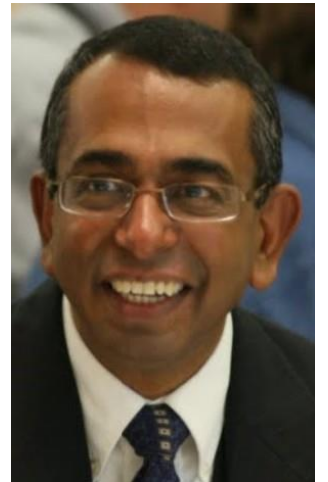


Financial Ratios Checklist

Bakul Lalla

BI Lifetime Member

Session: 305



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Topics Covered



Introduction



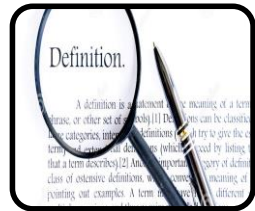
Examples



Pros and Cons



Summary



Definitions



Poll



Financial Ratios Checklist



Conclusion

Introduction – A financial ratios checklist is great ...



for keeping an investor sane!



to identify one's own biases in the investment process



express an investor's worldview via portfolio holdings



to stay within an investor's circle of competence

Pros and Cons of Financial Ratios



1. Emphasis on fundamentals
2. Focus on quality
3. Importance of consistency
4. Builds confidence in making investment decisions
5. Encourage portfolio weeding/feeding
6. Capital preservation (i.e., loss avoidance) first, growth/return usually follows over time



1. Backward looking i.e., no predictive value
2. May introduce personal bias
3. Missed opportunities - error of omission
4. Too restrictive in opportunity set
5. Disruptors could displace incumbents

Definitions

1. [ROE \(%\)](#): Return on equity shows how much profit a company generates on the money shareholders have invested in the firm. The calculation is return on assets times financial leverage.
2. [ROIC \(%\)](#): This figure is the percentage a company earns on its invested capital in a given year. The calculation is net operating profit after tax (NOPAT) divided by invested capital.
3. [Free Cash Flow/Sales](#) (FCF Margin) (%): Amount of free cash flow generated for each dollar of sales.



4. [CapEx/Sales \(%\)](#): Percent of sales used for internal growth. CapEx is capital deployed in Property, Plant, and Equipment (PP&E).
5. [Free Cash Flow/Net Income](#): Amount of free cash flow generated for each dollar of profit. This is also known as the conversion rate. **Note:** Some companies define conversion rate as [EBITDA/Net Income](#).

Definitions (Cont'd)

6. [Gross Margin \(%\)](#): $(\text{Net Sales} - \text{Cost of Goods Sold}) / \text{Net Sales} \times 100$. Profitability ratio indicates what's left after paying for direct cost of doing business.
7. [Operating Margin \(%\)](#): Operating earnings before interest and taxes (EBIT) expressed as a percentage of revenue.
8. [Net Margin \(%\)](#): Net income divided by sales expressed as a percentage.
9. [Return on Assets \(%\)](#): Net income divided by total assets expressed as a percentage.
10. [Financial Leverage](#): Total assets divided by total shareholder's equity.

“The market, like the Lord, helps those who help themselves. But, unlike the Lord, the market does not forgive those who know not what they do.” ... [Warren Buffett, 1982](#)

“When you mix raisins and turds, you've still got turds.” ... [Charlie Munger](#)

Financial Ratios Checklist

1. Return on Equity (ROE): above 15% is good, above 20% is better
2. Return on Invested Capital (ROIC): above 10% is good, above 12% is better
3. Free Cash Flow/Sales (FCF Margin): above 10% is good, above 15% is better



4. CapEx/Sales: lower than 10%, lower than 5% is better
5. Free Cash Flow/Net Income: steady or increasing at around 1.0
6. Gross Margin: above 50% is good, above 70% is better
7. Operating Margin: above 15% is good, above 20% is better
8. Net Margin: above 10% is good, above 15% is better
9. Return on assets (ROA): above 8% is good, above 10% is better
10. Financial Leverage: lower than 2.0, lower than 1.75 is better

Financial ratios criteria above are considered for non-financial companies only!





Examples – (1) Return on Equity (ROE) ...

... above 15% is good, above 20% is better

Morningstar.com → quote → Valuation → Key Statistics → Operating and Efficiency

Company 1	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Return on Equity %	19.52	26.20	28.94	34.77	35.06	57.29	56.05	61.84	68.70	62.41	62.41	61.26

ROE criteria met. Notice ROE high over the years. Check whether financial leverage is excessive.

Company 2	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Return on Equity %	12.14	12.24	13.94	14.37	17.77	-1.24	10.87	10.78	10.95	5.68	5.68	7.41

ROE criteria not met for all years except 2017! Hmm... what happened to [negative ROE](#) in 2018?



Examples – (2) Return on Invested Capital (ROIC) ...

... above 10% is good, above 12% is better

Morningstar.com → quote → Valuation → Key Statistics → Operating and Efficiency

Company 1	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Return on Invested Capital %	13.49	18.30	20.60	25.60	25.94	39.62	35.59	36.99	41.90	39.44	39.44	38.71

ROIC criteria met!

Company 2	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Return on Invested Capital %	9.92	9.79	9.94	9.25	11.56	1.34	6.24	6.07	6.42	3.99	3.99	4.81

ROIC criteria not met for all years except 2017!

U.S. GAAP accounting is commonly reported accounting principles (CRAP)! Separate the relevant signal from the noise (i.e. CRAP) just like separating the wheat from the chaff.



Examples – (3) Free Cash Flow / Sales (aka FCF Margin)

... above 10% is good, above 15% is better

Morningstar.com → quote → Valuation → Key Statistics → Cash Flow

Company 1	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TTM
Free Cash Flow/Sales %	24.35	26.88	28.59	30.54	31.20	38.38	40.34	37.96	34.31	29.57	29.57

Cash machine, generating gobs of free cash evidenced by a high FCF margin!

Company 2	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TTM
Free Cash Flow/Sales %	3.00	4.31	3.94	4.42	3.30	3.51	4.05	5.00	5.39	4.17	4.17

FCF margin criteria violation ... do not cross the [barbed wire fence](#)!

Show me the money! No, no ... show me the free cash!



Review ...

Financial Ratio	Criteria	Company 1	Company 2
1. Return on Equity (ROE)	> 15%+	Y	N
2. Return on Invested Capital (ROIC)	> 10%+	Y	N
3. FCF/Sales (aka FCF Margin)	> 10%+	Y	N

Call to Action: Put Company 1 in watch list or accumulate if already in portfolio [when price is right!](#)

Charlie and I are *not* stock-pickers; we are business-pickers.
[Warren Buffet, 2022](#)

Examples – (4) CapEx / Sales ...

... lower than 10%, lower than 5% is better

Morningstar.com → quote → Valuation → Key Statistics → Cash Flow

Company 1	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TTM
Cap Ex as a % of Sales	3.38	2.95	4.24	3.97	4.65	7.17	5.89	4.49	13.42	13.97	13.97

Meets criteria for eight years. See the [jump](#) in this ratio for 2021 & 2022?

Company 2	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TTM
Cap Ex as a % of Sales	1.57	1.53	1.54	1.25	1.04	1.05	0.96	0.91	0.86	0.85	0.85

Meets criteria but it is trending down.

Examples – (5) Free Cash Flow / Net Income ...

... steady or increasing at around 1.0

Morningstar.com → quote → Valuation → Key Statistics → Cash Flow

Company 1	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TTM
Free Cash Flow/Net Income	1.37	1.24	1.24	1.14	1.27	1.09	1.16	0.98	0.81	0.68	0.68

Recent three years i.e. 2020, 2021 & 2022 has a significant downtrend! We already know why ... company is increasing manufacturing capacity and using tax credits via the U.S. CHIPS act.

Company 2	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TTM
Free Cash Flow/Net Income	0.83	1.29	1.15	1.48	0.92	-11.49	1.57	1.87	1.99	3.24	3.24

Looks OK for the most part except for years 2013, 2017 & [2018](#).

This is a **litmus test** for quality of earnings i.e. it shows how much free cash is generated for each dollar of profit.

Remember cash is a fact, profit is an opinion!

[Alfred Rappaport, Creating Shareholder Value](#)

Examples – (6) Gross Margin ...

... above 50% is good, above 70% is better

Morningstar.com → quote → Valuation → Key Statistics → Operating and Efficiency

Company 1	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Gross Margin %	52.14	56.93	58.15	61.63	64.26	65.11	63.71	64.10	67.47	68.76	68.76	65.83

Gross margins are healthy and meets criteria!

Company 2	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Gross Margin %	18.76	18.20	17.31	16.26	15.45	16.21	17.73	18.25	17.82	16.84	16.84	17.37

Gross margins does not meet criteria!

Examples – (7) Operating Margin ...

... above 15% is good, above 20% is better

Morningstar.com → quote → Valuation → Key Statistics → Operating and Efficiency

Company 1	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Operating Margin %	24.45	32.40	34.86	38.17	43.65	44.56	41.54	42.29	49.91	51.91	51.91	46.04

Operating margin meets criteria!

Company 2	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Operating Margin %	6.34	6.31	6.17	5.82	5.15	5.23	4.67	5.18	5.13	4.99	4.99	5.04

Operating margin does not meet criteria!

Examples – (8) Net Margin ...

... above 10% is good, above 15% is better

Morningstar.com → quote → Valuation → Key Statistics → Operating and Efficiency

Company 1	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Net Margin %	17.41	21.29	22.64	26.55	24.38	35.08	34.88	38.69	42.17	43.48	43.48	38.86

Net margin meets criteria!

Company 2	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Net Margin %	3.62	3.33	3.42	3.00	3.58	-0.31	2.58	2.67	2.71	1.29	1.29	1.79

Net margin does not meet criteria!

Examples – (9) Return on Assets (ROA) ...

... above 8% is good, above 10% is better

Morningstar.com → quote → Valuation → Key Statistics → Operating and Efficiency

Company 1	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Return on Asset %	10.91	15.15	17.34	21.74	21.41	31.84	28.54	29.94	35.14	33.57	33.57	31.81

ROA meets criteria!

Company 2	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Return on Asset %	6.68	6.37	6.24	5.65	6.99	-0.41	3.17	3.17	3.41	1.80	1.80	2.23

ROA criteria not met!

Examples – (10) Financial Leverage ...

... lower than 2.0, lower than 1.75 is better

Morningstar.com → quote → Valuation → Key Statistics → Financial Health

Company 1	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Latest Qtr
Financial Leverage	1.75	1.71	1.63	1.57	1.71	1.91	2.02	2.11	1.85	1.87	1.87

Financial leverage does not meet criteria for 2019 & 2020 but meets criteria in 2021 & 2022!

Company 2	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Latest Qtr
Financial Leverage	1.89	1.96	2.52	2.56	2.52	3.37	3.48	3.33	3.10	3.21	3.21

Does not meet criteria for eight out of ten years!

Summary

Financial Ratio	Criteria	<u>Company 1 (TXN)</u>	<u>Company 2 (CVS)</u>
1. ROE	> 15%+	Y	N (9)
2. ROIC	> 10%+	Y	N (9)
3. FCF/Sales (aka FCF Margin)	> 10%+	Y	N (10)
4. CapEx/Sales	< 10%	Y (2)	Y
5. FCF/Net Income	steady at 1.0	Y (3)	Y (3)
6. Gross Margin	> 50%	Y	N (10)
7. Operating Margin	> 15%	Y	N (10)
8. Net Margin	> 10%	Y	N (10)
9. Return on Assets (ROA)	> 8%	Y	N (10)
10. Financial Leverage	< 2.0	Y (2)	N (8)

Notes:

1. External links to Company 1 & 2 may not work in the future!
2. Numbers in red indicate the frequency of financial ratio criteria violations over a period of ten fiscal years.

Summary – Company 2 – Do Not Cross the Barbed Wire Fence

Financial Ratio	Criteria	Company 1 (TXN)	Company 2 (CVS)
1. ROE	> 15%+	Y	N (9)
2. ROIC	> 10%+	Y	N (9)
3. FCF/Sales (aka FCF Margin)	> 10%+	Y	N (10)
4. CapEx/Sales	< 10%	Y (2)	
5. FCF/Net Income	steady at 1.0	Y (3)	
6. Gross Margin	> 50%	Y	
7. Operating Margin	> 15%	Y	
8. Net Margin	> 10%	Y	
9. Return on Assets (ROA)	> 8%	Y	
10. Financial Leverage	< 2.0	Y (2)	

Notes:

1. External links to Company 1 & 2 may not work in the future!
2. Numbers in red indicate the frequency of financial ratio criteria violations over a period of ten fiscal years.

Poll



Salesforce Inc. (CRM)



Visa Inc. (V)



Bed Bath & Beyond (BBBY)

Poll (Cont'd)

Financial Ratio	Criteria	CRM FY-Jan (2014-2023)	V FY-Dec (2013-2022)	BBBY FY-Feb (2013-2022)
1. ROE	> 15%+	N (10)	Y	Y (4)
2. ROIC	> 10%+	N (10)	Y	Y (4)
3. FCF/Sales (aka FCF Margin)	> 10%+	Y	Y	N (10)
4. CapEx/Sales	< 10%	Y (1)	Y	Y
5. FCF/Net Income	steady at 1.0	Y (3)	Y (4)	N (8)
6. Gross Margin	> 50%	Y	Y	N (10)
7. Operating Margin	> 15%	N (10)	Y	N (9)
8. Net Margin	> 10%	N (9)	Y	N (10)
9. Return on Assets (ROA)	> 8%	N (10)	Y	N (5)
10. Financial Leverage	< 2.0	N (5)	N (7)	N (8)

Note: Numbers in red indicate the frequency of financial ratio criteria violations over a period of ten fiscal years sourced from Morningstar.

Poll (Cont'd) – Do Not Cross the Barbed Wire Fence

Financial Ratio	Criteria	CRM FY-Jan (2014-2023)	V FY-Dec (2013-2022)	BBBY FY-Feb (2013-2022)
1. ROE	> 15%+	N (10)	Y	Y (4)
2. ROIC	> 10%+	N (10)	Y	Y (4)
3. FCF/Sales (aka FCF Margin)	> 10%+	Y	Y	N (10)
4. CapEx/Sales	< 10%		Y	
5. FCF/Net Income	steady at 1.0		Y (4)	
6. Gross Margin	> 50%		Y	
7. Operating Margin	> 15%		Y	
8. Net Margin	> 10%		Y	
9. Return on Assets (ROA)	> 8%		Y	
10. Financial Leverage	< 2.0		N (7)	

Note: Numbers in red indicate the frequency of financial ratio criteria violations over a period of ten fiscal years sourced from Morningstar.

Conclusion

Where/what is the investment edge?



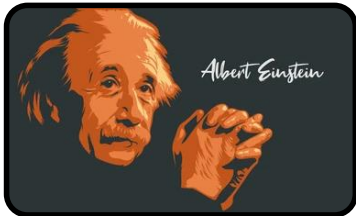
Information Advantage Exists?

Used to exist, but no longer with the advent of readily available information to everyone. ([Regulation FD](#))



Superior Interpretation of Financial Statements?

Helps to some extent but other investors are smarter. The person on the other side of the trade may know something that you don't.



Counting

“Not everything that counts can be counted, and not everything that can be counted counts.” ... [Albert Einstein](#) (Examples [CEO](#), [CFO](#), [CRO](#))



Temperament

“Once you have ordinary intelligence, what you need is the temperament to control the urges that get other people into trouble in investing.” ... [Warren Buffett](#)

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Bakul Lalla

BI Lifetime Member

blalla@yahoo.com

