



**The Stackr tool allows you to experiment with different capital and digital asset choices. Through understanding the likely risk and return profiles of these assets, investors can blend capital and digital assets in a way that reflects their long-term investing goals.**

## **Disclaimer**

All investment choices are subject to risks. Investments can go down as well as up as a result of changes in the value of the investments. There is no assurance or guarantee of principal or performance and there is no guarantee that an investment choice will achieve its objective. Investors may lose money, including possible loss of principal. Past performance is not a guide to future performance.

Stackr makes no representations that products or services described or referenced on the tool or website ([www.gostackr.com](http://www.gostackr.com)) are suitable or appropriate for an investor. Many of the products and services described or referenced herein involve significant risks, and an investor should not make any decision or enter into any transaction unless the investor has fully understood all such risks and has independently determined that such decisions or transactions are appropriate for the investor. Any discussion of risks contained herein with respect to any product or service should not be considered to be a disclosure of all risks or a complete discussion of the risks involved. Investors must make their own independent decisions or seek advice from their financial adviser regarding the suitability and risks of any strategies or financial instruments mentioned herein.

Investments in the underlying investment options involve risks, which are described in the respective investment choice material. The current material for each product and investment choice should be reviewed before investing.

This tool was developed to provide an understanding of the investment choices available in the Stackr Trust. It does not constitute an offer or solicitation to anyone in any jurisdiction.

## **The Stackr Investment Choices**

All Stackr investment choices are designed with a maximum capital loss objective to safeguard against investors' biggest concern – the risk of losing money.

Clients can invest in a range of innovative capital and digital asset choices that have varying risk profiles. Passive indices together with data science represent the Stackr Group's investment philosophy. This enables a consistent process delivering preset objectives and ensuring realistic investor expectations. Stackr's risk management framework should remove client emotions in market downturns due to the comfort that investment choices offer downside protection.



Stackr Trust Account holders will be able to keep their funds in one, or a combination of investment choices. Account holders can easily switch their holdings in any one investment choice, which will be executed and reported online, within 24 hours. The underlying investments that will be utilized as the initial investment choices within the Stackr Solution are set up as portfolios managed by a Cayman Islands Segregated Portfolio Company (SPC).

### **Digital Assets.**

All choices autonomously track a bespoke optimal index of the top 10 crypto assets by market capitalization, termed C10, in a similar way to funds such as the Vanguard 500 that track an index based on the market capitalization of the top 500 publicly listed US companies (the S&P 500). The parameters of the index which include a maximum allocation to any one asset and frequency of rebalance, were optimally determined using data science techniques.

- **Crypto 10 Conservative (C10C):** Designed for the more conservative investor who seeks capital loss protection. A passive strategy will move portions of the fund into cash (or cash equivalent) depending on levels and velocity of market stress, thus decreasing exposure to the Crypto 10 optimal index. The maximum exposure the investment can have to cash is 100%. Exposure to the index will generally be increased in performing markets.
- **Crypto 10 Balanced (C10B):** Designed for the more balanced investor. A passive strategy will move portions of the fund into cash (or cash equivalent) depending on levels and velocity of market stress, thus decreasing exposure to the Crypto 10 optimal index. The maximum exposure the investment can have to cash is 100%. Exposure to the index will generally be increased in performing markets.
- **Crypto 10 Unconstrained (C10U):** Designed for the investor with risk appetite. A passive strategy will move portions of the fund into cash (or equivalent) depending on levels and velocity of market stress, thus decreasing exposure to the Crypto 10 optimal index. The maximum exposure the investment can have to cash is 50%. Exposure to the index will generally be increased in “performing” markets.

*C10C, C10B and C10U determine market drawdown stress using data science techniques. It should be noted that an overweight of cash (or cash equivalent) may not necessarily precede a market fall and vice versa.*

### **Capital Assets.**

Exchange traded funds (ETFs) are listed investments that track an underlying benchmark or index, such as an equity index, providing investors with an equivalent risk-return profile. ETFs provide an accessible means to a diversified capital asset portfolio, without prohibitive transaction costs, perfectly aligning with the Stackr investment philosophy. Global ETFs, with strong growth in total assets under management in the past decade, provide desirable liquidity across a wide range of asset classes. Initially, Stackr will focus on combining a holding in a global equity ETF, such as the MSCI World Index, with short exchange-traded equity index futures. The short equity index futures will facilitate the execution of the optimal net equity exposure.

Machine Learning (ML) enhanced funds have driven strong long term performance in portfolio selection across a range of different risk profiles, as well as a nascent track record of highly effective decision making in the managed risk context. However, significant technical complexity, the fast pace of technical innovation, as well as industry conservatism mean that ML and specifically deep learning is an underexploited approach to managing risk and being utilized in portfolio selection.



Stackr utilizes this framework to provide investors with exposure to global capital markets for long-term growth. Investors can choose between the following three capital asset options that are tailored to fit a specific downside, or capital loss risk profile.

- **CM Conservative:** The fund is appropriate for investors looking for stable capital growth at moderate levels of volatility. Investors should be willing to accept a maximum drawdown or capital loss objective between 6-8% p.a.
- **CM Balanced:** The fund is appropriate for investors looking for long term capital growth through a healthy exposure to equity markets. Suitable for investors willing to accept a maximum drawdown or capital loss objective between 8- 12% p.a.
- **CM Unconstrained:** The fund should appeal to investors who have an aggressive risk profile and who can look beyond short-term market and capital volatility for the potential of superior returns and long-term capital growth. Suitable for investors willing to accept a maximum drawdown or capital loss objective in excess of 12% p.a.

The ML framework predicts the optimal portfolio composition for each risk profile on a weekly basis. Initially, the portfolio will be comprised of a single equity-based ETF with desired exposure achieved by shorting a determined amount of equity index futures contracts, effectively reducing the net market exposure. A fundamental goal of the ML framework is capital loss minimization, subject to which return above benchmark will be maximized.

The algorithm for the ML portfolio optimization tool is logically separated into two core components. The first component consists of supervised ML models, which are trained to predict future market prices for the underlying ETF as accurately as possible. The second component consists of an optimization algorithm that determines the ideal percentage of the fund value to allocated to the underlying ETF, given the current state of the market and the predicted price movements from the supervised models.

## The Projected Performance

The assumptions made in the data presented in the tool as projected performance are detailed below:

### Capital markets

#### Underlying return data used:

Morningstar Target Risk indices (Conservative, Moderate and Aggressive). Bloomberg tickers MSAAMCNR, MSAAMMOR, and MSAAMAGR)

The Morningstar Target Risk Indices are used to represent each of the capital market investment options, (Conservative, Moderate and Unconstrained)

#### Data source:

Bloomberg

#### Frequency of data used for Tool simulator:

Monthly, annualised return and standard deviation using Monte Carlo Simulation

#### Time period:

Since inception of the Morningstar Target Risk indices (Dec'99-Oct'18), using log returns.



**Methodology:**

Return forecasts are based on a Monte Carlo simulation using 30 simulations and 40 years of annual data points. The average returns for the minimum, median and maximum over these 30 simulations, are then used for the low, medium and high growth scenarios.

**Digital Assets**

**Underlying return data used:**

The back-tested return results of the C10 Digital Asset Portfolios for C10 Conservative, Moderate and Unconstrained.

This represents each of the risk-profiled capital market investment options

**Data source:**

Invictus Capital data science and machine learning algorithm. In addition to the C10 back-tested return results, the Nasdaq investable exchange-trade fund (ETF) i.e. Invesco QQQ Trust Series1, with Bloomberg ticker QQQ US Equity.

**Frequency of data used for Tool simulator:**

Monthly, annualised return and standard deviation using Monte Carlo Simulation

**Time period:**

For the Nasdaq ETF, two period are identified. Period 1 - Accelerated growth period, prior to sharp market decline, or tech bubble (Apr'99 to Mar'00). Period 2. Long-term growth period (Oct'02-Oct'18).

For C10 Portfolios, Jan'17-Sep'18, Period 3.

Log returns are used.

**Methodology:**

Return forecasts are based on a Monte Carlo simulation using 30 simulations and 40 years of annual data points. The average returns for the minimum, median and maximum over these 30 simulations, are then used for the low, medium and high growth scenarios.

In order to derive a forecast for the long-term digital assets growth, the accelerated and long-term growth periods of the Nasdaq ETF are used to standardised the C10 Portfolios. The return/risk profile of the Nasdaq during the accelerated growth period is used to standardised the C10 Portfolios during a similar price pattern period (Period 1 and Period 3) by means of a relative risk-adjusted (Sharpe ratio\*) multiple. The long-term growth period (Period 2) of the Nasdaq, by means of annualised return and risk parameters, is used as basis to forecast the low, medium and high growth of the C10 portfolios.

\* Sharpe ratio = annualised return divided by the annualised standard deviation. Assuming a risk-free rate of 0%.