Yale SCHOOL OF MANAGEMENT samsara

Investment Recommendation: Buy
Current price: $27.27
Estimated price: $32.01

Overview:

Samsara targets industries like transportation, retail, construction, utilities, government, and manufacturing that operate high-value assets or manage large workforces or logistics and depend on physical operations. These industries are characterized by legacy systems and manual processes that lack connectivity. Samsara is driving the digital transformation of physical operations with its Connected Operations Cloud that provides visibility and data collection capabilities allowing customers to improve productivity.

Customers include SMBs, state/local governments, and up to large global enterprises with account sizes ranging between $5k ARR to $100k+ Annual Recurring Revenue (ARR). As of the most recent 10k, Samsara had 19,000 customers with $5k-$100k and 1,237 customers with over $100k ARR.

Data collected on the platform includes video footage, GPS, energy consumption, asset utilization, and engine diagnostics. In fiscal year 2023, 6 trillion data points were collected and the network effects build up as Samsara improves its machine learning capabilities.

Use cases include truckers in North America reducing safety event rates using real-time, in-cab audio alerts and driver coaching. A city government reduced fleet downtime by using engine fault code alerts to better manage and plan fleet maintenance. An oilfield services provider used Video-Based Safety to decrease preventable accident and worker's compensation costs.[1]

Takeaways:

1. Samsara has achieved 40%+ ARR growth at scale (scale meaning at $1b ARR) driven by a large greenfield TAM and a product disrupting legacy industries.
2. 8x lifetime value of customer to customer acquisition cost which is in line with other top high quality recurring SaaS companies indicating they could achieve 30%+ FCF margins in the long term (10+ years out)
3. Multiple business lines (video safety, telematics, and equipment monitoring) have achieved $100m+ ARR demonstrating the cross-sell and upsell opportunities into new and existing customer base. 90% of customers over $100k ARR are using multiple products and over 70% of all customers in general.

[1] Samsara 2023 10k

Price History:

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Report Date: November 26, 2023

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Revenue Drivers: Samsara is selling into a growing connected operations global market, so they benefit from the tailwinds powering ~20% CAGR in the near term through 2025 and down to ~14% by 2033.[2] In the near term, Samsara fits in with the macro environment thesis in our Software Industry Report that describe high interest rates, inflation, and a potential impending recession that will drive customers towards digital transformation investments to generate efficiencies. The ROI of Samsara is saving customer money through operational efficiencies by automating previously manual tasks and bring transparency to previously opaque physical

[2] https://www.plantengineering.com/articles/smart-connected-asset-and-operations-market-expected-to-double-in-next-decade/#:~:text=Asset%20management%20insights&text=The%20smart%20connected%20assets%20and%20operations%20market%20is%20estimated%20to,7.1%25%20during%20the%20forecast%20period.

processes. For example, routing and dispatching applications allow customers to save on fuel with more efficient routes. Customers can also automate workflows and digitize documentation for regulatory compliance purposes.

Breaking into new customer accounts in predominantly legacy industries that are trying to spur digitization will add on to the existing customer base. Cross-selling will also be a significant driver and in the most recent 10k statement, over 70% of the customers over $5k ARR and over 90% of customers over $100,000 in ARR subscribed to multiple applications. Once the customers are adding physical assets to the platform it is hard to "rip out" as customers would have to swap out devices and data flows to a new system. Selling into an existing base with relationships developed with repeat customers will also drive revenue and will not require the direct sales work for customer acquisition.

Samsara's revenue stream can be broken up into four distinct product lines.

1. **Video-Based Safety**:
    a. **Market Size**: The global video surveillance market, which has significant overlap with video-based safety, was valued by market reports at USD 56.90 billion in 2022 and is expected to grow at a CAGR of 12.4% from 2023 to 2030.[3]
    b. **Samsara Advantage**: Offers integrated solutions combining video analytics with fleet data, which provides more comprehensive safety solutions compared to standalone tools offered by competitors such as Lytx and SmartDrive.
2. **Vehicle Telematics**:
    a. **Market Size**: The global vehicle telematics market was valued at USD 72.85 billion in 2022 and is projected to reach USD 280.78 billion by 2030, growing at a CAGR of 18.5%.[4]
    b. **Samsara Advantage**: Provides an integrated suite of telematics applications, including various aspects of fleet management, which is more extensive than the offerings of competitors such as Verizon Connect, Geotab, and Omnitracs.
3. **Equipment Monitoring**:
    a. **Market Size**: The global equipment monitoring market size was USD 4.09 billion in 2022 and is expected to grow at a CAGR of 6.4% through 2032.[5]
    b. **Samsara Advantage**: Offers scalable solutions adaptable to a wide range of equipment complexities, catering to more diverse needs than the basic tracking and diagnostics provided by Orbcomm and ZTR.
4. **Site Visibility**:

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[3] Grand View Research, "Video Surveillance Market Size, Share & Trends Analysis Report By Component (Camera, Monitors), By Vertical (Commercial, Government), By System Type, By Region, And Segment Forecasts, 2023 - 2030", accessed Nov 24, 2023.
[4] Fortune, "Vehicle Telematics Market Size…", published May, 2023
[5] Emergen Research, "Equipment Monitoring Market, By Monitoring Type, By Monitoring Process, By Deployment Type (On-Premises and Cloud), By End-Use (Oil & Gas, Power Generation, Metal & Mining, Chemical, Automotive, and Aerospace & Defense), By Region Forecast to 2032", published June, 2023

a. **Market Size**: The overall global surveillance market, which also includes site visibility, is valued at USD 43.11 billion in 2022 and is projected to reach USD 96.65 billion by 2031, growing at a CAGR of 9.6%.[6]
b. **Samsara Advantage**: Competes by providing comprehensive site visibility solutions, combining security/video-based safety and surveillance with operational insights, again a more holistic approach than competitors such as Avigilon.

In summary, Samsara's competitive edge lies in its ability to offer integrated, cloud-native applications that provide comprehensive and actionable insights. This positions Samsara favorably in markets that are substantial and growing, offering diverse and scalable solutions that are adaptable to specific industry needs.

Continuing near-term growth driven by trucking:

Trucking is significant because fleet-related revenue (video safety and telematics) represent roughly ⅔'s of Samsara's revenue and while they continue to build out other lines, at least in the near term fleet trends will be significant. Research and Markets estimates the market size to equal US $2.2 trillion as of 2022, a number which will grow to $3.4 trillion by 2030.[7] The market is segmented into various services, the largest being long-haul trucking, short-haul trucking, refrigerated transportation, and hazardous material transportation. The US trucking market has been growing rapidly in recent years, outstripping growth of the larger economy primarily due to the increasing popularity of e-commerce. This trend has contributed to a widening trucker shortfall, and the American Trucking Association (ATA) estimates the industry needs to hire an additional 78,000 drivers.[8] The US trucking industry moved 72.6% of the nation's freight by weight in 2022, according to the ATA.[9] Additionally, the industry is composed of 13.86 million trucks and over 750,000 active companies that have at least one registered truck.

IPO: Samsara IPO'd on December 15, 2021 priced at $23 per share, hitting the upper end of its projected price range of $20 to $23. This pricing valued the company at approximately $11.5 billion. Samsara intended to sell 35 million shares of Class A common stock, aiming for gross proceeds of around $752.5 million and ended up raising $805 million through this IPO. The market received the IPO well and the first day of trading saw Samsara's valuation rise from the initial $11.5 billion to about $12.4 billion.

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[6] Business Research Insights, "Surveillance Market Size, Share, Growth, and Industry Growth, By Type (Security Cameras and DVR & NVR), By Application (Residential, Commercial, Industrial, Road Traffic, Public Utility, and Government Facilities), Regional Forecast By 2031", published Nov 6, 2023.

Surveillance Market Size, Share, Growth, and Industry Growth, By Type (Security Cameras and DVR & NVR), By Application (Residential, Commercial, Industrial, Road Traffic, Public Utility, and Government Facilities), Regional Forecast By 2031

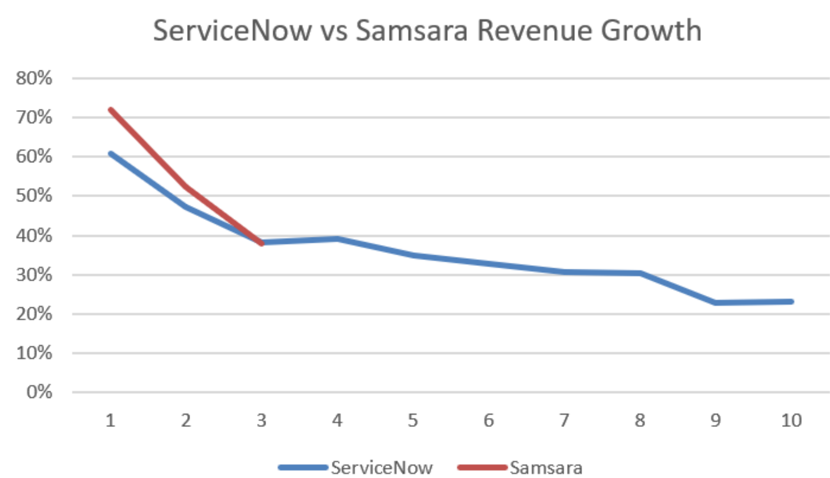
[7]GlobeNewswire, "Global Freight Trucking Market to Reach $3.4 Trillion by 2030, Driven by Truck Trailer Segment and Post-Pandemic Recovery", published July 13, 2023.
[8]Trucknews, "U.S. is short 78,000 drivers, ATA says", published October 25, 2022.
[9]American Trucking Associations, "Economics and Industry Data", accessed Nov 24, 2023.

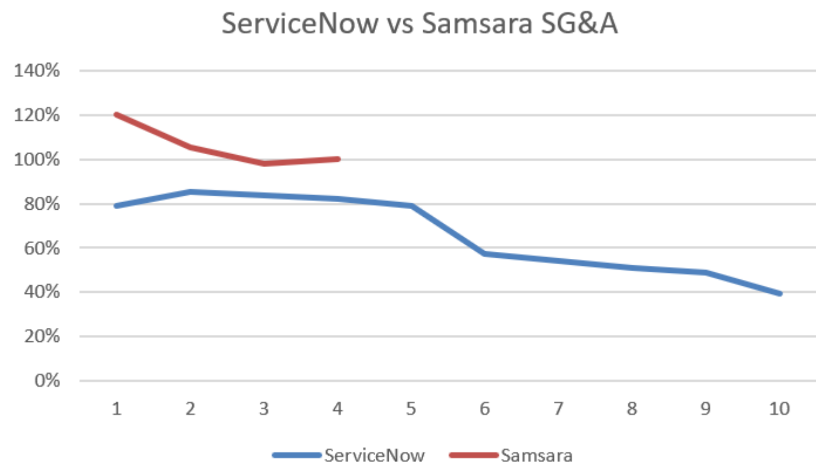
Comparable growth: Given the recent IPO, there is scant historical data to generate strong opinions on trends going forwards. Further, given recent advances in IOT that have really only begun drive real insights for users around 2019 (when the legacy players like Powerfleet, Hub Group, XPO started launching their IOT efforts) there are not great mature IOT comps to project a likely path that Samsara could take. For this reason, we looked elsewhere for mature software companies that reflect what the Samsara business model looks like.

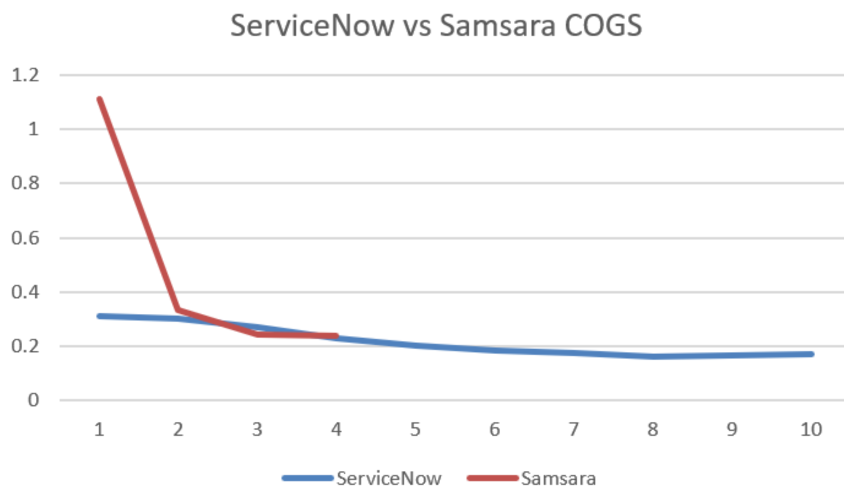
We considered Dexcom, a healthcare IOT device with true recurring revenue model, but decided that the growth was too aggressive considering that patients need the device to survive essentially and the products are purchased every few weeks with replacement sensor. The revenue in Dexcom is also nearly perfectly predictable with the patient base following doctor orders. Dexcom consistently grew revenue averaging around 50% in the early years which contradicts where Samsara is at this year with 38% YoY revenue growth and management projections next year for 30%.

We also considered the legacy players Powerfleet and Impinj but decided that these comps were too conservative with revenue growth in the mid teens for a disruptive product in greenfield TAM. Powerfleet has been around since 1993 and only recently (through acquisition) started rebranding as an IOT software company but has struggled in recent years to grow rapidly with 11% growth in ‘22 and 7% growth in ‘23. For a company 2 years past IPO picking the right comparable is important for the valuation (technique taken from Economic Analysis of High-Tech Industries with Ted Snyder where Facebook was used as a comp for Snap post its 2016 IPO) and we settled on ServiceNow.

The early years of ServiceNow’s growth match up very closely with the first three years of Samsara which we noticed given our prior investment recommendation on ServiceNow. Other similarities include aggressive direct sales forces powered by high quotas selling strong product into complex enterprises. 96% of ServiceNow revenue is subscription based compared to 98% of Samsara reflecting a similarity in the business model. Samsara typically sells into 3-5 year contracts similarly to the three year contract duration that ServiceNow employs.

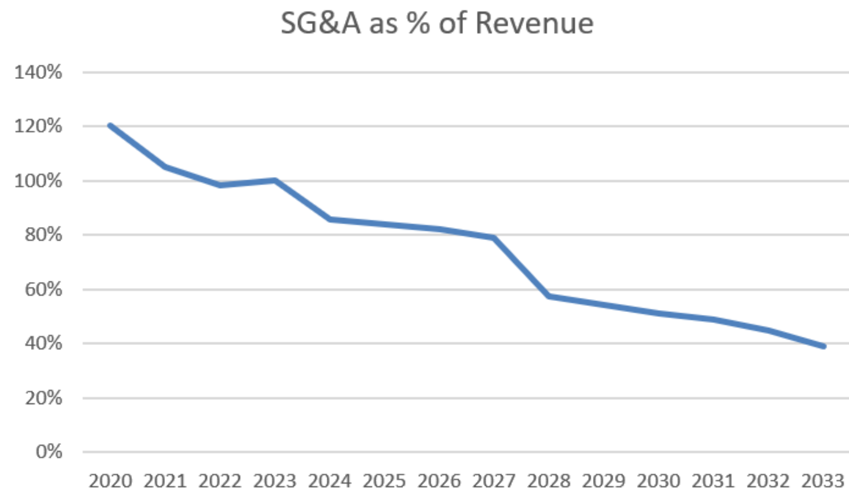




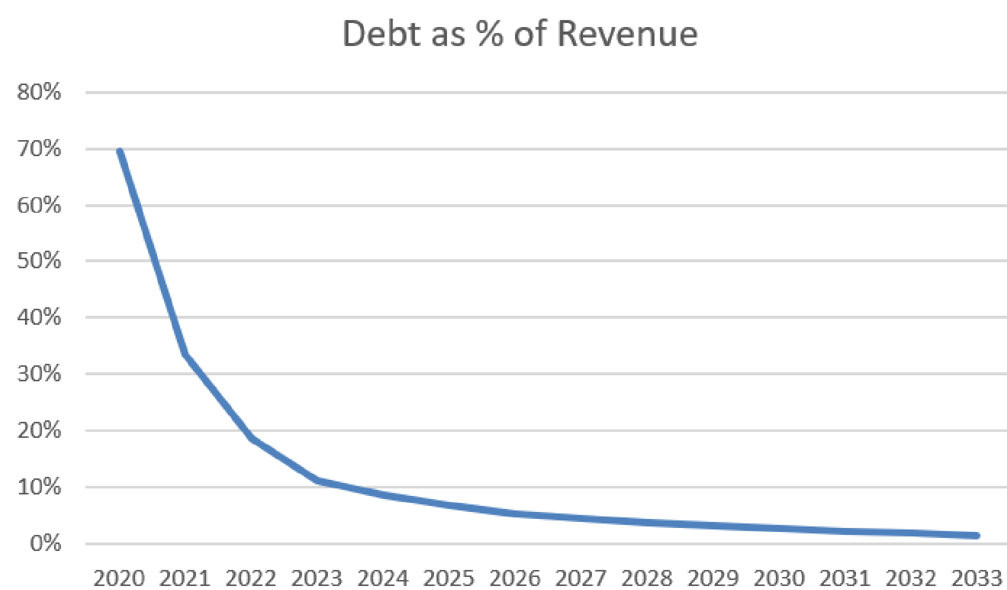


Cost Drivers: COGS consists primarily of the amortization of IoT device costs associated with subscription agreements, cellular-related costs, third-party cloud infrastructure expenses, customer support costs. The costs associated with operations are largely employee-related like salaries and benefits. Management expects cost of revenue as a percentage of revenue to remain relatively flat from year to year.

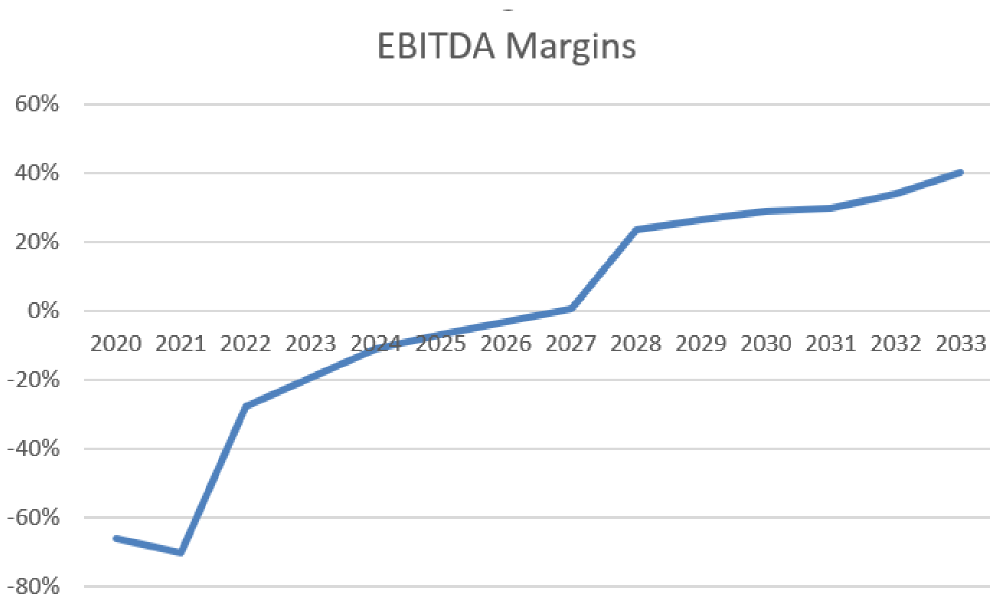
SG&A - Samsara plans to continue to invest aggressively in selling with its direct sales force but while the absolute dollars will continue to go up management expects the long-term trend will be SG&A coming down steadily as a percentage of revenue. The exact path of the SG&A trend will follow the historical early years of ServiceNow as it invested in SG&A to power its high revenue growth but coming down over time. Samsara also expects its general and admin costs to come down as a percentage of revenue as well to coincide with the selling trend.



Debt: Samsara has very little debt with most financing coming from either the $800m from the IPO or from customer payments. The debt that they do have on their balance sheet is just a lease. The total operating lease liabilities cost is $123m and cost of debt of 4.53%.

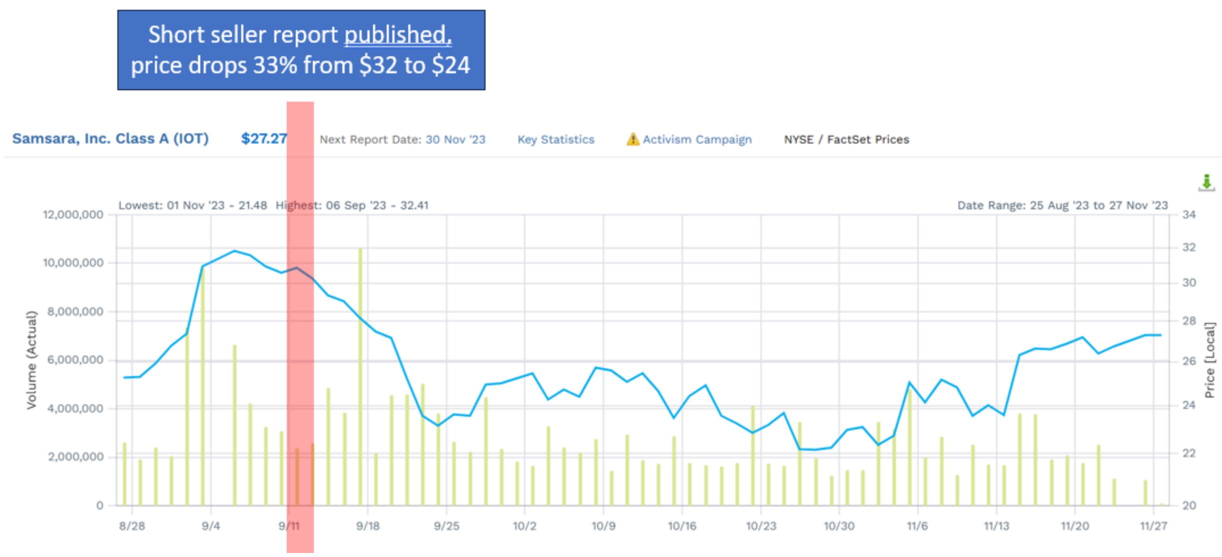


Earnings: significant margin improvements over the next 10 years if Samsara can execute its goals. We expect Samsara to breakeven in 2027 and by 2033 be profitable in the steady state. We expect Samsara in its mature stages to behave like a best-in-class SaaS company with ~40% EBITDA margins and ~30% FCF margins similar to a ServiceNow, Checkpoint, MSFT, Adobe, Qualcomm, etc.



Difference w/ market:

The current short float percentage is 10% which is up from around 4% at the time of the IPO. The main driver of the short interest is a particularly vicious short seller report issued by Spruce Point Capital Management in September 2023.



Spruce Point's analysis highlights several factors contributing to a perceived long-term downside risk for Samsara's shares, estimated between 45% to 75%. Key concerns raised by Spruce Point include:

1. Hardware Business Impact: Samsara's business model includes a significant hardware component and short-seller estimates that 25% of the value in its contracts. This reliance on hardware is seen as a risk factor, particularly due to mature technology and lower gross margins compared to pure software businesses.

    a. Our rebuttal - the hardware is indeed priced into the contract value but is actually at essentially no additional charge. The simple hardware boxes, cameras, etc. that they sell are in the range of $100-$200 compared to ACV per customer in the range of $50k. Breaking out hardware separately to argue that they should get a lower revenue multiple because they are hardware driven would be irrelevant.

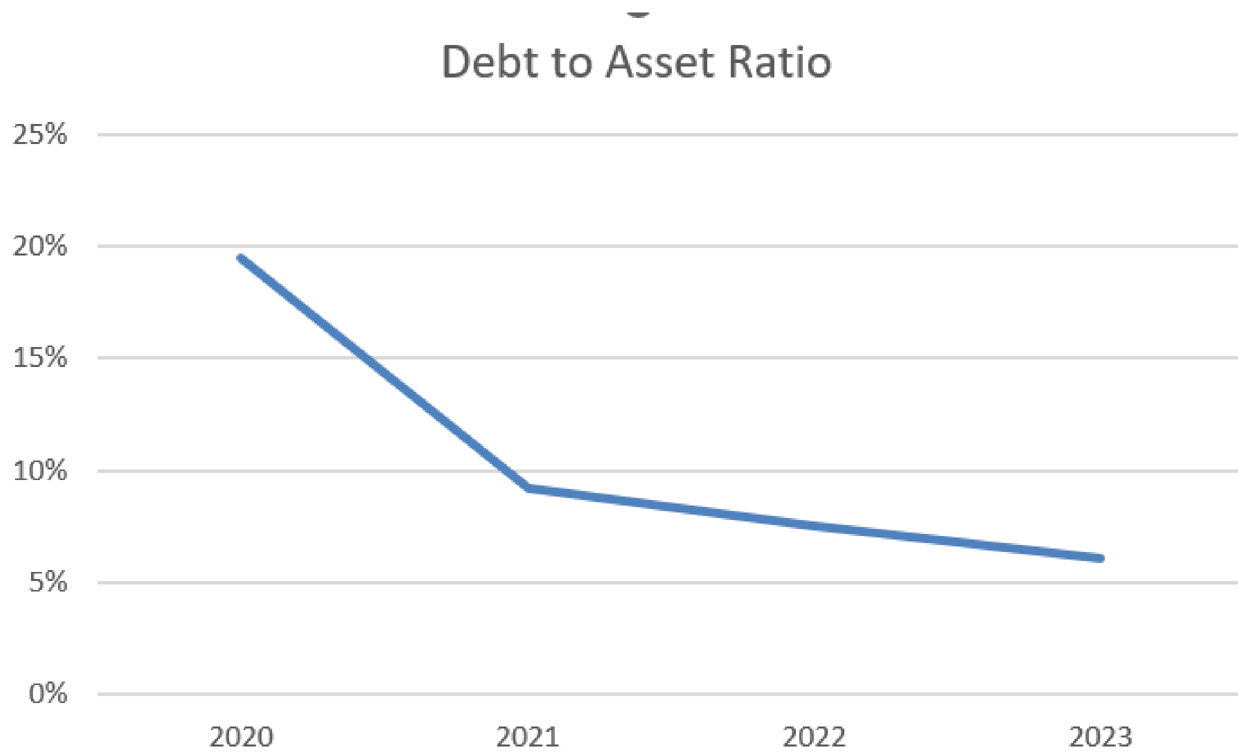
2. Accounting Practices: There are questions about Samsara's accounting practices, especially related to its hardware business. Spruce Point suspects that Samsara may be overstating its gross and EBITDA margins by amortizing hardware over a 5 year period which is too aggressive given Samsara customer based of small-medium businesses with short customer lives. The other accounting practice criticism was on the aggressive amortization of sales commissions.
    a. The refresh period for hardware is greater than 5 years and Samsara SMB exposure is only ~5% of revenue and decreasing over time given the focus on the larger $100k ARR customers. These large customer base increased nearly 50% last year and the base itself accounts for nearly 50% of total ARR.
    b. The amortization of sales commission is in line with Salesforce (4-5 years) which was adopted a few years ago.

3. Security and Supplier Concerns: Recent issues around the security vulnerabilities of electronic logging devices and potential risks associated with a key component supplier are seen as threats to Samsara's product reliability and financial performance.
    a. The company in question, Quectel, on a national security blacklist is a total commodity (its a subcomponent not even the entire product) and used in subset of Samsara lines.

4. Market Penetration and Competition: Samsara's efforts to expand into new markets beyond fleet applications are reportedly not as successful as anticipated, with limited market penetration. Additionally, competition from private companies and challenges in securing large clients are seen as threats to Samsara's market leadership. Pricing pressure coming in from multiple sources.
    a. The competition are largely PE-backed and run for profit and are not aggressively innovating. The price pressure would have shown up in gross margins which have been increasing.

Our valuation below reflects our estimate of the valuation of Samsara pre short seller report publication around $32 per share. The market has taken the short seller critiques into account, particularly the hardware commoditization versus software value of Samsara, and the price drop post report indicates this. We expect that another quarter reflecting the strong fundamentals of Samsara that we expect shortly in Q4’23 will reverse the price drop back to pre-short seller report levels.

Valuation: APV method is used given variation in debt to asset ratio. A beta of 1.1 (from ServiceNow valuation, impossible to 5 year rolling beta for Samsara) is used in the calculation. The debt tax shield is calculated as a formality but is irrelevant to the valuation given the lack of significant long-term debt at Samsara. A terminal growth rate of 3% is used after projecting out to 10 years (long enough to achieve breakeven and positive free cash flows) to capture the rapid revenue growth of Samsara in its young initial years.



Adjusted Present Value (APV) Model

Debt Levels	$	100
Debt to Assets		6%
Cost of Debt		4.53%
Risk Free Rate		4.60%
Market Returns		10.60%
Beta		1.1
Leveraged Cost of Capital		11.20%
Unleveraged Cost of Capital		10.80%

	Debt	Tax Shield	Discount Rate	PV
2023	100			
2024	103	1	96%	0.9
2025	106	1	86%	0.8
2026	109	1	78%	0.7
2027	113	1	70%	0.7
2028	117	1	69%	0.7
2029	121	1	63%	0.7
2030	124	1	57%	0.6
2031	127	1	50%	0.6
2032	130	1	45%	0.5
2033	134	1	40%	0.5

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Year	1	2	3	4	5	6	7	8	9	10
FCF	-127	-106	-73	-15	525	760	1062	1418	1983	2871
Levered Horizon Value										$ 36,062
Debt Tax Shield										$ 6.7
Total	$ (127)	$ (106)	$ (73)	$ (15)	$ 532	$ 760	$ 1,062	$ 1,418	$ 1,983	$ 38,940
APV	$ 16,359									
Value of Equity	$ 16,259									
Cash	$ 866									

Est Mkt Cap	$ 17,125
Shares	535
Price	$ 32.01

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Rev	249	428	652	899	1192	1557	2032	2497	3075	3783	4653	5723	7039	8658
SGA	299	450	640	898	1020	1304	1667	1973	1767	2047	2377	2803	3168	3377
COGS	277	142	159	216	273	343	447	549	677	832	1024	1259	1549	1905
Debt	173	144	122	100	103	106	109	113	116	119	123	127	130	134
D&A	4	19	11	14	36	47	61	75	92	113	140	172	211	260
Working Capital	279	761	515	549	585	624	665	709	756	806	859	916	976	1040
Assets	887	1567	1617	1653	1703	1754	1806	1860	1916	1974	2033	2094	2157	2221
Cash	201	667	921	783	441	311	305	250	308	378	465	572	704	866
NI	-210	-355	-247	-245	-100	-89	-66	-20	505	722	1002	1329	1858	2701
EBIT	-202	-352	-258	-269	-100	-89	-83	-26	632	903	1252	1661	2323	3377
EBITDA	-165	-302	-182	-175	-136	-136	-144	-100	539	790	1112	1489	2112	3117
Change in Wrking Cap		482	-246	34	36	39	41	44	47	50	53	57	60	64
Capex	32	19	33	22	27	25	27	25	26	26	26	26	26	26
Tax	*20% when positive*	0	0	0	0	0	-17	-5	126	181	250	332	465	675
FCF	-238	-837	-23	-286	-127	-106	-73	-15	525	760	1062	1418	1983	2871

% Rev	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Rev		72%	52%	38%	33%	31%	30%	23%	23%	23%	23%	23%	23%	23%
SGA	120%	105%	98%	100%	86%	84%	82%	79%	57%	54%	51%	49%	45%	39%
COGS	111%	33%	24%	24%	23%	22%	22%	22%	22%	22%	22%	22%	22%	22%
Debt	69%	34%	19%	11%	9%	7%	5%	5%	4%	3%	3%	2%	2%	2%
D&A	2%	4%	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Working Cap	112%	178%	79%	61%	49%	40%	33%	28%	25%	21%	18%	16%	14%	12%
Cash	81%	156%	141%	87%	37%	20%	15%	10%	10%	10%	10%	10%	10%	10%
NI	-84%	-83%	-38%	-27%	-8%	-6%	-3%	-1%	16%	19%	22%	23%	26%	31%
EBIT	-81%	-82%	-40%	-30%	-8%	-6%	-4%	-1%	21%	24%	27%	29%	33%	39%
EBITDA	-66%	-71%	-28%	-19%	-11%	-9%	-7%	-4%	18%	21%	24%	26%	30%	36%
FCF	-95%	-196%	-4%	-32%	-11%	-7%	-4%	-1%	17%	20%	23%	25%	28%	33%
Debt to Assets	20%	9%	8%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Capex	13%	4%	5%	2%	2%	2%	1%	1%	1%	1%	1%	0%	0%	0%