Insights

# Executive Remuneration Plans – partly demystified

19 MAY 2020: HTTPS://TWITTER.COM/GUYADDISON/STATUS/1262725272748658694

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## Foreword

In the below example we attempt to expand on a recent executive remuneration plan note that attempts to expand on the recently implemented executive remuneration plan.

If that wording isn't confusing enough…read on.

## Note 32: Share-based payments note

**32. Share-based payments** *(continued)*

**Share Appreciation Rights – new scheme** *(continued)*

Vesting dates, percentages and conditions are as in table below based on a grant date of 1 March 2018:

| Condition | Vesting date | Percentage |
|---|---|---|
| TSR | 1 March 2021 | 1/3 x 50% |
| | 1 March 2022 | 1/3 x 50% |
| | 1 March 2023 | 1/3 x 50% |
| PAT | 1 March 2021 | 1/3 x 50% |
| | 1 March 2022 | 1/3 x 50% |
| | 1 March 2023 | 1/3 x 50% |

Valuation of this instrument is achieved by performing a Monte Carlo simulation involving the CGR share and the Africa All Share Industrials Index (Bloomberg code: JASINTR), the SA Listed Property Index (Bloomberg code: JSAPYTR) and the Africa Construction & Materials Index (Bloomberg code: JCBDMTR). We use volatilities, a correlation of returns, risk-free rates, and dividend assumptions. The process assumed is risk-neutral geometric Brownian motion. The process is a simultaneous evolution of the codes found via the Cholesky decomposition.

Source: https://twitter.com/albie_cilliers/status/1262393200700002311/photo/1

or here: https://www.calgrom3.com/images/pdfs/Financial_Results/Calgro-year-end-results-booklet-2020.pdf

## 1. Original note to the note

Valuation of this instrument is achieved by performing a Monte Carlo simulation[1] involving the CGR share and the Africa All Share Industrials Index (Bloomberg code: JASINTR), the SA Listed Property Index (Bloomberg code: JSAPYTR) and the Africa Construction & Materials Index (Bloomberg code: JCBDMTR). We use volatilities[2], a correlation of returns[3], risk-free rates[4], and dividend assumptions[5]. The process assumed is risk-neutral geometric Brownian motion[6]. The process is a simultaneous evolution[7] of the codes found via the Cholesky decomposition[8].

## 2. Our notes to the note of the note

### 1 - Monte Carlo simulation

'are a broad class of computational algorithms that rely on repeated random sampling to obtain numerical results'

Source: https://en.wikipedia.org/wiki/Monte_Carlo_method

## 2 – volatilities

'Volatility is a statistical measure of the dispersion of returns for a given security or market index. In most cases, the higher the volatility, the riskier the security. Volatility is often measured as either the standard deviation or variance between returns from that same security or market index.'
Source: https://www.investopedia.com/terms/v/volatility.asp

## 3 - correlation of returns

Correlation is measured on a scale of -1.0 to +1.0. Modern portfolio theory (MPT) asserts that an investor can achieve diversification and reduce the risk of losses by reducing the correlation between the returns of the assets selected for the portfolio. The goal is to optimize the expected return against a certain level of risk.
Source: https://www.investopedia.com/ask/answers/030515/how-correlation-used-modern-portfolio-theory.asp

## 4 - risk free rates

The risk-free interest rate is the rate of return of a hypothetical investment with no risk of financial loss, over a given period of time.
Source: https://en.wikipedia.org/wiki/Risk-free_interest_rate#cite_note-1

## 5 - dividend assumptions

The discounted dividend model (DDM) is a procedure for valuing a stock's price by using expected dividends and discounting them back to present value.
Source: https://www.readyratios.com/reference/analysis/discounted_dividend_model_ddm.html

## 6 - risk-neutral geometric Brownian motion

A geometric Brownian motion (GBM) (also known as exponential Brownian motion) is a continuous-time stochastic process in which the logarithm of the randomly varying quantity follows a Brownian motion (also called a Wiener process) with drift. It is an important example of stochastic processes satisfying a stochastic differential equation (SDE); in particular, it is used in mathematical finance to model stock prices in the Black–Scholes model.
Source: https://en.wikipedia.org/wiki/Geometric_Brownian_motion

## 7 - simultaneous evolution

Simultaneous = 'occurring, operating, or done at the same time'

Evolution = theory in biology postulating that the various types of plants, animals, and other living things on Earth have their origin in other preexisting types and that the distinguishable differences are due to modifications in successive generations. The theory of evolution is one of the fundamental keystones of modern biological theory.
Source: https://www.britannica.com/science/evolution-scientific-theory

## 8 - codes found via the Cholesky decomposition

In linear algebra, the Cholesky decomposition or Cholesky factorization is a decomposition of a Hermitian, positive-definite matrix into the product of a lower triangular matrix and its conjugate transpose, which is useful for efficient numerical solution.
Source: https://en.wikipedia.org/wiki/Cholesky_decomposition

Understand now?
Didn't think so.

## If you and your company need clarity on the following:

1. Explanation of the **rules and issuing particulars** of your current incentive structure
2. Likely **outcome of the current performance incentive structure** for company and participant.
3. **Risks and unintended consequences** of the current incentive plan.
4. **Alternatives available** to current Share-Appreciation Rights / similar schemes.
5. **Benefits from a new approach** to executive alignment structures.

Addison Advisory is a professional services firm based in Sandton, South Africa providing insight, advice and direction to senior executives and shareholders on matters of remuneration and executive alignment structures. We help clients achieve their business and financial goals, providing custom designed solutions, with an emphasis on high-impact, value-enhancing work that is clearly understood and supported.

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