Debt to Capital: Unscrubbed Data Creates Misleading Credit Ratings

To demonstrate the difference our <u>proprietary</u> Adjusted Fundamental data makes, we continue our <u>series of reports</u> that show how our <u>Credit Ratings</u> are <u>more reliable</u> than legacy firms' ratings. This report explains how our "Adjusted" Debt to Capital ratio is better than the "Traditional" ratio because the Traditional ratio is based on unscrubbed financial data. Debt to Capital is one of the 5 ratios that drives our Credit Ratings. Get explanations and comparisons for the other four metrics here.

Learn more about the best fundamental research

No Bias, More Coverage, and Better Analytics: A New Paradigm for Credit Ratings

Though legacy providers, e.g. Moody's, S&P, and Fitch, <u>have dominated</u> the credit ratings industry for some time, our <u>Credit Ratings</u> offer these advantages:

- more coverage: ~2,700 companies vs. ~1,500 for S&P
- more frequent updates: we update all ~2,700 of our credit ratings quarterly while S&P updates ratings for ~400 companies per year
- free of conflicts of interest that continue to taint legacy ratings.

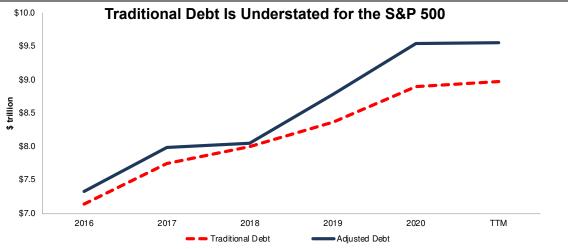
Most importantly, superior fundamental data drives material differences in our Credit Ratings and research compared to legacy firms' research and ratings. This report will show how Debt to Capital ratings for 8% of S&P 500 companies are misleading because they rely on unscrubbed data.

We also detail the differences that better data makes at the aggregate¹, i.e. S&P 500², level and the individual company level (see Appendix) so readers can easily quantify the benefits of our superior data.

Unscrubbed Debt Is Understated by -7% for the S&P 500

We use Debt as the numerator for the Debt to Capital ratio. Figure 1 shows the difference between Traditional Debt and our Adjusted Debt since 2016. Over the trailing twelve months (TTM), Traditional Debt understates our Adjusted Debt by -\$586 million, or -7% of Traditional Debt.





¹ We calculate the S&P 500 Traditional and Adjusted EBITDA by aggregating the results for all current members of the S&P 500.

² In this analysis, we use the 494 companies for which we have data back to 2016 and are currently in the S&P 500.

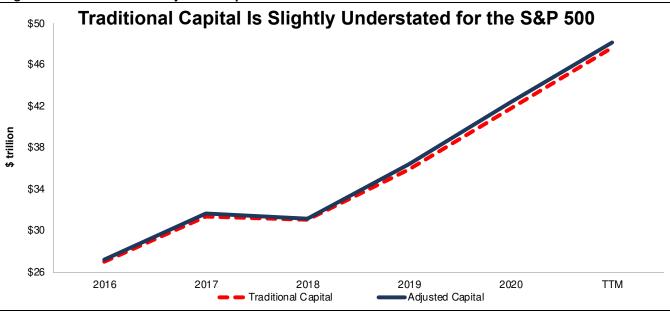


Adjusted Debt provides a more complete view of the fair value of a firm's total short-term, long-term, and off-balance sheet debt.

Traditional Capital Is Understated by Just -1% for the S&P 500

We use capital as the denominator for the Debt to Capital ratio. The difference between Traditional and Adjusted Capital are driven by adjustments to Debt. Over the TTM, Traditional Capital is understated by -\$586 billion, or - 1% of Traditional Capital.

Figure 2: Traditional Vs. Adjusted Capital for S&P 500



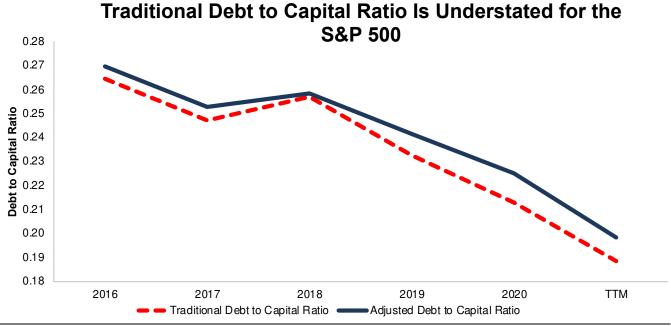
Sources: New Constructs, LLC and company filings.

Traditional Debt to Capital Ratio Is Understated by -5% at the Aggregate Level

At the aggregate level, differences between Traditional and Adjusted Debt drive the difference between the Traditional and Adjusted Debt to Capital ratios. Figure 3 shows that the Traditional Debt to Capital ratio has been understated since 2016. Over the TTM, the Traditional Debt to Capital ratio of 0.20 is higher than the Adjusted Debt to Capital ratio of 0.19 and is understated by -5%.



Figure 3: Traditional Vs. Adjusted Debt to Capital Ratio for S&P 500



Even Bigger Differences Emerge at the Individual Company Level

When analyzing individual companies, we see very large differences in Traditional and Adjusted Debt, Traditional and Adjusted Capital, and Traditional and Adjusted Debt to Capital ratios. For example, even though there is just a 1% difference between Traditional and Adjusted Capital at the aggregate level, at the company level, we find Traditional Capital understated by as much as 30% and overstated by as much as 24%. Eight percent of the firms in the S&P 500 have Traditional Capital that is over/understated by 5% or more.

Figure 4 shows the number of S&P 500 companies with understated and overstated Debt to Capital ratios. Companies with negative Debt to Capital Ratio distortion³ are understated and those with positive Debt to Capital distortion are overstated.

About 78% of S&P 500 companies' Traditional Debt to Capital ratios are overstated and 20% are understated.

Figure 4: Number of S&P Companies with Under/Overstated Debt to Capital Ratios: TTM

	# of Companies	Average Debt to Capital Ratio Distortion
Understated Ratio	100	(7%)
Overstated Ratio	392	3%
No difference	8	n/a

Sources: New Constructs, LLC and company filings.

Figure 5 lists ten S&P 500 companies with the most understated and overstated Debt to Capital ratios, by Debt to Capital Ratio distortion, over the TTM.

Note: we detail the data and disclosures that drive the differences in Traditional versus Adjusted Debt and Capital for Advanced Micro Devices (AMD) and Expedia Group (EXPE) in the Appendix to this report.

³ Debt to Capital Ratio Distortion equals (Traditional Debt to Capital ratio - Adjusted Debt to Capital ratio) / Traditional Debt to Capital ratio.

Figure 5: Companies with Under/Overstated Debt to Capital Ratios: TTM

Ticker	Name	Traditional Debt to Capital Ratio	Adjusted Debt to Capital Ratio	Debt to Capital Ratio Distortion			
	Most Understated						
ENPH	Enphase Energy Inc	0.04	0.08	(103%)			
ETSY	Etsy Inc	0.06	0.10	(78%)			
MPWR	Monolithic Power Systems	0.0003	0.0005	(46%)			
ADP	Automatic Data Processing	0.03	0.04	(39%)			
L	Loews Corporation	0.40	0.54	(35%)			
		Most Overstated					
BLL	Ball Corporation	0.23	0.01	95%			
AMCR	Amcor Plc	0.29	0.06	80%			
EXPE	Expedia Group	0.26	0.22	14%			
AMD	Advanced Micro Devices	0.01	0.01	11%			
AMT	American Tower Corp	0.24	0.21	10%			

Sources: New Constructs, LLC and company filings.

Ratings Based on Traditional Ratios Are Misleading

Not surprisingly, differences between Traditional and Adjusted ratios drive differences in the Credit Ratings we derive for Debt to Capital.

Figure 6 shows how our Credit Ratings align with legacy firms' ratings systems and the percentage of Traditional Debt to Capital ratings that are different from ratings based on Adjusted ratios for companies in the S&P 500. Overall, 8% of the Traditional Debt to Capital ratings are different from our Adjusted Debt to Capital rating because they rely on unscrubbed data.

As we explain in our <u>Credit Ratings methodology</u>, we set the Debt to Capital ratio thresholds so that the distribution of our ratings is comparable to the distribution of ratings for legacy firms. We use the Traditional version of the Debt to Capital ratio to set thresholds so that the difference in our ratings comes from the difference in our data.

Figure 6: S&P 500: Percent of Traditional Debt to Capital Ratings That Are Misleading

New Constructs Rating	Moody's Rating	S&P Rating	Fitch Rating	Traditional Debt to Capital Ratings That Are Misleading	
Very Attractive	Aaa to Aa3	AAA to AA-	AAA to AA-	3%	
Attractive	A1 to A3	A+ to A-	A+ to A-	14%	
Neutral	Baa1 to Baa3	BBB+ to BBB-	BBB+ to BBB-	12%	
Unattractive	Ba1 to B3	BB+ to B-	BB+ to B-	0%	
Very Unattractive	Caa1 to C	CCC+ to D	CCC to D	0%	
Total 8%					

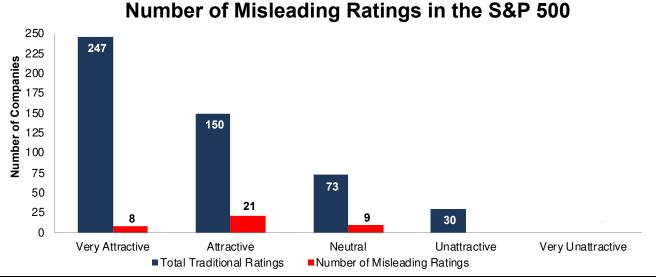
Sources: New Constructs, LLC and company filings.

Figure 7 provides more details on the number of companies whose Traditional Debt to Capital ratings are different from the rating based on Adjusted Debt to Capital ratios.

For example, 21 out of 150 (14%) companies that earn an Attractive Debt to Capital rating based on the Traditional ratio earn a different rating based on the Adjusted ratio.



Figure 7: S&P 500: Number of Misleading Traditional Debt to Capital Ratings



We dedicate the Appendix of this report to showing readers exactly how our Adjusted values for Debt and Capital are different and better than the unscrubbed versions.

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Disclosure: David Trainer, Kyle Guske II, Alex Sword, and Matt Shuler receive no compensation to write about any specific stock, style, or theme.

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Appendix: Auditing the Differences in Traditional Vs. Adjusted Values

This Appendix will show exactly how our Adjusted values for Debt and Capital differ from the Traditional versions for Automatic Data Processing and Expedia.

Automatic Data Processing: The Difference in Traditional Vs. Adjusted Values

Figure 8 shows the differences between the two components of the Debt to Capital ratio, Debt and Capital for Automatic Data Processing. The difference between Automatic Data Processing's Traditional Debt and Adjusted Debt is -\$987 million, or -40% of Traditional Debt. The difference between Traditional Capital and Adjusted Capital is -1% of Traditional Capital and is entirely driven by the difference between Traditional and Adjusted Debt.

Figure 8: Automatic Data Processing: Traditional Vs. Adjusted Debt to Capital Components

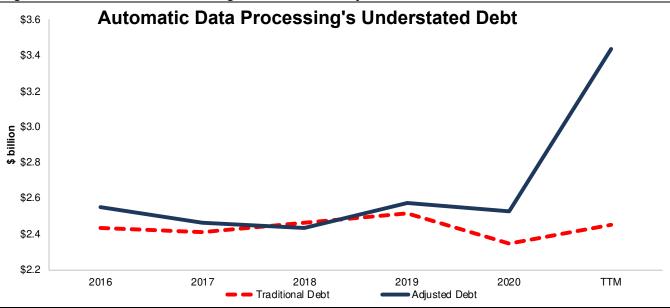
	Debt (\$mm)	Capital (\$mm)	Debt to Capital Ratio
Traditional	\$2,451	\$86,121	0.03
Adjusted	\$3,438	\$87,108	0.04
Difference	(\$987)	(\$987)	(39%)4

Sources: New Constructs, LLC and company filings.

Reconciling Automatic Data Processing's Traditional and Adjusted Debt

Automatic Data Processing's understated Debt drives its understated Debt to Capital ratio. Figure 9 shows the firm's Traditional and Adjusted Debt since 2016.

Figure 9: Automatic Data Processing: Traditional Vs. Adjusted Debt: 2016-TTM



Sources: New Constructs, LLC and company filings.

The -\$987 million difference between Automatic Data Processing's Traditional Debt and Adjusted Debt is driven by:

- \$1 billion in hidden short-term debt
- \$22 million difference between the fair value of debt and the carrying value of debt
- \$37 million difference between reported NPV of operating leases and Adjusted NPV of operating leases

⁴ This number is the Debt to Capital Ratio Distortion, which equals (Traditional Debt to Capital ratio - Adjusted Debt to Capital ratio) / Traditional Debt to Capital ratio.

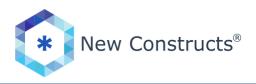


Figure 10 reconciles Automatic Data Processing's Traditional Debt and Adjusted Debt and details each of the adjustments listed above.

Figure 10: Automatic Data Processing: Adjusted Vs. Traditional Debt Detailed Comparison

Adjusted Debt (TTM)				
Item	\$ (mm)			
Short-Term Debt	\$0			
+ Hidden Short-Term Debt	\$1,002			
+ Non-Current Operating Liabilities	\$1,994			
+ Fair Value of Debt - Carrying Value of Debt	\$22			
+ Adjusted NPV of Operating Leases ⁵	\$420			
= Adjusted Debt	\$3,438			

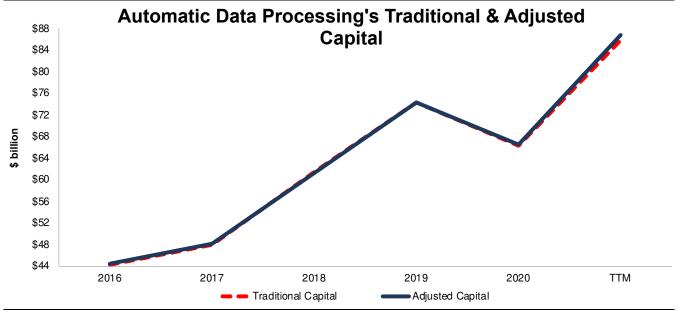
Traditional Debt (TTI	Difference	
Item	\$ (mm)	(\$mm)
Short-Term Debt	\$0	
+ Non-Current Operating Liabilities	s \$1,994	
+ NPV of Operating Leases ⁶	\$457	
= Traditional Debt	\$2,451	(\$987)

Sources: New Constructs, LLC and company filings.

Reconciling Automatic Data Processing's Traditional and Adjusted Capital

Figure 11 shows Automatic Data Processing's Traditional Capital and Adjusted Capital since 2016 have been nearly identical.

Figure 11: Automatic Data Processing: Traditional Vs. Adjusted Capital: 2016-TTM



Sources: New Constructs, LLC and company filings.

Figure 12 reconciles Automatic Data Processing's Traditional and Adjusted Capital and shows that the difference between Traditional and Adjusted Debt drives all of the difference between Traditional and Adjusted Capital.

⁵ We use a standardized discount rate across all companies under coverage to calculate the Adjusted NPV of Operating Leases to ensure comparability and remove management discretion in calculating operating lease liabilities. Find more details on how we treat operating leases here.

⁶ Traditional NPV of Operating Leases equals the operating lease obligation reported in the firm's 2Q20 10-Q.

Figure 12: Automatic Data Processing: Adjusted Vs. Traditional Capital Detailed Comparison

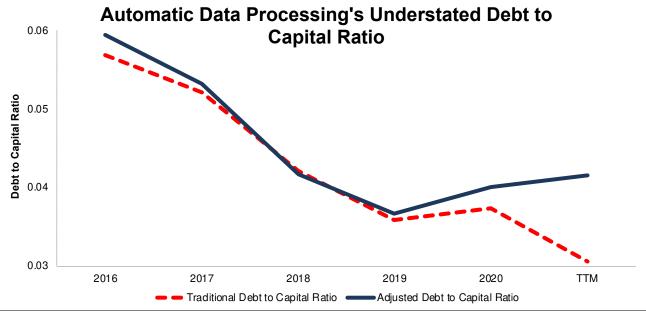
Adjusted Capital (TTM)		Traditio
Item	\$ (mm)	Item
Adjusted Debt	\$3,438	Debt
+ Market Value of Equity	\$83,670	+ Market Value
= Adjusted Capital	\$87,108	= Traditional

Traditional Capital (TTM)		Difference
Item	\$ (mm)	(\$mm)
Debt	\$2,451	
+ Market Value of Equity	\$83,670	
= Traditional Capital	\$86,121	(\$987)

Automatic Data Processing's Debt to Capital Ratio Is Understated

With large understated Traditional Debt and slightly understated Traditional Capital, Automatic Data Processing's Debt to Capital ratio is one of the most understated of all companies in the S&P 500. Per Figure 13, Automatic Data Processing's Debt to Capital ratio has grown increasingly understated since 2019.

Figure 13: Automatic Data Processing: Traditional Vs. Adjusted Debt to Capital Ratio: 2016-TTM



Sources: New Constructs, LLC and company filings.

Expedia: The Difference in Traditional Vs. Adjusted Values

Figure 14 shows the differences between the two components of the Debt to Capital ratio, Debt and Capital for Expedia. The difference between Expedia's Traditional Debt and Adjusted Debt is \$1.6 billion, or 18% of Traditional Debt. The difference between Traditional Capital and Adjusted Capital is 5% of Traditional Capital and is entirely driven by the difference between Traditional and Adjusted Debt.

Figure 14: Expedia: Traditional Vs. Adjusted Debt to Capital Components

	Debt (\$mm)	Capital (\$mm)	Debt to Capital Ratio
Traditional	\$9,029	\$34,088	0.26
Adjusted	\$7,421	\$32,480	0.22
Difference	\$1,608	\$1,608	14% ⁷

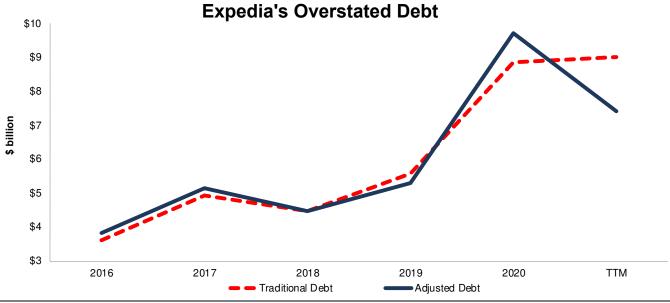
⁷ This number is the Debt to Capital Ratio Distortion, which equals (Traditional Debt to Capital ratio - Adjusted Debt to Capital ratio) / Traditional Debt to Capital ratio.



Reconciling Expedia's Traditional and Adjusted Debt

The primary driver of Expedia's overstated Debt to Capital ratio is overstated Debt. Figure 15 shows the firm's Traditional Debt has moved from being understated to overstated over the TTM.

Figure 15: Expedia: Traditional Vs. Adjusted Debt: 2016-TTM



Sources: New Constructs, LLC and company filings.

The \$1.6 billion difference between Expedia's Traditional Debt and Adjusted Debt is driven by:

- \$1.7 billion difference between the fair value of debt and the carrying value of debt
- -\$56 million difference between reported NPV of operating leases and Adjusted NPV of operating leases

Figure 16 reconciles Expedia's Traditional Debt and Adjusted Debt and details each of the adjustments listed above.

Figure 16: Expedia: Adjusted Vs. Traditional Debt Detailed Comparison

Adjusted Debt (TTM)		Traditional Debt (TTM)		Differenc
Item	\$ (mm)	Item	\$ (mm)	(\$mm)
Non-Current Operating Liabilities	\$8,464	Non-Current Operating Liabilities	\$8,464	
+ Fair Value of Debt - Carrying Value of Debt	(\$1,664)			
+ Adjusted NPV of Operating Leases8	\$621	+ NPV of Operating Leases9	\$565	
= Adjusted Debt	\$7,421	= Traditional Debt	\$9,029	\$1,608

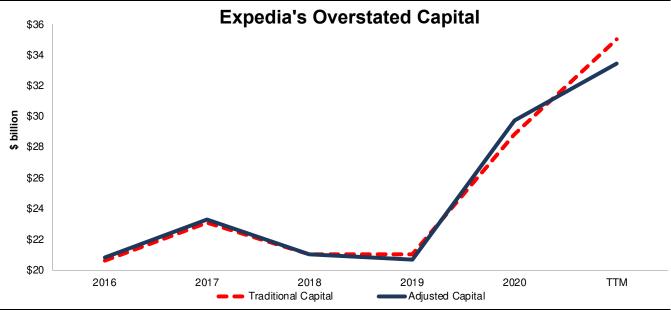
⁸ We use a standardized discount rate across all companies under coverage to calculate the Adjusted NPV of Operating Leases to ensure comparability and remove management discretion in calculating operating lease liabilities. Find more details on how we treat operating leases here.

⁹ Traditional NPV of Operating Leases equals the operating lease obligation reported in the firm's 2Q20 10-Q.

Reconciling Expedia's Traditional and Adjusted Capital

Figure 17 compares Expedia's Traditional Capital and Adjusted Capital since 2016.

Figure 17: Expedia: Traditional Vs. Adjusted Capital: 2016-TTM



Sources: New Constructs, LLC and company filings.

Figure 18 reconciles Expedia's Traditional and Adjusted Capital and shows that the difference between Traditional and Adjusted Debt accounts for all the difference between Traditional and Adjusted Capital.

Figure 18: Expedia: Adjusted Vs. Traditional Capital Detailed Comparison

Adjusted Capital (TTM)				
Item	\$ (mm)			
Adjusted Debt	\$7,421			
+ Market Value of Equity	\$24,037			
+ Market Value of Preferred Stock	\$1,022			
= Adjusted Capital	\$32,480			

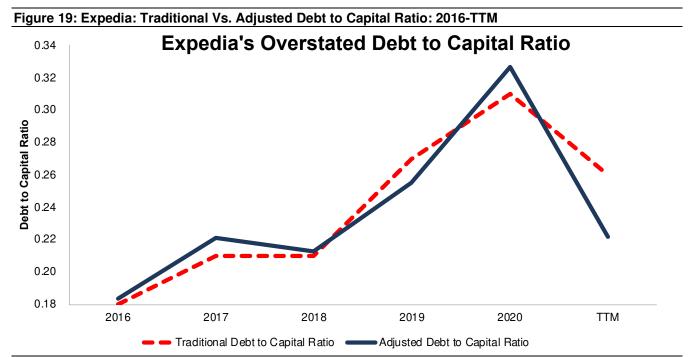
Traditional Capital (TT	Difference	
Item	\$ (mm)	(\$mm)
Debt	\$9,029	
+ Market Value of Equity	\$24,037	
+ Market Value of Preferred Stock	\$1,022	
= Traditional Capital	\$34,088	\$1,608

Sources: New Constructs, LLC and company filings.

Expedia's Debt to Capital Ratio Is Overstated

With overstated Traditional Debt and Traditional Capital, Expedia's Debt to Capital is one of the most overstated of all companies in the S&P 500. Per Figure 19, Expedia's Debt to Capital has moved from understated to overstated over the TTM.







It's Official: We Offer the Best Fundamental Data in the World

Many firms claim their research is superior, but none of them can prove it with independent studies from highly-respected institutions as we can. Three different papers from both the public and private sectors show:

- 1. Legacy fundamental datasets suffer from significant inaccuracies, omissions and biases.
- 2. Only our "novel database" enables investors to overcome these flaws and apply <u>reliable</u> fundamental data in their research.
- 3. Our proprietary measures of <u>Core Earnings</u> and <u>Earnings Distortion</u> materially improve stock picking and forecasting of profits.

Best Fundamental Data in the World

Forthcoming in <u>The Journal of Financial Economics</u>, a top peer-reviewed journal, <u>Core Earnings: New Data & Evidence</u> proves our Robo-Analyst technology overcomes material shortcomings in legacy firms' data collection processes to provide superior <u>fundamental data</u>, <u>earnings</u> models, and <u>research</u>. More <u>details</u>.

Key quotes from the paper:

- "[New Constructs'] *Total Adjustments* differs significantly from the items identified and excluded from Compustat's adjusted earnings measures. For example... 50% to 70% of the variation in *Total Adjustments* is not explained by *S&P Global's (SPGI) Adjustments* individually." pp. 14, 1st para.
- "A final source of differences [between New Constructs' and S&P Global's data] is due to data collection oversights...we identified cases where Compustat did not collect information relating to firms' income that is useful in assessing core earnings." pp. 16, 2nd para.

Superior Models

A top accounting firm features the superiority of our ROIC, NOPAT and Invested Capital research to Capital IQ & Bloomberg's in Getting ROIC Right. See the Appendix for direct comparison details.

Key quotes from the paper:

- "...an accurate calculation of ROIC requires more diligence than often occurs in some of the common, off-the-shelf ROIC calculations. Only by scouring the footnotes and the MD&A [as New Constructs does] can investors get an accurate calculation of ROIC." pp. 8, 5th para.
- "The majority of the difference...comes from New Constructs' machine learning approach, which leverages technology to calculate ROIC by applying accounting adjustments that may be buried deeply in the footnotes across thousands of companies." pp. 4, 2nd para.

Superior Stock Ratings

Robo-Analysts' stock ratings outperform those from human analysts as shown in this <u>paper</u> from Indiana's Kelley School of Business. Bloomberg features the paper <u>here</u>.

Key quotes from the paper:

- "the portfolios formed following the buy recommendations of Robo-Analysts earn abnormal returns that are statistically and economically significant." pp. 6, 3rd para.
- "Our results ultimately suggest that Robo-Analysts are a valuable, alternative information intermediary to traditional sell-side analysts." pp. 20, 3rd para.

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