CLAY TOKENS

The Uniform Accounting Monthly Report | February 28, 2023

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

Presented to the UAFRS Advisory Council

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GAAP's unfair treatment of acquired assets

Ames Department Stores serves as a great reminder to investors of the dangers of flawed fair value accounting.

Ames was a discount retailer in the US that filed for bankruptcy in 1990. It closed well over 300 of its stores and fired 26,000 employees in an effort to pay off its creditors.

Meanwhile, as part of its Chapter 11 bankruptcy reorganization, Ames went through "fresh-start" accounting. This means the assets and liabilities on the balance sheet were re-measured at their "fair value".

At the end of 1992, after raising money to pay its creditors, Ames re-emerged from bankruptcy as a public company.

With a cleaned-up balance sheet (thanks to its assets being carried at much lower amounts due to fair value accounting), Ames' return on assets and return on invested capital now appeared phenomenal.

This "fresh start" made Ames seem like a much better business than in reality.

Trying to capitalize on a seemingly improved business, Ames's management team decided to invest in growth. The company began to open up stores again and remodeled them to compete with retailers like Walmart. In 1998, Ames acquired Hills Department Stores for $330 million to become the fourth-largest retailer in the country.

However, much to the chagrin of management, Ames was not a better business coming out of bankruptcy. It just appeared better because of marked-down assets.

The firm's ROA quickly began to collapse. This is because its new stores were not being opened at its accounting-based marked-down "fair value", but rather at a much higher ***real*** market value, making expansion more value destructive than beneficial.

As you can likely guess, due in part to a misinterpretation of the economic realities of its business, Ames went bankrupt again in 2002.

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Recently, news emerged that Ames may try to make another come back towards the end of this year. Hopefully they learned their lesson about being careful about "fair value" accounting…

The mark-down of assets to fair value is not just a problem for the stakeholders of foolish retailers who go through bankruptcy reorganization, but extends to any stakeholder of a company that engages in M&A activity.

The acquisition method of accounting dictates how organizations should record acquired assets when consolidating their balance sheet. This method recognizes identifiable assets at fair value.

However, for many line items, it doesn't make sense to record items at fair value.

Take, for instance, the case of a company acquiring another company with really old, highly depreciated property, plant, and equipment.

As we've previously covered, the concept behind depreciation is critical for the operations of a firm. Depreciation expense tries to capture the maintenance capex of a firm, or the investment needed for a company to operate in its current form. This includes maintenance needs, periodic equipment replacement, and other expenses needed to keep an asset-intensive business humming.

Logically, older assets would have higher maintenance capex requirements since they are likely to break down more frequently and often rely on dated and less efficient technology. Likewise, you would expect a company acquiring such assets to spend a lot to maintain them.

Yet, similar to how Ames had its assets understated due to fresh-start accounting, due to the requirement to consolidate acquired assets at their "fair value", the acquirer of old assets would have their PP&E balance, and associated depreciation expense, look far more rosy than accurate.

Companies that bring on assets at "fair value" (effectively at net PP&E values) are bringing on assets that seem newer and much less costly to maintain than reality. This is because they aren't also transferring over the ***gross PP&E*** and accumulated depreciation values which would show the age and expected life of the acquired assets.

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As such, the as-reported returns on investment may look better for the firm even though the incremental returns on capital, caused by elevated maintenance needs, may be worse. The latter is what should really matter for most stakeholders.

The impact of this erroneous accounting method is thus felt on both the balance sheet and income statement. Tangible assets are understated on the balance sheet, and net income is overstated on the income statement due to a less-than-accurate depreciation number. This can have a doubly distorting effect on evaluating the ROA of a company pre- versus post- acquisition.

This distortive nature of fair value accounting leads to the notion: acquired assets should not be brought on based on fair value... they should be brought on at replacement value, or how much it would cost to build or buy an asset that does the same thing.

For liquid and tradeable items, replacement value and fair value are equivalent - bonds, stocks, and cash on your books would be replaced at their market values.

Inventory, calculated on a first-in, first out (“FIFO”) basis would also have a similar equivalency, for the inventory remaining on a firm’s books approximately reflects the replacement cost of its next batch, particularly for high turnover businesses in a low inflationary environment.

However, for depreciating assets such as PP&E, an adjustment is certainly needed.

We call this adjustment “Cumulative PP&E recapturing”. The goal of PP&E recapturing is to calculate how much PP&E is being understated by being brought on at fair value and then gross up the PP&E value by the difference to true up the balance sheet.

Then, like with any depreciating asset, this “recaptured PP&E” is depreciated over time.

The adjustment requires first understanding how much “fair value” PP&E was brought on through the acquisition, which is normally easily found in the acquisition details or annual company filings.

Then, the true gross value of the acquired PP&E must be determined.

For publicly-listed acquired companies, this is more straightforward.

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We take the reported gross PP&E from available filings and apply a GDP deflator adjustment as we've covered before. The deflator adjusts the carrying cost of PP&E over time to adjust for the replacement cost changes caused by inflation.

Then, the difference between this inflation-adjusted value and the "fair value" or "net" PP&E brought on the books equates to the recaptured value. After adding this value back fully in the first year, we then depreciate it based on the company's asset life to true up the difference going forward.

For acquired companies with non-public financial statements, the process is a tad more artful and some simplifying assumptions may need to be made.

For instance, for acquisitions of companies within the same industry, it is often reasonably appropriate to assume the Gross PP&E asset base relative to company size is roughly equal. The target company's economically-real inflation-adjusted Gross PP&E value can thus be estimated using ratios, and recaptured PP&E value can be deduced accordingly.

For inter-industry acquisitions, it may be most appropriate to look at the carrying amounts of close public peers to infer the estimated Gross PP&E of the acquired company.

By applying these PP&E recapturing adjustments, the true value of acquired assets can be more accurately gauged and a company's total asset base can be valued more precisely post-acquisition.

Similarly, the associated income statement impact can be discerned more accurately.

There has been a long line of firms that show the reporting of an acquisition does not represent economic reality due to the misrepresentation of PP&E.

This month, we highlight three companies wherein the misrepresentation of PP&E distorts economic reality:

- Leidos, a defense contractor and the acquirer of various security and information systems businesses
- Knight-Swift, a freight transporter that manages one of the largest truckload fleets in North America following a transformative merger
- L3Harris, an aerospace and defense technology consolidator that serves as a critical supplier to the U.S. government

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

In the pages and charts below, we disclose the Uniform Gross PP&E, Uniform PP&E Recapturing, and as-reported Net PP&E for these firms. Then, we will show the difference between as-reported GAAP Total Assets and UAFRS-based Net Assets.

While all of the 130+ adjustments have been applied, we hone in on how these line items 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

LDOS – Leidos Holdings, Inc.

From 2015 to 2018, following the acquisition of Lockheed Martin's Information Systems & Global Solutions business, LDOS saw profitability rise as the firm was able to realize scale synergies from the transaction (Exhibit 1a).

Closely reflecting these trends in profitability post-acquisition, the firm saw its stock performance rise, moving in the same direction as its Uniform-calculated earnings.

Yet, GAAP earnings show a firm with stagnant profitability, hovering below corporate averages. This lackluster performance is misaligned with the firm's positive stock performance, displaying how current accounting standards enable a dislocation between economic reality and as-reported performance.

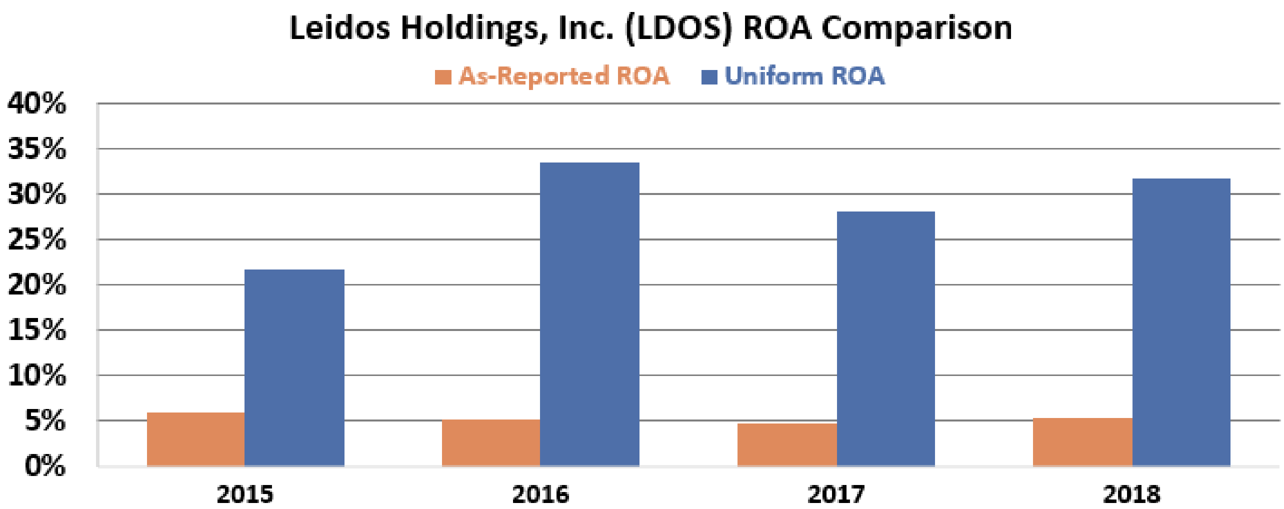
Starting in 2015, **LDOS** shares appreciated, rising from approximately $44/share to just over $69/share by the third quarter of 2018 (Exhibit 1b), a gain of almost 60%. That said, according to as-reported metrics, **LDOS** appeared to be a firm with muted, yet consistent profitability, with ROA hovering near cost-of-capital levels. This does not appear to be a firm with performance that would justify a significant appreciation in its stock price.

However, using Uniform Accounting, we can identify a number of distortions, including those associated with "fair value" acquisition accounting. The faulty calculation of acquired PP&E and other assets can lead to an artificially distorted picture of profitability and growth performance for acquisitive firms (Exhibit 1c).

UAFRS-adjusted metrics paint a different picture of **LDOS**, as Uniform ROA rose materially, from 22% in 2015, prior to its acquisition, to just under 32% by 2018, suggesting that the increase in the firm's stock price had likely been justified by stellar performance improvements following the transaction.

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

Exhibit 1a



Sources: UAFRS, Capital IQ

Exhibit 1b

Source: Capital IQ

Exhibit 1c

LDOS - Leidos Holdings, Inc.	2015	2016	2017	2018
Uniform Gross PP&E	593.0	1102.0	972.6	940.2
Uniform PP&E Recapturing	0.0	630.0	519.6	409.2
As-reported Net PP&E	142.0	259.0	232.0	237.0
Uniform Net Assets	1896.9	2324.0	2639.1	2670.2
Total Assets	3370.0	9132.0	8990.0	8770.0
% Variance	77.7%	292.9%	240.6%	228.4%
Uniform ROA	21.7%	33.5%	28.1%	31.7%
As-Reported ROA	5.5%	6.2%	5.9%	5.6%
Uniform ROA vs ROA - Variance	16.2%	27.3%	22.2%	26.1%

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KNX – Knight-Swift Transportation Holdings, Inc.

KNX saw profitability rise materially between 2016 and 2021, excluding a brief period of underperformance in 2019, following the merger between Knight and Swift, as the combined firm was able to realize scale synergies from its more dominant transportation industry positioning (Exhibit 2a).

Reflecting this UAFRS-based earnings trend post-merger, the firm has seen a material appreciation in stock price, including a brief period of underperformance around 2019, moving closely in the same direction as its Uniform-calculated earnings.

Meanwhile, even with a material rebound in 2021, GAAP earnings have never recovered to pre-merger levels. This falling performance fails to explain the firm's improving stock price, displaying how current accounting standards enable a dislocation between economic reality and as-reported performance.

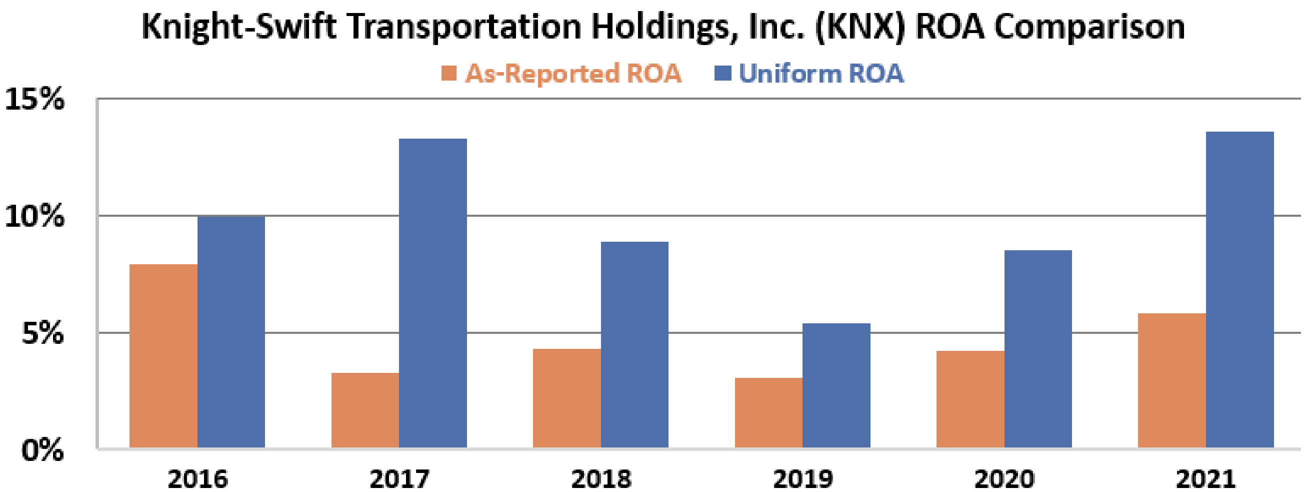
KNX shares increased from $24/share at the beginning of 2016 to around $61/share by the end of 2021, a 150% gain, following a brief drawback around 2019 due to macro setbacks (Exhibit 2b). That said, according to as-reported metrics, KNX appears to be a firm which saw a material drop off in profitability post-merger, with ROA falling from near corporate average to below cost-of-capital levels. This faltering performance implies the firm's materially positive stock price movements are wholly unwarranted.

However, using Uniform Accounting, we can identify a number of distortions, including those associated with "fair value" acquisition accounting. The faulty calculation of acquired PP&E and other assets can lead to an artificially distorted picture of profitability and growth performance for acquisitive firms (Exhibit 2c).

UAFRS-adjusted metrics paint a different picture of KNX, as Uniform ROA expanded from 10% in 2016 to almost 14% by 2021, including a period of underperformance of 6% in 2019. This suggests that the increase in the firm's stock price during this time frame and setback in 2019, have likely been justified by fundamental performance trends.

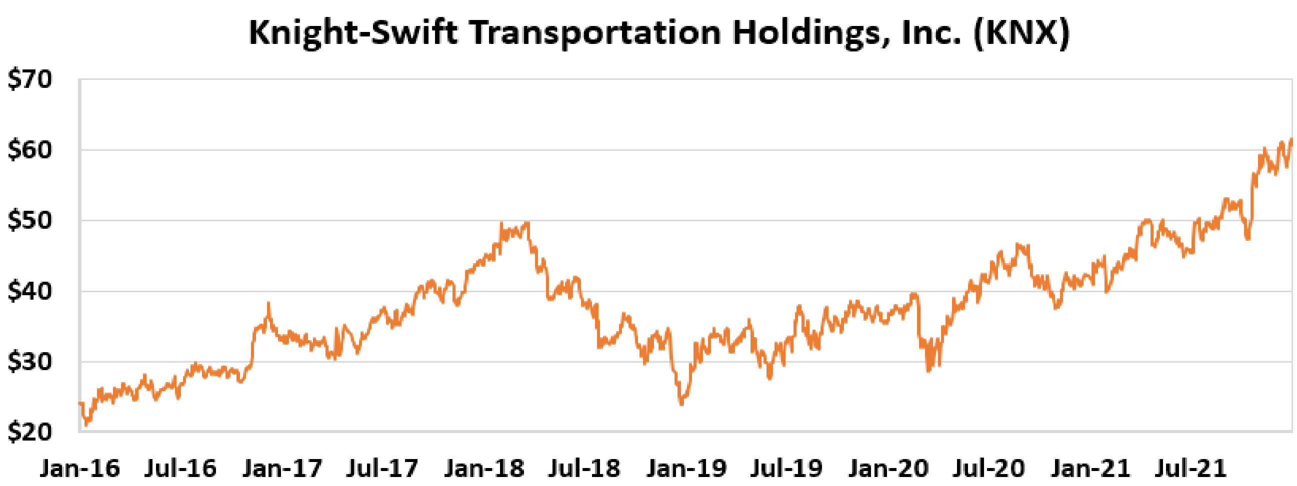
Deficiencies in GAAP/IFRS vis-a-vis Uniform Accounting

Exhibit 2a



Sources: UAFRS, Capital IQ

Exhibit 2b



Source: Capital IQ

Exhibit 2c

KNX - Knight-Swift Transportation Holdings Inc.	2016	2017	2018	2019	2020	2021
Uniform Gross PP&E	1097.7	4110.4	4334.2	4545.9	4794.4	5375.7
Uniform PP&E Recapturing	0.0	1479.9	1255.8	1031.7	807.6	583.5
As-reported Net PP&E	802.9	2384.2	2612.8	3020.1	3105.9	3702.9
Uniform Net Assets	884.7	3588.0	4324.0	4084.0	4145.3	4714.8
Total Assets	1078.5	7683.4	7911.9	8281.7	8468.0	10655.5
% Variance	21.9%	114.1%	83.0%	102.8%	104.3%	126.0%
Uniform ROA	10.0%	13.3%	8.9%	5.4%	8.5%	13.6%
As-Reported ROA	8.0%	3.3%	4.3%	3.1%	4.3%	5.8%
Uniform ROA vs ROA - Variance	2.0%	10.0%	4.6%	2.3%	4.2%	7.8%

LHX – L3 Harris Technologies, Inc.

Since 2018, following the merger between L3 Technologies and Harris, LHX has seen increasingly robust profitability, as the firm was able to incorporate synergies into the combined business (Exhibit 3a).

Reflecting this UAFRS-based earnings trend post-merger, the firm has seen a material appreciation in stock price, even despite a brief drawdown in 2020 amid the peak of the pandemic.

Meanwhile, GAAP earnings have faded over this same time period. This underwhelming performance fails to explain the firm's improving stock price, displaying how current accounting standards enable a dislocation between economic reality and as-reported performance.

LHX share prices have largely appreciated in recent years, rising from $142 at the start of 2018 to over $213 by the end of 2021, a 50% gain (Exhibit 3b). That said, according to as-reported metrics, **LHX** appeared to be a firm that had worsened materially post-merger, with decreasing levels of profitability over the same time period. This faltering performance implies the firm's materially positive stock price movements are wholly unwarranted.

However, using Uniform Accounting, we can identify a number of distortions, including those associated with "fair value" acquisition accounting. The faulty calculation of acquired PP&E and other assets can lead to an artificially distorted picture of profitability and growth performance for acquisitive firms (Exhibit 3c).

UAFRS-adjusted metrics paint a significantly different picture of **LHX**, as Uniform ROA over doubled from 11% in 2018 to 23% levels by 2021, suggesting that the increase in the firm's stock price has likely been justified by stellar performance improvements.

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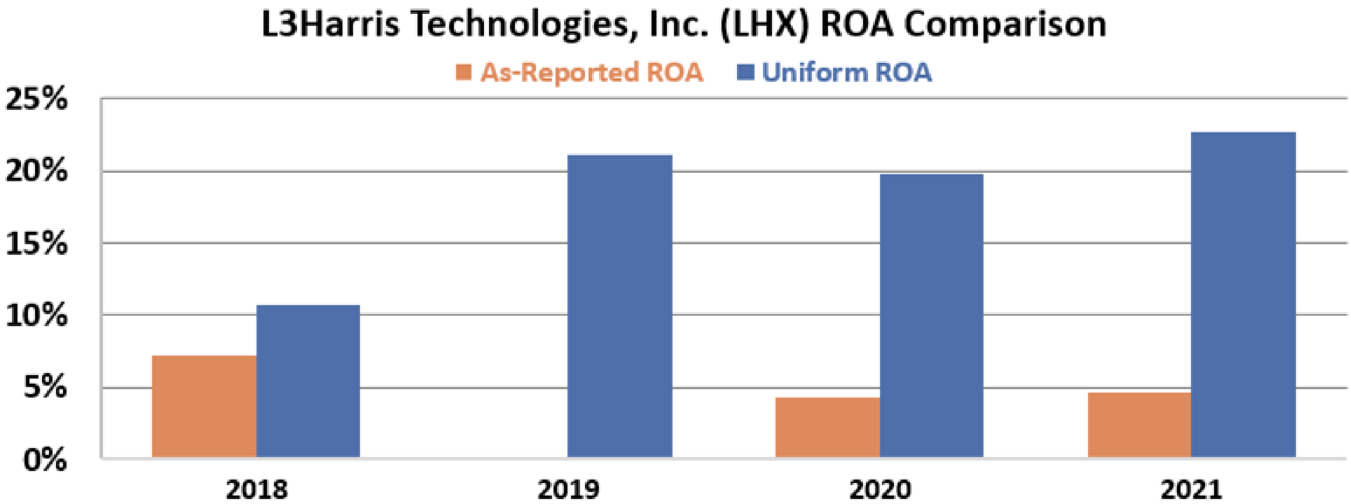
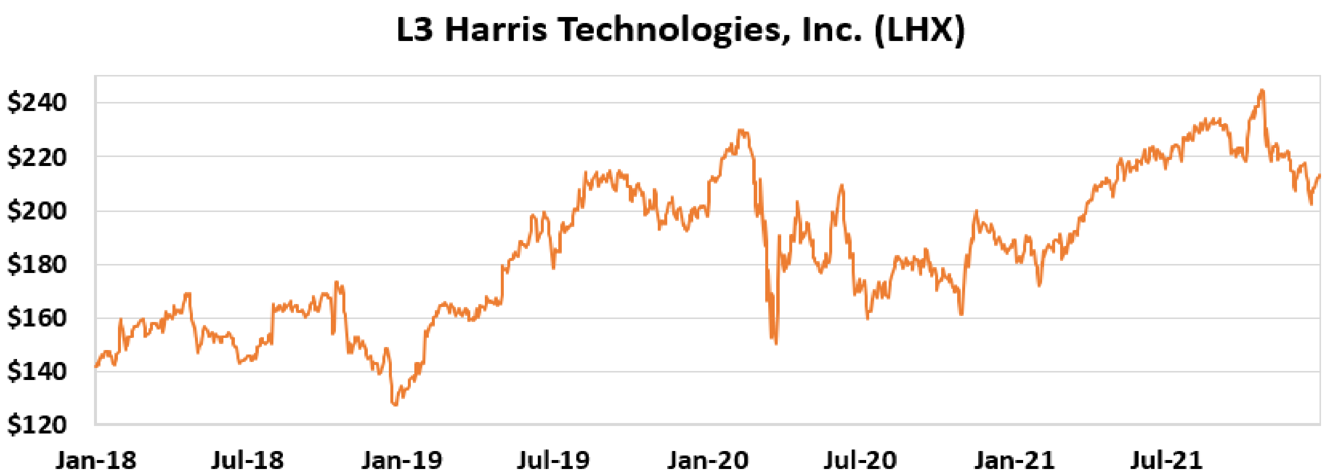
Deficiencies in GAAP/IFRS vis-a-vis Uniform Accounting

Exhibit 3a



Sorces: UAFRS, Capital IQ

Exhibit 3b



Source: Capital IQ

Exhibit 3c

LHX - L3Harris Technologies, Inc.	2018	2019	2020	2021
Uniform Gross PP&E	2140.0	5691.6	5536.9	5367.1
Uniform PP&E Recapturing	0.0	2137.6	1757.9	1378.1
As-reported Net PP&E	900.0	2954.0	2868.0	2870.0
Uniform Net Assets	5461.6	12813.6	12129.2	10974.9
Total Assets	9851.0	38336.0	36960.0	34709.0
% Variance	80.4%	199.2%	204.7%	216.3%
Uniform ROA	10.7%	21.1%	19.8%	22.7%
As-Reported ROA	7.2%	0.0%	4.2%	4.7%
Uniform ROA vs ROA - Variance	3.5%	21.1%	15.6%	18.0%

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) + Gross PP&E (including Cumulative PP&E Recaptured, excluding Land and Construction in Progress) + 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'.