CLAY TOKENS

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Deficiencies in GAAP/IFRS vis-a-vis Uniform Accounting

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Not all cash was created equal

Folks in finance often use the phrase “cash is king.”

These three words are used to describe different financial concepts, from a belief that cash is more valuable than other investment tools to an emphasis on cash in analyzing businesses to the importance of cash flow for the overall health of a business.

It seems that as one delves deeper, the colloquialism, or more accurately the sentiment behind it, has become ingrained in the way our financial system is set up.

For instance, take a look at how financial statements are structured under US GAAP.

Cash sits atop its throne at the top of the balance sheet, and assets are listed (at least theoretically) in order of how quickly they can be converted to cash. As such, the GAAP balance sheet seems to imply that cash should be a focal point for financial statement users.

The significance of cash becomes more apparent as we turn to other financial statements. There is a whole separate statement called the “statement of cash flows” which is supposed to help financial statement users better understand the different sources and uses of cash… although it does a fairly poor job at doing so.

Cash can be critical in determining important liquidity and solvency ratios to help investors and owners analyze the health of a business in both the short- and long-term. And cash generation is often a good measuring stick for how much value a firm can provide for shareholders.

Evidently, cash is critical to investors, but it is equally important to corporations and their day-to-day operations.

Inherently, corporations require some level of cash to operate their business.

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Without sufficient cash balances, corporations may run into short term liquidity issues with creditors, and in the long-term, complications may arise in building strategic partnerships with customers and suppliers. Insufficient cash levels may be a sign to various stakeholders that they should be wary of the firm's status as a going concern.

That said, when analyzing a company's operations, not all cash on a balance sheet should be looked at the same, because cash can serve very different purposes.

As Benjamin Graham, "the father of value investing", identified in The Interpretation of Financial Statements in 1937: "In theory a company should not keep any more cash on hand than is required for the transaction of its usual business and the possible needs that may suddenly arise."

But as we know, the business environment is slightly more complex than that of a theoretical environment and as Graham noted "there is a tendency to hold more cash than the business needs".

As such, to get an accurate assessment of the operating strength of a company, a distinction must be made between operating cash, what the business needs to run, and non-operating or "excess" cash, the rest of the cash it holds on its books.

This distinction becomes important because companies with a lot of cash on hand, and therefore with plenty of excess cash, can see their as-reported profitability (ROA), look significantly worse than is economically accurate. This distortion occurs because a lot of their balance sheet is taken up by cash that is earning little to no return.

If excess cash is not removed, huge cash generators can look like bad businesses.

Two prime examples include Apple (AAPL) and Microsoft (MSFT), which are two of the first companies to ever cross the $2 trillion market cap threshold. Yet when looking at their as-reported profitability, it becomes baffling why they would ever be valued so richly—both have ROAs hovering near corporate average 10% levels.

The key to this dislocation, of course, lies in their massive cash balances. While some is operating, a vast majority is not necessary for the business to function—and is often used for financing or investment purposes instead.

For years, Apple investors clamored for it to do something with its huge stockpile until it finally relented and instituted a modest dividend to appease shareholders.

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Meanwhile, Microsoft has so much cash lying around, it just acquired Activision for $60 billion without the need for outside financing. To reiterate, Microsoft just used cash reserves to purchase a company that is in the S&P 500 on its own, and it has enough saved up to do it again.

The purpose of removing excess cash is to see the true operating profitability of a firm—clearly these tech giants are not barely profitable companies. In fact, they are two very profitable firms once we apply our adjustments, with Apple boasting a 55% Uniform ROA, and Microsoft not far behind at over 35%.

By removing excess cash—and just the excess amount—we gain the ability to compare companies over time and across industries regardless of capital structure policies.

Now that we have an understanding of the thought process behind excess cash, how do we determine how much operating cash a company requires?

There are two methods to approximate operating cash—and whichever of the two identifies the highest "needed" operating cash, is the metric we use in our final operating cash calculations.

The first method is based on R&D, which is often greatest for technology companies and innovative firms as they need cash to maintain this investment into new products. These companies must prove to customers that they can fund big projects and continue product development without the need for incremental revenues.

Through interviews with management teams, buy-side and sell-side analysts, and statistical analysis of historic minimum and maximum cash balances—we've determined that 2x R&D (or two years of R&D investment) seems like a reasonable guideline here.

The other method is based on revenue—namely 5% of revenue, which is roughly equivalent to retaining two weeks of sales. This approximates the current liquidity required to satisfy near term operating costs.

Once the higher of these two methods is determined, we then add an adjustment for unearned revenue—particularly the incremental cash a company needs to pay the expenses to service these prepaid obligations.

The combined value of the R&D or revenue-based calculation plus the unearned "COGS" adjustment equals the operating cash value.

Once operating cash requirements are determined, anything extra is deemed to be excess cash and is excluded from operating assets.

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The cash itself does not go away, as once it is removed from the balance sheet, it is then deducted from the enterprise value of the company. Effectively, this represents that part of the value investors are getting when they buy a company's stock is an investment in the non-operating cash the company has.

Furthermore, we only deducted excess cash from enterprise value because the cash on hand needed to operate could not be returned to shareholders.

Once these adjustments are made, we get not only a better understanding of a firm's operating asset base, but also firmwide valuations.

There is a long line of firms, from various sectors, where as-reported assets do not represent economic reality due to excess cash holdings being included in the operating asset base.

This month we highlight three companies, with significant cash on the books, wherein the inclusion of all cash as operating assets severely limit the reliability of the firm's reported asset-based ratios:

•Electronic Arts, a leading video game developer and publisher;
•EPAM Systems, a software engineering firm focused on enterprise platform solutions; and
•NIKE, the leading retailer of sports apparel and accessories

In the pages and charts below, we show the excess cash for these firms and the difference between as-reported GAAP Assets and UAFRS-based Assets. In addition, we show the difference between as-reported GAAP earnings and UAFRS-computed Uniform Earnings.

While all of the 130+ adjustments have been applied, we hone in on how this line item in particular can create material deviations from economic reality.

In each case shown below, it's quite obvious the stock market does not and has not valued firms on GAAP earnings.

These examples highlight just how bad the as-reported numbers are, from a database of more than 32,000 companies wherein Uniform Accounting and GAAP/IFRS accounting differences are shown.

The report name "Clay Tokens" comes from the earliest known form of accounting and bookkeeping and a foundation for tracking the earliest debits and credits. In this regard, Uniform Accounting is an attempt to get financial statements back to the foundations of the purpose of accounting… to be useful to the users of the accounting information. Clay Tokens is produced monthly by Valens Research on behalf of and for the UAFRS Advisory Council for Uniform Adjusted Financial Reporting Standards.

Deficiencies in GAAP/IFRS vis-a-vis Uniform Accounting

EA – Electronic Arts, Inc.

Since 2016, excluding an uncharacteristic dip in 2020, through increased monetization of key franchises such as Apex Legends, Battlefield, FIFA, and Star Wars, Electronic Arts has been able to gradually improve its profitability. (Exhibit 1a).

Reflecting this UAFRS-based earnings trend, the firm has seen a material appreciation in its stock price, showcasing how an increased focus on microtransactions has been accretive to the firm's performance.

Meanwhile, GAAP earnings have declined materially over this same time period, misleading investors into incorrectly believing the firm has been investing heavily into dying gaming franchises. This as-reported performance would suggest the firm's stock price rise has been wholly unwarranted.

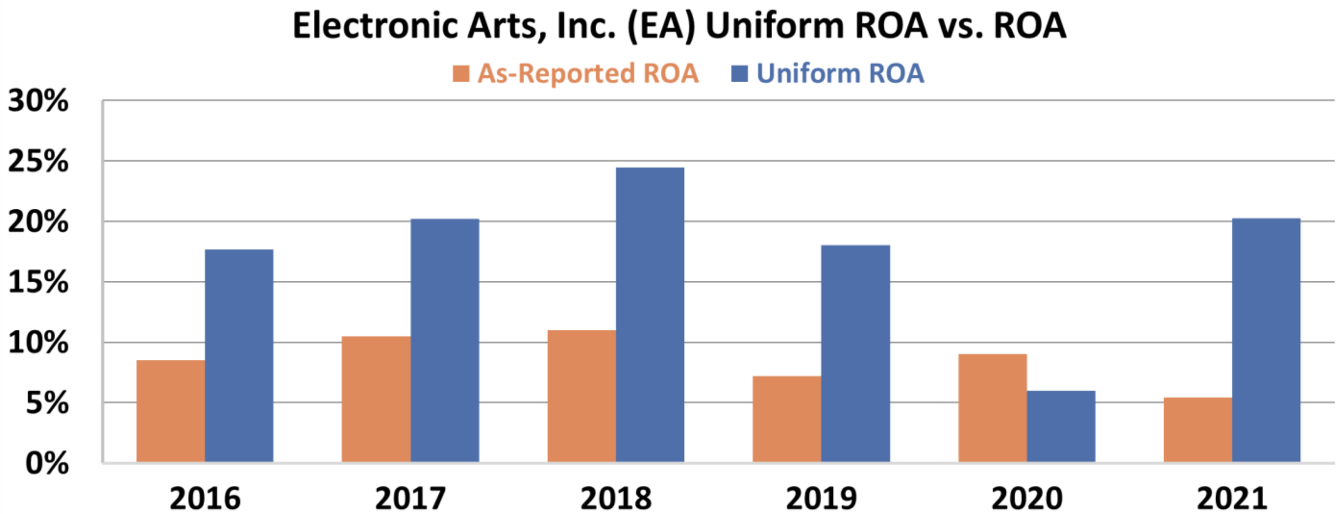
Since 2016, EA share prices have increased materially in value, rising from approximately $60/share to over $135/share, an over 110% rise (Exhibit 1b). That said, according to as-reported metrics, EA appeared to be a firm with middling and generally declining profitability, fading from corporate average to cost-of-capital profitability levels. This supposed deteriorating performance should not warrant the firm's stock price movements.

However, using Uniform Accounting, we can identify distortions such as a firm carrying excess assets on the balance sheet due to the mistreatment of excess cash, which substantially suppresses profitability metrics (Exhibit 1c).

UAFRS-adjusted metrics paint a significantly different picture of EA, where Uniform ROA improved from 18% in 2016 to 20% levels through 2020, accompanied by consistent Uniform asset growth, suggesting that the appreciation in the firm's stock price has likely been justified.

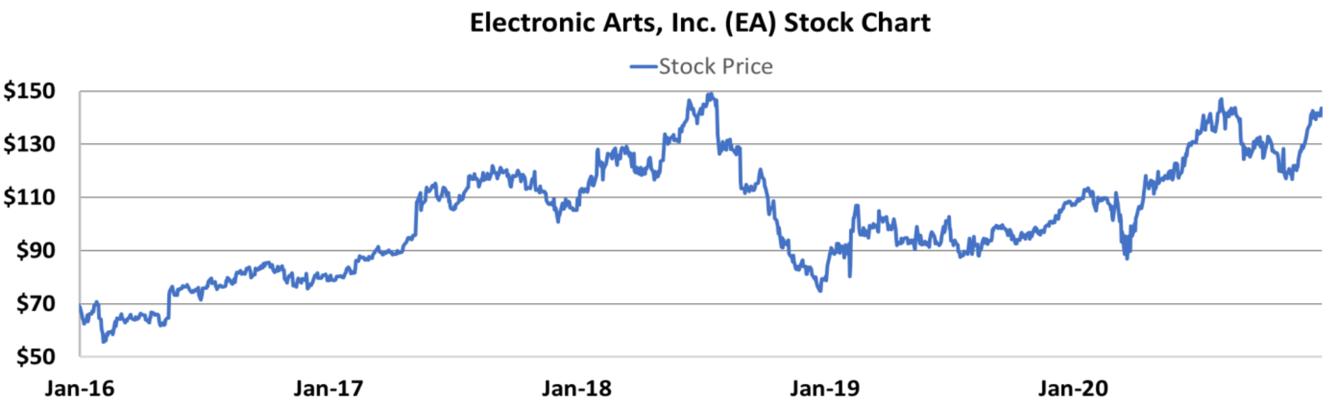
Deficiencies in GAAP/IFRS vis-a-vis Uniform Accounting

Exhibit 1a



Sources: UAFRS, CaptialIQ

Exhibit 1b



Source: CapitalIQ

Exhibit 1c

EA - Electronic Arts Inc.	2016	2017	2018	2019	2020	2021
Excess cash	648.1	1,257.2	1,937.7	2,206.1	2,271.5	2,518.2
Uniform earnings	1,068.4	1,250.8	1,573.9	1,256.7	440.6	1,507.0
Net income	1,156.0	967.0	1,043.0	1,019.0	3,039.0	837.0
% Variance	8.2%	-22.7%	-33.7%	-18.9%	589.7%	-44.5%
Uniform net assets	6,055.0	6,188.4	6,441.0	6,964.3	7,378.1	7,444.5
Total assets	7,050.0	7,718.0	8,584.0	8,957.0	11,112.0	13,288.0
% Variance	16.4%	24.7%	33.3%	28.6%	50.6%	78.5%
Uniform ROA	17.6%	20.2%	24.4%	18.0%	6.0%	20.2%
ROA	8.5%	10.5%	11.0%	7.2%	9.0%	5.4%
Uniform ROA vs ROA - Variance	9.1%	9.7%	13.4%	10.8%	-3.1%	14.8%

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EPAM – EPAM Systems, Inc.

Since 2016, EPAM Systems has been able to consistently expand profitability through an expansion of AI analytics offerings and through accretive acquisitions, including of Continuum in 2018 (Exhibit 2a).

In parallel, since 2016, the firm's stock price has been on an impressive streak, moving in the same direction as its Uniform-calculated earnings.

Meanwhile, GAAP earnings shows a firm that has seen stable, but unimpressive profitability in recent years. This pedestrian performance fails to explain the firm's meteoric stock price movements, displaying how accounting standards demonstrate a dislocation between economic reality and as-reported performance.

Since 2016, EPAM shares have seen material appreciation, rising from approximately $60/share to over $700/share at their peak, an over 10-fold increase (Exhibit 2b). That said, according to as-reported metrics, EPAM appeared to be a firm which saw stagnant profitability, with as-reported ROA ranging from 10% to 11% levels over the past five years, and not one with strengthening fundamentals that would justify the company's stock outperformance.

However, using Uniform Accounting, we can identify distortions such as a firm carrying excess assets on the balance sheet due to the mistreatment of excess cash, which substantially suppresses profitability metrics (Exhibit 2c).

UAFRS-adjusted metrics paint a significantly different picture of EPAM, where Uniform ROA substantially improved over the same time frame, expanding its profitability from an already robust 25% in 2016 to 45%+ levels in 2020. This earning trend justifies the firm's stock price improvement.

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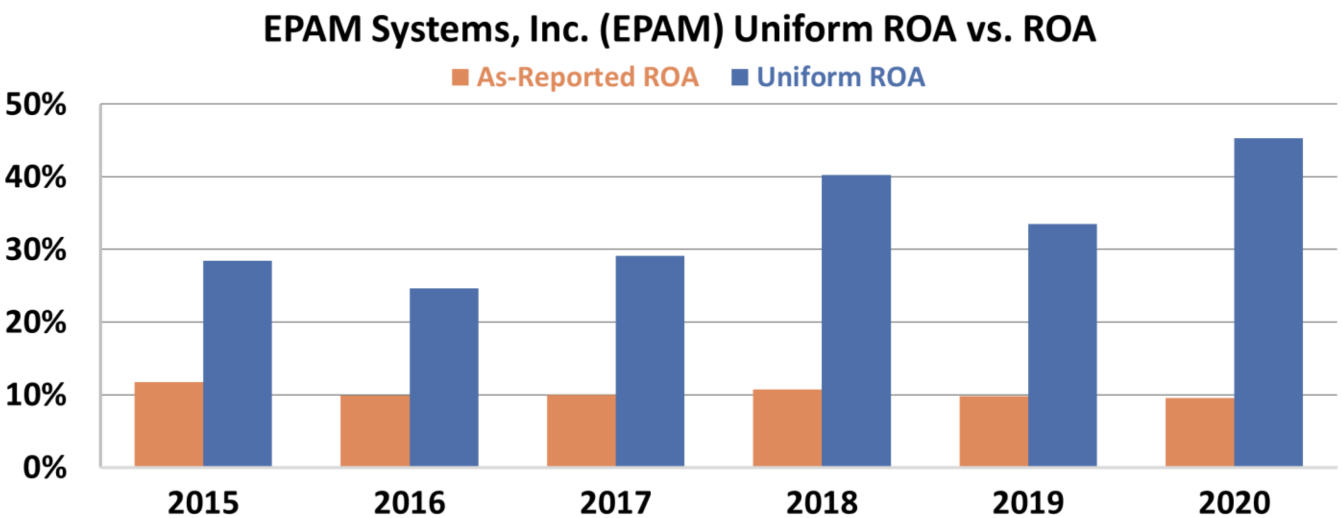
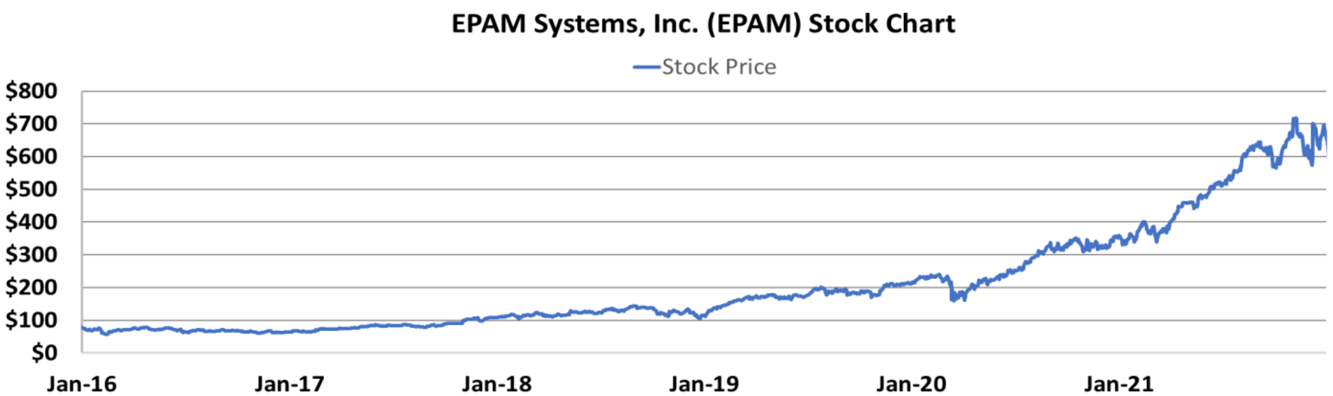
Exhibit 2a



Sources: UAFRS, CaptialIQ

Exhibit 2b



Source: CapitalIQ

Exhibit 2c

EPAM - EPAM Systems, Inc.	2015	2016	2017	2018	2019	2020
Excess cash	181.2	301.0	506.1	674.2	813.8	1,233.9
Uniform earnings	100.0	106.6	156.6	228.1	256.5	337.3
Net income	84.5	99.3	72.8	240.3	261.1	327.2
% Variance	-15.5%	-6.8%	-53.5%	5.4%	1.8%	-3.0%
Uniform net assets	351.4	432.3	537.6	566.8	765.6	744.2
Total assets	778.5	925.8	1,250.3	1,611.8	2,244.2	2,721.3
% Variance	121.5%	114.2%	132.6%	184.4%	193.1%	265.7%
Uniform ROA	28.4%	24.7%	29.1%	40.2%	33.5%	45.3%
ROA	11.7%	9.9%	9.9%	10.7%	9.8%	9.5%
Uniform ROA vs ROA - Variance	16.7%	14.8%	19.2%	29.5%	23.7%	35.8%

NKE – NIKE, Inc.

After seeing short-term disruptions to its business due to pandemic-related headwinds, Nike has since been able to improve profitability far past pre-pandemic levels on the heels of digital sales initiatives and further international expansion (Exhibit 3a).

The firm's stock price has reflected this strength in Uniform-calculated earnings since before the pandemic began, and in recent years, has seen significant appreciation over previous historical highs.

Meanwhile, GAAP earnings have remained stagnant over this same timeframe, showcasing a firm that seems to have just recovered to pre-pandemic levels, but not one that has been able to push beyond COVID-19 headwinds. These earnings figures distort the economic reality of the firm's performance.

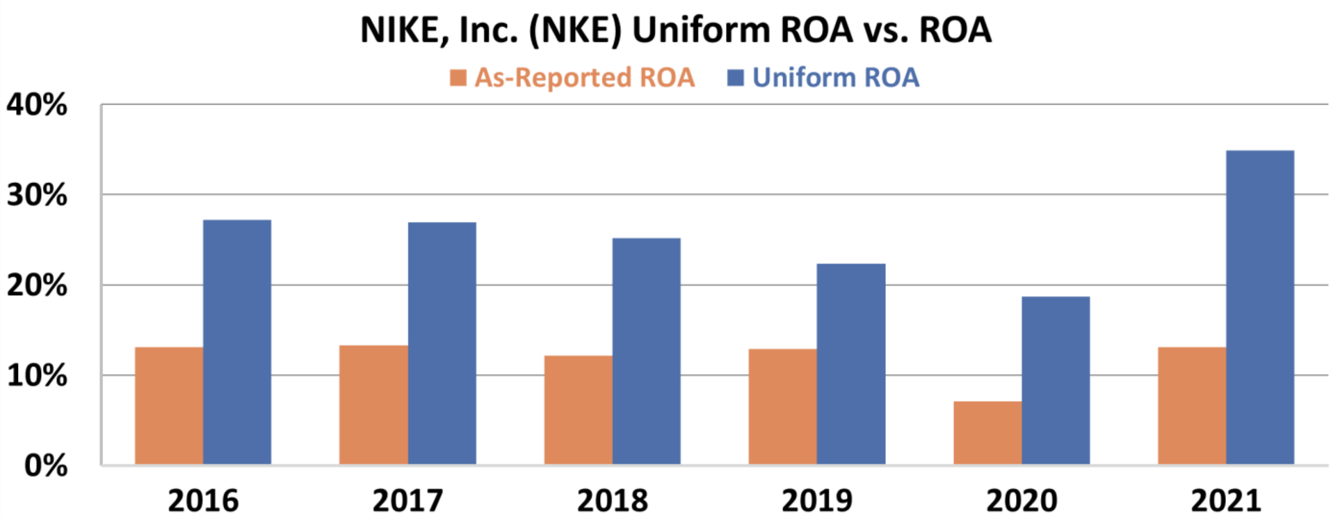
Since the start of 2019, NKE's share price has seen an impressive rise, climbing from approximately $75/share to nearly $150/share, representing about 100% appreciation in value (Exhibit 3b). Yet, according to as-reported metrics, NKE is a firm that likely warranted limited stock price movement due to slowly recovering fundamentals, and not one that had managed to strengthen its already impressive performance.

However, using Uniform Accounting, we can identify distortions such as a firm carrying excess assets on the balance sheet due to the mistreatment of excess cash, which substantially suppresses profitability metrics (Exhibit 3c).

UAFRS-adjusted metrics paint a significantly different picture of NKE, where Uniform ROA rose rapidly from 22% in 2019 to 35% in 2021. These Uniform metrics better explain the rationale behind the firm's substantial stock price appreciation.

Deficiencies in GAAP/IFRS vis-a-vis Uniform Accounting

Exhibit 3a



Sources: UAFRS, CaptialIQ

Exhibit 3b

Source: CapitalIQ

Exhibit 3c

NKE - NIKE, Inc.	2016	2017	2018	2019	2020	2021
Excess cash	3,845.2	4,461.5	3,425.2	2,707.2	6,916.9	11,249.1
Uniform earnings	3,877.4	4,211.4	4,164.0	4,044.4	3,381.1	6,451.1
Net income	3,760.0	4,240.0	1,933.0	4,029.0	2,539.0	5,727.0
% Variance	-3.0%	0.7%	-53.6%	-0.4%	-24.9%	-11.2%
Uniform net assets	14,271.0	15,633.5	16,552.3	18,106.4	18,091.6	18,476.0
Total assets	21,379.0	23,259.0	22,536.0	23,717.0	31,342.0	37,740.0
% Variance	49.8%	48.8%	36.2%	31.0%	73.2%	104.3%
Uniform ROA	27.2%	26.9%	25.2%	22.3%	18.7%	34.9%
ROA	13.1%	13.3%	12.1%	12.9%	7.1%	13.1%
Uniform ROA vs ROA - Variance	14.1%	13.6%	13.0%	9.4%	11.6%	21.8%

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Definitions

Uniform Net Assets **–** Net Asset’ is calculated as Net Working Capital + Long Term Non-Depreciating Operating Assets (including Land and Non-Depreciating Operating Intangible Assets, excluding Goodwill and other acquisition-related Intangible Assets) + Inflation-Adjusted Net PP&E + Net capitalized R&D + Net Capitalized Leases + Net Depreciating Operating Intangible Assets

Uniform ROA– UAFRS-adjusted ROA is a cleaned up Return on Asset ratio, used to understand the operating fundamentals of the company. UAFRS-adjusted ROA is Earnings’ divided by Asset’.

Uniform Earnings is calculated as Net Income + Special Items + Interest Expense + Depreciation and Amortization Expense + R&D Expense + Rental Expense + Minority Interest Expense + Pension Charges + LIFO to FIFO adjustments + Stock Option Expense + Purchase Accounting Cash Flow Adjustments - Non-Operating (Investment) Income - Asset Life Based Charge on Depreciating Assets. Asset' is Net Asset’, or Net Working Capital + Long-Term Non-Depreciating Operating Assets (including Land and Non-Depreciating Operating Intangible Assets, excluding Goodwill and other acquisition related Intangible Assets) + Inflation Net PP&E + Net Capitalized R&D + Net Capitalized Leases + Net Depreciating Operating Intangible Assets.

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