

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

Investment Proposal for a Private Equity Fund:  
A Buy-and-Build of Optical Retailers

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## Executive Summary

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The purpose of this Work Project is to present a market overview of an industry and subsequent investment proposal for a Private Equity fund. The type of deal is a buy-and-build of seven Portuguese optical retail chains and one hearing equipment retailer, with a holding period from 2014 to 2019. The cross selling of products is expected to lift up revenues, while cost synergies in procurement, personnel and general administrative expenses will increase operating margins. Provided the execution goes as planned, this investment is likely to generate strong returns for the fund's shareholders, which outweigh potential operating risks.

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## 1. Market Overview

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### 1.1. Optical Retail

#### Worldwide

Optical retail stores are ubiquitous across the globe, fulfilling one extremely important need, eyesight improvement, through the sale of optical corrective equipment. Products fit into one of the following categories:

- Lenses;
- Frames;
- Sunglasses - with or without prescription lenses;
- Contact lenses;
- Over-the-Counter spectacles - without a prescription of an ophthalmologist;
- Others - cleaning products, p.e;

The value chain is typically composed by two participants: manufacturers that produce the bulk eyewear equipment, and retailers, who resell it and tailor the products to prescriptions' requirements. These products can either be from a licensed or a white label brand. There are several distribution channels to reach the consumer: optical independent stores, optical retail chains, mass merchandisers (Wal-Mart for example), department stores and others, such as online or street-selling. The relative importance of each channel is presented in Exhibit 1.

In 2011, optical retail products had an estimated global market size of USD 81.0 Bn<sup>1</sup>, USD 63.0 Bn of which were attributed to eyeglasses. – Exhibit 2. The eyewear market is expected to grow by annually on average at 3.2% since 2013 to 2018<sup>2</sup>, fueled by a larger consumer base and a higher penetration of the products. But not all products have the same outlook; for instance, sunglasses will grow at 8.1% *per annum*, on average<sup>3</sup>.

Some trends have been observed in the past years, which are sure to have an impact on the business model of optical stores and chains:

- The world population is getting older: in 1993, approximately 6.3% of people had more than 65 years<sup>4</sup>; twenty years later that figure rose to 8.1%. One of the reasons is the increase in life expectancy at birth, from 65 to 71 years<sup>5</sup>. Since there is a larger penetration of optical equipment for older people (Exhibit 3), growing demand in the foreseeable future is expected;
- Sedentary habits and the growing exposure to screens are increasing short sightedness. According to experts, 35% more young people suffer from it and the proportion could increase further 50% in the next 10 years<sup>6</sup>;
- Glasses are used more and more as a fashion accessory;
- Optical Retailers are entering the e-commerce market, already worth USD 9.4 Bn (27.1% of total sector revenue) in 2013 in the U.S<sup>7</sup>.

With the ultimate purpose finding valuation multiples to later compute acquisition prices, a list of some of the largest optical retail chains was collected. For the complete list of the players, please refer to Exhibit 4. Overall the companies have had a moderate growth pattern and good profitability, evidenced by a 71% median Gross Margin and a median EBITDA margin of over 18%. They carried residual leverage and the multiples of EV/Revenue and EV/EBITDA were, respectively, 2.3x and 12.4x.

Since November 2011, 58 known transactions (acquisitions of more than 20% stakes or management buy-outs) of optical retailers around the world were recorded - Exhibit 5. I used the Tukey Outlier filter to find any possible outlier the dataset might contain, with the following range:  $Range = [Q1 - k * IQR; Q3 + k * IQR]$ ,

where  $k = 1.5$ ,  $Q1 = 1st\ Quartile$ ,  $Q3 = 3rd\ Quartile$  and  $IQR = Interquartile\ Range$

After finding the implicit, pre-deal valuation multiples of the analyzed transactions, I computed the average with the multiples of the publicly listed firms (with a 25% illiquidity discount), which can be seen in the following table.

	EV/Revenue	EV/EBITDA
M&A Multiples Median	1.41x	8.53x
International Peers Median	1.71x	9.29x
Average Medians	<b>1.56x</b>	<b>8,91x</b>

*Source: Zephyr; Gurufocus; Company's reports*

### Portugal

According to a study by the Portuguese Health Ministry, 52% of the population has a necessity of wearing glasses. Demand is created not only by health reasons, but also by aesthetical and comfort motives; for instance, more than 4 million people use sunglasses<sup>8</sup>. Thus, the sector is exposed to a broad consumer base and targets almost every age and socioeconomic group. Demand is likely to expand in the future, thanks to the economic upswing of the business cycle and an increasingly older population. Just as in the rest of the world, the proportion of old people is expected to grow, from 19% in 2011 to 25% in 2030<sup>9</sup>.

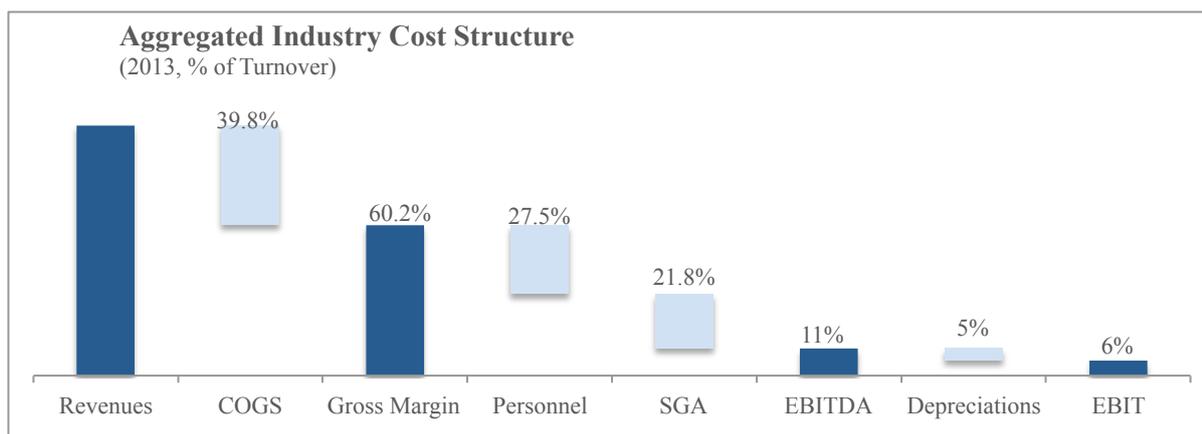
The Portuguese sector is composed almost exclusively by retailers that have to import the products from international players. The preferred way to reach costumers is through optical independent stores and chains. Still, and following their international counterparts, some hypermarkets have started selling optical equipment. Continente, through its Well's brand, offers contact lenses and eye drops, while Jumbo Óptica sells all kinds of eye care products and also hearing devices and exams.

According to the National Optical Retailers Association, there were 1,218 companies operating last year, owning 1,700 stores across the country. With an average of 1.4 stores per firm, the vast majority are family-owned SMEs, with turnover below Eur 1.0 Mn. In fact, only 55, or 4.5%, had sales above this threshold (*Amadeus database – Bureau Van Dijk*). This makes it a poorly concentrated market, where the 10 biggest companies had 31.3% of total market share and whose Herfindahl-Hirschmann index was 331 (out of 10,000).

Scale is a very important condition in this industry and that is a reason why several companies have joined associations. The biggest, *Instituto Óptico*, has 182 stores and more than 80 associated retailers. Together, they have managed to achieve more bargaining power with suppliers which translates into higher gross margins, better access to credit facilities, the possibility to sell Instituto Óptico's white label brand and leverage on its umbrella branding.

The estimated market size in 2013 amounted to Eur 395.9 Mn, an increase of 5.4% from the previous year (Exhibit 6). Since 2010 it has grown at an average annual rate of 1.0%, a small expansion, albeit higher than Portugal's GDP negative evolution of -5.8% in the same period<sup>10</sup>. The sector's profitability is not particularly high, with a median EBITDA margin of 8.5%. However, companies with turnover superior to Eur 1.0 Mn show higher margins (10.7%), which induce size as a determinant of performance. To further understand the profitability of the industry, I broke down the aggregated costs.

The biggest cost drivers are Materials and Personnel expenses, which together amount to 67.3% of revenues. This is where the largest cost saving measures can be implemented, as I will argue later on.



The selection of the targets to be purchased was based on several criteria: revenues within a threshold (above Eur 1.0 Mn and below Eur 5.0 Mn), ownership status (cannot be part of an international group) and number and location of stores (more than 5 shops, located in the North and Center of Portugal). The following firms were identified:

Company	Revenues (Eur Mn)	Revenue Growth (CAGR 2010/13)	EBITDA Margin	Net Debt/EBITDA	Number of stores	Acquisition Price (Eur Mn)
Adão Oculista	2,4	-8,1%	6,3%	-1,2	12	1,36
Óptica Lince	2,3	-0,7%	12,6%	1,9	13	2,57
Carlos & Leonor - Óptica	2,0	2,1%	4,2%	7,2	12	0,74
Antunes Oculistas	1,7	-12,5%	2,3%	-0,9	9	0,35
Jaime Oculista	1,4	-1,7%	14,0%	-0,1	7	1,74
Ópticas Parente II	1,2	-0,4%	15,7%	0,6	6	1,53
Alípios	1,0	n.a.	15,9%	-0,2	5	1,44

## 1.2 Hearing Equipment Retail

### Worldwide

A hearing aid equipment is a small electronic device that allows the user to restore part of the lost hearing ability. It has three components: a microphone, an amplifier and a speaker. The microphone receives sound, transforms it into electrical signals and sends them to the amplifier. Then, the power of the signals is increased in the amplifier and sent to the speaker, which will transmit it to the ear. There are several types of products available: behind the ear, receiver in the ear, in the ear, completely in the canal, body-worn aids and cochlear implants.

Typically, two types of players are involved: manufacturers of the equipment and retailers, who distribute it and sell it to the final customer. The channel mix is comprised of four alternative ways to reach the client: large retail chains, manufacture retail, independent dispensers and public, such as the U.S. Veteran Affairs - Exhibit 8.

The global retail hearing aid equipment is estimated to be worth around USD 5.4 Bn in 2012, with long-term growth rates of 3-6% driven by demographic development, according to a study by Sanford C. Bernstein (Berenberg pinpoints a CAGR of 4.5% for the next 6 years). In 2013, 10.8 million units were sold, an increase from 9.4 million two years prior and 8.5 million in 2009 (CAGR of 6.3%)<sup>11</sup>. Demand is higher in developed economies, with Europe and the U.S. responsible for 41% and 29% of sold units, respectively. According to the World Health Organization, market penetration is extremely low; Portugal, with 4.5%, is in the bottom range.

Key trends that accelerated in the past decade are expected to feed growth and finally increase a stubbornly low penetration<sup>11</sup>:

- Technological advances such as wireless connectivity with other devices, lower background noise or tailoring hearing characteristics to different occasions;
- Substantial size reduction;
- Aging of the population and longer life expectancy across the world;
- Bigger exposure to noise pollution and hearing-related diseases.

Six companies dominate the global market: Sonova, William Demant, Siemens' Hearing Division (on the verge to be acquired), GN Store Nord, Starkey and Widex, with a combined market share of 98%. Rion, a Japanese manufacturer, was also included to provide a more representative sample – Exhibit 9.

Since November 2011, 32 known transactions whose target was a hearing aid manufacturer were registered (Exhibit 10). After excluding outliers of the dataset using the Tukey range, I managed to compute the valuation multiples of the transactions.

Using the previous information from international comparables (with the illiquidity discount), the final valuation multiples can be now obtained:

	EV/Revenue	EV/EBITDA
M&A Multiples Median	1.00x	8.46x
International Peers Median	1.85x	9.40x
<b>Average Medians</b>	<b>1.43x</b>	<b>8.93x</b>

*Source: Zephyr; Gurufocus; Company's reports*

### Portugal

One of the factors with the biggest influence in the demand for this kind of product is demographics. In Portugal approximately 10% of the population has some sort of hearing loss; that figure rises to 60% for people with more than 65 years<sup>12</sup>. 90% of those cases can be corrected with the use of a simple hearing device (*i Journal*). Even though the future looks rosy, manufacturers and retailers have failed to increase market penetration, even comparing with international low standards.

In Portugal, there are 23 companies that operate in the hearing equipment retail sector, with a combined turnover of Eur 58.2 Mn. Having registered strong growth of 16% from 2005 to 2009 (CAGR; *Amadeus*), the market is down 3.8% since 2010. Five companies dominate the market, with an aggregate market share of 91.9% (Exhibit 11) and only seven firms report sales higher than Eur 1.0 Mn, making it extremely concentrated.

The five biggest, Hidden Hearing, Minisom, GAES, Widex and Amplifon, all belong to multinational groups and benefit from lower procurement costs. Due to this ownership

restriction and minimum needed size, the selected company to be acquired is Casa Sonotone (together with the subsidiary Audiosom), the sixth largest player:

Company	Revenues (Eur Mn)	Revenue Growth (CAGR 2010/13)	EBITDA Margin	Net Debt/EBITDA	Acquisition Price
Casa Sonotone + Audiosom	2,1	-10,3%	8,4%	-0,4	Eur 1,57 Mn

## 2 – Investment Strategy

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### 2.1 Deal Structuring

The type of deal is a buy-and-build, where a platform company is created and multiple acquisitions are added to, throughout 2015. The purchase of the targets will be financed through a mixture of equity from the Private Equity fund and the management team (Eur 8.95 Mn and Eur 0.23 Mn, respectively), and senior debt (Eur 2.70 Mn), parked on the new holding. The amount of contracted debt was chosen as to reach a Net Debt/Ebitda of 2.5x in 2014. Payments occur annually in equal installments until 2019.

The investment case presented assumes the full acquisition of the targets' equity, although an asset deal or a *carve-out* of non-core assets are options to be considered. The acquisition price of the targets has as a reference the EV/Ebitda multiple of each sector, previously computed.

### 2.2 Value Creation Drivers

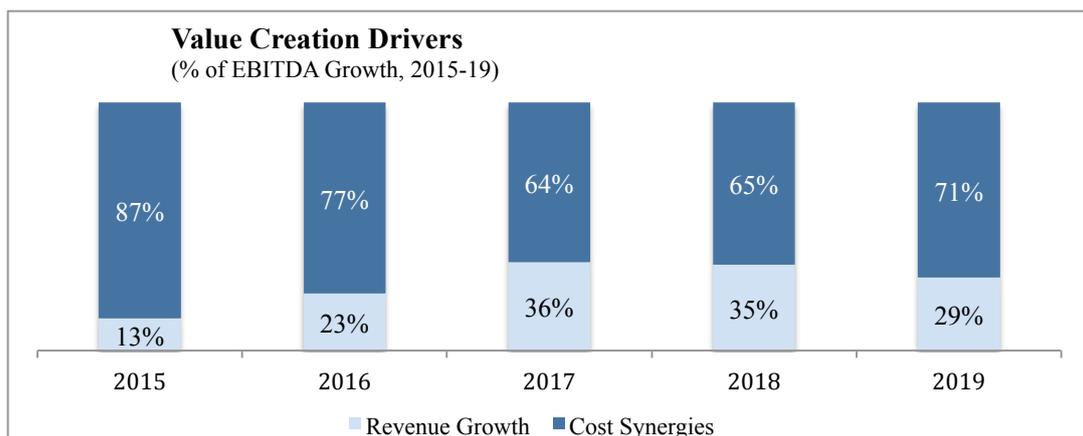
On this particular deal, there are predominantly three value creation drivers, all related to the fundamentals of the business:

- Revenue push-up by cross-selling hearing equipment in optical retail stores. Supporting this argument are a relevant capillarity of optical stores (opposed to the almost inexistence of hearing equipment selling places), a similar customer profile,

the creation of a single brand with national reach and a broader product offering. The number of stores to have both products is to increase gradually, from 9 to 33 (Exhibits 12 and 13);

- Reduction of material costs of eyecare products by merging procurement functions and purchasing equipment for the group as a whole;
- Leaner cost structure in the items of Personnel (human resources, marketing and management team) and SG&A, such as cleaning, insurance, fuel, communications, outsourced accountancy and ERP software licenses.

Below is a chart that demonstrates the source of the increase of fundamentals: more than 70% comes from cost synergies and the remaining from increasing sales.



### 2.3 Timeframe

The investment has a time horizon of five years, starting with the first acquisitions in December 2014 and with the sale of the group occurring in the end of 2019/early 2020. After initiating talks with the targets in October 2014 and the Legal and Financial Due Diligences are completed by November, the Private Equity fund should start 2015 by acquiring Casa Sonotone and the two biggest optical retail chains (Adão Oculista and Ópticas Lince), as well as recruiting the management team. During 2015, the remaining optical chains will be acquired, the majority of the cost reduction measures will take

place and hearing equipment will begin to be sold in nine stores. After that, the number of stores that sell hearing equipment will gradually increase, peaking at thirty-three by 2019 (Exhibit 14).

#### **2.4 Management and Alignment of Interests**

For this investment, the management team will be centralized and composed by a CEO, who will take charge of acquisitions, business development and reporting, a CFO with responsibilities over human resources, accounting/treasury and legal, and a COO, who will oversee procurement, quality and marketing. The Board of Directors will have as members the previously mentioned executives and a partner of the private equity fund as a non-executive chairman. The compensatory packages are composed by a base salary, lunch allowance and fringe benefits, which comprises of car, fuel, cell phone and medical insurance for 4 members of the family – Exhibits 15 and 16.

In Private Equity, one of the most crucial aspects is the correct alignment of interests of the management team and the fund's objectives (and, ultimately, shareholders). Two mechanisms will ensure the management has a motivation to drive up results: management equity and performance bonus.

The first one forces the acquisition of small stakes by the management team (CEO by 1.0% and CFO/COO 0.75% each) in cash and at the beginning of the investment. By having “skin in the game”, it will in their best interest to maximize the valuation of the company. The second mechanism ties bonuses to the EBITDA generated in 2019: if it surpasses Eur 2.5 Mn or Eur 3.0 Mn, a bonus of 40% or 80% of annual salary will be awarded to them, respectively, in the following year.

## 3 – Business Plan

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### 3.1 Base Scenario

The investment plan relies on a large number of assumptions, as follows:

- The acquisition of the companies will contemplate the creation of goodwill (Eur 4.05 Mn) and assume no other adjustments of assets and liabilities (such as PP&E). The costs of the legal and financial due diligences and legal & miscellaneous fees are estimated to be Eur 60,000 for each target, already accounted in the purchase price and to be paid in cash by the holding, in late 2014.
- Previously existing debt (short and long-term) in the companies will be totally paid off in equal installments over the investment period.
- No dividend payout through the investment cycle; free cash flows will be applied in reducing debt over the period;
- Flat revenues for optical products and sales increase for hearing equipment. The average retail price was estimated with a U.S benchmark (\$3,600 for a binaural equipment) and corrected for Portugal's Purchase Price Parity and the EUR/USD exchange rate, at 21/11/2014. Average quantities sold on each store will increase from ten to eighteen units each year. The number of stores that sell both products will start as 9 in 2015 and increase to 33 in 2019 (52% of the total number of shops). The rationale for cherry-picking the stores is potential cannibalization across the same district on the face of conservative demand forecasts.
- Material costs reduction of optical products by 10%, starting in 2015. As for hearing devices, the reduction will be steadily achieved, calculated by multiplying the increasing revenues in percentage points by a scale factor of 0.1.

- SG&A savings in fuel, communication, insurance and cleaning expenses amount to 5% of the historical values. ERP annual licenses' renewal was computed to be 15% of the price of the software (€4,000), which will be scrapped by using only one product. Outsourced accountancy will be used for the group, at a cost of €2,000, instead of €1,000 for each of the eight companies.
- Centralization of personnel dedicated to HR and Marketing; two people of each function in the group, opposed to one per company currently. However, one audiologist will have to be allocated to each store that sells hearing equipment.
- Other Costs and Benefits and Non-Current Liabilities remain unchanged. Steady Depreciations and Amortizations, equal to annual Capital Expenditures. No additional optical stores will open.
- Transportation costs of hearing equipment, 3 annual trips to each cross-selling store, at an average cost of €70 per store.
- Initial investment in 2015 to upgrade stores image, develop a new brand and logo and marketing expenses. The latter includes advertisement in billboards (€1,000 for every store) and search engine optimization (at €3,000 per year). Furniture to display hearing equipment is to be bought, for every shop that starts selling it, at €200 each.
- Tax rate would move to superior stage of 31.5% but reduced to 29.5% in 2015 and 27.5% in 2016 onwards thanks to a corporate tax reform;
- Days Payables Outstanding will stay at 209 and Days Sales Outstanding at 94. Days Inventory Outstanding for optical products will decrease from 374 days to 320 as a result of a centralized procurement function that will optimize stock management.

According to the business plan, by 2019, sales will have grown to EUR 16.1 Mn, a CAGR of 2.7% since 2014. Gross Margin will increase from 64.8% to 68.8% and EBITDA Margin will reach 17.9%, up 8.8 percentage points since the beginning of the investment. Net Debt/EBITDA will systematically decrease, from 2.5 in 2014 to -0,9 in 2019, reflecting the deleveraging process.

Working Capital	2013	2014	2015	2016	2017	2018	2019
Days Sales Outstanding	94	94	94	94	94	94	94
<i>Eyecare Retail</i>	102	102	102	102	102	102	102
<i>Hearing Equipment</i>	49	49	49	49	49	49	49
Days Inventory Outstanding	349	349	300	300	300	300	300
<i>Eyecare Retail</i>	374	320	320	320	320	320	320
<i>Hearing Equipment</i>	147	147	147	147	147	147	147
Days Payable Outstanding	209	209	209	209	209	209	209
<i>Eyecare Retail</i>	252	252	252	252	252	252	252
<i>Hearing Equipment</i>	107	107	107	107	107	107	107
Cash Conversion Cycle	234	234	185	185	185	185	185
<i>Eyecare Retail</i>	224	170	170	170	170	170	170
<i>Hearing Equipment</i>	89	89	89	89	89	89	89
Net Debt/EBITDA	0,7	2,5	0,9	0,4	0,0	-0,4	-0,9

### Group Income Statement and 5-Year Projections

<i>Eur '000</i>	2013	2014	2015	2016	2017	2018	2019
Revenues	14 076	14 076	14 173	14 379	14 815	15 415	16 054
COGS	4 960	4 960	4 542	4 593	4 698	4 846	5 007
Gross Margin	9 116	9 116	9 631	9 787	10 117	10 570	11 047
<i>% of Revenues</i>	64,8%	64,8%	68,0%	68,1%	68,3%	68,6%	68,8%
Personnel	4 925	4 925	4 715	4 858	5 084	5 166	5 207
<i>% of Revenues</i>	35,0%	35,0%	33,3%	33,8%	34,3%	33,5%	32,4%
SG&A	3 201	3 201	3 281	3 248	3 251	3 250	3 250
<i>% of Revenues</i>	22,7%	22,7%	23,1%	22,6%	21,9%	21,1%	20,2%
Other Gains/Expenses	-290	-290	-290	-290	-290	-290	-290
<i>% of Revenues</i>	-2,1%	-2,1%	-2,0%	-2,0%	-2,0%	-1,9%	-1,8%
EBITDA	1 280	1 280	1 926	1 971	2 072	2 444	2 881
<i>% of Revenues</i>	9,1%	9,1%	13,6%	13,7%	14,0%	15,9%	17,9%
Dep & Amortizations	613	613	613	613	613	613	613
EBIT	667	667	1 313	1 359	1 460	1 831	2 268
<i>% of Revenues</i>	4,7%	4,7%	9,3%	9,4%	9,9%	11,9%	14,1%
Financial Expenses	109	109	254	192	139	88	44
EBT	559	559	1 060	1 167	1 321	1 744	2 224
Taxes	171	170	313	321	363	480	612
Net income	388	388	747	846	958	1 264	1 612
<i>% of Revenues</i>	2,8%	2,8%	5,3%	5,9%	6,5%	8,2%	10,0%

## Group Cash Flow Statement and 5-Year Projections

<i>Eur '000</i>	2014	2015	2016	2017	2018	2019
<b>Cash Flows from Operating Activities</b>						
Inflows						
Sales	14 076	14 151	14 326	14 703	15 261	15 890
Outflows						
Materials	4 960	3 751	4 584	4 680	4 821	4 980
SG&A	3 201	3 281	3 248	3 251	3 250	3 250
Personnel	4 925	4 715	4 858	5 084	5 166	5 207
Taxes	170	313	321	363	480	612
Other Gains/Expenses	-290	-290	-290	-290	-290	-290
<b>Net Cash Flow Operations</b>	<b>1110</b>	<b>2382</b>	<b>1606</b>	<b>1615</b>	<b>1835</b>	<b>2132</b>
<b>Cash Flows from Investing Activities</b>						
Capital Expenditures	613	613	613	613	613	613
<b>Net Cash Flow Investing</b>	<b>-613</b>	<b>-613</b>	<b>-613</b>	<b>-613</b>	<b>-613</b>	<b>-613</b>
<b>Cash Flows from Financing Activities</b>						
Financial Expenses	109	254	192	139	88	44
Debt Payment	0	1833	964	964	964	964
<b>Net Cash Flow Financing</b>	<b>-109</b>	<b>-2086</b>	<b>-1155</b>	<b>-1102</b>	<b>-1051</b>	<b>-1008</b>
<b>Net Variation of Cash</b>	<b>388</b>	<b>-316</b>	<b>-162</b>	<b>-100</b>	<b>171</b>	<b>511</b>
Cash Beginning of the Year	2 099	2 488	2 171	2 009	1 909	2 080
Cash End of Year	2 488	2 171	2 009	1 909	2 080	2 591

## Group Balance Sheet and 5-Year Projections

<i>Eur '000</i>	2013	2014	2015	2016	2017	2018	2019
<b>Fixed Assets</b>	<b>4 568</b>	<b>8 623</b>					
Intangible Fixed Assets	230	230	230	230	230	230	230
Tangible Fixed Assets	4 058	4 058	4 058	4 058	4 058	4 058	4 058
Other Fixed Assets	279	279	279	279	279	279	279
Goodwill	0	4 055	4 055	4 055	4 055	4 055	4 055
<b>Current Assets</b>	<b>10 465</b>	<b>10 854</b>	<b>9 533</b>	<b>9 444</b>	<b>9 499</b>	<b>9 884</b>	<b>10 625</b>
Inventory	4 738	4 738	3 712	3 732	3 775	3 834	3 899
Accounts Receivable	3 629	3 629	3 650	3 703	3 815	3 970	4 135
Cash & Cash Equivalents	2 099	2 488	2 171	2 009	1 909	2 080	2 591
<b>Total Assets</b>	<b>15 033</b>	<b>19 476</b>	<b>18 156</b>	<b>18 067</b>	<b>18 121</b>	<b>18 507</b>	<b>19 248</b>
<b>Capital</b>	<b>454</b>	<b>8 793</b>					
Other shareholder's funds	6 987	388	1 136	1 981	2 939	4 203	5 816
<b>Equity</b>	<b>7 441</b>	<b>9 181</b>	<b>9 928</b>	<b>10 774</b>	<b>11 732</b>	<b>12 996</b>	<b>14 608</b>
<b>Non-Current Liabilities</b>	<b>2 337</b>	<b>5 041</b>	<b>4 077</b>	<b>3 114</b>	<b>2 150</b>	<b>1 187</b>	<b>223</b>
Long-term Debt	2 114	4 818	3 854	2 891	1 927	964	0
Other non-Current Liabilities	223	223	223	223	223	223	223
<b>Current Liabilities</b>	<b>5 254</b>	<b>5 254</b>	<b>4 150</b>	<b>4 179</b>	<b>4 239</b>	<b>4 324</b>	<b>4 416</b>
Loans	869	869	0	0	0	0	0
Accounts Payable	2 836	2 836	2 601	2 630	2 690	2 775	2 867
Other Current Liabilities	1 549	1 549	1 549	1 549	1 549	1 549	1 549
<b>Total Liabilities</b>	<b>7 592</b>	<b>10 295</b>	<b>8 227</b>	<b>7 293</b>	<b>6 390</b>	<b>5 511</b>	<b>4 639</b>
<b>Total Liabilities + Equity</b>	<b>15 033</b>	<b>19 476</b>	<b>18 156</b>	<b>18 067</b>	<b>18 121</b>	<b>18 507</b>	<b>19 248</b>

### **3.2 Adverse Scenarios**

To test for the resilience of the operating profitability of the investment, two different negative scenarios were considered. Under the first one, the acquisition of the hearing retailer Casa Sonotone could not be performed. This would nullify the revenue increase and make cost reduction the only value creation driver. Assuming the same Net Debt/Ebitda target as in the base case of 2.5x, under this scenario EBITDA would reach EUR 1.9 Mn, or 15.5% of sales, in 2019 (Exhibit 17).

On the other situation, the reduction of material costs of both products would fail to materialize. As a consequence, the overall group's gross margin would increase to only 65.9% of turnover (still a positive effect due to higher margins of hearing devices). Nonetheless, the EBITDA margin would still jump to 15.0% (Exhibit 17).

## **4 – Exit and Returns**

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### **4.1 Exit Opportunities**

Private Equity investments have three exit options: an IPO, a trade sale or a secondary buy-out, to another private equity fund. Given a dynamic M&A activity (45 known transactions of optical retailers since November 2011) and the existence of valuable attributes that this investment can generate, the preferred option would be a trade sale.

There are two types of companies that would clearly benefit from a deal: optical retail chains that are present in the Portuguese market and want to grow their market share or large, foreign optical retailers that want to expand to other countries through non-organic growth. In the case of the former, only GrandVision (owned by H.A.L. Trust) has the scale and means to acquire our group; however, it would most likely be blocked by the regulatory entity on the grounds of a dominant position. The latter group

comprises global firms such as Luxottica or Fielmann, who have large amounts of cash (USD 1.7 Bn and USD 243.0 Mn, respectively), or smaller European optical retailers.

Still, it would be somewhat reckless to overlook the possibility of a secondary buy-out.

In the analyzed transactions sample, 16 (or 36%) were deals of this type. Despite the most immediate benefits would already been taken, further growth would be possible, not least by making all the stores selling hearing equipment. Alain Afflelou, for one, was acquired by Lion Capital as a tertiary buy-out. Potential buyers would be small-market European Private Equity funds and their Portuguese brethren.

#### 4.2 Financial Returns

Assuming no multiple arbitrage on the sale (implicit EV/Ebitda of 8.91x), the proposed investment would generate a cash multiple of 2.80x and an IRR of 22,8%. After testing for the two different scenarios and another with an exit multiple of 7.0x, the returns proved to be fairly resilient, dropping no lower than 1.89x and 13,6%, respectively.

	Base Case	Without Casa Sonotone	No Material Cost Reduction	Exit Multiple 7.0x
Sales	16 054	11 997	16 054	16 054
EBITDA	2 881	1 859	2 408	2 881
EBITDA Margin	17,9%	15,5%	15,0%	17,9%
Equity Entry	8 951	8 232	8 951	8 951
Equity Exit	25 025	15 589	20 906	19 660
MOIC	2,80x	1,89x	2,34x	2,20x
IRR	22,8%	13,6%	18,5%	17,0%

Two of the most critical variables affecting the returns of the investment were the expected savings in materials costs of eyecare products and the reduction of operational costs, namely Personnel and SG&A. To assess the sensitivity of the investment's profitability on these items, the following data tables were created. Exhibit 18 addresses the relationship between profitability and the amount of debt contracted.

		% Reduction Material Costs of Eyecare Products				
Multiple on Invested Capital		0%	5%	10%	15%	20%
Reduction in pp. of SG&A and Personnel	0%	1,62x	1,83x	2,05x	2,26x	2,48x
	2%	1,93x	2,15x	2,36x	2,57x	2,79x
	4%	2,24x	2,46x	2,67x	2,89x	3,10x
	6%	2,55x	2,77x	2,98x	3,20x	3,41x
	8%	2,87x	3,08x	3,29x	3,51x	3,72x

		% Reduction Material Costs of Eyecare Products				
IRR		0%	5%	10%	15%	20%
Reduction in pp. of SG&A and Personnel	0%	10,1%	12,9%	15,4%	17,7%	19,9%
	2%	14,1%	16,5%	18,7%	20,8%	22,8%
	4%	17,5%	19,7%	21,7%	23,6%	25,4%
	6%	20,6%	22,6%	24,4%	26,2%	27,8%
	8%	23,4%	25,2%	26,9%	28,5%	30,1%

I then performed a valuation of the holding company using the Discount Free Cash Flow to Firm (FCFF), as a safety check for the returns obtained from the multiples approach. The Weighted Average Cost of Capital (Exhibit 21) was calculated for the appropriate discount rate, with the following premises:

- The discount rate of Equity was computed using the Capital Asset Pricing Mode, where the risk-free rate was the Yield-to-Maturity of Portuguese 10-Year Government Bonds<sup>13</sup> (2.75% at 29/12/2014), the Market Risk Premium was 7.39% (Damodaran's Equity Country Risk)<sup>14</sup> and the Market Beta<sup>15</sup> of Healthcare Products of 0.89 – Exhibit 19;
- The discount rate of Debt for every year was calculated adding the effective annual rates of Euribor 3 Months estimates and a spread of 4.0% – Exhibit 20;
- The Terminal Value was achieved using the Ebitda multiple (same multiple of entry) instead of a perpetuity, since the holding period of the investment is only 5 years.

Discounted to the present day, the Equity in 2019 would be Eur 22.6 Mn, not far from the values obtained from the multiples, Eur 25.0 Mn. To see the table that summarizes the valuation, please refer to Exhibit 21.

## 5 – Recommendation

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I believe this proposal provides an interesting investment opportunity to be pursued, considering the following:

- ✓ Highly fragmented market, with more than 1,200 retailers and 1,700 stores. Only 4.5% of the companies had turnover superior to Eur 1.0 Mn;
- ✓ Relevant market size (Eur 395.6 Mn) and fair profitability (median EBITDA margin of 10.5%). Demographic and cultural trends support demand in the long term for both eyecare and hearing aid equipment;
- ✓ International optical retail chains such as Specsavers or Fielmann have started selling hearing equipment. Similar customer profiles, the expansion of product offering and access to optical stores' capillarity will increase the penetration of hearing equipment, which has higher margins;
- ✓ Potential to obtain cost synergies with the creation of a larger player, in procurement, personnel and administrative expenses;
- ✓ Expected annual rate of return exceeds 22% and the multiple on invested capital is 2.80x. After testing with adverse scenarios, they still remain attractive. Creation of value will be achieved through operational improvements, both on the revenue and cost side and opposed to financial leverage.

However, there are some risks associated. To begin with, the execution relies on the acquisition of eight specific targets; regarding hearing retailers, Casa Sonotone is essentially the only available target. Secondly, customers may not associate the sale of hearing devices in optical stores, thus nullifying the expected revenue increase. Finally, expected cost savings might fail to materialize, which would have an impact on the

investment profitability. Despite this, I believe the investment's returns outweigh its risks and thus the project should proceed with implementation.

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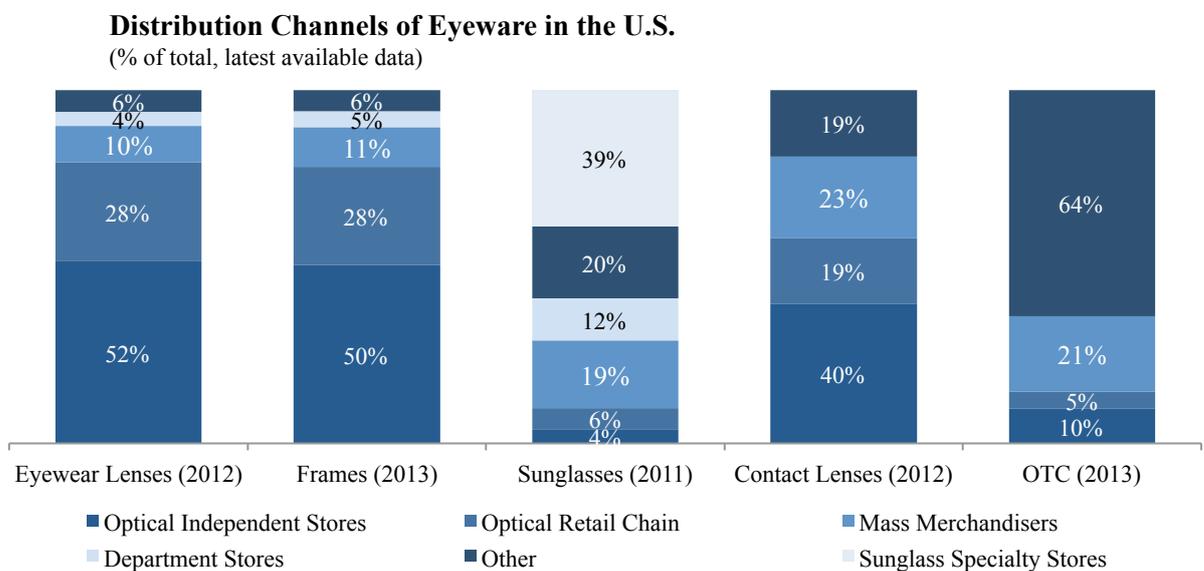
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## Appendix

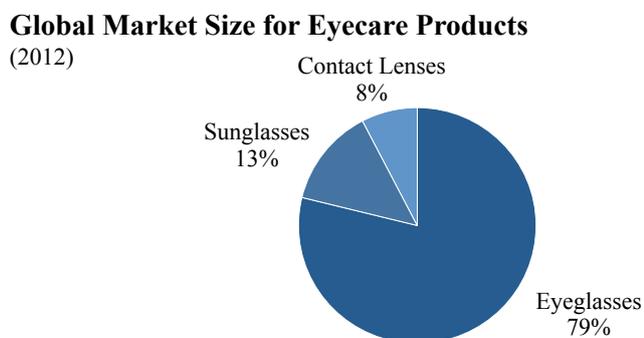
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Exhibit 1 – Distribution Channels of Eyewear in the U.S



Source: Statista

Exhibit 2 – Global Market Size for Eyecare Products



Source: Grand View Research

### Exhibit 3 – Adults wearing corrective eyewear in the UK

Age Group	%
16-19	65%
20-29	64%
30-39	71%
40-49	79%
50-59	96%
60-74	100%
75+	98%

Source: The College for Optometrists UK, 2013

### Exhibit 4 – List of International Optical Retail Peers

Company	Revenue (Eur Mn)	Rev. Growth (CAGR 10/13)	EBITDA Margin	Gross Margin %	N° stores	EV/ Revenues	EV/ EBITDA	Net Debt/ EBITDA
H.A.L. Trust	4 115	3,0%	16,5%	67,9%	5 046	2,1	11,3	0,0
Specsavers	1 800	8,9%	6,0%	47,4%	1 662	n.a.	n.a.	n.a.
Vision Source	1 551	n.a.	n.a.	n.a.	2 797	n.a.	n.a.	n.a.
Walmart Vision	1 163	n.a.	n.a.	n.a.	3 202	n.a.	n.a.	n.a.
Fielmann	1 160	5,2%	17,3%	78,2%	679	2,5	13,6	-0,7
Visionworks	618	n.a.	n.a.	n.a.	619	n.a.	n.a.	n.a.
National Vision	614	n.a.	n.a.	n.a.	745	n.a.	n.a.	n.a.
Costco Optical	596	n.a.	n.a.	n.a.	440	n.a.	n.a.	n.a.
Apollo Optik	264	-0,3%	23,9%	71,2%	800	n.a.	n.a.	-1,0
Alain Afflelou	202	2,5%	30,2%	75,6%	1 202	n.a.	n.a.	0,4

Source: Gurufocus; Company reports

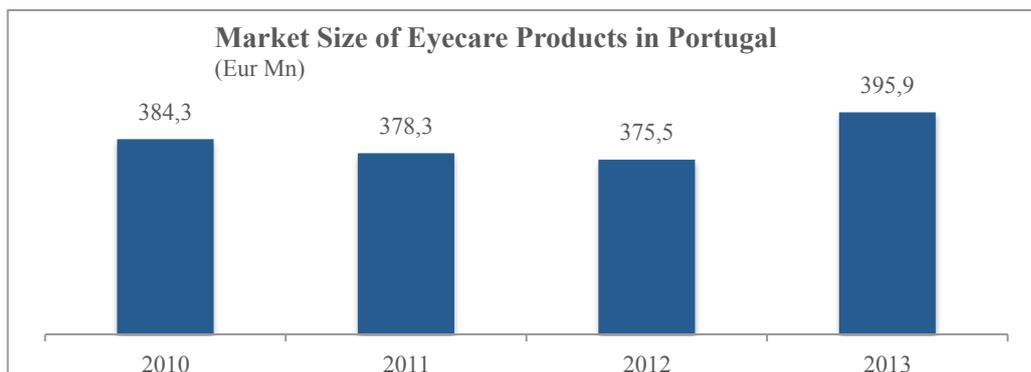
	Growth (CAGR 10/13)	Gross Margin	EBITDA Margin	EV/ Revenues	EV/ EBITDA	Net Debt/ EBITDA
Mean	3,0%	69,7%	18,8%	2,3x	12,4x	-0,3
Median	3,9%	75,6%	17,3%	2,3x	12,4x	-0,3

### Exhibit 5 – List of analyzed transactions of Optical Retailers

Target	Country	Acquirer	Country	Completed date	Deal Value (USD Mn)	Pre-deal EV/Revenue	Pre-deal EV/EBITDA
Coastal Contacts.	CA	Essilo International	FR	Apr/14	389,8	1,98	n.a.
National Vision	US	KKR	US	Mar/14	1000,0	1,27	n.a.
Synsam Nordic	DN	CVC Capital Partners	UK	Mar/14	625,2	1,62	8,53
Erroca	IR	Luxottica	IT	Jan/14	27,2	1,09	n.a.
Vogue Optical	CA	New Look Eyewear	CA	Dec/13	69,5	1,89	n.a.
Megane Top	JP	Tomizawa	JP	Aug/13	470,6	0,93	6,75
Multiopticas Int.	ES	Luxottica	IT	May/13	122,9	2,02	25,64
High Tech Sunglasses	MX	Luxottica	IT	Feb/13	22,7	1,13	n.a.
Alain Mikli	FR	Luxottica	IT	Jan/13	119,9	1,55	n.a.
Alain Afflelou	FR	Lion Capital	UK	Jul/12	982,7	1,23	13,10

Source: Zephyr – Bureau Van Dijk

## Exhibit 6 – Market Size of Eyecare Products in Portugal



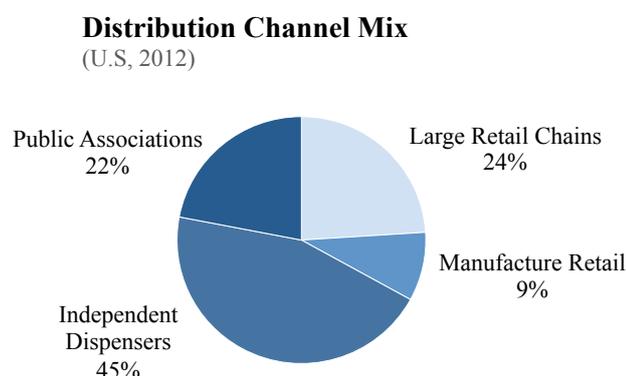
Source: Amadeus

## Exhibit 7 – List of Portuguese Optical Retailers (Turnover > Eur 1.0 Mn)

Company	Revenues (Eur Mn)	Revenue Growth (CAGR 2010/13)	EBITDA Margin	Net Debt/ EBITDA	Number of stores
Grandvision Portugal	67,4	0,3%	17,2%	3,4	177
Mais Óptica	11,4	3,5%	3,1%	-1,1	23
Alberto Oculista	9,8	1,4%	17,0%	2,2	29
Grupo OMB	7,4	-1,3%	8,6%	6,4	34
Optivisão	7,3	-4,5%	6,6%	-0,4	270
Sunglass Hut Portugal	6,7	8,9%	-2,9%	2,2	22
Ergovisão	4,0	0,1%	-0,8%	-54,7	29
Oculista Central das Avenidas	4,0	-6,9%	3,9%	0,4	2
Novo Oculista de Loures	3,4	0,1%	8,6%	3,3	3
Multivista	2,5	6,5%	10,9%	0,6	n.a.
Adão Oculista	2,4	-8,1%	6,3%	-1,2	12
Óptica Lince	2,3	-0,7%	12,6%	1,9	13
Visionlab	2,1	-1,6%	8,7%	42,3	1
Grupóptico	2,1	0,4%	19,3%	0,6	32
Vítor Almeida - Oculistas	2,1	-5,5%	4,7%	0,0	5
Carlos & Leonor - Óptica	2,0	2,1%	4,2%	7,2	12
Brancóptica	1,9	-2,0%	38,3%	-0,1	n.a.
Antunes Oculistas	1,7	-12,5%	2,3%	-0,9	9
Oculista de Santa Maria	1,7	0,3%	10,6%	2,8	n.a.
Vitriu	1,7	7,7%	23,7%	1,0	n.a.
Óptica Médica Rogério	1,6	-5,5%	9,7%	5,4	12
Centro Óptico Boa Imagem	1,5	6,8%	11,4%	0,6	8
Optisun - Ópticas	1,5	-6,4%	6,5%	5,0	n.a.
Cruz Oculista	1,5	-2,7%	11,4%	1,6	5
Oculista Central Torreense	1,4	-1,2%	13,3%	-1,3	n.a.
Gallery de Visão	1,4	5,2%	11,8%	-2,6	n.a.
Centro Óptico Ibérico	1,4	-0,1%	27,6%	-0,7	5
Jaime Oculista	1,4	-1,7%	14,0%	-0,1	7
Ópticas Parente II	1,2	-0,4%	15,7%	0,6	6
Alípios	1,0	n.a.	15,9%	-0,2	5

Source: Amadeus; Eur' 000

## Exhibit 8 – Distribution Channels of Hearing Aid Equipment



Source: William Demant Report, 2013

## Exhibit 9 – List of largest Hearing Aid Equipment Companies

Company	Revenue (Eur Mn)	Growth (CAGR 2010-13)	Gross Margin	EBITDA Margin	EV/Revenues	EV/EBITDA	Net Debt/EBITDA
Sonova	1600	15,2%	69,0%	22,5%	5,08	20,37	-0,8
William Demant	1241	10,8%	72,5%	21,2%	2,86	14,74	-0,2
Siemens Hearing Division	918	n.a.	n.a.	19%	2,2	12,0	n.a.
GN Store Nord	899	15,2%	60,0%	22,4%	3,3	14,32	1,0
Amplifon SpA	830	5,3%	76,5%	14,1%	1,37	9,39	2,4
Rion	129	2,2%	53,0%	14,0%	0,92	5,64	-0,7

Source: Gurufocus; Company reports

	Rev Growth (CAGR 2010-13)	EBITDA Margin	Gross Margin	EV/Revenue	EV/EBITDA	Net Debt/EBITDA
Mean	9,8%	18,8%	66.2%	2.4x	12.2x	0,3x
Median	10,8%	19,9%	69.0%	2.5x	12.5x	-0.2x

## Exhibit 10 – List of transactions of Hearing Aid Equipment companies

Target	Country	Acquiror	Country	Completed date	Deal Value (USD Mn)	Pre-deal EV/Revenue	Pre-deal EV/EBITDA
B2C SAS	FR	5M Ventures	IT	Jul/14	30,0	n.a.	n.a.
Medtechnica Ortophone	IR	Amplifon SpA	FR	Jun/14	27,3	n.a.	n.a.
Williams Medical	UK	DCC Healthcare	IR	Jun/14	75,4	0,78	8,94
Audika Italia Srl	IT	Amplifon SpA	IT	Apr/14	9,8	0,76	9,46
Rion Co.	JP	Resona Bank	JP	Jan/14	9,5	1,11	8,16
Amplifon SpA	IT	Fidelity International	BM	Nov/13	22,7	1,00	5,82
Zavod Slukhovykh	RU	KEM OOO	RU	May/13	22,3	6,36	n.a.
NHC Group Pty	AU	Amplifon SpA	IT	Sep/12	481,3	4,41	19,52
Maxtone	TU	Amplifon SpA	IT	Jan/12	1,3	n.a.	n.a.
Amplifon SpA	IT	Ms. Anna Formigini	IT	Oct/10	674,7	1,19	8,75

Source: Zephyr

### Exhibit 11 - List of 8 largest Hearing Aid companies in Portugal

Company	Revenues (Eur Mn)	Growth (CAGR 2010/13)	Total Assets (Eur Mn)	Net Debt/ EBITDA	Gross Margin	EBITDA Margin	EBITDA Margin (Average 2010/12)
Hidden Hearing	19.6	0.3%	16.7	-0.2x	82.7%	20.3%	16.5%
Minisom	15.1	-5.7%	17.3	0.3x	81.8%	5.0%	24.9%
Widex	10.2	7.5%	4.8	1.7x	68.6%	6.0%	-4.9%
GAES	4.5	-1.3%	1.3	3.9x	77.1%	-1.3%	-10.8%
Amplifon Portugal	4.2	5.4%	1.9	1.0x	82.3%	15.6%	-1.7%
Casa Sonotone + Audiosom	2.1	-10.3%	0.7	-0.4x	73.7%	8.4%	6.6%
Novacústica	0.6	305.5%	0.2	-8.1x	65.5%	2.0%	-41.4%
Audiovital	0.6	-6.9%	0.2	-1.0x	79.7%	8.9%	9.2%

Source: Amadeus

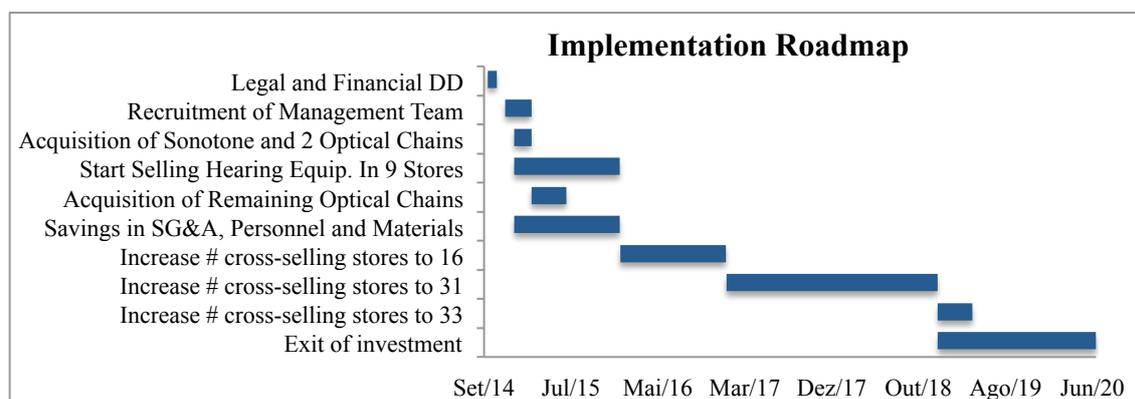
### Exhibit 12 – Number of stores by District

	Braga	Porto	Aveiro	Viseu	Guarda	Coimbra	Leiria	C.Branco	Lisboa	Santarém	Setúbal	Total
Adão Oculista		11	1									12
Ópticas Lince		2		1	6		1	1		2		13
Carlos & Leonor									11	1		12
Antunes Oculista									1		8	9
Jaime Oculista	5	1		1								7
Parente II				5		1						6
Alípio Oculista							1			4		5
<b>Total</b>	<b>5</b>	<b>14</b>	<b>1</b>	<b>7</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>12</b>	<b>7</b>	<b>8</b>	<b>64</b>

### Exhibit 13 – Number of stores with hearing aids, by year

	Braga	Porto	Aveiro	Viseu	Guarda	Coimbra	Leiria	C. Branco	Lisboa	Santarém	Setúbal	Total
2015	1	2		1	1				2	1	1	9
2016	2	3		2	2				3	2	2	16
2017	2	5	1	3	3	1	1	1	5	2	3	27
2018	3	6	1	3	3	1	1	1	6	3	3	31
2019	3	7	1	3	3	1	1	1	7	3	3	33

### Exhibit 14 – Implementation Roadmap



### Exhibit 15 – Compensation Package of Management Team and Audiologists

<i>Monthly figures, €</i>	CEO	CFO/COO	Audiologists
Base Salary	5 000	4 000	1 000
Lunch Allowance	150	150	150
Social Security	24 325	19 460	4 865
Fringe Benefits	10 400	8 400	-
<b>Total Annual Expense</b>	<b>106 378</b>	<b>85 513</b>	<b>20 518</b>

### Exhibit 16 – Fringe Benefits for Management Team

<i>Monthly figures, €</i>	CEO	CFO/COO
Car	500	400
Fuel	150	100
Cell phone	150	150
Medical insurance	800	600
<b>Total</b>	<b>10 400</b>	<b>8 400</b>

### Exhibit 17 – Adverse Scenarios' Income Statement 2019

<i>Eur '000</i>	Scenario 2
Revenues	11 997
COGS	3 971
<b>Gross Margin</b>	<b>8 026</b>
<i>% of Revenues</i>	<i>66,9%</i>
Personnel	3 940
SG&A	2 542
Other Gains/Expenses	-315
<b>EBITDA</b>	<b>1 859</b>
<i>% of Revenues</i>	<i>15,0%</i>
Dep & Amortizations	600
<b>EBIT</b>	<b>1 259</b>
Financial Expenses	43
EBT	1 215
Taxes	334
<b>Net Income</b>	<b>881</b>
<i>% of Revenues</i>	<i>7,3%</i>

<i>Eur '000</i>	Scenario 3
Revenues	16 054
COGS	5 481
<b>Gross Margin</b>	<b>10 573</b>
<i>% of Revenues</i>	<i>66,9%</i>
Personnel	5 207
SG&A	3 250
Other Gains/Expenses	-290
<b>EBITDA</b>	<b>2 407</b>
<i>% of Revenues</i>	<i>15,0%</i>
Dep & Amortizations	6013
<b>EBIT</b>	<b>1 794</b>
Financial Expenses	63
EBT	1 731
Taxes	483
<b>Net Income</b>	<b>1 255</b>
<i>% of Revenues</i>	<i>7,9%</i>

### Exhibit 18 – Sensitivity on amount of Debt

Net Debt/EBITDA	New Debt ( <i>Eur '000</i> )	Multiple on Investment
1,0x	784	2,31x
1,5x	1 424	2,45x
2,0x	2 064	2,61x
2,5x	2 704	2,80x
3,0x	3 344	3,01x

### Exhibit 19 – Equity Discount Rate

Risk-free Rate	2,75%
Market Risk Premium (PT Equities)	7,39%
Market Beta (Healthcare Products)	0,89
Equity Discount Rate	9,33%

### Exhibit 20 – Euribor 3 Months Estimates

Year	Q1	Q2	Q3	Q4	12 Months
2015	0,63%	0,67%	0,64%	0,58%	1,263%
2016	0,58%	0,47%	0,43%	0,47%	0,976%
2017	0,47%	0,42%	0,37%	0,32%	0,792%
2018	0,28%	0,28%	0,29%	0,26%	0,548%
2019	0,29%	0,29%	0,29%	0,29%	0,583%

Source: The Economy Forecast Agency

### Exhibit 21 – Weighted Average Cost of Capital, 2014-2019

	2014	2015	2016	2017	2018	2019
Debt Disc. Rate	4,66%	5,26%	4,98%	4,79%	4,55%	4,58%
Equity Disc. Rate	9,33%	9,33%	9,33%	9,33%	9,33%	9,33%
Tax Rate	30,5%	29,5%	27,5%	27,5%	27,5%	27,5%
Debt (Eur '000)	5 164	3 436	2 577	1 718	859	0
Equity (Eur '000)	9 923	10 690	11 551	12 519	13 790	15 406
WACC	7,24%	7,96%	8,28%	8,62%	8,97%	9,33%

### Exhibit 22 – Discounted Cash Flows

Eur '000	2015	2016	2017	2018	2019
NOPAT	926	985	1 058	1 328	1 644
+ Depreciations	613	613	613	613	613
- Capex	613	613	613	613	613
Non-Cash Working Capital	3 212	3 256	3 351	3 480	3 617
- Change in NCWC	100	45	94	130	137
+ Terminal Value	-	-	-	-	25 667
FCFF	826	940	964	1 198	27 174
Discounted FCFF	766	845	755	852	17 399
Enterprise Value	20 576				
Net Debt	-2 591				
Equity Value	22 587				

### Exhibit 23 – Reduction in Personnel Expenses

Eur	Management	HR	Marketing
Monthly Salary	2 800	1 200	1 200
Lunch Allowance	150	150	150
Annual Social Security	13 622	5 838	5 838
Total Annual Savings	381 324	145 745	145 745