phone prices and prescription drugs, consumer price inflation has been increasing from 1.7 percent in Q4 of 2016-17 to 2.2 percent in Q4 of 2017-18 (till January, 2018).

Euro Area

The euro area experienced almost similar kind of growth trends like the US over the last 4 quarters with real GDP growth rising from 1.7 percent to 2.6 percent buoyed by surprisingly rising labour force participation rate in many European countries including Germany, Italy and United Kingdom. The Euro Zone industrial production recorded significant increase during the last financial year **[Chart 3.1]**.The unemployment rate reached its

Chart 3.1: Trend in GDP Growth in Select Developed Economies



Source: The Economist

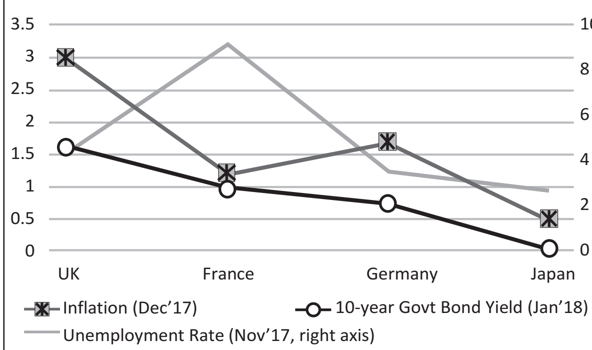
lowest level since 2009 and inflation remained low and range bound. The increase in growth in 2017 mostly reflects a quick growth in exports in the context of the broader pickup in global trade and continued strength in domestic demand growth supported by accommodative financial conditions amid diminished political risk and policy uncertainty.

There has been a significant increase in the growth of GDP during last quarter of 2016-17 and that of 2017-18 in France (from 1 percent to 2.3 percent) and Germany (1.7 percent to 2.8 percent). Inflation has picked up in Euro area from 0.2 percent to 1.5 percent during the same period, mostly reflecting higher energy prices and the ongoing cyclical recovery in demand. In UK too, inflation picked up from 1.2 percent to 3.1 percent during the last year **[Chart 3.2]**. On the positive side, unemployment rate had decreased from 9.8 percent to 8.8 percent over the year; similar declining trend is observed in France and Germany also during the same period (9.7 percent to 9.4 percent and 6 percent to 3.6 percent respectively). Also, in the region, bank credit growth to non-financial private sector has been positive since mid-2015, though Non-performing Loan (NPL) ratios are still high. Long-term sovereign bond yields have remained broadly stable in UK at around 1.25 percent, France at about 0.78 percent and marginally increased in Germany (0.27 percent to 0.45 percent) over the last four quarters (till January, 2018).

Japan

In Japan growth recorded considerable upsurge, from 0.9 per cent in 2016 to 1.7 per cent in 2017 so far, supported by increased demand and investment fuelled by the implementation of the fiscal stimulus package. Inflation remained below 1 per cent and the Central Bank continued to calibrate its bond purchases to stabilise long-term bond yields around zero. The 10 year government bond yield remained at around 0.04 percent over the last four quarters **[Chart 3.2]**. The growth forecast for Japan has been

Chart 3.2: Macroeconomic Variables in Select Advanced Economies



Source: The Economist

revised upwards for next two years, reflecting upward revisions to external demand, and carry over from stronger-than-expected recent activity.

Emerging Market and Developing Economies

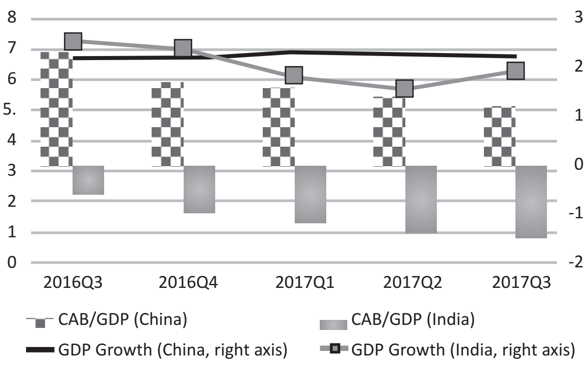
Among the emerging economies, while most of the countries recorded increase in GDP growth, it is the Asian countries which continued its fast pace of growth. During the last year, domestic demand continued to benefit from improved confidence and greater price stability and investment also recovered in many economies. Trade in commodity exporter countries recovered markedly, while a significant rebound in import growth also took place.

Asian Emerging Economies

The projected aggregate growth rate over 2017–22 is sustained by fast growth in the two largest economies in Asia, viz. China and India, which account for more than 40 percent of GDP (measured at purchasing power parity) and more than 40 percent of the population of emerging market and developing economies. In emerging market economies, financial conditions since March 2017 generally have been supportive of a pickup in economic activity. Equity markets have shown improved performance; long-term interest rates on local-currency bonds have generally declined, China being the exception (10 year government bond interest rate hovered around 2.93 percent to 3.88 percent over the last four quarters) and spreads on the Global Emerging Markets Bond Index have fallen slightly. Emerging market currencies have generally strengthened relative to the US dollar.

Backed by continued fiscal support and reforms and better than expected recovery of exports, real GDP growth in China sustained at around 7 per cent in 2017 **[Chart 4.1]**. China's trade flows recovered

Chart 4.1: GDP Growth and Current Account Balance in China and India

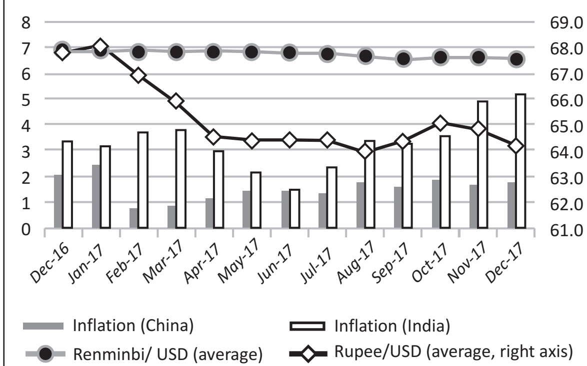


Source: The Economist

remarkably in 2017, partly reflecting rising commodity imports amid tightly enforced production cuts as well as strengthening foreign demand. Inflation surged, but remained within target during the last one year. However, key downside risks relate to financial sector vulnerabilities, the possibility of increased protectionist policies in advanced economies as well as rising geopolitical tensions.

India's economic expansion has been bouncing back from a temporary liquidity squeeze. The decision to demonetize high-denomination banknotes in November 2016 quelled cash-intensive economic activity, but the impact is expected to be short lived. Government deregulation and reform of taxes on goods and services, among other areas, is likely to boost up confidence and thereby business investment and growth prospects. Growth is expected to edge up to 7.4 percent in 2017 and 7.6 percent in 2018 **[Chart 4.2]**. Inflation has been

Chart 4.2: Trend in Inflation and Exchange Rate in China and India



Source: The Economist and www.x-rates.com

range bound and the fiscal deficit to GDP ratio also remained low, though could not meet the target. In the recent budget the policy makers are increasing focus on rural development and boosting the economic activity by reducing tax rates for small corporates.

GDP growth showed considerable increase in South East Asian economies. Economies in emerging Asia are already experiencing net capital outflows. In spite of the negative trend in net flows all over the world, India, Indonesia, and Vietnam received net inflows of foreign direct investment.[2]

[2]Asian Development Outlook 2017, Asian Development Bank

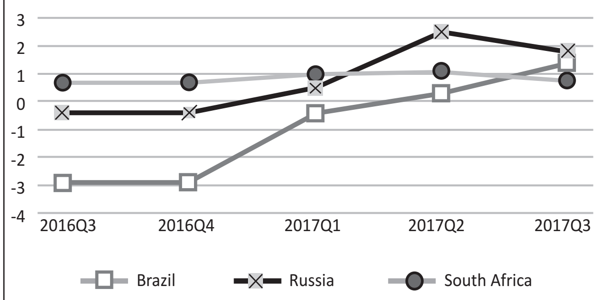
One risk is mounting household debt in some Asian economies. The ratio of debt to GDP has increased in several economies, rising significantly in the Republic of Korea from 74 percent in late 2008 to nearly 91 percent in the third quarter of 2016, and to about 71 percent in Malaysia and Thailand. However, there is scope to strengthen macro prudential policy, such as tightening ratios of debt to income and of loans to asset values. Policy makers may also have to scrutinize their banking sectors regularly to track bank exposure and identify needs for special reserves. They may have to intervene more decisively in housing markets as well to cool speculative demand and head off asset bubbles.

Latin America and the Caribbean

In Latin America and the Caribbean, real GDP in most of the emerging economies increased. Although growth is holding up well in Central America and strengthening in the Caribbean and domestic demand continues to underperform in much of the rest of the region, some factors are playing a key role in shaping substantially different outlooks across countries.

Due to strong export performance and huge diminishing rate of contraction in domestic demand, Brazil started seeing positive growth phase since the last quarter of 2017. GDP growth in Brazil reached nearly 1 percent for the year 2017-18 **[Chart 5.1]**, backed by a plentiful crop, a boost to consumption and the policy of allowing workers to draw on savings accumulated in their severance accounts. As key reforms to ensure fiscal sustainability are implemented over time, confidence improved. Mexican GDP growth showed a decline in 2017 compared to that of 2016, due to uncertainty related to renegotiation of the North American Free Trade Agreement and significant tightening of monetary policy. In

Chart 5.1: GDP Growth in Select Emerging Economies



Source: The Economist

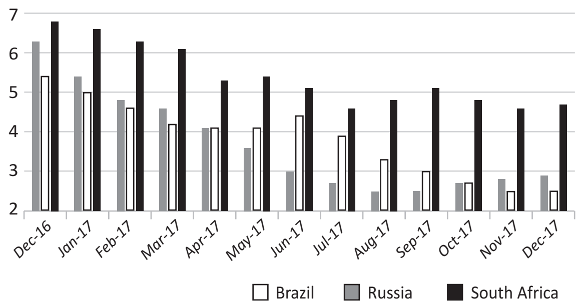
Mexico, consumer price inflation has been rising to 6.6 percent in last quarter of 2017-18, (till January, 2018), 2018) from 3.3 percent in early 2017 because of the liberalization of domestic fuel prices and pass-through from the peso's depreciation through January 2017.

European Emerging Economies

In developing Europe and Central Asia, GDP growth recorded notable increase, from 1.7 per cent in 2016 to 3.8 per cent in 2017 till January, 2018. The rise in growth in Turkey has been driven in part by a recovery in exports after several quarters of contraction and a more expansionary fiscal stance. The outlook was also revised up for Poland, reflecting better-than-expected growth in the first half of 2017 and the expected pickup in EU-funded projects. The consumer price inflation rate in Turkey has spiked to 11.9 percent (by end of January, 2018) from 8.5 percent in early 2017 following the depreciation of lira.

Growth in Russia, which came out of recession during 2017, was also well supported by domestic and external demand, banking sector support, targeted fiscal stimulus, and reduced external imbalances amid exchange rate flexibility. Lower inflation and greater monetary policy accommodation supported private consumption growth in large economies like Russia and South Africa. After rising to 6.6 percent in January 2017, consumer price inflation in South Africa has declined to 5.4 percent in June 2017 and further to 4.6 per cent in January 2018 **[Chart 5.2]**. However, in South Africa, growth prospects remain to be subdued at the backdrop of increased political uncertainty that weighs on confidence and investment.

Chart 5.2: Trend in Inflation in Select Emerging Economies



Source: The Economist

[2]Asian Development Outlook 2017, Asian Development Bank

Formalization: Have Demonetization, GST helped?

Renu Kohli*

Formalization has been in focus in India for more than a year. Widely understood as a process that is organized, regulated, taxpaying and operating through official mechanisms, formalization or formality is distinguished by these attributes from the informal sector, which is often characterized as avoiding taxes and regulations. In India, cash transactions serve as the key operational mechanism for the latter. Literature[1] points to other distinctions such as educated entrepreneurs, managerial and technological knowhow that enable scale efficiencies and make formal firms highly productive. Against this, informal enterprises are small and micro, manned by typically uneducated entrepreneurs, lack capital and skills, adding little value therefore. Formalization, which involves transition and change of the informal sector, is thus viewed by many as a positive development: an efficient, productive formal sector is perceived as the main driver of growth (Farrell, 2004, *McKinsey Global Institute*).

In India, formalization surfaced into the spotlight after demonetization in November 2016, and then at the institution of goods and services tax (GST) system. Both, it was argued, would accelerate formalization of the economy to several advantages. The enforced withdrawal of currency would bend public behaviour by depriving agents required amounts of cash to execute transactions, thus pushing them to transact in non-cash modes of payments and transfers. Official recording of activities would then rise, widening the tax base and increasing revenues, apart from additions to GDP growth from productivity gains in the medium-term from enhanced aggregate efficiency. The GST system too is expected to induce a somewhat similar shift to legal channels through its design – interlinked input credit claims accrued at each rung of the supply chain - and electronic platform for executing all transactions.

Formalization is anticipated through two key shifts as result of these changes. One, drawing in informal or unregulated firms into the official mainstream; two, an increase in the existing size of the formal sector from expanded market shares as informal ones at the margin become uncompetitive. It is obvious the above changes would cause the cash intensity of the economy to decline as more economic transactions are executed through banks, or formal financing system. In other words, the currency in circulation would be at least one critical indicator of formalization.

This article examines India's progress at formalization through the prism of this particular monetary aggregate. In the next section, it discusses formalization in the development process and the available international evidence on reduction of informality. Thereafter, trends in currency in

*Consultant-Economist and former staff member, IMF & RBI

[1]La Porta and Shleifer, 2014 provide a comprehensive overview

circulation or CIC are analyzed. India's informal economy and cash-dependency is considered thereafter, while the concluding section makes an attempt to interpret the return of currency to pre-demonetization levels to assess where formalization stands.

I. Does the Informal Economy Formalize? International Evidence

La Porta and Shleifer (LPS, 2014) have considered the important question of shrinking of the informal economy in developing economies. After collating the findings of numerous studies and two decades of *World Bank Enterprise Surveys,* they arrive at two important insights on formalization: One, the informal sector rarely, if ever, transits to formal. Two, formalization is essentially demand-driven, which is by consumers' preferences for high-quality, higher-priced products as per capita incomes rise. Formalization accompanies the level of economic development and rising incomes. And concomitant with this process, the informal sector gradually dies out as rising income levels reduces demand for inferior goods produced by this sector.

Five critical facts about the informal economy derived by LPS provide the rationale of this process.

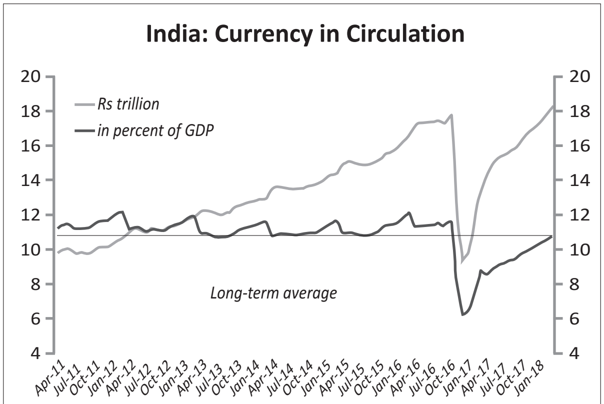
1. **The informal economy is huge in developing countries,** with a typical 30–40 percent share in total economic activity and the highest employment shares in the poorest countries. Informal economy shares fall to 15-20 percent in the richest quartile countries.
2. **Informal firms are small, unproductive and stagnant because of human capital, not size.** The median productivity difference between informal and formal firms is 15 percent; informal firms the same size added just 21 percent of value per employee of formal ones. Such low productivity reflects very low quality products sold at low prices to low-income customers; a small fraction, 14 percent, sold its output to formal firms (Enterprise Surveys). Given a chance, many informal entrepreneurs would shut their businesses and work as formal sector employees, pay income tax. But few have this opportunity.
3. **Regulation is not what keeps informal firms down.** Lack of access to finance is the biggest obstacle because informal entrepreneurs lack skills, business and accounting systems that banks value for credit appraisal. Land is another reason, partly because of illegal occupation and fear of eviction. Regulation, taxes are way lower concerns than corruption, electricity, licence-permits and crime. Informal firms think the biggest benefit of registration is financial access!
4. **Informal firms rarely become formal, almost never.** They start out and die in informality. By contrast, the majority of registered or formal firms started off as registered. Informal businesses are not 'reservoirs of entrepreneurial energy' but rather, 'swamps of backwardness", according to LPS. But they allow their owners to survive.
5. **As countries develop, informality becomes less important.** The informal economy as measured by the degree of self-employment (a proven, reliable measure) shrinks as per capita income rises. This is intuitive, given association between consumer incomes and demand for better quality, higher priced goods produced by the modern, organized sector.

The broad evidence in the literature is thus consistent that informality declines, although slowly, with development. Against this finding, LPS advocate caution in structural policies designed to promote formality, arguing that the wisdom in policies depends in part, whether they encourage formalization, or discourage informal activity. They are also sceptical of all policies that might tax or regulate informal firms; rather than encourage them to become formal, these could instead drive them out of business, leading to poverty and destitution of informal workers and entrepreneurs. This is because despite all their benefits of avoiding taxes and regulations, they simply cannot compete with formal firms. Growth that kills the informal sector is driven by the formation and expansion of formal firms managed by educated entrepreneurs.

II. Currency in Circulation: Trends

As discussed in the introduction, the policy goal of formalization in India has sought achievement by explicit targeting of currency amounts available to the public (demonetization) and compelling shift to electronic and banking channels through new systems and rules (GST). Trends in the monetary aggregate, currency in circulation (CIC), the key component of reserve money, should then serve as a good, immediate measure of formalization. It has been widely noted recently that CIC almost returned back to its pre-demonetization levels at 99.2 percent on February 23, 2018. In all likelihood, it will very soon overshoot the Rs 17.98 trillion in circulation on November 4, 2016. Observed from other perspectives too, i.e. normalized to GDP and relative to historical trends, the accompanying chart clearly illustrates that India's CIC-GDP ratio has reverted to its long-term mean. It is projected to cross the threshold in March, in repetition of its past pattern.

This development is contrary to an expected,



Note: March is projection - Rs 450 billion increase over Feb. 23 figure - using average rise in currency in circulation in the last 4 years.
Source: RBI & author's calculations

permanent decline post- demonetization and GST. A return to previous levels of circulation currency indicates that the public or economic agents in general have resumed their previous cash practices. It challenges policy claims and expectations: an accelerated shift to formality was expected not only from demonetization but the additional, similar impact of the closely-clubbed GST reform. All the more puzzling then to see as much currency circulating in the economy as before these two big changes!

The mystery is compounded because of several evidences presented as proof of formalization following demonetization and GST. *Inter alia,* tax base enlargement as seen from increase in the number of taxpayers, higher tax collections from transition of more transactions to formal mechanisms as well as improved compliance from better information and scrutiny by authorities, digitization of transactions with more use of non-cash payment and transfer modes and so on.

If all these effects have come about because of demonetization and GST, why has the CIC-GDP ratio not settled at a permanently lower level?

Where is this cash deployed? Which segments or activities continue to be cash dependent and why? Taking the commonly proffered proofs of formalization at face value, has cash intensity in some parts of the economy increased? What is the real status of formality in the Indian economy in the post-demonetization and GST period? The next section considers some aspects.

III. What does India's Informal economy look like?

India's informal economy closely corresponds to features observed internationally and presented by LPS (2014). According to the Reserve Bank (RBI, 2017), 45 per cent of India's gross value added (GVA) originates from the unorganised sector and is distributed across agriculture, industry and services as respective shares of 95, 15 and 42.4 percent. The informal economy has a very large, 82 per cent share in total employment - agriculture accounts for 49 percent, services at 25 percent and industry, 9 percent. Note that India's informal sector size is above the median 30-40 percent reported by LPS, whereas education and productivity levels are much lower than the median values arrived at by LPS. For instance, in comparing education levels across formal and informal firms in the *Enterprise Surveys* data, 89 percent of formal firms surveyed for India were headed by college-educated managers against none in the informal firms in the *Enterprise Survey* data. Again, the median productivity difference between informal and formal firms in India was found higher at 18 percent.

India's informal economy thus seems more 'informal' than the international average. Most of it depends upon cash is a well known fact. Currency flows from legal operations in the formal sector "...eventually percolate to the informal sector, where it provides a part of the essential liquidity for virtually all transactions within the informal sector and between the informal and formal sectors (Sen, 2016)." For various reasons, three sub-segments are reported to be the most cash-intensive: One, the small and micro enterprises operated by mostly the uneducated and dominating agriculture, trades and many parts of services. These segments are the largest sources of self-employment - informality in the traditional sense seen across developing countries. Two, the real estate and construction segment, which have long been improperly or loosely regulated and which serves as the major store for illicit wealth and tax-evading incomes. Cash transactions have dominated here, giving rise to a sizeable parallel/black economy. Three, gold and jewellery segment, the other physical store for genuine savings, illegal wealth and incomes.

In the pre-demonetization period, a sizeable quantum of currency financed three segments. But its hard to believe that post-demonetization and GST, currency requirements would be the same as before. This is because of a prolonged, visible slowdown in these very sectors more than a year after demonetization and seven months after the arrival of GST. Consider each by turn.

The rural-informal economy sector has been under consistent pressures in the period. In the first round, the source was demonetization-linked liquidity squeeze that hurt businesses, caused many closures and job losses, disrupted and/or broke down wholesale-retail supply-chains and adversely impacted agriculture markets and prices. The next disturbance to this segment was from GST, from which market share and volume gains have been reported by large, organized firms at the expense of numerous informal firms and suppliers that have either been unable to adapt to the new environment or are under transition, while still others have opted out altogether. For example, some large consumer goods' firms have established their own direct distribution channels, bypassing previous wholesale chain structures that have either not recovered and are overall, not expected to restore to pre-demonetization/GST levels. Equally in many farm produce markets, traders are reported to exploit farmers' preferences for cash payments by depressing purchase prices. The prolonged contraction in consumer durables' even as non-durables, two-wheeler and farm vehicle sales have recently revived. Such trends would suggest less transaction demand for currency than before demonetization and GST.

Likewise, the slowdown in real estate and construction is all too visible in large inventory pileups, subdued property sales and transaction volumes as well as demand for cement, steel, and construction materials. Sector estimates in the national accounts statistics match these trends. Moreover, the adverse effects of demonetization and GST, the former drying up liquidity and latter pushing up costs, are further magnified by new, tighter regulation (RERA, Benami Properties Act) adding fear and risk-aversion. Pulled down as result, this segment is unlikely to need the cash-financing levels seen in the pre-demonetization and GST period because activities and operations have declined. Last of all is gold and jewellery segment where too, stricter regulation and monitoring of cash purchases have pulled down sales. Again, the fear of tax authorities on the trail has also restrained volumes.

So, given that the three large cash-intensive parts of the informal economy have fared poorly in post-demonetization and GST, where is the previous magnitude of currency now deployed? Has formalization really occurred as believed from other indicative trends? Or have demonetization and GST have had the unintended consequence of increasing informality instead? The final section attempts some answers and explanations.

IV. Formalization: What may have happened?

Hard data for the informal sector, which would establish the extent of formalization due to demonetization and GST, is infrequent in India. Indeed, it is the organized, corporate sector information and data that is used by the national statistical agency to extrapolate output and value added for the informal sector from a base period benchmark survey. This is supplemented with other proxy indicators and past trends (RBI, 2017). In its absence, one can only hazard a guess, based upon the reversion of currency circulating in the economy, coupled with intrinsic features of the informal economy that are integral to the success, or otherwise, of policies and actions to fasten formalization. Amongst these are the large shares of informal employment.

The preceding section drew attention to three large segments that were major users of cash in the pre-demonetisation and GST period but where the intensity of transactions in the later period cannot be reconciled with a currency-GDP ratio at previous trend levels. It is possible this is what has happened instead: a portion of transactions in these segments have become completely informal in the sense of a clean divide between formal and informal activities compared to the previous situation in which cash operations and exchanges flowed easily between formal and informal sectors. In other words, the formal and informal parts that were closely intertwined through a mix of cash and other payment-transfer mechanisms have completely separated after demonetization and GST. The cleavage has occurred because of higher probabilities of detection under GST and that interlinkages between cash and non-cash operations would increase chances of scrutiny, income assessment and taxation.

A completely parallel but segmented informal economy now perhaps operates off the radar, in cash. One reflection of may be the perceived underreporting of transactions under the GST system. On the other hand, the formal economy, which ironically would also include such informal operations on the sidelines, executes through proper legal channels. This possibility cannot be ruled out because a transition to formality, which is what would be expected from GST especially, would significantly raise costs for informal firms; much more than they can expect to recoup from raising volumes and prices given market constraints or which they cannot lower at existing levels of managerial skills (LPS, 2014). This inability to adapt is also manifest in different ways, besides the reversion to cash (higher costs of digital transactions, lack of computer knowledge and access). For example, reports of aversion to online compliance to GST by textile, construction, transport, trade and other segments marked by large informality (lack of managerial, IT skills, accounting systems, additional costs threatening viability, loss of business from formal buyers, etc.), pleas for fiscal support, and so on.

Is this configuration the 'new normal'? Put succinctly, has informality increased? Time will shed more light on formalization effects of demonetization and GST. For now, the evidence is veering more towards the available cross-country evidence on reducing informality through explicit efforts, which is quite discouraging.

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Exploring Behavioural Biases among Indian Investors: A Qualitative Inquiry

Satish Kumar* & Nisha Goyal**

Abstract

Psychological factors influence individual investors' investment decision making, but few studies have used qualitative methods to understand these factors. The present study interviews experienced financial advisors and brokers working with individual investors. For the data analysis, a thematic content analysis approach with open coding was used. The findings of this study indicate that investors have numerous opinions and tendencies which can be categorized into cognitive errors, emotional biases and social interactions, that affect their investment decisions. This study suggests that an understanding of individual investors' behavioural biases can provide financial planners and advisors with additional knowledge to help their clients in making better financial decisions which potentially lead to improved investment results.

Keywords: **Psychological biases; investment decisions; individual investors; financial advisors; qualitative thematic content analysis**

Introduction

In the stock market, individual investors exhibit different kinds of behaviour. Traditional finance theory (e.g., the arbitrage principles of Miller and Modigliani; the portfolio principles of Markowitz; the capital asset pricing theory of Sharpe, Lintner and Black; and the option-pricing theory of Black, Scholes and Merton) is based on the assumption that individual investors are capable of making fully rational financial decisions and are wealth maximizers. The efficient market theory states that in the efficient market, investors tend to act rationally, and stock prices incorporate and reflect all the available information. Moreover, expected utility theory argues that a decision maker analyses all the available alternatives based on their utility and associated risks and chooses the optimum decision. However, individual investors do not always make their decisions based only on certain reasons and logic; they are driven by emotions and psychological factors (Tourani-Rad and Kirkby, 2005).

Behavioural finance provides the explanation for this phenomenon. Although finance has been studied for thousands of years, behavioural finance is an emerging field that combines the behavioural or psychological aspects with conventional economic and financial theories to provide explanations on how emotions and cognitive factors influence investors' behaviours. These emotions and cognitive factors are known as behavioural biases. Because of these biases, investors make irrational investment decisions. Besides, the emotional and cognitive factors, the social influence of media as well as friends, relatives and colleagues also affect investment decisions. In their seminal paper, two psychologists, Kahneman and Tversky (1979), have criticized the expected utility theory as a descriptive

*Assistant Professor (Finance & Accounting Area), NITIE, Mumbai

**Assistant Professor (Finance Area), Alliance University, Bengaluru

model of decision making under risk and have developed an alternative model of decision making, which is known as prospect theory. In the prospect theory, they advocate that people are loss averse and individuals dislike losses more than an equivalent gain. Hence, people are more willing to take risks, in order to avoid the losses. In another important study, Tversky and Kahneman (1981) presented the framing effect. They documented that if two problems are effectively identical but the only difference between them is that the outcomes are described in problem 1 by the gains and in problem 2 by the losses. In this case, they found that an individual's choice involving gains are often risk averse and choice involving losses are often risk taking. It indicates individuals' contradictory attitudes towards risks involving gains and losses.

Behavioural biases and prospects are abundant in an emerging financial market like India. A large amount of information, in a short period of time, forces individual investors to make decisions based on certain heuristics. These heuristics enable individuals to make rapid but biased decisions. Along with these heuristics, individuals also exhibit certain sentiments and beliefs that encourage individuals to make biased decisions. Some examples of behavioural biases that we have considered in this study are overconfidence bias, disposition effect, herd behaviour, familiarity bias, loss aversion, self-attribution bias, anchoring bias, regret aversion, overreaction, mental accounting, hind sight bias, framing effect, representative bias and availability bias (Barber and Odean, 2000; Kahneman and Riepe, 1998; Kahneman and Tversky,1979;Pompian,2006 and Tversky and Kahneman, 1974).

It is interesting to understand the decision-making behaviour of individual investors based on their beliefs and preferences. With this view, the objective of this study is to explore the various behavioural factors or biases that influence the investment decisions of individual investors in the Indian stock market. According to Crabtree and Miller (1992), a qualitative study is used to capture expressive information about values, beliefs, feelings and motivations that cause different behaviours. For the purpose of this exploratory study, an in-depth interview method was used because it provides much more exhaustive information and a relaxed atmosphere in which people feel more comfortable to provide information.

The remainder of this paper is structured as follows: The first section briefly reviews the related literature. In the next section, we describe the research method and data analysis followed by a section that presents the results and findings. The last section provides the conclusion and implication of this study.

Related Literature

Behaviour and biases of individual investors that differentiate them from rational actors or decision makers come under the purview of the micro-aspect of behavioural finance (Pompian, 2006). Micro-aspect of behavioural finance deals with the behavioural biases of the individual investors.

Initially, Tversky and Kahneman (1974) have identified the presence of three heuristics (representativeness, availability and anchoring) in decision-making under uncertainty and risk. These heuristics are shortcuts that are used to deal with new information. Although, De Bondt (2003) suggested that heuristics create the desired outcome, but on occasion, they lead to probable errors in judgements.

Cognitive biases include anchoring and adjustment, availability bias, mental accounting, representativeness, ambiguity aversion and self-attribution bias. In contrast, emotional biases include endowment effect, loss aversion, status-quo bias and regret aversion. The major research studies on these biases are summarized in Table 1.

Table 1: Summary of the literature on various behavioural biases

Bias	Author (Year)
Overconfidence	Odean (1999), Daniel et al. (1998), Barber and Odean(2000)
Herding	Lakonishok et al. (1992), Scharfstein and Stein (1990), Christie and Huang (1995)
Familiarity	Massa and Simonov (2006)
Disposition effect	Odean (1998)
Optimism	Toshino and Suto (2004), Shefrin and Statman (2011)
Overreaction	Bondt and Thaler (1985)
Mental accounting	Thaler (1999), is and Huang (2001)
Loss aversion	Kahneman and Tversky (1979)
Status-quo bias	Samuelson and Zeckhauser (1988)
Anchoring	Tversky and Kahneman (1974), Campbell and Sharpe (2009)
Gambler's fallacy	Croson and Sundali (2005)

These biases can get reflected in the form of market anomalies such as economic crises (e.g., the dot-com bubble of the 1990's and the global financial crisis of 2007). These crises affected the stock market and were found to be very costly. Further, researchers found that poor financialdecisions hurt productivity in the workplace also. Hence, it has become very important and vital to investigate investors' behaviour. This will be helpful in giving a deep insight to government and investment advisors into making policies, practices and more customized financial products that can fulfill the needs of individual investors.

Research Methodology

The aim of this study is to explore the behavioural factors or biases that affect individuals' investment decision making. To understand the behaviour of individual investors in the Indian stock market, qualitative research was preferred. Qualitative research allows researchers to gain a better understanding of investors' behaviour by accessing their intentions, motives, beliefs, attitudes, rules and values that lie behind their decision making and make their actions and behaviour meaningful (Draper, 2004). Moreover, qualitative methods refer to various data collection techniques such as semi-structured open-ended interviews and observations (Draper, 2004). These qualitative methods are important in exploratory research, e.g., the use of open ended questions gives participants the opportunity to respond in their own words; provides more flexibility to researchers for probing the initial participant responses, like, to ask why or how. Qualitative research relies on textual data (i.e., data from audiotapes, videotapes and field notes) obtained from observations and interviews rather than on numerical data (by assigning numerical values to responses) of survey research (Draper, 2004). In this study, an exploratory, in-depth data collection is required to ascertain the importance of the concept noted above. For this purpose, face-to-face, in-depth semi-structured interviews were conducted to obtain the participants' views and opinions. The main advantage of using in-depth interviews is that they provide more detailed and thorough information than do the data obtained from the survey methods.

Sample

In quantitative research studies, sampling is a crucial issue, and requires a representative sample to attain the objective of the study. But in the case of qualitative research, sample size tends to be small because researchers have to establish a fruitful relationship with the informants to address the research objective in depth (Crouch and McKenzie, 2006). In the qualitative study, the number of required subjects usually becomes obvious as the study progresses and adding more participants to the study does not result in additional perspectives or information (data saturation) (Marshall,1996).

Random sampling or probability sampling is very common and likely to be accurate because all members have an equal chance of being selected. However, in the case of qualitative study, random sampling is not appropriate. This is because in random sampling, characteristics of the whole population should be known, which is not possible in a complex qualitative study (Marshall, 1996). Additionally, random sampling creates representative sample only if the research characteristics (e.g. value, attitudes and beliefs etc.) are randomly distributed within the population. Although, there is no evidence that above mentioned characteristics are randomly distributed (Marshall, 1996). Therefore, purposive sampling was used to select participants. This is for the reason that purposive sampling assists in identifying and selecting individuals that areknowledgeable about and experienced with a phenomenon of interest (Cresswell and Plano Clark 2011). For this study, target participants were investment advisors, analysts and brokers having a minimum of 5 years of experience in various popular securities firms in India (see Table 2). Individuals are mostly dependent on financial advisors for their investments. Thus, because of poor financial literacy individual investors could be more biased in providing information; therefore, investment advisors were chosen to provide more detailed and

Table 2. Respondent Profile

S. No.	Designation	Gender	Experience
1.	Deputy Manager-Treasury and Equity	Male	5/10 years
2.	Senior Manager	Male	10/15 years
3.	Wealth Manager	Male	5/10 years
4.	Assistant Vice President	Male	10/15 years
5.	Assistant Manager	Male	5/10 years
6.	Owner	Male	10/15 years
7.	Assistant Manager	Male	5/10 years
8.	Wealth Manager	Male	15/20 years
9.	Investment Manager	Female	5/10 years
10.	Deputy Manager	Male	5/10 years
11.	Fund Manager	Male	5/10 years
12.	Owner	Male	10/15 years
13.	Fund Manager	Male	5/10 years
14.	Owner	Male	>20 years
15.	Investment Manger	Male	5/10 years
16.	Wealth Manager	Male	5/10 years
17.	Owner	Male	15/20 years
18.	Assistant Manager	Male	5/10 years
19.	Senior Manager	Male	>20 years
20.	Owner	Male	10/15 years

thorough information about the behaviour of individuals investing in the Indian stock market. Advisors of different securities firms deal with their clients (i.e., individual investors) and focus on their clients' investment goals, needs and reaction to losses. Nowadays, advisors are becoming increasingly aware that individuals' personality traits, demographic and socio-economic factors, cognitive and emotional biases affect their financial and investment- related decisions. To facilitate the identification of investment advisors, a snowball method was used. In the snowball method, one subject gives the researcher the name of another subject, who in turn provides the name of a third, and so on. In keeping with the qualitative approach to the study, interviews were carried out until similar and repetitive responses were gathered on the subject matter, and new data could no longer bring any additional insights into the research objectives . In this study, new themes stopped emerging after about 13-15 interviews and an acceptable interpretative framework was constructed after 20 interviews.

Therefore, 20 face-to-face in-depth semi-structured interviews were conducted to explore the behavioural factors of individuals that affect investment decisions. Each interview lasted for 30 minutes to 1 hour. The data were recorded through an audiotape recorder, with the prior permission of informants. The interviews were carried out at the informants' offices by taking prior appointments.

In this study, to obtain informants' viewpoints in their own words, interview guidelines with open-ended questions were followed (Kavle, 1996, 2007). Initially, in the interview, the interviewer asked the informants as to what factors individuals consider when investing in securities. Further, the interview was continued and respondents were asked some prepared questions, and follow-up questions were based on the answers given to the initial question. By following this approach, the interviewer could obtain detailed information from the informants.

Data Analysis

The data for this study were obtained from interview transcripts recorded through an audiotape recorder during the interviews. Further, notes were written down by listening to the recording of these interview transcripts. These notes helped to reconstruct the original comments, observations and feelings. In this study, thematic content analysis was used to analyse interview transcripts. Hence, all the information collected from the informants was thoroughly reviewed and notes were made in the form of summary statements or short phrases. This is known as coding to uncover themes. These transcripts were categorized into different codes namely, volatility, risk factor, safe playing, avoid losses, greed and risk averse, overconfident, effect of rumours and investment in familiar assets etc. The main motive is to develop a coding system that it will enable the conversion of data into meaningful and specific units of information. All the phrases and statements noted were later analysed and duplicate phrases (which gave the same meaning) were eliminated. From these codes, appropriate themes with strong arguments supported by many informants were identified as major biases that affect investors' investment decision making.

Results and Findings

In Table 1, different behavioural biases have been identified from the previous research studies. However, the analysis of the interviews highlighted certain different themes also that individuals exhibit while making their investment decisions. The findings are presented using the traditional approach. In the traditional approach, key findings are reported under each theme and then accompanied by linking a separate discussion in which findings are discussed in relation to our study. Here, the key findings under each theme were reported by using suitable opinions of the informants as shown in Table 3.

Table 3: Opinions of Informants on Various Factors considered while making Investment Decisions

Theme	Opinions
Past Market Returns and Volatility	"From the 2008 crisis and volatility in the market, we can see that…people moved away from the market". "Investors overreact when market volatility is high and they lose money". "In volatile situations, they panic and tend to trade excessively".
Preference for safe returns	"Investors invest their hard earned money in safe assets such as fixed assets, real estate and gold". "Equity is a very good asset class for the long term investment, but people lack patience and lose money".
Tendency to believe they are better than others	"Everyone believes that what they are doing or thinking is correct and trade excessively". "Investors initially listen to advisors after which they start choosing stocks on their own". "People believe that they are better than others while choosing stocks". "At the time of buying and selling the stocks, they are confident that they are right". "Investors go by their own choice and prefer not to listen to advisors".
Tendency to hold on to loss-making assets	"It is very difficult for retail investors to book losses. They only book intended losses". "When they entered the market during the loss-making situation, they never sell and get affected by emotions". "In the case of a loss, few people sell their stocks because they lose patience". "Long-term investors never book losses. They always see the profit". "Generally, clients book profits and wait for the loss".
Preference to invest in familiar securities	"They prefer to invest in those shares that are in the news and with which they are familiar". "Only a few investors invest in familiar investments".
Tendency to have regret for making past decisions	"After losing patience, they never come back to invest in the equity market". "Regret causes a loss of their risk appetite". "Again individual investors will not enter the market with a large amount". "Because of a previous loss, they are fearful and do not want to come back to the equity market". "Some people will want to reinvest in the equity market, but only after a period of time". "They may switch over to other shares or sectors". "After a loss, people sometimes tend to stay away not only from that particular share but also from the share market".

Theme	Opinions
Tendency to have more sensitivity to wards losses than gains	"They try to minimize losses by holding on to loss making assets". "People tend to feel more pain towards their loss than pleasure on the same amount of gain". "They book profits earlier than losses and become sensitive to loss". "When they have a loss, they tend to think they will recover the amount lost, and it is with this tendency that they book more loss".
Tendency to invest by looking at the framing of the outcome	"In the situation of guaranteed gain, investors do not take any risk. They want safe returns". "They want certainty in the case of gains but never take certainty in the case of a loss". "People tend to take risks in the situation of a loss".
Tendency to buy rising stocks with the expectation that this rise will continue	"When the stock is overvalued, they keep holding that stock and wait till its value increases". "Clients do not do their homework related to previous stock prices and market trends."
Follows the past trend of stocks	"People believe that the past trends of stocks will continue in the future also". "People follow the past trend before investment". "People buy shares that have recently increased in price".
Tendency to rely on other sources of information	"They have other sources of information including media, friends and relatives". "In this market, more than 50% of people invest by listening to others". "They believe rumours and follow others". "The media plays a major role in influencing investment decision making of individuals".
Tendency to rely on own skills	"Investors set their reference point, and generally, it is the purchase price of the share". "Individuals plan to sell only if the share price goes above the initial purchase price". "People avoid sale stocks that have gone below the purchase price".
Tendency to invest based on information easily available	"People have a very short-term memory. They look at the very recent event and behave accordingly". "Suppose it is highlighted in the news that share prices of Company X are expected to increase, people will buy these shares". "Sometimes, investors react to easily available news; in fact, sometimes, they even overreact".
Tendency to rely on own skills	"Some people do not listen to advisors and believe their own experience before making investment decisions". "After a certain point of time, they feel that have more knowledge than advisors do".
Tendency to divide their money into different accounts/assets	"They segregate their money into different assets, etc." "They are not systematic. They do not stick to such kind of things". "People value individual stocks and feel upset if they possess loss making stocks".

Theme	Opinions
Tendency to believe that past events were predictable	"Some people reacted as if they were already informed and felt that the listener did not pay attention to them at that time". "They felt that they had an intuition that prices of this share were going to rise".

Past market returns and volatility

People make investment decisions based on the historical returns and volatility in the stock market. This revealed that people in the stock market get intimidated by volatility. In the Indian equity market, the majority of the people invest with the desire of obtaining short-term benefits. Thus, there are more speculators than investors. Sometimes, because of these speculators, volatility increases because their decisions are generally based on rumours. This is evident from the opinions of the informants noted in Table 3 above.

Preference for safe returns

Research studies indicate that people lack the financial literacy necessary to make important financial decisions. People are rather unaware of the various financial products available. They prefer to invest their money in traditional investment products, such as fixed deposits and public provident funds, where they can get safe returns. However, their investment plans can be based on three broad parameters in order of preference— returns, liquidity and safety. This is substantiated by the opinions stated in Table 3.

Tendency to believe they are better than others

Previous studies have identified that people tend to exhibit the overconfidence phenomenon while they invest. In our study, informants stated that most of the people are overconfident about their abilities to make better decisions than others. Although they do not know the right time to enter or exit from the market, they tend to make decisions based on others.

Tendency to hold on to loss-making assets

People have the tendency to hold on to loss-making stocks and sell profit-making stocks. Our interviews revealed that investors never sell their stocks on loss because they do not want to book losses. They think that their share will attain the actual purchase price. This effect is risky to the clients because it can increase the capital gains taxes that individuals incur and can reduce returns even before taxes. If the share price is –INR 1 higher than the purchase price, (i.e., profit) then investors sell that share. However, if prices go below INR 10, (i.e., loss) investors will not sell stocks but will prefer to wait, as is seen by the statements of the informants in Table 3.

Preference to invest in familiar securities

Some people prefer to invest in a particular asset class or in a particular sector because they are familiar with it. In the case of the equity market (i.e., if someone is working in the banking sector), he/she may or may not invest a major part in that particular sector. This is because people have more knowledge and experience of such investment products and feel secure and comfortable as can be interpreted by the opinions in the Table.

Tendency to have regret for making past decisions

Some people tend to avoid making certain investment decisions because they feel regretful. This is the reason that there are likely chances to less participation of retail investors in the Indian equity market. If people have experienced losses earlier on any particular stocks, then they would avoid making an investment in those stocks can be seen in their statements.

Tendency to have more sensitivity towards losses than gains

People tend to be more disheartened and unhappy in the case of losses. People give more weight to losses rather than giving importance to the same amount of gain. Therefore, they try to avoid losses and keep them in their portfolio as seen by their statements.

Tendency to invest by looking at the framing of the outcome

In the case of a gain, people tend to prefer a certain gain. If the same problem is presented in different frames, one is positive and the other is negative. People tend to assign values to individual outcomes rather than focusing on aggregate returns. In the situation of a gain, people may invest in a company that has a certain gain (i.e., positive frame), but in the situation of a possible loss, people are ready to take more risks (i.e., negative frame). However, both these statements have the same outcome as can be seen in the table.

Tendency to buy rising stocks with the expectation that this rise will continue

Interviews revealed that people have a tendency to buy rising stocks that are already overvalued. Earlier researchers have suggested that people have a tendency to buy when the market has risen and to sell when the market falls. However, rises of the market are related to its own previous rises and due to cash inflows that shows momentum effect. People then hold these stocks and expect that this rise will continue in the future as is stated in the above table.

Follows the past trend of stocks

Some people make their investment decisions based on the past performance of a particular share. People believe that if any stock has had a good performance, this will happen again in the future. However, individuals lack knowledge of the fundamentals and technical aspects of stocks. In the Indian stock market, there are two types of investors: bullish and bearish. The former consider that if the market had exhibited a rising trend earlier, it will also continue to rise in the future; however, the latter have the opposite view.

Tendency to rely on other sources of information

Interviews revealed that people tend to rely on others including friends, family members and relatives. People trust the judgement of others and follow the decisions of the crowd. They also follow the news and media without looking at the fundamentals of the company, as is stated above.

Tendency to rely on the reference point

People tend to rely on a set of information or a value that is known as a reference point to make any investment decision. These values are known as the reference point, which is considered as the basis for making investment decisions in the future. Interviews revealed that people rely on the “purchase price”, “52-week high price” and “rate of return” as a point of reference. People have a sense of satisfaction by considering the reference point as a benchmark to judge their investment decisions, as is seen in the above table.

Tendency to invest based on information easily available

People have a tendency to jump to conclusions based on information easily available. They feel that the information that they have is very important for decisions to be made. People remember an event or incident that happened in the stock market based on which they make future investment decisions. When decisions are made based on easily available information, people feel strongly satisfied that they have made decisions based on information, as is understood from their statements.

Tendency to rely on own skills

Some people rely on their own experience and skills while making investment decisions. They feel that they have more knowledge than advisors do and can make realistic decisions for themselves. Therefore, people tend to believe that their intuitions are correct and perhaps they do not believe others regarding decisions for their money.

Tendency to divide their money into different accounts/assets

Interviews revealed that people tend to divide their money into separate accounts based on their specific needs. People tend to make categories mentally, such as money for retirement funds and child plans, and allocate their money to these categories. People also do these kinds of accounting to evaluate the performance of their shares. Few people evaluate the overall stock market holding and feel happy or upset based on gains or losses, respectively. However, most of the investors evaluate the value of individual stocks that they own as seen in the table.

Tendency to believe that past events were predictable

Interviews revealed that people have a tendency to feel what had happened in the past was already predicted (when analysed in the future). They felt that they already knew what would happen, as is stated above in the table.

Conclusion and Implications

This study investigated the psychological biases of individual investors as observed and interpreted by their financial advisors and brokers that affect their investment decisions in the Indian stock market. To achieve this objective, a qualitative method based on in-depth interviews was used. Twenty investment advisors having a minimum 5 years' experience in securities firms were interviewed. These advisors expressed their beliefs and observations relating to the behaviour of their clients investing in the stock market. From the previous section, it can be observed that individuals exhibit various beliefs and psychological biases in their behaviour while investing in the Indian stock market. The findings of the interviews revealed 13 biases based on certain themes. These biases have a negative connotation because they produce a distortion in the calculation of an outcome.

These biases are classified under three categories. Table 4 presents the categorization of individual investors' behavioural biases.

Table 4. Categorization of individual investor's behavioural biases

Cognitive Errors	Overconfidence bias	Tendency to believe they are better than others
	Disposition Effect	Tendency to hold loss making assets
	Familiarity bias	Prefer to invest in familiar securities
	Framing effect	Tendency to make investment by looking at the framing ofthe outcome
	Anchoring bias	Tendency to rely on reference point
	Availability bias	Tendency to invest based on information easily available

	Self-Attribution bias	Rely on their own skills
	Representativeness	Tendency to buy rising stocks with the expectation that this rise will continue. Follows past trend of stocks
	Mental Accounting	Tendency to divide their money in to different accounts/Assets
	Hindsight bias	Tendency to believe that past events were predictable
Emotional Biases	Regret Aversion	Tendency to feel regret for past decisions
	Loss Aversion	Tendency to have more sensitivity towards losses thanGains
Social Interactions	Herding bias/Media bias	Tendency to rely on other sources of information

The findings of this study may assist both financial service providers and researchers to understand the various psychological biases of individual investors in investment decision making. Additionally, individual investors will also be aware of the behavioural biases that will aid them to make sensible and efficient investment decisions. Understanding of these behavioural finance issues applied to investor behaviour can provide financial planners and advisers with additional knowledge to help their clients in making better judgments that potentially lead them to improve investment results. This will help investors to achieve greater financial well-being. One limitation of the qualitative research is that the sample used by the researchers cannot be generalized to the whole population. Although flexible sampling approaches of qualitative research helps in examining the issues in more detail and in depth. Moreover, one limitation that is specific to this study is that major biases have been identified from this study; there could be more behavioural biases that can influence individual investors' investment decisions. Therefore, in the future, it will be interesting to explore other biases prevalent in various countries. This will provide financial regulators and financial service providers with a deep insight into the behaviour of individual investors. In addition, to support the findings of the present study, a quantitative study can be conducted on a large number of individual investors investing in the Indian stock market.This may help in confirming the presence and influence of these psychological biases on individual investors' investment decisions in Indian stock market.

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Budget 2018-19: A Big Push to Strengthen the Bottom of the Indian Economic Pyramid

Sahana Roy Chowdhury*

Market efficiency is best achieved when an economic system is left to the "invisible hand", with least possible (government) intervention. However, in segments where there are market failures, and also developmental and equity concerns, government interventions and prioritization of budgetary allocations are crucial. The general budget 2018-19 underscores this economic principle, emphasising so much on agriculture, rural infrastructure, health sector concerns, while maintaining status-quo on several other grounds. In this article we will discuss about budget 2018-19 that relates to the issues of food and agriculture, and their possible ramifications.

In order to create better livelihood and infrastructure in rural areas, the budget 2018-19 has given a new boost to the rural economy to the tune of INR 14.34 lakh crore that is to be spent by the ministries in 2018-19. This includes extra-budgetary and non-budgetary resources of INR 11.98 lakh crore. This expenditure is supposed to create employment of 321 crore person days, 3.17 lakh kilometers of rural roads, 51 lakh new rural houses, 1.88 crore toilets, and provide 1.75 crore new household electric connections besides boosting agricultural growth.[1] Apart from major agri-pricing policy interventions (e.g., MSP, discussed later) there has been proposals in the budget to reform structural issues and strengthening of institutions in sectors related to the agrarian economy.

The volume of institutional credit for agricultural sector has been proposed to increase from the level of INR 8.5 lakh crore to INR 11 lakh crore in 2018-19. Diversification of agri-products have been incentivised by the announcement of establishing Fisheries and Aqua culture Infrastructure Development Fund (FAIDF) for fisheries sector and an Animal Husbandry Infrastructure Development Fund (AHIDF) with a total corpus of INR 10,000 for financing infrastructure requirement of animal husbandry sector. To address the price volatility of perishable commodities (tomato, potato, onion) **'Operation Green'** is announced with an outlay of INR 500 Crore. On marketing front, proposal has been to upgrade the 22,000 rural haats into Gramin Agricultural Markets to create a platform for facilitating bulk purchases and direct sale to the consumers. These markets will be electronically linked to e-NAM and are exempted from the APMC regulations. An Agri-Market Infrastructure Fund with a corpus of INR 2000 crore is to be set up to develop and upgrade infrastructure of 585 APMCs and these gramin markets. Also, organic farming in large clusters (1000 hectares) has been highly incentivised and INR 200 crore has been announced for organized cultivation of highly specialized medicinal and aromatic plants.

*Assistant Professor, IMI Kolkata

[1] http://pib.nic.in/newsite/PrintRelease.aspx?relid=176062

Allocation to the Ministry of food processing has been raised to the tune of INR 1400 crore in 2018-19 from INR 715 crore last year. To promote bamboo sector in a holistic manner proposal of restructuring National Bamboo Mission has also been recommended with an additional corpus of INR 1290. On building irrigation potential under Prime Minister Krishi Sinchai Yojna 96 deprived irrigation districts will be taken up with an allocation of INR 2600 crore. Centre and states will work on facilitating farmers to install solar water pumps to irrigate their fields. On issues related to pollution from crop residues in certain specific states, the budget took initiatives to subsidise machinery required for in-situ management of crop residue.

Referring to the commitment on raising the welfare of farmers – doubling their income, by 2022, quite a good number of measures have been announced, first and foremost is deciding to keep MSP at least 1.5 times the cost of production for all announced kharif crops, and also declaring the same for majority of the rabi crops. This has been a drastic measure and a commendable gesture towards addressing the farm sector distress. The National Commission on Farmers (NCF) – subsequently led by M S Swaminathan, was set up in 2004 to identify concerned issues. NCF stated that farmers should be given a minimum support price (MSP) of at least 50 percent more than the weighted average of the cost of production. This was however, neither implemented in the National Policy for Farmers, 2007 nor by the Ramesh Chand Committee that submitted a comprehensive review of the Commission for Agricultural Costs and Prices (CACP) methodology to determine MSP.[2] Now, the big challenge remains on several fronts: firstly, what might be the implications on food prices, secondly, with the central government already started gliding on the fiscal consolidation path, thirdly, and not so insignificantly, the modus-operandi of this ambitious pricing scheme.

RBI in its bi-monthly policy on monetary policy review has raised the concern of rising inflation for several reasons; one of these being the impact of proposed revised guidelines for MSP on kharif crops, though the magnitude is yet to be assessed. Already there are concerns over rising international fuel prices which is adding implicit and explicit pressure on inflation. Budget Estimates of Expenditure for 2018-19 show an increase of INR 2,24,463 crore over the Revised Estimates 2017-18, which is mainly driven by Grants given to states as compensation to states on account of revenue loss due to the rollout of GST (calculated to be around 23 percent of the expenditure variation between 2017-18 RE and 2018-19 BE), interest payment (20 percent) and food subsidy (13 percent), on account of NFSA primarily.[3] Food subsidy has been raised from INR 1.4 lakh crore in 2017-18 RE to 1.69 lakh crore in 2018-19 BE, which is quite a quantum jump. Coming to the point of slippage in the fiscal consolidation path, RBI has expressed concern over its possible impact on inflation. For 2017-18 RE the FD is 3.5 percent instead of 3.2 percent mentioned earlier and also fixing a higher target of 3.3 percent FD in 2018-19 as against 3 percent set earlier, the reason being inadequate GST collection, which is expected to recover soon. However, there are expenses such as the recapitalisation bonds of public sector banks, which are excluded from this FD numbers, and other

[2] Ghuman, R. s. (2015), Economic and political Weekly, 1(15): 20-23.

[3] Statement 2B, Expenditure profile, Union Budget 2018-19.

serious fiscal concerns such as rising RD within this FD numbers.

Coming up to the third point of the modus-operandi, how the production cost will be accounted for? Will that come from the farmers themselves, which might include rentals and all other costs? If so, this might lead to escalating food prices at a massive scale. Typically, the need for providing MSP arises when there is bumper crop and the market price has become too low to make it remunerative for the farmers. In that case government procures the excess produce from the farmers at MSP, which is (obviously) higher than the prevailing market price and hence doesn't have buyers in the market. Now, the question is how the government will channelize this procured crops? There needs to a suitable outlet for this: either PDS or storage, because this can not be sold back to the market at lower cost (which will trigger problem of creating arbitraging opportunities, and hence monitoring issues are associated), neither this can be sold at higher market price- there will be no buyers in that case. Finance minister in a post budget press meet has mentioned that NITI Aayog in consultation with state governments, will work out the designing of the procurement mechanism once the newly proposed MSP is implemented.

Overall, this budget has certainly rejigged the sectoral emphasis; specially, on building the related structural and institutional concerns in the agricultural sector. It is well evident that our sectoral contribution in GDP is heavily skewed towards the service sector to the extent that more than 50 percent of the GDP contribution comes from the sector itself which absorbs less than 25percent people, and also, the sector is in a momentum of high growth. In contrast, more than 50 percent of people are engaged in agriculture with very little productivity. It is right time to put new impetus to the issues of “structural” concerns in those sectors which have historically shown high absorptive capacity shaping livelihoods for millions.

International Management Institute
Kolkata

International Management Institute Kolkata
2/4C, Judges Court Road
Alipore, Kolkata 700027
Telephone: +91 33 6652 9658
website: www.imi-k.edu.in