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Cash is king:

The merits of including money market instruments in a diversified portfolio

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In considering an investment, the three most prevalent questions are:

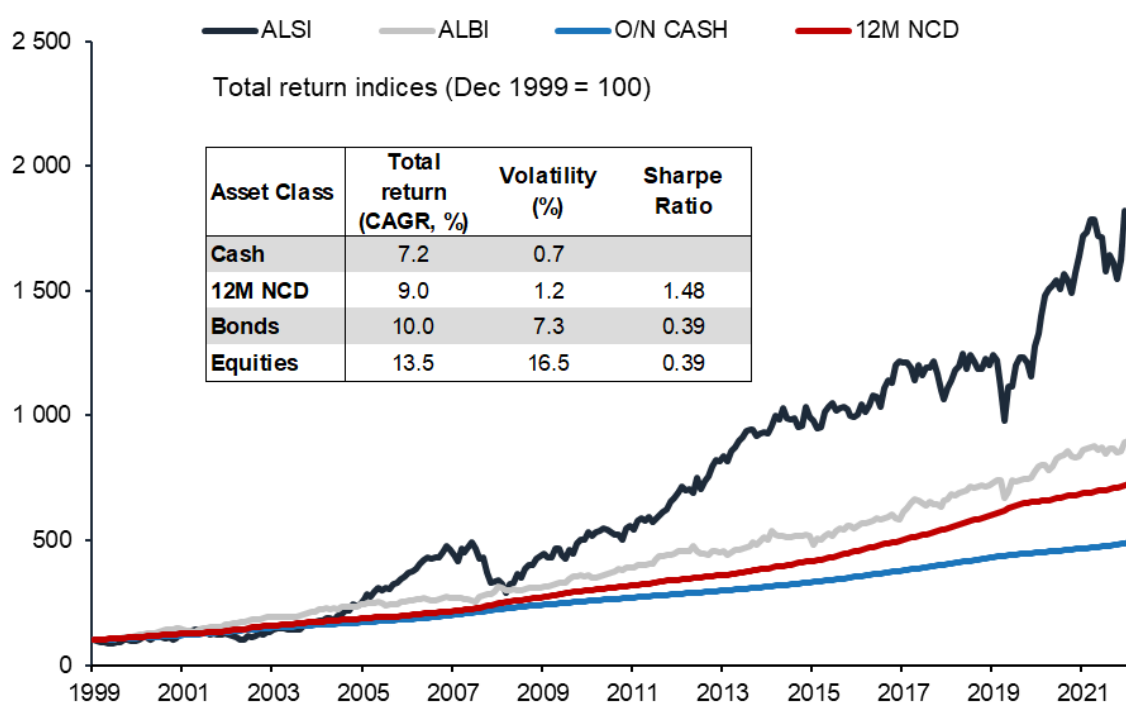
- What is the time horizon of the investment?
- What is the likely real return that I will achieve, i.e., am I likely to protect the purchasing power of my investment against inflation and by what margin?
- What is the likely volatility that my investment will display and is this tolerable within the given investment horizon?

We believe that South African money market instruments, and specifically 12-month negotiable certificates of deposits (NCDs), are an underappreciated lever in the pursuit of stable real returns in investment programmes.

To illustrate this, we have constructed a return series of a simple strategy whereby an investor purchases a 12-month NCD and one month later – upon this investment being an 11-month NCD – sells the 11-month NCD and purchases a new 12-month NCD. While this strategy is probably somewhat impractical in terms of associated trading costs, it would be a fair reflection of the investment outcome of a portfolio that maintained a constant 11- to 12-month exposure to senior debt of the four largest South African banks.

We compare the return of this strategy since 2000 to the total return associated with South African overnight call deposits (cash in the bank), SA fixed-rate bonds, and equities. We use the STeFI Call Deposit Total Return Index as our proxy for overnight cash, the FTSE/JSE All Bond Total Return Index (ALBI) as our proxy for bonds, and the FTSE/JSE All Share Total Return Index as our proxy for equities.

Figure 1: Return and volatility comparison of the major asset classes with our NCD strategy



Source: Iress, Matrix Fund Managers

Figure 1 illustrates that an equity investment has delivered superior absolute and real returns, albeit at considerably higher volatility. Inflation through this period averaged 5.6% per annum (pa), rendering an equity real return of 8% p.a., a bond real return of 4.4% pa, and a cash real return of 1.6% pa. This is not surprising given our understanding of the trade-off between risk and return.

What is, however, insightful is the incremental real return achievable from the money market, with our simple NCD investment strategy yielding a nominal return of 9.0% p.a. and exceeding inflation by a handsome 3.4% p.a. over the period.

The NCD strategy exceeds cash returns by almost 200 basis points (bps) and the return is comparable to that associated with investments in SA government bonds. Of more importance is the subdued volatility associated with this investment strategy, which results in superior volatility-adjusted returns. This is evidenced by a Sharpe ratio of 1.48, which compares extremely favourably to the risk-adjusted returns from bonds and equities.

Why is this the case and where is the catch?

The simple answer is that SA banks are paying a significant premium for stable funding, as various regulations and funding gap prescriptions force them to extend the tenor of their funding activities.

Figure 2: Margin of 12-month NCD yield over 3-month NCD yield

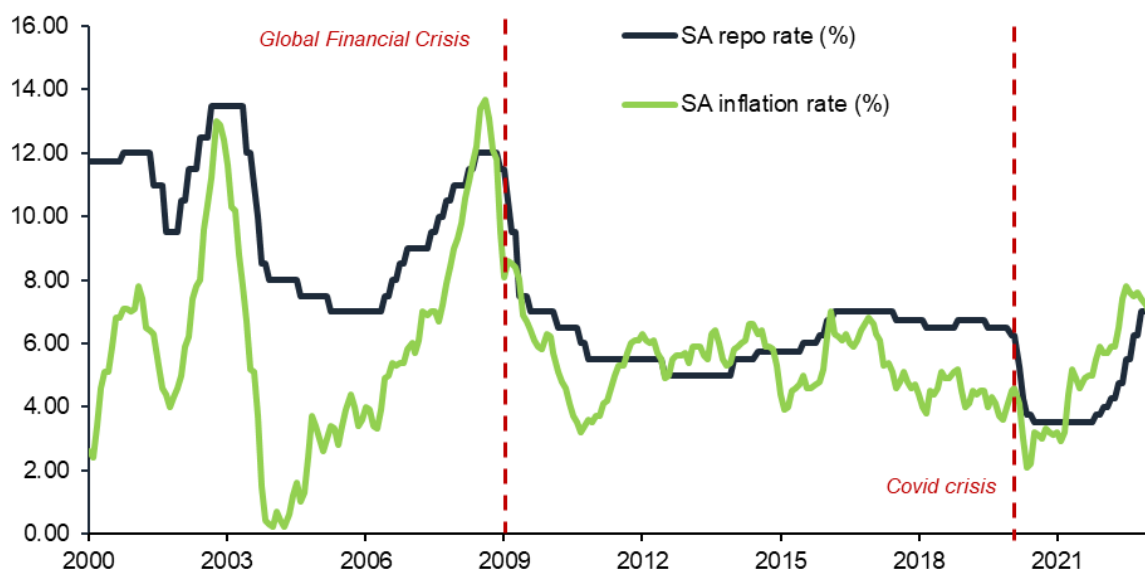


Source: Iress, Matrix Fund Managers

Figure 2 illustrates that the 12-month NCD maintained a positive margin over the three-month NCD, albeit varying in extent. It is also evident that this excess margin appears to be increasing rather than decreasing as a consequence of more onerous banking regulation. The average margin was 50 bps from 2000 to 2010 and rose to 90 bps from 2010 to 2020 as various stages of Basel regulations were incorporated in the SA banking sector. Since the COVID pandemic, the spread has increased further to around 120 bps on average.

One could argue that the excess margin is entirely a function of monetary policy expectations at any time over the subsequent 12-month period. This would be true to the extent that investors would favour shorter-dated (three-month) investments during periods of perceived monetary policy tightening and would prefer to mitigate re-investment risk by investing in longer tenors (12 months) during periods of perceived monetary policy loosening.

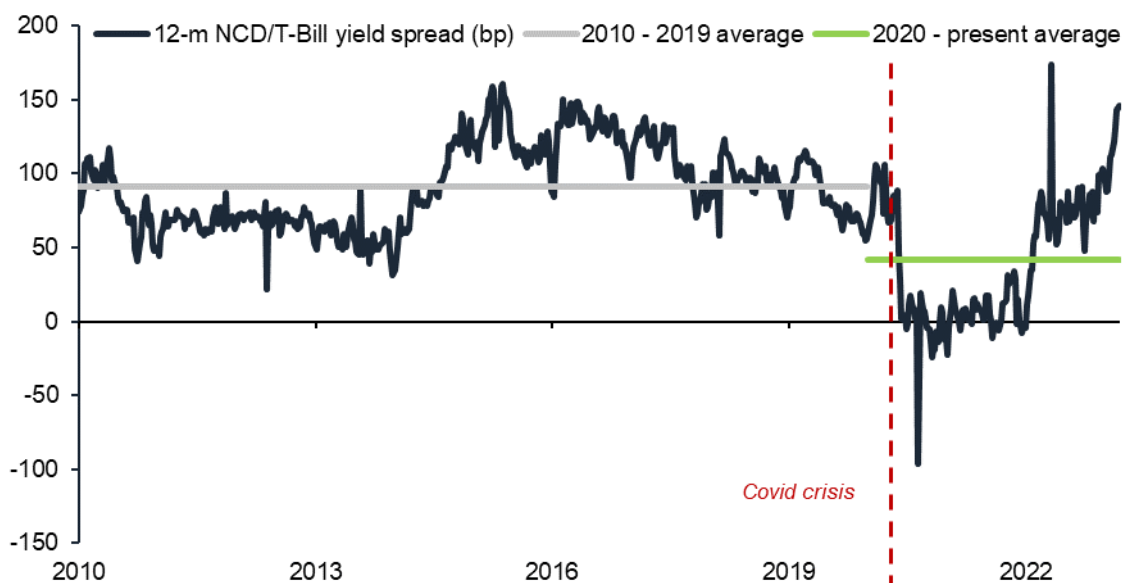
Figure 3: SA inflation and SA repo rate



Source: Iress, Matrix Fund Managers

Let us consider the period 2010 to pre-COVID in Figures 2 and 3. It is evident that the South African Reserve Bank (SARB) decreased interest rates from 12% before the Global Financial Crisis (GFC) of 2008/2009, to 5% at the end of 2010. The SARB then commenced with a moderate hiking cycle, taking the repo rate from 5% in 2013 to 7% in 2016, after which a modest loosening of 50 bps occurred from 2018 onwards. Figure 3 shows that there has not been a discernable structural/permanent tightening in the monetary policy stance since 2010. Yet the margin of the 12-month NCD over the three-month NCD has displayed a general upward tendency (Figure 2), even when accounting for oscillation around an average and incorporating monetary policy expectations.

Figure 4: Margin of 12-month bank NCD over 12-month government treasury bill (TB)



Source: Iress, Matrix Fund Managers

Figure 4 shows the margin of the 12-month bank NCD over the 12-month government treasury bill. It highlights the premium that South African banks pay for term funding. This premium has been

somewhat eroded since the COVID pandemic, as the SA government has stepped up its quantum of funding via treasury bills. More recently, the margin has been re-established, being above 100 bps. It largely confirms the notion that SA banks pay a premium for term funding and this premium contributes to superior investment returns when we incorporate 12-month bank NCDs in an investment programme.

How should we think of monetary policy expectations when using 12-month NCDs in our investment programme?

Interest rate theory (which is based on a zero-arbitrage model) says that investors should be indifferent between investing in short tenors (three-month instruments) and longer tenors (12-month instruments) if the expected re-investment in a series of three-month instruments equilibrates the return (yield) achievable from an investment in a 12-month instrument. In assessing this indifference, it becomes useful to an investor to compare the 12-month investment to implied forward starting three-month investments that would result in such indifference.

Table 1: The current money market curve and the three-month forward rates to be indifferent

Tenor	Current Money Market Curve	3-month forwards needed to be indifferent	Implied monetary policy tightening
3-month	7.50%	7.50%	
6-month	8.00%	8.50%	100bp
9-month	8.40%	8.90%	40bp
12-month	8.80%	9.20%	30bp

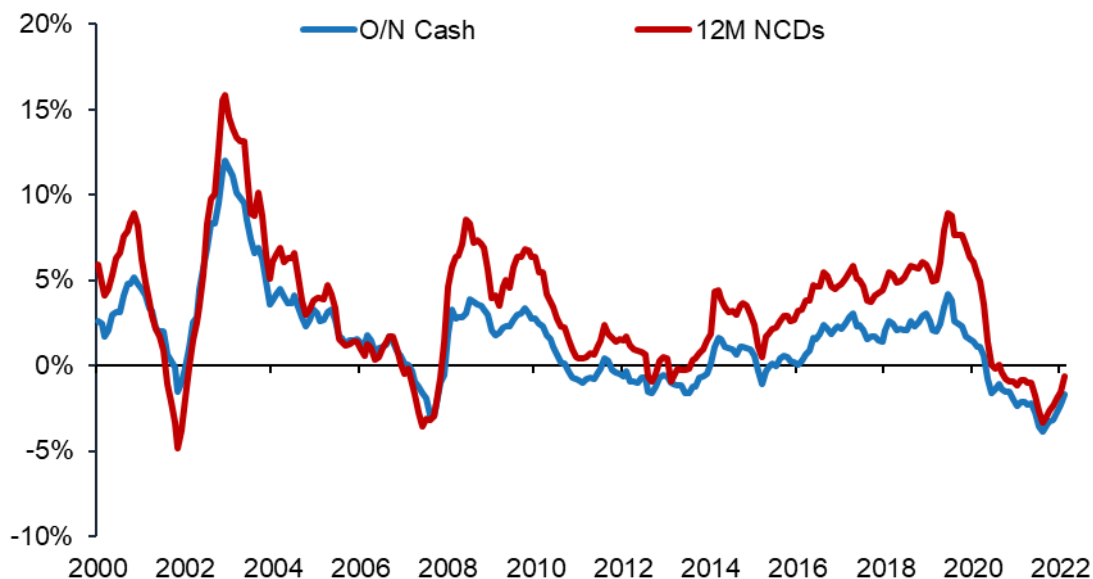
Source: Bloomberg, Matrix Fund Managers

Table 1 highlights that an investor with a 12-month investment horizon who chooses to invest in three-month NCDs as opposed to a 12-month NCD does so with the expectation that he will be able to re-invest his maturing three-month investment in three months' time (in June 2023) at 8.50% and again re-invest this in September 2023 for three months at 8.90%, and finally re-invest this in December 2023 for three months at 9.20%. This sequence of three-month investments would render the investor with the same return as investing now for 12 months at the known investment rate of 8.80% for the full period.

Another way of thinking about the above is that the investor should only choose to invest in three-month NCDs as opposed to a 12-month NCD if they were to expect 100 bps of rate hikes in three to six months' time, a subsequent 40 bps in additional hikes in six to nine months' time, and 30 bps of additional rate hikes in six to 12 months' time, i.e. 170 bps of cumulative tightening over the next year.

At Matrix Fund Managers, our most conservative estimate of monetary policy over the next 12 months would be an additional 50 bps of interest rate tightening over the next three months and then a prolonged (nine months) of stabilisation in the policy rate. Should we elect, based on these expectations, to rather invest in three-month NCDs, our 12-month return would likely only transpire at 8.10% as opposed to the 8.80% on offer now from the 12-month NCD. We can thus deduct that even on a conservative assumption of future monetary policy action, the 12-month NCD incorporates a 70-bps excess term premium.

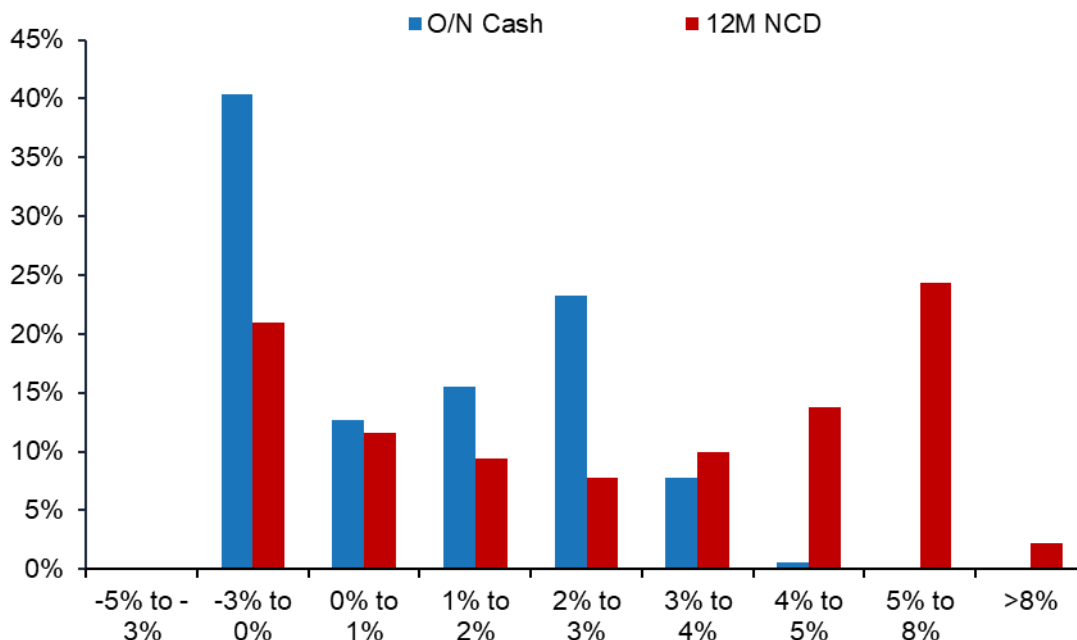
Figure 5: Rolling 12-month real return from cash versus 12-month NCDs



Source: Iress, Matrix Fund Managers

Figure 5 illustrates the superior rolling real returns (above inflation) achieved by investing in 12-month NCDs instead of overnight cash (since 2000). Not only has the 12-month NCD investment strategy delivered excess real return of 1.8% pa on average relative to cash, but it has also mitigated inferior real returns during periods of high inflation and/or low monetary policy rates. To illustrate this point, we conclude with a frequency distribution of rolling 12-month real returns, as per Figure 6.

Figure 6: Frequency distribution of rolling 12-month real returns since 2008



Source: Iress, Matrix Fund Managers

If we assess the distribution of real returns obtainable from overnight cash (money in the bank), versus the distribution of real returns associated with our simple 12-month NCD strategy, then the following becomes apparent:

- Overnight cash delivers negative real returns over rolling 12-month periods 40% of the time, whereas an investment in 12-month NCDs delivers negative real returns only 20% of the time.
- In both instances the extent of negative return is limited to -3.0% (i.e., there is no large negative tail).
- A cash investment strategy delivered real returns in excess of 3.0% for only 10% of the time, while a 12-month NCD investment strategy delivered real returns in excess of 3.0% for 40% of the time.

At Matrix Fund Managers, we recognise the value of a stable real return driver as part of our active asset allocation strategy. We specifically highlight the investment benefit associated with the excess term funding premium of longer-term bank negotiable certificates of deposits. It is important to distinguish between mere yield pick-up and yield pick-up versus future monetary policy expectations, as illustrated in Table 1.

To this extent, we take an active approach across all of our multi-asset mandates in assessing investment opportunities relative to the mandated return objective, as well as comparing asset classes to each other. It would follow that our more conservative mandates, such as stable income and CPI+3% mandates, would have larger allocations to the South African money market. We believe the SARB pursues a credible, transparent, and orthodox monetary policy mandate, which over time will most likely continue to result in a positive real monetary policy rate stance. This allows us to make extensive use of the money market in our investment programme.

Glacier Research would like to thank Lourens Pretorius for his contribution to this week's *Funds on Friday*



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Lourens is the head of Fixed Income and serves as the chairman on the Matrix Board of Directors. He has 30 years of financial markets experience and is also a founding member of Matrix Fund Managers, building the business from its legacy as a hedge fund division within Brait back in 2004. In 2008, he launched the Matrix NCIS Fixed Income Retail Hedge Fund that has subsequently grown to be one of the largest and most established fixed income hedge funds in South Africa. As head of Fixed Income, he is responsible for the performance of fixed income portfolios across the business, and he serves on the Matrix Investment Committee and asset allocation forums. Lourens is also the co-manager on a few long only fixed income and multi-asset balanced funds, including the Matrix SCI Stable Income Fund, the Amplify SCI Defensive balanced Fund, and the Amplify SCI Absolute Fund.