



# ORTHOPEDIC INDUSTRY OVERVIEW

May 2014

**Harris Williams & Co.**  
middle market®

Investment banking services are provided by Harris Williams LLC, a registered broker-dealer and member of FINRA and SIPC, and Harris Williams & Co. Ltd, which is authorised and regulated by the Financial Conduct Authority. Harris Williams & Co. is a trade name under which Harris Williams LLC and Harris Williams & Co. Ltd conduct business.

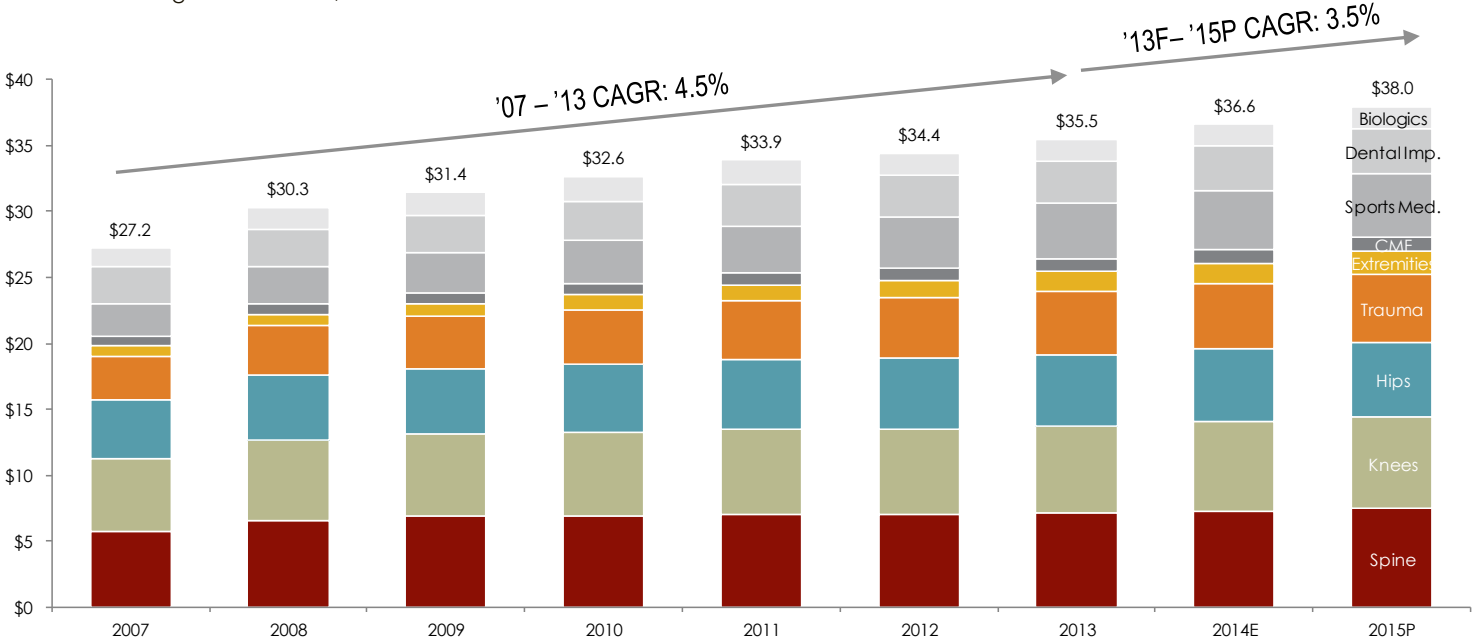
# ORTHOPEDIC PRODUCTS MARKET OVERVIEW

The \$35.5 billion worldwide orthopedic products market is forecasted to grow 3.5% annually to reach \$38.0 billion by 2015P.

- Industry growth is supported by demand drivers such as the aging of the population, individuals' desire to remain active later in life, the increasing prevalence of obesity, and the expansion of healthcare coverage.
- Spine, knees, hips, and trauma products make up more than 65% of the total orthopedic products market.
- Increased outsourcing by OEMs and supplier consolidation will drive above-market growth for outsourced precision manufacturers.

## WORLDWIDE ORTHOPEDIC PRODUCTS MARKET

For the Years Ended and Ending December 31, 2007 – 2015P  
(\$ in billions)

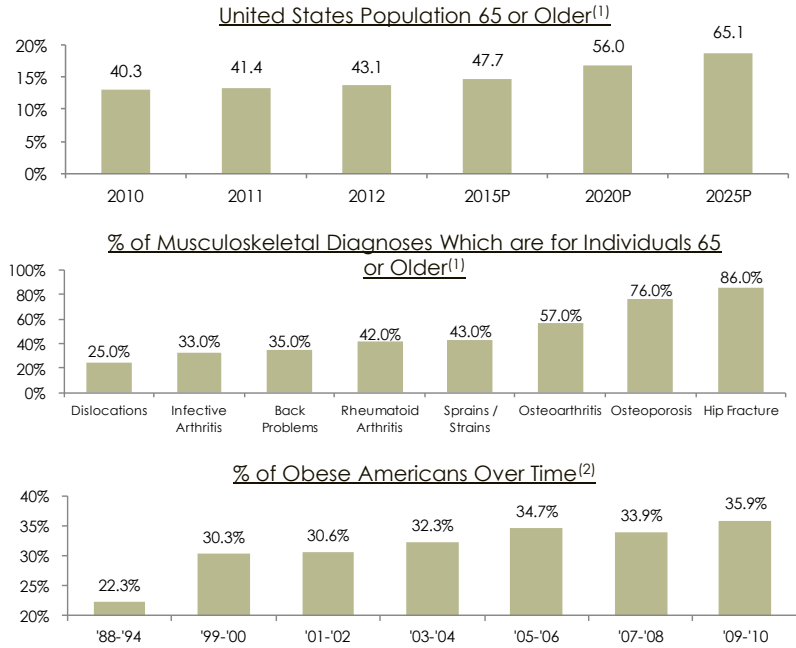


# GROWTH IN ORTHOPEDIC IMPLANTS

Orthopedic procedures are anticipated to grow 3 – 4% annually through 2015P.

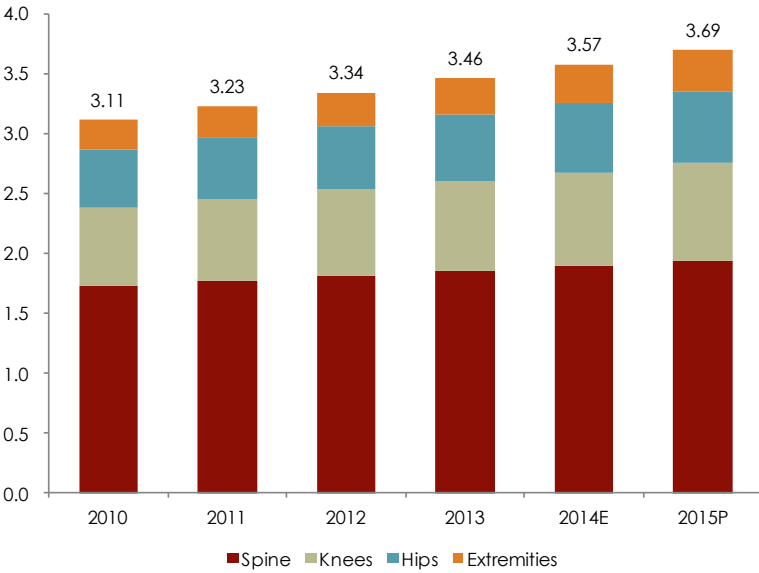
- Stable and growing demand for orthopedic implants is driven by:
  - An aging population will require more orthopedic implants; by 2015P, the U.S. population over 65 years old will reach 48 million, an increase of over 18% from 2010
  - A rise in osteoporosis-related fractures and musculoskeletal diagnoses are driving increased orthopedic procedure volume, particularly for individuals age 65 or older
  - Medical expenditures related to obesity have doubled over the last decade and currently represent an annual spend of approximately \$150 billion in the U.S.
  - Active lifestyle trends have resulted in increased implant volumes for younger demographics
  - Technology advances are making devices last longer, fueling younger patient acceptance of “life-long” implants

## FAVORABLE SECULAR DEMOGRAPHIC TRENDS...



## ...DRIVE SUSTAINED ORTHOPEDIC PROCEDURE VOLUME GROWTH

For the Years Ended and Ending December 31, 2010 – 2015P<sup>(3)</sup>  
(procedures in millions)



(1) 2012 Ortho Industry Annual Report.  
(2) CDC.  
(3) MedTech Insight.

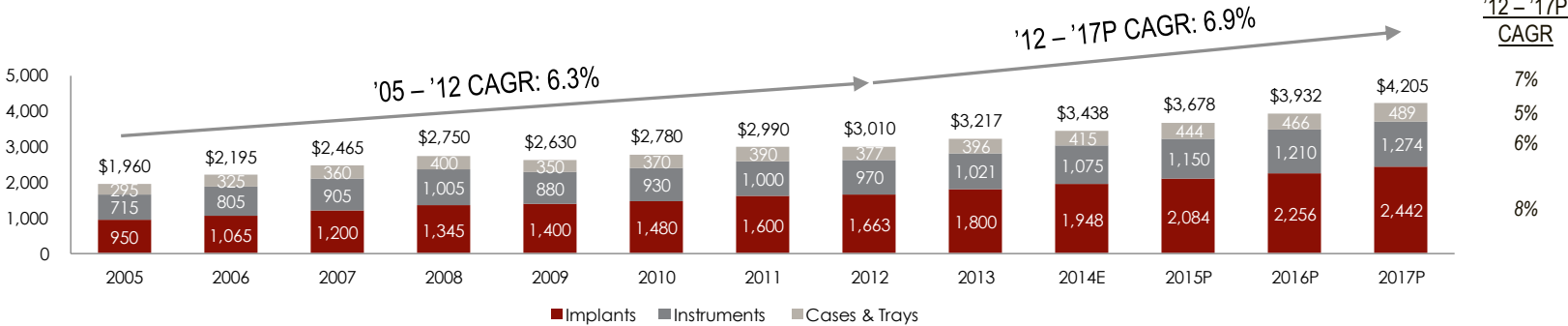
# OUTSOURCED ORTHOPEDIC PRECISION MANUFACTURING MARKET OVERVIEW

The outsourced orthopedic precision manufacturing market is forecasted to grow from \$3.0 billion in 2012 to \$4.2 billion in 2017P, an increase of 6.9%.

- Market growth is projected to outpace the broader orthopedic products market as OEMs increasingly outsource precision component manufacturing.
- The outsourced orthopedic precision manufacturing market includes manufacturers of implants, instruments, and cases & trays.
  - Implants represent the largest and fastest growing segment and are expected to grow from \$1.7 billion to \$2.4 billion, representing a 8.0% CAGR
  - Instruments are the second largest and second fastest growing manufacturing segment at and are projected to grow at 5.6% CAGR
  - The cases & trays segment is projected to maintain stable growth of 5.3% as the majority of these products are already outsourced
- The top six OEMs represent approximately 70% of the total orthopedic products market and are served by a highly fragmented base of outsourced precision manufacturing partners.
  - Those expected to experience the fastest growth are outsourced precision manufacturers with specialized, full-service capabilities
  - Full-service precision manufactures are particularly well positioned for growth as they offer OEMs a one-stop-shop solution
  - As a result, many OEMs are consolidating their base of suppliers to a select group of manufacturers with a broad set of capabilities

## GROWTH IN OUTSOURCED PRECISION MANUFACTURING SEGMENTS

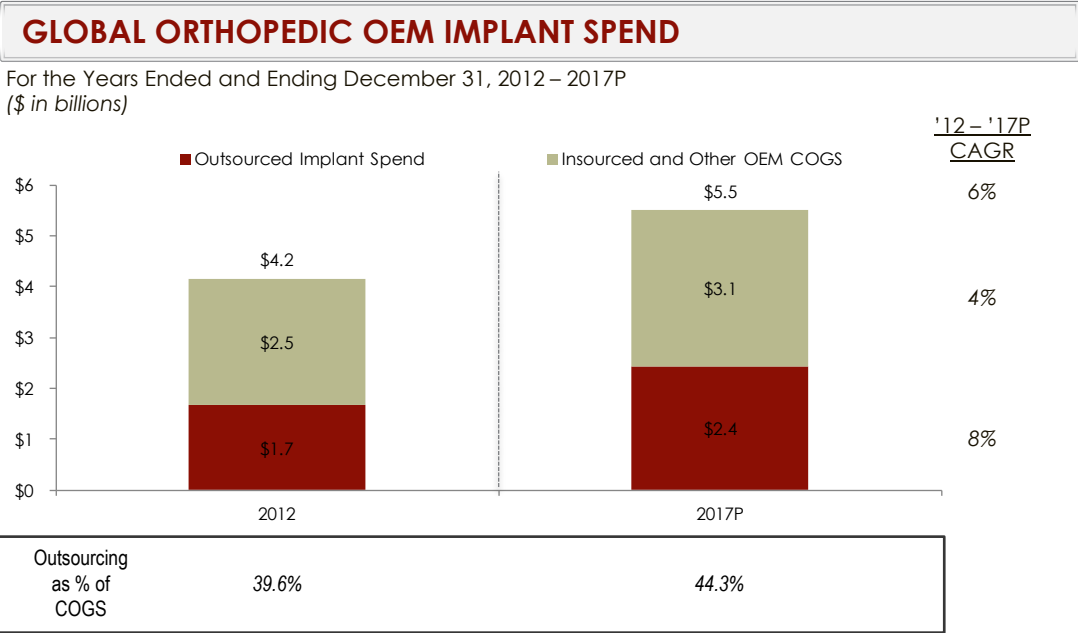
For the Years Ended and Ending December 31, 2005 – 2017P  
(\$ in millions)



# INCREASED OEM OUTSOURCING

Global medical device OEMs continue to aggressively outsource non-core functions.

- Most medical device companies are increasingly focusing their resources primarily on research, product development, and marketing.
  - Outsourcing manufacturing allows OEMs to increase speed to market by concentrating on core competencies
- Outsourced manufacturing is a valuable cost reduction tool, allowing OEMs to maintain a variable cost structure.
- Outsourced implant manufacturing is projected to outpace the broader orthopedic manufacturing industry, growing 8.0% annually from 2012 to 2017P, driven by an increase in outsourcing penetration.



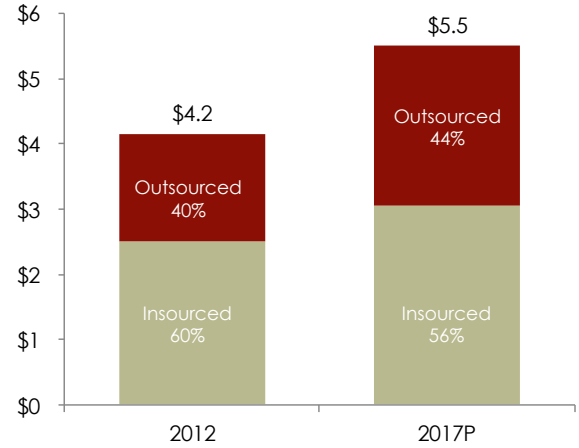
# PROVIDER OF SCALE MARKET SHARE GAINS

Providers of scale will benefit disproportionately as OEMs continue to consolidate their supplier base.

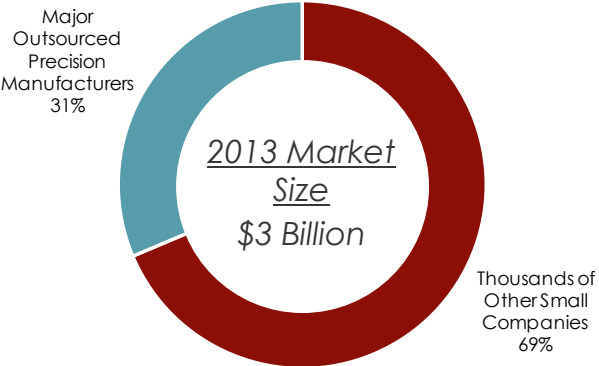
- The outsourced orthopedic precision manufacturing industry remains highly fragmented, while the medical device OEM customer base has consolidated.
  - Major outsourced precision manufacturers represent approximately 30% of the total outsourced market
- Full-service precision manufacturers of scale are projected to grow faster than the broader outsourced manufacturing market.
  - Industry trends are pushing business to larger manufacturers with a highly valuable set of broad and differentiated capabilities
  - Smaller operators lack the resources to keep up with stringent regulatory requirements and are being pressured to sell

**SIGNIFICANT PENETRATION GROWTH EXPECTED IN IMPLANTS**

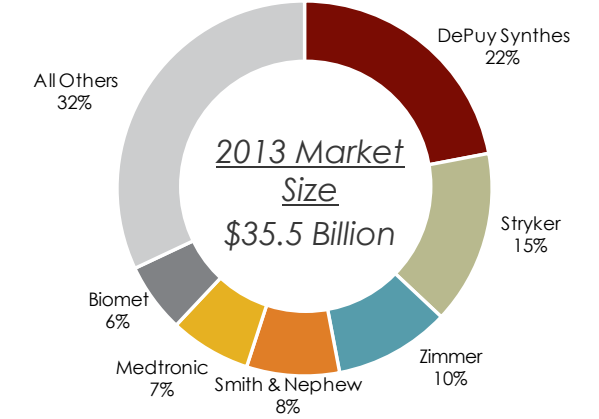
For the Years Ended and Ending December 31, 2012 and 2017P  
(\$ in billions)



**OUTSOURCED ORTHOPEDIC PRECISION MANUFACTURING INDUSTRY REMAINS HIGHLY FRAGMENTED**



**OUTSOURCED PARTNERS SERVE A LIMITED NUMBER OF MEDICAL DEVICE OEMS**



**OEMs' desire to focus on core competencies and leverage outsourced manufacturing partners will drive further penetration of the insourced opportunity.**

# DISCLOSURES

Harris Williams & Co. ([www.harriswilliams.com](http://www.harriswilliams.com)) is a preeminent middle market investment bank focused on the advisory needs of clients worldwide. The firm has deep industry knowledge, global transaction expertise, and an unwavering commitment to excellence. Harris Williams & Co. provides sell-side and acquisition advisory, restructuring advisory, board advisory, private placements, and capital markets advisory services.

Investment banking services are provided by Harris Williams LLC, a registered broker-dealer and member of FINRA and SIPC, and Harris Williams & Co. Ltd, which is authorised and regulated by the Financial Conduct Authority. Harris Williams & Co. is a trade name under which Harris Williams LLC and Harris Williams & Co. Ltd conduct business.

**THIS REPORT MAY CONTAIN REFERENCES TO REGISTERED TRADEMARKS, SERVICE MARKS AND COPYRIGHTS OWNED BY THIRD-PARTY INFORMATION PROVIDERS. NONE OF THE THIRD-PARTY INFORMATION PROVIDERS IS ENDORSING THE OFFERING OF, AND SHALL NOT IN ANY WAY BE DEEMED AN ISSUER OR UNDERWRITER OF, THE SECURITIES, FINANCIAL INSTRUMENTS OR OTHER INVESTMENTS DISCUSSED IN THIS REPORT, AND SHALL NOT HAVE ANY LIABILITY OR RESPONSIBILITY FOR ANY STATEMENTS MADE IN THE REPORT OR FOR ANY FINANCIAL STATEMENTS, FINANCIAL PROJECTIONS OR OTHER FINANCIAL INFORMATION CONTAINED OR ATTACHED AS AN EXHIBIT TO THE REPORT. FOR MORE INFORMATION ABOUT THE MATERIALS PROVIDED BY SUCH THIRD PARTIES, PLEASE CONTACT US AT +1 (804) 648-0072.**

*The information and views contained in this report were prepared by Harris Williams & Co. ("Harris Williams"). It is not a research report, as such term is defined by applicable law and regulations, and is provided for informational purposes only. It is not to be construed as an offer to buy or sell or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular trading strategy. The information contained herein is believed by Harris Williams to be reliable but Harris Williams makes no representation as to the accuracy or completeness of such information. Harris Williams and/or its affiliates may be market makers or specialists in, act as advisers or lenders to, have positions in and effect transactions in securities of companies mentioned herein and also may provide, may have provided, or may seek to provide investment banking services for those companies. In addition, Harris Williams and/or its affiliates or their respective officers, directors and employees may hold long or short positions in the securities, options thereon or other related financial products of companies discussed herein. Opinions, estimates and projections in this report constitute Harris Williams' judgment and are subject to change without notice. The financial instruments discussed in this report may not be suitable for all investors, and investors must make their own investment decisions using their own independent advisors as they believe necessary and based upon their specific financial situations and investment objectives. Also, past performance is not necessarily indicative of future results. No part of this material may be copied or duplicated in any form or by any means, or redistributed, without Harris Williams' prior written consent.*