FUNDS ON FRIDAY
by Glacier Research

18 August 2023
Volume 1194

Risk and return: Choosing your trade-offs

Author: Madalet Sessions, Head of Multi-Asset, Denker Capital

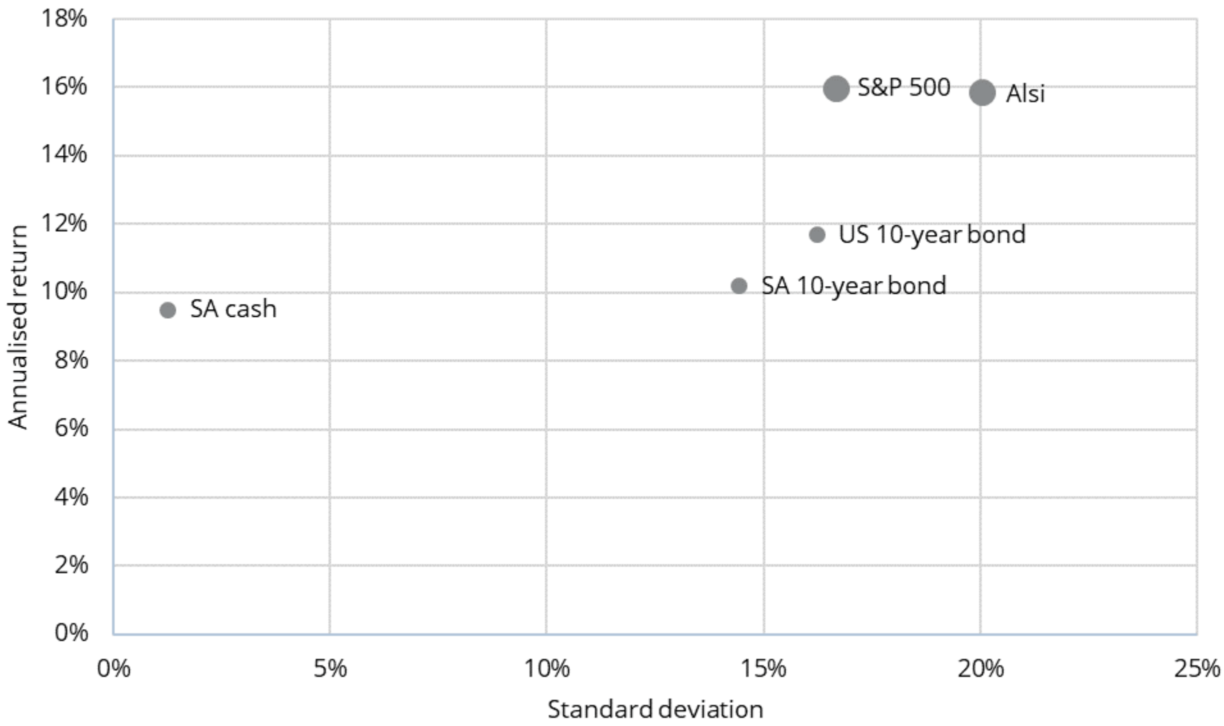
In the figures below, we illustrate the returns earned and the drawdowns suffered by South African investors in two major equity markets - the FTSE/JSE All Share Index (ALSI) and the S&P 500 – between 1960 and June 2023. All the data included in this article is in rand terms, for comparison purposes.

Glacier Financial Solutions (Pty) Ltd, I A member of the Sanlam Group | Private Bag X5 I Tyger Valley 7536 I Email: client.services@glacier.co.za | Tel +27 21 917 9002 I Fax +27 21 947 9210 I Web www.glacier.co.za | Reg No 1999/025360/07 I Licensed Financial Services Provider
Glacier Management Company (RF) (Pty) Ltd is a registered and approved Manager in Collective Investment Schemes

The SA equity market delivered comparable returns to offshore equity markets between 1960 and 2023, but with greater risk.

Over this time, the S&P 500 delivered a return of 16.0% in rand, while the ALSI delivered 15.8%. Although these returns differ by a small margin, the ALSI return came at greater risk – as is evident from the standard deviation of each return.

Figure 1: Risk vs. return scatter of major asset classes in rand (1960-2023)



Source: I-Net, Refinitiv, S&P and Denker Capital calculations. Measured from 1 January 1960 to 30 June 2023.

Also included in Figure 1 are alternative assets available to South African investors. These include:

- SA cash – represented by the return on short-dated interest-bearing investments;
- SA bonds – represented by the return of a constant 10 years to maturity fixed interest bond; and
- US bonds – represented by the return of a constant 10 years to maturity fixed interest US government bond.

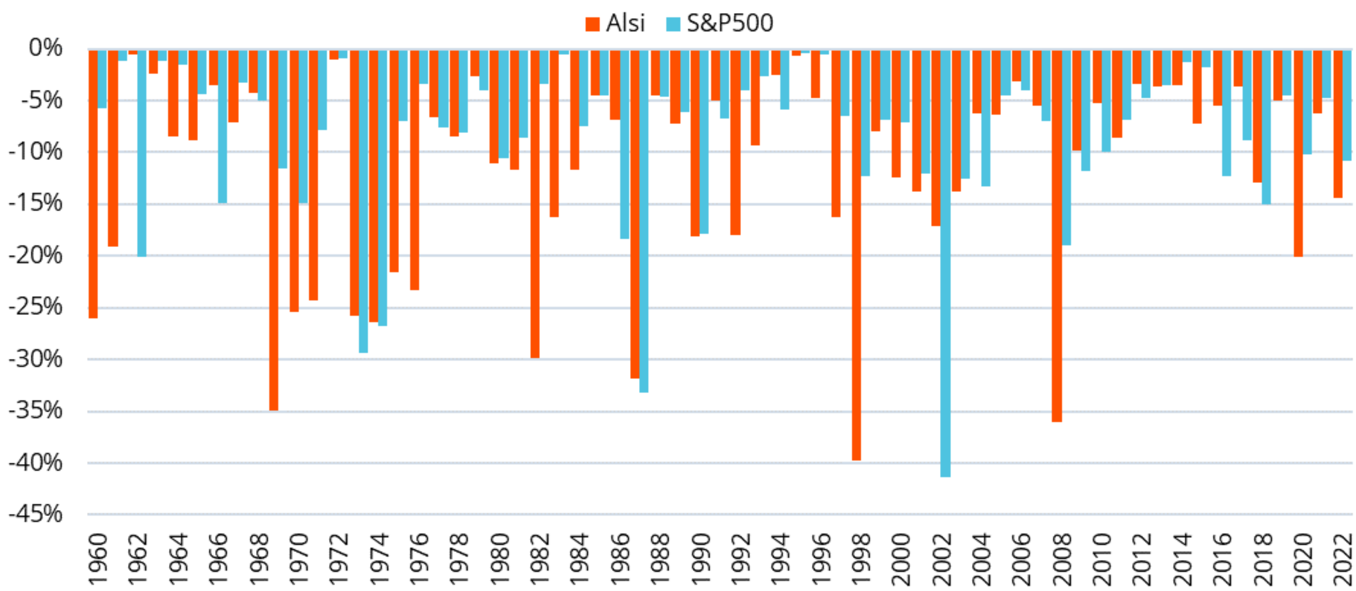
Investors in the ALSI suffered greater losses and with greater frequency in the past, compared to the S&P 500.

In other words, there has been greater risk in owning SA equity assets in the past (as reflected in Figure 1, and as we show in Figure 2 and 3 below). With that said, elevated offshore valuations and rand panic can also set offshore equity investors up for extended periods of very poor realised returns – despite it being the less risky option, historically.

In Figure 2 we show the calendar year drawdowns experienced by investors in the ALSI and the S&P 500 between 1960 and 2022.

- Out of the 63 years, the losses suffered by investors in **the ALSI** were greater than:
  - 10% in 27 years;
  - 15% in 19 years; and
  - 20% in 13 years.
- The losses suffered by rand investors in the **S&P 500** were greater than:
  - 10% in 21 years;
  - 15% in only nine years (and far less likely than in the ALSI**)**; and
  - 20% in only five years.

Figure 2: Calendar year drawdowns of the ALSI and the S&P 500 (in rand)

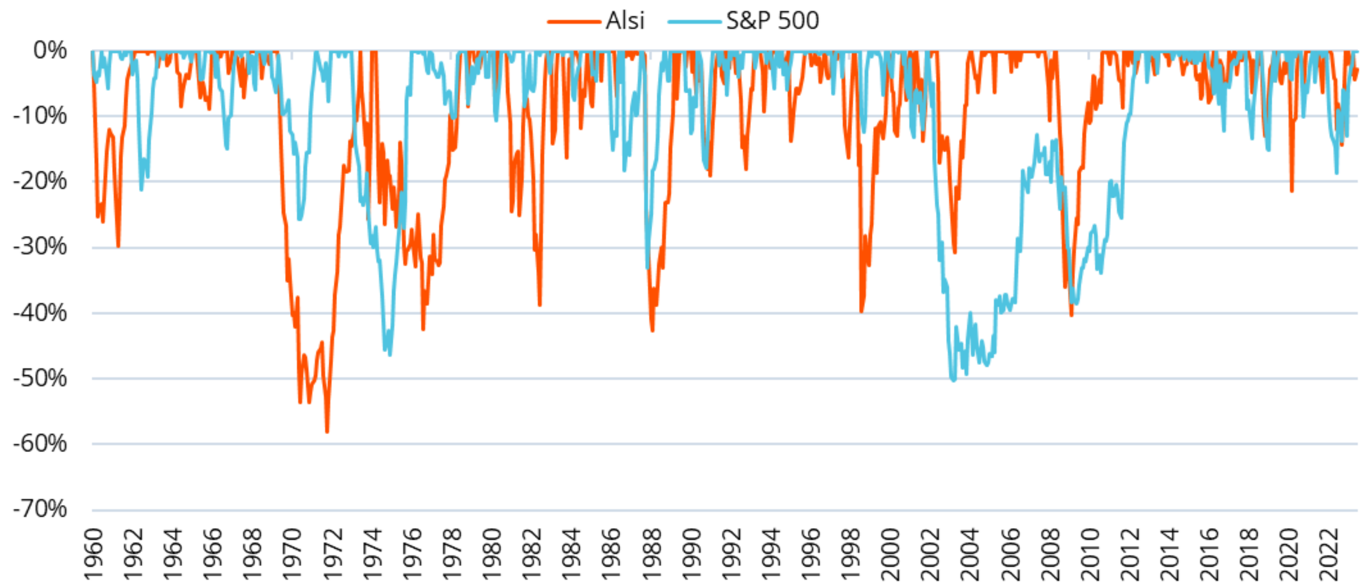


Source: I-Net, Refinitiv, S&P and Denker Capital calculations. Measured from 1 January 1960 to 31 December 2022.

In Figure 3 we show the peak-to-trough drawdowns, using monthly data, from January 1960 to June 2023. This data shows that:

- The worst drawdown in the **ALSI** was 58% and investors subsequently recovered their capital in just under five years. This was in the aftermath of the financial bubble in the late 1960s.
- The worst peak-to-trough drawdown suffered by investors in the **S&P 500** wiped 50.3% off their capital value and it took more than a decade to recover their capital. These losses were the result of the dotcom mania, aggravated by the rand panic and subsequent recovery.

Figure 3: Peak to trough drawdowns of the ALSI and the S&P 500 (in rand)



Source: I-Net, Refinitiv, S&P and Denker Capital calculations. Measured from 1 January 1960 to 30 June 2023.

Diversification provides more predictable capital values.

For the analyses that follow we constructed three different portfolios, as shown in Figure 4.

All three portfolios are consistent with the asset allocations appropriate to the ASISA SA - Multi Asset - High Equity category, to illustrate several important findings. The first two portfolios are restricted to 25% offshore. The last portfolio engages in a bit of 'what if' and assumes investors were allowed to invest 45% of their assets offshore over this period.

Figure 4: Composition of our illustrative portfolios

	SA cash	SA 10-yr bond	US 10-yr bond	S&P 500	Alsi	Description
Portfolio 1	25%	-	-	-	75%	SA equity + lowest risk asset class available
Portfolio 2	-	-	25%	-	75%	SA equity + asset class with lowest correlation to SA equity
Portfolio 3	-	25%	-	45%	30%	SA equity + max offshore equity + next highest return asset class available

Source: Denker Capital (Illustrative portfolio composition)

As before, we investigated drawdowns in calendar years, between 1960 and 2022, for a sense of the riskiness of a portfolio. The more diversified portfolio delivered the most certainty.

- Portfolio 1 experienced losses exceeding 15% in 13 years, and losses more than 20% only five times.

- Portfolio 2, by comparison, suffered losses greater than 15% in 11 years, and investors saw drawdowns exceed 20% six times.

- Portfolio 3 delivered the most capital certainty. Only five calendar years saw drawdowns exceed 15% and drawdowns exceeded 20% only three times.

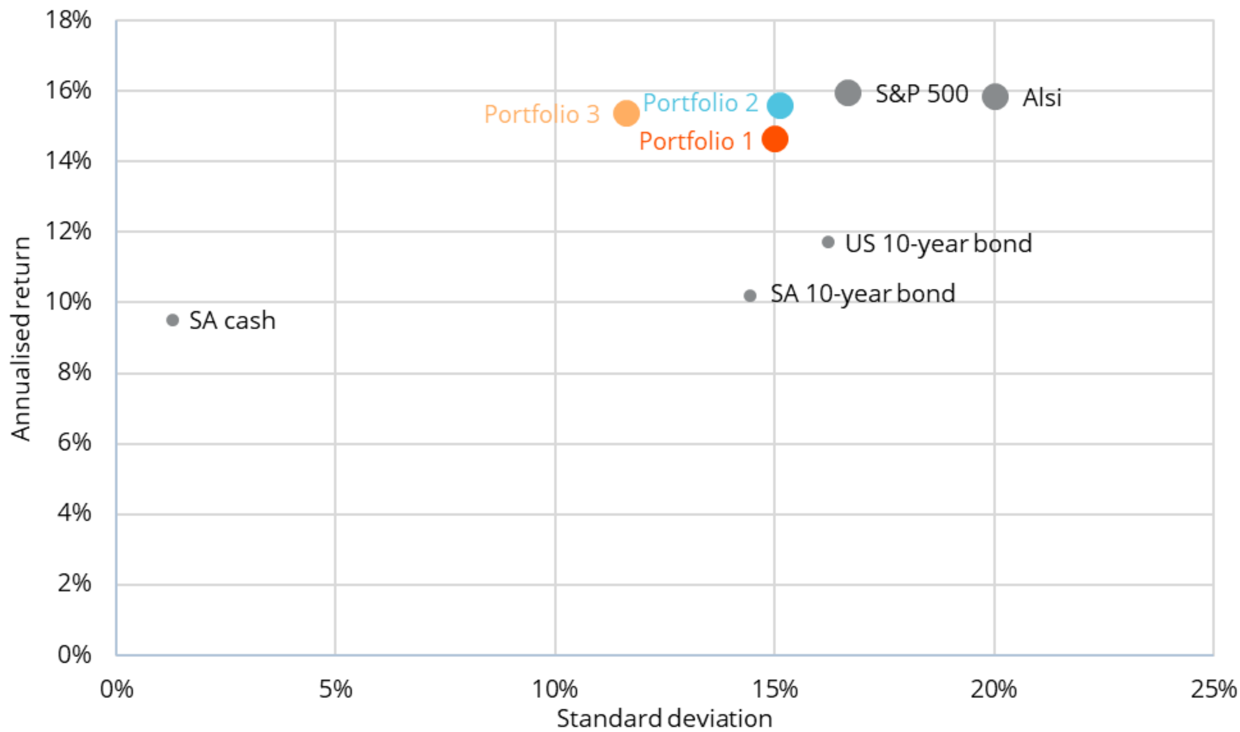
<u>The risk vs. return results in Figure 5 may surprise some.</u>

The almost intuitive sense that combining the lowest risk asset (SA cash) with the highest risk asset (SA equity) – Portfolio 1 – would result in the lowest risk portfolio, is not supported by the data.

Portfolio 2, over time, results in returns that are very similar to those of the ALSI (over the full investment period) but at substantially lower risk. Investors have far greater certainty and much lower drawdowns in this portfolio than in the two equity indices but earn very similar returns over the full period. Interestingly, Portfolio 2 earns this return at lower risk than either of the building blocks (US bonds and SA equity)! This shows that putting two assets together can deliver much lower risk outcomes without a substantial reduction in expected returns.

Portfolio 3 represents the lowest risk portfolio of the three high equity portfolios that we investigate in this analysis. As with Portfolio 2, Portfolio 3 ends up with a lower risk profile than any of the assets included in its construction.

Figure 5: Risk vs. return scatter of the three illustrative portfolios, combining different asset classes



Source: I-Net, Refinitiv, S&P and Denker Capital calculations. Measured from 1 January 1960 to 30 June 2023.

Figure 6 below summarises the risk and return information of the different asset classes and the total returns earned by investors over this period.

Figure 6: Summary of risk and return data 1960 to June 2023 (in rand)

	SA cash	SA 10-yr bond	US 10-yr bond	S&P 500	Alsi	Portfolio 1	Portfolio 2	Portfolio 3
Standard deviation	1.3%	14.4%	16.2%	16.7%	20.0%	15.0%	15.1%	11.6%
Annualised return	9.5%	10.2%	11.7%	16.0%	15.8%	14.7%	15.6%	15.4%
Value of R100 investment today	R32k	R47.6k	R114.3k	R1.23m	R1.15m	R600k	R1.0m	R890k

Source: I-Net, Refinitiv, S&P and Denker Capital calculations. Measured from 1 January 1960 to 30 June 2023.

On the strength of the evidence presented so far, it seems reasonable to assume that investors would prefer the more diversified portfolios to the less diversified equity markets.

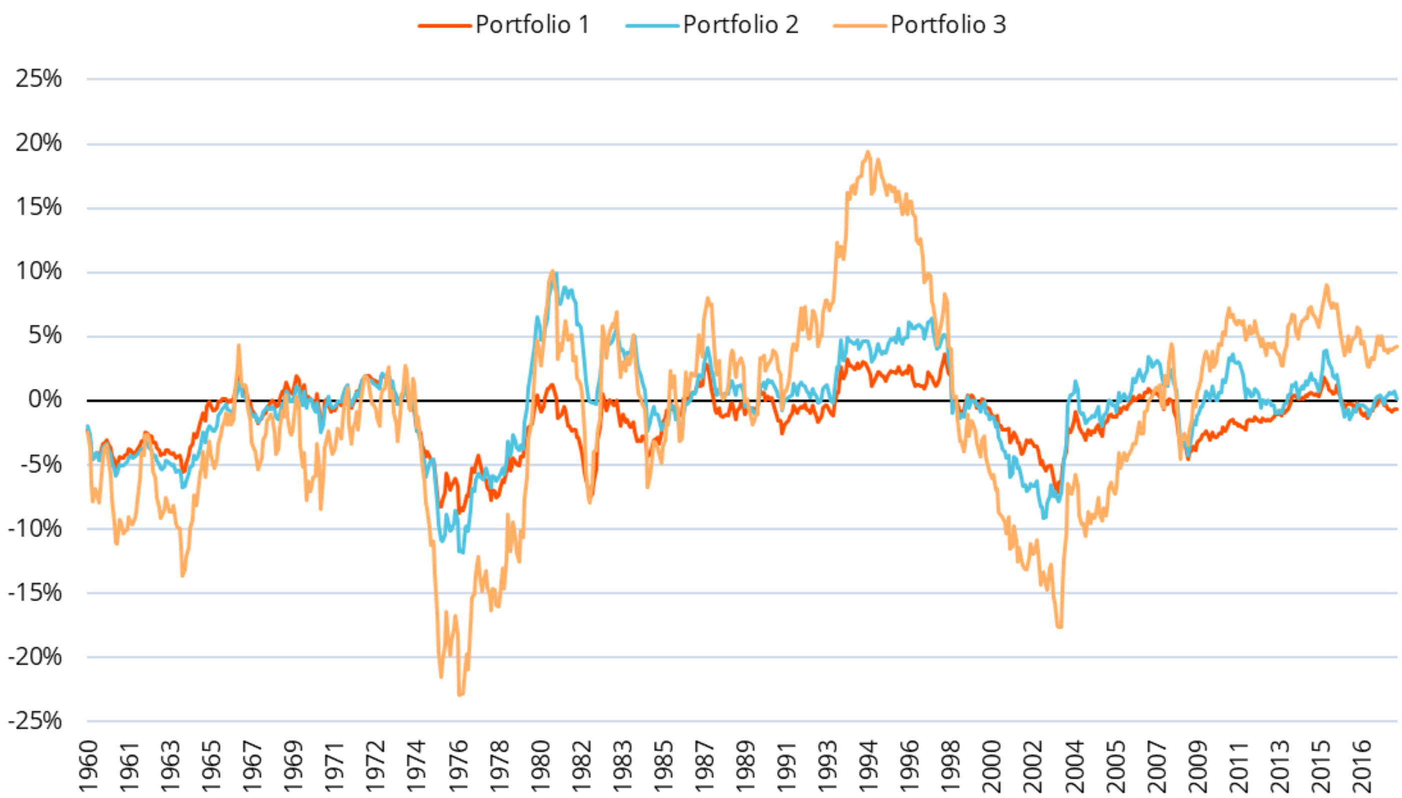
High returns, at the lowest possible risk, are the bread and butter of the investment management and financial advice industry. But which portfolio represents the most attractive potential for investors?

Although it creates more capital stability, greater diversification increases relative performance risk.

Figure7 shows the rolling 5-year annualised relative performance of the three different diversified portfolios compared with the returns available from the ALSI over the same 5-year period. Implicit in this analysis is also the relative performance between the different portfolios.

- Portfolio 1 consistently lagged the higher-return ALSI equity portfolio. The portfolio, on average, underperformed by ~1% pa.
- Portfolio 2, the portfolio that delivered a lower risk outcome for only marginally lower returns (by combining domestic equity with negatively correlated, but higher risk, offshore bonds), has more volatile relative performance than Portfolio 1. Portfolio 2 shows meaningful periods of both out- and underperformance relative to the ALSI over time.
- Portfolio 3, the most diversified 'high equity' portfolio of the three, shows the greatest relative performance variability. There are extended periods of time when performance exceeds/lags the ALSI returns (and the returns of Portfolio 1 and Portfolio 2) by a wide margin. Investors who purchased Portfolio 3 in 1995 earned almost 20% annualised outperformance over the subsequent five years. However, over the five years between 2000 and 2005, investors in the ALSI would have outperformed by a similar margin when compared with Portfolio 3.

Figure 7: Rolling 5-year alpha of the illustrative portfolios vs. the ALSI



Source: I-Net, Refinitiv, S&P and Denker Capital calculations. Measured from 1960 to 2018.

Unfortunately, as with most things, when it comes to investing there is no silver bullet for success.

There are only complex trade-offs. Higher returns involve taking greater risk. Diversification allows one to achieve higher returns over time with greater certainty, but means forgoing the highest possible return in the short run (diversification means owning things that are likely to do badly when equity markets run, for example). Owning assets that don't perform all at the same time is quintessential risk management (also known as diversifying).

Greater certainty requires greater clarity.

One cannot always look at what might have been. Investors who want to achieve their financial goals with the greatest of certainty should be comfortable that (a) they know why they've chosen a particular portfolio and (b) they understand how this choice is likely to behave. It is only then that one can hope to achieve one's financial goals with the greatest certainty.

Glacier Research would like to thank Madalet Sessions for her contribution to this week's *Funds on Friday*

Madalet Sessions
Head of Multi-Asset
Denker Capital

Madalet is Head of Multi-Asset at Denker Capital. She co-manages the Denker SCI Balanced Fund and Denker SCI Stable Fund with Jan Meintjes. She started her investment career at Investec Securities as a research assistant to top-rated investment strategist Brian Kantor. In 2008 she joined Element Investment Managers as an analyst responsible for fixed income, money market and property investments. Thereafter she moved to Nedgroup Investments in 2010, where she was responsible for managing the Nedgroup Private Wealth Bond and Property funds. She joined Denker Capital in 2016 to establish a range of multi-asset class funds.