A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the NOVA – School of Business and Economics.

PRIVATE EQUITY CHALLENGE FIELD LAB - A LEVERAGED BUYOUT OF BIOTELEMETRY INC.

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A Project carried out in the Master in Finance Program, under the supervision of:

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Abstract

This Investment Committee Paper was elaborated by a group of students from the Master in Finance Program which is intended to be used for academic purposes only. It consists on a proposal for a leveraged buyout on BioTelemetry Inc., the leading US-based company focused on providing remote cardiac monitoring, centralized research services for clinical trials, remote glucose monitoring, and original equipment manufacturing. The group developed a value creation strategy and an operating business model for the proposed investment, which was based on a thorough market and company analysis, as well as on the company's valuation. Subsequently, the group suggested an optimal capital structure for the investment as well as a range of possible exit strategies.

Keywords: BioTelemetry, Clinical Trial Services, Glucose Monitoring, Remote Cardiac Monitoring

Disclaimer: This Work Project was elaborated by students from the Master in Finance Program from Nova School of Business and Economics. As a group, we hereby certify that the submitted work is wholly our own work. This Work Project's content is intended to be used for academic purposes only and we do not accept any responsibility or liability for investment, business, legal, or any other decisions taken based on this Work Project. All data used was retrieved from publicly available sources, such as companies' annual reports, earnings call transcripts, and database websites, as well as from interviews and phone calls conducted with BioTelemetry's former employees and industry experts. All sources and aids used have been indicated as such. All texts either quoted directly or paraphrased have been indicated by intext citations or their sources have been made available in footnotes.

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Personal Reflection

Personal Reflection – João Malheiro (26169)

1	Which hard/soft skills did yc	ou deve	lop through the project?
	Hard Skills		Soft Skills
S	Data Gathering, Structuring and Analysis: Researched and collected data from several reliable databases and websites, analyzing, and displaying data in a understandable way.	<u>م</u> ر))	Communication Skills: Improved my English speaking and writing capabilities.
+÷ ×-	PE industry knowledge: Got in touch with several concepts, content, and real cases related with the PE sector which have helped me deepening my interest in this industry.		Time management Skills: Given the long period of time dedicated to this WP, these skills were essential not to lose focus on the important topics.
	Financial Modeling: Excel financial modelling was key in this WP and it has helped me improve my skills in this field.	(E)	Team Work Skills: Worked in a multi-cultural team with different working methods which contributed to improve my adaptability to different working environments.

2	What would you change in your individual or	team ap	proach if you had to do a similar project?
	Individual Approach		Team Approach
R	Given the vast available time to complete the WP, in some cases I have postponed tasks which I could have completed earlier. This would be something to improve at in a similar project.		Sometimes I felt that the team was overdoing some tasks which did not add that much value. Would have been better to prioritize other tasks.

3	What skills did the Masters' program gave you	so you	could be prepared for this kind of project?
	General		Private Equity Course
S:	Opportunity to meet and discus the WP with well prepared advisors.	ଟ୍ର	Vast and deep knowledge on the PE industry's key concepts and investment approaches.
	Time Management and Interpersonal Skills.	00	Opportunity to develop a similar project to the PE Challenge Field Lab WP, which was helpful given the feedback provided.



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Valuation, Capital Structure & Returns

Valuation Capital Structure Returns Scenario Analysis

Valuation

The valuation of BioTel suggests an EV/EBITDA multiple of 12.7x resulting in an Enterprise Value of approximately \$1,292mn considering the company's 2019 EBITDA of \$102mn

Valuatio	n Summary	Min – Max	Valuation Method Analysis ¹
M Intrinsic Valuation DCF	in. EV Median Max. EV 1.0bn 1.4bn	9.8x – 14.2x	 Considering implied and relative valuation methods, including precedent transactions as well as current and historical trading comparables, BioTel can be valued at an EV/EBITDA multiple of 12.7x (i.e. the median of all valuation methods). Considering BioTel's 2019B EBITDA, the company can be acquired at an Enterprise Value of \$1,292mn.
Extrinsic Valuation Precedent Transactions (EV/EBITDA) Trading Comparables EV/EBITDA LTM	12.9x 0.3bn 2.4bn 1.1bn 1.3bn	3.2x – 24.0x 10.8x – 13.2x	 By testing the sensitivity of WACC and TV growth, DCF recommends an EV/EBITDA-range of 9.8x to 14.2x and a median EV/EBITDA multiple of 11.6x. Adjusting for CAPEX, the EV/(EBITDA-CAPEX) multiple increases to 19.2x. Due to the conventionality of high CAPEX requirements in the industry, this effect is neglected. Accounting for a risk adjustment of 1.5% due to the reimbursement risk and the high growth of the company during the holding period, considered WACC is 9.7%.
Trading Comparables EV/EBITDA LTM (10Y Average) Trading Comparables EV/EBITDA Through The Cycle (TTC)	1.6bn 2.2bn 1.6bn 3.2bn	15.6x – 21.8x 6.6x –31.1x	 Precedent transactions recommend an EV/EBITDA multiple of 12.9x. Transactions occurred in the Medical Equipment and Diagnostic Services between the years 2010 to 2013. Most targets were headquartered in the US, with one exception (Australia), where only the bidder is from the US. High-multiple acquisitions were characterized by strong revenue growth, similar to BioTel.
Regression Analysis (EV/EBITDA vs. 5Y Revenue CAGR)	12.5x 1.1bn 1.3bn	10.9x – 13.0x	 Trading comparables recommend an EV/EBITDA multiple between 12.4x and 18.5x. Trading comparables analyzed are listed US-based Medical Equipment manufacturers and Diagnostic Services providers. Comparables' 2018 EBITDA margins range from 17-22%, while BioTel achieved 23%. TTC EV/EBITDA LTM analysis was performed using the trading comparables previously
\$102mn 2019B EBITDA	12.7x Median EV/EBITDA	\$1,292mn Enterprise Value	 TTC EV/EBITDA LTM analysis was performed using the trading comparables previously identified. The cycle term was set as 10 years. Regression of EV/EBITDA over 5-Year Revenue CAGR was computed over the trading comparable sample.

Notes: ¹See Appendix 28-32. Sources: MergerMarket; Bloomberg; CapitalIQ

January 2020 Investment Thesis | Industry Overview | Company Overview | Value Creation Strategy | Operating Model | Valuation, Capital Structure & Returns | Exit & Due Diligence

BioTelemetry

Capital Structure - Overview

The acquisition will be levered with 6.0x Total Debt, whereof 5.0x are Senior Bank Debt and 1.0x BioTelemetry will be raised as PIK Loan

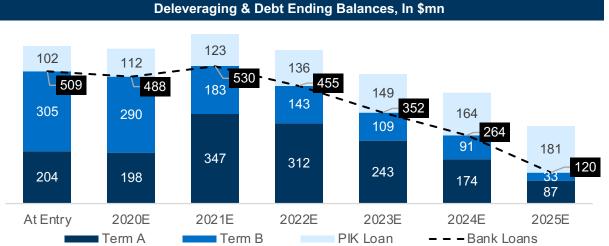
Sourc	es of Fu	nds		Us	es of Fund	S		Debt Source	Maturity and Spreads ¹	Repayment Schedule
Senior Debt Term Loan A	\$mn 508.8 203.5	37.4% 14.6%	EBITDAx 5.0x 2.0x	EBITDA in 2019B EV/EBITDA	\$mn 101.8	%	EBITDAx 12.7x	Term Loan A (2.0x EBITDA) ²	 Senior and secured. Tenor: 7 years. 400bps + 5Y Libor Swap Rate. 	 Increasing mandatory annual repayments. Additional leverage in 2021 to initial 2.0x EBITDA level for SHL acquisition and additional debt repayments.
Term Loan B Subordinated Debt PIK Loan Total Debt	305.3 101.8 101.8 610.5	21.9% 7.3% 7.3% 43.7%	3.0x 1.0x 1.0x 6.0x	Total Equity Debt Repayment Equity + Debt	1,163.5 213.4 1,376.9	83.3% 15.3% 98.6%	2.1x	Term Loan B (3.0x EBITDA) ²	 Senior and secured. Tenor: 8 years. 450bps + 5Y Libor Swap Rate. 	 No mandatory annual repayments. Optional repayment if CODR³ > 0. Bullet repayment of outstanding debt in year 8.
FRI Ordinary Equity Institutional Equity MEP	563.4 104.5 83.6 20.9	40.3% 7.5%	5.5x 1.0x 0.8x 0.2x	Transaction Fees Financing Fees	11.6 7.8	0.8% 0.6%	0.1x 0.1x	PIK Loan (1.0x EBITDA)	 Subordinated. Tenor: 10 years. 850bps + 5Y Libor Swap Rate. 	 Non-cash interest payments and no-call protection covenants. Bullet repayment of principal and total accrued interests in year 10.
Total Equity Cash on Hand Total Sources	667.8 117.9 1,396.3	47.8% 8.4% 100%	6.6x 1.2x 13.7x	Total Fees	19.4 1,396.3	1.4%	0.2x	RCF (\$30mn)	 200bps + 5Y Libor Swap Rate. 25bps flat commitment fee. 	 The RCF is not expected to be drawn down during the investment period. Annual payment of commitment fee.
		Uses o	f Funds B	reakdown, In \$mn				Equity Source	Eq	uity Description
6	68	118	(8) (12)	(212)	1	1 164	Fixed Return Instrument (5.5x EBITDA)	 Tenor of 10 years and accrued FRI corresponds to 84.4% of accrued interest portion. 	interest rate of 10%. Total Equity, with only 10% tax-deductible
611					(213)			Institutional Ordinary Equity (0.8x EBITDA)	PE investment in Ordinary Equity	y will grant 80% of total shares .
Total Total Debt	Equity C	ash on H	Financ	sing Fees [Transaction Fe	Debt Repay		el Equity	Management Equity Program (0.2x EBITDA)	remaining 20% of total shares.	
									BioTel can afford ~\$34mn of Cash Interest c ments; 4See Appendix 34. Sources: Invesco C	or ~518mn Senior Secured Debt considering its \$102mn Call; Team Assessment

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Capital Structure – Deleveraging & Credit Statistics

Forecasted debt deleveraging and repayment schedule allow BioTel to respect the proposed financial covenants during the investment period

BioTelemetry



Debt Re	epayment	& Releveraç	jing Sched	ule, In \$mn			
In \$mn	2020E	2021E	2022E	2023E	2024E	2025E	
Term A							
(Mandatory Repayments) / Releveraging	(5.1)	148.7 ¹	(34.7)	(69.4)	(69.4)	(86.8)	
Interest Expense	(11.1)	(15.1)	(18.3)	(15.4)	(11.5)	(7.2)	
Term B							
Optional Repayments	(15.5)	(106.5)	(40.3)	(33.6)	(18.5)	(57.6)	
Interest Expense	(18.0)	(14.3)	(9.9)	(7.6)	(6.0)	(3.8)	
PIK Loan							I
Accrued Interests	10.2	11.2	12.4	13.6	15.0	16.5	
Total Debt Repayments	(20.6)	42.2	(75.0)	(103.0)	(87.9)	(144.4)	
Total Cash Interest Expense	(29.1)	(29.4)	(28.1)	(23.0)	(17.6)	(10.9)	
¹ Releveraging of Term A Loan to will be used to finance the acquisit Notes: The Revolver Credit Facilit	ion of SHL i	n 2021 and to	repay more	expensive det	ot, such as Te		

	2020E	2021E	2022E	2023E	2024E	2025E
Leverage Cover	4.7x	3.9x	3.2x	2.8x	2.2x	1.4x
Proposed (20% Headroom)	5.6x	4.7x	3.8x	3.3x	2.5x	1.6x
CAPEX Adjusted Leverage Cover	9.0x	6.1x	4.6x	4.0x	3.0x	1.8x
Proposed (20% Headroom)	12.0x	8.0x	6.1x	5.3x	4.1x	2.6x
Interest Cover	4.6x	6.0x	7.0x	8.4x	12.1x	21.1x
Proposed (20% Headroom)	3.7x	4.8x	5.6x	6.7x	9.7x	16.9x
CAPEX Adjusted Interest Cover	2.3x	3.6x	4.6x	5.5x	8.1x	14.9x
Proposed (20% Headroom)	1.8x	2.9x	3.7x	4.4x	6.5x	11.9x
Cash Cover	1.5x	3.2x	1.7x	1.3x	1.2x	1.5x
Proposed (Invariably)	1.0x	1.0x	1.0x	1.0x	1.0x	1.0x

Credit Statistics

• Leverage Cover ratio is given by Net Debt over EBITDA.

• CAPEX Adjusted Leverage Coverage ratio is given by Net Debt over EBITDA net of CAPEX (excluding SHL Telemedicine acquisition).

- High cash generation business model, which allows for optional debt repayments, leads to a decrease in the leverage cover ratio overtime.
- Interest Cover ratio is given by EBITDA over Total Cash Interest Expenses.
- CAPEX Adjusted Leverage Coverage ratio is given by EBITDA net of CAPEX (excluding SHL Acquisition) over Total Cash Interest Expenses.
- Debt repayment and strong EBITDA growth lead to ratio improvement.
- **Cash Cover** ratio is given by Unlevered FCF over Total Debt Service (Total Interest Expenses and Total Mandatory Repayments).
- Cash Cover ratio forecast shows that BioTel has a **strong cash** generation to meet its financial obligations during the investment period.

• Increase in 2021's ratio is due to the re-leveraging of Term Loan A.

Sources: Invesco Call; Team Assessment

Leverage Cover

Interest Cover

Cash Cover

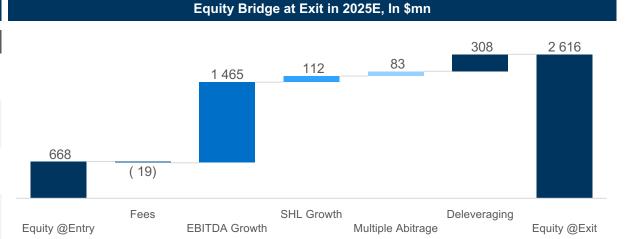
Returns – Breakdown – Returns to PE and MEP & Equity Bridge at Exit

After an exit in 2025, the PE is expected to return MOIC 3.5x and IRR 23.5%, while the investors in BioTelemetry the MEP are looking at returns of MOIC 15.5x and IRR 57.9%

	Returns to P	E and ME	P, In \$mn			
	2020E	2021E	2022E	2023E	2024E	2025E
Initial PE Investment	647.0	647.0	647.0	647.0	647.0	647.0
Proceeds to PE	991.8	1,374.5	1,650.2	1,703.8	1,979.6	2,292.8
MOIC	1.5x	2.1x	2.6x	2.6x	3.1x	3.5x
IRR	53.3%	45.8%	36.6%	27.4%	25.1%	23.5%
Initial MEP Investment	20.9	20.9	20.9	20.9	20.9	20.9
Proceeds to MEP Investors	93.0	173.2	225.1	219.7	268.1	323.7
MOIC	4.5x	8.3x	10.8x	10.5x	12.8x	15.5x
IRR	345.3%	187.9%	120.9%	80.1%	66.6%	57.9%

- After an exit in 2025, the Institutional Investors, i.e. the PE fund, are expected to return \$2,292.8mn representing a money multiple of 3.5x and an IRR of 23.5%.
- Investors in the MEP, i.e. the management as well as the sales force, are expected to return \$323.7mn representing a money multiple of 15.5x and an IRR of 57.9%.
- These high returns are justified by higher volatility and provide an incentive for the investors to work towards the same targets.

				Sensitivity	/ Analysis					
IF	R	2024E	2025E	2026E	МС	DIC	2024E	2025E	2026E	
	11.7x	26.7%	24.9%	23.3%		11.7x	3.3x	3.8x	4.3x	
Exit	12.2x	25.8%	24.2%	22.6%	Exit ple	12.2x	3.2x	3.7x	4.2x	
Entry/ Exit Multiple	12.7x	25.1%	23.5%	22.0%	ry/ I ultip	12.7x	3.1x	3.5x	4.0x	
Ent	13.2x	24.4%	22.9%	21.4%	Entry/ Multij	13.2x	3.0x	3.4x	3.9x	
	13.7x	23.8%	22.4%	20.9%		13.7x	2.9x	3.4x	3.8x	



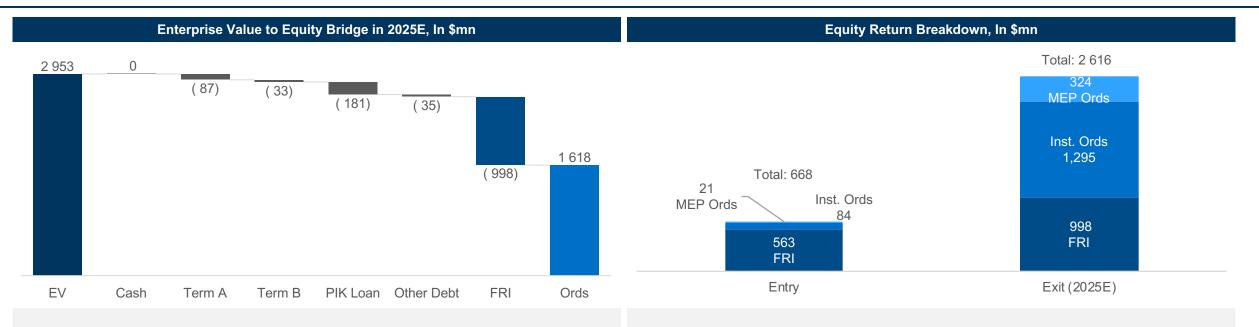
Over the projected 6-year investment period, the equity value is expected to increase by 3.9x, from \$668mn in 2020 to \$2,616mn in 2025; the equity value creation throughout the investment period arises from EBITDA growth – both from BioTel and the acquired SHL Telemedicine –, multiple arbitrage and deleveraging.

- EBITDA growth for BioTel, which is the major contributor to the strong equity value with an impact of \$1,465mn, is driven by the significant growth in revenue as well as an improvement of the company's EBITDA margin.
- EBITDA growth for SHL Telemedicine had an impact of \$112mn, which equals its EBITDA in 2025 considering that the company was acquired during the investment period, and hence did not contribute in the beginning.
- **Multiple arbitrage had an impact of \$83mn**, due to the difference of the SHL Telemedicine acquisition multiple of 7.3x to the consolidation multiple of 12.7x.
- In total, the acquisition of SHL Telemedicine had an impact of \$195mn.
- Deleveraging during the investment period had an impact of \$308mn.

Sources: Team Assessment

Returns – Breakdown – Enterprise Value to Equity Bridge & Breakdown at Entry and Exit

Vast deleveraging during the investment period leaves much of the generated EV on the table for BioTelemetry institutional investors and MEP participants



- Based on forecasted financials and returns, the exit is projected to occur in 2025. This results in an investment period of 6 years.
- Based on the forecasted EBITDA of \$232mn and an EBITDA multiple of 12.7x, which equals the entry multiple, an expected **Enterprise Value of \$2,953mn** can be generated in the sale of the target company.
- Due to the full use of available cash for optional repayment of debt during the investment period, there is **no expected cash at hand**.
- The debt of \$87mn for Term A, \$33mn for Term B, \$181mn for the PIK Loan and \$35mn for Other Debt-like Items amounts to **\$336mn of total outstanding debt that will be repaid at exit**.
- After the repayment of **\$998mn for the Fixed-Return Instrument**, the remaining part of **\$1,618mn will fall to the shareholders of the company**.

- BioTel's shareholder, i.e. institutional investors as well as the company's management and sales force through the Management Equity Program, will generate significant returns at exit.
- Post-acquisition in 2019, total equity amounts to \$668mn, whereas at the projected exit, in 2025, total equity is expected to grow to \$2,616mn.
- The Fixed-Return Instrument, senior to the shareholder's ordinary shares, was initially installed at acquisition with \$563mn; at exit, the FRI is expected to amount to \$998mn.
- Institutional Ords are expected to grow from \$84mn (i.e. their value considering their share of financing and transaction fees) to \$1,295mn at exit, hence accounting for the largest part of the company's equity.
- MEP Ords are expected to grow from \$21mn (i.e. their value considering their share of financing and transaction fees) to \$324mn at exit.

Sources: Team Assessment

Scenario Analysis

Case

Upside

Case

Case

Downside

BioTel's scenarios assume EBITDA growth driven by a strong market, organic revenue growth measures as well as improvements in cost of revenue and other expenses

Absolute Growth Scenario Description EBITDA Bridge, In \$mn EBITDA **Revenue Growth Cost Improvements** 29.9% Revenue • The Upside Case anticipates a very strong organic growth, Margin +164% driven by strong growth in BioTel Heart and the successful 375 45 market placement of the glucose monitor. Furthermore, it is 61 22 assumed, that reimbursement rates do not decrease for all 145 **Gross Profit** 21.4% products, besides Extended Holter. +185% · Furthermore, cost savings from higher scaling effects are 102 CAGR reflected in cost of revenue and other expenses. 24.3% · Overall, the EBITDA grows at a CAGR of 24.3% to \$375m or **EBITDA** EBITDA 2019 SHL Cost of Revenue Other Expenses EBITDA 2025 29.9% of revenue. +269% Organic Revenue • Strong growth in revenue, as well as cost saving measures, +97% result in a combined CAGR of 14.8%. Over 85% of revenue driven EBITDA growth results from organic 24.9% measures, such as the increasing sales force and the related **Gross Profit** 232 19 increase in patients. 21.4% 16 82 +101% Due to scaling effects and cost-saving measures, significant 102 CAGR improvements in the cost of revenue and other expenses can be 14.8% **EBITDA** realized. • In 2025, EBITDA is expected to improve to 24.9% of revenue. +128% EBITDA 2019 Organic SHL Cost of Revenue Other Expenses EBITDA 2025 Revenue • In the Downside Case an increase in sales is still assumed, +38% driven by the promising market expectations and BioTel's historical performance. **Gross Profit** · Due to non-successful cost measures, the cost of revenue is 16.5% 21.4% assumed to increase significantly, resulting in a decrease in +29% 33 5 108 102 EBITDA margin to 16.5% in 2025. (27)(5) CAGR · Overall, EBITDA is assumed to increase at a modest CAGR of **EBITDA** 1.0%. EBITDA 2019 SHL Cost of Revenue Other Expenses **FBITDA 2025** +6% Organic

Sources: Team Assessment

BioTelemetry



BioTelemetry

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Exit & Due Diligence

Equity Story Exit Strategies & Recommendation Due Diligence

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BioTel is an attractive, diversified business, which is well positioned to create value under new ownership and beyond

BioTelemetry

BioTel – The #1 Telemedical Company

BioTel is an attractive, diversified business with three pillars: **Remote Cardiac Monitoring, Clinical Trial Services and Health Population Management**. Across all its activities, BioTel has developed into the leading telemedical company, leveraging software and technology for the remote diagnosis and treatment of patients with cardiovascular health issues as well as chronic diseases, such as diabetes, hypertension and sleep apnea.

The company's clear value proposition lies within its offer of **making health care accessible to anyone, anywhere** while improving the quality, but reducing the cost for all – patients, physicians, and public or private health care systems.

Key Reasons For the Deal	Rationale	Validation
Financial Success BioTel's revenue and EBITDA growth are skyrocketing	 BioTel, while of considerable size, has experienced enormous growth over the investment period with an attractive revenue CAGR of 11.9%, hereby outgrowing its major market for Remote Cardiac Monitoring services. High EBITDA margins, paired with steady overhead, efficient use of NWC and CAPEX, also provide for BioTel's stable Cash Flow, making the company highly leverageable. 	EBITDA Revenue 717 782 822 875 935 475 581 176 197 194 214 232 102 135 176 197 194 214 232 2019B 2020E 2021E 2022E 2023E 2024E 2025E
Market Leadership D BioTel is #1 in RCM, with all set to stay at the top	 RCM services are the major contributor to the vast revenue growth driven by BioTel's market-leading position; an increased sales push over the investment period has led to an expansion of BioTel's market share in the US. This strong market position in the US favors the geographical expansion to EMEA, which has already started with the acquisitions of ADEA Medical and SHL Telemedicine. 	US Market Share in 2019B US Market Share in 2025E 64% 16% 16% 16% 16% 16% 16% 16% 14% 14% 17% Trad. Holter Ext. Holter Event
Value Creation Potential	 More than 2/3 of the revenue generated in 2025 stem from the provision of software or high-tech solutions, which is the result of the company's strategic development towards the leading provider of remote health care services, leveraging software and technology, across different therapeutic areas¹. This focus on high-value adding services in fast-growing markets ensures a vast potential for further value creation. 	301 9 935 531 94 Software Tech Service Other Total 2025E
Notes: 1Software includes the Geneva Software Platform, Tech includes the MCOT Sources: Team Assessment	and Extended Holter Solutions as well as BioTel Care, Service includes Event and Tra	aditional Holter Solutions, as well as ADEA Medical, SHL and BioTel Research.

Exit – Strategies & Recommendation

BioTel is well positioned for sale to strategic buyers or to go public in an IPO, particularly driven by BioTelemetry its strong value proposition

	Exit Decision Factors & Recommendation	
Exit Decision Factors	Recommendation	
 Transaction Deal Size (Expected EV of ~\$2,952mn). Business Model, Synergies and Future Value Creation. 	 At this stage, the recommendation is to assess a strategic sale o This is particularly driven by the large transaction deal size and t well towards strategic buyers looking for self-sustaining businesse 	the strong value proposition of BioTel, which positions the company
Secondary Buyout	Strategic Sale	IPO
Secondary buyouts were the most common exit strategy in Healthcare and MedTech deals in 2018 , accounting for approximately 47% and 40%, respectively ¹ .	Sales to strategic corporate buyers were the 2nd most common exit strategy in Healthcare deals in 2018 , accounting for roughly 40% of all exits ¹ .	IPOs were the least common exit strategy in 2018, mainly because their value fell 34% globally as market uncertainty and higher volatility curtailed activity ¹ .
 Advantages: This strategy enables the PE firm to perform a fast and complete exit; additionally, unlike in an IPO process, the PE firm has full control over the timing of the process. Disadvantages: Selling to financial buyers typically generates a lower premium than other exit strategies. 	 Advantages: The advantages of a strategic sale are similar to a secondary buyout, with the exception that realized synergies increase the willingness to pay a higher acquisition premium. Disadvantages: Due to anti-trust regulation, the completion of the deal is sometimes withdrawn or even cancelled². 	 Advantages: At favorable market conditions, the advantage of an IPO is the potential premium that can be realized. Disadvantages: IPOs are characterized by higher uncertainty, greater regulatory burden, transaction costs as well as the cash-out restriction.
BioTel is considered to be an attractive target for secondary buyout due to its enormous potential for future value creation, strong market-leading position and stable free cash flow generation. Given the large size of BioTel, large PE firms, such as the Blackstone Group and KKR are considered to be potential acquirers due to their ability to raise the required funds for this transaction expected to be valued at \$2,952mn.	Potential strategic buyers include all healthcare conglomerates, such as the Boston Scientific Corporation, Abbott Laboratories or Medtronic, considering the vast potential for synergies and the technologically advanced product offering of BioTel . Out of all healthcare conglomerates, two have been identified as high-potential acquirers: Medtronic and Boston Scientific; both are operating in the cardiac health space and showed interest in growing their operations with large recent acquisitions .	Given that all large US healthcare conglomerates, including United Health Group, Medtronic and Abbott Laboratories, are listed at the New York Stock Exchange, an IPO at the NYSE should position the company to the right investors . However, looking at recent IPOs of healthcare companies in the US, there are two that are comparable: Castlight and Livongo Corp; while the first one was carried out on the NYSE, the larger valuation was achieved on NASDAQ .
Platinum Equity Fund Size: \$6,500mn Lifescan \$2,100mn	Medtronic CardinalHealth CardinalHealth Deal size: \$5,700mn, 2016	Costlight NYSE Valuation: \$1,400mn
KKR Fund Size: \$14,000mn PharMerica \$1,300mn	Boston ScientificImage: Science of the sectorAcquisition of BTG plc Deal size: \$3,968mn, 2019	Livongo [®] NASDAQ Valuation: \$4,400mn
Sources: ¹ Bain, Global Healthcare Private Equity and Corporate M&A Report (2019); ² Private Equity Exit Strategies – IPOs, Trade Sales and Secondary Buyouts (2018)	

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Due Diligence

Key DD areas that require further analysis are the evolution of reimbursement rates and technological risks arising from the expiration of intellectual property

BioTelemetry

	Area	Key Points	Red Flags
	Reimbursement	 Further analysis on the reimbursement rates evolution in the RCM market. Evaluate the political risk on the Medicare services' coverage and reimbursement. In-depth analysis of premium paid by commercial insurances over Medicare rates. 	 No clear reimbursement rates forecast. Uncertainty when the transfer of the Extended Holter temporary CPT code to a permanent one will occur.
Commercia	Competition	 Evaluate the risk of substitution arising from possible better and more precise cardiac monitoring devices and technology. In-depth analysis of entry barriers for large healthcare conglomerates. 	 Different emerging startups identified with promising technology. Unclear market players due to high fragmentation.
U	Market Size	 Evaluate assumptions for the number of accounts and the number of patients per account. Further analysis of the different Cardiac Monitoring market segments' growth rates. 	 No clear data on the total number of accounts in the Remote Cardiac Monitoring market. Unclear market growth rates per market segment.
ancial	Performance	 In-depth analysis of the current performance of the different monitoring devices. Analysis of recent BioTel's asset write-downs and increase in DSO ratio. Further analysis on BioTel's organic vs. inorganic growth drivers. 	 No clear breakdowns of revenue contribution per device nor market shares for each device. Unclear asset write-down of \$12mn in 2018.
Operational & Financial	SHL Telemedicine Acquisition	 In-depth analysis of SHL's assets and liabilities consolidation. Further evaluate cost-saving opportunities and operational improvements. Evaluate impacts on SHL's customer relationships arising from the acquisition. 	 Uncertainty on monitoring centers consolidation due to language barriers and different cultures. Possible negative impact on SHL's brand value.
	Valuation	 Further evaluate the different valuation approaches' assumptions. Analysis of possible multiple arbitrage opportunities, mainly related to SHL acquisition and exit strategy. 	 No direct trading comparable companies identified. Risk of having a misleading company valuation. Multiple arbitrage in acquisition of SHL was assumed.
Legal	Intellectual Property	 In-depth analysis of risks and threats arising from patents expiration, mainly in revenue generation and market share. Evaluate current BioTel's legal settlements related to patents violations. 	 Risk of competitors copying BioTel's key technology. Risk of further high legal costs and negative impact on BioTel's brand value.
Le	European Regulation	 In-depth analysis of European regulation related issues with SHL acquisition. Further analyze the possibility of using BioTel's cardiac devices in the European market. 	• Risk of long-lasting regulation settlements that make the European expansion impossible.





Appendix



Appendix 1 – Precedent Transaction Sample

Sample for precedent transactions consists of four target companies with a median EBITDA margin BioTelemetry of 18.1% and an effective EV/EBITA multiple of 12.9x

Target	Target Description	Acquirer	Closing Date	EV, In \$mn	Revenue, In \$mn	EBITDA, In \$mn	EBITDA Margin	EV/Revenue	EV/EBITDA
BioClinica, Inc.	US-based provider of scientific-enabled Medical Imaging, eHealth, and patient- centric solutions supporting clinical research	JLL Partners	13/03/2013	105	98	12	12.0%	1.1x	8.9x
Axis-Shield plc	UK based Anglo-Norwegian developer, manufacturer, marketer and seller of diagnostic tests for diagnostic and monitoring of human disease	Alere, Inc.	21/10/2011	401	159	23	14.2%	2.4x	16.9x
Somanetics Corp.	US-based medical device manufacturer	Covidien plc	28/07/2010	264	50	11	22.0%	5.3x	24.0x
HealthTronics, Inc.	US-based manufacturer of medical devices and provides repair services, with additional interest in clinical laboratory services	Endo International plc	15/07/2010	261	185	82	44.4%	1.4x	3.2x
Mean Median							23.1% 18.1%	2.5x 1.9x	13.3x 12.9x
High Low							44.4% 12.0%	5.3x 1.1x	24.0x 3.2x

Sources: Merger Market

January 2020

Direct trading comparables identified are Medical Equipment manufacturers and Diagnostic Services providers with similarities to BioTel's business model and financials

BioTelemetry

Trading Comparable	Sector	Business Model Overview	Revenue, EBITDA & EV/EBITDA Multiples
Merit Medical System	Medical Equipment Manufacturer	 Leading manufacturer and marketer of disposable medical devices used in interventional, diagnostic and therapeutic procedures, particularly in cardiology, radiology, oncology, critical care, and endoscopy. Sells to hospitals and other healthcare providers that receive reimbursement for the services provided to patients from third-party payers, such as Government programs. 	In \$mn 1400 1215 883
integer Holdings	Medical Equipment Manufacturer	 Integer Holdings is one of the largest medical device outsource manufacturers in the world serving the cardiac, neuromodulation, vascular and portable medical markets. Medical customers include large multi-national medical device OEMs and their subsidiaries. 	399 263 268 531 90 148 263 268 92 BioTelemetry Merit Medical Integer Holdings ICU Medical Natus Medical Systems Natus Medical
ICU Medical	Medical Equipment Manufacturer	 ICU Medical develops, manufactures and sells innovative medical products used in infusion therapy and critical care applications. Primary customers are acute care hospitals, wholesalers, ambulatory clinics and alternate site facilities The ability of customers to obtain appropriate reimbursement for healthcare services and products from third-party payors is critical. 	EV/EBITDA LTM Medical Equipment Manufacturer Diagnostic Equipment &Services Image: 12.0x Image: 12.0x Image: 12.0x Image: 12.0x
natus. Natus Medical	Diagnostic Equipment & Services	 Leading provider of neurology, newborn care, and hearing and balance assessment healthcare products and services used for the screening, diagnosis, detection, treatment, monitoring and tracking of common medical ailments in newborn care, hearing impairment, neurological dysfunction and neurosurgical treatments, epilepsy, sleep disorders, neuromuscular diseases, and balance and mobility disorders. 	13.2x 11.9x 10.8x 12.9x Merit Medical Systems Integer Holdings ICU Medical Natus Medical

Sources: Bloomberg; Trading Comparable Companies Annual Reports

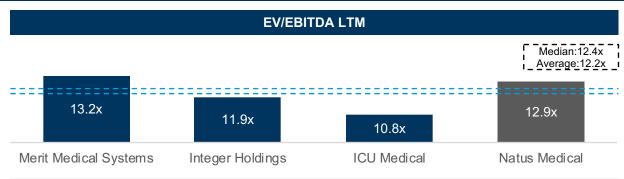
Appendix 3 – Extrinsic Valuation Overview

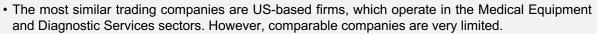
BioTelemetry Comparable trading companies operate in the Medical Equipment and Diagnostic Services sectors and TTC analysis indicates a median EV/EBITDA multiple of 13.6x

Trading Comparable

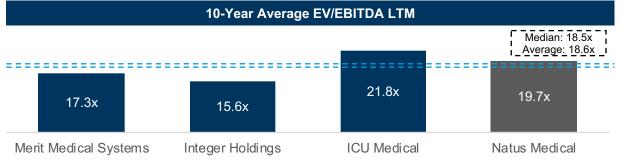
2009

2010





- · EV/EBITDA LTM multiples were retrieved for these companies and median and average multiples were computed.
- This valuation approach implies an EV/EBITDA multiple range of 10.8x-13.2x, with a median multiple of **12.4x**, which leads to an EV range of **\$1.1-\$1.3bn**.

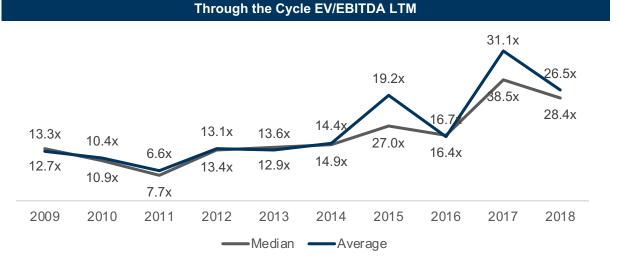




trading companies previously identified.

Median and average values for the respective average multiples were determined.

• This valuation approach implies an EV/EBITDA multiple range of 15.6x-21.8x, with a median multiple of 18.5x, which leads to an EV range of \$1.6-\$2.2bn, considering BioTel's 2019 EBITDA of \$102mn.



2012

2014

2013

2015

2017

2016

2018

Natus Medical	-										
	Average	12.7x	10.9x	7.7x	13.4x	12.9x	14.9x	27.0x	16.4x	38.5x	28.4x
	Median	13.3x	10.4x	6.6x	13.1x	13.6x	14.4x	19.2x	16.7x	31.1x	26.5x
19.7x	Natus Medical	16.7x	14.1x	n.a.	19.4x	14.5x	19.3x	21.8x	14.4x	34.3x	n.a.
	ICU Medical	7.7x	6.2x	5.6x	8.2x	9.3x	15.9x	16.6x	19.2x	78.7x	44.9x
Average: 18.6x	Integer Holdings Corp	14.4x	6.6x	6.6x	10.4x	12.7x	11.8x	56.0x	13.0x	13.2x	13.8x
Median: 18.5x	Merit Medical Systems	12.1x	16.6x	11.1x	15.7x	15.2x	12.8x	13.7x	18.9x	27.9x	26.5x

2011

• EV/EBITDA LTM Through the Cycle analysis was performed using the trading companies previously identified.

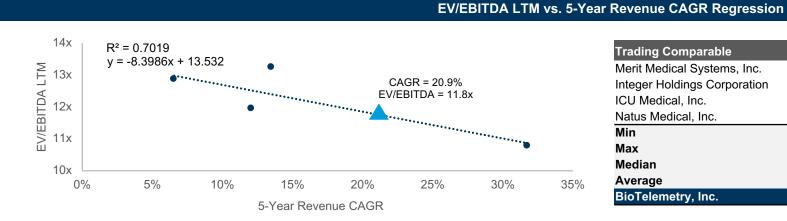
• EV/EBITDA LTM multiples for the period 2015-2019E were used and their median and average values were computed.

• This valuation approach implies an EV/EBITDA multiple range of 6.6x-31.1x, with a median multiple of 13.6x, which leads to an EV range of \$0.7-\$3.2bn.

Sources: Bloomberg

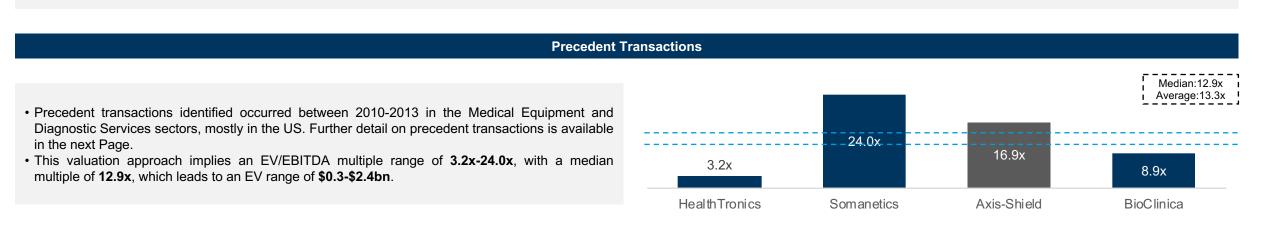
Appendix 4 – Extrinsic Valuation Overview

Precedents transactions valuation include a sample with transactions in the period 2010 to 2013 and recommend a median EV/EBITDA multiple of 16.9x



Trading Comparable	5-Year Revenue CAGR	EV/EBITDA LTM
Merit Medical Systems, Inc.	13.5%	13.2x
Integer Holdings Corporation	12.1%	11.9x
ICU Medical, Inc.	31.8%	10.8x
Natus Medical, Inc.	6.6%	12.9x
Min	6.6%	10.8x
Max	31.8%	13.2x
Median	12.8%	12.4x
Average	16.0%	12.2x
BioTelemetry, Inc.	20.9%	11.8x
	20.3/0	11.07

- Regression analysis was done having the revenue CAGR for the past 5 years (2015-2019) as the independent variable and EV/EBITDA LTM multiple as the dependent variable.
- The sample used was the trading comparable companies previously identified.
- Revenue CAGR for the past 5 years were retrieved and the regression line was computed.
- This valuation approach implies an EV/EBITDA multiple range of **10.8x-13.2x**, with a median multiple of **12.5x**, which leads to an EV range of **\$1.1-\$1.3bn**.



BioTelemetry

Based on a risk-adjusted WACC of 9.7% the DCF valuation suggests an Enterprise Value of \$1,184mn or 11.6x LTM EBITDA

In \$mn 12 Months Ending	Pro Forma Dec-19	E Dec-20	E Dec-21	E Dec-22	E Dec-23	E Dec-24	E Dec-25	E Dec-26	E Dec-27	E Dec-28	TV	CAGR 2019-2025	
EBITDA	101.8	135.3	164.0	183.3	178.4	196.1	213.4	226.2	239.9	250.9		13.1%	D
(-) Statutory Tax Expense	10.5	16.5	24.5	25.2	23.4	27.1	30.6	33.0	35.2	36.9		19.6%	•
Operating Cash Flow	91.3	118.8	139.6	158.1	155.0	169.0	182.8	193.2	204.7	214.0		12.3%	;
(-) Δ in Net Working Capital	1.5	9.8	(3.4)	8.8	(10.9)	15.0	(9.6)	13.8	(9.2)	13.2		n.a.	(
(-) CAPEX	40.0	68.9	68.6	64.1	61.8	65.6	64.2	78.8	83.6	86.9		8.2%	1
Investing Cash Flow	41.5	78.8	65.2	72.8	50.9	80.6	54.6	(92.6)	(74.5)	(100.1)		4.7%	(
Unlevered Free Cash Flow	49.8	40.1	74.3	85.3	104.1	88.3	128.2	100.6	130.2	113.9	1,508.6	17.0%	•
Discount Factor		0.91	0.83	0.76	0.69	0.63	0.57	0.52	0.48	0.43	0.43		-
Present Value		36.5	61.8	64.6	71.9	55.6	73.5	52.6	62.1	49.5	655.6		;

Present Value of Cash Flows	528.1	44.6%		EV
Present Value of Terminal Value	655.6	55.4%		
Enterprise Value	1,183.7	11.6x		8.2%
et Debt	128.8	1.3x		8.7%
quity Value	1,054.9	10.4x	ប្រ	9.2%
			Q	J.Z /0

Weighted Average Cost of Capital	
Risk-Free Interest Rate	3.50%
Market Risk Premium	5.50%
Mean Unlevered Beta	0.90
Tax Rate	21.0%
E/EV	73.2%
D/EV	26.9%
Levered Equity Beta	1.15
Cost of Equity	9.8%
Cost of Debt (Pre-Tax)	4.7%
WACC	8.2%
Risk Adjustment	1.5%
WACC adj.	9.7%
Terminal Value Growth	2.0%

EV	Terminal Value Growth										
	1.7%	1.8%	1.9%	2.0%	2.1%	2.2%	2.3%				
8.2%	1,442.9	1,457.5	1,472.5	1,488.0	1,504.1	1,520.6	1,537.7				
8.7%	1,334.0	1,346.1	1,358.6	1,371.4	1,384.6	1,398.2	1,412.3				
9.2%	1,239.7	1,249.9	1,260.3	1,271.0	1,282.0	1,293.3	1,305.0				
9.7%	1,157.2	1,165.8	1,174.6	1,183.7	1,193.0	1,202.5	1,212.3				
10.2%	1,084.5	1,091.9	1,099.4	1,107.1	1,114.9	1,123.0	1,131.3				
10.7%	1,019.9	1,026.2	1,032.7	1,039.3	1,046.0	1,052.9	1,060.0				
11.2%	962.2	967.6	973.2	978.9	984.7	990.7	996.7				

1.0%		EV/EBITDA			Term	inal Value Gro	owth		
3.2% 6.9%			1.7%	1.8%	1.9%	2.0%	2.1%	2.2%	2.3%
1.15		8.2%	14.2x	14.3x	14.5x	14.6x	14.8x	14.9x	15.1x
9.8%		8.7%	13.1x	13.2x	13.4x	13.5x	13.6x	13.7x	13.9x
4.7%	с С	9.2%	12.2x	12.3x	12.4x	12.5x	12.6x	12.7x	12.8x
3.2%	M A M	9.7%	11.4x	11.5x	11.5x	11.6x	11.7x	11.8x	11.9x
1.5%		10.2%	10.7x	10.7x	10.8x	10.9x	11.0x	11.0x	11.1x
9.7%		10.7%	10.0x	10.1x	10.1x	10.2x	10.3x	10.3x	10.4x
2.0%		11.2%	9.5x	9.5x	9.6x	9.6x	9.7x	9.7x	9.8x

Rationale

DCF

- DCF is based on BioTel's standalone financials. Hence, SHL contribution is not included in EBITDA, Tax, changes in NWC nor CAPEX.
- PV Future Cash Flows and PV of Terminal Value account for 44.6% and 55.4% of total Enterprise Value, respectively.
- Enterprise Value is **\$1.2bn**, which corresponds to a **11.6x** multiple, considering a WACC of 9.7% and terminal revenue growth of 2.0% in perpetuity.

WACC

- Risk-free rate and MRP are based on Duff & Phelps recommendation as of 2019.
- Unlevered beta is based on trading comparable companies' and it was relevered with the industries' average financial structure.
- Considering the levered beta of 1.15, the cost of equity is 9.8%.
- Based on BioTel's annual report, the firm's **cost of debt is 4.7%**.
- WACC was adjusted by a **risk premium**, due to the companies' reimbursement risk and high growth of future revenue.

Interest rates are computed as 5-Year Libor Swap Rate plus the respective Loan's spread

Debt Instrument	Tenor (in Years)	2020	2021	2022	2023	2024	2025	2026	2027
5-Year Libor Swap Rate	n.a.	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Spreads									
Term A	7	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	n.a.
Term B	8	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
PIK Loan	10	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%	8.5%
RCF	n.a.	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Interest Rates									
Term A	7	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Term B	8	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
PIK Loan	10	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
RCF	n.a.	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Average Interest Rate	n.a.	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%

Appendix 7 – Management Equity Program

The Management Equity Program is split between 19.6% to management team and the remaining BioTelemetry 80.4% to the sales force

Name	Position	# FTE	Annual Salary (in \$k) ¹	Salary Ratio ²	Investment Factor ³	Equity Investment (in \$k)	Sweet Equity Share	
Jospeh H. Capper	CEO	1	635	100%	2	1,270	6.1%	
Heather Getz	CFO	1	394	100%	2	788	3.8%	
Manish Wadwa	СМО	1	336	100%	2	672	3.2%	
Peter Ferola	SVP, Legal	1	336	100%	2	672	3.2%	
Andy Broadway	SVP BioTel Heart	1	345	100%	2	689	3.3%	
-	Sales Force	120	70	100%	2	16,800	80.4%	
	Total Equity Investment of Management and Sales Force							

Notes: ¹Salary ratio stands for the percentage of annual salary invested alongside the fund; ²Investment Factor stands for the multiple of annual salary invested. A 2-Factor multiple means 2x annual salary was invested. Sources: BioTelemetry Proxy Statement

January 2020