Financial Ratios Reference Guide

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This guide provides information and guidance for the financial ratios presented on the Ratios tab in SSGPlus.

1. Profitability Margins

Profitability margins measure how much profit a company retains from its revenue at different stages of the income statement. Each successive margin deducts additional expenses, providing a layered view of financial performance.

Margin	Formula	What's Deducted
Gross Profit Margin	(Revenue - COGS) / Revenue	Cost of goods sold
Operating Margin	Operating Income / Revenue	+ Operating expenses
Pre-Tax Profit Margin	Pre-Tax Income / Revenue	+ Interest & non-operating items
Net Profit Margin	Net Income / Revenue	+ Taxes

1.1 Gross Profit Margin

Measures how much profit a company retains from revenue after subtracting the direct costs of producing goods or services (COGS). A higher margin means the company keeps more from each dollar of sales before paying operating expenses.

Formula:

```
Gross Profit Margin = ((Revenue - COGS) / Revenue) × 100
```

1.2 Operating Margin

Measures profit from core business operations after deducting both COGS and operating expenses (rent, salaries, utilities), but before interest and taxes. Gives a clearer picture of overall operational efficiency than gross margin alone.

Formula:

```
Operating Margin = (Operating Income / Revenue) × 100
Operating Income = Revenue - COGS - Operating Expenses
```

1.3 Pre-Tax Profit Margin

Measures profit after all operating expenses and non-operating items (interest income/expense), but before income taxes. Useful for comparing companies across different tax jurisdictions since it removes the distorting effect of varying tax rates.

Formula:

```
Pre-Tax Profit Margin = (Pre-Tax Income / Revenue) × 100
```

```
Pre-Tax Income = Operating Income - Interest Expense + Interest Income + Other
```

1.4 Net Profit Margin

The 'bottom line' metric — measures how much of each dollar of revenue ultimately becomes profit after all expenses are deducted. The most comprehensive measure of profitability and widely used by investors to compare companies.

Formula:

```
Net Profit Margin = (Net Income / Revenue) × 100
```

1.5 Return on Assets (ROA)

Measures how efficiently a company uses its assets to generate profit. Asset-heavy industries (banking, utilities) naturally have lower ROAs, so comparisons are most meaningful within the same industry.

Formula:

```
ROA = (Net Income / Total Assets) × 100
```

Industry	Typical ROA
Technology	10–20%+
Retail	5–10%
Manufacturing	3–8%
Banking	1–2%

1.6 Return on Equity (ROE)

Measures how efficiently a company generates profit from shareholders' equity. Because ROE uses only equity (not total assets), it is heavily influenced by leverage — a company taking on more debt reduces its equity base, which can artificially inflate ROE. Very high ROE (30%+) can be driven by heavy debt rather than operational efficiency. It's worth pairing ROE with Debt/Capital or Debt/Equity to confirm the quality of the number.

Formula:

```
ROE = (Net Income / Shareholders' Equity) × 100
```

ROE	Rating
Negative	Poor (losing money on equity)
0-10%	Below average
10-15%	Fair/Average
15-20%	Good
20-30%	Excellent
30%+	Exceptional – but verify quality

Consistency matters more than a single year. A company with 15% ROE sustained over 5–10 years is often a stronger pick than one with a single 25% year that reverts afterward.

2. Efficiency Metrics

Efficiency metrics measure how well a company uses its resources to generate revenue and profit.

2.1 Asset Turnover

Measures how efficiently a company uses its assets to generate revenue. Higher is generally better — it means the company is squeezing more revenue out of every dollar of assets. However, asset-light businesses (software) have lower turnover but higher margins, while asset-heavy businesses (retail) have higher turnover but thinner margins.

Formula:

```
Asset Turnover = Revenue / Total Assets
```

Industry	Typical Asset Turnover
Retail	1.5–2.5x
Manufacturing	0.5–1.5x
Technology	0.5–1.0x
Utilities	0.2–0.5x

A rising asset turnover is a positive signal when driven by revenue growth, but potentially concerning if driven by asset contraction (underinvestment).

3. Cash Flow Metrics

Cash flow metrics reveal the actual cash reality behind accounting profits — harder to manipulate and critical for assessing true financial health.

3.1 Cash from Operations (CFO)

Measures actual cash generated from core business activities — not accounting profit, but real cash. It is the first section of the cash flow statement and the starting point for free cash flow analysis.

Formula (Indirect Method):

```
CFO = Net Income + Non-Cash Charges + Changes in Working Capital
```

Key warning sign: CFO consistently below net income may indicate the company is recognizing revenue it hasn't actually collected in cash.

Relationship	Signal
CFO > Net Income	✅ Strong cash generation
CFO ≈ Net Income	✅ Healthy, consistent business
CFO < Net Income	⚠️ Investigate further
CFO negative, Net Income positive	❌ Serious red flag

3.2 Free Cash Flow Margin

Measures how much free cash flow a company generates for every dollar of revenue. The cash flow equivalent of net profit margin — and generally more reliable since it is harder to manipulate than accounting-based measures.

Formula:

```
FCF / Sales = (Free Cash Flow / Revenue) x 100
```

```
Free Cash Flow = Cash from Operations - Capital Expenditures (CapEx)
```

A company with FCF/Sales consistently below net profit margin warrants the same scrutiny as CFO < Net Income. Free cash flow can be deployed for dividends, share buybacks, debt repayment, acquisitions, or cash reserves.

4. Growth Metrics

Growth metrics track the rate of change in key financial measures. Sales growth alone is meaningless without profitability — the most desirable scenario is profitable growth with stable or expanding margins.

4.1 Sales Growth

Measures the percentage increase or decrease in revenue from one period to the next. One of the most fundamental indicators of a company's trajectory.

Formula:

```
Sales Growth = ((Current Revenue - Prior Revenue) / Prior Revenue) × 100
```

Stage	Typical Expectation
Early stage startup	50–100%+
High growth company	20–50%
Mature company	5–15%
Declining company	Negative

4.2 Accounts Receivable Growth

Measures the percentage change in outstanding customer invoices. Most meaningful when compared directly to sales growth — the key relationship is whether AR is growing faster or slower than revenue.

Formula:

```
AR Growth = ((Current AR - Prior AR) / Prior AR) × 100
```

Scenario	Signal
AR growth ≈ Sales growth	✅ Normal — growing in line with business
AR growth < Sales growth	✅ Strong — collecting faster than booking
AR growth > Sales growth	⚠️ Warning — collection lag
AR growing, sales flat/declining	❌ Red flag — serious collection problems

4.3 Inventory Growth

Measures the percentage change in unsold goods. Like AR growth, most meaningful when compared to sales growth. Rising inventory faster than sales suggests demand problems and can lead to future margin pressure from markdowns or write-offs.

Formula:

```
Inventory Growth = ((Current Inventory - Prior Inventory) / Prior Inventory) × 100
```

Scenario	Signal
Inventory growth ≈ Sales growth	✅ Normal — building in line with demand
Inventory growth < Sales growth	✅ Strong — selling through efficiently
Inventory growth > Sales growth	⚠️ Warning — demand may be weakening
Inventory growing, sales flat/declining	❌ Red flag — serious demand problem

When both AR and inventory are growing faster than sales simultaneously, it is one of the most serious red flags in financial analysis — AR growth signals a collection problem (sold but not collected) while inventory growth signals a demand problem (produced but not sold).

5. Financial Structure & Leverage

Leverage metrics measure how much of a company's capital structure is financed by debt versus equity. Higher leverage amplifies both gains and losses.

5.1 Financial Leverage (Equity Multiplier)

Measures how much of a company's assets are financed by equity versus debt. A ratio of 2.0x means half the asset base is debt financed. Also referred to as the equity multiplier.

Formula:

```
Financial Leverage = Total Assets / Shareholders' Equity
```

Ratio	Signal
1.0x	No debt — entirely equity financed
1.0x–2.0x	Conservative
2.0x–3.0x	Moderate
3.0x–5.0x	Elevated — warrants scrutiny
Over 5.0x	High — significant financial risk

5.2 Debt to Capital

Measures the proportion of total capital financed by debt. More intuitive than debt to equity since it always falls between 0% and 100%.

Formula:

```
Debt to Capital = Total Debt / (Total Debt + Shareholders' Equity) × 100
```

Ratio	Signal
Under 30%	✅ Conservative — low financial risk
30%–50%	✅ Moderate — typical for many industries
50%–70%	⚠️ Elevated — warrants scrutiny
Over 70%	❌ High — significant financial risk

5.3 Debt to Equity

One of the most widely used measures of financial leverage. Compares debt directly to equity. More sensitive to changes in leverage at higher debt levels than debt to capital.

Formula:

```
Debt to Equity = Total Debt / Shareholders' Equity × 100
```

Ratio	Signal
Under 50%	✅ Conservative
50%–100%	✅ Moderate
100%–200%	⚠️ Elevated
Over 200%	❌ High — significant financial risk

5.4 Interest Coverage

Measures how easily a company can pay its interest expense from operating earnings. One of the most direct measures of financial distress risk. A ratio declining over time alongside rising debt and compressing margins is one of the clearest early warnings of financial trouble.

Formula:

```
Interest Coverage = Operating Income (EBIT) / Interest Expense
```

Ratio	Signal
Over 7.0x	✅ Strong — very comfortable coverage
3.0x–7.0x	✅ Adequate — healthy buffer
1.5x–3.0x	⚠️ Thin — limited margin of safety
1.0x–1.5x	❌ Dangerous — barely covering interest
Below 1.0x	❌ Critical — cannot cover interest from operations

5.5 Goodwill / Equity

Measures how much of shareholders' equity consists of goodwill — an intangible asset created when acquiring another business at a premium. Goodwill cannot be sold independently or liquidated in a crisis. If an acquisition underperforms, a goodwill impairment simultaneously reduces net income, equity, and causes leverage ratios to spike.

Formula:

```
Goodwill as a % of Equity = (Goodwill / Shareholders' Equity) × 100
```

Ratio	Signal
Under 20%	✅ Low — equity is mostly tangible
20%–50%	⚠️ Moderate — warrants monitoring
50%–100%	⚠️ Elevated — significant acquisition premium
Over 100%	❌ Extreme — goodwill exceeds entire equity base

Tangible Equity = Shareholders' Equity - Goodwill - Other Intangibles. Many analysts use tangible equity for a more conservative and realistic picture of what shareholders actually own.

6. Liquidity Metrics

Liquidity metrics measure a company's ability to meet its short-term financial obligations. A declining liquidity ratio over time, especially when combined with rising inventory and weakening cash flow, signals increasing financial pressure.

6.1 Current Ratio

The most widely used measure of liquidity. Measures the ability to pay short-term obligations using short-term assets. An important limitation: not all current assets are equally liquid — inventory must be sold first before converting to cash.

Formula:

```
Current Ratio = Current Assets / Current Liabilities
```

Ratio	Signal
Over 2.0x	✅ Strong — comfortable liquidity cushion
1.5x–2.0x	✅ Adequate — healthy buffer
1.0x–1.5x	⚠️ Thin — limited margin of safety
Below 1.0x	❌ Dangerous — cannot cover short-term obligations

6.2 Quick Ratio

A more conservative liquidity test than the current ratio — excludes inventory since it must first be sold before converting to cash. Asks: if sales stopped tomorrow, could the company meet its obligations? A company with a healthy current ratio but weak quick ratio is more vulnerable to demand slowdowns than it appears.

Formula:

```
Quick Ratio = (Cash + Accounts Receivable + Short-Term
Investments) / Current Liabilities
```

```
Quick Ratio = (Current Assets - Inventory - Prepaid Expenses) /
Current Liabilities
```

Ratio	Signal
Over 1.5x	✅ Strong — very comfortable liquid position
1.0x–1.5x	✅ Adequate — healthy buffer
0.5x–1.0x	⚠️ Thin — dependent on collecting receivables
Below 0.5x	❌ Dangerous — severely limited liquid resources

The gap between current ratio and quick ratio is itself informative — a large gap means the company is heavily dependent on selling inventory to meet its obligations.

7. Quick Reference Summary

Metric	Formula	Category
Gross Profit Margin	(Revenue - COGS) / Revenue	Profitability
Operating Margin	Operating Income / Revenue	Profitability
Pre-Tax Profit Margin	Pre-Tax Income / Revenue	Profitability
Net Profit Margin	Net Income / Revenue	Profitability
Return on Assets (ROA)	Net Income / Total Assets	Profitability
Return on Equity (ROE)	Net Income / Equity	Profitability
Asset Turnover	Revenue / Total Assets	Efficiency
Cash from Operations (CFO)	Net Income + Non-Cash + WC Changes	Cash Flow
Free Cash Flow Margin	Free Cash Flow / Revenue	Cash Flow
Sales Growth	(Current - Prior) / Prior Revenue	Growth
AR Growth	(Current - Prior) / Prior AR	Growth
Inventory Growth	(Current - Prior) / Prior Inventory	Growth
Financial Leverage	Total Assets / Equity	Leverage
Debt to Capital	Debt / (Debt + Equity)	Leverage
Debt to Equity	Debt / Equity	Leverage
Interest Coverage	EBIT / Interest Expense	Leverage
Goodwill as % of Equity	Goodwill / Equity	Leverage
Current Ratio	Current Assets / Current Liabilities	Liquidity
Quick Ratio	(Cash + AR + ST Investments) / CL	Liquidity