

# Private Healthcare Sector Business Activities in Croatia After Joining European Union

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**University of Zagreb**  
**Faculty of Economics and Business**

**Diana Jaklin**

**Private Healthcare Sector Business Activities in  
Croatia After Joining European Union**

**Undergraduate Thesis**

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Course: Health Economics

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Zagreb, July 2019

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## 1.0 Introduction

### 1.1 Basic Features of the Private Healthcare Sector

Private healthcare is a healthcare system where services are paid directly for and not provided through insurance. The private health care sector facilities, in various nations across the globe, are a part of a significant and increasing industry that poses its problems and possibilities for nations working in the direction of universal coverage of health. (WHO, 2016)

Many high income nations manage the private sector through a multitude of processes to regulate prices, quality, levels of service, and entitlement programs for people. Crucial legal problems for nations with high revenues include: the extent of interventionism needed to be adopted, options of systems of law and regulation, the role of different industries in controlling the provision of healthcare and the balance between distinct regulatory types. (WHO, 2016) Though the private provision is often widespread in low-income and middle-income nations, it is also relatively poorly controlled. Furthermore, in such nations, health system consumers face economic obstacles and the absence of social support. (WHO, 2016) Participants might be undereducated about their needs and therefore unable to assess most elements of quality and value. Hence they are susceptible to over-charging and maybe even quality reduction and expense escalation that could very well disqualify those who can afford it.

Middle and low-income countries' core regulatory and legal challenges comprise of a need for more private industry details and knowledge to steer legislative choice-making, guaranteeing that legal and regulatory practice is well embedded with the country's strategic narration on the role of the private sector operating on health funding and buying agreements to guide private sector services towards universal health protection objectives. There is a need for suitable legislation and legal frameworks to tackle efficiency, security and expense problems, constructing and enforcing legal and regulatory organizations as well as an assessment of the throughput for society to assist control the behavior of providers. (WHO, 2016)

## 2.0 European Context

Across all nations, Europeans are prepared to pay a fee for personal healthcare, either to bypass long lines, access plastic surgery or prevent the possible danger of disease in public clinics. Health tourism is therefore flourishing in the European Union, where patients often travel to Eastern Europe for low-cost dental procedures. The especially rich Russians but also Saudi Arabs prefer to go to Switzerland and Germany's private doctors. Since most Europeans have access to public-sector service either through their compulsory social security contribution or through taxes, personal medical insurance remains a comparatively tiny market. Many customers prefer to pay single charges as and when required. (The Hindu, 2017)

Furthermore, any employment insurance that employers pay for, makes private health insurance pointless. Employers are required to compensate for a certain level of healthcare for their workers in several European countries with a state-run national health system. Most companies are prepared to pay for employment healthcare for their employees because it may prevent employee delays to see a doctor when they become ill. (The Hindu, 2017)

When discussing the European context, it is important to present the country with the highest portion of private healthcare institutions. Namely, Germany has the most developed system of private healthcare with the highest number of privately owned hospital beds in the European Union.

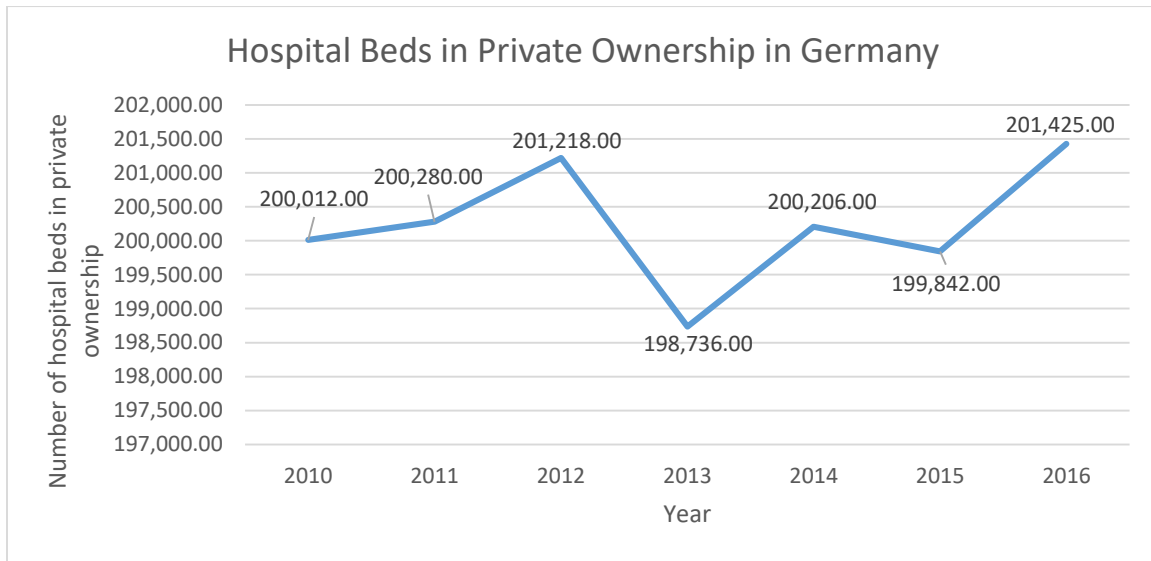


Figure 1: Hospital Beds in Private Ownership in Germany (Eurostat, 2019)

When evaluating the information from Figure 1 about the quantity of private-owned hospital beds in Germany, we can immediately detect a general pattern of development in the number of beds over the years with two significant drops occurring over the observed period. We see a steady and remarkable increase in the quantity of privately owned beds from 2010 to 2012. In 2010 there were 200,012 private-owned beds, which increased to 201,218 by 2012, resulting in an increase of 1,206 over the two-year period, portraying an increase of 0.60% over the period. However, in 2013, the amount of private-owned beds fell sharply, dropping to 198,736 beds. This strong decline in private hospital beds reflects a somewhat substantial 1.23 percent shrinkage compared to the prior year. The number of private hospital beds in Germany does indeed have a major rise in the following year after reaching a peak, attaining an amount of beds comparable to the 2011 period, so the amount in 2014 corresponds to 200,206 beds, indicating a change of 0.73 percent from the prior year. Immediately after experiencing a recovery in the number of hospital beds in 2014, another decrease occurs in the following year with the number of beds falling to 199,842 beds in 2015. In 2016, the last year of the observed period, the amount of hospital beds encountered another significant growth reaching a final amount of 201,425 private hospital beds in Germany. Compared to the previous year, this ultimate development stage reflects a rise of 0.79%. If we glance at the whole graph and the whole time period, compared to the beginning year of 2010 and the end year of 2016, we come to a conclusion that overall the number of private hospital beds in Germany has increased by 1,413 beds over the examined time period.

### 3.0 Focus on Croatia

There are various options within the Croatian private healthcare sector for Croatian citizen to access. The service is either being paid straight away or by using the supplemental insurance. (HZZO, 2013)

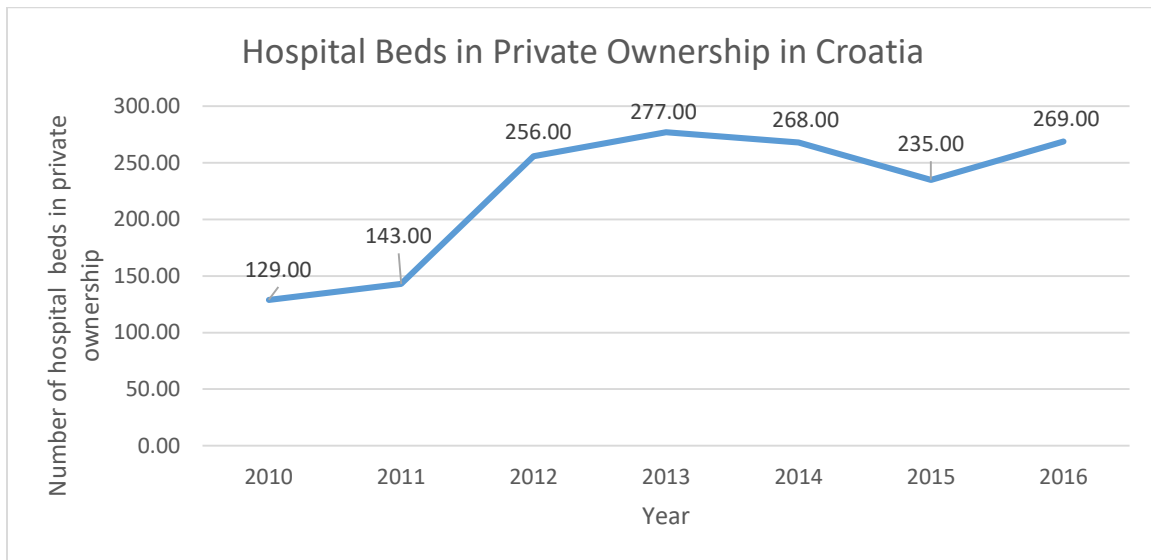


Figure 2: Hospital Beds in Private Ownership in Croatia (Eurostat, 2019)

Figure 2 shows the complete amount of private-owned hospital beds in Croatia between 2010 and 2016. It is evident that the number of private hospitals in Croatia has risen over the six years that have been published. There were only 129 private hospital beds in 2010, that amount began to rise in 2011, rose quickly in 2012 and peaked in 2013 at 277 privately owned hospital beds. It started to fluctuate over the next three years after its pinnacle and has not yet reached the highest quantity of beds it had in 2013 in the latest accessible year which was 2016. The numbers seem rather low but they are not surprising. Namely, Croatians have the ability to use public health services considering the high prices of privately conducted procedures so the demand for the number of private hospital beds is not so high. Private hospital beds are generally used for shorter periods of time, unlike those in public hospitals, as the processes are not as invasive, nor do they perform urgent surgeries that require prolonged hospital stay.



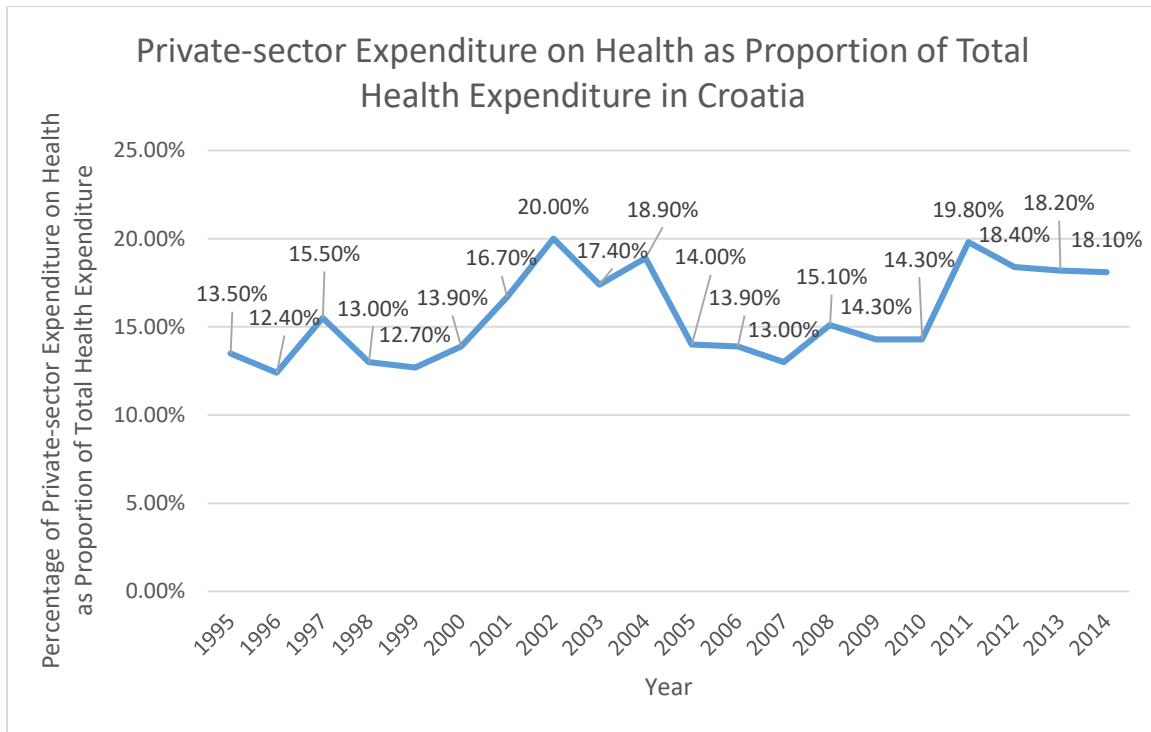


Figure 3: Private - sector Expenditure on Health as Proportion of Total Health Expenditure in Croatia (WHO, 2015)

Figure 3 demonstrates private-sector health expenditure as a percentage of total health expenditure in Croatia from 1995 to 2014. The percentage of private-sector spending was 13.50% in 1995. It was rising over the next two years after which it's starting to drop considerably. There is a growth period from 1999 to 2002 achieving an ultimate peak in 2002 at 20.00%. It continued to fall and fluctuate until 2011, when it nearly achieved the prior peak at 19.80%. It began to decrease at a constant pace afterwards. The overall trend suggests fluctuations in the amount of private – sector expenditure as compared to the total health expenditure in Croatia. The expenditure has increased since 1995 but not by a tremendous amount which leads to believing that public healthcare still carries out the majority of health related services.

## 3.1 Analysis of Ten Major Special Hospitals and Polyclinics in Croatia

### 3.1.1 Polyclinic Šljaj – Anić

Polyclinic Šljaj – Anić is a Zagreb based dental polyclinic, founded in 1984. Their main fields include dentistry and more recently, dermatology. (Poliklinika Šljaj-Anić, 2017)

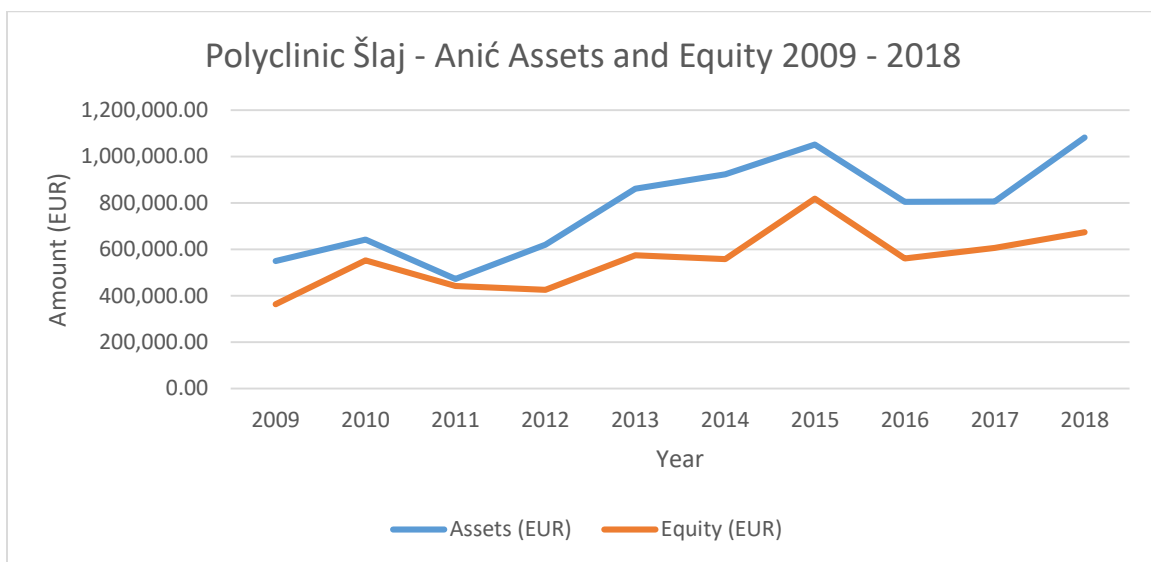


Figure 4: Polyclinic Šljaj - Anić Assets and Equity 2009 – 2018 (Bisnode, 2019)

As seen in Figure 4, Polyclinic Šljaj – Anić had initial fluctuations in both assets and equity. There was an overall increase in assets, it has doubled since 2009. The reason for the asset boost is the growth of current assets, more specifically an immense increase of cash in bank. Over the years, there was an increase in machinery which is a part of long term assets which makes sense since they present themselves as a modern dental clinic always upgrading their technology. Equity increased predominately due to the profit from the business year. In 2011, cash in bank and current assets decreased while in 2015 there is a notable surge of cash in bank. Equity peaked in 2015 as a result of an increase of retained earnings. Both equity and assets grew in 2018.

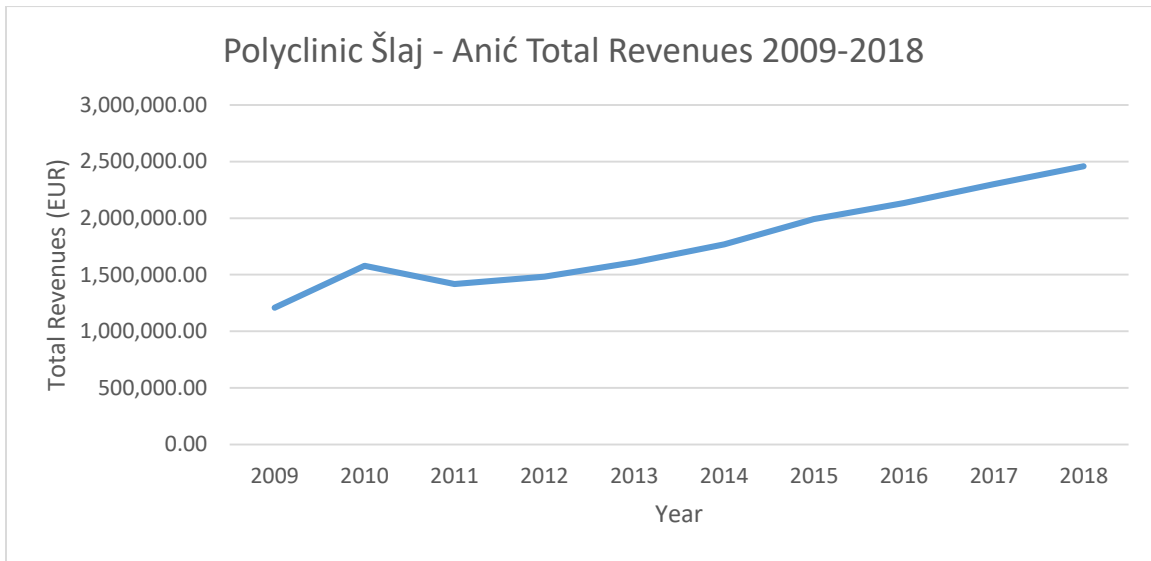


Figure 5: Polyclinic Šlaj - Anić Total Revenues 2009 – 2018 (Bisnode, 2019)

Figure 5 denotes the total revenues of the polyclinic in the time period from 2009 until 2018. From 2009 until 2012, the polyclinic had a brief growth followed by a decline period but the total revenues stabilized and grew at a constant rate onwards. Polyclinic Šlaj Anić introduced new services hence experienced an increased demand over the examined years which is the main reason for the growth of total revenues. Since the growth period started before 2013, there is no correlation of Croatian's EU entrance and the increase in revenues.

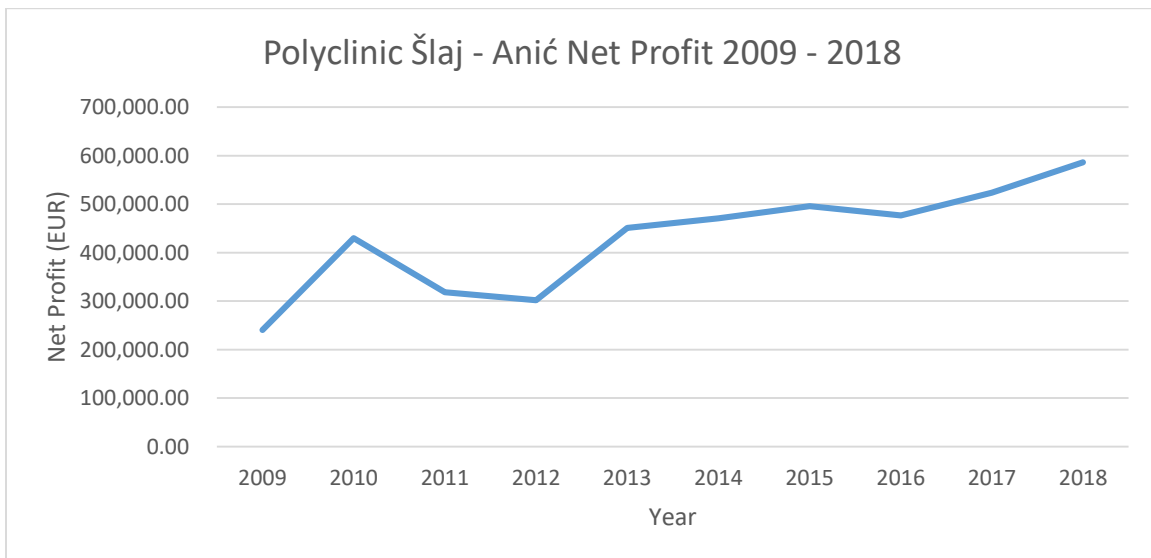


Figure 6: Polyclinic Šlaj - Anić Net Profit 2009 – 2018

Net profit is used to assess company's performance and indicate its profitability. Figure 6 illustrates net profits of each year from 2009 to 2018 which is decent amount of time for observations. Looking at the graph, it is evident that for all ten years, Polyclinic Šljaj – Anić had no net loss. In fact, their net profit increased. However, some fluctuations occurred in the period before 2013, the situation changes and the polyclinic experiences growth onward.

<b>Year</b>	<b>Current ratio</b>	<b>Return on assets</b>
2009	$0.88 \leq 2$	43.78%
2010	$3.31 \geq 2$	66.85%
2011	$7.32 \geq 2$	67.42%
2012	$2.48 \geq 2$	48.75%
2013	$3.06 \geq 2$	52.37%
2014	$2.30 \geq 2$	50.95%
2015	$3.22 \geq 2$	47.17%
2016	$1.49 \leq 2$	59.06%
2017	$2.93 \geq 2$	64.43%
2018	$3.54 \geq 2$	61.76%

*Table 1: Polyclinic Šljaj – Anić Current Ratio and Return on Assets (Bisnode, 2019)*

Current ratio over 2 means that current assets are twice as large as current liabilities. Current ratio less than 2 indicates that a company is not able to cover its short term liabilities and financial obligations lasting less than one year.

Table 1 shows current ratio and return on assets of Polyclinic Šljaj – Anić from 2009 to 2018. It is apparent that the company was unable to cover its short-term obligations in 2009, but changes were made in the following year. In general, the current ratio exceeds 2 in each year except in 2016, when it is equivalent to 1.49, which suggests a rather favorable financial health.

Return on assets is a financial ratio that indicates a business's proportion of profit relative to its general resources. ROA is usually acceptable, exceeding 5 percent. ROA was very high in every

year which represents great business efficiency - the higher the return on assets, the greater the management.

### 3.1.2 Polyclinic Aviva

Polyclinic Aviva was founded in 1997 as a successor to the Nemetova Polyclinic. They specialize in Magnetic Resonance Imaging, ultrasounds, gastroenterology, gynecology, cardiology, psychiatry and neurology. (Poliklinika Aviva, 2019)

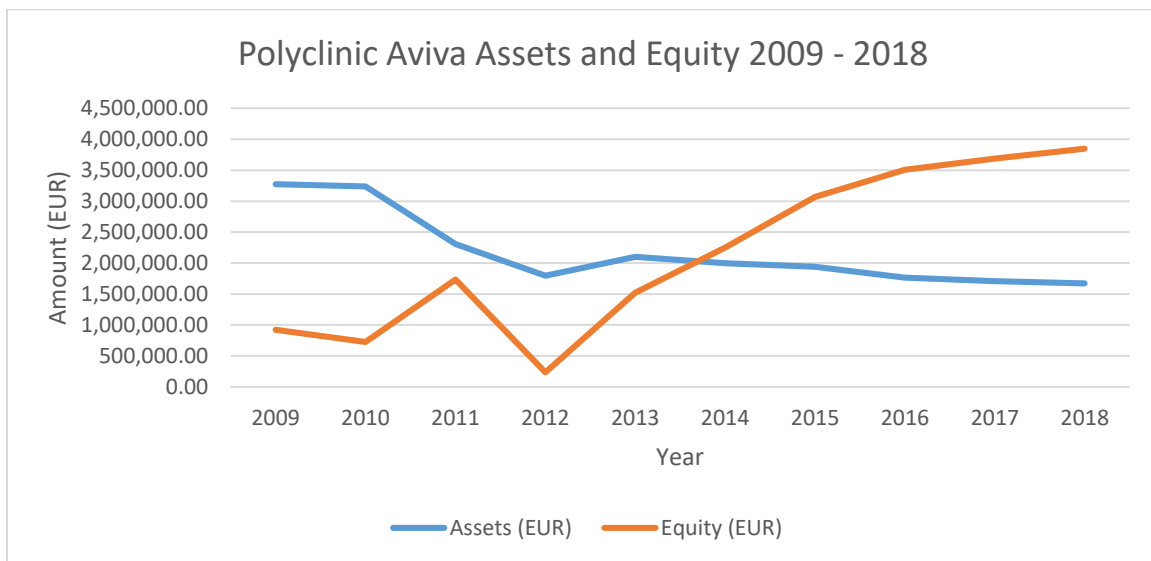


Figure 7: Polyclinic Aviva Assets and Equity 2009 – 2018 (Bisnode, 2019)

Figure 7 shows how, over the ten years studied, the total assets of Polyclinic Aviva have declined. Assets were the highest in 2009 and started to slightly reduce in 2010. This event was followed by a steep downfall with the lowest point being in 2012. Assets have since started to recover but ended up reducing eventually. The intriguing aspect is that the reason for the decrease in assets is the decrease in machinery quantity which could indicate lack of investment in technology. Significant equity changes occurred from 2009 to 2012 as there was a large rise in retained earnings in 2012.

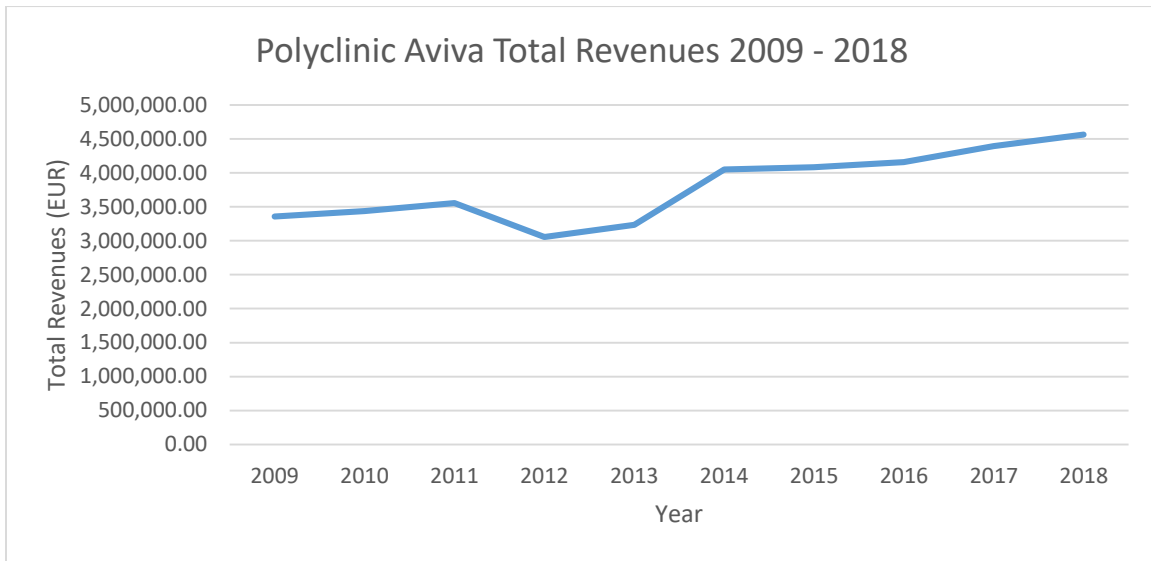


Figure 8: Polyclinic Aviva Total Revenues 2009 – 2018 (Bisnode, 2019)

Figure 8 demonstrates the total revenues of Polyclinic Aviva during the interval under review. Polyclinic Aviva's total revenues grew from 2009 to 2018 owing to a number of variables. Namely, there was a massive rise in operating revenues of the polyclinic. On the other side, there was a drop in interest and financial expenses.

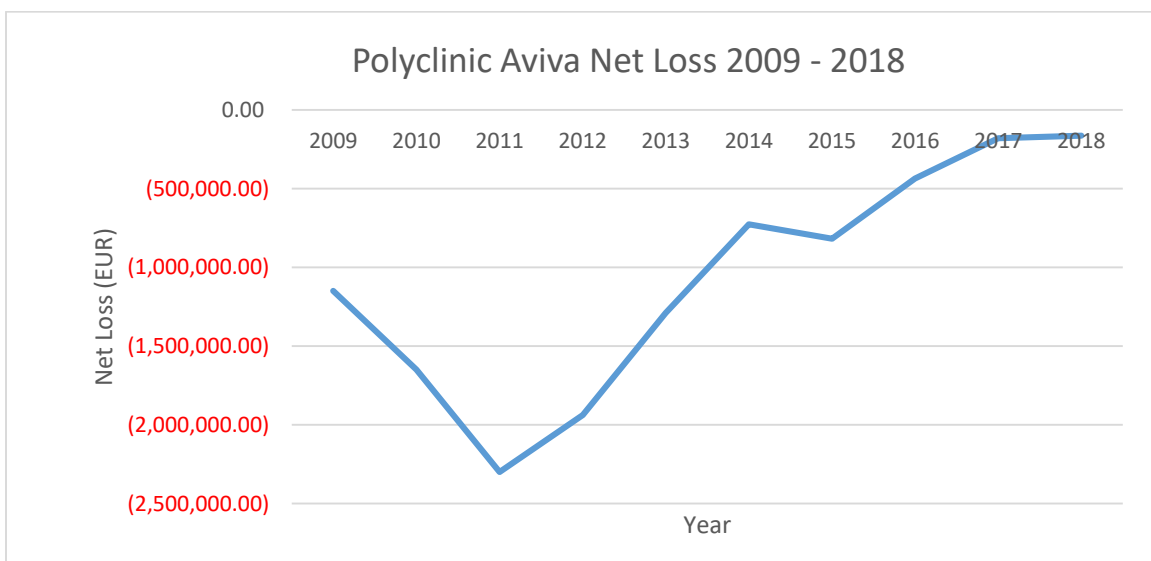


Figure 9: Polyclinic Aviva Net Loss 2009 – 2018 (Bisnode, 2019)

Figure 9 denotes the net loss experienced by Polyclinic Aviva from 2009 to 2018. Unlike Polyclinic Šlaj – Anić that had net profit in all years, Polyclinic Aviva has astonishing levels of net loss. In 2002 they already had over one-million-euro net loss, but there was an even greater plummet in 2011 reaching almost 2.5-million-euro loss. Those numbers have improved over the years but the polyclinic is still not operating profitably.

<b>Year</b>	<b>Current Ratio</b>	<b>Return on assets</b>
2009	$0.963485902 \leq 2$	-35.09%
2010	$1.072096642 \leq 2$	-50.90%
2011	$0.76511674 \leq 2$	-99.72%
2012	$0.274466651 \leq 2$	-84.04%
2013	$0.154047528 \leq 2$	-61.39%
2014	$0.121206023 \leq 2$	-36.34%
2015	$0.136037933 \leq 2$	-42.18%
2016	$0.144078492 \leq 2$	-24.58%
2017	$0.187689198 \leq 2$	-10.21%
2018	$0.185564018 \leq 2$	-9.53%

*Table 2: Polyclinic Aviva Current Ratio and Return on Assets (Bisnode, 2019)*

The current ratio of Polyclinic Aviva is constantly exceptionally small. It has never reached the minimum threshold in the ten years it was examined. This is not at all unexpected given that in all these years they have had net loss.

Table 2 also depicts their return on assets. Not only do they fail to satisfy the 5 percent minimum obligation, their ROA is negative at all times. Company is neither liquid nor profitable, there is poor financial health and their company is not effective.

### 3.1.3 Special hospital Arithera

Special hospital Arithera was founded in 2003 in Zagreb. They specialize in general surgery, internal medicine, physical therapy, orthopedics, rehabilitation, dermatology and venereology. (Specijalna bolnica Arithera, 2013)

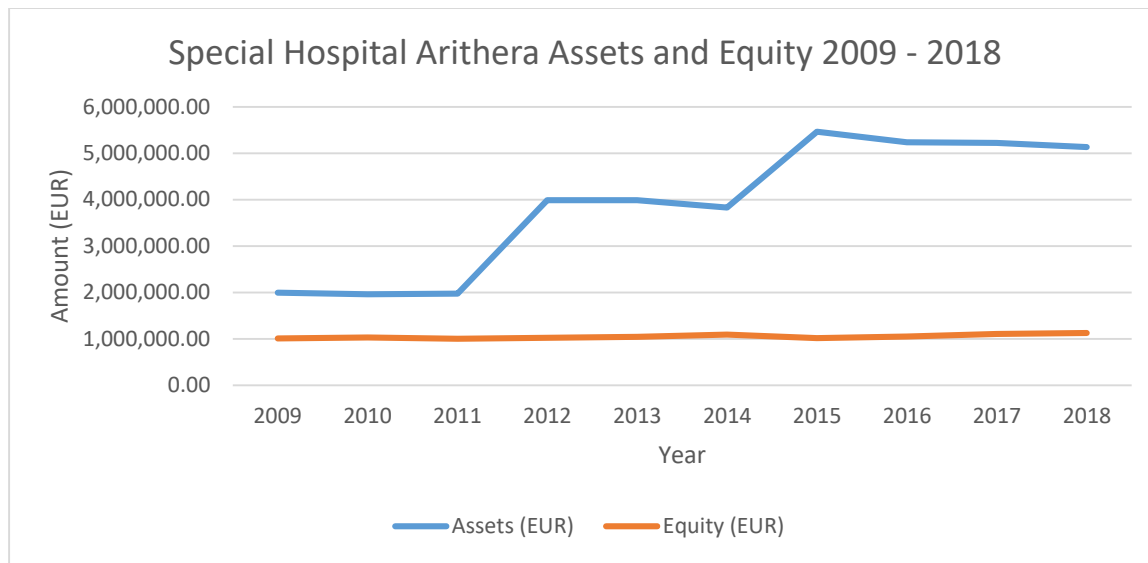


Figure 10: Special Hospital Arithera Assets and Equity 2009 – 2018 (Bisnode, 2019)

Figure 10 presents the polyclinic's assets and equity from 2009 to 2018. Special hospital Arithera encountered periods of rapid assets growth and plateau phases while almost stagnating from 2009 to 2011. This is because there have been spikes in current assets over the years of development. On the other hand, due to retained earnings, equity grew at an exceptionally slow pace.



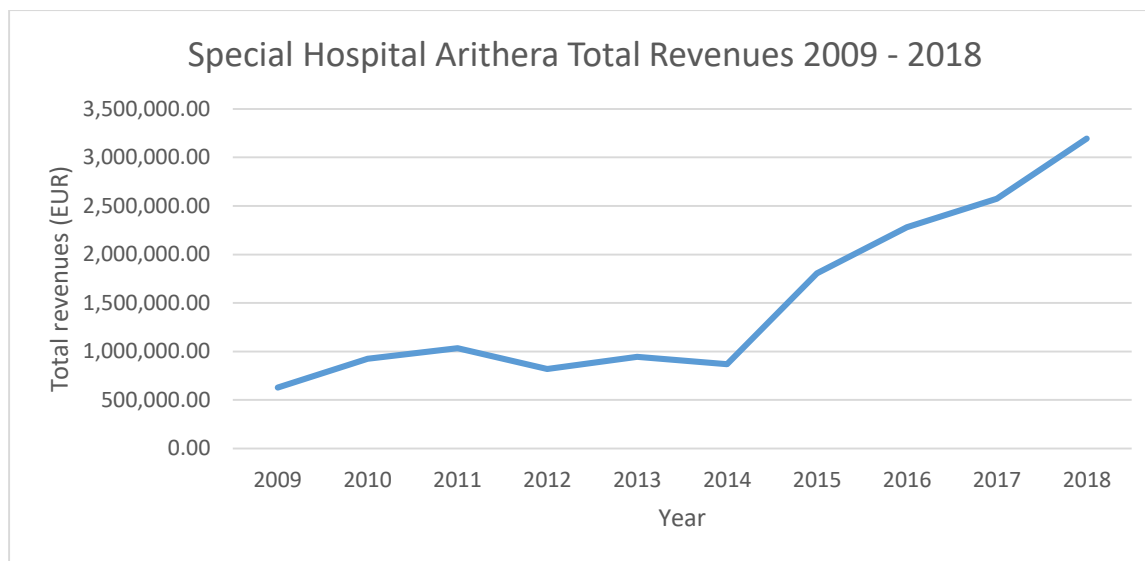


Figure 11: Special Hospital Arithera Total Revenues 2009 – 2018 (Bisnode, 2019)

Figure 11 shows how Special hospital Arithera's total revenues fluctuated from 2009 until 2014. Rapid development took place in 2014, and it was still active in 2018. Growth occurred subsequent to a rise in financial income and operating income, and sales increased significantly from 2016 to 2018. It is essential to note that operating expenses have also increased, but not so rapidly.

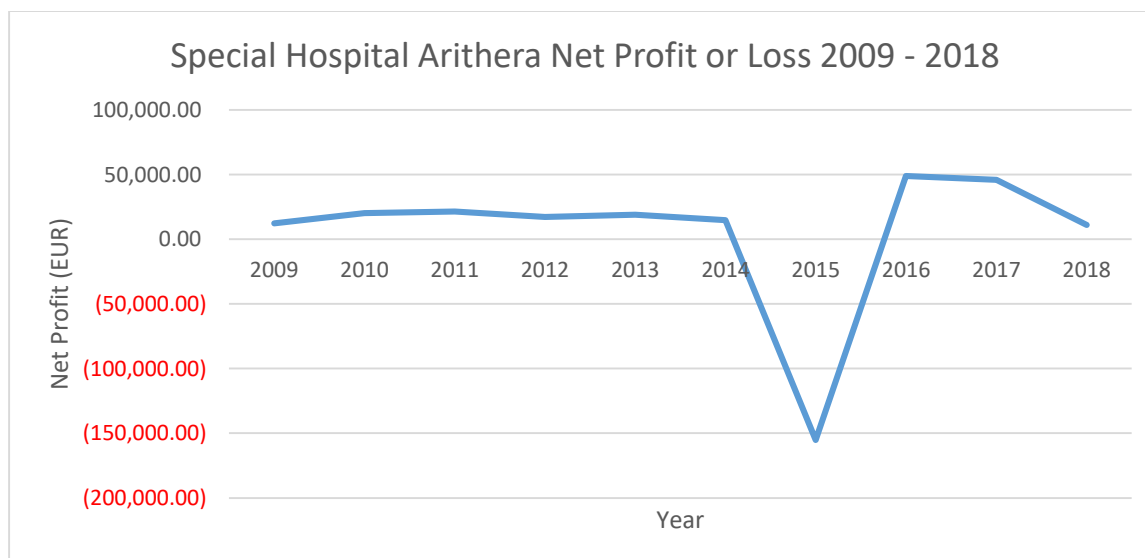


Figure 12: Special Hospital Arithera Net Profit 2009 – 2018 (Bisnode, 2019)

Figure 12 displays the net profit and loss that occurred within Special hospital Arithera's business. In 2009, they encountered low levels of net profit which, with minimal fluctuations, remained at the same level until 2015. From 2014 to 2015, special hospital underwent a major net loss followed by the largest net profit recorded within just one year. The net profit has been falling ever since but is still positive.

<b>Year</b>	<b>Current ratio</b>	<b>Return on assets</b>
2009	$0.50 \leq 2$	0.62%
2010	$0.73 \leq 2$	1.05%
2011	$1.09 \leq 2$	1.09%
2012	$0.52 \leq 2$	0.44%
2013	$0.59 \leq 2$	0.49%
2014	$1.45 \leq 2$	0.38%
2015	$0.77 \leq 2$	0.39%
2016	$0.93 \leq 2$	0.93%
2017	$0.80 \leq 2$	0.87%
2018	$0.78 \leq 2$	0.21%

*Table 3: Special Hospital Arithera Current Ratio and Return on Assets (Bisnode, 2019)*

Table 3 demonstrates Special hospital Arithera's current ratio and return on assets levels from 2009 to 2018. Current ratio was unsatisfactory in all years as it was below 2. Comparing 2018 to 2009, it is visible that current ratio has improved but seeing that in 2014 the hospital experienced a ratio of 1.45, it is not looking as positive as it could. Their financial health and liquidity do not paint a positive picture of the company.

Return on assets is positive, but it does not equal 5% in any of the years. In most periods, it is under 1% and only exceeds it in 2010 and 2011. ROA indicates that Special hospital Arithera does not have good business efficiency and prosperity.

### 3.1.4 Special Hospital Akromion

Special hospital Akromion was founded on April 11th 2008. They operate on two locations, in Zagreb and in Krapinske Toplice. They do examinations in their Zagreb clinic and surgeries in Krapinske Toplice hospital. They specialize in orthopedics and traumatology. Special hospital Akromion is the largest private orthopedic hospital in Croatia and have a status of E – hospital meaning that the hospital is completely computerized. (Specijalna bolnica Akromion, 2017)

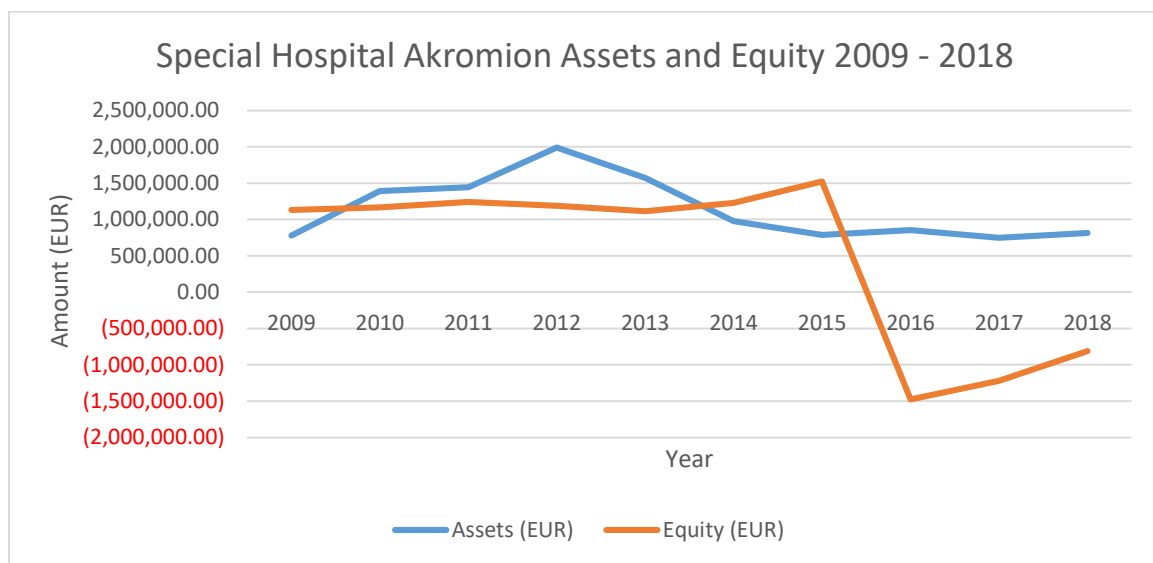


Figure 13: Special Hospital Akromion Assets and Equity 2009 – 2018 (Bisnode, 2019)

Special hospital Akromion had an initial growth of assets caused by increase of cash in bank. The assets reached their peak in 2012 and went on to decline due to decrease of cash in bank. In 2013 their short term financial assets become zero and did not change. Equity remained stable until a small growth period from 2014 and the first half of 2015. However, an intense plummet, triggered exclusively by accumulated deficit, characterizes the second half of 2015. Accumulated deficit rates enhanced and continued to rise in the second half of 2016.

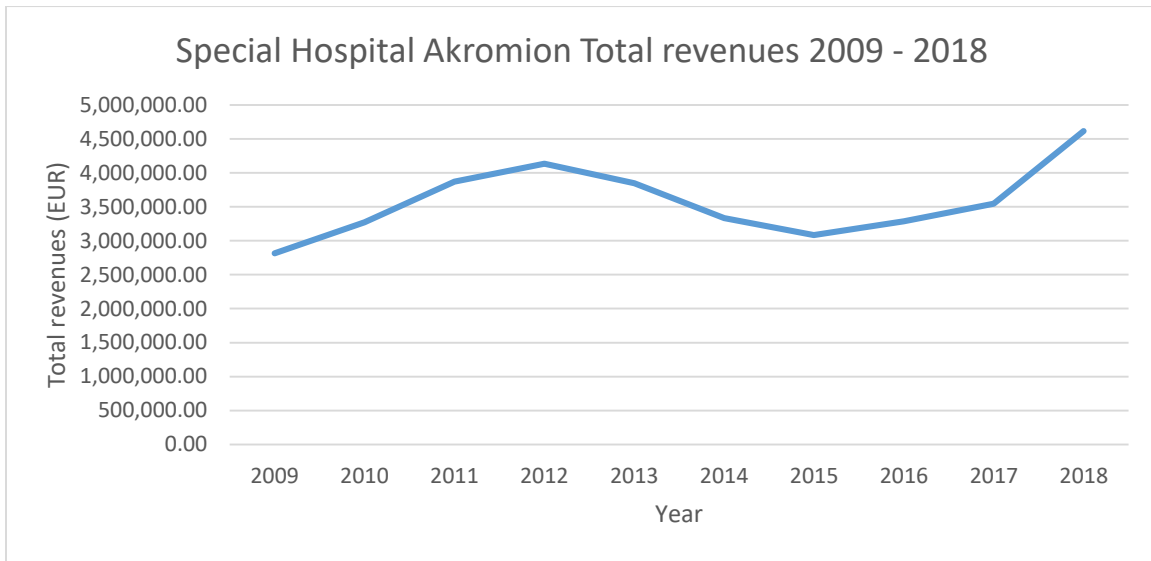


Figure 14: Special Hospital Akromion Total revenues 2009 – 2018 (Bisnode, 2019)

Figure 14 shows Special hospital Akromion's total revenues from 2009 to 2018. The hospital's total revenues constantly oscillate over the years because operating income changes due to fluctuating sales.

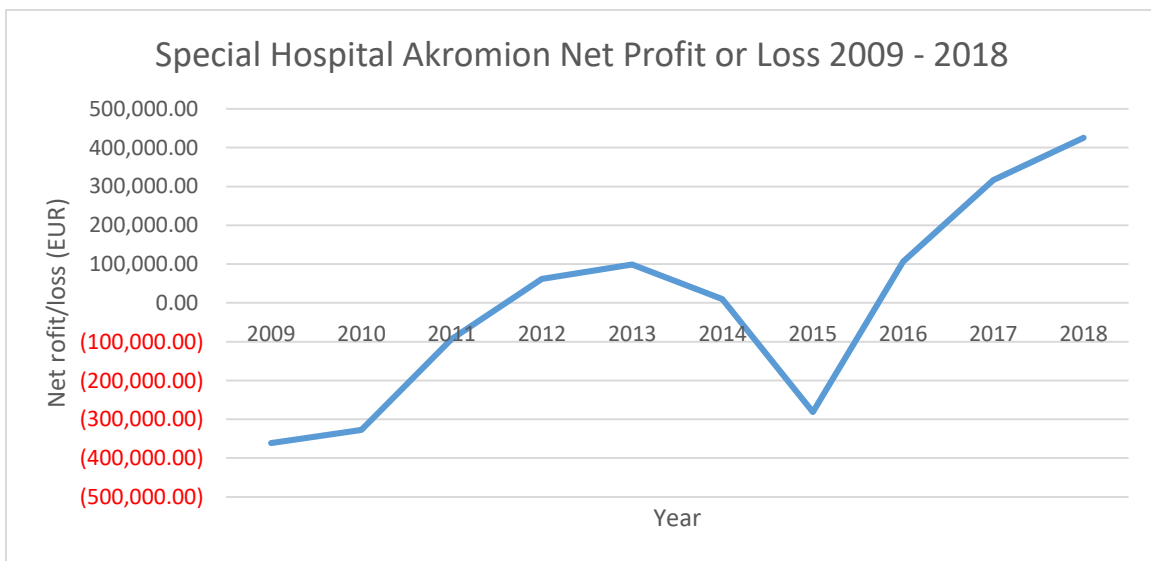


Figure 15: Special Hospital Akromion Net Profit or Loss 2009 – 2018 (Bisnode, 2019)

Figure 15 presents Special hospital Akromion's net profit and loss over ten years observed. 2009 was rather an unfavorable period for the hospital because they suffered net loss of almost four hundred thousand euros. It seems as if things picked up for them due to the rise in profit over the next five years but the company encountered loss again. They had a rather quick rise of profits within a year and net profit still keeps increasing.

<b>Year</b>	<b>Current ratio</b>	<b>Return on assets</b>
2009	$0.39 \leq 2$	-46.46%
2010	$0.42 \leq 2$	-23.53%
2011	$0.38 \leq 2$	-6.48%
2012	$0.49 \leq 2$	3.11%
2013	$0.39 \leq 2$	6.29%
2014	$0.19 \leq 2$	10.12%
2015	$0.12 \leq 2$	-35.69%
2016	$0.21 \leq 2$	12.40%
2017	$0.22 \leq 2$	39.16%
2018	$0.31 \leq 2$	54.26%

*Table 4: Special Hospital Akromion Current Ratio and Return on Assets (Bisnode, 2019)*

Table 4 represents the current ratio and return on assets of Special hospital Akromion. Their current ratio is lower than two at all times and has even lowered over the ten years. This trend is not good for the company's liquidity and their financial health.

Return on assets is low in the first three years but it recovers in 2013. In the latter three years their ROA increases significantly. This shows that the hospital has improved their business efficiency.

### 3.1.5 Special Hospital Svjetlost

Special hospital Svjetlost is a leading ophthalmology hospital founded in January 2008. They operate in several locations: Zagreb, Split, Bosnia and Herzegovina in Sarajevo and Banja Luka, Novi Sad in Serbia and Budva in Montenegro. (Specijana bolnica Svjetlost, 2015)

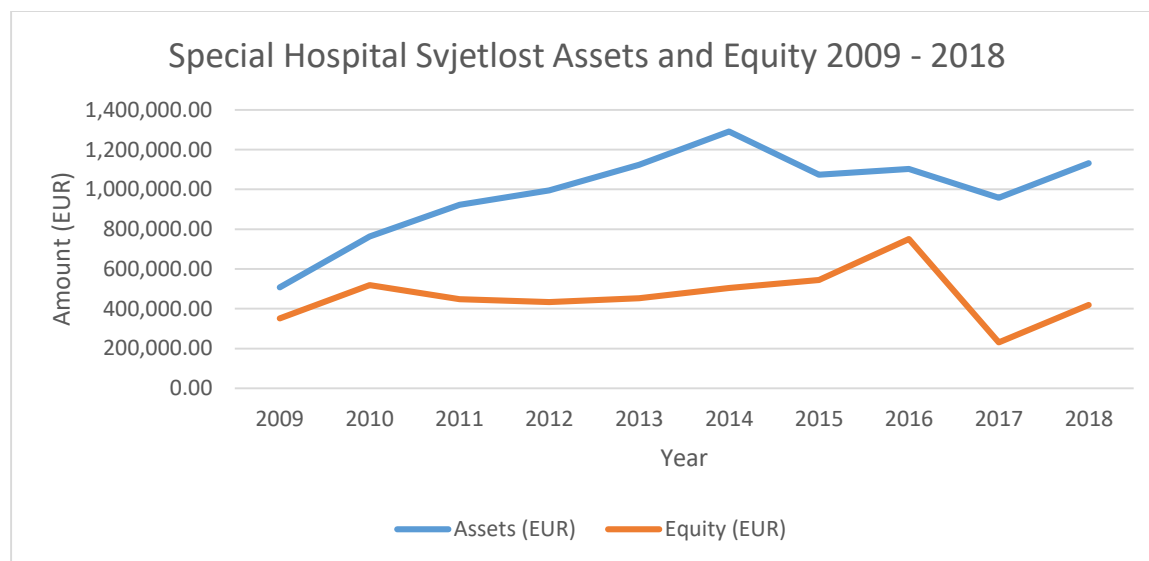


Figure 16: Special Hospital Svjetlost Assets and Equity 2009 – 2018 (Bisnode, 2019)

Figure 16 shows the development era of Svjetlost Special Hospital which spanned from 2009 to 2014 with the peak of assets in 2014. Graph shows some changes, but general development exists. Growth occurred due to an increase in long-term assets, short-term assets and financial assets. There was a drop in 2017 due to financial assets suddenly being equal to zero which lowered the total assets line. Equity was rising from 2009 to 2010 when it started gradually decreasing. Those changes were not of a big scope and even turned into growth with a 2016 peak. The peak was caused by the current year profits. Equity plummeted in 2017 as the profit decreased.

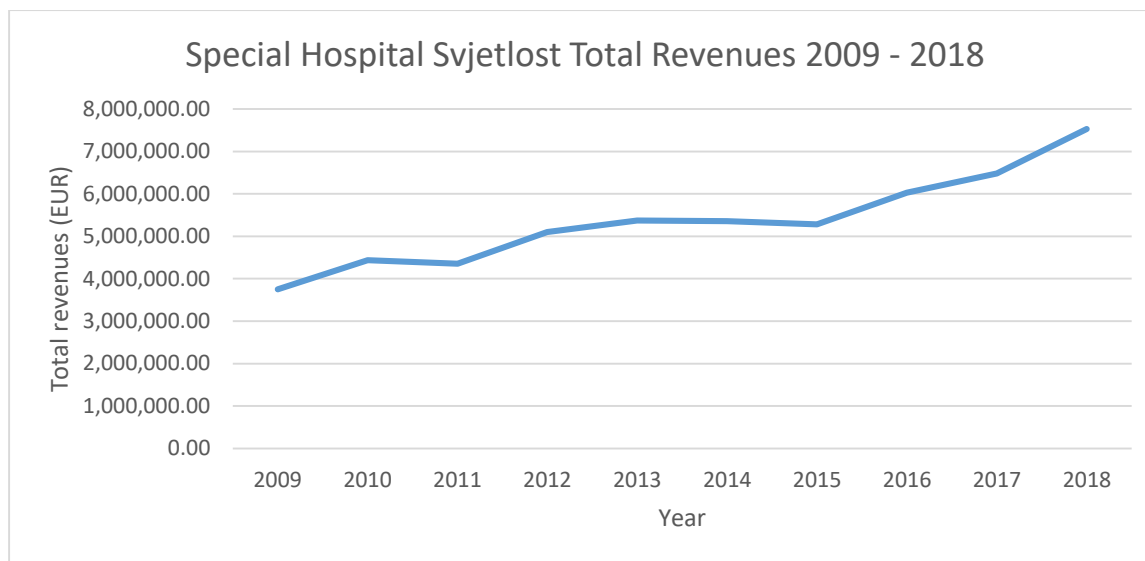


Figure 17: Special Hospital Svjetlost Total Revenues 2009 – 2018 (Bisnode, 2019)

Figure 17 represents Special hospital Svjetlost’s total revenues over ten years. In the years mentioned, even with some minor changes, total revenues grew. Growth was due to increased operating income, higher revenues, and higher financial income.

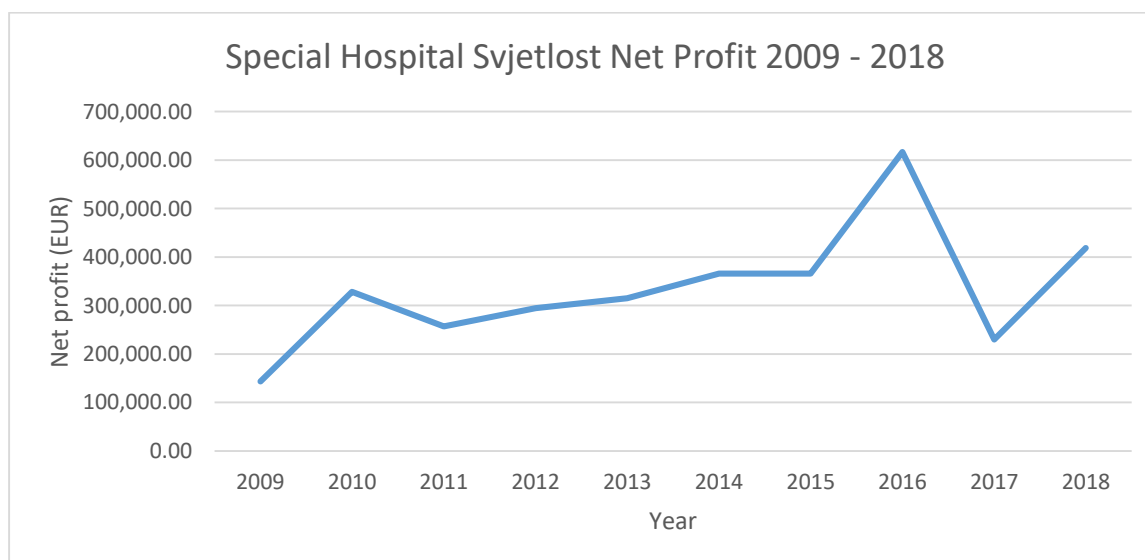


Figure 18: Special Hospital Svjetlost Net Profit 2009 – 2018 (Bisnode, 2019)

By analyzing figure 18, it is clear that Special hospital Svjetlost's net profit has grown over the years. In 2009 their profit was just over 100,000 euros and has climbed in the following years with a slight decline in 2011. Net profit reached a peak in 2016 after which it plummeted. It started recovering and is currently on a growth path.

<b>Year</b>	<b>Current ratio</b>	<b>Return on assets</b>
2009	$2.92 \geq 2$	28.22%
2010	$1.07 \leq 2$	42.95%
2011	$0.39 \leq 2$	27.87%
2012	$0.91 \leq 2$	29.64%
2013	$0.74 \leq 2$	28.03%
2014	$0.55 \leq 2$	28.35%
2015	$0.48 \leq 2$	34.07%
2016	$1.24 \leq 2$	55.68%
2017	$0.72 \leq 2$	22.11%
2018	$1.09 \leq 2$	37.04%

*Table 5: Special Hospital Svjetlost Current Ratio and Return on Assets (Bisnode, 2019)*

Table 5 shows Special hospital Svjetlost's current ratio and return on assets. In 2002, current ratio was 2.92 which is above 2 and indicates good liquidity and financial health. After that period, current ratio fell and fluctuated but never reached the initial value. That is not a good sign regarding the company's liquidity. Special hospital's return on asset, on the other hand, met the satisfactory amount as they are above 5% at all times. This proves business efficiency within the company and mindfulness when using assets to generate earnings.



### 3.1.6 Polyclinic Bagatin

Polyclinic Bagatin was founded in 1995 as the founder's private practice for maxillofacial surgery. The polyclinic offers over 250 services on three locations within Zagreb and Split. Their focus is plastic surgery and dermatology. (Poliklinika Bagatin, 2014)

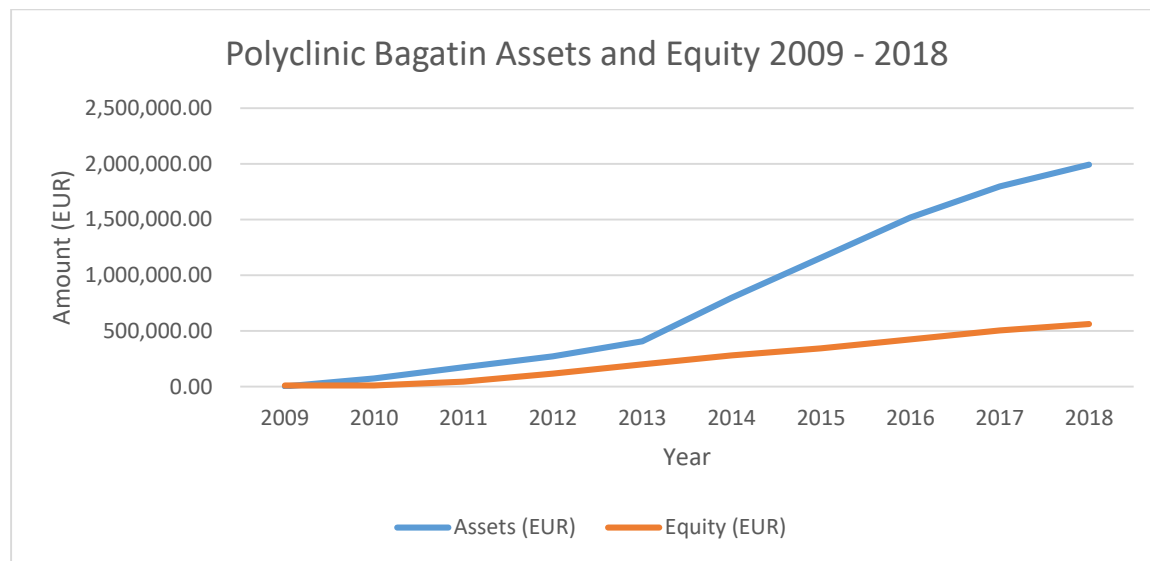


Figure 19: Polyclinic Bagatin Assets and Equity 2009 – 2018 (Bisnode, 2019)

Figure 19 displays Polyclinic Bagatin's assets and equity from 2009 until 2018. In the early years, both assets and equity started low and slowly increased until 2013. In 2013, the incline of assets becomes steeper. This is due to an increase in tangible assets, receivables, inventories and short term financial assets. Equity rose for the entire period at a steady pace. The rise was a result of increased retained earnings, current year profit as well as subscribed capital.

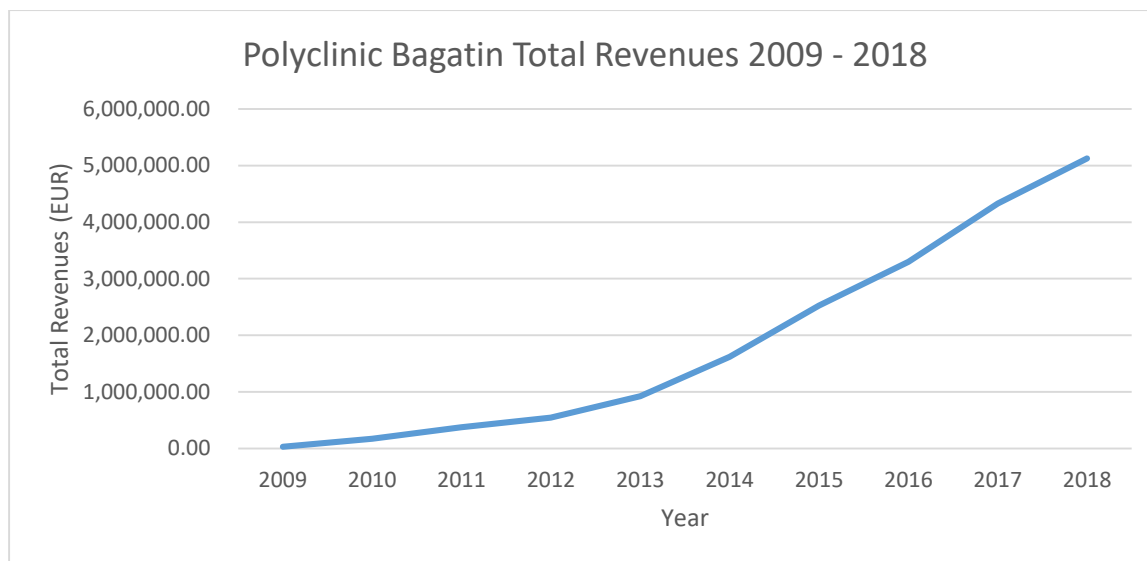


Figure 20: Polyclinic Bagatin Total Revenues 2009 – 2018 (Bisnode, 2019)

Figure 20 presents Polyclinic Bagatin's total revenues. Over the years examined, the total revenues of Polyclinic Bagatin witnessed a fast rise. The increase is linked to the rise of sales as tangible assets also expanded as a consequence of improvements in equipment.

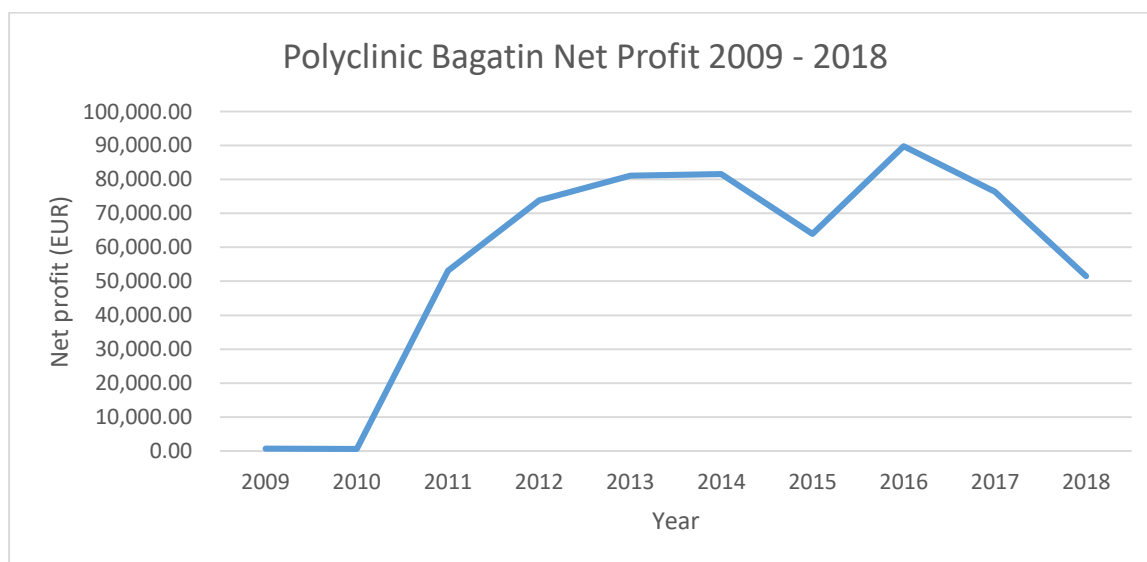


Figure 21: Polyclinic Bagatin Net Profit 2009 – 2018 (Bisnode, 2019)

In Figure 21, the graph of the net profit of Polyclinic Bagatin shows stagnation in 2009 and 2010 followed by a rapid phase of growth and maturity completed with a fall in 2015. Net profit picks up in 2015 just to begin to decline in 2016. The situation has not changed yet. The declining net profit of the company is an indication of company's low profitability.

Year	Current ratio	Return on assets
2009	$0.06 \leq 2$	49.45%
2010	$0.21 \leq 2$	0.86%
2011	$1.05 \leq 2$	30.69%
2012	$1.48 \leq 2$	27.22%
2013	$1.95 \leq 2$	49.45%
2014	$1.76 \leq 2$	10.23%
2015	$0.84 \leq 2$	5.53%
2016	$0.75 \leq 2$	5.83%
2017	$0.76 \leq 2$	49.45%
2018	$1.25 \leq 2$	2.59%

Table 6: Polyclinic Medikol Current Ratio and Return on Assets (Bisnode, 2019)

Table 6 shows how the current ratio and return on assets change over ten years. Current ratio started very low at only 0.06 but started increasing afterwards. 2013 was quite promising for the polyclinic's current ratio hence their liquidity. It started to fall just a year later and hasn't recovered. Due to the low current ratio, their liquidity and financial health do not promise a positive future impact. Return on assets started out high, however, in this case both net profit and total assets were extremely low so the high percentage does not reflect the real situation. There is a significant fall in 2010 because net profit stayed at the same low level while total assets increased dramatically. The percentages change a lot over the years. There is a drastic fall in 2015, 2016 and 2018 and the reason behind this is an immense increase in total assets and a little to no increase in net profit. For the most part, the polyclinic still has an acceptable business efficiency.

### 3.1.7 Polyclinic Medikol

Polyclinic Medikol was established in 2000 as a solely radiology private institution. They are currently located in seven locations in five Croatian cities: Zagreb, Rijeka, Čakovec, Split and Osijek. The polyclinic offers services in the fields of neurology, radiology, dermatology, nuclear medicine, internal medicine, gynecology, ophthalmology, urology, podiatry, physical therapy and rehabilitation. (Poliklinika Medikol, 2013)

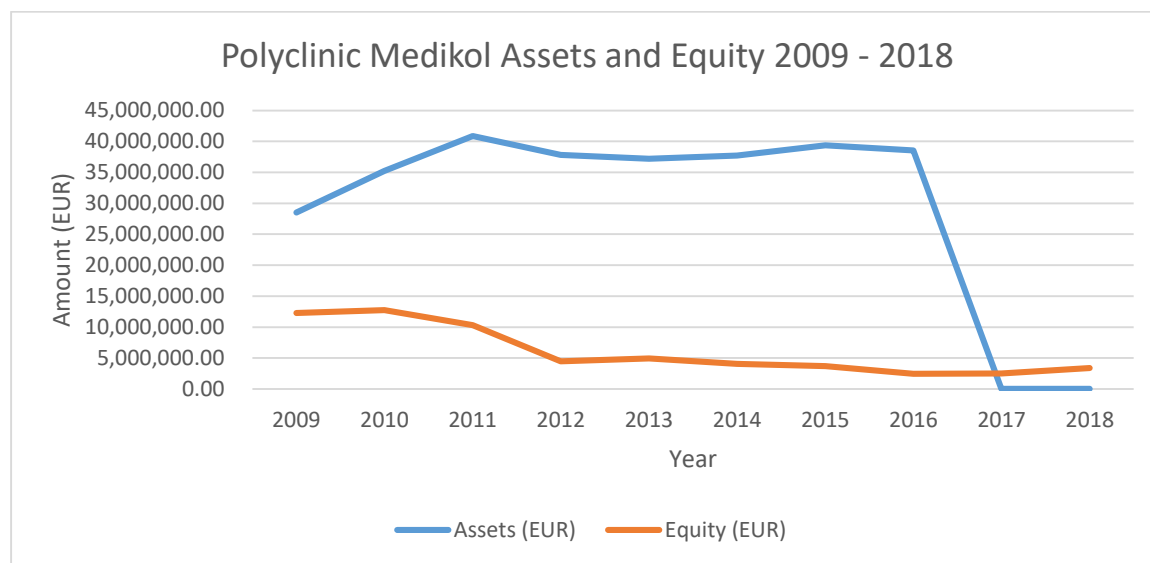


Figure 22: Polyclinic Medikol Assets and Equity 2009 – 2018 (Bisnode, 2019)

In Figure 22, the trend of asset and equity movement through the years can be observed. In the 2009 and 2010, assets continued to expand and then began to drop in the second half of 2012. There was an unexpected plummet in mid-2016 as a consequence of a drop in tangible assets and current assets, short term financial assets and receivables. Equity also declined due to diminishing revaluation reserves and current year profit.

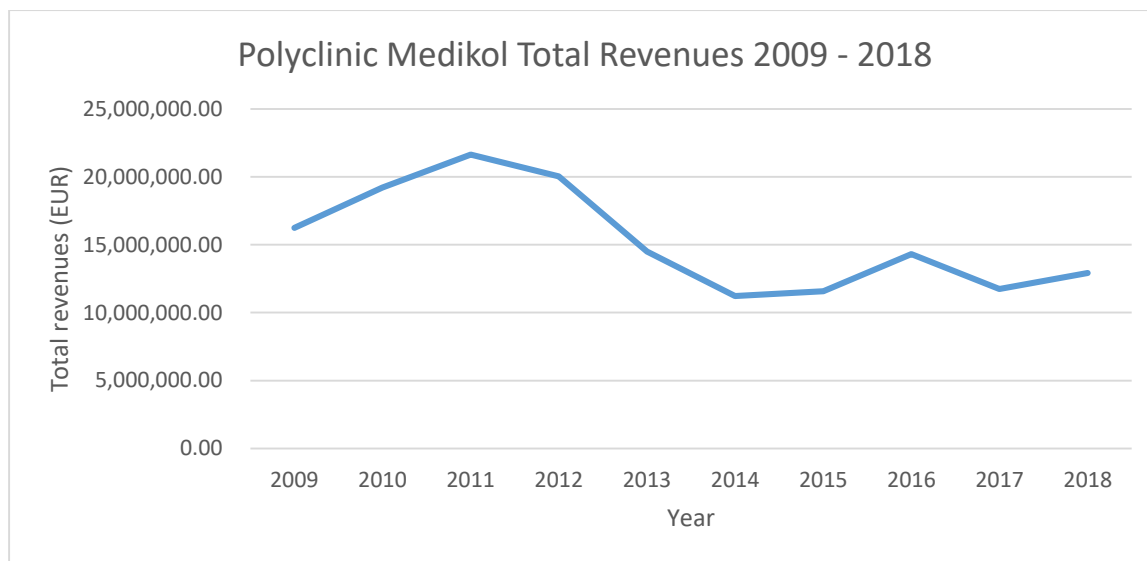


Figure 23: Polyclinic Medikol Total Revenues 2009 – 2018 (Bisnode, 2019)

Figure 23 portrays Polyclinic Medikol's total revenues. In the first three years there was an almost linear increase with a pinnacle in 2011. There was a downturn from the mid-2011 until 2014. The small rise did not create the conditions like they were in 2011, in reality another decrease occurred. The major downsizing of total revenues happened because there was a decline in the dropping of the item other business revenues.

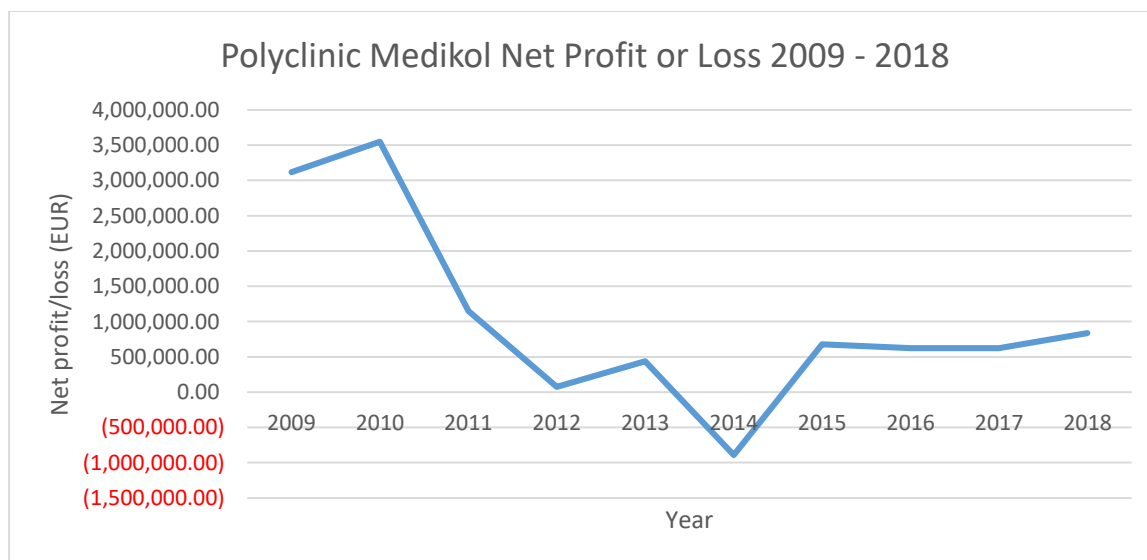


Figure 24: Polyclinic Medikol Net Profit or Loss 2009 – 2018 (Bisnode, 2019)

Polyclinic Medikol's net profit and loss is seen in Figure 24. 2010 was the most profitable year for them with profits reaching 3.5 million euros. After the success came a dramatic fall, reaching loss in 2014. They became profitable again on 2015 but their profit is not significant considering their size.

Year	Current ratio	Return on assets
2009	$0.30 \leq 2$	10.94%
2010	$0.38 \leq 2$	10.08%
2011	$0.33 \leq 2$	2.81%
2012	$0.35 \leq 2$	0.19%
2013	$0.13 \leq 2$	1.17%
2014	$0.63 \leq 2$	-2.37%
2015	$0.76 \leq 2$	1.72%
2016	$0.74 \leq 2$	1.61%
2017	$0.60 \leq 2$	31.95%
2018	$0.67 \leq 2$	40.82%

Table 7: Polyclinic Medikol Current Ratio and Return on Assets (Bisnode, 2019)

Table 7 exhibits current ratio and return on assets of Polyclinic Medikol. Based on their current ratio values, the business is not liquid. Such small values portray financial health issues in the foreseeable future. Return on investments was fair in 2009 and 2010 but began to collapse in 2011. Looking back at Figure 24 and observing net profit in all years with poor asset return it is clear that the highest one was in 2014 when the business suffered net loss. In 2017 and 2018, percentage increase remarkably due to a rise in net profit.

### 3.1.8 Special Hospital Agram

Special hospital Agram was established in 1995. Their specialties include gynecology, internal medicine, radiology and surgery. They opened hospitals in seven Croatian cities: Zagreb, Split, Varaždin, Slavonski Brod, Zadar, Rijeka and Osijek. (Specijalna bolnica Agram, 2018)

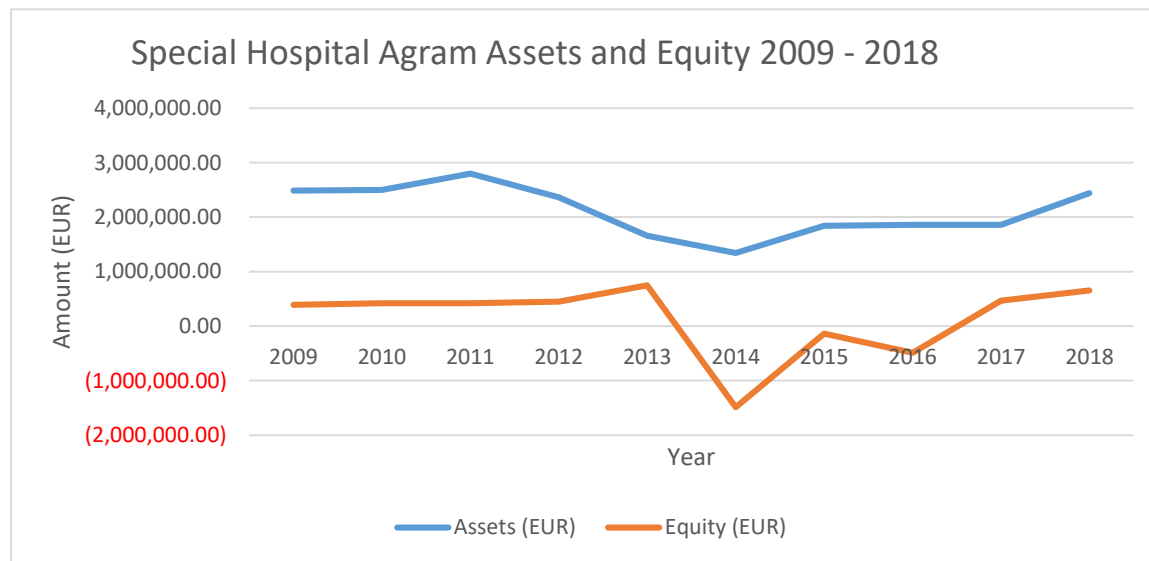


Figure 25: Special Hospital Agram Assets and Equity 2009 – 2018 (Bisnode, 2019)

Figure 25 displays Special hospital Agram's assets and equity changing over ten years. Over the years, the assets of Special Hospital Agram fluctuated and peaked in 2011, but subsequently dropped. There were fluctuations corresponding to machinery oscillations, declines in receivables, growth of cash in bank. Not much of a transition has occurred overall. Equity remained stable until 2013 when a decline occurred as a result of the current year loss.

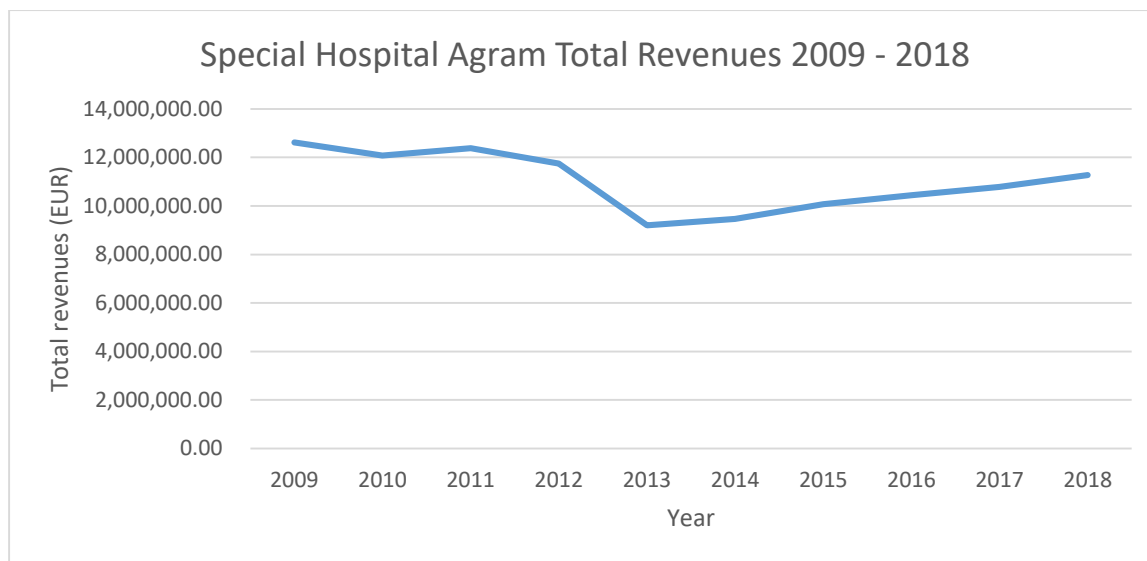


Figure 26: Special Hospital Agram Total Revenues 2009 – 2018 (Bisnode, 2019)

Special hospital Agram's total revenues are shown in Figure 26. 2009 had the highest amount of total revenues. Over the years, revenues fluctuated somewhat even had a drop in 2013 but have since been growing steadily.

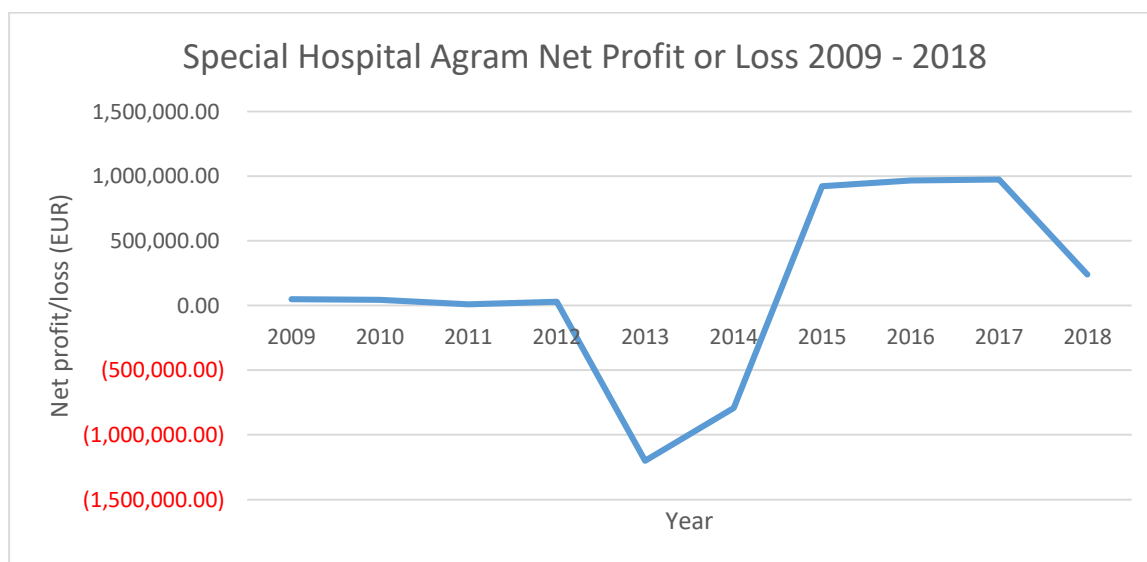


Figure 27: Special Hospital Agram Net Profit or Loss 2009 – 2018 (Bisnode, 2019)



Net profit and loss of Special hospital Agram can be seen in Figure 27. In 2009, net profit was present but was rather low. The trend continued until 2012 when profit suddenly dropped and became a loss. Net loss became net profit in 2014 and it seems as if the company was on the right track, however, profits first reached a plateau then took a downward turn. At this point, it is not clear if the company will experience loss once again in 2019.

<b>Year</b>	<b>Current ratio</b>	<b>Return on assets</b>
2009	$1.05 \leq 2$	1.93%
2010	$0.93 \leq 2$	1.81%
2011	$1.29 \leq 2$	0.33%
2012	$2.00 \geq 2$	1.19%
2013	$1.13 \leq 2$	-72.43%
2014	$0.80 \leq 2$	-59.19%
2015	$1.80 \leq 2$	50.08%
2016	$0.75 \leq 2$	52.00%
2017	$1.27 \leq 2$	52.30%
2018	$1.23 \leq 2$	9.81%

*Table 8: Special Hospital Agram Current Ratio and Return on Assets (Bisnode, 2019)*

Table 8 introduces Special hospital Agram's current ratio and return on assets. Current ratio lower than 2 in all years except for 2012. It shows that the special hospital is not tremendously liquid and it is not in the best financial health. Return on assets was not acceptable in the first six years, it even became negative in 2013 and 2014. The cause of the drop was net loss that occurred at that time. 2015 was a real turning point for the company when return on assets becomes over fifty percent. Values fell later on but they are still tolerable.

### 3.1.9 Polyclinic Identalia

Polyclinic Identalia is a dental polyclinic located in Zagreb. They were founded in 2012. They pride themselves with owning the latest technologies. (Poliklinika Identalia, 2013)

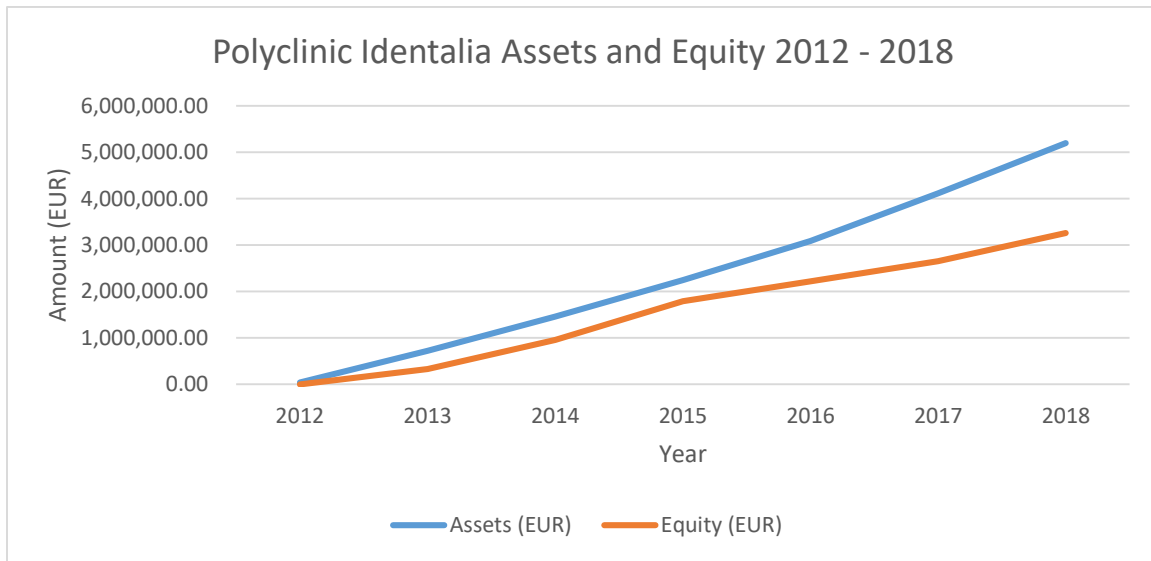


Figure 28: Polyclinic Identalia Assets and Equity 2012 – 2018 (Bisnode, 2019)

Figure 28 represents assets and liabilities movements from 2012 to 2018. There has been a constant rise in their assets since then. Current and non-current assets contribute similarly to development. Loans began to be part of their long-term assets in 2016. The equity line is increasing and the reason behind the rise is the growth of retained earnings and current year profits.

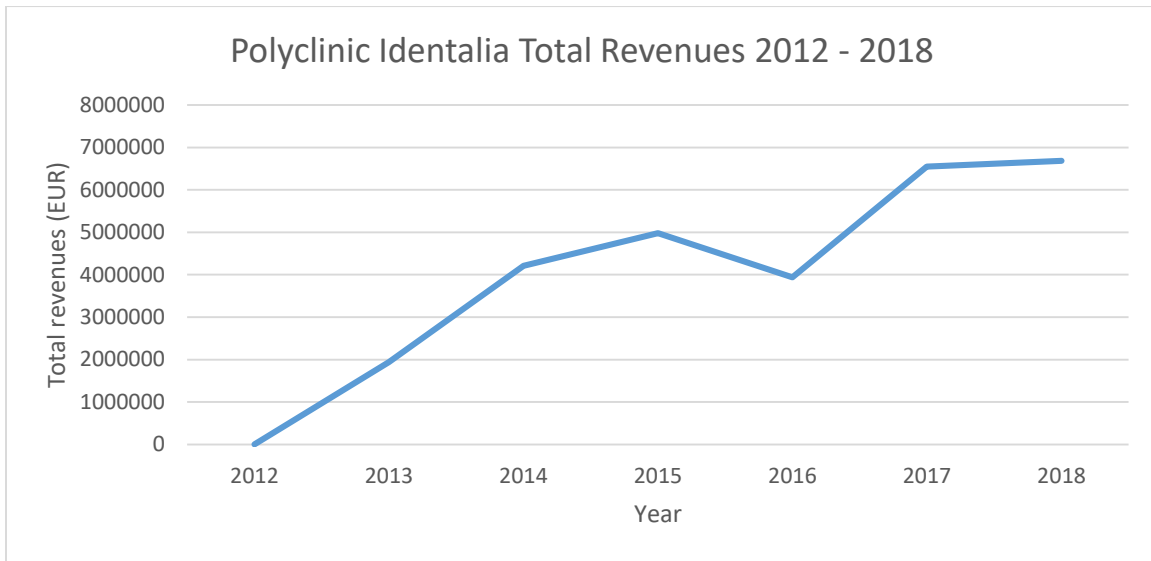


Figure 29: Polyclinic Identalia Total Revenues 2012 – 2018 (Bisnode, 2019)

Polyclinic Identalia's total revenues from 2012 to 2018 are explained in Figure 29. As a consequence of operating sales, total revenues rose instantly after the foundation. In 2016, the company had a tiny fall, accompanied by an era of development. The growth is still present but moving at a slower pace.

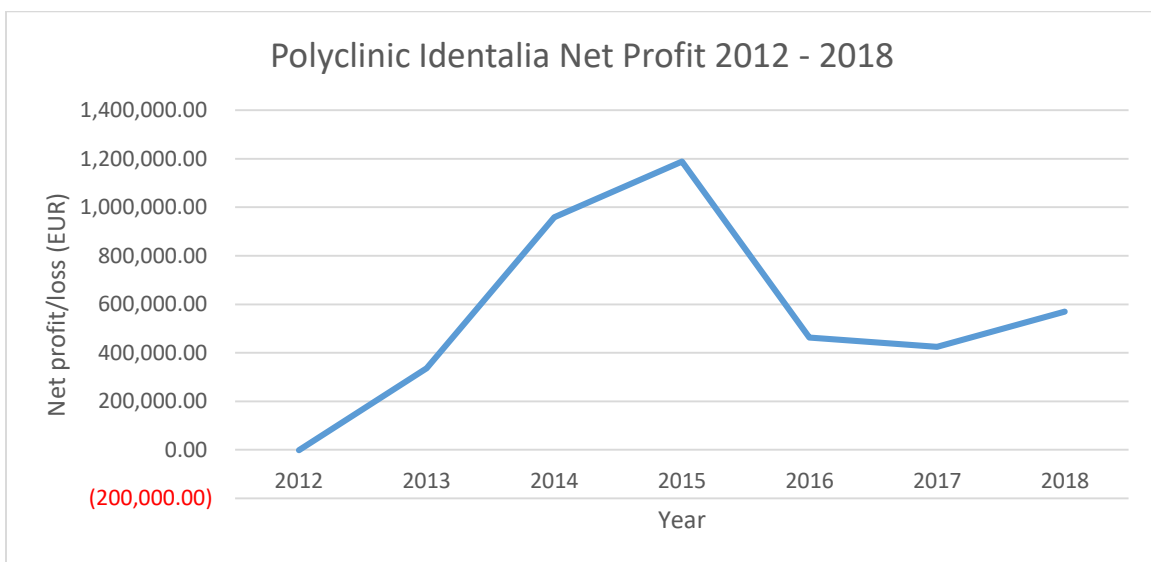


Figure 30: Polyclinic Identalia Net Profit 2012 – 2018 (Bisnode, 2019)

Figure 30 presents Polyclinic Identalia's net profit. The polyclinic's net profits grew at a rapid pace from 2012 until 2015 when they reached their highest point. There was a plummet in the following year but net profit recovered afterwards.

<b>Year</b>	<b>Current ratio</b>	<b>Return on assets</b>
2012	$0.18 \leq 2$	3.13%
2013	$1.28 \leq 2$	46.39%
2014	$3.23 \geq 2$	65.67%
2015	$6.01 \geq 2$	52.87%
2016	$2.32 \geq 2$	14.99%
2017	$3.26 \geq 2$	10.30%
2018	$1.74 \leq 2$	10.97%

*Table 9: Polyclinic Identalia Current Ratio and Return on Assets (Bisnode, 2019)*

Polyclinic Identalia's current ratio and return on assets are visible in Table 9. For the first two years, the current ratio has been below two. In 2014, their liquidity improved with current ratio growing over three. The trend continued until 2018 when it declined but it is not a terrible sign looking at previous years. Return on assets was under 5% only in 2012. Those number became higher which proves business efficiency.

### 3.1.10 Polyclinic Rident

Polyclinic Rident is Croatian largest dental polyclinic. They were established in 2003 in Rijeka. They currently have two locations in cities within Croatian region Istria: Rijeka and Poreč. In 2018, the polyclinic had the most employees out of all ten polyclinics and hospitals examined in this paper. (Rident, 2019)

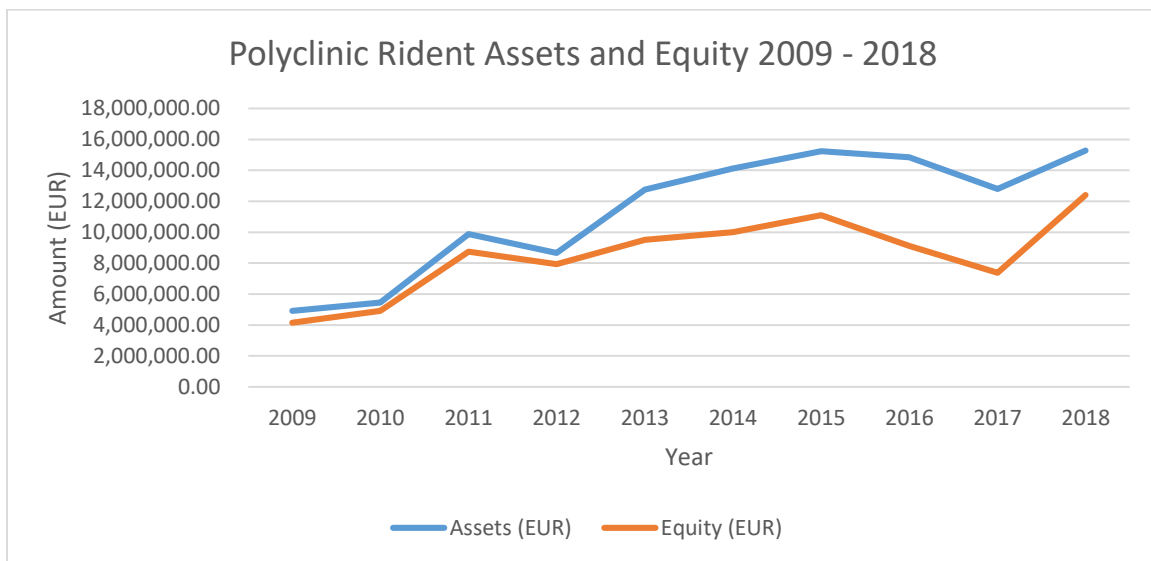


Figure 31: Polyclinic Rident Assets and Equity 2009 – 2018 (Bisnode, 2019)

Figure 31 defines Polyclinics Rident's total assets and equity progress from 2009 to 2018. Total assets rose due to an increase in intangible assets. Namely, Polyclinic Rident has continued to invest in patents and licenses over the years, increasing short and long-term financial assets as a result of lending and investing in securities. Their cash in bank and receivables increased as well.

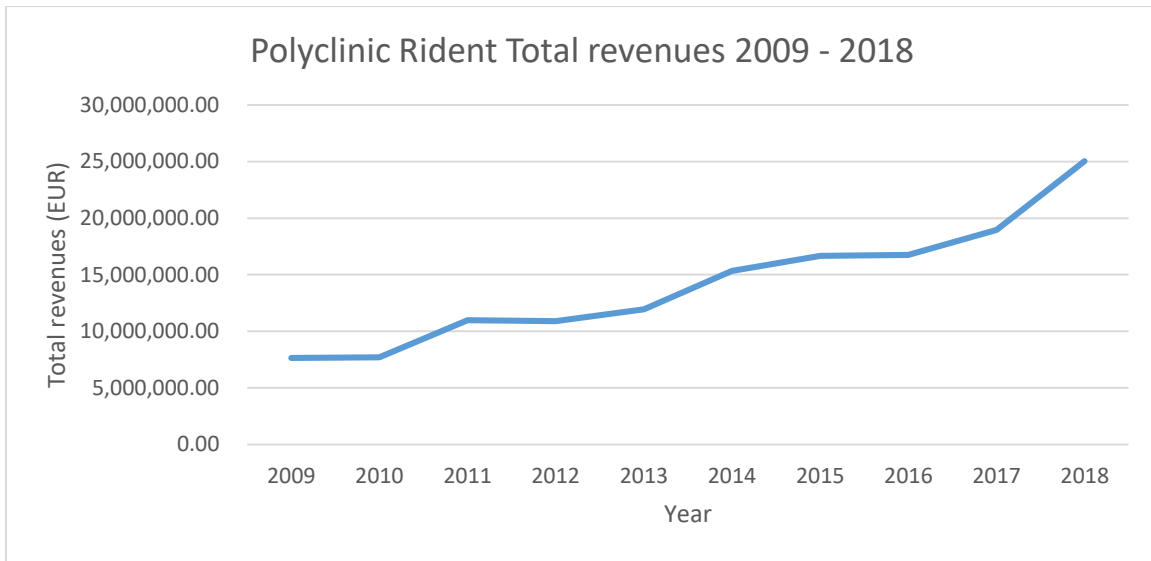


Figure 32: Polyclinic Rident Total revenues 2009 – 2018 (Bisnode, 2019)

Figure 32 exhibits total revenues of Polyclinic Rident in the time span of ten years. Total revenues have increased as a result of an increase in operating income. Every year, Polyclinic Rident welcomes more and more company traffic which has had a major impact on their revenues.

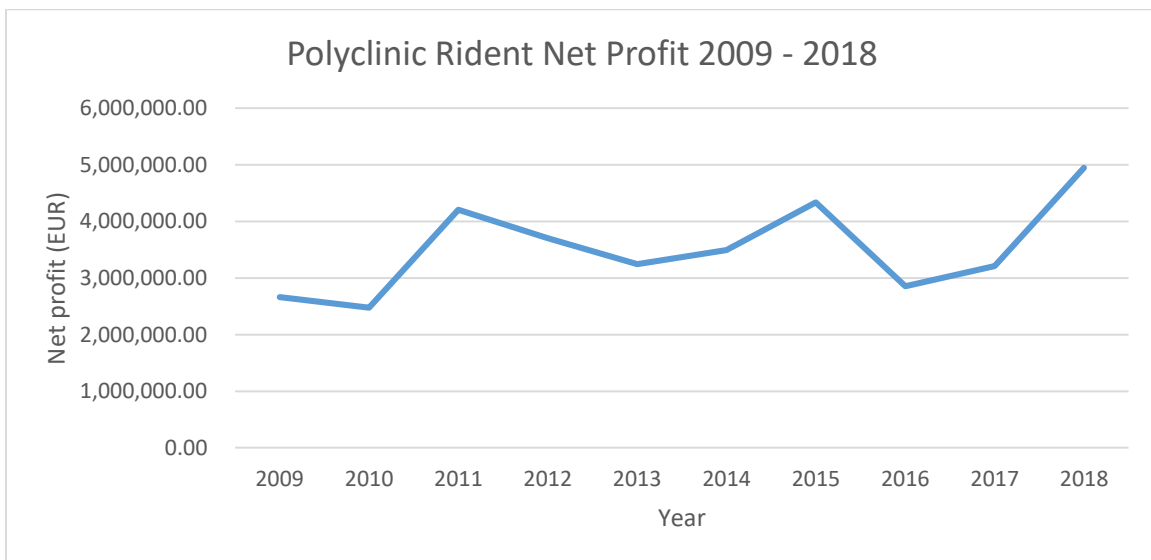


Figure 33: Polyclinic Rident Net Profit 2009 – 2018 (Bisnode, 2019)

Polyclinic Rident's net profit can be seen in Figure 33. Net profit was high in 2009, it fluctuated over the years but it has been on an upturn since 2016. Those high numbers will be important in Table 10, looking at the company's return on assets.

<b>Year</b>	<b>Current ratio</b>	<b>Return on assets</b>
2009	$5.11 \geq 2$	54.28%
2010	$7.34 \geq 2$	45.32%
2011	$7.40 \geq 2$	42.63%
2012	$10.03 \geq 2$	42.72%
2013	$3.36 \geq 2$	25.46%
2014	$3.09 \geq 2$	24.75%
2015	$3.51 \geq 2$	28.47%
2016	$2.29 \geq 2$	19.26%
2017	$2.00 \geq 2$	25.10%
2018	$4.28 \geq 2$	32.40%

*Table 10: Polyclinic Rident Current Ratio and Return on Assets (Bisnode, 2019)*

Table 10 shows Polyclinic Ridents's current ratio and return on assets. Ever since 2009, their current ratio was excellent, exceeding two in each year. This means that the company is very liquid and in great financial health. Return on assets is good in all years proving that the polyclinic is operating efficiently.

## 4.0 Future of the Private Healthcare Sector

Croatian private healthcare sector has an immense potential to grow since demand for privately offered services keeps increasing. The advantage of private healthcare sector compared to the public healthcare sector is that consumers feel like they get services of higher quality when they visit a private healthcare institution. Besides that, patients that wish to get examined immediately, instead of waiting for months, can do it with ease.

The following two tables prove the point made about the potential for growth viewed through salaries and the number of employees for each of the observed special hospitals and polyclinics from 2014 to 2018.

**Average Net Salary (EUR) 2014-2018**

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Polyclinic Šljaj - Anić</b>	719.00	730.00	745.00	741.00	826.00
<b>Polyclinic Aviva</b>	1,470.00	1,529.00	1,552.00	1,551.00	1,665.00
<b>Special Hospital Arithera</b>	556.00	542.00	629.00	747.00	810.00
<b>Special Hospital Akromion</b>	1,183.00	1,160.00	1,109.00	1,142.00	1,148.00
<b>Special Hospital Svjetlost</b>	1,008.00	958.00	1,048.00	1,245.00	1,361.00
<b>Polyclinic Bagatin</b>	617.00	599.00	712.00	837.00	802.00
<b>Polyclinic Medikol</b>	861.00	894.00	914.00	970.00	1,017.00
<b>Special Hospital Agram</b>	1,131.00	1,141.00	1,224.00	1,207.00	1,248.00
<b>Polyclinic Identalia</b>	534.00	647.00	741.00	781.00	829.00
<b>Polyclinic Rident</b>	838.00	829.00	879.00	994.00	1,075.00

*Table 11: Average Net Salary (EUR) 2014-2018 (Poslovna Hrvatska, 2019)*



Table 11 represents the average net salary (EUR) recorded from 2014 until 2018. Wages in almost all ten polyclinics and special hospitals have risen considerably since 2014 up until 2018. Unfortunately, information is not accessible from before Croatia joined the European Union, so it is not feasible to say whether the entry had an impact on wage rises, but it provides a good indication of the favorable future.

Virtually all institutions increased their wages except for Special Hospital Akromion whose wages decreased. If we hold 2014 as the base year, the salary shifts are as follows: Akromion Special Hospital was the only one to suffer a drop in salaries (by 2.95%), Special Hospital Agram increased their wages by 10.34%, Polyclinic Aviva by 13.26%, Polyclinic Šljaj - Anić increased by 14.88%, Polyclinic Medikol by 18.12%, Polyclinic Rident by 28.28%, Polyclinic Bagatin by 29.98%, Special Hospital Svjetlost by 35.02%, Special Hospital Arithera by 45.68% and lastly, the greatest increase in wages occurred in Polyclinic Identalia by a an impressive 55,24%. Wages can continue to grow because more people use their services

### Number of Employees

	2014	2015	2016	2017	2018
<b>Polyclinic Šljaj - Anić</b>	26	29	34	40	41
<b>Polyclinic Aviva</b>	68	69	62	66	64
<b>Special Hospital Arithera</b>	23	58	52	54	56
<b>Special Hospital Akromion</b>	50	50	50	49	58
<b>Special Hospital Svjetlost</b>	63	62	56	59	64
<b>Polyclinic Bagatin</b>	22	46	53	66	87
<b>Polyclinic Medikol</b>	167	171	175	172	176
<b>Special Hospital Agram</b>	149	156	157	163	167
<b>Polyclinic Identalia</b>	88	77	74	82	92
<b>Polyclinic Rident</b>	150	177	178	178	186

Table 12: Number of Employees (Bisnode, 2019)

Table 12 discusses the number of employees in each of the ten polyclinics and special hospitals that have been examined. Everyone, except for Polyclinic Aviva, eventually increased the amount of employees by 2018. This is an indication that business in the private sector is on the rise. Demand is increasing, so there is a need to increase the number of personnel.

## 5.0 Conclusion

In brief, the expectations for the private healthcare sector in Croatia, after entering European Union, were that the private sector would operate more profitably and experience growth because of the ease of access for foreigners to visit Croatian polyclinics. In spite of that, by observing the sample, it can be concluded, that there was not much of the change in the growth patterns. The possible reason could be that Croatian government does not actively support and encourage the growth of health tourism.

It is difficult to assess the macro view of the private healthcare industry because, as seen by observing a sample of ten special hospitals and polyclinics, there is no constant increase or decrease across all factors analyzed. It is necessary to conduct a microeconomic analysis of each institution separately and assess their individual situation in order to discover the cause of incline and decline of profits in the observed period. Genially speaking, demand for services in the private sector grew but that could be because of distrust in the public health care sector and affordable prices. Croatia is following a world trend of increasing the number of private health care institutions but some do not operate very profitably.

In conclusion, entrance of Croatia in the European Union did not have a great impact on the private healthcare sector. It certainly helped to create the potential to assist Croatian private institutions in promoting their services to foreigners but only a few seized that opportunity.

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