Equity Analysis for

Intuitive Surgical (ISRG)

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Company Overview

Intuitive Surgical designs and manufactures machines that robotically assist surgeries.

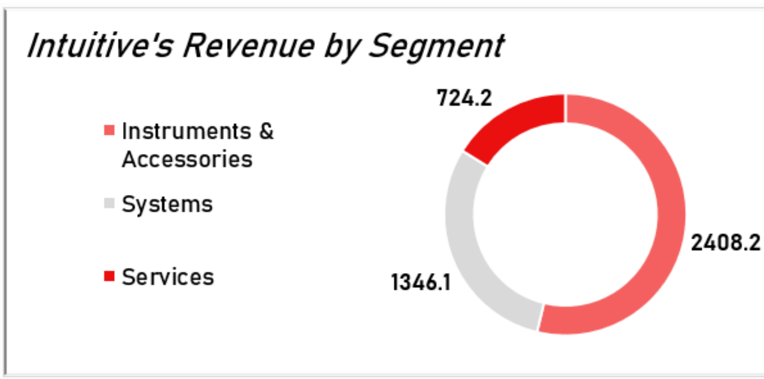
Their da Vinci systems are considered to be world-class, and they're currently on the 4-generation of production.

The Company's da Vinci Surgical System consists of a surgeon's console, a patient-side cart and a vision system. Essentially, the system translates what the surgeon is doing with their hands at the console and performs those steps robotically on the patient.

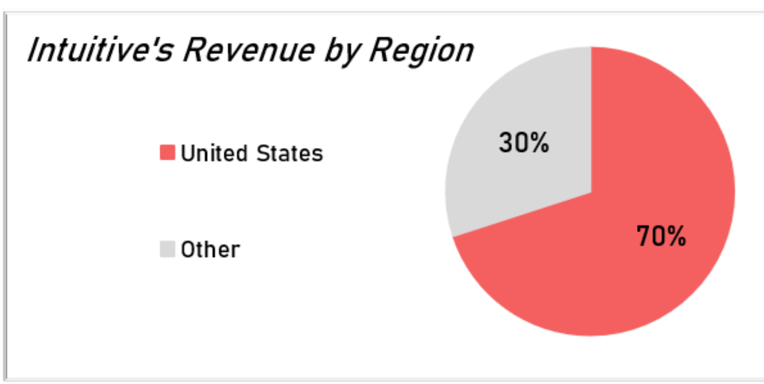
Operations

Intuitive operates under one segment, but their revenues can be broken down using a few different metrics. For instance, physical products make up around 84% of their sales. The other 16% is comprised of various services the company offers to their clients.

Furthermore, physical sales can be broken down into Instruments & Accessories, and Systems sales.



Geography



Industry

Intuitive's da Vinci machines are larger purchases for a hospital. Depending on which model they choose, prices can range from $500,000 to $2,500,000.

In an attempt to make da Vinci available to more hospitals, Intuitive created an option to lease their machines. Annual leases fall between $80,000 to $190,000, and are becoming a major part of the company's sales. In 2019, leases comprised of 38% of total System sales.

Similarly, hospitals face cost sensitivity surrounding surgeries for benign conditions. Typically, benign surgeries aren't reimbursed at attractive rates by insurance companies. Intuitive's da Vinci allows for consistency and fewer mistakes, that ultimately lead to more surgeries falling within the hospital budget.

Therefore, so long as this cost structure is in place, healthcare providers will need Intuitive's services to meet operational goals.

Lastly, Intuitive is the only major play in the field of robotic-assisted surgery. That being said, the company is now facing competition from the likes of Johnson & Johnson, and several others. This will no doubt change industry characteristics.

Short Term Outlook

In correlation to the broader Healthcare industry, ISRG has had a long bull run. Larger market penetration, growing margins, and consistent earnings beats have helped pushed the stock higher.

Intuitive's revenue for 2019 was approximately $4.5B; growing 20% over 2018 revenues. Similarly, net income was up around 22.8% to $1.38B.

Higher net incomes were driven by a lower effective tax rate, but operating income increased 14.6% as well.

Additionally, the company measures global procedure growth to get an idea of how the surgical industry is growing. Procedures continued their double-digit growth in 2019, at a rate of around 19% worldwide.

Higher procedure growth reflected customer's increased usage of Intuitive's advanced instruments.

As showcased by Intuitive's growth in foreign revenues, much of this growth came from Japan, China, and Korea. This is a trend that has been pushing the firm's revenues higher in the last few years, and will continue to do so moving forward.

Conversely, overall sales to Europe have been flat for several years.

It’s also important to note, that the company’s da Vinci base grew by only 12% in 2019. Though their system sales have fallen behind, the company has relied upon Instrument, Accessory, and Service sales to achieve their target growth rates.

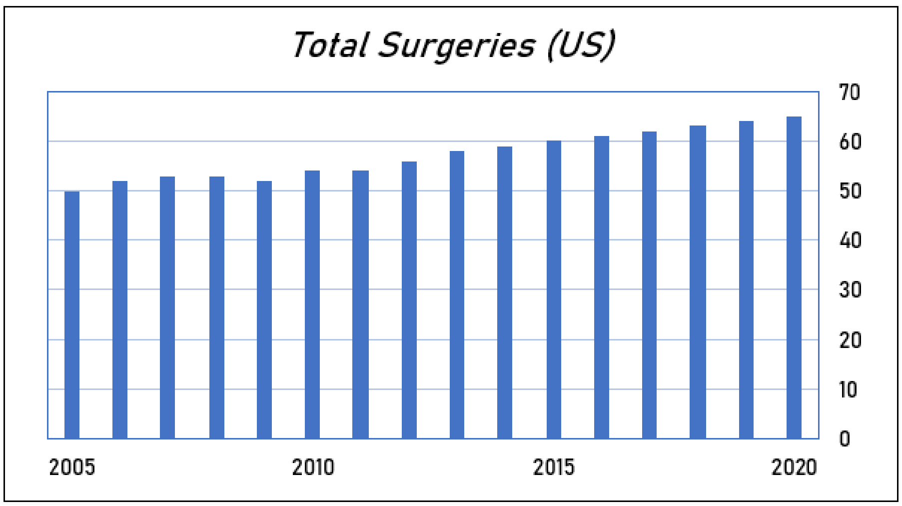
Long Term Outlook

The Healthcare sector continues to outperform broader economies across the world. In the next few years, the CAGR of the sector should fall to just over 5%. This would bring its worldwide valuation to nearly $12 Trillion.

There are additional areas where regional growth will outpace Healthcare’s global growth. Going forward, the fastest growing markets will be in Asia Pacific and Africa, where growth will be around 13% for both. Other areas are in the Middle East and South America, where the sector is expected to grow at CAGRs of 12.8% and 10.7%.

In the United States, where Intuitive still derives the majority of their business, growth rates are anticipated to be around 5.5%.

As Healthcare grows, naturally the total numbers of surgeries growth with it. Since 2005, total number of US surgeries performed have increased by 30%.



This is a more important metric than overall sector growth, because it has historically been a more accurate indicator of Intuitive’s performance.

Although there hasn’t been extensive research done when it comes to surgical growth, we do know that the total number of surgeries will continue to grow at a substantial rate.

United States procedures have become more complex, but also less invasive. This has made more overall surgeries possible.

Furthermore, as agrarian countries begin to develop, medicine will as well. In fact, Intuitive estimates that some of their fastest growing regions in the future will be in the heart of the Asia Pacific.

On another note, Intuitive's growth may be inhibited by new entrants into the industry. Namely, J&J's acquisition of Auris Health means that the company is ready to ramp up development of their own surgical machine.

Johnson & Johnson has substantially more resources than Intuitive, and already has a timeline scheduled. Their device, Monarch, has already passed FDA approval. It is scheduled to begin production in the next few years. What's more, they've brought one of Intuitive's original founders on board to see through the project.

The company also recently purchased Orthotaxy, a French robotic surgery company.

Risk Factors

New Product Development From Other Firms

Intuitive operates in a niche of the healthcare industry. They are a well-known company, and typically are considered to have the best products on the market.

However, if a larger company developed a machine for robot-assisted surgery, the company would most likely lose a great deal of market share (depending on the quality and price-point of the new system).

Johnson & Johnson is currently planning on revealing a similar machine to da Vinci later this year.

Laws and Regulations

When it comes to healthcare, and especially surgery, there are a lot of rules and regulations involved. If the government of any country that Intuitive does business in were to band robotic-assisted surgery, the company's overall sales would be affected. There may also be other laws that indirectly effect the company's sales.

Public Perception

A final risk factor, is the public perception of robot usage. Specifically, if populations began to not trust robotic technology, Intuitive machines would lose popularity. Ultimately, they wouldn't be ordered by hospitals anymore.

Valuation

CIR Valuation

$690.00

Error (%)			
7.5	**$638.25**	to	**$741.75**

As they continue their transition to a stable growth company, Intuitive Surgical will see continued pressure on their margins. In the next several years, we expect the subtle pressure on the company's margins to continue. Though this effect will slightly stunt bottom-line growth, we ultimately believe that their earnings will stay between the 8.5% and 12.9% growth range.

However, top-line growth should continue to see strong growth moving forward. Industry shifts towards Artificial Intelligence (AI) will push sales forward. Afterwards, it will be important to watch how J&J's Monarch influences market dynamics.

Secondly, growth rates at the company have begun to slow down. That being said, the company expects to continue their current trend of higher expenditures. Therefore, we kept their current reinvestment rate active for some time; only changing it towards the end of our valuation, when we shifted it towards the Healthcare Products industry average of 35%.

ISRG is currently at the stage where they can achieve more favorable terms on debt agreements. Thus, it makes more sense for them to increase the amount of debt in their capital structure, in order to achieve shareholder value.

	Short Term		Long Term
Unlevered Beta:		0.95	
Levered Beta:	1.03	→	1.06
Growth Rate:	12.7%	→	3.9%
Discount Rate:	5.8%	→	5.9%

Cash Flows

	ADJ 0	1	2	3	4	5	6	7	8	9	10
Net Income	1382	526	1480	1802	2045	2311	2593	2884	3181	3487	3809
FCFE		459	914	1182	1420	1694	2001	2336	2700	3095	3527

Terminal Value

$$\frac{3{,}809 \quad (1.03) \quad (0.89)}{(\ 0.0594 \quad - \quad 0.03\ )} = 116{,}518$$

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