https://damaacademia.com/fme/ April 2020 Pages: 01-18 Volume 2 | Issue 4

Financial Modeling and Purpose it serves in the BFSI Sector

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Abstract

Indeed, financial modeling is something that no one in the BFSI (Banking, Financial Services, and Insurance) sector cannot know since it is the very lifeblood of their work. So, what exactly is financial modeling and why it is so important? To start with, suppose you as a consumer has applied for a loan for you're to be purchased house, vehicle, other expenses such as weddings, or even personal loans to fund their consumption habits. Now, when you approach a bank or a financial institution, the banker or the financial professional must gauge how creditworthy you are and what the risks are in lending to you. this can be done only if he or she can project your ability to repay the loan over the time period for which the loan would be sanctioned and for this, they must "model" how your repayment profile would look like into the future based on your past credit history, present income, and future earnings. This is where financial modeling comes in handy as it offers a data driven and quantitative approach to "mapping" where you stand with regards to the soundness and financial health when compared to others. Thus, financial modeling provides bankers and financial professionals with a clear picture of your financial standing and creditworthiness.

Keywords: Financial Modeling, Financial Administration, BFSI Sector

1.0 INTRODUCTION

Ask any banker or for that matter any financial professional what financial modeling is and they would reel off cost benefit analysis, cash flow projections, Net Present Value, expected rate of return, and break even points in a single breath. Further, for those of you who are aspiring to be bankers or financial professionals and especially Investment Bankers, no doubt that you would be acquainted with financial modeling right from your college days. Indeed, financial modeling is something that no one in the BFSI (Banking, Financial Services, and Insurance) sector cannot know since it is the very lifeblood of their work. So, what exactly is financial modeling and why it is so important? To start with, suppose you as a consumer has applied for a loan for you're to be purchased house, vehicle, other expenses such as weddings, or even personal loans to fund their consumption habits. Now, when you approach a bank or a financial institution, the banker or the financial professional must gauge how creditworthy you are and what the risks are in lending to you. this can be done only if he or she can project your ability to repay the loan over the time period for which the loan would be sanctioned and for this, they must "model" how your repayment profile would look like into the future based on your past credit history, present income, and future earnings.

This is where financial modeling comes in handy as it offers a data driven and quantitative approach to "mapping" where you stand with regards to the soundness and financial health when compared to others. Thus, financial modeling provides bankers and financial professionals with a clear picture of your financial standing and creditworthiness.

1.1 From the Micro to the Macro: Financial Modeling Up and Across the Value Chain

Now, extrapolate the same to large borrowers such as industrial conglomerates, big corporations, or even for that matter, nations seeking aid and loans from multilateral lending institutions such as the World Bank, IMF or the International Monetary Fund, ADB or Asian Development Bank, and AIIB or Asian Infrastructure and Investment Bank. The decision as to whether loans for these entities can be granted would be determined to a large extent by the relevant financial models that are developed based on sophisticated and advanced financial modeling techniques. In addition, investment bankers using financial model to advise prospective clients about whether their proposed Mergers and Acquisitions, Takeovers, and Outright Purchase of other business entities would be worthwhile from a financial perspective over the short, medium, and longer term. Thus, without modeling the various scenarios,

bankers and financial professionals cannot judge or assess whether a project, a loan, or an investment, or a large tranche of bailout to nations is justified from a purely financial point of view.

1.2 The Analogy of the Doctor and the Nuts and Bolts of Financial Modeling

Indeed, in the same manner in which Doctors and Medical Professionals arrive at the diagnosis and more importantly prognosis, based on the patient's past medical history, the results of the various tests, and the present condition of the patient, financial professionals arrive at their recommendations using financial modeling. Typically, financial modeling is done by using the various financial statements as described earlier wherein future cash flows, projected balance sheets for the next five years, estimated profit and loss (if any) for the coming years, and the IRR or the Internal Rate of Return based on how much yield the project would provide to the undertakers, and most importantly, the NPV or the Net Present Value of the project so that exit clauses can be drawn up that can be triggered as per viability.
Though, in the basic form, financial modeling is done using Excel Spreadsheets, as we move up the financial value chain, sophisticated and advanced software is used to model.

1.3 Technology and the Persistence of the Human Element

In addition, in recent years, there has been such a dizzying pace of change in the models used that Hedge Funds and the Investment Bankers now use AI or Artificial Intelligence powered and Big Data driven financial modeling to arrive at the models. Indeed, while all this sounds exciting and glitzy, one must remember that financial models do fail at times as was seen during the Global Financial Crisis of 2008 where even the best and the most advanced models developed by the so-called Masters of the Universe failed to "read the tea leaves" and judge which way the wind was blowing. Having said that, if we leave out the failures, it can be said that by and large financial models do stand up to scrutiny though the skill and the expertise of the human element is something that determines the success or failure of the models. Indeed, while we do talk about AI and other cutting edge technologies augmenting and even replacing humans in such decision making positions where large investment decisions have to be taken, it is the case that even now it is the ability of the financial professional who models the past, present, and future of the financial health of various projects, loans, and investment decisions to make a difference to the eventual success or failure of the models.

2.0 DOES FINANCIAL INNOVATION BENEFIT THE SOCIETY?

We live in a world which idolizes innovation. We tend to idolize companies which have produced some products which can be considered to be innovative. The underlying belief in the capitalistic system is that innovation is beneficial. It is innovation which creates more value, and since the capitalistic system allows the creator of innovation to reap the most benefits, it encourages innovation. However, when the word financial is put in front of innovation, the opinions tend to change very fast. This is because the general public believes that financial innovation isn't really beneficial to them. Maybe it helps a few investment bankers earn bigger bonuses. However, the lives of common people aren't really better off because of financial innovation. In this article, we will have a look at some of the examples of financial innovation. Then we will try and analyze whether this innovation has been beneficial to society as a whole.

2.1 Examples of Financial Innovation

Financial innovation can be divided into multiple categories. There are innovations related to personal banking, corporate banking as well as capital markets. Some examples are as follows:

- Automated Teller Machine (ATM)
- Credit Cards
- Electronic Banking
- SWIFT Messaging System
- Lockbox
- Credit Default Swaps
- Collateralized Debt Obligations
- Securitization etc.

https://damaacademia.com/fme/ April 2020 Pages: 01-18 Volume 2 | Issue 4

If the above list of innovations is scrutinized carefully, all innovations in the financial world can be broadly divided into two categories viz. technical and non-technical. These technological innovations definitely make the world a better place. For instance, because of e-banking, people spend lesser time in the banks. As a result, they can use this time to either earn more money or for leisure activities.
On the other hand, non-technical innovations need to be scrutinized more. Some of these innovations do benefit society. However, many of them aren't as beneficial. Some of the common metrics that can be used to classify financial innovations have been given in this article.

2.3 What is a Good Financial Innovation?

Excessive Risk Taking: A good financial innovation does not support excessive risk-taking. Financial innovation is only good if it allows decentralization of risk. It is important that the tool being developed cannot be used for risk-taking at all. For instance, consider the case of credit default swaps. These products work as insurance if you already hold a bond. Hence, if you have bonds of company A and you buy credit default swaps, you are buying insurance. However, the problem is that credit default swaps can be purchased without any interest in the underlying. In such cases, the investor stands to benefit if company A falters on its debt. This is where insurance is turned into gambling. Hence, credit default swaps would qualify as a good financial innovation if the possibility of their misuse was drastically reduced.

Excessive Production: It is important to realize that credit affects the real economy. If all the credit starts flowing to one sector, then that sector will witness a boom whereas the other sectors will witness a bust. It is the job of the financial sector to ensure that the resources are proportionately distributed amongst the different sectors in the economy. However, a lot of times financial innovation does the exact opposite. It leads to the congestion of resources in one or a few sectors of the economy. Consider the case of securitization. Securitization allows banks to sell their old loans to investors. Then they receive the money and can start making new loans. The problem with securitization is that it allows excessive funds to be pumped into one sector of the economy. Hence, the real estate sector received a lot of funds whereas the other sectors tend to be starved of funds. This is the reason why it is important to look at financial innovations from this point of view as well. If the so-called innovation leads to an asymmetrical distribution of wealth in favor of certain sectors, then it shouldn't really be called an innovation.

Excessive Debt: Lastly, it is important to ensure that the so-called financial innovation does not foster a culture of excessive debt. The proliferation of credit cards can be taken as a case study. Before credit cards became common in the world, the household sector was not really that indebted. However, this so-called innovation provides credit to young people at the beginning of their careers. Many times, this credit is utilized irresponsibly. Of course, the responsibility of usage lies with the borrower. However, credit card companies are known for creating enticing offers which promote excessive and irrational spending. Financial innovation needs to be analyzed from this angle as well. If a product promotes excessive spending, then it would be incorrect to call it an innovation.

3.0 THE FINANCIAL BLACK HOLE CALLED ESKOM

The financial problems of South Africa are now well known across the globe. However, not many people are aware of a South African corporation named Eskom which threatens to drag the country into a major financial crisis. This state-backed Utilities Company came into the limelight as the South African government was forced to provide it with a $500 million bailout at the very last minute. In many ways, Eskom is representative of the financial problems which South Africa is facing as a country.

3.1 Why did the South African Government Bailout Eskom?

The South African government was forced to bailout Eskom because all the debts which have been generated by Eskom are actually guaranteed by the South African government. Hence, in the event of a default by Eskom, investors will straight away head to the South African government to obtain their dues. The finances of the South African government are already very strained, and they cannot afford to repay Eskom's creditors. Eskom is trying not to be dependent on the South African state. It had made some arrangements with a Chinese bank and was due to obtain a $500 million tranche of the $2.5 billion loan that has been agreed upon between the two parties. However, the Chinese central bank has changed

https://damaacademia.com/fme/ April 2020 Pages: 01-18 Volume 2 | Issue 4

some rules which ended up delaying the payment of $500 million to Eskom. This exposed the precarious financial situation that the company is in.

In the absence of the Chinese loan, Eskom did not have any mechanism to pay its bills. It was, therefore, looking at an inevitable bankruptcy. This is why, the South African government, which is the guarantor to Eskom's loans had to arrange emergency funding in order to avoid a catastrophe.

3.2 What Does Eskom's Financial Future Look Like?

The South African government may have saved the day by arranging emergency funding for the debt-strapped company. However, it does not seem like the South African company will be able to survive for very long. For instance, the company is looking at a historic loss of R30 billion for the financial year ending in 2019. Eskom will have no option but to borrow more money in order to finance this shortfall. This will add to the total debt making the situation worse.

There is only one way for Eskom to solve its problems, in the long run,, i.e., by increasing its revenue. This is the reason that the loss-making company has submitted a proposal to the South African government to allow it to raise prices. The company wants to raise prices by 15% every year for the next three years in order to be able to increase revenues sharply. However, the South African government cannot really allow that to happen since that would raise the utility bills by 50% in three years causing massive public outrage. Hence, the South African government has agreed to a meagre 5% rise over the course of the next three years which are not nearly enough to prevent the financial fiasco that Eskom is most certainly heading towards.

3.3 Real Measures Being Avoided

There is a lot of politics at play when it comes to rectifying the situation at Eskom. For instance, it is a known fact that the workforce at Eskom is overpaid. The company could save billions of dollars in cash flow if it could just lay off some of the many redundant workers that are now a part of the company. However, President Cyril Ramaphosa is about to face re-election in the next few months. Hence, he is unlikely to take any unpopular step even though they may make perfect economic sense.

This is the reason that Ramaphosa is resorting to political ploys like distraction. As per the latest plan proposed by the South African government, the debt-laden company Eskom will be split into three parts. It is not clear, how splitting the company will help solve the problem. Will the government also proceed to remove redundant jobs? Will the government privatize the company to reduce the amount of national debt? The answers to these questions are being deliberately obscured in order to waste time until the national election. The fact of the matter is that unless the underlying factors are addressed, it wouldn't really matter whether Eskom is split into three parts or three hundred, it will continue to be bankrupt.

3.4 Why The Collapse of Eskom Could Be Catastrophic?

Eskom is the only provider of electricity to South Africa. Electricity is a vital commodity which is important for the well-being of the economy in general. The South African government, as well as the South African people, want to avoid a Venezuela style blackout at all costs. This is the reason why the government lent R6 billion to Eskom to avoid load shedding. However, Eskom's operations are in such bad shape that they still couldn't avoid load shedding and the whole country witnessed extended periods of Grade 4 load shedding.

CONCLUSION

Lastly, without financial modeling, all our financial decisions would be akin to the tale of the Blind Men and the Elephant where each of them arrives at a conclusion that is individually as well as collectively wrong and hence, it can be said that financial models provide us with a compass with which we can navigate the turbulent financial waters and the unpredictable storms that lay in our path.

To sum it up, it is important to note the difference between financial innovation and general innovation. Inventing credit default swaps is not the same as inventing the internet. This is because there is a possibility that credit default swaps will be misused. It is for this reason that financial regulators need to stand their ground. Sometimes, it may be alleged that these regulators stifle financial innovation.

However, as we have seen in this article, not all financial innovation makes life better for the people using it.

Prima facie, the Eskom problem appears to be unsolvable. However, the South African government will have to find a way to keep the company afloat or else there could be serious consequences for the entire economy.

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