Bakul's Financial Ratios Checklist:

Makes Evaluating Management Easy

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Topics Covered

- Introduction
- Pros and Cons
- Definitions
- Financial Ratios Checklist
- Examples
- Poll – Interactive Exercise
- Conclusion
- Appendix

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

Pros and Cons of Financial Ratios

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Pros

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

Cons

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 (%): (Net Sales – Cost of Goods Sold) / Net Sales X 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.

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

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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Current	5-Yr
Return on Equity %	16.54	16.25	15.06	14.08	15.02	8.69	18.62	18.12	19.00	32.07	30.80	19.30

ROE down in 2017: tax rate change due to U.S. Tax Cuts and Jobs Act (TCJA). One time hit!

Company 2	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Current	5-Yr
Return on Equity %	13.32	13.02	11.36	14.27	10.94	10.10	9.72	10.58	10.77	15.99	15.68	11.43

ROE criteria not met for all years except 2021!

The 2017 red box is an external link that may not work in the future!

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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Current	5-Yr
ROIC	14.66	14.52	13.77	12.82	14.02	7.98	17.26	16.15	16.63	28.36	27.25	17.28

ROIC gets a one-time hit in 2017 due to TCJA!

Company 2	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Current	5-Yr
ROIC	10.78	11.15	10.15	10.98	7.53	7.27	7.40	6.70	6.69	10.43	10.60	7.70

See the ROIC downtrend from 2016 thru 2020 then return above the ROIC requirement?

U.S. GAAP accounting is **c**ommonly **r**eported **a**ccounting **p**rinciples (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	2014-12	2015-12	2016-12	2017-12	2018-12	2019-12	2020-12	2021-12	2013-12	2012-12	TTM
Free Cash Flow/Sales %	17.30	21.48	28.61	21.57	16.69	19.14	23.47	26.01	18.89	26.60	25.52

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

Company 2	2012-12	2013-12	2014-12	2015-12	2016-12	2017-12	2018-12	2019-12	2020-12	2021-12	TTM
Free Cash Flow/Sales %	5.83	6.34	6.11	5.59	2.47	-9.19	-8.89	-4.02	-5.65	-1.21	0.39

FCF margin criteria violation … do not cross the barbed wire fence!

Show me the sales growth and profit … no, no. Show me the free cash.

Review …

Financial Ratio	Criteria	Company 1	Company 2
1. ROE	> 15%+	Y	N
2. ROIC	> 10%+	Y	N
3. FCF/Sales	> 10%+	Y	N

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

"It's far better to buy a wonderful company at a fair price than a fair company at a wonderful price."
Warren Buffet, 1989

Examples – (4) CapEx / Sales …

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

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

Company 1	2012-01	2013-01	2014-01	2015-01	2016-01	2017-01	2018-01	2019-01	2020-01	2021-01	2022-01	TTM
Cap Ex as a % of Sales	6.25	4.47	4.76	2.46	1.95	2.23	3.52	4.67	3.88	2.83	3.34	3.70

Meets criteria! … figure out company's growth strategy!

Company 2	2012-12	2013-12	2014-12	2015-12	2016-12	2017-12	2018-12	2019-12	2020-12	2021-12	TTM
Cap Ex as a % of Sales	28.03	22.47	22.5	28.84	34.74	34.17	38.29	44.35	41.51	38.71	38.54

Lots of capital going into CapEx i.e., property, plant, and equipment (PP&E), … capital intensive business!

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

… steady or increasing at around 1.0

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

Company 1	2012-09	2013-09	2014-09	2015-09	2016-09	2017-09	2018-09	2019-09	2020-09	2021-09	TTM
Free Cash Flow/Net Income	0.99	1.20	1.26	1.31	1.14	1.05	1.08	1.07	1.28	0.98	1.04

Free cash flow appears to be in a steady range around 1.0 for each dollar of profit!

Company 2	2012-05	2013-05	2014-05	2015-05	2016-05	2017-05	2018-05	2019-05	2020-05	2021-05	TTM
Free Cash Flow/Net Income	0.41	0.84	0.35	0.97	0.49	-0.06	-0.22	0.23	-0.60	0.81	0.59

I am sitting on a barbed wire and hurting … get me out of here!

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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Current	5-Yr
Gross Margin %	58.88	56.78	61.07	62.44	61.08	58.88	56.48	55.58	53.58	56.94	56.93	56.29

Gross margins are healthy and meets criteria!

Company 2	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Gross Margin %	30.86	30.38	29.53	29.39	29.53	29.68	28.87	29.27	29.76	29.27	29.28	28.3	29.29

Gross margins are healthy but 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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Current	5-Yr
Operating Margin %	37.92	34.38	32.11	30.10	24.96	25.16	31.77	34.14	37.03	41.59	42.56	33.94

Operating margin meets criteria!

Company 2	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Current	5-Yr
Operating Margin %	14.68	14.58	13.56	12.75	10.96	2.78	-0.51	2.1	-1.47	6.28	7.71	1.84

Operating margin deteriorating trend can get shareowners in trouble!

Examples – (8) Net Margin …

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

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

Company 1	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Current	5-Yr
Net Margin %	26.67	21.67	21.61	22.85	21.19	21.09	22.41	21.24	20.91	25.88	26.41	22.31

Net margin meets criteria!

Company 2	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Current	5-Yr
Net Margin %	10.42	9.51	8.89	8.06	6.95	5.61	3.44	-1.14	-5.50	-1.63	-7.11	-7.11	-2.39

Net margin does not meet criteria … get me out of here!

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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Current	5-Yr
Return on Asset %	14.77	16.58	14.02	7.00	9.08	9.75	6.63	14.39	15.07	19.30	22.18	13.03

Healthy ROA except for years 2015 & 2018:

a) 2015: net income was lower than previous years due to impairment charges

b) 2018: one-time TCJA tax rate!

Company 2	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Current	5-Yr
Return on Asset %	2.00	2.33	1.60	2.33	1.70	2.26	1.88	2.44	0.79	2.29	2.19	1.93

ROA criteria not met … capital intensive business with recurring reinvestments into PP&E!

Examples – (10) Financial Leverage …

… lower than 2.0, lower than 1.75 is better

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

Company 1	2012-12	2013-12	2014-12	2015-12	2016-12	2017-12	2018-12	2019-12	2020-12	2021-12	Latest Qtr
Financial Leverage	1.31	1.27	1.25	1.23	1.20	1.29	1.31	1.37	1.44	1.43	1.41

Meets criteria!

Company 2	2012-12	2013-12	2014-12	2015-12	2016-12	2017-12	2018-12	2019-12	2020-12	2021-12	Latest Qtr
Financial Leverage	1.73	1.55	1.58	2.04	1.97	1.77	1.70	2.17	2.09	1.99	1.94

Does not meet criteria … check if company is a serial acquirer … growth by acquisitions!

Note: Lease assets are required (ASC 842) to be reported on the balance sheet as of 2019. So, financial leverage will appear to be higher starting in 2019 than previous years.

Almost every financial blow-up is because of leverage.
Seth Klarman

Poll - Interactive Exercise

Visa Inc. (V)

BI Magazine, February 2019

CVS Health Corp. (CVS)

BI Magazine, March 2021

The Hershey Co. (HSY)

BI Magazine, August 2021

Interactive Exercise – Poll (Cont'd)

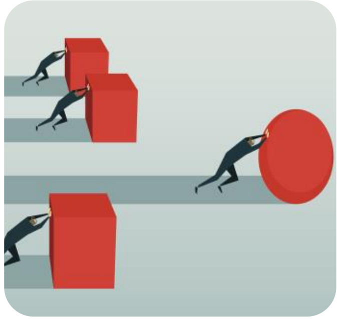
Financial Ratio	Criteria	V	CVS	HSY
1. ROE	> 15%+	Y (1)	N	Y
2. ROIC	> 10%+	Y (1)	N	Y
3. FCF/Sales	> 10%+	Y	N	Y (1)
4. CapEx/Sales	< 10%	Y	Y	Y
5. FCF/Net Income	steady at 1.0	Y (3)	Y(2)	Y(1)
6. Gross Margin	> 50%	Y	N	N
7. Operating Margin	> 15%	Y	N	Y
8. Net Margin	> 10%	Y	N	Y (1)
9. Return on Assets (ROA)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

Notes:

1. Financial ratios on Morningstar are examined for years 2012 thru 2021.
2. Numbers in red indicate the frequency of financial ratio criteria violations.

Conclusion

Where/what is the investment edge?

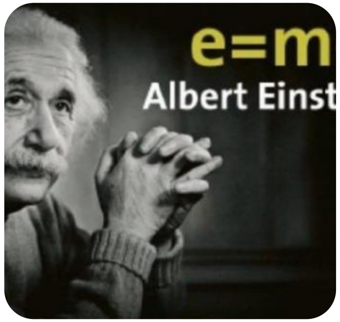


Information Advantage Exists?

Used to exist, but no longer with the advent of readily available information to everyone.

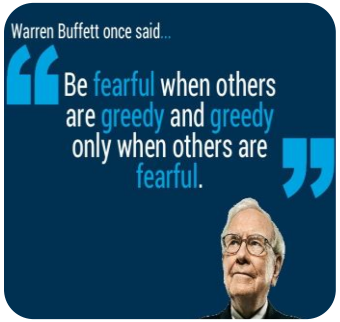
Superior Interpretation of Financial Statements?

Helps to some extent but other investors are smarter.



Counting

“Not everything that can be counted counts, and not everything that counts can be counted.”



Temperament

This is the only investment edge left! “To finish first, you must first finish,” easier said than done!

Appendix – Companies in the Examples

Financial Ratio	Criteria	Company 1	Company 2
1. ROE	> 15%+	GOOG	DHR
2. ROIC	> 10%+	GOOG	DHR
3. FCF/Sales	> 10%+	GOOG	REV
4. CapEx/Sales	< 10%	TGT	DUK
5. FCF/Net Income	steady at 1.0	AAPL	FDX
6. Gross Margin	> 50%	GOOG	TGT
7. Operating Margin	> 15%	MSFT	REV
8. Net Margin	> 10%	AAPL	BBBY
9. Return on Assets (ROA)	> 8%	MSFT	DUK
10. Financial Leverage	< 2.0	GOOG	DHR

External links to Company 1 & 2 may not work in the future!

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