



"STRYKE THREE YOU'RE OUT"

/ STRONG SELL OPINION /

Stryker Corp. | NYSE: SYK



SPRUCE POINT
CAPITAL MANAGEMENT
INVESTMENT RESEARCH REPORT

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Spruce Point Has A Track Record In Medical Products And Diagnostic Equipment

Spruce Point made an incisive short call directly related to Stryker, with a critical report released in 2017 on TSO3 (TSX: TOS). Our research warned about a material overvaluation and product challenges ahead of an 84% collapse in the share price. Stryker acquired TSO3 in 2019 and has admitted challenges scaling the product.⁽¹⁾ We were perplexed that Stryker would pay anything for TSO3's product suite. The TSO3 acquisition was the catalyst for Spruce Point to follow Stryker's acquisition behavior. We now are ready to expose Stryker's broken acquisition practices.

Company:		
Exchange: Ticker	TSX: TOS	Nasdaq: HSKA
Report Date	August 23, 2017	October 25, 2021
Company Positioning	Innovative and market leading low-temperature sterilizer for hospital and medical practitioners	Market leading animal medical health diagnostic equipment maker and distributor
Spruce Point's Criticisms	<ul style="list-style-type: none"> Poorly promoted Canadian healthcare company, with limited product value Disclosure issues obfuscate actual end market sales, and overstatement of total addressable market Over-promotion of a partnership with Getinge that would be destined to fail Misalignment with shareholders with management owning just 1% of shares 80%+ downside when Getinge deal fails 	<ul style="list-style-type: none"> Evidence shows that management has materially embellished Heska's market share, business model, and product development capabilities while failing to disclose increasing risks to its challenged competitive positioning Our in-depth analysis of Heska's recent acquisitions reveals a pattern of acquiring low-quality assets to create the perception of an expanded product offering on par with the sector's leaders. Market due diligence and management commentary suggest Heska's highly anticipated product, the Element AIM, will disappoint.
Successful Outcome	<ul style="list-style-type: none"> On Jan 25, 2018, TSO3 discloses amendments to the Getinge partnership, validating Spruce Point's criticisms Multiple brokers downgrade shares from >C\$5.00 to C\$2.00 Stryker acquired TSO3 in 2019 for C\$0.43 in 2019, down 84% from our short call made at C\$2.60 (source) 	<ul style="list-style-type: none"> Q3 2021 results came in below expectations with revenues at \$60m vs. \$64m expected, while guiding to the low end of its recently raised 2021 sales guidance Consumable sales, a big part of the growth story, also disappointed JP Morgan, Heska's most bullish stock promoter, cut its price target from \$300 to \$250 per share Heska's stock price hit a low of \$119 in Feb 2022, down 46% from our short call at \$221

The recommendations shown above are not intended to be exhaustive. A full list of all recommendations made over the past twelve months can be found on our [website](#)

1) [Stryker's Q3 2020 Conference Call](#)

Spruce Point's Success Shorting S&P 500 Companies

Quote From
Ben Axler

"Being an S&P 500 company is a validation of absolutely nothing, and can be a wasteland of corporate mediocrity. It affords investors zero protections against companies and their ability to scheme investors. Buyer beware!"





				
Index	S&P 500	S&P 500	S&P 500	S&P 500
Report	NYSE: CHD 9/5/19	NYSE: AME 11/14/14	NYSE: MTD 7/24/19	NYSE: AOS 5/16/19
Market Cap	\$22.7 billion	\$12.3 billion	\$21.8 billion	\$6.1 billion
Company Promotion	Best of breed roll-up acquiror of personal care and consumer products with the core Arm & Hammer brand providing a stable backbone to diversify into other products	Best of breed roll-up in the test and measurement equipment space with world class EBITDA margins and an ability to never miss Wall St estimates through any economic cycle	Best of breed weights, test and measurement equipment company with superior margins and an ability to never miss Wall St. EPS targets	Leading maker of water heaters and treatment products, boilers, and air purifiers. Fast and sustainable growth in China, allowing for corporate gross margins in excess of industry peers
Our Criticism	New management is more aggressive, using financial and accounting tactics to inflate the share price. The recent acquisition of FLAWLESS hair care was expensive and will disappoint investors. Governance lapses have allowed management to reap unjust bonuses based on non-cash gains. Shares at \$80 trade 8% above analyst targets	AMETEK isn't creating any value by delivering zero organic growth and that its financial statements showed signs of strain with aggressive accounting. We believed its premium valuation multiple could not be sustained as the quality of its acquisitions deteriorated	Excessive cost capitalization from a 12 year "Blue Ocean" ERP implementation. Unusual corporate structure that omits product level margin discussion. Closeness of mgmt with PwC its auditor. Financial strains being signaled and anomalies in China. Extreme valuation with price 14% over avg analyst price target	China capital expenditure anomalies, notably consistent mis-forecasting. Capex issues often linked to gross margin inflation. Excessive spending on a protracted ERP implementation also often linked to accounting and financial issues
Successful Outcome	Within the first quarter after our report, CHD reported disappointing Q3 sales results, cut its full year revenue guidance, and issued Q4 earnings at \$0.54, well below the \$0.62 expected. Management blamed higher sales and marketing expenses on FLAWLESS. CHD's new 10-K added risk factors around financial controls and its Chief Accounting Officer is " retiring "	By early 2016, AMETEK began guiding down sales and earnings expectations for multiple quarters. Its CEO and CFO abruptly retired. Its share price fell nearly 20% from our initial report date	Q2 2019 missed sales estimates by the widest margin in years, and initial 2020 guidance issued in Q3 2019, missed estimates with lower sales and earnings growth. Management failed to address any of the issues identified by Spruce Point. The share price corrected by 22%	AOS admitted an undisclosed material supply chain partner following a report by firm J Capital. In Q2 2018 , AOS substantially revised guidance, showing weakness in China with sales projected down 16-17%. AOS fired its head of China after an investigation


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Executive Summary

Spruce Point Estimates 35% - 75% Downside Risk To Stryker (NYSE: SYK) Share Price: (\$67.00 – \$174.50)



Stryker has a history of bad corporate behavior, and is one of a few public companies we're aware of that was charged by the SEC not once, but twice for Foreign Corrupt Practices Act violations. *"Those who do not learn from history are doomed to repeat it."* We're calling on the Audit Committee, led by Harvard Business School Dean Srikant Datar, to review our report with an independent forensic investigator. We believe it's time for CEO Lobo and CFO Boehnlein to resign or be terminated.

In 2018, the SEC found that Stryker's internal accounting controls were not sufficient to detect the risk of improper payments in sales. We believe this is just the tip of the iceberg. After conducting an extensive forensic financial investigation of Stryker Corp. (NYSE: SYK) a \$100 billion dollar valued S&P 500 member, and debt-fueled roll-up of medical product companies, we believe the Company has been covering-up inventory accounting problems, and is caught in a massive margin squeeze that is pressuring its cash flow and credit rating.

Following the 2009 financial crisis, Stryker embarked on an aggressive levered roll-up strategy and would divert ~60% of cumulative capital raised towards acquisitions. From 2009-2014 Stryker was advised by Howard Lance, who would later become President and CEO of Maxar Technologies (NYSE/TSX: MAXR). In a critical forensic report in 2018, Spruce Point warned about Maxar's levered M&A accounting scheme before a 90% collapse in its share price. Both CEO Lance and Maxar's Chief Accounting Officer abruptly resigned and its goodwill impaired. Since 2009, Stryker has amassed more than \$16 billion of debt, almost \$18 billion of goodwill and intangibles, and for years we believe has delayed critical internal investment leading to severe operational cost bloat and manufacturing inefficiencies. Stryker failed to warn investors leading up to COVID-19 that more than 50% of its sales were tied to elective surgeries, or non-critical procedures that could be deferred. As such, Stryker is in a delicate situation, having to battle with its core products experiencing deflationary price pressures, while inflation and supply chain challenges are now haunting it. We also present evidence that Stryker has been covering-up challenges with Mako Surgical, one of the few recent stars in its product portfolio tied to robotic surgeries. Stryker obscures the size of Mako's business, but we estimate it generates between \$615 - \$1,200 million of sales. Mako is now facing increased competitive pressures, having to offer more creative financing solutions, and it recently cut robot platform prices in 2022 by up to 30% to contend with robots being offered at no upfront cost by its second biggest competitor Zimmer Biomet.

After an extensive investigation into all of Stryker's recent multibillion dollar acquisitions including Vocera Communications (Nasdaq: VCRA), K2M Group (Nasdaq: KTWO), and Wright Medical Group (Nasdaq: WMGI), including speaking with a former Stryker M&A professional, we believe it systematically overpays for acquisitions, lacks discipline to walk away from bad deals, uses creative inventory step-up accounting to pass off non-cash costs, and then deflects its failures by quickly pivoting towards the next big acquisition and avoiding goodwill impairments. As a result, Stryker's GAAP to Non-GAAP reporting keeps widening, its former focus on ROIC has been abandoned, and it quietly modified its long-term financial sustainable growth verbiage from its recent November 2021 Analyst Day presentation. These glaring signs, along with our behavioral analysis of management's history, suggest Stryker is delaying bad news from investors. Meanwhile, its governance quality is decreasing. The head of its Compensation Committee didn't stand for re-election in 2021, the Board hired a new compensation consultant, and management enjoyed record compensation in 2021 despite our evidence it is failing investors.

Based on our adjusted metrics, which includes forms of "hidden" debt and removes dubious Non-GAAP add-backs, Stryker has the industry's highest valuation multiple at 6.5x, 35x, and 43x '22E sales, EBITDA and operating cash flow - almost 2x its closest peers Zimmer Biomet and Smith & Nephew based on '22E EBITDA. Pro forma for its recent \$3.1 billion acquisition of Vocera Communications, a deal we argue could one day be written down to zero, we believe it is precariously levered at 4.9x Total Debt to '22E EBITDA. Follow the shares and Stryker family holdings carefully. After years of a stable share count, dilution is now increasing as Stryker has to conserve cash, and the Stryker family consistently sells stock. We see 35% - 75% downside to \$67.00 - \$174.50 as numbers are cut and its multiple compresses closer to the industry average.

How Many Negative Headlines Will Stryker's Shareholders Tolerate Under CEO Lobo?

Under Kevin Lobo's leadership since [appointment as CEO in October 2012](#), Stryker has been ensnared in multiple government and regulatory settlements, while defending itself against numerous allegations of unsavory business practices. In our report, Spruce Point will highlight even more suspect business, financial and accounting practices under Lobo's tenure. We believe it's time for CEO Lobo to resign so that credibility and accountability can be restored to the once revered Stryker name.

Incident	Brief Description: Settlements	Source
US Attorney Office – Massachusetts Jan 18, 2012	Stryker Biotech has reached a settlement with the U.S. Attorney's Office for the District of Massachusetts. As part of the settlement, Stryker has agreed to plead to one misdemeanor charge and pay a non-tax deductible fine of \$15 million. As a result of this resolution, the Department of Justice has agreed to dismiss all 13 felony charges against Stryker Biotech contained in a 2009 federal grand jury indictment.	Stryker
Massive Product Settlement 2014	Stryker Orthopaedics Announces Settlement Agreement To Compensate Eligible U.S. Patients Who Had Surgery To Replace Their Rejuvenate Modular-Neck and/or ABG II Modular-Neck Hip Stems. Based on the information that has been received to date, Stryker Corporation has recorded charges to earnings totaling \$1.425 billion representing the actuarially determined low end of the range of probable loss to resolve these matters.	Stryker
DOJ Settlement March 24, 2014	The publicly traded Stryker Corporation and the privately held Alliant Enterprises have paid the United States a total of \$1.05 million to resolve a "whistleblower" lawsuit that alleged a failure to disclose complete information about projected government sales, allowing them to avoid heightened scrutiny of a government contract.	DOJ
SEC FCPA Charges Oct 24, 2013	The Securities and Exchange Commission today charged a Michigan-based medical technology company with violating the Foreign Corrupt Practices Act (FCPA) when subsidiaries in five different countries bribed doctors, health care professionals, and other government-employed officials in order to obtain or retain business.	SEC
SEC FCPA 2nd Charge Sept 28, 2018	The Securities and Exchange Commission today charged Stryker Corp. with violating the books and records and internal accounting controls provisions of the Foreign Corrupt Practices Act (FCPA), the second time the SEC has brought an FCPA action against the Michigan-based medical device company. Stryker agreed to settle the charges and pay a \$7.8 million penalty. The SEC's order found that Stryker's internal accounting controls were not sufficient to detect the risk of improper payments in sales of Stryker products in India, China, and Kuwait, and that Stryker's India subsidiary failed to maintain complete and accurate books and records.	SEC
Issue	Brief Description: Allegations	Source
FCA Claim	A former analyst with Stryker adequately alleged that the company violated the False Claims Act by not complying with Buy American rules when it sold medical devices to the Department of Defense and Department of Veterans Affairs, a New Jersey district court said.	Bloomberg Law
Brazilian Kickbacks	Associação Brasileira de Medicina de Grupo (Abramge) is a Brazilian nonprofit professional association. Its members are private health insurance providers, many of whom were impacted by a bribery and kickback scandal in the medical device market that broke in the Brazilian media in 2015. According to Abramge's complaint, Defendant Stryker, a Michigan corporation, masterminded an "illicit scheme, which was planned and run from Michigan, designed to increase its market share by making improper payments and paying bribes and kickbacks to Brazilian doctors to induce the use of Stryker products."	Court Opinion
Mexican Bribery	Mexico's federal health agency last week sued Stryker (NYSE:SYK) over an alleged bribery scheme, accusing the company of bribing officials at the Instituto Mexicano del Seguro Social to reap more than \$2 million in illicit profits.	Industry NBews
Ireland Working Conditions	'Standards are on the floor': Stryker staff allege health and safety issues at Cork sites A photograph, seen by the 'Irish Examiner', shows a warning sign informing staff that a machine was faulty, and would not be fixed for a number of months. It asked staff to exercise caution due to risks of "radiation leaks"	Irish Examiner

Summary of Eye-Opening Quotes From Former Employees Spruce Point Interviewed

Functional Role	Key Quotes From Former Stryker Employees Spruce Point Interviewed
Former M&A Employee	<p>On M&A Challenges: “The Stryker name carries a premium to it. I believe we overpay. When I was there I felt like we overpaid for deals. However, target prices tend to go up when they hear Stryker is looking at them. So if you go to a company, they assume we’re deep pockets, so it’s more difficult to negotiate and get a good price.. we have experienced some challenges where we significantly overpaid, which caused, a negative mark in the report card. We generally created these report cards that show what our forecast was, 90 days out to 180 days where we stand on performance to the Board or different presidents depending on the level of the deal. One of the challenges I find with the M&A teams and with Stryker is its a psychological effect. They get very entrenched in having a specific company. They convince themselves they have to have it... And so sometimes you back into your deal when it should have been a walk away. I’ve seen that happen a bit.”</p> <p>On Inventory: “So it’s incredibly hard to account for inventory without eyes on it. And we’ve been burned before significantly about that, where we assumed certain inventory existed, that didn’t exist and we overpaid and we get there and you know, it was a fraction of what we assumed.”</p> <p>On Cost Bloat: “So one of the biggest challenges that Stryker requires is the footprint. With Wright, the amount of sites that were acquired, was intense and the cost associated with it. So there’s a lot of redundancies and cost associated with, for example, Mobius was Shirley outside of Boston, Massachusetts, the rent was exorbitant. It was not a very optimal facility. It took almost 2 years to move it to Kalamazoo. Only more recently within the last few years, have they really been focusing on streamlining operations with respect to how many plants are open in sites, and consolidating those due to cost.”</p>
Former Supply Chain Employee	<p>On Inventory: “And Stryker had a big inventory problem anyway, before COVID, where we were sitting on piles and piles of inventory in certain business segments.”</p> <p>On Supply Chain: “But I think just the compounding of all these issues that we see in the marketplace where suppliers would have their sub suppliers who would declare force majeure and would extend the lead time on some materials. And so I think that’s now playing catch up where, it’s just been hard for Stryker to keep up with the level of issues going on with their supply base.”</p> <p>On IT and ERP: “Stryker is still very immature when it comes to its technology infrastructure, as in its ERP platforms and everything that they use to manage their business internally. We had this massive program that was rolled out a few years back, to standardize our ERP platforms onto one platform. And it was just taking forever and the timelines are constantly getting pushed out. I think that’s something that Stryker needs to wake up and do a better job at, because, it still sometimes functions as a collection of small companies, as opposed to one major company that operates off of one platform...So the program has definitely been delayed in terms of scope, as well as timeline, but it has to happen. I mean, there’s no way the company can survive otherwise because they’re operating off of 40 different ERP platforms and as being a sixteen billion dollar (sales) company, it just doesn’t work well.”</p>
Former Senior Technology Employee	<p>On ERP: “The project was not successful as it could have been because there were 21 business units and we were not tough enough on limiting the customization. And it’s not going to cost \$500 million. The overall cost is going to be much bigger, close to \$1.0 billion.”</p> <p>On Inventory: “We built the tool suite called RepSuite and it was rolled out, but the inventory tracking remains a problem because you never know what the surgery is going to be consuming what. So you have to keep a lot of consignment inventory, which in some cases it is prepaid, in most cases it is not. It’s a process problem.”</p> <p>On Operations: “Stryker is fiercely decentralized. Anytime anything centralization happens, it was a dog fight...They’ve never had a leader that didn’t come up through sales.”</p> <p>On Innovation: It’s very hard for Stryker to appreciate the role of R&D and manufacturing optimization. One bad thing about Stryker – a long term assessment – this is the issue. You need enough people that understand all of this. Stryker’s executive team has no one from R&D at the table. Internal innovation has not delivered a huge amount of value. Taking something internal and taking it to the market, that’s not Stryker’s strength.”</p>
Former Senior Mako Salesperson	<p>On Ceasing Mako’s Quarterly Disclosures In 2019: “They did that for a reason, because the Joint Value financing program I discussed. They were worried people would go, ‘wait a minute, now your just placing the robots, in return for cases.’ So you’re wiping out the million dollar price tag and your getting cases off it. So it’s a way to fool the numbers a little bit. They started going heavy on Joint Value.”</p> <p>On Pricing: “In 2022, they dropped the 3 app price from \$1.3m to \$1.0m, and approximately \$750k or \$600-\$650k for a 2 and 1 app robot. I know it for a fact. I believe competition is a big part of it. So the industry is finding more creative ways so that customers don’t have to invest as much capital upfront. Zimmer really changed the market when they introduced the ROSA. Zimmer did placements, not even looking for cash. They did placement agreements on a lot of robots as the second person in the market.”</p> <p>On Competition and Outlook: “I would think now that J&J is in the market and Zimmer is there, systems sales will probably slow, and they moved away again from Joint Value deals. That makes it a little more challenging. Procedure volumes I think will go up.”</p>

Multiple Red Flags Appearing In The Stryker Growth Story Under Lobo's Watch

Spruce Point believes the market is missing multiple factors signaling extreme financial strain in the Stryker equity story.

Widening Rift Between GAAP And Non-GAAP Results

Spruce Point has experienced repeat success finding short opportunities early by identifying companies showing a widening rift between GAAP and Non-GAAP figures. In Stryker's case, we observe the rift has intensified post COVID-19 as we believe its business is experiencing not only short-term issues from deferrals of elective surgeries, but long-term issues in product segments like Spine and Robotics. We believe Stryker failed to disclose a material risk to investors that approximately 50% of its business is tied to elective surgeries that can be deferred

Cash Flow Strains Emerging

Dovetailing with our Non-GAAP concerns above, we observe that Stryker recently introduced Adjusted Free Cash Flow or "AFCF" as a Non-GAAP metric and we believe that its 2020 version overstates Spruce Point's AFCF by \$141m. Over the LTM, AFCF has largely been flat. For the first time, Stryker implemented AFCF as a metric tied to short-term management incentive compensation, a tacit admission in our view that it's aware of the problem. To conserve cash, Stryker also suspended stock repurchases to mitigate share dilution from employee compensation programs

Increasing Deal Size And Overpaying Despite Saying It Wouldn't

A former Stryker M&A professional told us it overpays for acquisitions and many reasons are to blame. Stryker made multiple statements following the Wright Medical acquisition (closed Nov 2020) that it would be years until another large acquisition came along, and that its priority would be smaller tuck-in deals. Instead, Stryker announced the \$3.1 billion dollar acquisition of Vocera Communications (closed Feb 2022). Despite Vocera's CFO recently leaving and it retracting its TAM claims before Stryker announced the deal, Stryker paid a lofty 11.7x NTM sales multiple for low teens sales growth company, with no benefit to 2022 earnings. Even worse, there's a risk Vocera is disintermediated by Microsoft, which recently bought Nuance Communications which controls Vocera's voice functionality

Abandoning Key Metrics

We observe that Stryker stopped presenting Adjusted Return on Invested Capital (ROIC) as a metric to investors after 2017. Whereas the CEO claimed M&A discipline and the ability to walk away from bad deals as a factor driving consistent ROIC performance, recent commentary we received from a former M&A professional indicates that Stryker overpays for deals, and has been reluctant to walk away from deals or get price concessions from targets. When asked point blank about its ROIC expectation for Vocera Communications, the CFO declined to answer. Stryker also abandoned key quarterly metrics with Mako Surgical's 2019 reporting before a period we believe its growth started to stall and it changed sales practices to allow for more creative financing

Deferring And Abandoning Critical Capex

Stryker's track record of hitting its Capex projections is generally poor, but in the past two years it has materially underspent its target, which we believe has allowed it to boost free cash flow to pay down debt from the Wright acquisition. Notably, Stryker impaired its Enterprise Resource Planning (ERP) project, which cost over \$500 million since being started circa 2016. One former employee in supply chain commented, that "*Stryker can't survive*" unless it can fix the problem of unifying over 40 different technology platforms from its acquisition spree. Another former Stryker IT professional said the project would cost north of \$1.0 billion with no guaranteed success

Multiple Red Flags Appearing In The Stryker Growth Story Under Lobo's Watch (Cont'd)

Inventory Problems Not Being Disclosed

A former employee told us Stryker has long had inventory problems from being a sales focused organization. Another former employee told us that Stryker was burned in an M&A deal where inventory didn't exist. We see that Stryker has made subtle changes to its inventory accounting definition which allows it to lower its inventory value, and thus increase gross margin. Also, we identify material and five revisions to Wright Medical's inventory valuation during the 1 year purchase price accounting period post close. We cannot reconcile total inventory-step up charges that Stryker is passing through as non-cash charges to COGS. As a result, it could be using this as a mechanism to flush expenses. Stryker claims days inventory has improved. However, based on our analysis, which adjusts for reclassified loaner inventory, we believe days inventory have not changed from pre-COVID-19 levels. We also find evidence that inventory acquired from the K2M Group acquisition received a "qualified" opinion from its auditor, yet Stryker eliminated its inventory reserve and marked-up the valuation by 53%

Paying Off Failing Acquisitions By Accelerating Contingent Payments

Spruce Point finds an alarming discrepancy in the Mobius Imaging acquisition. Stryker claims the deal included up to \$130m for future regulatory and commercial milestones. There is clear evidence Mobius has struggled to ramp-up production, and yet Stryker recorded just a \$4m liability for contingent consideration. Based on the deal price allocation, it appears payments were made despite the production shortfalls and issues. The same issue occurred with the acquisition of OrthoSpace where Stryker claimed contingent milestone payments up to \$110m would be made, but by closing it marked contingent consideration at \$0 and it appears \$98m of payments were made. Spruce Point cannot identify where Stryker is recording contingent payments on its financial statements as they don't appear to be recorded in the cash flow from investing section

Changing Key Accounting Assumptions Affecting Depreciation And Presenting Two Depreciation and Amortization Figures

It appears that Stryker changed its useful life assumptions for machinery and equipment (part of PP&E) between 2019-2020, which cannot be explained by the acquisition of Wright Medical because it contributed a very small % to the PP&E accounts. We see that Stryker increased the high end of the useful life assumption from 10 to 15 years, which has the effect of lowering depreciation expense and increasing EPS. Even more worrisome, we find evidence that Stryker keeps two sets of depreciation and amortization (D&A) figures. Looking carefully in its segment reporting, we see D&A figures that diverge from figures in its statement of cash flows. We track the issue back to 2012, a period of organizational stress at Stryker with it reaching a settlement with the US Attorney's Office, the resignation of its CEO, appointment of now CEO Lobo, two interim CFOs and other leadership changes. Stryker's management conducted a stealth financial restatement in 2012 to change certain balance sheet and cash flow items in 2011. In a form 10K/A filed April 24, 2012 Stryker "*management concluded that our disclosure controls and procedures are effective.*" Yet, we see that when the 2012 10-K was filed Feb 27, 2013 that a financial revision was necessary. We see that 2011 total depreciation and amortization ("D&A") was \$481 million, and later revised to \$282 million (-41%). Likewise, 2010 total D&A was revised from \$410 million to \$223 million (-45%). Stryker failed to make any revisions to segment D&A during this time period

Aggressive Tax Maneuvering

Stryker benefitted materially in 2021 from pushing its effective tax rate well below what it claims is its 16% target. The benefits appear to be coming from transferring intellectual property among group holdings and claiming more foreign earnings, despite evidence foreign earnings are declining. Stryker's top VP of Tax mysteriously left the Company in the middle of 2021. For the first time, a "*Critical Audit Matter*" was raised in relation to uncertain tax positions requiring significant management judgment. Stryker's former VP of Tax claimed to be a CPA despite his license having been expired since 2013

Realigning Segments

After reporting sharp organic sales decline in the Spine segment, and when asked about market share conditions, management could not offer specifics. We observe that a segment realignment was implemented that moved Spine into a new segment that minimizes its impact. A former employee told us that Stryker would realign segments in order to minimize the drag from underperforming businesses

Multiple Red Flags Appearing In The Stryker Growth Story Under Lobo's Watch (Cont'd)

Credit Extension And Bad Debts Increasing

Stryker has often referred to its Flex Financial arm and noted in Q2 2020 that, *"we definitely are seeing a shift to financing more deals than we have historically experienced, and I fully believe that, that will continue throughout the rest of this year."* Stryker does not disclose any financial information of its financing arm. However, Spruce Point believes there are signs of increasing credit strains. Hospitals themselves are under pressure from the pandemic, and The American Hospital Association estimated they could lose \$53 - \$122 billion of revenue due to lingering effects of the pandemic. We observe that Stryker's allowance for bad debts, a contra account to accounts receivables, has been steadily growing and is now above 5% of gross receivables – notably larger than close peers Zimmer Biomet and Medtronic

Signs of Governance And Misalignment Between Shareholders And Insiders Increasing

Spruce Point takes extreme issue with the Compensation Committee's decision in 2020 to award management 75% payout for 2020 targets. Granted COVID-19 threw a curveball to the overall business, but management was still rewarded for things we believe they could control and objectively failed at. Notably, "Functional goals" included successful integration of acquisitions and leadership towards its cost transformation plan. However, through a former employee interview, we learned that Mobius Imaging and Cardan Robotics (largest 2019 acquisition acquired in Oct 2019) was struggling to integrate and ramp capacity. Furthermore, management abandoned its ERP project after spending millions and promising to see it to completion. Spruce Point believes this shows a clear misalignment of interests between shareholders and investors. Interestingly, Roch Doliveux, Chair of the Compensation Committee, did not stand for re-election at the 2021 Annual Meeting and Stryker replaced its long-time compensation consultant Willis Towers Watson (since 2017) with Korn Ferry in 2022. Stryker's management had record compensation in 2021 despite our comprehensive analysis showing increasing financial strain in the business

Dilution Now Increasing, Off-Cycle "Retention" Grants and Insider Ownership Decreasing

After a multiyear period of declining and then flat shares outstanding, Stryker's share count has been creeping higher the past few years resulting in dilution. Meanwhile, the Stryker family continues to sell shares regularly and are no longer the top two holders as they were a decade ago. More alarming, the recent proxy statement disclosed that the CFO and President of Global Quality and Operations were award "off cycle" RSU as "retention" tools in recognition of their efforts toward cost transformation initiatives in May 2021. Spruce Point takes extreme issue with this as Stryker is now talking about a 50-100 basis point impact to gross margin from cost pressures. Why did the Board feel it necessary to "retain" management with this grant – is the CFO looking to leave?

Avoiding And Obscuring Goodwill Impairment

Stryker's goodwill is >37% of total assets, and total goodwill and intangibles is >51%. By having to divest the STAR ankle business acquired in 2014, we find evidence that Stryker has avoided taking goodwill impairment charges. There is no evidence Stryker received any cash from the divestment of the business, and three months after the sale, the FDA warned about product problems. Stryker recorded \$221m of goodwill from the acquisition of this product line and has never recorded an impairment charge at the corporate level. Yet, we find it recently took a goodwill impairment charge for its Ears, Nose and Throat which was only disclosed in its UK foreign financials, but not at the parent level in SEC filings. Ironically, we believe its U.S. ENT business is suffering worse than its UK counterpart, though no U.S. impairments were noted. Stryker also made a recent subtle change to its impairment testing description

Leverage Rising Significantly Faster Than EBITDA or Cash Flow

In 2009, Stryker had just \$18 million of debt. Today, we estimate total debt is \$16.3 billion, pro forma for the recent Vocera acquisition, and adjusted to include product recall liabilities, unfunded employee compensation programs, operating leases and accrued unpaid interest and tax penalties. Since 2018 alone, we estimate Stryker's debt has increased by \$6.5 billion, while adjusted EBITDA and Operating Cash Flow are up by \$329m and \$699m, respectively. Stryker's financial flexibility and cost of capital is increasing as interest rates rise, and its credit rating was recently downgraded. By our estimate, Stryker's total debt to 2022E adjusted EBITDA is 4.9x. Stryker must deleverage or face additional credit downgrades

Our Assessment of Stryker's Billion Dollar Deals Reveals Multiple Failures

Spruce Point believes Stryker's recent large acquisitions of public companies either are failing, or likely to fail.

Company	Close Date / Price Paid	Evidence of current and future (Vocera) deal failure
Vocera Communications (Nasdaq: VCRA)	Feb 2022 \$3.1 billion	Stryker is now pivoting to a riskier and wildly more expensive acquisition in healthcare technology for a company with a decade of failure to hit any of its financial or business targets. <u>In fact, management had settled a lawsuit for allegedly covering up failures with revenue smoothing, and being overly optimistic. Prior to Stryker's acquisition, Vocera retracted its decade long-term \$6bn TAM claim.</u> According to interviews of former employees, the sales cycle for Vocera's solution is 2 – 5 years, much longer than management claims. Vocera's backbone speech technology was just acquired by Microsoft, which itself is pushing into the healthcare space. There is now a material risk that Microsoft disintermediates the Vocera communication solution
Wright Medical Group (Nasdaq: WMGI)	Nov 2020 \$5.1 billion	Wright was clearly struggling with sales and inventory management before Stryker made a rich offer to acquire the Company at a 50% share premium. Stryker has made five different valuation estimates for Wright's acquired inventory. Stryker initially projected 11-12% growth with Wright, but has walked back the target to 6%. <u>We also find mathematically impossible financial reporting of Wright's revenue.</u> Stryker's Orthopaedics segment had two acquisitions in Q4 2020: Wright Medical (Nov) and OrthoSensor (Dec). Based on Stryker's organic reporting, the segment had \$126m of contributions from both acquisitions. Yet, Stryker's 10-K says Wright Medical alone contributed \$129.2m of revenue
K2M Group (Nasdaq: KTWO)	Nov 2018 \$1.5 billion	Stryker claimed various synergies for its spine business and mid-single digit growth when acquiring K2M Group. Sales have averaged just 0.4% per annum since it completed the acquisition. K2M's Chief Medical Officer had scores of medical malpractice claims. In addition, its CFO and Chief Accounting Officer worked at InPhonic, which had an accounting scandal tied to inventory accounting, and its stock went to zero. <u>Spruce Point finds clear evidence of inventory and product challenges at K2M Group, notably a "Qualified Opinion" from Stryker's own auditor post closing and after inspecting foreign inventory.</u> FDA MAUDE database submissions for K2M shows that injury and malfunctions ballooned in 2021
Mako Surgical (Nasdaq: MAKO)	Dec 2013 \$1.6 billion	Stryker entered the robot-assisted orthopedic surgery space with an expensive bet on Mako Surgical in late 2013, paying almost 16x LTM sales. Within three quarters, management admitted it overestimated the challenges of operational and sales integration. Stryker has never cleanly reported Mako's sales, making it difficult for investors to assess its progress. By 2017, Mako got an uplift of installs from total knee procedures and Stryker was giving quarterly disclosures of installs, procedures, and surgeon's trained. However, by the end of 2019, Stryker ceased quarterly install disclosures. <u>Leading up to this, we find evidence that Stryker made subtle reporting changes such as disclosing unit "installs" to unit "sales".</u> Recently, we find discrepancies in historical unit install disclosures. FDA MAUDE database submissions show a dramatic decline post 2019, which either means it fixed product issues, or overall procedures were in rapid decline and haven't recovered. During the 2017-2019 period, Stryker's competitors were busy acquiring and building their competitive solutions to Mako, and we now believe the competitive landscape has shifted against it. In fact, we've learned that Stryker relied heavily on "Joint Value" a financing solution to lower the upfront cost in exchange for guaranteed joint purchase in the future. As Zimmer now gives away its ROSA® at no upfront cost, we've learned that Stryker recently cut the price on Mako by -17% to -30%

Our Assessment of Stryker's "Tuck-In" Acquisitions Show Multiple Failures

Stryker's CEO had claimed that tuck-in acquisitions are "easy" and that it has a "pretty good" track record.⁽¹⁾ Spruce Point believes Stryker's tuck-ins have been disastrous failures.

Company	Close Date / Price Paid	Evidence of current failure
OrthoSensor	<u>Dec 2020</u> <u>\$115 million</u>	On Jan 5, 2021 Stryker promoted the acquisition of OrthoSensor saying, " <i>Smart devices and implants will play a big role in orthopaedics and we are excited for OrthoSensor to join Stryker as we continue to innovate and advance smart sensor technologies, including intraoperative sensors, wearables and smart implants across our joint replacement business.</i> " Based on our analysis, OrthoSensor was a bust for its previous owners, and was acquired at a price below the \$136 million of total capital invested into the business since 2011. A former lawsuit alleges that OrthoSensor struggled with manufacturing defects in 2016 and didn't achieve its optimistic unit sales. Since 2018, OrthoSensor had been increasingly dependent on raising debt capital. Stryker was OrthoSensor's first strategic alliance announced in 2011, and may have even been the unnamed "strategic" investor referenced in the first financing announcement. Stryker even had former employees from R&D and Legal who had worked at OrthoSensor. Yet, when asked simple questions about the plan for OrthoSensor over the first six months post closing, Stryker dodged direct responses and acted as if OrthoSensor is too new to the organization to comment on. Evidence shows Stryker has paid over \$10 million to the top three scientific contributors to research referencing the efficacy of OrthoSensor. Finally, after almost nine months post closing, CEO Lobo commented that OrthoSensor was not something that would transform the market in a very fast period of time. Beware, OrthoSensor management has ties to Mako Surgical, which as we noted, disappointed investors for a long period of time
Mobius and Cardan Robotics	<u>Oct 2019</u> <u>\$478 million</u>	Based on commentary from management and a former employee interview, Stryker vastly underestimated the challenges of ramping up production for Mobius Imaging, and has had issues sourcing key components. Despite this, it appears Stryker made a large contingent payment to former owners that was supposed to be tied to regulatory and commercial milestones. Stryker's reporting language makes it difficult to track where exactly contingent payments are flowing through its cash flow statement. Analysts have been promoting Cardan Robotics as Stryker's next big thing, despite it being described to us as just " <i>a concept</i> "
TSO3 (TSX: TOS)	<u>Oct 2019</u> <u>~\$50 million</u>	Stryker acquired TSO3, a company that Spruce Point specifically warned the world was more akin to a stock promotion, than a company with a commercially viable product. Stryker acquired the publicly listed Canadian company for over \$50m, or more than it had generated in sales over the past decade, while racking up multiples of sales in financial losses. Stryker never issued a press release about this transaction. In a rare comment about TSO3, a year later the CEO said it had challenges ramping up the product... REALLY! Under Stryker's ownership the Sterizone VP4 product appears largely unchanged in appearance almost 3 years later
STAR Ankle	<u>June 2014</u> <u>(acquired)</u> <u>\$358 million</u> <u>Divested</u> <u>Nov 2020: \$0</u>	As part of the Wright Medical transaction, Stryker was required to divest the STAR total ankle replacement product. We observe that Stryker reported no cash inflows from investing from this divestiture. At most it received \$1 million through "Other Investing". Later in March 2021, the FDA issued a warning about the STAR Ankle's safety. We observe that Stryker has not impaired any of the \$221 million of goodwill associated with a product set that it likely knew was experiencing breakage issues, and which it received little to no value from divesting

1) Morgan Stanley Conference, Sept 2021

Our Assessment of Stryker's "Tuck-In" Acquisitions Show Multiple Failures (Cont'd)

Company	Close Date / Price Paid	Evidence of current failure
NOVADAQ Technologies (Nasdaq/TSX: NVDQ/NDQ)	<u>Sept 2017</u> <u>\$674m</u>	In June 2017, NOVADAQ entered into an agreement to be acquired by Stryker and closed the deal on Sept 1, 2017. Throughout its financial reporting, NOVADAQ never reported more than \$11.7m of inventory on its balance sheet. Leading up to the acquisition, it last reported \$4.8m of inventory as of June 20, 2017. Stryker completed the acquisition on September 1, 2017. Stryker preliminarily revalued its inventory to \$39 million, with a final inventory valuation of \$25 million (421% more than the final reported value). Stryker initially talked about portfolio synergy and collaboration amongst the sales team, which ultimately led to a reduction of the sales force three quarters later. Today, the LUNA angiography system, a key product initially marketed by NOVADAQ, is no longer marketed by Stryker. In addition, NOVADAQ marketed the PINPOINT endoscopic fluorescence imaging system. This "system" has been reduced to nothing more than an imaging camera. A total of \$527 million of goodwill was generated from this transaction, but with a reduced product portfolio, none of it was impaired
SafeAir	<u>Estimated Late 2019</u> <u>Price: N/A</u>	Stryker announced the acquisition of SafeAir in June 2018, but as of May 2019 almost a year later, Stryker said the transaction was still pending. The company had a very narrow product line of pencils for electrosurgery and smoke evacuation that sells in boxes of ten. In January 2020, Stryker reported an FDA recall noting hairline fractures in a component could allow electrical current to arc out of the device, resulting in a burn to the patient and/or user. Stryker advised customers to immediately check all stock areas and/or operating room storage for affected products, quarantine and discontinue use of any recalled Stryker SafeAir Smoke Evacuation Pencils or LINA Telescopic Smoke Pencils
TMJ Concepts	<u>Q1 or Q2 2021?</u> <u>Price: N/A</u>	There is a discrepancy between timing disclosures of when TMJ Solutions (DBA: TMJ Concepts) is to have closed. Stryker claimed TMJ closed in Q1 2021, but the Company's website says Q2 2021. State filings records also indicate a new business entity was formed April 1, 2021. 36% of all FDA MAUDE incident reports since 2018 for TMJ Solutions, LLC (DBA TMJ Concepts) have come after Stryker acquired the Company in early 2021. The product has a device history dating back to 1989 and each prosthesis is individually fabricated for the unique anatomy of the patient. Why would Stryker waste its time and shareholder capital on an acquisition of a legacy product that is experiencing an accelerated rate of patient injury claims?

Summary of Recent Abysmal Acquisitions

Stryker only discloses the Operating Income (EBIT) contribution from transactions completed in the year in its Proxy Statement. We can now clearly see that it has spent \$8.6 billion in total acquisition and integration costs from 2018 - 2021. EBIT contribution, which is influenced by the timing of when acquisitions are completed, has been virtually negligible.

\$ in mm	Source	2018	2019	2020	2021	2018-2021
Total Acquisitions, net of cash acquired	10-K Cash From Investing	\$2,451	\$802	\$4,222	\$339	\$7,814
Total Acquisition and Integration Costs	10-K and Proxy Statement	\$108	\$208	\$194	\$319	\$829
Acquisitions Completed In Year	Stryker PR, Conf Calls and 10-K	Entellus Medical Vexim Squeeze Out Hygia Invuity K2M Group HyperBranch Medical	OrthoSpace Arrinex Conformis Assets SafeAir AG Mobius and Cardan Mobius and Cardan Robotics TSO3 Zipline	Wright Medical OrthoSensor	TMJ Concepts Gauss Surgical Thermedx	
Revenue From Acquisitions Recorded In Year ⁽¹⁾	Year End Press Release and 10-K	\$236	\$354	\$179 ⁽²⁾	\$789	
Contribution of Acquisitions Completed During The Year To Operating Income	Proxy Statement	(\$3)	(\$7)	\$21 ⁽²⁾	\$1	\$12

- 1) Revenues include companies acquired in the current and prior year. For example, 2018 revenues would also include revenues from NOVADAQ (closed Sept 2017)
- 2) Spruce Point's analysis calls into question these figures later [in the report](#) due to reporting discrepancies.

Historical Bull Case Increasingly Hard To Justify Now That Stryker Is Bigger With Less Financial Flexibility

We Believe Stryker Is Caught In A Margin Squeeze And Delaying Bad News

5% Upside To Sell-Side Average Price Target Is A Poor/Risk Reward Relative To Our Conservative Estimate of 35% Downside

Debt-Fueled Acquisition Roll-Up Is Hitting A Wall And No Longer Producing An Attractive ROIC:

- Stryker's shareholders have enjoyed an impressive ride since the start of 2009, with shares up ~546%, not including reinvested dividends. At this time, Stryker had just \$18 million of debt, and a surplus of nearly \$3.0 billion in cash. As a \$17 billion enterprise value company at the time, valuations were cheap following the financial crisis, deal targets plentiful, and debt capacity abundant
- However, now the story has changed. As a \$118 billion company with \$16.4 billion of debt and just \$1.5 billion of unrestricted cash, financial flexibility is lower, actionable targets of size to grow Stryker are fewer, and Stryker's track record of paying rich premiums for targets is working against it. With leverage nearly 5x Total Debt to EBITDA, Stryker must cease more acquisitions and forgo increasing its dividend or repurchasing stock (to offset dilution) in favor of deleveraging
- We believe Stryker left investors flat-footed when the pandemic hit by not warning investors that its true exposure to elective procedures was 50% of sales. Things got so bad for Stryker, that we find evidence it went delinquent on paying property taxes at its global headquarters. We believe Omicron and global world war fears have delayed Stryker's recovery
- Our research shows that Stryker has long suffered from inventory management issues, and has never made good on promises to rationalize its operational and global manufacturing footprint. Furthermore, its promise to complete a critical ERP project to unify over 40 systems failed miserably, was impaired, and has been a sunk cost to investors for over \$500 million
- We believe that during COVID-19, Stryker worked down excess inventory, but has now been caught short critical materials that are being hampered by supply chain challenges and inflationary pressures. Unfortunately, Stryker's products are largely deflationary and have been declining low single digits per annum. Even Stryker's one portfolio bright spot, robotic surgeries led by Mako, are now experiencing double digit pricing pressures
- Based on our behavioral analysis of Stryker management, we believe it often delays bad news as long as possible. Stryker is sending mixed signals to the market about the extent of supply chain and inflation challenges, while trying to recruit new analysts such as Evercore and BofA to say "Buy" its stock
- 75% of sell-side analysts have "Buy" or "Market Outperform" recommendations, but the average price target is \$282 per share. At the current price, this implies just 5% upside. In light of our concerns about the accuracy of Stryker's financial reporting, and tactics it's using to embellish results, we believe holding shares at this level represent a poor risk / reward
- Sell-side analysts expect 110 basis points of gross margin expansion and nearly 6% and 21% cash flow growth in 2022-23. However, Stryker has shown an incredibly poor track-record of delivering on gross margin expectations, never-mind in a world with rampant supply chain dysfunction and inflation pressures. We expect deferred capex spending in recent years to pressure free cash flow going forward. We believe revenue targets are at risk as analysts fail to capture pricing pressure at Mako Surgical
- Our estimates ignore what we view are egregious non-cash add-backs for roll-up and integration costs, product recall costs related to management blunders, and dubious inventory step-up add backs which we point out don't make sense. On our 2022E figures, Stryker trades at an industry leading 6.5x, 35x, and 43x 2022E sales, EBITDA and operating cash flow. Valuing Stryker at multiples closer to the industry average, we see 35% - 75% downside risk to \$67.00 - \$174.50 per share

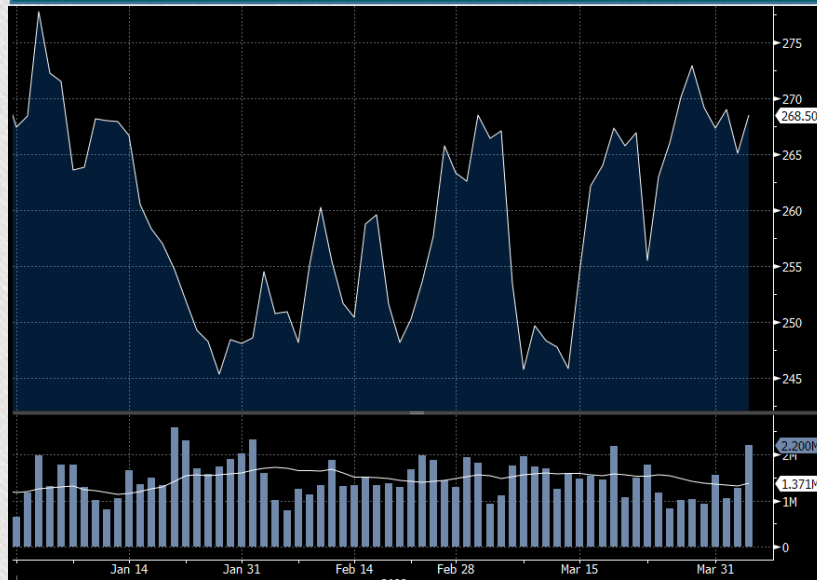


Who Is More Astute: Equity or Debt Holders?



Economic theory posits that as a firm's weighted average cost of capital rises, the firm's valuation should decline. In a perplexing case, we observe that Stryker's bond holders are selling, driving up its cost of debt. Stryker's longer-dated maturities are down low double digits. Meanwhile, Stryker's equity holders haven't reacted keeping its stock price unchanged year-to-date.

Stryker's Equity YTD Is Nearly Unchanged



Source: Bloomberg

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Stryker's June 2046 US\$ Unsecured Debt



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Stryker's June 2030 US\$ Unsecured Debt



Recommendations For Management

We believe it's time for Stryker's failing business strategy to end. The Company needs to take a hard stance that management's blunders are no longer acceptable and that it's time to reposition Stryker from a growth by terrible acquisition story, to one committed to internal investment, fixing cost bloat, improving manufacturing inefficiencies, and returning capital.

Replace The CEO and CFO

Stryker's reputation has suffered immeasurable harm under the leadership of CEO Kevin Lobo and CFO Glenn Boehnlein. Aside from numerous regulatory investigations, settlements, and product recalls, the Company has plummeted in Fortune Magazine's "100 Best Companies to Work". In fact, its ranking peaked in the top 10, only to recently nosedive to #88 on the list. We believe this mirrors our observations and insights from former employees of a Company quietly struggling. Our forensic investigation uncovers numerous ways in which Stryker is embellishing its financial results through increasingly creative accounting and financial presentation methods

Impair Goodwill and Hire a New Auditor

It's time for management to take a hard look at impairing goodwill for failed acquisitions. How can management seriously lead investors to believe that there has been no goodwill impairment in its spine business and ankle business, notably around the K2M and STAR Ankle transactions. Ernst & Young has been Stryker's auditor continuously since 1974. It's time for some fresh eyes on the books and records of the Company

Get Serious About Trimming SG&A Bloat And Manufacturing Rationalization

For years, management has overpromised and underdelivered about cost rationalization, operational and manufacturing improvements. Stryker's insistence that it was committed to the ERP, only to abandon it, is a key example. We believe Stryker needs to commit significant capital to its information technology budget and hire a world class CTO to complete the ERP. Stryker also needs to vastly shrink its 50 manufacturing facilities and rationalize its global footprint

Reset Long-Term Expectations

Cease Acquisition Strategy, Refocus From Growth To Harvest

At its November 2021 Analyst Day, Stryker modified a key slide called "Long-term sustainable growth targets," now calling for "adjusted" EPS growth and qualifying its margin expansion goals. Stryker has not modified these statements since at least 2016. Stryker needs to admit that these goals are no longer obtainable and that its capital priorities need to change. It's evident to us that Stryker is getting diminishing returns on investment by directing 60% of capital towards expensive acquisitions. Recent large acquisitions have failed to spark top-line growth, and continue to compound Stryker's operational bloat. Stryker also claims its specialty is small "tuck-in" acquisitions, but we find evidence that even recent deals have failed and/or brought product complications to Stryker's portfolio. It's time for management to consider shifting capital priorities to increasing the dividend, stop delaying Capex and be committed to hit its targets, and focus on debt reduction

Top Five Questions For Management

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Spruce Point believes management should address the following important questions pertaining to suspect financial reporting and accounting practices

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<p>#1 Financing and Loaner Equipment</p>	<p>Why did Stryker obscure loaner inventory in the 2011 period, only to recently “reclassify” it from inventory to “other noncurrent assets.” Did Stryker do this to improve the optics of inventory turns? More broadly, why doesn’t Stryker provide greater disclosures around its financing business, especially in light of evidence it has been offering “Joint Value” programs for Mako customers to compete with Zimmer’s placement deals</p>
<p>#2 Inventory Step-Up Practices</p>	<p>Why has Stryker systematically revalued inventory materially higher upon acquisition closing, and why has Stryker recorded in its income statement \$419 million of inventory sold that was stepped-up to fair value since 2017. After reviewing Stryker’s recent and large public company acquisition targets, Spruce Point estimates just \$268m of inventory that was stepped-up. Why did Stryker make five revisions to Wright Medical Group’s acquired inventory, but did not mention this as a Critical Audit Matter? Moreover, why did Stryker mark-up the value of K2M Group’s inventory when its own auditor issued a qualified opinion on nearly \$30 million of foreign inventory?</p>
<p>#3 Contingent and Milestone Payments</p>	<p>Stryker says that OrthoSpace and Mobius Imaging had up to \$110 and \$130 million of future milestone payments. However, upon evaluating each transaction, Stryker marked just \$0 and \$4 million of contingent consideration and it appears that the milestone payments were made. There is ample evidence to suggest Mobius Imaging experienced delays and integration challenges. Where exactly are contingent acquisition payments flowing through Stryker’s cash flow statement?</p>
<p>#4 Depreciation and Amortization</p>	<p>Why does Stryker keep two sets of figures for depreciation and amortization? There are material differences between depreciation and amortization running through its cash flow statement, and figures being reported in segment results</p>
<p>#5 Goodwill Impairment</p>	<p>Why are we to believe that Stryker has never had to impair goodwill? Can it explain how much it received from the divestiture of the STAR Ankle? It appears to have received \$0 dollars from a business it once spent \$375 million to acquire. Furthermore, with all the challenges in the Spine business, why have peers such as Zimmer impaired goodwill, but Stryker has not. Lastly, why did Stryker impair goodwill at its UK ENT business, but it did not appear at the consolidated level?</p>



Signs That Stryker Is Obscuring Increased Financial Strains With New Financial Reporting And Accounting Changes

Stryker's Financial Strategy

Spruce Point believes that since CEO Lobo's first year of leadership in 2013, Stryker has run a dangerously levered strategy that is starting to show diminishing returns and hit a wall. Stryker has deployed 60% of cumulative capital raised towards acquisitions. Its second biggest capital priority has been dividends. As a sign of financial stress, Stryker has recently suspended share repurchases. We believe Stryker has underspent on capex, while overpaying for acquisitions that it has struggled to properly integrate. As a result, we will lay out the case that Stryker is now caught in a large margin squeeze from years of mismanagement.

Stryker's Sources And Uses of Capital Under CEO Lobo's Tenure

	\$ in mm	2013	2014	2015	2016	2017 ⁽¹⁾	2018	2019	2020	2021	2013-21 Total
Capital Sources	Operating Cash Flow	\$1,930	\$1,858	\$981	\$1,915	\$1,559	\$2,610	\$2,191	\$3,277	\$3,263	\$19,584
	Less: Cash for Employee Stock Programs ⁽¹⁾	NA	NA	(\$56)	(\$67)	(\$95)	(\$120)	(\$136)	(\$110)	(\$114)	(\$698)
	Spruce Point Adjusted OCF	\$1,930	\$1,858	\$925	\$1,848	\$1,464	\$2,490	\$2,055	\$3,167	\$3,149	\$18,886
	Net Debt Raised (repaid)	\$1,005	\$1,159	\$48	\$2,912	\$299	\$2,456	\$1,293	\$989	(\$1,153)	\$9,008
	Total Capital Sources	\$2,935	\$3,017	\$973	\$4,760	\$1,763	\$4,946	\$3,348	\$4,156	\$1,996	\$27,894
Capital Uses	Stock Repurchase	\$317	\$100	\$700	\$13	\$230	\$300	\$307	\$0	\$0	\$1,967
	Capex	\$195	\$233	\$270	\$490	\$598	\$572	\$649	\$487	\$525	\$4,019
	Dividend	\$401	\$462	\$521	\$568	\$636	\$703	\$778	\$863	\$950	\$5,882
	Acquisitions ⁽²⁾	\$2,320	\$916	\$153	\$4,332	\$930	\$2,465	\$802	\$4,222	\$339	\$16,479

Source: Stryker financials

- 1) In 2017, Stryker adopted ASU 2016-09 related to employee share-based payment accounting. Payments for employee stock programs are being reported as financing cash flows, but we reclassify them as operating cash flows
- 2) Includes payments for non-controlling interests in 2017 and 2018

Ceasing stock repurchase to offset employee stock dilution is a sign of financial stress

Stryker's Fortune Ranking Recently Plummeted

Stryker used to annually promote itself as making Fortune Magazine's "100 Best Companies to Work". In fact, its ranking peaked in the top 10, only to recently plummet to #88 on the list. We believe this mirrors our observations and insights from former employees of a Company quietly struggling. Our forensic investigation uncovers numerous ways in which Stryker is embellishing its financial results through increasingly creative accounting and financial presentation methods.

Stryker Recently Plummeted In Fortune Magazine's Annual Review of Best Companies To Work For

100 Best Companies to Work For

RANK
11

< Previous: 10

Next: 12 >

Stryker

Source: [2019 Fortune Ranking](#)

100 Best Companies to Work For

RANK
8

< Previous: 7

Stryker

Source: [2020 Fortune Ranking](#)

STRYKER COMPANY PROFILE > 100 BEST COMPANIES TO WORK FOR > #88

100 Best Companies to Work For

Stryker

RANK
88

Source: [2021 Fortune Ranking](#)

**No More
Stryker PR?**

Fortune Magazine names Stryker one of the 100 Best Companies to Work For in 9th consecutive year

02/14/2019

stryker



UNITED STATES/ENGLISH



Stryker named one of Fortune's 100 Best Companies to Work for 10th consecutive year

19-Feb-2020

Source: Stryker Press Release ([2020](#)) and ([2019](#))



Stryker Hid A Material Risk From Investors: Significant Exposure To Elective Procedures

Spruce Point believes shareholders should be outraged that Stryker never warned investors that a Material Risk Factor is that 50% of its business is tied to “elective” procedures. The word “elective” has never appeared in any of its SEC filings. Stryker waited nearly 2 months into the pandemic to reveal that roughly 50% of its business was exposed to elective procedures.⁽¹⁾ In addition, its trauma and extremities business was already struggling pre COVID-19, but got even worse as activities causing injuries declined as shelter-in-place measures increased. Even people experiencing strokes were avoiding going to a hospital for medical attention.

CEO Lobo
Q4 2019 Call

Jan 28, 2020

“In Trauma and Extremities, again, we had a very strong year last year. So a little bit of that was comp related. And we still believe that we have the leading market performer in Trauma. It does vary sometimes from quarter to quarter. We’ve seen that over the past 2 or 3 years, but the T2 Alpha launch is starting to pick up steam. We also have a mini frag launch, which just occurred at the end of this year, which is pretty exciting. That’s one of our sort of soft spots in our portfolio. So we believe we are well-positioned and we expect to continue to grow above the market. It was a slight reduction versus what we have experienced before, but nothing that concerns me.”

Source: [Q4 2019 Conf Call](#)

IR Owen
Cowen
March 3, 2020

“And clearly, a lot of -- or essentially all elective surgeries in China have stopped. And so there will be a revenue impact, certainly, in Q1. We would imagine there’ll be still an impact in Q2 as well as an earnings impact.”

Owen and
Lobo
Q1 2020 Call

April 30, 2020

Lobo: “Clearly, we are seeing a deferral in elective procedures, particularly within our Orthopedics and Spine businesses. We fully expect, given the chronic and progressive nature of the conditions impacting these patients, that the vast majority of them will be treated in the coming months, recognizing that the exact timing of a broad resumption of elective procedures is too fluid to predict.”

Lobo: “What we’re seeing a little bit in the stroke area, which is kind of sad a lot of patients are afraid of going to the ER. And so we thought that, that would be largely protected, just like trauma cases. That’s actually not true. And so they’re not -- they’re actually suffering with strokes at home.”

Owen: “Additionally, with many states and countries having implemented or recently come out of stay-at-home orders, we have seen a slowdown in trauma. This can be attributed to fewer people out driving, a slowdown in construction and general decline in overall activity that traditionally drives trauma procedures.”

Source: [Q1 2020 Conf Call](#)

CEO Lobo Finally
Reveals Risk
Shareholder/
Analyst Call

May 5, 2020

“The elective surgery impact of these delays around the world and postponements of surgery mostly impacted our Orthopedics, Spine and Endoscopy business and also had other impacts to some of our other capital businesses. However, in spite of this impact, we still managed to have positive organic sales growth of 2.4% in spite of that.”

“As you saw from the first quarter impact, we are not immune from COVID-19, especially since roughly half of our business is exposed to elective surgery.”

1) [WHO declares pandemic on March 11, 2020](#) and Stryker discloses material risk on May 5, 2020

Beware of Widening GAAP / Non-GAAP Operating Income Presentation

Spruce Point believes it's a classic red flag and sign of financial strain when GAAP figures become increasingly divergent from the "Non-GAAP Adjusted" figures highlighted by management. We observe that Stryker's EBIT adjustments are now almost 70% of its GAAP figure.

Stryker's GAAP vs. Non-GAAP Adjusted Operating Income

\$ in mm	2017	2018	2019	2020	2021
GAAP Operating Income (A)	\$2,297	\$2,537	\$2,713	\$2,223	\$2,584
Adjusted Operating Income (B)	\$3,138	\$3,517	\$3,908	\$3,499	\$4,382
Adjustment Difference C=(B – A)	\$841	\$980	\$1,195	\$1,276	\$1,798
Adjustments as % of GAAP Operating Income (C/A)	36.6%	38.6%	44.0%	57.4%	69.6%
Source	Earnings	Earnings	Earnings	Earnings	Earnings

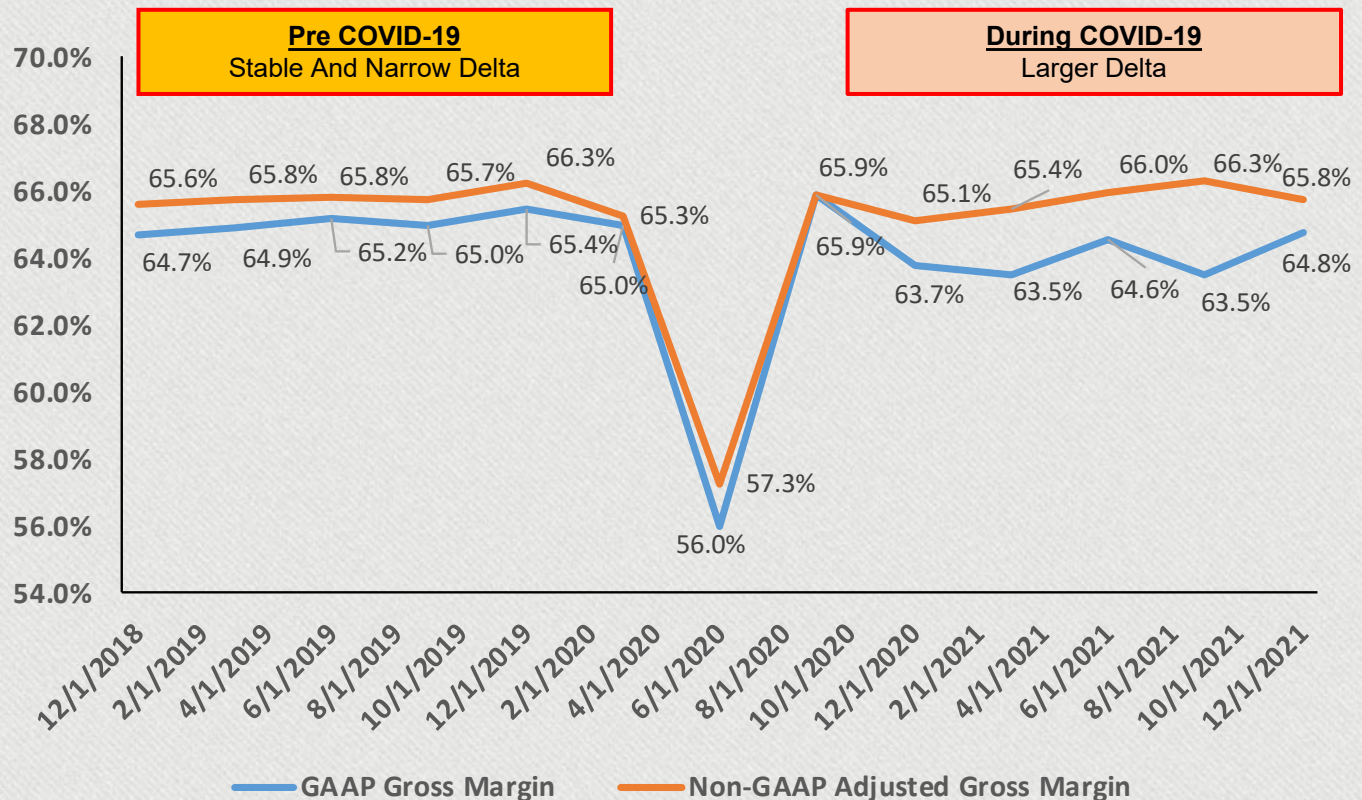
Greater Adjustment Intensity



Widening Rift Between GAAP And Adjusted Non-GAAP Gross Margins

Spruce Point believes that the wider delta in GAAP and Non-GAAP Gross Margins pre and during COVID-19 are a reflection of greater financial strain in the business. Inventory accounting and valuation directly affect Gross Margins. [Later in our report](#), we will illustrate why we believe Stryker suffers from inventory accounting problems, and is using more aggressive inventory accounting methods to portray Non-GAAP Gross Margin stability.

The Delta Between GAAP and Non-GAAP Gross Margins Is Widening Post COVID-19



Expanding Bucket For Charges

Stryker is adding more buckets for charges. If the effects of COVID-19 and any recent headwinds were short-term, we don't believe they'd be *"terminating sales relationships in certain countries", "eliminating product lines" and "impairing long-lived and intangible assets."*

Buckets For Charges Expanding

- (a) *Charges represent certain acquisition and integration-related costs associated with acquisitions.*
- (b) *Charges represent the costs associated with the termination of sales relationships in certain countries, workforce reductions, elimination of product lines, certain long-lived and intangible asset impairments and associated costs and other restructuring-related activities.*
- (c) *Charges represent the costs specific to updating our quality system, product labeling, asset write-offs and product remanufacturing to comply with the medical device reporting regulations and other requirements of the new medical device regulations in the European Union and China.*
- (d) *Charges represent changes in our best estimate of the minimum end of the range of probable loss to resolve certain recall-related matters.*
- (e) *Our best estimate of the minimum of the range of probable loss to resolve certain regulatory or other legal matters and the amount of favorable awards from settlements.*
- (f) *Benefits and charges represent the accounting impact of certain significant and discrete tax items, including adjustments related to the Tax Cuts and Jobs Act of 2017, and the transfer of certain intellectual properties between tax jurisdictions.*

Source: [FY 2021 Press Release](#)

- (a) *Charges represent certain acquisition and integration-related costs associated with acquisitions.*
- (b) *Charges represent the costs associated with certain restructuring-related activities associated with workforce reductions and other restructuring-related activities.*
- (c) *Charges represent the costs specific to updating our quality system, product labeling, asset write-offs and product remanufacturing to comply with the medical device reporting regulations and other requirements of the new medical device regulations in the European Union and China.*
- (d) *Charges represent changes in our best estimate of the minimum end of the range of probable loss to resolve certain recall-related matters.*
- (e) *Our best estimate of the minimum of the range of probable loss to resolve certain regulatory or other legal matters and the amount of favorable awards from settlements.*
- (f) *Benefits and charges represent the accounting impact of certain significant and discrete tax items, including adjustments related to the Tax Cuts and Jobs Act of 2017, and the transfer of certain intellectual properties between tax jurisdictions.*

Source: [FY 2019 Press Release](#)

Hit So Hard By COVID-19 It Had To Delay Paying Key Property Taxes?

Stryker must have been hit pretty hard during COVID-19. It was delinquent on its real estate taxes for its Corporate HQ and ended up settling its bill ~4 months after it was due with interest penalties. When the CEO talked about steps to conserve cash, he should have highlighted that going delinquent on tax payments was part of the strategy.

CEO Lobo

April 30,
2020

*"We ended the first quarter with cash and marketable securities of \$4 billion and generated approximately \$591 million of cash from operations in the quarter. This is ahead of our internal targets and significantly more than in Q1 2019. This reflects increased earnings and a reduction in working capital, primarily driven by accounts receivable during the quarter. As I noted in January, we did not repurchase any shares in Q1, nor do we plan to do so during the remainder of the year. **In addition to the discretionary spending controls I previously outlined, we have also taken steps to conserve cash, including reductions in planned capital expenditures and project spending, focusing on opportunities and accounts payable and slowing M&A activities.**"*

Source: [Q1 2020 Conf Call](#)

☐ Owner and Taxpayer Information
 ☐ Tax History

Owner

STRYKER CORPORATION
ATTN: CONTROLLER
2825 AIRVIEW BLVD
KALAMAZOO, MI 49002

Taxpayer

STRYKER CORPORATION
KALAMAZOO FINANCE SHARED SERVICES
1901 ROMENCE ROAD PKWY
PORTAGE, MI 49002

****Note:** On March 1 at 12:00 AM, Summer and Winter local taxes become ineligible for payment at the local unit.

The total due shown for prior year taxes is as of the annual settlement date with the County for that particular tax year and does not reflect any payments, fees, or interest accrual that may have occurred after the settlement date. For updated tax information, please check with the local County.

	Year	Season	Total Amount	Total Paid	Last Paid	Total Due	
▶	2020	Winter	\$187,454.05	\$187,454.05	02/02/2021	\$0.00	
▶	2020	Summer	\$136,708.05	\$136,708.05	07/22/2020	\$0.00	
▶	2019	DIQ. Taxes	\$191,791.68	\$191,791.68	06/29/2020	\$0.00	Paid
▶	2019	Winter	\$177,584.88	\$0.00		-	** Read Note(s) Above
▶	2019	Summer	\$134,331.97	\$134,331.97	07/21/2019	\$0.00	
▶	2018	Winter	\$178,939.10	\$178,939.10	12/28/2018		

Base Paid

\$177,584.88

Admin Fees Paid

\$1,758.26

Interest Fees Paid

\$14,206.80

Total Paid

\$191,791.68

Source: [Kalamazoo County records](#)

Loaner Instruments: More Customer Financing

Stryker used to disclose loaner instruments on its balance sheet, and show changes in the account as reduction to operating cash flow. By moving the asset from inventory, to other noncurrent (long-term) accounts, Stryker could potentially be enabling operating cash flow overstatement or avoiding impairment of assets where customers have defaulted. We observe that allowance for bad debts has been steadily rising. Stryker appears to be offering more customer financing through Flex Financial.

Loaner Disclosure

*"Certain prior year amounts have been reclassified to conform with current year presentation in our Consolidated Financial Statements, including immaterial reclassifications of segment results and **\$302 of loaner instrumentation not intended to be sold reclassified from inventories to other noncurrent assets.**"*

CFO Q2 2020 Call

*"I would tell you that during Q2, Mako sales were quite robust. And we supported our customers through a variety of financing options. And then lastly -- **the last bit of color I'll say is that just given the circumstances, we definitely are seeing a shift to financing more deals than we have historically experienced, and I fully believe that, that will continue throughout the rest of this year.**"*

Source: [Q2 2020 Conf Call](#)

Loaner Instruments A Historical Cash Flow Drag....

Stryker Corporation and Subsidiaries CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31		
	2011	2010	2009
Operating Activities			
Net earnings	\$ 1,345	\$ 1,273	\$ 1,107
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation	160	165	165
Amortization	321	245	220
Share-based compensation	75	69	62
Restructuring charges	76	—	67
Property, plant and equipment impairment	—	124	—
Payments of restructuring charges	(29)	(9)	(47)
Sale of inventory stepped-up to fair value at acquisition	143	7	—
Deferred income tax credit	(164)	(104)	(73)
Changes in operating assets and liabilities, net of effects of acquisitions:			
Accounts receivable	(152)	(121)	(10)
Inventories	(166)	(131)	34
Loaner instrumentation	(224)	(193)	(188)
Accounts payable	11	86	(86)
Accrued expenses and other liabilities	158	91	66
Income taxes	(95)	(24)	192
Other	(58)	59	(54)
Net cash provided by operating activities	1,434	1,547	1,461

Source: 2011 [10-K](#)

Stryker Still Markets Loaners As An Attractive Alternative To Purchasing Equipment



GERMANY/ENOUS



Loaner System Service

Loaner System Service

The purchasing of devices, instruments and implants for surgery is extremely expensive. Stryker's Loaner System Service represents a high-quality and economically interesting offer.



Source: [Stryker Website](#)

Rising Bad Debts Indicate Customers Are Struggling To Pay....

Stryker's bad debt allowance has been steadily rising and now exceeds peers such as Zimmer and Medtronic. We observe it took a large bad debt increase in the early stage of COVID-19, however bad debts have continued to rise and recently exceeded 5.0%. Our report will also detail how [Stryker has gotten more aggressive in financing its Mako Robotics platform by offering reduced upfront cost in exchanged for future purchase guarantees](#). This strategy is risky because hospitals themselves are under pressure. The American Hospital Association commissioned a report that estimated hospitals could lose between \$53 - \$122 billion in revenues due to the lingering effects of COVID-19.⁽¹⁾

Stryker's Bad Debt Allowance For Accounts Receivables

	2018	2019				2020				2021			
\$ in bn	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Acct's Receivables (A)	\$2.33	\$2.28	\$2.41	\$2.44	\$2.89	\$2.65	\$2.20	\$2.43	\$2.70	\$2.62	\$2.71	\$2.82	\$3.02
Bad Debt Allowance (B)	\$0.06	\$0.07	\$0.07	\$0.08	\$0.08	\$0.10	\$0.11	\$0.13	\$0.13	\$0.13	\$0.14	\$0.15	\$0.17
Gross (A+B) Receivables	\$2.40	\$2.35	\$2.48	\$2.51	\$2.97	\$2.75	\$2.32	\$2.55	\$2.83	\$2.75	\$2.86	\$2.96	\$3.19
Allowance % of Gross Receivable	2.67%	2.85%	2.82%	2.98%	2.69%	3.64%	4.92%	4.90%	4.63%	4.80%	4.94%	4.93%	5.24%

Allowance For Bad Debts Keeps Rising

Zimmer Biomet

\$ in mm	2019	2020	2021
Acct's Receivables	\$1,364	\$1,452	\$1,405
Bad Debt Allowance	\$65	\$76	\$75
Gross Receivables	\$1,429	\$1,528	\$1,480
Allowance % of Gross Receivable	4.55%	4.96%	5.04%

Medtronic

\$ in mm	April 20	April 21	Jan 22
Acct's Receivables	\$4,645	\$5,462	\$5,446
Bad Debt Allowance	\$208	\$241	\$253
Gross Receivables	\$4,853	\$5,703	\$5,699
Allowance % of Gross Receivable	4.29%	4.23%	4.44%

Source: Stryker, Zimmer Biomet and Medtronic SEC filings

1) "Hospitals could lose between \$53B and \$122B this year due to pandemic," [FierceHealthcare](#), Feb 23, 2021

A Classic Accounting Ploy: Stretching Depreciation Assumptions

Stretching out the depreciation period for PP&E is a classic accounting tactic to lower depreciation expense, and increase earnings. We observe that Stryker increased its depreciation period from 10 to 15 years in 2020. There could be a legitimate explanation for this change, and the Wright Medical Group acquisition in 2019 could be the reason. However, we observe that even Wright Medical did not amortize machinery and equipment beyond 14 years. Furthermore, Wright's gross machinery and equipment contributed just 3% to the pro forma combined company (see: table bottom right). We don't believe Wright's small contribution could explain the lengthened depreciation period.

**Stryker
2019**

***"Property, Plant and Equipment:* Property, plant and equipment is stated at cost. Depreciation is generally computed by the straight-line method over the estimated useful lives of three to 30 years for buildings and improvements and three to 10 years for machinery and equipment."**

Source [2019 10-K](#)

**Revised
Stryker
2020**

***"Property, Plant and Equipment:* Property, plant and equipment is stated at cost. Depreciation is generally computed by the straight-line method over the estimated useful lives of three to 30 years for buildings and improvements and three to 15 years for machinery and equipment."**

Source [2020 10-K](#)

**2019
Wright
Medical**

**3 to 14 years
Machinery &
Equipment**

Property, plant and equipment. Our property, plant and equipment is stated at cost. Depreciation, which includes amortization of assets under finance lease, is generally provided on a straight-line basis over the estimated useful lives generally based on the following categories:

Land improvements	15 to 25 years
Buildings and building improvements	10 to 40 years
Machinery and equipment	3 to 14 years
Furniture, fixtures and office equipment	3 to 14 years
Surgical instruments	6 years

Source: Wright Medical [2019 10-K](#)

Machine & Equipment Contribution Analysis

\$ in mm	2019	% of Total
Stryker	\$3,636	97%
Wright Medical	\$102	3%
Total	\$3,736	100%

Source Company Annual Reports
Note: Gross asset contribution

A Classic Way To Hit Numbers: Evidence of Aggressive Tax Maneuvers

Spruce Point believes it is a classic red flag when a Company manipulates its tax rates to achieve earnings. We observe that Stryker reported a 12.6% effective tax rate (14.9% adjusted) for 2021 while initially guiding investors to a 15.5%-16.5% rate. Stryker's top VP of Tax David Furgason mysteriously left in 2021, and its auditor noted its tax position as a "Critical Audit Matter" with significant judgement. Mr Furgason claimed he was a CPA but his license had expired in 2013.

CFO
Boehnlein

Jan 2021 &
Nov 2021

Jan 2021: "These (tax) rates (from 2020) reflect onetime operational fluctuations that arose due to the pandemic, with a mix of foreign losses related to lower foreign manufacturing activity combined with reduced U.S.-sourced income that resulted from the sharp drop in sales at the end of the year. **For 2021, we do not anticipate these circumstances arising as we expect to return to normalized operations during the year. And we expect our full year effective tax rate to be in the range of 15.5% to 16.5%"**

Nov 2021: "If I look at my tax structure, my global tax structure, I essentially have an effective tax rate of roughly 16% every single year. Those things make sure that we're structured right so we can continue to deliver this kind of EPS."

Effective Tax Rate
Mysteriously Declines

Income Taxes: **Our effective tax rate was 12.6%, 18.2% and 18.7% for 2021, 2020 and 2019.** The effective income tax rate for 2021 reflects the continued lower effective income tax rates as a result of our European operations, certain discrete tax benefits, the tax effect related to the transfer of intellectual property between tax jurisdictions and the tax effect of future remittances of the undistributed earnings of foreign subsidiaries."

Critical Audit Matter
For Taxes
Raised

Uncertain Tax Positions: As described in Note 11 to the consolidated financial statements, the Company operates in multiple jurisdictions with complex tax policy and regulatory environments and establishes reserves for uncertain tax positions in accordance with the accounting guidance governing uncertainty in income taxes. Uncertainty in a tax position may arise because tax laws are subject to interpretation. **The Company uses significant judgment to (1) determine whether, based on the technical merits, a tax position is more likely than not to be sustained and (2) measure the amount of tax benefit that qualifies for recognition. At December 31, 2021, the Company had accrued liabilities of \$444 million relating to uncertain tax positions**

Stryker Top VP of Tax
Mysteriously Leaves

Last Appeared on Website
July 2021



David G. Furgason
Vice President, Tax
MEET DAVID ▶

David G. Furgason was named Vice President, Tax, in August 2012 and is responsible for all aspects of tax for our business, including global tax policy and strategy, compliance, audits and accounting for income taxes. Mr. Furgason began his career with Stryker in 2004 as Senior Manager, Tax Planning, Audits and Accounting at our Corporate headquarters in Kalamazoo, Michigan. He was promoted to Director of Tax, U.S. in August of 2006 and appointed Director, Global Tax Operations in 2010. Prior to Stryker, David had an 18-year career in public accounting as a principal with Jansen Furgason & Valk, PC, and a manager with Ernst & Young. **Mr. Furgason is a Certified Public Accountant** and holds a Bachelor of Business Administration degree from Western Michigan University.

License Type:	Accountant - Licensed	License Number:	1101018841
Name:	David George Furgason		
License Issue Date:	03/23/1989	License Expiration Date:	12/31/2013
License Status:	Lapsed	County:	Kalamazoo

Source: [Michigan LARA](#)

Evidence of Aggressive Tax Maneuvers (Cont'd)

Upon closer inspection, we see that Stryker's foreign earnings before income taxes ("EBT") has been falling as a percentage of total EBT, and its foreign margins are falling, yet it is claiming greater U.S. tax benefits.

Effective Income Tax Rate Reconciliation

	2021	2020	2019
United States federal statutory rate	21.0 %	21.0 %	21.0 %
United States state and local income taxes, less federal deduction	2.7	0.1	1.7
Foreign income tax at rates other than 21%	(6.9)	(3.3)	(4.6)
Tax related to repatriation of foreign earnings	1.4	3.0	(0.5)
Intellectual property transfer	(2.3)	(1.4)	3.5
Other	(3.3)	(1.2)	(2.4)
Effective income tax rate	12.6 %	18.2 %	18.7 %

Earnings Before Income Taxes

	2021	2020	2019
United States	\$ 433	\$ 239	\$ 366
International	1,848	1,715	2,196
Total	\$ 2,281	\$ 1,954	\$ 2,562

	Net Sales			Net PP&E	
\$ in mm	2019	2020	2021	2020	2021
United States	\$10,957	\$10,455	\$12,321	\$1,645	\$1,717
Europe, ME, Africa	\$1,888	\$1,818	\$2,299	\$938	\$941
Asia Pacific	\$1,617	\$1,630	\$1,973	\$91	\$76
Other Countries	\$422	\$448	\$515	\$78	\$99
Total Int'l Sales	\$3,927	\$3,896	\$4,787	\$2,752	\$2,833
Total Net Sales	\$14,884	\$14,351	\$17,108	67%	65%
% International	26.4%	27.1%	28.0%		

Stryker Claiming Higher Foreign Income Tax Benefits Despite Foreign EBT Falling And Comprising A Smaller % of Total EBT

"Other" Benefits Also Lowering Effective Taxes

\$ in mm	2019	2020	2021
% EBT U.S.	16.5%	12.2%	19.0%
% EBT Int'l	83.5%	87.8%	81.0%
EBT U.S. / U.S. Net Sales	3.3%	2.3%	3.5%
EBT Int'l / Int'l Net Sales	47.1%	44.0%	38.6%

Source [Stryker 10-K Annual Report](#)

Foreign EBT Margins Wildly Higher Than U.S. EBT Margin

Source: Spruce Point Analysis



Obscuring Spine Struggles



Some challenges Stryker has been more transparent about, others less so. Spruce Point observes that Stryker continues to struggle in Spine, and the Company can't answer where its market share stands when asked directly. This even comes after Stryker spent ~\$1.4 billion to acquire K2M Group in Nov 2018, which it touted would strengthen its spine offering, further its manufacturing capabilities, and expand globally.⁽¹⁾ Management is still blaming COVID-19 two years into the pandemic. The struggles in Spine correspond with the segment reporting change, whereby Spine is put into a larger bucket, potentially masking its declining performance (next slide). [Our report will do a deep dive into K2M Group](#) and why we believe it has been a failure. Stryker's auditor even issued a "Qualified Opinion" on acquired inventory. There were multiple warning signs about K2M Group, including its CFO and Chief Accounting Officer's involvement in the InPhonic accounting scandal.

Stryker CFO

*Our U.S. Trauma and Extremities business grew 6.7% on a comparable basis with strong growth in our plating products combined with double-digit growth in our upper extremities business. **Spine declined 6.6% organically in the U.S., primarily resulting from COVID disruptions to their business.***

Needham Analyst

*"My first one is just on Spine. Just wondering if you have any sense of **if you've gained or lost share in the quarter?** And then looking at 2022, do you think you can grow off that 2019 base?"*

Stryker IR Wells

*"So let me address your Spine question first. I think as we've said in general throughout the pandemic, **it's just very hard to get a read on how share changes are happening given some of the COVID impacts and how they impact different things regionally also just in terms of where we are in the reporting cycle. It's very early.***

Certainly, with Spine, just like we saw with Hips and Knees, it was impacted from a COVID perspective throughout the quarter early on as we try to recover from Delta and then with Omicron coming in later on in the back part of the quarter. So not easy to say where everybody is going to shake out from that standpoint."

Source: [FY 2021 Conf Call](#), Jan 27, 2022

1) [Stryker announces definitive agreement to acquire K2M](#), Aug 30, 2018

A Classic Way To Obscure Problems: Segment Realignment

Spruce Point often finds that struggling companies engage in segment realignment to obscure challenges. Notably, Stryker just implemented a realignment, by moving Spine into Orthopaedics and combining MedSurg and Neurotechnology.

Revised Segment Reporting

Business Segments and Geographic Information

Effective December 31, 2021 we changed our reportable business segments to (i) MedSurg and Neurotechnology and (ii) Orthopaedics and Spine to align to our new internal reporting structure. We have reflected this change in all historical periods presented. Financial information regarding our reportable business segments and certain geographic information is included under "Consolidated Results of Operations" in Item 7 of this report and Note 14 to our Consolidated Financial Statements.

Net Sales by Reportable Segment

	2021		2020		2019	
MedSurg and Neurotechnology	\$	9,538 56 %	\$	8,345 58 %	\$	8,475 57 %
Orthopaedics and Spine		7,570 44		6,006 42		6,409 43
Total	\$	17,108 100 %	\$	14,351 100 %	\$	14,884 100 %

Source: [2021 10-K](#)

Prior Segment Reporting

Business Segments and Geographic Information

We segregate our operations into three reportable business segments: Orthopaedics, MedSurg and Neurotechnology and Spine. Financial information regarding our reportable business segments and certain geographic information is included under "Consolidated Results of Operations" in Item 7 of this report and Note 14 to our Consolidated Financial Statements.

Net Sales by Reportable Segment

	2020		2019		2018	
Orthopaedics	\$	4,959 34 %	\$	5,252 35 %	\$	4,991 37 %
MedSurg		6,400 45		6,492 44		6,045 44
Neurotechnology and Spine		2,992 21		3,140 21		2,565 19
Total	\$	14,351 100 %	\$	14,884 100 %	\$	13,601 100 %


Source: [2020 10-K](#)



Warning: Go To Market Website Not Matching Financial Reporting Realignment

Effective Dec 31, 2021 Stryker says it realigned its business and financial reporting around “Orthopaedics and Spine” and “MedSurg and Neurotechnology” – However, months later its website shows three different product groupings, and “Spine” appears under both Orthopaedics and Neurotechnology. Clicking on the “Spine” links go to the exact same product page.

Orthopaedics



CAREERS | INVESTOR RELATIONS |

ABOUT MEDICAL AND SURGICAL EQUIPMENT ORTHOPAEDICS

All product categories

Advanced Digital Healthcare

Craniomaxillofacial

Foot and Ankle

Joint Replacement


Spine

Sports medicine

Trauma & Extremities

Upper extremities

Neurotechnology



CAREERS | INVESTOR RELATIONS |

ABOUT MEDICAL AND SURGICAL EQUIPMENT ORTHOPAEDICS NEUROTECHNOLOGY

All product categories

Advanced Digital Healthcare

Cranial

Neurovascular

Spine

Identical [Spine Links](#) and paths to products under two different segments being reported?

Insights On Spine From A Spruce Point Interview of a Former Employee



Spruce Point interviewed a former employee that highlighted Spine's challenges and how reporting can be used to minimize a struggling business.

Spruce
Point
Question

"How do you feel about Stryker's disclosures. Are there any areas that are misleading?"

Former
Stryker M&A
Professional

*"I don't think misleading. **However, I think, certain divisions look like they perform better because they're grouped into certain segments. Spine is an example.** Now they disclose and its separate. A while ago it wasn't. It was struggling and before actually was losing money and they thought K2M was gonna fix it. Because the goal of K2M was to acquire market share. There was significant overlap and redundancies between K2M and Stryker spine. But the idea was to do a pure spine play and acquire market share. But because of the redundancies and the cost and, and ironically, K2M became the surviving entity, and the headquarters moved to Leesburg."*

*"**Pricing pressures were significantly hurting Stryker when I was there. Spine was probably experiencing high single digits.** One maybe two percent is probably (company) average. **There were so many competitors in spine with lower overhead cost that they could drive the price down. Hospitals want single source suppliers. Stryker doesn't leverage the fact that it can sell so many different types of products. Divisions don't communicate or work well together, they're very competitive with each other.**"*

Segment Revisions: Spine Combined Now With Ortho

Yr Reported In 10-K	2015	2016	2017	2018	2019	2020	2021
Spine Sales					\$1,157	\$1,047	\$1,167
Ortho and Spine					\$6,409	\$6,006	\$7,570
Spine % of Total					18.1%	17.4%	15.4%
Segment Margin					\$2,084	\$1,588	\$2,180
% margin					32.5%	26.4%	28.8%
Spine Sales				\$828	\$1,157	\$1,047	
Neuro and Spine				\$2,565	\$3,140	\$2,992	
Spine % of Total				32.3%	36.8%	35.0%	
Segment Margin				\$700	\$839	\$647	
% margin				27.3%	26.7%	21.6%	
Spine Sales			\$751	\$828	\$1,085		
Neuro and Spine			\$2,174	\$2,565	\$3,058		
Spine % of Total			34.5%	32.3%	35.5%		
Segment Margin			\$631	\$700	\$846		
% margin			29.0%	27.3%	27.7%		
Spine Sales		\$754	\$751	\$828			
Neuro and Spine		\$2,009	\$2,174	\$2,565			
Spine % of Total		37.5%	34.5%	32.3%			
Segment Margin		\$559	\$631	\$700			
% margin		27.8%	29.0%	27.3%			
Spine Sales	\$740	\$754	\$751				
Neuro and Spine	\$1,828	\$2,009	\$2,174				
Spine % of Total	40.5%	37.5%	34.5%				
Segment Margin	\$474	\$557	\$639				
% margin	25.9%	27.7%	29.4%				

Spine moved to a segment where it has a smaller overall impact

Segment revisions where margin has been retroactively lowered



Now Reporting “Adjusted FCF”

Spruce Point often observes that when companies come under stress, they start presenting “Adjusted” measures of Free Cash Flow. In 2020, Stryker presented its version of Adjusted Free Cash Flow (“FCF”). Spruce Point does not believe it’s an accurate depiction of reality. We observe that Stryker adds-back product recall payments that have been recurring for almost a decade. Why should investors ignore these tangible costs? Furthermore, Stryker fails to classify stock repurchases related to employee compensation matters as an operational cost. We find that FCF declined in 2021. Overall, we believe FCF growth has not been impressive in relation to more than \$8.5 billion in acquisition and integration spending from 2018-2021.

Stryker’s “Non-GAAP” Adjusted Free Cash Flow

	2019	2020	2021
	Free Cash Flow (\$ millions)		
Cash provided by operating activities	\$ 2,191	\$ 3,277	\$ 3,263
Purchases of property, plant and equipment	(649)	(487)	(525)
Proceeds from long-lived asset disposals	3	14	11
Legal settlement proceeds	(100)	—	—
Recall payments	177	17	221
Free cash flow	\$ 1,622	\$ 2,821	\$ 2,970

Source: [2021 Proxy Statement](#)

Recall-related payments: have been recurring for almost 10 years and are management blunders related to Rejuvenate and ABG II Modular-Neck hip stems

Asset Sales: Are non-standard add-backs

Spruce Point “Reality” Adjusted Free Cash Flow

\$ in mm	2018	2019	2020	2021
Cash From Ops	\$2,610	\$2,191	\$3,277	\$3,263
Less: Capex	(\$572)	(\$649)	(\$487)	(\$525)
Less: Legal Settlement	--	(\$100)	--	--
Less: Stock Repo For Employees	(\$136)	(\$136)	(\$110)	(\$114)
Spruce Point Adjusted FCF	\$1,902	\$1,406	\$2,680	\$2,624
% YoY Growth	120%	-31%	105%	-2%
Cash for acquisitions	\$2,451	\$802	\$4,222	\$339
Acquisition and Integration Costs	\$90	\$108	\$208	\$319

Source: Spruce Point analysis

As we will illustrate, Stryker has materially missed its Capex estimates in what appears to be an attempt to defer spending. If we normalized Capex for this underspending, 2020 and 2021 FCF would be -\$163m and -\$125m lower

Poor Capex Planning or Delaying Capex To Boost Free Cash Flow?

We believe Stryker has generally not been good about forecasting its capital expenditures. However, the past two years have been particularly poorly planned. The Company can blame COVID-19 for the large variance in 2020, but it again materially underspent in 2021. The CFO recently touted a \$600 million annual capex figure in late 2021, but he must have known that Stryker would fall short of that target for two consecutive years. We believe Stryker has been delaying Capex to temporarily boost cash flow, especially as it has to pay down debt related to the Wright Medical Group acquisition.

CFO
Shareholder /
Analyst Day
Nov 18, 2021

"On capital expenditures, we roughly spend \$600 million a year on CapEx, and we really focused that CapEx on what are the things that are going to make sure that we are driving future efficiencies for Stryker. These include IT systems. These might include upgrading manufacturing equipment so we can drive in cost savings. It's really prioritizing that CapEx that is going to really contribute to the overall model."

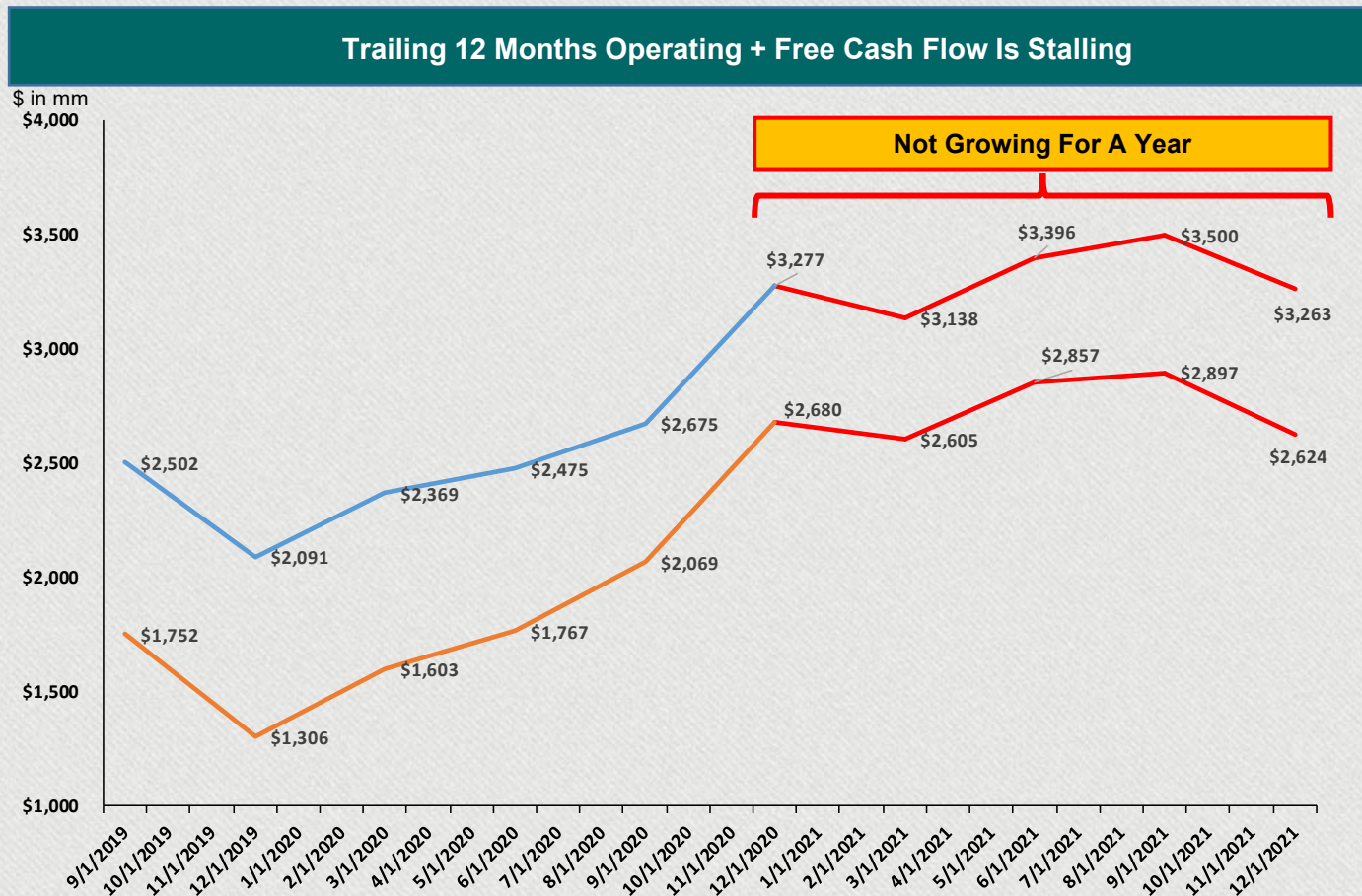
Stryker's Record of Capital Spending vs. Forecasted Guidance							
\$ in mm	2016	2017	2018	2019	2020	2021	2022E
Projected Capex	\$400 - \$450	\$450	\$550 - \$600	\$600 - \$650	\$600 - \$700	\$650	\$650
Actual Capex	\$490	\$598	\$572	\$649	\$487	\$525	N/A
Over (Under) Spend vs. Midpoint of Initial Guidance	\$65	\$148	(\$3)	\$24	(\$163)	(\$125)	N/A
Source	Conf Call	Conf Call	Conf Call	Conf Call	Conf Call	Conf Call	Conf Call

Note: Guidance as given at the beginning of year conference call




Cash Flow Is Struggling To Grow

Spruce Point believes the ultimate evidence that Stryker is struggling is by observing that its 12 month trailing Operating and Free Cash Flow has not been growing for a year.



Free Cash Flow Added To Annual Bonus



Spruce Point observes that in 2020 for the first time, Stryker included an executive bonus modifier related to Free Cash Flow. Generally, we view this as a positive for alignment with shareholders. However, we also view this as signal that the Board and management may be seeing future challenges with Free Cash Flow generation, and are preemptively focusing management on addressing the issue.

2020 Annual Bonus Discussion

Annual Bonus: Individually structured short-term bonus plans under our Executive Bonus Plan are intended to motivate and reward our NEOs for achieving and exceeding specific annual performance goals. The primary focus of the 2020 bonus goals that were established in February 2020 for our NEOs was total Stryker performance. For 2020, each NEO's bonus plan designated a threshold level of performance for each measure that had to be achieved before any bonus could begin to be earned for that measure. Each 2020 bonus plan included an opportunity to earn an overachievement bonus of up to an additional 100% of target bonus, which is included in the "Maximum Bonus Opportunity" column in the table below, if 2020 goals for sales on a constant currency basis, adjusted operating income and adjusted diluted net earnings per share were achieved. **In addition, free cash flow performance was included as a potential downward modifier to the total bonus payout in each NEO's bonus plan.**

Source: [Stryker 2021 Proxy Statement](#)

Modifying Long-Term Financial Targets

Looking carefully, we observe that Stryker made subtle revisions to its “Long-term sustainable growth targets” of at least 9% EPS growth and 30 – 50 bps of annual EBIT expansion over the next 5 years. They now stress that the EPS growth is “adjusted” and are qualifying the EBIT growth is “ex large deal dilution” while retracting “improvement over the next 5 years.”

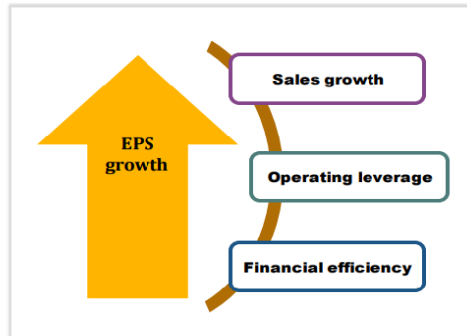
September 2020

Long-term sustainable financial growth

Sales growth at the **high end** of med tech, which allows us to drive...

30 to 50 basis points of annual operating income improvement over the next 5 years

EPS growth of at least **9% annually**



Source: [Stryker IR](#), Morgan Stanley Conf, Slide 7

Analyst Day: 2016

Long-term sustainable growth targets

Sales growth at the **high end** of med tech, which allows us to drive...

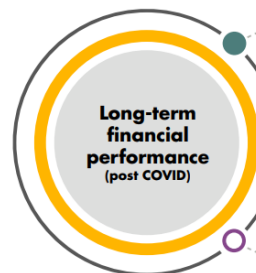
30 to 50 basis points of annual operating income improvement over the next 5 years, resulting in ...

EPS growth of at least **9% annually**



Source: [Analyst Day](#), Nov 2016, Slide 51

Long-term sustainable growth model post COVID



Sales growth
Sales growth at the high end of MedTech

Operating efficiency
Drive a minimum of 30 basis points of annual operating margin improvement excluding large deal dilution

Leveraged earnings growth
At least double-digit annual adjusted EPS growth

Cash flow generation
Free cash flow of 70% to 80% of adjusted net earnings

2021 Analyst Day 27

Source: [Stryker Analyst Day](#), Nov 2021, Slide 27

No longer committing to improvements over 5 years and qualifying for “ex large deal dilution”

Now qualifying the EPS growth as “adjusted”



Why We Believe Stryker Has Been Covering Up Accounting Errors For Over A Decade And Was Advised By A Notable Executive Exposed By Spruce Point In The Past

Major Intangible Expense Revision.....

2012 was a period of organizational stress at Stryker with it reaching a settlement with the U.S. Attorney's Office, the resignation of its CEO, appointment of now CEO Lobo, two interim CFOs and other leadership changes.⁽¹⁾ **Stryker's management conducted a stealth financial restatement in 2012 to change certain balance sheet and cash flow items in 2011.** In a form [10K/A](#) filed April 24, 2012 Stryker "management concluded that our disclosure controls and procedures are effective." Management was also implementing an ERP, and stated that it did not believe it would have an adverse effect on its internal control over financial reporting. Yet, we see that when the [2012 10-K](#) was filed Feb 27, 2013 that a financial revision was necessary. We see that 2011 total depreciation and amortization ("D&A") was \$481 million, and later revised to \$282 million (-41%). Likewise, 2010 total D&A was revised from \$410 million to \$223 million (-45%). **We believe these are material revisions in magnitude especially when 2011 total intangible assets did not change at all as listed at \$1,424 million at 12/31/2011.**

2012 Annual Report

Stryker Corporation and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31		
	2012	2011	2010
Operating activities			
Net earnings	\$ 1,298	\$ 1,345	\$ 1,273
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation	154	160	165
Intangibles amortization	123	122	58
Share-based compensation	75	75	69
Restructuring charges	75	76	—
Property, plant and equipment impairment	—	—	124
Sale of inventory stepped up to fair value at acquisition	18	143	7
Deferred income tax credit	(39)	(164)	(104)
Changes in operating assets and liabilities, net of effects of acquisitions:			
Accounts receivable	(20)	(152)	(121)
Inventories	18	(166)	(131)
Accounts payable	(48)	44	96
Accrued expenses and other liabilities	180	158	91
Income taxes	(159)	(95)	(24)
Other	(18)	(112)	44
Net cash provided by operating activities	1,657	1,434	1,547

Source: [2012 10-K](#)

2011 Annual Report

Stryker Corporation and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31		
	2011	2010	2009
Operating Activities			
Net earnings	\$ 1,345	\$ 1,273	\$ 1,107
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation	160	165	165
Amortization	321	245	220
Share-based compensation	75	69	62
Restructuring charges	76	—	67
Property, plant and equipment impairment	—	124	—
Payments of restructuring charges	(29)	(9)	(47)
Sale of inventory stepped-up to fair value at acquisition	143	7	—
Deferred income tax credit	(164)	(104)	(73)
Changes in operating assets and liabilities, net of effects of acquisitions:			
Accounts receivable	(152)	(121)	(10)
Inventories	(166)	(131)	34
Loaner instrumentation	(224)	(193)	(188)
Accounts payable	44	96	(80)
Accrued expenses and other liabilities	158	91	66
Income taxes	(95)	(24)	192
Other	(58)	59	(54)
Net cash provided by operating activities	1,434	1,547	1,461

Source: [2011 10-K](#)

1) [Attorney General Settlement](#), [CEO resignation and interim CFO appointment](#), [Lobo appointed](#), [New Interim CFO](#), [Leadership changes](#).

We Believe Stryker Failed To Restatement D&A In Its Segment Reporting

Now looking carefully at the segment reporting, we see that the 2010 and 2011 total D&A matches what flowed through the old cash flow statement. **It appears that Stryker failed to restate the segment D&A when it made the restatement through the cash flow statement.**

2012 Annual Report

	Reconstructive			MedSurg			Neurotechnology and Spine			Other			Total		
	2012	2011	2010	2012	2011	2010	2012	2011	2010	2012	2011	2010	2012	2011	2010
Net sales	\$3,823	\$3,710	\$3,549	\$3,265	\$3,160	\$2,803	\$1,569	\$1,437	\$ 968	\$ —	\$ —	\$ —	\$8,657	\$8,307	\$7,320
Depreciation and amortization	271	267	250	85	84	77	122	119	61	8	11	22	486	481	410
Income taxes (credit)	344	375	332	177	165	178	76	63	60	(110)	(106)	(71)	487	497	499
Segment net earnings (loss)	936	926	818	603	535	481	267	221	188	(246)	(234)	(158)	1,560	1,448	1,329

2011 Annual Report

No revision made

	Reconstructive			MedSurg			Neurotechnology and Spine			Other			Total		
	2011	2010	2009	2011	2010	2009	2011	2010	2009	2011	2010	2009	2011	2010	2009
Net sales	\$3,710	\$3,549	\$3,384	\$3,160	\$2,803	\$2,427	\$1,437	\$ 968	\$ 912	\$ —	\$ —	\$ —	\$8,307	\$7,320	\$6,723
Depreciation and amortization	267	250	245	84	77	66	119	61	52	11	22	22	481	410	385
Income taxes (credit)	375	332	276	165	178	148	63	60	62	(106)	(71)	(38)	497	499	448
Segment net earnings (loss)	926	818	683	535	481	413	221	188	169	(234)	(158)	(85)	1,448	1,329	1,180

We Believe Stryker Has Had Segment Reporting Errors For Over A Decade

We observe that Stryker continues to have a material mismatch between D&A disclosed in the cash flow statement and its segment reporting. We believe Stryker needs to form a committee with the assistance of an independent advisor to review its historical intangible asset recognition, expense policy and segment financial reporting.

Stryker's Cash Flow Statement

Stryker Corporation and Subsidiaries CONSOLIDATED STATEMENTS OF CASH FLOWS

	2021	2020	2019
Operating activities			
Net earnings	\$ 1,994	\$ 1,599	\$ 2,083
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation	371	340	314
Amortization of intangible assets	619	472	464

Stryker's Cash Flow Data Table

Cash Flow Data	2021	2020	2019
Net cash provided by operating activities	\$ 3,263	\$ 3,277	\$ 2,191
Purchases of property, plant and equipment	525	487	649
Depreciation	371	340	314
Acquisitions, net of cash acquired	339	4,222	802
Amortization of intangible assets	619	472	464
Payments of dividends	950	863	778
Repurchase of common stock	—	—	307

Warning: Stryker's total depreciation and amortization is not being accurately reported. On the surface, 2021 D&A is \$371m + \$619m = \$990m. According to its segment reporting, the total is almost triple: \$1,272m + \$619m = \$1,891m

Stryker's Segment Reporting

Segment Results	2021	2020	2019
MedSurg and Neurotechnology	\$ 9,538	\$ 8,345	\$ 8,475
Orthopaedics and Spine	7,570	6,006	6,409
Net sales	\$ 17,108	\$ 14,351	\$ 14,884
MedSurg and Neurotechnology	\$ 518	\$ 496	\$ 488
Orthopaedics and Spine	629	458	457
Segment depreciation and amortization	\$ 1,147	\$ 954	\$ 945
Corporate and Other	125	122	99
Total depreciation and amortization	\$ 1,272	\$ 1,076	\$ 1,044
MedSurg and Neurotechnology	\$ 2,807	\$ 2,414	\$ 2,304
Orthopaedics and Spine	2,180	1,588	2,084
Segment operating income	\$ 4,987	\$ 4,002	\$ 4,388
Items not allocated to segments:			
Corporate and Other	\$ (605)	\$ (503)	\$ (480)
Acquisition and integration-related charges	(585)	(242)	(275)
Amortization of intangible assets	(619)	(472)	(464)
Restructuring-related and other charges	(386)	(458)	(226)
Medical device regulations	(107)	(81)	(62)
Recall-related matters	(103)	(17)	(192)
Regulatory and legal matters	2	(6)	24
Consolidated operating income	\$ 2,584	\$ 2,223	\$ 2,713

Balance Sheet Revisions And Disclosure Changes Point To Loaner Instrument Cover-up

Stryker revised its historical balance sheet in 2011. We believe it was trying to cover-up issues with loaner instrumentation. The 2011 10-K made ten mentions of loaner instruments, whereas the 2012 10-K made one mention of the word. The loaner instruments line item became obscured in both the balance sheet and cash flow statement as did the disclosure below. Nine years later in 2020, Stryker disclosed that loaner instruments have been hidden in inventories, but were moved to other noncurrent assets. [We'll explore the effect of this move on inventory turnover later in the presentation.](#)

Disclosure
Ceased
Post 2011

Loaner Instrumentation: ~~Loaner instrumentation represents the net book value of loaner instruments for surgical implants provided by us to customers. Loaner instrumentation is amortized on a straight-line basis over a 3-year period. Amortization expense for loaner instrumentation is included in selling, general and administrative expenses.~~

Disclosure
Made in
2020 10-K

"Loaner instrumentation not intended to be sold of \$302 in 2019 has been reclassified from inventories to other noncurrent assets to conform with current year presentation."

Source: [2020 10-K](#)

Stryker's Stealth Balance Sheet Revision In 2011

\$ in mm	Original	Restated	Change
Deferred Income Tax	\$820	\$777	(\$43)
Prepaid Expenses and Other Current Assets	\$273	\$312	\$39
Total Inventories	\$1,283	\$1,283	--
Loaner Instruments	\$318	Obscured	NA
Deferred Income Tax	\$317		NA
Other Assets	\$157		NA
Total Other Long-Term Assets	\$792	\$544	(\$248)
Income Tax Payable	\$116	\$155	\$39
Accrued Expenses /Other Liabilities	\$825	\$798	(\$27)
Other Long-Term Liabilities	\$1,143	\$872	(\$271)
Total Assets	\$12,405	\$12,146	(\$259)

Source: [2012 10-K](#) and Source: [2011 10-K](#)

Note: Only disclosure Stryker made was "Certain prior year amounts have been reclassified to conform with the presentation used in 2012, primarily with respect to correct the classification of non-current deferred income taxes"

Questionable Finance And Accounting Board Members At Stryker During Stealth Restatement

Stryker's Board at the time of the stealth restatement had controversial people overseeing its finance and audit functions. Notably, we see that Howard Lance, an individual tied to multiple accounting scandals, served on Stryker's Board from 2009-2014 and was on the Finance Committee from 2011-2014 advising on acquisitions at the start of Stryker's acquisition spree.

Individual	Stryker Role	Prior or Concurrent Role of Materiality To Stryker	Concerns
Howard Lance	<p>Board Member 2009 – 2014</p> <p>Comp and Finance Committee overseeing investment, capex and acquisitions</p> <p>He was on the Finance Committee from 2011-2014</p>	<p>Chief Executive Officer, Harris Corp (NYSE: HRS) 2003 – 2011</p> <p>Director, Harris Stratex (Nasdaq: HSTX) 2007 – 2009</p> <p>Chairman of the Board Change Healthcare 2012 – 2022</p> <p>CEO Maxar Technologies May 2016 – Jan 2019</p>	<p>Harris Stratex: Revises guidance due to accounting errors and unexpected higher costs at Harris Stratex, July 2008. Shares decline as much as 35%. Stratex delays 10-K and says financials should no longer be relied upon. Restates financials following: 1) Errors in project work in process inventory accounts within a cost accounting system at one location that resulted in project cost variances not being recorded to cost of sales in a timely manner 2) Errors in the reconciliation of inventory and intercompany accounts receivable accounts which resulted in an overstatement of inventory and accounts receivable in prior years 3) Errors in prior years' product warranty liability accruals which resulted in the improper exclusion of costs associated with technical assistance service provided by the Company under its standard warranty policy</p> <p>Change Healthcare: On Jan 22, 2017 filed an 8-K indicating material weakness of financial controls + restatement of results was necessary</p> <p>Maxar Technologies: The stock collapsed 90% following a Spruce Point investigative report of Lance's promoted merger between MDA and DigitalGlobe. Lance resigned as did the Chief Accounting Officer. The Company impaired its goodwill and slashed its dividend to \$0.01 cent</p>
William Parfet	<p>1993 – 2016 Chairman of the Audit Committee</p> <p>Non-Exec Chairman 2012</p>	<p>CEO of MPI Research since May 1999</p> <p>Director CMS Energy, Monsanto, and PAREXEL</p>	<ul style="list-style-type: none"> Resigned from Stryker's Board on Aug 31, 2016, but the company did not give any reason Later, it emerged that a lawsuit alleged that Mr. Parfet had an affair between 2008 – 2014 with a women who claimed sexual harassment, discrimination, and wrongful termination The parties stipulate and agreed to dismiss this action with prejudice, with each party to bear its own costs, attorney fees, and expenses, thereby concluding this matter in its entirety A media report claims he was fired from MPI after the lawsuit

Spruce Point Has Serious Concerns About Lance's Legacy Role At Stryker

After leaving Stryker's Board, Lance joined Maxar Technologies (TSX/NYSE: MAXR) – formed by the disastrous merger of MacDonald Dettwiler & Associates and DigitalGlobe. He omitted from his biography that he was the Chairman of the Board at Change Healthcare Holdings through 2017 and Harris Stratex (Nasdaq: HSTX, now called Aviat Networks (AVNW)). Both companies informed investors the financial statements could not be relied upon under Mr Lance's tenure. Lance also appears to have embellished his role at NCR, where he was not the company COO, but rather the COO of two operating units.



Howard L. Lance
Age: 62
California, U.S.A.
Director since 2016
Non-Independent

Mr. Lance is President and CEO of the Company. He joined the Company in May 2016. Mr. Lance was Executive Advisor at Blackstone Group's private equity business from 2012 to 2016. From 2003 to 2011, he was Chairman and CEO of Harris Corporation, an international communications and information company serving government and commercial customers. Prior to Harris Corporation, Mr. Lance served as President and Chief Operating Officer of NCR Corporation from 2001 to 2003. Mr. Lance served in a variety of progressively more senior roles at Emerson Electric Company, lastly as Executive Vice President of the Electronics and Telecom segment. He earned a Bachelor of Science degree in industrial engineering (with honors) from Bradley University, and a Master of Science degree in management from the Krannert School of Management at Purdue University.

Principal Areas of Expertise/Experience: Industry Experience Strategic Planning Operations	2017 Board Committee Membership: N/A
2017 Board & Committee Meeting Attendance: Board: 12/12	Total Board & Committee Attendance: 100%
Other Public Board Memberships — Present & Past Five Years: Present Boards: Summit Materials, Inc.	Past Boards: Ferrovia S.A. Eastman Chemical Inc. Stryker Inc.
Ownership and Value of At-Risk Holdings ^{(2) (5)} : As at March 20, 2018 Share Ownership: 603,144 DSU Ownership: N/A	Value of At-Risk Holdings: \$26,912,285
Ownership Requirement Compliance: Yes	2017 Annual Meeting Votes in Favour: 99.73%

According to NCR, Mark Hurd was appointed COO on Sept 9, 2002. Was Lance really the COO in 2003? Also, NCR's filings show he was COO of the Retail and Financial Group, not the entire company as suggested by his biography.

Note: Source: Maxar's proxy statement filed at [Sedar](#) and [SEC](#) March 2018

Though his association with Harris Stratex was more than 5 years ago, we believe he should nonetheless distinguish his role from Harris Corp vs. Harris Stratex. On the [announcement of Lance's appointment](#), it also states he was President and COO of NCR and fails to mention Harris Stratex or Change Healthcare



Cost Bloat And Enterprise Resource Planning (ERP) Disaster

SG&A Bloat And Stryker's Big Talk of Cost Transformation Plans

Stryker has talked about cost transformation opportunities for a long time, and stepped up its big talk in 2016 when CFO Boehnlein was appointed. We believe management has always been dodgy about committing to specifics, though a core part of the game plan was to implement a new ERP system. **We observe that since 2016, Stryker's SG&A margin is largely unchanged.**

Morgan Stanley
Analyst
Lewis

Sept 2016

CEO Lobo
Response

*"I'm going to come back to the number you're not going to give in a second, but before I do that, this topic of restructuring, most of your company, **you've hinted at this notion of there's cost inside Stryker, largely SG&A cost that can come out, but you've been sort of hesitant to give us that number. Why not come out and say, "We have a \$500 million cost plan, it's got a 3-year term, thank you very much, this is what you're going to get?"***

*"I have a new CFO we named earlier this year, and he's -- we're working through our plans. And at this stage we're not really ready to sort of throw out a number. **What I'm telling you is each year I have -- the cost transformation that we have underway, with moving from 41 different ERP systems to 1 ERP system, having indirect procurement, rationalizing some of our products, closing some of our factories, all of this activity that we have underway will deliver.** That gives us the confidence that we can year after year deliver leveraged earnings."*

Source: MS Conf, Sept 2016

Spruce Point Estimated SG&A Margin: 2016 vs. Today

\$ in mm	2016	2021
Reported Sales	\$11,325	\$17,108
Reported SG&A	\$4,137	\$6,427
Less: Charges	(\$193)	(\$675)
Plus: Shipping and Handling ⁽¹⁾	\$227 – \$340	\$428 – \$599
Adjusted SG&A	\$4,171 – \$4,284	\$6,180 – \$6,351
% SG&A Margin (Reported)	36.5%	37.6%
% SG&A Margin (Adjusted)	36.8% - 37.8%	36.1% - 37.1%

1) We estimate 2.0% - 3.0% (2016) and 2.5% - 3.5% (2021) of revenue are shipping and handling costs. We reclassify these costs to SG&A since most of Stryker's largest peers report this way

Almost No
SG&A Margin
Improvement
In 5 Years

Stryker's Bloated SG&A Footprint Among The Highest In The Industry

Spruce Point believes that Stryker's SG&A remains bloated, and that it has been passing through large adjustments in order to lower its Adjusted SG&A margin to 33.6%. **However, we note that Stryker's SG&A margins are not directly comparable with peers because it includes Shipping and Handling costs through COGS.** Unlike close peers which disclose this cost, Stryker does not. Transportation and logistics shipping costs have been rising and complications due to COVID-19. Our analysis suggests peers spend between 1% - 3.8% of revenues on these costs, with an average of 2.5%. Our pro forma analysis illustrates that Stryker has the second highest SG&A margin among peers at 36.1% – 37.1% of revenues. We note that Zimmer Biomet, which has the most bloated SG&A margin, is restructuring itself by spinning of its Spine and Dental business to “optimize resource allocation” and “reduce complexity”.⁽¹⁾

Spruce Point Adjusted Selling, General And Administrative Benchmarking Analysis

\$ in mm Last Annual Figures	Revenues (A)	Reported SG&A (B)	Special Charges (C)	Charges As % of Reported (C/A)	Adjusted SG&A D=(B-C)	Shipping and Handling "S&H" In SG&A (E)	S&H % of Revenue (E/A)	Reported G&A To Revenues (B/A)	Adj SG&A To Revenues (D/A)	Adjusted To Include S&H
Zimmer Biomet	\$7,836	\$3,324	\$204	6.1%	\$3,120	\$296	3.8%	42.4%	39.8%	
Stryker	\$17,108	\$6,427	\$675.0	10.5%	\$5,752	\$428-\$599	Est 2.5% - 3.5%	37.6%	33.6%	36.1% - 37.1%
Boston Scientific	\$11,888	\$4,359	\$72	1.7%	\$4,287	\$194	1.6%	36.7%	36.1%	
Medtronic	\$30,117	\$10,148	\$196	1.9%	\$9,952	\$308	1.0%	33.7%	33.0%	
Agilent	\$6,319	\$1,619	\$0	0.0%	\$1,619	COGS	Est 2.5% - 3.5%	25.6%	25.6%	28.1% - 29.1%
Becton Dickinson	\$20,248	\$4,867	\$0	0.0%	\$4,867	\$656	3.2%	24.0%	24.0%	
Steris	\$3,108	\$731	(\$2)	-0.3%	\$733	COGS	Est 2.5% - 3.5%	23.5%	23.6%	26.1% – 27.1%
Baxter	\$12,784	\$2,867	\$259	9.0%	\$2,608	\$381	3.0%	22.4%	20.4%	
Thermo Fisher	\$39,211	\$8,007	\$144	1.8%	\$7,863	COGS	Est 2.5% - 3.5%	20.4%	20.1%	22.6% - 23.6%
Lab Corp of America	\$16,121	\$1,952	\$96	4.9%	\$1,856	COGS	Est 2.5% - 3.5%	12.1%	11.5%	14.0% – 15.0%

Source: Company filings and Spruce Point Analysis

Note: Analysis includes peers that disclose where they classify Shipping and Handling Costs

Note: We assume a range of Stryker's shipping and handling costs with reference to peers

1) "Zimmer Biomet Announces Intent to Spin Off Spine and Dental Businesses", [press release](#), Feb 5, 2021



Manufacturing And Property Bloat

Since 2017, Stryker has provided reduced disclosures of its operational footprint. However, we observe it has grown total locations from 275 to 356, or by 30%, from 2017-2021 (Note: Revenues are up 37% in the same period). A former employee we interviewed warned about this, and says Stryker has not invested in streamlining its footprint. A keen observation was made that a comparable company, Boston Scientific operates with 16 manufacturing facilities while Stryker boasts over 50 facilities.

2021

"We have approximately **28 company-owned and 328 leased locations worldwide including 50 manufacturing locations**. We believe that our properties are in good operating condition and adequate for the manufacture and distribution of our products. We do not anticipate difficulty in renewing existing leases as they expire or in finding alternative facilities."

2017

"We have approximately **24 company-owned and 251 leased locations worldwide including 42 manufacturing locations**. We believe that our properties are in good operating condition and adequate for the manufacture and distribution of our products. We do not anticipate difficulty in renewing existing leases as they expire or in finding alternative facilities."

Source: [2017 10-K](#) vs. [2021 10-K](#)

Stryker Has Ceased Providing More Granular Information On Its Properties

ITEM 2. PROPERTIES.			
Principal Manufacturing and Distribution Locations			
Location	Segment	Approximate Square Feet	Owned/Leased
Portage/Kalamazoo, Michigan	M	1,033,000	Owned
Changzhou, China	O & NS	889,000	Owned
Chicago, Illinois	M & NS	610,000	Owned
Plainfield, Indiana	O, M & NS	600,000	Leased
Mahwah, New Jersey	O	531,000	Owned
Redmond, Washington	M	291,000	Owned
Tuttlingen, Germany	M	273,000	Leased
Kaysert, Turkey	M	259,000	Owned
Carrigtwil, Ireland	O & M	248,000	Owned
Arroyo, Puerto Rico	M	220,000	Leased
Venlo, Netherlands	O, M & NS	200,000	Owned
San Jose, California	M	185,000	Leased
Kiel, Germany	O	174,000	Owned
Fremont, California	M & NS	168,000	Leased
Suzhou, China	O & M	160,000	Owned
West Valley/ Salt Lake City, Utah	M & O	141,000	Leased
Limerick Ireland	O	140,000	Owned
Selzach, Switzerland	O	138,000	Owned
Lakeland, Florida	M	119,000	Leased
Flower Mound, Texas	M	108,000	Leased
Malvern, Pennsylvania	O	107,000	Leased
Freiburg, Germany	O	106,000	Owned
Phoenix, Arizona	M	100,000	Leased

Newbury, United Kingdom	M	99,000	Owned
Carrigtwil, Ireland	NS	97,000	Leased
Neuchatel, Switzerland	NS	88,000	Owned
Tijuana, Mexico	M	83,000	Leased
Cestas, France	NS	79,000	Owned
Ontario, Canada	M	75,000	Leased
Fort Lauderdale, Florida	O	68,000	Leased
Freiburg, Germany	O	62,000	Leased
Mountain View, California	M & NS	62,000	Leased
O = Orthopaedics M = Med Surg NS = Neurotechnology and Spine			

Former Stryker Employee Knowledgeable About Supply Chain and M&A Integration Warns About Operational Footprint

"**Stryker investing in operations would be a watch out for me as well as I think about it.** Keep in mind, Stryker has 47 manufacturing locations all across the globe. You take another company like Boston Scientific, a company roughly the same as Stryker you could argue, they probably have maybe 15 or 16 manufacturing locations. **So, most of the other big medical device players are very good at streamlining operations and having a very strong manufacturing base that can support multiple businesses. Stryker has never invested in that area. It's always grown through acquisitions and the operations part of the acquisitions being left at alone and the manufacturing still operate as they would prior to the acquisition.** Whereas other companies shut down the product, move the products elsewhere, and streamline the operations footprint. Its an area of opportunity for Stryker"

Insights From Spruce Point Interview Corroborate Prior View

Spruce Point also interviewed another former employee with knowledge of its M&A practices. A view was expressed that Stryker prioritized revenue over cost synergies and that one of its biggest challenges is its operational footprint.

Spruce Point Question

"Does Stryker prioritize revenue or cost synergies in looking at transactions?"

Former Stryker M&A Professional

*"I feel it probably is more revenue. And I'll kind of expand on that **cost synergies happen way late in the game.** Okay. At Stryker, they had this internal group called, it's kind of like PLCM group, like a project lifecycle kind of group. We would look at which products needed to be sunsetted, other synergies, reduction of plants. **So one of the biggest challenges that Stryker requires is the footprint. With Wright, the amount of sites that were acquired, was intense and the cost associated with it.** So there's a lot of redundancies and cost associated with, for example, Mobius was Shirley outside of Boston, Massachusetts, the rent was exorbitant. It was not a very optimal facility. It took almost 2 years to move it to Kalamazoo. **Only more recently within the last few years, have they really been focusing on streamlining operations with respect to how many plants are open in sites, and consolidating those due to cost.** So initially it's a revenue play, because divisions, aren't looking at it as a siloed kind of company within Stryker from the cost perspective, right. Corporate looks at cost, which then happens after an acquisition is done."*

The CEO's Jets Are Sacred Cows

Spruce Point believes the corporate profile bloat then lends itself to unnecessary and extravagant spending in other areas. For example, Stryker has three registered corporate jets and the CEO is the only one allowed to use them for personal use. In fact, he was recently rewarded with **MORE** use of the corporate jet. [We believe this is another sign of growing Corporate Governance challenges at Stryker we'll explore later in the presentation.](#)

Jet Use Discussion

*"In November 2021, the Board, excluding Mr. Lobo, amended the policy regarding the personal use of aircraft by Mr. Lobo and his immediate family members that was previously approved in December 2016. The Board believes the policy maximizes the efficient use of Mr. Lobo's travel time and helps to ensure his personal safety and security. Mr. Lobo is the only Stryker executive officer allowed to use aircraft for personal use. **The primary revision to the policy was to increase the annual hour limitation to 60 hours, effective for calendar year 2021, from the previous amount of 40 hours.** The annual hour limitation and the actual personal use by Mr. Lobo and his immediate family members is reviewed annually by the Board. The benefit to Mr. Lobo associated with personal use of aircraft is imputed as income for tax purposes at Standard Industry Fare Level rates and he is responsible for paying the associated taxes."*

Source: [2022 Proxy Statement](#)

Active Stryker Corporate Jets

N-Number	Serial Number	Model	Expiration
421SC	331	Dassault Falcon 200EX	11/30/2023
520SC	338	Dassault Falcon 200EX	6/3/2024
625SC	9647	Bombardier BD-700-1A11	8/31/2023

Source: [FAA registry](#)



“Committed” To The ERP

Stryker continued making bold claims in 2018 about its “*commitment*” to the ERP saying “*we’re not going to stop*” and that consolidating systems to 1 ERP was important for the businesses to continue to perform. The COO, who recently “retired” in 2021, points out that the ERP is projected to become more complex as additional acquisitions are completed. Stryker has announced \$10.0 billion worth of deals since his comment....

CFO
Boehnlein

“Let’s start with ERP first. **First of all, ERP is a 4-year program. We’ve committed \$400 million to this program. We are replacing over 40 separate ERP systems with one global SAP system.** We’re also setting up, more importantly, kind of a global template in terms of how we’ll run sort of back-office functions that affect the ERP, which really sets us up to drive future efficiencies. If you look at about 2017, that was the kick-off year. That was a build year. And if you think about the accounting for these types of things, in a build year, you can capitalize a lot of the cost related to the people that are working on your ERP system. We have already over a 100-person team that’s working on it, of Stryker people, so it’s a big initiative.”

“You fast forward to now and you look at first quarter in particular, you’re right, a lot of the things that really can impact sort of the delivery of that are all around spending, you got to keep in mind though that if you think about sort of the overarching program, our cost transformation for growth program, I mean, a lot of that spending is very locked in. **We’re not going to stop the ERP.** We’re not going to stop product life cycle management, which are sort of the 2 programs where we’re seeing a lot of investment going on this year still.”

Source BaML Conf, May 15, 2018

Katherine
Owen
Former VP of
Strategy IR
and CEO
Advisor

“And part of that came out of big investments we’ve been making in CTG, which is our cost transformation for growth initiatives. That’s a number of different programs. It includes going from 42 to 1 ERP system. Its product life cycle management. Its plant network optimization. It’s indirect spend. These are all going to drive long-term benefits and sustainable margin expansion, but they require upfront costs. **You do not go from 42 to 1 ERP system without spending a lot up front, particularly if you want to ensure that the businesses are able to continue to perform.**”

Source DB Conf, May 8, 2018

Former COO
Tim Scannell

Resigned
2021

“**Another thing is we’re in the very early innings of installing a new ERP system around the globe.** That’s probably only in the second inning, if you will, of a 9-inning game. So a lot of work to be done. But the broader point I’d ultimately make is I think historically, everyone wants to deliver improved margins. As an operator, it’s great to have that ambition. It’s even greater to have this toolkit that’s underway. So these tools, these programs, these projects are underway, we think we have the right levers to pull and deliver. **And as you know, it becomes a bit more complicated as you do deals and you have other variables coming in there, but we’re fully committed to delivering.**”

Source MS Conf, Sept 12, 2018

Stryker Does Not Appear “Committed” To Its Technology Infrastructure

Our view is clear: Stryker does not appear committed to advancing its technology infrastructure to deliver the organizational efficiencies and earnings leverage for investors. It’s apparent to us that Stryker does not have among its top executive management team any technology leaders. The last executive member was Bijoy Sagar - Chief Digital Technology Officer. He departed and was hired by Bayer in January 2020.⁽¹⁾ Spruce Point believes that without a commitment from leadership at the most senior level, Stryker’s technology infrastructure will continue to languish.

Last Time Stryker Had An Executive Officer Driving Technology.... 2019

Executive Officers

As of January 31, 2019

Name	Age	Title	First Became an Executive Officer
Kevin A. Lobo	53	Chairman and Chief Executive Officer	2011
Yin C. Becker	55	Vice President, Communications, Public Affairs and Corporate Marketing	2016
William E. Berry Jr.	53	Vice President, Corporate Controller and Principal Accounting Officer	2014
Glenn S. Boehnlein	57	Vice President, Chief Financial Officer	2016
M. Kathryn Fink	49	Vice President, Chief Human Resources Officer	2016
Michael D. Hutchinson	48	Vice President, Chief Legal Officer	2014
Viju Menon	51	Group President, Global Quality and Operations	2018
Katherine A. Owen	48	Vice President, Strategy and Investor Relations	2007
Bijoy S.N. Sagar	50	Vice President, Chief Digital Technology Officer	2014
Timothy J. Scannell	54	President and Chief Operating Officer	2008

Source: 2018 [Stryker 10-K](#)

Current Executive Officers Lacking Technology Leadership

Information about our Executive Officers

As of January 31, 2022

Name	Age	Title	First Became an Executive Officer
Kevin A. Lobo	56	Chair, Chief Executive Officer and President	2011
Yin C. Becker	58	Vice President, Communications, Public Affairs and Corporate Marketing	2016
William E. Berry Jr.	56	Vice President, Chief Accounting Officer	2014
Glenn S. Boehnlein	60	Vice President, Chief Financial Officer	2016
M. Kathryn Fink	52	Vice President, Chief Human Resources Officer	2016
Robert S. Fletcher	51	Vice President, Chief Legal Officer	2019
Viju S. Menon	54	Group President, Global Quality and Operations	2018
J. Andrew Pierce	48	Group President, MedSurg and Neurotechnology	2021
Spencer S. Stiles	45	Group President, Orthopaedics and Spine	2021

Source: 2021 [Stryker 10-K](#)

1) [Bayer press release](#)

Setting Unrealistic Expectations For The Enterprise Resource Planning (ERP) Project

Here is more evidence of Stryker's poor capital allocation policies related to its ERP. The CEO forecasted margin improvements from the project in early 2019, but instead Non-GAAP EBIT margins fell 150 basis points.

CEO
Lobo
Discusses
The ERP

Claims Margin
Pick-Up In
2019

"So that the biggest area is that go live, the 2 areas are ERP. So we -- at Stryker, we had about 40 different ERP systems. We're going to 1 global ERP system. It's a massive transformation and we're going to go live in multiple locations starting with our Instruments division in the first quarter. So we spent the last 2 years designing common processes, getting the divisions to agree on how we're going to use the system, with this SAP, the cloud-based HANA system is the one that we chose. We also have a number of other systems that plug into the core system. And we used to have different systems, 2 different manufacturing systems, 3 different PLM systems, document matter. So we've standardized all the accompanying systems as well over the last 2 years. And so every division you go into in Stryker, you're going to have just one common ERP, one common product life cycle management system, one common document management system, one -- so we've really standardized all of our systems across the company. It was -- it's just heavy, heavy lifting. I can't describe to you just how many -- we had to pull people out of their full-time jobs to work on this process and to get all the divisions to agree to go to common systems. At Stryker, that takes a little work given how decentralized the organization has historically been, but we're there. And so this is the time where we were going to flip the switch and go live. Hopefully, we won't have too many bumps. We think we prepared very well for that. And we're also going to start to go live with our shared services, both in HR and in finance. And so we've been investing the last 2 years. That investment has run through the P&L. This year, we're going to invest roughly maybe similar levels to last year overall because we're going to have some depreciation, which will come into the P&L even though our spend will start to decrease a little bit. **And then starting next year, the actual spend on these programs will start to decrease, and you'll start to have a margin pickup starting in '19."**

Source JPM Conf, Jan 10, 2018

Stryker's
Margin
Pick-up
In 2019
Never
Occurred

Margins
Contracted

	2017	2018				2019		
\$ in bn	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
GAPP EBIT	\$712	\$591	\$672	\$576	\$698	\$528	\$613	\$628
Non-GAAP EIBIT	\$936	\$810	\$855	\$807	\$1,045	\$881	\$944	\$913
Revenues	\$3,471	\$3,241	\$3,322	\$3,242	\$3,796	\$3,516	\$3,650	\$3,587
GAAP Margin	20.5%	18.2%	20.2%	17.8%	18.4%	15.0%	16.8%	17.5%
Non-GAAP Margin	27.0%	25.0%	25.7%	24.9%	27.5%	25.1%	25.9%	25.5%

Source Stryker Earnings Releases

Abandoning The ERP

Spruce Point doesn't believe the narrative that Stryker is a disciplined and successful capital allocator towards acquisitions. We believe it miserably failed in its objective to unify its ERP systems under 1 platform. Even worse, it blamed COVID-19 as an excuse for project abandonment. While many companies used COVID-19 as a means to accelerate technology investment to drive efficiencies, Stryker went in the opposite direction and abandoned a key project.

CFO
Boehnlein

"Think, **first off, on ERP, we are executing our program.** We're now live with sort of 3 of our entities on our global SAP platform, corporate, CMF and Instruments. We have an active rollout plan for all of our divisions. **And honestly, it's 2 to 3 a year, so that will roll out over the next couple of years here before we really start to feel that the platform is spread enough across the company that will drive significant efficiencies.**"

Source [Q3 2019 Earnings Call](#)

Morgan Stanley
Analyst
Lewis

"You've got -- ERPs, don't forget, with the consolidating companies, you have disparate network of ERP systems you're trying to get down to one ERP. There are some big ERP implementations going in for Stryker this year. So it feels like to me we're getting to sort of the precipice of a big inflection in margin, but I want to set expectations appropriately. So these 30 to 50 basis points we get every year is that what we should expect going forward or is there a chance that, that can inflect?"

CEO Lobo
Response

"Yes. So certainly, we've delivered the 30 to 50, but the underlying performance has been better than that, as you know, because we've -- our acquisitions have had dilution. So underlying op margin has been expanding more sort of the 70, 80 bps range. And we really are just started on our -- on the big heavy lifting margin expansion. The way we've been getting it is through indirect procurement. It's been through I'd call it sort of hustle and sort of old-fashioned cost reduction. **The bigger rocks, we haven't moved those yet and that has to do with the plant network. That has to do with the ERP. We've gone live with 3 of our divisions right now, but we still have a lot more to do, and frankly, globally to move to one SAP system. We had a huge implementation that occurred in July this year, which went very well.** So we're really excited that we do have the right platform of ERP. We've been through some big integrations. Now it's just a question of rolling them out. That will take us 2 to 3 years to move to one ERP system."

Source [MS Conf, Sept 10, 2019](#)

Abandoning
3 Years of
ERP Work

"Not
Significant"

"**Impairment charges in the six months 2021 were not significant. In the second quarter of 2020, due to the significant negative impact the COVID-19 pandemic had on our operations and financial results, we suspended certain in-process investments resulting in charges of \$189 to impair certain long-lived assets (primarily the portion of our investment in a new global ERP system that was in-process of being developed for future deployment) and product line and other exit costs. These charges were included in cost of sales and selling, general and administrative expenses.**"

Source [Q2 2020 10-Q](#)



“No Way Stryker Can Survive Without Fixing The ERP Problem” According To A Former Employee

Spruce Point Question

“From our perspective, what are the biggest business risks here that you can think of that we should be worried about?”

Former Stryker Supply Chain Professional

“On the technology side a bit of a risk in my mind, which is **Stryker is still very immature when it comes to its technology infrastructure, as in its ERP platforms and everything that they use to manage their business internally.** We had this massive program that was rolled out a few years back, to standardize our ERP platforms onto one platform. And it was just taking forever and the timelines are constantly getting pushed out. **I think that's something that Stryker needs to wake up and do a better job at, because, it still sometimes functions as a collection of small companies, as opposed to one major company that operates off of one platform.** I think it would be possible at some point here in the next call it, four to five years, for them to finish it but it's definitely taken a lot longer than what was initially projected when they kicked off the program. **When they initially kicked off the program, it was a half a billion dollar cost program and it was supposed to wrap up in four years. It's already five years now, or six years almost. And, we've spent way north of a half a billion dollars and they've gone live with the unified ERP platform for one of the three major business segments. So the program has definitely been delayed in terms of scope, as well as timeline, but it has to happen. I mean, there's no way the company can survive otherwise because they're operating off of 40 different ERP platforms and as being a sixteen billion dollar (sales) company, it just doesn't work well.**”

Spruce Point Question

“Can you give an example of how this ERP if completed would be completed?”

Former Stryker Supply Chain Professional

“On the front end, here's an example, **if you're a hospital buying multiple products from Stryker, today you'd have to login 4 to 5 different systems, portals to order from Stryker. So having a single unified ERP platform would enable me as a customer to just base one single order with Stryker and for the system to automatically communicate what those orders are with Stryker and get it all arranged and organized and have it all come back to me in a unified fashion.** So it would be a huge help from a customer service standpoint. **And then on the back end of the process, within the Stryker plants and factories currently, if I am a procurement professional and I'm placing an order for a certain commodity with a supplier. I could have somebody in another part of Stryker doing the exact same order with the exact same supplier, but not knowing that I'm placing very similar order and losing out on all that price leverage, because we are not communicating with each other, right?** So when we have a single ERP platform everybody's working off of the same system, we all have visibility into what each other's orders are and we can consolidate our orders and we can gain price leverage. So I think there's lots of efficiencies to gain on the front end and the back end if you had a single ERP platform.”

Spruce Point interviewed a former information technology professional who shed insights on Stryker's ERP.

Spruce Point Question

"Can you talk about the ERP project. Years ago management talked about spending \$500 million and simplifying over 40 systems to one system. They just impaired the ERP and stopped during COVID-19. What's your view?"

Former Stryker Information Technology Professional

*"No ERP goes perfectly as you can imagine. And this is true, the surgery market was hemorrhaging, all optional surgeries were put on hold. They didn't know how long it would be. The panic reaction was to shut all capital investments, including ERP. **The project was not successful as it could have been because there were 21 business units and we were not tough enough on limiting the customization. And it's not going to cost \$500 million. The overall cost is going to be much bigger, close to \$1.0 billion. There is no technical reason why they can't possibly complete the ERP project. But if you ask me, would it realistically happen that its going to be an amazing outcome, now we are speculating.**"*

Spruce Point Question

"What do you see as some of Stryker's challenges."

Former Stryker Information Technology Professional

*"**Stryker is fiercely decentralized. Anytime anything centralization happens, it was a dog fight.** Stryker under former CEO Brown had more of a Danaher model. He basically looked at each division and measured them only on performance. And therefore there was no value placed on anything except the commercial records. **Stryker has changed a bit, but the new CEO has not been successful at changing it. The downside is the intellectual power of all the commercial leaders is not the same. They've never had a leader that didn't come up through sales. It's very hard for Stryker to appreciate the role of R&D and manufacturing optimization. One bad thing about Stryker – a long term assessment – this is the issue. You need enough people that understand all of this. Stryker's executive team has no one from R&D at the table. Internal innovation has not delivered a huge amount of value. Taking something internal and taking it to the market, that's not Stryker's strength. Not everyone is good at everything.**"*



A Close Look At Inventory Failures And M&A Reporting Issues

Famous Quote For Context

Now that we've established that Stryker has failed at unifying over 40 technology systems, let's take a closer look at its inventory reporting. Inventory reporting is a critical link toward reporting gross margin profitability.

Famous Management Guru Peter Drucker

“If you can’t measure it, you can’t manage it”

Signs of Inventory Problems: Multiple Revisions To Inventory Accounting Policy

A former employee with knowledge of Stryker's supply chain told us the Company had inventory problems leading up to COVID-19. Spruce Point observes that Stryker has made multiple subtle revisions to its inventory accounting policy related to valuation. The distinction is between inventory being stated at the lower of cost, market price, or net realizable value. Stryker has shifted to net realizable value, which would have the effect of reducing stated inventory. By lowering inventory cost assumptions, the effect would be lower Cost of Goods Sold and increased Gross Margins. We also point out that during this period Stryker has never recorded an inventory impairment charge to the income statement.

Former
Stryker
Supply Chain
Professional

"Stryker had a big inventory problem anyway, before COVID, where we were sitting on piles and piles of inventory in certain business segments. But then after COVID struck and it was very important that we saved cash flow and that we try not have too much inventory in the system."

Source: Spruce Point Interview

Stryker Has Made Multiple Revisions To Its Inventory Accounting Discussion

2020 – 2021

Inventories: Inventories are stated at the **lower of cost or net realizable value**, with cost generally determined using the first-in, first-out (FIFO) cost method. For excess and obsolete inventory resulting from the potential inability to sell specific products at prices in excess of current carrying costs, reserves are maintained to reduce **current carrying cost to net realizable value**.

2019

Inventories: Inventories are stated at the **lower of cost or net realizable value**, with cost generally determined using the first-in, first-out (FIFO) cost method. For excess and obsolete inventory resulting from the potential inability to sell specific products at prices in excess of current carrying costs, reserves are maintained to **reduce current carrying cost to market prices**.

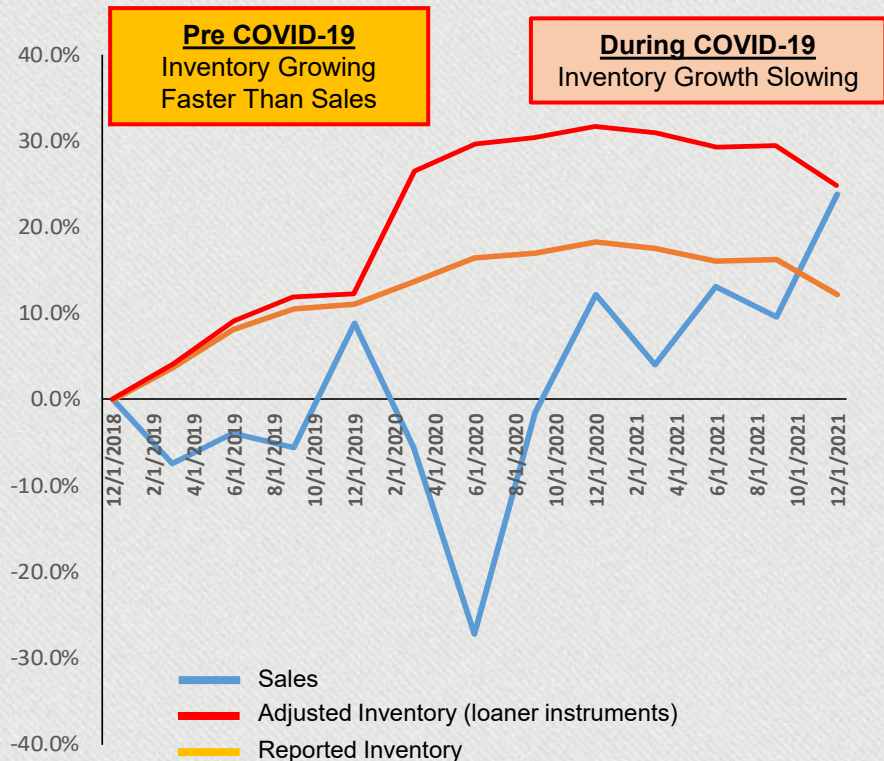
Prior 2018

Inventories: Inventories are stated at the **lower of cost or market**, with cost generally determined using the first-in, first-out (FIFO) cost method. For excess and obsolete inventory resulting from the potential inability to sell specific products at prices in excess of current carrying costs, reserves are maintained to **reduce current carrying cost to market prices**.

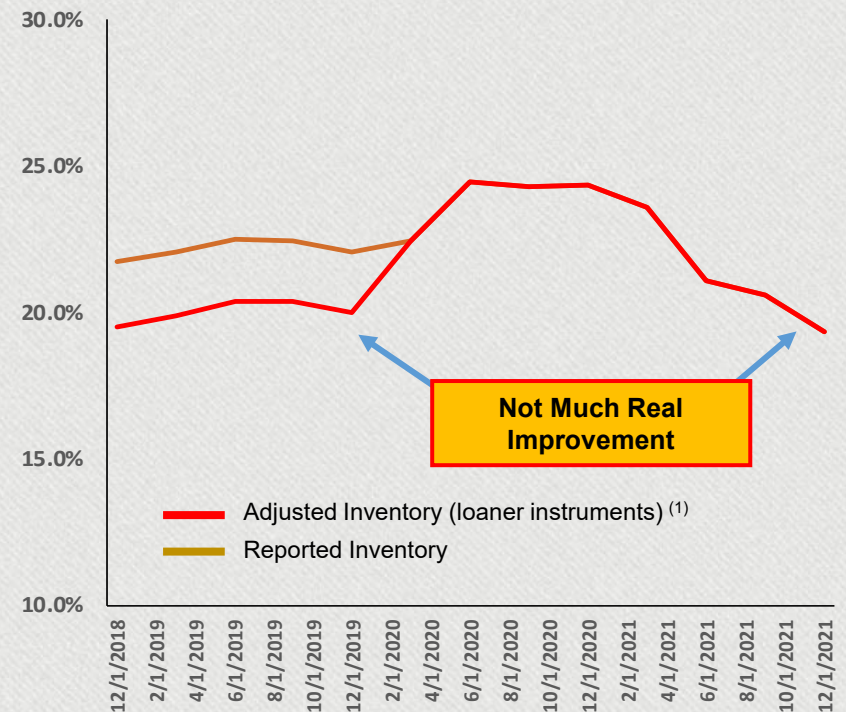


While on the surface it appears Stryker has made progress with its inventory to sales ratio improving, the reality is that there has not been much progress made. By adjusting inventory for loaner instruments, the ratio is back to its historic (pre-COVID, pre-Wright acquisition) levels (see chart to right).

Cumulative Inventory Growth vs. Sales Growth



Inventory To LTM Sales Ratio



Source: Stryker Financials

1) See Note 1 under "Basis of Presentation and Consolidation", [2020 10-K](#) page 25

Stryker's Inventory Turns NOT Improving Despite Claiming Otherwise

Stryker recently disclosed a 2019 reclassification of loaner instruments from inventory to other long-term assets.⁽¹⁾ By pro forma adjusting historical inventory, we find days inventory is largely unchanged pre vs. post COVID-19 while the CEO claims improvements.

CEO Lobe

2021
Analyst Call

Nov, 18 2021

"So we're really getting much more effective in our utilization of our manufacturing facilities. The other aspect is inventory management. And again, Glenn touched upon it, If you look at the several years up to maybe 2018, 2019, you can see that our inventory was on the upswing in terms of the -- not just the value, but also days of inventory. **Over the last 3 years or so, we have really looked at each of our product lines end to end and really put in place a variety of inventory optimization plans and strategies. And you'll see that our days of inventory have actually not just flattened, but its come down nicely,** and we see further progress in the horizon as we continue to proliferate these methods."

\$ in mm	Pre- COVID-19					Post COVID-19							
	12/31/18	3/31/19	6/30/2019	9/30/19	12/31/19	3/31/20	6/28/20	9/30/20	12/31/20	3/30/21	6/30/21	9/30/21	12/31/21
Inventory	\$2,955	\$3,064	\$3,198	\$3,269	\$3,282	\$3,359	\$3,442	\$3,459	\$3,494	\$3,473	\$3,431	\$3,434	\$3,314
(-) Loaner Instruments	(\$302)	(\$302)	(\$302)	(\$302)	(\$302)	--	--	--	--	--	--		
Adjusted Inventory	\$2,653	\$2,762	\$2,896	\$2,967	\$2,980	\$3,359	\$3,442	\$3,459	\$3,494	\$3,473	\$3,431	\$3,434	\$3,314
LTM Avg Inventory (A)	--	--	--	\$3,122	\$3,203	\$3,277	\$3,338	\$3,386	\$3,439	\$3,467	\$3,464	\$3,458	\$3,413
LTM Adj Avg Inventory (B)	--	--	--	\$2,820	\$2,901	\$3,051	\$3,187	\$3,310	\$3,439	\$3,467	\$3,464	\$3,458	\$3,413
Cost of Sales	\$1,340	\$1,233	\$1,270	\$1,257	\$1,428	\$1,257	\$1,216	\$1,276	\$1,545	\$1,444	\$1,522	\$1,518	\$1,656
LTM Cost of Sales (C)	--	--	--	\$5,100	\$5,188	\$5,212	\$5,158	\$5,177	\$5,294	\$5,481	\$5,787	\$6,029	\$6,140
Inventory Turn (C/A)	--	--	--	1.63x	1.62x	1.59x	1.55x	1.53x	1.54x	1.58x	1.67x	1.74x	1.80x
Days Inventory	--	--	--	223	225	229	236	239	237	231	218	209	203
Adj Inventory Turn (C/B)	--	--	--	1.81x	1.79x	1.71x	1.62x	1.56x	1.54x	1.58x	1.67x	1.74x	1.80x
Adj Days Inventory	--	--	--	202	204	214	226	233	237	231	218	209	203

Source: Stryker Filings, Spruce Point Analysis

1) See Note 1 under "Basis of Presentation and Consolidation", [2020 10-K](#) page 25

Note: We assume a stable \$302m of loaner instruments throughout 2019

No Real Inventory Turnover Improvement

Warning: M&A Inventory Step-Up Charges Exceed What We Can Account For

Spruce Point observes that Stryker has recorded in its income statement \$419 million of inventory sold that was stepped-up to fair value since 2017. Stryker passes this through as a “non-cash” cost add-back to improve gross margins. However, after reviewing Stryker’s recent and large public company acquisition targets, Spruce Point estimates just \$268m of inventory that was stepped-up. The step ups are very large in relation to the final inventory amount reported by the acquired public target.

Estimated Inventory Step-Up Recorded From Public Acquisitions					
\$ in mm Target	Closed	Final Target Inventory Valuation	Stryker Final Inventory Valuation	Approx Inventory Step-Up	% Increase
Wright Medical	11/11/20	\$243.1	\$440.0	+\$196.9	+82%
K2M Group	11/9/18	\$85.3	\$131.0	+\$45.7	+54%
Entellus Medical	2/28/18	\$8.6	\$14.0	+\$5.4	+63%
NOVADAQ	9/1/17	\$4.8	\$25.0	+\$20.1	+421%
Total		\$341.8	\$610.0	\$268.1	+78.4%

Inventory Step-Up Recorded Through Stryker's Income Statement		
\$ in mm Year	Step-Up Recorded To Gross Profit	As a % of Non-GAAP Gross Margin
2017	\$22	0.3%
2018	\$16	0.2%
2019	\$67	0.7%
2020	\$48	0.5%
2021	\$266	2.4%
Total	\$419	0.9%

Source: Target company and Stryker SEC filings

Note: Other acquired inventories that can be accounted for as minimal include OrthoSpace (\$1m) and Mobius (\$7m) per Stryker valuation reporting and TSO3 (\$3.3m) and Inuity (\$8.5m) per their last public filings.



Insights From A Former Stryker M&A Professional Interviewed By Spruce Point

Spruce Point interviewed a former Stryker M&A professional who provided some startling insights about Stryker having been burned before by acquiring overstated inventory and performing limited due diligence.

Spruce Point Question

Former Stryker M&A Professional

"Do you have a view on why Stryker consistently writes-up of inventory during its acquisitions? We've noticed multiple large revisions on the Wright transaction."

*"I'm not exactly sure why they wrote it up on the Wright acquisition, but I've seen in some other acquisitions that I've done with them. Inventory is given a certain number, but once we got in there and actually looked at what existed, **inventory is super hard to track**, sometimes it'll be so for large companies in particular, it'll be at some distribution offices, some distributors or agents hold it, right? There's some sales people who hold it in their trunks. **So it's incredibly hard to account for inventory without eyes on it. And we've been burned before significantly about that, where we assumed certain inventory existed, that didn't exist and we overpaid and we get there and you know, it was a fraction of what we assumed.** So what I've seen happen in some deals is because we were burned, we would be very conservative in our estimate in what existed because of what distributors, agents, sales people had, what was on consignment in hospitals, what was on their shelves. **So that could be one of the reasons because we have experienced some challenges where we significantly overpaid, which caused, a negative mark in the report card.** We generally created these report cards that show what our forecast was, 90 days out to 180 days where we stand on performance to the Board or different presidents depending on the level of the deal. "*

*"**For public companies, due diligence is super light, because you don't want to tip your hand that you're looking at the Company.** Because for obvious reasons. You rely heavily on public disclosures and behind closed doors negotiations with the very high level executives. That happened with K2M and Wright. **So when you were looking at a smaller, privately owned company, you're actually allowed to go in there, and I mean, after we got burned a few times,** we sent the teams in to count inventory in office or in stock. As smaller companies, like when I say small, like \$250 million or \$100 million deal, we can do that. **But for larger companies like Wright, you can't do that. You can't tour the facilities even during operating hours. There's a lot more gap in your due diligence. You have to take it on faith and in your projections.**"*



Insights From A Former Stryker Information Technology Professional on Inventory

Spruce Point interviewed a former information technology professional who provided insights on Stryker's inventory tracking challenges.

Spruce Point Question

"Do you believe Stryker has a good reporting platform to track inventory because we've heard elsewhere that this can be somewhat difficult."

Former Stryker Information Technology Professional

*"So it's a very difficult question to answer. So on the MedSurg side, there is no problem because there's no consigning of inventory. It's all clean. We could track it very cleanly. **The problem that you are raising is on the orthopedic side. We built the tool suite called RepSuite and it was rolled out, but the inventory tracking remains a problem because you never know what the surgery is going to be consuming what. So you have to keep a lot of consignment inventory, which in some cases it is prepaid, in most cases it is not. It's a process problem. So there's significant inventory issue, but it's not just Stryker, it's an industry problem.**"*

*"To provide more detail, surgery has two components: One instrumentation, which is not paid. It's free stuff. They, get the instrumentation that they (surgeons) pick, but it's really, when they go into the operating room that they would know what screw to put in, or how many plates are needed. They literally open the suitcase. There is a going to be a rep in the room and they (the surgeon) literally pick what they need, and at the end of the surgery, the rep knows what was picked and used. The rest is taken back, re-sterilized, etc. So this is the process, and the rep has to track how many instruments cases are there. **It's hard to reduce the complexity. This is where Stryker has a cultural problem. They want to bend over backward to please surgeons, which is a good thing, but also means that the complexity of instrumentation and product sizes are probably bigger than necessary. When I was there we cut back a significant amount of SKUs, but I could argue that it's still not probably fully optimal.**"*

Wright Medical Group: Inventory Step-Up

In November 2019, Stryker announced the acquisition of Wright Medical Group (Nasdaq: WMGI) for ~\$4.0 billion in equity value. The transaction closed on November 11, 2020.⁽¹⁾ The last inventory report from WMGI showed \$243 million of inventory as of Sept 27, 2020. Stryker modified its valuation of the inventory 5 times, from nearly a 100% increase to a final increase of 82%.

Wright Medical Group: Inventory Pre-Acquisition

	September 27, 2020	December 29, 2019
Assets:		
Current assets:		
Cash and cash equivalents	\$ 141,549	\$ 166,856
Accounts receivable, net	120,597	147,400
Inventories	243,072	198,374
Prepaid expenses	21,867	16,031
Other current assets ¹	235,769	214,997
Total current assets	762,854	743,658

Source: WMGI [Q3 2020 10-Q](#)

Stryker's Inventory Valuation: Big Inventory Step-Up

Purchase Price Allocation of Acquired Net Assets

2020	Wright
Tangible assets acquired:	
Accounts receivable	\$ 127
Deferred income tax assets	371
Inventory	485
Other assets	344
Debt	(1,447)
Deferred income tax liabilities	(511)
Product liabilities	(192)
Other liabilities	(288)
Intangible assets:	
Customer and distributor relationships	181
Developed technology and patents	1,523
Trade name	60
Goodwill	3,428
Purchase price, net of cash acquired	\$ 4,081
Weighted average life of intangible assets	12

Source: [2020 10-K](#)

1) [Stryker completes acquisition of Wright Medical](#)

Wright Medical: Repeated And Unusual Revisions To Its Inventory Valuation

In Stryker's discussion of its valuation of Wright's assets, it doesn't draw attention to inventory and claims no material adjustments were made to the final valuation. However, the inventory valuation changed five times (revised up, down, up) and was settled at a value 82% higher than Wright's final valuation as a public company. We believe this is material and needs further explanation by Stryker.

Stryker Calls Out Everything But Inventory Related To Wright

*"Purchase price allocations for Wright and other acquisitions were based on preliminary valuations, **primarily related to intangible assets, product liabilities and deferred income taxes**. Our estimates and assumptions are subject to change within the measurement period."*

Source [Q1 2021 10-Q](#)

No Material Adjustments?

*"Purchase price allocations for 2021 acquisitions were based on preliminary valuations, primarily related to intangible assets, product liabilities and deferred income taxes. Our estimates and assumptions are subject to change within the measurement period. The purchase price allocations for Wright, OrthoSensor and other 2020 acquisitions **were finalized in 2021 without material adjustments**."*

Source: [2021 10-K](#)

Five Revisions To Wright's Inventory Valuation

\$ in mm	Wright Final 9/27/20	Q4 2020 12/31/20	Q1 2021 3/31/21	Q2 2021 6/30/21	Q3 2021 9/30/21	Q4 2021 12/31/21
Inventory Valuation	\$243.1	\$485	\$478	\$419	\$448	\$440
Increase from final value	--	+100%	+97%	+72%	+84%	+82%
Source	10-Q	10-K	10-Q	10-Q	10-Q	10-K

Wright Medical Group Cited Under Critical Audit Matter, But Inventory Not Mentioned

Stryker's Critical Audit Matter for 2020 involved the Wright Medical acquisition. There is no mention of inventory valuation, which changed five times, but rather issues related to profit margins for the acquired assets. Notably, valuation of inventory affects Cost of Sales, which is a critical factor driving profit margins.

Stryker's Critical Audit Matter of Wright Medical "Especially Challenging"

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Business Combinations

Description of the Matter As described in Note 6 to the consolidated financial statements, in 2020 the Company completed the acquisition of all the outstanding equity of Wright Medical Group N.V. (Wright) for total consideration, net of cash acquired of \$4,081 million. The acquisition was accounted for as a business combination.

The recognition, measurement and disclosure of the Company's business combination in the 2020 consolidated financial statements and related footnote is preliminary and was considered especially challenging and required significant auditor judgment due to the complex determination by management of the appropriate assumptions, such as discount rates, revenue growth rates, and profit margins for the valuation of acquired assets, including developed technologies. The Company used a discounted cash flow model to measure the developed technologies.

How We Addressed the Matter in Our Audit We tested the effectiveness of controls over the accounting for the business combination, including testing controls over the estimation process supporting the recognition and measurement of consideration transferred and developed technology. We also tested management's review of assumptions used in the valuation models.

To test the valuation of acquired assets, we performed audit procedures that included, among others, evaluating management's identification of assets acquired and liabilities assumed and assessing the fair value measurements prepared by management and their third-party valuation specialists, including the discount rates, revenue growth rates and projected profit margins as used in valuing the developed technology. We involved our valuation specialists to assist with the evaluation of methodologies used by the Company and significant assumptions included in the fair value estimates. For example, to evaluate the revenue growth rates and projected profit margins, we compared the amounts to historical results of the Company's business, as well as the acquired business' historical results, and current industry and market trends for those in which the Company operates and performed sensitivity analyses on key assumptions. We also evaluated the adequacy of the Company's disclosures included in Note 6 related to these acquisitions.

Source: [2020 10-K](#)

Wright Medical Inventory Turns Plummeted Prior To Stryker's Acquisition

It's no mystery that Wright Medical was struggling ahead of its purchase by Stryker. It was struggling with the Cartiva acquisition, having to terminate distributors, and reset investor expectations.⁽¹⁾ The Company even made changes to its estimate for excess and obsolete inventory in Q3 2019. We estimate inventory turnover fell in half leading up to the acquisition.

\$ in mm	3/31/19	6/30/19	9/29/19	12/31/19	3/29/20	6/28/20	9/27/20
Cost of Sales	\$46.3	\$48.3	\$44.4	\$49.5	\$38.9	\$28.7	\$45.1
(+) Inventory Step-Up	\$0.4	\$0.4	\$0.4	--	--	--	--
(+) Stock Comp	\$0.1	\$0.1	\$0.2	\$0.2	\$0.2	\$0.3	\$0.3
(+) Inventory Charge	\$3.5	\$2.5	\$4.1	\$3.0	\$1.6	\$5.2	\$5.2
(-) Favorable Adjustment	\$0.0	\$0.0	(\$2.6)	(\$2.6)	(\$2.6)	(\$2.6)	(\$2.6)
Adjusted Cost of Sales	\$50.3	\$51.3	\$46.5	\$50.1	\$38.1	\$31.6	\$48.0
LTM Adjusted Cost of Sales (A)	--	--	--	\$197.1	\$186.0	\$119.8	\$117.7
Inventory	\$186.9	\$194.7	\$197.3	\$198.4	\$215.8	\$238.8	\$243.1
4 Qtr Average (B)	--	--	--	\$194.3	\$201.5	\$212.6	\$224.0
Inventory Turnover (A/B)	--	--	--	1.01	0.92	0.56	0.53
Free Cash Flow							
Operating Cash Flow	(\$7.4)	\$9.5	\$16.2	\$23.3	\$19.3	(\$30.2)	\$21.3
(-) Capex	(\$27.3)	(\$24.3)	(\$19.1)	(\$37.0)	(\$26.6)	(\$16.3)	(\$13.4)
Free Cash Flow	(\$34.7)	(\$14.8)	(\$2.9)	(\$13.7)	(\$7.3)	(\$46.5)	\$7.9

Source: Wright Medical filings, Spruce Point Analysis

1) Wright [Q2 2019 Conf Call](#)

NOVADAQ: Inventory Step-Up

In June 2017, NOVADAQ (TSX/Nasdaq: NVDQ/NDQ) entered into an agreement to be acquired by Stryker and closed the deal on Sept 1, 2017.⁽¹⁾ Throughout its financial reporting, NOVADAQ never reported more than \$11.7m of inventory on its balance sheet.⁽²⁾ Leading up to the acquisition, it last reported \$4.8m of inventory as of June 20, 2017. Stryker completed the acquisition on September 1, 2017. Stryker preliminarily revalued its inventory to \$39 million, with a final inventory valuation of \$25 million (421% more than the final reported value).

NOVADAQ Inventory Pre-Acquisition

Notes	As at June 30, 2017	As at December 31, 2016
ASSETS		
Current assets		
Cash and cash equivalents	\$ 49,589,689	\$ 62,382,649
Accounts receivable	27,522,109	27,791,574
Prepaid expenses and other assets	6,078,718	5,776,463
Inventories	4,869,246	4,295,565
	<u>88,059,762</u>	<u>100,246,251</u>

Source [Canada's Sedar](#)

Stryker's Inventory Valuation: Big Inventory Step-Up

Preliminary

Purchase Price Allocation of Acquired Net Assets	
	2017
	NOVADAQ
Purchase price, net of cash acquired	\$ 674
Tangible assets:	
Accounts receivable	11
Inventory	39
Other assets	9
Contingent consideration	—
Other liabilities	(59)
Intangible assets:	
Customer relationship	18
Trade name	1
Developed technology and patents	133
Goodwill	522
	<u>\$ 674</u>
Weighted-average life of intangible assets	14

Source [Q1 2018 10-Q](#)

Final

Purchase Price Allocation of Acquired Net Assets	
	2017
	NOVADAQ
Tangible assets acquired:	
Accounts receivable	11
Inventory	25
Other assets	7
Contingent consideration	—
Liabilities	(56)
Intangible assets:	
Customer relationship	18
Distributor relationship	—
Trade name	1
Developed technology and patents	141
Internally developed software	—
Goodwill	527
Purchase price, net of cash acquired	\$ 674
Weighted average life of intangible assets	15

Source [2018 10-K](#)

1) [Stryker completes acquisition of NOVADAQ Technologies Inc.](#)
2) Reported \$11.7m on March 31, 2016

Entellus Medical: Inventory Step-Up

On Dec 7, 2017 Stryker announced the acquisition of Entellus Medical (Nasdaq: ENTL) and closed the transaction on Feb 28, 2018.⁽¹⁾ Stryker revalued Entellus' inventory higher by 63% from \$8.6 to \$14.0 million.

Entellus Inventory Pre-Acquisition

<i>(in thousands)</i>	September 30, 2017	December 31, 2016
Finished goods	\$ 4,256	\$ 3,562
Work-in-process	1,260	536
Raw materials	3,102	3,128
Total	\$ 8,618	\$ 7,226

Source Entellus [Q3 2018 10-Q](#)

Stryker's Inventory Valuation: Big Inventory Step-Up

Purchase Price Allocation of Acquired Net Assets

	2018 Entellus
Purchase price, net of cash acquired	\$ 697
Tangible assets:	
Accounts receivable	17
Inventory	14
Other assets	66
Contingent consideration	(78)
Other liabilities	(92)
Intangible assets:	
Customer relationship	33
Trade name	—
Developed technology and patents	256
Goodwill	481
	\$ 697
Weighted-average life of intangible assets	16

Source: Stryker [Q1 2018 10-Q](#)

1) [Stryker completes acquisition of Entellus Medical](#)

K2M Group: Inventory Step-Up

In August 2018, Stryker announced the acquisition of K2M Group (Nasdaq: KTWO) for ~\$1.0 billion in equity value. The transaction closed on November 9, 2018 for a final net purchase price of \$1.38 billion.⁽¹⁾ K2M last reported net inventory of \$85.3m as of September 30, 2018. Stryker marked the preliminary value of its inventory at \$136m (+59.4%) and the final valuation at \$131m (+53.5%). In effect, Stryker ignored the \$45.5m inventory allowance last reported by K2M Group and assumed its finished goods of \$130.8m reflected fair value.

K2M Group Holdings Inventory Pre-Acquisition

	September 30, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 55,631	\$ 23,964
Accounts receivable, net	54,053	50,474
Inventory, net	85,294	71,424
Prepaid expenses and other current assets	6,551	7,842
Total current assets	201,529	153,704
Property, plant and equipment, net	46,401	49,200
Surgical instruments, net	30,079	26,250
Goodwill	121,814	121,814
Intangible assets, net	18,988	18,899
Other assets, net	3,060	3,260
Total assets	\$ 421,871	\$ 373,127

4. INVENTORY

The following table summarizes inventory, net of allowances:

	September 30, 2018	December 31, 2017
Finished goods	\$ 130,784	\$ 109,342
Inventory allowances	(45,490)	(37,918)
Inventory, net	\$ 85,294	\$ 71,424

Stryker's Inventory Valuation: Big Inventory Step-Up

Purchase Price Allocation of Acquired Net Assets

	2018	
	K2M	Entellus
Tangible assets acquired:		
Accounts receivable	67	17
Inventory	136	14
Other assets	118	72
Contingent consideration	—	(78)
Liabilities	(247)	(92)
Intangible assets:		
Customer relationship	34	33
Distributor relationship	1	—
Trade name	10	—
Developed technology and patents	473	256
Internally developed software	2	—
Goodwill	786	475
Purchase price, net of cash acquired	\$ 1,380	\$ 697
Weighted average life of intangible assets	14	16

Source [2018 10-K](#) and revised to \$131m in [Q2 2019 10-Q](#)

Source K2M [Q3 2018 10-Q](#)

1) [Stryker completes acquisition of K2M](#)



Strains From A Failing M&A Strategy And Financial Misreporting



Spruce Point Believes Stryker Is No Longer ROIC Focused As Deals Become Less Economically Viable

Spruce Point observes that Stryker stopped presenting Adjusted Return on Invested Capital (ROIC) as a metric to investors after 2017. Whereas the CEO claimed M&A discipline and the ability to walk away from bad deals as a factor driving consistent ROIC performance, recent commentary we received from a former M&A professional indicates that Stryker overpays for deals, and has been reluctant to walk away from deals or get price concessions from targets.

At a glance

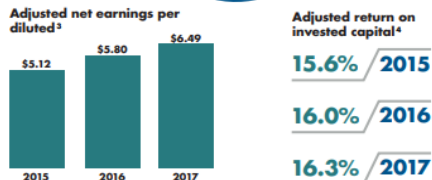
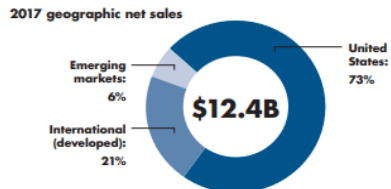
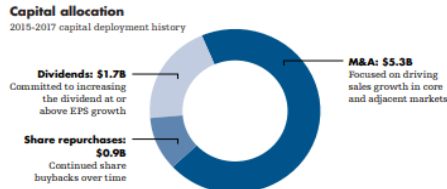
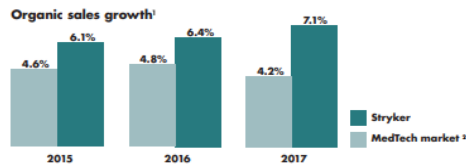
\$12.4
billion in annual global sales in 2017

38
straight years of sales growth

6,560
patents owned globally

~33,000
employees worldwide in 2017

FORTUNE 500
FORTUNE WORLD'S MOST ADMIRABLE COMPANIES 2017



CEO
Lobo

Oct
2016

*"But **we won't just pay whatever to companies. We're very disciplined.** We walk away when the prices are above our ability to deliver value. And sometimes, **there's assets that we like and the price point's just too high and we have discipline to walk away from deals. And I think that's why you see the ROIC still consistent year over year over year in spite of the acquisition nature.**"*

Source: [Q3 2016 Conf Call](#), Oct 2016

Spruce
Point
Interview
With
Former
Stryker
M&A Pro

*"Deals are significantly more expensive. **The Stryker name carries a premium to it. I believe we overpay. When I was there I felt like we overpaid for deals.**"*

*"**One of the challenges I find with the M&A teams and with Stryker is its a psychological effect. They get very entrenched in having a specific company.** They convince themselves they have to have it. It's kind like when you purchase a home, you go, you check and you come back and you justify, this is a great home. I'm not gonna find another one on the market like this. This is perfect. **And so sometimes you back into your deal when it should have been a walk away. I've seen that happen a bit.**"*

Stryker has ceased presenting ROIC

1 Organic sales growth removes the impact of changes in foreign currency exchange rates and the first twelve months of acquisition sales that affect the comparability and trend of sales.
2 MedTech market growth has been compiled by Stryker from financial information and published guidance reported by industry competitors.
3 Adjusted net earnings per diluted share, a non-GAAP financial measure, is our reported net earnings per diluted share excluding certain items, such as charges for acquisition and integration-related activities, the amortization of purchased intangible assets, restructuring-related and other charges, costs to comply with European Medical Devices Regulation, Rejuvenate and other recall-related matters, regulatory and legal matters and tax matters.
4 Adjusted return on Invested Capital, 3 year average (adjusted net earnings plus interest expenses net of tax) / (average total debt and total equity).



Insights From A Spruce Point Interview

Spruce Point Question

"Has the M&A game gotten harder for Stryker as its gotten larger?"

Former Stryker M&A Professional

*"I guess I would answer that in two parts. I think the M&A process is gotten way more standardized. It's pretty much a well oiled machine, and enough lessons learned that we can do a pretty good job assessing a target. **However, target prices tend to go up when they hear Stryker is looking at them. So if you go to a company, they assume we're deep pockets, so it's more difficult to negotiate and get a good price.** One of the challenges I find with the M&A teams and with Stryker is its a psychological effect. **They get very entrenched in having a specific company. They convince themselves they have to have it. It's kind like when you purchase a home, you go, you check and you come back and you justify, this is a great home. I'm not gonna find another one on the market like this. This is perfect. And so sometimes you back into your deal when it should have been a walk away. I've seen that happen a bit.** You need to understand a bit about Stryker setup. It's very siloed. **So each division operates like its own company. So there's a bit of competition with funds when it comes to M&A,** and each one has to present to the Capital Committee for approval."*

Spruce Point Question

"Stryker used to talk about ROIC and put in the fact sheet. And now there's no talk of it. Maybe returns are going down from M&A, do you have a view?"

Former Stryker M&A Professional

*"**I think that's a good speculation. Deals are significantly more expensive. The Stryker name carries a premium to it. I believe we overpay. When I was there I felt like we overpaid for deals.** Look at Mobius, there were risks identified of getting commercial products to quality standards to market. This is a very manual (production) process. It takes three months to train someone up for it. They're super constrained with respect to capacity for actually building these massive 3,000 pound, auto drive, portable CT scanners. The facility layout was ridiculous. The expenses of being in a historic building where they set up the manufacturing. It was separate floors, like moving them up and down, and where would the inventory be stored? There was a lot of challenges that we'd face with incorporating integration costs. **They should have adjusted the price down for that, but because it's Stryker, companies would be resistant to adjusting price down. Stryker would've already invested so much time and energy and thought process and kind of justification emotionally entrenched in a deal, that they don't walk away.**"*

Warning: Be Careful When A Company Says One Thing, Does Another With Its M&A Strategy

Less than a year after telling investors it would not make another “big acquisition” for “a couple of years” following Wright Medical, Stryker announced the acquisition of Vocera Communications for \$3.1 billion. Spruce Point has grave concerns when management says one thing, and then does another, especially when it involves large, complex acquisitions.

Analyst
Newitter

“Congrats on getting Wright Medical finally over the finish line there. I guess, should we think of you as very much out in the market, size of deals, everything fair game and back to kind of normal Stryker M&A, not just small tuck-ins, or maybe anything you would if you care to comment on or share with respect to your view of the M&A outlook?”

CEO
Lobo

*“M&A is so important to our growth strategy and keep in mind that our normal M&A strategy is really just smaller tuck-in deals. It's what we do well, it's what we do best, and we can execute those quickly. So I think just like with OrthoSensor, **you will see us continuing with smaller tuck-in acquisitions like we normally do through the year, and I don't anticipate that you'll see a -- sort of a big acquisition of the size of Wright Medical for a couple of years.**”*

Source: [Q4 2020 Conf Call](#), Jan 27, 2021

Citigroup
Analyst

“And then my second question has to do with M&A. In October, you're rounding the 2-year mark of the announcement of Wright Medical. Does that change your thinking and timing or tempo?”

CEO
Lobo

*“Yes, Joanne, you're right. It is rounding the 2-year mark on Wright Medical. However, we're only 9 months into sort of the cash flow impact of buying Wright Medical. And so, as we announced at the time of the acquisition, we were going to focus on debt reduction and sort of tuck-in kind of M&A -- And so that really is what we've been doing, and you've seen it over the last 9 months, we've paid down just a little over \$1 billion of debt this year. We'll continue to look for opportunities to do that as we move forward, but we're ahead of the schedule that we thought we'd be on for debt pay down. So that's good. **And then honestly, our BD teams are working and looking at smaller tuck-in M&A deals which we think actually provide the most sort of shorter-term growth upside.** And so we're excited as they bring us new deals to look at sort of in that kind of size and category.”*

Source: [Q2 2021 Conf Call](#), July 27, 2021

Stryker's recent acquisitions have come at steep multiples for challenged businesses. We warned about TSO3's product challenges in a [critical report](#) and observe that Stryker didn't even announce to its shareholders it was buying the company. Rather, the [announcement](#) came from TSO3.

Recent Acquisitions And Deal Multiples

\$ in mm	Closed	Deal Value	LTM Sales	Recent Annual Sales Trend	Next Yr Projected Sales	LTM Gross Margin	EV / LTM Sales	EV / Proj Sales
Vocera Communications	2/23/22	\$3,100	\$234.0	Mid Teens	\$265.0	67%	13.2x	11.7x
Wright Medical	11/11/20	\$4,081	\$820.4	Mid single digits	\$1,107.0	80%	6.8x	5.1x
Mobius/Cardan Robotics ⁽¹⁾	10/21/19	\$473	\$20	Double Digits	\$40.0	NA	23.7x	11.8x
TSO3	10/1/19	\$51	\$3.6	Down -87%	NA	50%	14.4x	NA
K2M Group	11/9/18	\$1,380	\$280.7	High single, low double digits	\$317.0	64%	4.9x	4.4x
Invuity	10/23/18	\$204	\$40.8	High Single Digits	\$56.0	67%	5.0x	3.6x
Hyperbranch	10/1/18	\$220	\$61.0	NA	NA	NA	3.6x	NA
Hygia	5/1/18	\$63	\$116.0	NA	NA	NA	0.5x	NA
Entellus Medical	2/28/18	\$697	\$86.2	20-30%	\$115.4	74%	8.1x	6.0x
NOVADAQ	9/1/17	\$674	\$84.0	20-30% then low single digits	\$127.0	61%	8.0x	5.3x
Physio-Control	4/5/16	\$1,299	\$503	6%	NA	NA	2.6x	NA
Sage Products	4/1/16	\$2,875	\$430	13%	NA	NA	6.5x	NA
Synergistics USA Neuro Portfolio	4/1/16	\$158	\$31	NA	NA	NA	5.1x	NA

Source: Company and Stryker SEC Filings and Spruce Point analysis

1) Sales and estimates from J.P. Morgan equity report, Sept 4, 2019

Abysmal 2018 Acquisitions

We believe Stryker's 2018 acquisitions were abysmal. It spent \$2,451 million on acquisitions (and recorded an additional \$108 million for acquisition and integration related charges), which contributed \$236 million of revenue.⁽¹⁾ However, according to the proxy statement, the operating income contribution was negative -\$3 million.

Estimating \$236M of 2018 Acquired Revenue Contribution

\$ in mm	Total	Ortho	MedSurg	Neuro/Spine
2018 Net Sales	\$13,601	\$4,991	\$6,045	\$2,565
2017 Net Sales	\$12,444	\$4,713	\$5,557	\$2,174
Contribution To Growth From Acquisitions	1.9%	0.0%	1.4%	7.4%
Revenue Contribution	\$236	\$0	\$78	\$161

Source: [FY 2018 Stryker Press Release](#). Note: Segment acquisition revenues don't sum to total due to possible rounding

2018 EBIT Contribution: -\$3M

Item	Year Ended December 31, 2018
Operating income, as reported	\$2,537
Acquired inventory stepped up to fair value	15
Other acquisition and integration-related charges	108
Amortization of purchased intangible assets	417
Restructuring-related and other charges	220
Medical device regulations	12
Recall-related matters	23
Regulatory and legal matters	185
Net currency adjustments	47
Operating income attributable to acquisitions that occurred during 2018	3
Adjusted operating income for bonus calculation	\$3,567

Source: [Stryker 2019 Proxy Statement](#)

Note: A positive add-back implies the contribution was negative

Stryker's 2018 Acquisitions

\$ in mm	Source	Q1	Q2	Q3	Q4	Total 2018
Acquisitions, net of cash	Cash flow from investing	\$704	\$63	\$3	\$1,681	\$2,451
Acquisition Target (Date Closed)	Press Releases, SEC filings	Entellus Medical: \$697 (Feb 18)	Vexim Squeeze Out Hygia (May 2018)		K2M: \$1,380 (Nov 9) Invuity: \$204 (Oct 23) HyperBranch: \$220 (Oct 1)	\$2,501

Source: Stryker's SEC filings and press releases

1) Some of this acquired revenue would have come from NOVADAQ which closed Sept 1, 2017 and was projected to do \$127m of revenue in 2017

Abysmal 2019 Acquisitions

We believe Stryker's 2019 acquisitions were abysmal. It spent \$802 million on acquisitions (and recorded an additional \$208 million for acquisition and integration related charges), which contributed \$354 million of revenue.⁽¹⁾ However, according to the proxy statement, the operating income contribution was negative -\$7 million.

Estimating \$354M of 2019 Acquired Revenue Contribution

\$ in mm	Total	Ortho	MedSurg	Neuro/Spine
2019 Net Sales	\$14,884	\$5,252	\$6,574	\$3,140
2018 Net Sales	\$13,601	\$4,991	\$6,045	\$2,565
Contribution To Growth From Acquisitions	2.6%	0.0%	1.0%	11.6%
Revenue Contribution	\$354	\$0	\$60	\$298

Source: [FY 2019 Stryker Press Release](#)

2019 EBIT Contribution: -\$7M

Item	Year Ended December 31, 2019
Operating income, as reported	\$2,713
Acquired inventory stepped up to fair value	67
Other acquisition and integration-related charges	208
Amortization of purchased intangible assets	464
Restructuring-related and other charges	226
Medical device regulations	62
Recall-related matters	192
Regulatory and legal matters	(24)
Net currency adjustments	67
Operating income attributable to acquisitions that occurred during 2019	7
Adjusted operating income for bonus calculation	\$3,982

Source: [Stryker 2020 Proxy Statement](#)

Note: A positive add-back implies the contribution was negative

Stryker's 2019 Acquisitions

\$ in mm	Source	Q1	Q2	Q3	Q4	Total 2019
Acquisitions, net of cash (A)	Cash flow from investing	\$180.0	\$80.0	\$21.0	\$521.0	\$802.0
Acquisition Target (Date Closed)	Press Releases, SEC filings	OrthoSpace 3/14/19 Arrinex (Undisclosed) 2/25/19		Conformis Assets 9/30/19 SafeAir AG?	Mobius and Cardan 10/21/19 TSO3, Inc 10/2/19 Zipline ?	--
Deal cost disclosed, net of cash: (B)	Note 6, acquisitions	\$208.0 + ?	--	\$14.0	\$473.0 + \$51.7 + ? = \$524.7	\$746.7
Difference (A-B)		(\$28.0) + ?	\$80.0	\$7.0	(\$3.7)	\$55.3

Source: [Conformis](#), [TSO3](#)

1) Revenues would have mostly come from 2018 acquisitions of K2M, Entellus, Invuity, Hyperbranch and Hygia

Abysmal 2021 Acquisitions

Stryker's recent proxy statement revealed that operating income from acquisitions that occurred in 2021 was just \$1 million on a total acquisition spend of \$339 million. Further to this, Stryker absorbed \$319 million of acquisition and integration-related costs in 2021, much of which was likely related to Wright Medical which closed in Nov 2020. Total acquired revenue in 2021 was \$789 million, again most of which we assume is related to Wright Medical. Other acquisitions that could have contributed to this acquired revenue include OrthoSensor (Q4'20), TMJ Concepts (Q1/Q2'21), Gauss Surgical (Q3'21), and Thermedx (Q4'21). However, Stryker has never provided any indication of the revenue run rate from these acquisitions.

Estimating \$789M of 2021 Acquired Revenue Contribution

\$ in mm	Total	Ortho and Spine	MedSurg and Neuro
2021 Net Sales	\$17,108	\$7,570	\$9,538
2020 Net Sales	\$14,351	\$6,006	\$8,345
Contribution To Growth From Acquisitions	5.5%	12.8%	0.2%
Revenue Contribution	\$789	\$769	\$17

Source: [FY 2021 Stryker Press Release](#)

2021 EBIT Contribution: \$1 million

Item	Year Ended December 31, 2021
Operating income, as reported	\$2,584
Acquired inventory stepped up to fair value	266
Other acquisition and integration-related costs	319
Amortization of purchased intangible assets	619
Restructuring-related and other charges	386
Medical device regulations	107
Recall-related matters	103
Regulatory and legal matters	(2)
Net currency adjustments	(35)
Operating income attributable to acquisitions that occurred during 2021	(1)
Adjusted operating income for bonus calculation	\$4,346

Source: [Stryker Proxy Statement](#)

Note: A negative adjustment implies the contribution was positive



Insights From A Spruce Point Interview

Spruce Point Question

"Let's look at 2019, Stryker spent \$800m on acquisitions (and \$200 of deal costs). Revenues were about \$350m and the proxy said acquired EBIT was -\$7m. From the outside looking in, this doesn't look great. What's your take?"

Former Stryker M&A Professional

*"Look at Mobius, for example, the challenge, again, this goes back to how, what I was explaining about the structure, and **this is why the reports don't always turn out great internally**. In order to sell a deal to the Capital Committee and get Board approval or whatever amount you want, **Mobius was like over \$200 million, you have to be pretty optimistic with what you think your revenues are going to be. And so that sells the the deal and the price you want to pay for it, and gets you approval for the funds. And that's why I was telling you, it's a bit of a slight game internally in order to get the funds. People are very optimistic with their (deal) presentations, right? So then you look at a year later, you're not hitting what you projected**. And so when you look at it in comparison to what you paid, because you thought you were gonna sell more because you wanted to, you know, get that deal through, it's not very positive. **So that happened for sure, with Mobius. Also Mobius had some challenges in the sense that they're massive CT scanners, they're mobile CT scanners in the hospital. Mobius' capacity was extremely limited. I think when we acquired them, they could produce four a week if we were lucky. Demand was higher. We assumed we could ramp up capacity a lot quicker than we could. That was an issue. We didn't realize how long training time and how manual the process this was, and supply chain and the parts, some of the lead times were almost a year to get components of this very highly electronic, specific parts for this. And it had to have a very specific battery that was custom made to fit into that device to make it mobile.**"*

Acquisition Mysteries

Spruce Point believes Stryker is becoming more opaque with acquisition announcements. It used to provide some historical revenue context of deals, and now it often doesn't. Furthermore, there are quarters it records acquisitions through the cash flow statement, with no associated disclosures. Now we're finding large issues between when deals are announced and closed (eg. [SafeAir](#) and [TMJ Concepts](#)). In 2021, the cash costs disclosed in the footnotes no longer match the figures in the cash flow from investing section.

Discrepancies in 2019 Acquisitions						
\$ in mm	Source	Q1	Q2	Q3	Q4	Total 2019
Acquisitions, net of cash (A)	Cash flow from investing	\$180.0	\$80.0	\$21.0	\$521.0	\$802.0
Acquisition Target (Date Closed)	Press Releases, SEC filings	OrthoSpace 3/14/19 Arrinex 2/25/19	--	Conformis Assets 9/30/19 SafeAir AG? (announced 2018)	Mobius and Cardan 10/21/19 TSO3, Inc 10/2/19 Zipline?	--
Deal cost disclosed, net of cash: (B)	Note 6, acquisitions	\$208.0 + ?	--	\$14.0	\$473.0 + \$51.7 + ? = \$524.7	\$746.7
Difference (A-B)		(\$28.0) + ?	\$80.0	\$7.0	(\$3.7)	\$55.3

Source: [Conformis](#), [TSO3](#)

Discrepancies in 2021 Acquisitions						
\$ in mm	Source	Q1 ⁽¹⁾	Q2	Q3 ⁽²⁾	Q4	Total 2021
Acquisitions, net of cash (A)	Cash flow from investing	\$27	\$77	\$122	\$113	\$339
Acquisition Target (Date Closed)	Press Releases, SEC filings	Q1 or Q2? TMJ Concepts		Gauss Surgical 9/27/21	Thermedx	--
Deal cost disclosed, net of cash: (B)	Note 6 or 7, acquisitions	\$31	\$77	\$159	\$126	\$393
Difference (A-B)		(\$4)	--	(\$37)	(\$13)	(\$54)

- 1) Stryker [10-Q](#) Note 7 said, "The aggregate purchase price of our acquisitions, net of cash acquired was **\$31** and \$23 in the three months 2021 and 2020" which does not match cash flow statement 3m figure of \$27m
- 2) Stryker [10-Q](#) Note 7 said, "The aggregate purchase price of our acquisitions, net of cash acquired was **\$267** and \$26 in the nine months 2021 and 2020" which doesn't match cash flow statement 9m figure of \$267m

Major Discrepancies With Acquisition Spending

Spruce Point cannot account for at least \$294 million in milestone payments. As later illustrated, milestone payments for [Mobius](#) and [OrthoSpace](#) appear to have been made, but where are they flowing through the cash flow statement?

Annual Report

*"In 2019 we **completed** acquisitions for total net cash consideration of \$802 and \$294 in future milestone payments primarily due upon the achievement of certain regulatory and commercial milestones."*

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Business Combinations

Description of the Matter As described in Note 6 to the consolidated financial statements, the Company completed business combinations during 2019 for total consideration, net of cash acquired of \$1,096 million. The most significant of these were (1) the acquisition of all outstanding equity of OrthoSpace, Ltd. for total consideration, net of cash acquired of \$208 million; and (2) the acquisition of all outstanding equity of Mobius Imaging and Cardan Robotics for total consideration, net of cash acquired of \$473 million. The acquisitions were accounted for as business combinations.

The recognition, measurement and disclosure of the Company's business combinations in the 2019 consolidated financial statements was considered especially challenging and required significant auditor judgment due to the complex determination by management of the appropriate assumptions, such as discount rates, revenue growth rates, and projected profit margins, for the valuation of acquired assets and expected probabilities of key outcomes for the valuation of assumed liabilities, including, but not limited to, developed technology and contingent consideration. The Company used a discounted cash flow model to measure the developed technology and a probability weighted discounted cash flow approach to measure the contingent consideration.

Dollar amounts in millions except per share amounts or as otherwise specified.

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Source: [2019 10-K](#)





Cash Flow Data	2019	2018	2017	2016	2015
Net cash provided by operating activities	\$ 2,191	\$ 2,610	\$ 1,559	\$ 1,915	\$ 981
Purchases of property, plant and equipment	649	572	598	490	270
Depreciation	314	306	271	227	187
Acquisitions, net of cash acquired	802	2,451	831	4,332	153
Amortization of intangible assets	464	417	371	319	210
Dividends paid	778	703	636	568	521
Repurchase of common stock	307	300	230	13	700



A Closer Look At Challenges With The Vocera Communications Acquisition

Summary of Why Spruce Point Is Extremely Negative On Stryker's \$3.1 Billion Vocera Deal

Spruce Point believes Stryker's \$3.1 billion levered acquisition of Vocera Communications is another example of it overpaying for a low quality business while failing to do adequate due diligence. Our biggest concern is that Vocera, which is heavily dependent on Nuance Communications for its backbone technology, could now be disintermediated following Microsoft's acquisition of the business in April 2021. We believe this is a risk that the market is underestimating, but that according to a former Vocera technology employee interviewed by Tegus, there are few limiting factors except "time and money."

	Issue	Evidence
 Prior Allegations of Vocera Management Being Too Optimistic	<ul style="list-style-type: none"> Shortly after coming public, Vocera was hit with a securities lawsuit that alleged management provided overly optimistic financial targets while it was aware of changes to its business that were causing revenue shortfalls Allegations that management smoothed revenue by pulling from backlog Current CEO Lang was COO at the time and a defendant in the lawsuit. The lawsuit was settled for \$9m 	<ul style="list-style-type: none"> Spruce Point has analyzed all of Vocera's long-term financial claims about its business, including revenue growth, gross margin, and EBITDA margin objectives Over a decade from 2011-2021, all Vocera's targets proved too aggressive and were never achieved by CEO Lang
 Vocera's Recent Financial Performance Is Unsustainable	<ul style="list-style-type: none"> Stryker has claimed that Vocera's recent financial performance did not reflect a pull forward of results from COVID-19, but rather is evidence of sustained underlying trends benefiting the business 	<ul style="list-style-type: none"> According to a former employee interviewed by Tegus, Vocera saw an increase of purchases from existing customers during COVID-19 in response to the pandemic Vocera has also said that travel expenses and hiring were unusually low during COVID-19 and would normalize
 Vocera Disintermediation Risk Rising, Growth Opportunities Shrinking	<ul style="list-style-type: none"> Since its IPO Vocera has claimed a \$6 billion TAM In addition, it has claimed international revenues would become an increasing percentage of its business, and that non-healthcare revenues would increase Vocera has never disclosed any key dependency from any partner or supplier, nor highlighted disintermediation risks 	<ul style="list-style-type: none"> Vocera recently removed its \$6 billion TAM claim around the time its CFO resigned and the Nuance deal was announced Vocera has never achieved its goals of greater international sales penetration or non-healthcare sales In April 2021, Microsoft acquired Nuance Communications. According to a former Vocera technology professional interviewed by Tegus, Vocera is heavily reliant on Nuance and that Microsoft / Nuance could effectively disintermediate it with time and money
 Stryker Overpaid For Vocera	<ul style="list-style-type: none"> Stryker paid \$79.50 per share for Vocera, an all-time high for its stock, valuing it at 11.7x, 63x and 86x 2022E sales, EBITDA and EPS Stryker increased leverage with \$1.5bn of term loan debt 	<ul style="list-style-type: none"> Vocera's fairness opinion shows that with a traditional precedent transaction or public comps multiples that Stryker's price paid can't be justified Street high broker target for Vocera was \$71/share

Early Allegations of Bad Faith Made Against Vocera Communications

There were early signs of challenges with Vocera Communications. Not long into its life as a public company, [securities litigation](#) alleged that management misled investors with overly optimistic projections. Plaintiff lawyers even had confidential witnesses that alleged management smoothed revenue by taking from backlog. The case was eventually settled for \$9 million in 2016. Brett D. Lang was COO and became CEO of Vocera who led its sale to Stryker.

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Plaintiff, Michael Brado, by his attorneys, alleges the following upon information and belief, except for those allegations that pertain to Plaintiff and his attorneys, which are based on personal knowledge. Plaintiff's information and belief are based upon, among other things, Counsel's investigation, which included, *inter alia*, review and analysis of filings by Vocera Communications Inc. ("Vocera" or the "Company") with the United States Securities and Exchange Commission ("SEC"), press releases, conference calls, news articles, and analyst reports. Plaintiff believes that substantial additional evidentiary support will exist for the allegations set forth herein after a reasonable opportunity for discovery.

NATURE OF THE ACTION

1. This is a federal securities class action on behalf of all persons or entities that purchased or otherwise acquired: (i) Vocera securities between March 28, 2012 and May 3, 2013, inclusive (the "Class Period"), seeking to pursue remedies under the Securities Exchange Act of 1934 (the "Exchange Act"); and/or (ii) Vocera common stock pursuant and/or traceable to the registration statement issued in connection with the Company's initial public offering on March 28, 2012 (the "IPO" or "Offering"), seeking to pursue remedies under the Securities Act of 1933 (the "Securities Act"). The "Class" (as more fully defined below in Paragraphs 81 and 82) includes all persons who purchased or otherwise acquired Vocera securities during the Class Period or pursuant and/or traceable to the registration statement issued in connection with the IPO, and were damaged thereby.

2. Defendant Vocera is a leading provider of mobile communication solutions to healthcare and non-healthcare markets. The Company is headquartered in San Jose, California. Vocera offers software applications, hands-free wearable voice-controlled communication badges, smartphones, and other wireless devices to hospitals and to other enterprises where workers are highly mobile. The Company also provides consulting, training, and technical support services with customers. The Company sells its products through a direct sales force, resellers, and distributors in the United States, the United Kingdom, and Australia. At all relevant times, Vocera was traded on the New York Stock Exchange ("NYSE") under the ticker

CLASS ACTION COMPLAINT

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symbol "VCRA."

3. Beginning on March 28, 2012, Vocera issued a series of false and/or misleading statements and/or material omissions concerning the Company's financial condition that caused the Company's shares to trade at an artificially high price.

4. Specifically, during the Class Period, the Company made false and/or misleading statements and/or failed to disclose: (i) the extent of adverse impact that healthcare reform was having on the closing of sales of the Company's communication products to hospitals; and (ii) the extent of adverse impact that the federal budget sequestration was having on the closing of sales of the Company's communication products to government hospitals.

5. On March 28, 2012, Vocera conducted its IPO in which the Company offered 5 million common shares of Vocera stock, as well as another 877,500 common shares that could be purchased at the option of the underwriters. The Company offered these common shares at \$16.00 per share.

6. Following the IPO, and during the Class Period, Vocera share prices increased significantly, climbing to a Class Period high of \$31.52 per share on September 13, 2012.

7. Then, on May 2, 2013, after the markets closed, Vocera shocked the investing public when it announced financial results for the first quarter 2013 that were significantly worse than expected. The Company reported revenue of \$22.4 million, and non-GAAP earnings per share of \$0.07, far below analysts' expectations and previously released guidance. The Company also sharply reduced its previously stated revenue guidance for full-year 2013, from between \$120 million and \$130 million, to between just \$100 million and \$110 million. Furthermore, the Company reduced its guidance for non-GAAP earnings per share from a profit of \$0.33 to \$0.51 to a loss of \$0.06 and a profit of \$0.18.

8. On a subsequent earnings call, the Company's management attributed the poor results and lowered guidance to, among other factors, increased financial pressure and scrutiny from the Company's hospital customers as a result of the healthcare reform initiative. Additionally, several expansion deals that the Company had previously stated were to be

CLASS ACTION COMPLAINT

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Individual Defendants knew about the revenue shortfalls and proactively chose to use the backlog to "smooth" Vocera's quarterly numbers. CW2, corroborated by CW1, offered that Vocera "continually missed...forecasts quarter after quarter [but] Bill (Zerella) was insistent on growth and took from backlog to make up the shortfalls." ¶104.²⁴ Zerella who authorized what to book as revenue and what to ship (¶105), specifically authorized the unapproved shipment in IQ13 "as a last minute attempt to make revenue numbers." ¶¶123, 127.

Defendants' fourth argument – the purported absence of anyone raising concerns about declining bookings, backlog, or the smoothing of earnings – fares no better. The Complaint establishes that Vocera employees raised these very concerns with at least Zerella (See ¶94 (CW1 told Zerella that Vocera "would not meet internal projections of future sales based on the realities of what was going on with the business."); ¶¶116, 117 (Hutchinson warned Zerella that the Company was going to "fall off a cliff" because it was eroding backlog; Zerella forbid Hutchinson from showing trending graphs at revenue meetings that would have shown backlog running out and that sales would not support Company targets), and that the other Individual Defendants were present at meetings where the use of backlog to meet guidance was discussed (¶103).²⁵

2. Stock Sales Support Scientist

Defendants Zollars and Lang benefited handsomely from stock sales while Vocera's stock traded at artificially inflated prices, selling over 450,000 shares and collectively netting over \$11 million in proceeds. ¶134. It is well established that "personal financial gain may weigh heavily in favor of a scientist inference." *Tellabs*, 551 U.S. at 325. "Unusual trading or trading at suspicious times or in suspicious amounts by corporate insiders has long been

²⁴ Ignoring facts in the Complaint, Defendants claim that allegations that the IQ13 forecasts and related statements were not supportable are based on merely "after-the-fact discussions with unidentified financial planners," calling them "hindsight allegations." MTD at 17. But there is nothing "hindsight" about down-trending graphs Zerella forbid Hutchinson from showing in 4Q12 and the unauthorized shipment of product and use of backlog in 4Q12 and IQ13 to meet revenue targets.

²⁵ In response to this damning fact, Defendants attempt to raise a factual dispute – arguing that capital investments in the Company prove the Company wasn't really "falling off a cliff" at all. MTD at 20. It is inappropriate to resolve factual disputes on a motion to dismiss. See, e.g., *Livid Holdings Ltd. v. Salomon Smith Barney, Inc.*, 416 F.3d 940, 949-50 (9th Cir. 2005).

PLS. OPP'N TO THE VOCERA DEFS.' MOT. TO DISMISS THE EXCHANGE ACT CLAIMS FROM THE CONSOL. CLASS ACTION COMPL. [MASTER FILE NO. 3:13-cv-03567 EMC]

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Looking Back, Vocera Never Achieved Any of Its Long-Term Financial Projections

In context of claims alleging management issued bad faith guidance, Spruce Point believes it worthwhile to assess Vocera's ability to meet its long-term projections. Vocera issued long-term revenue growth commitments of 25%. However, by the time Stryker acquired the Company, its top line growth compounded at just 11.4% over a decade. Vocera initially promised long-term 70% gross margins, but adjusted them lower to 68%. These targets were never achieved, nor were its 20% adjusted EBITDA target.

Vocera
Long-Term Sales
Guidance
Fmr. CEO Zollars

"But looking forward, **we want to reiterate our commitment to long-term growth of 25% on the top line.** We are fortunate to have a very large market opportunity, a unique solution, a healthy and growing installed base, and numerous investment initiatives underway as I just described.

Source: [Vocera 2012 Conf Call](#)

Vocera
Long-Term
Gross Margin
Guidance
Fmr. CEO Zollars

"Overall, gross margins were 62.6% in the quarter versus 61.6% in the first quarter of last year. Gross margins decreased from the 66% levels we reported for the last 2 quarters. **We, however, have not changed our view of the long-term gross margin target of 70%, since we believe all the same drivers remain in place.**"

Source: [Vocera Q1 2013 Conf Call](#)

CEO Lang
Vocera Reset
Long-Term
Guidance
2017

"And finally, 2016, was the year where we accelerated our progress towards our target operating model. **And we've published that our target model at a \$200 million run rate, we believe we can get to a 68% gross margin and a 20% adjusted EBITDA margin.**"

Source: Vocera JPM Conf, Jan 12, 2017 – Note: Targets also discussed at the prior year JPM Conf in 2016

Vocera Never Hit Any of Its Long-Term Targets

\$ in mm	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	CAGR
Annual Sales	\$79.5	\$101.0	\$102.5	\$95.4	\$104.1	\$127.7	\$166.0	\$179.6	\$180.5	\$198.4	\$234.2	--
Sales Growth	40.0%	27.0%	1.5%	-6.9%	9.1%	-22.7%	30.0%	8.2%	0.5%	9.9%	18.0%	+11.4%
Gross Margin	60.4%	63.7%	62.6%	61.1%	62.0%	61.6%	61.1%	62.4%	60.4%	65.7%	66.2%	All targets fell short
EBITDA Margin	1.2%	7.4%	-7.8%	-24.0%	-13.0%	-5.8%	-1.1%	-0.9%	-3.8%	2.2%	6.3%	

Source: Vocera financials and Bloomberg

Vocera's Failed Goals (Cont'd)

Two of Vocera's big growth ambitions were to expand internationally and to expand its presence beyond healthcare markets. Fast forward to today, we see that international revenue did not outgrow domestic and average revenue per international and non-healthcare customer declined significantly. This does not suggest that Vocera achieved another one of its objectives "to penetrate its existing installed base" otherwise revenue per customer and facility should have been driven higher over time.

IPO Goal	Grow our international healthcare presence. Today, in addition to our core U.S. market, we sell primarily into other English-speaking markets, including Canada, the United Kingdom, Australia, the Republic of Ireland and New Zealand. As of December 31, 2011, our solutions were deployed in over 90 healthcare facilities outside the United States.
At IPO	"Although we derive a relatively small portion of our revenue from customers outside the United States, we believe that non-U.S. customers could represent an increasing share of our revenue in the future. During 2010 and 2011, we obtained 9.7% and 7.3% of our revenue, respectively, from customers outside of the United States, including Canada, the United Kingdom, Australia, the Republic of Ireland and New Zealand?"
At Time of Stryker Acquisition	"As of December 31, 2021, our solutions were selected by nearly 400 healthcare facilities outside the United States. During the years ended December 31, 2021, 2020 and 2019, we generated 9.4%, 10.7% and 8.7% of our revenue, respectively, from customers outside of the United States, including Canada, the United Kingdom, Australia, New Zealand and Middle Eastern countries including the United Arab Emirates, Saudi Arabia and Qatar"
Spruce Point Observation	International revenues grew from \$5.8 to \$22.0 million from 2011 - 2021 BUT: Average revenue per international healthcare facility declined from \$65,486 to \$55,037 (or by 15%) In 2016, CEO Lang said that International would be 20% - 25% of its business over the next few years. ⁽¹⁾ This goal never materialized
IPO Goal	Expand our communication solutions in non-healthcare markets. While our current focus is on the healthcare market, we believe that our communication solutions can also provide value in non-healthcare markets, such as hospitality, retail and libraries.
At IPO	"Our Voice Communication solution has been deployed in over 100 customers in non-healthcare markets, including hospitality, retail and libraries. Total revenue from non-healthcare customers accounted for 3% of our revenue in 2011."
At Time of Stryker Acquisition	" To date, our solutions have been selected by over 450 customers in non-healthcare markets. Total revenue from non-healthcare customers accounted for 2%, 2% and 4% of our revenue for the years ended December 31, 2021, 2020 and 2019, respectively.. "
Spruce Point Observation	Non-healthcare revenues grew from \$2.4 to \$4.7 million from 2011 - 2021 BUT: Average revenue per client declined from \$23,851 to \$10,409 (or by 56%)

Vocera Retracted TAM Claims Post CFO Departure, And Ahead of Stryker's Acquisition

Vocera retracted its \$6 billion TAM claim, one which it steadfastly promoted since its IPO, shortly after its CFO Justin Spencer [resigned](#) in January 2021 and Microsoft acquired Nuance Communications (Vocera's backbone technology) in April 2021.^(1,2) When asked about the TAM on the last conference call before Stryker's acquisition, the CEO made a defensive comment, asking to take the conversation offline.

Piper
Analyst

"Can I just one quick follow-up, I guess, how should we think about the total addressable revenue opportunities for each of those solutions, so kind of comparing the magnitude of the TAM available for badges, Engage, Ease and Edge?"

CEO Lang
Response

"It's hard to quantify it succinctly. So I think maybe a longer off-line conversation. I would tell you that the Engage opportunity is quite large. Those deals tend to be very large software deals, because they're typically going house-wide or hospital-wide. And once they make the decision to do these kind of clinical integration, they want to standardize it across the health system. And so those end up being very, very large software opportunities."

Source: [Q3 2021 Conf Call](#)

Feb 2021: \$6 Billion TAM Claim

Large Global Market Opportunity

U.S. Hospitals 1253⁽¹⁾ U.S. Healthcare 137 (non hospital) International Healthcare Facilities 315 Global Non-Healthcare Facilities 414



115+ new healthcare facilities in 2019

~\$6 Billion Global Market Opportunity

■ Vocera Hospitals ■ Non-Vocera Hospitals

Federal Hospitals ¹	Vocera ²	Total ¹
VA	90	169
DoD	20	43
Total	110	212

⁽¹⁾ Based on Definitive US Healthcare Database. As of December 31, 2019

² Federal numbers are for acute care hospitals, do not include clinics or ambulatory care centers

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Sept 2021: TAM Claim Omitted

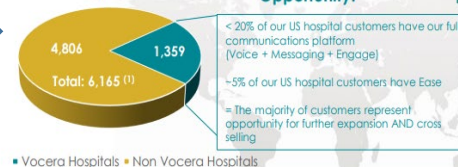
Large Market Opportunity

U.S. Hospitals ~1360⁽¹⁾ U.S. Healthcare ~175 (non hospital) International Healthcare Facilities ~340 Global Non-Healthcare Facilities ~435

Purchased by 22% of U.S. Hospitals⁽¹⁾⁽²⁾

Sizeable Cross Sell and Expansion Opportunity:

De-facto standard in the Federal Market:



■ Vocera Hospitals ■ Non Vocera Hospitals

Federal Hospitals	Vocera ⁽²⁾	Total ⁽¹⁾
VA	108	161
DoD	21	36
Total	129	197

⁽¹⁾ Based on Definitive US Healthcare Database as of December 2020

⁽²⁾ Represents the total number of hospitals, expressed as a percentage of all U.S. hospitals (1,359/6,165=22%), that have purchased a Vocera solution. Most of these facilities represent opportunity for further expansion and cross selling

⁽³⁾ Federal numbers are for acute care hospitals, do not include clinics or ambulatory care centers

CONFIDENTIAL

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Source: Vocera, Feb 2021

- 1) [IPO Prospectus](#) claiming \$6 billion TAM
- 2) [Microsoft acquires Nuance communications](#), April 12, 2021

Source: Vocera, Sept 2021

Stryker Slashes Vocera's TAM Claim And Offers Little Insight To How It Will Be Achieved

Spruce Point believes Stryker is wildly overpaying for Vocera at a \$3.1 billion dollar valuation. Even by Stryker's own admission, the core market today is only \$1 billion. Citing its own internal research, Stryker claims the total global TAM is \$3 - \$5 billion, which is lower than the \$6 billion TAM claim that Vocera recently retracted. As is often the case, when pressed for details, we observe Stryker's management won't give specifics about how it plans to achieve its TAM.

Analyst
Jennings

"And then the follow-up question is really just Kevin as your team is building out digital capabilities and thinking about the ultimate sort of the \$3 billion to \$5 billion TAM that's been laid out. Can you just talk about where those portfolio gaps sit now and I know there's a lot of opportunity you just said in your last answer, but what areas within global digital care coordination is Stryker need to -- where do they need to build out?"

CFO Answers
Instead of
CEO

*"Yeah, Josh. I'll take the first question, as you think about the process, **right now we won't comment on that, just given where we are in the process.**"*

Source: [Vocera Deal Call](#), Jan 6, 2022

Significant **segment expansion** opportunities

stryker

**Paying \$3BN For A
Current \$1BN TAM**

- Global Digital Care Coordination and Communication Segment: approaching \$1B and growing at 15%+ annually
- Fast-growing segment of digital care coordination and communication due to macro-tailwinds and increasing importance of solution
- The space is relatively underpenetrated today, both in the US and globally
- Estimated that only ~35% of US hospitals have some form of 'advanced' secured communication solution, leaving ample room for further adoption and penetration
- \$3B - \$5B total addressable opportunity exponentially larger than the current segment⁽¹⁾



**Lower Than The
\$6BN Claim**

Note: Segment sizes and growth rates are from internal estimates based upon competitive intelligence, investor presentations, and publicly available information. (1) Global Addressable Opportunity. Sizing based upon internal financial models, proprietary company information, and other research. Low end of estimate does not include full set of international countries.

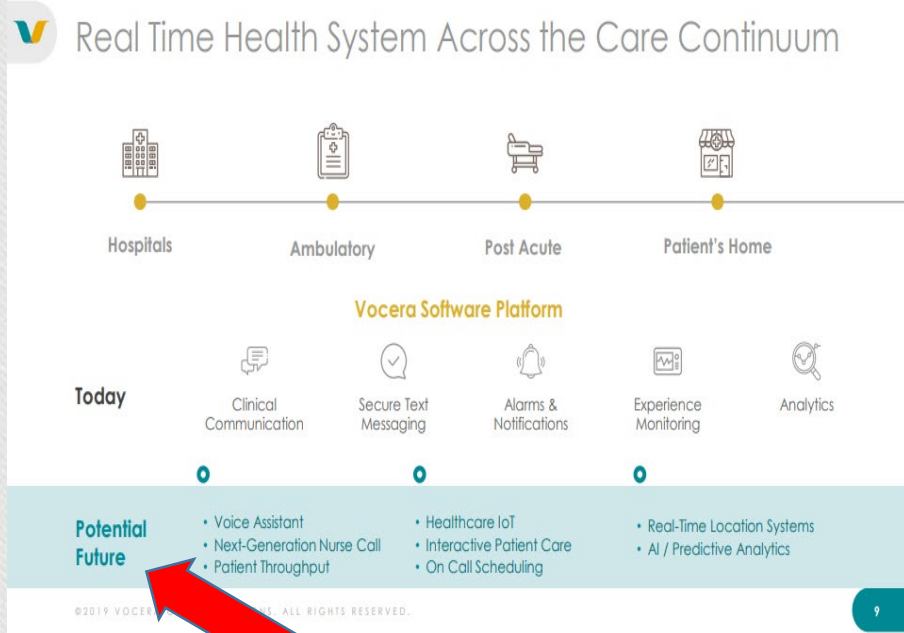
9

Source: [Stryker deal presentation](#)

Vocera Walking Back “Potential Future” For Product Roadmap

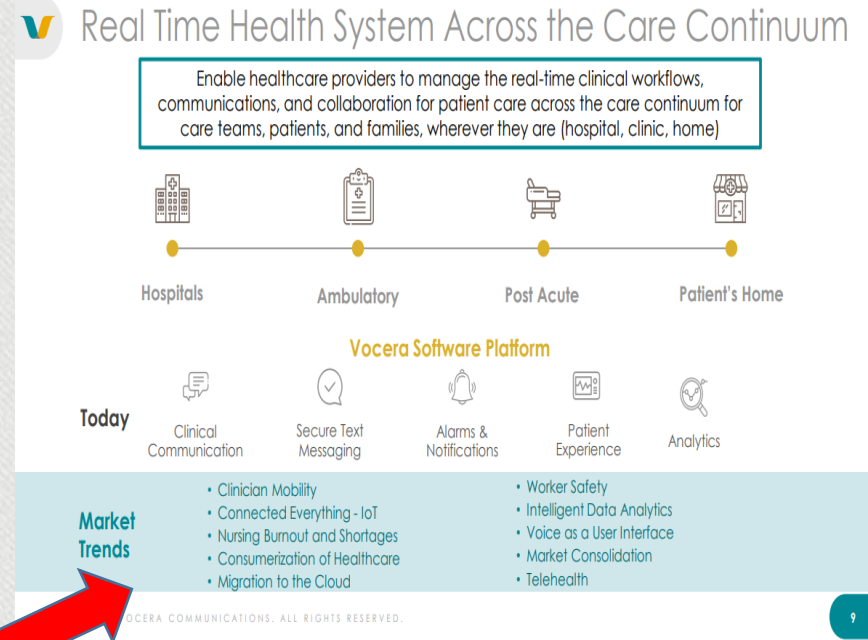
Looking carefully, we see that Vocera retracted claims of its system’s “*Potential Future*” and replaced it with “*Market Trends*”. We view this as a weaker endorsement of its product’s roadmap.

Feb 2021: “Potential Future”



Source: Vocera, Feb 2021

Sept 2021: “Market Trends”



Source: Vocera, Sept 2021

Weaker Language



Stryker's Claim That Vocera's Experienced No COVID-19 Revenue Pull Forward Contradicted By Former Vocera Employee

Stryker claims that Vocera's revenues weren't a pull-forward of business from COVID-19, but reflected underlying growth of existing trends. Tegus interviewed a former Vocera technology professional who shared insights that the Company was a COVID-19 beneficiary from existing clients purchasing more devices and not net new customer purchases.

Leerick
Analyst

J. Andrew
Pierce
Group
President of
MedSurg &
Neurotech

"On the Vocera business specifically, I mean, obviously, COVID has driven higher demand of these types of offerings, right? So just curious about how you think of how much demand that we've seen over the last 18 months is pull forward versus potential sustainable long-term demand here?"

"Sure. **We really don't feel like this is a pull-forward business. The business growth over the last 24 months is simply a highlight of existing trends.** And in particular, the recognition that nurses matter by our customers. And we don't feel that, that's going to go away. That is a sustainable trend. So as the nurse has taken a more prominent position in the health care setting, these types of technologies will only become more important over time. And then as noted, workplace safety has become -- as part of that value proposition for the nurse, a very important part of the equation and Vocera really addresses that quite nicely."

Source: [Stryker / Vocera Deal Call](#)

Tegus
Interview

Former
Vocera
Technology
Professional

"Just trying to understand the impact of COVID on the business. So I just want to understand if hospitals to any extent are ordering extra devices because of how they were used during COVID. What was the overall impact on the business?"

"**Yes. So what I was experiencing was that during the early part of COVID, there was kind of a surge as they were increasing staff, increasing potential capacity to manage this large influx of patients because there were so many uncertainties at that time.** People didn't know if they're going to have like the mass units or the tents or whatever you want to call them, having to be stood up to accommodate thousands upon thousands upon thousands of sick patients. **I think Vocera saw some ramping up in the acquisition of the hands-free devices because they can be worn without having to break a sterile environment. And so the customers that were pretty well established in the beginning of 2020. And by the way, not all of them, but enough of them had a surge purchase to accommodate for that.** Now as you probably know now historically, that never came to fruition, thank God, but there was still enough of a spike to where having a hands-free device was very valuable. And I think helps position Vocera very favorably because of the ability to maintain that sterile environment, but when you're in your PPE, yet have the capacity to communicate with a team member regardless if it was emergent or nonemergent. So I think there's a lot of value for those. Now the organizations that didn't have Vocera seem to be less reluctant to introduce change. **So a majority of the opportunities that I was part of were for the existing client base and not new facilities because of so much volatility in the market in 2020.**"



Insights From A Former Vocera Technology Professional

Tegus interviewed a former technology professional who shared insights about the expectation of Vocera losing market share and sustaining double digit growth.

Tegus Interview

"I wanted to ask about how much if any, do you see the impact of Cerner and Epic having integrated and secure texting platforms and their systems impacting Vocera?"

Former Vocera Technology Professional

"Yes. I think it is an absolute threat especially as Cerner and Epic mature, I don't think that they're really viable competitors today, quite frankly, they say that they are, and they say they have a bunch of things. They're still pretty archaic and basic capabilities. I mean we're talking like the most minimal of capabilities from just a secure messaging standpoint, just like the old school texting, think about how texting has kind of been that they are where texting was 10 years ago probably versus the components that are in the intelligent messaging that Vocera has. **So that gap will shorten at some point because, I mean, Epic is a monster and so is Cerner. And as that happens, I think you'll see some of that market share. I anticipate some of that market share is going to erode for Vocera.** But I think what they will hold on to and if they, in my opinion, they should continue to market their hands-free capability because that's the spot that they own that IP. There's no one else that's really, their nearest competitor claims they have it, but it's more of an earpiece connected to a smart device, and it's not really driving the same way that the hands-free devices are for Vocera. **So I think Vocera is very favorably positioned in the marketplace. But they will incur some revenue loss and lose some customers because of the Epic is for sure. I don't think Cerner as close as Epic is, but Epic is tagged, they're getting deeper into the space that Vocera plays into.**"

Tegus Interview

"So I just want to understand what do you think the ability to grow the business is given the level of penetration that they already have as well as some of these varying dynamics within the marketplace that we've talked about?"

Former Vocera Technology Professional

"Yes. So I think double-digit growth will be difficult for Vocera, they don't create or don't partner with some of those other solutions that we've talked about, specifically the ones that are around the device within the patient room. I think it's going to become a challenge to penetrate the market in any deeper, it doesn't scale down very well. So if you're looking at trying to get into some of the areas that are the ambulatory market or the outpatient settings that you're talking about in terms of how patients now are seeking treatment will be an impact to Vocera. And the other piece that's interesting too is looking at how telemedicine is going to pan out, right. **So with COVID, people are now getting treatment and visits, obviously, not inpatient visits, but through telemedicine space. And so I'm wondering how that's going to impact the need for communication devices outside of the four walls of the hospital. But as it relates to just being the device of choice depending on what happens with Amazon and Apple entering into the patient rooms. I think double-digit growth would be very difficult without some more acquisitions or growth in their product set.**"



Insights From A Former Vocera Technology Professional About Microsoft/Nuance Disintermediating Vocera

Tegus interviewed a former technology professional who shared insights about the risk that Microsoft's acquisition of Nuance Communications allows it to disintermediate Vocera, which is dependent on Nuance's technology.

Tegus Interview

"So you touched on Nuance. That was actually going to be one of my questions. So Microsoft acquiring Nuance per their press release, Nuance Solutions is leveraged by 77% of the hospitals, used by more than 55% of physicians, 75% of radiologists in the United States. You also have Microsoft Teams. So what does Microsoft acquiring Nuance do, if anything, to Vocera?"

Former Vocera Technology Professional

"Well, I think the reliance upon Nuance for Vocera today is pretty heavy. So it would mean they're somewhat dependent upon that relationship staying intact." There are some other stats out there that they might be able to leverage, but Nuance, that was a smart purchase by Microsoft, has a lot of huge presence in the market like you just shared. The other piece, they're doing a lot of work with Epic. So I think the relationship between Vocera and Nuance prior to the acquisition was very positive. I don't have any visibility or insight to how that's working now that Microsoft owns them on what would impact that. **But if for some reason, that was pulled away, that would be a challenge for Vocera. It's the voice recognition piece and the intelligence of how they teach their devices to understand the end-user it gives those handsfree commands. So yes, it will be interesting if that were to change, that would be pretty bad for Vocera. Pretty damning on the Nuance side, too, but it would be bad for Vocera."**

Tegus Interview

"What is the core value that Vocera is delivering? Is it just the integration side of the business? I'm just trying to understand why, if you're Nuance, why couldn't you create, or how hard would it be to replicate what Vocera is doing, especially if you're doing the back end because Microsoft may have a vision that kind of what we just talked about?"

Former Vocera Technology Professional

"Yes, so I just recall that there are some patents and intellectual property on how those devices have been registered and are kind of created around. So it's not like we have a monopoly on the ability to do a handsfree device, but it absolutely is the market leader. **Now the barriers to entry, we have to be asked upon like Microsoft themselves. I don't think will take them too much to figure out how to build the device and have Nuance running on the back end and have it integrated all the Microsoft stuff. So that's absolutely a possibility. They absolutely have the money to do it. I just think there are some pieces that Vocera has engineered specifically, and I believe they have intellectual property around some of those components that make the device more user-friendly in a healthcare setting. So what I mean by that is some of the noise-canceling capabilities that are specifically inherent in the enhanced free device of how they engineered o block out the ambient noise and pick up just the voice command.... And again, what's the limitation for someone else to duplicate that, it's just money and time."**



Insights From A Former Vocera Salesperson

Spruce Point interviewed a former Vocera sales person who had been with the Company for over a decade and gave some insights. The discussion is paraphrased below. One takeaway we believe is that the sales cycle is much longer than management has suggested at two to five years. In addition, the individual was surprised that Stryker had acquired Vocera, claiming that Stryker was a name that never was talked about as a logical buyer for the business.

Spruce Point Question

"Were there any recent new competitive threats or changes in the sales cycle in the past couple years?"

Former Vocera Sales Employee

*"I wouldn't say a change in the competitive landscape, **but I started to worry more about Epic as a competitor.** They we starting to pull together their offerings in a more cohesive fashion to compete holistically with us. **As far as the sales cycle, for enterprise deals, the cycle can be really long. More than two years and up to five years. If you're lucky eighteen months.** It's not a simple sale process. We did see an affect on our business from COVID-19. A few enterprise deals come through due to COVID-19."*

CEO Lang
Oct 28, 2021
In Response
To Question
on Sales
Cycle

*"I would say it's stabilized. It's longer than it was before, but now that we've sort of transitioned the business where the bulk of the deals are on that same cadence, it's just a matter of building pipeline. **So whether it's a 12-month or 18-month sales cycle doesn't matter in as long as you've made the transition to the new cadence.**"*

Source: [Q3 2021 Conf Call](#)

Spruce Point Question

"Where you surprised that Stryker acquired Vocera? Stryker talks about this as being a sales synergistic acquisition. What's your view."

Former Vocera Sales Employee

*"**Yes over the years we often speculated who would buy Vocera, but Stryker was never a name that came up in discussion.** From my understanding, their products are a little more need to have, versus selling Vocera's platform which is a nice to have product. We take a more consultative approach to selling, and I'm not sure what Stryker is like. I'm hearing some rumblings through the grapevine from the salespeople I used to work with. I'm not sure how all our salespeople will feel working for a much larger organization such as Stryker."*

Stryker Evades Questions On Key Quantifiable Aspects of The Vocera Deal

Spruce Point believes there is a clear lack of discipline in Stryker's acquisition of Vocera. Recall, that Stryker used to be very focused on ROIC, but now dodges discussion of ROIC in this transaction. When asked for specific figures on synergies, the CFO also declines to elaborate. Lastly, management seems to think Vocera is a high growth asset with mid-teens sales growth, despite its long-term growth rate being just 11.4%. We believe management's faulty assumption is to extrapolate recent COVID-19 results.

Andy Pierce
Stryker
Group
President on
M&A Call

*Turning to Slide 9, as we bring Vocera into Stryker, we will be a category leader in the fast growing digital care coordination and communication segment. The global digital care coordination and communication segment is in its infancy and is estimated to be approaching \$1 billion today. However, we believe that the addressable opportunity is significantly larger and will further expand over time as hospitals prioritize investment in more modern communication and workflow solutions. **The annual rate for the category is - - growth rate for the category is in the mid-teens and is accretive to the total Stryker growth rate making it an attractive market adjacency to continue to drive our growth profile.***

Analyst
Biegelsen

*"Thanks for taking the question. One for Glenn and one for Andy. **Glenn, how are you thinking about ROIC on this deal, it's obviously not an inexpensive deal on traditional metrics. So first question is ROIC three to five years out?***

CFO
Boehnlein

*"Hi, Larry. Great, great question. **First of all, as it relates to ROIC, we don't necessarily disclose those numbers specifically. What I would tell you is that we have a pretty disciplined framework about how we look at assets and how we look at the valuation of assets over time**, and Vocera clearly fits within that framework. I think a few things to keep in mind from a valuation perspective, first of all, **this is a high growth asset** in a very attractive healthcare SaaS category that's going to command a certain premium."*

Analyst
Winch

*"Thanks for taking the questions. **I just want to spend a couple of minutes as I think about synergies because it sounds like there are both revenue and expense synergies and is there a way to quantify or just maybe qualitatively talk us through how these are going to progress over the next period of time?***

CFO
Boehnlein

"There are two things, I mean, I think and Andy has really elaborated pretty extensively on some of the sales synergies that we see. And obviously, if you're thinking about our past acquisitions where we integrate our sales force in with products and also take advantage of a lot of the positive impact that their sales forces have, we really think the top line synergies will accelerate growth for sure. This -- on the cost side, this acquisition is really not sort of a cost synergy play in sort of traditional valuation metrics, but I do think there are obviously places, if you think about public company costs that we would eliminate and there are also opportunities to bring Vocera into our shared services platforms that will also drive some nice cost synergies too. But I think overall, as you think about this, this is much more of a top line synergistic play than it really is a cost synergy play."

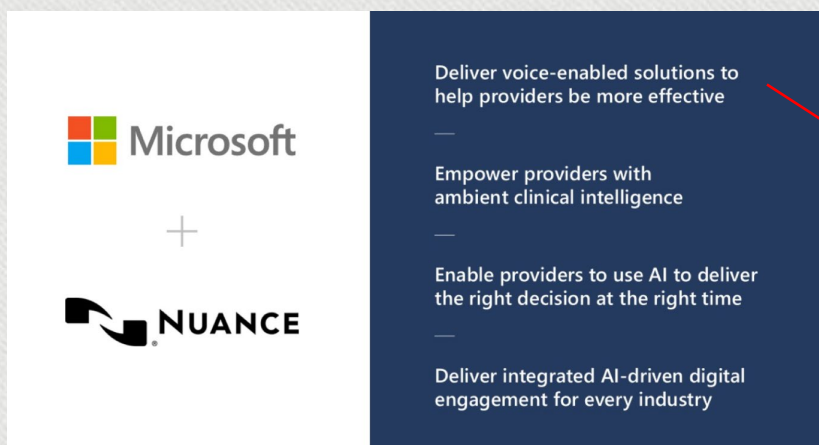
Spruce Point Believes Microsoft / Nuance Could Render The Vocera Deal Worthless

Spruce Point believes the market underestimates the potential that Microsoft and Nuance disintermediate Vocera as it becomes the de facto end-to-end information and communications solutions for the healthcare market.

Commentary From The Microsoft Acquisition of Nuance

"Today, the Microsoft Cloud is differentiated and is leading with industry and cross-industry solutions and our opportunity is to take Nuance's momentum and add Microsoft Cloud for Healthcare. Six months ago, we introduced the Microsoft Cloud for Healthcare, which brings together the breadth of our offerings and adds new capabilities, customizations and standards unique to the industry. Nuance and Microsoft complete the end-to-end patient-provider workflow, capturing the patient interaction, converting into clinical documentation and conducting follow-up actions. Together, Nuance's momentum and growth in these key areas, paired with Microsoft's scale across the enterprise, will increase our total addressable market and expand our AI leadership. Nuance will double our TAM in healthcare provider space and increase our TAM across healthcare to nearly \$500 billion [ph]. This acquisition brings our technology directly into the physician/patient loop, which is central to all healthcare delivery. The acquisition will also expand our leadership in cross-industry enterprise AI and biometric security. Nuance is a recognized leader in conversational AI for intelligent customer engagement through interactive voice response, virtual assistants and voice biometrics. Most importantly, together, we will drive increased customer benefits by augmenting the Microsoft Cloud for Healthcare with Nuance and by combining Nuance's deep enterprise AI expertise with the Microsoft Cloud, we will deliver powerful next generation services and accelerate the growth of Nuance's business and drive growth across our complete tech stack."

Source: [Deal Conf Call](#)



**Sounds exactly like
Vocera's core
competency**

Source: [Microsoft / Nuance Deal Presentation](#)

Spruce Point Believes Stryker Wildly Overpaid For Vocera Communications

Vocera shareholders received \$79.25 per share, which in our view points to Stryker having wildly overpaid. The fairness opinion provided to Vocera shareholders even shows that by using traditional means to value the stock such as public peer valuations, precedent transactions and broker price targets all point to a takeover price in the high \$60s/low \$70s being rich.

Publicly Traded Comps In Healthcare Tech, Med Tech, Enterprise Networking, Vertical Software

Reference Range	Implied Equity Value Per Share of Vocera Common Stock
8.0x - 11.0x CY 2021 Revenue	\$ 50.46 to \$67.80
7.0x - 9.0x CY 2022 Revenue	
Base Case	\$ 51.79 to \$65.43
Upside Case	\$ 53.29 to \$67.20
Downside Case	\$ 50.34 to \$63.74

High Price

\$67.80

Precedent Transactions

Reference Range	Implied Equity Value Per Share of Vocera Common Stock
9.0x - 10.0x LTM 2021 Revenue	\$ 56.49 to \$62.31
8.0x - 9.0x NTM 2022 Revenue	
Base Case	\$ 58.86 to \$65.43
Upside Case	\$ 60.55 to \$67.20
Downside Case	\$ 57.21 to \$63.74

\$67.20

Broker Target Prices For Vocera

Equity Research Analyst Price Targets

Evercore reviewed selected public market trading price targets for the Shares prepared and published by equity research analysts that were publicly available as of January 5, 2022, the last full trading day prior to the delivery by Evercore of its opinion to the Board. These price targets reflect analysts' estimates of the future public market trading price of the Shares at the time the price target was published. As of January 5, 2022, the range of selected equity research analyst price targets per Share was \$36.00 to \$71.00. Public market trading price targets published by equity research analysts do not necessarily reflect current market trading prices for the Shares and these target prices and the analysts' earnings estimates on which they were based are subject to risk and uncertainties, including factors affecting the financial performance of Vocera and future general industry and market conditions.

\$71.00



A Closer Look At Challenges With The Wright Medical Group Acquisition

Evidence That Wright's Revenue Growth Projections Have Been Halved....

Stryker paid a handsome 50% share price premium for Wright Medical. Its financial advisor called this a fair price, which in hindsight was incredibly fair to Wright, but painfully toxic to Stryker. Wright projected 11% – 12% sustained revenue growth, and gross margin expansion peaking at 130 basis points in 2021. Stryker largely bought into the projections, and showed ~10% growth in its investor presentation. Of course, these were pre-COVID-19 estimates. **Ever since the deal has closed, Stryker has walked back revenue growth targets for Wright, and now talks about Wright as growing revenues 6%, or 50% lower than projected.** Gross margins are also likely to have been pressured below projections due to commodity price increases, and supply chain disruptions, which Stryker now says is hurting the overall company.⁽¹⁾

Stryker Paid a 50% Share Premium For Wright Medical

Transaction-Implied Premiums and Transaction-Implied Multiples

Offer Consideration per Share		\$30.75
		Wright's Stock Price
Acquisition Premium/(Discount) Relative to Wright's:		
Unaffected Stock Price @ 10/31/19(1)	\$ 20.80	48%
Unaffected VWAPs @ 10/31/19(1):		
10-Day	20.84	48
30-Day	20.49	50
90-Day	21.06	46
52-Week High(2)	32.86	(6)
Enterprise Value / Revenue:		
CY2020E Management Forecast	5.2x	
Wall Street Consensus Estimates	5.3	
NTM @ 9/30/19 Management Forecast	5.3	
Wall Street Consensus Estimates	5.4	
Enterprise Value / Adj. EBITDA(3):		
CY2020E Management Forecast	24.9x	
Wall Street Consensus Estimates	26.4	
NTM @ 9/30/19 Management Forecast	26.6	
Wall Street Consensus Estimates	27.9	

- (1) Represents the last full trading day prior to a 5.8% increase on November 1, 2019 in the trading price of the Shares on Nasdaq, which coincided with a Bloomberg article suggesting Wright was contemplating a sale transaction.
 (2) Based on intraday stock trading prices.
 (3) Adj. EBITDA is not burdened by stock-based compensation.

Source: [Wright Medical Proxy Statement](#)

Wright Was Projecting 11%-12% Sales Growth

	Calendar Year Ending December 31 (dollars in millions)					
	2019E	2020E	2021E	2022E	2023E	2024E
Revenues	\$ 930	\$ 1,039	\$ 1,171	\$ 1,319	\$ 1,484	\$ 1,652
Gross Profit(1)	\$ 742	\$ 839	\$ 950	\$ 1,059	\$ 1,193	\$ 1,329
Adj. EBITDA(2)	\$ 160	\$ 216	\$ 279	\$ 333	\$ 405	\$ 467
Stock-Based Compensation	(\$ 33)	(\$ 35)	(\$ 37)	(\$ 39)	(\$ 42)	(\$ 44)
Depreciation	(\$ 63)	(\$ 68)	(\$ 73)	(\$ 73)	(\$ 72)	(\$ 71)
Amortization(3)	(\$ 32)	(\$ 32)	(\$ 32)	(\$ 32)	(\$ 32)	(\$ 32)
Operating Income(4)	\$ 32	\$ 81	\$ 137	\$ 189	\$ 260	\$ 321
Capital Expenditures	\$ 90	\$ 70	\$ 81	\$ 78	\$ 74	\$ 70
(Increase)/Decrease in Net Working Capital & Other(5)	(\$ 20)	(\$ 48)	(\$ 45)	(\$ 45)	(\$ 53)	(\$ 53)
Unlevered Free Cash Flow(6)	\$ 3	\$ 36	\$ 74	\$ 117	\$ 164	\$ 211
Non-Operating Cash Flows(7)	(\$ 81)	(\$ 37)	(\$ 27)	(\$ 6)	(\$ 11)	(\$ 6)

**11% - 12% Revenue Growth
With
Material EBIT Margin Expansion (before even
\$100M+ of Stryker's Cost Synergy projections)**

Wright Medical Financials

- Strong forward revenue growth of ~10% (2019E – 2021E)
- 2019 expected revenues of \$900M+; driven by shoulder, ankle, and Augment
- Expected Adj. EBITDA margin of ~20% (by Q4 2019)

Source: Stryker Investor Presentation For Wright Medical

1) FY 2021 Conf Call discussing inflation and supply chain

Wright's Failing Growth

We believe Stryker was overly optimistic with the Wright acquisition in suggesting it would grow high single digits.

Analyst
Hopkins

"Okay. And then just my question -- my other question is **just on the revenue growth assumptions that you're making for the asset you're acquiring going forward**. Can you just maybe talk about your confidence in the sustainability of the market growth rates that we're seeing today in shoulders? And what specifically you assume for, kind of, the revenue growth?"

Spencer
Response

"This is Spence. I'll share a few remarks. Obviously, we're not going to give exact revenue guidance on the future. **However, we feel very confident in these markets. They're both high-single-digit growers upper extremity and lower extremity, accretive to overall Stryker's organic growth.** And we remain confident in the future of the needs in the market and continued growth both, I would say short and mid term and longer term, plenty of opportunity for innovation and additional patient access in these spaces.."

Source: Wright Medical Deal Call, November 4, 2019

CFO
Boehnlein

"As it relates to other aspects of Wright Medical, **we expect comparable growth for Trauma and Extremities to be in the low to mid-single digits in 2021 when compared to 2019. This includes the integration of Stryker's legacy extremity business with Wright Medical,** which will all be part of our Trauma and Extremities division. This growth is impacted by the recovery from COVID-19, partially offset by dis-synergies from the integration activities in 2021."

"**As it relates to sales expectations for Wright Medical, we now expect comparable growth for trauma and extremities to be in the mid-single digits for the full year** when compared to the combined results for 2019."

Source [FY 2020 Conf Call](#), Jan 2021 and [Q1 2021 Conf Call](#), April 2021

Truist
Analyst

"Just for Wright Medical, you're saying -- **you're confident that the combined business will grow at least 6% this year.** Can you just speak to any more detail around sort of the recent drivers in this business? Are you guys seeing any benefit from dislocation associated with the recent Integra spin-off? And then I guess is there any reason why that 6% couldn't be an 8% to 10% growth next year?"

Spencer
Response

"**But if you recall, when we started the year, we said low to mid-single-digit growth on a combined basis. And we sort of moved it up to mid-single, and now we're kind of thinking it's really going to be 6-plus percent for this year.** And you should assume if this continues and the elective procedures on the lower extremities ramps up, that we should have a very good year next year. And also, our core Trauma business is actually having a very good year as well."

Source [Q2 2021 Conf Call](#), July 2021

Revenues From Wright Medical Are Not Reconciling

Stryker's Orthopaedics segment had two acquisitions close in Q4 2020: Wright Medical (Nov) and OrthoSensor (Dec). Based on Stryker's reporting, the segment had \$126 million of contributions from acquisitions. Yet, elsewhere it reported \$129.2 million of revenue just from Wright Medical. Internet sources estimate that OrthoSensor had between \$10 - \$32 million in revenue, which are likely aggressive estimates.⁽¹⁾ While it may be negligible, it suggests some revenue should have been contributed in 2020.

Estimating 2020 Acquired Revenue Contribution				
\$ in mm	Total	Ortho	MedSurg	Neuro/Spine
2020 Net Sales	\$14,351	\$4,959	\$6,400	\$2,292
2019 Net Sales	\$14,884	\$5,252	\$6,492	\$3,140
Contribution To Growth From Acquisitions	1.2%	2.4%	0.5%	0.8%
Revenue Contribution	\$179	\$126	\$32	\$25

Source: [FY 2020 Stryker Press Release](#)

Note: Could be rounding, but segment acquisition revenue contribution of \$184m is more than total company of \$179m

Wright's Sales And EBT Contribution			
\$ in mm	Consolidated Stryker	% Wright	Wright Contribution
Net Sales	\$14,351	0.9%	\$129.2
Earnings Before Income Taxes	\$1,954	1.3%	\$25.4

Source: 2020 [10-K](#) – Item 9A, page 37

Ortho also includes the OrthoSensor acquisition In December 2020:

"We completed the acquisition of OrthoSensor, Inc. (OrthoSensor). OrthoSensor is a leader in the digital evolution of musculoskeletal care and sensor technology for total joint replacement. OrthoSensor is part of our Joint Replacement business within Orthopaedics"

Mathematically Impossible Figures Related To Wright Medical

Stryker rarely, if never, reports precise financial contribution from specific acquisitions in its SEC filings, except when it comes to determining management's bonus. In 2020, it claims that operating income attributable to acquisitions was +\$21 million. We assume this is primarily from Wright Medical, which was the only substantive deal completed on November 11, 2020. Yet, through the first nine months of the year, Wright's EBIT was negative. Stryker initially claimed that, assuming a Sept 30th close, Wright would be neutral to earnings. **Even more mysteriously, another disclosure indicates that Wright's Earnings Before Income Tax (EBT) was \$25.4M which is higher than its \$21M EBIT contribution. We believe it mathematically impossible for EBIT to be higher than EBT.**

2020 Stryker Proxy Disclosure: Wright EBIT Contribution +\$21M

Item	Year Ended December 31, 2020
Operating income, as reported	\$2,223
Acquired inventory stepped up to fair value	48
Other acquisition and integration-related charges	194
Amortization of purchased intangible assets	472
Restructuring-related and other charges	458
Medical device regulations	81
Recall-related matters	17
Regulatory and legal matters	6
Net currency adjustments	(18)
Operating income attributable to acquisitions that occurred during 2020	(21)
Adjusted operating income for bonus calculation	\$3,460

2020 Report On Internal Control

in *Internal Control-Integrated Framework (2013)*. Based on this assessment, management concluded that our internal control over financial reporting was effective as of December 31, 2020. The Company's management excluded Wright Medical Group N.V. (Wright), acquired on November 11, 2020 from its evaluation of internal control over financial reporting as of December 31, 2020. As of December 31, 2020 Wright represented approximately 2.7% of our consolidated total assets, 0.3% of our consolidated net assets, 0.9% of our consolidated net sales and 1.3% of our consolidated earnings before income taxes for 2020.

Source: [Stryker Proxy](#) and [10-K](#), [Wright 10-Q](#)

9M 2020 Wright EBIT: -\$11.8M

	Nine months ended September 27, 2020				
	U.S. Lower Extremities & Biologics	U.S. Upper Extremities	International Extremities & Biologics	Corporate ¹	Total
Net sales from external customers	\$ 228,903	\$ 228,289	\$ 114,670	\$ —	\$ 571,862
Depreciation expense	8,298	9,997	11,117	18,246	47,658
Amortization expense	—	—	—	23,970	23,970
Segment operating income (loss)	\$ 55,386	\$ 86,352	\$ (20,524)	\$ (132,994)	\$ (11,780)
Other:					
Transaction and transition costs					13,828
Operating loss					(25,608)

Wright's Sales And EBT Contribution

\$ in mm	Consolidated Stryker	% Wright	Wright Contribution
Net Sales	\$14,351	0.9%	\$129.2
Earnings Before Income Taxes	\$1,954	1.3%	\$25.4



*A Closer Look At The STAR Ankle
Divestiture Required From The
Wright Deal And Questions Around
Avoiding Goodwill Impairments*

A Close Look At STAR Ankle System

Stryker acquired Small Bone Innovations (SBI) in 2014 for \$358 million and recorded \$221 million of goodwill from the acquisition. The sales of the acquired products, notably the STAR Ankle System were \$48 million

SBI Acquisition: \$221 Million Goodwill

	2014			
	SBI	Berchtold	PST	Other
Purchase price paid	\$ 358	\$ 184	\$ 120	\$ 216
Tangible assets acquired:				
Cash	—	12	—	—
Inventory	34	22	7	5
Other assets	4	38	19	25
Liabilities	(2)	(45)	(33)	(37)
Intangible assets:				
Customer relationship	19	11	33	5
Trade name	—	7	—	—
Developed technology & patents	82	32	26	115
IPRD	—	—	—	2
Goodwill	221	107	68	101
	<u>\$ 358</u>	<u>\$ 184</u>	<u>\$ 120</u>	<u>\$ 216</u>

Goodwill acquired associated with the SBI acquisition in 2014 is deductible for tax purposes.

Source: [2014 10-K Annual Report](#)

SBI Acquisition Announcement

"Kalamazoo, Michigan - June 30, 2014 - Stryker Corporation (NYSE:SYK) announced today a definitive agreement to acquire assets of Small Bone Innovations, Inc. ("SBI") in an all cash transaction for up to \$375 million. The net cost to Stryker after taking into account the present value of the tax benefits as a result of the asset purchase structure will be up to \$285 million. Founded in 2004, SBI is a privately held business headquartered in Morrisville, Pennsylvania with facilities in France and Germany. SBI products are designed and promoted for upper and lower extremity small bone indications, with a focus on small joint replacement.

*The assets to be acquired include the Scandinavian Total Ankle Replacement System (STAR Ankle). The STAR Ankle, sold globally in over 40 countries, is the only PMA approved, cementless, three-piece total ankle replacement system and is the most published total ankle replacement product in the world. With the addition of the STAR Ankle to the Stryker Foot & Ankle product portfolio, Stryker comprehensively addresses the broad range of foot and ankle procedures. Additional assets include finger, wrist, and elbow products, further expanding the existing Stryker upper extremity product offerings. **The sales of the acquired products were approximately \$48 million in 2013.***

Source: [Stryker Press Release](#)

No Cash From Divesting A Problematic Product Set, And No Goodwill Impairment

Stryker agreed to sell STAR ankle as part of the Wright Medical acquisition. It was sold to Colfax (NYSE: CFX), which publicly closed the asset divestiture in Q4 2020. **We observe that Stryker reported no cash inflows from investing from this divestiture.** At most it received \$1 million through “Other Investing”. **Later in March 2021, the FDA issued a warning about the STAR Ankle’s safety. We observe that Stryker has not impaired any of the \$221 million of goodwill associated with a product set that it likely knew was experiencing breakage issues, and which it received little to no value from divesting.**

Stryker
PR
Nov 4, 2020

“The U.S. Federal Trade Commission voted to approve the transaction on November 3, 2020, and the UK Competition and Markets Authority approved the transaction earlier today. In connection with obtaining the required regulatory approvals for the transaction, as previously announced, **Stryker has agreed to divest its STAR total ankle replacement product and related assets and finger joint replacement products.**”

Source: [Stryker Press Release](#)

Colfax
JPM Conf
Jan 14, 2021

“Page 12 introduces **one of the acquisitions that we completed in the fourth quarter.** We acquired the STAR ankle business from Stryker”

Where’s
The Cash
From Asset
Divestiture?

	2020	2019	2018
Investing activities			
Acquisitions, net of cash acquired	(4,222)	(802)	(2,451)
Purchases of marketable securities	(54)	(74)	(226)
Proceeds from sales of marketable securities	61	69	394
Purchases of property, plant and equipment	(487)	(649)	(572)
Other investing, net	1	1	(2)
Net cash used in investing activities	\$ (4,701)	\$ (1,455)	\$ (2,857)

Source: [2020 10-K Annual Report](#)

Did Stryker Receive Just \$1 Million For A Faulty Product Suite?

Risk of Device Component Breaking in Patients with Stryker’s STAR Ankle: FDA Safety Communication

“(FDA) is advising patients, caregivers, and health care providers about the higher than expected risk of the polyethylene (plastic) component of the device breaking (fracture), as early as three to four years after implantation in all Scandinavian Total Ankle Replacement devices”

Source: [FDA](#), March 15, 2021

No Goodwill Impairments... Really?

At the parent level, Stryker continues to claim no goodwill impairments have been necessary. Spruce Point questions why Stryker impaired its UK goodwill for its Ear Nose and Throat (“ENT”) business in 2020, when it said that its U.S. business has a higher ENT weighting, and that ENT was the most heavily impacted by COVID-19?

Goodwill Testing Discussion Annual Report

“Our annual impairment testing indicated that all reporting unit goodwill fair values significantly exceeded their respective recorded values. Future changes in the judgments, assumptions and estimates that are used in our impairment testing for goodwill and indefinite-lived intangible assets, including discount and tax rates and future cash flow projections, could result in significantly different estimates of the fair values. A significant reduction in the estimated fair values could result in impairment charges that could materially affect our results of operations.”

Source: [2020 10-K](#)

CEO Lobo on ENT July 2020

“So in the U.S., you have a much higher weighting on ENT, CMF and neurosurgical. All 3 of which, obviously, were heavily impacted by the pandemic.... And ENT was the most heavily impacted business of all of the business of Stryker given the aerosolizing procedures.”

Source: [Q2 2020 Earnings Call](#)

Goodwill Impairment Taken For ENT At Stryker UK

Annual impairment assessment


Goodwill is not amortised but is tested annually for impairment. The impairment analysis is based on certain assumptions, including future revenue growth that can change the conclusion on whether goodwill is impaired. These assumptions are set based upon management’s experience and expectations. Impairment occurs where the carrying value of a Cash Generating Unit (CGU) exceeds the higher of its fair value less cost to sell and its value in use.

In 2020 the Company measured the carrying value against the value in use using a discounted cash flow model. The cash flow projections were based on key assumptions in management’s revenue growth projections over the five-year period ending 31 December 2025.

During the year ended 31 December 2020 a goodwill impairment loss of £3,065,000 (2019: £nil) was recognised in relation to the Ear, Nose and Throat (ENT) CGU. The division was particularly impacted by the COVID-19 pandemic significantly impairing the division's short to medium term growth plans.

Source [Stryker UK Ltd, FY 2020](#)

Subtle Change To Goodwill Impairment Testing Methodology



Given our findings of goodwill impairments being recognized in foreign subsidiaries, but not at the consolidated level, Spruce Point finds it curious that Stryker recently updated its discussion of goodwill impairment testing in its 2021 Annual Report. The testing now states that it “periodically corroborates its assessment with quantitative information.” We view this as a stronger indicator that it is looking more carefully at goodwill impairment. We believe qualitative testing is more subjective relative to quantitative testing and may have allowed Stryker to defer impairments.

Changing Discussion of Goodwill Testing: New Key Phrase Added

“Goodwill, Intangibles and Long-Lived Asset Impairment Tests: We perform our annual impairment test for goodwill in the fourth quarter of each year. We consider qualitative indicators of the fair value of a reporting unit when it is unlikely that a reporting unit has impaired goodwill **and periodically corroborate that assessment with quantitative information.** In certain circumstances, we may also utilize a discounted cash flow analysis that requires certain assumptions and estimates be made regarding market conditions and our future profitability. Indefinite-lived intangible assets are also tested at least annually for impairment by comparing the individual carrying values to the fair value.

We review long-lived assets for indicators of impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The evaluation is performed at the lowest level of identifiable cash flows. Undiscounted cash flows expected to be generated by the related assets are estimated over the asset's useful life based on updated projections. If the evaluation indicates that the carrying amount of the asset may not be recoverable, any potential impairment is measured based upon the fair value of the related asset or asset group as determined by an appropriate market appraisal or other valuation technique. Assets classified as held for sale are recorded at the lower of carrying amount or fair value less costs to sell.”



Evidence The Mako Surgical (Robotic) Acquisition Is Failing

Summary of Why Spruce Point Is Extremely Negative On Mako Surgical

Spruce Point believes Mako's robotic surgical platform is one of the few growth drivers in Stryker's overall lackluster product portfolio and could be over \$1 billion of annual revenues. However, we believe that sell-side analysts and investors are not attuned to the fact that Stryker recently cut prices on Mako's product suite by -17% to -30% in response to companies like Zimmer, which have been giving their system away at no upfront cost.

Issue	Explanation
Management Has Never Been Transparent About Mako's Financial Performance	<ul style="list-style-type: none"> Stryker paid a lofty \$1.6 billion for Mako in 2016, and admitted some early integration challenges a few quarters later Stryker has never cleanly broken out revenues of Mako, but has claimed it falls within three buckets within the Orthopaedics segment. By our estimate, it's a \$1bn+ year business Impossible to determine margins on the Mako product
Stryker Has Become Less Transparent About Mako	<ul style="list-style-type: none"> Stryker received a big uplift from Total Knee in 2017- 2019 During this time, it gave better disclosures about unit installs, procedures and surgeons trained At the end of 2019, Mako stopped disclosing quarterly updates
Forensic Evidence Shows Numbers Aren't Adding Up, Stryker Hasn't Disclosed A Change In Sales Strategy And Business Slowed Dramatically Post 2019	<ul style="list-style-type: none"> In Q2'19 Stryker made a subtle change from disclosing "unit installs" to "unit sales" Stryker appears to have shifted products into or out of the "other ortho" line where robot sales are located Based on our field work, Stryker hasn't disclosed it moved towards a "Joint Value" sales strategy to reduce the upfront cost of the robot system in exchange for guaranteed purchases of joint cases in the future Working backwards from recent annual unit sales and growth rates illustrates historical units have been overstated Looking at MAUDE database submissions and tangible property tax records at key Mako locations points to economic activity dramatically slowing post 2019 and not recovering through 2021/22
Management Is In Denial About Competition But Our Field Checks Indicate 2022 Prices Cuts By -17% to -30%	<ul style="list-style-type: none"> While Stryker had a first mover advantage in the robot-assisted ortho surgery space, others are rapidly playing catch up Stryker is still largely in denial and spinning competition as "beneficial" and "validation" of the category Zimmer is known to be giving away its ROSA® system at no upfront cost. In just a few years, Zimmer now has 600 units in the field while it took Stryker more than a decade to place 1,500 units J&J has invested heavily in the space and recently launched its VELYS system Our field checks indicate that in 2022, Stryker has reduced the cost of Mako by an estimated -17% to -30% Implant prices have also been in structural decline over the last decade by at least 20%

Spruce Point Estimates Mako Surgical Is A \$615 - \$1,200 Million Dollar Business For Stryker Under Extreme Pressure

Spruce Point believes that Stryker doesn't cleanly provide investors with Mako sales figures. However, based on our research, we believe the market fails to appreciate both the size of the business, and the pressures it is under from disruptive pricing and sales from Zimmer Biomet, the #2 player in the industry. Mako revenues could exceed \$1.0 billion, with prices dropping up to 30%

Issue	Low	High	Note
Unit Sales (A)	320	320	Recent annual sales 320
Robot Capital Cost (B)	\$500,000	\$790,000	Down significantly from list price in the \$1.3m range in response to Zimmer giving away robots
Annual Robot Sales C = (A x B)	\$160,000,000	\$252,800,000	
Annual Procedures (D)	100,000	150,000	
Consumables and Implants Cost Per Procedure (E)	\$3,500	\$6,000	Implants have also been under secular pricing pressure
Consumables Revenue F = (D x E)	\$350,000,000	\$825,000,000	
Service Contract (G)	\$70,000	\$100,000	Historically priced approximately 8-10% of list price
Units Installed (H)	1,500	1,500	Disclosed by Stryker
Annual Service Revenue I = (G x H)	\$105,000,000	\$150,000,000	
Estimated Annual Revenue (C+F+I)	\$615,000,000	\$1,227,800,000	

Source: Spruce Point analysis and estimates based on field research

Spruce Point Interview: Insights From A Former Mako Robotics Salesperson



Spruce Point interviewed a former Stryker / Mako robotics salesperson with over a decade experience in surgical robotics. We learned many startling insights into industry dynamics, notably that Mako has been using “Joint Value” pricing strategies to lower the robot’s upfront cost, but now just cut prices in response Zimmer – it’s second largest competitors – who gives away robots for free to gain share.

**Spruce Point
Question**

“What went wrong with the initial integration in 2014? Stryker blamed it on challenges with integrating the salesforce.”

**Former Mako
Salesperson**

*“The biggest challenge was not truly integration. **It was that Stryker has a “pompous” attitude let me put it that way.** One of the challenges is that Stryker has great relationships, and Mako had a great device, and **Stryker was reluctant to put Mako in front of its clients. It took a long time to get over that hump.** There were certain regions that got over it quickly, but other areas of the country that suffered for a long time.”*

**Spruce Point
Question**

“Can you walk me through the pricing and economics of purchasing a Mako robotic systems”

**Former Mako
Salesperson**

*“**So actually I do believe they just cut prices.** It used to be for about \$1.3 million for a 3 app robot. There’s different apps you can buy; 1) total knee, 2) total knee, total hip 3) total knee, total hip, and uni. And the prices were approximately \$1.3m, \$1.05m, and \$750k was the price range (from 3 to 1 app). Stryker Flex was a financing option. They have a lot of creative ways to finance. Some hospitals pay cash, have lines of credit, or have their own solutions too. Sometimes we went away from Stryker Flex, trying to do what’s best for the customer. **Stryker also offered creative ways internally such as “Joint Value” which is a customer guarantee to buy a certain amount of joints over a period, and then Stryker would reduce X% off the robot list price. I’ll be honest, when COVID-19 hit they went 100% towards this Joint Value model for a while. They’ve gone away from this which I believe is smart.**”*

**Spruce Point
Question**

“Can you elaborate on why the prices went down and what’s driving that?”

**Former Mako
Salesperson**

*“**In 2022, they dropped the 3 app price from \$1.3m to \$1.0m, and approximately \$750k or \$600-\$650k for a 2 and 1 app robot. I know it for a fact. I believe competition is a big part of it.** So the industry is finding more creative ways so that customers don’t have to invest as much capital upfront. **Zimmer really changed the market when they introduced the ROSA. Zimmer did placements, not even looking for cash. They did placement agreements on a lot of robots as the second person in the market.**”*

Spruce Point Interview: Insights From Former Mako Robotics Salespeople

Spruce Point Question

"Can you explain why Stryker makes it difficult to determine Mako's revenue. Stryker ceased providing quarterly Mako unit installs and sales after 2019?"

Former Mako Salesperson

"They did that for a reason, because the Joint Value I discussed. They were worried people would go, 'wait a minute, now you're just placing the robots, in return for cases.' So you're wiping out the million dollar price tag and your getting cases off it. So it's a way to fool the numbers a little bit. They started going heavy on Joint Value. Zimmer was starting to come out and focused on placements. Stryker did the wrong thing, in my opinion, and said, 'we need to do what they're doing'. In my opinion, what they should have done is assert their market leadership and stress why Stryker's is better than Zimmer's."

Spruce Point Question

"If you had to estimate the amount of revenues Stryker generates from Mako, what would it be?"

Former Mako Salesperson

"It's probably close to \$450 million ex: implants. Then estimate \$3,000 per consumable per procedure, at 150,000 procedures per year and that's another \$450 million. So it could easily be a \$900 million a year revenue business."

Spruce Point Question

"Do you think Mako's revenues are going to slow down?"

Former Mako Salesperson

"I would say systems sales did well recently from what I heard. I would think now that J&J is in the market and Zimmer is there, systems sales will probably slow, and they moved away again from Joint Value deals. That makes it a little more challenging. Procedure volumes I think will go up. If I were to have it done, I'd go with Mako."

Tegus Interview: Corroborates Some of Spruce Point Findings

A recent Tegus interview conducted Oct 4, 2021 of a former Zimmer Biomet Orthopedic employee shed light on their “placement” deals.

Tegus Question

“So overall, like do you feel like the profitability from the Zimmer's perspective is like vastly different in terms of, it sounds like the business model is slightly different because there's kind of capital purchase upfront and then what are sort of the ongoing sort of revenue streams which are there?”

Former Zimmer Employee

“Yes, initially, it was a capital sale only, right? And just kind of walking back a little bit, what they realized quickly is that in order to adapt change and not have to deal with that six- to 18-month hospital capital budget process, which is extremely lengthy, it's much easier to do a placement agreement where we provide, so in other words, you, as a surgeon, are opening up a surgery center. And I think when you start talking strategy, where we saw that paradigm shift is using yourself and you own a surgery center and you also work at a hospital. Well, if I can place a unit in your surgery center at no cost to you other than just a commitment for growth on the implant side of things at a competitively priced implant, what that's going to do is that's going to drive usability right away, not put you in a situation where you're going to be out that \$600,000, \$700,000, \$800,000 for the robot. And then what I'm going to ask you to do is help me pull the system and sell one to the hospital. So as I look to make that change, I drive usability, adaptability at the ASC where I placed one at no cost other than a volume commitment there. And then I can backtrack and pull it into the hospital based on that surgeon's commitment to using my implants. So there's definitely a partnership fashion that can be positioned to drive that in the hospital. And I think that's where there's not a big disposable cost to using the system on a case-by-case basis. That was never a big issue in terms of some disposables and some reference trackers and things like that, but most everything is minimal cost. So the capital device is the big cost.”

Tegus Interview: Corroborates Some of Spruce Point Findings

A recent Tegus interview conducted Oct 4, 2021 of both a former Zimmer Biomet and Stryker employee confirms that the market has shifted towards giving away the robots for free or reduced cost in exchange for implant minimums.

Tegus Question

"And I want to start sort of diving in there. So like one, just starting off with the kind of product line. So obviously starting off with the kind of big ones, kind of knees and hips. So where do you see them positioned today in knees and hips? And like to understand like how is sort of the trajectory of ROSA, especially kind of moving the kind of traditional model, like instrumentation and implants, and then into kind of the ROSA system, which is more capital intensive. So like just to understand where that's going?"

Former Zimmer / Stryker Employee

*"Well, let's step back. If you're familiar with the Mako robot that Stryker had. **When Stryker brought that robot out, and I happened to be at Stryker at the time. The plan was garnish these implants by requiring these doctors to do a minimum of 400 implants in order to get a free machine. And they were taking that model out everywhere. And so when ROSA was moving from the brainstem side on dealing with epilepsy and they were making the arm into the robotics for hip and knee, they were trying to think of the same process. Could we do that? Could we get these hospitals to get to 400 implants that would pay for the robot? Or do we just try a different strategy and try to figure out how we give these away and still get those implants and not have commitment letters everywhere.** If you recall or if you know, Zimmer started their ROSA implants down in Australia, and they started using that in the knee space. And with the Ascension group, The Resource Group down there, and we had no idea what that price was going to be. **We thought we were going to have to give these things away for instead of \$1 million from anywhere from \$300,000 to \$500,000. I'm not sure where they laid out at this point where the pricing is now,** but most everybody figured us a \$1 million robot just like the Mako was and just like Smith+Nephew is. So that dynamic had to change."*

Tegus Question

So and then so kind of moving from there into the sales cycle, obviously, like something like ROSA is. more capital intensive than the more sort of implant side, the traditional implant side. So that changed the sales dynamic significantly, the move from like kind of the surgeons being kind of point and center to more kind of the hospital procurement side. Can you talk a little bit about that transition?"

Former Zimmer / Stryker Employee

*"Because once you get that robot in there, it never comes out. It's just again them, whether you use it. You can talk your man into financing it so it comes out of a monthly operating budget. **Or you find a way based on the usage with the facility, get them the robot for free to get them using it.**"*

Zimmer's ROSA® Looks Similar To Stryker's, But At Zero Upfront Cost

Look familiar? With Zimmer offering hospitals and its customers a robot with no upfront cost, it has made sale more difficult for Stryker. Stryker's response has been to offer its "Joint Value" pricing strategy, and more recently in 2022, to cut prices by approximately -17% to -30%

Stryker's Mako

Upfront Cost (Pre-2022): \$1,300,000 to \$750,000
Now: \$1,000,000 to \$600,000



Source: [Stryker Mako](#)

Zimmer's ROSA® **Upfront Cost: FREE!**



Source: [Zimmer](#)

Early Days, Stryker Stumbles On Mako, But With Little Competition It Didn't Matter

In almost a repeatable pattern observable by now, Stryker talked up Mako only to reveal a year later that it was having integration challenges. Stryker could get a pass on this at time when there was little competition. Stryker received very few questions about competitive threats to Mako or robotic surgery solutions. As a result, management often denied any competitive impact as it did in Q2 2019 below. Ironically, we'll show in an [upcoming slide](#), in the same quarter we believe management shifted product classifications in revenue reporting to improve the segment where Mako robotics sales are included.

IR Owen
Q4 2013

"We believe MAKO has demonstrated excellent market acceptance of their partial knee application. However, our analysis suggest there's a bigger opportunity in total hips and total knees to leverage Stryker's reconstructive implants. **We look forward to sharing more regarding our plans for robotic-assisted surgery later in 2014.**"

Source: [Q3 2014 Conf Call](#)

Q3 2013

IR Owen
On
Challenges
Acquiring
Mako

"In terms of the integration, I think the most challenging part, and I think its fair to say, we underestimated the complexity of it, but feel very comfortable with the trajectory we are on. Its just integrating a capital salesforce alongside a very large implant salesforce, and going through the necessary training and coordination that has to take place in existing accounts. So its nothing truly unique, its just, it's a big job to do, given how large our salesforce is. So we are making really good headway, very excited about the pipeline we are seeing and our ability to continue to drive sequential acceleration in robot sales....Certain regions have embraced it, they understand the differences in implant sales versus the CapEx sales and how to partner, and there we are seeing great success and uptick in utilization. But we are only a couple of quarters in and its going to take some time here to really leverage that breadth of combining those two sales forces. So nothing that's significant or really different. just us being overly optimistic about the pace of managing that integration."

Source: [Q3 2014 Conf Call](#)

Jefferies
Analyst

"I think the question was asked earlier, but you have a sort of major launch or at least a launch for a major (competitor), I should say in robotics. Within those accounts, have you seen within the Zimmer accounts, has there been any change in tone of those customers being willing to entertain Mako, it's really any -- any change in the market broadly as it gets more competitive?"

IR Owen
Q2 2019

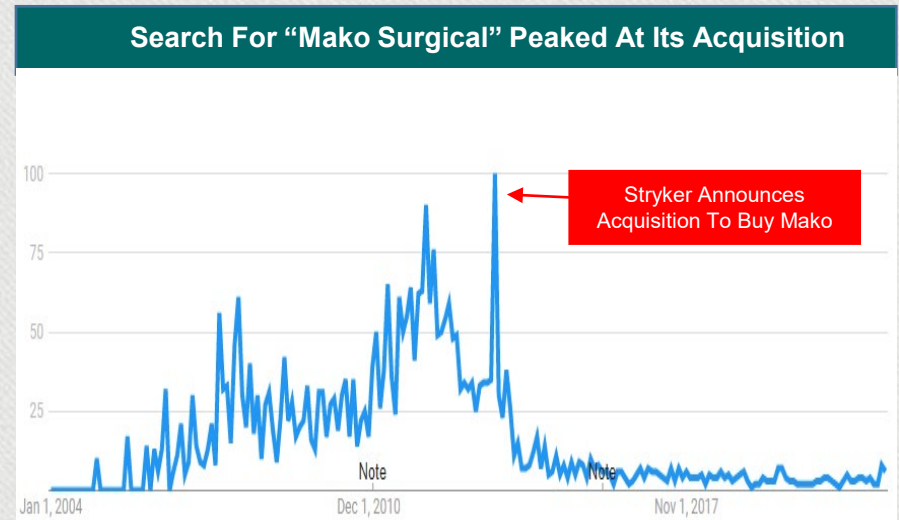
"Yeah, I would tell you, when we look at the performance in the quarter, I think it's just simply too soon. **We are not seeing a competitive impact.** I think our results really do underscore just how strong our momentum is with robots. We have a very large installed base and building off of that. **We're just not seeing anything.** This question is probably better directed at them because obviously they're going to (give) better insights."

Competitors Fast Playing Catch-Up To Stryker

Competitors are fast playing catch-up to Stryker. Google trends shows that interest in Mako surgical peaked at the time of acquisition and has been low ever since. This could be a function of the prior public company heavily promoting itself and its stock. However, other clues emerge within Google Trends. Looking at key words such as Surgical Robotics shows that Stryker doesn't appear as related topic until #15. J&J's Auris Health is listed at #1 while Medtronic's Mazor Robotics is #5.

Surgical Robotics		
Related topics ?	Rising ▼	Download <> Share
1 Auris Health, Inc. - Company	Owned by J&J	Breakout
2 Company - Topic		Breakout
3 Stock - Topic		Breakout
4 Medical robot - Topic		Breakout
5 Mazor Robotics - Company	Owned by Medtronic	Breakout
< Showing 1-5 of 23 topics >		

Source: [Google Trends](https://trends.google.com/trends/explore?q=surgical+robotics); Note: Stryker is #15 on the List



Source: [Google Trends](https://trends.google.com/trends/explore?q=mako+surgical)

Robotic Wars Heat Up

Though Stryker's acquisition of Mako Surgical in late 2013 made it an early mover into the robotic-assisted surgery space, nearly all of its major competitors such as Zimmer, Smith & Nephew, Medtronic, J&J and Globus Medical have followed with acquisitions of competing systems covering not only knee surgeries, but also spine applications.

Target	Acquirer	Date	Deal Value	LTM Sales	More information
Mako Surgical	Stryker	2013	\$1,677	\$106	Founded in 2004 and had deployed over 150 RIO systems for MAKOPlasty partial knee resurfacing procedures
MedTech SA	Zimmer	2016	\$132	~\$10m	Medtech makes the Rosa Brain and Rosa Spine robot-assisted surgery platforms; present in 20 hospitals globally
Blue Belt	Smith & Nephew	2016 (2015 ann)	\$275	\$19	Maker of the Navio surgical system for partial knee replacement
Orthotaxy	J&J / DePuy Synthes	2018	NA	NA	Proprietary technology is currently in early-stage development for total and partial knee replacement
Mazor Robotics	Medtronic	2018	\$1,640	\$58	Mazor's proprietary core platform technology, including the Mazor X™ Robotic Guidance System (Mazor X), and the Renaissance® Surgical-Guidance System (Renaissance), are transforming spinal surgery from freehand procedures to accurate, state-of-the-art, guided procedures
Auris Health	J&J	2019	\$3,400+\$2,350 earnout		Developer of robotic technologies and a platform, initially focused in lung cancer
StelKast	Globus Medical	2019	\$24 +4m earnout	NA	Manufacturer of total joint arthroplasty systems with a 30+ yr history in producing and supplying high-quality artificial knee and hip systems
Corindus Vascular Robotics (CVRS)	Siemens Healthineers	2019	\$1,100	\$15	Technology platform for robotic-assisted coronary, peripheral, and neurovascular procedures
Verb Surgical	J&J	2019	NA	NA	VELYS Digital Surgery will pave the way in orthopaedics with a platform that consists of connected technologies that leverage data insights for patients, surgeons and health care systems across the entire care continuum
OMNI Orthopaedics	Corin (backed by Permira)	2019	NA	NA	Founded in 1999, OMNI is now at the forefront of robotic-assisted knee replacement. Their OMNIBotics® is a unique imageless total knee replacement solution which combines a robotic cutting guide with the world's first robotic tool to measure ligament function
OrthoSpin	J&J / DePuy Synthes	2021	NA	NA	An automated strut system – which is used in conjunction with DePuy Synthes MAXFRAME™ Multi-Axial Correction System
Merger: Adaptive Geometry and Fusion Robotics		2021	\$505	\$23	Rebranded “Accelus” and is uniquely positioned to accelerate the adoption of minimally invasive surgery as the standard of care in spine

Competitors Fast Playing Catch-Up To Stryker

Competitors are fast playing catch-up to Stryker. J&J and Globus Medical are in the process of commercializing their new robotics systems this year. Smith & Nephew is highlighting key points of differentiation. Meanwhile, Zimmer which entered the market in 2017, already has 600 units in the field. Compare this with Stryker's 1,500 units which took 18 years since Mako Surgical's founding in 2004.

Smith & Nephew

"On CORI (our robotics platform), we've seen good continued adoption, and it's really encouraging. I think we've now also launched in EMEA, in Asia. We've had sales in India as well. So we see some good adoption with CORI. And I think, absolutely, there is differentiation potential in robotics. **In our case, we have a very different approach in that we have a handheld system.** We have a burying approach. **Most importantly, I think also this doesn't require presurgery CT. And the start-up times in the OR are actually very, very short. So altogether, we believe we have a fully differentiated solution here.** And with a cementless knee option, I think we also have now an additional asset to market. So more to come."

Source: Q3 2021 Conf Call

Johnson & Johnson

"This quarter, we began commercialization of our VELYS robotic-assisted solution for total knee procedures in the U.S. We believe this launch, along with our differentiated VELYS digital solutions and a 2 knee platform, including the second half 2021 launch of ATTUNE Cementless fixed bearing knee with AFFIXIUM 3D-printed technology will enhance our portfolio and competitiveness as procedures continue to recover... VELYS, our robotic-assisted solution for total knee procedures, launched in the United States and received regulatory approval in Australia this month. We are extremely pleased with the early customer engagement and feedback confirming the differentiation of this next-generation solution."

Source: [Q2 2021 Conf Call](#)

Globus Medical

On the StelKast acquisition: "We're looking at a 2022 launch for the robotics system. And we continue to make progress on the development. In terms of specifics, as is our practice, we really don't break out the segments with specifics. Although I will say that once we launch the robot, that was our thought process going in, that we would get some pull-through from our Enabling Technologies as we hit the market."

Source: [Q4 2020](#), Feb 17, 2021

Zimmer Biomet

"I've been really enthusiastic. It's hard to believe almost because I said before, almost, let's call it, 75% to 80% of the time that we've been out launching ROSA, it's been in the midst of the pandemic and the pressure associated with that. **But even still, as I referenced before, we closed out '21 at almost 600 units. I mean it's a lot of units out in the marketplace in a pretty challenged environment.** We're remembering again that we started for the most part with our first unit place at March 2019. So the demand is strong. The placements are good. The utilization inside those spaces is very strong."

Source: JPM Conf, Jan 10, 2022

More Skeptical Questions Being Asked About Stryker's Robotics: Beware When Companies Start Spinning Increased Competition As A Positive

Jefferies
Analyst

"Maybe just a couple of questions, one on robotics, one on Wright Medical. **On robotics, just trying to get a sense of sort of the competitive landscape. We're hearing quite a bit about the J&J BLS robot launch for pending.**"

CFO
Boehnlein

Q1 2021

"So with regards to your question on robotics, **I mean, from our perspective, really nothing's changed in our focus.** And what you saw in the first quarter really is just a continuation of the effort that we had since we launched Mako. And so we're really seeing the uptick as a result of just selling in our technology. And overall, we really remain bullish about Mako and what it brings. **Other competitive systems like BLS or Rosa haven't slowed us down at all. And if anything, what they've done is they've increased the validation that robotics are here to stay. And really demand for Mako and our technology continues to be super strong as we saw by the results we posted.** And then also, we believe we have the best solution. And so from a head-to-head comparison, it is something that we look forward to with the technologies that are on the market today."

Shareholder
/Analyst
Call

"Our next question relates to the Mako platform. **We received a question regarding Mako's sales outlook as compared to Zimmer Biomet's ROSA platform.** Specifically, have we heard any feedback about Mako's CT imaging approach and associated radiation?"

CEO Lobo

May 5, 2021

"As you may have seen in our Q1 results, Mako had an outstanding performance, **and we continue to be the market leader in robotic-assisted solutions. We are confident on the prospect of maintaining our lead versus any of the competing systems on the market.**"

MS Analyst

"And just kind of coming out of AAOS, just kind of one topic, **one debate that I think I've been hearing more is just -- is the orthopedics robotic market getting a bit more crowded nowadays?** So just with competitive entrants kind of coming in, you talked before about it validating the technology overall."

CEO Lobo

Sept 2021

"**I'm feeling great about our business. Our Mako order book is -- continues to be very strong. We know we have a fabulous solution. Robotics is here to stay.** If you walked the floor, which I did, at AAOS, robotics was everywhere. 5 years ago, that was not the case when you walked the floor. **And that, to me, is a tailwind. It's -- robotics, overall, it's still very underpenetrated. So that will grow the actual adoption.** And as the leader and someone who clearly has a fabulous solution, we know we're going to gain more than our fair share of this market. So I feel very good about it."

CEO Lobo
Analyst/
Shareholder
Day
Nov 18, 2021

"In an interesting way, **the fact that more competitors are coming to the market** and if you went to AAHS or AAOS, which I had a chance to do, every booth, every sign was robots, robots, robots. **It's pretty amazing. And that, frankly, has just raised awareness in the category. And that's acted more as a tailwind than, frankly, a problem for us because we know we have the best solution.**"

Strains In Stryker's Robotics Growth And Financial Reporting Anomalies Appear

Based on recent disclosures, we see that installed Mako systems growth has been slowing down year-over-year and month-over-month and Stryker is now revealing financial reporting discrepancies. Looking carefully, and working backward from 2021 and 2020 growth rates of installed Mako systems we calculate 887 installed robotic systems in 2019. Yet, at year end 2019 Stryker reported "approximately 860" installed global robots. Stryker's website also claimed 850+ installed global systems in early 2021, well short of the 1,180 as of year end 2020. We believe these are material discrepancies.

Q4 2020
Jan 27, 2021

"During the year, our Mako installed base grew by 33%" and exceeded another milestone with over 100 robots sold and installed in the fourth quarter. This growth continues to highlight the demand for our differentiated Mako robotic technology as well as our ongoing success selling and installing robots in major teaching institutions, ASCs and competitive accounts."

Source: [2020 Conf Call](#)

Shareholder
Analyst Call
Nov 18, 2021

"And then second quick part of that question or long question, 1,300 Mako systems now. That's up another 300 versus the last check in about a year ago," so trending every bit as good as it has been."

Q4 2021
Jan 27, 2022

"For the full year 2021 versus 2020, our global Mako installed base grew by 27%, and we now have an installed base that is approaching 1,500 Mako robots." This continues to grow -- this growth continues to highlight the high demand for our differentiated Mako robotic technology."

Source: [2021 Conf Call](#)

Mako Installed System Growth Is Slowing

Was Disclosing Quarterly Mako Results

Stopped Disclosing Quarterly Mako Results

\$ in mm	12/31/18	12/31/19	Nov 2020	12/31/20	Nov 2021	12/31/21
Installed Mako Systems	651	887	1,000	1,180	1,300	1,500
% YoY Growth	32%	36%	--	33% ↓	30% ↓	27% ↓
% Month-to-Month Growth		--	--	18%	--	15% ↓

Source: Company statements from above quotes and [FY 2018 Conf Call](#)

From FY 2019 Conf Call: "Globally, our installed base of robots is **approximately 860** with close to 700 in the U.S."

In April 2021, [Stryker's website](#) claimed 850+ systems installed globally, well short of the 1,180 reported figure



Evidence of Slowing Mako Growth As Early As 2019

Spruce Point believes that Stryker started to experience strain in the Mako's robotics growth story in late 2018/2019, subsequent to Zimmer's entry, a period it again pivoted towards large acquisitions such as K2M Group ([Aug 2018](#)), and started exaggerating and changing disclosures. Notice below, it pivoted towards disclosing "sold" systems vs. "installed" systems. Also by Q1 2019, Stryker began exaggerating language around the installed base saying "approaching 700" when in reality, the number was closer to 686 units. U.S. knee procedures appear to have slowed in Q1 2019, with the Company claiming it a seasonal issue, despite there being no seasonal slowdown issue in the prior year.

Subtle Change

IR Owen
Q2 2019

"In Q2, **we sold 44** Mako robots globally with 35 in the US. **By comparison in the comparable quarter a year ago, we installed a total of 39 robots** of which 29 were in the US. Globally, our installed base of robots is north of 700, with close to 600 in the US."

Source: [Q2 2019 Conf Call](#)

IR Owen
Q1 2019

"Starting with Mako, **we installed a total of 35 robots globally in the quarter** with 27 in the U.S. By comparison in the comparable quarter a year ago, we installed a total of 28 robots, of which 24 were in the U.S. **Globally our installed base of robots is approaching 700** with over 550 in the U.S. **Looking at U.S. procedures, in Q1, Mako total knee procedures exceeded 15,000** increasing over 80% from the prior year quarter while total Mako procedures approximated 24,000."

Source: [Q1 2019 Conf Call](#)

Q4 2018

"**Mako Total Knee procedures increased over 35% sequentially to approximately 15,500** with knees representing roughly 60% of all Mako procedures performed in the U.S. in 2018."

Source: [Q4 2018 Conf Call](#)

Analyst
Q1 2019

"I noticed the Mako procedure number was more flattish sequentially. I want to just sort of talk about your thoughts on Mako procedure sequentially, the orthopedic market volumes sort of first quarter versus expectations, and your outlook for these sort of businesses post AOS."

Source: [Q1 2019 Conf Call](#)

IR Owen
Q1 2019

"I think you've got to keep in mind the cadence of procedure volumes when you go from Q4 which is always the strongest quarterly number for recon into Q1. **So, we always have fewer volume of procedures in the first quarter and also the Mako placement which was very robust in the fourth quarter don't factor in until we have them out for a full quarter. So, it's just the normal cadence.**"

Source: [Q1 2019 Conf Call](#)

NOT TRUE: In 2018, procedures increased from 7,150 to 8,200 or 15% between Q4'17 and Q1'18 ([source](#))

Less And Less Disclosures Up Until Ceasing All Quarterly Disclosures

Q4 2019 Ceases Mako Disclosures

"Please note that going forward we will no longer be providing quarterly Mako results. Since acquiring the company in early 2014, we have provided detailed Mako data for 23 consecutive quarters in order to allow investors to accurately track the performance of this differentiated robotic technology. As we are now six years since the acquisition and nearly five years since the initial launch of the total knee indication, we believe we have validated a strategic rationale and competitive advantage of Mako as witnessed by the roughly 600 basis points of U.S. knee market share that we have gained since 2013."

Source: [2019 Conf Call](#)

Quarterly Mako Disclosures									
\$ in mm	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019
U.S. Installed	414	438	467	493	529	556	Close to 600	Well over 600	Close to 700
Foreign Installed	79	83	93	104	122	130			
Total Installed	493	521	560	597	651	686	North of 700	Approach 800	887 or 860?
U.S.	27	24	29	26	36	27	No Longer Disclosed		
Foreign	8	4	10	11	18	8			
Quarterly Installed	35	28	39	37	54	35			
U.S.	Not Disclosed						35	42	63
Foreign							9	9	26
Quarterly Sold							44	51	89
Total Procedures	42,500	--	--	--	45,000	--	--	--	75,000
Competitive Acc't	~40%	Over 50%	Over 40%	Over 50%	40%	55% (1)	No Longer Disclosed		
Trained Surgeons	800	1,000	1,200	1,350	1,600	No Longer Disclosed			
US. Knee Procedures	7,150	8,200	10,100	11,350	15,500	Exceed 15,000	18,000	18,000	24,000
# of Hospitals Installed in U.S.	372	400	No Longer Disclosed						
Total Potential U.S. Hospitals	4,000	4,000							

Source: Stryker conference calls and Spruce Point analysis

- 1) A competitive account where Stryker has below average or no market share [Stryker had to be asked to provide the figure](#) – in subsequent quarters it stopped disclosure

Two discrete periods of plateauing growth, one of which we caught the IR claiming was due to seasonality despite prior periods showing no such effect



Stryker Has Never Cleanly Broken Out Mako Revenues, Now Shifting Reporting

Spruce Point is concerned that Stryker has never cleanly broken out Mako's revenues, but historically the three revenue buckets were within the Reconstructive (renamed: Orthopaedics segment in 2014). In mid/late 2019, prior to Stryker's suspension of providing quarterly performance metrics, it also started talking about revenue allocations in a different manner. Notably, it appears Stryker either moved bone cement out of the "other ortho" revenue line, or put other products (power tools, protective devices) into the "other ortho" segment which included bone cement, robot sales and upgrades, and SPS. Bone cement use has been declining according to recent commentary, so one way to bolster the "other ortho" line where robotic sales are also reported, would be to add new products into the segment.

Analyst
Bernstein
Q4 2013

"And on MAKO, I appreciate that you're not going to be breaking out sales. Can you tell us how you'll be accounting for MAKO sales moving forward? Do those go into your knee sales where, within reconstructive, do they go in or there's a separate breakout?"

IR Owen
Response

*"If you look within it, the hip sales will be in hips, the knee sales will be in knees as it relates to implants. **The capital and any related service will be in our other line along with** sports medicine, **bone cement** and the other products in that. So it will be in those 3 buckets."*

Source: [Q4 2013 Conf Call](#)

CEO Lobo
Q1 2014
Q1 2017

Q1 2014: "So, as we've already indicated, we are going to report in these MAKO knee numbers with knees, the MAKO hip numbers with hips and the capital will be part of our other reconstructive (now orthopedics) segment."

Q1 2017: "**But keep in mind, (other ortho) includes bone cement**, it includes revenue associated with the robots installed and it includes revenue associated with the upgrades, and as well as some revenue associated with SPS." Source: [Q1 2014 Call](#) and [Q1 2017 Call](#)

Prior To Quarterly Mako Reporting Suspension

IR Owen
and CEO
Lobo
Q2 2019

Owen: "My update today will focus on Mako and the key data points that allow you to track our success in executing on our Orthopaedic robotic strategy. **In addition, we will continue to provide our new growth, which excludes any robot revenue. As a reminder, sales tied to Mako continue to be included in our other Orthopaedic revenue line, while Navigation is reported in Instruments.**"

Lobo Respond to a question on Instruments (only reported within MedSurg) "And then the other part is called **orthopaedic Instruments, which has** the power tools, **bone cement**, the protective device, the protective gowns for the surgeon, and so a number of other products that are in that category, 2 different call points."

Source: [Q2 2019 Conf Call](#)

IR Owen
Q4 2019

*"Going forward, we continue to expect to take meaningful market share in Knees, owing to Mako, along with our differentiated portfolio of knee products, including our 3D-printed implants. **We will continue to report on a combined basis both manual and the Mako-implanted knees in our knee line, while robot sales will be reported in other orthopaedics to allow for accurate tracking of our Knee revenue.**"*

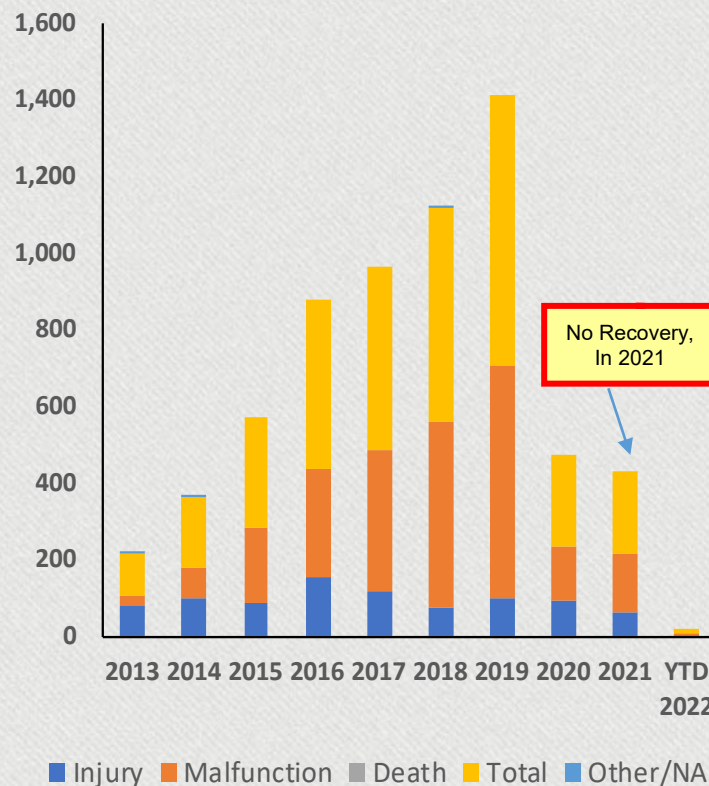
Source: [FY 2019 Conf Call](#)

FDA Database Shows Record Report Incidents In 2019 And No Recovery

FDA MAUDE submissions reporting problems with Mako Surgical's product and services peaked in 2019, at the precise time we observe it started making subtle changes to reporting practices, and then ceased all quarterly reporting going forward. There are two possible explanations: 1) Mako substantially improved its product quality experience, or 2) Procedure growth rapidly declined post 2019 into COVID-10 and have not recovered..

Counts of FDA MAUDE Submissions For Mako Surgical By Event Date And Type

Year	Injury	Malfunction	Death	NA or Other	Total
2022	2	9	0	0	11
2021	61	154	0	0	215
2020	95	142	0	0	237
2019	99	608	0	0	707
2018	76	482	0	4	559
2017	116	368	0	0	484
2016	158	282	0	0	440
2015	87	200	0	0	287
2014	100	80	0	2	182
2013	81	26	0	4	111



Source: [FDA MAUDE database search for Mako Surgical](#)

Another Indicator of Declining Business Activity At Mako Surgical

Spruce Point has analyzed tangible business property records at key locations for Mako Surgical: 1) Its Mako Education Center at 505 N.W. 65th (opened 2018)⁽¹⁾ and 2) Its Mako design, manufacturing, service and installation center at 2555 Davie Road.⁽²⁾ Both properties are in Ft. Lauderdale (Broward County). Broward assess an “ad valorem” tax assessed against the value of business equipment, leased equipment, furnishing, etc.⁽³⁾ **We find evidence that around 2018 taxes peaked and have been in decline since. This could be the result of lower capital investment into the business, and depreciation of existing assets.**





Tangible Property Tax: 2555 Davie Road (Mako Manufacturing)

BILL	AMOUNT DUE	STATUS
2021 Annual Bill ①	\$0.00	Paid \$71,283.53 11/24/2021 Receipt #02C-21-00000687
2020 Annual Bill ①	\$0.00	Paid \$95,303.81 11/30/2020 Receipt #02A-20-00001686
2019 ①		
2019 Annual Bill	\$0.00	Paid \$122,597.12 12/02/2019 Receipt #03C-19-00002052
Refund	Processed \$4,608.55	02/07/2020 To RYAN TAX COMPLIANCE SERVICES, LLC PAYING FOR STRYKER ORTHOPEDICS
	Paid \$122,597.12	
2018 ①		
2018 Annual Bill	\$0.00	Paid \$112,319.11 11/30/2018 Receipt #1CP-18-00004958
Refund	Processed \$7,849.30	03/08/2019 To RYAN TAX COMPLIANCE SERVICES LLC PAYING FOR STRYKER ORTHOPEDICS
	Paid \$112,319.11	

Source: [Broward County Taxes, Mako Surgical Corp](#)

Tangible Property Tax: 505 NW 65 CT (Mako Education)

Account History

BILL	AMOUNT DUE	STATUS	ACTION
2021 Annual Bill ①	\$0.00	Paid \$22,147.54 11/24/2021 Receipt #02C-21-00000687	 Print (PDF)
2020 Annual Bill ①	\$0.00	Paid \$29,558.44 11/23/2020 Receipt #WWW-20-00078358	 Print (PDF)
2019 ①			
2019 Annual Bill	\$0.00	Paid \$37,883.50 12/02/2019 Receipt #03C-19-00002052	 Print (PDF)
Refund	Processed \$1,763.16	02/07/2020 To RYAN TAX COMPLIANCE SERVICES, LLC PAYING FOR STRYKER ORTHOPEDICS	
	Paid \$37,883.50		
2018 ①			
2018 Annual Bill	\$0.00	Paid \$48,475.80 11/30/2018 Receipt #1CP-18-00004962	 Print (PDF)
Refund	Processed \$7,359.45	04/05/2019 To RYAN TAX COMPLIANCE SERVICES LLC PAYING FOR STRYKER ORTHOPEDICS	

Source: [Broward County Taxes, Stryker Orthopaedic](#)

- 1) “Stryker opens robotic surgery education center in Fort Lauderdale,” [South Florida Business Journal](#), July 16, 2018
- 2) [Mako’s facility certification](#)
- 3) [Broward County Tangible Personal Property Tax](#) Note: In 2021 a small change was fully implemented due to COVID-19 to allow certain assets depreciation over 10 years vs. 7 years



*Did Stryker Acquire Mobius Imaging
/ Cardan Robotics Just As Mako
Surgical Growth Started Stalling?*



Shady Mobius And Cardan Robotics Accounting

Stryker paid \$370m upfront for an acquisition with just \$3m and \$7m of accounts receivable and inventory, respectively. Based on a JPMorgan report, we estimate Stryker paid almost 12x NTM sales. There is also evidence that Stryker made milestone payments to Mobius and Cardan well in advance of “regulatory” milestones being achieved. In fact, within one quarter after announcing the acquisition, the deal structure changed to an asset purchase, and only \$4m of the \$130m of contingent consideration was marked in the valuation. We find no FDA records of any regulatory actions with respect to Mobius or Cardan Robotics. A former employee told us there were significant deal challenges.

Q3
2019

*“In October 2019 we completed the acquisition of Mobius Imaging and Cardan Robotics for cash consideration of approximately \$370 and future development and commercial milestones of up to \$130. Mobius is a leader in point-of-care imaging technology focused on integrating advanced imaging technologies into medical workflow. Cardan is working to develop innovative robotics and navigation technology systems for surgical and interventional radiology procedures. Mobius and Cardan will be part of our Spine business within Neurotechnology and Spine. **Goodwill attributable to the acquisition is not deductible for tax purposes.** The preliminary purchase price allocation for this acquisition will be performed during the fourth quarter 2019.”*

Source: Q3 2019 10-Q

By Year End
Deal
Structure
Changes,
Contingent
Payments
Already
Made And
Accounted
For

*“In October 2019 we completed the acquisition of Mobius Imaging and Cardan Robotics for net cash consideration of \$360 and future regulatory and commercial milestone payments of up to \$130. Mobius Imaging is a leader in point-of-care imaging technology focused on integrating advanced imaging technologies into medical workflow. Cardan Robotics is working to develop innovative robotics and navigation technology systems for surgical and interventional radiology procedures. Mobius Imaging and Cardan Robotics (Mobius) are part of our Spine business within Neurotechnology and Spine. **For income tax purposes the acquisition is treated as an asset purchase. Goodwill attributable to the acquisition is deductible for tax purposes.**”*

Source: 2019 10-K

Valuation Year End 2019: Suggests Milestone Payments Made

Purchase Price Allocation of Acquired Net Assets

2019	Mobius	OrthoSpace
Tangible assets acquired:		
Accounts receivable	\$ 3	\$ 1
Inventory	7	1
Other assets	2	1
Contingent consideration	(4)	—
Liabilities	(10)	(29)
Intangible assets:		
Customer relationship	7	—
Developed technology and patents	60	120
In-process research and development	98	—
Non-compete agreements	9	—
Goodwill	301	114
Purchase price, net of cash acquired	\$ 473	\$ 208
Weighted average life of intangible assets	12	18

Only \$4m of \$130m?

Source: 2019 10-K

Suggests \$103M of
Milestone Payments Made



Cardan Robotics Hype vs. Reality



Evidence shows that sell-side analysts heavily promoted Stryker's acquisition of Mobius and Cardan Robotics, issuing glowing reports about how Cardan "*significantly bolsters*" its robotics expertise and made a "*differentiated bet*" in the space. However, based on our conversation with a former employee knowledgeable about the business, we learned it was merely a "concept." Cardan's website also had little information. A year later, when asked about the likelihood of Cardan's availability in 2021, the CEO passed on responding.

Sell-Side Promotion of Cardan Robotics Acquisition

Analyst
Zimmerman
BTIG

"The transaction would have been just another [Stryker] tuck-in but we believe the transaction has broader implications for [Stryker] and its plans in spinal robotics."

"At a high level we believe investors should view the transaction positively as [Stryker] made *another differentiated bet on robotics* with the acquisition."

"Though [Stryker] has remained focused on large joint reconstruction with MAKO and downplayed questions about its plans in spinal robotics, *we believe the Cardan Robotics component of the acquisition is more interesting and what investors should focus on.*"

Analyst
Rose
Canaccord

"We view the M&A positively as it provides Stryker's Spine division with an immediate entry into the intra-operative imaging market, complements its existing implant and navigation offerings, *and significantly bolsters the company's robotic and navigation expertise, something we continue to view as the future of spine surgery.*"

Source: "Latest Stryker deal is more than "just another tuck-in acquisition," [MedCity News](#), Sept 2019

Former Insider View of Cardan As Just "A Concept"

Former
Stryker
Professional
Familiar
With Cardan

"Cardan robotics. So that the elements they were gonna do robotics within that there's, *you know, it was a bit of a concept when we acquired it. I don't know how far along they are now, but it was definitely a concept.* Right. Um, so robotics is expanding and they're, they're betting a lot on robotics."

CEO Lobe In
Response
To Cardan
Availability
by NAS 21

"*I can't predict that. Robotics is very difficult to predict, David. I'm just going to take a pass on that.*"

Source: [MS Conf](#), Sept 2020

Cardan Website: Not Much Here At Time of Acquisition

Something revolutionary is happening in the
OR.

Cardan Robotics is working with top surgeons to develop innovative technology to set the future direction of spine surgery. To learn more about Orion please email
info@cardanrobotics.com

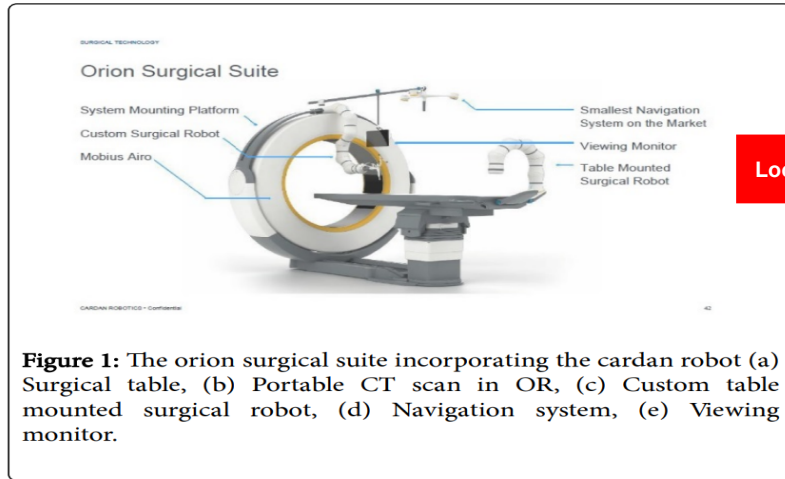
Source: [Wayback Machine Cardan Robotics](#)

Dissecting The Mystery And Hype Around Stryker's Cardan Robotics

Spruce Point found only one research reference to Cardan's Orion Surgical Suite.⁽¹⁾ As can be seen by the image on the left, it is essentially the Mobius CT scanner with a robotic arm. The research article is written by Anthony T. Yeung affiliated with the Desert Institute for Spine Care. Upon closer examination, we see that Mr. Anthony Yeung, MD was a Medical Advisor to Mobius Imaging at the time. Thus, we don't believe view the research report as credibly independent of the Company.

Cardan's Orion Concept....

The Orion Surgical suite brings all the components together (Figure 1).



Look Similar?

Not Too Dissimilar From Current Mobius/Stryker Airo TruCT



Source: [Stryker Website](https://www.stryker.com/en/products/robotics/airo-tru)

1) "Robotics in the MIS Spine Surgery Arena: A New Role to Advance the Adoption of Endoscopic Surgery as the Least Invasive Spine Surgery Procedure", [Journal of Spine](https://www.spine-journal.com/article/S1526-6907(17)30111-1), published May 13, 2017

Medical Advisors

Hansen Yuan, M.D.
Professor in the Department of Orthopedic & Neurosurgery at SUNY Upstate Medical University.

Chung T. Chung, M.D., FACR, FACRO
Professor in the Department of Radiation Oncology at SUNY Upstate Medical University.

Anthony Yeung, MD
Orthopedic and minimally invasive endoscopic spine surgeon at the Desert Institute for Spine Care in Phoenix and voluntary associate clinical professor at the University of California San Diego School of Medicine, Department of Orthopedics.

Warning Note: While Anthony Yeung MD is listed as a Medical Advisor, the [wrong biography](#) is listed. This actually appears to be his son Chris A. Yeung MD who is also affiliated with Desert Institute for Spine Care In Phoenix.



Mobius And Cardan Robotics (Continued)



Our research suggests that Mobius has been a disappointment, and had significant challenges ramping up. This supports our concern as to why Stryker made milestone payments when clear problems existed.

CEO
Lobo

*"Enabling technologies to us, we're big believers that this is going to be important for the future. **We're very excited about Mobius.** That - we launched that at our sales meeting, and we're very excited about the potential of that being part of the enabling solution portfolio."*

[FY 2019 Conf Call](#), Jan 2020

*"**So we're actually trying to ramp our capacity of Mobius,** which is, as you know, a mobile CT scan and really the only one in the market that's mobile, and they're using it for coronavirus. So we're actually ramping that capacity."*

[Q1 2020 Conf Call](#), April 2020

*"Listen, **we're thrilled with the Mobius acquisition. We bought a terrific technology. Our biggest challenge, honestly, has been scaling up the manufacturing.** So we've had very, very high demand for Mobius. It was a small company based in Shirley, Massachusetts, and we're just -- large challenges really scale up. **And it's the same challenge we've had, frankly, with TSO3,** which is the sterilizing company that we've bought."*

[Q3 2020 Conf Call](#), October 2020

Former
M&A
Professional
On Mobius

Spruce
Point
Interview

*"**Mobius was like over \$200 million, you have to be pretty optimistic with what you think your revenues are going to be. And so that sells the deal and the price you want to pay for it, and gets you approval for the funds. And that's why I was telling you, it's a bit of a slight game internally in order to get the funds. People are very optimistic with their (deal) presentations, right? So then you look at a year later, you're not hitting what you projected.** And so when you look at it in comparison to what you paid, because you thought you were gonna sell more because you wanted to, you know, get that deal through, it's not very positive. So that happened for sure, with Mobius. **Also Mobius had some challenges in the sense that they're massive CT scanners, they're mobile CT scanners in the hospital. Mobius' capacity was extremely limited. I think when we acquired them, they could produce four a week if we were lucky. Demand was higher. We assumed we could ramp up capacity a lot quicker than we could. That was an issue. We didn't realize how long training time and how manual the process this was, and supply chain and the parts, some of the lead times were almost a year to get components of this very highly electronic, specific parts for this. And it had to have a very specific battery that was custom made to fit into that device to make it mobile.**"*



Additional Color On The Mobius And Cardan Robotics Acquisition

Spruce Point Question

"Stryker used to talk about ROIC and put in the fact sheet. And now there's no talk of it. Maybe returns are going down from M&A, do you have a view?"

Former Stryker M&A Professional

*"I think that's a good speculation. Deals are significantly more expensive. The Stryker name carries a premium to it. I believe we overpay. When I was there I felt like we overpaid for deals. **When I looked at Mobius...there were risks of getting commercial products to quality standards to market. This is a very manual (production) process. It takes three months to train someone up for it. They're super constrained with respect to capacity for actually building these massive 3,000 pound, auto drive, portable CT scanners. The facility layout was ridiculous. The expenses of being in a historic building where they set up the manufacturing. It was separate floors, like moving them up and down, and where would the inventory be stored? There was a lot of challenges that we'd face with incorporating integration costs. They should have adjusted the price down for that, but because it's Stryker, companies would be resistant to adjusting price down. Stryker would've already invested so much time and energy and thought process and kind of justification emotionally entrenched in a deal, that they don't walk away.**"*

Mobius Imaging Global Recall History: Issues Continuing Into 2021...

Spruce Point has identified an alarming pattern of recalls with Mobius Imaging CT X-Ray equipment. The issues are continuing post-acquisition and into 2021. We've identified two recent recalls in Canada.

Date	Country	Issue	Source
Sept 19, 2021	Canada	Stryker has determined through internal investigation (during testing at the production level) that a fuse block located within the system requires additional insulation to ensure the Airo TruCT complies with applicable electronic requirements for medical devices	Health Canada
May 17, 2021	Canada	Stryker has identified software bugs which may impact device performance and user experience. These issues were identified around December 2020.	Health Canada
July 8, 2017	Australia	The routing of the main-drive motor cable can cause long-term repeated bending & flexing of the cable and possible breakage of the motor wire(s) while the system goes into / out of transport mode and while driving or transporting the system. If a wire were to break, the main-drive motor would not get the correct feedback and the motor could behave unpredictably.	TGA
Sept 29, 2017	Australia	When pushing the green button to home/tilt the gantry, the gantry may tilt in either direction, and at a higher than normal speed. The operator may not be able to respond (by releasing green button or pressing the Emergency Stop Button) in time to prevent harm	TGA
Sept 10, 2017 July 31, 2017 Jan 26, 2015	Switzerland	1) A problem with the configuration settings of the Motion control of the tilt motor 2) An issue with the motion control configuration settings for the Main drive 3) An error introduced in the latest software update	SwissMedic
Aug 2, 2018	Germany	The Tube Current Modulation feature (Modulated Scans) is not working in AIRO systems with software version 2.0.0.0, and operators would not be able to detect this fault until after a scan is completed.	BaFarm
Oct 16, 2017	Germany	Due to an issue with the configuration settings of the tilt-drive motion controller, if a tilt-drive motor has an intermittent connection or broken encoder or sensor wire there is a risk of unintended tilt motion of gantry while AIRO system is homing the axis at startup or preparing for a scan	BaFarm
July 20, 2017 Sept 26, 2017	Italy	1) a problem with the controller configuration settings of the tilt-pull movement, if a tilt-pull motor has a intermittent connection, a broken encoder wire or sensor, there is a risk of movement of unwanted inclination 2) a problem with the motion controller configuration settings of the main drive wheel	Salute / Salute
July 24, 2017 Oct 2, 2017	Saudi Arabia	1) Due to an issue with the configuration settings of the main-drive motion controller, if a main-drive motor has a broken encoder or sensor wire there is a risk of unintended motion while driving or transporting the AIRO system. 2) Mobius Imaging believes, due to an issue with the configuration settings of the tilt-drive motion controller,	Saudi FDA / Saudi FDA
July 28, 2017	US	Risk of unintended motion while the AIRO system is in transport mode.	FDA
Sept 26, 2017	US	If the tilt-drive motor has an intermittent connection or broken encoder or sensor wire there is a risk of unintended or unpredictable device motion while the CT system is homing the axis at startup or preparing for a scan.	FDA
Dec 8, 2014	US	There is a risk that during the transfer of an image and navigation data to the Brainlab Curve Image Guided Surgery Navigation System after a CT scan, an error may occur, causing either no navigation data or incorrect navigation data being transferred to the curve.	FDA



*A Closer Look At The K2M Group
Acquisition, Its Management's Prior
Accounting Scandal And The
"Qualified" Inventory Audit Opinion*

Background on Co-founder And Chief Medical Officer of K2M Group

It's worth highlighting that K2M Group's co-founder and Chief Medical Officer was cited for having an abnormally large number of malpractice lawsuits against him, some of which were still in litigation at the time K2M was incorporated in 2004.⁽¹⁾ No disciplinary action was ever taken against Mr. Kostuik.

K2M's Co-Founder, Chief Medical Officer

DR. JOHN P. KOSTUIK
CHIEF MEDICAL OFFICER (CO-FOUNDER)



John P. Kostuik, M.D. is a co-founder of the Company and has served as Chief Medical Officer and a member of our Board of Directors since January 2004. In addition, he served as the Chairman of our Board of Directors from 2004 to 2009. Dr. Kostuik was a recognized leader in orthopedic surgery for over 40 years. From 1991 to 2003, he served as the Chief of Spine Surgery at Johns Hopkins School of Medicine and he is generally recognized as a leading teacher, surgeon and authority on spinal disorders. Dr. Kostuik is a founder, member and past president of the North American Spine Society. He is a past president of the Scoliosis Research Society and an Honorary Fellow of the Belgium and Japanese Orthopaedic Societies. Dr. Kostuik has published more than 150 scientific articles, lectured in 38 countries and taught 150 fellows from ten countries. Dr. Kostuik holds an undergraduate degree and an M.D. from Queen's University in Kingston, Ontario, completed post-graduate surgical training at the University of Toronto and is a Fellow of the Royal College of Surgeons of Canada in Orthopedics. Dr. Kostuik was selected to serve as a director because of his valuable perspective and experience as Chief Medical Officer and a co-founder of the Company and as a former academic surgeon, as well as his leadership and reputation within the global spine surgery community, medical expertise and industry knowledge.

Source: [K2M.com via Wayback Machine](#)

Large Cases of Malpractice

- Dr. John P. Kostuik, former chief of spinal surgery and chairman of the orthopedics department at Johns Hopkins Hospital, has had 17 malpractice claims filed against him since 1993 -- among the most of any Maryland doctor over the period. In each case, Kostuik denied any negligence.
- Court and state records show that 10 claims were settled confidentially, including three in which patients died. According to malpractice claims, two patients died as a result of blood loss during surgery, the third as a result of complications. Four other claims against Kostuik were dismissed, two are pending and one outcome cannot be determined from available records.
- By law, the Board of Physicians cannot confirm whether it investigated Kostuik, unless the investigation resulted in disciplinary or other action. Records show the board took no action against him.
- In a brief interview by phone, Kostuik said, "Ninety percent of the surgery I did came from other people who had failed. It was high-risk."
- He acknowledged that a relatively large number of claims had been filed against him but declined to elaborate, saying he had been "advised by Hopkins lawyers not to talk to the press."

Source: "Disregarding the Symptoms," [The Baltimore Sun](#), Dec 18, 2005

1) Search Maryland cases under John Kostuik

When Stryker Bought K2M Group In 2018, How Carefully Did It Look Into Its Chief Accounting Officer?

K2M Group's Chief Accounting Officer was initially Gregory S. Cole. He also was CFO.⁽¹⁾ George Z. Moratis was appointed Principal Accounting Officer Dec 15, 2015.⁽²⁾ Both of these K2M Group executives worked previously at InPhonic, Inc. (Nasdaq: INPC), which had an accounting scandal and issued a non-reliance opinion on its financial statements. Up to six material weaknesses were revealed, including lack of effective controls on COGS and inventory overstatement. An SVP of Supply Chain at InPhonic who reported to the CEO and other senior executives was alleged by the SEC to have engaged in fraudulent "round-trip transactions" that resulted in financial misstatements from Q3 2005 – Q4 2006.⁽³⁾ When InPhonic filed its 2006 restated financial report in May 2007, it reported a loss of \$63.7 million - more than three and a half times the initially reported \$17.5 million loss.⁽⁴⁾

K2M's Chief Accounting Officer Was Chief Accounting Officer (and SVP Financial Reporting Analysis) At InPhonic

GEORGE Z. MORATIS GLOBAL ACCOUNTING OFFICER



George Z. Moratis is the Company's Global Accounting Officer, responsible for overseeing all accounting operations and policy determinations. Mr. Moratis has more than 30 years of accounting, finance, and financial reporting experience with public, private and global companies in the medical device, telecommunications, e-commerce, and energy industries. Prior to joining K2M, Mr. Moratis was as a partner at Tatum, LLC, where he provided pre-IPO preparation and other accounting consulting services to public and private companies. From 2008 to 2013, he was Vice President and Assistant Controller of The AES Corporation, a Fortune 200 global power company. Between 2005 and 2008, he served as Senior Vice President and Chief Accounting Officer of InPhonic, Inc. and later as Senior Vice President of Accounting at Simplicity Inc., a privately held eCommerce and MVNO solutions provider for the wireless industry. He held various

roles at Metrocall, Inc, a telecommunications provider, and its successor, USA Mobility, Inc., including Chief Financial Officer of Metrocall and Treasurer of USA Mobility. He was also with MCI Communications, the Securities and Exchange Commission and Deloitte, & Touche, LLP. Mr. Moratis holds a B.S. in Business and Economics from the University of Pittsburgh at Johnstown.

Source: [K2M.com via Wayback Machine](#)

- 1) [K2M Group S-1 Prospectus](#)
- 2) [8-K appointment](#)
- 3) SEC vs. Len Familant and Paul V. Greene and settlements [1](#) and [2](#)
- 4) [Original 2016 results](#) vs. [restated results](#)

InPhonic Accounting Scandal Timeline

- [June 2006](#): Washington DC Attorney General sues InPhonic for alleged fraudulent consumer rebate practices
- [April 2007](#): Issues Non-Reliance Opinion on financials and related to revenue overstatement and identifies three material weaknesses
- [May 2007](#): Updates Non-Reliance report to include six material weaknesses and other errors related to equipment expense, SG&A and marketing expenses, and rebate accruals
- [May 2007](#): CFO resigns, **George Moratis the Company's Senior Vice President, Financial Reporting Analysis, has been designated as the Company's Executive Vice President and Chief Accounting Officer.** Following the 10-K filing, Gregory S. Cole will be assuming some of the duties of the Chief Financial Officer in his capacity as Senior Vice President, Corporate Treasurer.
- [June 2007](#): 10K/A states
 - ✓ "The Company did not maintain adequate documentation to support the proper accounting for inventory movements related to phone shipments for refitting and refurbishment. Consequently, **the Company overstated inventory** or receivables by not maintaining adequate documentation of track phones provided to outside services providers. As a result of this material weakness, an adjustment was necessary to properly record costs of goods sold and amounts due from vendors"
- [Nov 8, 2007](#): Bankruptcy filing, auditor resignation and eventual stock delisting and registration revoked. Final auditor note warned again about,
 - ✓ "**Lack of effective controls over the accuracy and completeness of costs of goods sold** and amounts due from vendors"

K2M's CFO Also Tied To The InPhonic Scandal



K2M Group's CFO was SVP and Corporate Treasurer of InPhonic (Nasdaq: INPC) during a period a major corporate scandal emerged with six material weaknesses. He had a short role transitioning K2M Group within Stryker spine. Today, his public LinkedIn biography does not mention anything related to his role at InPhonic. Also of note, years earlier he had a Senior Financial Analyst role supporting USEC's CFO during its IPO in the late 90s. Years later, USEC also issued a non-reliance opinion and financial statement dating back almost to the IPO.

K2M's CFO Was SVP and Treasurer of InPhonic

MR. GREGORY COLE
CHIEF FINANCIAL OFFICER




Gregory S. Cole has served as our Chief Financial Officer since September 2008. From May 2008 to September 2008, Mr. Cole served as a financial consultant to start-up and development stage companies in the medical device industry. From September 2006 to May 2008, he served as Senior Vice President and Corporate Treasurer of InPhonic, Inc. and later as Executive Vice President and Chief Financial Officer of Simplicity Inc., a privately-held eCommerce and MVNO solutions provider for the wireless industry through its acquisition. From 2001 to May 2005, Mr. Cole was the Vice President and Treasurer of XM Satellite Radio, Inc., a NASDAQ 500 provider of satellite delivered entertainment, media and sports content in the United States and Canada. Mr. Cole joined XM Satellite Radio, Inc. in 1998 and served in additional financial management positions with the company, including Interim Chief Financial Officer. Mr. Cole also served in various financial roles at USEC, Inc., a public provider of enriched uranium for use in nuclear power plants, and as an auditor with Coopers & Lybrand (now PricewaterhouseCoopers LLP, or PwC). Mr. Cole holds a B.A. in Accounting from James Madison University and an M.B.A. in Finance from the Robert H. Smith School of Business at the University of Maryland, College Park.

Source: [K2M.com via Wayback Machine](#)

Years later in 2005, USEC would issue a non-reliance opinion and financial restatement dating back to June 30, 1999. USEC IPO'ed July 28, 1998. Cole's LinkedIn bio says he assisted the CFO and VP Finance

Source: USEC [8-K](#)

Cole's LinkedIn Biography Today Has No Mention Of InPhonic, But His Start Date Is Two Months Earlier

 **Gregory Cole (He/Him)**
Board Member / Management Advisor

EVP, CFO and Treasurer

Simplicity
May 2006 - Apr 2008 · 2 yrs
Northern Virginia

Simplicity aka Wirefly.com was the leading online reseller of wireless services and devices from Verizon, AT&T, T-Mobile and Sprint in the US with revenue that peaked at approximately \$350MM annually. Wirefly.com was also one of the leading purchasers of Internet advertising space on the web. As CFO on the Board elected transition team, we achieved the following business highlights:

- Restored the business to EBITDA and cash flow generation by terminating uneconomical business activities
- Led strategic due diligence and interfaced with Lazard Freres in auction process
- Sold the business to private equity in a Chapter 11 business restructuring
- Transitioned organization to private equity ownership and operating philosophy, led finance and accounting team of 15 persons
- Increased the percentage of consumers purchasing products through Wirefly.com and saved \$20MM annually by terminating ineffective Internet advertising programs
- Increased transaction value per purchase through product placement on the Wirefly.com store through high margin products and peripherals.
- Increased customer conversion per dollar spent in Search Engine Optimization (SEO) activities by terminating non-relevant key word purchases.
- Right sized the executive team and HQ organization
- Closed a \$100MM credit facility with Goldman Sachs and Citigroup
- Public company Treasury and Investor Relations – 10 active coverage analysts and investors

Source: [Cole's LinkedIn Biography](#)

Multiple Warning Signs Leading Up To Stryker's Acquisition of K2M Group

There are many classic Spruce Point red flags leading up to Stryker's acquisition of K2M Group. We observe an auditor change, admission of material weakness of internal controls, and a distributor acquisition. The most alarming issue we observe is that following Stryker's approach to K2M management of interest in pursuing a transaction, inventory growth started exceeding sales by 2.3x. Combine these facts with our finding of a [qualified audit opinion related to K2M's foreign inventory](#) and we see strong potential of foul play at work.

	Auditor Change		Private Equity Sells Out		Stryker Approaches K2M		Material Weakness Disclosed	Foreign Distributor Acquisition, Sales Recognition Change		
\$ in mm	June 2016	Sept 2016	Dec 2016	March 2017	June 2017	Sept 2017	Dec 2017	March 2018	June 2018	Sept 2018
K2M Sales	\$59.2	\$59.3	\$61.8	\$61.9	\$65.7	\$62.7	\$67.8	\$67.9	\$73.6	\$71.4
YoY Sales	5.0%	7.8%	14.0%	9.9%	10.9%	5.6%	9.7%	9.7%	12.0%	13.9%
QoQ Sales	5.2%	0.1%	4.2%	0.2%	6.2%	-4.6%	8.2%	0.1%	8.4%	-3.0%
Inventory	\$99.3	\$99.5	\$96.6	\$99.6	\$101.8	\$109.8	\$109.3	\$117.0	\$121.6	\$130.8
Less: Allowance	(\$30.2)	(\$32.7)	(\$34.7)	(\$35.9)	(\$35.1)	(\$37.4)	(\$37.9)	(\$39.6)	(\$41.5)	(\$45.5)
Net Inventory	\$69.1	\$66.7	\$61.9	\$63.7	\$66.8	\$72.4	\$71.4	\$77.4	\$80.1	\$85.3
Allowance/Gross	30.4%	32.9%	33.9%	34.1%	34.8%	33.9%	34.1%	34.8%	33.9%	34.1%
LTM Average Gross Inventory (A)	--	--	--	--	\$79.5	\$81.6	\$84.1	\$91.5	\$95.7	\$95.7
LTM Sales (B)	Big Allowance Increase Post Auditor Change		--	--	\$248.7	\$252.0	\$258.0	\$264.0	\$271.9	\$280.6
LTM Inv / Sales (A/B)			--	--	32.0%	32.4%	32.6%	34.7%	35.2%	34.1%
Cumulative Sales Growth			--	--	--	-4.6%	3.2%	3.3%	12.0%	8.6%
Cumulative Gross Inventory Growth	--	--	--	--	--	7.8%	7.4%	14.9%	19.4%	28.5%

Source: K2M financials and Spruce Point analysis

Note: Auditor change ([May 2016](#)), Stryker approaches K2 ([Proxy page 32](#)), Material Weakness of Financial Controls ([2017 10-K](#)), Distributor customer and inventory acquisition (May 2018, [10-Q](#)) and Private equity owners sell out of total position ([prospectus](#))

Inventory To Sales Increasing, While Inventory Growing 2.3x The Rate of Sales

Stryker's Large Inventory Step-Up At K2M Group

In August 2018, Stryker announced the acquisition of K2M Group (Nasdaq: KTWO) for ~\$1.0 billion in equity value. The transaction closed on November 9, 2018 for a final net purchase price of \$1.38 billion.⁽¹⁾ K2M last reported net inventory of \$85.3m as of September 30, 2018. Stryker marked the preliminary value of its inventory at \$136m (+59.4%) and the final valuation at \$131m (+53.5%). **In effect, Stryker ignored the \$45.5m inventory allowance last required by K2M Group and assumed its finished goods of \$130.8m reflected fair value.**

K2M Group Holdings Inventory Pre-Acquisition

	September 30, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 55,631	\$ 23,964
Accounts receivable, net	54,053	50,474
Inventory, net	85,294	71,424
Prepaid expenses and other current assets	6,551	7,842
Total current assets	201,529	153,704
Property, plant and equipment, net	46,401	49,200
Surgical instruments, net	30,079	26,250
Goodwill	121,814	121,814
Intangible assets, net	18,988	18,899
Other assets, net	3,060	3,260
Total assets	\$ 421,871	\$ 373,127

4. INVENTORY

The following table summarizes inventory, net of allowances:

	September 30, 2018	December 31, 2017
Finished goods	\$ 130,784	\$ 109,342
Inventory allowances	(45,490)	(37,918)
Inventory, net	\$ 85,294	\$ 71,424

Stryker's Inventory Valuation: Big Inventory Step-Up


Purchase Price Allocation of Acquired Net Assets

	2018	
	K2M	Entellus
Tangible assets:		
Accounts receivable	\$ 60	\$ 17
Inventory	131	14
Other assets	122	62
Contingent consideration	—	(79)
Other liabilities	(243)	(76)
Intangible assets:		
Customer relationship	34	33
Distributor relationship	1	—
Trade name	10	—
Developed technology and patents	475	261
Internally developed software	2	—
Goodwill	788	465
Purchase price, net of cash acquired	\$ 1,380	\$ 697
Weighted-average life of intangible assets	14	16

Source [2018 10-K](#) and revised to \$131m in [Q2 2019 10-Q](#)

Source K2M [Q3 2018 10-Q](#)

Warning: “Qualified” Audit Opinion On Inventory Later Emerges In K2M Foreign Filings



K2M Group’s UK subsidiary was audited by KPMG. Upon acquisition, Stryker’s auditor E&Y issued a “Qualified Opinion” and pointed out it was unable to satisfy itself regarding the stated inventory value of GBP 23.1m (US\$ 30.3m). Stryker has since moved to liquidate the subsidiary. This finding calls into question why Stryker essentially eliminated K2M’s inventory reserve and marked its inventory close to its gross value.

Basis for qualified opinion

We were not appointed as auditor of the company until after 31 December 2018 and thus did not observe the counting of physical inventories at the end of the year. We were unable to satisfy ourselves by alternative means concerning the quantity of inventory held at 31 December 2018 totalling £23,140,336 in the balance sheet. Consequently, we were unable to determine whether any adjustment to this amount was necessary. In addition, were any adjustment to the inventory balance to be required, the strategic report would also need to be amended.

Source: [K2M UK Limited](#) filed October 25, 2019


Basis for qualified opinion

We were not appointed as auditor of the company until after 31 December 2018 and thus did not observe the counting of physical stocks at the end of that year. We were unable to satisfy ourselves by alternative means concerning the stocks quantities of £23,140,336 held at 31 December 2018 by using other audit procedures. Consequently, we were unable to determine whether any adjustment to this amount at 31 December 2018 was necessary or whether there was any consequential effect on the cost of sales amounting to £10,673,590 for the 18 month period ended 30 June 2020. Our audit opinion on the financial statements for the period ended 31 December 2018 was modified accordingly. Our opinion on the current period’s financial statements is also modified because of the possible effect of this matter on the comparability of the current period’s figures and the corresponding figures.

As described in the basis for qualified opinion section of our report, we were unable to satisfy ourselves concerning the cost of sales amount of £10,673,590 for the 18 month period ended 30 June 2020. We have concluded that where the other information refers to the cost of sales, it may be materially misstated for the same reason.

Source: [K2M UK Limited](#) filed March 31, 2021

CEO Lobo On The K2M Acquisition



Stryker talked a big game in its deal to acquire K2M Group to bolster its spine business. The CEO said it expected mid-single digit performance going forward.

RBC
Analyst

"Kevin, I had a question on K2M. You're doubling down on Spine with the K2 acquisition. Is this a signal that you feel more optimistic about the outlook for the Spine market and now was the right time to do the deal? Or was this more signal that Spine is strategic, synergistic with orthopaedic and neuro, and you just need it to get bigger."

Stryker
CEO Lobo

Q3 2018
Oct 25, 2018

*"Sure. Thanks for the question. I think we've -- I've been for pretty consistent with the past 3 or 4 years in how important and committed Stryker was to the Spine market. It is very synergistic with both the Neurotechnology as well as orthopaedic, and we're seeing that with a terrific performance of our Tritanium product, which is 3D-printed technology that we also use in Orthopaedics. And so this has been a market we are very committed to. **The timing just worked very well for us right now. We've got our Spine business starting to perform better. K2M has really developed stronger and stronger performance with their new product launches. So the timing just came together right now....***

And so I'm very optimistic about the 2 organizations merging very well and performing very well.** But there really hasn't been a change strategically. It's always been important. I think I've said that over and over again. The market, it's nice to see that the market is stabilizing and hopefully will start to improve. **But this is a deal that makes sense for us. It will really improve our growth trajectory in our Spine business. And it just felt like a good time to do it, and we're very excited about it."

Source: [Q3 2018 Conf Call](#)

Stryker
CEO Lobo

Q4 2018
Jan 29, 2019

*"But overall, there is strength everywhere. **Really the one business that hasn't been performing as well for us in the past has been Spine. Now with the K2M acquisition, I think that story changes dramatically starting in 2020.** In 2019, we won't report K2M within our organic sales, but what we will provide each quarter are pro forma results. So you can see what the combined business is doing.. **We expect mid-single-digit performance on a pro forma basis. And then obviously, in 2020, that'll then roll into organic. So we're really excited with the speed of that integration and being able to post these numbers with a Spine business that's been essentially flat for the past 5 years is pretty remarkable."***

Source: [Q4 2018 Conf Call](#)

We Believe The Results In Spine Post-K2M Are Disappointing

Despite the CEO claiming in late 2018 and in 2021 that the story would change dramatically for Stryker's spine business, the numbers tell a different story. In the two year time span from 2019 – 2021, Spine sales rose just 0.9%, or 0.4% per annum. On the next slide, we'll show that management should have been aware of operational problems at the time it was projecting rosy outcomes for spine.

Spencer Stiles
Group
President
Ortho and
Spine

"And then thinking about Spine, **we expect to continue to post growth in that space.** And we think some of the enabling technology investments we've made will continue to pay dividends and on top of, **obviously, the K2M acquisition, which has opened up more of the portfolio for new product developments, we do think that we have good confidence in our performance in the quarters to come and well into '22 and beyond.**"

Source: BofA Conf, May 11, 2021

CEO Lobo
July 2021

"So in terms of underlying growth, I mean, we don't break out guidance in terms of **as we think about spine. But we do expect that market and that business to continue to accelerate as the recovery happens in the back half of the year**"

Source: Q2 2021 Conf Call

Stryker's Spine Reporting Year over Year

				2021 vs. 2020					2020 vs. 2019				
						US	Int'l				US	Int'l	
\$ in mm	2021	2020	2019	As Reported	Const Currency	As Reported	As Reported	Const Currency	As Reported	Const Currency	As Reported	As Reported	Const Currency
Spine Sales	\$1,167	\$1,047	\$1,157	11.5%	10.5%	8.7%	19.1%	15.2%	(9.5%)	(9.6%)	(12.5%)	(0.6%)	(0.9%)

0.9% Total Growth In Two Years


Source: 2021 10-K Annual Report

FDA Database Shows Record Report Incidents In 2021 Under Stryker's Ownership

Stryker's executives should have been aware of a significant rise in FDA complaints about K2M spine devices while issuing rosy outlooks for the business. Why didn't they disclose any operational challenges?

Counts of FDA MAUDE Submissions For K2M By Event Date And Type				
Year	Injury	Malfunction	Death	Total
2022	9	34	0	43
2021	78	280	0	358
2020	34	40	0	74
2019	80	57	0	137
2018 (Post Nov 8 th Close)	107	72	2	181
2018 (Pre Nov 7 th)	7	5	0	12
2018 Total	114	77	2	193
2017	106	78	1	185
2016	79	53	0	132

Revisiting Spine And Goodwill Impairment



Earlier in our report, we pointed out that Stryker recently experienced declining organic growth in spine where [management couldn't explain what was driving market share](#), and the [Company realigned reporting segments](#), thereby reducing Spine's drag on its new segment. Stryker's miserable spine results are even after it acquired K2M Group in 2018 which was supposed to augment its spine offerings and allow it grow its global presence. Stryker has never impaired any of the \$788m of goodwill recorded from this transaction. Compare this with Zimmer Biomet which acknowledged the challenges in the Spine business and reported large goodwill impairments in 2017 and 2018, respectively. **We believe Stryker is avoiding goodwill impairment of its spine business.**

Stryker's Competitor Impairs Goodwill For Its Spine Segment

"In our annual impairment tests, we determined our Spine reporting unit's carrying value was in excess of its estimated fair value in each of the last two years. This resulted in impairment charges of \$401.2 million and \$272.0 million in the years ended December 31, 2018 and 2017, respectively. There is no goodwill balance remaining in this reporting unit as of December 31, 2018. This reporting unit included goodwill from both the Biomet merger in 2015 and the LDR merger in 2016, as well as goodwill that existed prior to those mergers. The forecasts used to recognize the goodwill related to the spine product categories of Biomet and LDR assumed cross sale opportunities of the combined businesses would enable the reporting unit to grow faster than the overall spine market. In 2017, the primary drivers of impairment were lower than expected sales due to sales force integration issues and additional complexities of combining the Zimmer, Biomet and LDR spine product supply chains. As a result, in our 2017 forecasts we estimated it would take longer than originally anticipated to realize the benefits of the mergers of the Biomet and LDR spine product categories. In 2018, our Spine reporting unit's performance did not significantly improve as we continued to work through integration and supply issues. We estimate our Spine sales are currently growing below overall market growth. Consequently, we lowered our expectations of future sales growth."



Sensing Failure At OrthoSensor And A Look Into Other Problematic “Tuck-In” Acquisitions

CEO Lobo On “Tuck-In” Acquisitions

Spruce Point will put CEO Lobo’s claims to the test that tuck-ins are easy and that its track record is good and it is disciplined.

CEO Lobo
Morgan Stanley
Conference
Sept 13, 2021

*“And picking -- **the tuck-ins are easy**. Those -- we were good at that, and we'll keep doing those tuck-ins. But when we're talking about multibillion-dollar deals, then making sure we pick the right companies. **And our track record has been pretty good so far, and I think we'll continue to be a disciplined acquirer.**”*

A Closer Look At OrthoSensor

Recall earlier in our analysis of the Wright Medical acquisition that we identified revenue contribution anomalies. Stryker's Orthopaedics segment had two acquisitions close in Q4 2020: Wright Medical (Nov) and OrthoSensor (Dec). Based on Stryker's reporting, the segment had \$126 million of contributions from acquisitions. Yet, elsewhere it reported \$129.2 million of revenue just from Wright Medical alone. Internet sources estimate that OrthoSensor had between \$10 - \$32 million in revenue.⁽¹⁾ While it may be negligible, it suggests some revenue should have been contributed in 2020. Given this discrepancy, we decided to take a closer look into OrthoSensor.

Estimating 2020 Acquired Revenue Contribution				
\$ in mm	Total	Ortho	MedSurg	Neuro/Spine
2020 Net Sales	\$14,351	\$4,959	\$6,400	\$2,292
2019 Net Sales	\$14,884	\$5,252	\$6,492	\$3,140
Contribution To Growth From Acquisitions	1.2%	2.4%	0.5%	0.8%
Revenue Contribution	\$179	\$126	\$32	\$25

Source: [FY 2020 Stryker Press Release](#)

Note: Could be rounding, but segment acquisition revenue contribution of \$184m is more than total company of \$179m

Wright's Sales And EBT Contribution			
\$ in mm	Consolidated Stryker	% Wright	Wright Contribution
Net Sales	\$14,351	0.9%	\$129.2
Earnings Before Income Taxes	\$1,954	1.3%	\$25.4

Source: 2020 [10-K](#) – Item 9A, page 37

Ortho also includes the OrthoSensor acquisition In December 2020:

"We completed the acquisition of OrthoSensor, Inc. (OrthoSensor). OrthoSensor is a leader in the digital evolution of musculoskeletal care and sensor technology for total joint replacement. OrthoSensor is part of our Joint Replacement business within Orthopaedics"

1) [KonaEquity](#) and [Zippia](#)

OrthoSensor Appears To Be Another Busted Company Acquired By Stryker

On [Jan 5, 2021](#) Stryker promoted the acquisition of OrthoSensor saying, “Smart devices and implants will play a big role in orthopaedics and we are excited for OrthoSensor to join Stryker as we continue to innovate and advance smart sensor technologies, including intraoperative sensors, wearables and smart implants across our joint replacement business.” Based on our analysis, OrthoSensor was a bust for its previous owners, and was acquired at a price below the total capital invested into the business since 2011. Since 2018, OrthoSensor had been increasingly dependent on raising debt capital.

We Estimate Stryker Acquired OrthoSensor At Less Than The Total Capital Invested Into The Business

Estimated Total Capital Raised By OrthoSensor

Date	Capital Raised	Capital Type
1/26/2011	\$21.0	Series B
Form D	\$3.0	Notes Convert to B-1 Preferred
5/4/2012	\$15.0	Series B
10/15/2013	\$13.0	Series B-2
5/23/2015	\$19.0	Series C
11/24/2015	\$12.0	Equity and Options
4/29/2016	\$2.4	Equity and Options
4/10/2017	\$6.3	Debt and Options
1/26/2018	\$2.8	Equity and Options
5/2/2018	\$5.2	Debt
8/10/2018	\$6.0	Debt and options
11/16/2018	\$16.2	Debt
5/2/2019	\$6.3	Debt and options
10/9/2020	\$1.3	Debt and options
10/15/2020	\$6.5	Debt and options
Total	\$135.9	

In December 2020 we completed the acquisition of OrthoSensor, Inc. (OrthoSensor). OrthoSensor is a leader in the digital evolution of musculoskeletal care and sensor technology for total joint replacement. OrthoSensor is part of our Joint Replacement business within Orthopaedics.

Investing Activities: Cash used in investing activities was \$4,701, \$1,455 and \$2,857 in 2020, 2019 and 2018. **The increase in cash used in 2020 was primarily due to the acquisition of Wright and OrthoSensor**

Source: [Stryker 2020 10-K](#)

Estimated Stryker Purchase Price for OrthoSensor

\$ in mm	Q4 2020
Total Acquisitions In Q4 2020, Net of Cash	\$4,196
Less: Wright Group Purchase Net of Cash	(\$4,081)
Implied OrthoSensor Purchase Price	\$115

Note: Stryker also says deals completed in 2020 included \$82m in future milestone payments due upon achievement of regulatory and commercial milestones. However, Stryker does not explicitly say this was for the OrthoSensor deal

OrthoSensor Failures Alleged In A Lawsuit

In 2013, OrthoSensor signed a manufacturing contract with Valtronic to produce between 5,000 – 30,000 per year of its knee balancer. The contract detailed that a 10% failure rate was to be assumed. In August 2017, Valtronic filed a lawsuit against OrthoSensor for non-payment and alleging failure rates up to 40%. The case was eventually settled between the two parties. For further reference, OrthoSensor also had an FDA recall event from 2014-2015.⁽¹⁾ In October 2018, OrthoSensor issued a press release announcing its milestone of having distributed 50,000 of its leading VERASENSE knee balancer globally. This appears to be well short of optimistic projections as OrthoSensor was looking for up to 30,000 units per year just from its Zimmer partnership, while at the same time it also had a partnership with Stryker.

Allegations In Valtronic vs. OrthoSensor Lawsuit

16. As a result of the negotiations, on September 6, 2013, Valtronic and Ortho entered into an agreement, attached as Exhibit A, whereby Valtronic would manufacture the Knee Balancers to Ortho's specifications.

17. Among other things, the agreement called for Valtronic to manufacture between 5000 and 30,000 units of the Knee Balancer per year and engage in activities, including but not limited to, component purchasing, hand assembly of the units, packaging of the units and necessary sterilization of each unit.

36. Throughout 2016 the specifications provided to Valtronic by Ortho and which Ortho had itself tested or had the ability to test, resulted in a failure rate of greater than 10%. Specifically, and by way of example, during the period of January 1, 2016 to June 1, 2016, 6,098 units were tested by Valtronic with 4,976 of the units meeting the specification. This is a failure rate of 18%. Between June 1, 2016 and August 31, 2016 the failure rate was 40% (2,383 of 3,977 passing). And between September 1, 2016 and November 14, 2016 the failure rate was 36% (4,171 of 6,488 passing).

Case: Valtronic Technologies (USA) vs. OrthoSensor, Inc. 1:17-cv-01787-JG Doc#1, Filed 8/25/17

Red emphasis Spruce Point

Source: [OrthoSensor Press Release](#)

Note: The Valtronic contract was specifically for the [Zimmer product partnership](#)

1) [Class 2 FDA OrthoSensor recall](#)

ORTHOSENSOR ANNOUNCES MILESTONE OF 50,000 VERASENSE™ SENSORS DISTRIBUTED GLOBALLY

DANIA BEACH, FL (October 4, 2018) – OrthoSensor, Inc., a leader in sensor-assisted technology for total knee replacement (TKR), today announced the milestone achievement of 50,000 VERASENSE sensors distributed worldwide.

Why Does Stryker Dodge Answering Questions About A Company It Has Known For A Decade?

Stryker was the first strategic alliance announced by OrthoSensor dating back to 2011, and may have even been the unnamed “strategic” investor referenced in the [first financing announcement](#). Stryker even had former employees from R&D and Legal who had worked at OrthoSensor.⁽¹⁾ Yet, when asked simple questions about the plan for OrthoSensor, Stryker management dodges direct responses and acts as if OrthoSensor is too new to the organization to comment on.

Stryker An
OrthoSensor
Partner Since
2011

Date	News
August 17, 2011	Stryker Orthopaedics Enters Into Agreement With OrthoSensor For Intelligent Surgical Platform
May 22, 2013	Stryker Extends Co-Marketing Agreement

Oppenheimer
Analyst

“A couple of quick ones on Orthosensor and then a follow-up on Orthosensor. Can you just remind us what you plan on doing with the intraoperative, the VERASENSE capability? I know that some of your competitors currently use that system. Are you going to continue to sell that as an open architecture? And then second on Orthosensor is just should we think of when you do offer your first iteration of a product there, whether it's a wearable, external or whatever it looks like? Is that going to be something that you'll charge separately for? Or do you think you'll package it in with the procedure?”

IR Wells
Q4 2020

*“Thanks for the question. **So on OrthoSensor, obviously, it's new under the belt here a few weeks. And so it's not something that we have fully developed all of the various plans in terms of how we're going to market for any of the products at this point in time. And so as that happens, we'll certainly be able to come back and give you updates** with regards to how we're going to market and what the impacts might be in terms of what the legacy business was and what we expect it to be in the future.”*

Source: [Q4 2020 Conf Call](#)

Oppenheimer
Analyst

“And then just secondly, with OrthoSensor in the full year, when I think about 6 months. Any updated thoughts on a smart implant coming from that acquisition?”

CEO
Lobo
Q2 2021

*“**Nothing new to report at this point. I mean, obviously, it's still fairly new in terms of the acquisition into the organization.** We still do believe in smart implants and smart devices and that they will have a role to play in orthopedics. And so as we -- as similar as with robotics, as we get further down that pathway, it's something that we will certainly keep you updated on.”*

Source: [Q2 2021 Conf Call](#)

1) Mr. Leach ([R&D](#)) and Mr. Trousdale ([Legal](#))

Stryker Punts OrthoSensor Further Into The Future, Despite Significant Ties To Scientific Contributors

The scientific claims made in OrthoSensor's press release cites various studies led by individuals with deep ties to Stryker. In fact, the top three contributors to key references have been paid over \$10 million by Stryker, mostly for licenses and royalties tied to Mako Surgical. Again, this further calls into question why Stryker dodges specific guidance on OrthoSensor's product roadmap when it has deep financial ties to the scientific community backing it.

CEO Lobo
On
OrthoSensor
Sept 13, 2021

"And so while I do believe smart implants and wearables is a big part of the future, which is why we did the Orthosensor acquisition, and we'll continue to pursue this. I think it's going to take time for this to really demonstrate the value because what data are you collecting? ...And there are a lot of question marks today. I think the data is going to be useful, but we have to be able to turn that data into something that actually validates the need for it. And we're not at that stage yet. So I think this will be something that will grow over time, but it's not something that's going to transform the market in a very, very fast period of time."

Source: MS Conf, Sept 2021

About OrthoSensor, Inc.

OrthoSensor, Inc., a leader in Sensor-Assisted Total Knee Arthroplasty, develops and commercializes intelligent orthopedic devices and data services that provide quantitative feedback to surgeons and hospitals. The sensor utilizes advanced proprietary sensor and communications technologies, coupled with the company's innovative software products, to facilitate evidence-based decisions in orthopaedic surgery – with the goal of improving patient outcomes and potentially reducing the cost of treating musculoskeletal disease.

OrthoSensor® VERASENSE™, and OrthoLogIQ® are trademarks of OrthoSensor, Inc.

References:

1. Gustke KA, Golladay GJ, Roche MW, Elson LC, Anderson CR. Primary TKA Patients with Quantifiably Balanced Soft-Tissue Achieve Significant Clinical Gains Sooner than Unbalanced Patients. *Advances in Orthopedics*, vol. 2014, Article ID 628695, 6 pages, 2014.
2. Gustke KA, Golladay GJ, Roche MW, Elson LC, Anderson CR. A new method for defining balance: promising short-term clinical outcomes of sensor-guided TKA. *J Arthroplasty* 2014; 29:955-960.
3. 2-Year Clinical Outcomes. OrthoSensor Multicenter Evaluation. Pending publication. Data on file at OrthoSensor, Inc.
4. Gustke, K., Golladay, G., Roche, M., Elson, L., Jerry, G., Anderson, C. The satisfied total knee replacement patient: 3-year multicenter study. *EC Orthopedics* 9.3 (2018): 122-127.

Source: OrthoSensor 50,000 Verasense milestone, [press release](#) 2018

Physician	Total Since 2014 (# of Pmts)	Notes
Gregory J. Galloday	OrthoSensor \$154,388 (75) Stryker \$5,365 (7)	In 2020 \$2,500 consulting fees from OrthoSensor
Kenneth Alan Gustke	OrthoSensor \$121,722 (65) Stryker \$3,999,064 (466)	In 2020 93% royalty/license 7% consulting Majority related to Mako
Martin W. Roche Founder & CMO of OrthoSensor and Orthopedic Consultant to Mako/Stryker	OrthoSensor \$209,992 (215) Stryker \$6,369,340 (361)	In 2020 87% royalty/license 13% consulting Majority related to Mako

Tuck-in NOVADAQ: Recall A Material Step-Up of Inventory Valuation

In June 2017, NOVADAQ (TSX/Nasdaq: NVDQ/NDQ) entered into an agreement to be acquired by Stryker and closed the deal on Sept 1, 2017.⁽¹⁾ Throughout its financial reporting, NOVADAQ never reported more than \$11.7m of inventory on its balance sheet.⁽²⁾ Leading up to the acquisition, it last reported \$4.8m of inventory as of June 20, 2017. Stryker completed the acquisition on September 1, 2017. Stryker preliminarily revalued its inventory to \$39 million, with a final inventory valuation of \$25 million (421% more than the final reported value).

NOVADAQ Inventory Pre-Acquisition

Notes	As at June 30, 2017	As at December 31, 2016
ASSETS		
Current assets		
Cash and cash equivalents	\$ 49,589,689	\$ 62,382,649
Accounts receivable	27,522,109	27,791,574
Prepaid expenses and other assets	6,078,718	5,776,463
Inventories	4,869,246	4,295,565
	<u>88,059,762</u>	<u>100,246,251</u>

Source [Canada's Sedar](#)

Stryker's Inventory Valuation: Big Inventory Step-Up

Preliminary

Purchase Price Allocation of Acquired Net Assets	
	2017 NOVADAQ
Purchase price, net of cash acquired	\$ 674
Tangible assets:	
Accounts receivable	11
Inventory	39
Other assets	9
Contingent consideration	—
Other liabilities	(59)
Intangible assets:	
Customer relationship	18
Trade name	1
Developed technology and patents	133
Goodwill	522
	<u>\$ 674</u>
Weighted-average life of intangible assets	14

Source [Q1 2018 10-Q](#)

Final

Purchase Price Allocation of Acquired Net Assets	
	2017 NOVADAQ
Tangible assets acquired:	
Accounts receivable	11
Inventory	25
Other assets	7
Contingent consideration	—
Liabilities	(56)
Intangible assets:	
Customer relationship	18
Distributor relationship	—
Trade name	1
Developed technology and patents	141
Internally developed software	—
Goodwill	527
Purchase price, net of cash acquired	\$ 674
Weighted average life of intangible assets	15

Source [2018 10-K](#)

1) [Stryker completes acquisition of NOVADAQ Technologies Inc.](#)
2) Reported \$11.7m on March 31, 2016

Initial Optimism In Portfolio Sales Synergy, Later Tempered A Few Quarters Later



Initial talk of portfolio synergy and collaboration amongst the sales team ultimately led to a reduction of the sales force three quarters later.

VP of IR
Owen
Q3 2017

"We are actively identifying portfolio synergies and collaborating amongst the sales team on combined [quotes] to our customers as they look to standardize to this full, advanced imaging portfolio. Beyond the sales force, NOVADAQ has an extensive clinical research team and impressive R&D team. We are excited about the long-term opportunity to advance the visualization market."

Source [Q3 2017 Conf Call](#)

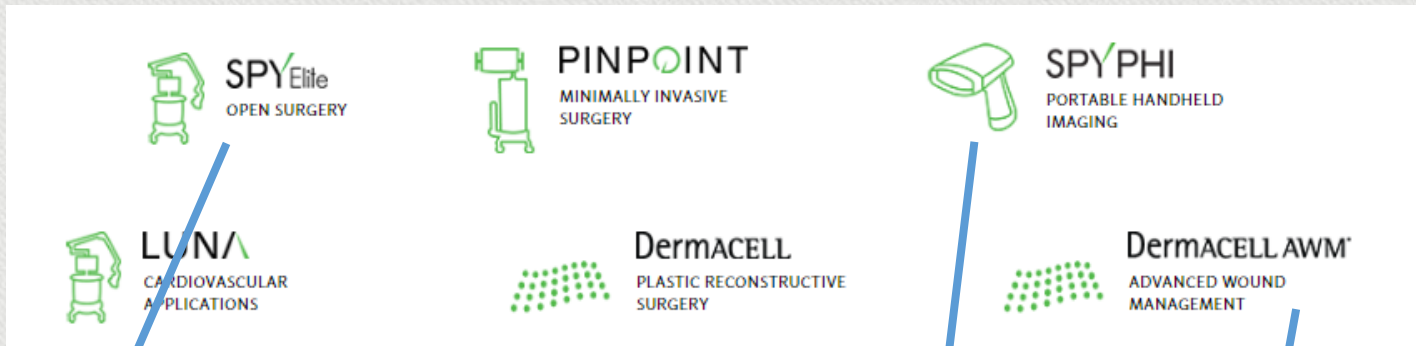
VP of IR
Owen
Q2 2018

"So we're really pleased with NOVADAQ, but there was always going to be an initial hiccup because we ended up taking out a lot of sales reps as we brought the technology into our organization."

Source [Q2 2018 Conf Call](#)

NOVADAQ's Product Portfolio: Now vs. Then

Products Marketed By NOVADAQ When Stryker Announced Its Intention To Acquire It



Source: NOVADAQ website via [Wayback Machine](#), June 2017

Products Today Marketed By Stryker

SPY^{Elite}

Fluorescence imaging system

SPY^{Elite} Fluorescence Imaging enables surgeons performing open procedures, such as breast and other reconstruction, gastrointestinal and cardiothoracic surgery, to visualize microvascular blood flow and perfusion in tissue intraoperatively.



Source: [Stryker Website](#)

SPY-^{PHI}

SPY Portable Handheld Imaging System

SPY Portable Handheld Imager (SPY-^{PHI}) utilizes SPY Fluorescence Imaging technology and allows surgeons to visualize blood flow in vessels and related tissue perfusion during plastic, microsurgical, reconstructive and gastrointestinal procedures.



Source: [Stryker Website](#)

DermACELL[®]

Acellular dermal matrix

Dermacell is a decellularized regenerative human tissue matrix allograft processed using proprietary MATRACELL[®] technology from LifeNet Health.




Source: [Stryker Website](#)

NOVADAQ's Shrinking Portfolio

LUNA – an entire product systems from NOVADAQ has disappeared, while the PINPOINT imaging system has been reduced just to a single camera. **In retrospect, should NOVADAQ's inventory have been stepped up, or down?**

As Promoted By NOVADAQ




LUNA

FLUORESCENCE ANGIOGRAPHY SYSTEM

The LUNA Fluorescence Angiography System provides clinicians with real-time visualization of tissue perfusion in patients being evaluated and treated for the effects of certain cardiovascular diseases such as arteriosclerosis that impair blood flow to the extremities and other tissues, such as diabetic foot ulcers, arterial and venous blockages in the lower extremities, traumatic and chronic wounds.

Source: NOVADAQ website via [Wayback Machine](#), June 2017



PINPOINT

ENDOSCOPIC FLUORESCENCE IMAGING SYSTEM

The PINPOINT Endoscopic Fluorescence Imaging System combines - into a single laparoscopy platform - the latest in high definition white-light video with SPY Fluorescence imaging, resulting in bright, clear images.

Source: NOVADAQ website via [Wayback Machine](#), June 2017

As Promoted By Stryker Today

Search Results
Showing results for: luna

Search this site



Showing 3 Of 3 records

Source: [Stryker Website Today](#)

PINPOINT

Endoscopic fluorescence imaging

The PINPOINT Endoscopic fluorescence imaging camera provides high definition white light video and SP Fluorescence Imaging.



Source: [Stryker Website Today](#)

Tuck-In: TSO3, One Man's Garbage Is Another Man's Treasure

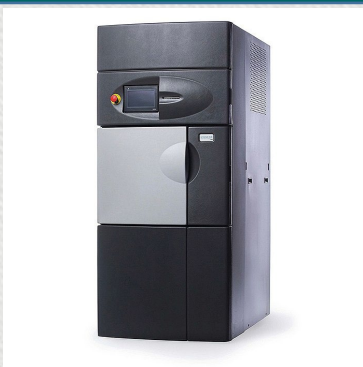
[Stryker acquired TSO3 in August 2019](#), a company that [Spruce Point](#) warned the world about in a detailed forensic report on August 2017. We argued TSO3 was more akin to a stock promotion than a company with a commercially viable product. Stryker acquired the publicly listed Canadian company for over \$50m, or more than it had generated in cumulative sales over the prior decade, while racking up multiples of sales in losses. Stryker never issued a press release about this transaction. In a rare comment about TSO3, a year later the CEO said it had challenges ramping up the product... REALLY! Based on the product image currently listed on Stryker's website, there does not appear to be much advancement of the Sterizone VP4 product under Stryker's ownership.

CEO Lobo Only Public Comment on TSO3 Performance

"Listen, we were thrilled with the Mobius acquisition, we bought a terrific technology. **Our biggest challenge honestly, has been scaling up the manufacturing. So we've had very, very high demand for Mobius. It was a small company based in Shirley, Massachusetts where just large challenges really scale up and it's the same challenge we've had, frankly, the TSO3, which is the sterilizing company that we bought**, and a lot of times when we buy smaller companies, the demand tends to overwhelm us. And we have to go back to the design robustness and be able to scale the manufacturing, build new production lines."

1) [Q3 2020 Conf Call](#)

Now Under Stryker (2022)



Source: [Stryker Website](#)

Under TSO3 (2017)



Source: Spruce Point report

TSO3 Share Price (TSX: TOS)



Source: Bloomberg



Tuck-In: Shady OrthoSpace Acquisition

Based on just \$1m of accounts receivable and inventory, and \$110m paid upfront, OrthoSpace appears richly valued with negligible sales. Evidence suggests that Stryker made milestone payments to OrthoSpace well in advance of “regulatory” milestones being achieved. By year end 2019, it disclosed the allocation of the purchase price and allocated \$0 to contingent consideration. FDA approval wasn’t received until July 12, 2021.⁽¹⁾

Q1
2019

“In March 2019 we completed the acquisition of OrthoSpace, Ltd. for total cash consideration of \$110 with future milestone payments of up to an additional \$110. OrthoSpace is a medical device company specializing in orthopaedic biodegradable technology for the treatment of irreparable rotator cuff tears.”

Source: [Q1 2019 10-Q](#)

Q2
2019

“In March 2019 we completed the acquisition of OrthoSpace, Ltd. for total cash consideration of \$110 with future milestone payments of up to an additional \$110. OrthoSpace is a medical device company specializing in orthopaedic biodegradable technology for the treatment of irreparable rotator cuff tears. **Goodwill attributable to the acquisition was \$114 and is not deductible for tax purposes.**”

Source: [Q2 2019 10-Q](#)

Annual
Report

Clarifies:
“Regulatory”
Milestone

“In March 2019 we completed the acquisition of OrthoSpace, Ltd. (OrthoSpace) for **net cash consideration** of \$110 and **future regulatory milestone payments of up to \$110**. OrthoSpace is a medical device company specializing in orthopaedic biodegradable technology for the treatment of irreparable rotator cuff tears. **OrthoSpace is part of our Endoscopy business within MedSurg.** Goodwill attributable to the acquisition is not deductible for tax purposes.”

Source: [2019 10-K](#)

Valuation Year End 2019: \$0 For Contingent Consideration

Purchase Price Allocation of Acquired Net Assets

2019	Mobius	OrthoSpace
Tangible assets acquired:		
Accounts receivable	\$ 3	\$ 1
Inventory	7	1
Other assets	2	1
Contingent consideration	(4)	—
Liabilities	(10)	(29)
Intangible assets:		
Customer relationship	7	—
Developed technology and patents	60	120
In-process research and development	98	—
Non-compete agreements	9	—
Goodwill	301	114
Purchase price, net of cash acquired	\$ 473	\$ 208
Weighted average life of intangible assets	12	18

Where is the contingent payment value?

Actual Cash Spent Suggest
\$98M of Milestone Payments



Tuck-In: TMJ Concepts

There is a discrepancy between timing disclosures of when TMJ Solutions (DBA: TMJ Concepts) is to have closed. Stryker claimed TMJ closed in Q1 2021, but the Company's website says Q2 2021. State filings records also indicate a new business entity was formed April 1, 2021.⁽¹⁾

Q1 2021
Conference
Call

*"Finally, our dedicated business development teams continue to identify and execute on tuck-in acquisitions. **During the quarter, we completed the acquisition of TMJ Concepts**, a medical device company that manufactures a patient-specific temporomandibular joint reconstruction prosthesis system. And our cranial maxillofacial business, personalized medicine plays a critical role. And the acquisition of TMJ Concepts supports their business strategy of driving category leadership through innovation and purpose of restoring form, function and hope to patients. These acquisitions continue to demonstrate our focus on our strategy of driving category leadership and market-leading growth."*

Source [Q1 2020 Conference Call](#)

TMJ Concepts Acquired By Stryker FAQs

- TMJ Concepts was acquired by Stryker on April 5, 2021
- TMJ Concepts will remain in Ventura, CA
- You may continue to use your preferred modeling and planning vendor
- The TMJ Concepts staff and management team will remain in place. We will receive additional resources and teammates as we work through the integration
- You will now have increased logistical and sales support from the Stryker team
- Contact TMJ Concepts' customer service team if you want a Stryker sales representative to reach out to you

We are committed to continuing the same high level of customer service and quality product that you have come to know and expect from TMJ Concepts. Please contact us if you would like to discuss any details related to this acquisition.

Source [TMJConcepts.com](https://www.tmjconcepts.com)

Deal Actually
Closed In
Q2 2021
According
To TMJ

1) [California State Records](#)

TMJ Concepts Patient Injuries Accelerating Post Stryker's Acquisition

36% of all MAUDE reports since 2018 for TMJ Solutions, LLC (DBA TMJ Concepts) have come after Stryker acquired the Company in early 2021. **The product has a device history dating back to 1989 and each prosthesis is individually fabricated for the unique anatomy of the patient.⁽¹⁾ Why would Stryker waste its time and shareholder capital on an acquisition of a legacy product that is experiencing an accelerated rate of patient injuries?**

Number	Event Date	Event Type	Brand	Device Problem
0002031049-2022-00002	12/8/2021	Injury	TMJ BILATERAL IMPLANTS	Adverse Event Without Identified Device or Use Problem
0002031049-2022-00001	12/6/2021	Injury	TMJ BILATERAL IMPLANTS	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00072	11/30/2021	Injury	TMJ BILATERAL IMPLANTS	Fracture
0002031049-2021-00073	11/18/2021	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Device Dislodged or Dislocated; Adverse Event Without Identified Device or Use Problem
0002031049-2021-00088	11/12/2021	Injury	TMJ BILATERAL IMPLANTS	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00068	11/8/2021	Injury	TMJ BILATERAL IMPLANTS	Fracture
0002031049-2021-00067	10/19/2021	Injury	TMJ BILATERAL IMPLANTS	Malposition of Device; Adverse Event Without Identified Device or Use Problem
0002031049-2021-00065	10/11/2021	Injury	TMJ BILATERAL IMPLANTS (BUNDLED COST)	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00064	10/6/2021	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00063	9/24/2021	Injury	TMJ BILATERAL IMPLANTS	Malposition of Device; Adverse Event Without Identified Device or Use Problem
0002031049-2021-00086	3/22/2021	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Adverse Event Without Identified Device or Use Problem
0002031049-2022-00004	1/5/2021	Injury	TMJ BILATERAL IMPLANTS	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00070	12/15/2020	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Device Dislodged or Dislocated
0002031049-2021-00085	10/13/2020	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00087	9/4/2020	Malfunction	TMJ BILATERAL IMPLANTS	Malposition of Device; Adverse Event Without Identified Device or Use Problem
0002031049-2021-00084	7/21/2020	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00083	6/15/2020	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00078	2/26/2020	Injury	TMJ BILATERAL IMPLANTS	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00080	12/10/2019	Malfunction	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Malposition of Device; Adverse Event Without Identified Device or Use Problem
0002031049-2021-00071	10/30/2019	Injury	TMJ BILATERAL IMPLANTS	Adverse Event Without Identified Device or Use Problem; Patient Device Interaction Problem
0002031049-2021-00079	10/16/2019	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Adverse Event Without Identified Device or Use Problem
0002031049-2022-00003	8/1/2019	Injury	TMJ BILATERAL IMPLANTS	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00077	1/23/2019	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00076	11/15/2018	Malfunction	TMJ BILATERAL IMPLANTS	Device Dislodged or Dislocated
0002031049-2021-00081	10/22/2018	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00075	10/2/2018	Injury	TMJ BILATERAL IMPLANTS	Contamination
MW5080628	9/19/2018	Injury	TMJ CONCEPTS	Patient-Device Incompatibility
MW5080481	9/11/2018	Injury	TMJ CONCEPTS	Insufficient Information
0002031049-2021-00074	7/24/2018	Injury	TMJ BILATERAL IMPLANTS	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00069	7/16/2018	Injury	TMJ UNILATERAL IMPLANTS (BUNDLED COST)	Adverse Event Without Identified Device or Use Problem
0002031049-2021-00082	3/14/2018	Injury	TMJ BILATERAL IMPLANTS (BUNDLED COST)	Malposition of Device; Adverse Event Without Identified Device or Use Problem

Source: [FDA Maude Database](#)

1) [TMJ Concepts history](#)

Why does Stryker claim tuck-ins are easy? Why did it take almost a year to close the small “tuck-in” acquisition of SafeAir, a pencil that sells in boxes of ten? Why hasn’t Stryker said much of anything about SafeAir after completing the acquisition? Did Stryker not want to inform investors that it issued a recall with the FDA shortly after closing the acquisition?

Major Delay In Closing A “Tuck-in” Which Stryker Says Are “Easy” And It Has “A Pretty Good” Track Record

SafeAir Deal Announced

*“Kalamazoo, Michigan - **June 25, 2018** - Stryker Corporation (NYSE:SYK) announced today a definitive agreement to acquire SafeAir AG, a Swiss medical device company dedicated to the design, development and manufacture of innovative surgical smoke evacuation solutions. The company's smoke evacuation products help reduce staff and patient exposure to hazards associated with surgical smoke. "The acquisition of SafeAir AG is highly complementary to the Surgical business of Stryker's Instruments division, and strengthens our smoke evacuation portfolio in both the U.S. and Europe," said Timothy J. Scannell, Group President, MedSurg and Neurotechnology. "This acquisition aligns with Stryker's focus of providing solutions that result in a higher quality of care and level of safety for both healthcare professionals and patients. **The transaction is subject to customary closing conditions and is expected to close in the fourth quarter of 2018.**"*

Analyst Call

May 2, 2019

*“Over the past 6 years, you can see we've been very busy, buying many, many companies. Most of the companies are pictured in gold, and that's because they're core business, they tuck into an existing business. **Occasionally, we'll buy an adjacent business, and then we have 1 acquisition, SafeAir, which is pending and should be closing very soon.** And that'll be in addition to the Instruments division, we're very excited about.”*

A Tuck-In Just Requires A Label Change...?

Order the SafeAir® Smoke Pencil

Ordering information	
PENCIL	
1923011	Telescopic Smoke Evac Pencil, PB, Coated, Product No. SHKTSPLC. The product is a Bovie pencil that is 75 inches long compressed, with a telescoping shaft.
1923050	Telescopic Smoke Evac Pencil, PB, Coated, Product No. SHKTSPLC. The product is a Bovie pencil that is 75 inches long compressed, with a telescoping shaft.
1924004	Telescopic Smoke Evac Pencil, PB, Coated, Product No. SHKTSPLC. The product is a Bovie pencil that is 75 inches long compressed, with a telescoping shaft.
1924005	Telescopic Smoke Evac Pencil, PB, Coated, Product No. SHKTSPLC. The product is a Bovie pencil that is 75 inches long compressed, with a telescoping shaft.
1924015	Telescopic Smoke Evac Pencil, PB, Coated, Product No. SHKTSPLC. The product is a Bovie pencil that is 75 inches long compressed, with a telescoping shaft.
1929038	Telescopic Smoke Evac Pencil, PB, Coated, Product No. SHKTSPLC. The product is a Bovie pencil that is 75 inches long compressed, with a telescoping shaft.
1929039	Telescopic Smoke Evac Pencil, PB, Coated, Product No. SHKTSPLC. The product is a Bovie pencil that is 75 inches long compressed, with a telescoping shaft.
1929055	Telescopic Smoke Evac Pencil, PB, Coated, Product No. SHKTSPLC. The product is a Bovie pencil that is 75 inches long compressed, with a telescoping shaft.



Source: [SafeAir via Wayback Machine](#)



Source: [Stryker](#)

Product Recall Months After Closing....

Product	Telescopic Smoke Evac Pencil, PB, Coated, Product No. SHKTSPLC. The product is a Bovie pencil that is 75 inches long compressed, with a telescoping shaft. UDI GTIN 37613327466332
Code Information	1923011, 1923050, 1924004, 1924005, 1924015, 1929038, 1929039, 1929055
Recalling Firm/Manufacturer	Stryker Instruments Div. of Stryker Corporation 4100 E Milham Ave Portage MI 49002-9704
For Additional Information Contact	Kara Spath 269-389-4518
Manufacturer Reason for Recall	Hairline fractures in a component could allow electrical current to arc out of the device, resulting in a burn to the patient and/or user.
FDA Determined Cause ²	Under Investigation by firm
Action	On January 13, 2020, the firm informed customers of the recall via Urgent Medical Device Recall Notification letters. Customers were advised to take the following actions: 1. Immediately check all stock areas and/or operating room storage for affected products. Quarantine and discontinue use of any recalled Stryker SafeAir Smoke Evacuation Pencils or LINA Telescopic Smoke Pencils.

Source: [FDA product recall](#)



Multiple Signs of Governance Breakdowns Between Insiders And Shareholders

After a period of first reducing the total share count and then holding it steady, we see that Stryker's total shares outstanding are now starting to creep higher. Furthermore, family matriarch Ronda Stryker is increasing share sales along with Greenleaf Trust which manages family shares. Mrs. Stryker is married to William Johnston, the chairman of Greenleaf Trust.

Stryker Family Ownership Trends								
	2015	2016	2017	2018	2019	2020	2021	2022
Ronda Stryker Holdings	27,710,000	26,324,606	24,944,964	24,680,295	24,599,060	23,341,197	22,937,610	22,068,100
Annual Share Sales	--	(1,385,394)	(1,379,642)	(264,669)	(81,235)	(1,257,863)	(403,587)	(869,510)
% of Total	7.3%	7.1%	6.7%	6.6%	6.6%	6.2%	6.1%	5.8%
Greenleaf Trust	29,170,088	27,275,271	24,590,807	22,971,839	22,185,620	21,743,475	21,048,539	20,452,972
Annual Share Sales	--	(1,894,817)	(2,684,464)	(1,618,968)	(786,219)	(442,145)	(694,936)	(595,567)
% of Total	7.7%	7.3%	6.6%	6.2%	5.9%	5.8%	5.6%	5.4%
Total Greenleaf and Ronda Stryker holdings	15.0%	14.4%	13.3%	12.8%	12.5%	12.0%	11.7%	11.3%
Total Shares	378,976,916	373,191,816	373,069,477	373,112,916	373,105,225	374,828,201	376,324,529	377,700,065

Source: Stryker's proxy statements 2015-2022

Notice shares are increasing in recent years and diluting family holdings

Management Rewarded For Failures By The Board In 2020, Comp Chair Departs....

Spruce Point takes extreme issue with the Compensation Committee's decision to award management 75% payout for 2020 targets. **Granted COVID-19 threw a curveball to the overall business, but management was still rewarded for things we believe they could control and objectively failed at.** Notably, "Functional goals" included successful integration of acquisitions and leadership towards its cost transformation plan. However, through a [former employee interview](#), we learned that Mobius Imaging and Cardan Robotics (largest 2019 acquisition acquired in Oct 2019) was struggling to integrate and ramp capacity. Furthermore, management [abandoned its ERP project](#) after spending millions and promising to see it to completion. **Spruce Point believes this shows a clear misalignment of interests between shareholders and investors.** Interestingly, Roch Doliveux Chair of the Compensation Committee did not stand for re-election at the 2021 Annual Meeting.

Bonus Plans for our NEOs

	2020 Threshold		2020 Target		2020 Actual Performance	
	Threshold	Percentage Change Over 2019 Actual	Target	Percentage Change Over 2019 Actual	Performance Level	Calculated Payout, Excluding Upward Adjustments
Core Bonus Potential⁽¹⁾:						
Adjusted operating income (20%)	\$3.845 bil.	(1.6)%	\$4.272 bil.	9.3%	\$3.460 bil.	0%
Adjusted operating income margin (20%)	26.56%	1.1%	26.76%	1.9%	24.34%	0%
Constant currency sales (40%)	\$15.008 bil.	0.8%	\$15.966 bil.	7.3%	\$14.217 bil.	0%
Functional goal (20%) ⁽²⁾	—	—	—	—	20%	20%
Overachievement Bonus Potential⁽¹⁾:						
Adjusted operating income (50%)	\$4.272 bil.	9.3%	\$4.486 bil.	14.8%	\$3.460 bil.	0%
Constant currency sales (25%)	\$15.966 bil.	7.3%	\$16.605 bil.	11.6%	\$14.217 bil.	0%
Adjusted diluted net earnings per share (25%)	\$9.02	9.2%	\$9.56	15.7%	\$7.43	0%
Potential Bonus Payout Modifier⁽¹⁾:						
Free cash flow (0% to -10%)	< \$2.160 bil.	33.4%	≥ \$2.280 bil.	40.8%	\$2.821 bil.	No downward adjustment
Total Calculated Payout, as % of Target:						20%
Upward Adjustment, as % of Target:						55%
Final Approved Payout, as % of Target:						75%

- (1) The target weighting for each performance measure is noted in parentheses next to each measure. The values listed for the potential bonus payout modifier represent the range of the potential adjustment.
 (2) Functional goals for the NEOs are listed in the table below. Each NEO achieved 100% of his 2020 functional goal.

Name	Functional Goal
Kevin A. Lobo	Qualitative assessment of his efforts in driving innovation in the Company's products and services, successfully integrating the Company's large acquisitions, leading the Company's multi-year cost transformation initiative and strengthening the Company's global, diverse leadership pipeline.
Glenn S. Boehnlein	Qualitative assessment of his contributions to the execution of the Company's cost transformation initiative with a focus on the Company's Finance transformation program and driving the evolution of the Company's information services and digital organizations.
Timothy J. Scannell	Qualitative assessment of his contributions to driving success in the integration of the Company's recent acquisitions and driving the Company's performance in emerging markets.
Viju S. Menon	Qualitative assessment of his contributions to the execution of the Company's cost transformation initiative, driving the Company's cash flow performance and continuing the transformation of the Company's global supply chain organization.
Robert S. Fletcher	Qualitative assessment of his efforts in driving improvement in the Company's legal centers of expertise and global compliance program and developing and implementing the Company's security strategy.

Awarded 100% Credit For The 20% Weighting

"Functional Goals" –
But What Are They?

"Upward Adjustment"


Arbitrary 55% Credit?

Functional Goals

"Successful Integration of Acquisitions"

"Leading Multi-Year Cost Transformation Initiative"

Stryker Changes Compensation Consulting Firm



Warning: Stryker did not draw attention to the fact that it recently changed its compensation consultant from Willis Towers, to Korn Ferry. This follows Compensation Committee Chair Roch Doliveux not standing for re-election and ending his service in May 2021. It appears an updated risk assessment of Stryker's sales compensation program was conducted.

New Consultant: Korn Ferry

Compensation Risks

Pay Governance LLC ("Pay Governance"), a consulting firm that was determined by the Compensation Committee to be independent using the factors discussed above with regard to Semler Brossy, conducted a risk assessment of our executive compensation program in 2019 that concluded that our executive compensation policies, practices and programs do not create risks that are reasonably likely to have a material adverse effect on Stryker. The Compensation Committee reviewed the Pay Governance report, discussed it with management at the time it was received and concurred with the report's conclusion.

In addition, Korn Ferry, a consulting firm that was determined by the Compensation Committee to be independent using the factors discussed above with regard to Semler Brossy, conducted a risk assessment of our sales compensation program in 2021 that concluded that our sales compensation policies, practices and programs do not create risks that are reasonably likely to have a material adverse effect on Stryker. The Compensation Committee reviewed the Korn Ferry report, discussed it with management at the time it was received and concurred with the report's conclusion.

Source: [2022 Stryker Proxy Statement](#)

Old Consultant Since 2017: Willis Towers

Compensation Risks

Pay Governance LLC ("Pay Governance"), a consulting firm that was determined by the Compensation Committee to be independent using the factors discussed above with regard to Semler Brossy, conducted a risk assessment of our executive compensation program in 2019 that concluded that our executive compensation policies, practices and programs do not create risks that are reasonably likely to have a material adverse effect on Stryker. The Compensation Committee reviewed the Pay Governance report, discussed it with management at the time it was received and concurred with the report's conclusion.

In addition, Willis Towers Watson Public Limited Company ("Willis Towers Watson"), a consulting firm that was determined by the Compensation Committee to be independent using the factors discussed above with regard to Semler Brossy, conducted a risk assessment of our sales compensation program in 2017 that concluded that our sales compensation policies, practices and programs do not create risks that are reasonably likely to have a material adverse effect on Stryker. The Compensation Committee reviewed the Willis Towers Watson report, discussed it with management at the time it was received and concurred with the report's conclusion.

Source: [2021 Stryker Proxy Statement](#)



“Off Cycle” Bonuses.. For Retention And Good Work?



Spruce Point believes investors should be outraged that management is receiving “off cycle” RSU grants to “retain” management. **Is something going wrong at Stryker that the Board is helping to conceal from investors such that management needs inducements to stay?** Spruce Point also believes that Mr. Boehnlein (CFO) and Mr. Menon (President of Global Quality and Operations) have done a poor job controlling costs, as illustrated by the fact that the Company is now warning about a 100 bp gross margin impact from supply chain issues and inflation.

CFO and IR
Q3 and Yr
End Call Conf
Calls
and
Cowen Conf
March 11th 2022

“Restricted stock units were also granted on an off-cycle basis to Mr. Boehnlein and Mr. Menon in May 2021 and to Mr. Pierce and Mr. Stiles in October 2021. **The restricted stock units granted to Mr. Boehnlein and Mr. Menon in May 2021 were awarded in recognition of their efforts and contributions related to the Company's cost transformation initiative and to establish an additional retention incentive.** The restricted stock units granted to Mr. Pierce and Mr. Stiles in October 2021 were awarded in recognition of their increased responsibilities in connection with Mr. Scannell's transition and to establish an additional retention incentive.”

“The restricted stock units granted to Mr. Boehnlein and Mr. Menon in May 2021 were awarded in recognition of their efforts and contributions related to the Company's cost transformation initiative and to establish an additional retention incentive. Mr. Boehnlein and Mr. Menon have overseen meaningful progress of the cost transformation initiative since 2018, with key improvements in the Company's adjusted operating margin and free cash flow levels and optimization of the Company's supply chain. The restricted stock units vest in three equal installments on May 1 in each of 2022, 2023 and 2024, respectively”

Huh?

Source: [Stryker Proxy Statement](#)

CFO and IR
Q3 and Yr
End Call Conf
Calls
and
Cowen Conf
March 11th 2022

Oct 28, 2021: “And so as a result, we have seen some increased costs as well in terms of inflation on those items. **But to date, our supply chain and procurement teams have really just been able to manage that. And so we haven't seen anything really show up in terms of any major impacts on our financials.** And so while we expect that to continue into the rest of '21 and into 2022 as well, we want to make sure that whatever we have in our numbers has already been factored in some of those raw material challenges that we have. And we're going to just continue to monitor the situation as it progresses.”

Jan 27, 2022: “As a result of the latest COVID wave and the current inflationary environment, **we expect gross margin performance to be negatively impacted by 50 to 100 basis points** with a more pronounced impact in the first half of the year.”

March 11, 2022: “We expect that this is going to drive a negative impact, and in January, we said between 50 and 100 basis points within gross margin as you compare it to prior year. I think, if you think about the full year, **it's going to lean more towards 100 basis points in the first half of the year and then it will moderate down as some of these supply chain issues improve in the back half of the year.**”

A Record Year For Management Compensation!



Despite all of our findings that indicate Stryker's business is under increasing financial stress from underlying fundamental challenges and more expensive and levered acquisitions, Stryker's management took home a record in compensation in 2021. [Recall](#): Adjusted Free Cash Flow declined in 2021 and management still earned record pay!

Total Compensation Paid To Stryker's Continuous Executive Management: Past Four Years				
	2018	2019	2020	2021
CEO Lobo	\$13,911,065	\$14,974,829	\$13,317,032	\$16,359,898
CFO Boehnlein	\$3,788,573	\$4,375,730	\$4,345,853	\$6,015,333
COO Scannell⁽¹⁾	\$6,632,178	\$7,113,232	\$6,517,994	\$8,121,406
President Menon	\$4,394,186	\$3,025,199	\$2,973,487	\$4,259,466
Total	\$28,726,002	\$29,488,990	\$27,154,366	\$34,756,103

Source: [2022](#) and [2021](#) Proxy Statement

Note: Includes salary, bonus, stock, option, non-equity and all other compensation

1) Transitioned to "Executive Advisor" in late 2021

Time For An Auditor Change And An Audit Committee With More “At Risk”

Spruce Point observes that Stryker’s Audit Committee has little vested interest in the Company. In total, the Audit Committee owns less than 8,500 shares. For a company of the size, scope and complexity of Stryker, we’d prefer to see Directors with more equity “At Risk” as an incentive to perform quality audit oversight. In total, 3 of 8 Directors own no stock in Stryker. Even more of concern, E&Y has audited Stryker continuously since 1974. Given the breadth of our financial reporting and accounting concerns, we believe it is time for Stryker to seek a new auditor with fresh eyes to review its books.

Time For An Auditor Change?

*The Audit Committee is directly responsible for the appointment, compensation, retention and oversight of the Company's independent registered public accounting firm and such firm reports directly to the Audit Committee. **Ernst & Young LLP and its predecessor firms, Ernst & Ernst and Ernst & Whinney, have been retained as the Company's independent auditor continuously since 1974.***

Audit Committee Member	Shares Owned	Right To Acquire Within 60 Days
Andrew K. Silvernail (Chair)	1,902	19,994
Mary K Brainerd	3,576	2,404
Lisa M. Skeete Tatum	--	991
Rajeev Suri	2,976	--
Total	8,454	23,389

Other Directors	Shares Owned	Right To Acquire Within 60 Days
Giovanni Caforio	--	316
Srikant M. Datar	29,002	19,845
Allan C. Golston	10,018	16,325
Sherilyn S. McCoy	--	1,985
Total	39,020	38,471







Source: [Stryker Proxy Statement](#)



*Leverage Rising And Valuation
Downside Increasing: 35% – 75%
Downside Risk*

Top 6 Reasons Stryker's Valuation Multiple Should Compress Below Industry Average

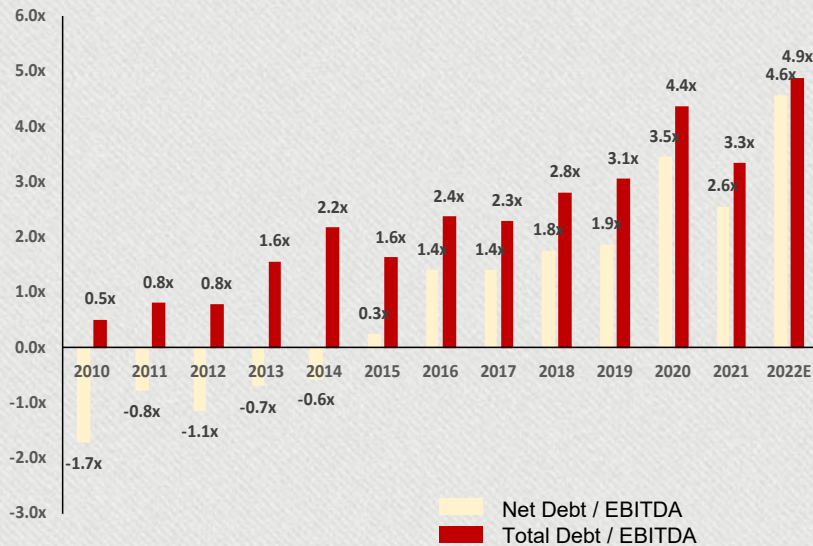
Spruce Point believes Stryker's industry premium multiple should compress to account for the following six factors.

Factor	Explanation
 Capital Being Directed Towards Larger and More Expensive Acquisitions With Diminishing Returns, Failed Objectives	In the past 5 years, 70% of Stryker's adjusted cash from operations (i.e. cash from operations less stock repurchase for employee benefit programs) has been deployed for acquisitions. Management said it would focus on smaller tuck-ins after Wright Medical, but instead went big again dropping \$3 billion on Vocera Communications. However, as we've detailed through a key former M&A employee interview and through our analysis, Stryker is increasingly overpaying for deals, no longer disclosing ROIC, experiencing delays with integration, and lowering growth rates of acquisitions post closing (notably Wright Medical and K2M). Given that acquisitions are such a critical component of the Stryker's growth story, we believe its multiple should compress to reflect a deterioration in its core strategy
 Questionable Return on R&D Spend	Stryker spends a relatively high 6%+ of sales on R&D or \$4.8 billion over the past 5 years. Yet, it's hard to quantify what kind of return on investment investors' have received. When we spoke with a former senior Stryker employee on this issue, we heard that, <i>"One bad thing about Stryker – a long term assessment – this is the issue. You need enough people that understand all of this. Stryker's executive team has no one from R&D at the table. Internal innovation has not delivered a huge amount of value. Taking something internal and taking it to the market, that's not Stryker's strength."</i> In our view, innovative companies deserve a premium multiple, while those that can't innovate and are dependent on inorganic growth do not deserve a premium
 Persistent Pricing Pressures	Stryker's products are in a persistent deflationary spiral. Over the past three years, organic price declines have impacted sales by -0.90%, -0.70%, -0.80%. Now pricing pressures are forecasted to decline by 1% in 2022. Even worse, Mako robotic prices are contracting upwards of 30%. Spruce Point does not believe a company with limited to no pricing power deserves a premium valuation
 SG&A and Operational Cost Bloat Adding To Margin Squeeze	While prices are persistently falling by ~1%, we believe Stryker has delayed and failed to rationalize its cost structure, including its manufacturing footprint and supply chain partners. Despite management insisting it would complete the project, it largely abandoned its ERP during COVID-19 after spending at least \$500m. According to one former employee, <i>"Stryker can't survive"</i> unless it can fix the problem of unifying over 40 different technology platforms from its acquisition spree. All told, with its prices falling and input costs such as labor and raw materials rising, we believe Stryker is caught in a margin squeeze and should see its multiple compress
 Management Using More Creative Financial Reporting and Accounting Gamesmanship	As we've pointed out, Stryker is doing things like realigning segments, changing depreciation schedules, reclassifying and change inventory accounting definitions, and introducing Non-GAAP definitions of Free Cash Flow. We believe all of these maneuvers are signaling greater financial stress that management is keen to obscure. This is another reason its multiple should compress
 Leverage Is Rising, Its Credit Is Deteriorating And Interest Rates Are Rising	Early gains in Stryker's roll-up strategy were easy when the Company had a surplus of cash on the balance sheet, and a long-runway of targets. However, now by our measure, total debt is a staggering \$16.4 billion. We estimate that Total Debt to unadjusted 2002E EBITDA stands at 4.9x and that Stryker is being closely watched by credit agencies as a likely downgrade candidate. With interest rates rising, and its credit deteriorating, we believe its valuation multiple should compress

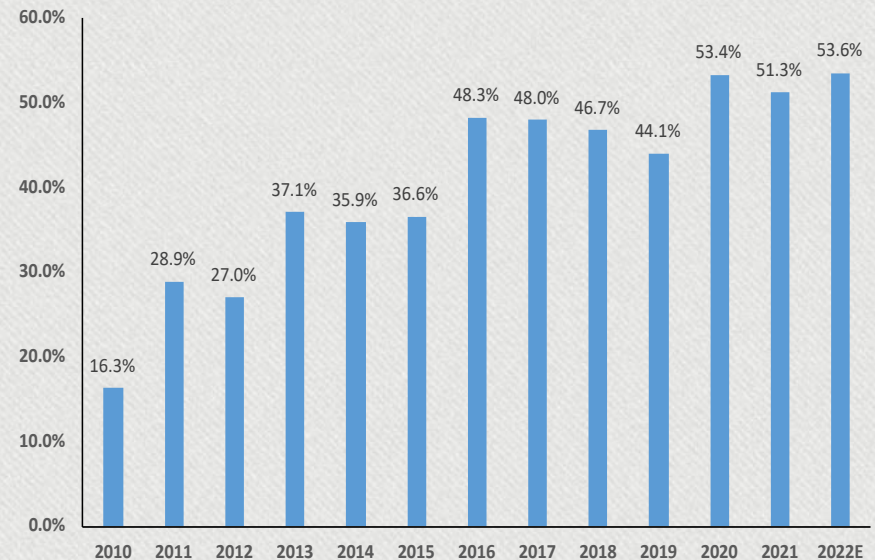
Leverage Keeps Rising

Spruce Point believes Stryker is becoming dangerously levered as it pays hefty premiums for low quality acquisitions that it has failed to properly integrate. Stryker's has no pricing power and cost inputs are rising leading to a margin squeeze. Debt has ballooned from nearly \$0 to \$16.3 billion over the past decade and following the Vocera acquisition this year. The Company has twice been downgraded by S&P for its higher-than-anticipated acquisition appetite, first from A to A- after the Wright Group deal, and then to BBB+ following Vocera.⁽¹⁾ We believe Stryker has diminishing financial flexibility, and must direct free cash flow towards debt reduction or risk further credit downgrades and increased borrowing costs. Stryker has a generously defined leverage ratio covenant of 3.75x, but based on our adjustments, its leverage ratio is approximately 4.9x.⁽²⁾

Leverage Rising



Goodwill and Intangibles To Total Assets



Source: Stryker and Spruce Point adjustments

Note: Spruce Point EBITDA excludes recurring Stryker adjustments. 2022E is pro forma for Vocera

1) S&P downgrade [Nov 2019](#) and [Feb 2022](#)

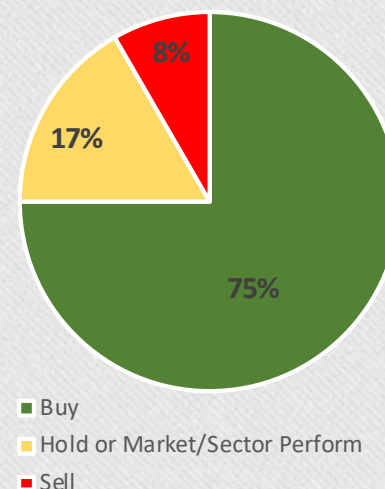
2) See [credit agreement](#) for definition of Leverage Ratio covenant

Poor Risk / Reward Owning Stryker

The majority of sell-side analysts are bullish on Stryker, and the consensus view calls for another 5% upside.

Firm	Rating	Price Target (\$)
Piper Sandler	Overweight	\$315
Citigroup	Buy	\$310
Cowen	Outperform	\$305
BofA	Buy	\$300
Baird	Outperform	\$297
Credit Suisse	Outperform	\$295
Loop Capital	Buy	\$295
Bernstein	Outperform	\$295
Wells Fargo	Overweight	\$292
Argus	Buy	\$290
Canaccord	Buy	\$285
Deutsche Bank	Buy	\$285
SVB Leerink	Outperform	\$285
Stifel	Buy	\$285
Evercore	Outperform	\$284
Morgan Stanley	Equalweight / Attractive	\$275
BTIG	Buy	\$273
RBC Capital	Sector perform	\$272
Oppenheimer	Market perform	\$272
JPMorgan	Overweight	\$265
Jefferies	Hold	\$260
Goldman Sachs	Sell	\$260
Morningstar	Sell	\$195
Average Price Target		\$282
Upside / (Downside)		+5.1%

Rating Distribution Of Analysts With Price Targets



Note: Upside based on current share price of \$268.50
 Source: Bloomberg, Wall Street Research

The Market Mismodels Stryker's Capital Structure

Spruce Point believes that current market data services fail to account for significant cash liabilities tied to unpaid taxes, product recalls, and unfunded employee compensation plans. We believe debt is \$3.4 billion more than data services report.

Spruce Point Adjusted Pro Forma Stryker Capital Structure

\$ in mm, except shares	Stryker	Spruce Point Adjustments	Pro Forma Capital Structure
Stock Price US\$	\$268.50	--	\$268.50
Basic and Diluted	383.0	--	383.0
Market Capitalization	\$102,836	--	\$102,836
\$2.25bn Credit Facility due 2026	\$88	--	\$88
Vocera Term Loan due 2025	--	\$1,500 ⁽¹⁾	\$1,500
Operating Leases	\$112	\$3 ⁽²⁾	\$115
Unfunded Employee Comp Plans	--	\$2 ⁽³⁾	\$2
Total Short-Term Debt	\$200	\$1,505	\$1,705
Senior Unsecured Debt, 2023-2050	\$12,479	\$912 ⁽⁴⁾	\$13,391
Operating Leases	\$310	\$13 ⁽²⁾	\$323
Unfunded Employee Comp Plans	--	\$491 ⁽³⁾	\$491
Accrued Tax Interest And Penalties	--	\$150 ⁽⁵⁾	\$150
Product Recall Liabilities	--	\$328 ⁽⁶⁾	\$328
Total Long-Term Debt	\$12,789	\$1,894	\$14,683
Total Short and Long-Term Debt	\$12,989	\$3,398	\$16,387
Less: Cash and Equivalents	(\$3,019)	\$1,628 ⁽⁷⁾	(\$1,391)
Enterprise Value	\$112,806	--	\$117,832

Source: Stryker and Spruce Point Analysis

1) Assumed fully funded term loan per [8-K](#) filed Feb 25, 2022

2) Vocera short and long-term balance sheet leases per its [10-K](#)

3) Under Retirement Plans, Note 12 of [10-K](#)

4) Market value adjustment of the debt per Note 10 of [10-K](#)

5) Under Income Taxes, Note 11 in [10-K](#). Note total "Uncertain Tax Positions" are \$444m

6) Midpoint of \$255 - \$400m range in Note 7 of [10-K](#)

7) Assume cash used for balance of [\\$3.1 billion Vocera acquisition](#) after \$1.5 billion Term Loan draw. Pro forma for \$28m [Sage Products patent infringement loss to Becton Dickinson](#)

We Believe Market Data Providers Vastly Under-Report Liabilities

Balance Sheet

Total Cash (mrq)	3.02B
Total Cash Per Share (mrq)	8
Total Debt (mrq)	12.9B

Source: Yahoo! Finance

In Millions of USD 12 Months Ending	Current/LTM 12/31/2021
 Market Capitalization	101,412.5
 - Cash & Equivalents	3,019.0
 + Preferred & Other	0.0
 + Total Debt	12,901.0
 Enterprise Value	111,294.5

Source: Bloomberg

Stryker Dangerously Levered

Spruce Point believes that Stryker could be dangerously levered around 4.9x Debt to '22E EBITDA. In addition, its full stated cash position is not liquid and available for debt reduction as it is permanently invested in foreign jurisdictions. Stryker was recently downgraded by S&P From A- to BBB+ on Feb 25th related to increased leverage from Vocera. However, we don't believe the rating agencies are fully attuned to the extent of financial strains we are observing.

Spruce Point Adjusted Pro Forma Stryker Leverage

\$ in mm, except shares	Stryker 2021	Spruce Point Adjustments	Vocera 2022E	Pro Forma Leverage 2022E
Total Short and Long-Term Debt	\$12,989	\$1,883	\$1,515	\$16,387
Less: Cash and Equivalents	(\$3,019)	\$390 ⁽¹⁾	\$1,600	(\$1,029)
Net Debt	\$9,970	--	--	\$15,358
Operating Income (GAAP)	\$2,584			
(+) Inventory Step-Up	\$266			
(+) Other Acquisition and Integration	\$319			
(+) Amort of Intangibles	\$619			
(+) Restructuring and other	\$386			
(+) Medical Device Regulations	\$107			
(+) Recall-Matters	\$103			
(+) Regulatory and legal	(\$2)			
Stryker Adjusted EBIT	\$4,382			\$4,700
(+) Depreciation	\$371			\$403
Stryker Adjusted EBITDA	\$4,753	\$357⁽²⁾		\$5,103
Spruce Point GAAP Adjusted EBITDA	\$3,574			\$3,351
Total Debt / Stryker Adj. EBITDA	2.7x			3.2x
Total Debt / Spruce GAAP EBITDA	3.6x			4.9x
Net Det / Stryker Adj. EBITDA	2.1x			3.0x
Net Debt / Spruce GAAP EBITDA	2.8x			4.6x

Dubious recurring adjustments related to Stryker's core acquisitive business strategy and product mishaps that cannot be disregarded. Many are cash costs

Spruce Point believes the best way to evaluate Stryker is on its GAAP results

- 1) 2021 [10-K](#) page 17 discloses that 26% of cash and equivalents is outside the U.S. and its intended use is to grow operations organically and for acquisitions. Repatriation could result in tax consequences. We reduce remaining cash of \$1,419m by \$369m as not available for debt reduction. Also pro forma for \$28m [Sage Products patent infringement loss to Becton Dickinson](#)
- 2) Represents core Stryker growth and Vocera contribution implied from 2022E Stryker EBITDA market consensus

CFO Provides Oblique Answer To Cash Flow Expectations In 2022...

When asked directly about cash flow expectations for 2022, we believe the CFO danced around the question but dropped some clues that suggests it is going to decrease. Notably, he referenced that capex and certain spending had been deferred in the past few years that will pick up in a more normal environment. We interpret his comments negatively. Wall Street analysts project free cash flow to grow 13% and 17% in the next two years, which we believe is too optimistic.

MS
Analyst

"Just maybe one for Glenn, just on cash flow for 2022. Can you provide any type of framework for cash flow from operations? I think you mentioned CapEx, but just curious what you're seeing and -- or expecting and any type of working capital improvements you're kind of working on in 2022?"

CFO
Boehnlein

*"No, great question. I think as we think about cash flow, we've really come a long way, especially from where we were in 2019 and especially a lot of the muscle and discipline that we've built around working capital management. So all of that will roll into this year 2022 and the benefits associated with that. **I think there will be some spending that was somewhat muted and deferred in the past, especially around CapEx.** And so right now, we're estimating approximately \$650 million of CapEx. That being said, we generally target that 70% to 80% free cash flow conversion number. **I know we've beaten that over the last couple of years, but we've also seen reduced spending in a lot of areas that I think will start to pick up, especially as we exit this and kind of try to get to a more normal operating environment.** So I think that's probably what we're targeting. There could be some variability depending on how COVID plays out through the year."*

Source: [FY 2021 Conf Call](#), Jan 2022



Capex
Benchmarking

2022E Capex
To Sales Ratio

Consensus Estimates Seem Wildly Optimistic

Given our discussions with former employees and forensic analysis of Stryker's historical inability to deal with its SG&A and cost bloat, along with rising supply chain and inflation challenges, we view it unlikely that its free cash flow will increase 4.4% in 2022 and that earnings will grow 25.2%. We note that the market is expecting some of the biggest earnings leverage in recent history, with an 18% spread between 2022E revenue and EPS growth.

**Spruce Point
Believes
7% - 23%
Cash Flow
Projections
Are Too High**

\$ in mm	2021	2022E	2023E
Cash From Operations % growth	\$3,263 -0.4%	\$3,443 +5.6%	\$4,169 +21.0%
(-) Capex	(\$525)	(\$585)	(\$634)
Free Cash Flow % growth	\$2,738 -1.9%	\$2,858 +4.4%	\$3,535 +23.7%

Source: Historical financials, Bloomberg consensus estimates 2021-2022

**Widest
Margin
Between
Sales and
Earnings
Growth
Expected In
2022 Appears
Aggressive**

\$ in mm	2015	2016	2017	2018	2019	2020	2021	2022E
Sales Growth (A)	2.8%	13.9%	9.9%	9.3%	9.4%	-3.6%	19.2%	7.1%
EPS Growth (B)	8.2%	10.1%	11.8%	11.2%	13.4%	-11.6%	21.4%	25.1%
Spread Absolute Value (A-B)	5.4%	3.8%	1.9%	1.9%	4.0%	8.0%	2.2%	18.2%

Source: Bloomberg adjusted EPS financials and consensus estimate for 2022

Analysts Quietly Trim Numbers, But Aren't Downgrading Stryker's Stock.... Why?

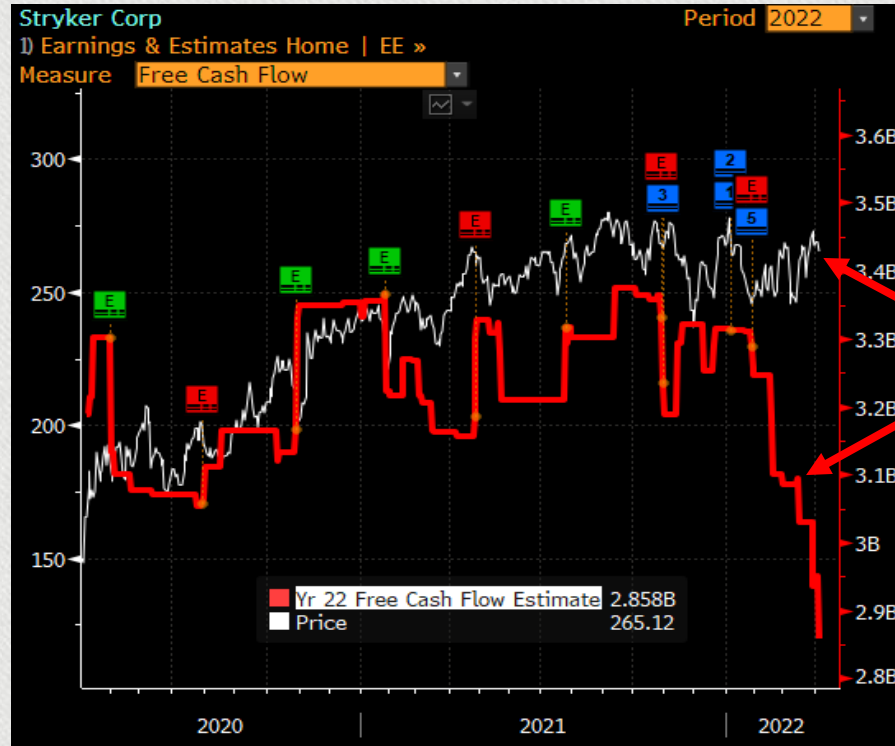
Free cash flow growth should be a strong driver of equity valuation and sell-side analyst price targets. What we find is that Stryker's 2022E Free Cash Flow estimates have been contracting. Yet, not a single analyst has downgraded the stock, and in fact some brazen analysts claim shrinking Free Cash Flow merits a price increase and a "Buy".

Stock Promoters Say "Buy"

Stryker Price Target Raised to \$295.00/Share From \$288.00 by Bernstein
Stryker Price Target Announced at \$284.00/Share by Evercore ISI Group
Stryker Reinstated Buy at BofA

DJ 03/16
DJ 03/15
BFW 03/02

While The Promoters Quietly Cut Free Cash Flow Expectations?



Stock price oblivious to FCF estimates plunging?

Spruce Point Believes Stryker Is Delaying Bad News To Investors About Inflation/Supply Chain

In Spruce Point's experience, public company managers generally delay bad news as long as possible. Stryker has been slow to inform investors about the impact of supply chain and inflation on its business. The Company is slowly walking down gross margin expectations, but based on our analysis of Stryker's purchase commitments, we see a significant uptick in 2022 vs. recent history. On the next slide, we'll show just how large these material purchase commitments are relative to peers.

CFO and IR
Q3 and Yr
End Call 2021
Conf Calls
and
Cowen Conf
March 11th 2022

Oct 28, 2021: "And so as a result, we have seen some increased costs as well in terms of inflation on those items. **But to date, our supply chain and procurement teams have really just been able to manage that. And so we haven't seen anything really show up in terms of any major impacts on our financials.** And so while we expect that to continue into the rest of '21 and into 2022 as well, we want to make sure that whatever we have in our numbers has already been factored in some of those raw material challenges that we have. And we're going to just continue to monitor the situation as it progresses."

Jan 27, 2022: "As a result of the latest COVID wave and the current inflationary environment, **we expect gross margin performance to be negatively impacted by 50 to 100 basis points** with a more pronounced impact in the first half of the year."

March 11, 2022: "We expect that this is going to drive a negative impact, and in January, we said between 50 and 100 basis points within gross margin as you compare it to prior year. I think, if you think about the full year, **it's going to lean more towards 100 basis points in the first half of the year** and then it will moderate down as some of these supply chain issues improve in the back half of the year."

Stryker's Historical Purchase Commitments							
\$ in mm	Unconditional Purchase Commitments (A)	Next Year Revenues (B)	Next Year Cost of Goods (C)	Ending Inventory (D)	Unconditional Purchase Commitments To Revenues =A/B	Unconditional Purchase Commitments To COGS =A/C	Unconditional Purchase Commitments To Ending Inventory =A/D
Year							
2018	\$1,144	\$13,601	\$4,663	\$2,163	8.4%	24.5%	52.9%
2019	\$1,411	\$14,884	\$5,188	\$2,653	9.5%	27.2%	53.2%
2020	\$1,419	\$14,351	\$5,294	\$2,980	9.9%	26.8%	47.6%
2021	\$1,587	\$17,108	\$6,140	\$3,494	9.3%	25.8%	45.4%
2022E	\$2,117	\$18,318	\$6,374	\$3,321	11.6%	33.2%	63.7%

Source: Stryker financials and 2022E Bloomberg consensus sales and COGS. Pro forma for Vocera's \$10.1m of purchase commitments and \$7.1m of inventory

Note: Inventory historically adjusted to remove loaner instruments of \$302m

Note: Stryker reports purchase commitments as "purchase commitments for materials, supplies, services and property, plant and equipment as part of the normal course of business." Our analysis uses the unconditional purchase commitments which are the higher of the two reported figures

Stryker's Contractual Purchase Commitments Are Very High In Relation To Close Peers

Based on a comparative analysis of large medical product peers, Stryker's unconditional purchase commitments are the highest among all its peers relative to inventory, revenues and COGS. Furthermore, this strain cannot be explained by Stryker growing any faster than its peers. We believe this analysis reveals that Stryker has relatively inefficient purchasing process that burdens investors with higher risk from unconditional purchasing obligations.

Stryker vs. Peer Historical Purchase Commitments								
\$ in mm								
Company Organic Growth Target	Year	Unconditional Purchase Commitments (A)	Next Year Revenues (B)	Next Year Cost of Goods (C)	Ending Inventory (D)	Unconditional Purchase Commitments To Revenues =A/B	Unconditional Purchase Commitments To COGS =A/C	Unconditional Purchase Commitments To Ending Inventory =A/D
Medtronic 5%+	2020	\$790	\$28,913	\$9,424	\$3,753	2.7%	8.4%	21.0%
	2021	\$892	\$30,117	\$10,483	\$4,229	3.0%	8.5%	21.1%
	2022E	\$1,038	\$32,038	\$10,029	\$4,313	3.2%	10.3%	24.1%
Thermo Fisher 7%-9%	2020	\$830	\$32,218	\$16,214	\$4,349	2.6%	5.1%	19.1%
	2021	\$1,800	\$39,211	\$19,573	\$4,029	4.6%	9.2%	44.7%
	2022E	\$2,510	\$42,147	\$22,009	\$5,051	6.0%	11.4%	49.7%
Becton Dickinson 6%-7%	2020	\$1,364	\$17,117	\$9,540	\$2,579	8.0%	14.3%	52.9%
	2021	\$1,436	\$20,248	\$10,821	\$2,743	7.1%	13.3%	52.4%
	2022E	\$1,670	\$19,680	\$8,866	\$2,866	8.5%	18.8%	58.3%
Boston Scientific 6%-8%	2020	\$334	\$9,913	\$3,465	\$1,579	3.4%	9.6%	21.2%
	2021	\$403	\$11,888	\$3,711	\$1,351	3.4%	10.9%	29.8%
	2022E	\$631	\$12,826	\$3,748	\$1,610	4.9%	16.8%	39.2%
Stryker 6%-8%	2020	\$1,419	\$14,351	\$5,294	\$2,980	9.9%	26.8%	47.6%
	2021	\$1,587	\$17,108	\$6,140	\$3,494	9.3%	25.8%	45.4%
	2022E	\$2,107	\$18,318	\$6,373	\$3,321	11.6%	33.2%	63.7%

Source: Company financials and 2022E Bloomberg consensus sales and COGS

Note: One limiting factor of the analysis is that not every company specifically details what is included in unconditional purchase commitments

Note: Medtronic does not report unconditional purchase commitments



Stryker's Products Are Deflating In An Inflationary Environment



Spruce Point believes that Stryker's inability to raise prices to offset inflation speaks volumes about the quality of its business vs. peers. Most are sticking to margin improvements despite inflationary and supply chain headwinds.

Stryker
Jan 27, 2022

"Consistent with the pricing environment we experienced in previous years, **we would expect continued unfavorable price reductions of approximately 1%.**"

Medtronic
Nov 23, 2021

"So we're offsetting our headwinds in a different way when it comes to delivering the bottom line. Also, on gross margin, yes, our gross margin was better than expected. We're really pleased with that. We're -- we've got a very concerted effort to improve our operations and to lead to better gross margin. We're focused on getting our gross margin back to pre-COVID levels. And from there, at least sustaining it and hopefully improving it. **And if you look at just the year-over-year, we're still focused on that 2.5 to 3 points of improvement in gross margin this fiscal year.**"

Thermo
Fisher
Jan 11, 2022

"**And so when I think about pricing, it's clearly going to be higher in 2022 than it has been in years past.** In any given year, we might have 50 to 75 basis points of price on average across the portfolio, and it will be well over 1% this year, and we'll get into all of the details. We've had those pricing discussions with our customers. We've explained it. What our own wage experiences, where we're seeing inflation, what we're able to offset, where we're not and the customers appreciate the transparency. **And we expect to be able to capture additional price so that we are able to pass through some of the cost increases where we see.**"

Becton
Dickinson
Feb 3, 2022

"**And so if you look at where we are implementing price most significantly, it is -- and we're very transparent with our customers, by the way, on where we're raising price and why we're raising price and the impacts of inflation as the driver of that....** And so we can share what those impacts are on those raw material increases with our customers, and we have those discussions, and we've been raising price actively, particularly in those product categories."

Boston Sci.
Feb 2, 2022

"**Our longer-term goal remains to return to pre-COVID gross margin levels of 72% plus as global supply chain disruptions and inflation lessen over time.** Fourth quarter adjusted operating margin was 26.2%, resulting in a second half average of 25.9%. Full year adjusted operating margin was 25.3%. **In light of increased gross margin pressures, we felt it was prudent to provide a range for 2022 adjusted operating margin and expect the full year to be within a range of 26% to 26.4%, representing a 70 to 110 basis point improvement over the full year of 2021,** with the high end representing our long-range plan goal of 50 basis points annual improvement versus second half average 2021."

Zimmer Biomet
Feb 7, 2022

"From there into 2022, on adjusted gross margins, you've got, of course, some headwinds, tailwinds. The headwinds being the VBP margin pressure I just spoke about with Vijay as well as the input cost inflation that we're seeing, again, that I just talked about. In addition, lower volumes will also be a slight headwind. Those will be partially offset by some accretion that we see related to the spin. **But net-net, I would expect gross margins year-over-year from '21 to '22 to be down.** So the bulk of our improvement in adjusted operating margins from '21 into '22, again, will be primarily driven through SG&A."



Insights From Spruce Point Interview of a Stryker Supply Chain Professional

Spruce Point interviewed a former Stryker supply chain professional who shared insights. Whereas Stryker management has long preached about cost optimization, according to a former employee it is really a sales driven organization, and problems of too much inventory were present pre COVID-19.

Spruce Point Question

"How did Stryker navigate COVID-19 and what lasting challenges might it have."

Former Stryker Supply Chain Professional

*"Yeah, I think with all medical device companies, particularly that play in the elective surgery space, joint reconstruction surgeries, that would not be considered life threatening, COVID has definitely had a impact where hospitals have been postponing those kinds of surgeries and, rather utilizing their capacity towards, treating COVID patients. So that's been a significant impact Stryker's ability to grow. Now through 2020 and 2021, I think Stryker has done much better than its competitors when it comes to COVID with six to eight percentage growth, and so I think that's, that's been handled very well. **Now, there was some challenges in terms of the supply chain due to COVID related issues. Early on Stryker took the view that it would, idle up factories where it could to shave off some excess inventory. And Stryker had a big inventory problem anyway, before COVID, where we were sitting on piles and piles of inventory in certain business segments.** And so it was just a good opportunity for us to idle up production lines, keep people safe, but then also make sure that we are maintaining our customer service levels. So that happened through COVID. So I suppose, long story short, I think during COVID, there was definitely some impact and top line and bottom line but I think the company has done fairly well and, and much better than some of the other competitors."*

Spruce Point Question

"Can you elaborate on the pre-COVID inventory problem you highlighted? What is your view of the problems?"

Former Stryker Supply Chain Professional

*"Yeah, I think especially in, in business segments like neurovascular, which should be considered as a critical care product, you know, we just had this tendency of, let's make sure that the hospital shelters are always stocked with product that we never run out of product for surgeries. So therefore, there was always this tendency to keep build, build, build, as fast as we can. **And it was always about growing the top line that wasn't as much focus put on the bottom line, in terms of cash flow and in terms of managing inventory levels. There was always this, I suppose, culture of sales drives everything. Therefore, let's make sure that we never run into a back order situation.** But then after COVID struck and it was very important that we saved cash flow and that we try not have too much inventory in the system. That's when supply chain part of the organization really took notice and started coming up with plans to reduce inventory and idle production lines and, and cut down inventory where possible and improve our cash flow. Cash flow was never part of the bonus objectives. Inventory dollars were never on anybody's list of incentives. And so there was just this tendency to build, build, build, and get product out to the customer account fast as possible."*

Insights From Spruce Point Interview of a Stryker Supply Chain Professional

Spruce Point interviewed a former Stryker supply chain professional who shared insights about Stryker's supply chain challenges.

Spruce Point Question

"Stryker is reducing gross margin expectations. We're now 18 months into COVID maybe two years. Why do you think is the reason it's taken so long for them to admit some of the supply chain challenges?"

Former Stryker Supply Chain Professional

*"So what's been happening here is just indicative of the larger ecosystem in terms of all the supply chain challenges that are ongoing. **So I can tell you, back in 2018 we launched this massive cost reduction program in partnership with McKinsey**, they came in with consultants and with the supply chain organization, kickstarted this program to reduce our costs and improve our margins. And there's a lot of programs that came out of it around how do we get with suppliers and negotiate favorable contracts? How do we improve our purchasing strategies, such that we minimize our price impact and so on and so forth. **And so for the first year or two, we saw some really good benefits of that program. But then COVID struck and, and for the first 6-12 months post COVID we had some supply chain challenges, but were able to keep our head above water and get enough supply from suppliers.** And in many cases, although suppliers would declare force majeure we would be able to work with the, and especially given the critical nature of some of the products that we are manufacturing, we're able to convince them to keep the supply pipeline going. **But I think just the compounding of all these issues that we see in the marketplace where suppliers would have their sub suppliers who would declare force majeure and would extend the lead time on some materials. And so I think that's now playing catch up where, it's just been hard for Stryker to keep up with the level of issues going on with their supply base.** Everything from electronic suppliers to packaging materials and all kinds of commodities. I think that's what's causing the price pressure as well as the supply chain issues. **See now where suppliers are basically demanding, look, you know, you either increase the price you pay for this product and help Stryker jump ahead of the queue from a scheduling perspective, so we can get you fast tracked and get you the product you need, or we'll have to prioritize other customers.** Right? So it's a question of, do you prioritize product supply over price? And the answer is yes."*

**Spruce
Point
Question**

"What do you think the biggest unappreciated risk is with respect to Stryker?"

**Former
Stryker M&A
Professional**

*"Supply chain and lead times for products as well. With COVID and procedures being canceled, I think COVID is gonna work itself out, but I mean, we said that it's gonna be a year and now we're going on year three. Right. Then hospitals due to, kind of the rates of people in space they've canceled; procedures that they don't deem as essential procedures. Okay. Which would include things like knee replacement or certain back surgeries. So that has had a significant impact. **With supply chain, I would say the fact that certain components and parts are delayed, and the costs have increased. I think that's gonna have an impact on Stryker. Also if they do not consolidate their facilities and redundancies, it's gonna be a heavy cost for going forward as they continue to grow and acquire.**"*

The Market's Expectations Are Too High For Stryker's Gross Margins

Spruce Point observes that the market has been systematically overly-optimistic about the direction of Stryker's gross margins. They've continue to contract over a decade, and now with the worst inflation and supply chain issues in recent history, the market still thinks they will expand. We believe Stryker will yet again disappoint investors.

Gross Margins Have Disappointed Expectations In 9 of 11 Years

	Ann Date	Per	Per End	C	Reported	Comp	Estimate	%Surp
Average of Absolute Values								0.83%
11)	01/27/2026	FY 25	12/25				66.271	
12)	01/27/2025	FY 24	12/24				65.935	
13)	01/27/2024	FY 23	12/23				65.919	
14)	01/27/2023	FY 22	12/22				65.205	
15)	01/27/2022	FY 21	12/21		64.110	64.100	65.886	-2.71%
16)	01/27/2021	FY 20	12/20		63.111	63.800	64.092	-0.46%
17)	01/28/2020	FY 19	12/19		65.144	65.900	65.864	0.05%
18)	01/29/2019	FY 18	12/18		65.716	66.000	66.347	-0.52%
19)	01/30/2018	FY 17	12/17		65.734	66.313	66.330	-0.03%
20)	01/24/2017	FY 16	12/16		66.260	66.200	66.840	-0.96%
21)	01/26/2016	FY 15	12/15		66.378	66.500	66.271	0.35%
22)	01/27/2015	FY 14	12/14		65.695	66.000	66.328	-0.49%
23)	01/22/2014	FY 13	12/13		66.722	67.509	67.972	-0.68%
24)	01/30/2013	FY 12	12/12		67.876	67.876	68.027	-0.22%
25)	01/24/2012	FY 11	12/11		66.161	66.161	67.957	-2.64%

Does a company that fails to hit a key metric 9 out of 11 years during the greatest bull market in history deserve a premium valuation?

The market is looking for 110 bps of gross margin expansion in the highest inflationary environment in decades, while supply chains issues and war weighs on global uncertainty. Does this really seem like a realistic forecast? Our expert interviews describe Stryker's issues and failure to implement a global ERP as a limiting factor

A decade ago the market thought Stryker could produce a 68% gross margin. Its gone down since

2010 Year End Call: "Going forward, we do anticipate year-over-year gross margin improvement, partly resulting from our focus in our manufacturing operating model."

2011 Year End Call: "For gross margins, we are calling for the underlying range to remain steady, with a subtle, favorable bias subject to the variations driven by currency, business mix and global operations investments"

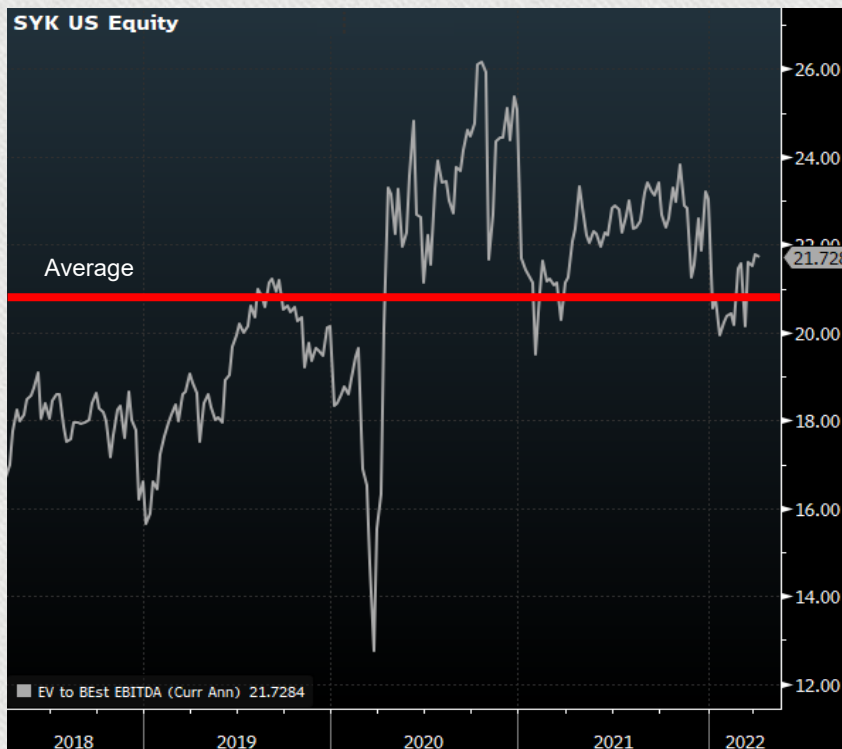
Source: Bloomberg SURP function



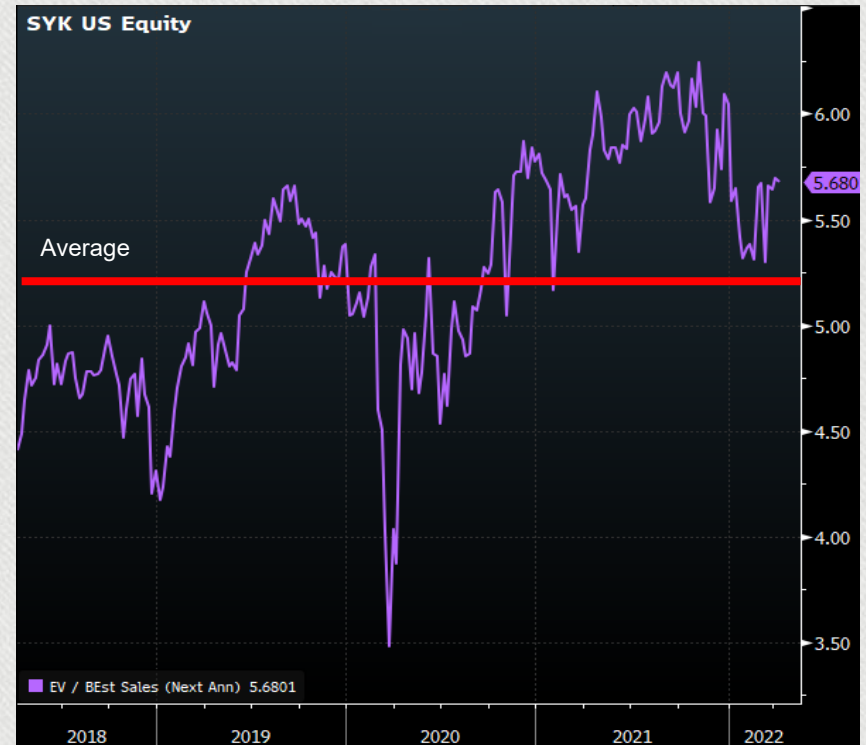
Near A Peak Multiple

Our view is clear: Stryker's acquisition strategy is becoming less economic as it pays higher multiples for lower quality acquisitions. Furthermore, the Company's multiple trades at a premium to peers despite evidence it has become more dependent on aggressive accounting and "adjusted" metrics to portray growth. Our extensive analysis and employee interviews point to a company struggling with inventory challenges and SG&A bloat from years of chasing revenue in favor of operational excellence and improvement. As a result, we believe Stryker's multiple should compress lower.

EV / NTM EBITDA



EV / NTM Sales



Stryker Appears To Be Working Sell-Side Analysts Hard To Keep The Equity Story Afloat

Our view: Stryker appears to be working sell-side analysts to keep the equity story afloat. Despite record inflation, supply chain dysfunction, macro war uncertainties, and Stryker having swallowed an expensive and unproven acquisition in Vocera, four analysts have recently endorsed buying Stryker's shares.⁽¹⁾ Based on a note from J.P. Morgan, Stryker appears to be confusing investors in a "rare" example of miscommunication. Yet, not a single analyst has viewed this negatively and downgraded?

Recent Broker Pumps

Stryker Price Target Raised to \$295.00/Share From \$288.00 by Bernstein	DJ	03/16
Stryker Price Target Announced at \$284.00/Share by Evercore ISI Group	DJ	03/15
Stryker Reinstated Buy at BofA	BFW	03/02

Source: Bloomberg

Excerpts From J.P. Morgan Note After The Cowen Conf March 7, 2022

"A rare example of Stryker miscommunicating, but it believes wasn't trying to talk down 2022 numbers or call out worsening macro conditions hitting numbers"

"Management just wanted to clarify comments made back in 4Q 2021"

"Numbers need to go lower in H1 2022 and Q1 2022 but not because things have worsened since late Jan 2022, but rather because of the sequence of commentary given on Q4 2021"

Spruce Point Analysis



This signals to us investors are starting to question management and are pushing back



Then why not come out and downgrade the stock? Why is the recommendation "Overweight" in the face of so much uncertainty?

Source: JPMorgan, "Updating the Model For Recent Management Commentary; Remain Optimistic On NT Trends" – March 16, 2022

¹⁾ In addition to Bernstein, Evercore and BofA, Citigroup also on April 1, 2022 issued a "Buy" and price increase from \$290 to \$310, yet cut 1Q22 EPS estimate to \$1.92 from \$2.07

Spruce Point Vs. Street Expectations In 2022

Our estimates are significantly below the Street in 2022. We also eliminate all the “noise” of Stryker’s adjustments, which we believe are covering-up financial strains and allowing results to rapidly diverge from GAAP financials.

\$ in mm	2022E Wall St Consensus	2022E Spruce Point Alternative View	Notes
Revenue % growth	\$18,318 7.1%	\$18,248 6.7%	Note: Vocera expected to contribute \$225m in sales. Company guiding 6%-8% full yr organic growth and yet Street is at 7% for the full year?
Gross Profit % margin	\$11,944 65.2%	\$11,679 64.0%	The Street expects gross margin expansion. History shows that Stryker rarely hits gross margin guidance. Low inventory levels and record inflation and supply chain issues will make gross margin expansion difficult
EBITDA	\$5,102	\$3,350	Spruce Point gives no credit to the Non-GAAP adjustments
GAAP Net Income	\$2,856	\$2,193	
Adj Net Income	\$3,735	\$2,742	We only adjust for amortization of acquired intangibles. The rest of the adjustments (esp inventory step-up) we have pointed out are highly suspect
Diluted Share Count	381.8	384.0	Street has share count down from 382.3m in 2021 despite no buyback? We model modest dilution
Adjusted EPS	\$9.76	\$7.14	
Cash from Operations	\$3,443	\$2,898	Long-term EBITDA to CFO conversion of 85%
Less: Capex	(\$585)	(\$650)	Stryker estimates \$650m; the Street is short. We believe capex has been deferred in the past and will be made up for this year
Less: Share Repo For Tax	--	(\$115)	Street inappropriately ignores this line item as a financing, not an operating cash flow
Free Cash Flow	\$2,858	\$2,084	Company is signaling the historical 60%-80% cash flow conversion won't be met

Trading Comparables To Stryker

Stryker commands among the highest valuations in the medical device and technology space, reflecting investors belief that it is a proven acquiror worthy of a premium. However, we have provided ample evidence why we believe that narrative is no longer a defensible reason to own shares at this price level.

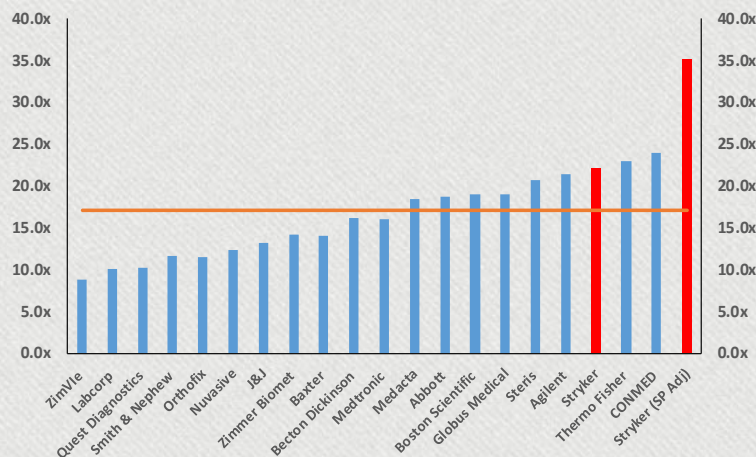
\$ in mm, except per share figure

Name (Ticker)	Stock Price 4/5/2022	Adj Ent. Value	2022E		Sales Growth '21E-'22E	Earnings Growth '21E-'22E	EV / Sales		EV / EBITDA		Price / EPS		EV/OCF 2022E	Net Debt 2022E EBITDA	Dividend Yield
			OCF Margin	EBITDA Margin			2022E	2023E	2022E	2023E	2022E	2023E			
Johnson&Johnson (JNJ)	\$177.61	\$477,397	29.5%	36.4%	6.0%	26.1%	4.8x	4.7x	13.2x	12.7x	16.9x	16.1x	15.0x	0.1x	2.4%
Thermo Fisher (TMO)	\$584.28	\$264,589	22.8%	27.4%	7.5%	11.3%	6.3x	5.2x	22.9x	21.5x	25.9x	24.0x	24.3x	2.6x	0.2%
Abbott (ABT)	\$119.48	\$222,069	27.8%	29.0%	-5.3%	12.3%	5.4x	5.1x	18.8x	18.4x	24.7x	23.3x	20.0x	0.7x	1.6%
Medtronic (MDT)	\$110.50	\$163,142	24.7%	30.9%	4.8%	52.2%	5.0x	4.0x	16.1x	15.1x	19.2x	18.0x	19.4x	1.3x	2.3%
Becton Dickinson (BDX)	\$262.94	\$90,906	25.1%	28.3%	-1.1%	6.2%	4.6x	3.6x	16.1x	15.1x	20.0x	18.5x	16.7x	2.6x	1.3%
Boston Scientific (BSX)	\$44.35	\$71,295	19.8%	29.2%	7.9%	58.6%	5.6x	4.6x	19.0x	17.4x	25.0x	22.0x	24.2x	1.9x	0.0%
Baxter (BAX)	\$76.49	\$54,183	16.4%	24.1%	24.4%	17.9%	3.4x	2.3x	14.1x	12.9x	17.9x	15.8x	17.4x	3.7x	1.3%
Agilent (A)	\$133.26	\$41,950	24.3%	28.8%	6.7%	23.7%	6.2x	5.5x	21.4x	19.8x	26.8x	24.3x	23.5x	0.7x	0.6%
Zimmer Biomet (ZBH)	\$129.13	\$33,307	29.4%	34.5%	-0.4%	NA	4.9x	3.8x	14.2x	13.5x	19.4x	18.1x	17.8x	2.6x	0.7%
Labcorp (LH)	\$264.25	\$30,311	13.8%	19.7%	-4.6%	-23.9%	2.0x	1.6x	10.0x	10.7x	13.7x	14.6x	14.5x	1.7x	0.0%
Steris (STE)	\$245.70	\$27,925	15.3%	27.5%	15.3%	18.9%	5.7x	4.7x	20.7x	17.8x	28.2x	27.6x	36.6x	2.0x	0.7%
Quest Diagnostics (DGX)	\$133.67	\$20,533	16.7%	21.4%	-13.3%	-34.1%	2.2x	1.8x	10.3x	11.0x	14.9x	16.0x	14.0x	2.0x	2.0%
Smith & Nephew (SNN)	\$32.21	\$16,218	19.0%	25.9%	3.3%	8.8%	3.0x	2.5x	11.6x	10.9x	36.6x	31.9x	11.1x	1.4x	2.3%
Globus Medical (GMED)	\$75.01	\$6,829	23.3%	35.0%	7.3%	22.7%	6.6x	6.9x	19.0x	17.2x	35.6x	31.3x	22.5x	-2.4x	0.0%
CONMED (CNMD)	\$145.03	\$5,437	12.1%	20.8%	7.8%	86.9%	5.0x	4.0x	24.0x	22.0x	39.3x	33.8x	39.6x	2.8x	0.6%
Nuvasive (NUVA)	\$54.80	\$3,597	19.4%	24.1%	6.6%	88.8%	3.0x	2.2x	12.3x	11.0x	25.2x	21.1x	14.1x	2.3x	0.0%
Medacta (MOVE SW)	\$119.32	\$2,517	22.6%	29.8%	26.7%	53.7%	5.5x	4.6x	18.4x	16.0x	32.2x	27.2x	22.1x	0.8x	0.0%
Zimvie (ZIMV)	\$23.66	\$1,177	15.0%	13.4%	-1.0%	NA	1.2x	0.6x	8.8x	8.5x	10.5x	9.6x	7.9x	4.2x	0.0%
Orthofix (OFIX)	\$32.78	\$589	4.0%	10.6%	3.8%	-67.1%	1.2x	1.3x	11.6x	9.6x	115.8x	43.7x	28.9x	-1.0x	0.0%
Max			29.5%	36.4%	26.7%	88.8%	6.6x	6.9x	24.0x	22.0x	115.8x	43.7x	39.6x	4.2x	2.4%
Average			20.1%	26.1%	5.4%	21.3%	4.3x	3.6x	15.9x	14.8x	28.8x	23.0x	20.5x	1.6x	0.8%
Min			4.0%	10.6%	-13.3%	-67.1%	1.2x	0.6x	8.8x	8.5x	10.5x	9.6x	7.9x	-2.4x	0.0%
Stryker (SYK)	\$268.50	\$112,806	18.8%	27.9%	7.1%	25.1%	6.2x	5.8x	22.1x	20.0x	27.5x	24.5x	32.8x	2.0x	0.9%
SP Adjusted	\$268.50	\$117,832	15.0%	18.4%	6.7%	NM	6.5x	6.0x	35.2x	31.7x	37.6x	34.4x	43.1x	4.6x	0.9%

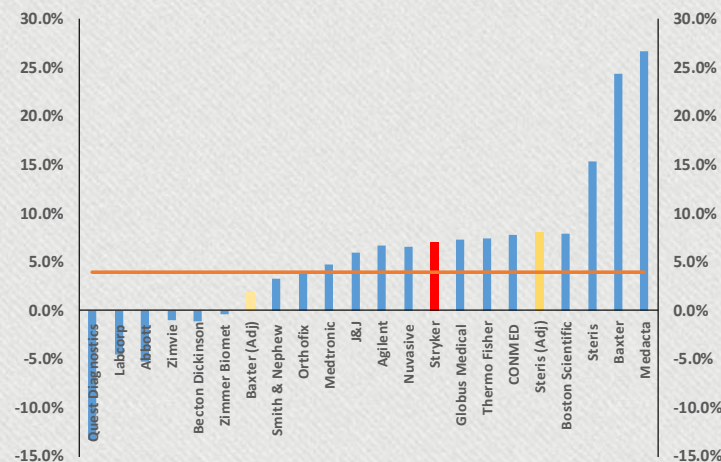
Source: Company financials, Bloomberg and Spruce Point estimates

Trading Comparables To Stryker (Cont'd)

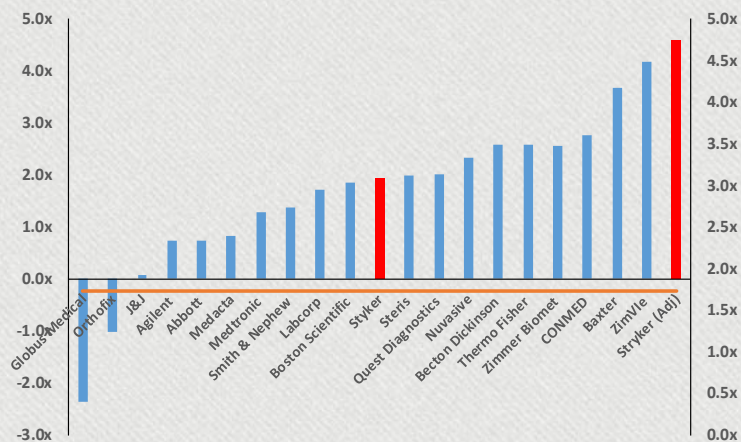
EV / 2022E EBITDA



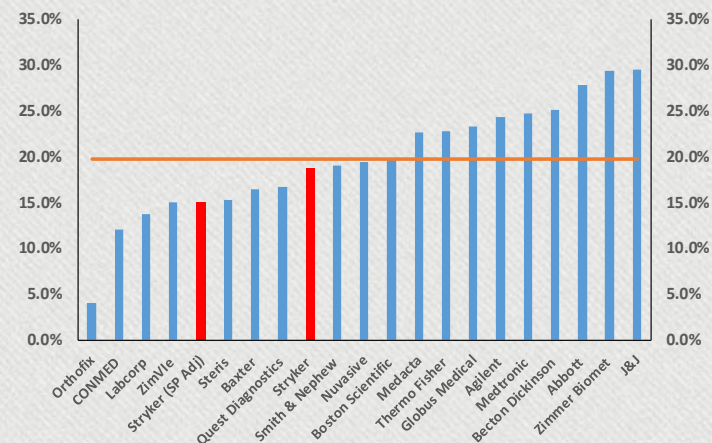
'22E Organic Sales Growth



Net Debt / 2022E EBITDA



'22E Operating Cash Flow Margin



Spruce Point Estimates 35% - 75% Downside Risk To Stryker's Share Price

As we articulated earlier with numerous supporting points, Spruce Point believes Stryker's valuation multiple is rich and needs to compress. Given the stock is heavily levered, there's a wide range of downside price targets sensitive to which metric Stryker is valued on.

Calendar Year Estimates \$ in millions, except per share data	Revenue Multiple		EBITDA Multiple		Operating Cash Flow ⁽¹⁾	
	Low Case	High Case	Low Case	High Case	Low Case	High Case
2022E Revenue / EBITDA / OCF growth / margin	\$18,248 +6.7%	\$18,318 +7.1%	\$3,351 18.4%	\$3,362 18.4%	\$2,734 15.0%	\$2,816 15.4%
Multiple Range	3.5x	4.5x	13.0x	15.0x	20.0x	25.0x
2022E Enterprise Value	\$63,867	\$82,430	\$43,567	\$50,430	\$54,672	\$70,390
Less: Total Debt	(\$16,387)	(\$16,387)	(\$16,387)	(\$16,387)	(\$16,387)	(\$16,387)
Plus: Unrestricted Cash + Equivalents	\$1,391	\$1,391	\$1,391	\$1,391	\$1,391	\$1,391
Equity Value	\$48,871	\$67,434	\$28,571	\$35,434	\$39,676	\$55,394
Diluted Shares (millions)	383.0	383.0	383.0	383.0	383.0	383.0
Implied Share Price	\$127.60	\$176.07	\$74.60	\$92.52	\$103.59	\$144.63
% Downside	-52%	-34%	-72%	-66%	-61%	-46%

Market data as of 4/5/22. Downside based on current share price of \$268.50

Source: Company financials, and Spruce Point adjustments and research

1) Adjusted to reclassify stock repurchases for employee compensation programs as operating cash flows