

MOCK TEST PAPER
FINAL (NEW) COURSE: GROUP – II
PAPER – 6B: FINANCIAL SERVICES AND CAPITAL MARKETS
Solutions

ANSWERS TO CASE STUDY: 1

Solution to Question no. 1

The primary reason is oversupply of bonds. The government, in its Budget on February 1, 2021 announced Rupees 80,000 crore extra borrowing for this fiscal and Rupees 12.05 trillion of gross market borrowing for the next. In the current fiscal, the government has already borrowed more than Rs. 13 trillion from the market and the states an additional Rs. 10 trillion. Major investors in the bond market are banks, insurance companies and provident/pension funds. Foreign investors hold less than 5 percent of the outstanding stock. Clearly, as supply outmatches the demand, the investors are offering lower prices for the bonds. When bond prices fall, yields rise.

A rise in government bond yields means a rise in the interest rate in the economy. If the interest rates rise, banks make their lending rate costlier. The market also demands higher interest costs for the companies that want to issue bonds to meet their financial needs, as well as for the government. The interest is a crucial input cost, and this pushes up overall cost in the economy. When the pricing power is constrained due to low demand, a rising cost reduces the profit, discouraging entrepreneurs to invest in the economy. The government also cannot spend enough on the infrastructure and other social expenses. People defer their discretionary spending and put off car and house purchases. All of these combined bring the economy down and ultimately leads to job losses and all kinds of economic maladies.

Solution to Question no. 2

For most part of fiscal year 2020-21, the 10-year bond yields were below 6 percent. Now if the yields rise to say, 6.20 percent by the end of the quarter, that's a loss for banks on their bond holdings which they must show as treasury losses. Banks will simply stop buying bonds if they are threatened with such losses. The government will not be able to borrow cheaply in that case.

For the government, any fresh bond issuance has to be done at near the market yields. If the yields increase in the secondary market, the fresh issuance has to be done at a higher rate. This increases the interest cost for the government substantially. Therefore, the RBI will try to keep yields low, because it sees low yields as a "public good".

To reduce the bond yield, the RBI is refusing to sell bonds at the yields market are quoting. At the same time, it is buying huge amounts of bonds from the secondary market, both pre-announced and unannounced. So far, this fiscal, it has bought bonds worth Rupees 3.04 trillion. The markets are, however, expecting the RBI to buy bonds every week so that they can offload old bonds and buy fresh one. Whenever the RBI is silent on a bond buyback, the yields get pushed up.

So, though, RBI has no dearth of tools to decrease the bond yield, the most effective one right now is simply to keep on buying more bonds. There is also a theory that there are short-sellers in the market. The yields can come down rapidly if the short-sellers are discouraged. The RBI can also let the banks buy more bonds and hold them till maturity. And the RBI can stop normalization of liquidity operations and let the investors use the easy liquidity to buy bonds.

Solution to Question no. 3

(i) The expected market price of the debenture may be found as follows:

The annual interest on perpetual debenture is Rs. 800 and yield is 10%. so, the market price may be

$$\frac{800}{0.10} = 8000$$

If the debenture is available at Rs. 7000, it can be bought and the yield in that case would be

$$\frac{800}{7000} = 11.43$$

(ii) The approximate yield on debenture investment may be found by using the YTM formula as follows:

$$\begin{aligned} \text{Approximate Yield} &= \frac{\text{Interest} + \frac{\text{Redemption Value} - \text{Purchase Price}}{\text{Period Of Holding}}}{\text{Redemption Value} + \text{Purchase Price}/2} \\ &= \frac{800 + \frac{10000 - 8250}{8}}{10000 + 8250/2} = \frac{1018.75}{9125} = 11.16 \end{aligned}$$

Solution to Question no. 4

(i) (a)

(ii) (c)

(iii) (c)

(iv) (b)

(v) (a)

ANSWERS TO CASE STUDY: 2

Solution to Question no. 1

Note 1 Calculation of amount kept as reserve by factor

Factor will keep reserve equal to 20% of amount after adjusting commission and 10% of receivable.

Average Receivable (in crores) = (Rs 3600 /360) *90

= Rs. 900 Crores

Factoring Commission (in crores) = Rs. 900 * 1.8%

= Rs. 16.2 Crores

10% of receivable (in crores) = Rs. 900 * 10%

= Rs. 90 crores

$$\begin{aligned}\text{Reserve kept by factor (in cores)} &= 20\% (\text{Rs. } 900 - \text{Rs. } 16.2 - \text{Rs. } 90) \\ &= \text{Rs. } 158.76 \text{ crores}\end{aligned}$$

Note 2 Calculation of Interest amount charged by factor

The factor will provide advance after adjusting reserve, commission charges and interest amount.

$$\begin{aligned}\text{Amount available for advance before adjusting interest (in crores)} &= \text{Rs. } 900 - \text{Rs. } 158.76 - \text{Rs. } 16.2 \\ &= \text{Rs. } 725.04 \text{ Crores}\end{aligned}$$

$$\begin{aligned}\text{Interest amount (in crores)} &= \text{Rs. } 725.04 * 18\% * (90/360) \\ &= \text{Rs. } 32.63 \text{ crores}\end{aligned}$$

Note 3 Amount paid as advance by factor

The factor will provide advance after adjusting reserve, commission charges and interest amount.

$$\begin{aligned}\text{Amount paid as advance by factor} &= \text{Amount available for advance before adjusting interest (in crores)} - \text{Interest amount (in crores)} \\ &= \text{Rs. } 725.04 - \text{Rs. } 32.63 \\ &= \text{Rs. } 692.41 \text{ crores}\end{aligned}$$

Solution to Question no. 2

Note 1 Calculation of yearly factoring cost

Factoring cost for 90 days

$$\begin{aligned}(\text{in crores}) &= \text{Commission charges} + \text{Interest amount} \\ &= \text{Rs. } 16.2 + \text{Rs. } 32.63 \\ &= \text{Rs. } 48.83 \text{ crores}\end{aligned}$$

$$\begin{aligned}\text{Yearly factoring cost (in crores)} &= \text{Rs. } 48.83 * (360/90) \\ &= \text{Rs. } 195.32 \text{ crores}\end{aligned}$$

Note 2 Calculation of saving in cost due to factoring

Saving in administrative cost = Rs. 75 crores

Saving in bad debts = Nil*

*This factoring arrangement is on recourse basis. So bad debts will be borne by RFTL.

Note 3 Calculation of effective factoring cost (%)

Particulars	Rs. in crores	Rs. in crores
Yearly factoring cost		Rs. 195.32
Less: Cost Saved per year		
Bad debts	Nil	
Administrative cost	Rs. 75	Rs. 75
Net Factoring cost per year		Rs. 120.32
Net Factoring cost per year (%)	(Rs. 120.32 / Rs. 692.41) * 100	17.38%

Solution to Question no. 3

Increase in Turnover = $(\text{Rs.720 crores} / \text{Rs.3600 crores}) * 100 = 20\%$

Note 1 Calculation of amount kept as reserve by factor

Factor will keep reserve equal to 20% of amount after adjusting commission and 10% of receivable.

Average Receivable (in crores) = $(\text{Rs } 4320 / 360) * 90$
= Rs. 1080 Crores

Factoring Commission (in crores) = $\text{Rs. } 1080 * 1.8\%$
= Rs. 19.44 Crores

10% of receivable (in crores) = $\text{Rs. } 1080 * 10\%$
= Rs. 108 crores

Reserve kept by factor (in crores) = $20\% (\text{Rs. } 1080 - \text{Rs.19.44} - \text{Rs. } 108)$
= Rs. 190.51 crores

Note 2 Calculation of Interest amount charged by factor

The factor will provide advance after adjusting reserve, commission charges and interest amount.

Amount available for advance before adjusting interest (in crores) = $\text{Rs.1080} - \text{Rs.190.51} - \text{Rs.19.44}$
= Rs.870.05 Crores

Interest amount (in crores) = $\text{Rs. } 870.05 * 18\% * (90/360)$
= Rs. 39.15 crores

Note 3 Calculation of yearly factoring cost

Factoring cost for 90 days

(in crores) = Commission charges + Interest amount
= $\text{Rs. } 19.44 + \text{Rs. } 39.15$
= Rs. 58.59 crores

Yearly factoring cost (in crores) = $\text{Rs. } 58.59 * (360/90)$
= Rs. 234.36 crores

Note 4 Calculation on effect of Profit after accepting new orders and factoring proposal

Particulars	Rs. in crores	Rs. in crores
Annual Turnover		Rs. 4320
Less:		
Variable Cost		
= $\text{Rs. } 2160 + 20\% \text{ of Rs. } 2160$	Rs. 2592	
Less: Saving in Bad debts	Nil*	Rs. 2592
Fixed Cost	Rs. 450	
Less: Saving in Fixed Cost	Rs. 75	Rs. 375
Factoring Cost		Rs. 234.36
Profit		Rs. 1118.64

* This factoring arrangement is on recourse basis. So bad debts will be borne by RFTL

Increase in Profit (in crores) = Rs. 1118.64 –Rs. 990
= Rs. 128.64 crores

It is worthwhile for RFTL to accept new order worth Rs.720 crores as it will result in increase in profits.

Solution to Question 4:

- (i) c
- (ii) c
- (iii) d
- (iv) b
- (v) c

ANSWERS TO CASE STUDY: 3

Solution to Question 1:

SPACs are different from traditional IPOs in that the publicly traded SPAC merge with a private company through shareholder approval while a regular IPO company would continue to function as an operating business.

There are several significant advantages SPACs offer over traditional IPOs. First, the IPO process lasts many months, even a year and can be grueling in terms of disclosures and documentations required. SPACs can be done within 3-4 months with fewer restrictions.

Second, there are no roadshows, no brokers, no detailed market regulator's scrutiny and companies can give projections - real or hyped to investors and raise funding at multiple points in time, unlike the 'quiet period' that precedes any IPO. The costs of a traditional IPO are both the direct fees that companies pay to investment banks, as well as legal fees, due diligence fees, commissions, etc. This critical difference allows company CEOs to directly pitch their wares and real and potential numbers to investors, without any restrictions.

Third, with a SPAC, there is greater certainty that the deal gets done, while IPOs often fall apart at the last minute because of volatility in the markets. SPACs are much more predictable.

Finally, there is a larger indirect cost of under-pricing IPOs, or 'leaving money on the table'. Studies indicate that in the year 2020, about 34 billion dollars was 'left on the table' - more than 200 million dollars per IPO which makes SPACs a naturally more attractive alternative.

One alternative to SPACs is private equity (PE). But access to PE investments is limited to wealthy individuals who can accept the risks as well as illiquidity of PE investments. The lock in period for PE investments stretches several years, discouraging most individual investors. In contrast, SPACs are a liquid investments vehicle with an opportunity to invest small as well as large amounts.

Solution to Question 2:

While probably a more efficient way of raising capital, the risks of SPACs are not small. SPAC investors simply trust the reputation of the sponsors and have no historical record of the target company to check prior to investing. They are at the mercy of the sponsors, who get paid by receiving additional shares of the company being acquired above and beyond those they get for the capital they invest. Also, this significantly dilutes the values of the stock held by other investors.

Sponsors don't need to hold onto these shares for any mandatory period and can dump them once the post-IPO price shoots up. Their profit is assured, irrespective of the final outcome of the SPAC. Thus, there is a moral hazard embedded into the transaction.

Stanford Law School's Michael Klausner argues that the average stock price falls by an average of 15% after the first three months, and even further after a longer period, all directly due to SPAC dilution. So, pre-merger investors with minimal risk get exponential returns. But post-merger investors suffer negative returns after assuming risks.

Theoretically, one can trade them as regular equity investments, but it is important to be cognizant of the risks. Initially, after the SPAC has priced its IPO, it may not show much trading volume and stock price movement. However, the prospect of a possible merger and the credibility of the sponsors provides a set up to be bullish with relatively high risk. If the announced merger and the subsequent completion of the deal is appealing to investors, the market will respond favourably and may push the stock up by a considerable amount. Alternatively, as with any M&A, the risk of a deal falling through or for the street to not view a transaction favourably can significantly impact the stock price and wipe out a chunk of the initial investment.

So, allowing SPACs in India is fraught with risks. For instance, this route is preferred by firms to sidestep regulatory scrutiny. Clearly, this will be in the best interests of neither the financial markets nor the investors. It is possible that such shell firms will be listed to acquire other companies at lofty valuations at the cost of ordinary shareholders. This could have significant impact on the individual investors who are in any case ill-equipped to participate in a price discovery process. Besides, the recent data shows that companies acquired by SPAC have underperformed the broader markets in the US.

Solution to Question 3:

A SPAC has no track record and so does not qualify, in the normal course, to go public. SEBI will have to carve out new provisions for them or accommodate them in the platform it has created for startups.

The market regulator should consider allowing firms with assets or revenue above a threshold to list on the main exchanges with full disclosures. Investors would, then, know the risks of investing in such companies. This will be a more transparent way of letting start-ups above certain size to raise capital and allowing investors to participate in the new economy.

SEBI should both enable less costly IPOs and allow SPACs with conditions that let sponsors gain only after the merged entity's shares have gained a stable premium over SPAC's issue price.

Furthermore, SEBI will have to consider exemption provisions to allow these entities to list publicly. It's not that India don't have competent managers or a plethora of high-growth private companies, it's that the three-year profitability record requirement as fixed for traditional IPOs is difficult for a "shell company" to comply with.

If one considers growth companies with significant operational expenditure that are rapidly scaling, they could be great candidates for a SPAC, but they may not turn net income positive for a few years. At that point, do they stop growing as capital dries up or investment timelines reach the exit stage? Do they consider becoming a fuel for the VC/growth equity supply or do our banks assist with more friendlier financing terms to keep these businesses running so that they reach an inflection point in their cash flows? Reconsidering the three-year rule will definitely be a landmark event for start-up founders, investors, SPAC sponsors and the retail investors alike.

Solution to Question 4:

- (i) (b)
- (ii) (a)
- (iii) (c)
- (iv) (d)
- (v) (a)

ANSWERS TO CASE STUDY: 4**Solution to Question 1:**

Credit Default Swap (CDS) is a form of insurance that a bond investor buys against potential defaults by a corporation. The seller of the CDS is not necessarily an insurance company and the contract can be written (issued) by any permitted regulated financial entity, mainly banks. If the underlying bond defaults, the writer of the CDS pays for the default. A premium is charged for the risk.

In India, the CDS market is almost non-existent. The lone CDS instrument written by the country's largest lender, the State Bank of India, is no longer there in the market.

CDS is seen as being responsible for the 2008 global crisis, and is, therefore, a feared instrument, in Indian psyche. For the RBI, which believes in regulation ahead of innovation, CDS was a forbidden word for a very long time.

In its original form CDS was a bilateral instrument, and more often than not, written in an opaque and non-transparent manner. Later, when D Subbarao, as RBI governor, tried to introduce it, the central bank proposed to make it strictly a hedging instrument with several conditionalities attached. Bond dealers and banks were not interested in the product.

The last draft guidelines on CDS were issued in 2013. The new draft norms replace those. In 2010, too, there was an effort to introduce CDS, but it didn't get enough support. The main reason is that 90% of the corporate debt market is dependent on private placement. All the risks are concluded in the pricing negotiation and buyers know what they are getting into. CDS is not needed in this environment when there is no corporate paper to deal with in the secondary market.

CDS is needed only for corporate bonds. Government bonds are sovereign instruments, the safest form of investment possible in a country. For government bonds, there is no need for CDS as it covers primarily the default risk or "credit events". However, there are other instruments for G-secs to hedge the interest risk and even currency risk for foreign investors.

Solution to Question 2:

Pushing for the development of the credit derivatives market, the Reserve Bank of India recently retail allowed retail users to undertake transactions in permitted credit derivatives for hedging their underlying credit risk. Unveiling draft guidelines on credit default swaps (CDS), the RBI said non-retail users will be allowed to undertake transactions in credit derivatives for both hedging and other purposes.

A person resident in India and a non-resident — to the extent specified in the RBI directions — can participate in the market, it said. Exchanges may offer standardised single-name CDS contracts with guaranteed cash settlement. "Retail users shall undertake transactions in exchange-traded CDS only for hedging their underlying credit risk," the RBI said.

The central bank said commercial papers, certificates of deposit and non-convertible debentures of original maturity up to 1-year, rated rupee corporate bonds (listed and unlisted) and unrated rupee bonds issued by the special purpose vehicles set up by infrastructure companies will be eligible to be a reference or deliverable obligation in a CDS contract.

As per the central bank, retail users should exit their CDS position within one month from the date they cease to have underlying exposure. It also mentioned that market participants can exit their CDS contract by unwinding the contract with the original counterparty or assigning the contract to any other eligible market participant.

CDS contracts should be denominated and settled in Indian rupees. "CDS contracts can be cash settled or physically settled. However, CDS contracts involving retail users should be mandatorily physical," the RBI said.

The Fixed Income Money Market and Derivatives Association of India, in consultation with market participants and based on international best practices, should devise standard master agreement/s for the Indian CDS market, which should include credit event definitions and settlement procedures. Credit derivative is a contract whose value is derived from the credit risk of an underlying debt instrument.

Furthermore, it is unlikely that it will be used for speculative purposes. Though the draft guidelines do not clearly mention what the "other" purposes of CDS could be, the RBI has made sure that the CDS is defanged before it hits the market. A trade has to be reported within 30 minutes, clearly mentioning if it is to a retail or non-retail investor, and whether it is for hedging or for other purposes. Importantly, the central bank can ask for details of the trades any time and even publish those for public dissemination.

In India, CDS has to be priced based on a methodology set by the Fixed Income Money Market and Derivatives Association (FIMMDA). If the CDS contract uses a proprietary methodology, the writer of the CDS has to justify why it did not follow the FIMMDA model in note to accounts. In short, the RBI wants a standardised product and no experimentation whatsoever when it comes to CDS.

Solution to Question 3:

The bank must pay an amount equal to 3% of the notional amount to the CDS seller each year. Annual premium amounts to \$1.5 million ($3\% \times \$50 \text{ million}$).

If the borrower defaults on the final principal payment and the bank collects only 60% of its principal back, it can claim the differential from the seller of the CDS.

The amount it will receive from the CDS seller is approximately equal to \$20 million ($\$50 \text{ million} \times (1 - 60\%)$).

If the borrower doesn't default on the final principal amount, the bank will not receive anything from the CDS seller.

Solution to Question 4:

- (i) (c)
- (ii) (b)
- (iii) (d)
- (iv) (b)
- (v) (c)

CASE STUDY 5

Solution to Question No. 1

A brief of the proposed changes to the multi-cap category was they would have to, from January 31, 2021, invest a minimum of 25% each in large, medium, and small caps. This took away the flexibility these funds had.

What followed was many discussions around this new rule and how these might be detrimental both for the investors and the markets. SEBI seems to have acknowledged these issues and launched this new category of Flexi Cap.

As per the SEBI circular, Flexi-cap funds will be required to have a minimum of 65% of their assets in equity and equity-related investments. There is no cap on how much these funds can or need to invest in large, mid, or small caps. This is the same investment mandate which multi-cap funds had earlier.

This is good news for investors in this category. Apart from announcing this new category, SEBI has also given liberty to AMCs to convert their existing funds which are there in the multi cap category into this flexi cap category. Some fund houses have already declared they will exercise this option and move their current multi-cap funds to this new category and have the term Flexi-cap mentioned in their name (as per regulation). Almost all others are likely to follow.

This move by SEBI is a welcome relief for both the fund houses and the investors. Fund houses won't have to make any drastic changes to their existing multi-cap funds. This will also give flexibility to managers to make investment decisions basis their conviction on the companies irrespective of their market caps.

And, the new regulation would also benefit investors who want complete flexibility in ownership of companies, irrespective of market capitalization.

Hence, it can be seen that as for flexi-cap funds category, the only rule to adhere to is the minimum 65 percent in equity instruments. And that gives the freedom to invest across market caps. So, the fund manager has the flexibility to invest any proportion in stocks from large-caps, mid-caps and small-caps.

Solution to Question No. 2

Some of the non-compliances which ABC Mutual Fund did which is not as per the SEBI (Mutual Funds) Regulations, 1996 are highlighted as below:

- (i) As per regulation 7B of the SEBI (Mutual Funds) Regulations, 1996, the ABC Bank Ltd. (the sponsor of the mutual fund) cannot hold more than 10% voting rights in ABC Asset Management Company Ltd. However, as mentioned in the case study, it is holding 15% voting rights.
- (ii) As per regulation 26 (1) of the said regulations, the mutual fund shall appoint a Custodian to carry out the custodial services for the schemes of the fund and sent intimation of the same to SEBI within fifteen days of the appointment of the custodian. However, the period mentioned in the case study is ten days.
- (iii) As per regulation 22 of the above-mentioned regulations, no appointment of a director of an Asset Management Company shall be made without prior approval of the trustees. But, in the present case, Suresh, one of the technical directors was appointed by taking the approval of the trustees after his appointment.

Solution to Question No. 3

- (i) The return of the mutual fund has been calculated as below:

$$\text{Return} = \frac{\text{Dividend} + \text{CG} + (\text{NAV}_1 - \text{NAV}_0)}{\text{NAV}_0} \times 100$$

Where, CG = Capital Gain distributed

NAV_0 = NAV in the beginning

NAV_1 = NAV at the end of the period

Now, as per the question,

$$\begin{aligned} \text{Return} &= \frac{2.2 + 1.50 + (12.80 - 12.50)}{12.50} \times 100 \\ &= 32\% \end{aligned}$$

- (ii) In order to find out the NAV, the cash balance at the end of the year is calculated as follows:

	Rs.
Cash balance in the beginning Rs. 150 lakhs – Rs. 130 lakhs	20,00,000
Dividend Received	15,00,000
Interest on 8% Government Securities	1,28,000
Interest on 9% Debentures	1,08,000
Interest on 10% Debentures	1,20,000
	<u>38,56,000</u>
Less: Operating Expenses	8,00,000
Net cash balance at the end	<u>30,56,000</u>
Calculation of NAV:	
Cash balance	30,56,000
8% Government Securities (at par)	16,00,000
60,000 equity shares @ 150 each	90,00,000
9% Debentures (unlisted) at cost	12,00,000
10% Debentures at 90%	10,80,000
Total Assets	<u>1,59,36,000</u>
No. of Units	15,00,000
NAV per unit	10.62

Solution to Question No. 4

- (i) (b)
(ii) (b)
(iii) (d)
(iv) (b)
(v) (a)