

REFINITIV INDICES

VENTURE CAPITAL INDEX METHODOLOGY

September 2021

Refinitiv Venture Capital Index Methodology

Version 1.0

Contents

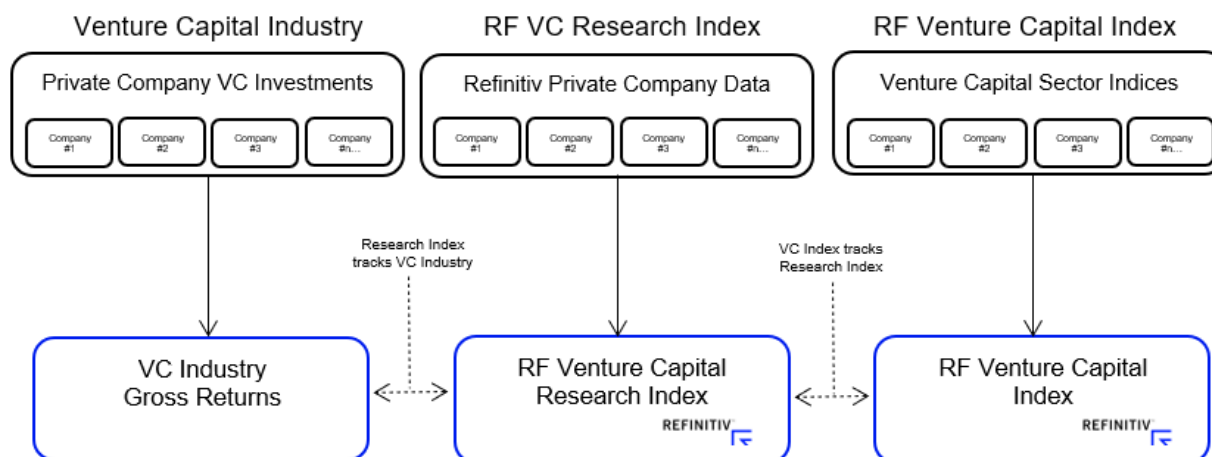
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Introduction

The **Refinitiv Venture Capital Index** (“RF VC Index”) tracks the return of the venture capital universe by replicating movements in the Refinitiv Venture Capital Research Index (“RF VC Research Index”). The RF VC Research Index is constructed from observed valuations of venture-backed firms at discrete points in time, such as during funding rounds, acquisitions, and exits. These observed valuations fuel a sophisticated econometric methodology that estimates the value of each venture-backed firm in every month, not just the months in which the firm value is observable. Aggregating this time-series of firm values, the RF VC Research Index constructs a value-weighted index of the returns to a theoretical fully-diversified portfolio of venture-backed firms capturing a high percentage of all VC-backed companies.

The nature of the valuation events used in the RF VC Research Index is such that data are available only after some significant delay, and are subject to revision for some time after they become available. As a result, the RF VC Research Index returns are published on a quarterly basis, and are subject to revision for 8 quarters.

The Refinitiv Venture Capital Index seeks to replicate the return profile of the VC industry by constructing a theoretical dynamic portfolio in public, liquid assets that tracks the movements of the RF VC Research Index, which in turn tracks the VC industry. Since this portfolio is constructed using observable prices and indicators; its return can be computed in real-time, providing immediate information about movements in the VC universe. Further, since the VC Index portfolio is constructed using liquid securities and is not subject to revision, it is an appropriate benchmark for investable products seeking to achieve venture capital returns in real time.



The RF VC Index is constructed as the return to a theoretical portfolio containing a series of venture capital sector indices (“sector indices”), each seeking to replicate a sector of the VC universe, as well as universal characteristics of VC-backed firms. The sector indices are constructed using proprietary econometric models and seek to mimic the risks and return

characteristics of venture-backed firms associated with each economic sector. These sector indices, in turn, contain liquid securities which may include equities, derivatives, and indices, among others. These securities can be priced in real time and, when weighted appropriately, seek to mimic the behavior of the Refinitiv Venture Capital RF VC Research Index.

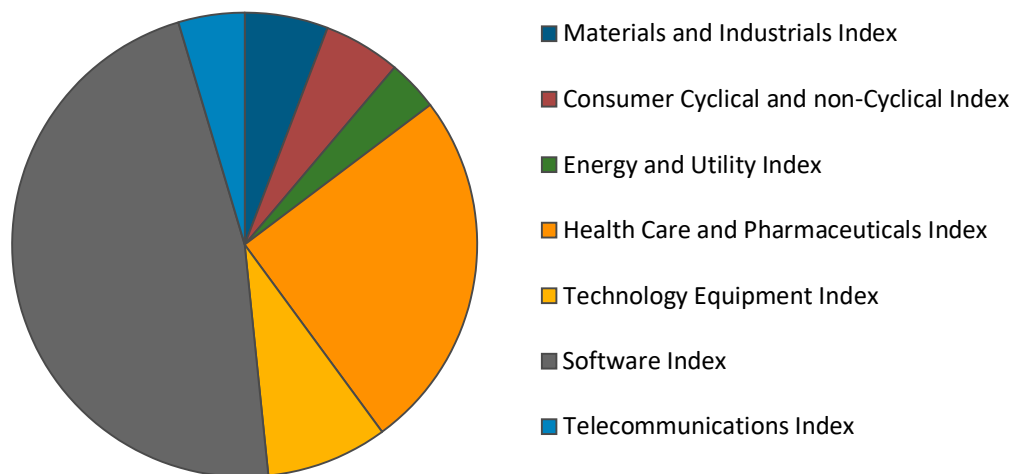
It should be noted that the Refinitiv Research and VC Indices seek to match the returns of the venture capital industry (asset class) *before* fund-level management and incentive fees.

Annualized Return	January 1996 - September 2012
Refinitiv Venture Capital Research Index:	19.67%
Refinitiv Venture Capital Index:	19.38%
Refinitiv US Technology Index:	9.03%

Weighting Methodology

The RF VC Research Index tracks the performance of venture-backed private firms across a number of economic sectors. These firms, collectively, make up the venture universe. The approach of the RF VC Index is to construct portfolios that seek to mimic characteristics of the venture firms in each economic sector in the venture universe and, jointly, to capture the risks/reward characteristics of venture capital as an asset class.

Research Sector Composition by Capitalization Sep 30, 2012



Within the computation of the RF VC Research Index, each VC-backed firm is mapped to a Refinitiv (“RF”) sector. The penultimate result of the RF VC Research Index computation is a list of the estimated values of each venture-backed firm in each month. Using these VC firm weights, we can compute the weight of each Refinitiv sector in the VC universe. These weights are used in determining the final weights of the specially constructed, venture-like sector indices corresponding to each Refinitiv sector.

Venture Capital Sector Indices

The RF VC Index is computed as the weighted return of seven RF VC sector indices.

Refinitiv Venture Capital Sector Indices:

- Refinitiv Venture Capital Materials and Industrials Index
- Refinitiv Venture Capital Consumer Cyclical and non-Cyclical Index
- Refinitiv Venture Capital Energy and Utility Index
- Refinitiv Venture Capital Health Care and Pharmaceuticals Index
- Refinitiv Venture Capital Technology Equipment Index
- Refinitiv Venture Capital Software Index
- Refinitiv Venture Capital Telecommunications Index

Weight Computation

The RF VC Research Index is computed quarterly. This means that live sector weights are not immediately available for use in weighting the RF VC Index. Instead, the latest available sector weights from the RF VC Research Index are used, along with an update accounting for relative performance of each sector in the public market (market-weighted Refinitiv sector returns).

Since the RF VC Research Index and RF VC Index are value weighted, no explicit rebalance is needed on a day-to-day or month-to-month basis. However, a new set of weights is received when the RF VC Research Index is updated once a quarter; therefore a quarterly rebalance is computed using the following:

Let the weights of each VC sector as of the last published RF VC Research Index month be denoted by W_{t-j}^i . Here i denotes the sector, t the current date, S is the performance of the matching RF VC index, and j the number of months that have passed since the last available RF VC Research Index weight. The current weights can be computed using:

$$W_t^i = \frac{(1 + S_{t-j,t}^i) * W_{t-j}^i}{\sum_{k=1}^7 (1 + S_{t-j,t}^k) * W_{t-j}^k}$$

Thus the required portfolio weights are last known weights of those sectors in the VC industry, updated using relative performance of corresponding RF VC Indices.

Index Computation

Although the RF VC Index seeks to track the non-tradable RF VC Research Index, its sector indices are made up of liquid securities. The RF VC Index returns are computed in a similar fashion to other weighted total-return portfolios in public equities. Thus, the RF VC Index monthly return is computed:

$$R_t = \sum R_t^i * W_t^i$$

These 7 sector indices include the 7 portfolios associated with RF sectors. Notice that R_t^i in this equation denotes the return to sector index i in period t and W_t^i is the weight sector index i receives in period t (that is, the weight implemented at time $t-1$ and affecting the return until time t).

Once the returns are calculated, the RF VC Index levels are then computed:

$$L_t = L_{t-1} * (1 + R_t)$$

The base value of the RF VC Index is 100 as of January 1, 1996.

GOVERNANCE

Index Action Committee (IAC)

The Index Action Committees (IAC) for the Refinitiv Venture Capital Index is composed of representation from the Refinitiv Indices and independent outside members of the financial community (TBD).

The main activity of this Index Action Committee is to ensure that the attributes the Refinitiv Venture Capital Index claims to possess are indeed present. These reviews take place a week before the quarterly rebalance results are published (3rd Friday in April, July, October and January). The Index Action Committee deals with making sure algorithm that calculates the index is accurate. The committee will also review the results of the quarterly rebalance and reserves the right to make any necessary changes.

ABOUT REFINITIV INDICES

Refinitiv Indices

Refinitiv is the world's leading source of intelligent information for businesses and professionals. We combine industry expertise with innovative technology to deliver critical information to leading decision makers in the financial, legal, tax and accounting, scientific, healthcare and media markets, powered by the world's most trusted news organization.

Refinitiv provides trusted and innovative indices and index-related services to the investment community. Our index business leverages Refinitiv global footprint and unparalleled depth and breadth of the financial markets to provide our clients with:

- **Beta-generating Indices**
- **Alpha-creating Indices**
- **Custom Index Services**
- **Index Calculation Services**
- **Sector Classification with TRBC**

Whether you require indices for benchmarking or for the development of investment vehicles, Refinitiv offers a range of index solutions to satisfy your requirements. Delivered via Refinitiv platforms and data feeds, Refinitiv Indices leverage the latest technologies for ease of use and convenient delivery.

Refinitiv Indices are used by investors such as plan consultants, investment managers, mutual fund providers, ETF providers, financial advisors, investment banks, stock exchanges and the media. Refinitiv does not provide financial advice to clients, which allows for the provision of truly objective market information.

Each index is constructed employing content sets with the highest data integrity. They are transparent and designed to provide unbiased and neutral measures of the markets. Our rigorous financial models, analytics and classifications provide insight needed to make better investment decisions.

CONTACT US:

For further information, visit the Refinitiv Indices [website](#) or Index_Queries@refinitiv.com