



## Return on Invested Capital (ROIC) Calculation

This backtest data set contains the data we use to calculate [ROIC](#). This data set contains point-in-time data. See below.

This data is available through our [API](#) in the [Return on Invested Capital endpoint](#). Historical data provided through the API is best-available data as of today, not the point-in-time data presented in this backtest data set.

### Economic Rationale for ROIC - Why ROIC Matters

Return on invested capital (ROIC) is the primary driver of valuation and most important measure of corporate performance. Put simply, ROIC measures how much profit a company generates for every dollar invested in the company. The difference between our ROIC and other firms' ROIC is that ours is based on better data as demonstrated in this [white paper by Ernst & Young](#). Our [Robo Analyst technology](#) allows us to scale the most accurate calculation of ROIC across thousands of companies.

### ROIC Datapoints

Invested Capital is the year-end value of the money invested in a business over its lifetime.

Average Invested Capital is the average value of invested capital over the year, adjusted for acquisitions. The denominator of our ROIC calculation.

Average GAAP-Based Invested Capital is the average invested capital calculated based only on reported GAAP data from the financial statements. GAAP-Based Average Invested Capital is what is generally provided by other data providers. This is compared to New Constructs' Average Invested Capital, which is based on critical information from the MD&A and footnotes.

Beginning Invested Capital is the value of invested capital at the beginning of the year.

GAAP-Based Invested Capital is invested capital calculated based only on reported GAAP data from the financial statements. GAAP-Based Invested Capital is what is generally provided by other data providers. This is compared to New Constructs' Invested Capital, which is based on critical information from the MD&A and footnotes.

Gross Invested Capital is calculated like our regular Invested Capital calculation, but also includes accumulated depreciation and amortization. We use Average Gross Invested Capital as the denominator in our ROIC calculation.

Average Gross Invested Capital is calculated like our regular Average Invested Capital calculation, but also includes accumulated depreciation and amortization. We use Average Gross Invested Capital as the denominator in our ROIC calculation.

Average Invested Capital Using Last 4 Quarters is the average invested capital of the last four quarters.

Average Invested Capital Using Year-over-Year Data is the average invested capital using the year-over-year period-beginning and -ending values.

NOPAT (Net Operating Profit After Tax) represents the unlevered, normalized, recurring after-tax cash flows of the business.

GAAP-Based NOPAT is NOPAT calculated based only on reported GAAP data from the financial statements. GAAP-Based NOPAT is what is generally provided by other data providers. This is compared to New Constructs' NOPAT, which is based on critical information from the MD&A and footnotes.

Gross NOPAT (Net Operating Profit After Tax) is calculated like our regular NOPAT calculation but with depreciation and amortization expense added back.

Return on Gross Invested Capital (ROGIC) is Gross NOPAT divided by Average Gross Invested Capital. Gross NOPAT is calculated like our regular NOPAT calculation but with depreciation and amortization expense added back. Gross Invested Capital is calculated like our regular Invested Capital calculation, but also includes accumulated depreciation and amortization.



ROIC (Return On Invested Capital) is return on invested capital, calculated using NOPAT / average invested capital.

ROIC (Return On Invested Capital) Using Ending Invested Capital is the return on invested capital using period-end invested capital.

ROIC (Return On Invested Capital) Using Beginning Invested Capital is the return on invested capital using period-beginning invested capital.

ROIC (Return On Invested Capital) Using Average Quarterly Invested Capital is the return on invested capital using the average invested capital of the last four quarters.

ROIC (Return On Invested Capital) Using Year-over-Year Average Invested Capital is the return on invested capital using the year-over-year average invested capital.

GAAP-Based ROIC is the return on Invested Capital calculated based only on reported GAAP data from the financial statements. GAAP-Based NOPAT and Average Invested Capital is what is generally provided by other data providers. This is compared to New Constructs' NOPAT and Average Invested Capital, which are based on critical information from the MD&A and footnotes.

### **Coverage**

New Constructs covers:

~2800 currently active stocks.

~2700 currently inactive stocks that appear in the historical data.

Coverage information is updated daily and available on our website:

<https://client.newconstructs.com/nc/coverage/view.htm>

### **Time Frame - 1998 to Present**

Our company data sets begin in 1998 when SEC filings were made available in electronic form.

### **Source**

We source all data directly from the annual and quarterly SEC filings using our proprietary [Robo Analyst technology](#). All calculations are our own.

### **Point-in-Time Data**

New Constructs data is provided as of the data availability date presented in the data. See information on data availability dates below.

### **Data Fields**

**ticker** - The ticker for the security on the file generation date. Tickers that include a colon are currently inactive stocks. They are no longer traded because they were acquired, went bankrupt, etc. We assign the last used ticker to the security following by a colon and a number that increments for each new company that becomes inactive with that ticker. For example, XYZ Corp uses ticker XYZ and goes inactive. We assign the company the ticker XYZ:1 because it is the first company in our system to go inactive using ticker XYZ. If a different company, XYZ Technology, starts using ticker XYZ and goes inactive, it will be assigned XYZ:2.

A list of tickers and company names is available on our website at <https://client.newconstructs.com/nc/coverage/view.htm> or through the coverage endpoint of our API, see <https://client.newconstructs.com/nc/documentation/api.htm>

**company\_name** - The name of the company on the file generation date.

**cik** - The Central Index Key (CIK) used by the SEC to identify corporations and individuals who have filed with the SEC. We do not provide CUSIPs or other industry identifiers for securities. CIK is provided to help map securities from New Constructs to other data sets. For active companies, the CIK is the one in use by the SEC on the data generation date. For inactive companies, the CIK is the last one in use by the company prior to its being inactivated.

**figi** - The Financial Instrument Global Identifier (FIGI) is an established global standard issued under the guidelines of the Object Management Group (OMG.org, an international, non-profit standards organization),



founded in 1989. FIGI is provided to help map securities from New Constructs to other data sets. At this time, we only provided FIGI for active securities. Please see <https://www.openfigi.com/> and <https://www.openfigi.com/assets/local/figi-allocation-rules.pdf> for details on OpenFIGI and its use.

**stock\_exchange** - The exchange on which a ticker trades. For active stocks, the exchange is the one on which the ticker was traded on the data generation date. For inactive stocks, the exchange is the last one on which the ticker was traded prior to its being inactivated.

**company\_status\_current** - Actively traded stocks are marked as 'live'. Inactive stocks are marked as 'inactive'. This is the status of the security on the data generation date.

**fiscal\_year** - The fiscal year of the most recent filing used in the model.

**fiscal\_quarter** - The fiscal quarter of the most recent filing used in the model. If the most recent filing is an annual filing, this field will be null, indicating the data belongs to an annual model. If the most recent filing is a quarterly filing, this field will show the quarter: 1, 2, or 3, indicating the data belongs to a TTM model.

**filing\_type** - The filing type of the most recent filing used in the model - generally a 10-K or 10-Q, though other filing types are also used.

**filing\_date** - The date the most recent filing used in the model was filed with the SEC.

**period\_end\_date** - The period end date of the most recent filing used in the model.

**actual\_data\_availability\_date** - The date that New Constructs provided this data to clients on our website, in data feeds, or any other distribution method. The data availability date is the real historical date this data was available to clients. For companies added to coverage, the data\_availability\_date for all historical data will be the date we added the company to coverage. For example, we added Summit Materials, Inc. (SUM) to coverage in January 2018, so the data\_availability\_date for all SUM data prior to January 2018 is January 2018. SUM's data was made available to clients on that date. The data set includes data for SUM back to the first date we can generate a model for SUM in 2016. For backtest purposes, we also provide an implied data availability date. See below.

**implied\_data\_availability\_date** - The date that New Constructs would have provided this data to clients on our website, in data feeds, or any other distribution method assuming that we covered the security at the time with our current system & [Robo-Analyst technology](#). For backtesting purposes, this date is most similar to the data\_availability\_dates for SEC filings filed today. It is provided as a reasonable data availability date for historical data to most closely match current practices and technology. See data\_availability\_date above for information.

**model\_date** - The historical date for which the model was generated. In the data set, there is one model\_date at the beginning of every other month for each security. New Constructs backtest data is bimonthly recalculated data. The backtest data in this file are as calculated by our system on the indicated data\_generation\_date, once for every other month on the first trading date over the historical period. Only data available on the model\_date is used to calculate our ratings and metrics. No future data is used.

**data\_generation\_date** - The date on which the data was generated.

**Data Value Data Fields** - The following data fields are columns in the data set. All values are reported in ones units.

**ROIC Sample Data**

Name	Datapoint	Example (LEG 2016)
Invested Capital	CAPITAL_INVESTED	\$3,085,850,440
Average Invested Capital	CAPITAL_INVESTED_ADJUSTED	\$3,104,394,024
Average GAAP-Based Invested Capital	CAPITAL_INVESTED_ADJUSTED_GAAP	\$2,069,400,000
Beginning Invested Capital	CAPITAL_INVESTED_BEGINNING	\$3,075,737,977
GAAP-Based Invested Capital	CAPITAL_INVESTED_GAAP	\$2,071,600,000
Gross Invested Capital	CAPITAL_INVESTED_GROSS	\$4,251,250,440
Average Gross Invested Capital	CAPITAL_INVESTED_GROSS_ADJUSTED	\$4,268,219,024
Average Invested Capital Using Last 4 Quarters	CAPITAL_INVESTED_Q_AVG	\$3,104,394,024
Average Invested Capital Using Year-over-Year Data	CAPITAL_INVESTED_YOY_AVG	\$3,080,794,209
NOPAT (Net Operating Profit After Tax)	NOPAT	\$380,509,804
GAAP-Based NOPAT	NOPAT_GAAP	\$363,633,237
Gross NOPAT (Net Operating Profit After Tax)	NOPAT_GROSS	<b>\$442,247,072</b>
Return on Gross Invested Capital (ROGIC)	ROGIC	10.36%
ROIC (Return On Invested Capital)	ROIC	12.26%
ROIC (Return On Invested Capital) Using Ending Invested Capital	ROIC_CAPITAL_INVESTED	12.33%
ROIC (Return On Invested Capital) Using Beginning Invested Capital	ROIC_CAPITAL_INVESTED_BEGINNING	12.37%
ROIC (Return On Invested Capital) Using Average Quarterly Invested Capital	ROIC_CAPITAL_INVESTED_Q_AVG	12.26%
ROIC (Return On Invested Capital) Using Year-over-Year Average Invested Capital	ROIC_CAPITAL_INVESTED_YOY_AVG	<b>12.35%</b>
GAAP-Based ROIC	ROIC_GAAP	17.57%

Sources: New Constructs, LLC and company filings