THE CURRENT RATIO NON-SENSE PARADOX – AND HOW TO FIX IT

FINN SCHOELER
Research University in Aarhus, Denmark

ABSTRACT

We aim for presenting a theoretical stringent version of the common current ratio. Existing accounting regulation prescribes using the going concern concept perspective and provides the measurement basis for a company's current assets and current liabilities, that make it questionable what is measured by the current ratio. Thus, we suggest using fair value as a common measurement basis for this ratio, since stringent use of fair value and fair value proxies provides adjusted current ratio values that differ from traditional current ratio values, but in return the conclusions based on the numbers are concise, understandable, reliable, and theoretically credible, no matter whether we use a normative or positive approach in our financial analysis.

Our suggestion is a unique modification which eliminates a theoretical lapsus, and thus improves financial analysis since it is easily adapted by analysts using normative current ratio heuristics to the benefit of all accounting users seeking faithful information on companies' financial health.

Keywords: Accounting Regulation, Measurement Basis, Financial Analysis, Normative Approach, Positive Approach, Theoretical Stringency, Ratio Adjustment, Financial Health, Accounting Heuristics.

1.0 INTRODUCTION

According to for instance Revsine (1973), the current ratio is defined as the ratio of current assets to current liabilities, and ideally this ratio should reflect the ability of a firm to meet its short-term obligations when they are due.

The going concern concept is one of the underlying assumptions in the preparation of financial statements, and it suggests that all assets and liabilities are measured accordingly. However, if one's interpretation of the current ratio implies that companies will liquidate current obligations by using current assets, the interpretation of the current ratio challenge the going concern concept since assets' liquidation values are often very different from going concern values if forced on short notice. Consequently, both the recognition and the measurement of existing assets and liabilities as well as the temporal profile of the orderly transformation of assets (and liabilities) to (from) cash becomes important for a credible understanding of the current ratio.

The current ratio is traditionally very popular, and it is often used in a bench mark against some (industry) norm, although it is just a simple snapshot comparing two balance sheet numbers, current assets and current liabilities, each of which consist of different accounting items that are measured differently, for which reason it can be questioned what the totals represent in the exact comparison to each other. Despite this "instable" measurement basis, conventional

wisdom provides us with a normative heuristic, that the current ratio should exceed some target, often 1.5 which has been popular among analysts conveying the point of view that if so, then the company should not see itself in a position not being able to pay the current liabilities when due. Simultaneously, the current ratio has not proven successful in positive settings linking current ratio and financial distress, and consequently we will focus on the normative use, and thus the attention that has been given to the current ratio, where it's often prominent place in traditional financial analysis is due to severe misconceptions.

Despite its popularity and the fact that it is easy to use normatively, the current ratio as such, i.e. the definition, content, and use, is at best unprecise, and at worst non-sense. However, as we will show, it is quite easy to cope with a key part of the shortcomings on the current ratio as we know it, and thus make it a coherent, strong, and useful financial ratio if some minor revisions are conducted.

Research question: How should current ratio be re-defined and used if the measure should be theoretically stringent.

Some of the main challenges in the present current ratio-definition and use when the current ratio is compared to some "arbitrary" norm is the vague theoretical substance in cross-sectional settings. The main incoherencies we focus on are:

- Perspectives: going concern (measurement assumption for all current assets and current liabilities accounting items) vs. liquidation assumption (used for the daily understanding of the current ratio).
- Measurement basis: current assets and current liabilities are both a mix of numbers measured at cost; historical cost; amortised cost: fair value; and net realisable value.
- Approach: Causality challenges for both a normative and a positive use of the ratios. Our primary approach here is normative, challenging existing heuristics.

The reminder of the paper is structured in the following way: In section B, we present some of the background literature and the history behind the current ratio, and the normative current ratio heuristics. In section C, we present theoretical analyses that challenge the definition and use of the current ratio so far, and we suggest improvements. In section D we present empirical analyses of ratios from a typical industry; and finally, we conclude the paper in section E.

2.0 BACKGROUND (literature review)

2.1 Current Ratio development – short history.

The industrial revolution in the 19th century changed business from a huge number of small companies with owner-managers to many large and legal companies with limited liability and with professional managers and stockholders, and thus the personal relationship between lender and borrower became less intimate and of minor importance since the personal liability was highly reduced. Consequently, the demand for knowledge concerning the financial position of limited companies increased, which drove the need for financial statements and financial analysis. Commercial bank requests for company financial statements that began in the 1870's became widespread by the 1890's. The current ratio was the very first financial ratio developed which according to Brown (1955) originally was observed in a report to the US congress in

1872 (Brown, 1955: 9), and it remained the only ratio for several years. The passage of the US federal income tax in 1913 and the establishment of the US federal reserve board in 1914 were two important events in the United States that increased the demand for and the quality of financial statements and led to the development of more financial ratios. According to Foulke (1950: 173) already by 1908 many good judges felt that the current ratio should be about 2.5 (Rosendale, 187, February 1908) for a company to be financially healthy. Wall (1919) demonstrates the original practical use of the current ratio, since he suggests that the straight-forward interpretation would be that if the sales of the different current assets in a forced sale (i.e. in a non-orderly transaction) could realise 40 (50) cents on the dollar of the accounting value of the current assets, which corresponds to a sufficient fund by a current ratio of 2.5 (2.0), the company would be able to pay the current liabilities when due. According to Wall's (1919) comparative analysis a current ratio of this size "tends to create an acceptable margin of safety" (Wall, 1919, 132). Further, Wall's analyses showed wide variability of the current ratio by industry and by geographic region, and thus he argued for the use of relative standards to compare a firm's ratios by industry norms rather than absolute standards.

Although the size of the ratio may not be a safe credit guide, the ratio is helpful when looking at all the current assets item by item in a liquidation perspective:

- Receivables: how large a cash discount should be offered to receive immediately payments on credit sales.
- Inventory: how much cash could be achieved when selling inventory items, raw materials and finished goods have value if not very specialised, while work in progress may be worthless unless almost finished.

Taking this perspective, the measurement challenge disappears, since the only thing that matters is how large should the current assets be to ensure at least as much cash as the current liabilities when converted to cash in a future forced sale.

2.2 Current Ratio heuristic development.

Following Wall's (1919) pioneering work, the current ratio has become the probably most common ratio, in particular used by creditors and security analysts to evaluate the ability of a company to pay its short-term obligations with short-term assets, and for many years the rule-of-thump was that a company's current ratio should be at least 2.0 to ensure an adequate safety margin ensuring that the company can pay employees, suppliers, and other current liabilities when due. While a current ratio above 1.0 often suggests good liquidity, today, many strong companies use sophisticated cash management techniques to minimize funds invested in current assets and, as a result, have ratios below 1.0. However, some lenders consider a current ratio below 1.0 as a sign of underlying liquidity problems suggesting the company is risky. Likewise, when a company shows a current ratio which compared to others in same industry, seems to be high, this suggests inefficient use of resources, like large obsolete inventory and irrecoverable debtors that cannot be easily converted into cash, and thus a company with a high current ratio might still have liquidity problems.

The current ratio should be treated with caution since the ideal target level will depend on the type of business and probably also the industry, and rather than focusing on the actual number

in comparison to some target, it is far more important to consider the trend in the ratio over time and whether the ratio approaches the target, or it moves away from it. Following Atrill & McLaney (2019), there is no simple rule to apply when determining the target: supermarkets usually face cash payment and consequently they can operate and survive comfortably with a current ratio of less than 0.5 while companies in heavy engineering need to operate with a level much larger than this because of high levels of work in progress. Concerning an eventual trend in current ratio, an increase may not necessarily be a good sign since it may show excessive inventory or a very large amount of cash that could be put to better use. Beyond some point a high current ratio may not indicate superior liquidity, and according to Spiceland et al (2022), analysts become concerned if a company reports an increasing current ratio combined with either a lower receivables turnover ratio or a lower inventory turnover ratio. On the other hand, a continuing decline in the ratio might be a warning signal which should not be ignored.

The norm for companies in most industries nowadays is around 1.5, as reported by the Risk Management Association (US) according to Thomas et al (2024: 743). Most successful businesses operate with current ratios between 1.2 and 1.8 while a current ratio of less than 1.0 is considered low, but it must be seen in the context of the business operations and cash flows to prevent irrational or inaccurate conclusions for a company as well as an industry as already Wall (1919) suggested.

Due to the challenges that increased inventory can have on the interpretation of an increased current ratio, some have suggested ignoring inventory when evaluating a company's short-term financial position. The quick ratio (or acid test) can be defined as (current assets less inventory) divided by current liabilities, and it reflects that inventory is often difficult to convert to cash on short notice. Among those who find the general current ratio should be 1.5, a suggested ideal value for the quick ratio at 0.8 is generally accepted. However, in order for an analyst to catch the high inventory dilemma, i.e. that a seemingly good current ratio is a consequence of a large and slow-moving inventory, it might make more sense to consider looking at additional financial ratios, like "Share of inventory financed by supplier credits (i.e. accounts payable)"), Turnover ratios, Operating cycle and the like, rather than ignoring the inventory.

The normative challenges finding ideal current ratio targets become even more clear if we look at the attempts of finding a positive relation between current ratio and financial distress. Since original partial analyses by Merwin (1942) and Beaver (1966), and multiple analyses by Altman (1968), several attempts have been made during the last decades to make positive conclusions on causal relations between current ratio and different measures of financial distress. Positive uses include estimation of variables such as profit margins, returns, debt, and market prices, used for predictive models for corporate failure, bond ratings, and credit risk, but mixed results in several attempts support the challenge of developing more clear heuristics, preferable with clear and understandable content.

For both a positive and normative approach the key issue considered is usually whether the current ratio is too low, which indicates a future lack of liquidity (normatively) and future financial distress (positively). However, some of the blurred empirical findings are probably due to the unintended mix of accounting perspectives, measurement basis issues, and different theoretical approaches.

3.0 THEORETICAL ANALYSES

3.1 Perspectives

The original intention behind the balancing of current assets against current liabilities is to accentuate the relation between the two. The early literature suggests a liquidation perspective, like Laugh (1917) and Wall (1919), for the evaluating whether the accounting current assets when converted to cash at short notice can cover the current liabilities. Wall (1936, 32ff) presents a straightforward method for analysing the sizes by proportion, where current assets minus current liabilities equals excess capital.

Example, based on numbers from Wall (1936: 33)

Item	Case A	Case B
Current Assets	250	375
Current Liabilities	125	250
Excess (or Net Working) Capital	125	125
Current Ratio	2.0	1.5
1 / Current Ratio	50%	67%

Following Wall's two cases A and B the excess capital is identical, but the real question is how large a part of the current assets must be liquidated to be able to pay off the current liabilities when due? The values from the balance sheet meet the going concern criteria, and the conversion to cash is expected to take place as orderly transactions. However, when the assets are liquidated through forced transactions the consequence will be lower cash amounts since the conversion comes at a price. In the example, for case A we need at least 50% of the current assets (250) in cash to ensure we can pay off the current liabilities (125), while we for case B need at least 67% of the current assets in cash to ensure we can pay off the current liabilities. According to Wall (1936) this understanding would have been clearer if the current ratio had been turned upside down, i.e. if the current ratio was defined as current liabilities divided by current assets, and thus giving us the results, 50% and 67%, as mentioned.

As such, there is no problem using each company's balance sheet numbers case-by-case using a liquidation perspective to evaluate every current asset's liquidation value individually if granted access to such detailed accounting information. However, already Laugh (1917) and Wall (1919 and 1936) made attempts to translate the currents assets liquidation value part of the current liabilities into a safety margin or "going-concern surplus-need" expressed through suggesting the current ratio should be larger than 2.0 (corresponding to 1/current ratio = 50%) or 2.5 (corresponding to 1/current ratio = 40%). It should be noted that the use of some rule-of-thumb constant safety margin and a few accounting totals (current assets and current liabilities) make cross-sectional comparability far less time-consuming when screening companies, since the financial statements can be used directly.

However, to make this going concern perspective work it would be necessary to reconsider the different liabilities and assets composing the current liabilities and current assets respectively and how they are measured to ensure accountability for the current ratio. All current assets and current liabilities should thus be measured at same measurement basis i.e. same uniform principles and methods. As basis we suggest (IFRS 13 measurement of) Fair Values, i.e. de

facto exit prices (as defined in IFRS 13.24): "Fair value is what would be received to sell an asset or paid to transfer a liability in an orderly transaction .. at the measurement date under market conditions (i.e. an exit price) …". It should be noticed that the requested orderly transaction ensures going concern is respected. Generally, if both current assets and current liabilities are close to fair value one could expect the value 1.0 as an appropriate norm for the current ratio, since both the nominator and the denominator are at one year's sight – otherwise they would not be current.

3.2 Measurement basis

The two accounting standard setters, IASB and FASB, basically share same accounting practice for most current assets and liabilities: Cash and cash equivalents – eventually converted from foreign currencies to local currency at present exchange rate, and eventual listed securities converted to value at public stock prices less expected transaction costs ~ fair value; Receivables – prescribed allowance reduction (impairment) where foreseeable i.e. an eventual expected net realisable value lower than carrying value ensuring closeness to fair value; Inventory – prescribed impairment when net realisable value is lower than cost which in particular is important for goods with low (or falling) inventory turnover (see also below); Payables – prescribed at total expected expenses to settle liabilities ~ fair value; Debt – sometimes amortised cost are seen at values quite different than market values, but since the current debt is due within one year all scheduled interests and repayments should be very close to fair value.

Generally, fair values (exit prices) are not prescribed for current ratio components, and thus evaluation of accounting estimates might suggest corrections for the accounting numbers to reflect expected exit prices – especially downwards for current assets and upwards for current liabilities, since our task probably is to clarify what is the lowest expected current ratio using fair values (exit prices). On the other hand, a too large current ratio is also not desirable, since it suggests non-efficient use of cash, and consequently the composition of current assets and current liabilities as well as the age-composition of accounts receivable and accounts payable become interesting.

For inventory, the determination of a fair value depends on what category of inventory referred to: Raw materials and Goods bought for resale have fair values as referred to above, i.e. at cost or at a lower net realisable value if relevant in a going concern perspective. Work in progress and Finished goods are generally measured at cost in the financial statements, but for the purpose here these goods' fair values should incorporate a profit since the overall assumption is that we aim for determining their net realisable value (i.e. the fair value or exit price). The going concern principle suggest that the goods should be part of orderly transactions and since the assets are current the goods are expected to be finished, sold, and delivered within one year (or a business cycle). Thus, the conversion of these goods to fair values is a matter of adding expected profit on these goods to the already known cost prices for the goods in the accounting system. The adjustment of the current ratio can be done using numbers from income statement and balance sheet as follows, since adjustment of inventory from cost to fair value is given by:

$$INV_{FV}^{PF} = INV_C^{PF} \text{ x (Revenue / COGS)}$$

And thus adjustment calculation is given:

$$CR_{FV} = CA_{FV} / CL_{FV} = [CA_{FV} + INV_C^{PF} \times ((\text{Revenue} / \text{COGS}) - 1)] / CL_{FV}$$

Where:

- CR is current ratio;
- CA is current assets;
- CL is current liabilities;
- INV is inventory;
- Revenue is revenue;
- COGS is Cost of goods sold – or cost of sales where appropriate.
- Super-notation PF refer to goods in Progress or Finished;
- Sub-notation FV refer to at fair value;
- Sub-notation C refer to at cost;

3.3 Approach (normative)

This fair value adjustment introduces some uncertainty due to the incorporation of estimated profit on goods in progress and finished, but the current ratio converted to exit prices (fair values) in a going concern perspective provide valuable information on the balancing of current assets and current liabilities on a one-year sight. However, the company might have timing issues within the one-year limit that could affect the relation significantly, for instance due to very different turnover ratios for individual current assets and liabilities caused by the business like the supermarkets referred to earlier where the balance could be expected on a lower level expressed by current ratio.

Consequently, we might (again) look for additional measures: Quick ratio (acid test), and cash ratio that just eliminates the challenges caused by the inventory. However, for the evaluation of a company's cash position the inventory is a main accounting item which should not be neglected, since a suitable inventory with a suitable turnover would be a cornerstone for profitability and proper financing in most companies. A probably better solution would be to include more specific and detailed information on central working capital elements, like accounts receivable, inventories and accounts payable by use of turnover-ratios (or the inverse of the turnover, i.e. the average number of days goods are in inventory, also called the through-put-time); Cash conversion cycle; Share of inventory financed by supplier credits; Invested capital in current assets (at fair value) per sales activity; and Operating Cycle.

Whether one will use these supplementary ratios to adjust the expected current ratio-norm for a company or simply see the information as means for qualifying the current ratio is not important since the overall goal is to ensure enough and relevant information on the company's short-term financial position.

4.0 EMPIRICAL ANALYSES AND DISCUSSION

4.1 Real world example – the beer industry.

For illustrative purposes we look at just one industry: Beer is in essence a simple product – the result of fermentation using the malt of barley and other grains, and flavoured with hops, which

has been made in the same way for thousands of years. More recently, brewers differentiate their products through branding, and by adding substances and ingredients, allowing them to obtain higher prices and thus earn higher profits. The best-known brands provide reassurance to consumers: the taste and quality will be the same over time and across countries, and thus also follow any brand-associated lifestyle. The brewing industry consists of many small (local) producers, and a few large ones supplying standard beers to an international market. By concentrating production and setting up sophisticated distribution facilities, the big brewer can enjoy significant economies of scale, and inspired by the Top-20 list from Affan Mir from March 2023 we have chosen to look at 16 of the largest 20 companies, see Table 1.

Table 1:

16 largest beer breweries and companies in the World

Company name	Revenue 2022 in billion USD	Volume output in hectoliters (2022)	Financial Ratios								
			Current Ratio (this year)	Quick Ratio (this year)	Cash Ratio (this year)	Current Ratio (adj.def. - this year)	Share of inventory financed by suppliers (this year)	Invested Capital in Current Assets (fair) per Sales activity (this year)	Inventory conversion in days (this year)	Operating cycle in days (this year)	Cash conversion cycle in days (this year)
Anheuser-Busch Inbev	57.78	518.0	0.6743	0.4820	0.0290	0.7674	2.8114	0.4566	91.7	190.1	-67.8
Heineken	37.60	256.9	0.7763	0.5472	0.1949	0.8386	1.8006	0.4144	58.9	122.4	16.4
Diageo	20.57	23.9	1.5321	0.6918	0.2707	1.7908	0.8299	0.9784	433.5	517.5	157.7
Asahi Group	19.22	59.3	0.5826	0.3970	0.0295	0.6570	2.5187	0.3312	54.0	121.6	-14.4
Kirin Holdings	15.20	24.4	1.3223	0.8641	0.1390	1.6288	0.9138	0.5184	97.6	181.9	92.6
Molson Coors	10.70	82.3	0.7816	0.5467	0.1778	0.8340	2.6456	0.2630	41.1	83.5	-25.1
Carlsberg	10.20	102.4	0.7026	0.5853	0.1675	0.7487	3.8330	0.5194	54.6	160.4	-49.0
Constellation Brands	9.56	33.2	1.1778	0.5382	0.0450	1.7449	0.4959	0.5479	148.0	204.5	131.1
China Resources Beer	5.13	122.2	0.9077	0.5859	0.4438	0.9674	0.4645	0.6311	124.5	158.3	100.5
Tsingtao	4.86	79.6	1.6268	1.4157	0.9076	1.7039	0.8342	1.0419	74.6	188.0	125.8
Efes Beverage Group	4.70	34.0	1.2264	0.8910	0.5678	1.2997	1.3340	0.6036	89.5	144.2	24.9
Compania Cervecerias Unidas	3.40	17.6	2.0847	1.4816	0.7490	2.1060	1.0260	0.6192	70.6	149.2	76.8
Boston Beer Company	2.09	9.6	2.0720	1.3451	0.8840	2.3031	0.5670	0.2251	44.1	60.6	35.6
HiteJinro	1.92	5.5	0.5102	0.4057	0.1132	0.5583	1.4048	0.4883	54.7	148.1	71.2
Royal Unibrew	1.60	4.8	0.6633	0.4002	0.0464	0.7932	1.5944	0.3183	66.9	118.7	12.1
Olvi plc	0.63	5.2	1.1655	0.8244	0.2944	1.2729	0.8463	0.4534	71.1	140.0	79.8

Revenue 2022 from the article "Top 20 Beer Companies in the World" by Affan Mir, March 30, 2023, found on Yahoo Finance.
Volume 2022 in hectolitres found in the article "The 40 Biggest Beer Companies in the World in 2023" by Vinepair staff (www.vinepair.com).

In appendix A all relevant collected information from the 16 companies is shown, while Table 1 only shows key numbers from this year.

Except for health regulations that apply to all food and drink producers, the production of beer is not regulated. However, the brewing industry does face restrictions on the sale of beer since it is an alcoholic beverage, and in most countries licensing laws limit the outlets that can stock it, while the sale of alcoholic beverages might even be banned in Muslim countries. The production of standard beers is quite capital-intensive, which suggest focus on the economies of scale since key inputs besides huge plant-costs are relatively low variable unit costs for raw materials and packaging, which make it difficult (i.e. expensive) to enter the industry.

Illiquidity does not imply insolvency, since a company may have sufficient assets to cover its debts, but the assets cannot be converted quickly into cash. Both the traditional current ratio, quick ratio, and our fair value adjusted current ratio have weaknesses: First, all show a company's liquidity on one date in the year only and consequently management can make all ratios look better by careful choice of the firm's financial year-end, and either ratio can be raised by temporarily paying off loans or other current liabilities just before the year-end. Second, all the ratios equate liquid with current, but some fixed assets may also be highly

liquid, like listed shares or bonds in another company that management intends to hold much longer than a year, and that can be converted into cash quickly, and thus disturb the picture.

Ideally, the beer industry should probably reflect a quite homogenously economic setting since the business surroundings are quite identical for all companies. However, the industry is probably a good example of the real-world complexity. In our Table 1, the traditional current ratio shows quite low numbers in most of the companies (11 below a 1.3 norm) which might suggest an industry in (severe) crisis. This is backed up by quite low quick and cash ratios on average shown here, but our adjusted current ratio (CRFV) is as expected generally higher than the traditional current ratio and, in many cases, quite close to 1.0 – the overall general expected balance. In cases where CRFV is not in accordance with norm it as especially suggested to look at additional ratios, and doing this shows that where current ratio is low, a quite large share of inventory is financed by suppliers indicating that inventory financing is not a challenge.

The different cash conversion cycle days to some extent backs this up as the cycles are lower when CRFV's are low indicating that the companies seem to manage cash appropriately. This tells us that as such the CRFV is not the one missing link, but now the analyses are stringent!

4.2 Beer industry heuristics.

Comparing the 16 companies in the beer-industry to rules-of-thumbs heuristics prevails that only 8 (8) of 16 (16) companies this year (and last year) have CRFV larger than 1.0; and only 5 (5) of 16 (16) have traditional current ratio larger than end 1.3. The largest company, AbInbev, has a traditional current ratio of 0.67 and a CRFV of 0.77, but this hardly means that the company is in trouble – in fact the company's inventory is financed 2.8 times by their suppliers. In fact, the suppliers generally finance the inventories 2 or more times for the large companies, where CFFV < 1.0 and even for the small companies where CRFV < 1.0 the suppliers finance more than the total inventory's cost value. Further, in 8 (7) companies the CRFV > 1.2 indicating that it can be discussed whether cash is managed efficiently – and likewise for 4 (2) companies where the traditional current ratio > 1.5. For 6 (4) companies, the quick ratio is larger than the usually recommend norm of 0.8 – and for the companies having the largest quick ratios the share of the inventories financed by suppliers seems to be at relatively lower level.

To conclude, in this industry we observe quite large dispersion which may give us reasons to doubt the heuristics as such since the industry is not so homogenous as expected and assumed when the industry-heuristic was decided. In fact, when the numbers and ratios seem to go in all directions it is definitely a very good achievement that they are now comparable based on exit prices, which reflect orderly transactions within coming year and where timing issues probably only remain the same within that year. In fact, the last is a good argument for looking at the setting in other industries.

Although our numbers are from only one industry, we see no reason to believe that the same would not be a similar pattern in other industries.

5.0 CONCLUSION

The adjusted current ratio does not provide a less diverse picture than the traditional current ratio, but now the diversification is neither due to different perspectives nor due to measurement differences across industry, and thus now the ratios are truly comparable. Likewise, the suggestion of only using fair values (exit prices) in going concern perspective presumably presents a more reliable current ratio than when the traditional procedure is followed. The diverse results are also a good reminder that although the corrected current ratio represent a concise and theoretically credible measure, the current ratio should never stand alone in a financial analysis.

Even though current ratio often (normatively) is recommended on some different industry wide target level reflecting industry business structures, norms and cash flow patterns, our industry analysis shows a high level of diversity and thus that one should be careful when using "raw" current ratio-norms. Instead, it is recommendable to make a detailed analysis of the composition of current assets and current liabilities including other ratios than the current ratio components to justify an eventual non-balancing of current assets and current liabilities, and thus qualify a current ratio adjusted at fair value very different from 1.0.

While the basis for the heuristics is often not even mentioned in scholar investments books, it is our conviction that the analyses and guidance presented here will be valuable for accounting users seeking information on companies' liquid position – in all industries and not only in the beer industry that we have used as case-industry.

Appendix

Accounting numbers from World's 20 largest breweries (2022) based on revenue converted to USD - we were able to get public full/relevant access to 16 breweries' accounts, and key numbers are presented here.

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Appendix:

16 largest beer breweries and companies in the World

Company name	Country	Revenue 2022 in billion USD	Volume output in hectoliters (2022)	Financial Year	Accounting Regime	Accounting numbers in size and currency	Numbers from annual report (in annual							
							Revenue (this year)	Revenue (last year)	Cost of Goods Sold (this year)	Cost of Goods Sold (last year)	Current Assets (beginning)	Current Assets (ending)	Inventory (beginning)	Inventory (ending)
Anheuser-Busch Inbev	Belgium	57.78	518.0	2022	IFRS	Mio USD	57,786	54,304	26,305	23,097	23,949	23,186	5,399	6,612
Heineken	Netherlands	37.60	256.9	2022	IFRS	Mio EUR	28,719	21,941	20,155	15,022	9,578	11,015	2,438	3,250
Diageo	UK	20.57	23.9	2021/22	IFRS	Mio GBP	15,452	12,733	5,973	5,038	11,445	12,934	6,045	7,094
Asahi Group	Japan	19.22	59.3	2022	IFRS	Mia YEN	2,511	2,237	1,589	1,383	700	738	201	235
Kirin Holdings	Japan	15.20	24.4	2022	IFRS	Mia YEN	1,989	1,822	1,084	999	827	837	247	290
Molson Coors	USA	10.70	82.3	2022	US	Mio USD	10,701	10,280	7,046	6,226	2,779	2,638	805	793
Carlsberg	Denmark	10.20	102.4	2022	IFRS	Mio DKK	70,265	60,097	38,198	31,528	23,091	34,249	5,391	5,718
Constellation Brands	USA	9.56	33.2	2022/23	US	Mio USD	9,453	8,821	4,684	4,113	3,330	3,496	1,573	1,899
China Resources Beer	China	5.13	122.2	2022	IFRS	Mio RMB	35,263	33,387	21,702	20,313	15,897	20,878	6,458	7,402
Tsingtao	China	4.86	79.6	2022	CAS	Mio RMB	32,172	30,167	20,318	19,091	28,959	32,003	3,493	4,152
Efes Beverage Group	Turkey	4.70	34.0	2022	TFRS	Mio TRL	90,504	39,284	57,513	25,142	24,664	51,546	5,903	14,096
Compania Cervecerias Unidas	Chile	3.40	17.6	2022	IFRS	Mia CLP	2,711	1,515	2,485	1,292	1,091	1,662	353	481
Boston Beer Company	USA	2.09	9.6	2022	US	Mio USD	2,090	2,058	1,228	1,260	345	423	149	149
HiteJinro	South Korea	1.92	5.5	2022	IFRS	Mia WON	2,484	2,192	1,514	1,258	1,071	1,109	227	260
Royal Unibrew	Denmark	1.60	4.8	2022	IFRS	Mio DKK	11,487	8,746	6,618	4,490	2,143	3,058	780	1,213
Olvi plc	Finland	0.63	5.2	2022	IFRS	Mio EUR	584	462	364	269	217	242	59	71

June 30, 2022
February 28, 2023
China's Accounting Standards for Business Enterprises
Turkish Accounting/Financial Reporting Standards
Revenue 2022 from the article "Top 20 Beer Companies in the World" by Affan Mir, March 30, 2023, found on Yahoo Finance.
Volume 2022 in hectolitres found in the article "The 40 Biggest Beer Companies in the World in 2023" by Vinepair staff (www.vinepair.com).

l report currency)						Financial Ratios									
Cash and equivalents (beginning)	Cash and equivalents (ending)	Current Liabilities (beginning)	Current Liabilities (ending)	Accounts Payable (beginning)	Accounts Payable (ending)	Current Ratio (this year)	Current Ratio (last year)	Quick Ratio (this year)	Quick Ratio (last year)	Cash Ratio (this year)	Cash Ratio (last year)	Current Ratio (adj.def. - this year)	Current Ratio (adj.def. - last year)	Share of inventory financed by suppliers (this year)	Share of inventory financed by suppliers (last year)
12,097	997	34,184	34,383	17,810	18,589	0.6743	0.7006	0.4820	0.5427	0.0290	0.3539	0.9045	0.9140	2.8114	3.2988
3,248	2,765	12,094	14,190	4,631	5,852	0.7763	0.7920	0.5472	0.5904	0.1949	0.2686	0.8736	0.8848	1.8006	1.8995
2,749	2,285	7,142	8,442	4,648	5,887	1.5321	1.6025	0.6918	0.7561	0.2707	0.3849	2.8657	2.8953	0.8299	0.7689
53	37	1,243	1,266	532	592	0.5826	0.5634	0.3970	0.4018	0.0295	0.0424	0.6903	0.6630	2.5187	2.6474
149	88	599	633	230	265	1.3223	1.3800	0.8641	0.9676	0.1390	0.2487	1.7048	1.7197	0.9138	0.9312
637	600	3,623	3,375	2,068	2,098	0.7816	0.7670	0.5467	0.5449	0.1778	0.1758	0.9035	0.9117	2.6456	2.5689
8,344	8,163	43,282	48,747	20,642	21,917	0.7026	0.5335	0.5853	0.4089	0.1675	0.1928	0.8011	0.6464	3.8330	3.8290
199	134	2,699	2,968	899	942	1.1778	1.2338	0.5382	0.6508	0.0450	0.0739	1.8291	1.9009	0.4959	0.5716
5,376	10,208	21,007	23,002	3,100	3,438	0.9077	0.7567	0.5859	0.4493	0.4438	0.2559	1.1087	0.9546	0.4645	0.4800
14,598	17,855	18,259	19,672	3,128	3,464	1.6268	1.5860	1.4157	1.3947	0.9076	0.7995	1.7500	1.6970	0.8342	0.8955
10,260	23,867	24,521	42,031	11,916	18,804	1.2264	1.0058	0.8910	0.7651	0.5678	0.4184	1.4187	1.1412	1.3340	2.0186
266	597	781	797	516	493	2.0847	1.3973	1.4816	0.9448	0.7490	0.3400	2.1397	1.4755	1.0260	1.4587
66	181	255	204	86	84	2.0720	1.3536	1.3451	0.7691	0.8840	0.2603	2.5821	1.7238	0.5670	0.5761
286	246	1,954	2,173	316	319	0.5102	0.5482	0.3906	0.4320	0.1132	0.1466	0.5868	0.6345	1.2270	1.3919
86	214	3,801	4,610	1,721	1,934	0.6633	0.5638	0.4002	0.3586	0.0464	0.0226	0.8569	0.7583	1.5944	2.2064
59	61	193	208	63	60	1.1655	1.1272	0.8244	0.8229	0.2944	0.3048	1.3716	1.3451	0.8463	1.0751

Invested Capital in Current Assets per Sales activity (this year)	Invested Capital in Current Assets per Sales activity (last year)	Invested Capital in Current Assets (fair) per Sales activity (this year)	Invested Capital in Current Assets (fair) per Sales activity (last year)	Invested Capital in Inventory (fair) per Sales activity (this year)	Invested Capital in Inventory (fair) per Sales activity (last year)	Number of days' Sales the Invested Capital in Inventory (fair) represents (this year)	Number of days' Sales the Invested Capital in Inventory (fair) represents (last year)
0.4012	0.4410	0.5382	0.5753	0.2514	0.2338	91.7	85.3
0.3835	0.4365	0.4316	0.4877	0.1613	0.1623	58.9	59.2
0.8370	0.8988	1.5656	1.6240	1.1877	1.1999	433.5	438.0
0.2937	0.3131	0.3480	0.3684	0.1479	0.1452	54.0	53.0
0.4208	0.4538	0.5425	0.5655	0.2675	0.2473	97.6	90.3
0.2465	0.2703	0.2850	0.3213	0.1125	0.1293	41.1	47.2
0.4874	0.3842	0.5557	0.4655	0.1497	0.1710	54.6	62.4
0.3699	0.3775	0.5744	0.5816	0.4054	0.3825	148.0	139.6
0.5921	0.4761	0.7232	0.6006	0.3411	0.3179	124.5	116.0
0.9947	0.9599	1.0700	1.0271	0.2044	0.1830	74.6	66.8
0.5695	0.6278	0.6589	0.7124	0.2451	0.2348	89.5	85.7
0.6129	0.7204	0.6291	0.7608	0.1935	0.2736	70.6	99.9
0.2025	0.1678	0.2524	0.2137	0.1209	0.1184	44.1	43.2
0.4462	0.4886	0.5133	0.5655	0.1716	0.1805	62.6	65.9
0.2662	0.2450	0.3439	0.3296	0.1833	0.1737	66.9	63.4
0.4151	0.4697	0.4885	0.5605	0.1949	0.2176	71.1	79.4