Modeling Debt Risks in the Abattoir Industry

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Introduction

- Modulate – fix or adjust the time, amount, degree or rate of.
- Model – the act of representing something
- Operations Research – Mathematical or scientific analysis of a process or operation, used in making decisions.

What is Financial Risk?

In general

Financial risk, in the broader sense, is the risk that a company will not have adequate cash flow to meet future financial obligations.

In the Abattoir Industry

Financial risk in the Abattoir Industry relates not only to cash flows with specific regard to sales, but also to risk associated with:

- Market trends
- Seasonality
- Supply and Demand
- Market Vulnerability
- Access to Capital
- Cost of Labour
- Cost of Electricity.
- Maintenance cost
- Perishable products
- Bad debt

Causes of Instability

Causes of instability that can lead to financial crises can be attributed to amongst others,

- Volatility in the economy,
- An unstable supply market,
- Increasing fixed and variable costs (such as tax, levies, fuel),
- Weather patterns (such as floods and drought) and
- Seasonal fluctuations.

Abattoirs can look at alternative strategies that can protect them better in times of financial turmoil

Debt Risk

- Debt risk => Cashflow risk
- Cash is the lifeblood of a business, so smart management of your debtors is crucial to success.
- The secret of effective cashflow is just that – it needs flow. Obstruct it and your business struggles to stay afloat. Free it and its powerful surge could take your business to the top.

Alternative Strategy

How to increase flow of cash?

- Stricter Policies
  - Management of Debt
  - Capital expenditures
  - Labour
  - Purchasing
  - Etc.
- Other sources of income.
  - Low risk High return investment

Low Risk - High Return Investment

What are the types of Risk of an Investment

- Market Risk: The risk that an investment can lose its value in the market
- Interest Rate Risk: The risk that an investment will lose value due to a change in interest rates
- Reinvestment Risk: The risk that an investment will be reinvested at a lower rate of interest when it matures
- Political Risk: The risk that a foreign investment will lose value because of political action in that country
- Legislative Risk: The risk that an investment will lose value or other advantages that it offers because of new legislation
- Liquidity Risk: The risk that an investment will not be available for liquidation when it is needed
- Purchasing Power Risk: The risk that an investment will lose its purchasing power due to inflation
- Tax Risk: The risk that an investment will lose its value or return on capital because of taxation

Low risk – High return Investment

An Example

- For the sake of the options explained later, I am going to define the following investment:
  - Low Risk
    - The investment is not influenced by interest rates changes
  - High Return
    - A return of 24% per year.

Illustration of Alternative Options

Option 1:

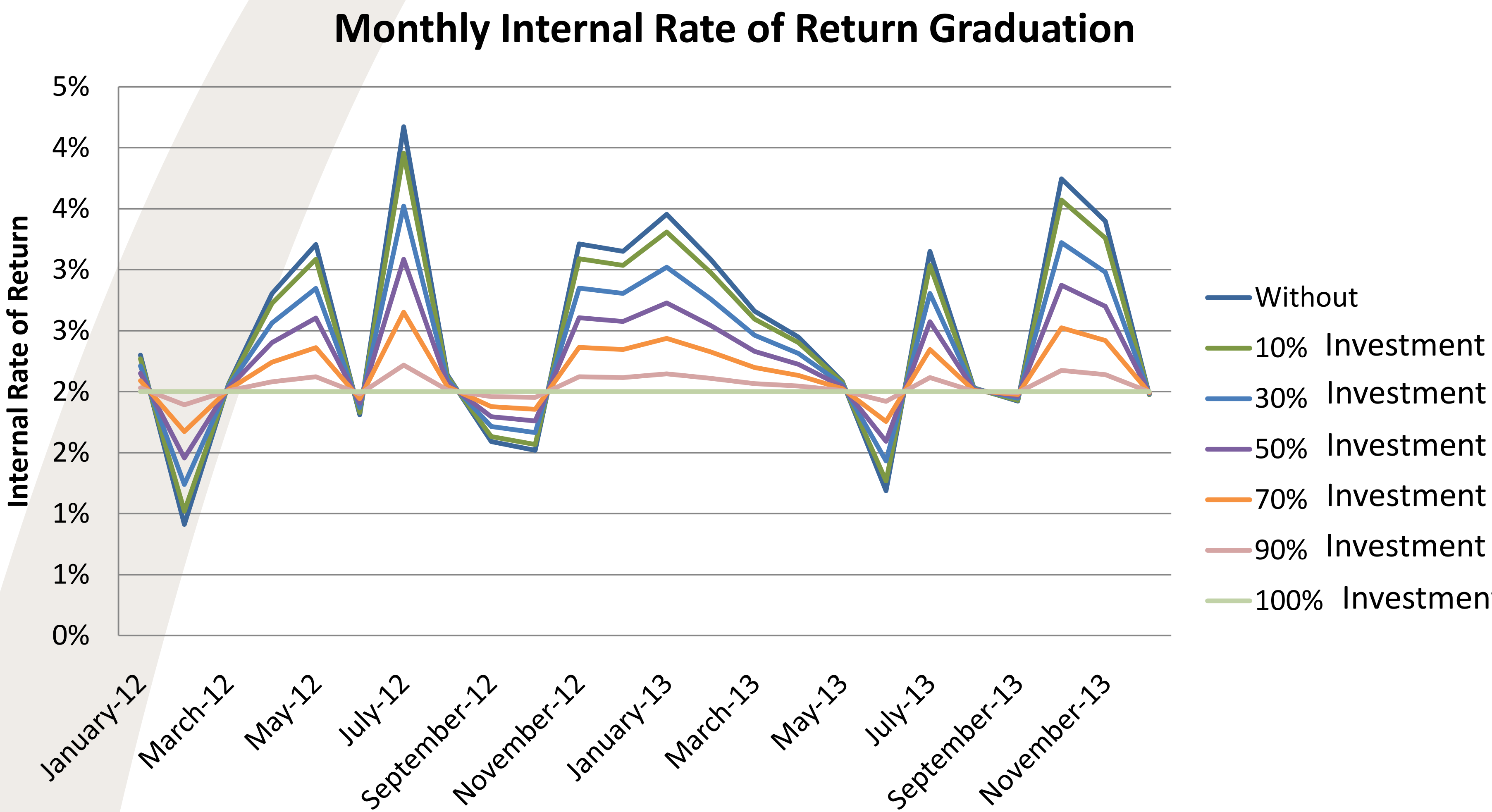
- In order to reduces market vulnerability the Abattoir may decide to invest money in order to reduce the impact of variance in income .

Option 2:

- Another use of an investment is to utilise the returns to supplement the income stream to ensure sufficient cash to cater for projected company expenditures.

Option - 1

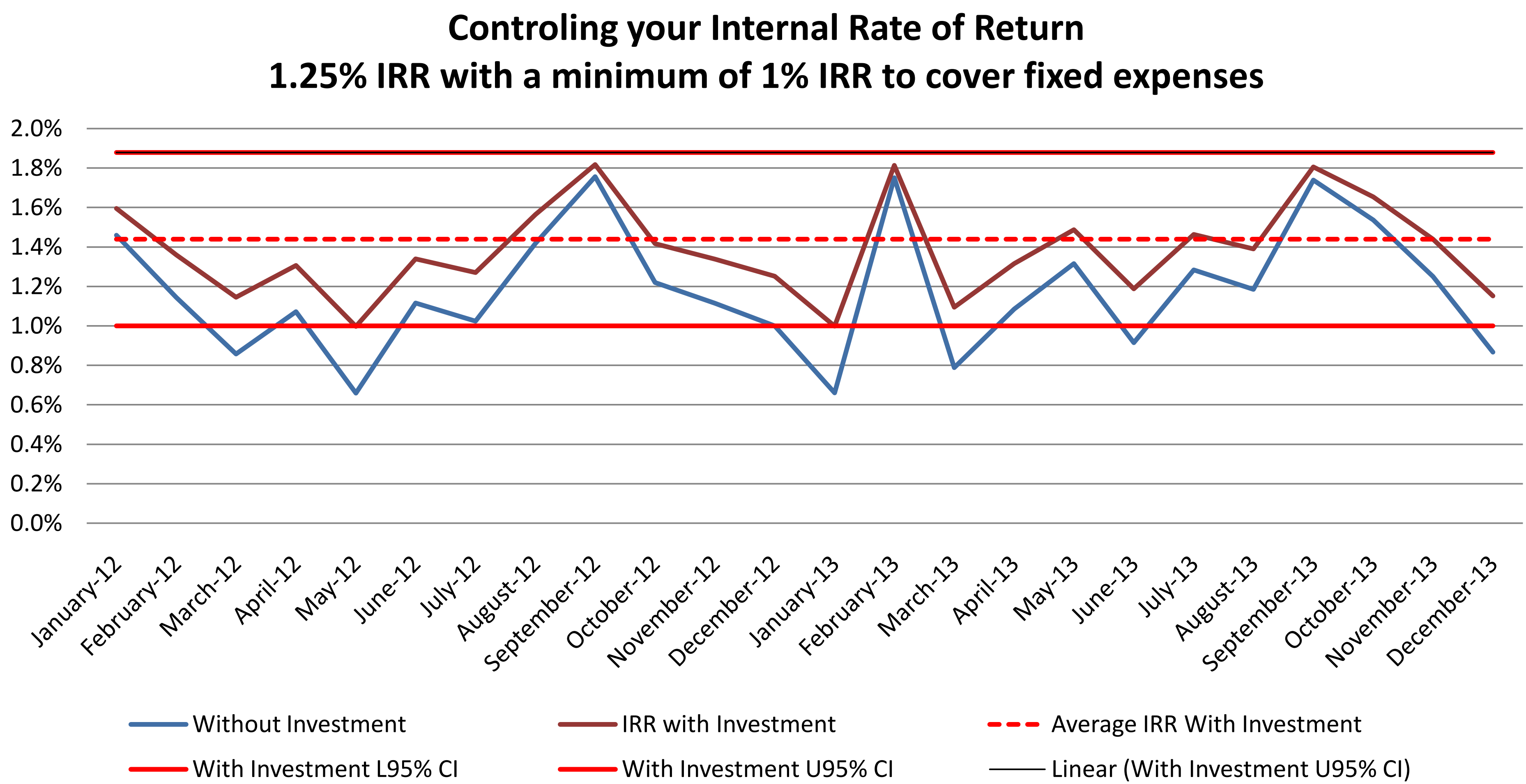
Using investment to reduce market vulnerability



Option- 2

Using investment returns to reduce cash flow risk

(25% of operating capital invested)



Option - 3

Using an investment to provide for future expenditure

- In instances where a lump sum is payable on a yearly basis, provision can be made by using an investment.
- The abattoir invest in a low risk – high return Investment for 12 months.
- Alternatively the lump sum could be settled by taking out a low interest loan.
- It is evident that the higher returns of the investment more than makes up for the low interest rate on the loan, and in effect saves the abattoir valuable money.

Projected Expense	R	150 000
Months in the Future		12
Using an Investment		
IRR on the Investment		24%
Monthly Investment	R	11 172
Total of Monthly Investment	R	134 060
Low Interest Loan		
Interest rate		9.50%
Repyament Term		12
Monthly Instalment	R	13 153
Total of Monthly Instalments	R	157 830
Total Savings	R	23 770

Option - 4

Using an investment to generate capital

- An abattoir can take out a loan at prime interest rate, and immediately reinvest the capital amount into a low risk – high return investment.
- The return on this investment is higher than the required monthly repayments on the loan, allowing the loan to be repaid and the remaining return to be reinvested.
- This allows the investment to grow, effectively insuring that there is enough interest in the investment to repay the loan after 50 months.

Loan	R 500 000
Loan Interest	9.5%
Loan Term	240
Loan Monthly Instalment	R 4 661
Investment	R 500 000
IRR per Year	24%
Monthly Return	R 10 097
Month of Equilibrium	50
Capital repaid on loan	R 41 843
	R 739 701
Loan balance/Investment balance after 50 months	R 458 157

Closing remark

Risk, investments and Abattoirs

The current economic situation demands creative thinking for an Abattoir to continue to prosper.