# Innovative product line and favourable market conditions bodes well for Exactech

**Investment Recommendation: HOLD**

**Current Price: $24.95**

**Target Price: $25.54**

**Stock Upside Potential: 1.97%**

***Date: Saturday 15th April 2017***

- Exactech's Extremities division has almost doubled in size in the last 5 years, from $52.1mn (2012) to $100.3mn (2016). They are well positioned to continue this faster than market growth as they prepare to launch their Vantage Total Ankle System
- Divestment from Spine will enable the firm to concentrate on the development of surgeon friendly medical devices to increase acceptance rates in the three main orthopaedic divisions: Hip, Knee & Shoulder
- We expect the firm's hip revenues to continue its steady ascent following the launch of Alteon Monobloc Revision System and the planned launch of the Alteon HA Hip Stem in H2 2017
- The launch of the Truliant Knee System (Exactech GPS compatible) will help the firm reverse its fortunes and gain a small but meaningful market share.

UCD Michael Smurfit Graduate Business School

# Exactech [EXAC]


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Yale SCHOOL OF MANAGEMENT

| Capitalization as at 15/04/2017 | |
|---|---|
| Share Price ($) | 24.95 |
| Shares Outstanding (MM) | 14.3 |
| Market Cap ($ MM) | 356.79 |
| - Cash & STI ($ MM) | 13.10 |
| +Total Debt ($ MM) | 20.00 |
| + Preferred Equity (MM) | 0 |
| = Enterprise Value ($ MM) | 363.69 |

| Trading Multiples | |
|---|---|
| P/E | 24.05 |
| P/B | 1.5 |
| EV/EBITDA | 8.04 |
| EBITDA ($ MM) | 43.2 |
| EBITDA ($ MM) | 25.1 |

| APV Valuation | |
|---|---|
| Value of Unlevered Firm ($MM) | 332.81 |
| + Cash & STI ($MM) | 13.1 |
| + Value of Debt Tax Shield ($MM) | 37.91 |
| =APV (Value of Equity) ($MM) | 363.82 |
| Market Cap ($MM) | 356.79 |
| (Premium)/Discount | 1.97% |
| Implied Share Price ($) | 25.44 |

**Important Disclaimer:**

Please read disclaimer on page 22

## Company Overview

Exactech Inc. (NASDAQ: EXAC) is a developer and manufacturer of orthopaedic implant devices and related surgical instruments. Exactech are headquartered in Gainesville, Florida, USA and have 12 other offices located throughout Europe and Asia. The company markets its products through direct sales representatives and independent dealers in the US, as well as through affiliated and independent distributors in about 35 other countries. Customers include hospitals, clinics, surgeons and physicians.

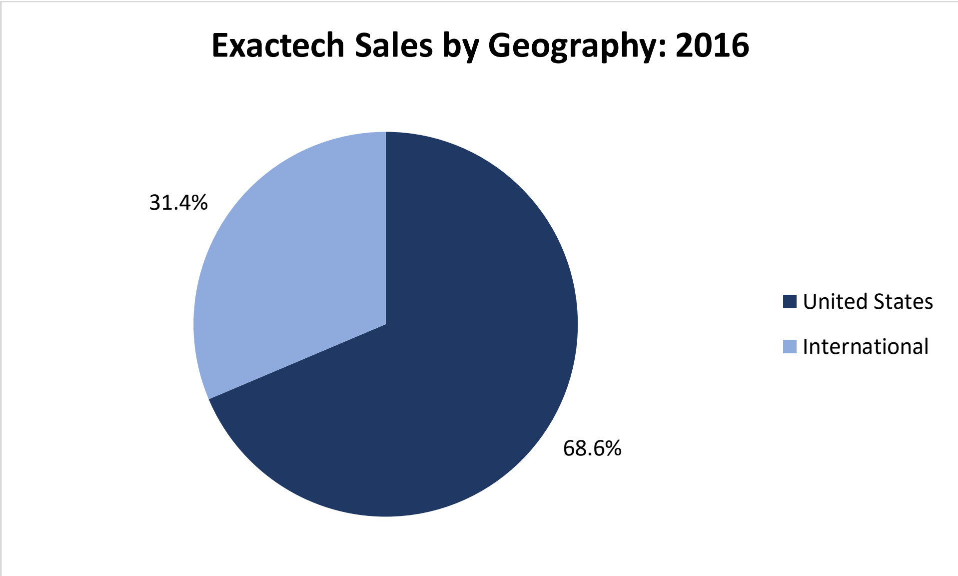


*Figure 1: Sourced from Bloomberg*

Exactech was founded by William Petty in 1985 and biomedical engineer Gary Miller with the aim of making a difference in the quality of care provided to patients suffering from injuries and joint diseases. In recent years, Exactech has strategically reduced R&D expenses by utilizing modern, highly automated computer aided manufacturing equipment. Their manufacturing processes are organised into 'cells' or groups, each dedicated to specific product lines to minimize change-over and increase efficiency. This helps reduce production cycle times and permits flexibility enabling Exactech to adjust quickly to changes in demand. The company continues to roll out new innovative products and focuses on adding functionality to their extensive product portfolio in order to help surgeons perfect procedures.

## Recent Financial Performance:

From January 2012 to March 2017, Exactech's share price has risen 77.1%, from $15.25 to $25.20. During this period. Exactech has been out-performed by three comparable benchmarks: S&P 500, S&P Healthcare Index and iShares Medical Devices ETF. If an investor invested $100 in Exactech on January 1st 2012, it would currently be worth $153.01. Exactech's slow growth has been largely due to stagnant revenue levels, an uninspiring product line in a number of its divisions and pricing pressure within the industry itself.

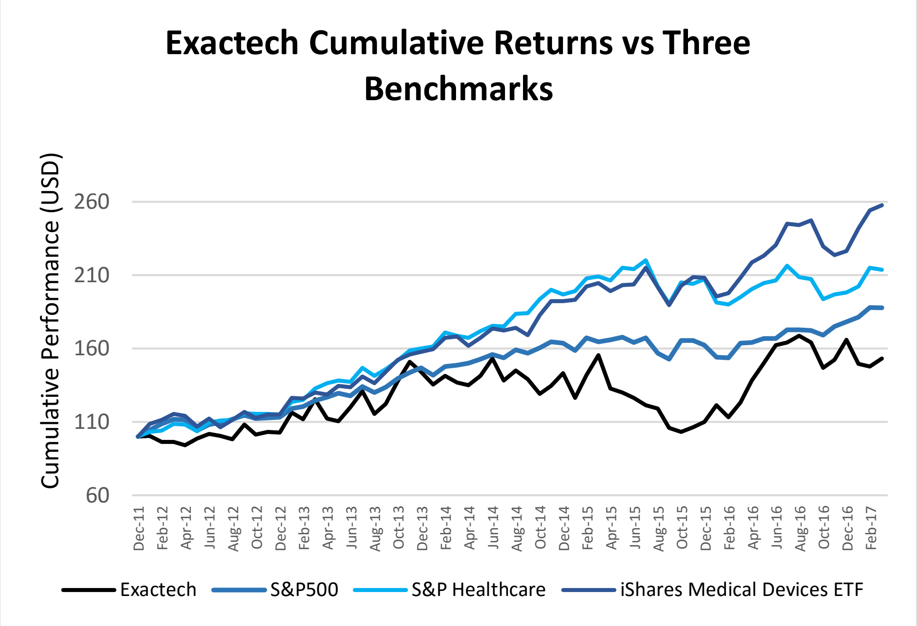


*Figure 2: Share prices sourced from Bloomberg*

## Forecasted Income Statement

## Revenue

Exactech's revenue in recent years has come from the following five segments:

- Extremities
- Knee
- Hip
- Biologics & Spine
- Other

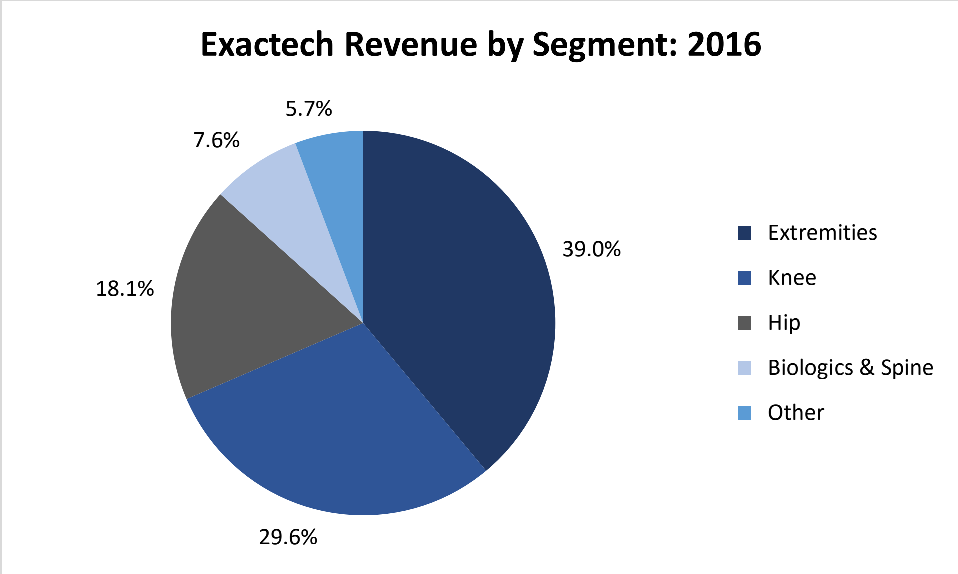


*Figure 3: Sourced from Exactech 2016 10-K*

Each of these divisions will be analysed in detail with the aim of forecasting revenue levels for the 10-year period between 2017 and 2026.

## Extremities:

Exactech's Extremities division focuses on producing medical devices for the outermost parts of the body with a particular focus on shoulders. Extremities is Exactech's highest earning division and represented 39% of sales in 2016. The division has nearly doubled in size in the last 5 years, from $52.1mn (2012) to $100.3mn (2016).

Exactech's innovative shoulder products have been main catalyst of this growth in revenue. Their standout product in this field is the Equinoxe Platform Shoulder System family (Equinoxe). Equinoxe contains a number of treatment options for both degenerative disease and trauma-related surgery. Exactech holds a major competitive advantage over its direct rivals in that the Equinoxe is the first shoulder platform system which has achieved a significant reduction in scapular notching. According to the Clinical Orthopaedics and Related Research (2011), scapular notching is the erosion of the neck as a consequence of reverse shoulder arthroplasty and occurs anywhere between 44-96% of surgeries performed.

Additionally, Exactech is poised to enter the $3.9bn foot and ankle market for the first time with the launch of the Vantage Total Ankle System (Vantage). In October 2016, orthopaedic surgeons Mark Easley and James Nunley of Duke University successfully performed the first surgery using the Vantage system after Vantage received US FDA 510(k) approval in April of the same year. Vantage is a total ankle replacement system that targets patients who have severe arthritis in their ankle.

The Extremities market is dominated by five firms: Johnson & Johnson, Smith & Nephew, Stryker, Wright Medical and Zimmer-Biomet. Exactech hold a very minor share in the market equating to 1.44% of total revenues. In 2014, medical device giant Johnson & Johnson penetrated the extremities market and increased overall revenues by approximately $2.6bn. In the face of this heightened competition, Exactech have been able to continue growing revenues and this gives us confidence that the company will not be thwarted by the large cap firms in the market. Exactech's unique position in the market as the provider of optimal functionality to physicians allows them to maintain a small percentage in this very large market.

Growth in this market has been largely fuelled by a number of different factors: the rise in the population aged 65 years and older, increased life expectancy and the rise of GDP per capita. Given that the majority of Exactech's business is based in the United States, all of these factors have been trending upwards. The rise of robotic-assisted surgeries, among other technological advancements, has improved the efficient of procedures in this field and will help to maintain growth levels into future.

We forecast market revenue levels to reach $13.76bn by 2026 and Exactech's Extremities sales to reach $228mn. Our assumptions are detailed below. All forecasted revenue levels and market share tables are included in the Appendix A.

**<u>Assumptions:</u>**

After conducting research on Exactech and its competitors, we projected the growth rates that each firm will have for the period 2017-2021. After analysing each firm's product pipeline, we did not find evidence of any firm specific innovation that will differ dramatically from the market after this period.

**<u>Market:</u>** We forecast that the Extremities market revenue levels will continue to rise at 9.68% between 2017 and 2021. For 2022-2026, we did not uncover any evidence of disruptive technologies or products offered by either Exactech or its competitors that will cause major shifts in growth levels in the industry. Historical CAGR's in the orthopaedic implant industry have been roughly normally distributed. We used a Monte Carlo simulation to randomly select an industry growth rate from the normal distribution with a mean equal to the historical average of orthopaedic implant 5 year CAGRs and a standard deviation equal to the volatility of same. This gave us a figure of 4.54%.

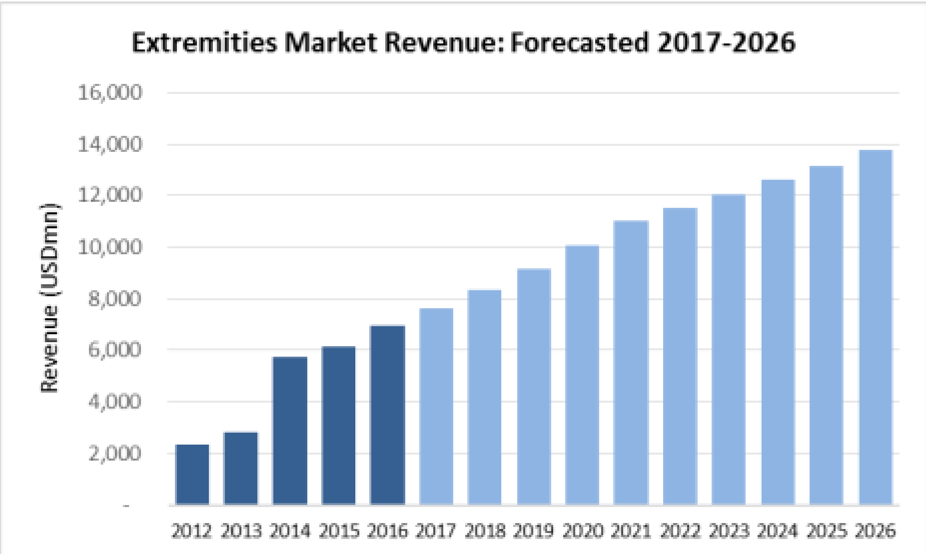


*Figure 4: Sourced from Bloomberg and authors' projections*

**Exactech:** Exactech has out-performed the market over the past couple of years gaining 0.05% (significant for Exactech who are a small cap firm in a large industry) in market share between 2014-2016 due to innovative shoulder products (Equinoxe system). We believe that the launch of the Vantage Total Ankle system will enable Exactech to continue to grow revenues and gain a foothold in the foot and ankle market. Although the launch of this product will not alter the course of the overall market, it will enable Exactech to increase their market share to 1.66% by capitalising on Orthofix and JNJ's recent struggles. We believe that these two competitors will return to positive growth but at a slower rate than the market, allowing Exactech to gain a small but meaningful market share.

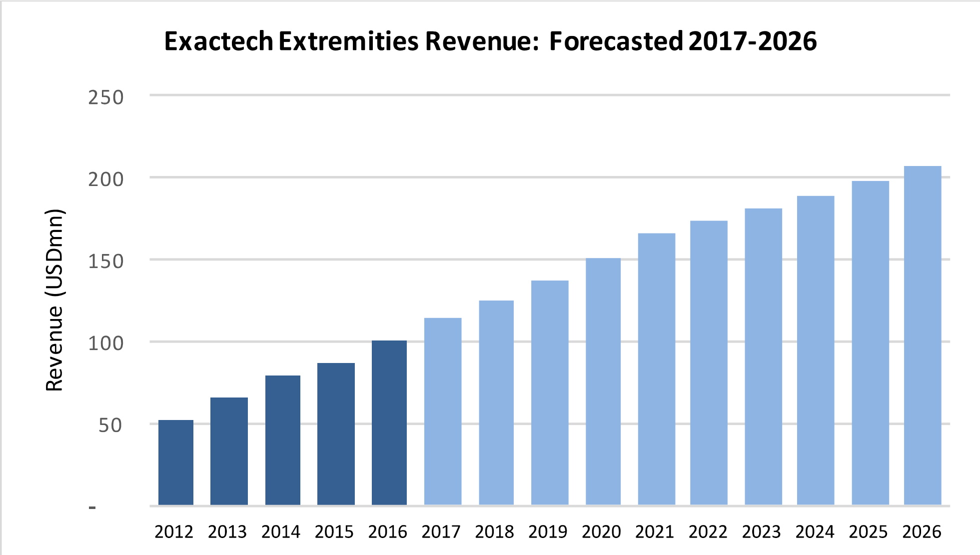


*Figure 5: Sourced from Bloomberg and authors' projections*

**Johnson & Johnson:** Johnson & Johnson's penetration of the Extremities market in 2014 immediately saw them gain a 46% market share. The company has struggled to build on their breakthrough year as revenues have declined YOY by 1.35%. We anticipate that they will utilise their scale in order to reverse their fortunes and grow revenues over the next ten years in line with US GDP estimates. However, this is at a rate that is slower than the overall extremities market and we believe that they will lose approximately 10% market share by the year 2026, allowing companies like Exactech to capitalise.

**Orthofix:** Orthofix is Exactech's closest competitor in terms of sales. Orthofix has not been able to keep with industry growth rates and have lost a massive 3.26% of their 4.74% market share that they held in 2012. Our research indicates that this trend is set to continue and Orthofix will lose approximately 0.03% market share over the next ten years. While this may not be significant for the large cap firms in this segment, this provides a vital opportunity for Exactech.

**Smith & Nephew:** Our research suggests that Smith & Nephew is well positioned in the market to take advantage of industry growth opportunities. Therefore, we project that Smith & Nephew will grow at the market rate of 6.8% from 2017-2026.

**Wright Medical:** Wright Medical and Tornier NV's merger at the end of 2014 allowed the combined company to establish itself in the Extremities industry through a combined innovative product line. We project that they will continue to grow at a rate above the industry average.

**Stryker:** based on Stryker's innovative product pipeline, we project that Stryker will continue to frow at their 5 year CAGR of 8.37% for the next 5 years and comfortably maintain their position as the third largest firm in the market.

**Zimmer-Biomet:** Zimmer-Biomet are the second largest firm in the Extremities division. They have experienced stellar growth rates over the last 5 years and have been the catalyst behind the sub-sectors growth in recent years. Our research indicates that the firm will be able to realise synergies from their blockbuster merger in 2014 and continue to grow at a rate that is faster than the market.

**New Competitors:** There are very few firms with the capability of seizing market share in the same fashion that Johnson & Johnson did in 2014. In our opinion, Medtronic are the only firm that could possibly enter the market. However, there is no indication that Medtronic nor any other medical device firm will enter this industry.

| Extremities Industry Market Share Forecasted 2017-2026 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| Exactech | **2.20%** | **2.32%** | **1.37%** | **1.41%** | **1.44%** | **1.49%** | **1.46%** | **1.50%** | **1.69%** | **1.66%** | **1.66%** | **1.66%** | **1.66%** | **1.66%** | **1.66%** |
| Johnson & Johnson | - | - | 45.75% | 41.15% | 37.01% | 34.81% | 32.73% | 30.79% | 28.96% | 27.23% | 27.23% | 27.23% | 27.23% | 27.23% | 27.23% |
| Orthofix | 4.74% | 3.67% | 1.90% | 1.56% | 1.48% | 1.44% | 1.41% | 1.37% | 1.34% | 1.31% | 1.31% | 1.31% | 1.31% | 1.31% | 1.31% |
| Smith & Nephew | 20.05% | 17.60% | 9.98% | 9.86% | 8.46% | 8.46% | 8.46% | 8.46% | 8.46% | 8.46% | 8.46% | 8.46% | 8.46% | 8.46% | 8.46% |
| Stryker | 41.83% | 39.60% | 21.32% | 21.01% | 19.65% | 19.41% | 19.18% | 18.95% | 18.72% | 18.50% | 18.50% | 18.50% | 18.50% | 18.50% | 18.50% |
| Wright Medical | 8.85% | 8.63% | 4.72% | 5.24% | 8.26% | 8.89% | 9.56% | 10.29% | 11.07% | 11.91% | 11.91% | 11.91% | 11.91% | 11.91% | 11.91% |
| Zimmer-Biomet | 22.34% | 28.17% | 14.96% | 19.77% | 23.70% | 25.50% | 27.20% | 28.64% | 29.77% | 30.94% | 30.94% | 30.94% | 30.94% | 30.94% | 30.94% |

*Table 1: Sourced from Bloomberg and authors' projections*

## Knees:

Exactech's Knee division provides comprehensive solutions for partial, primary and revision total knee arthroplasty. Knees is Exactech's second biggest division by revenue and contributed 29.6% of Exactech's revenue in 2016. The division has been loss-making in recent years. Exactech's Knee revenue has fallen from $81mn in 2012 to $65mn in 2016 at a 4.23% CAGR.

Knees have been an area of concern for Exactech as they have been losing market share and are in danger of being crowded out of the market. This has been due to a lacklustre product pipeline in recent years in comparison to their direct competitors. Device pricing pressure in the orthopaedic device market has also been a major factor and this has hampered smaller firms' growth opportunities.

Exactech's major knee product being launched in the second half of 2017 is the Truliant system (Truliant) that received US FDA approval via a 510(k) in February 2017. Truliant is the most comprehensive knee implant system on the market and it is linked up to the ExachtechGPS computer-assisted surgery system. Additionally, the Optetrak Logic CC Comprehensive Revision Knee system (Optetrak) was recently launched in March 2017 with wide acclaim due to successful surgeries performed in October 2016. These are Exactech's two biggest knee products launched on the market. The sale of the Spine and Biologics division will also help Exactech streamline their business model and the renewed focus on large joint reconstructive work will help Exactech's Knees revenues return to their former levels.

Exactech is the smallest of the major global knee medical device producers and currently ocupies just over 1% of the knee market. We forecast Exactech's Knee revenues to reach $111mn and for the Knee implant industry to reach $13.6bn in sales by 2026. Our assumptions are detailed below.

**Assumptions:**

After conducting research on Exactech and its competitors, we projected the growth rates that each firm will have for the period 2017-2021. After analysing each firm's product pipeline, we did not find evidence of any firm specific innovation that will differ dramatically from the market after this period. Thus, we projected each firm to grow at the same rate as the market from 2022-2026.

 

**Market:** The current trend in the Knee market is robotics. Each firm in this market are racing towards launching their company's robotic-assisted surgery on the market. While growth rates between 2012-2016 were primarily supported by a rise in old age population and the end of the global financial downturn, 2017-2021 will focus on automating knee arthroplasty procedures. Given the current pricing pressure within the industry, firms are keen to leap ahead of their rivals and establish themselves in the robotics revolution. Because of these technological advancements, we believe that the current 5-year CAGR of 7.5% is sustainable for 2017-2021. For the period 2022-2026, we believe that the industry will continue to reap the benefits of robotics and computer-assisted surgery. Therefore, we took the mean (11.61%) and the standard deviation (4.66%) of all the 5-year CAGRs from 2011-2021. We then then took one standard deviation south of the mean as our growth rate for 2022-2026. This is equal to 7.2%.

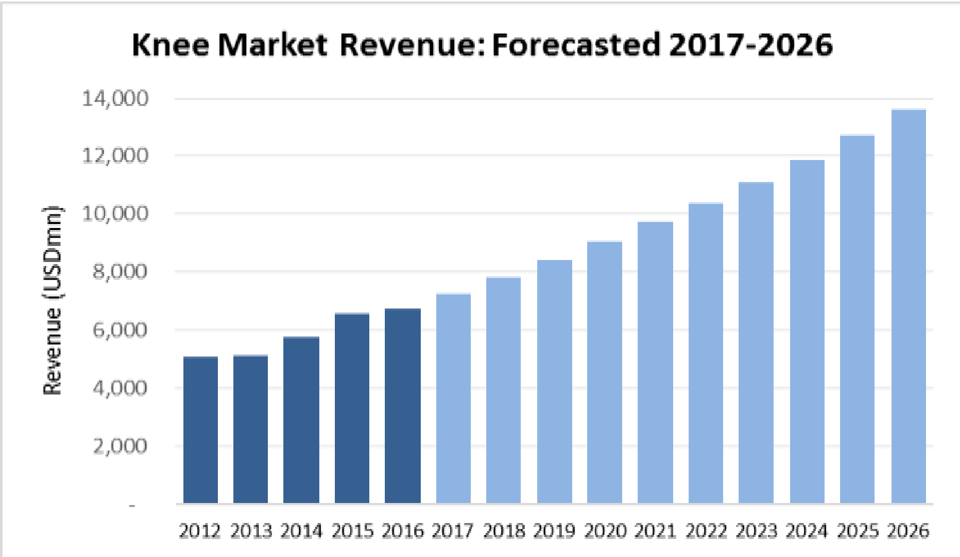


*Figure 6: Sourced from Bloomberg and authors' projections*

**Exactech:** We anticipate Exactech to hit revenues of $111mn by 2026. Exactech's declining revenue in this field over the past number of years (-4.23%) can be attributed to a lack of new and innovative knee replacement products. We are anticipating Truliant and Optetrak to reverse the company's fortunes and fuel organic growth from late 2017 onwards. Additionally, Exactech's ability to streamline the main orthopaedic divisions solidifies our forecasts. This will enable the firm to grow at a modest 5.41% CAGR over the next ten years. This is a rate that is slower than anticipated market growth and we will result in Exactech losing approximately 0.19% of their market share.

 

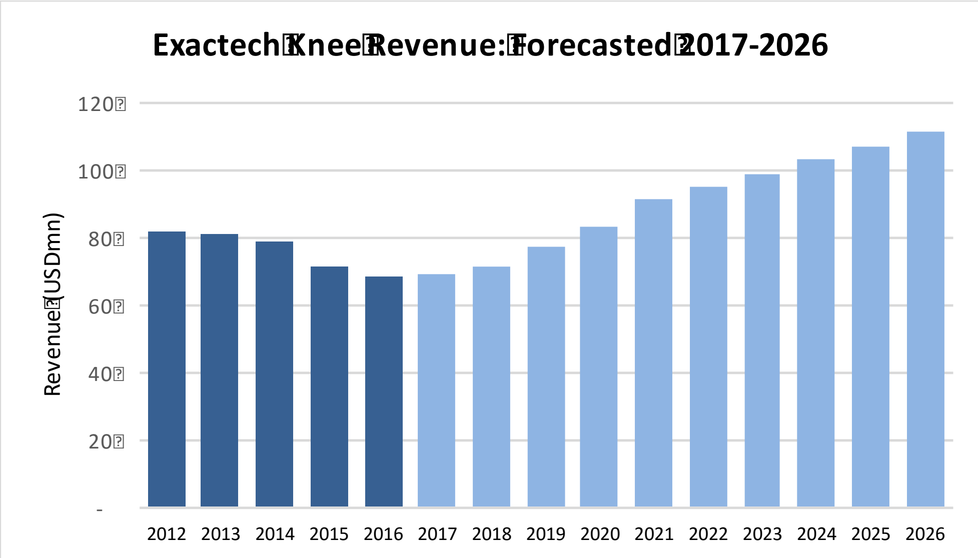


*Figure 7: Sourced from Bloomberg and authors' projections*

**Johnson & Johnson:** Johnson & Johnson penetrated the knee implant market in 2014 and have been losing market share ever since. However, they have recently rolled out their DePuy Synthesis knee product line which we believe will help the company correct the negative trend in knee sales and grow at levels similar to other firms who have launched product lines. We forecast that they will grow at rate slightly slower than the market at a CAGR of 6.4% and continue to steadily lose market share.

**Smith & Nephew:** After slow growth from 2012-2015, Smith & Nephew rebounded in 2016 with a substantial increase in knee revenue. They are second, behind Stryker, in developing robotic-assisted surgery and our research indicates a planned launch in 2018. There are a lot of unknowns surrounding the S&N robotics launch and we believe that they will continue to grow at historical CAGR until 2021. After this, when they begin to reap the benefits from their robotics launch they will have the capacity to grow in line with the market. This equates to a CAGR of 4.68% over the next ten years, a rate that is slower than the market which will result in Smith & Nephew surrendering a 3% market share.

**Stryker:** Stryker's acquisition of Mako in December 2013 has been the catalyst for Stryker to become the leaders of the robotics field. The Mako Robotic Assisted Arm is the biggest competitive advantage that any firm enjoys in the Knee market and the Mako Total Knee line was recently launch in 2017. We forecast that Stryker will grow at a rate faster than the market and will overtake Johnson & Johnson in 2017 to become the second biggest firm in the industry.

**Zimmer-Biomet:** Since the merger between Zimmer and Biomet in 2014, the consolidated revenues of the two firms spring-vaulted Zimmer-Biomet to the largest earning firm in the Knee implant industry. While growth has been stagnant in recent years, our research points to an unrivalled variety of knee products that no other firms can match. While Stryker may have the competitive advantage in robotics, Zimmer-Biomet's comprehensive knee product range will allow it to grow at the same rate as the market and retain its position as the largest firm in the industry.

**New Competitors:** Similar to Extremities, we do not identify any firms that are likely to enter the industry and gain significant market share.

| Knee Industry Market Share Forecasted 2017-2016 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| Exactech Inc | 1.61% | 1.57% | 1.36% | 1.08% | 1.01% | 0.95% | 0.91% | 0.92% | 0.92% | 0.94% | 0.91% | 0.89% | 0.86% | 0.84% | 0.82% |
| Johnson & Johnson | - | - | 26.54% | 22.71% | 22.52% | 22.42% | 22.21% | 21.88% | 21.47% | 20.97% | 20.97% | 20.97% | 20.97% | 20.97% | 20.97% |
| Smith & Nephew | 17.25% | 16.87% | 15.11% | 13.40% | 13.77% | 13.02% | 12.31% | 11.63% | 11.00% | 10.40% | 10.42% | 10.44% | 10.47% | 10.49% | 10.51% |
| Stryker | 26.77% | 26.74% | 24.17% | 21.29% | 22.02% | 22.94% | 23.90% | 24.90% | 25.94% | 27.03% | 27.03% | 27.03% | 27.03% | 27.03% | 27.03% |
| Zimmer-Biomet | 54.38% | 54.82% | 32.81% | 41.52% | 40.67% | 40.67% | 40.67% | 40.67% | 40.67% | 40.67% | 40.67% | 40.67% | 40.67% | 40.67% | 40.67% |

*Table 2: Sourced from Bloomberg and authors' projections*

## Hip:

Exactech develops and manufactures a wide variety of hip replacement products and currently boasts a complete product portfolio. The division is Exactech's third largest in terms of revenues but there can be no argument that it has been the most consistent performer over the last five years and has grown at a very steady CAGR of 3.44%.

A large part of this growth can be attributed to the launch of their Alteon Monobloc Revision Femoral Stem System. The product has been designed to improve surgical experiences for physicians throughout the country by combing axial and rotational mechanical stability through its carefully engineered and unique design. The launch helped increase sales by $3.6m dollars (8.4%) in Q4 2016. With the planned launch of the Alteon HA Hip Stem in the second half of 2017, the future of the division rests on solid foundations to continue its steady ascent.

The hip market, like all other reconstructive surgery markets, is correlated with the percentage of old age people, which has been growing at an increasing rate over the last number of years. This is a trend that is set to continue. The global economy is stabilising as GDP levels continue to steadily increase and disposable income levels allows more people to access previously unaffordable surgical procedures. We forecast market levels to reach $10.95bn by 2026 and for Exactach to hold a 0.7% share.

The major challenge for Exactech is not to gain, but rather to maintain market share amongst the giants of the medical device industry. The segment is dominated by the aforementioned major players: Johnson & Johnson, Zimmer Biomet, Stryker Corp. and Smith & Nephew. Prices in the industry have come under increasing pressure because of the heightened competition in recent years and Exactech have been one of the major losers. This pricing pressure is set to continue, and in an effort to combat this, Exactech has devised a clear business strategy following its divestment from spine: the development of user (surgeon) friendly medical devices to increase acceptance rates and the creation of distribution channels to complement the new products. However, Exactech do not have the capabilities to lower their prices to match the large cap firms in the industry and we believe they will surrender a 0.3% market share over the next ten years.

**Assumptions:**

Our thorough analysis has resulted in the following assumptions which will determine the future course of the hip implant market.

**Market:** We forecast that Hip Implant market revenues will grow at a faster rate than its last 5 years CAGR of 7.13% and believe that the market will accelerate over the next five years at a CAGR of 10.17% (average of the last seven 5 year CAGRs less one standard deviation). This is supported by the increase in global ageing population and an increase in patient volume because of a rise in successful surgery rates. These macro factors are supplemented by the fact that the hip market is yet to realise the same innovation benefits as the knee implant market. As new innovative technologies which have already hit the knee implant market begin to launch in the hip implant market revenues growth rates above 10% become very realistic. Between the years 2022-2026, we believe that the market will begin to revert to a CAGR of 5.53% (average of the preceding twelve 5 year CAGR's less one and a half standard deviations).

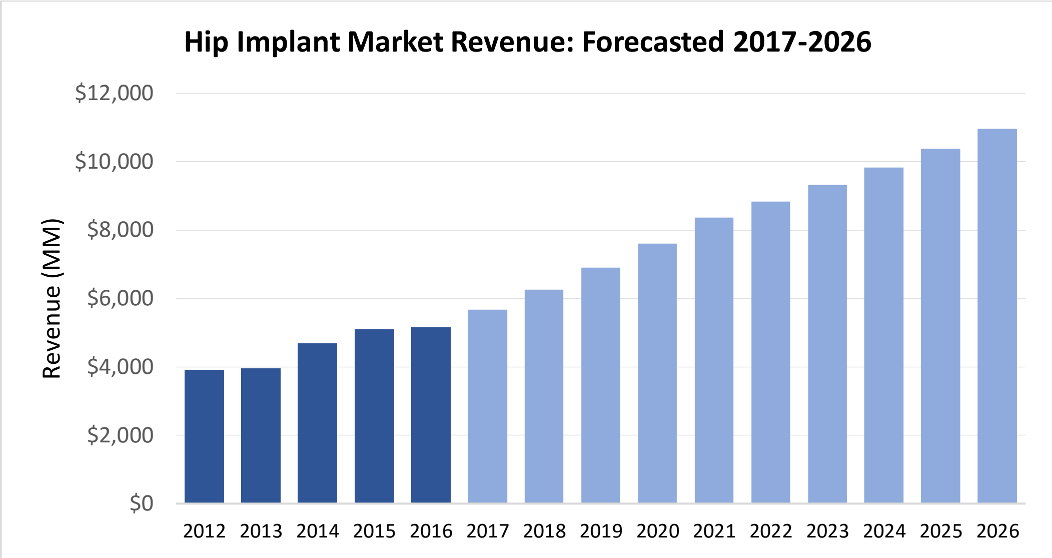


*Figure 8: Sourced from Bloomberg and authors' projections*

**Exactech:** We believe that Exactech can continue to build on their solid performance over recent years. The introduction of the Monobloc Revision product in 2016 has proven that they are developing products that physicians are interested in. The planned launch of their new hip stem in the latter half of 2017 will enable them to continue on their steady ascent. However, the lack of a blockbuster innovation makes it very difficult to reconcile anything above the last 5 years CAGR. We feel that Exactech's existing and future products can only support growth levels that have been observed over the past five years. The company have an incredibly solid hip product portfolio that will easily facilitate this stable growth rate, however they do not plan on offering anything 'extra' in the coming years and we believe that they will surrender approximately 0.3% over the projection period. To quote the great Albert Einstein, "Insanity is doing the same thing over and over again and expecting different results".

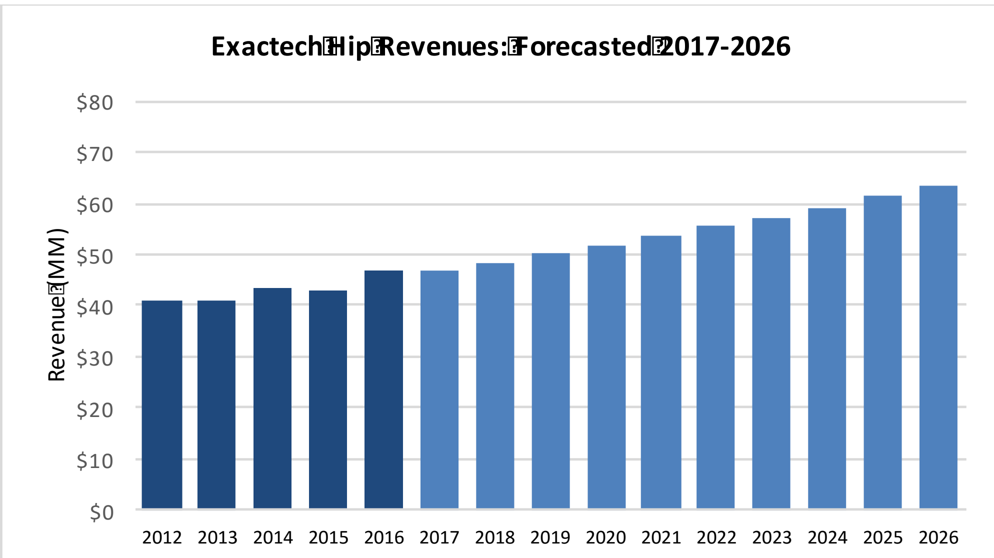


*Figure 9: Sourced from Bloomberg and authors' projections*

**Johnson & Johnson:** Johnson & Johnson's penetration of the Hip Implant market in 2014 immediately saw them gain a 29% market share. They have been losing market share ever since their breakthrough year as revenues declined YOY by 0.26%. However, they have recently rolled out their DePuy Synthesis Hip line which we believe can return them to positive growth. Their large economies of scale and enormous wealth of expertise is also taken into consideration and we believe that revenues will increase at a rate equivalent to US GDP growth. This is in fact slower than the forecasted growth in the overall Hip Implant market and we forecast that they will surrender approximately 10% market share.

**Smith & Nephew:** Smith and Nephew have been a long-standing player in the global hip implant market and have the resources to turn around their misfortune of late. They are second, behind Stryker, in developing robotic-assisted surgery and our research indicates a planned launch in 2018. However, this innovative new technology is more likely to hit their knee segment before hips and we project that they will grow at a rate that is in line with GDP forecasts for the next ten years and surrender approximately 5% market share.

**Stryker:** Best positioned in the market place because of their innovative efforts in Robotic assisted surgeries which have proven to be a massive success in the knee implant market. They plan to roll out a Total Hip Robotic assisted surgery platform in the coming years which will enable them to overtake Zimmer-Biomet as the industry leader. Combined with this new innovative technology the company already boasts a complete portfolio of Hip Replacement products which has resonated with doctors and patients. We forecast that Stryker will be the dominant player in the hip implant market for years to come.

**Zimmer-Biomet:** We have assumed that Zimmer Biomet Holdings will grow at a rate that is in line with the market (7.52%). The company boasts a comprehensive hip replacement product line which includes, partial, total and revision hip products. From our research of the industry, Zimmer Biomet are second only to Stryker in terms of innovative efforts and product placements. Moreover, they have publicly assured investors that the supply chain issues that hampered much of their results in Q4 2016 will be ironed out by the second half of 2017.

**New Competitors:** There are very few firms with the capability of seizing market share in the same fashion that Johnson & Johnson did in 2014. In our opinion, Medtronic are the only firm that could possibly enter. However, there is no indication that Medtronic nor any other medical device firm will enter this industry.

| Hip Implant Market Share Forecasted 2017-2026 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| Exactech | 1.04% | 1.04% | 0.93% | 0.85% | 0.91% | 0.82% | 0.77% | 0.73% | 0.68% | 0.64% | 0.63% | 0.61% | 0.60% | 0.59% | 0.58% |
| Johnson & Johnson | - | - | 29.21% | 26.15% | 26.40% | 24.48% | 22.70% | 21.05% | 19.52% | 18.10% | 17.52% | 16.96% | 16.42% | 15.89% | 15.39% |
| Smith & Nephew | 17.01% | 16.55% | 13.97% | 11.86% | 11.58% | 10.74% | 9.96% | 9.23% | 8.56% | 7.94% | 7.69% | 7.44% | 7.20% | 6.97% | 6.75% |
| Stryker | 31.50% | 32.24% | 27.57% | 24.80% | 24.89% | 31.07% | 34.46% | 37.64% | 40.63% | 43.43% | 43.70% | 43.93% | 44.12% | 44.28% | 44.40% |
| Zimmer-Biomet | 50.45% | 50.17% | 28.32% | 36.34% | 36.23% | 32.89% | 32.11% | 31.35% | 30.61% | 29.89% | 30.47% | 31.05% | 31.65% | 32.26% | 32.89% |

*Figure 3: Sourced from Bloomberg and authors' projections*

## Spine & Biologics:

On 31st January 2017, Exactech Inc. agreed to sell their Spine and Biologics division to ChoiceSpine, a private entity headquartered in Knoxville, Tennessee. The consideration for the deal was set at approximately $7 million of which $4 million was paid in cash at closing and the remaining $3 million is to be paid over the course of the next 4-5 years. This recurring payment has been included in the company's forecasted income statement and comprises part of the valuation. We believe that this will have an overall positive impact on Exactech's future performance. The company will be able to streamline their business and focus on the three main orthopaedic lines: Knees, Hips and Shoulder. Resources previously tied up in the Spine division will be made available for product launches in these departments and expanding distribution and sales channels. Exactech's Chief Financial Officer speaking about the company's decision to divest from spine declared in their Q4 Earnings call that, "It will be a positive tailwind for us in 2017".

## Probability Distribution

Before we completely accept our revenue forecast, we felt that it was prudent to depict the levels of growth experienced by Exactech and its direct competitors in the medical devices industry. Inspired by Mauboussin (2016), we calculated a rolling window of 5-year revenue compound annual growth rates for Exactech and its main medical device competitors from 1991. It is hard to justify any projections in revenue growth without initially establishing the base CAGR at which the revenues of medical device firms grow at.

We adjusted our sample to omit the first 5 years of each individual firm. We felt that the extremely high growth rates in revenues experienced by some of the firms within their first 5 years are not relevant to a well-established firm like Exactech and will not realistically be achieved within our projection period. Below are our results with our reduced sample:

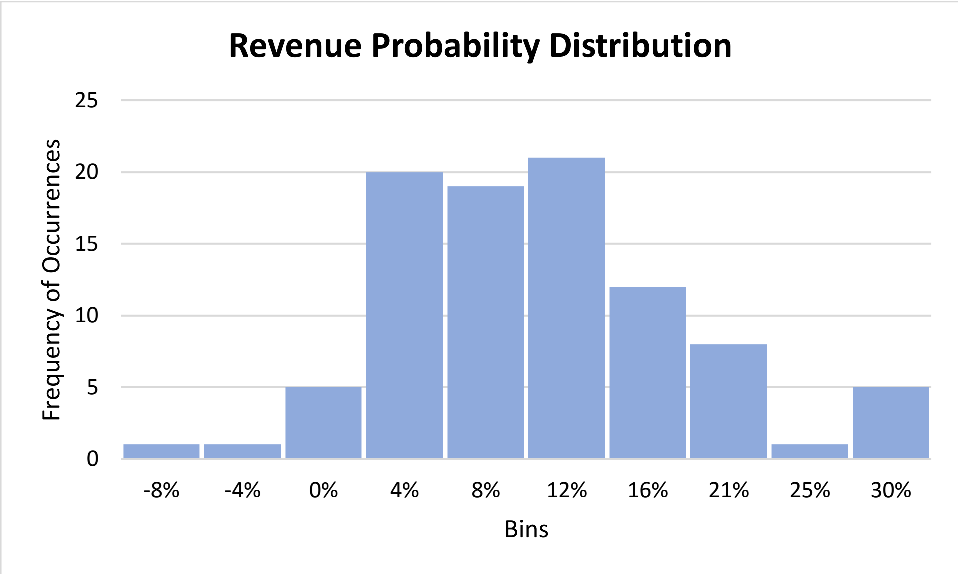


*Figure 10: Sourced from Bloomberg and authors' calculations*

| Summary Statistics | |
|---|---|
| **Median** | 8.47% |
| **Standard Dev** | 7.11% |
| **Skew** | 0.4888 |
| **Kurtosis** | 0.3888 |

*Table 4: Summary Statistics for sample*

All of this tells us a number of things. Firstly, the median 5-year CAGR is 8.47% for these companies. This is the average revenue growth levels that have been experienced year-on-year by the main companies within this industry. Our projections of a 6.34% CAGR in revenue levels is easily within 1 standard deviation of the median revenue CAGR in the medical devices industry. This reinforces our revenue projections with the knowledge that this type of revenue growth rate is very common in the industry for the well-established companies.

## Expenses:

**Cost of Goods Sold (COGS):**

Exactech's COGS expense is highly correlated with revenue levels (0.96). Therefore, we calculated the average COGS/Revenue ratio and assume that this will remain the same for the duration of the projection period.

$$\frac{COGS}{Revenue} = 30.59\%$$

**Selling, General & Administrative (SGA):**

SGA is highly correlated with revenue levels (0.99). Therefore, we calculated the average SGA/Revenue ratio and assume that this will remain the same for the duration of the projection period.

$$\frac{SGA}{Revenue} = 44.84\%$$

**Research & Development (R&D):**

R&D is highly correlated with revenue levels (0.89). Therefore, we calculated the average R&D/Revenue ratio and assume that this will remain the same for the duration of the projection period.

$$\frac{R\&D}{Revenue} = 7.74\%$$

**Depreciation & Amortization:**

After Exactech sold its Spine & Biologics division in early 2017, we obtained the portion of the charge that was attributable to Spine & Biologics ($1.1mn) and projected that the remaining charge would remain constant for the projection period.

$$D\&A = \$16.9mm$$

**Changes in Net Working Capital:**

We calculated the average of the changes in net working capital over the last 5 years.

$$\Delta_{NWC} = \ 3.56mm$$

**Capital Expenditure (Capex):**

Management infrequently give guidance on their capital expenditure allocation for the following year. Whenever they do, they are reasonably accurate with no upward or downward bias in their error. Therefore, we decided to use their capex projection for 2017 and assume it remains constant for the duration of the projection period.

$$CapEx = \$30mm$$

## Valuation - Adjusted Present Value

We examined Exactech's Debt-to-Equity levels over the last 10 years. This is displayed in Figure 11.

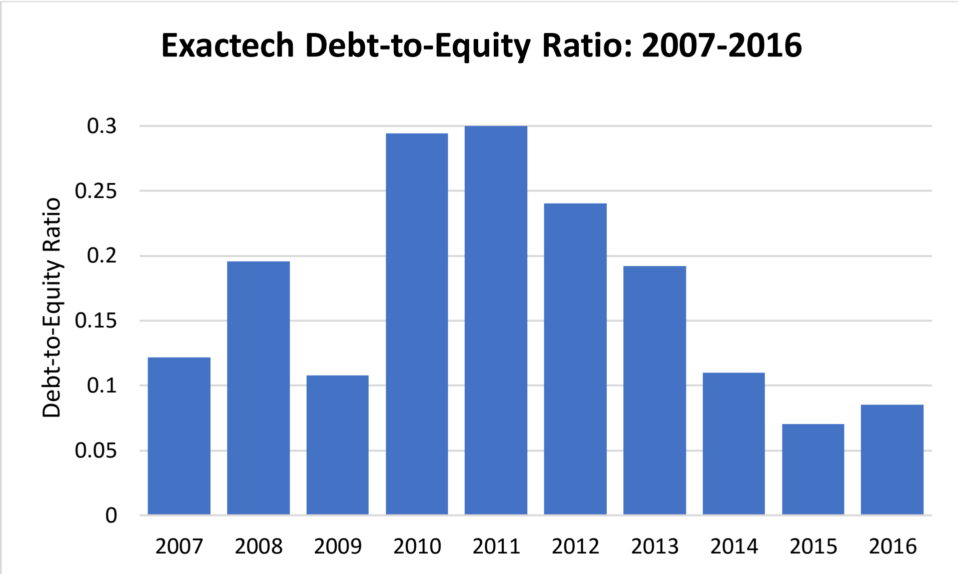


*Figure 11: Sourced from Bloomberg*

Exactech's D/E levels have clearly not been stable over the last 10 years. Therefore, we are unable to use the WACC as our discount rate and instead we will use the Adjusted Present Value (APV) Model.

The Adjusted Present Value method allows users to value a company by first valuing the company as if it were 100% equity financed and secondly by valuing the benefits of financing through debt. In Exactech's case, as we have seen, the debt/equity ratio has varied dramatically over the last 10 years. This is because the companys debt levels have fluctuated in the past because the company finances irregular business activities through debt e.g a $3 million share buy-back scheme executed in 2016. The company offers no guidance on how much debt will they will have on their balance sheet over the next few years because of the inconsistent utilisation of their credit facility. Therefore, we have forecasted Exactech's levels of debt using a Monte Carlo Simulation whereby the output has been distributed normally with a mean equalling Exactech's average total debt over the past 10 years and a standard deviation equalling the volatility of same. We have used MATLAB to conduct the simulation and forecast the company's total debt for the next 10 years:

This produced the following debt schedule for Exactech Inc. over the next ten years:

| Exactech Inc. Total Debt (2017 - 2026) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 15.74 | 20.23 | 28.90 | 29.58 | 26.05 | 25.40 | 32.64 | 32.01 | 32.27 | 33.40 |

*Table 5: Forecasted Total Debt Levels*

We believe the above debt schedule for Exactech is an accurate representation of the firm's financing structure. On 17 December 2015 the company agreed to restructure their credit facility with JP Morgan Chase in order to continue their policy of financing irregular business activities such as acquisitions and other investment activities.

The first step of APV is to calculate the value of the unlevered firm. We projected out Exactech's revenues using our previous analysis and calculated discounted the unlevered free cash flows for the period 2017 – 2026 by the unlevered return on equity figure. Please see the Appendix A for these calculations.

We have calculated the unlevered return on equity using the CAPM formula but instead of using the Beta of the firm's equity (i.e. levered Beta) we have converted this to an unlevered Beta using the formula set out in our assumptions. The sum of these discounted cash flows plus the corresponding discounted terminal value will give us the value of the unlevered firm.

The next step is to value the benefits of leverage or gearing. Since we know the amount of debt for the next 10 years (calculated above) we are able to determine the value of the tax shield by multiplying the previous period level of debt by the company's tax rate and by the cost of debt (all set out in assumptions). We have assumed that once the company has determined that they are entitled to this beneficial tax shield they are risk free. We then discount these tax 'benefits' (can be viewed as risk free cash flows) by the risk-free rate and sum them up to find their fair value.

The value of the firm was then calculated as:

$$(Value\ of\ the\ Unlevered\ Firm) + (Cash\ and\ Cash\ Equivalents) + (Present\ Value\ of\ the\ Firms\ Periodic\ Tax\ Shield) - (Debt).$$

Please see below some of the assumptions we have made and a detailed outline of our workings.

## <u>Assumptions:</u>

### <u>Tax Rate:</u>

We took the average of the income tax paid over EBIT ratio for the last 5 years.

$$T_c = 29.32\%$$

### <u>Risk-Free Rate:</u>

We used the yield from the 1-year US Treasury bill as at 14th March 2017.

$$r_f = 1.06\%$$

### <u>Market Risk Premium:</u>

The market risk premium is the required rate of return an investor requires to invest in the market. It is the compensation an investor receives for bearing the risk involved with investing in the market security. It is one of the most researched figures in finance with hundreds of financial literatures debating the topic.

In order to calculate the market risk premium we have utilised the library of Eugene Fama and Kenneth French. In 1992, Fama and French developed an asset pricing model known as the Three-Factor Model. One of the inputs to this model is the market risk premium and we believe their extensive online library will provide us with the most accurate figure. Using monthly data stretching back to the start of 1930, we took an average of the 1,047 monthly market risk premiums. Annualising this gave us a figure of 7.62%.

$$(r_m - r_f) = 7.62\%$$

**Beta:**

To calculate the levered beta, we regressed the monthly returns of Exactech onto the monthly returns of the Russell 3000 Index. We constructed a 60-month rolling window and rolled the window out for the last 5 years using MATLAB. Our rolling beta is displayed in Figure 12.

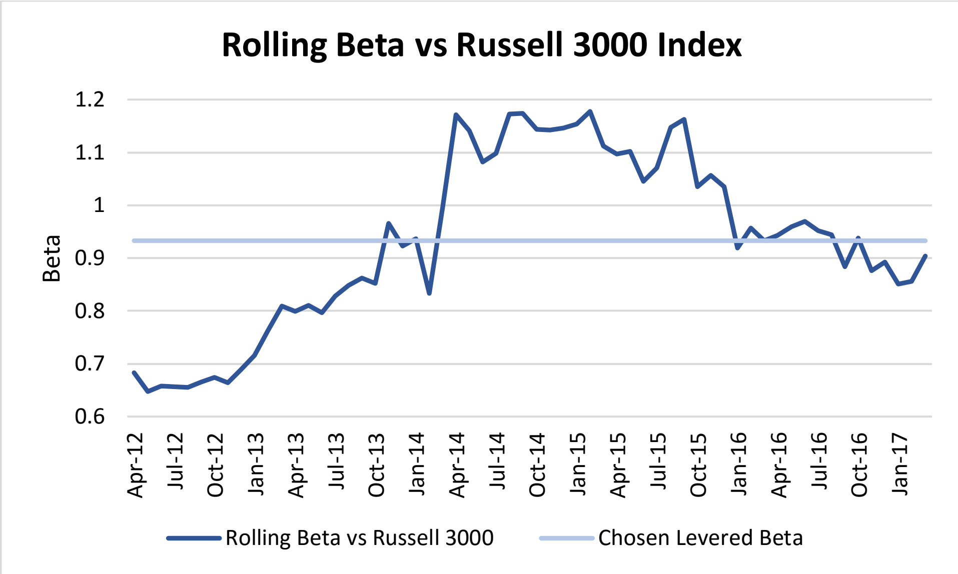


*Figure 12: Authors' calculations*

Historically, Exactech's beta was quite low before a dramatic surge in early 2014. We decided to use the mean value over the last 5 years as we feel that Exactech's beta has steadied around the mean in recent months and is not wildly fluctuating.

$$\beta_L = 0.93$$

For the purpose of the APV valuation method, we need to calculate the unlevered beta. We used the following formula:

$$\beta_U = \frac{\beta_L}{\left[1 + (1 - T_C)x\left(\frac{D}{E}\right)\right]} = 0.87$$

where $\left(\frac{D}{E}\right)$ has been set at 10%. We believe this is an appropriate input as the company's D/E ratio of the last three years has been between 7-11% and represents the target D/E ratio of the firm.

**Return on Equity:**

We used the Capital Asset Pricing Model (CAPM) to calculate the Return on Equity.

$$ROE = r_f + \beta_U\left(r_m - r_f\right) = 7.65\%$$

**Cost of Debt:**

We used the interest paid in 2016 and divided it by the average debt levels between 2015 and 2016.

$$r_D = 5.46\%$$

**Result:**

The APV model gives us the following results:

| APV Valuation | |
|---|---|
| Value of Unlevered Firm | 332.81 |
| + Cash & STI | 13.10 |
| + Value of Debt Tax Shield | 37.91 |
| =APV (Value of Equity) | 363.82 |
| Market Cap | 356.79 |
| (Premium)/Discount | 1.97% |
| Implied Share Price | 25.44 |

*Table 6: Authors' calculations*

Based on the APV model we have constructed, we calculate that Exactech is trading at a 1.97% discount to its current market price and that the implied price is $25.57.

## Multiples

We decided to supplement our valuation by examining the trading multiples of Exactech and its main competitors. These are shown in Table 3. Both EV/EBITDA and P/B indicate that the market views Exactech as a highly under-valued company. We are reluctant to put too much faith in trading multiples as they offer a very short-term view of the company that can be misleading. In an industry with innovative products on the horizon that will causes disruptions to industry growth, we believe that relying too much on multiples would not be suitable to Exactech. Therefore, we are going to stick with our recommendation from the APV model.

| Valuation Multiples | EV/EBITDA | P/E | P/B |
|---|---|---|---|
| Zimmer-Biomet | 13.9 | 28.1 | 2.5 |
| Stryker | 16.7 | 24.1 | 5.1 |
| Johnson & Johnson | 12.9 | 20.2 | 4.8 |
| Smith & Nephew | 9.8 | 18.8 | 3.6 |
| Orthofix | 10.2 | 43.3 | 2.5 |
| Exactech | **8.0** | **24.1** | **1.5** |
| Comp Median | **12.9** | **24.1** | **3.6** |

*Table 7: Sourced from Bloomberg*

 

## Recommendation: HOLD

Our recommendation is to hold Exactech. Despite Exactech's rocky performance in the recent past, we are confident that a stronger product pipeline, a streamlined business model that focuses on large joint reconstructive surgery and favourable market conditions will be a catalyst for solid growth for the next 10 years.

A thorough Adjusted Present Value valuation of the company using our projections values the company at a slight discount of 1.97%. However, this is not enough to justify recommending our investors to purchase the stock.

# Appendix A:

## Forecasted Free Cash Flows

| Exactech Inc (EXAC) - Forecasted Free Cash Flows | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **In Millions of USD** | **FY 2012** | **FY 2013** | **FY 2014** | **FY 2015** | **FY 2016** | **CAGR ('12-'16)** | **FY 2017E** | **FY 2018E** | **FY 2019E** | **FY 2020E** | **FY 2021E** | **FY 2022E** | **FY 2023E** | **FY 2024E** | **FY 2025E** | **FY 2026E** | **CAGR ('17-'21)** |
| **Revenue** | **224.3** | **237.1** | **248.4** | **241.8** | **257.6** | *3.51%* | **250.5** | **262.3** | **285.6** | **325.2** | **347.8** | **361.8** | **376.3** | **391.4** | **407.0** | **423.2** | *4.00%* |
| - Extremities | 52.1 | 65.5 | 79.0 | 86.7 | 100.3 | *17.82%* | 113.8 | 121.7 | 137.6 | 169.5 | 182.5 | 190.8 | 199.4 | 208.5 | 218.0 | 227.9 | *8.02%* |
| - Knee | 81.4 | 80.5 | 78.7 | 73.1 | 76.2 | *-1.64%* | 69.1 | 71.3 | 77.0 | 83.1 | 90.9 | 94.8 | 98.7 | 102.7 | 106.8 | 111.0 | *5.41%* |
| - Hip | 40.8 | 41.0 | 43.5 | 43.1 | 46.7 | *3.44%* | 46.7 | 48.4 | 50.0 | 51.7 | 53.5 | 55.4 | 57.3 | 59.2 | 61.3 | 63.4 | *3.44%* |
| - Biologics & Spine | 24.5 | 25.5 | 23.8 | 22.8 | 19.5 | *-5.50%* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| - Other | 25.6 | 24.6 | 23.4 | 16.2 | 14.8 | | 20.9 | 20.9 | 20.9 | 20.9 | 20.9 | 20.9 | 20.9 | 20.9 | 20.9 | 20.9 | |
| **Cost of Goods & Services** | **68.7** | **73.0** | **74.2** | **73.6** | **80.3** | *3.95%* | **76.6** | **80.2** | **87.3** | **99.5** | **106.4** | **110.7** | **115.1** | **119.7** | **124.5** | **129.4** | *6.00%* |
| **Gross Profit** | **155.6** | **164.1** | **174.1** | **168.2** | **177.3** | *3.32%* | **173.9** | **182.1** | **198.2** | **225.7** | **241.4** | **251.1** | **261.2** | **271.7** | **282.5** | **293.8** | *6.00%* |
| - Operating Expenses | 116.6 | 123.6 | 130.9 | 127.8 | 133.3 | | 129.0 | 135.2 | 147.4 | 168.3 | 180.2 | 187.5 | 195.1 | 203.1 | 211.3 | 219.8 | *6.10%* |
| + Selling, General & Admin | 99.8 | 105.7 | 112.5 | 109.6 | 114.6 | *3.52%* | 112.3 | 117.6 | 128.0 | 145.8 | 156.0 | 162.2 | 168.7 | 175.5 | 182.5 | 189.8 | *6.00%* |
| + Research & Development | 16.8 | 17.8 | 18.4 | 19.4 | 21.4 | *6.20%* | 19.4 | 20.3 | 22.1 | 25.2 | 26.9 | 28.0 | 29.1 | 30.3 | 31.5 | 32.8 | *6.00%* |
| + Other Operating Expense | 0.0 | 0.0 | 0.0 | -1.2 | -2.7 | | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | |
| - Non-Operating (Income) Loss | 1.4 | 1.5 | 2.1 | 2.0 | 0.9 | *-11.66%* | -2.6 | 0.3 | -0.1 | -0.3 | -0.3 | -0.2 | 0.4 | 0.4 | 0.4 | 0.4 | |
| **EBITDA** | **37.5** | **39.0** | **41.1** | **38.4** | **43.2** | *3.55%* | **47.5** | **46.6** | **50.9** | **57.8** | **61.6** | **63.9** | **65.7** | **68.2** | **70.9** | **73.6** | *4.98%* |
| - Depreciation & Amortization | 15.3 | 16.2 | 17.0 | 16.9 | 18.0 | *4.09%* | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | |
| **EBIT** | **22.2** | **22.8** | **24.1** | **21.5** | **25.1** | *3.17%* | **30.6** | **29.7** | **34.0** | **40.8** | **44.7** | **46.9** | **48.8** | **51.3** | **54.0** | **56.7** | *7.08%* |
| EBIT*(1-Tc) | | | | | | | 21.1 | 20.5 | 23.5 | 28.2 | 30.8 | 32.4 | 33.7 | 35.4 | 37.2 | 39.1 | |
| Add Depreciation/Amortization | | | | | | | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 | |
| Less Increase in NWC | | | | | | | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | |
| Less CapEx | | | | | | | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | |
| **FCF** | | | | | | | **4.5** | **3.8** | **6.8** | **11.5** | **14.2** | **15.7** | **17.0** | **18.8** | **20.6** | **22.5** | **19.60%** |

*Table 8: Sourced from Bloomberg and authors' projections*

## Forecasted Revenue Tables:

## Extremities:

| Extremities Industry Revenue Forecasted 2017-2026 | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **2012** | **2013** | **2014** | **2015** | **2016** | **CAGR** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **CAGR** |
| **Johnson & Johnson** | - | - | 2,640 | 2,528 | 2,569 | *-1.35%* | 2,650 | 2,734 | 2,820 | 2,909 | 3,001 | 3,138 | 3,280 | 3,429 | 3,585 | 3,748 | *3.93%* |
| **Stryker** | 989 | 1,116 | 1,230 | 1,291 | 1,364 | *8.37%* | 1,478 | 1,602 | 1,736 | 1,881 | 2,039 | 2,131 | 2,228 | 2,329 | 2,435 | 2,546 | *6.23%* |
| **Zimmer-Biomet** | 528 | 794 | 863 | 1,215 | 1,645 | *32.85%* | 1,942 | 2,272 | 2,624 | 2,991 | 3,410 | 3,565 | 3,727 | 3,896 | 4,073 | 4,258 | *9.12%* |
| **Smith & Nephew** | 474 | 496 | 576 | 606 | 587 | *5.49%* | 644 | 706 | 775 | 850 | 932 | 974 | 1,018 | 1,065 | 1,113 | 1,164 | *6.80%* |
| **Wright Medical** | 209 | 243 | 273 | 322 | 574 | *28.67%* | 677 | 799 | 943 | 1,112 | 1,312 | 1,372 | 1,434 | 1,500 | 1,568 | 1,639 | *10.32%* |
| **Orthofix** | 112 | 103 | 110 | 96 | 103 | *-2.14%* | 110 | 118 | 126 | 135 | 144 | 150 | 157 | 164 | 172 | 180 | *5.62%* |
| **Exactech** | **52** | **66** | **79** | **87** | **100** | ***17.79%*** | **114** | **122** | **138** | **169** | **182** | **191** | **199** | **209** | **218** | **228** | ***8.02%*** |
| **Industry Total** | **2,365** | **2,818** | **5,770** | **6,144** | **6,942** | ***9.68%*** | **7,614** | **8,352** | **9,160** | **10,048** | **11,021** | **11,521** | **12,045** | **12,592** | **13,165** | **13,763** | ***6.80%*** |

*Table 9: Sourced from Bloomberg and authors' projections*

## Knee:

| Knee Industry Revenue Forecasted 2017-2026 | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **2012** | **2013** | **2014** | **2015** | **2016** | **CAGR** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **CAGR** |
| **Zimmer-Biomet** | 2,755 | 2,811 | 1,895 | 2,736 | 2,752 | *-0.03%* | 2,958 | 3,180 | 3,419 | 3,676 | 3,951 | 4,226 | 4,520 | 4,834 | 5,170 | 5,530 | *7.20%* |
| **Johnson & Johnson** | - | - | 1,533 | 1,496 | 1,524 | *-0.29%* | 1,631 | 1,737 | 1,839 | 1,940 | 2,037 | 2,179 | 2,330 | 2,493 | 2,666 | 2,851 | *6.40%* |
| **Smith & Nephew** | 874 | 865 | 873 | 883 | 932 | *1.62%* | 947 | 962 | 978 | 994 | 1,010 | 1,083 | 1,161 | 1,244 | 1,334 | 1,430 | *4.68%* |
| **Stryker** | 1,356 | 1,371 | 1,396 | 1,403 | 1,490 | *2.38%* | 1,669 | 1,869 | 2,093 | 2,345 | 2,626 | 2,808 | 3,004 | 3,213 | 3,436 | 3,675 | *9.17%* |
| **Exactech Inc** | **81** | **81** | **79** | **71** | **68** | ***-4.23%*** | **69** | **71** | **77** | **83** | **91** | **95** | **99** | **103** | **107** | **111** | ***5.41%*** |
| **Industry Total** | **5,066** | **5,127** | **5,776** | **6,589** | **6,766** | ***7.50%*** | **7,274** | **7,820** | **8,407** | **9,037** | **9,715** | **10,391** | **11,113** | **11,886** | **12,713** | **13,597** | ***7.20%*** |

*Table 10: Sourced from Bloomberg and authors' projections*

## Hip:

| Hip Implant Industry Revenue Forecasted 2017-2026 | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **2012** | **2013** | **2014** | **2015** | **2016** | **CAGR** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **CAGR** |
| **Johnson & Johnson** | - | - | 1,368 | 1,332 | 1,361 | -0.26% | 1,390 | 1,420 | 1,451 | 1,482 | 1,514 | 1,547 | 1,581 | 1,615 | 1,650 | 1,685 | *2.16%* |
| **Stryker** | 1,233 | 1,272 | 1,291 | 1,263 | 1,283 | 1.00% | 1,765 | 2,156 | 2,595 | 3,086 | 3,634 | 3,859 | 4,094 | 4,340 | 4,596 | 4,863 | *11.92%* |
| **Zimmer-Biomet** | 1,975 | 1,980 | 1,326 | 1,851 | 1,868 | -1.38% | 1,868 | 2,009 | 2,161 | 2,325 | 2,501 | 2,690 | 2,894 | 3,113 | 3,349 | 3,602 | *7.57%* |
| **Smith & Nephew** | 666 | 653 | 654 | 604 | 597 | -2.70% | 610 | 623 | 637 | 650 | 664 | 679 | 693 | 708 | 724 | 739 | *2.16%* |
| **Exactech** | **41** | **41** | **43** | **43** | **47** | **3.44%** | **47** | **48** | **50** | **52** | **54** | **55** | **57** | **59** | **61** | **63** | ***3.44%*** |
| **Industry Total** | **3,915** | **3,946** | **4,683** | **5,093** | **5,156** | **7.13%** | **5,680** | **6,258** | **6,894** | **7,595** | **8,368** | **8,831** | **9,319** | **9,835** | **10,379** | **10,953** | ***7.57%*** |

*Table 11: Sourced from Bloomberg and authors' projections*

| VALUE OF UNLEVERED FIRM | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Period** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | TV |
| **Free Cash Flow** | 4.49 | 3.82 | 6.83 | 11.54 | 14.19 | 15.75 | 17.02 | 18.77 | 20.58 | 22.47 | 497.79 |
| **Discount Factor** | 0.93 | 0.86 | 0.80 | 0.74 | 0.69 | 0.64 | 0.60 | 0.55 | 0.52 | 0.48 | 0.48 |
| **Present Value FCF** | 4.17 | 3.30 | 5.48 | 8.59 | 9.81 | 10.12 | 10.16 | 10.41 | 10.60 | 10.75 | 238.22 |

*Table 12: Discounted Free Cash Flow calculations*

| PV OF DEBTS PERIODIC TAX SHIELD | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Period** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | TV |
| **Total Debt** | 15.74 | 20.23 | 28.90 | 29.58 | 26.05 | 25.40 | 32.64 | 32.01 | 32.27 | 33.40 | |
| **Tax Shield** | 0.34 | 0.27 | 0.34 | 0.49 | 0.50 | 0.44 | 0.43 | 0.55 | 0.54 | 0.57 | 42.13 |
| **Discount Factor** | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.90 |
| **Present Value** | 0.33 | 0.26 | 0.33 | 0.47 | 0.47 | 0.41 | 0.40 | 0.51 | 0.49 | 0.51 | 37.91 |

*Table 13: Value of firm's periodic tax shield*

## Appendix B:

Bloomberg. (2017) *Bloomberg Professional*. [Online]. Available at: Subscription Service (Accessed: 15 April 2017).

Exactech Q4 2016 Earnings Call

Exactech Form 10-K 2012

Exactech Form 10-K 2013

Exactech Form 10-K 2014

Exactech Form 10-K 2015

Exactech Form 10-K 2016

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Nicholson, G.P., Strauss, E.J. & Sherman, S.L. (2011), 'Scapural notching: recognition and strategies to minimize clinical impact'. *Clinical Orthopaedics and Related Research* 469: 2521-2530.

**IMPORTANT DISCLOSURE**