# Example of loan maturity = 10 years essay 

Business, Marketing

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1. An efficient market hypothesis which also known as the random walk theorem assumes that the obtaining stock prices completely reflect all the information available about the value of a firm or stock. It proposes that in no way can the excess profits be made on the overall (Clark, et al). It is also given that most investors try to be on a look out for undervalued stocks and securities which are expected to increase in value in the near future, especially securities that are more volatile than others. These investors who include investment managers have believe that they can select the securities with potential to outperform in the market. A variety of forecasting and valuation techniques help these investors to arrive their decisions.
(a) The ASX or the Australian stock exchange is an efficient market in some aspects of the definitions of the efficient market hypothesis. In fact this market is one of the biggest markets in the stocks which include, New York stock exchange, London stock exchange, and Tokyo stock exchange where stock and Forex is traded. There is evidence in this market to indicate the presence of random walk behavior especially the weak form of behavior as seen in the results of a study done by Worthington in 2006 using data extrapolated from 1975 to 2005 that showed a random walk on stocks on a monthly returns and 1958 to 2006 that attempt to show similar results but for a period exceeding a month.
(b) In the Australian market as it can be another market, investors are known to be either optimistic or pessimistic if not having both attributes. The periods of pessimism and optimism can cause systematic components in the prices after some time (DeBondt and Thaler, 1985). More results from studies done even in Australia indicate that this behavior in the market can
also be true for short periods of interval (Simmons, 2011). In that respect the ASX, for some aspects cannot be described to be very efficiency as there are experiences of the turn of the month effect anomaly. According to (Nosheen et al 2007), the Australia stock market is among markets like USA, UK, and Germany that experience turn of the month effect normally, an indication of inefficient market behavior. This results from the mental behaviors of investors as they speculate about the turn of the month when they sell at month end with hope to get positive changes at the beginning of the next month. Therefore an argument can be made against efficient market hypothesis in Australia.
(c) The ASX bodes the principles of an efficient market if not by being regulated. It should be understood that an efficient market hypothesis reflects the principles of corporate governance. The ASX thus works under some principles that stress corporate governance especially the principle number seven that recognize and manage risk. There is a recommendation that is consistent with the ASX governing council with guidance and operating efficiently and effectively and emphasis on design and operational effectiveness (group 100, 2003)
(d) The weak form of efficient market hypothesizes that all past information which also incorporate past prices and the return is already taken care of when arriving at the current prices of the stocks. This form is also consistent with the random walk theory and Brownian motion behavior of the stock markets which behave randomly and independent of one another (Bodie et al 2007). The weak form of market efficiency holds if no one predict the future prices on the sole basis of using past information. We therefore that
no one can beat the market by getting abnormal earnings from the same market.

We therefore realize that for weak form of hypothesis, the so called charting or technical analysis of the market looking at past prices of the stocks to predict the future prices has no consequence. But however an investor can be able to beat the market and perhaps earn abnormal profits in case they can be able to use accurately the fundamental information to analyze the prices and also use the insider or private information. Stock brokers and investors employ chartists for the reason of analyzing the markets technically or otherwise to do technical analysis to use moving averages, Bollinger bands and all other known indicators. This is however not easy to do as we have seen because all the past information is used to arrive at the current stock market price which makes them unsuitable to predict the future price.
(e) The strong form of the market efficiency on the other hand is the form that supposes that all the information about a stock be it public or private and including the past information is reflected when arriving at the stock market prices. With the persistence of the strong form of efficient markets, it becomes very difficult for any investor to ably beat the market, not even one using the investor using the insider information to unethically trade (i) Evidence indicates that, on average, investment fund managers do not consistently earn abnormal returns. This is true because most markets are efficient and all information is thus available to most investors. The information is therefore filtered in the prices which make it difficult for the investors to earn abnormally before being detected.
(ii) You make consistent abnormal profits by trading stocks after the announcement of an unexpected rise in earnings. This is also true because different investors react to fundamental information differently especially when the information has led to change in the prices. A consistent market analyst may therefore stage opposite actions to most investors' panicky reactions and this can lead to abnormal profits for a time being.
2. The principal of the loan $=\$ 20,000,000$.

Interest rate $=8 \%$
(a) Using excel worksheet, we calculate the monthly payment over the period of 10 years to be \$ 242, 659. 42
(b) The interest paid on the first payment is =
(c) The principal in the first payment is $=$
(d) The total sum to be paid to the bank in 10 years is $\$ 44,392,804$ which includes an interest of \$ 24, 392, 804. 69

The amount paid back to the bank after three years is $\$ 25,404,741.03$ which includes an interest of $\$ 5,404,741.03$

The balance after three years or 36 months =
The balance of interests included in the above sum is $==\$ 18,988,063.66$
(e) The cost of refinancing is $\$ 250,000$ after 3 years. Its future value is FV $==\$ 436,855.51$. Using excel worksheet, we find that the monthly installments are now $\$ 211,297.32$ a reduction from the old installment by \$31, 361. 90 whereas the interest paid for the loan increases by some \$17, 458. 43 on the old loan interest. The calculated present value of the differences in the monthly payments is $\$ 2,077,954.35$.
(f) If the loan repayments are quarterly instead of monthly, the future value
by excel worksheet calculation is FV is $\$ 44,160,793$. 27. The interest on this amount is $\$ 24,160,793$. 27 . In this case the quarterly installment by similar calculation is $\$ 571,284.86$.
(g). After the period of 3 years payment. The amount paid is $\$ 25,364,835$. 89 on which the interest is $\$ 5,364,835$. 89. The balance owed to the bank is \$18, 795, 957. 38
3. (a) NPV. Which is the net present value has a good advantage of tuning in a positive value which is the present value of the equal cash flowing streams. This value helps in evaluating the present value of an entire portfolio of investments. This value also gives importance to the time values of money and that the profitability and any risk of the projects are given considered priority. While the disadvantage of the net present value is that it is hard to estimate accurately for it does not account for the opportunity cost and so does not show a complete picture for an investment showing either a loss or a gain. It therefore does not show a correct decision when projects have unequal life spans.

There are three forms of efficient market hypothesis according to Madiha et al (2001) which are weak form and this has basis on the past prices and information to direct the market trend. The next form is the semi strong efficiency which includes all the attributes of the weak form and the publicly available information. Finally there is the strong efficiency form that brings all the attributes of the semi strong form together with the all the publicly and privately available information in such way that not even insider trading should not be possible.
(b) IRR: internal rate of return

The advantage of this rate is that it gives considerable importance to the time value of money when it is used to evaluate a given project, an attribute that lacks in accounting rate of return. This rate is also very simple to interpret when presented after calculations. It is also very easily to visualize for company managers. This is the reason it is commonly preferred till the managers come across occasional situations like the mutually exclusive projects.

While the disadvantage of the IRR method is that in its calculation, the dollar value of the benefits for the projects is ignored.
(c) First proposal. NPV =. The NPV of the project is $\$ 276,845$

Second proposal NPV $=$ where $v=0.909$
We get after simplifying that NPV $=\$ 966,366.6154$.

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