INDIAN BANKING CRISIS 2020

GAA ADVISORY

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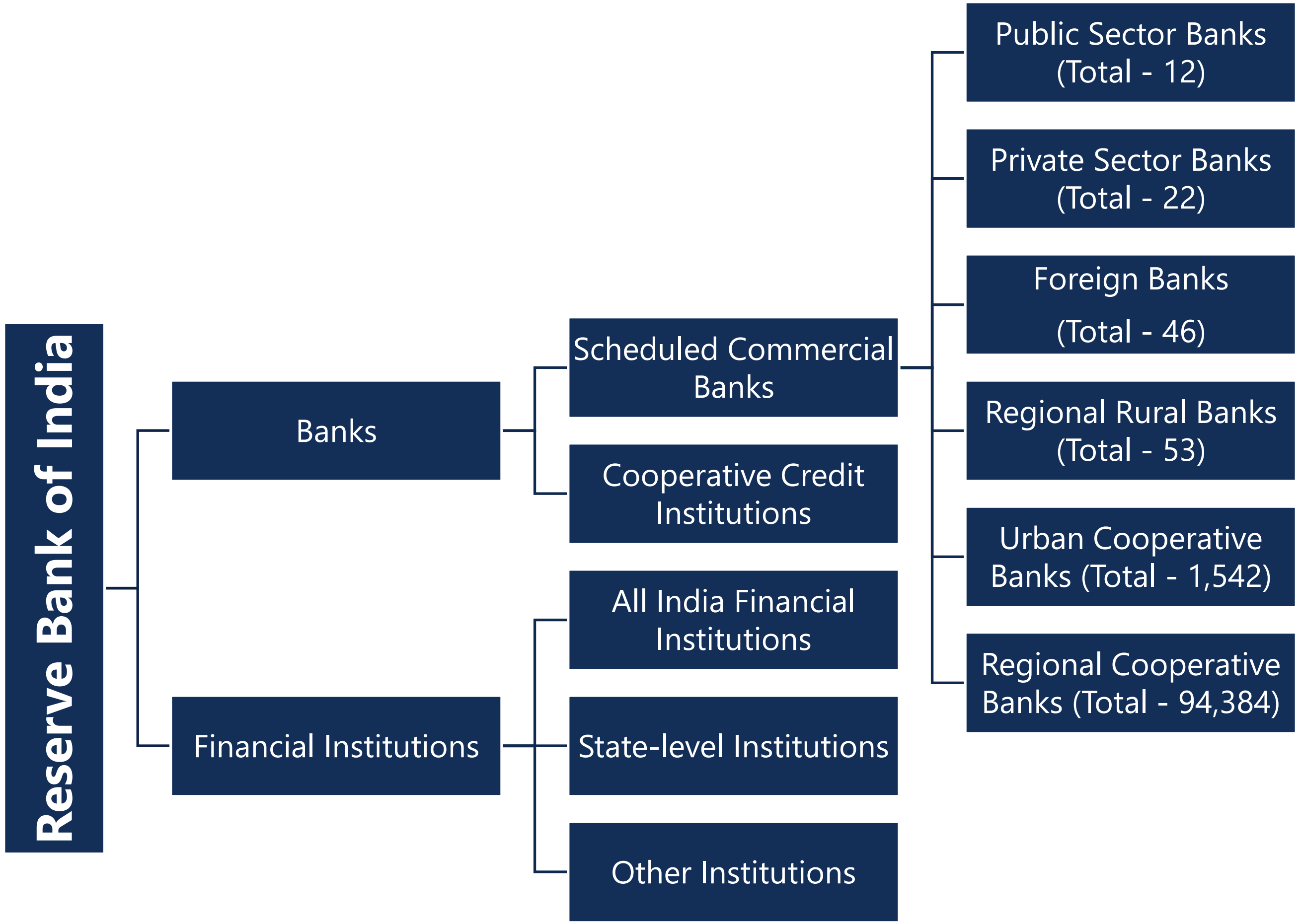
OVERVIEW OF INDIAN BANKING SECTOR

Structure of Indian Banking



Reserve Bank of India

About the Central Bank

- Reserve Bank of India is the central bank of India who is responsible to: oversee the monetary system, supervise & regulate the member banks, control the money supplies, manages the foreign reserve, and acts as a banker's banks or banker to the Government

- The Reserve Bank of India was set up based on the recommendations of the Hilton Young Commission. The Reserve Bank of India Act, 1934 (II of 1934) provides the statutory basis of the functioning of the Bank, which commenced operations on April 1, 1935.
- The Bank began its operations by taking over from the Government the functions so far being performed by the Controller of Currency and from the Imperial Bank of India, the management of Government accounts and public debt. The existing currency offices at Calcutta, Bombay, Madras, Rangoon, Karachi, Lahore and Cawnpore (Kanpur) became branches of the Issue Department.
- After the partition of India, the Reserve Bank served as the central bank of Pakistan up to June 1948 when the State Bank of Pakistan commenced operations. The Bank, which was originally set up as a shareholder's bank, was nationalized in 1949.
- The Bank was also instrumental in institutional development and helped set up institutions like the Deposit Insurance and Credit Guarantee Corporation of India, the Unit Trust of India, the Industrial Development Bank of India, the National Bank of Agriculture and Rural Development, the Discount and Finance House of India etc. to build the financial infrastructure of the country.

Components of Scheduled Commercial Banks

- **Scheduled Commercial Banks:** The scheduled commercial banks are those banks which are included in the second schedule of RBI Act 1934 and which carry out the normal business of banking such as accepting deposits, giving out loans and other banking services. The paid-up capital & collected fund of the bank should not be less than Rs. 5 lac. Any activity of the bank will not affect the interest of the depositors e.g. commercials banks.

- **Public Sector Banks:** Public Sector Banks (PSBs) are a major type of bank in India, where a majority stake (i.e. more than 50%) is held by the government. The shares of these banks are listed on stock exchanges. There are a total of 12 Public Sector Banks alongside 1 state-owned Payments Bank in India.

- **Private Sector Banks:** In these banks most of the equity is owned by private bodies, corporations, institution or individual rather than government E.g. ICICI bank, HDFC bank, Axis bank, etc. There are a total 22 private sector banks.

- **Foreign Banks:** A foreign bank is a type of International Bank that is obligated to follow the regulations of both the home and host countries. Because the foreign banks' loan limits are based on the parent bank's capital, foreign banks can provide more loans than subsidiary banks." Foreign Banks are present in India either as representative offices or as branches. A bank may choose to open foreign bank branches to meet the needs of multinational corporate customers. E.g. Citibank, Deutsche Bank, DBS Bank, etc.

- **Urban and Regional Cooperative Banks:** Co-Operative Banks are small financial institutions that offer the lending facility to the small businesses in both urban and non-urban regions. These are monitored and regulated by the Reserve Bank of India (RBI) and come under the Banking Regulations Act, 1949 as well as the banking laws act, 1965. Cooperative Banks are also regulated by the Registrar of Cooperative Societies (RCS) of State concerned or by the Central Registrar of Cooperative Societies (CRCS), as the case may be.

- **Regional Rural Banks:** Regional Rural Banks (RRBs) are Indian Scheduled Commercial Banks (Government Banks) operating at regional level in different States of India. They have been created with a view of serving primarily the rural areas of India with basic banking and financial services. However, RRBs may have branches set up for urban operations and their area of operation may include urban areas too.

Products and Financial Services

- Financial Services
  - Capital Markets
    - Asset Management
    - Broking
    - Wealth Management
  - Insurance
    - Life
    - Non-life
  - NBFC's
    - Asset Finance Company
    - Investment Company
    - Loan Company
  - Cards
    - Credit Cards
    - Debit Cards
  - Deposits
    - Savings Account
    - Current Account
    - Fixed Deposits; etc.
  - Loans and Mortgage
    - Home Loans
    - Car Loans
    - Education Loans
    - Personal Loans
    - Business Loans; etc.
  - Fee Based Services
    - Locker
    - Internet Banking
    - Fund Transfer Facilities
    - Demat Account
    - Automatic Bills Payment; etc.

PRE- COVID BANKING

As per NFS (National Financial Switch), there are more than 2.48 lakh ATM's in India as of April 2020.

RBI has allowed, regional rural banks to launch online transaction through internet banking facilities.

As per BCG report, India's Digital influence is on boost. In FY18, India's digital lending stood at US$ 75billion.

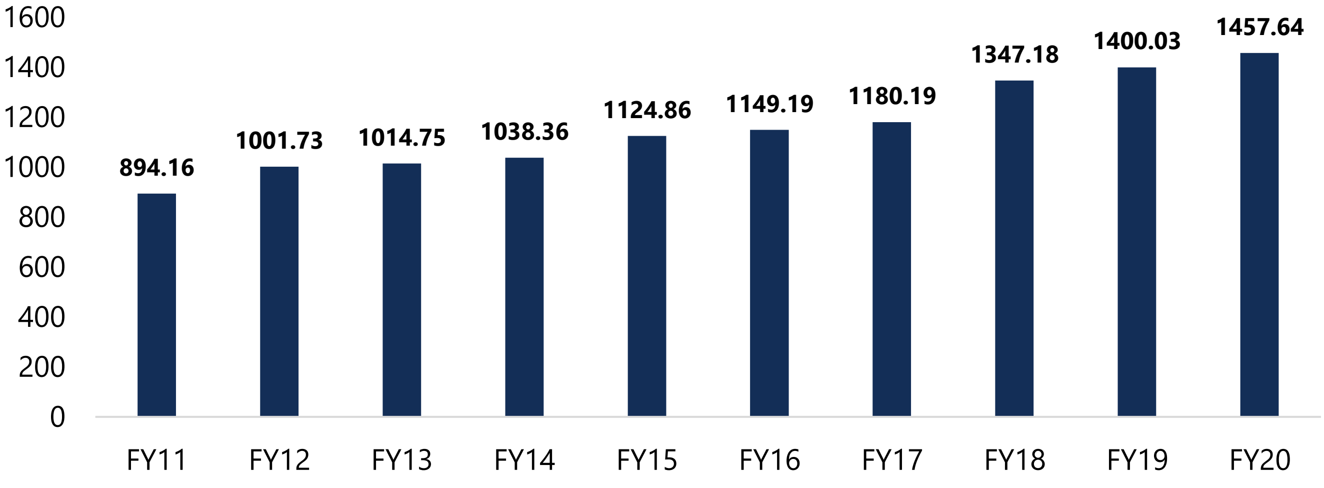
As per Union Budget 2019-20, the government has proposed fully automated GST refund module and an electronic invoice system that will eliminate the need for a separate e-way bill.

'MANI' app was introduced by RBI, for visually challenged people, which can help in identifying currency notes.

As many private banks are planning to expand, these will create employment opportunities.

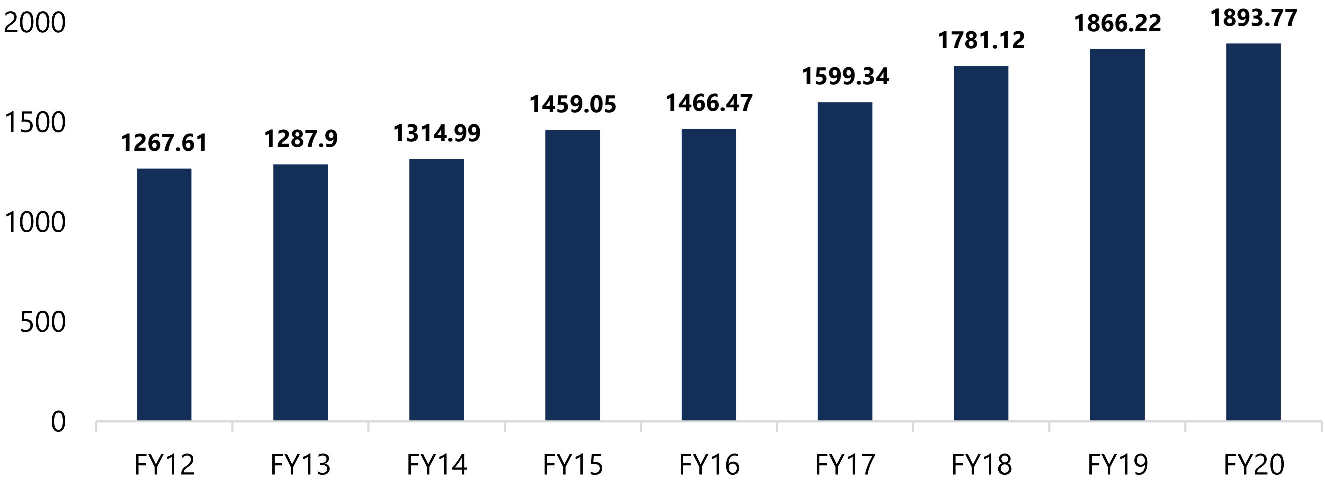
As of 4th March, 2020, the Union Cabinet approved the merger of 10 PSBs into 4 bringing the number of PSBs from 18 to 12.

Growth in credit off-take over the past few years (US$ Billion)



Source: RBI

Growth in deposit over the past few years (US$ Billion)



Source: RBI

POST- COVID BANKING

1

Bad Loan/Bad Debt

According to the report published in Firstpost, bad loans in banking sector may rise by Rs 5.5 lakh Cr. this fiscal, while there were already many cases registered with IBC & NCLT.

2

Uncontrolled NPA Growth

AS per RBI, gross NPA will rise from 8.5% in March 2020 to 12.5% by March 2021, which will be the highest among emerging economies.

3

Rise in Service Charges

To overcome the losses due to lockdown banks may increase their service request charges, digital transaction charges and penal charges.

4

EMI Moratorium

The relief in the form of extension of Loan Moratorium had added further to the pain of the banks as it has increased the riskiness of the bad debts.

RBI’s response to COVID-19

In response to COVID-19, combination of fiscal, monetary and regulatory interventions on an unprecedented scale has ensured normal functioning of financial markets.

The overleveraged non-financial sector, simmering global geopolitical tensions, and economic losses on account of the pandemic are major downside risks to global economic prospects.

Actions undertaken by financial sector regulators and the Government to mitigate the impact of COVID-19 eased operational constraints and helped in maintaining market integrity and resilience in the face of severe risk aversion.

Bank credit, considerably weakened during the first half of 2019-20, slid down further in the subsequent period with the moderation becoming broad-based across bank groups.

The capital to risk-weighted assets ratio (CRAR) of Scheduled Commercial Banks (SCBs) edged down to 14.8 per cent in March 2020 from 15.0 per cent in September 2019 while their gross non-performing asset (GNPA) ratio declined to 8.5 per cent from 9.3 per cent and the provision coverage ratio (PCR) improved to 65.4 per cent from 61.6 per cent over this period.

Macro stress tests for credit risk indicate the GNPA ratio of all SCBs may increase from 8.5 per cent in March 2020 to 12.5 per cent by March 2021 under the baseline scenario; the ratio may escalate to 14.7 per cent under a very severely stressed scenario.

Network analysis reveals total bilateral exposures among entities in the financial system declined marginally during 2019-20; with the inter-bank market continuing to shrink and with a better capitalization of PSBs, there would be a reduction in contagion losses to the banking system under various scenarios in relation to a year ago.

Going forward, the major challenges include pandemic-proofing large sections of society, especially those that tend to get excluded in formal financial intermediation.

IMPACT OF COVID-19 ON INDIAN BANKING SECTOR

Suspension of IBC 2016

- When the economy is fighting back from the slowdown and disruption caused by COVID-19, the Union Finance Minister, as a part of her economic relief package, announced suspension of proceedings under **Section 7, 9 and 10 of the IBC would be suspended for six months** which can be extended up to 1 year intending that no fresh insolvencies can be initiated against companies for one year while keeping the COVID-19 related-debt outside the purview of default under IBC. The threshold default amount for invoking insolvency proceedings under IBC to Rs. 1 Crore from Rs. 1 Lakh in order to prevent triggering of such proceedings against small and medium enterprises.

- It becomes important to analyze the implications of the suspension on IBC-2016 at the macro-economic level as it shall add to the burden of the already burdened banking sector of India. The implications of suspending IBC are highlighted below:

Restriction on self-initiated CIRP

Under section 10 of IBC takes away the right of the Companies of opting itself out from the market. It has been a common scenario under the insolvency regime where companies opt for their restructuring through section 10 of IBC arising out of the unbearable financial crunch. This refusal negating the freedom of exit amid COVID-19 is exactly what is not required to be done, in utter contravention to the fundamental spirit of IBC.

Presence of other recovery legislations

Poses a problem wherein a creditor, has other options to legally initiate recovery against the companies. For instance, Recovery of Debts Due to Banks and Financial Institutions (RDDBFI) Act, 1993 can be effectuated in cases where if the creditor is a financial institution. Additionally, Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFEISI) Act, 2002 can be used to recover the debt by a bank if security is involved.

Disturbance in the Capital flow

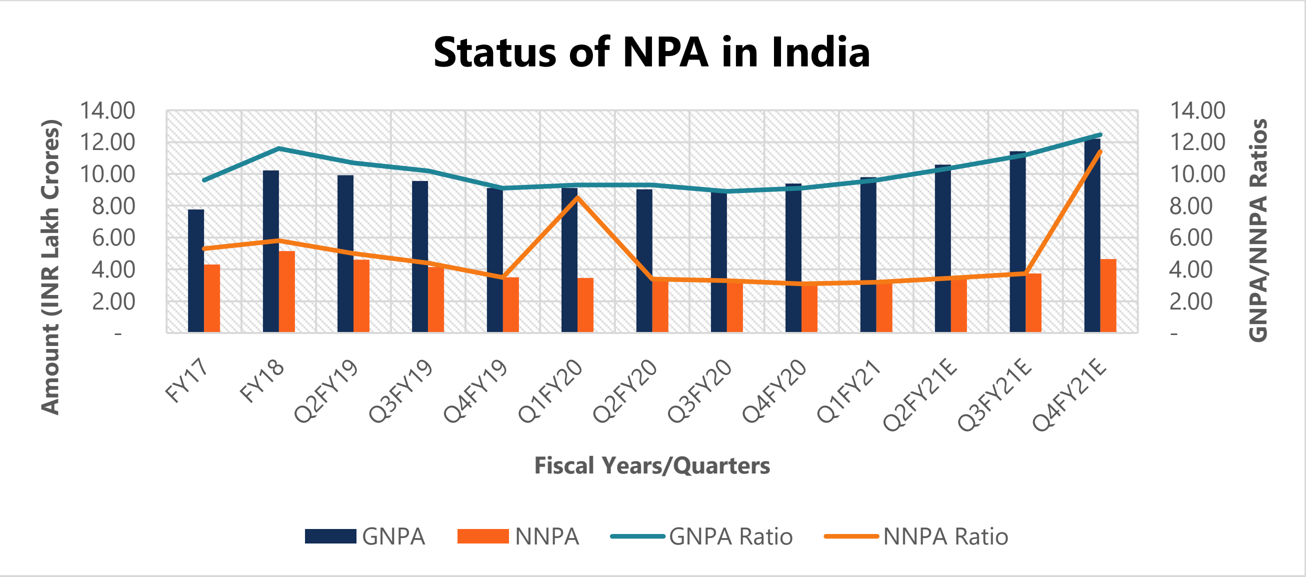
Can be a possible outcome from the suspension of IBC as the prohibition would restrict the creditors from receiving any money from the companies which would act as a catalyst to the creditors making further defaults to their lenders. This can create a circular disturbance to the capital flow of the economy and can bring unexpected economic disruptions during COVID-19 where the economy should ideally target to get the capital flow moving.

Rising NPAs eventually

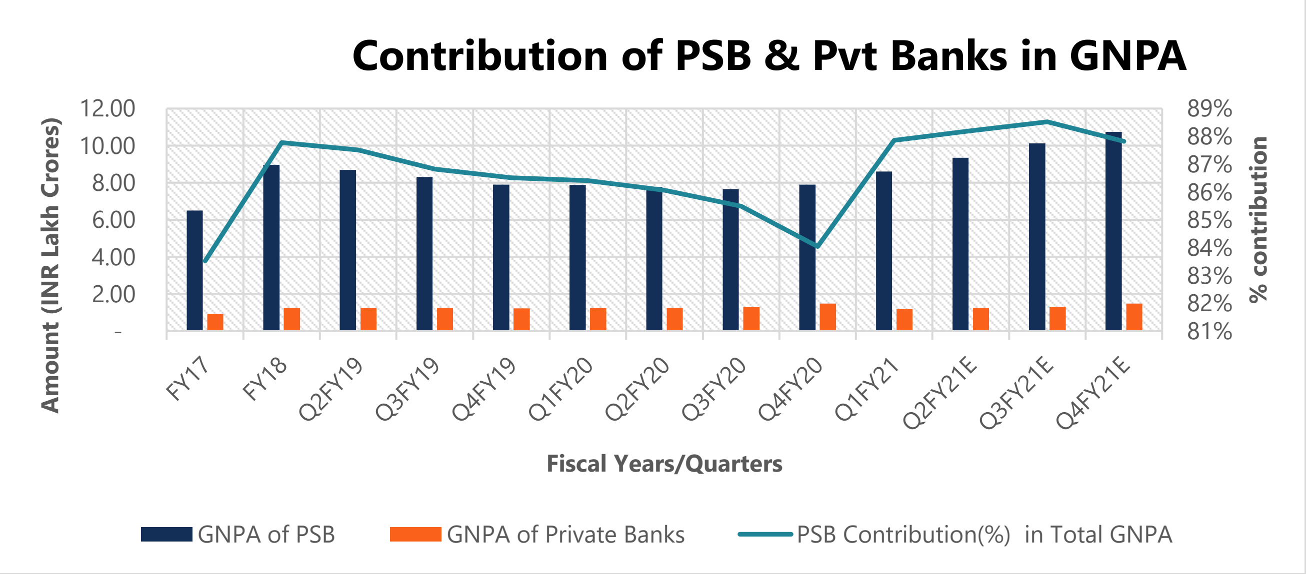
The spirit and ideology of the IBC was to move from the 'debtor-in-possession' to the 'creditor-in-possession' regime, but this amendment marks a shift from this approach. In the 221 cases resolved so far via IBC, about **Rs 1.84 lakh crore** was recovered, against the admitted claims of Rs 4.13 lakh crore, with a recovery rate of **44%.** However, the suspension of IBC is expected to decrease this recovery rate and result in rising NPAs eventually.

Rising NPAs

- **As per RBI,** gross non-performing asset (NPA) ratio of all commercial banks is likely to increase from **8.5 per cent in March 2020 to 12.5 per cent by March 2021** under the baseline scenario in the wake of the disruption caused by the COVID-19 pandemic.
- If the macroeconomic environment worsens further, the NPA ratio may escalate to 14.7 per cent under the very severely stressed scenario.
- In terms of recovery, suspension of IBC stalled the recovery pace. In addition, the extension of IBC suspension till December 24, 2020 would keep recovery pace benign, thus delaying the required breather to major banks.
- Lower slippages were offset by a muted recovery pace, which led GNPA to inch up almost 4.50% QoQ to Rs. 9.48 Lakh Crores.
- Subsequently, GNPA ratio increased 170 bps QoQ to 10.40%. With provisions continuing to remain elevated, NNPA lowered by 2.60% QoQ to Rs. 3.14 Lakh Crores. This does not include COVID related provisions.
- During the period of Q1FY21, Public Sector Banks (PSBs) accounted for almost 88% of the total GNPA. These are levels typically associated with Banking Crisis.



Source: RBI



Source: RBI

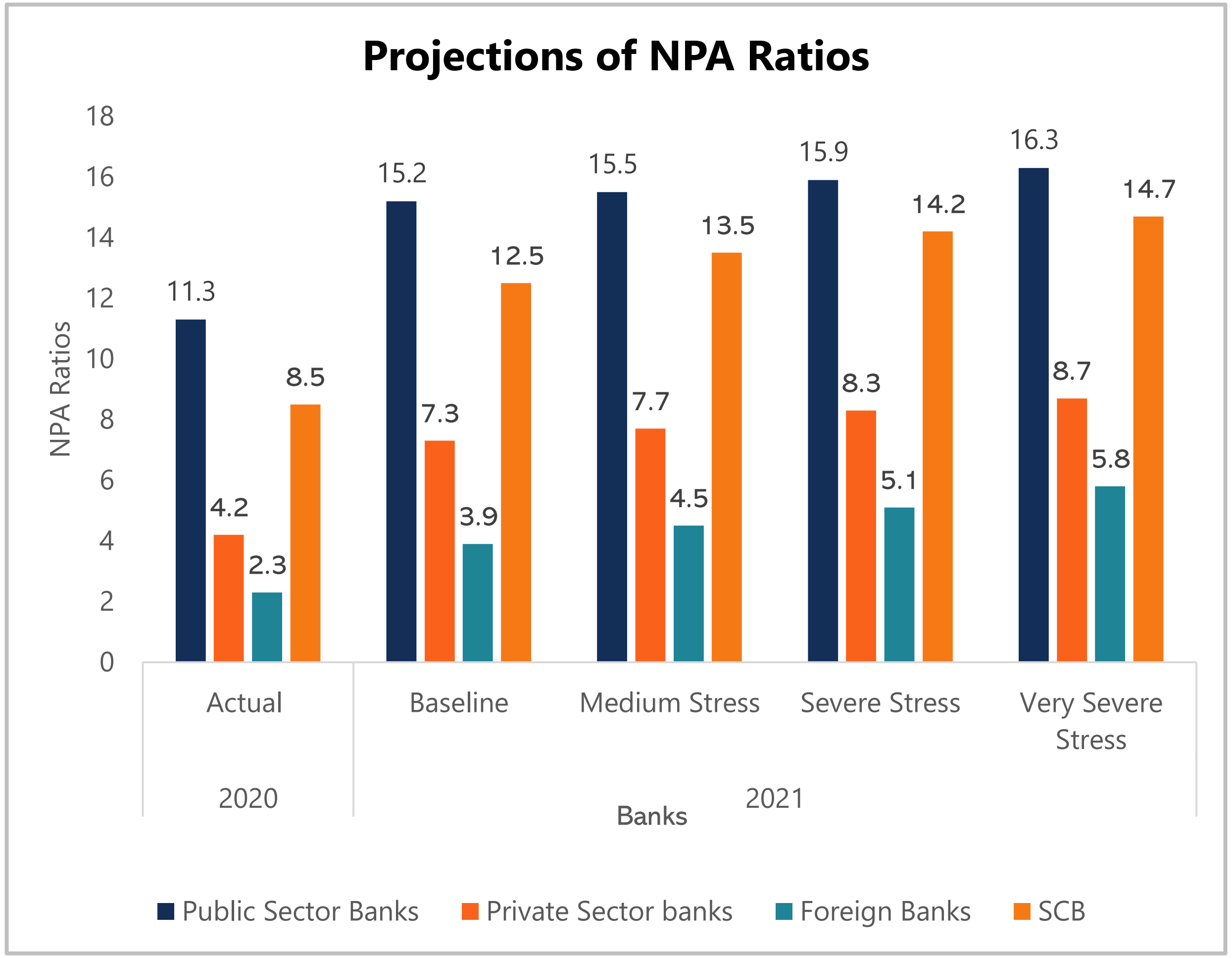
Rising NPAs

As per RBI report

- GNPA of the banking sector could rise to as high as 14.7% of total loans by March 2021 under "very severe stressed scenario" after stress-testing of 53 SCBs.
- Stress test results indicates five banks may fail to meet the minimum capital level by March 2021 in a very severe stress scenario. This does not take into account the mergers or any further recapitalization, which will further increase systemic resilience.
- System level capital adequacy ratio (CAR) could drop to 13.3% under the baseline scenario, and to 11.8% in very severe stress, by March 2021 resulting to erosion of capital
- Public sector banks likely to be the worst hit, could see their GNPAs rise to 15.2% by March 2021 from 11.3% a year earlier in the baseline scenario.
- On account of the worsening macroeconomic factors, even private banks and foreign banks would see a spike in bad loans

Systematic Risk Survey

- The effects of COVID-19 likely to remain for 3-5 years and may impact the quality of credit in the books of banks, the general risk-taking ability of entrepreneurs, investments in capital markets and real estate, and the saving pattern of households.



Declining Credit Growth

Damage Done

As per a report by RBI, Non-food credit growth slowed to **6% YoY**, the slowest rate in the last three years. All segments saw lower YoY growth vs. July. We do not find this surprising as disbursals by banks are likely to have been muted while repayments have gradually improved.

Industrial Credit Growth

As per RBI, **Industrial credit** growth slowed to **0.5%** YoY vs **2.4%** in previous year, led by a reduction in large industrial credit growth. Petroleum, coal products and nuclear fuels continued to see a fall in growth from **31.5%** in June-20, and **8.8%** in July-20 to **5.5%** in August-20.

Service Sector Credit Growth

As per RBI, **Service sector** credit growth decelerated to **8.6%**. Within this segment, growth in credit to seemingly precarious segments- NBFCs (**+17.1%** YoY, slowest since February 2018) and commercial real estate (**+6.6%** YoY, slowest since December 2018) slowed considerably.

Personal Loan Growth

As per RBI, **Personal loan growth** has seen the most dramatic decline post the outbreak of COVID-19. Growth in this segment slowed to 10.6% YoY. Within this segment, credit card growth slowed slightly to 7.4% YoY. This sub-segment has seen the sharpest reduction in growth. Home loan growth too, slowed slightly 11.1% YoY from 12.3% YoY.

Our Opinion

We believe that a further reduction in non-food credit growth is inevitable. Muted disbursal trends and an increase in repayment rates from current levels after the completion of the moratorium is likely to limit growth. Post the economic standstill amid Covid-19, the pace of revival in credit offtake is expected to be gradual. Growth in advances was reported in single digits at **6%** in August 2020 to **Rs. 90.50 Lakh Crore**. On a YTD basis, absolute credit growth is lower by **~Rs. 2 Lakh Crore**.

Extension of Moratorium

Action

In June 2020, RBI had announced a three-month moratorium on loan repayments due between March 2020 and May 2020. The central bank further extended the moratorium by three months.

Need & Demand

A huge demand for deferment of interest obligations started arising as the business houses were facing severe cash crunch. There was a desperate need of a Moratorium Period by the Government.

Damage to Banks

The gradual damage done to the banks due to extension of Moratorium had increased the potential for bad debts. Additionally, the riskiness of future EMIs had raised the red-flags on Credit Discipline.

Issues

The rising cases of COVID-19 had pushed the Government to stretch the nation-wide lockdowns. This led to the increase in capital cycle of the businesses due to which they were unable to fulfill the interest obligations.

Way Forward

The RBI has told the Supreme Court that continuation of the loan moratorium period beyond the six months already granted may affect overall credit discipline, and small borrowers will eventually feel the pinch. Hence, the extension has now been cancelled.

Moratorium & its affects

HDFC Bank - Customers availed less than a 25% of its loan book for moratorium while its net profit stands at Rs. 6,727 crore.

ICICI Bank - Customers availed 30% of its book under moratorium, amounting to Rs 1,93,587 crore and has shown a 26% increase in its Q4FY20 earnings on a YoY basis, declaring a profit of Rs 1221.36 Cr.

Bandhan Bank has made 100% provisions on its MFI books. While a heavy 75% of its loan book is under moratorium, amounting to Rs. 71,847 crore, the net profit for the private sector bank stood at Rs. 517 crore.

Axis Bank - Customers availed 28% of books under moratorium and unexpected losses of worth about Rs 1,388 crore.

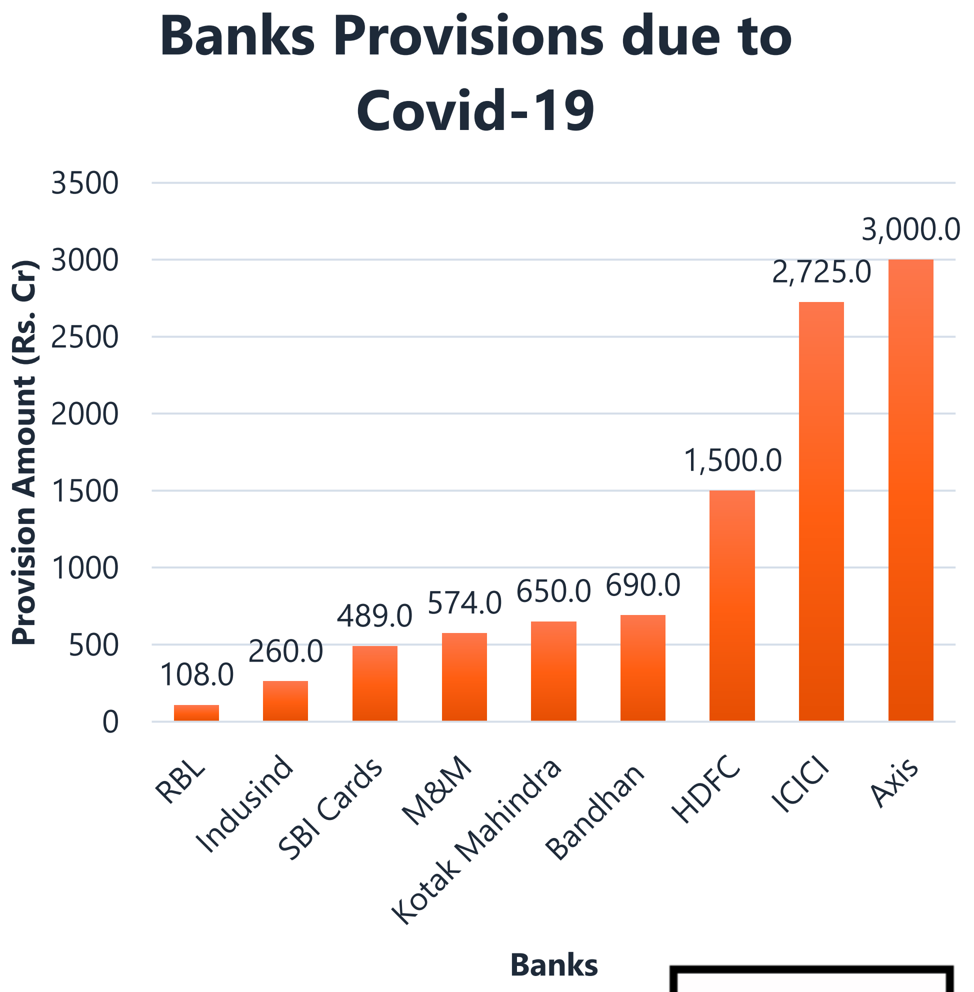
Kotak Mahindra Bank availed by about 26% of its customer base. showed a 10% y-o-y fall in standalone net profit at Rs 1,267 crore for the March quarter.

IndusInd Bank - 5% of its customers have sought moratorium benefits from a Rs. 206000 crore book. while its profit has fallen by 16% y-o-y basis to Rs. 302 crore.

RBL Bank has also reflected a whopping 53.7% y-o-y decline in standalone profits amounting to Rs 114.36 crore while customers have availed moratorium of about 33% of its loan book amounting to Rs. 58,019 crore.

Mahindra & Mahindra Finance over 75% of its customers have opted for the three-month moratorium on loan repayments while its profits have fallen by a bulky 62% on a y-o-y basis.

SBI Cards, 66% YoY drop in profit for Q4FY20 at Rs 83.54 crore. As low as about 12% of its customers have availed the moratorium facility.

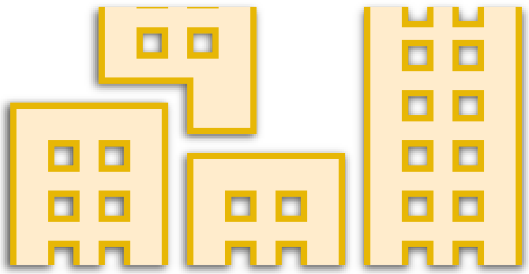


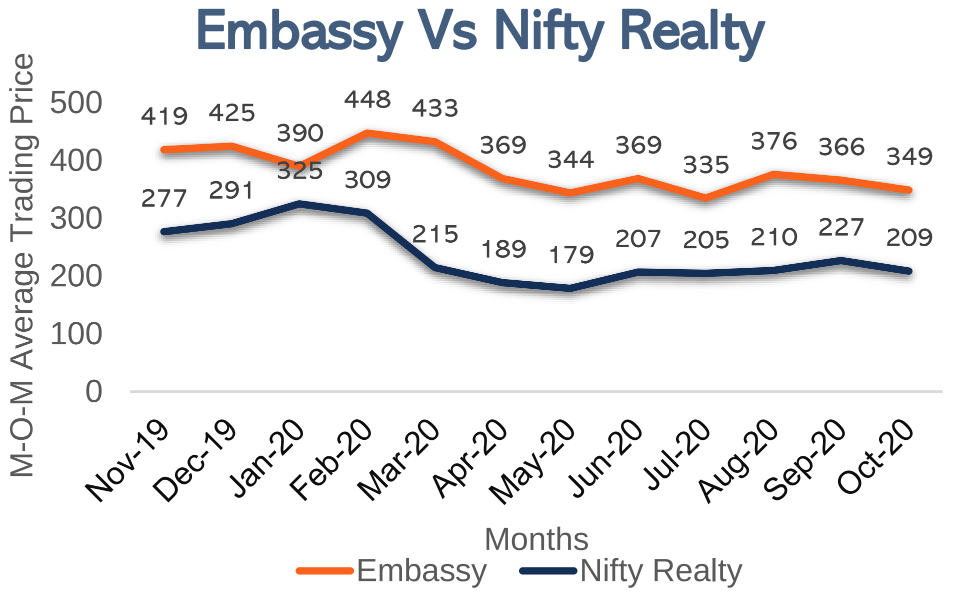
COMPETITIVE INVESTMENT AVENUES

GAA ADVISORY

Real Estate Investment Trust (REIT)

- REIT is innovative vehicle that enables developers to monetise their revenue-generating real estate assets and release capital for funding new infrastructure/ real estate project.
- The unit are listed on the stock exchange and provide liquidity to investors in an otherwise largely illiquid asset class.
- To encourage retail investors market regulators have gradually lowered the minimum investment size of Rs. 50,000





Scenario in India:-

- The first REIT by Embassy office park backed by Blackstone listed in March 2019 raised Rs. 4,750 Cr. through IPO
- Second REIT- Mindspace launched recently in August 2020 backed by K Raheja and Blackstone with premium of 11% to its offer price.
- Market may grow to $22-40 billion over next few years
- Aligning with the practice of the stock market, single stock can also be traded.

REIT- The game changer to real estate of India

- Allowing the retail investor to stake the holdings of the premium real estate assets
- Market potential for long term is comparatively high and safe
- Units being listed on stock exchanges, provides liquidity in an otherwise to largely illiquid asset class.
- Allowing developer to capitalize their project in optimized way

EMBASSY OFFICE PARKS

- Embassy Office Park REIT outperformed their respective sectoral indices
- Portfolio is on strong foundation with 95% occupancy that comprises 7 office parks and 4 city-center office building

REIT Types

Equity	Mortgage	Hybrid	Publicly traded REITs	Public non-traded REITs
Concerned with operating and managing income-generating commercial properties. Notably, the common source of income here is rents.	Also known as mREITs, involved with lending money to proprietors and extending mortgage facilities. Further, tend to acquire mortgage-backed securities. Mortgage REITs also generate income in the form of interest accrued on the money they lend to proprietors.	This option allows investors to diversify their portfolio by parking their funds in both mortgage REITs and equity REITs. Hence, both rent and interest are the sources of income for this particular kind of REIT.	Publicly-traded real estate investment trusts extend shares that are enlisted on the National Securities Exchange and are regulated by SEBI. Individual investors can sell and purchase such shares through the NSE.	These are non-listed REITs which are registered with the SEBI. They are not traded on the National Stock Exchange. when pitted against public non-traded REITs, these options are less liquid. Plus, they are more stable as they are not subjected to market fluctuations.

Why Invest in REIT

Steady dividend income and capital appreciation:	Option to diversify:	Transparency in dealing:	Liquidity:	Accrues risk-adjusted returns:
Provide substantial dividend income and also allows steady capital appreciation over the long term.	Traded frequently on the stock exchanges, it provides investors with an opportunity to diversify their real estate.	Regulated by the SEBI, requires to file financial reports audited by professionals. Provides investors an opportunity to avail information on aspects like taxation, ownership and zoning.	Trades on public stock exchanges and are easy to buy and sell, which adds on to their liquidity aspect.	Offers individuals risk-adjusted returns and helps generate steady cash flow. Enables to have a steady source of income to rely on even when the rate of inflation is high.

Equity Markets

The number of new Demat Accounts surged despite the lockdown, NSE internet trading volumes jumped 53% in April, and the indices climbed one third since the March 23 low

Trading volumes jumped 53% in April

The equity markets turned over 4 months high in July 2020 with SENSEX up 50% from March low. Few Stocks witnessed huge gains with up to 100-340% jump.

“We have added a record 3 lakh new customers in the last two months and 65% of them are first-time investors” said Nithin Kamath, CEO, Zerodha

4.2 million new Demat Account in 11 months, between April 19 to Feb 20.

“The prime reasons for such an interest in the equity market are attractive valuations, free time due to the lockdown and ease of transactions because of the work-from-home routine.”

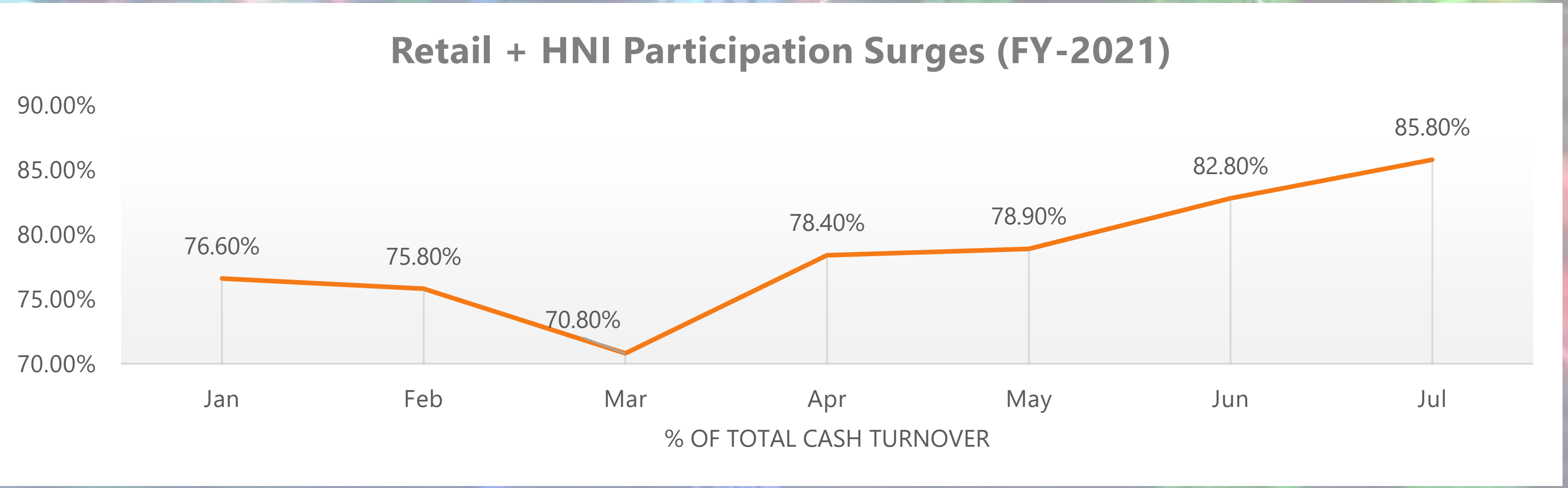
The Sensex fell 37% between February 19 and March 23 and recovered 30% since then. During this period, institutional investors sold shares over ₹6,000 crore. Foreign investors sold stocks worth ₹16,000 crore, and domestic institutions bought ₹10,000 crore.

April - Average daily volume of ₹12,602 crore, compared to a daily average turnover of ₹ 8,261 crore

A sharp fall in the prices of several quality stocks since mid-February have tempted retail investors to make direct purchases rather than go through mutual funds

Equity Markets

- India's share markets have beaten the global equity benchmarks with a 22% growth in S&P BSE Sensex
- Sensex has risen by 23% in the one-month period since the announcement of the lockdown
- Prior to the lockdown, Indian stock markets were the worst-performing in the world, down 32% since the beginning of March till the lockdown was officially announced
- Investors started considering investment into Gold as an Asset via Mutual funds or Sovereign Gold Bonds which assisted in hedging the portfolio and provide capital protection
- Retail investors used the opportunity to invest in corrections
- Working from home have given retail investors sufficient time to understand the nuances of share trading
- Work from home has been definitively the opportunity for Retail and HNI Investors to study, learn about Equity, FO, Trading etc. and start investing
- The falling FD rates pushed many to look at other options to make their money grow
- The fall in markets helped rookie investors to invest in good companies at discounted prices

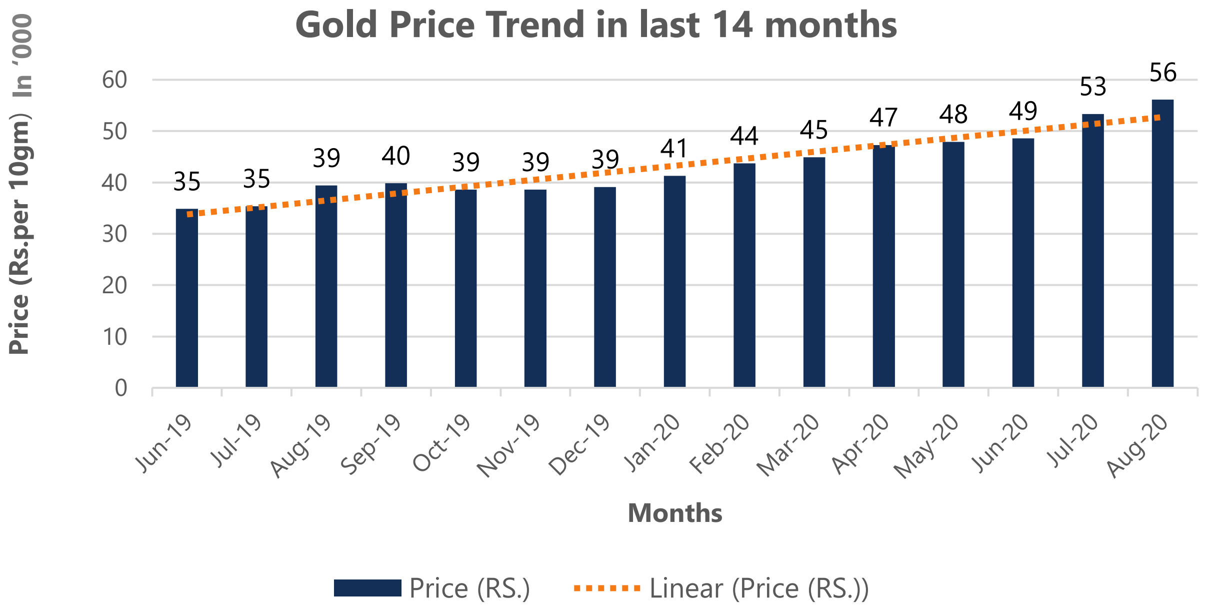


Gold

Gold prices have rallied whenever a crisis has taken place. The effect of ongoing COVID-19 outbreak, can be seen as gold prices have jumped sharply. Reason behind the growth in prices of gold are as follow:

Gold is always seen as a 'safe haven' for investors wherever there is greater economic uncertainty for historical, psychological & cultural reasons as it is seen as an insurance against adverse economic events.

Name of the Crisis	Y-o-Y Growth(%) before Crisis	Y-o-Y Growth(%) during Crisis
1992 Scam	*6.88%*	***24.51%***
2008 Financial Crisis	*8.17%*	***33.91%***
COVID-19 Crisis	*-3.18%*	***40.77%***

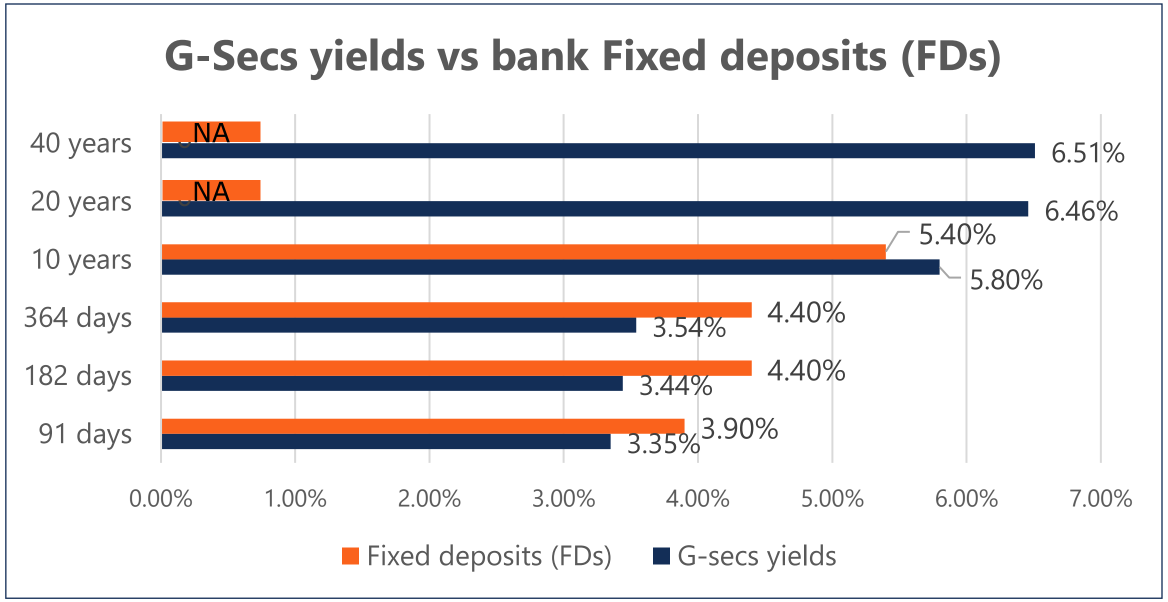


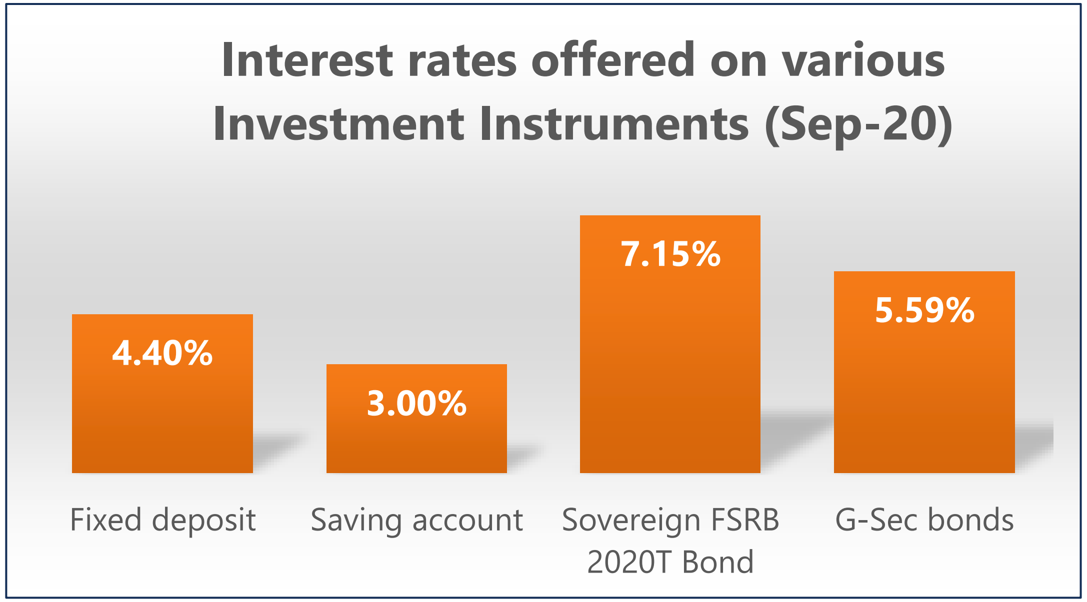
The gold price in domestic market have galloped 38% since the COVID-19 outbreak began spreading outside china. As against this, the gold price had soared by 13% within a year after 9/11 WTC terror attack. While the maximum jump recorded in history was during the global financial turmoil in 2008.

The COVID-19 epidemic has pushed gold price to its historic high at Rs. 53,250 per 10 gm(excluding GST) as on July 30. From January, a growth of 38% over the price of 38,694 has been seen.

Government Bonds

After COVID-19 crisis, a record high sales of bond has been recorded. In August-2020, the government planned to sell 12 trillion rupees of bond during this fiscal year. So far, a third of the planned bond have already been sold. Due to huge supply of govt bonds, the yield on the India's benchmark 10-year bond has stayed around 5.80% since mid-may. The yields are anticipated to improve after the crisis.

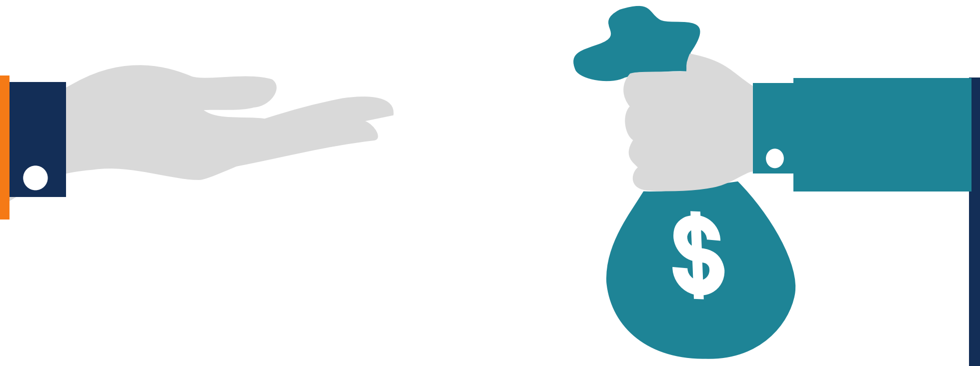


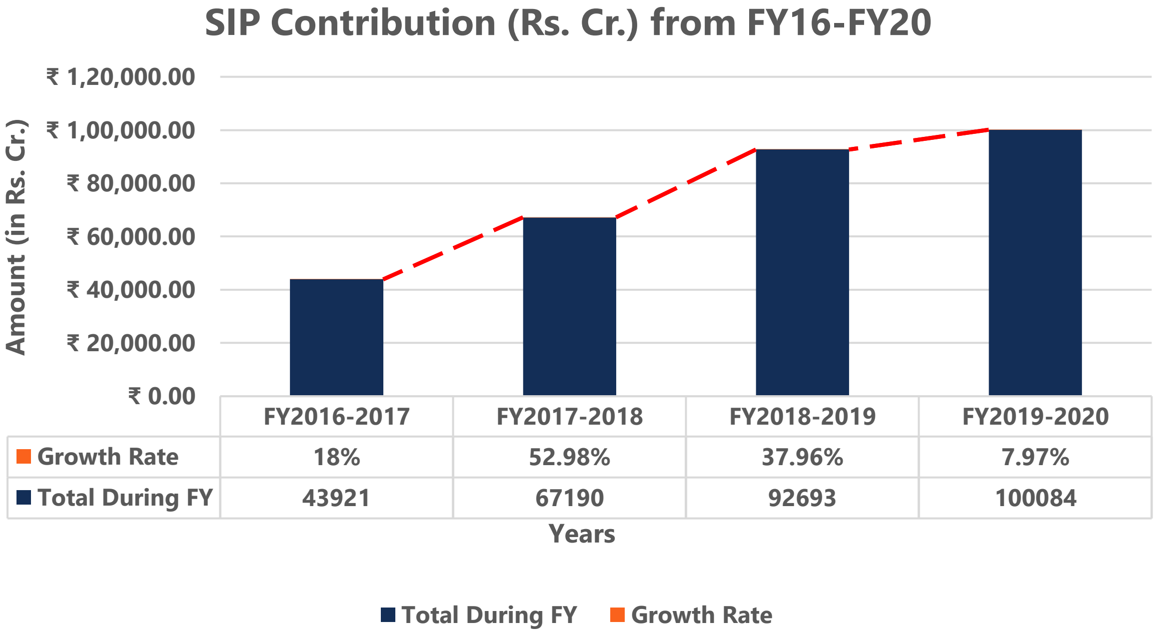


- Individuals and Corporates who are looking for medium to long-term investment opportunities are switching from Bank's fixed deposits that are currently offering lower rates in the range of 4-5% only. The G-sec bond yields are close to 6-7% for longer terms.
- Further, short-term investors have switched to Sovereign FSRB 2020T Bond by RBI which offers close to 7.15% interest on the investment. The liquidity offered by the bond has made it more lucrative.
- It has been widely observed that during the period of crisis, investment in G-Sec or government bonds pick pace as it is considered as the safest investment instrument. G-Secs carry practically no risk of default and, hence, are called risk-free gilt-edged instruments.
- The shift towards bond market has further paralyzed the money inflow of the banks affecting the top-line significantly.

Mutual Funds- SIPs

- In July-2020, a rise in SIP Accounts was observed which increased from 9.1 lakhs in June-2020 to 11 lakhs in July.
- The total outstanding SIP accounts stood at 3.3 crores at end of July 2020.
- A continuous rise of approximately 17.9% was observed in Equity AUM (including ELSS & index funds).
- The risk averse investors now prefer to invest in Mutual Fund schemes. It can be seen through the rise in AUM from Rs. 24.5 trillion in Sep-19 to Rs. 26.90 trillion in Sep-20.





	FY2016-2017	FY2017-2018	FY2018-2019	FY2019-2020
Growth Rate	18%	52.98%	37.96%	7.97%
Total During FY	43921	67190	92693	100084

- The ongoing scenario of COVID-19, and continuously rising equity market recorded new highs even after plunged to nearly 40% in March.
- If we conclude that equity market attracted retail investors, then it will be half truth. Not just equity market shown momentum because the investors too moved toward the mutual funds.
- Therefore here equity investment are not alone in the race. As of now monthly mutual fund SIP remained above the Rs. 8,000 crores mark.

GLOBAL BANKING SCENARIO

Post COVID-19 Global Overview of Banks

Areas Impacted by COVID-19

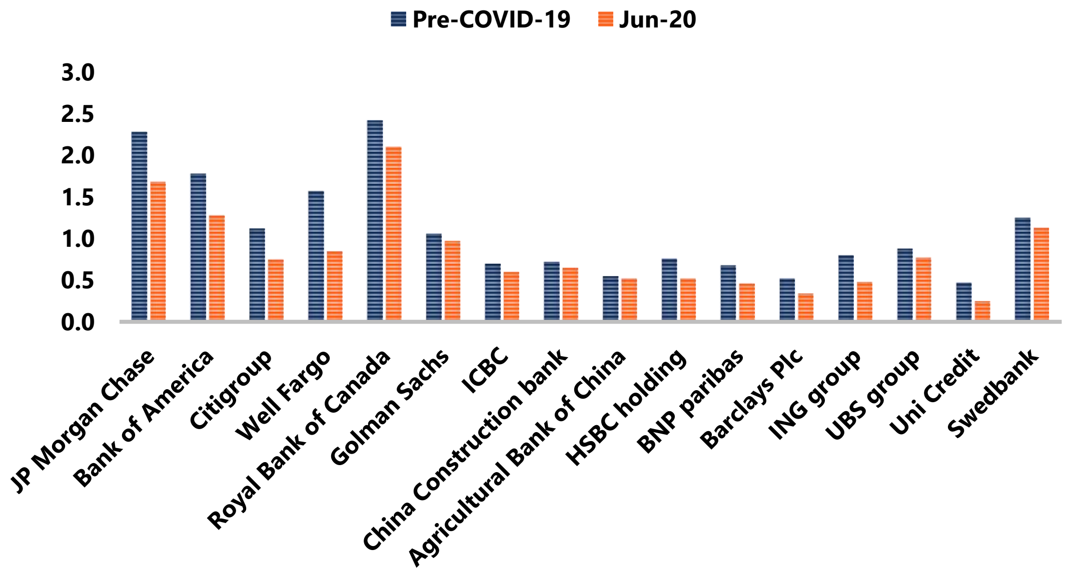
- Profitability & Credit management/cost of risk
- The low interest rate scenario, along with significant impact of COVID-19, is reducing profitability of core banking
- Financial institutions are thus shifting towards commission-based income from likes of payments and tech businesses
- A surge in credit risk of corporate & retail clients of the banks
- Digitization of the sector is providing excellent service experience in First world nations. However poor African economies can't afford the technology of digitization, due to lack of access to internet
- The clear understanding by banking operators of their gap in the provision of services, becoming more tangible than ever before with COVID-19, could make them even more inclined to accelerate the digital transformation path through partnerships and collaborations within the fintech community

High volatility of stock markets depressed bank's valuation

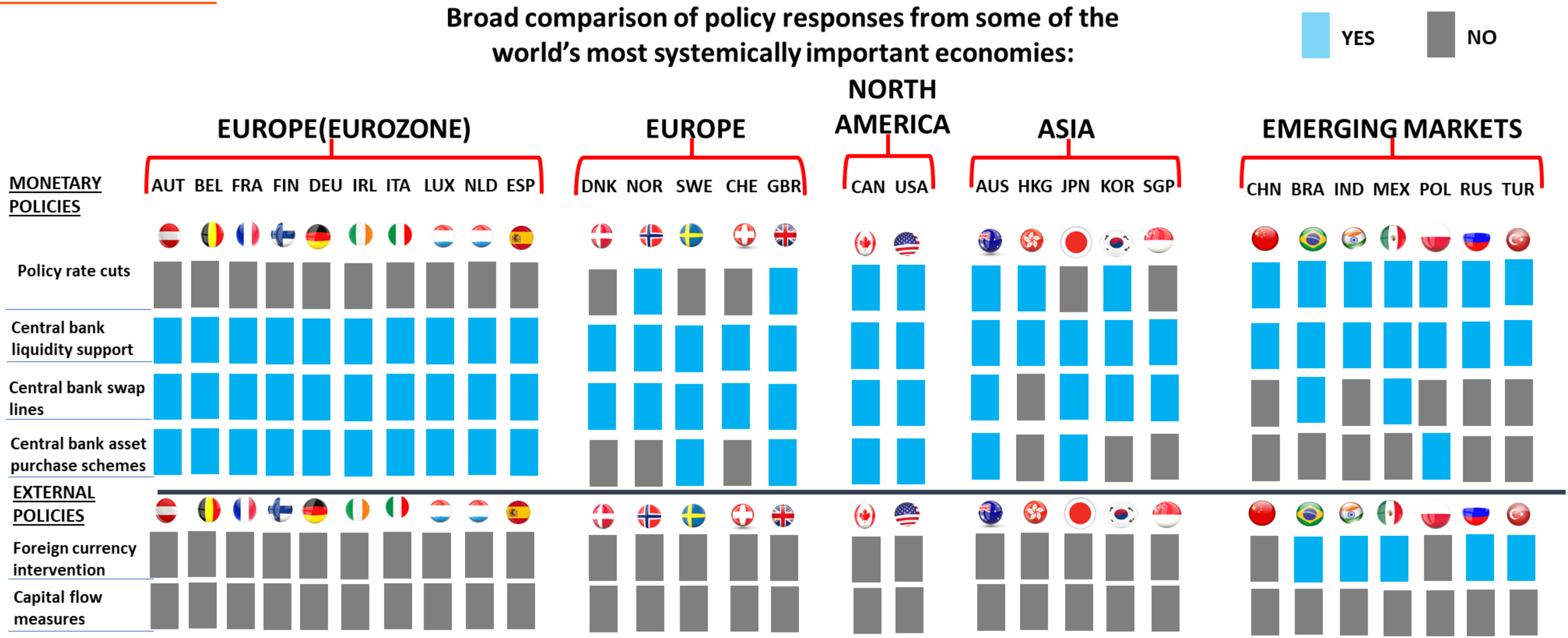
- COVID-19 has generated significant instability and high volatility in global capital markets. The financial sector has been one of the most affected, with bank valuations dropping in all countries around the world (P/NAV multiple experienced a severe downfall from 1.00x on 31 December 2019 to 0.69x on 30 April 2020)
- At the regional level, North American banks are still trading at P/NAV equal to an average 1.15x, while Asian and European banks (with the exception of the Nordics) are currently trading at significant discount levels (with average P/NAV at 0.56x and 0.52x, respectively)

- Banking stocks were impacted during COVID-19. In the period from 01 December 2019 to 30 April 2020 - most banks saw a price slump in mid-March. European banks were adversely impacted as the Euro STOXX banks index saw a massive decline of 40.18 percent followed by STOXX North America 600 banks index (31.23 percent) and STOXX Asia/Pacific 600 Banks Index (26.09 percent) for the given period.

PRICE TO TANGIBLE BOOK VALUE MULTIPLE OF THE TOP BANKS, BY REGION.



Renewed Policies of Central Banks Worldwide



Renewed Policies of Central Banks Worldwide

YES NO

EUROPE(EUROZONE)

	AUT	BEL	FRA	FIN	DEU	IRL	ITA	LUX	NLD	ESP
FINANCIAL POLICIES FOR BORROWERS										
State loan or credit guarantees	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Moratorium on payments	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES
FINANCIAL POLICIES FOR BANKS										
Easing of countercyclical	NO	YES	YES	NO	YES	YES	NO	NO	NO	NO
Domestic capital buffer	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO
Use of capital buffer	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Use of liquidity buffers	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adjustments to provisioning requirements	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

EUROPE

	DNK	NOR	SWE	CHE	GBR
FINANCIAL POLICIES FOR BORROWERS					
State loan or credit guarantees	NO	YES	YES	YES	YES
Moratorium on payments	NO	YES	YES	NO	YES
FINANCIAL POLICIES FOR BANKS					
Easing of countercyclical	YES	YES	YES	YES	YES
Domestic capital buffer	NO	NO	NO	NO	NO
Use of capital buffer	NO	YES	YES	YES	YES
Use of liquidity buffers	YES	YES	YES	YES	YES
Adjustments to provisioning requirements	YES	YES	YES	NO	YES

NORTH AMERICA

	CAN	USA
FINANCIAL POLICIES FOR BORROWERS		
State loan or credit guarantees	YES	YES
Moratorium on payments	YES	YES
FINANCIAL POLICIES FOR BANKS		
Easing of countercyclical	NO	NO
Domestic capital buffer	YES	NO
Use of capital buffer	NO	YES
Use of liquidity buffers	YES	YES
Adjustments to provisioning requirements	NO	YES

ASIA

	AUS	HKG	JPN	KOR	SGP
FINANCIAL POLICIES FOR BORROWERS					
State loan or credit guarantees	YES	YES	YES	YES	YES
Moratorium on payments	YES	YES	YES	YES	YES
FINANCIAL POLICIES FOR BANKS					
Easing of countercyclical	NO	YES	NO	NO	NO
Domestic capital buffer	NO	NO	NO	NO	NO
Use of capital buffer	YES	NO	YES	NO	NO
Use of liquidity buffers	YES	NO	YES	NO	NO
Adjustments to provisioning requirements	YES	NO	NO	NO	NO

EMERGING MARKETS

	CHN	BRA	IND	MEX	POL	RUS	TUR
FINANCIAL POLICIES FOR BORROWERS							
State loan or credit guarantees	YES	NO	YES	NO	NO	YES	NO
Moratorium on payments	YES	NO	YES	NO	YES	YES	YES
FINANCIAL POLICIES FOR BANKS							
Easing of countercyclical	NO	NO	NO	NO	NO	NO	NO
Domestic capital buffer	NO	NO	NO	NO	YES	YES	NO
Use of capital buffer	NO	YES	YES	NO	YES	YES	YES
Use of liquidity buffers	YES	NO	NO	NO	YES	YES	YES
Adjustments to provisioning requirements	YES	YES	NO	YES	YES	YES	YES

Comparison with Similar Historical Events

GAA ADVISORY

Great Depression of 1929

History

- Worldwide economic downturn that began in 1929 and lasted until about 1939
- It was the longest and most severe depression ever experienced by the industrialized Western world
- Although the Depression originated in the United States, it resulted in drastic declines in output, severe unemployment, and acute deflation in almost every country of the globe
- The Great Depression is commonly used as an example of how intensely the global economy can decline

Impact

- Industrial production in US declined by 47%, real GDP fell by 30%, CPI fell by 27% & WPI declined by 33% (deflationary situation)
- The prices of primary commodities (coffee, cotton, silk, and rubber) traded in world markets declined even more dramatically during this period
- Unemployment reached to 25% from 3%.

Causes

- The fundamental cause of the Great Depression in the United States was a decline in spending (Aggregate demand).
- Decline in spending lead to decline in production as manufacturers noticed unintended rise in inventories.
- Tight Monetary Policy in place leading to lower aggregate demand

Major Causes of Decline in Aggregate Demand & Aggregate Supply

Stock Market Crash:

- Fall of stock prices had reached levels that could not be justified by reasonable anticipations of future earnings.
- Minor events led to gradual price declines in October 1929, investors lost confidence and the stock market bubble burst.
- The US market declined 33 percent.

Banking Panics:

- The next blow to aggregate demand occurred in the fall of 1930. Depositors lose confidence in the solvency of banks. And a hasty liquidation can cause even a previously solvent bank to fail.

The Gold Standard:

- Some economist believe that the Federal Reserve allowed or caused the huge declines in the American money supply partly to preserve the Gold standard.

Measure for Recovery

- Currency devaluations & monetary expansion became the leading sources of recovery throughout the world
- Abandoned the Gold Standard for pegging US Dollar
- Franklin D. Roosevelt created a federal government programs to end the Great Depression. Within 100 days, he signed the New deal into law and created 42 agencies

Hyperinflation in Germany 1923

History:

Weimar Republic after World War 1 went through one of the worst hyper-inflation in history

The economists believe the policy and political leadership's decisions were much responsible for Hyper-inflation in Germany.

In November 1922, Germany defaulted on its reparation payment as scheduled. Due to inability to pay.

In response, France & Belgium sent troops into Germany's main industrial area, the Ruhr Valley. They occupied coal mines, railways, steel works & factories.

German government ordered workers to follow a policy of "passive resistance" refusing to work or cooperate with foreign troops & in return the govt. continued to pay them their wages

The occupation of German industrial area led the Weimar govt. to print more money to pay the workers in the region, which ultimately contribute to hyperinflation

Impact of Hyperinflation

- Germany already suffering from high levels of inflation because of the war & increase in government debt
- Passive resistance impacted the production of industrial goods, which weakened the economy further
- Govt. printed more money in order to pay workers in strike leading to rising prices
- Prices ran out of control, for example a loaf of bread, which cost 250 marks in January 1923, had risen to 200,000 million marks in November 1923

Measures for recovery

When Gustav Stresemann became Chancellor in August 1923 during the Hyperinflation crisis, he ended hyperinflation in just three months by:

- Calling off the 'passive resistance' of German workers in the Ruhr. This helped Germany's economy because goods were back in production & the Government could stop printing money to pay striking workers
- Promising to begin reparations payment again. This persuaded France & Belgium to end the occupation of the Ruhr by 1925
- Introducing a new currency called the Rentenmark. This stabilized prices as only limited number were printed meaning money rose in value
- Reducing Government spending (700,000 govt. employees lost their jobs) so that its budget deficit reduced

Financial Crisis of 2007-08

History:

- It is also called subprime mortgage crisis, severe contraction of liquidity in global financial markets that originated in the United states as a result of collapse of US housing market
- It led to near failure of several major investment & commercial banks, mortgage lenders, insurance companies, and savings & loan associations. It was the worst financial crisis after the Great Depression of 1929

Cause of the Crisis

- Fed having anticipated a mild recession that began in 2001 reduced Federal fund rates 11 times between May 2000 & December 2001 from 6.5 % to 1.75 %. That significant decrease enabled the banks to extend consumer credit at lower prime rate and encourage them to lend even to high-risk customers through higher interest rates
- Initially it was looking lucrative investment for many banks. As long as home prices continued to increase, subprime borrowers could protect themselves against the increased value of their homes or selling their homes at a profit & paying off their mortgages. In the case of default, banks could repossess the property and sell it for more than the amount of the original loan
- Banks had bundled together thousands of subprime mortgages which were sold as less risky forms of consumer debts in capital markets as securities (bonds) to other banks and investors, including hedge funds and pension funds
- Partial abrogation of the Depression- era Glass-Steagall Act (1933), it allowed banks, security firms, and insurance companies to enter each other’s market & to merge, resulting formation of banks that were “too big to fail”
- In 2004 SEC (securities & exchange commission) weakened the net-capital requirement (the ratio of capital, or assets, to debt, or liabilities, that banks are required to maintain as a safeguard against insolvency), which encouraged banks to invest even more money into MBSs

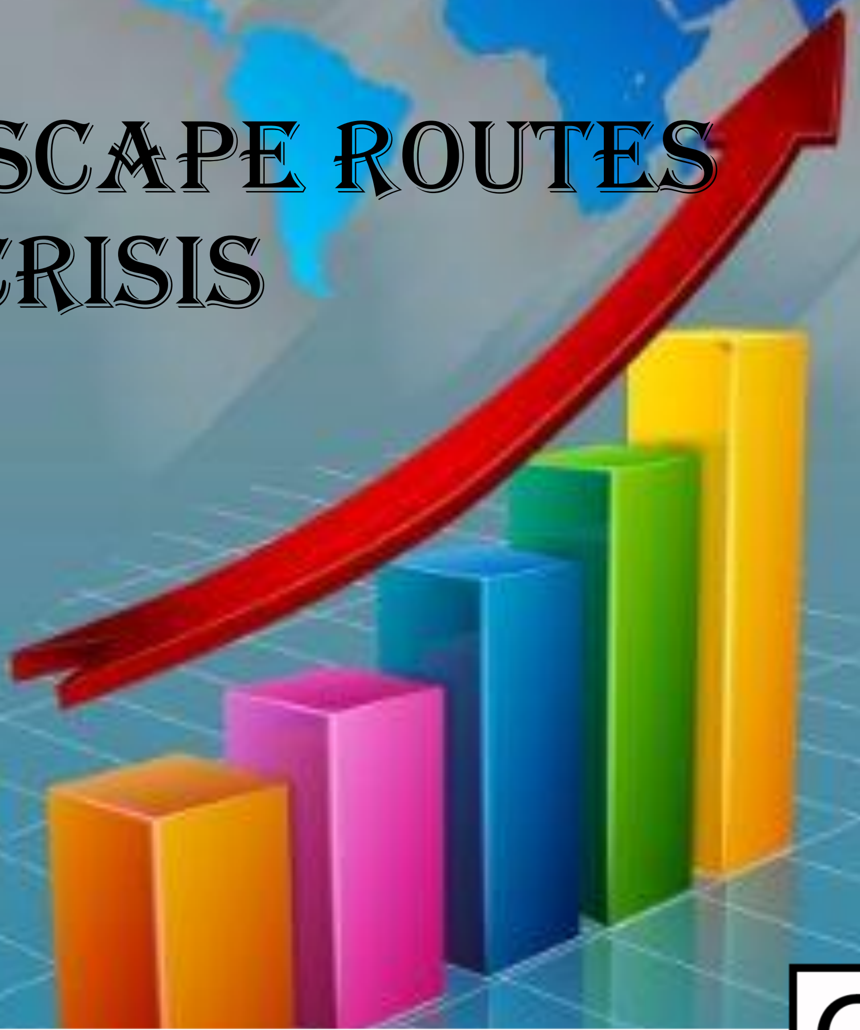
Effects & Aftermath of the Crisis

- The net worth of American households had declined by about $ 17 trillion in adjusted inflation in adjusted terms, which is a loss of 26%
- If crisis would not have happened in 2007, then US GDP would have been 7 % more than the current GDP
- Doubling of the unemployment rate, which stood at nearly 10 % in 2010. Approximately 7.5 million jobs were lost between 2007 – 2009
- Hedge funds investments were tainted with toxic debt

Measures Taken

- Treasury created super fund, - Treasury Secretary Henry Paulson convinced three banks, Citigroup, JP Morgan Chase & Bank of America to set up a $75 billion superfund. The fund provided liquidity to banks and hedge funds
- Announcement of TAF - Fed announces TAF (Term Auction Facility), it supplied short term credit to banks with sub-prime mortgages
- The treasury department injected $ 412 billion into banks, carmakers & other struggling companies through TARP (Troubled Asset Relief Program)

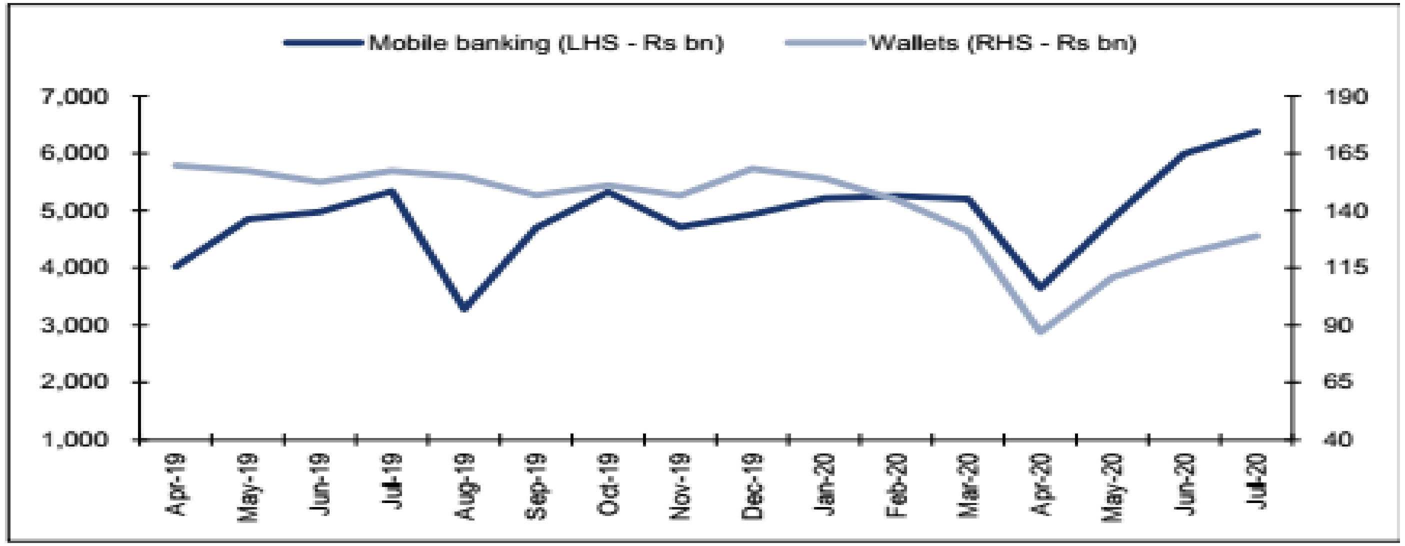
FUTURE OUTLOOK- ESCAPE ROUTES FROM THE CRISIS



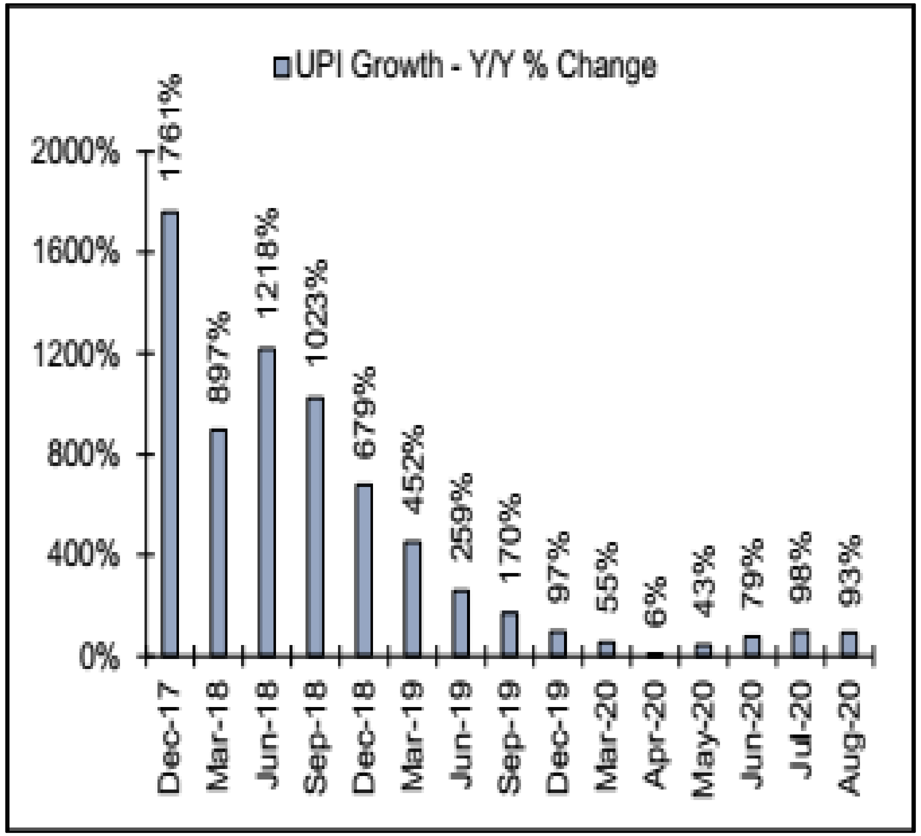
Increase in Digital Banking

Digital adoption has accelerated during the pandemic as seen by the rise in UPI and online spending.

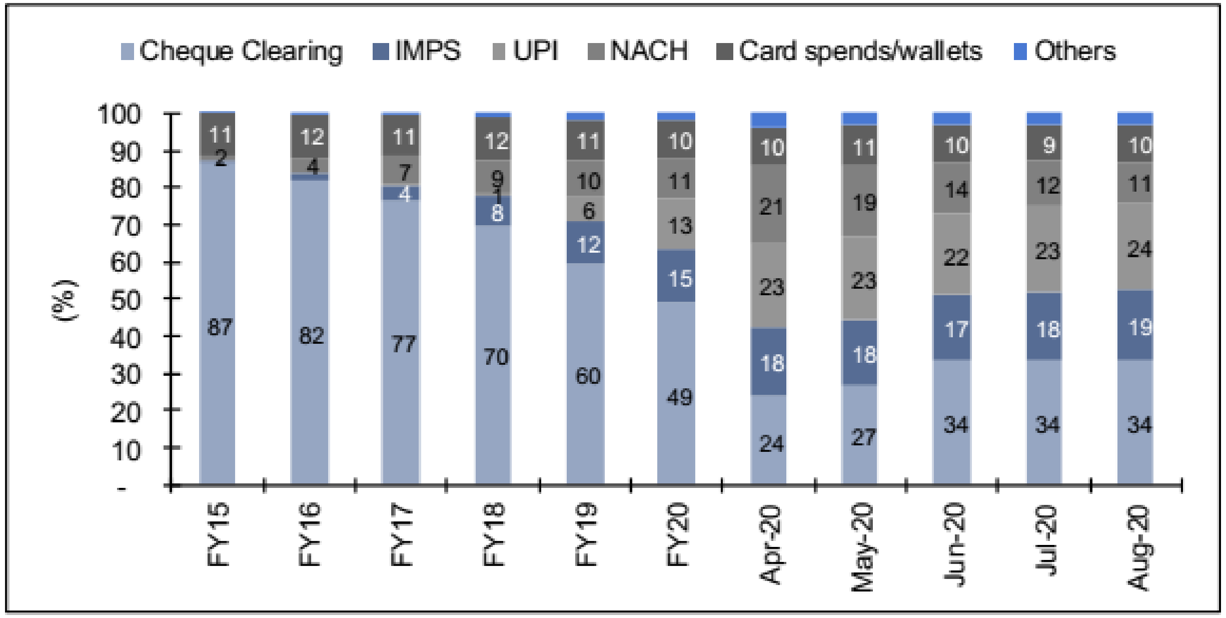
- Retail activity are back to ~90% of pre-Covid levels and non-retail activity back to ~80%
- Pace of digital adoption across channels and touchpoints has accelerated as digital mode constitutes >87% of retail payments including NEFT and <65% excluding NEFT
- Contactless payments (UPI) witnessed remarkable growth accounting for 24% of overall payments
- Cheque bounce trend was not overwhelming in August – recurring payments bounce rate elevated at 32% and overall cheque bounce rates at 8%



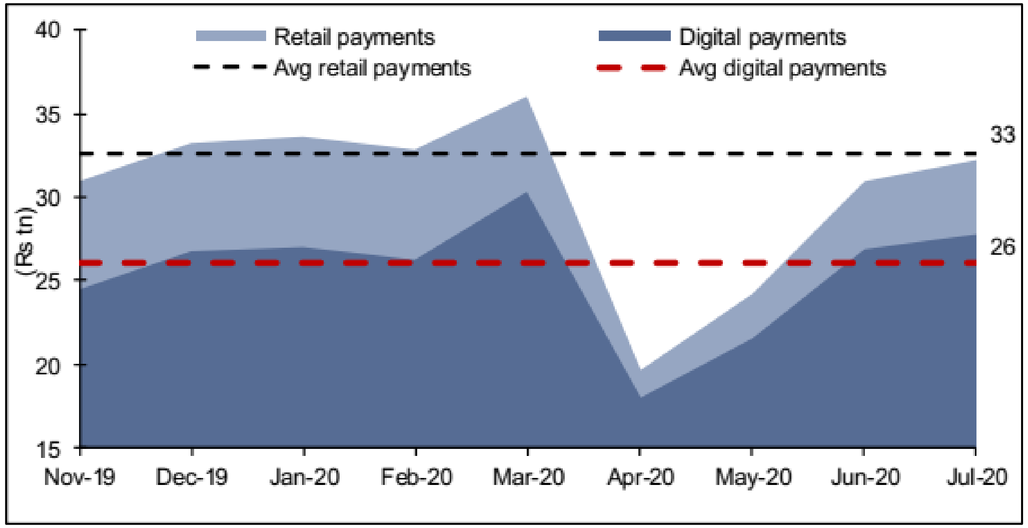
Source: NPCI, RBI, I-Sec Research

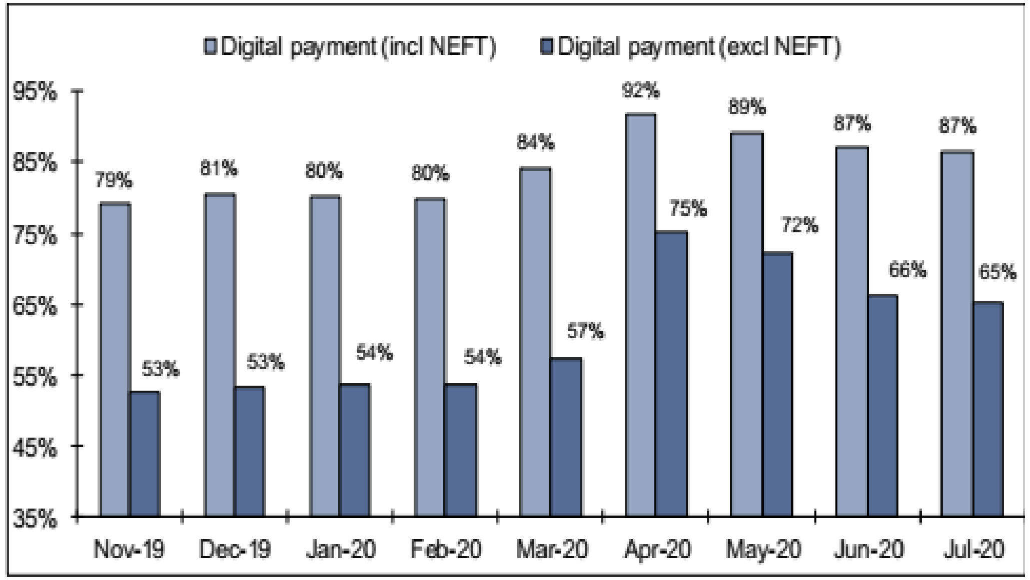


Digital Banking Trends



Source: NPCI, RBI



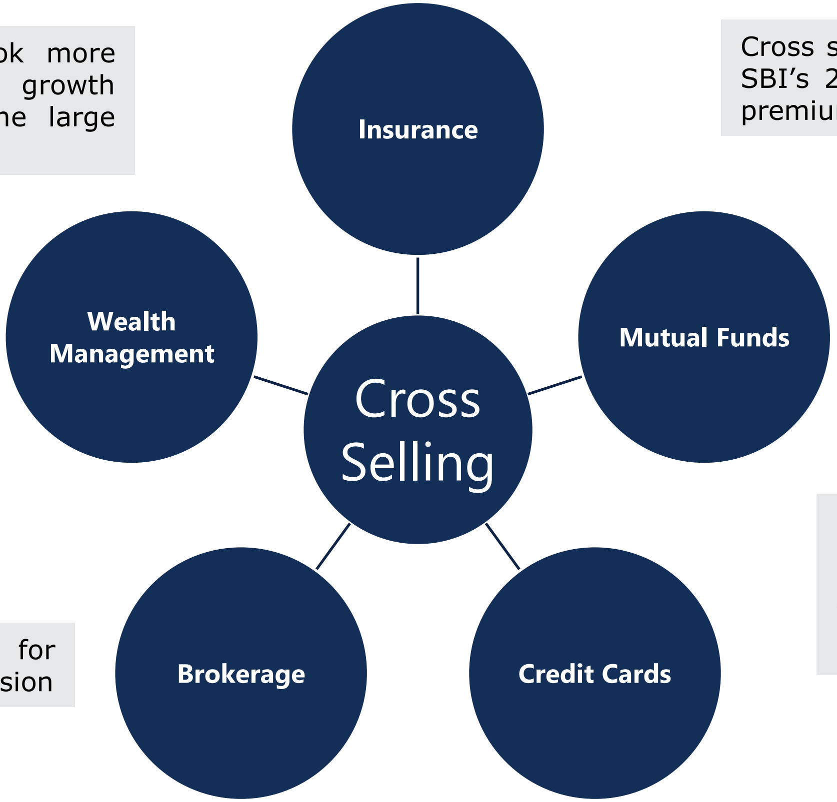


Source: RBI, NPCI, I-Sec Research

Post COVID-19 Product Line for Banks

With COVID-19 affecting the revenues of banks, it becomes imperative for the banks to modify their offerings in order to stay competitive

It becomes imperative for banks to look more towards cross-selling for higher revenue growth prospects especially insurance due to the large under penetrated market of insurance



Cross selling is an important source of revenue for banks. SBI's 20% of revenue in FY 19-20 came from insurance premium, brokerage, credit card charges, etc.

Payments Banks can be a better option for banks and NBFC's to improve financial inclusion

In ICICI's Annual Report, premium and operating profit from insurance business constitutes 30.38% of the total revenue earned by the bank in FY2020. While brokerage and commission from distributing mutual funds, insurance, etc. amounts 9.5%.

Areas To Be Focused

Banks need to look ahead at short-term and long-term strategy during the crisis. They should keep early focus on long-term strategy for profitable. The key areas for banks to focus will be:

Re-organizing the business continuity process.

Flexibility in processes to ensure smooth customer experience across Branches, touchpoints, ATM, call centers digital assets & operations.

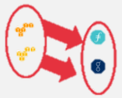
Efficiency in operations.

Ensuring sustainability and protecting the bottom line by reducing costs, without any counterproductive effects on growth.

Reset outlook, strategy and plan

Looking at the larger picture and channelizing efforts in potential growth areas while withdrawing from cost-inefficient and non-essential segments.

Asset light operating model



Shifting to an asset-lite model, with a larger focus on digital platforms and remote working, thereby reducing fixed costs without any disruption to services

Productivity

Keeping employee productivity high amidst the COVID-19 crisis will require innovative efforts beyond the usual crisis-management playbook.

Digitization

Embracing and evolving with digital capabilities to enable contactless sales, services and customer employee/employee-employee interactions.

Re-organizing the Business Continuity Process

Most Indians continue to use physical channels for their banking needs. While banks are encouraging their clients to use low-touch mediums, they will have to manage their touchpoints while adhering to the guidelines on social distancing. This will require deployment and adoption of technology, and development and implementation of new standard operating procedures (SOPs) for both customer-facing and internal branch operations:

Customer touchpoint	Potential areas of focus
Internal Operations	• Reviewing business continuity planning (BCP) and financial health of vendors. • Removing non-essential vendor services and onboarding additional vendors for essential services.
ATM Operations	• Defining ATM operations SOPs for client access to machine and sanitization for self and partnered ATMs. • Encouraging higher usage of mobile banking to further reduce branch and ATM footfalls
Branches	• Maintaining flexible office hours to spread customer footfall and rotating staff to maintain social distancing norms. • Segmenting branches by COVID-19 severity zones and implementing 'visit by appointment only' policies in critical areas.

Efficiency in Operations

In current scenario, the whole banking industry is under pressure of declining revenues and rising NPAs. Banks need to impart focus on cost cutting, through efficient operation management. Efficiency ensures that their bottom line is protected. The COVID-19 crisis can be utilized as a moment for a bold cost transformation. Banks should focus especially on those costs which lead to ease in functioning and growth. A few areas where banks can focus for efficient operations are:

STEP 01

Corporate
- Separate must-have costs from nice-to-have costs.
- Halt the near take-off of projects that have a low impact on revenue or productivity.
- Identify opportunities to reduce real estate expenses

STEP 02

Customer service: Develop digital processes to resolve maximum queries. Make a list of frequently answered questions (FAQs) and increase the use of chatbots.

STEP 03

Information Technology
Monitor the usage of systems and implement processes to remove underutilized assets.

FINAL

Marketing
Take a closer look at spending to acquire customers and reduce the cost of acquisition. Evaluate the efficacy and capability to bring inhouse media and media analytics expenditure

Reset Outlook, Strategy & Plan

COVID-19 crisis forced banks to rethink & change their revenue outlook due to their reduced ability to lend, low interest income & mounting stressed assets. They should change as per their new customers and explore new product lines beyond legacy or change their business model & strategy.

Adapting to new customer norms and analyzing customer preferences towards channels, products or financial needs, and changing business models accordingly.

Ring-fencing profitable customers by providing customized services, focusing on building a good brand image to earn customer loyalty.

Revisiting the strategy for capturing new market segments via new products and channels.

Evaluating intra-industry partnerships for sales and services, reconstructing the resilience plan by incorporating wider exigencies and scenarios.

Asset Lite Operating Model

Most Indians continue to use physical channels for their banking needs. While banks are encouraging their clients to use low-touch mediums, they will have to manage their touchpoints while adhering to the guidelines on social distancing. This will require deployment and adoption of technology, and development and implementation of new standard operating procedures (SOPs) for both customer-facing and internal branch operations.

The key elements of an asset-lite operating model will be:

- Digital assets for customers and employees alike
- Consolidation of footprint and optimizing real estate
- Outsourcing of specialist services.
- Support of remote workforce

The key benefits of adopting an asset-lite operating model are lower recurring fixed costs like rentals, lower support and maintenance costs, direct connect with customers, higher utilization of self-service platforms and easier compliance with standards/regulations.

Productivity

Banks continue to provide services to customers while planning to optimize their operations. It is expected that revenue generating activities of workforce is under stress due to owning social distancing norms. The current crisis is different from previous crisis due to a large number of workforce is working remotely without workspace and technology infrastructure.

A few steps that bank can take to enhance productivity are:

- Boosting productivity with Data Analytics Support.
- Strict monitoring and lead management system for prevention of leakages of efforts.
- Inducing digital labors like AI, Blockchain for daily operations.
- Increase use of digital tools for enabling sales and services.
- Designing training modules for upscaling employees.
- Continuing communication with all stakeholders during the COVID-19 crisis.
- Re- designing the business processes to define workflows by activity and not time
- Reviewing the scope for outsourcing non-essential services to vendors.

Focus on Technology

Most Indians continue to use physical channels for their banking needs. While banks are encouraging their clients to use low-touch mediums, they will have to manage their touchpoints while adhering to the guidelines on social distancing. This will require deployment and adoption of technology, and development and implementation of new standard operating procedures (SOPs) for both customer-facing and internal branch operations.

Customer touchpoint	Potential areas of focus
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ATM Operations	• Defining ATM operations SOPs for client access to machine and sanitization for self and partnered ATMs. • Encouraging higher usage of mobile banking to further reduce branch and ATM footfalls
Branches	• Maintaining flexible office hours to spread customer footfall and rotating staff to maintain social distancing norms. • Segmenting branches by COVID-19 severity zones and implementing 'visit by appointment only' policies in critical areas.
Maximum adoption of new technology	• Banks should adopt the following technologies that are being used or are about to be used in the world economy: a. **Robotic Process Automation (RPA),** b. **Artificial Intelligence (AI),** c. **Hybrid Cloud (HC),** d. **API Platform and** e. **Blockchain** **All the above-mentioned technologies are briefly explained in the sections below.**

Robotic Process Automation (RPA)

Robotics in banking is defined as the use of robotic process automation software like UiPath, Automation Anywhere, or Blue Prism, to install desktop and end user device level software robots, or an artificial intelligence workforce, or assistants, to help process banking work that is repetitive in nature. These robots work at the individual data field level and act similar to an Excel macro across banking software systems.

Usage of RPA

- The volume of unstructured data that the bank has to process is increasing exponentially with the rise of the digital economy. This is not just banking transaction data, but also other behavioural data that could potentially allow the banks to improve & innovate customer experience.
- This has made bankers realize that they need to find technologies that can mimic human action and judgment but at a higher speed, scale, and quality.

Benefits of RPA in Banking

- Banking RPA does not require new core IT infrastructure change or upgrades. To the contrary, it's a low-cost layer that sits on top and across all currently-installed banking applications.
- There is no coding requirement. Robotics in banking does not require coding experience.
- Implementation is fast. RPA for the banking industry is nimble; robots can be tested in short cycle iterations.
- It's easy to change. A banking robot can be installed or updated in less than a week when banking processes change

Beneficial for Indian banking

In current scenario, only ICICI bank is the leading private sector bank to adopt RPA on large scale. However, PSU banks are a way behind from this bank. A recent amalgamation of 10 PSU banks into 4 have took 9 months, but it did not finish here. Even after amalgamation I.T system integration is still a time-consuming task; it takes around 3 to 4 years. If these would have adopted RPA, this task would not have taken so long because RPA allows the organizations to automate heavy manual processes. RPA can also be leveraged for daily operations, customer service, risk & compliance management and loan processing.

Names of RPA Service Providers	
Uipath	**Rapise**
Blue Prism	**SAP-Contextor**
Automation Anywhere	**EdgeVerve-Assistedge**
Kofax	**Servicetrace**
Workfusion	**Nice-Neva**
Softomotive	**Kryon**
Jacada	**Visual Cron**
Pega	**Another Monday**
Microsoft-Power Automate	**Antworks**
Alteryx	**Redwood**
NTT-Winactor	**Helpsystems automate**

Artificial Intelligence (AI)

Artificial intelligence (AI) is wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence. AI is an interdisciplinary science with multiple approaches, but advancements in machine learning and deep learning are creating a paradigm shift in virtually every sector of the tech industry.

Usage of A.I

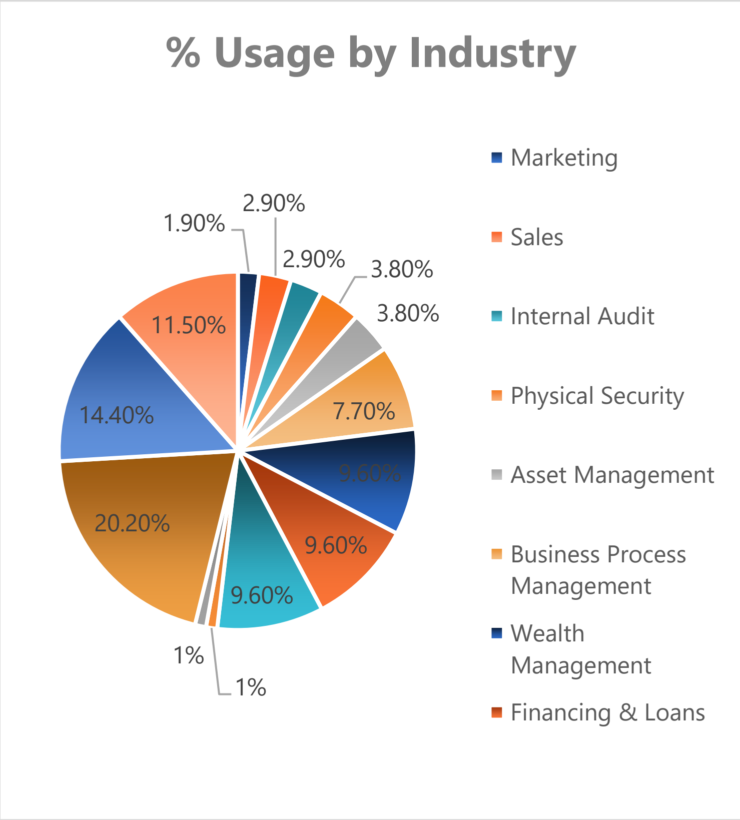
- Artificial Intelligence allows banks to use the large histories of data that they capture to make much better decisions across various functions including back-office operations, customer experience, marketing, product delivery risk management, and compliance.
- AI can be useful in E-commerce, Chatbots, Workplace communication, Human resource management, Intelligent cybersecurity.

Benefits of A.I in Banking:

- Artificial intelligence would revolutionize banks by shifting the focus from the scale of assets to scale of data.
- The banks would aim to deliver tailored experiences to their customers rather than build mass products for large markets. Instead of retaining customers through high switching costs, banks would be able to become more customer-focused and retain them by providing high retention benefits.
- Most importantly, banks would no more just depend on human ingenuity for improving their services. Instead, performance would be a product of the interplay between technology and talent.

Beneficial for Indian banking

Globally, the financial industry is enthusiastic adopter of (AI). From personalization to customer service, fraud detection & prevention to compliance, & risk monitoring to intelligent contract documents, AI has helped banks gain better control & predictability. In case of Indian banking industry, AI is primarily used to improve customer experience by adding chatbots as an additional interface for customer like SIA by SBI, Eva by HDFC & iPal by ICICI. While majority of state-owned banks have been slow to leverage seamless adoption of AI as it requires banks to operate outside of the traditional privacy framework. India still does not have robust data protection & privacy policy. In our suggestion, RBI should take a commanding role for regulations on emerging technology, data privacy & ensuring the business interests of the banks.



Hybrid Cloud

Hybrid cloud is a solution that combines a private cloud with one or more public cloud services, with proprietary software enabling communication between each distinct service. A hybrid cloud strategy provides businesses with greater flexibility by moving workloads between cloud solutions as needs and costs fluctuate.

Usage of Hybrid Cloud

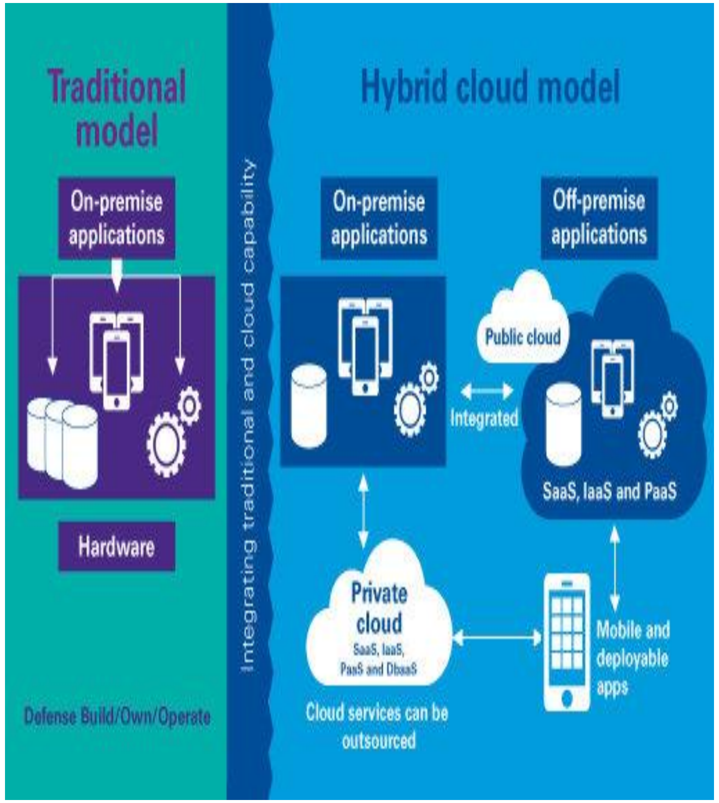
- The benefits of a hybrid cloud strategy stem from the solution's ability to give IT leaders increased control over their data.
- the hybrid model provides the business with multiple options so that stakeholders can pick an environment that best suits each individual use case.
- A hybrid model requires much less space on-premises compared to a strictly private model.
- This model can benefit startups that can't afford to invest in a huge private data center as well as established enterprises that need to scale in a cost-effective manner.

Benefits of Hybrid Cloud in Banking:

- One of the biggest challenges that the digital age has brought to banking is the need to respond quickly. The constantly evolving market that banks operate in require them to be as agile as possible.
- They need to be able to provide resources across the enterprise in a timely manner to address business faster.
- Enterprise-wide hybrid cloud. Hybrid cloud also allows banks to offer innovative new offerings to its customers. For example, ICICI Bank has partnered with Zoho to allow businesses to automate the basic reconciliation process through Zoho Books, a cloud accounting software.

Beneficial for Indian banking

Today, most banks report very high cost to income ratio (approx. 46 %) largely because of inflexible cost structures, legacy system & operating models. Now its high time to adopt cloud system while COVID-19 exacerbates all hope of their earnings for upcoming years. Digital initiatives of most banks have been around front office over the last decade or so, but in the last couple of quarters, banks seem to have realized that to compete with non-traditional players they would have to go beyond giving a nice front office experience towards a hassle-free user experience end-to-end. Banks are waking up to this reality, are still at a crawling stage in terms of harnessing and monetizing the data, establishing a robust platform."



Application Program Interface (API)

An API (Application Program Interfaces) Platform's purpose is to serve net new application development — building new capabilities, new experiences, nurturing ecosystems, and more. API Management, Full Lifecycle API Management, and API Gateways are tables stakes here. These bring life to API design and development, to lifecycle management, to policy and security enforcement, to analytics, and to nurturing development communities as consumers of these APIs.

Usage of API Platform

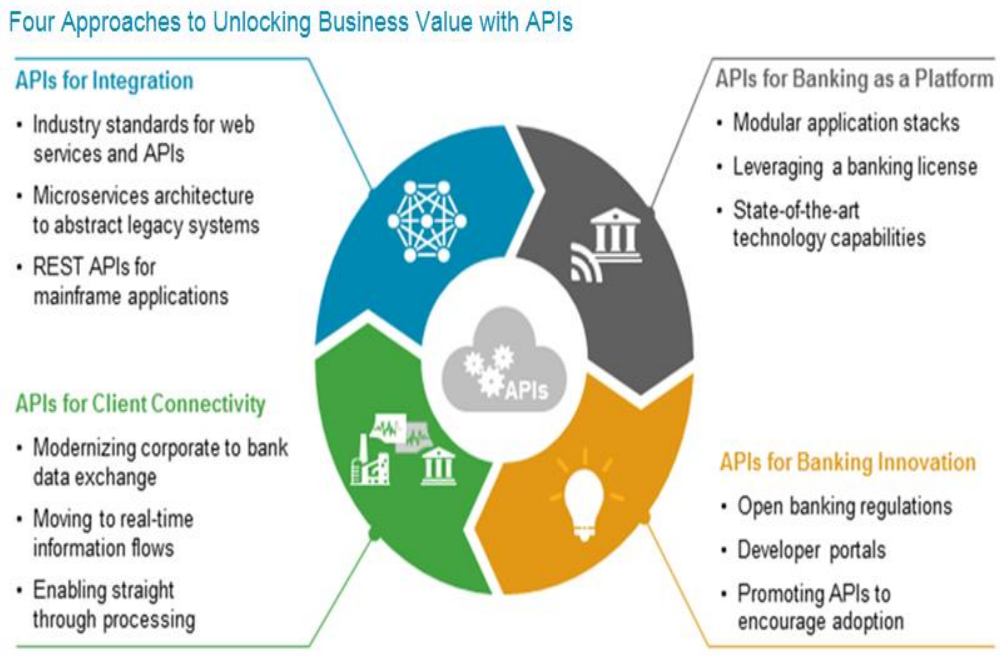
- MESH microservices management
- Developer tools and API Mediation (not pictured)
- Runtime Services
- Data as a Service
- Streams/Event-Driven APIs
- Pre-Built back-end services
- Application Connectors

Benefits of API Platform in Banking:

- APIs can be created to speed backend connections and functionality within an organization, and even provide access to functions and data for customer-facing features.
- Open APIs are a shift from this insular view. With open APIs, businesses make certain functions and data available to both internal users and the outside world in a safe and secure manner. Partners and 3rd parties participate in adding value for the bank's customers and their own through the use of these APIs.
- While there are many, we've pulled together the top reason banks should consider open APIs, regulatory compliance, meeting consumer demand, business agility,

Beneficial for Indian banking

- ICICI bank is already using this technology which consists of 250 APIs, enables developers of prospective partner companies across the globe to seamlessly sign up on it , create an application, select the application, test it out & get the sample code.
- The APIs are available across an array of categories including payments & collections like IMPS, UPI payment/collection, accounts & deposits and cards.



Block Chain

Blockchain technology is most simply defined as a decentralized, distributed ledger that records the provenance of a digital asset.

Usage of Block Chain.

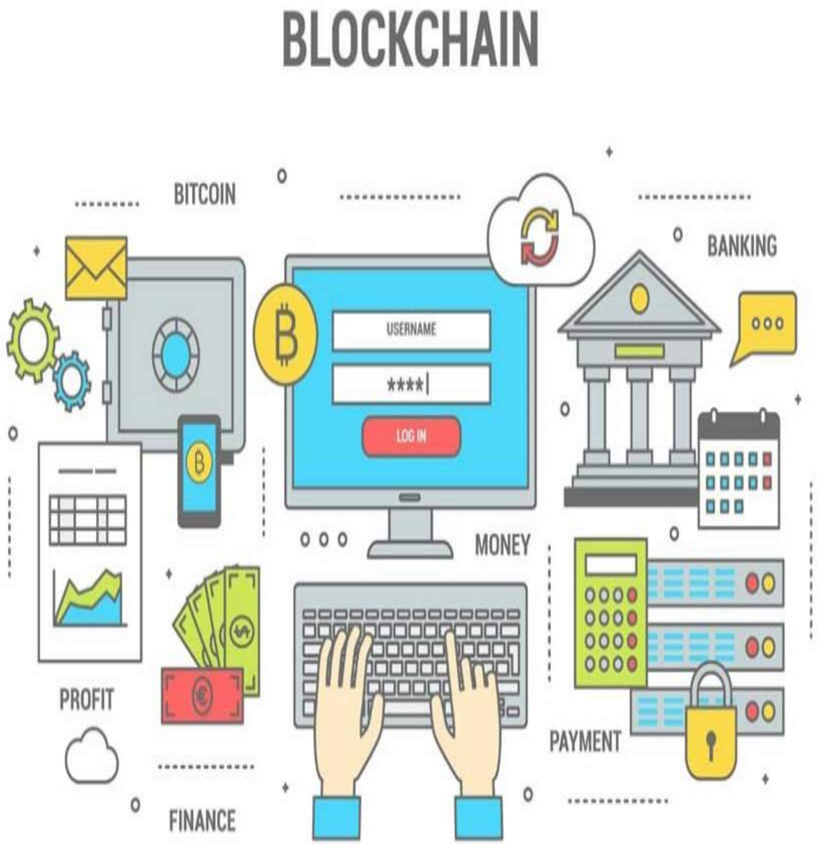
- Blockchain is an especially promising and revolutionary technology because it helps reduce risk, stamps out fraud and brings transparency in a scalable way for myriad uses
- The whole point of using a blockchain is to let people — in particular, people who don't trust one another — share valuable data in a secure, tamperproof way.

Benefits of Block Chain.

- Greater transparency- Transaction histories are becoming more transparent through the use of blockchain technology.
- Enhanced Security- There are several ways blockchain is more secure than other record-keeping systems. Transactions must be agreed upon before they are recorded.
- Improved traceability- If your company deals with products that are traded through a complex supply chain, you're familiar with how hard it can be to trace an item back to its origin.
- Increased efficiency & speed- When you use traditional, paper-heavy processes, trading anything is a time-consuming process that is prone to human error and often requires third-party mediation.
- Reduced costs- For most businesses, reducing costs is a priority. With blockchain, you don't need as many third parties or middlemen to make guarantees because it doesn't matter if you can trust your trading partner.

Beneficial for Indian banking

- ICICI Bank, Axis Bank and Yes Bank, which have been at the forefront of blockchain efforts in the country, have joined JP Morgan's blockchain platform, 'the Interbank Information Network (IIN)' in September 2019, which enables faster cross-border payments by providing secure exchange information to banks at lower cost.
- Earlier in 2019, 11 Indian banks, including ICICI, Axis, Yes Bank, HDFC, Kotak Mahindra, Standard Chartered, RBL and South Indian Bank, have formed a consortium to introduce and run a blockchain-linked loan system for small and medium enterprises in the country. Bank of Baroda, the State Bank of India (SBI) and IndusInd Bank are involved in this consortium as outside members.



Consolidation of PSU Banks

The Government of India successfully concluded the Mega–merger of 10 Public Sector Banks (PSBs) into 4 banks. The purpose of merger was to manage the capital more efficiently. The amalgamation of the PSBs is based on bad loans intensity & regional factors. After merger, now we have total 12 PSB (7 large public sectors bank & five smaller ones). Before mergers, there were 27 banks in 2017. Government intention is clear and noteworthy to merge 21 PSB into 3-4 global size banks.

Banks	Advance	Deposits	Net NPA	Employees
Punjab National Bank	5,06194 Cr.	6,76,030 Cr.	6.55%	65,116
Oriental Bank of Commerce	1,71,549 Cr.	2,32,645 Cr.	5.93%	21,729
United Bank of India	73,123 Cr.	1,34983 Cr.	8.67%	13,804
After Amalgamation	**7,50,867 Cr.**	**10,43,659 Cr.**	**6.61%**	**1,00,649**

Merits of Merger

- A large capital base would help the acquirer banks to offer a large loan amount.
- Service delivery can get improved.
- Recapitalization need from the government to reduce.
- Technological up-gradation on the cards & various other products.
- With fewer banks, it is possible for the ministry to better focus on the banks on its watch.
- Customer will have a wide array of products like mutual funds & insurance to choose from, in addition to the traditional loans & deposits.

Our Opinion

During the ongoing COVID-19 epidemic, it is a well-known fact there is humungous pressure on revenues & profitability of banks. In our opinion, it is imperative to increase the pace of amalgamation so that PSBs can achieve scale of accessibility covering different geographies of the nation. Further, the merger also helps to reduce the Net NPA of the banks. It also makes easier for the Government to monitor & provide efficient benefits to the group of banks at one go.

Conclusion

With the onset of COVID-19, it becomes imperative for banks to look for new sources of revenue in order to stay competitive.

In order to provide a boost in the economy, fiscal measures from the RBI along with economic stimulus from the Government is required in order to improve credit growth in the economy.

Consolidation of PSB's will help in achieve scale of accessibility and also improve situation regarding NPA's due to better oversight from the Government.

Revenue from Cross-Selling of products and services such as insurance, mutual funds, etc. are now becoming big contributors.

Digital Banking initiatives will not only help customers but also bankers in terms of safety and reduce routine operations for them.

Adopting newer technologies such as RPA, AI, Blockchain, etc. will not only help in terms of safety but also improve the efficiency in operations of banks.

SERVICES

VALUATION

Business & Business Interests
- Business & Equity Valuation
- Valuation of Start-up / IPO / REIT / M&A, Leverage Buyout Valuation
- Valuation of ESOPs and Sweat Equity
- Valuation for Tax, Capital Gain, Transfer Pricing
- Valuation for Financial Reporting, Fairness Opinion, Purchase Price Allocation (PPA) for M&A
- Determination of Swap Ratio under Merger and Demerger
- Valuation of Inventory / Stocks and Debentures / Receivables
- Litigation and Dispute Support

Intangible Assets
- Valuation of Brands, Goodwill, Trademark, Copyright, Patents, Other Intangible Assets & Intellectual Property
- Valuation for Financial Reporting, Fairness Opinion, Purchase Price Allocation (PPA) for (M&A)
- Impairment Studies of Intangible Assets

Financial Instruments
- Valuation of Financial Securities, Instruments & Derivatives
- Valuation for M&A Transaction, under Insolvency & Bankruptcy Code

Immovable Assets (Real Estate)
- Valuation of Land, Building Residential / Commercial / Industrial Estates
- Valuation of Infrastructure Assets, Expressways / Toll Ways & Specialized Assets
- Valuation for Capital Gain Tax, Stamp Duty, Litigation & Dispute
- Impairment Studies for Financial Reporting, PPA, Cash Generating Units
- Mines, Mineral Advisory and Valuation
- Valuation under Insolvency & Bankruptcy Code (IBC)

Movable Assets (Plant & Machinery)
- Valuation of Industrial Assets and Plant & Machinery
- Valuation of Infrastructure Assets & Specialized Assets, Power Plants
- Fairness Opinion, Purchase Price Allocation for M&A
- Impairment Studies for Financial Reporting, Cash Generating Units
- Valuation under Insolvency & Bankruptcy Code (IBC)

TRANSACTION ADVISORY

- Buy side due diligence and closing due diligence
- Vendor due diligence and vendor assistance
- Sale Purchase agreement (SPA) and Business Transfer Agreement (BTA)
- Assistance in deal negotiation

SERVICES

RISK CONSULTING

Strategic & Risk Advisory Services
- Techno Economic Feasibility Studies
- Economic Viability & Financial Appraisal
- Business Plan Review

Technical Support Services
- Lender's & Investor's / Independent Engineer Services
- Technical Due Diligence, Technical Opinions
- Chartered Engineers Opinion & Certification
- Project Cost Investigations
- Project Appraisal & Monitoring

Agency for Specialized Monitoring (ASM)
- Term Loan Monitoring
- Working Capital Monitoring
- Cash Flow Monitoring

Financial & Treasury Risk Advisory
- Assessment Of Credit Risk, Market Risk & Interest Rate Risk
- Assets Quality Review & Stress Testing
- Assessment of Expected Credit Loss
- Assessment of Asset Liability Management & Liquidity Risk

INVESTMENT BANKING

- M&A Advisory:
  - Sell Side, Buy Side
  - Domestic & Cross Border
- Partner, Joint Venture & Strategic Alliances
- Government Disinvestment & Privatization
- Fund Raising – Equity, Mezzanine, Structure Finance & Debt
- Distress Investment Banking – One – Time Settlement, Priority and Interim Funding, Rescue Financing and Buyouts

DISPUTE & LITIGATION SUPPORT

- Valuation Services
- Damages & Loss of Profit Assessment
- Independent Expert Testimony
- Anti – Trust & Competition Advisory
- Post – Acquisition Disputes, Joint Venture & Shareholder Disputes
- Civil & Construction Disputes, Real Estate Disputes
- Intellectual Property Rights Dispute

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