

ARE DERIVATIVES BETTER DEAD OR ALIVE IN ZIMBABWE?

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Abstract

This research comes at a time when Zimbabweans are looking for practical and compatible solution in the quest to resolve the transitory challenges facing the economy. It is the objective of this paper to compliment all other national policies and initiatives to bring to the people of Zimbabwe a better, sound and innovative financial systems. Thus the paper particularly intends to offer as another powerful tool which gives information on whether derivatives are a building block in the resuscitation of a distressed economy and if not, are they better dead.

Background to the study

Derivatives are a financial contract whose value is derived from the performance of assets, interest rates, currency rates or indices, Blake (2000). Howells and Bain (2002) define a derivative as a financial instrument based upon the performance of separately traded commodities or financial instruments, and instruments that allow market agents to gamble on movements in the prices of other instruments without being required to actually trade in them. Derivatives were re-looked as an instrument which embodies different terms, rights or obligations, to those prevailing in the underlying cash, or physical market to which the instruments relates, Manwere (2006). In simple derivatives are instruments whose return is derived from another instrument. Most of the common financial derivatives can be classified as one or a combination of four types: swaps, forwards, futures and options.

The Zimbabwean financial system comprises of foreign exchange markets, money markets and capital markets. Dealing in derivatives markets is currently dormant as the trend has been very difficult to trace since 2004 when they were last officially traded prior to the 2004 bank-wide crisis. Official records from the Reserve bank of Zimbabwe show that currency swaps were the most popular in the Zimbabwean market during that period. A currency swap is a contract between two parties for an exchange of payments in two currencies, (Hull, 1997). The two parties would agree to exchange a principal amount in one currency for an amount in the second currency. Trade in currency swaps came in a variety of ways. Under the gold derivatives, the following were found: Gold swap, where the Reserve Bank of

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Zimbabwe would swap gold for US\$ in order to finance balance of payment obligations, the Gold put options where the bank tried to hedge against a downward movement in the prices of gold by entering into a contract which gave it the right to sell a given amount of gold on or before a set date at an agreed exercise price. The Gold forward sale was used when the Central Bank tried to hedge against a downward movement and for asset and liability matching. Lastly there was Gold deposit where the central bank would deposit free gold and earn fixed interest, which was used for matching future commitments. These strategies were successfully used by the RBZ as a hedge tool against various risks inherent in the trading of gold especially on the world market. Below is a table that shows the volume of swap transactions between RBZ, merchant banks and commercial banks as counter parties:

Table 1: Volume of currency swap activity in Zimbabwe

Bank	Amount (US\$) million
Trust Bank	68.8
African Banking Corporation	40.7
Renaissance Merchant Bank	37.6
Interfin	9.9
NMB	8.6
Stanbic Bank	1
Total	166.6

Source: Reserve Bank Annual Bulletin 2004

The Homelink initiative was another form of currency swap introduced by the RBZ. The bank would target Zimbabweans in Diaspora to whom avail mortgage in Zimbabwean dollars at an agreed exchange rate. The repayment of the mortgage would be in foreign currency (US\$ or Pounds). The granting of title deeds was on extinguishing of a debt.

Another important type of derivative traded during the pre-2004 financial crisis was the commodities derivatives. These were traded on the Zimbabwe Agricultural Commodities Exchange (ZIMACE) with commodity exchange of yellow and white AB maize grain among other commodities. Dealers would enter into futures contracts with farmers and agree on the supply of grain at a stated price at the end of the cropping season. Risk was thus passed from the farmer in case of drought and the same to the dealer a hedge mechanism against adverse price fluctuations. The collapse of the market was attributable to speculative tendencies in the price of white and yellow AB maize. This led to the sky rocketing of bid prices out of reach of Grain Marketing Board, which later assumed a monopoly in the market.

During the same period, inflation soared beyond 100%, whilst the bank rate remained pegged at 52.7% (RBZ, 2004). This resulted in massive flight of capital from the money market to the stock market. Stockbrokers successfully traded share options on the back of the buoyant market. Only call options were offered through over the counter markets. The main participants in the call options market were individuals who used them for leveraged speculation. The absence of the put option was mainly due to the high level of inflation. This left the market with a higher upward potential compared to the downward potential hence the unpopularity of put options on the market. The following institutions traded share options over the counter: Kingdom Merchant Bank, Interfin Merchant Bank, Continental Securities, Trust Banking Corporation and Barbican Bank. Though options are useful, share options in Zimbabwe proved to be speculative in nature, looking at the run in this particular period, which was not backed by any fundamentals. Share options thus could have been said to have fuelled inflation as funds were diverted from the productive to the unproductive sector.

The post 2004 period, trading in derivatives became illegal. The RBZ has been the sole trader in derivatives through gold swap transactions with foreign countries though with no legal grounds. In essence, there has been no legal, active derivative market in Zimbabwe since 2004. The question is whether derivatives are better dead or alive?

Financial derivatives snags in Zimbabwe

The main aim of this section is to show the major challenges on the ground that act as hindrances to the trading of derivatives in Zimbabwe. It is imperative thus to outline some of the conditions that are necessary for the derivative market to function effectively and efficiently. Some of these include:

- Stable inflation
- Stable interest rates
- Free floating exchange rates
- A ready and consistent supply of commodities in case of a commodities exchange

The major challenge is that none of the above stated conditions prevails in Zimbabwean markets. Currently inflation is 7 300% (as at September 2007), with price controls being introduced in Zimbabwe to contain this. In this case, the willing seller and willing buyer basis makes it difficult to implement derivatives. Price controls create more buyers than sellers due to stringent controls, hence the efficiency of the market is compromised.

Absence of a legal and regulatory framework for derivatives is a major snag. An economy must have a legal and regulatory framework conducive to building liquidity in both primary and secondary derivatives markets. Legal uncertainties can be a deterrent to investors. The major worry about regulation is that derivative activity will be flourishing without being regulated and by the time regulation is enacted, it might impede rather than promote the development of these instruments. Clear tax and accounting rules must govern derivatives trading.

The exchange rate in Zimbabwe is best described as a fixed exchange rate regime. Considering the situation that prevailed in 2006 and 2007 (prior to the announcement of the 2007-08 fiscal policy, the exchange rate was pegged at USD1:ZWD\$250 before being half-heartedly devalued to the present rate of USD1: ZWD\$30 000). In a nutshell, the economy has been operating far from the 'free floating exchange rate regime'. Forward rate agreements (FRAs) would not work in the foreign exchange market as long as the current foreign exchange regime prevails. FRAs would not work whether the official or the parallel market rates are used when hedging. On one hand, if the fixed exchange rate is adopted, it therefore follows that there would not be any risk with transacting in foreign currency, as there is certainty as far as the near future is concerned, hence there would be no need to hedge because of the absence of foreign exchange risk. On the other hand, if the parallel market rates are used, then the direction of the future movement is to a large extent very predictable, that is, the Zimbabwean currency will depreciate against major trading currencies. No financial institution will enter into a FRA or write an option to sell currency on a future date when it is apparent that it would lose from such a transaction. The underlying principle of derivatives is trying to speculate on future direction of exchange rates in the case of forward rate agreements. In Zimbabwe, the direction of the exchange rates is known to all and sundry.

At this moment, Zimbabwe cannot operate a futures exchange like the South African Futures Exchange (SAFEX) mainly because commodities market for both agricultural and minerals is virtually non-existent. The agricultural sector has been on a free fall since the year 2000 after the fast track implementation of land reform programme. The sector has failed to recover to date to guarantee a steady supply of agricultural produce to the market, which makes it difficult to have futures exchange in Zimbabwe.

The same misery has spilled-off to other important sectors of the economy like the mining sector. Price distortions are currently experienced in the studied economy, with unrealistic exchange rates in the foreign exchange markets ensuring mining firms and some other small-scale miners of lucrative markets in countries like South Africa and Europe. Recent cases of gold and diamond smuggling reveals that not much would be delivered to Fidelity Printers as it lucratively deals with abroad where one is paid in foreign currency. This then calls for measures to be taken to converge the official and parallel rates or smuggling of precious stones in Zimbabwe would continue unabated and no talk of a futures exchange in such scenario.

The equities market in Zimbabwe seems not to be driven by fundamentals like the financial performance of the counters, but by speculation, which makes it an inefficient market. According to Tsetsekos and Varangis (1997), derivatives trading requires an efficient market for the option market to derive its value from the underlying stocks.

Derivatives are compared to a builder power saw (Siemens, 2000). In as much as power saw could increase the efficiency and effectiveness of a builder so do derivatives, which can help, increase a firm's efficiency and effectiveness in meeting its risk management objective. Siemens further goes to say, power saws can be dangerous if used incorrectly or blindly, and users can injure themselves or ruin projects. Likewise financial derivatives can inflict pain by causing serious losses or propelling the organisations in the wrong direction if used improperly. The major point here is that not many people are best-qualified and experienced to implement derivatives in Zimbabwe with the pioneers (Mthuli Ncube, founder of the Barbican bank) having left the country. Due to the complexity of derivatives, it is necessary that the managers who possess sufficient professional training in finance and quantitative methods in asset pricing models supervise and target the actual risks levels that are inherent in derivatives. This calls for rigorous training programmes for treasury officials in the financial institutions on the trading of financial derivatives to enhance the skills of would be traders.

Market makers in Zimbabwe are risk averse and not willing to bear the risks associated with derivatives (Chibisa, 2005). As a matter of fact, the market makers in derivatives trading were only indigenous banks and the foreign owned banks were very conservative and did not want to bear the risks that were characterised by the market.

Various ways Zimbabwe could use and benefit from derivatives

Financial derivatives have changed the face of the financial markets by creating new ways of understanding and measuring risks, (Sill, 1997). Untimely derivatives offer organisations the opportunity to break financial risks into smaller components then to buy and to sell those components to better meet the specific risk management objectives. Under a market-oriented philosophy like Zimbabwe, derivatives would allow for the free trading of the individual risk components thereby improving market efficiency. While the underlying risk is not eliminated, the net consequence of such a redistribution of risk is greater robustness, if indeed the risk takers are better qualified to handle risk. It's imperative to note that derivatives should be considered as part of any business risk management strategy to ensure that value enhancing investments opportunities can be pursued.

In an economy like Zimbabwe where the macro-economic fundamentals like interest rates are difficult to predict as far as their future direction is concerned, derivatives reduce uncertainties, which makes it possible for companies or individuals to initiate productive activities that might not otherwise be pursued. An example could be a Zimbabwean farmer who may wish to produce say wheat or any other commodity but is concerned about the future prices of the commodity and the preparedness of the market to buy the produce. To ensure that such uncertainties do not exist, the farmer in question should devise prudent risk management strategy that is in harmony with the broader farm objectives of selling all his produce at a good price. As part of the strategy, the farmer could enter into futures contract on a commodities market to hedge against the risk of an adverse movement in the future prices of his commodity. Derivatives

therefore empower end-users to manage and reduce their inherent risk exposures effectively, which permits them to focus on their core businesses. The ability to manage and reduce risks ultimately leads to stronger long run economic performance. Without derivatives, economic agents would be more hesitant to make long-term investment and production decision, as they would be unsure of the future price movements.

Zimbabwe is a country blessed with natural resources especially in the form of minerals. A greater proportion of the foreign exchange receipts can be traced back from sale of minerals in the world markets. With occurring volatility on the world markets, prices of such minerals are not stable which poses risks to producers of such commodities. To hedge against such risks, it is important for Zimbabwean firms to enter into derivatives market where risk is transferred to someone willing to accept it. This does not shift away the risk from the mining firms but also guarantees the country of a reasonable amount of foreign exchange. Firms in this case would be able to lock in guaranteed return no matter the price levels of the commodity in the future.

Derivatives markets help to improve the liquidity in the underlying asset markets by bringing hedgers and speculators together. The ability to hedge encourages investors and traders to take bigger positions and be more active in the underlying markets, (Thorbeke, 1995). A more active market environment with high liquidity in turn facilitates price discovery, which promotes economic efficiency.

It can be argued that derivatives are windows into market expectations, and could be exploited for information about future price expectations for various types of financial assets and important commodities. The forward-looking content is especially useful for regulators and policy makers when assessing the health of the financial system and the appropriateness of a monetary policy stance. For example, currency and interest rates swaps and futures prices contain valuable information about the outlook for the economy and the tightness of monetary conditions, which are very useful to central banks when making monetary policy decisions.

When used properly, derivatives can help organization to meet their risk management objectives so that funds are available for making worthwhile investments. In an inflationary and very volatile environment like in Zimbabwe where returns on investments by shareholders are to a large extent negative, derivatives can increase shareholder's value by means to provide a better means to control a firm's risk exposures and cash flows. Hedgers and speculators would be brought together which improves liquidity of the underlying asset among other things. All these would have a positive impact on the economic system

Possible dangers of derivatives in Zimbabwe

Derivatives have gained notoriety as instrument of speculation in financial crises for instance in triggering the 1992 Exchange Rate Mechanism (ERM) crisis and the 1997 Asia financial crisis. In the latter case, speculative attacks were made on the Thai Baht

through forward contracts and swaps, which depleted the foreign reserves of the Central Bank and led to the collapse of the pegged exchange rate regime triggering the Asian financial crisis. In the 1994 Mexican peso crisis shows how derivatives can accelerate and deepen financial crisis. Mexican banks were holding US\$16 billion in tesobonos total return swaps at the time of the Mexican crisis. The initial peso devaluation at the onset of the crisis depressed the tesobonos price substantially and exposed the markets to a large next day collateral payments. This could have accounted for a major part of the loss in foreign reserves by the Mexican Central Bank the day after devaluation (Sill, 1997). This shows how collateral or margin calls on derivatives can accelerate the pace of a financial crisis. The greater the leverage that these instruments provide can also multiply the size of losses and thereby deepen a crisis.

The rapid increase of derivatives can pose some major challenges to regulators and policy makers. Derivatives lead to increase in moral hazard. This can be illustrated by using motor vehicle insurance as an example. This is because these instruments can be regarded equivalent to an insurance product where a certain premium is paid for a certain amount of coverage in the event of an undesirable outcome. By pooling the risk, insurance lowers the cost to individual motorists of owning and operating a car, including the cost of being involved in an accident. However, the lower cost might induce some motorists to become more reckless in their driving and leads ultimately to more accidents.

When adopted in Zimbabwe, derivatives can be used to exploit regulatory or tax loopholes. They can help firms avoid capital requirements, manipulate accounting rules and credit ratings, evade taxes. They can also be used to raise the level of a firm's market exposure relative to its capital in pursuit of higher yielding and riskier investment strategies. In the event of a sharp correction in asset prices, large market exposures on the part of firms will hasten and intensify the adverse effects of the correction on the financial sector and the general economy.

Furthermore these instruments complicate the monitoring and assessment of the financial health of a firm or the financial system because they are off-balance sheet items. Derivatives introduce a wedge or discrepancy between the true risk exposure of a firm and what is reflected on its balance sheet. Off-balance sheet exposure through derivatives can easily reverse, exaggerate or overwhelm the risk exposure indicated by balance sheet.

Derivatives have been blamed for intensifying the price volatility of the underlying assets in the presence of market imperfections. Mechanistic trading rules in the derivatives markets create more noise, and the specific technical construction of certain derivatives products increases price volatility and hence market instability. An example of products which can increase price volatility is of knockout options, portfolio insurance, dynamic hedging, where an option seller can hedge by buying another option or by buying or selling of shares. In the event that there is a major correction in prices, the market would be driven down further as the model would cause investors to even

sell more. (This effect was widely blamed for the severity of the US stock market crash in 1987 when investors with portfolio insurance sold into the selling wave as they attempted to replicate the Black Scholes hedging ratio in the midst of a market sell off.)

Derivatives are capable of creating financial disasters of tremendous proportions, a disaster that could paralyse the Zimbabwean financial markets and force the already burdened authorities to intervene to restore stability and prevent massive economic collapse. The Troubled Banks Fund (TBF) of 2004 is such an example of authorities intervention to curtail a bank wide collapse when some of the players who had started using the derivative instruments found themselves in a liquidity crunch. Derivatives hence can threaten the accomplishment of a firm's long-term objectives and result in unsafe and unsound practices that could lead to the organization insolvency.

This possibly could have led to Buffet (2003) describing derivatives as time bombs for both the parties dealing with them and the economic system and other researchers viewing them as financial weapons of destruction, carrying dangers that while latent are potentially lethal.

Conclusion

From the past painful experiences there is agreement on the dangers of derivatives. Derivative can be dangerous if used incorrectly as several large companies were found in recent history (refer to various cases, bankruptcy of the Orange County, California and the Barings Bang among others). Nevertheless, there must be no confusion on the instruments of speculation with the underlying causes of the financial crises. Derivatives themselves cannot cause currencies to depreciate or firms to go bankrupt. Financial crises occur because of fundamental imbalances in the economy. Note that even numerous financial disasters related to the use of derivatives as a tool has lead to the downfall of companies, it is rather the misuse and compromise, which is a problem.

It is vital to view a derivatives market as a supplementary market, existing side by side with the underlying market to which they relate and from which they derive a significant portion of their value. To these markets in turn, derivatives bring significantly greater dimension and flexibility, which currently is absent in the Zimbabwean financial markets. Thus derivatives contribute to the 'completeness' of the global market and without them, loopholes within the financial industry would exist.

The rewards of derivatives are not merely restricted to end-users but encompass the wider economy. By facilitating a more efficient distribution of risks, derivatives render the economy more efficient, stable and robust. The major point on risks in derivatives is that they can be minimized with the right framework and tools, and in Zimbabwe the structures of risk management in derivatives are incorporated in the Basle II accord though still in its initiation stages will go a long way to do so (RBZ Bank Licensing,

Supervision and Surveillance Report). The challenges to regulators are significant but not insurmountable.

It goes without saying that derivatives require a firm understanding of trade between risk and reward. To this end, derivatives users and traders should establish a guiding set of principles to provide a framework for effectively managing and controlling financial derivatives activities.

Necessary legislation and regulatory body would be needed to govern the derivatives market in Zimbabwe hence legalizing transactions that are currently running. The effectiveness of derivatives instruments could be increased in the Zimbabwean market if regulators issue guidelines that banks with substantial trading of derivatives activities should follow and these guideline could be:

- Active board and senior management oversight of trading activities.
- Establishment of an internal risk management audit function that is independent of the trading function.
- Disclosure of derivatives positions in financial statements.
- Adequate capital for trading huge derivatives.
- Thorough and timely audits to identify internal control weaknesses and
- Risk measurement and risk management information systems that include stress tests, simulations and contingency plans for adverse market movements.
- Increasing transparency between dealers and end-users.
- Reducing legal uncertainties between countries.

Senior managers and boards of directors should know and authorize the amount of risk a firm is exposed to through derivatives. There would be need to use computer models to determine how much capital is necessary to shield the firm from possible losses due to these instruments. In conducting these instruments, they should not only perform a theoretical stress testing but also consider likely macroeconomic scenarios (Hull, 1997) and an example could be how their portfolio would respond if the Reserve bank of Zimbabwe raises interest rates, which would simultaneously depress stock prices and appreciate the dollar.

Derivatives can be traded in Zimbabwe for as long as the users and traders of such instruments stay away from exotic instruments unless the risk and return trade off is clearly understood. Exotic contracts should not be used unless there is an obvious reason for doing so.

One of the reasons that led to the failure of derivatives in Zimbabwe, was that the market was very small and information on the derivatives prices and transactions not easily accessible to the public (Chibisa, 2005). This was partly because trading was mainly over-the-counter, hence if there is a set up of a derivatives exchange, Zimbabwe could go a long way. Information on prices would be updated in the press daily or weekly and this could drive investors in the same way as the stock market in Zimbabwe.

Dealers would find derivatives instruments as a better way of covering and hedging their positions. Cited as a snag in derivatives in Zimbabwe are government regulations and price controls (government legislation on farmers selling agricultural commodities to the Grain Marketing Board and gold miners to sell gold the Fidelity, controls on interest rates and foreign exchange) which act as hindrance to trading of derivative instruments. If controls are removed and the market liberalized, financial derivatives trading can start.

Possibilities of financial crises cannot be eliminated, but certainly an attempt to mitigate their damaging effects is possible, "Harnessing the benefits and containing the dangers of financial derivatives" (Thorbeeke, 1995). In this regard, financial derivatives can be valuable tools that can help firms, financial institutions and the government to protect against adverse financial shocks. But there is need to make sure that adequate macroeconomic and regulatory safeguards are in place to control the risks that can arise from the use of derivatives. For a developing country like Zimbabwe, the best defense would be to practice sound macroeconomic policies, establish the proper regulatory framework, and maintain close prudential oversight of financial institutions. At the same time, the financial sector must be given enough freedom to innovate. Thus a strike of balance is needed between a single-minded policy agenda focused solely on crisis prevention at the expense of stifling financial innovation, and the other extreme of adopting policies aimed at promoting financial innovation at the expense of greater vulnerability of financial mishaps. Only by controlling risks, can Zimbabwe like any other economy reap the full benefits of derivatives.

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