

# TRUPANION INC TRUP

**\$62.66 | SELL**

Trupanion, Inc., together with its subsidiaries, provides medical insurance for cats and dogs on a monthly subscription basis in the United States, Canada, Puerto Rico, and Australia. The company operates in two segments, Subscription Business and Other Business. It serves pet owners and veterinarians. The company was formerly known as Vetinsurance International, Inc. changed its name to Trupanion, Inc. in 2013. The company was founded in 2000 and is headquartered in Seattle, Washington.

### PRVit Scores & Ratings: Latest Changes

Date	Action	Rating	Share Price
2/16/2018	▼ Downgrade	SELL	\$29.68
11/8/2016	▲ Upgrade	UNDERWEIGHT	\$14.81

### Sector: Non-Spread Financials

**TRUP PRVit Score vs. Sector: 0**



**PRVit Score vs. Sector:** TRUP's PRVit score is at the 0th percentile of all firms in its industry, which leads to a recommendation to Sell. TRUP is less attractively priced in relation to its true value than almost all of the stocks in its industry.

### PRVit Score vs. Market: 3

Higher is better



### Sector Median Score: 51

Higher is better



TRUP's market score is at the 3rd percentile when rated against all Russell 3000 companies, as is explained in the section below. By comparison, the median firm in TRUP's industry rates a market score of 51, which indicates the market is paying a normal multiple of past performance trends for industry firms. TRUP's market score thus converts to its official in-industry PRVit score of 0.

### Performance Score (P): 14

Higher is better



TRUP's low return on capital and highly disappointing EVA profit trend result in a very weak, 14th percentile P score.

### P1 Profitability: 23

Higher is better



### P2 Trend: 13

Higher is better



**P1 Profitability** measures the firm's financial strength in generating an attractive return on capital.

**P2 Trend** indicates the expansion rate in the firm's economic profit from productivity gains and profitable growth.

### Risk Score (R): 66

Lower is better



TRUP's moderate return variability and weak financial condition combine for a high, 66th percentile R score.

### R1 Volatility: 46

Lower is better



### R2 Vulnerability: 74

Lower is better



**R1 Volatility** measures variability of the firm's return on capital and stock price.

**R2 Vulnerability** measures inability to withstand shocks; leveraged, negative cash flow firms are suspect.

### Valuation Score (V): 93

Lower is better



TRUP's elevated market valuation compared to book value, earnings and cash flow combine for a lofty, 93rd percentile V score.

### V1 Wealth Ratios: 90

Lower is better



### V2 Wealth Multiples: 92

Lower is better



**V1 Wealth Ratios** measures the firm's market-to-book ratios.

**V2 Wealth Multiples** measures the firm's price to earnings and cash flow multiples.

### TRUP vs. Market: 3

Higher is better



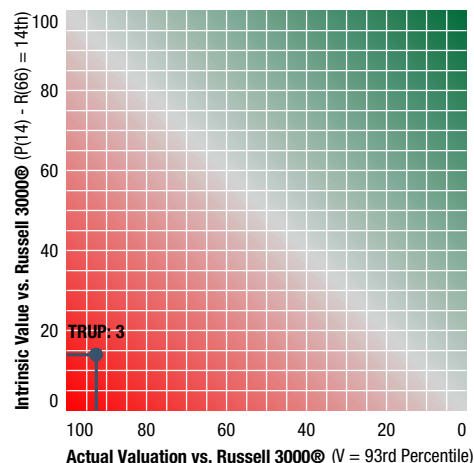
TRUP's very weak performance (14th percentile vs. Russell 3000 companies), coupled with its high risk (66th percentile), indicates a very low intrinsic valuation is warranted (14th percentile), which compared to its actual market valuation (93rd percentile at its \$62.66 share price) makes for a PRVit score of 3rd percentile vs. the market.

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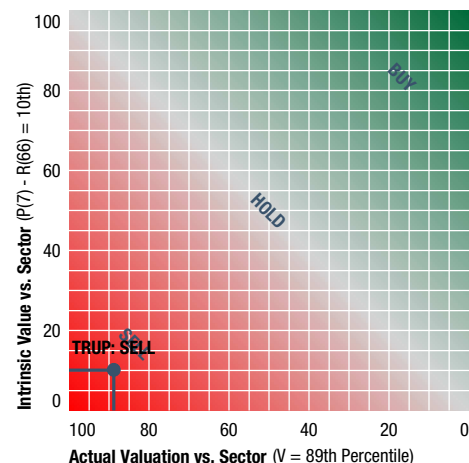
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The **PRVit Matrix** depicts a company's PRVit score by plotting its "intrinsic" value score – what PRVit rates the firm is truly worth based on its risk-adjusted performance, i.e., its comparative P-R score – against its actual valuation score – which reflects the company's current trading multiples. Companies rated "Hold" plot along the diagonal, where the firms' actual valuation multiples align with their intrinsic values. "Buys" plot in the upper right green zone, where PRVit rates the firms as more valuable than their stock prices indicate, and "Sells" appear in the lower left red zone, where the firms' P-R scores fall short of their V scores. The grid on the left rates the firms against the entire market, and the right hand one ranks just against their sector peers (which is the basis for the official "PRVit" score).

**TRUP PRVit Score vs. Market: 3**



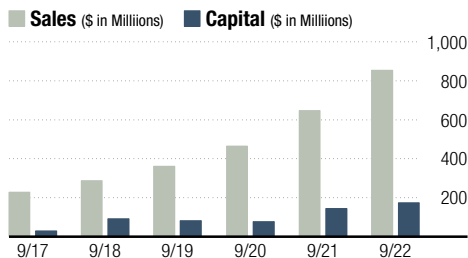
**TRUP PRVit Score vs. Sector: 0**



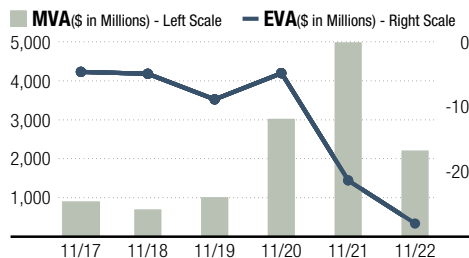
**PRVit Measures Overview:** A company's performance is "strong" when its Return on Capital (ROC) exceeds its Cost of Capital (COC), and it is increasing its EVA -- the profit earned over the full COC, which includes earning a minimum return on equity. Many firms that look profitable by EBITDA or EPS aren't when judged by EVA. EVA repairs other distortions: restructuring charges are added back, research is written off over time, leased assets are treated as if owned, and tax gyrations are smoothed. The result: EVA is a sounder measure of economic profit and more reliable indicator of added market value than reported earnings.

Risk is indicated by stock price and return volatility and reliance on debt financing, offset by "free" cash generation, which betokens liquidity and staying power.

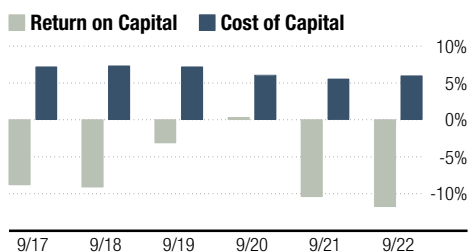
Valuation is measured by Market Value Added (MVA) – the spread between a firm's overall market value and its balance sheet capital – which is also the amount of wealth a company has created or destroyed. MVA and EVA should be linked. A firm's MVA should equal its projected EVA profit, discounted to present value. If a firm just breaks even on EVA, its market value should nearly match its book capital. Only profitable, EVA expanding firms should trade for MVA premiums. Buy/Sell opportunities arise when MVAs are mis-aligned with the record for earning and increasing EVA.



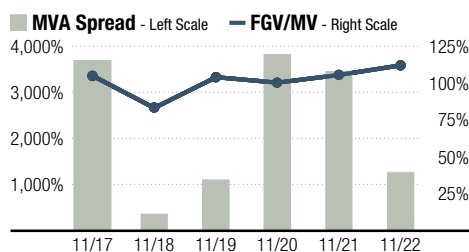
Sales growth has averaged 30% but was 39% in the most recent year. On average, every dollar of Sales has been supported by Capital of \$0.24, but capital intensity last year was \$0.21 per \$1.00 of sales.



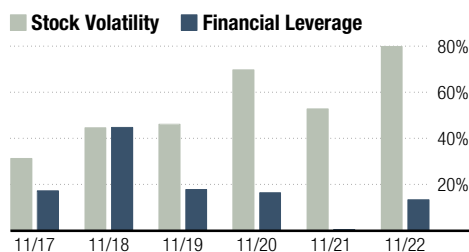
TRUP's MVA climbed against the grain of a softening EVA, but a recent MVA downturn suggests investors' patience is wearing thin.



TRUP's profitability recently headed south, as the current return on capital of -10.6% is lower than the -4.8% 3-year average.



112% of the company's market value is dependent on future growth in EVA, which is very high among the Russell 3000 companies.



TRUP's stock price volatility of 70% is close to the 3-year average volatility of 63%. Financial leverage has fallen, but increased recently and is now in the 74th percentile.

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## PRVit Scores and Measures

**PRVit Score vs. Sector:** The percentile rank of a firm's "intrinsic" value compared to its actual market valuation, rated against all firms in its sector. Companies with high in-sector PRVit scores are bargains, offering relatively more real economic performance, net of risk, per unit of value, and thus they are expected to outperform other lesser rated firms in their sectors.

In-sector PRVit scores are always equally distributed among the stocks in a sector, with a perfect balance between Buys and Sells, for instance, and a median score of 50 in all sectors, which means that any bias to favor one sector over another is removed. The in-sector scores tell which stocks to buy and which to sell once a decision to invest in a sector has been made. A company's score in its sector is its official "PRVit" score, and determines its Buy/Hold/Sell rating.

**PRVit Score vs. Market:** The percentile rank of a firm's "intrinsic" value compared to its actual market valuation, rated against all Russell 3000 firms. A firm's intrinsic value is based on its ability to predictably earn and increase EVA profit, as measured by its performance score (P) less its risk score (R). The firm's actual market valuation score (V) is derived from a composite ranking of 4 valuation multiples generally based around MVA, the market value less book capital measure of shareholder wealth. The firm's PRVit score is thus the ratio of its P score less its R score, divided by its V score, expressed as a percentile against all Russell 3000 firms. It is a comparative index of the firm's risk-adjusted return on value. The higher the yield, the higher the score, and the more attractive the stock is to own. PRVit scores vs. the market implicitly incorporate the general outlook for the sector in which the company participates, and thus, the official PRVit score is measured "in-sector," after removing the sector influence.

**Sector Median Market Score and Removing the Sector Bias:** The median score is the PRVit score vs. the market that falls in the middle of the sector pack. A low median score is typical of sectors where investors are generally willing to pay high multiples of the past performance trends, and high median scores, the opposite – sectors where the market is heavily discounting past performance in setting current stock prices. Companies may thus be highly or lowly rated only because they are in a "value" or "growth" sector, or in one that's generally rebounding or tumbling, and not because they are inherently good or bad investments. In-sector PRVit scores remove the sector bias by ranking companies solely against other firms in the same business line, which makes it the official "PRVit" score and basis for the Buy/Hold/Sell ratings.

**PRVit Scores & Ratings: Meaning & Distribution:** Stocks with "in-sector" PRVit Scores of 80-100 are rated Buy/Significant outperformance relative to sector peers, 60-79 are rated Overweight/Slight outperformance relative to sector peers, 40-59 are rated Hold/Performance in-line with the sector, 20-39 are rated Underweight/Slight underperformance relative to sector peers, and 0-19 are rated Sell/Significant underperformance relative to the sector. All five rating categories always have a distribution of 20%. PRVit has no built in bias to buy or sell stocks in general, but only, to identify those which represent the best and worst bets in their sector.

**P: Performance Score:** Indicates the firm's ability to justify a high valuation by earning and increasing economic profit (i.e., its EVA). It is a blended function of its Profitability and Trend, as defined below:

**Profitability:** measures the firm's basic financial strength in generating a return on capital above its cost of capital. With higher profitability (as judged by EVA Margin and EVA Spread), a firm is capable of generating more cash while it grows, and is better able to raise new capital if needed.

**Trend:** measures the degree to which the firm is on a path of increasing its EVA profit (and generating positive EVA Momentum).

**R: Risk Score:** An aggregate measure of the uncertainty surrounding an extrapolation of past performance trends. The Risk score is high when a firm's stock price, returns and growth are volatile and it is vulnerable to economic cycles (as defined below).

**Volatility:** measures the variability and hence inherent unpredictability of the firm's return on capital, EVA, and its stock price.

**Vulnerability:** measures the firm's inability to withstand shocks -- which is characteristic of small, emerging firms, with negative "free" cash generation after investment spending, and high dependency on debt and external financing.

**V: Valuation Score:** An aggregate measure of the company's relative market valuation at its current share price. The Valuation score is high at firms that trade at significant premiums to book value, earnings and cash flow.

**Wealth Ratios:** indicated by the firm's market value to book value ratio (i.e., its MVA Spread and MVA Margin). A premium valuation is warranted only when a firm is currently earning profit above a threshold return (i.e., EVA) or is expected to rapidly increase it over a long time horizon.

**Valuation Multiples:** measures the ratio of the firm's market value to its earnings and cash flow (as judged by its Enterprise Multiple and Future Growth Reliance).

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## Glossary of Terms

### Performance Metrics:

**Return on Capital (ROC).** The yield a company is generating on the funds that creditors and shareholders have collectively invested in the firm.

ROC is specifically defined as net operating profit after taxes, or NOPAT, as a percentage of total capital employed. "Capital" in this context is a firm's total borrowings and its shareholders' equity, or what is the same thing, its net operational assets – the sum of its working capital, fixed plant, equipment and property assets, and other assets, including intangibles. NOPAT is correspondingly the profit attributable to the capital – before deducting any interest or other financing expense – which makes ROC a gauge of a firm's ability to productively invest and manage the resources put at its disposal regardless of how financed.

NOPAT and capital are also measured after making a series of corrective adjustments that undo accounting distortions. Accounting rules mandate, for example, that research and development and advertising spending be written off against corporate earnings right away, as the money is spent. But in fact, such outlays are in the main vital investments that improve productivity and increase brand value and customer satisfaction. Therefore, a new rule is followed to measure NOPAT and capital, which is to add the outlays to balance sheet assets and to write them off over a period of years. That way, a boost in the spending doesn't inexplicably diminish a company's earnings and depress its ROC in the year it is spent. Rather, the cost is spread over time – to match the expected benefits. Another advantage is that the rate of return the firm is actually earning on its investments in innovation and in building brands can be more accurately gauged and compared with other firms.

The adjustments don't stop there, of course. In the same spirit, restructuring charges and asset write-downs are taken out of earnings, and added back to balance sheet capital. Mere accounting strokes of the pen have no impact on ROC, therefore. Assets rented are added to capital as if they were owned, and the interest component of rent expense is added back to NOPAT. Surplus cash and the related income are set aside, so that a massive cash distribution to investors, such as Microsoft undertook in 2004, has no effect on ROC (though it sends ROE – return on equity – haywire). Period to period fluctuations in the effective tax rate, too, are smoothed to better reveal underlying profitability. All told, some 50 adjustments are called into play to correct bookkeeping flaws.

The result is that unlike the conventional ROE computed from reported financial figures, the ROC measure that ISS-EVA uses enables more uniform and informative comparisons of performance over time for a given company, and across firms and sectors that are inherently quite different in their business models and financial make-up. It neutralizes the varying degrees to which firms use intangible capital (like patents, know how, and brands) vs. tangible capital (inventories and plant), the mix of owning versus leasing assets, and the mix of debt versus equity financing, to name a few.

Financial institutions require a special treatment. Financing assets with appropriate funding sources is an operating decision for a financial intermediary, and interest expense is akin to cost of goods sold. Hence, "capital" defined as common equity capital, as adjusted, and NOPAT is measured after treating interest expense as an operating expense.

**Economic Value Added (EVA).** EVA is the name given to a special way of measuring corporate profit that follows economic logic rather than doggedly conforming to accounting rules. The chief difference is that, under EVA, profit is measured after setting aside a minimum return to compensate shareholders for bearing risk, which is an invisible but nevertheless quite real "opportunity cost" that accounting records miss entirely. EVA recognizes that a firm isn't really profitable until it earns at least the return that its shareholders could earn on their own by investing in an equally risky basket of stocks. This one change means that many companies that appear to be profitable and profitably expanding when judged by their EBITDA or net income or EPS, aren't really profitable at all when judged by the EVA standard.

To be specific, EVA is computed as net operating profit after tax, or NOPAT, less a

"capital charge" one computes by multiplying the firm's capital by the overall, weighted average percent interest cost of its debt and equity capital (a figure that is generally 7%-12%, depending on the risk of the firm). EVA may also be thought of as the percent spread between a firm's return on capital (ROC) and its cost of capital (COC), times the amount of capital it employs. In other words, it is thus the dollar spread of the return on capital less the cost of capital.

A firm's EVA increases when it pares wasteful costs and earns a higher ROC on its installed capital base, when it grows by investing new capital in projects and strategies that more than cover the threshold return, and when it releases capital that is earning beneath its cost – such as by improving asset turns, paring marginal lines of business or selling or outsourcing assets worth more to others. Thus, an increase in a firm's EVA, even if it is just making a negative EVA less negative, is as sure a sign a company is making progress as generally exists, and that it is increasing the value of the firm above the capital invested in it, spread which goes by the name of MVA, standing for "market value added."

**EVA Spread.** The ratio of EVA/Capital, which is also the same as the percent spread between ROC and COC. It shows whether and by how much the firm's return on capital – properly measured – exceeds, or falls short, of covering it overall, weighted average cost of debt and equity capital.

**EVA Margin.** The ratio of EVA/Sales; it is the percentage of sales that ends up as EVA after all operating expenses and capital charges have been paid. It is the single best measure of a company's profit margin because it accurately consolidates pricing power, operational efficiency and the quality of asset management into one overall score.

In so doing, the EVA margin makes it possible to compare meaningfully compare asset light service businesses that require little capital, and which like Wal-Mart can generate an outstanding EVA with relatively meager operating margins, versus companies in asset intense sectors, such as semiconductor fabricators or paper mill operators that must tie up significant capital to generate sales, and which therefore are obliged to earn far higher operating margins to cover the cost of their capital before they can begin to earn EVA.

**EVA Momentum.** It is the change in a firm's economic profit in a given period divided by its sales in the prior period. For example, if a company increases its EVA by \$10 million on last year's sales base of \$1billion, then its EVA Momentum is 1% for the year. Said another way, it is the size-adjusted change in economic profit. It is the only financial ratio where a bigger number is always better, because it's the only ratio that always increases only when EVA does. That cannot be said of profit margin, return on capital, or sales or earnings growth rates, for instance. All of them can "improve" when a firm's performance and value are actually deteriorating.

EVA Momentum levels cross-company comparisons by scaling results according to size and also by measuring performance improvements – focusing on changes in EVA – which ignores legacy assets or liabilities that are already reflected in the level of EVA that is being earned. It is, for instance, positive for negative EVA businesses that are on the mend, and negative for positive EVA businesses that are slipping. EVA Momentum is thus the financial "canary in the cave," presciently signaling changes of direction in advance of conventional measures like EBITDA, EPS or ROE, which do not adequately charge profit for the use of investors' capital.

### Valuation Metrics:

**Market Value Added (MVA).** The spread between a company's overall market value and the capital employed on its balance sheet. It is the difference between the sum of cash that investors have put into or left in the business as its capital and the present value of the cash they could expect to take out of it, if only by selling their shares. As such, it represents how much wealth the firm has created. The period to period change in MVA, when coupled with the EVA profit actually earned, determines the rate of return the firm generates for its investors on the market value of their investment in the firm.

In principle, a firm is fairly valued when its MVA is priced to equal the expected sum of the EVA profit it is able to earn in the future, after discounting to a present value. Thus, businesses that just cover their cost of capital and that break even on EVA break even



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on MVA, too. They tend to trade close to the book value of their capital (actually, usually a bit more, as there is always the chance for a turnaround or takeover). On the other hand, businesses that return above the cost of capital and earn positive EVA trade for positive MVA. They are bid to market value premiums over book value, and create investor wealth. And the larger the EVA they earn and the more rapidly and surely they can expand it, the larger their MVA will be, too. It works in reverse, too. Negative EVA businesses, like many auto makers in recent years, are bid to market values that discount, sometimes quite severely, the book values of their capital, leading to a loss of shareholder wealth.

Of course, the rule above is theory, and it is not always perfectly realized across a market universe of 3000 stocks, which is the reason PRVit is often capable of identifying mis-valued stocks by weighing on the one side of the scale a set of EVA performance and risk factors that proxy for the present value of EVA, and on the other side, a variety of MVA related multiples derived from the firm's actual market valuation. The relative balance of intrinsic EVA value versus actual MVA valuation, compared to all other Russell firms, gives rise to the PRVit rating, and to insights about relative over- or under-valuations of individual companies.

**Wealth Index.** MVA/Capital, which indicates the efficiency with which a firm is creating wealth per unit of capital employed. Either a high ROC or a significant stream of new investments in positive EVA projects are necessary to justify a high MVA index.

**Wealth Margin.** MVA/Sales, which indicates the efficiency with which a firm is creating wealth per unit of sales. Either a high EVA Margin or a significant and long-lasting EVA Momentum trend are necessary to justify a high MVA margin. To be precise, a firm's MVA margin should equal the capitalized value of its current EVA Margin plus the present value sum of the EVA Momentum it will accumulate over a growth horizon of 3 -15 years.

**Future Growth Value (FGV).** The portion the firm's MVA that exceeds the capitalized value of its current EVA. It is therefore the value that investors are currently paying in anticipation of growth in EVA.

**Future Growth Reliance (FGR).** Future Growth Value/Market Value. It is the percent of the firm's overall market value that is dependent on, actually, at the risk of, continued growth in EVA. Stocks with high FGRs will qualify as PRVit "Buys" only if they are demonstrating a strong and reliable trend of improving EVA.

**Future Growth Margin (FGM).** Future Growth Value/Sales (for the most recent trailing four quarters). In principle, a fairly valued firm's FGM should equal the present value sum of the EVA Momentum it will accumulate over a growth horizon of 3 -15 years.

Either a high EVA Margin or a significant and long-lasting EVA Momentum trend are necessary to justify a high MVA margin.

**Enterprise Multiple (EM).** Enterprise Value/EBITDAR (which is EBITDA, plus rent, plus corrective accounting adjustments). EM is the number of years of pre-tax operating cash flow required to match the firm's Enterprise Value (which is just a slight variation on the aggregate market value of the firm's debt and equity). The higher the multiple, the more the firm must be able to reinvest its EBITDAR in EVA-enhancing investments and strategies.

### Risk Metrics:

**Volatility.** A composite measure of the fluctuations in the firm's ROC, EVA Margin, EVA Momentum and stock price, as measured statistically by the standard deviations over the trailing 2-3 years. The higher the variability, the less confidence that can be attached to extrapolating past performance trends into the future.

**Free Cash Flow (FCF).** Cash operating receipts minus cash operating disbursements over a period. It can also be computed as NOPAT less the change in capital over the period. A firm that earns more NOPAT than it re-invests, and which has positive "free" cash flow, is in a position to distribute the surplus to its investors or accumulate it as balance sheet cash. A firm that invests more than it earns, and which records a negative FCF, must raise debt or equity, or draw down on its excess cash balances.

**Free Cash Generation (FCG).** The ratio FCF/Capital. It is mathematically the same as the firm's ROC less the growth rate in its capital. Positive cash generation is considered a sign of liquidity and lower risk. Negative free cash generation is interpreted as a higher risk proposition. For one, it stretches out the duration of the firm's cash generation. For another, it may be the result of aggressive and unproven acquisition spending. Regardless, negative FCG generation requires external financing, and that puts the firm's growth at the mercy of market access. At the extreme, that tempts managers to resort to accounting tricks gin up earnings in order to create the appearance of steady financial strength, raising questions about the quality of the earnings and the corporate governance – a la Enron.

**Payback Horizon.** The ratio of the firm's total debt/EBITDAR (which is EBITDA plus rent plus corrective accounting adjustments). It is the number of years of pre-tax operating cash flow that is required to pay off the firm's debt, including its operating lease commitments and pension fund deficit. A high ratio raises questions about a firm's creditworthiness and its ability to pounce on fleeting opportunities and to withstand downturns, and is taken as a sign of "vulnerability."