



Medtronic PLC

Recommendation: Buy

Target Price: \$108.11

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Healthcare Sector

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Morgan Sattler  
Marc Cappuccitti  
Bremner Churchill  
Saahir Kapasi  
Johan Roohi  
Norman Yang  
Neelam Talat  
Nicholas Gondzik

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# Company Overview

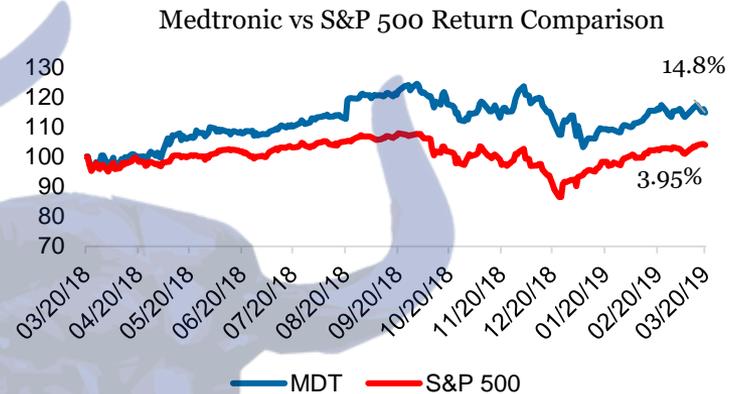


## Highlights

Medtronic Plc is a medical application and equipment company listed within the healthcare industry. Medtronic is active in the healthcare sector through its four divisions:

1. Cardiac and vascular division,
2. Minimally invasive therapies division,
3. Restorative therapies division,
4. Diabetes division.

## Share Price Performance



## Management Team



### Omar S. Ishrak

Chairman & CEO with eight years of company tenure. Has been the head of eight different companies. Previously, Ishrak held the position of president and CEO for Health Care Systems, Inc.,



### Mark Ploof

Senior Vice President-Global Operations with three years of company tenure. Previously, Ploof held the position of Vice President at TenX Capital Management Inc.,



### Karen L. Parkhill

Chief Financial Officer & Executive Vice President with three years of Tenure. Previously, Parkhill was the CFO-Commercial Banking Business at JPMorgan Chase & Co.,

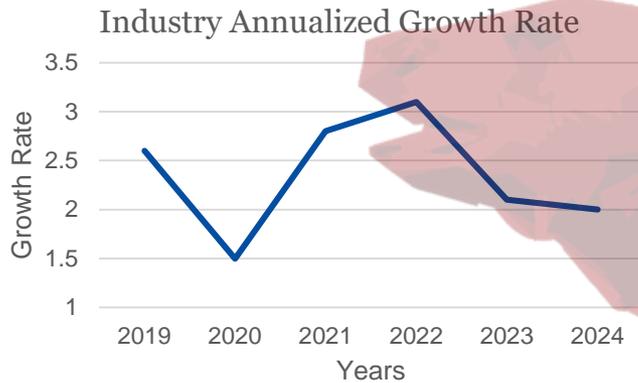
## Significant Events

1. January 24, 2019, Medtronic offers to acquire EPIX Therapeutics. This acquisition would allow Medtronic to expand its Medtronic cardiac ablation portfolio.
2. November 5, 2018, Medtronic acquires Clearum GmbH from Jens Sieder. Clearum GmbH manufactures chemicals, fertilizers, and nitrogen compounds, plastics, and other synthetic fibers.
3. Despite the industry as a whole being at the mature stage in its life cycle, the industry has not slowed its growth in revenue. Medtronic itself pursues a strategy of innovation. This means that it is able to take advantage from being the first mover in emerging markets and introduce new products at regular intervals.

# Industry & Macro Outlook

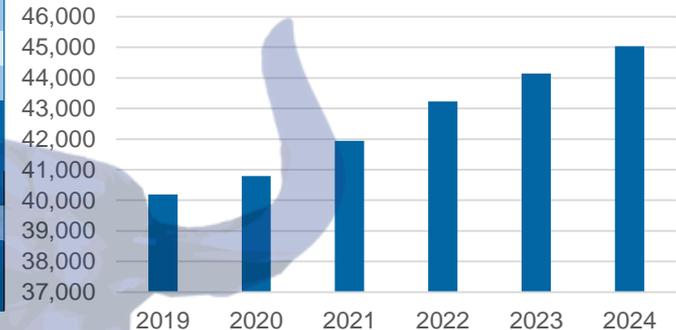


## Medical Device Manufacturing Industrial Trends



Life Cycle Stage	Mature
Revenue Volatility	Medium
Capital Intensity	Low
Industry Assistance	Medium
Concentration Level	High
Regulation Level	High
Technology Change	High
Barriers to Entry	Medium
Industry Globalization	High
Competition Level	High

Industry Revenue in \$ million



### Industry

The medical device manufacturing industry is essentially healthcare products. It is expected to slow down as a measure against GDP growth in USA. However, this growth rate has been consistent and the US economy has been ramping up in recent years. According to IBISWorld this industry is expected to experience an increased demand, resulting in new product development and rapid technological change. IBISWorld also expects greater access to healthcare for an expanding elderly population to contribute to an at-home healthcare trend. Due to growth constraints in established markets, medical device companies will likely aim to expand into lucrative developing markets

### Key Success Metrics

**Ability to attract human capital:** The design and production of medical devices is highly technical, so operators with access to skilled staff will experience a competitive advantage. The importance of a skilled workforce is reflected in the industry's high average wage.

**Development of latest technology:** Companies must have the capacity and competency to develop or acquire new and innovative technology to maintain a competitive edge

**Ability to globalize:** The industry operates globally, so successful players must take advantage of the growing globalizing of this industry to reduce reliance on the domestic market and diversify the risk.

**Having contacts within key markets:** Access to key distributors and end users is essential to successful sales in the market. Thereby giving a consistent flow of revenue to maintain relevance.

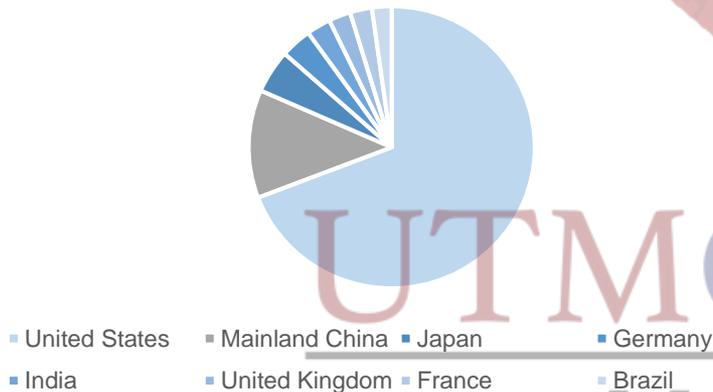
# Investment Thesis

## Exposure in United States and China

We've decided to pitch Medtronic due to its large exposure in the United States and its growing exposure in Mainland China.

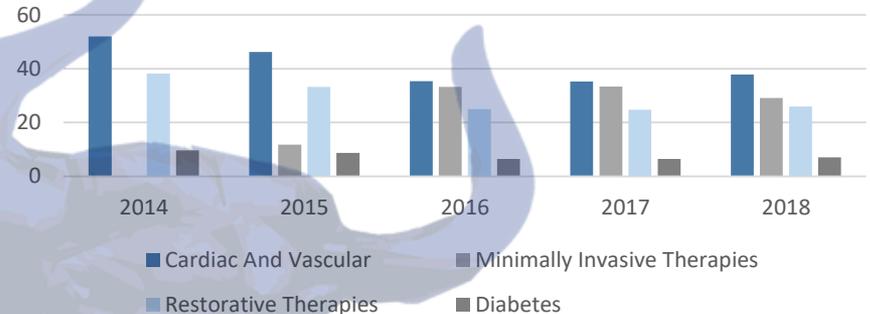
- 53% of Medtronic's revenue has come from the United States and 9.5% of revenue has come from china.
- Statistically, China has the highest number of diabetics worldwide and Medtronic's highest growing division is its diabetes division with 11.1% growth year on year.

## Revenue Exposure By Country



## Cardiac And Vascular Division Strength

Revenue By Division



- Medtronic earns its highest percent of its revenue from the Cardiac and Vascular division.
- 37.9% of revenue coming from the cardiac and vascular division, 29.1% coming from the minimally invasive therapies division, 25.9% coming from the restorative therapies division, and 7.1% coming from the diabetes division.
- Cardiovascular disease accounts for nearly 836,546 deaths which is about 1 of every 3 deaths in the US. As stated, the cardiac and vascular division is the highest revenue gaining division in Medtronic and the US is the country that accounts for the most revenue for this company.

# Company Breakdown and Growth Drivers

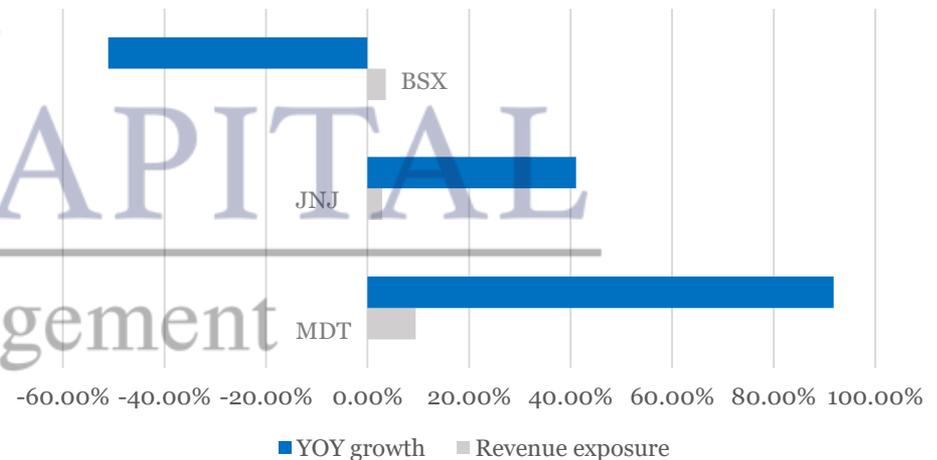
## Breakdown

Medtronic holds a significant \$10,259 Mil. at cost Property, Plant, and Equipment (PPE) Assets, 66% of which are held in Equipment assets. Significant investments in PPE combined with Medtronic's \$2,328 Mil. research spending, only outpaced by the largest firm in the market segment Johnson & Johnson, show that Medtronic has the capability to further establish take-to-market research products – a major driver of growth in the biomedical / pharmaceutical industry.

## Growth Drivers

- 1. Research Capacity:** Medtronic holds over 4600 patents and the research capacity and direction to continue to develop unique products within its focus on growing areas of the healthcare industry (products related to obesity / old age).
- 2. Market Aligned Strategy:** Medtronic is the thought leader in “value-based healthcare” a delivery model wherein providers are compensated based on patient health outcomes. This strategy aligns with the corporate / medical culture of China. Medtronic is also pioneering the Integrated Health Solution (IHS) strategy. IHS allows Medtronic to integrate itself into hospital infrastructure and may provide cross-hospital synergies as the program expands aligning with the trend of hospital digitization. HIS also provides access to majority public paper healthcare systems that are increasingly coming under pressure to reduce costs.
- 3. International Exposure:** Medtronic has significant relative and quickly growing exposure to China. China also represents the largest market of Diabetic patients, one of Medtronic's main product divisions.

Exposure and Growth in China



# Catalysts & Risks

## Catalysts

### 1. Mergers and Acquisitions

Medtronic has offered to acquire both EPIX Therapeutics and Nutrino Health Ltd.. The acquisition of either or both companies would prove to be extremely beneficial for Medtronic.

### 2. Growth in the Diabetes division

Medtronic's highest growing division is their Diabetes division with a growth of 11.1% year on year. Their highest growing revenue by country is China, who is responsible for the highest amount of diabetic people in the world.

### 3. Legislation Changes

Policy changes to allow patenting products easier would be essential for a healthcare company such as Medtronic which thrives on product innovation.

### 4. Growth In China

China is the largest economy in the world and by expanding in to this untouched market, Medtronic has the opportunity to immensely increase its revenue. Medtronic grew by 91.8% year on year

## Risks

Likelihood of Occurring	High	CSR				
			ER			
					LL	
				RR	MCA	
	Low					
		Impact				High

 MCA = Maintaining Competitive Advantage

 LL = Legal Liability

 CSR = Corporate Social Responsibility

 RR = Regulatory Risk

 ER = Economic Risk

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# Valuation Summary



## Discounted Cash Flow Valuation

### Exit Multiple Method

Enterprise Value	
Present Value of Projected FCF	<b>\$53,043.5</b>
Terminal Value	
Terminal Year EBITDA	\$8,691.4
Exit Multiple	<b>19.9x</b>
Terminal Value	\$172,610.7
Discount Factor	0.64
Present Value of Terminal Value	\$109,698.7
% of Enterprise Value	67%
Enterprise Value	<b>\$162,742.2</b>

### Perpetuity Growth Method

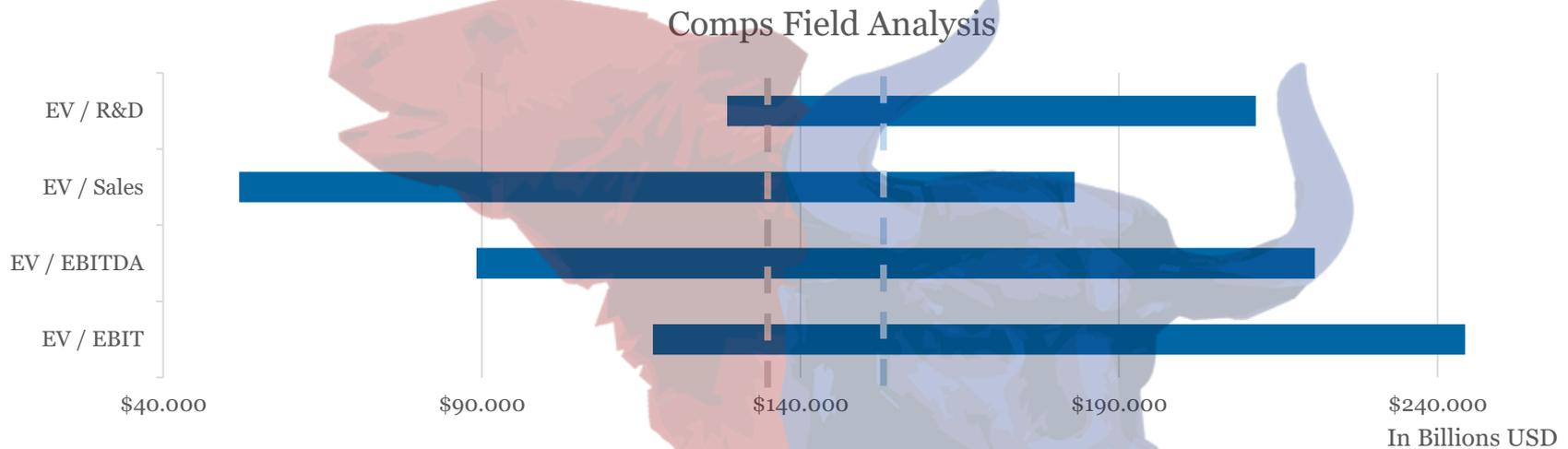
Enterprise Value	
Present Value of Projected FCF	<b>\$53,043.5</b>
Terminal Value	
Terminal Year FCF	\$8,350.3
Perpetual FCF Growth Rate	<b>2.0%</b>
Terminal Value	\$178,044.0
Discount Factor	0.64
Present Value of Terminal Value	\$113,151.8
% of Enterprise Value	68%
Enterprise Value	<b>\$166,195.2</b>

Implied Equity Value	
Enterprise Value	<b>\$162,742.2</b>
Less: Total Debt	<b>\$25,757.0</b>
Less: Preferred Securities	<b>\$0.0</b>
Less: Non-Controlling Interest	<b>\$0.0</b>
Plus: Cash & Equivalents	<b>\$11,227.0</b>
Implied Equity Value	\$148,212.2
Shares Outstanding	<b>1354.2</b>
Implied Share Price	<b>\$109.44</b>

Implied Equity Value	
Enterprise Value	<b>\$166,195.2</b>
Less: Total Debt	\$25,757.0
Less: Preferred Securities	\$0.0
Less: Non-Controlling Interest	\$0.0
Plus: Cash & Equivalents	\$11,227.0
Implied Equity Value	\$151,665.2
Shares Outstanding	1354.2
Implied Share Price	<b>\$111.99</b>

# Valuation Summary Continued

## Comparable Companies Valuation



Stock Price				
	EV/EBIT	EV/EBITDA	EV/Sales	EV/R&D
Enterprise Value	\$181,857.840	\$142,238.880	\$140,858.550	\$151,004.699
Net Debt	\$16,000.00	\$16,000.00	\$16,000.00	\$16,000.00
Market Value	\$165,857.84	\$126,238.88	\$124,858.55	\$135,004.70
Shares Outstanding	1,341.15	1,341.15	1,341.15	1,341.15
Per Share Price	\$123.67	\$94.13	\$93.10	\$100.66
<b>Comps Share Price</b>	<b>\$102.89</b>			



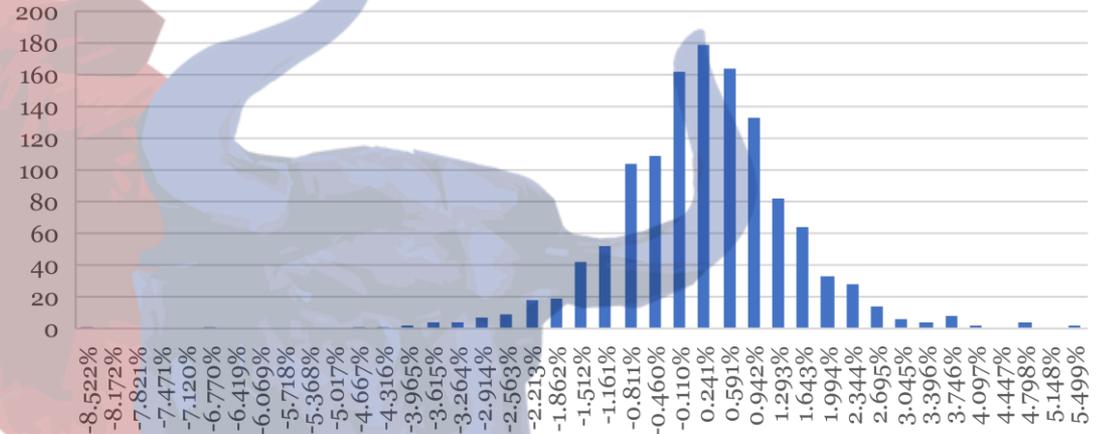
# Valuation Summary Continued



## Sensitivity Tables and VaR

Frequency of Daily Returns 5 Years

99% VaR	-3.26%
97% VaR	-2.21%
95% VaR	-1.86%
Kurtosis	3.6428
Skewness	-0.285



		Implied Share Price				
		Long Term FCF Growth Rate				
		1.5%	1.8%	2.0%	2.3%	2.5%
WACC	8.7%	\$73.98	\$75.71	\$77.56	\$79.56	\$81.71
	7.7%	\$86.56	\$89.05	\$91.77	\$94.73	\$97.98
	6.7%	\$103.94	\$107.77	\$111.99	\$116.70	\$121.97
	5.7%	\$129.59	\$135.93	\$143.13	\$151.37	\$160.91
	4.7%	\$171.26	\$183.18	\$197.33	\$214.37	\$235.30

		Implied Share Price				
		Exit Multiple				
		17.9x	18.9x	19.9x	20.9x	21.9x
WACC	8.7%	\$90.09	\$93.67	\$97.25	\$100.84	\$104.42
	7.7%	\$95.49	\$99.31	\$103.14	\$106.96	\$110.78
	6.7%	\$101.29	\$105.37	\$109.44	\$113.52	\$117.60
	5.7%	\$107.50	\$111.86	\$116.22	\$120.57	\$124.93
	4.7%	\$114.18	\$118.84	\$123.49	\$128.15	\$132.81



Medtronic PLC

Recommendation: Buy

Target Price: \$108.11

## Final Implied Price

Exit Multiple Method	\$109.44
Terminal Growth Method	\$111.99
Company Comparable	\$102.89
<b>Implied Price</b>	<b>\$108.11</b>
Current Share Price	\$90.39
<b>Percent Return</b>	<b>19.60%</b>

Management

# Appendix A



## Discounted Cash Flow Valuation

### Medtronic

Discounted Cash Flow Analysis

(Millions of Dollars)

Calculation of FCFF	Units	Historical					Projected						
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Operating Scenario	1Base												
<b>Revenue</b>		\$17,005	\$20,261	\$28,833	\$29,710	\$29,953	\$31,001	\$32,009	\$32,969	\$33,876	\$34,723	\$35,504	\$36,214
% Growth		2.5%	19.1%	42.3%	3.0%	0.8%	3.5%	3.3%	3.0%	2.8%	2.5%	2.3%	2.0%
Cost of Goods Sold (Excl. D&A)		3,754.0	5,626.0	8,143.0	8,317.0	8,166.0	8,680.4	8,962.5	9,231.4	9,485.2	9,722.4	9,941.1	10,139.9
Gross Profit		13,251.0	14,635.0	20,690.0	21,393.0	21,787.0	22,321.0	23,046.4	23,737.8	24,390.6	25,000.4	25,562.9	26,074.1
% Margin		77.9%	72.2%	71.8%	72.0%	72.7%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%	72.0%
Selling, General & Administrative and Other		7,711.0	8,574.0	11,757.0	11,904.0	12,190.0	14,880.7	15,364.3	15,825.2	16,260.4	16,666.9	17,041.9	17,382.7
<b>EBITDA</b>		5,540	6,061	8,933	9,489	9,597	7,440	7,682	7,913	8,130	8,333	8,521	8,691
% Margin		32.6%	29.9%	31.0%	31.9%	32.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%
Depreciation & Amortization		850.0	1,306.0	2,820.0	2,917.0	2,644.0	2,480.1	2,560.7	2,637.5	2,710.1	2,777.8	2,840.3	2,897.1
<b>EBIT</b>		4,690	4,755	6,113	6,572	6,953	4,960	5,121	5,275	5,420	5,556	5,681	5,794
% Margin		27.6%	23.5%	21.2%	22.1%	23.2%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%
Income Taxes		811.4	1,107.9	1,124.8	828.1	3,163.6	1,041.6	1,075.5	1,107.8	1,138.2	1,166.7	1,192.9	1,216.8
<b>EBIAT</b>		3,879	3,647	4,988	5,744	3,789	3,919	4,046	4,167	4,282	4,389	4,488	4,577
Free Cash Flow Adjustments:													
Plus: Depreciation & Amortization		850.0	1,306.0	2,820.0	2,917.0	2,644.0	2,480.1	2,560.7	2,637.5	2,710.1	2,777.8	2,840.3	2,897.1
Less: Capital Expenditures		(396.0)	(571.0)	(1,046.0)	(1,254.0)	(1,068.0)	(1,085)	(1,120)	(1,154)	(1,186)	(1,215)	(1,243)	(1,267)
Less: Increase in NWC							10,127	(86)	(82)	(77)	(71)	(65)	(392)
<b>Free Cash Flow to Firm</b>							\$17,611.2	\$7,640.7	\$7,876.9	\$8,100.8	\$8,310.7	\$8,505.3	\$8,350.3
Weighted Average Cost of Capital		6.69%											
Discount Period							1.0	2.0	3.0	4.0	5.0	6.0	7.0
Discount Factor							0.94	0.88	0.82	0.77	0.72	0.68	0.64
<b>Present Value of FCFFs</b>							\$16,506.9	\$6,712.5	\$6,486.1	\$6,252.2	\$6,012.0	\$5,767.0	\$5,306.8

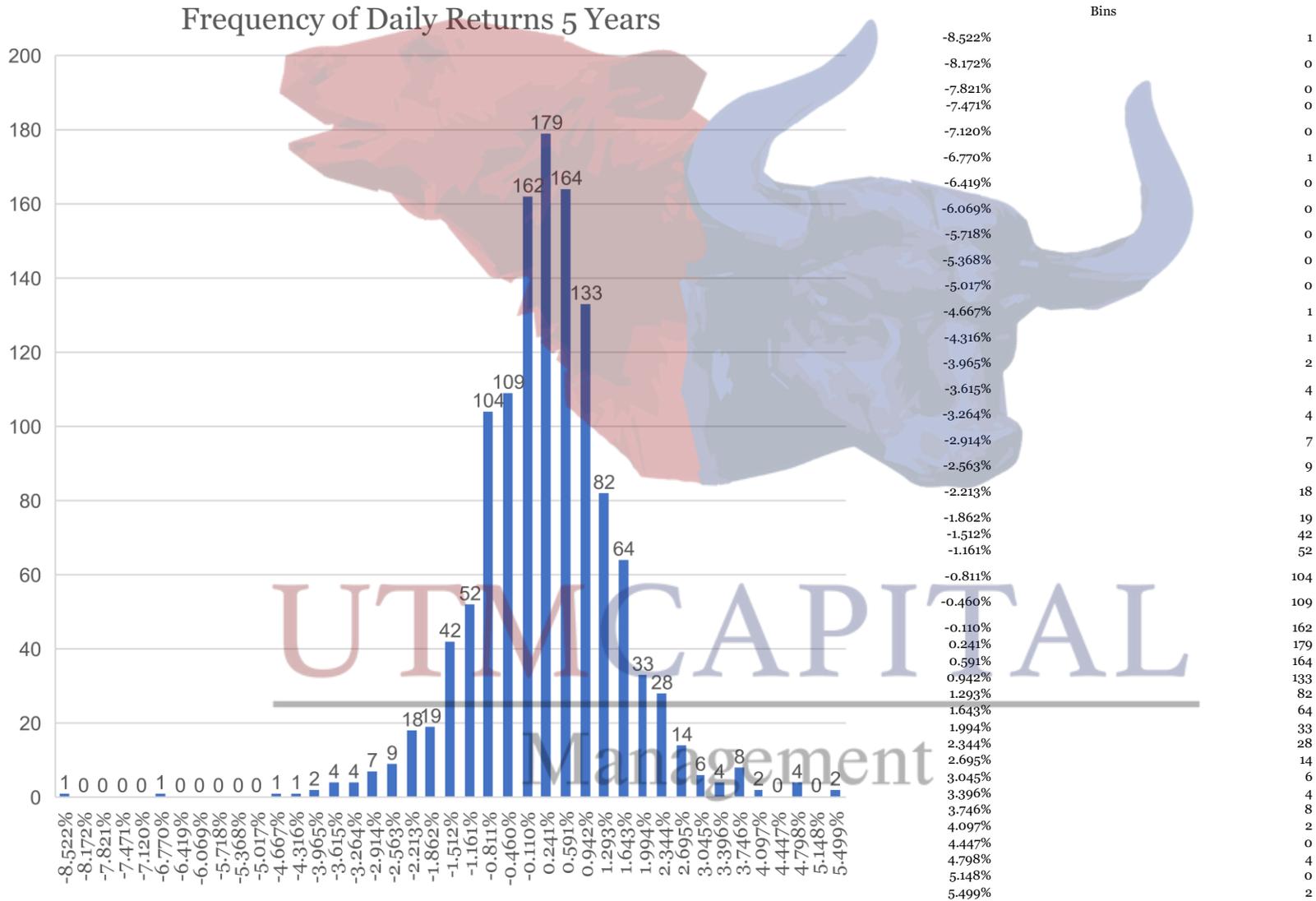
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# Appendix B



## Value at Risk

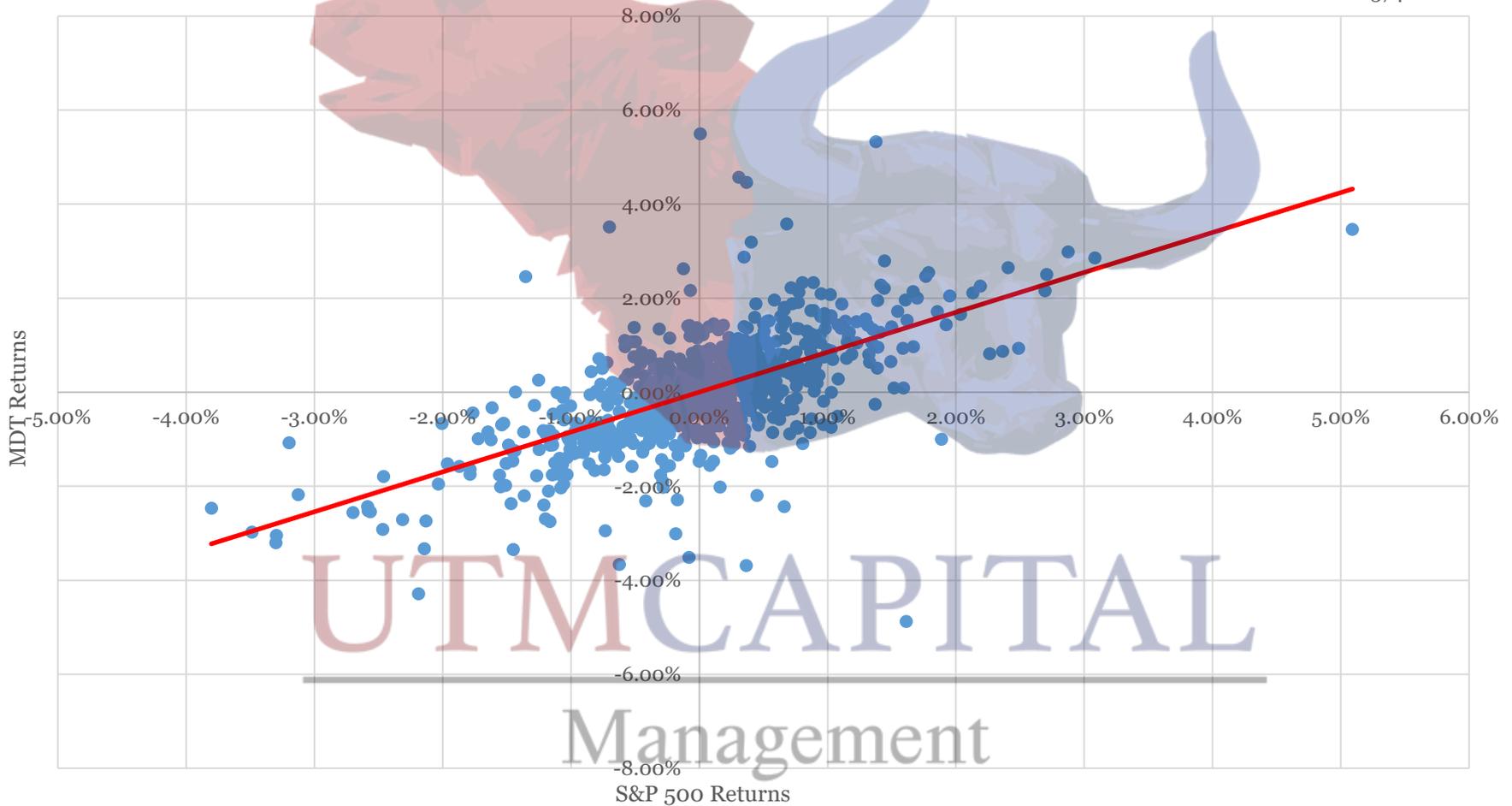
Frequency of Daily Returns 5 Years



## Beta Calculation

### MDT Returns Vs. S&P 500

$$y = 0.8484x + 3E-05$$
$$R^2 = 0.3746$$



## WACC Calculation

3 year Beta Daily	0.848381417
MDT Variance	0.000148254
MDT STD DEV	0.01217595
Market Risk Premium	6.60%
Risk Free Rate	2.60%
<b>Cost of Equity MDT</b>	<b>8.20%</b>
<b>Cost of Debt</b>	<b>2.92%</b>

Weight of Debt	28.65%
Weight Applied to C.O.D.	0.84%
Weight of Equity	71.35%
Weight applied to C.O.E	5.85%
<b>WACC</b>	<b>6.69%</b>

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