What Makes the World go Round?

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Once, an honest customer exclaimed half-way through his hair-cut that he had forgotten to bring his wallet. The barber promptly reacted by cutting loss, and stopped his service abruptly.

Introducing credit risk, which is broadly defined as the risk of someone not being able to pay up when he is due to do so. Understanding how credit risks can arise as well as how to mitigate or eliminate them is important – be it in our day-to-day lives, business or banking.

Back to the poor barber. He runs a small business, thriving on trust, collecting his dues only after he finishes the cut. After the salon closed for the day, he sat down at a quiet corner to do some thinking, reminiscing in his secondary school statistics.

- What is the probability of meeting a customer who does not wish or is unable to pay up? That is the Probability of Default (PD). Very small, he figured. In fact, since his salon opened, this was only the second instance. He estimated he had cut about 10,000 hair-cuts in the last 1+ years, ignoring the fact that some are repeat business. He estimated that the probability is less than 0.1% (in a year), which is about the chance of striking the 4D first prize.
- What is the loss he suffers if a customer does not pay? That is the Loss Given Default (LGD). On the average, he charges about $15.
- Should he mitigate the risk? He got smarter after some thinking. He could impose that customers pay a deposit upfront ($5) and the balance after the cut. With that, he reduces the potential loss by 33%. That is the Recovery Rate of 33%, meaning that if a customer defaults, he can still recover at least 33% of the potential loss.

Happily the next day, he implemented his new business rule. The rest is history.

How often we are bombarded with offers of magazine subscription of $100, $180 and $250 for a 1-yr, 2-yr or 3-yr subscription respectively. Before jumping on the offers, do some calculations on the present value of the subscriptions as well as the credit risks of the publisher, who may not be around to honor its obligation before the subscription period ends. That, too, is credit risk.

One key risk that SMEs face is the credit risks they cannot evaluate comprehensively. How frequent we have heard that a company runs into bad debt or liquidity problem. The latter due to its mounting debts, and debtors failing or delaying to pay. Temporary mismatch between the 2 can bring the company down. Without more vigorous ‘lending’ policy, SMEs can encounter difficulties that have little to do with their end-products, marketing and distribution strategy but with credit risks.

Banks have traditionally prided themselves on having sophisticated methodologies to assess loan customers. From simple guidelines such as the number of years in employment, to debt-servicing ratio to more complex credit scoring system. Banks' lending policies and diligence is key to their survival as they rely on taking in deposits to lend out and the difference between the two, put crudely, is what banking is about. Empirical studies found that out of the small elite group of companies that survive for over a century, 2 industries dominate – banks & energy. These are the twin engines of growth that have been fuelling the world economies.

Since there was a huge demand to know the creditworthiness of parties, rating agencies have found their service indispensable. With historical data dating back many decades, these rating agencies have the precious database of defaults that occur among companies over time. Through statistical grouping, companies are allocated a rating, from the highest-rated Aaa to Aa to..Baa to D for default, using for instance Moody's ratings. It can be inferred that a company of certain rating has a certain expected probability of default. For instance, if you lend to a company currently rated Baa3, there is on average a 0.41% likelihood that it will default over the next one year; 1.07% of default over 2 years and 7.20% over ten years. Not too small risk as we extend the time horizon, since 1 out of 15 Baa3 companies is likely to default over 10 years.

These are of course based on average historical default experience (Moody's default rates study of Jan 2005), and while useful as a guide, outliers such as companies that failed suddenly due to accounting fraud occur once in a while to add a cynical twist to the ratings benchmark. It is hence common that lending institutions or companies supplement the external ratings with their own analysis, especially if they have further insights that are beyond the public domain.

Obviously, companies will want to attain and maintain a high credit rating so that they can borrow at a lower interest rate. To do that, companies will have to watch their debt leverage, cash flows, interest servicing capability and so on, normally expressed as ratios.

Will it be far-fetched then to imagine that in the future even each of us man-in-the-street will be assigned a constantly updated credit rating, stored in an embedded smartcard somewhere..?

Before that, the next time someone asks what makes the world go round, you have the answers.

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