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MANAGEMENT**  
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**MASTER OF SCIENCE IN  
FINANCE**

**MASTERS FINAL WORK  
PROJECT**

EQUITY RESEARCH  
NOVABASE SGPS SA

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## **Abstract**

This study contains the valuation of Novabase elaborated in accordance with ISEG's Finance Master's Final Work Project. Our Equity Research follows the adaptable format of a research report recommended by the CFA Institute (Pinto, Henry, Robinson, and Stowe, 2010). This research is issued considering the public available information on Novabase on October 23<sup>rd</sup>, 2015. Thus, the report does not take into account any events or circumstances which have arisen after this date. The target price was derived recurring to absolute valuation methods, specifically to the Discounted Cash Flow (DCF) Approach. The assumptions considered to conduct this study were the result of a thorough analysis of both the historical data publicly disclosed by the company and data from various sources, such as S&P Capital IQ, Bloomberg L.P. and Thomson Reuters Datastream. With a price target of €2.46 for YE16 and an upside potential of 10.9% from current €2.21, the final recommendation for Novabase stands for 'Reduce'.

## **Resumo**

Este estudo contém uma avaliação da Novabase elaborada de acordo com o Projeto de Trabalho Final do Programa de Mestrado em Finanças do ISEG. O Relatório de Avaliação segue as recomendações do CFA Institute (Pinto, Henry, Robinson, e Stowe, 2010). O presente relatório é emitido considerando a informação pública sobre a Novabase disponível em 23 de Outubro de 2015. Deste modo, o relatório não tem em consideração eventos ou circunstâncias que tenham ocorrido posteriormente a esta data. O preço-alvo foi obtido com recurso a métodos de avaliação absoluta, especificamente o método dos Fluxos de Caixa Descontados (DCF). Os pressupostos considerados neste estudo resultaram de uma análise exaustiva tanto de dados históricos divulgados publicamente pela empresa, como de bases de dados, como o S&P Capital IQ, Bloomberg L.P. e a Thomson Reuters Datastream. Com um preço-alvo de €2,46 para FA16 e um potencial de valorização de 10,9% face ao atual €2,21, a recomendação final para a Novabase SGPS SA (NVQ) é de 'Redução'.

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## Internationalization: the way to profitability or to abyss?

Novabase SGPS SA (NVQ) is a Portugal-based company, which offers information technology solutions. NVQ provides services for Financial Services, Government & Healthcare, Energy & Utilities and Aerospace. The company's organization comprises three business lines: Business Solutions (BSO), Infrastructures & Managed Services (IMS), and Venture Capital (VC).

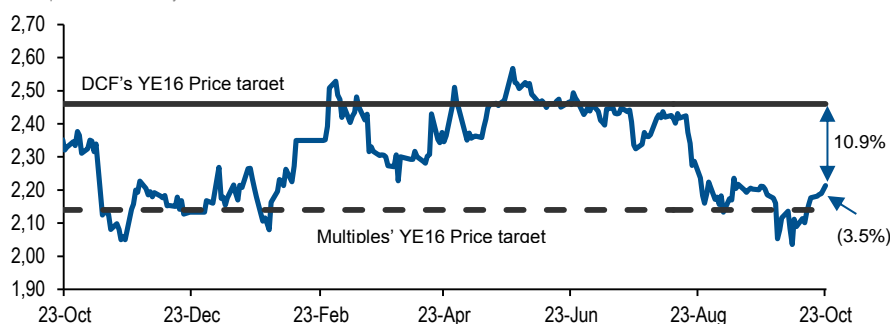
### Novabase's key statistics

Ticker	DB:NVQ	52-Wk High	€2.57	Shares Outstg.	€31.4m	5 Year Beta	0.77
Website	http://www.novabase.pt	52-Wk Low	€2.04	Market cap	€68.4m	Float %	33.0%
Industry	IT Consulting and Other Services	Current Price 23 <sup>rd</sup> October 15	€2.21	Dividend Yield	1.4%	Institutional ownership %	15.8%

Source: Capital IQ and JPA analysis

### Novabase stock performance

Source: Capital IQ and JPA analysis



### Highlights

- With a price target of €2.46 and an upside potential of 10.9% from current price of €2.21, our recommendation for Novabase SGPS SA (NVQ) stands for **Reduce**. We estimate operating EPS of €0.07 in FY15F and €0.08 in FY16F, contrasting to €0.10 in FY14A and €0.24 in FY13A. The conclusions drawn from the Market Approach are relatively aligned with the DCF Approach noted above. The market approach discloses an 11.4% associated premium over NVQ's peers. In our opinion, NVQ's premium to its peer's is justified by higher growth perspectives and by NVQ's risk mitigation strategy. According to Monte Carlo simulation ran, there is less than 5.0% chance of one of the key valuation variables trigger a change in our recommendation to buy.
- NVQ had a good first two quarters in FY15A, nearly reaching half of all the goals proposed by the management for FY15. The overall revenue in 6m15A was slightly above management projections by about €415k, as well as the national market activity progress, registering a deviation in excess of €685k. However, international revenue fell short of expectations by €270k. Despite the promising start this year, our estimates point to an annual revenue decrease of 1.5% justified by the business seasonality. From FY16A onwards, revenue is expected to increase at a 0.6% CAGR until FY20F. We believe the company will continue to increase its focus on emerging markets as operators are in an early stage of their IT network development.
- Given that Angola contributes with more than 50% of NVQ's international revenue, the outlook for the country is a concern to consider in the short-run. Nevertheless, the company claims to carry out monitoring and risks mitigation procedures according to well-defined criteria, which reduces considerably potential losses. With risk reduction in mind and trying to not compromise revenues, NVQ is seeking for diversification amongst other emerging economies, such as Ghana and Nigeria.
- We expect EBITDA margins of 5.4% in FY15F and 5.5% FY16F, compared to a 6.6% margin reached in FY14A. We see margins being pressured in the near term, which in our view will continue at least as the international expansion lasts. Nevertheless, we expect an improvement over time, driven by higher volume and greater operating leverage.

### NVQ's valuation sensitivity analysis

Country rating	Market Risk Premium (MRP)						
	4.0%	4.5%	5.0%	5.5%	6.0%	6.5%	7.0%
BBB	€3.40	€3.19	€3.00	€2.83	€2.68	€2.54	€2.42
BBB-	€3.12	€2.94	€2.77	€2.63	€2.50	€2.38	€2.27
BB+	€2.88	€2.72	€2.58	€2.46	€2.34	€2.24	€2.14
BB	€2.55	€2.43	€2.32	€2.21	€2.12	€2.04	€1.96
BB-	€2.25	€2.15	€2.06	€1.98	€1.91	€1.84	€1.77

Source: JPA analysis

# Reduce

High risk

October 2015

Portugal

### Analyst's Risk Assessment

Low	Medium	High
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Our risk assessment reflects intense competition in company's domestic market as well as the high dependence of international growth. Angola's weight in Novabase's portfolio is also an upset.

### Revenue

Currency: €k	1Q	2Q	3Q	4Q	FY
15A	54,123	58,792	-	-	217,552
14A	51,550	54,359	52,740	62,206	220,855
13A	54,439	59,310	44,034	59,047	216,830
12A	53,670	54,883	47,045	56,477	212,075
11A	59,301	59,827	53,422	57,083	229,633
10A	58,003	64,793	56,656	56,879	236,331

Source: Statutory accounts and JPA analysis

### SOP Valuation DCF

Currency: €000	EV	% EV
BSo	73,707	62.3%
IMS	38,401	32.5%
VC + Others	6,116	5.2%
<b>Enterprise value</b>	<b>118,225</b>	
Net debt FY15F	953	
Minority interests	31,403	
Other assets	236	
<b>Value of equity</b>	<b>85,631</b>	
Number of shares outstanding	31,389	
<b>YE16 Fair value</b>	<b>€2.73</b>	
Small cap discount	10.0%	
<b>YE16 Price target</b>	<b>€2.46</b>	
Price at October, 23 <sup>rd</sup> 2015	€2.25	
Price at October, 23 <sup>rd</sup> 2015 actual	€2.21	
<b>Upside potential</b>	<b>10.9%</b>	

Source: JPA analysis

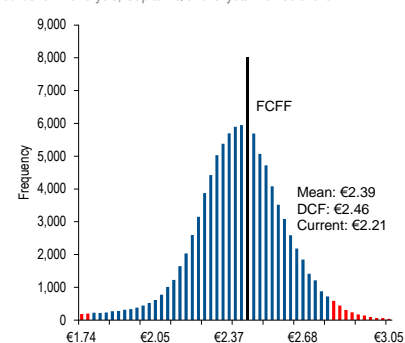
### SOP Valuation Multiples

Currency: €000	EV	% EV
BSo	57,865	56.1%
IMS	37,993	36.9%
VC + Others	7,213	7.0%
<b>Enterprise value</b>	<b>103,070</b>	
Net debt FY15F	953	
Minority interests	27,378	
Other assets	236	
<b>Value of equity</b>	<b>74,503</b>	
Number of shares outstanding	31,389	
<b>YE16 Fair value</b>	<b>€2.37</b>	
Small cap discount	10.0%	
<b>YE16 Price target</b>	<b>€2.14</b>	
Price at October, 23 <sup>rd</sup> 2015	€1.96	
Price at October, 23 <sup>rd</sup> 2015 actual	€2.21	
<b>Upside potential</b>	<b>(3.5%)</b>	

Source: JPA analysis

### Monte Carlo price distribution

Source: JPA analysis, Capital IQ and Crystal Ball software



## Investment summary

With a price target of €2.46 for YE16F and an upside potential of 10.9% from current €2.21, our recommendation for Novabase stands for **Reduce**. NVQ's stock growth is expected to be moderate or low for two main reasons. Firstly, NVQ currently trades close to its intrinsic value. Secondly, NVQ's is overvalued comparing to its peers by an 11.4% premium with respect to enterprise value multiples.

NVQ has a strong position in the domestic market of the IT sector and presents a growing internationally activity. The major driver of NVQ's growth regards precisely to international projects. Indeed, international activities account at Jun15A for 44.6% of NVQ's total revenue and it is expected to surpass the domestic share in two or three years.

### Valuation methods

The target price is derived recurring to absolute valuation methods, specifically to the Discounted Cash Flow (DCF) Approach. The sum of the parts (SOP) technique is used because NVQ has three distinctive segments, although each segment was valued through DCF. Additionally, we perform a valuation through relative valuation methods, recurring to multiple comparables with equal weight. Peer group was chosen according to a set of objective criteria. The method of comparables aims to support conclusions drawn from the DCF approach, given that the latter is a more robust approach to value NVQ's equity.

### International projects strongly boost revenues, but bring potential high risks

International new projects in emerging markets, fundamentally through new long term partnerships where the market is rich in opportunities, are capable of boosting NVQ's revenue in the future (Figure 1). In fact, these long term partnerships often allow the company to stabilize its returns, moving it away from the normal emerging economies' volatility. Crude oil represents today about 98% of Angola's exports, leaving the economy significantly vulnerable to the global markets volatility as well as the oil price shocks. Given that, Angola remains by far NVQ's major risk exposure to the emerging markets, thus the company is also susceptible to these distresses. In order to diminish company's risk without jeopardising revenue, NVQ seeks for diversification amongst other emerging economies such as Ghana and Nigeria.

We believe that NVQ's 11.4% premium over its peers is justified by both higher growth perspectives and significant potential losses reduction arising from the current risk mitigation strategy.

### Recent stock performance

The stock traded between a 52-week low of €2.04 and a high of €2.57. The standard deviation of weekly log-normal price returns over the past year, annualized with a factor of 52 for the 52 trading weeks in a year was of 25.1, at 23<sup>rd</sup> October 15. Additionally, at May15A NVQ joined the newly created Enternext Tech 40 index, which brings together European companies that stand out for innovation.

### Recovery of financial position

Novabase working capital requirements arising from international expansion, have led to a significant weakening of its cash position. Cash to market capitalization was of 43.1% at Dec13A, 30.5% at Dec14A and 22.5% at Jun15A. The combined effect of either the cash decrease or debt increase, due to the international expansion, has been deteriorating significantly NVQ's net debt position. Net debt totalled €-17.0m (level of cash higher than debt) at Dec13A, €-3.1m at Dec14A, and €1.3m at Jun15A. According to our estimates, as NVQ increases its operational leverage (reducing the high initial international charges) net debt position will be recovered, amounting to €-1.6m in FY20F. This would enable NVQ starting to generate again high free cash flows, setting the stage for a return to high dividends.

### Risks to price target

Besides the already mentioned risk arising from oil dependent emerging economies, investors should be aware of other possible vulnerabilities to which the business can be associated with. Among them, (i) the credit risk arising from the regular company functioning (credit risk is also associated with Portugal credit rating, which will have direct impact on our discount rate), (ii) exchange risk arising from transaction in other currencies than euro, and (iii) deterioration of margins due to unexpected internationalization costs.

Figure 1  
Revenue by segment and geography

Source: Statutory accounts and JPA analysis

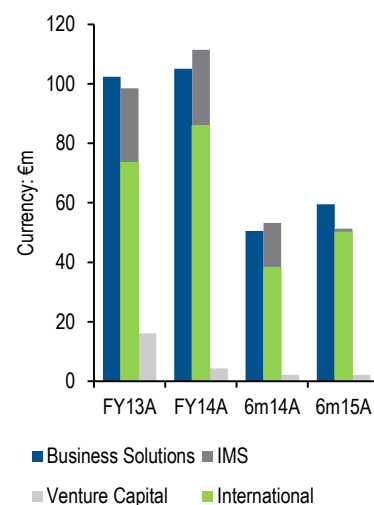


Figure 2  
EBITDA margin estimated

Source: JPA analysis

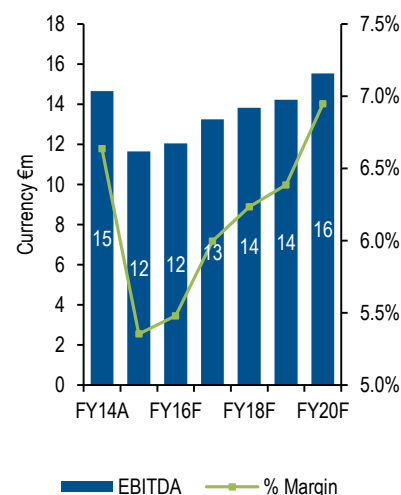
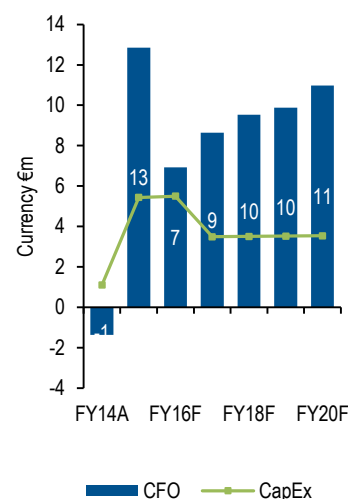


Figure 3  
CFO and CapEx

Source: JPA analysis



## NOVABASE SGPS SA

Novabase SGPS SA (NVQ) is a Portugal-based company, which offers information technology solutions and has been listed since July 2000. NVQ provides services for Financial Services, Government & Healthcare, Energy & Utilities and Aerospace. The firm’s organization comprises three business lines: Business Solutions (BSO), Infrastructures & Managed Services (IMS), and Venture Capital (VC). The company is headquartered in Lisbon and was founded in 1989, originally operating as a software-house and a customized IT solutions provider. In 1984, NVQ became the first Portuguese software company being certified by the Portuguese Institute of Quality (IPQ) with the standard NP EN ISO 9001. Currently, NVQ has offices in 8 countries (Figure 4) projects in over than 40 countries and comprises about 2,390 employees worldwide (Figure 5). Indeed, about 39% of NVQ’s revenue in FY14A came from international activity. In Feb14A, NVQ sold to the General Satellite group 100% of two of its subsidiaries Novabase Digital TV, EURL and DTV Research, Lda, and 49% of Novabase Digital TV, GmbH.

As previously mentioned, the company currently coordinates its activities into three segments:

- ▶ The **Business Solutions segment** provides business consulting, developing and implementing customized solutions according to its technological, management, design, and business expertise competences.
- ▶ The **Infrastructure & Managed Services segment** delivers IT and engineering consulting services in information and communications technologies, as well as concrete technology solutions for telecommunication operators, television and media.
- ▶ The **Venture Capital** is specialized in the incubation and development of start-ups, generally from the IT, Internet, and Technology areas. The firm seeks for innovative and differentiating projects at an early stage, frequently from Universities, start-ups factories, and other platforms. This segment manages Novabase’s VC Fund, where the Portuguese Public Agency for Competitiveness and Innovation (IAPMEI) holds a share position of 70%. Historically, the company has given preference to Portuguese start-ups, seeking to invest a maximum of €1.8m per project; however, VC is currently increasing its exposure to emerging economies, namely Angola.

### Ownership structure

According to the information disclosed by NVQ about its shareholder structure as at Dec14A, the portion related to “Corporations (Private)” (Figure 6) comprises fundamentally HNB – SGPS (26.5%), Pedro Marques Carvalho (7.3%), Rogério Santos Carapuça (6.7%) and João da Silva Bento (2.23%). These ordinary shares grant the right to vote, to participate in general shareholders, to receive information, profit sharing and pre-emptive rights in capital increases, as well as the generally applicable obligations of capital contributions and loyalty.

### Corporate governance

NVQ’s corporate governance system is operated through an Anglo-Saxon model, which includes a Board of Directors, an Audit Committee and a Statutory Auditor (PwC). Following the General Shareholders’ Meeting in 28<sup>th</sup> April 2009, two specialized committees were created within the Board of Directors: a Board of Directors Performance Assessment Committee, and a Corporate Governance Assessment Committee. NVQ has three independent directors from a total of fifteen members of the Board of Directors. In our opinion, given the company’s size, shareholder structure and the Anglo-Saxon corporate governance model, NVQ adopted a reasonable number of independent directors within the board, as there is other monitoring mechanism (specialized committees).

According to the annual reports, NVQ continuously assesses the good practices application within the governance model, aiming at same time to adapt such practices to the new challenging society. Note that, a consortium between AEM and the Portuguese Catholic University (UCP) conducted a study with the purpose of testing the Portuguese companies’ compliance with the stock market regulator (CMVM) recommendations, and attributed to NVQ an AA rating (in a range from D to AAA).

**Figure 4**  
Novabase’s offices

Source: Novabase information and JPA analysis

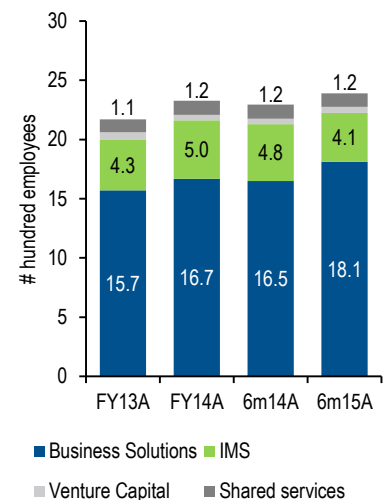


Notes to graphic

1. Novabase has offices in Spain, the United Arab Emirates, Mozambique, Angola, Turkey, the United Kingdom and Portugal.

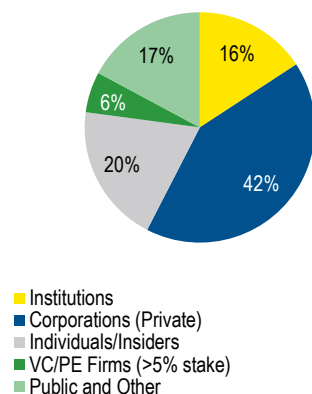
**Figure 5**  
NVQ average number of employees

Source: Statutory accounts and JPA analysis



**Figure 6**  
Ownership structure

Source: Capital IQ and JPA analysis



**Company's key members**

*António Manuel da Rocha e Menezes Cordeiro* serves as General Meeting's Chairman. He is graduated in Law and obtained a PhD in Law from Lisbon University. *Luís Paulo Cardoso Salvado* serves as the Chief Executive Officer and Chief Human Resource Officer. Holds an MBA in Information Management from Universidade Católica Portuguesa and is graduated in Electrotechnical Engineering from IST. *Francisco Paulo Figueiredo Morais Antunes* serves as the Chief Financial Officer, Chief Investment Officer, Chief Legal Officer and Chief Risk Officer and is graduated in Management and M.Sc. in Finance at ISCTE. *José Afonso Oom Ferreira de Sousa* founded Novabase in 1989 and has been a Non-Executive Director of Novabase since 1991. He currently serves as Director of Novabase Capital, Novabase Serviços, OctalTV, TVLab, and Superemprego. *Pedro Miguel Quinteiro Marques de Carvalho* serves as the Chief Information Officer and is graduated in Applied Mathematics from Universidade Nova de Lisboa. *Paulo Soares De Pinho* serves as Chairman of Audit Board. *Fátima do Rosário Piteira Patinha Farinha* and *Nuno Miguel Dias Pires* serve both as Members of the Audit Board.

**NVQ's competitive position**

Table 2  
SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>▶ One of the leading IT companies in Portugal;</li> <li>▶ Well-defined growth strategy;</li> <li>▶ Suitable accounting policies;</li> <li>▶ Financially sound;</li> <li>▶ Employees with specialized know-how.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Still little geographic diversification;</li> <li>▶ Uncertain dividend policy;</li> <li>▶ Historical net debt position upward trend.</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>▶ Increasing demand for consulting services given the current environment of uncertainty;</li> <li>▶ High potential of emerging economies;</li> <li>▶ M&amp;A activity increase in the IT sector;</li> <li>▶ Great business opportunities for VC segment arose from the oil shock;</li> <li>▶ Diversification of the Angola's economy with focus on infrastructure investments.</li> </ul>	<ul style="list-style-type: none"> <li>▶ International competition;</li> <li>▶ Portuguese generalised crisis;</li> <li>▶ Angola's political risk;</li> <li>▶ Angola's oil dependency.</li> </ul>

**Porter's five forces**

According to Meyer et al. (2007), a task environment is regarded as a set of forces that directly affect the ability of an organization to acquire resources and deliver its offerings on a daily basis, emanating from its immediate environment such as the suppliers, distributors, customers and competitors.

**Industry rivalry (High)**

Nowadays, the Consulting and Venture Capital industries' rivalry are fierce. The increasing globalization and developed markets limited growth, are leading the industries to increase their focus on international investments. Emerging economies are rich in resources and its population and demographics are very attractive for any company in any market. However, these are gradually getting saturated. In order to overcome these hurdles, NVQ Consulting seeks for differentiated solutions capable of providing a competitive advantage over its competitors.

**Threat of substitutes (High)**

There is a high threat of substitutes. Despite NVQ considerably invests in the development of innovative and differentiated products there are a large number of competitors able to offer solutions that also meet most of NVQ's customer needs.

**Threat of new entrants (Moderate)**

We consider that the new entrants' risk in markets where NVQ operates is moderate. Despite the entry of new players for the consulting industry be not likely given the necessary up front high costs (with research, development and implementation of products), the threat in Venture Capital's markets (namely Angola) is a reality.

Table 1  
NVQ's members' stock position

# shares	%
Carvalho, Pedro Miguel (Non-Exc. Dir. and CIO of NB Serviços)	7.29%
Santos, Fernando Fonseca	5.02%
Carapuça, Rogério (Former Chairman, Chairman of Corp. Gov. Ass. Commit. and Chairman of Board of Dir. Perf. Ass. Commit.)	4.19%
Silva Bento, João Nuno (Former Exc. Dir., Member of Exc. Commit. and Member of Corp. Gov. Ass. Commit.)	1.56%
Santos Fórneas, Nuno (Former CMO, Exc. Dir. and Member of Exc. Commit.)	0.54%
Trigo, Paulo Jorge (Former Non-Exc. Dir.)	0.25%
Cardoso Salvado, Luís (CEO, CHRO and Exc. Dir.)	0.16%
Silva Ferreira, Álvaro José (Former Exc. Dir., Member of Exc. Commit. and Dir. of Novabase Consulting)	0.16%
Palma, Carmo (Former BS Director)	0.12%
Antunes, Francisco Paulo (CFO, CIO, CLO, CRO and Exc.Dir.)	0.10%
Brito Palma, Maria do Carmo (Former Exc. Dir. and Member of Exc. Commit.)	0.08%
Sousa, José Afonso (Non-Exc. Dir.)	0.03%
Alves Monteiro, Manuel (Former Non-Exc. Dir., Member of Corp. Gov. Ass. Commit. and Member of Audit Commit.)	0.03%
Mira Amaral, Luís Fernando (Former Non-Exc. Dir., Chairman of Audit Commit. and Member of Board of Dir. Perf. Ass. Commit.)	0.02%
Duque, João Luis (Former Non-Exc. Dir, Member of Corp. Gov. Ass. Commit. and Member of Audit Commit.)	0.00%

Source: Capital IQ

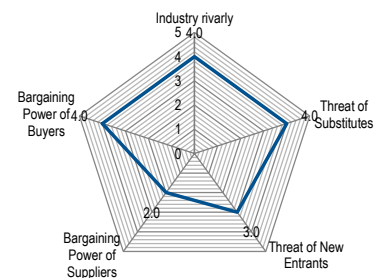
Table 3  
Key management compensation

Currency: €000	Dec13A	Dec14A
Wages & ST benefits	4,289	4,858
Stock options	106	196
<b>Key members compensation</b>	<b>4,395</b>	<b>5,054</b>

Source: Statutory accounts and JPA analysis

Figure 7  
Porter's five forces

Source: JPA analysis





### Bargaining power of buyers (**High**)

The wide range of solutions available in the consulting market results in a high price elasticity demand. Indeed, customers often choose the consultant firm having as one of the main criteria the lowest price offered. Given the earlier described and to domestic market saturation, consultants firms trying to steal market share (or no to loose) from (for) other consultants have been significantly reducing their services' prices. This scenario leads inevitably to a reduction of operating margins.

### Bargaining power of suppliers (**Low**)

The suppliers' power on NVQ's business is reduced. Despite NVQ requires products with specific characteristics to develop some of the solutions offered we believe that NVQ's size is translated into a high bargaining power. In addition, NVQ's most relevant resource is the expertize labour. Given that there are an increasing number of skilled workers both at national and global level, thus we do not consider that the company is subject to substantial risks in this field.

### Piotroski F score (financial strength comparison)

The Piotroski F Score, pointed out by Piotroski (2000), is a value between 0 and 9 which reflects the number of the nine criteria used to determine the strength of a firm's financial position. The score is used to determine the best value stocks, nine being the best one. It was named after Joseph Piotroski, an Accounting Professor, who devised the scale according to specific criteria found in the financial statements. For every criterion that is met, the company is given one point; if it is not met, then no point is awarded. The points are then added up to determine the best value stocks (Table 4).

Piotroski F Score Criteria: **(i)** NI: Score 1 if latest annual net income is positive. **(ii)** Operating CF: A better earnings gauge. Score 1 if latest annual cash flow is positive. **(iii)** ROA: Measures profitability. Score 1 if latest ROA exceeds prior ROA. **(iv)** Quality of Earnings. Score 1 if latest annual operating cash flow exceeds net income. **(v)** Long-Term Debt vs. Assets: Is debt decreasing? Score 1 if the latest ratio of long term debt to assets is down from the prior value (If LTD is 0 but assets are increasing, score 1). **(vi)** CR: Measures increasing working capital. Score 1 if CR has increased from the prior year. **(vii)** Shares Outstanding: Measures potential dilution. Score 1 if the number of shares outstanding is no greater than the year-ago figure. **(viii)** Gross Margin: Measures improving competitive position. Score 1 if the latest annual GM exceeds the prior GM. **(ix)** Asset Turnover: Measures productivity. Score 1 if the percentage increase in sales exceeds the percentage increase in total assets.

Table 4

### Piotroski F score

Company	F Score	Net Income	CFO	ROA	Quality of Earnings	Δlever	Δliquid	Shares Out	Δmargin	Δturnover
<b>Novabase SGPS (Portugal)</b>	<b>4</b>	<b>1</b>	-	-	-	<b>1</b>	-	-	<b>1</b>	<b>1</b>
<b>Business Solutions</b>										
Datagroup AG (Germany)	8	1	1	1	1	1	-	1	1	1
Digia Oyj (Finland)	7	1	1	1	-	1	-	1	1	1
Sygnity Spółka Akcyjna (Poland)	5	1	1	1	-	1	-	1	-	-
Cybercom Group AB (Sweden)	9	1	1	1	1	1	1	1	1	1
Cancom SE (Germany)	5	1	1	-	1	-	1	-	1	-
Clac N.V. (Netherlands)	7	1	1	1	1	1	1	-	-	1
EVRY ASA (Norway)	3	-	1	-	1	-	-	-	-	1
Engineering Ingegneria Informatica S.p.A. (Italy)	7	1	1	1	1	-	1	1	-	1
SMT S.A. (Poland)	5	1	-	-	-	-	1	1	1	1
ProAct IT Group AB (Sweden)	6	1	1	-	1	1	-	1	1	-
<b>Infrastructure &amp; Managed Services</b>										
T Clarke plc (United Kingdom)	4	-	1	-	1	-	1	1	-	-
Datagroup AG (Germany)	8	1	1	1	1	1	-	1	1	1
Harvey Nash Group plc (United Kingdom)	7	1	1	1	1	-	-	1	1	1
Digia Oyj (Finland)	7	1	1	1	-	1	-	1	1	1
Sygnity Spółka Akcyjna (Poland)	5	1	1	1	-	1	-	1	-	-
WASKO Spółka Akcyjna (Poland)	6	1	1	1	-	-	1	1	-	1
Hawe Spółka Akcyjna (Poland)	5	1	1	-	1	1	-	-	-	1
Clac N.V. (Netherlands)	7	1	1	1	1	1	1	-	-	1
Cancom SE (Germany)	5	1	1	-	1	-	1	-	1	-
EVRY ASA (Norway)	3	-	1	-	1	-	-	-	-	1
<b>Venture Capital</b>										
SECURE PROPERTY Development & Investment PLC (Ukraine)	3	1	-	-	-	-	-	-	1	1
Alpha Trust Mutual Fund and Alternative Investment Fund Management (Greece)	6	1	1	1	-	-	-	1	1	1
Blue Cap AG (Germany)	5	1	1	-	1	-	1	-	1	-
Open Finance Spolka Akcyjna (Poland)	4	1	1	-	-	1	-	1	-	-
Compagnie Lebon (France)	5	1	1	-	-	1	-	1	1	-
The Scottish Investment Trust PLC (United Kingdom)	4	1	1	-	1	-	-	1	-	-
Matador Private Equity AG (Switzerland)	5	1	-	1	-	1	-	1	-	1
Alba Private Equity S.p.A. (Italy)	7	1	1	1	-	1	-	1	1	1
CapMan Oyj (Finland)	7	1	1	1	1	-	1	-	1	1
Value8 NV (Netherlands)	5	1	-	1	-	1	1	-	1	-

Source: Capital IQ and JPA analysis

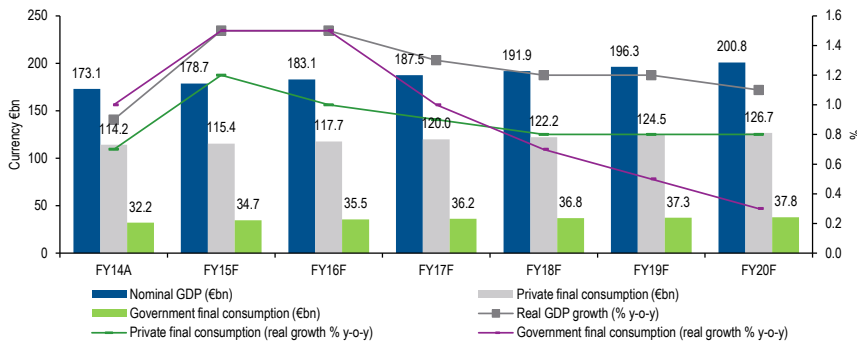
## NVQ's core countries outlook

### Portugal

Our outlook for the Portuguese economy is not favourable. Currently, the Portuguese debt to GDP is about 130.2% (Figure 8), and according to IMF World Economic Outlook October 2015 it is not expected a GDP growth much beyond 1.2% a year until 2020 (Figure 9).

**Figure 9**  
Portugal KPIs development

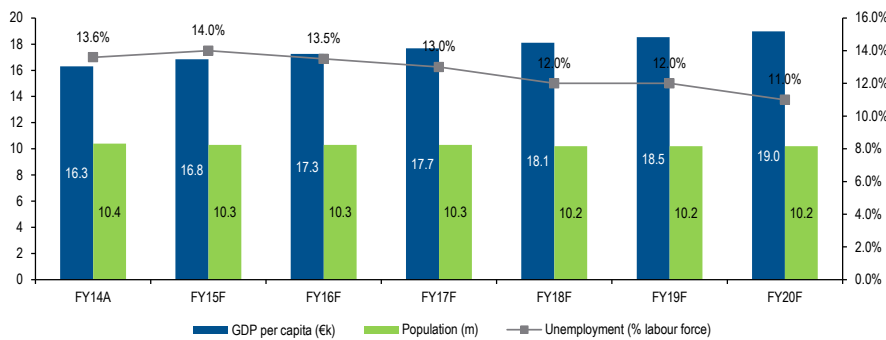
Source: Capital IQ, IMF and JPA analysis



The demographic projections are frightening (Figure 10). According to INE (2015), the Portuguese workforce will account for less than 66.0% of the entire population in 2023, and in 2035 over 50% of the population will be aged more than 45. The most worrying aspect is that the total number of employees has been reducing at a faster pace than expected, which was the result of several factors such as the immigration rate. Taking into account only the current declining demographic scenario and keeping everything else constant, if the number of working hours per person or the retirement age does not increase, GDP will necessarily have to contract. However, some measures are already being implemented by the government, such as the introduction of a sustainability factor for pension calculation.

**Figure 10**  
Portugal demographics and unemployment outlook

Source: Capital IQ and JPA analysis

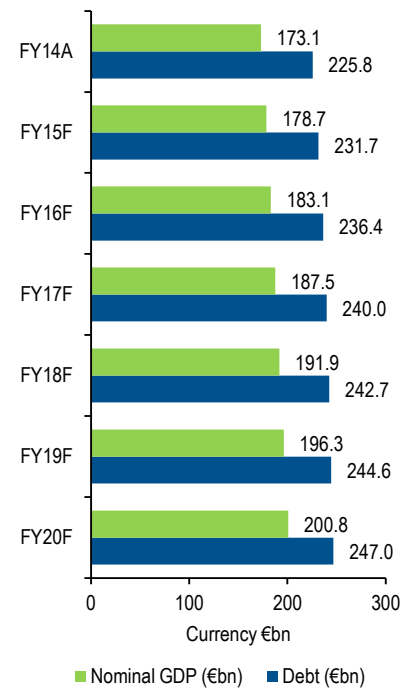


Because it is unlikely a reversal of the demographic outlook in the short term, a productivity improvement may well boost GDP. In this sense, the reform programs that the government has already initiated during the crisis upsurge, has been gradually improving the competitiveness of key industries and attracting new investors as the economic sentiment improves (Figure 11).

In our point of view, private consumption will be one of the key factors for GDP future growth; however a shy growth is expected as a consequence of the household sector's large debt weight. The current exports' increasing trend is also expected, all across the Eurozone, and mainly in the lift of the emerging markets.

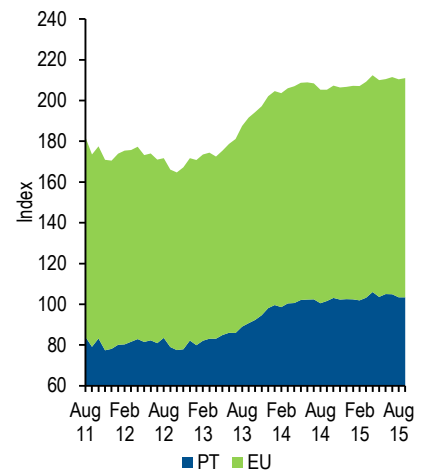
**Figure 8**  
Portugal GDP / debt

Source: Capital IQ and JPA analysis



**Figure 11**  
Economic sentiment indicator – PT / EU

Source: Capital IQ and JPA analysis

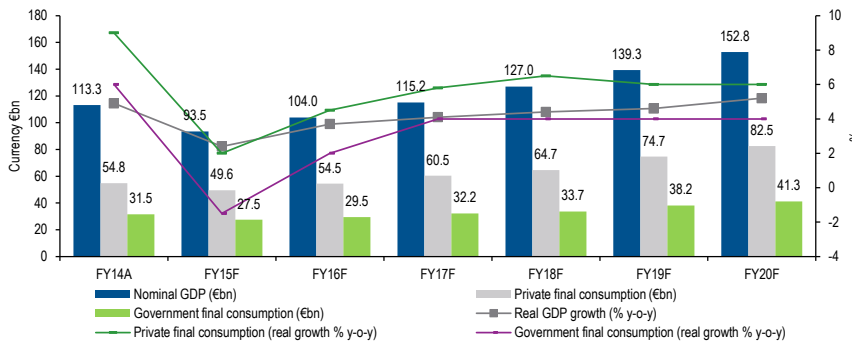


**Angola**

Our outlook for the Angolan economy is for a **moderate** growth. Angola has been showing two digit growth rates since 2002. Nevertheless, we anticipate a slowing down of this incredible growth pace. A growth of the real GDP of at least 3.5% yearly until FY20F, aligned with IMF and Capital IQ consensus estimates is expected (Figure 13). This progress will be supported by public investments, namely in infrastructures, and oil production expansion, which are all part of the ambitious diversification programme of the Angola's economy.

**Figure 13**  
**Angola KPIs development**

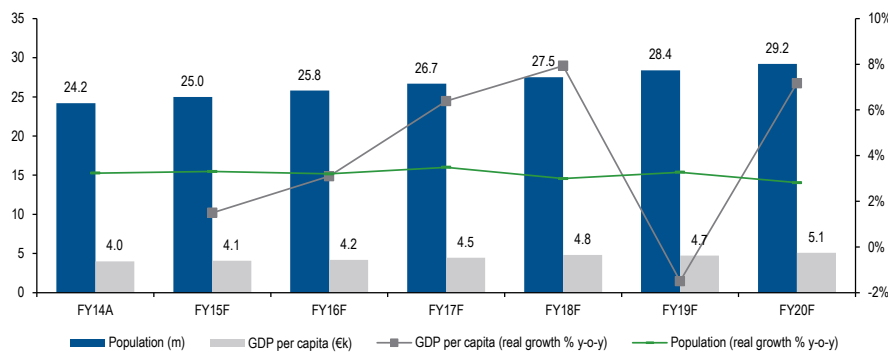
Source: Capital IQ, IMF and JPA analysis



Private consumption currently accounts for 48.4% of GDP, and it is expected to grow up 54.0% over the next five years (Figure 13). Although, private consumption represents a main contributor to economy growth, its influence is limited due the large country social imbalances (Figure 14).

**Figure 14**  
**Angola demographics outlook**

Source: Capital IQ, IMF and JPA analysis

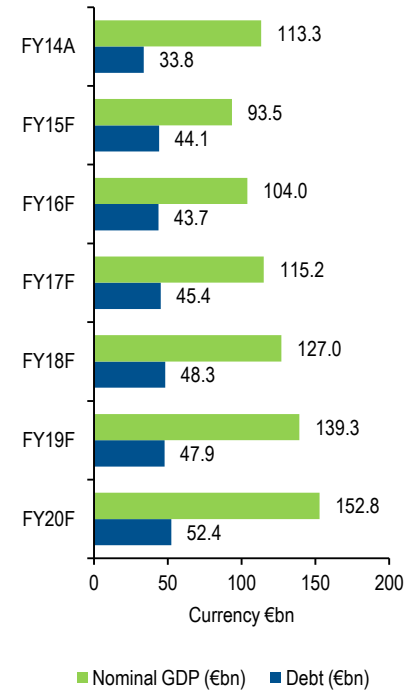


The oil price evolution is with no doubt the greatest unknown and determining variable of Angola's short term growth. Currently, oil represents more than 50% of the Angolan economy (Figure 15), making it very vulnerable to price fluctuations and production disruptions (Figure 16). A solution for such limitation may be an economy diversification. Thus, in the near future, a large investment in the country's infrastructure and in human capital is predicted.

Additionally, Angola still exhibits a large operational risk, driven in part by expensive, complex, and unreliable import and export procedures. Bearing in mind that corruption remains large, companies face a huge risk of instability within its operating environment as well as potential financial losses due to piracy or rights infringement.

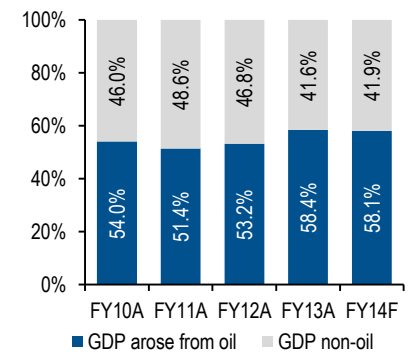
**Figure 12**  
**Angola GDP / debt**

Source: Capital IQ and JPA analysis



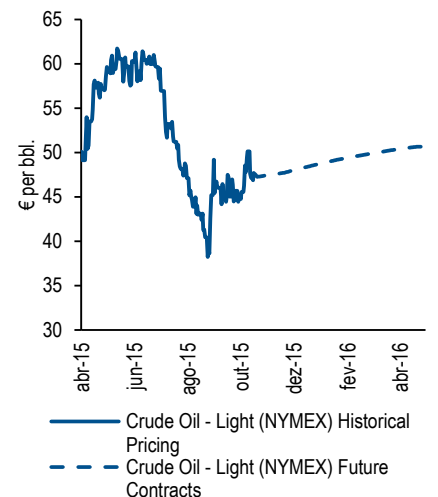
**Figure 15**  
**GDP arose from oil / GDP non-oil**

Source: WEF – The Global Competitiveness Report 2014-2015



**Figure 16**  
**Crude Oil - Light (^CL) (NYMEX)**

Source: Capital IQ and JPA analysis



## Segments' industry outlook

### IT Consulting & Other and Infrastructure services

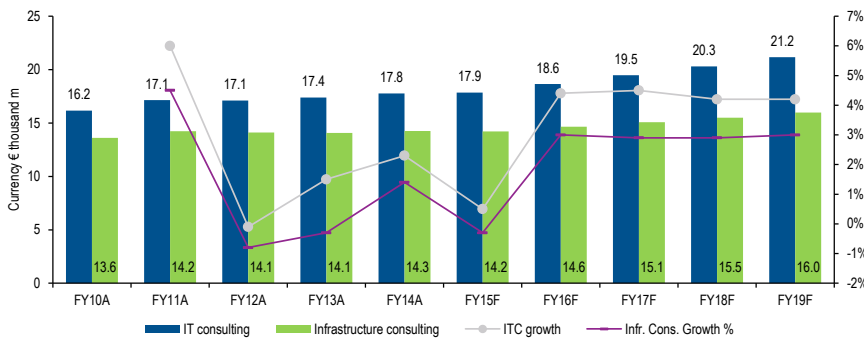
Our stance for the IT Consulting & Other services and Infrastructure services sectors is **moderate**.

In FY14A, the uncertain environment experienced in the global economy resulted in an IT and Infrastructure spending cutback almost worldwide. In FY15A, the previous downward trend has continued, given that the investment at least in mature markets continues short. This scenario is expected to persist as developed countries continue to struggle with fiscal deficits and austerity.

However, from FY16F onwards, INE (2015) projections point out to an increase in consumer sentiment. Consequently, a surge increase, even though small, is also expected in IT and Infrastructure services investment (Figure 18). The CAGR of the industry will remain in single digit growth rates until FY19F.

**Figure 18**  
Worldwide IT Consulting Spending by Segment

Source: IDC and JPA analysis



Additionally, if the oil price stays low, the services growth in oil dependent economies will suffer. The overall impact in services worldwide is uncertain, given that mature markets can benefit from the energy costs reduction counterweighing somehow the emerging economies fall.

However, it should be remembered that some of the oil dependent economies represent some of the highest services growth rates over the past two or three years. Therefore, a decreasing trend in these markets can effectively push down the global services growth.

### Europe, Middle East and Africa region (EMEA)

Although the IT investment growth in EMEA region has registered a slowdown from 3.3% in FY13A to 2.7% in FY14A, it was the region that displayed a bigger progress.

The FY14A EMEA's IT investment growth was mainly driven by the good results in Western Europe, where investment in IT consulting services increased by 3.9%, compared to the decrease of 2.7% in the previous year.

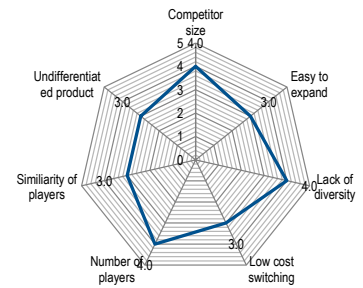
After the FY13A boom, where the Central and Eastern Europe, Middle East and Africa grew by 6.9%, FY14A showed a 3.5% decline, essentially driven by the competitiveness, pressure on prices and consequent reduction in the consulting fees charged.

### Major driver to possible changes in our moderate industry forecast

- ▶ If the economy grows less than expected or the crisis lasts for longer than expected, businesses, consumer confidence and consequently investment will be negatively affected, which may well compromise our growth assumptions. In such case, we will witness to companies delaying IT upgrades and public investment in infrastructures will be made just in essential infrastructure such as health and education. A rising above what is expected will lead the industries in the opposite direction.

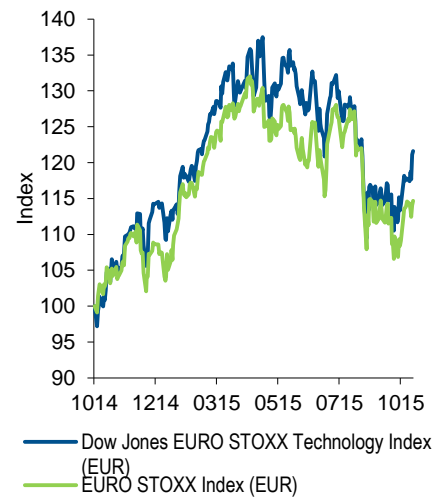
**Figure 17**  
IT and Infrast. industries degree of rivalry

Source: JPA analysis



**Figure 19**  
Indices 52 week performance

Source: Capital IQ and JPA analysis





**Venture Capital**

We have a **positive** fundamental view for the Venture Capital sub-industry. According to a study conducted by EY (2014), the Venture Capital industry invested around €76.4bn in 6,507 deals, reaching the highest investment volume since FY00A. The average amount invested per deal attained €14.7bn, surpassing the pre-crisis volume (€12.3bn in FY08A).

The venture capital industry has been increasing its exposure to the emerging economies. In fact, according to Preqin (2015), the alternative assets industry’s leading source of data and intelligence, the Venture Capital deals flow in emerging countries has more than doubled in the past two years. It is all about opportunity and emerging economies have to offer unparalleled investment opportunities in companies at early stages.

Additionally, the recent oil price tumble generated exceptional openings to acquire undervalued assets. Indeed, the oil shock hit violently some corporations that have been forced to reduce budgets, which committed current and future projects.

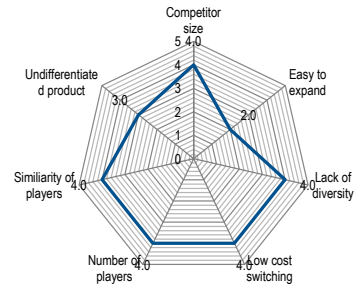
We expect continued market volatility, driven by current emerging economies uncertainties and the widespread crisis in developed markets (Figure 21).

**Major drivers to possible changes in our positive industry forecast**

- ▶ Venture Capital future growth pace will depend directly of investor’s confidence and the risk they are willing to take.
- ▶ Venture Capital future growth is closely linked to emerging economies development, consequently one of the largest uncertainties is the oil price.

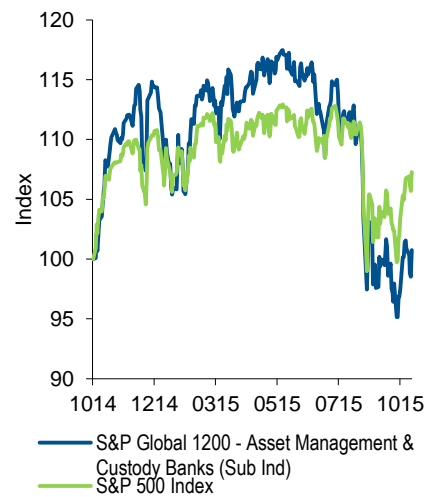
**Figure 20**  
**Asset Management industry rivalry**

Source: JPA analysis



**Figure 21**  
**Indices 52 week performance**

Source: Capital IQ and JPA analysis



## Novabase segments historical overview

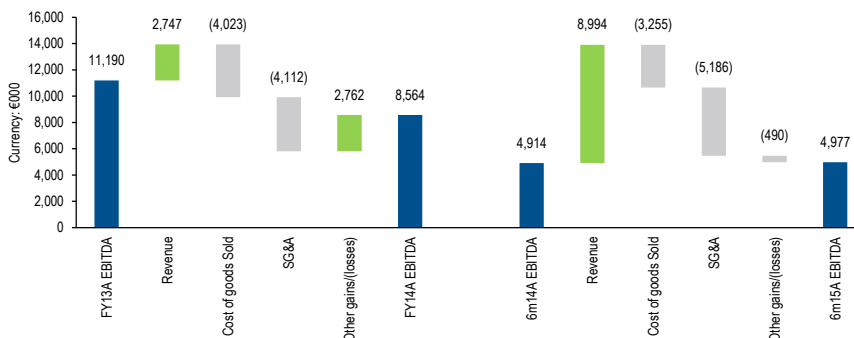
### Novabase Business Solutions

BSO's revenue presents an upward trend, having reached €102.3m in FY13A, €105.1m in FY14A, €50.4m in 6m14A and €59.5m in 6m15A. We highlight the continued segment expertise in providing services and consequent abandonment of sales (Figure 22). The increasing pattern of services rendered is the consequence of the international expansion strategy.

Despite the increase in revenues, EBITDA decreased, which was mainly driven by an increase in personnel costs higher than the revenue growth. Consequently, operating profit decreased from €7.4m in FY13A to €4.3m in FY14A, and from €2.8m in 6m14A to 3.2m in 6m15A (Figure 23).

**Figure 23**  
Business Solutions bridge FY13A-FY14A and 6m14A-6m15A

Source: Statutory accounts and JPA analysis



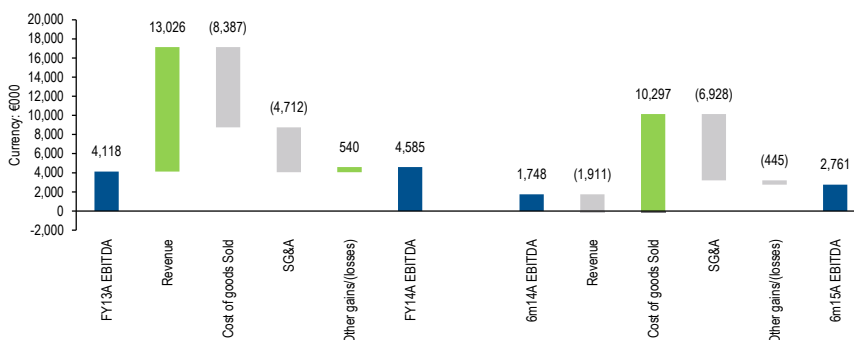
### Novabase Infrastructure & Managed Services

IMS' revenue amounted to €98.4m in FY13A, €111.5m in FY14A, €53.2m in 6m14A and €51.3m in 6m15A. The revenue growth comes simultaneously from two effects. On the one hand an increase of services driven by international developments (Figure 24). On the other hand, a declining effect from divestitures. This is a consequence of domestic market constrains, due to fierce competition in a saturated market, which led to a greater pressure on prices.

According to the statutory accounts, in order to increase competitiveness, overcome the price pressure and reduce the high internationalization costs, NVQ's management has prepared an action plan to reach significant savings through operating optimization. We emphasize the development of new strategic partnerships in markets where the company already operated. As result, operating profit increased from €2.8m in FY3A to €3.2m in FY14A, and from €1.1m in 6m14A to €2.1m in 6m15A (Figure 25).

**Figure 25**  
Infrastructure & Managed Services bridge FY13A-FY14A and 6m14A-6m15A

Source: Statutory accounts and JPA analysis

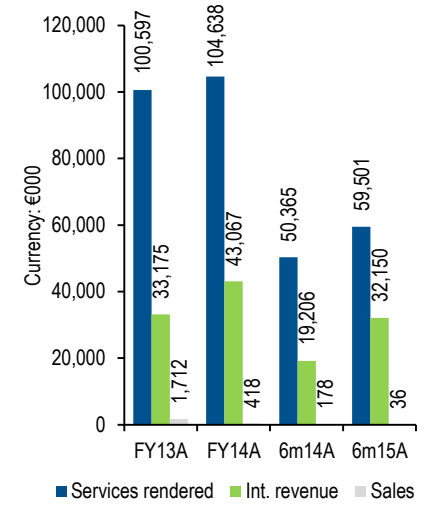


### Novabase Venture Capital

From FY13A to FY14A, VC's unit has undergone major changes in its revenue source structure. In FY13A the revenue stemmed 30.0% from services rendered and 70.0% from sales, albeit in FY14A we assisted to a reversal and services rendered came to represent 92.6%, fundamentally reflecting the sale of Digital TV business in Feb14A (Figure 26).

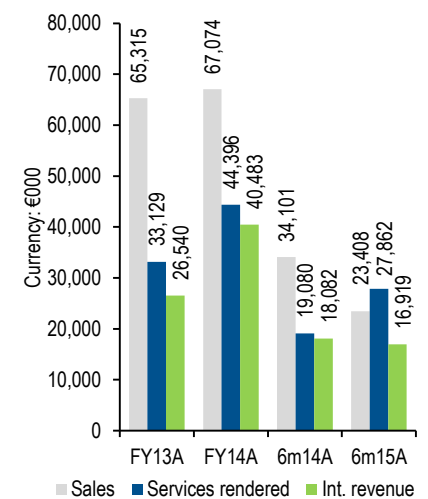
**Figure 22**  
BSO's revenue by source

Source: Statutory accounts and JPA analysis



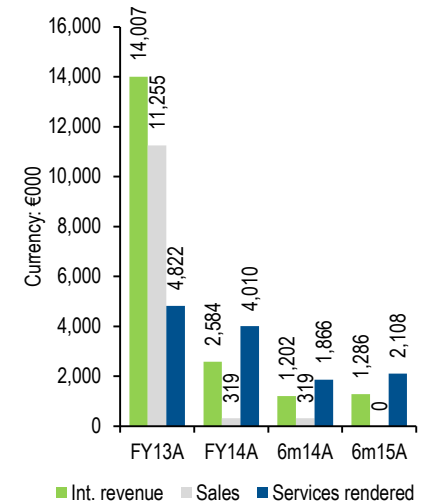
**Figure 24**  
IMS' revenue by source

Source: Statutory accounts and JPA analysis



**Figure 26**  
VC's revenue by source

Source: Statutory accounts and JPA analysis



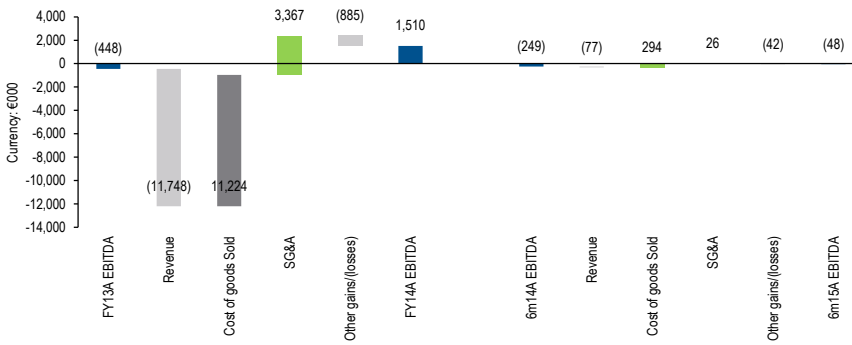
Notes to chart

International revenue respects to the total revenue generated internationally. Sales and services rendered correspond to revenue by source regardless of whether originated at national or international level.

The segment revenue was down €11.8m from FY13A to FY14A and €17k from 6m14A to 6m15A. Gross profit decreased by €524k between FY13A and FY14A and registered a slight increase of €217k between 6m14A and 6m15A. The operating profit going from negative to positive grew €2.3m between FY13A and FY14A. Between 6m14A and 6m15A the segment's operating profit grew from €-392k to €-191k (Figure 27).

**Figure 27**  
**Venture Capital bridge FY13A-FY14A and 6m14A-6m15A**

Source: Statutory accounts and JPA analysis



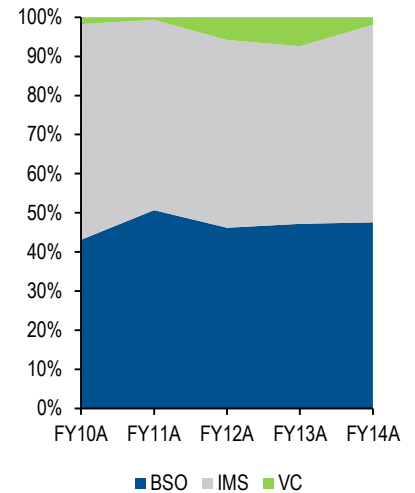
**Novabase segments weight**

NVQ's revenue in FY14A, comes about 47.6% from the Business Solutions segment, 50.5% from Infrastructure & Managed Services, and 2% from the Venture Capital (Figure 28). EBITDA is constituted by 31.3% from BSo, 58.4% from IMS, and 10.3% from VC.

During the period under analysis BSo segment presents the higher average gross profit margin (39.5%), followed by IMS (26.3%). We highlight, the high VC's gross margin volatility, which features in the period under analysis a minimum of -65.7% and a maximum of 71.3% (Figure 29).

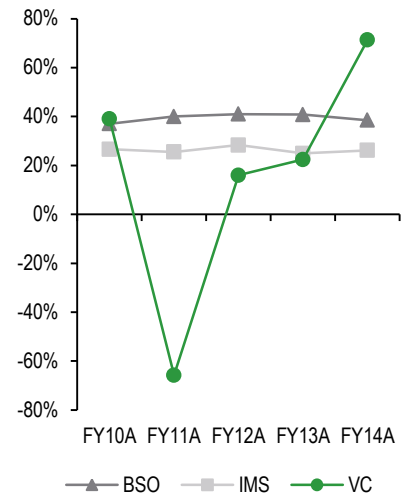
**Figure 28**  
**Revenue by segment**

Source: Statutory accounts and JPA analysis



**Figure 29**  
**Segments' gross profit margin**

Source: Statutory accounts and JPA analysis



## Financial analysis: NVQ consolidated

### Profit & Loss

The **total revenue**, which comprises services rendered and sales, registered both in FY13A-14A and in 6m14A-15A a slight improvement of €4.0m and €7.0m, respectively. These improvements were fundamentally driven by the growth in international operations. In fact, the revenue from international activities accounted for 34.0% of NVQ's total revenue in FY13A, 39.0% in FY14A, 36.3% in 6m14A and 44.6% in 6m15A (Figure 30 and Figure 31).

- ▶ In FY14A, Infrastructures & Managed Services revenue presented a growth of more than double of the company's growth rate, with revenue going up for 13.2%, from €98.4m to €111.4m. Yet, in 6m15A the revenue segment fell 3.6% (€1.9m).
- ▶ Business solutions presented significant increases in FY14A's revenue (up 2.7%, from €102.3m in FY13A to €105.1m in FY14A). From 6m14A to 6m15A, this growth stepped up further, having risen by 17.8% (from €50.5m to €59.4m).
- ▶ Venture Capital revenue fell 73.1% (€4.3m) from FY13A to FY14A and 3.5% (€77k) from 6m14A to 6m15A.

The overall revenue in 6m15A was slightly above the projected by management in the **FY15 company's guidance**, by €415k, as well as the domestic market activity growth, registering a deviation in excess of €685k. However, international revenues fell short of expectations by €270k (Figure 32).

**Cost of revenue**, which includes employee benefit expense and cost of sales, increased by 0.8% (€1.2m) in FY14A, with employee benefit expense going up for 8.1% (€6.5m) although partially offset by a cost of sales decrease of 7.9% (€5.3m). Between 6m14A and 6m15A the previous trend has changed and the cost of revenue showed a decrease of 9.8% (€5.3m), driven mainly by the considerable decrease in cost of sales (31.7%). However, by dissecting this decrease in cost of sales, we realize that this significant reduction was originated from the sale of the Digital TV business. Removing this effect, cost of sales would actually have increased for about €3.5m. Additionally, we point out that the progression of personnel costs has been in part linked to international expansion.

Looking for the **gross profit margin**, it exhibits a slight increase in FY14A (up 4.1%, from €69.9m in FY13A to €72.7m in FY14A). From 6m14A to 6m15A, we witnessed to a further increase of 46%, from €31.2m to €45.6m, respectively. However, we have to take into account the small comparability between the periods as a result of the digital TV deal.

**External supplies and services** were pushed up during the period under analysis, basically due to the subcontracts costs escalation associated to international operations. This item rose to €54.4m in FY13A, €59.9m in FY14A, €27.0m in 6m14A and €39.1m in 6m15A.

According to the statutory accounts, during the period under analysis, **provisions** were mainly related to liabilities from TV subcontracts (warranty coverage) and legal claims.

Novabase's consolidated reported **EBITDA** amounted to €14.9m in FY13A, €14.7m in FY14A, €6.4m in 6m14A and €7.7m in 6m15A.

With regard to EBITDA in 6m15A, this showed a difference in defect of about €810k compared to the estimated value in the **management guidance**, due to an unforeseen increase of internationalization costs. Nevertheless, this was mitigated by an excess in revenue, in relation to the anticipated by NVQ's management. We highlight that, given that the company does not publicly provide 6m15G, it was computed by considering an equal growth in both semesters.

We also point out that we proceeded to the expurgation of **restructuring costs** from EBITDA, since these correspond to non-recurring costs and should be removed so as to not bias the results. These costs totalled €1.5m in FY14A.

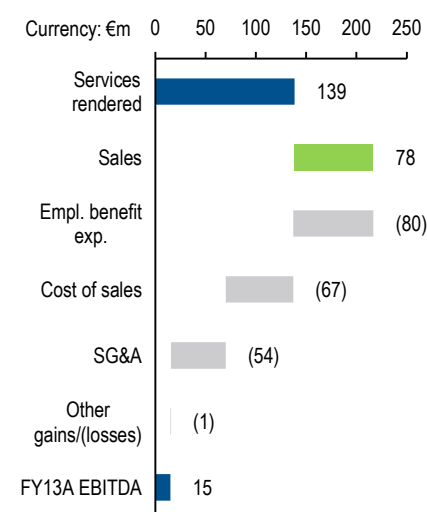
### Working capital

As at Jun15A, **working capital** amounts to €33.0m, displaying a decrease of €3.2m from Dec14A and an increase of €3.6m from Dec13A (Figure 33).

- ▶ As at Jun15A **total receivables**, which are basically composed by trade and other receivables, income tax receivable and accrued income, present a decline of

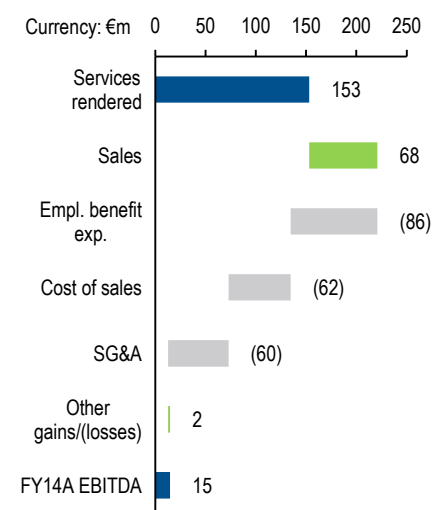
**Figure 30**  
**EBITDA bridge FY13A**

Source: Statutory accounts and JPA analysis



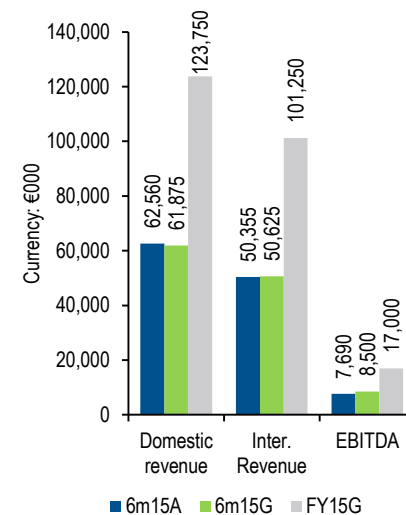
**Figure 31**  
**EBITDA bridge FY14A**

Source: Statutory accounts and JPA analysis



**Figure 32**  
**NVQ – actual vs. guidance**

Source: Management guidance and JPA analysis



Notes to chart

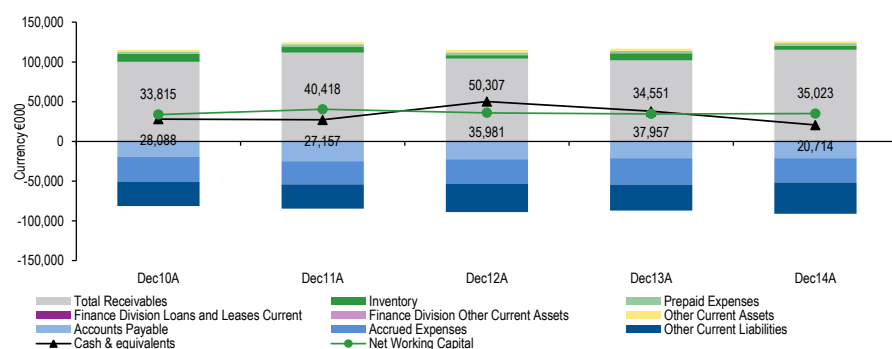
2. 6m15G, stands for the guidance for the first half; FY15G, stand for the guidance for FY15.

6.7%, from €115.9m at Dec14A to €108.2m at Jun15A, fundamentally impacted by the trade receivables and value added tax evolution.

- ▶ As at Jun15A, **inventory**, mainly comprised by merchandise, exhibits a decrease of 0.7% from €4.94m at Dec14A to €4.91m at Jul15A. The company inventory on hand decreased 4 days from Dec14A to Jul15A, displaying positive signs given the adverse domestic conditions, as result of the already mentioned action plan. Another way to evaluate this is that the company passed of turning over its inventory 21.5 times per year to 28 times.
- ▶ **Other current assets** respects essentially to prepayments of contracted services, such as subcontracts, and hardware and software maintenance. As at Jun15A this account displays a growth of €1.7m from Dec14A and of €2.4m from Dec13A, effect of subcontracts costs evolution associated with international activity, which led Novabase to increase usage of external services.
- ▶ As at Jun15A **trade and other payables**, mainly constituted by trade payables and personnel charges (such as remunerations, vacations, vacations subsidies, bonus and others), presents a cutback of €5.0m from Dec13A and of €2.4m from Dec14A. This evolution is largely justified by the substantiated diminution of bonus, value added tax, and other accrued expenses payables.
- ▶ **Current income tax payable**, which comprises the taxes that must be paid to the government, amounts to €89k at Dec13A, €967k at Dec14A and €135k at Jul15A.
- ▶ **Deferred income and other current liabilities** derive essentially from research and development subsidies, and consulting projects, which amounts to €24.8m at Dec13A, €29.7m at Dec13A and €30.0m at Jun15A.

**Figure 33**  
**Working Capital analysis**

Source: Statutory accounts and JPA analysis



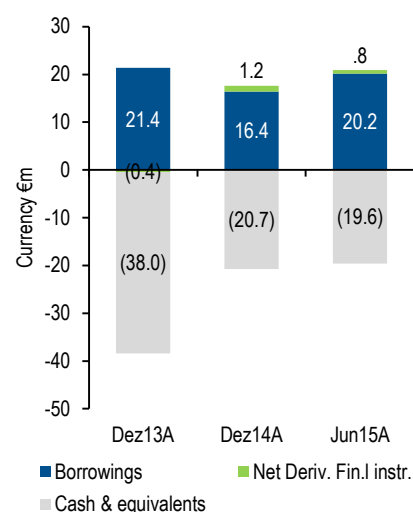
### Net debt

NVQ historically held more cash and cash equivalents than debt, which resulted in a net debt with inverse signal compared to the majority of companies. However, due to a recent debt issuance (€12m) the situation has changed. Net debt totals €-17.0m at Dec13A, €-3.1m at Dec14A, and €1.3m at Jul15A (Figure 34).

- ▶ **Cash & ST investments** as at Jun15A, which comprise cash and short-term bank deposits amounting to €19.6m, decreased 5.4% from €20.7m at Dec14A and 48.4% from €38.0m at Dec13A.
- ▶ As at Jun15A, **bank borrowings** balance figures a rise of €3.8m from Dec14A and a reduction of €5.0m from Dec13A. The rise of this account between Dec14A and Jun15A is closely linked to the funding provided by the EIB to Novabase, under the program "InnovFin - EU Finance for Innovators" for R&D investment. Bank borrowings, which accounts for 84.9% of debt at Dec14A, has attached a 5.01% spread charge and are composed by 60.1% of non-current debt and 39.9% of current debt.
- ▶ We included in Net debt the fair value of derivative financial instruments that are used to hedge against foreign exchange and interest rate risks relating to finance debt.

**Figure 34**  
**Net debt**

Source: Statutory accounts and JPA analysis



### Fixed assets

**Gross tangible assets**, which correspond to basic equipment, buildings and other constructions, and transport equipment, total €18.1m at Dec13A and 18.5m at Dec14A, representing a PP&E increase of €405k. The major contributor to this evolution was the basic equipment. The accumulated depreciation amounts to €25.2m at Dec13A and €29.6m at Dec14A (Figure 35).

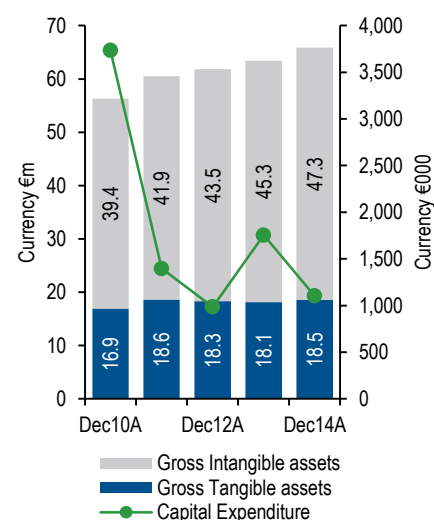
**Gross intangible assets** total €45.3m at Dec13A and €47.3m at Dec14A. These comprise at Dec14A internally generated intangible assets in the amount (€9.9m), industrial property and other rights (€11.2m), work in progress (€2.6m), and the remaining correspond to goodwill (Figure 35).

### Dividends

NVQ has no long history in dividends distribution. However, Novabase already carries out dividends distribution since FY10A (Figure 36 and Appendix D). From Jun14A to Jun15A, Novabase paid dividends up to €0.03. Considering that the stock currently trades at €2.09, it corresponds to a 1.4% dividend yield. The company's dividend yield is higher than the peers average considered in the valuation, which are currently paying dividends between 0.0% and 1.1% of stocks' price. From Jun14A to Jun15A, Novabase reported earnings of €0.15 per share. Therefore, the company paid 20.0% of its earnings as dividends.

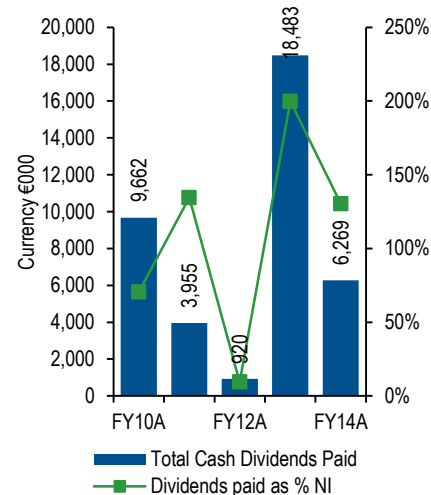
**Figure 35**  
**Gross fixed assets and CapEx**

Source: Statutory accounts and JPA analysis



**Figure 36**  
**Dividends paid**

Source: Statutory accounts, Capital IQ and JPA analysis





## Key valuation drivers

### Revenue

We estimated revenue recurring to the adjusted exponential smoothing forecasting method. Given that revenue moves in accordance with business cycles and economic trends, we believe that this method is suitable for the revenue forecasting objective. This method uses measurable historical data observations to make forecasts, by computing the weighted average of the current and forecasted values, with a trend adjustment added in. We also adjusted the forecast for seasonality (Appendix E).

According to Gardner (1985) and Jain (2003), this quantitative forecasting method is highly accurate and performs even better when trends or cyclical patterns exist. It is widely used for investors to forecast economic indicators such as housing starts and GDP. Financial data can be forecast using this method as long as it is not random.

We point out that at the end of the forecast computation; we compare the obtained results with the consensus of analysts and with the company's guidance, in order to validate them. This methodology was used across all Novabase business segments (Figure 37).

### Cost of revenue

The cost of revenue, which includes employee benefit expenses and cost of sales, was estimated considering the historical operating leverage added of a business transformation factor and an international expansion factor. In other words, we took into account the average margin that each sale or service delivered over the past five years and added two expander factors.

The first factor is associated with the relative weight of sales and services rendered over revenue. This factor was determined based on the difference of sales gross margin and services rendered gross margin, i.e., we took into consideration the evolution of costs incurred by Novabase for each euro of revenue and its respective source. Using extreme cases as example, if the company has no sales, it will not incur in cost of sales. Similarly, if the company does not provide services, the personnel costs will be necessarily lower.

The second factor relates to the costs which arise from current international expansion strategy. It is expected a reduction of margins in the early years, as a result of the high initial costs. The value of the international factor was reduced over time. This takes into account the assumption that, as time passes, these initial high internationalization costs are diluted and the created stable returns remain.

### External supplies & services

External supplies & services were calculated considering their correlation with services provided, as its variation is directly related to the change in spending on subcontracts.

### CapEx

CapEx was estimated at a segmented level resorting to each segment comparables' CapEx over revenue average. We do understand that the historical CapEx does not fit perfectly in the results obtained. However, each segment's CapEx over revenue average was used due to (i) the lack of available segmented information and (ii) the unfeasibility of breaking the consolidated CapEx by the three segments. Moreover, it was assumed that at the medium-long term all the companies will at certain point converge to the industry mean.

Summing up, the CapEx over revenue employed in our model was of 1.58% from FY17F onwards. In order to better reflect NVQ's expansion needs, the latter was added by a factor of roughly 1.0% for the next two years (FY15F and FY16F). Please note that, the 1.58% CapEx over revenue employed in our model does not differ materially from the values registered in the past (1.6% in FY10A) (Figure 38).

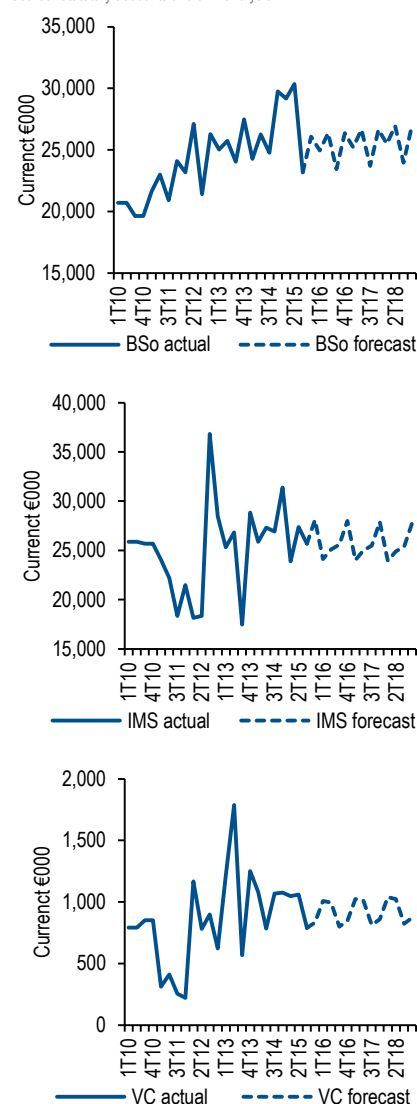
### Working capital

In order to estimate the different working capital captions we have considered FY14A accounts and took into consideration the following assumptions:

- ▶ Inventories were estimated based on 17 days of inventory outstanding which corresponds to the average level of FY14A.
- ▶ Trade receivables were estimated based on 180 days of sales outstanding which corresponds to the average level of FY14A;

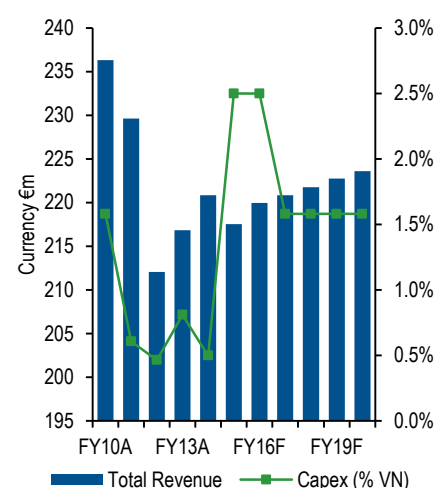
**Figure 37**  
NVQ segments' revenue forecast

Source: Statutory accounts and JPA analysis



**Figure 38**  
CapEx as % of revenue

Source: Statutory accounts and JPA analysis



- ▶ Trade payables were estimated based on 52 days of purchases outstanding which corresponds to the average level of FY14A.
- ▶ To estimate other current assets, prepaid expenses and accrued expenses its FY14A weight over revenue constant was assumed.

## Valuation methodologies

In valuing NVQ we follow a Discounted Cash Flow (DCF) Approach, for several reasons. Firstly, we are able to obtain comprehensive data at segment level, which make it possible to estimate each segment enterprise value. Secondly, NVQ operates in three main segments which differ significantly in terms of cash flow streams, risks, amongst others. Thirdly, a Dividend Discount Model is not suitable, as NVQ's dividend distribution is uncertain. Over the past decade, NVQ only distributed dividends from FY10A onwards. By using a DCF approach per segment, we estimate the corresponding streams of Free Cash Flow to the Firm (FCFF).

### Methodology for the calculation of the discount rate

The discount rate applied to the future cash-flows must reflect not only the time value of money, but also the specific risk of the industry and country where the company operates. Because we follow a DCF approach and estimate each segment's FCFF, the discount rate is the one that results from the NVQ's Weighted Average Cost of Capital ("WACC"), which considers an optimal financing structure (mean of industry), in opposition to the actual structure. The mean of comparables' financing structure was used rather than the actual structure mainly for three reasons: (i) lack of available information by segment (ii) impossibility of breaking the consolidated debt by the three segments, at least in an accurate way, and (iii) we do understand that the financing structure used in the model differ from the actual one, however it was assumed that at medium-long term all the companies converge to the industry mean. The sum of the unlevered free cash-flows (excluding the financing impact) discounted at the WACC rate, results in the enterprise value (Table 32, Table 33, and Table 34).

$$WACC = W_e * K_e + W_d * K_d (1-T)$$

### Cost of equity

With the aim of estimating the opportunity cost of equity ( $K_e$ ), a multi-factor model was used. The CAPM postulates that the opportunity cost of equity is equal to the return on risk-free securities plus an individual risk premium. The risk premium is the company's systematic risk ( $\beta$ ) multiplied by the market risk premium ( $R_m - R_f$ ). We follow a modification of the CAPM, which includes a country risk premium and an industry specific risk premium, for the reasons listed below.

$$R = R_f + \beta(R_m - R_f) + CRP + IRP$$

The country risk premium and the industry risk premium do not interact with the company's systematic risk because we assume that all companies in a market are equally exposed to their industry and country risk.

- ▶  $R_f$  (Risk free rate): we have used the rate referent to the 10 years treasury bond's yield for European AAA economies, which in our view constitutes a reasonable proxy for a risk-free rate for a company established in any European Member State. The AAA rated European economies have traditionally been regarded as the entities least likely to default. Therefore, the rate observed at 15<sup>th</sup> Oct15A of 0.65% was used. (Source: Capital IQ).
- ▶  $\beta$  (beta): The non-diversifiable risk for any asset can be measured by the covariance of its returns with returns on a market index, which is defined as the asset's beta. In order to determine the appropriate beta for the each business segment, we have taken into account the peers' average unlevered beta, computed by us and resorting to S&P Capital IQ database. The peers' average unlevered beta is used in the computation of the levered beta, with the target capital structure of the company. Similarly, based on the comparable analysis, we have considered an optimal capital structure that result in a Debt/Equity ratio of 0.28, 0.44 and 0.75, resulting in a levered beta of 0.79, 0.94 and 0.54 for Business Solution, Infrastructure & Managed Services and Venture Capital, respectively.



- ▶ Rm - Rf (Market risk premium): The market risk premium should be the general risk premium for a mature equity market, according to Damodaran's database. We do understand that the current rate is 5.75%, however, we have used 5.5% because (i) it is an average of the current market premiums used by investment banks; and (ii) it is more representative of the historical market premiums.
- ▶ CRP (Country risk premium): We have considered 3.8% as the most adequate country risk premium for Portugal, since this is the premium associated to the sovereign current credit rating of BB<sup>+</sup>, as presented by S&P. The CRP was computed by us, following Damodaran's methodology and resorting to Capital IQ database.
- ▶ IRP (Industry risk premium): We have considered a premium related with the industry volatility. This premium was considered only for the VC segment, given the higher implied risk in asset management industry. The premium pondered was of 3.8%. The IRP was computed by us, following the same Damodaran's method that was used for CRP.

Total estimated cost of equity is 8.7%, 9.6% and 11.1% for Business Solutions, Infrastructure & Managed Services and Venture Capital, respectively.

#### Effective tax rate

We have considered an effective tax rate of 22.5% in the valuation analysis. This rate was estimated according to the most recent changes of the Portuguese Law and comprises a corporate income tax of 21.0% and a municipality surtax of 1.5% as well as the predicted changes over time according to Corporate Income Tax Reform (Appendix J). We do understand that the effective tax rate incorporated in the model differ from the one that NVQ has been effectively paying. However, the methodology and effective tax rate used by us are aligned with the generally accepted by financial analysis practitioners.

#### Cost of debt

Kd (Cost of debt): To compute the after tax funding cost of 3.51%, 3.51% and 3.54%, for Business Solutions, Infrastructure & Managed Services and Venture Capital, respectively, we have assumed the following assumptions:

$$Kd = Rf + CDS + Spread$$

- ▶ Rf (Risk free rate): we have used 0.65% as previously mentioned.
- ▶ CDS (Credit default swaps): Sovereign spread associated to the credit rating of the Portuguese debt is 2.5%, based on the methodology proposed by Damodaran (Country risk premium/1.5).
- ▶ Spread: Average spread of 1.2% between corporate bonds with AAA rating and the risk free rate. This spread was introduced to reflect the premium asked for financiers when investing in companies with virtually no risk over AAA treasury bonds.
- ▶ Please note that, the cost of debt obtained through this method is reasonably consistent with the coupon paid referring to the most recent bonds issued by NVQ (3.56%).

Taking into consideration all the parameters mentioned above, the discount rate (WACC) was estimated at 7.6%, 7.7% and 7.9% for Business Solutions, Infrastructure & Managed Services and Venture Capital, respectively (Appendix G).

#### Terminal value

The terminal value of each business unit captures the estimated value beyond the projected period, brought to present value at the estimated discount rate. The terminal value has been calculated using a normalized free cash flow.

We have estimated the normalized free cash flow taking into consideration the capital expenditures which are necessary to replace assets as they depreciate. A terminal growth rate of 1.5% in perpetuity as stated in IMF's World Economic Outlook - October 2015 edition has been considered in the terminal value. Please note that the terminal value growth rate considered by us is more conservative than the 2.0% used by the company in the impairment tests of FY14A.

### Valuation period

From a theoretical point of view, the valuation period would extend to infinity given the longevity of the industry in which the company operates. However, due to practical reasons (including the difficulty of estimating parameters for longer periods), we considered a limited explicit projected period of five years, from the base date 31<sup>st</sup> December 2015 until 31<sup>st</sup> December 2020. The terminal value is then added at the end of this period.

### Discount period

On what concerns to present value calculation, we have assumed the mid-year convention to discount, which is in line with the generally accepted practices used by financial analysis practitioners.

### Multiples

The market multiples are selected based on an initial sample of 48,705 companies within the industry of each segment. This initial sample is the same used to estimate the unlevered beta and the debt structure ratio on capital. The sample was obtained from Capital IQ. Outliers in the sample were eliminated. Other observations were eliminated, as follows:

- ▶ The firm is listed outside the European region. According a study conducted by Dittmann and Weiner (2005), when valuing European companies; valuation errors are smaller if comparable companies are chosen from the same continent. Particularly, when valuing companies headquartered in Belgium, Finland, France, Germany, Italy, the Netherlands, Portugal, and Spain. The EU15 region is optimal in minimizing the mean absolute error.
- ▶ Some criteria screens are applied with the purpose to reduce the wide sample without compromising the valuation precision. The metrics are chosen to eliminate companies that are still contained in the database but no longer operate, or that do not provide all the necessary data for a proper valuation.
- ▶ Revenue smaller than €1; Market capitalization less than 1 share; and total assets smaller than €1.
- ▶ Companies with a  $B_L$  outside the range from 0 to 5 and  $B_U$  outside the range from 0.5 to 1.5. This criterion is commonly used by consulting groups when valuing firms in order to avoid biased results. Selecting companies within these intervals deliver results that are more accurate.
- ▶ Companies with effective tax rate outside the range from 10% to 40%. This criterion is used to avoid choosing companies with tax rate highly disparate from NVQ one. Otherwise,  $B_U$  could deliver biased results.
- ▶ Companies with a debt to equity ratio outside the range from 10% to 150%. This criterion is used to avoid choosing companies with dissimilar capital structure.

After applying the entire selection filters, we create a ranking considering ROA and TA proximity of each comparable and the corresponding NVQ's segment. According to the study conducted by Dittmann and Weiner (2015), Return on Assets (ROA) and Total Assets (TA) correspond to the metrics with lowest valuation errors over time.

The ratios considered to value Novabase through market approach were the TEV/Total revenues, TEV/EBITDA, TEV/EBIT, TEV/Forward total revenues, TEV/Forward EBITDA and TEV/Forward EBIT. In our opinion, these ratios allow us to perform a proper analysis of the capital framework of each company as well as of the business itself.

Given that we performed a Market Approach valuation recurring to the SOP method, we were unable to conduct an analysis through price Multiples. In our view, an enterprise analysis as a whole would not be appropriate given the company's three very different business lines. Thus, we believe that a valuation through multiples price, given the restrictions we are subject, would very likely result in inaccurate results.

## Financial Statements: Forecast

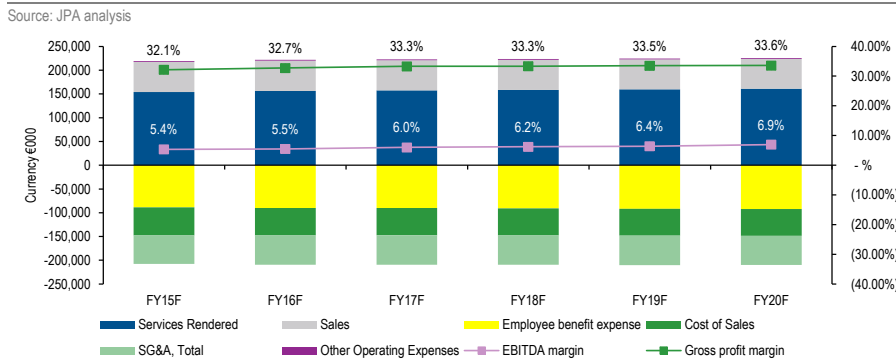
Novabase makes clear its intentions of international growth, sacrificing current margins for the benefit of high international growth opportunities. Indeed, we estimate international sales weight to surpass domestic ones in the next two or three years, not only due to an optimistic international performance but also to an unexciting performance in the domestic market.

From FY16F onwards, **revenue** is expected to revert from its previous downward trend (CAGR FY10A-FY14A of -1.7%) at a timid CAGR of 0.6%. The movement is estimated as a combination of a 1.5% CAGR for VC segment and of 1.3% for BSo, while reduced by a negative trend for IMS (-0.3%) (Figure 39).

We estimate **cost of revenue** (employee benefits expense and cost of sales) to increase at a CAGR of 0.1% and SG&A at a CAGR of 0.4%, until FY20F (Figure 40).

**EBITDA** will continue depressed, particularly as this phase of expansion lasts. However, from FY16F onwards, the internationalization strategy should begin paying off. Then gross profit and EBITDA margins should start to enlarge as effect of operational leverage improvement (Figure 41).

**Figure 41**  
NVQ estimated EBITDA

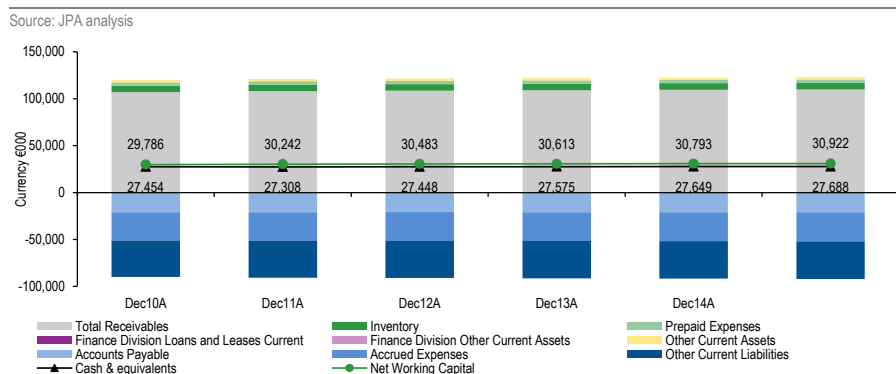


Despite Angola remaining by far the major income generator of NVQ's business in Africa, the company has been increasing its presence in other countries, such as Ghana and Nigeria. A greater than expected investment increase can result in even deeper efforts and consequently margins deterioration. Nevertheless, we are expecting **EBITDA margin** to get back to historic levels by FY18F (6.2% in FY11A). Let us recall that the company's maintenance **OpEx** needs are low and most of its OpEx total amount is destined to work force retribution, improvement and international reallocation, thus affecting operating expenses and margins at least until start-up operations begin to collect significant revenue.

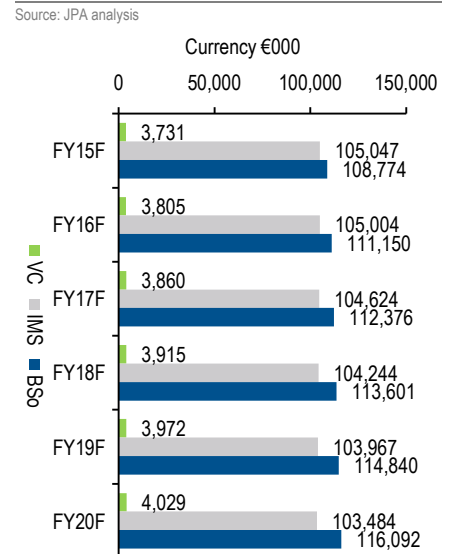
NVQ is a human capital intensive company. Consequently, its **CapEx** respects fundamentally to work in progress, buildings maintenance and equipment maintenance/substitution. Due to the internationalization expansion requirements, we estimate that the company will have to increase its investment both in work in progress as well as in fixed assets that enable the development of the business. We estimate that NVQ will invest more than €4.0m a year until next year (Figure 42).

Novabase's **working capital** requirements arisen essentially from the new international projects, which have led to a remarkable deterioration of its net debt position. We project a trend rollback at the beginning of FY16F (Figure 43). Additionally, we estimate that by FY16F NVQ will start to generate again high free cash flows, clearing the way for an increase in the dividends distribution.

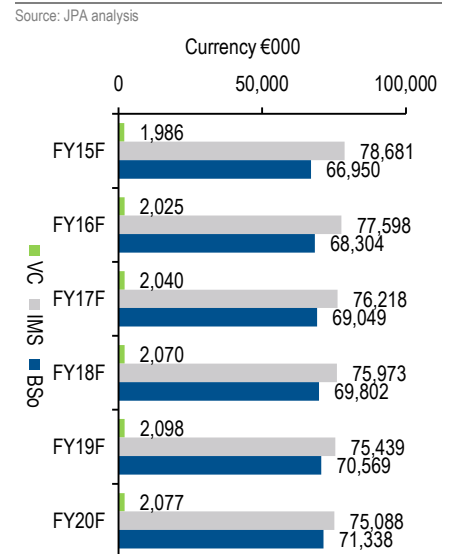
**Figure 43**  
NVQ estimated Working Capital



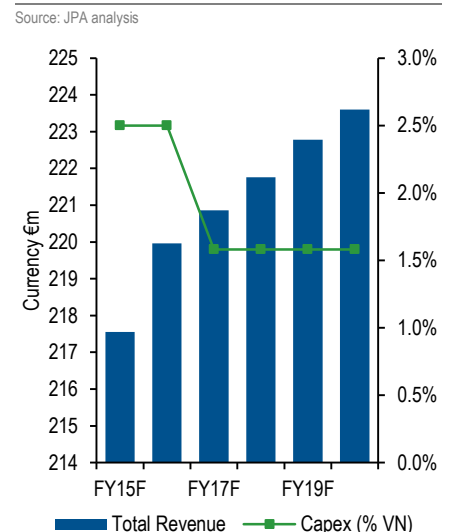
**Figure 39**  
Estimated revenue per segment



**Figure 40**  
Estimated cost of revenue per segment



**Figure 42**  
Estimated CapEx as % of revenue



Return on Equity shows a downward trend, having registered 7.4% in FY13A, 3.1% in FY14A. According to our estimates, ROE will revert in FY16F, reaching 5.3% in FY20F (Figure 44 and Appendix C).

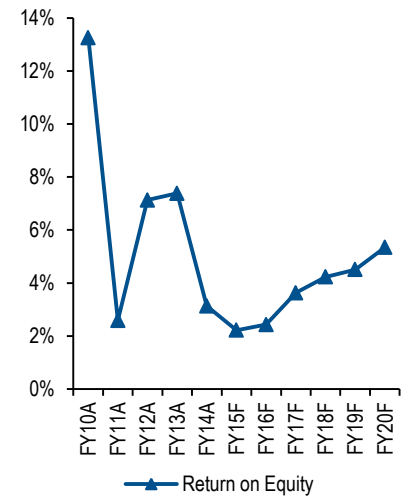
We performed a valuation of NVQ through Market Approach with the purpose of supporting the conclusions drawn from the DCF approach. During this analysis the ratios considered were the TEV/Total revenues, TEV/EBITDA, TEV/EBIT, TEV/Forward total revenues, TEV/Forward EBITDA and TEV/Forward EBIT (Appendix I).

The market multiples analysis indicates:

- ▶ A range between 4x and 10x for Business Solutions segment. Thus, based on estimated multiples we got an EV between €34.5m and €102.2m, and an average of €57.9m.
- ▶ A range between 4x and 20x for Infrastructure & Managed Services segment. Thus, based on estimated multiples we got an EV between €12.8m and €89.5m, and an average of €38.0m.
- ▶ A range between 3x and 27x for Venture Capital Segment. Thus, based on estimated multiples we got an EV between €1.7m and €21.7m, and an average of €7.2m.

**Figure 44**  
**Return on Equity**

Source: Statutory accounts and JPA analysis



## Investment risks

### Market risk: Exchange rate risk (MR1, Figure 45)

As at Dec14A, NVQ holds €137.8m assets and €106.6m liabilities exposed to exchange rate risk, faced to the previous €141.4m and €108.1m, respectively. Although the slight decrease, the amount exposed still constitutes a considerable sum. The recent increased volatility derived from the oil dependent countries where NVQ operates, give rise to some concerns. Notwithstanding, Novabase's finance department monitors the risk and seeks to mitigate the risk through derivative financial instruments. Additionally, a weakening of foreigner currencies will have negative effects on exports profitability if traded in other currencies than euro (Figure 46).

### Market risk: Interest rate risk (MR2, Figure 45)

Exposure to interest rate arises from investment made by the company in financial institutions, bonds and loans. The applications in financial institutions and in bonds are of short term. The borrowings obtained and indexed to a float rate expose the company to interest rate fluctuations. The borrowings obtained at fixed rates expose the company to fair value risk. We highlight that, according to the statutory accounts in FY14A, 18% of Novabase borrowings were issued at a fixed rate and were all denominated in euros.

### Market risk: Credit risk (MR3, Figure 45)

Credit risk arises from cash and cash equivalents, financial derivatives, and credit exposures to customers, including the receivables and transactions already agreed. Notwithstanding, NVQ evaluates the credit risk of all clients based on its financial position, trade relations history. In addition, given Angola's large weight in NVQ's portfolio, there is an extra risk of not getting paid. However, this is not directly linked to debtors' default but to the complex and unreliable Angola's import and export procedures as well as to potential financial losses due to piracy or rights infringement.

### Economic risk: Competition (ER1, Figure 45)

We foresee that several IT consulting companies will try to accelerate their growth through acquisitions, partnerships, and international expansion. There are numerous companies conducting expansion projects. Due to this fact, in the mid-term, we are expecting a fierce increase in markets that until now were practically corporate untouched. This situation may lead to a decrease of market share and price pressure.

### Economic risk: GDP growth (ER2, Figure 45)

The Public investment in infrastructures depends mostly on the economic climate. There is a strong correlation between public investment in infrastructures and the GDP growth rate. As government struggle with fiscal deficits and austerity, public investment in infrastructures other than essentially remains weak. Therefore, the Infrastructure & Managed services can be harmed by these circumstances.

### Economic risk: Oil shock (ER3, Figure 45)

Oil price unpredictability takes firms to postpone investments, and may require expensive reallocation of resources. Note that, VC's activity is directly linked to the oil industry momentum via some investments hold in the energy sector (Figure 47).

### Corporate risk: Capital risk (CR1, Figure 45)

Capital risk should be controlled in order to guarantee returns for the shareholders and benefits for stakeholders as well as to maintain a solid capital structure capable of reducing the cost of capital. NVQ's management monitors the Return on Invested Capital (ROIC) with the purpose to maintain it above the cost of capital, allowing the company to create value. However, in FY14A the ROIC goal was not achieved given the financial and economic crisis.

### Corporate risk: Internationalization costs' unexpected increase (CR2, Figure 45)

An unforeseen increase in internationalization costs will necessarily reduce margins and compress EBITDA, postponing the reversion of current downward trend.

### Corporate risk: Talent retaining (CR3, Figure 45)

Novabase as a consulting group provides services based on expertise competences. Therefore it is critical to retain the most qualified employees, which are capable of delivering differentiating solutions to customers.

Figure 45  
NVQ's risk matrix

Source: JPA analysis

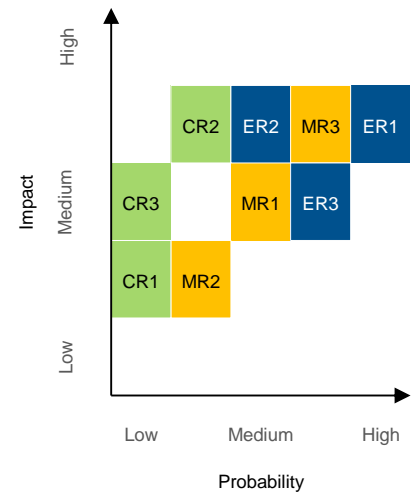


Figure 46  
NVQ'S FY14A Liabilities per currency

Source: Statutory accounts and JPA analysis

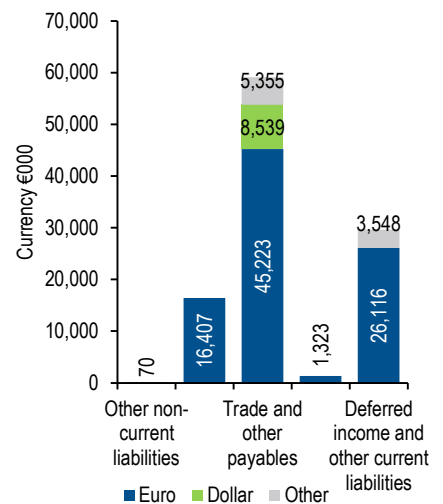
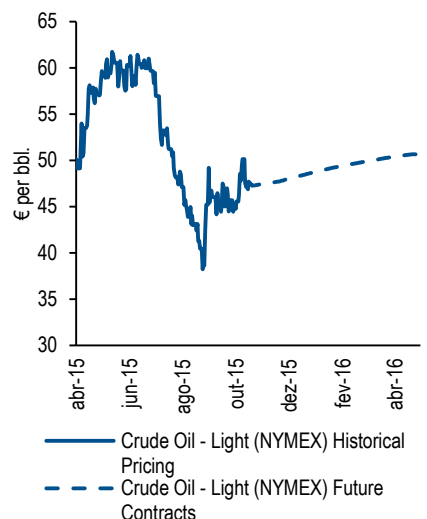


Figure 47  
Crude Oil - Light (^CL) (NYMEX)

Source: Capital IQ and JPA analysis



## Risks to price target analysis

### Sensitivity analysis

We have performed a sensitivity analysis with the purpose of quantifying possible changes in YE16 price target due to changes on some key variables. These variables were defined recurring to the Crystal Ball software and analyzing which model's variables could most impact the price target if base assumptions were not observed. For the sensitivity analysis the simulation of 100,000 possible scenarios was conducted.

We concluded that the variables which should be primary targets of a more comprehensive analysis, as shown in Figure 48, correspond to NVQ's Market Risk Premium (MRP), Country Credit rating, and the industries' specific Terminal growth rate (g) and Industry Volatility Multiplier (IVM).

MRP changes impact directly the cost of equity and changes in Portugal's rating impact the cost of equity via CRP and the cost of debt via CDS, *please refer to valuation methodologies section*. Through Table 7, it is possible to evidence that the region of the sensitivity analysis table which supports our Reduce recommendation corresponds to the largest one (colored orange).

Table 6  
NVQ's valuation sensitivity analysis

Country Rating	Market Risk Premium (MRP)						
	4.0%	4.5%	5.0%	5.5%	6.0%	6.5%	7.0%
BBB+	€3.75	€3.49	€3.26	€3.06	€2.89	€2.73	€2.59
BBB	€3.40	€3.19	€3.00	€2.83	€2.68	€2.54	€2.42
BBB-	€3.12	€2.94	€2.77	€2.63	€2.50	€2.38	€2.27
BB+	€2.88	€2.72	€2.58	€2.46	€2.34	€2.24	€2.14
BB	€2.55	€2.43	€2.32	€2.21	€2.12	€2.04	€1.96
BB-	€2.25	€2.15	€2.06	€1.98	€1.91	€1.84	€1.77
B+	€1.91	€1.84	€1.77	€1.71	€1.66	€1.60	€1.55

Source: JPA analysis

Table 7  
NVQ's upside potential sensitivity analysis

Country Rating	Market Risk Premium (MRP)						
	4.0%	4.5%	5.0%	5.5%	6.0%	6.5%	7.0%
BBB+	69.3%	57.5%	47.3%	38.3%	30.4%	23.4%	17.1%
BBB	53.8%	44.0%	35.4%	27.8%	21.0%	14.9%	9.4%
BBB-	40.9%	32.6%	25.3%	18.7%	12.9%	7.5%	2.7%
BB+	30.1%	23.0%	16.6%	10.9%	5.8%	1.1%	(3.2%)
BB	15.3%	9.7%	4.7%	0.0%	(4.2%)	(8.0%)	(11.6%)
BB-	1.6%	(2.8%)	(6.8%)	(10.5%)	(13.9%)	(17.0%)	(19.9%)
B+	(13.8%)	(16.9%)	(19.9%)	(22.6%)	(25.1%)	(27.5%)	(29.8%)

Source: JPA analysis and BPI rating scheme

#### Notes to chart

3. Green stands for buy; Grey stands for neutral; Orange stands for reduce; and Red stands for sell.

The industries' specific terminal growth rates impact directly the terminal value and consequently the Enterprise Value of each segment (Table 8). IVM influences the YE16 target price changing the cost of debt (similarly to changes in MVP, *refer to valuation methodologies section*) (Table 9).

Table 8  
Terminal growth value (g) sensitivity analysis

Venture Capital	Business Solutions					Infrastructure & Managed Services
	2.5%	2.0%	1.5%	1.0%	0.5%	
2.5%	€2.82	€2.70	€2.60	€2.51	€2.44	2.5%
2.0%	€2.81	€2.69	€2.59	€2.50	€2.43	2.5%
1.5%	€2.80	€2.68	€2.58	€2.49	€2.42	2.5%
1.0%	€2.79	€2.67	€2.57	€2.48	€2.41	2.5%
0.5%	€2.79	€2.67	€2.56	€2.48	€2.40	2.5%
2.5%	€2.76	€2.63	€2.53	€2.44	€2.37	2.0%
2.0%	€2.74	€2.62	€2.52	€2.43	€2.36	2.0%
1.5%	€2.74	€2.61	€2.51	€2.42	€2.35	2.0%
1.0%	€2.73	€2.61	€2.50	€2.42	€2.34	2.0%
0.5%	€2.72	€2.60	€2.50	€2.41	€2.34	2.0%
2.5%	€2.70	€2.58	€2.47	€2.39	€2.31	1.5%
2.0%	€2.69	€2.57	€2.46	€2.38	€2.30	1.5%
1.5%	€2.68	€2.56	€2.46	€2.37	€2.29	1.5%
1.0%	€2.67	€2.55	€2.45	€2.36	€2.29	1.5%
0.5%	€2.67	€2.54	€2.44	€2.35	€2.28	1.5%
2.5%	€2.65	€2.53	€2.43	€2.34	€2.27	1.0%
2.0%	€2.64	€2.52	€2.42	€2.33	€2.25	1.0%
1.5%	€2.63	€2.51	€2.41	€2.32	€2.25	1.0%
1.0%	€2.62	€2.50	€2.40	€2.31	€2.24	1.0%
0.5%	€2.62	€2.50	€2.39	€2.31	€2.23	1.0%
2.5%	€2.61	€2.49	€2.39	€2.30	€2.22	0.5%
2.0%	€2.60	€2.48	€2.38	€2.29	€2.21	0.5%
1.5%	€2.59	€2.47	€2.37	€2.28	€2.20	0.5%
1.0%	€2.58	€2.46	€2.36	€2.27	€2.20	0.5%
0.5%	€2.58	€2.45	€2.35	€2.27	€2.19	0.5%

Source: JPA analysis

Table 9  
Industry Volatility Multiplier sensitivity analysis

Venture Capital	Business Solutions					Infrastructure & Managed Services
	2.0	1.5	1.0	0.5	-	
2.5	€1.57	€1.66	€1.78	€1.94	€2.14	2.0
2.0	€1.58	€1.67	€1.79	€1.95	€2.15	2.0
1.5	€1.59	€1.69	€1.81	€1.96	€2.16	2.0
1.0	€1.61	€1.70	€1.83	€1.98	€2.18	2.0
0.5	€1.63	€1.73	€1.85	€2.00	€2.20	2.0
2.5	€1.62	€1.72	€1.84	€1.99	€2.19	1.5
2.0	€1.63	€1.73	€1.85	€2.00	€2.20	1.5
1.5	€1.64	€1.74	€1.86	€2.01	€2.21	1.5
1.0	€1.66	€1.76	€1.88	€2.03	€2.23	1.5
0.5	€1.68	€1.78	€1.90	€2.05	€2.25	1.5
2.5	€1.68	€1.78	€1.90	€2.05	€2.25	1.0
2.0	€1.69	€1.79	€1.91	€2.06	€2.26	1.0
1.5	€1.71	€1.80	€1.92	€2.08	€2.28	1.0
1.0	€1.72	€1.82	€1.94	€2.09	€2.29	1.0
0.5	€1.74	€1.84	€1.96	€2.11	€2.32	1.0
2.5	€1.76	€1.86	€1.98	€2.13	€2.33	0.5
2.0	€1.77	€1.87	€1.99	€2.14	€2.34	0.5
1.5	€1.78	€1.88	€2.00	€2.15	€2.36	0.5
1.0	€1.80	€1.90	€2.02	€2.17	€2.37	0.5
0.5	€1.82	€1.92	€2.04	€2.19	€2.39	0.5
2.5	€1.86	€1.96	€2.08	€2.23	€2.43	-
2.0	€1.87	€1.97	€2.09	€2.24	€2.44	-
1.5	€1.88	€1.98	€2.10	€2.25	€2.46	-
1.0	€1.90	€2.00	€2.12	€2.27	€2.47	-
0.5	€1.92	€2.02	€2.14	€2.29	€2.49	-

Source: JPA analysis

Table 5  
Investment ratings according risks

	Low risk	Medium risk	High risk
Buy	>15%	>20%	>30%
Neutral	>5% and < 15%	>10% and <20%	>15% and < 30%
Reduce	>-10% and < 5%	>-10% and < 10%	>-10% and < 15%
Sell	< -10%	< -10%	< -10%

Source: BPI rating scheme

Figure 48  
YE16 Price Target Sensitivity

Source: JPA analysis and Crystal Ball software

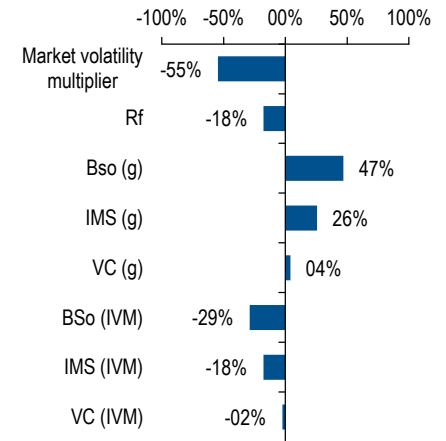




Table 10 and Table 11 support our Reduce recommendation given that the largest regions correspond to reduce recommendation (colored in orange).

**Table 10**  
NVQ's upside potential sensitivity analysis to IVM

	Business Solutions						
	2.0	1.5	1.0	0.5	-		
Venture Capital	2.5	(29.2%)	(24.8%)	(19.4%)	(12.5%)	(3.4%)	2.0
	2.0	(28.7%)	(24.3%)	(18.9%)	(12.0%)	(2.9%)	2.0
	1.5	(28.1%)	(23.7%)	(18.3%)	(11.4%)	(2.3%)	2.0
	1.0	(27.4%)	(23.0%)	(17.5%)	(10.6%)	(1.5%)	2.0
	0.5	(26.4%)	(22.0%)	(16.5%)	(9.6%)	(0.5%)	2.0
	2.5	(26.9%)	(22.5%)	(17.1%)	(10.1%)	(1.0%)	1.5
	2.0	(26.4%)	(22.0%)	(16.6%)	(9.6%)	(0.5%)	1.5
	1.5	(25.8%)	(21.4%)	(16.0%)	(9.0%)	0.1%	1.5
	1.0	(25.0%)	(20.6%)	(15.2%)	(8.3%)	0.8%	1.5
	0.5	(24.0%)	(19.7%)	(14.2%)	(7.3%)	1.8%	1.5
	2.5	(24.1%)	(19.7%)	(14.2%)	(7.3%)	1.8%	1.0
	2.0	(23.6%)	(19.2%)	(13.7%)	(6.8%)	2.3%	1.0
	1.5	(23.0%)	(18.6%)	(13.1%)	(6.2%)	2.9%	1.0
	1.0	(22.2%)	(17.8%)	(12.4%)	(5.4%)	3.7%	1.0
	0.5	(21.2%)	(16.8%)	(11.4%)	(4.5%)	4.6%	1.0
	2.5	(20.5%)	(16.1%)	(10.7%)	(3.8%)	5.3%	0.5
	2.0	(20.0%)	(15.6%)	(10.2%)	(3.3%)	5.8%	0.5
1.5	(19.4%)	(15.0%)	(9.6%)	(2.7%)	6.4%	0.5	
1.0	(18.7%)	(14.3%)	(8.8%)	(1.9%)	7.2%	0.5	
0.5	(17.7%)	(13.3%)	(7.8%)	(0.9%)	8.2%	0.5	
2.5	(16.0%)	(11.6%)	(6.2%)	0.7%	9.8%	-	
2.0	(15.5%)	(11.1%)	(5.7%)	1.2%	10.3%	-	
1.5	(14.9%)	(10.5%)	(5.1%)	1.8%	10.9%	-	
1.0	(14.1%)	(9.7%)	(4.3%)	2.6%	11.7%	-	
0.5	(13.2%)	(8.8%)	(3.3%)	3.6%	12.7%	-	

Source: JPA analysis

Notes to chart

- 5. Green stands for buy; Grey stands for neutral; Orange stands for reduce; and Red stands for sell.

**Monte Carlo simulation**

Additionally to the sensitivity analysis, using to the Crystal Ball software, a Monte Carlo simulation (covering 100,000 simulations) to test YE16 price target's sensitivity to the previously identified key variables (NVQ's MVM, and the industries' specific g and IVM) plus the risk free rate was ran.

With a confidence level of 95.0%, the Monte Carlo simulation mean price target was €2.39, a median of €2.41 and a €0.24 associated standard deviation (Figure 49).

According to the results obtained, there is 95% probability of YE16 NVQ's price be between €1.79 and €2.79, which means that there is less than 5.0% chance of one of the identified variables trigger a change in the recommendation to buy (Table 12).

To perform the Monte Carlo simulation analysis a normal distribution was assumed for all the inputs and a respective standard deviation of 1.0% for the terminal growth rates, of 1.0 for IVMs, of 1.0 for MVM, and of 0.58% for Rf. The industries' terminal growth rates' STD was derived from the 2 years segments' industry historical indexes (Dow Jones EURO STOXX Technology Index, Dow Jones Brookfield Global Infrastructures Index and S&P Global 1200 – Asset Management & Custody Banks). The Rf's STD was derived from the 2 years historical Treasury bond's yield for European AAA economies' STD.

**Table 11**  
NVQ's upside potential sensitivity analysis to g

	Business Solutions						
	2.5%	2.0%	1.5%	1.0%	0.5%		
Venture Capital	2.5%	27.5%	22.0%	17.4%	13.4%	10.1%	2.5%
	2.0%	27.0%	21.5%	16.9%	13.0%	9.6%	2.5%
	1.5%	26.6%	21.1%	16.5%	12.6%	9.2%	2.5%
	1.0%	26.3%	20.8%	16.1%	12.2%	8.8%	2.5%
	0.5%	26.0%	20.5%	15.8%	11.9%	8.5%	2.5%
	2.5%	24.5%	19.0%	14.4%	10.4%	7.1%	2.0%
	2.0%	24.0%	18.5%	13.9%	10.0%	6.6%	2.0%
	1.5%	23.6%	18.1%	13.5%	9.6%	6.2%	2.0%
	1.0%	23.3%	17.8%	13.1%	9.2%	5.8%	2.0%
	0.5%	23.0%	17.5%	12.8%	8.9%	5.5%	2.0%
	2.5%	22.0%	16.5%	11.8%	7.9%	4.5%	1.5%
	2.0%	21.5%	16.0%	11.3%	7.4%	4.0%	1.5%
	1.5%	21.1%	15.6%	10.9%	7.0%	3.6%	1.5%
	1.0%	20.8%	15.2%	10.6%	6.7%	3.3%	1.5%
	0.5%	20.5%	14.9%	10.3%	6.4%	3.0%	1.5%
	2.5%	19.8%	14.3%	9.7%	5.7%	2.4%	1.0%
	2.0%	19.3%	13.8%	9.2%	5.3%	1.9%	1.0%
1.5%	18.9%	13.4%	8.8%	4.9%	1.5%	1.0%	
1.0%	18.6%	13.1%	8.4%	4.5%	1.1%	1.0%	
0.5%	18.3%	12.8%	8.1%	4.2%	0.8%	1.0%	
2.5%	18.0%	12.4%	7.8%	3.9%	0.5%	0.5%	
2.0%	17.5%	12.0%	7.3%	3.4%	0.0%	0.5%	
1.5%	17.1%	11.6%	6.9%	3.0%	(0.4%)	0.5%	
1.0%	16.7%	11.2%	6.6%	2.7%	(0.7%)	0.5%	
0.5%	16.4%	10.9%	6.3%	2.4%	(1.0%)	0.5%	

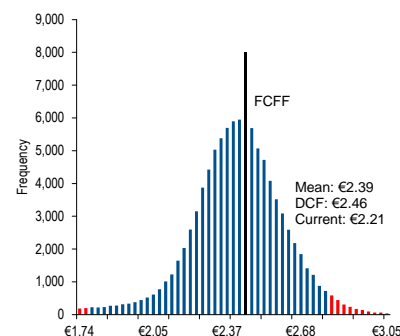
Source: JPA analysis

Notes to chart

- 4. Green stands for buy; Grey stands for neutral; Orange stands for reduce; and Red stands for sell.

**Figure 49**  
Monte Carlo price distribution

Source: JPA analysis, Capital IQ and Crystal Ball software



**Table 12**  
Monte Carlo price percentiles

Percentiles	Forecast values	Upside potential
0%	€0.25	(88.6%)
10%	€2.16	(2.6%)
20%	€2.26	2.0%
30%	€2.32	4.7%
40%	€2.37	6.9%
50%	€2.41	8.9%
60%	€2.45	10.9%
70%	€2.50	13.1%
80%	€2.56	15.7%
90%	€2.65	19.6%
100%	€3.54	59.8%

Source: JPA analysis, Capital IQ and Crystal Ball software

## Statement of Financial Position (Consolidated)

Table 13

### NVQ's Balance sheet

Currency €000	Dec10A	Dec11A	Dec12A	Dec13A	Dec14A	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F
Net PP&E	9,836	9,000	7,101	6,120	5,570	9,108	12,676	14,226	15,779	17,335	18,895
Long-term investments	1,697	1,786	2,586	2,217	2,415	12,727	12,868	12,920	12,973	13,033	13,081
Goodwill	23,375	23,467	23,716	23,713	23,729	23,729	23,729	23,729	23,729	23,729	23,729
Other assets	10,514	12,387	12,249	19,769	24,998	24,624	24,897	24,999	25,100	25,216	25,309
<b>Total non-current assets</b>	<b>53,276</b>	<b>54,300</b>	<b>53,596</b>	<b>60,201</b>	<b>63,646</b>	<b>76,444</b>	<b>79,740</b>	<b>80,756</b>	<b>81,772</b>	<b>82,809</b>	<b>83,813</b>
Cash	28,088	27,157	40,452	32,942	20,714	27,454	27,308	27,448	27,575	27,649	27,688
Trading asset securities	-	-	9,855	5,015	-	-	-	-	-	-	-
Total receivables	100,161	111,909	104,133	102,129	115,231	107,055	108,239	108,682	109,125	109,627	110,033
Inventory	10,403	6,909	4,474	8,925	4,943	6,909	6,923	6,894	6,919	6,931	6,950
Prepaid expenses	2,450	3,532	3,454	2,768	3,508	3,456	3,494	3,508	3,522	3,539	3,552
Other current assets	2,118	2,495	2,992	2,719	2,412	2,376	2,402	2,412	2,422	2,433	2,442
<b>Total current assets</b>	<b>143,220</b>	<b>152,002</b>	<b>165,360</b>	<b>154,498</b>	<b>146,808</b>	<b>147,248</b>	<b>148,366</b>	<b>148,944</b>	<b>149,564</b>	<b>150,178</b>	<b>150,664</b>
<b>Total assets</b>	<b>196,496</b>	<b>206,302</b>	<b>218,956</b>	<b>214,699</b>	<b>210,454</b>	<b>223,692</b>	<b>228,106</b>	<b>229,700</b>	<b>231,336</b>	<b>232,988</b>	<b>234,477</b>
Total debt (excl. Working capital revolver)	12,181	17,307	16,533	21,384	16,407	28,407	29,866	28,466	27,198	26,456	26,067
Working capital revolver	1,031	-	-	-	-	-	-	-	-	-	-
Other liabilities	3,469	2,129	2,606	4,556	3,708	3,653	3,693	3,708	3,723	3,740	3,754
<b>Total non-current liabilities</b>	<b>16,681</b>	<b>19,436</b>	<b>19,139</b>	<b>25,940</b>	<b>20,115</b>	<b>32,060</b>	<b>33,559</b>	<b>32,174</b>	<b>30,921</b>	<b>30,197</b>	<b>29,821</b>
Accounts payable	19,122	24,939	22,405	21,117	20,992	20,977	21,022	20,934	21,010	21,047	21,103
Accrued expenses	32,013	29,193	31,111	33,204	30,549	30,092	30,425	30,550	30,674	30,815	30,929
Other current liabilities	30,182	30,295	35,411	32,684	39,530	38,939	39,370	39,531	39,692	39,874	40,022
<b>Total current liabilities (excl. St debt)</b>	<b>81,317</b>	<b>84,427</b>	<b>88,927</b>	<b>87,005</b>	<b>91,071</b>	<b>90,008</b>	<b>90,816</b>	<b>91,014</b>	<b>91,376</b>	<b>91,736</b>	<b>92,055</b>
<b>Total liabilities</b>	<b>97,998</b>	<b>103,863</b>	<b>108,066</b>	<b>112,945</b>	<b>111,186</b>	<b>122,068</b>	<b>124,375</b>	<b>123,188</b>	<b>122,297</b>	<b>121,933</b>	<b>121,876</b>
Common stock	92,774	92,628	100,277	90,232	86,837	87,522	87,938	89,022	89,845	90,149	89,978
Minority interest	5,724	9,811	10,613	11,522	12,431	14,103	15,793	17,490	19,194	20,906	22,624
<b>Total equity</b>	<b>98,498</b>	<b>102,439</b>	<b>110,890</b>	<b>101,754</b>	<b>99,268</b>	<b>101,624</b>	<b>103,731</b>	<b>106,512</b>	<b>109,039</b>	<b>111,055</b>	<b>112,602</b>
<b>Total Liabilities &amp; Equity</b>	<b>196,496</b>	<b>206,302</b>	<b>218,956</b>	<b>214,699</b>	<b>210,454</b>	<b>223,692</b>	<b>228,106</b>	<b>229,700</b>	<b>231,336</b>	<b>232,988</b>	<b>234,477</b>

Source: JPA analysis

Table 14

### NVQ's Balance sheet common size

Currency €000	Dec10A	Dec11A	Dec12A	Dec13A	Dec14A	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F
Net PP&E	5.0%	4.4%	3.2%	2.9%	2.6%	4.1%	5.6%	6.2%	6.8%	7.4%	8.1%
Long-term investments	0.9%	0.9%	1.2%	1.0%	1.1%	5.7%	5.6%	5.6%	5.6%	5.6%	5.6%
Goodwill	11.9%	11.4%	10.8%	11.0%	11.3%	10.6%	10.4%	10.3%	10.3%	10.2%	10.1%
Other intangibles	4.0%	3.7%	3.6%	3.9%	3.3%	2.8%	2.4%	2.1%	1.8%	1.5%	1.2%
Other assets	5.4%	6.0%	5.6%	9.2%	11.9%	11.0%	10.9%	10.9%	10.9%	10.8%	10.8%
<b>Total non-current assets</b>	<b>27.1%</b>	<b>26.3%</b>	<b>24.5%</b>	<b>28.0%</b>	<b>30.2%</b>	<b>34.2%</b>	<b>35.0%</b>	<b>35.2%</b>	<b>35.3%</b>	<b>35.5%</b>	<b>35.7%</b>
Cash	14.3%	13.2%	18.5%	15.3%	9.8%	12.3%	12.0%	11.9%	11.9%	11.9%	11.8%
Trading asset securities	- %	- %	4.5%	2.3%	- %	- %	- %	- %	- %	- %	- %
Total receivables	51.0%	54.2%	47.6%	47.6%	54.8%	47.9%	47.5%	47.3%	47.2%	47.1%	46.9%
Inventory	5.3%	3.3%	2.0%	4.2%	2.3%	3.1%	3.0%	3.0%	3.0%	3.0%	3.0%
Prepaid expenses	1.2%	1.7%	1.6%	1.3%	1.7%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Other current assets	1.1%	1.2%	1.4%	1.3%	1.1%	1.1%	1.1%	1.1%	1.0%	1.0%	1.0%
<b>Total current assets</b>	<b>72.9%</b>	<b>73.7%</b>	<b>75.5%</b>	<b>72.0%</b>	<b>69.8%</b>	<b>65.8%</b>	<b>65.0%</b>	<b>64.8%</b>	<b>64.7%</b>	<b>64.5%</b>	<b>64.3%</b>
<b>Total assets</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Total debt (excl. Working capital revolver)	6.2%	8.4%	7.6%	10.0%	7.8%	12.7%	13.1%	12.4%	11.8%	11.4%	11.1%
Working capital revolver	0.5%	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %
Other liabilities	1.8%	1.0%	1.2%	2.1%	1.8%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
<b>Total non-current liabilities</b>	<b>8.5%</b>	<b>9.4%</b>	<b>8.7%</b>	<b>12.1%</b>	<b>9.6%</b>	<b>14.3%</b>	<b>14.7%</b>	<b>14.0%</b>	<b>13.4%</b>	<b>13.0%</b>	<b>12.7%</b>
Accounts payable	9.7%	12.1%	10.2%	9.8%	10.0%	9.4%	9.2%	9.1%	9.1%	9.0%	9.0%
Accrued expenses	16.3%	14.2%	14.2%	15.5%	14.5%	13.5%	13.3%	13.3%	13.3%	13.2%	13.2%
Other current liabilities	15.4%	14.7%	16.2%	15.2%	18.8%	17.4%	17.3%	17.2%	17.2%	17.1%	17.1%
<b>Total current liabilities (excl. St debt)</b>	<b>41.4%</b>	<b>40.9%</b>	<b>40.6%</b>	<b>40.5%</b>	<b>43.3%</b>	<b>40.2%</b>	<b>39.8%</b>	<b>39.6%</b>	<b>39.5%</b>	<b>39.4%</b>	<b>39.3%</b>
<b>Total liabilities</b>	<b>49.9%</b>	<b>50.3%</b>	<b>49.4%</b>	<b>52.6%</b>	<b>52.8%</b>	<b>54.6%</b>	<b>54.5%</b>	<b>53.6%</b>	<b>52.9%</b>	<b>52.3%</b>	<b>52.0%</b>
Common stock	47.2%	44.9%	45.8%	42.0%	41.3%	39.1%	38.6%	38.8%	38.8%	38.7%	38.4%
Minority interest	2.9%	4.8%	4.8%	5.4%	5.9%	6.3%	6.9%	7.6%	8.3%	9.0%	9.6%
<b>Total equity</b>	<b>50.1%</b>	<b>49.7%</b>	<b>50.6%</b>	<b>47.4%</b>	<b>47.2%</b>	<b>45.4%</b>	<b>45.5%</b>	<b>46.4%</b>	<b>47.1%</b>	<b>47.7%</b>	<b>48.0%</b>
<b>Total Liabilities &amp; Equity</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Statutory accounts and JPA analysis



## Income Statement (Consolidated)

Table 15

### NVQ's Profit & Loss

Currency €000	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
Services rendered	132,356	132,715	137,795	138,548	153,044	153,910	156,334	157,458	158,582	159,762	160,874
Sales	103,975	96,918	74,280	78,282	67,811	63,642	63,626	63,402	63,178	63,016	62,730
<b>Total revenue</b>	<b>236,331</b>	<b>229,633</b>	<b>212,075</b>	<b>216,830</b>	<b>220,855</b>	<b>217,552</b>	<b>219,959</b>	<b>220,860</b>	<b>221,760</b>	<b>222,779</b>	<b>223,604</b>
Employee benefit expense	75,607	76,210	75,936	79,808	86,305	88,712	89,821	90,226	90,942	91,597	92,252
Cost of sales	90,125	86,917	65,126	67,165	61,854	58,905	58,105	57,082	56,903	56,509	56,251
Cost of revenue	165,732	163,127	141,062	146,973	148,159	147,617	147,927	147,308	147,845	148,105	148,503
<b>Gross profit</b>	<b>70,599</b>	<b>66,506</b>	<b>71,013</b>	<b>69,857</b>	<b>72,696</b>	<b>69,935</b>	<b>72,032</b>	<b>73,552</b>	<b>73,915</b>	<b>74,673</b>	<b>75,101</b>
SG&A, total	50,378	51,720	52,228	54,441	59,898	59,930	61,629	61,953	61,737	62,093	61,211
D&A, total	5,478	6,125	5,757	5,731	5,917	5,414	5,600	5,543	5,565	5,595	5,752
Other operating expenses	(1,947)	543	725	556	(1,861)	(1,643)	(1,650)	(1,649)	(1,648)	(1,648)	(1,645)
<b>Operating income</b>	<b>16,690</b>	<b>8,118</b>	<b>12,303</b>	<b>9,129</b>	<b>8,742</b>	<b>6,234</b>	<b>6,453</b>	<b>7,704</b>	<b>8,261</b>	<b>8,633</b>	<b>9,783</b>
<b>EBITDA</b>	<b>22,168</b>	<b>14,243</b>	<b>18,060</b>	<b>14,860</b>	<b>14,659</b>	<b>11,648</b>	<b>12,053</b>	<b>13,248</b>	<b>13,826</b>	<b>14,228</b>	<b>15,536</b>
Net interest (expense)/income	(370)	(1,501)	(166)	(574)	(1,765)	(1,013)	(1,067)	(766)	(641)	(538)	(462)
<b>EBT excl. Unusual items</b>	<b>16,320</b>	<b>6,617</b>	<b>12,137</b>	<b>8,555</b>	<b>6,977</b>	<b>5,221</b>	<b>5,386</b>	<b>6,939</b>	<b>7,620</b>	<b>8,095</b>	<b>9,321</b>
Merger & restructuring charges	-	(3,496)	-	-	(1,522)	-	-	-	-	-	-
<b>EBT incl. Unusual items</b>	<b>16,320</b>	<b>3,121</b>	<b>12,137</b>	<b>8,555</b>	<b>5,455</b>	<b>5,221</b>	<b>5,386</b>	<b>6,939</b>	<b>7,620</b>	<b>8,095</b>	<b>9,321</b>
Income tax expense	2,628	884	2,376	(693)	857	1,294	1,173	1,376	1,302	1,376	1,585
<b>Earnings from cont. Ops.</b>	<b>13,692</b>	<b>2,237</b>	<b>9,761</b>	<b>9,248</b>	<b>4,598</b>	<b>3,927</b>	<b>4,212</b>	<b>5,563</b>	<b>6,318</b>	<b>6,719</b>	<b>7,736</b>
Discontinued operations	-	703	-	-	211	-	-	-	-	-	-
Extraordinary items & acct. Change	-	-	-	-	-	-	-	-	-	-	-
<b>Net income to company</b>	<b>13,692</b>	<b>2,940</b>	<b>9,761</b>	<b>9,248</b>	<b>4,809</b>	<b>3,927</b>	<b>4,212</b>	<b>5,563</b>	<b>6,318</b>	<b>6,719</b>	<b>7,736</b>
Minority interest	(639)	(289)	(1,855)	(1,738)	(1,697)	(1,672)	(1,690)	(1,697)	(1,704)	(1,712)	(1,718)
<b>Net income to parent</b>	<b>13,053</b>	<b>2,651</b>	<b>7,906</b>	<b>7,510</b>	<b>3,112</b>	<b>2,256</b>	<b>2,522</b>	<b>3,866</b>	<b>4,614</b>	<b>5,007</b>	<b>6,018</b>
Preferred dividends and other adjust.	-	-	-	-	-	-	-	-	-	-	-
<b>NI to common incl. extra</b>	<b>13,053</b>	<b>2,651</b>	<b>7,906</b>	<b>7,510</b>	<b>3,112</b>	<b>2,256</b>	<b>2,522</b>	<b>3,866</b>	<b>4,614</b>	<b>5,007</b>	<b>6,018</b>

Source: Statutory accounts and JPA analysis

Table 16

### NVQ's Profit & Loss common size

Currency €000	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
Services rendered	56.0%	57.8%	65.0%	63.9%	69.3%	70.7%	71.1%	71.3%	71.5%	71.7%	71.9%
Sales	44.0%	42.2%	35.0%	36.1%	30.7%	29.3%	28.9%	28.7%	28.5%	28.3%	28.1%
<b>Total revenue</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Employee benefit expense	32.0%	33.2%	35.8%	36.8%	39.1%	40.8%	40.8%	40.9%	41.0%	41.1%	41.3%
Cost of sales	38.1%	37.9%	30.7%	31.0%	28.0%	27.1%	26.4%	25.8%	25.7%	25.4%	25.2%
Cost of revenue	70.1%	71.0%	66.5%	67.8%	67.1%	67.9%	67.3%	66.7%	66.7%	66.5%	66.4%
<b>Gross profit</b>	<b>29.9%</b>	<b>29.0%</b>	<b>33.5%</b>	<b>32.2%</b>	<b>32.9%</b>	<b>32.1%</b>	<b>32.7%</b>	<b>33.3%</b>	<b>33.3%</b>	<b>33.5%</b>	<b>33.6%</b>
SG&A, total	21.3%	22.5%	24.6%	25.1%	27.1%	27.5%	28.0%	28.1%	27.8%	27.9%	27.4%
D&A, total	2.3%	2.7%	2.7%	2.6%	2.7%	2.5%	2.5%	2.5%	2.5%	2.5%	2.6%
Other operating expenses	(0.8%)	0.2%	0.3%	0.3%	(0.8%)	(0.8%)	(0.8%)	(0.7%)	(0.7%)	(0.7%)	(0.7%)
<b>Operating income</b>	<b>7.1%</b>	<b>3.5%</b>	<b>5.8%</b>	<b>4.2%</b>	<b>4.0%</b>	<b>2.9%</b>	<b>2.9%</b>	<b>3.5%</b>	<b>3.7%</b>	<b>3.9%</b>	<b>4.4%</b>
<b>EBITDA</b>	<b>9.4%</b>	<b>6.2%</b>	<b>8.5%</b>	<b>6.9%</b>	<b>6.6%</b>	<b>5.4%</b>	<b>5.5%</b>	<b>6.0%</b>	<b>6.2%</b>	<b>6.4%</b>	<b>6.9%</b>
Net interest (expense)/income	(0.2%)	(0.7%)	(0.1%)	(0.3%)	(0.8%)	(0.5%)	(0.5%)	(0.3%)	(0.3%)	(0.2%)	(0.2%)
<b>EBT excl. Unusual items</b>	<b>6.9%</b>	<b>2.9%</b>	<b>5.7%</b>	<b>3.9%</b>	<b>3.2%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>3.1%</b>	<b>3.4%</b>	<b>3.6%</b>	<b>4.2%</b>
Merger & restructuring charges	-	(1.5%)	-	-	(0.7%)	-	-	-	-	-	-
<b>EBT incl. Unusual items</b>	<b>6.9%</b>	<b>1.4%</b>	<b>5.7%</b>	<b>3.9%</b>	<b>2.5%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>3.1%</b>	<b>3.4%</b>	<b>3.6%</b>	<b>4.2%</b>
Income tax expense	1.1%	0.4%	1.1%	(0.3%)	0.4%	0.6%	0.5%	0.6%	0.6%	0.6%	0.7%
<b>Earnings from cont. Ops.</b>	<b>5.8%</b>	<b>1.0%</b>	<b>4.6%</b>	<b>4.3%</b>	<b>2.1%</b>	<b>1.8%</b>	<b>1.9%</b>	<b>2.5%</b>	<b>2.8%</b>	<b>3.0%</b>	<b>3.5%</b>
Discontinued operations	-	0.3%	-	-	0.1%	-	-	-	-	-	-
Extraordinary items & acct. Change	-	-	-	-	-	-	-	-	-	-	-
<b>Net income to company</b>	<b>5.8%</b>	<b>1.3%</b>	<b>4.6%</b>	<b>4.3%</b>	<b>2.2%</b>	<b>1.8%</b>	<b>1.9%</b>	<b>2.5%</b>	<b>2.8%</b>	<b>3.0%</b>	<b>3.5%</b>
Minority interest	(0.3%)	(0.1%)	(0.9%)	(0.8%)	(0.8%)	(0.8%)	(0.8%)	(0.8%)	(0.8%)	(0.8%)	(0.8%)
<b>Net income to parent</b>	<b>5.5%</b>	<b>1.2%</b>	<b>3.7%</b>	<b>3.5%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>1.8%</b>	<b>2.1%</b>	<b>2.2%</b>	<b>2.7%</b>
Preferred dividends and other adjust.	-	-	-	-	-	-	-	-	-	-	-
<b>NI to common incl. extra</b>	<b>5.5%</b>	<b>1.2%</b>	<b>3.7%</b>	<b>3.5%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>1.8%</b>	<b>2.1%</b>	<b>2.2%</b>	<b>2.7%</b>

Source: Statutory accounts and JPA analysis

## Income Statement (Individual)

Table 17  
BSo's Profit & Loss

Currency €000	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
Services rendered	79,377	88,542	94,815	100,597	104,638	108,341	110,708	111,929	113,149	114,383	115,630
Sales	1,282	1,106	3,144	1,712	418	433	442	447	452	457	462
Total revenue	80,659	89,648	97,959	102,309	105,056	108,774	111,150	112,376	113,601	114,840	116,092
Employee benefit expense	49,508	53,100	55,965	59,487	64,292	66,626	67,973	68,715	69,464	70,227	70,993
Cost of sales	1,253	650	1,834	1,095	313	324	331	335	338	342	346
Cost of revenue	50,761	53,750	57,799	60,582	64,605	66,950	68,304	69,049	69,802	70,569	71,338
<b>Gross profit</b>	<b>29,898</b>	<b>35,898</b>	<b>40,160</b>	<b>41,727</b>	<b>40,451</b>	<b>41,824</b>	<b>42,846</b>	<b>43,326</b>	<b>43,799</b>	<b>44,271</b>	<b>44,753</b>
SG&A, total	19,384	25,365	30,184	28,442	32,554	34,443	35,195	35,623	36,005	36,398	36,795
D&A, total	3,210	3,732	3,699	3,760	4,263	3,830	4,087	4,137	4,182	4,228	4,274
Other operating expenses	(421)	(415)	(2,709)	2,095	(667)	(504)	(515)	(520)	(526)	(532)	(537)
<b>Operating income</b>	<b>7,725</b>	<b>7,216</b>	<b>8,986</b>	<b>7,430</b>	<b>4,301</b>	<b>4,055</b>	<b>4,079</b>	<b>4,086</b>	<b>4,137</b>	<b>4,177</b>	<b>4,222</b>
<b>EBITDA</b>	<b>10,935</b>	<b>10,948</b>	<b>12,685</b>	<b>11,190</b>	<b>8,564</b>	<b>7,885</b>	<b>8,166</b>	<b>8,224</b>	<b>8,320</b>	<b>8,405</b>	<b>8,496</b>

Source: Statutory accounts and JPA analysis

Table 18  
IMS' Profit & Loss

Currency €000	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
Services rendered	34,233	28,261	39,514	33,129	44,396	41,838	41,821	41,669	41,518	41,408	41,215
Sales	68,875	57,774	62,265	65,315	67,074	63,209	63,183	62,955	62,726	62,559	62,268
Total revenue	103,108	86,035	101,779	98,444	111,470	105,047	105,004	104,624	104,244	103,967	103,484
Employee benefit expense	16,679	13,874	16,536	16,913	21,028	20,100	19,823	19,471	19,408	19,272	19,182
Cost of sales	58,981	50,204	56,362	57,013	61,285	58,581	57,775	56,747	56,565	56,167	55,905
Cost of revenue	75,660	64,078	72,898	73,926	82,313	78,681	77,598	76,218	75,973	75,439	75,088
<b>Gross profit</b>	<b>27,448</b>	<b>21,957</b>	<b>28,881</b>	<b>24,518</b>	<b>29,157</b>	<b>26,367</b>	<b>27,406</b>	<b>28,406</b>	<b>28,271</b>	<b>28,529</b>	<b>28,396</b>
SG&A, total	19,434	17,693	19,221	21,226	25,938	24,259	25,201	25,110	24,505	24,440	23,244
D&A, total	1,477	1,400	1,486	1,298	1,367	1,439	1,365	1,255	1,251	1,248	1,242
Other operating expenses	(634)	(294)	3,358	(826)	(1,366)	(1,287)	(1,287)	(1,282)	(1,277)	(1,274)	(1,268)
<b>Operating income</b>	<b>7,171</b>	<b>3,158</b>	<b>4,816</b>	<b>2,820</b>	<b>3,218</b>	<b>1,956</b>	<b>2,127</b>	<b>3,322</b>	<b>3,792</b>	<b>4,115</b>	<b>5,179</b>
<b>EBITDA</b>	<b>8,648</b>	<b>4,558</b>	<b>6,302</b>	<b>4,118</b>	<b>4,585</b>	<b>3,395</b>	<b>3,492</b>	<b>4,578</b>	<b>5,043</b>	<b>5,362</b>	<b>6,420</b>

Source: Statutory accounts and JPA analysis

Table 19  
VC's Profit & Loss

Currency €000	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
Services rendered	3,286	1,197	3,466	4,822	4,010	3,731	3,805	3,860	3,915	3,972	4,029
Sales	-	-	8,871	11,255	319	-	-	-	-	-	-
Total revenue	3,286	1,197	12,337	16,077	4,329	3,731	3,805	3,860	3,915	3,972	4,029
Employee benefit expense	2,003	1,984	3,435	3,408	985	1,986	2,025	2,040	2,070	2,098	2,077
Cost of sales	-	-	6,930	9,057	256	-	-	-	-	-	-
Cost of revenue	2,003	1,984	10,365	12,465	1,241	1,986	2,025	2,040	2,070	2,098	2,077
<b>Gross profit</b>	<b>1,283</b>	<b>(787)</b>	<b>1,972</b>	<b>3,612</b>	<b>3,088</b>	<b>1,745</b>	<b>1,780</b>	<b>1,820</b>	<b>1,846</b>	<b>1,874</b>	<b>1,952</b>
SG&A, total	1,113	398	2,823	4,773	1,406	1,228	1,233	1,220	1,227	1,255	1,173
D&A, total	69	188	572	673	287	146	148	151	132	120	236
Other operating expenses	(242)	17	76	(713)	172	148	151	153	156	158	160
<b>Operating income</b>	<b>343</b>	<b>(1,390)</b>	<b>(1,499)</b>	<b>(1,121)</b>	<b>1,223</b>	<b>223</b>	<b>247</b>	<b>296</b>	<b>332</b>	<b>341</b>	<b>383</b>
<b>EBITDA</b>	<b>412</b>	<b>(1,202)</b>	<b>(927)</b>	<b>(448)</b>	<b>1,510</b>	<b>369</b>	<b>396</b>	<b>446</b>	<b>463</b>	<b>461</b>	<b>619</b>

Source: Statutory accounts and JPA analysis

**Table 20**  
**BSO's Profit & Loss common size**

Currency €000	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
Services rendered	98.4%	98.8%	96.8%	98.3%	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%
Sales	1.6%	1.2%	3.2%	1.7%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
<b>Total revenue</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Employee benefit expense	61.4%	59.2%	57.1%	58.1%	61.2%	61.3%	61.2%	61.1%	61.1%	61.2%	61.2%
Cost of sales	1.6%	0.7%	1.9%	1.1%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Cost of revenue	62.9%	60.0%	59.0%	59.2%	61.5%	61.5%	61.5%	61.4%	61.4%	61.4%	61.4%
<b>Gross profit</b>	<b>37.1%</b>	<b>40.0%</b>	<b>41.0%</b>	<b>40.8%</b>	<b>38.5%</b>	<b>38.5%</b>	<b>38.5%</b>	<b>38.6%</b>	<b>38.6%</b>	<b>38.6%</b>	<b>38.6%</b>
SG&A, total	24.0%	28.3%	30.8%	27.8%	31.0%	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%
D&A, total	4.0%	4.2%	3.8%	3.7%	4.1%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%
Other operating expenses	(0.5%)	(0.5%)	(2.8%)	2.0%	(0.6%)	(0.5%)	(0.5%)	(0.5%)	(0.5%)	(0.5%)	(0.5%)
<b>Operating income</b>	<b>9.6%</b>	<b>8.0%</b>	<b>9.2%</b>	<b>7.3%</b>	<b>4.1%</b>	<b>3.7%</b>	<b>3.7%</b>	<b>3.6%</b>	<b>3.6%</b>	<b>3.6%</b>	<b>3.6%</b>
<b>EBITDA</b>	<b>13.6%</b>	<b>12.2%</b>	<b>12.9%</b>	<b>10.9%</b>	<b>8.2%</b>	<b>7.2%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>	<b>7.3%</b>

Source: Statutory accounts and JPA analysis

**Table 21**  
**IMS' Profit & Loss common size**

Currency €000	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
Services rendered	33.2%	32.8%	38.8%	33.7%	39.8%	39.8%	39.8%	39.8%	39.8%	39.8%	39.8%
Sales	66.8%	67.2%	61.2%	66.3%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%	60.2%
<b>Total revenue</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Employee benefit expense	16.2%	16.1%	16.2%	17.2%	18.9%	19.1%	18.9%	18.6%	18.6%	18.5%	18.5%
Cost of sales	57.2%	58.4%	55.4%	57.9%	55.0%	55.8%	55.0%	54.2%	54.3%	54.0%	54.0%
Cost of revenue	73.4%	74.5%	71.6%	75.1%	73.8%	74.9%	73.9%	72.8%	72.9%	72.6%	72.6%
<b>Gross profit</b>	<b>26.6%</b>	<b>25.5%</b>	<b>28.4%</b>	<b>24.9%</b>	<b>26.2%</b>	<b>25.1%</b>	<b>26.1%</b>	<b>27.2%</b>	<b>27.1%</b>	<b>27.4%</b>	<b>27.4%</b>
SG&A, total	18.8%	20.6%	18.9%	21.6%	23.3%	23.1%	24.0%	24.0%	23.5%	23.5%	22.5%
D&A, total	1.4%	1.6%	1.5%	1.3%	1.2%	1.4%	1.3%	1.2%	1.2%	1.2%	1.2%
Other operating expenses	(0.6%)	(0.3%)	3.3%	(0.8%)	(1.2%)	(1.2%)	(1.2%)	(1.2%)	(1.2%)	(1.2%)	(1.2%)
<b>Operating income</b>	<b>7.0%</b>	<b>3.7%</b>	<b>4.7%</b>	<b>2.9%</b>	<b>2.9%</b>	<b>1.9%</b>	<b>2.0%</b>	<b>3.2%</b>	<b>3.6%</b>	<b>4.0%</b>	<b>5.0%</b>
<b>EBITDA</b>	<b>8.4%</b>	<b>5.3%</b>	<b>6.2%</b>	<b>4.2%</b>	<b>4.1%</b>	<b>3.2%</b>	<b>3.3%</b>	<b>4.4%</b>	<b>4.8%</b>	<b>5.2%</b>	<b>6.2%</b>

Source: Statutory accounts and JPA analysis

**Table 22**  
**VC's Profit & Loss common size**

Currency €000	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
Services rendered	100.0%	100.0%	28.1%	30.0%	92.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Sales	- %	- %	71.9%	70.0%	7.4%	- %	- %	- %	- %	- %	- %
<b>Total revenue</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Employee benefit expense	61.0%	165.7%	27.8%	21.2%	22.8%	53.2%	53.2%	52.9%	52.9%	52.8%	51.6%
Cost of sales	- %	- %	56.2%	56.3%	5.9%	- %	- %	- %	- %	- %	- %
Cost of revenue	61.0%	165.7%	84.0%	77.5%	28.7%	53.2%	53.2%	52.9%	52.9%	52.8%	51.6%
<b>Gross profit</b>	<b>39.0%</b>	<b>(65.7%)</b>	<b>16.0%</b>	<b>22.5%</b>	<b>71.3%</b>	<b>46.8%</b>	<b>46.8%</b>	<b>47.1%</b>	<b>47.1%</b>	<b>47.2%</b>	<b>48.4%</b>
SG&A, total	33.9%	33.2%	22.9%	29.7%	32.5%	32.9%	32.4%	31.6%	31.3%	31.6%	29.1%
D&A, total	2.1%	15.7%	4.6%	4.2%	6.6%	3.9%	3.9%	3.9%	3.4%	3.0%	5.9%
Other operating expenses	(7.4%)	1.4%	0.6%	(4.4%)	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
<b>Operating income</b>	<b>10.4%</b>	<b>(116.1%)</b>	<b>(12.2%)</b>	<b>(7.0%)</b>	<b>28.3%</b>	<b>6.0%</b>	<b>6.5%</b>	<b>7.7%</b>	<b>8.5%</b>	<b>8.6%</b>	<b>9.5%</b>
<b>EBITDA</b>	<b>12.5%</b>	<b>(100.4%)</b>	<b>(7.5%)</b>	<b>(2.8%)</b>	<b>34.9%</b>	<b>9.9%</b>	<b>10.4%</b>	<b>11.6%</b>	<b>11.8%</b>	<b>11.6%</b>	<b>15.4%</b>

Source: Statutory accounts and JPA analysis

## Return On Equity

Table 23  
NVQ's DuPont Identity

Currency €000	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
Net Income	13,053	2,651	7,906	7,510	3,112	2,256	2,522	3,866	4,614	5,007	6,018
Sales	236,331	229,633	212,075	216,830	220,855	217,552	219,959	220,860	221,760	222,779	223,604
<b>Net Profit Margin</b>	<b>5.5%</b>	<b>1.2%</b>	<b>3.7%</b>	<b>3.5%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>1.8%</b>	<b>2.1%</b>	<b>2.2%</b>	<b>2.7%</b>
Net Income	13,053	2,651	7,906	7,510	3,112	2,256	2,522	3,866	4,614	5,007	6,018
EBT	16,320	3,121	12,137	8,555	5,455	5,221	5,386	6,939	7,620	8,095	9,321
<b>Tax Burden (1 - tax rate)</b>	<b>80.0%</b>	<b>84.9%</b>	<b>65.1%</b>	<b>87.8%</b>	<b>57.0%</b>	<b>43.2%</b>	<b>46.8%</b>	<b>55.7%</b>	<b>60.5%</b>	<b>61.9%</b>	<b>64.6%</b>
EBT	16,320	3,121	12,137	8,555	5,455	5,221	5,386	6,939	7,620	8,095	9,321
EBIT	16,690	8,118	12,303	9,129	8,742	6,234	6,453	7,704	8,261	8,633	9,783
<b>Interest Burden</b>	<b>97.8%</b>	<b>38.4%</b>	<b>98.7%</b>	<b>93.7%</b>	<b>62.4%</b>	<b>83.7%</b>	<b>83.5%</b>	<b>90.1%</b>	<b>92.2%</b>	<b>93.8%</b>	<b>95.3%</b>
EBIT	16,690	8,118	12,303	9,129	8,742	6,234	6,453	7,704	8,261	8,633	9,783
Total Revenue	236,331	229,633	212,075	216,830	220,855	217,552	219,959	220,860	221,760	222,779	223,604
<b>EBIT Margin</b>	<b>7.1%</b>	<b>3.5%</b>	<b>5.8%</b>	<b>4.2%</b>	<b>4.0%</b>	<b>2.9%</b>	<b>2.9%</b>	<b>3.5%</b>	<b>3.7%</b>	<b>3.9%</b>	<b>4.4%</b>
Sales	236,331	229,633	212,075	216,830	220,855	217,552	219,959	220,860	221,760	222,779	223,604
Total Assets	196,496	206,302	218,956	214,699	210,454	223,692	228,106	229,700	231,336	232,988	234,477
<b>Asset Turnover</b>	<b>1x</b>	<b>1x</b>	<b>1x</b>	<b>1x</b>	<b>1x</b>	<b>1x</b>	<b>1x</b>	<b>1x</b>	<b>1x</b>	<b>1x</b>	<b>1x</b>
Total Assets	196,496	206,302	218,956	214,699	210,454	223,692	228,106	229,700	231,336	232,988	234,477
Shareholder's Equity	98,498	102,439	110,890	101,754	99,268	101,624	103,731	106,512	109,039	111,055	112,602
<b>Equity Multiplier</b>	<b>2x</b>	<b>2x</b>	<b>2x</b>	<b>2x</b>	<b>2x</b>	<b>2x</b>	<b>2x</b>	<b>2x</b>	<b>2x</b>	<b>2x</b>	<b>2x</b>
<b>Return on Equity</b>	<b>13.3%</b>	<b>2.6%</b>	<b>7.1%</b>	<b>7.4%</b>	<b>3.1%</b>	<b>2.2%</b>	<b>2.4%</b>	<b>3.6%</b>	<b>4.2%</b>	<b>4.5%</b>	<b>5.3%</b>
<b>Return on Equity - 5 Step</b>	<b>13.3%</b>	<b>2.6%</b>	<b>7.1%</b>	<b>7.4%</b>	<b>3.1%</b>	<b>2.2%</b>	<b>2.4%</b>	<b>3.6%</b>	<b>4.2%</b>	<b>4.5%</b>	<b>5.3%</b>

Source: Statutory accounts and JPA analysis

## Cash Flow Statement (Consolidated)

Table 24  
NVQ's CF statement

Currency €000	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
Net Income	13,053	2,651	7,906	7,510	3,112	2,256	2,522	3,866	4,614	5,007	6,018
D&A, Total	5,212	5,711	5,096	3,850	3,093	2,683	2,713	2,724	2,735	2,747	2,758
Amortization of Deferred Charges	266	414	661	1,881	2,824	678	686	688	691	694	697
Other Non-Cash Items, Total	4,635	(2,861)	20,160	(5,894)	(10,397)	1,990	1,458	1,610	1,617	1,614	1,639
Change in Net Operating Assets	-	-	-	-	-	5,237	(456)	(241)	(130)	(180)	(128)
<b>Cash Flow from Operations</b>	<b>23,166</b>	<b>5,915</b>	<b>33,823</b>	<b>7,347</b>	<b>(1,368)</b>	<b>12,843</b>	<b>6,923</b>	<b>8,647</b>	<b>9,527</b>	<b>9,882</b>	<b>10,983</b>
Capital Expenditure	(3,736)	(1,396)	(985)	(1,755)	(1,102)	(5,439)	(5,499)	(3,491)	(3,506)	(3,522)	(3,535)
Sale of PP&E	-	7	1	46	20	-	-	-	-	-	-
Cash Acquisitions	(95)	(843)	(782)	(375)	(286)	(782)	(782)	(782)	(782)	(782)	(782)
Divestitures	78	76	82	2,534	2,479	-	-	-	-	-	-
Other Investing Activities	(3,882)	(1,965)	(15,527)	(1,112)	4,083	(10,312)	(141)	(53)	(53)	(60)	(48)
<b>Cash Flow from Investing</b>	<b>(7,635)</b>	<b>(4,121)</b>	<b>(17,211)</b>	<b>(662)</b>	<b>5,194</b>	<b>(16,533)</b>	<b>(6,422)</b>	<b>(4,326)</b>	<b>(4,340)</b>	<b>(4,363)</b>	<b>(4,365)</b>
Total Cash Dividends Paid	(9,662)	(3,955)	(920)	(18,483)	(6,269)	(1,571)	(2,106)	(2,781)	(3,791)	(4,703)	(6,189)
Issue/(Retire) of Debt	3,079	3,251	(1,819)	3,211	(6,625)	12,000	-	-	-	-	-
LT Debt (Paydown/issuance)	-	-	-	-	-	-	1,459	(1,400)	(1,269)	(741)	(390)
Issue/(Retire) of Common Equity	(5,435)	-	-	-	(392)	-	-	-	-	-	-
Other Financing Activities	(517)	(992)	(511)	1,101	(2,698)	-	-	-	-	-	-
<b>Cash Flow from Financing Activities</b>	<b>(12,535)</b>	<b>(1,696)</b>	<b>(3,250)</b>	<b>(14,171)</b>	<b>(15,984)</b>	<b>10,429</b>	<b>(647)</b>	<b>(4,181)</b>	<b>(5,059)</b>	<b>(5,444)</b>	<b>(6,579)</b>
Foreign Exchange Effects	35	2	(67)	(24)	(70)	-	-	-	-	-	-
<b>Change in Cash</b>	<b>3,031</b>	<b>100</b>	<b>13,295</b>	<b>(7,510)</b>	<b>(12,228)</b>	<b>6,740</b>	<b>(146)</b>	<b>140</b>	<b>127</b>	<b>74</b>	<b>39</b>
<b>Beginning Cash</b>	<b>n.a.</b>	<b>28,088</b>	<b>27,157</b>	<b>40,452</b>	<b>32,942</b>	<b>20,714</b>	<b>27,454</b>	<b>27,308</b>	<b>27,448</b>	<b>27,575</b>	<b>27,649</b>
<b>Change in Cash</b>	<b>n.a.</b>	<b>100</b>	<b>13,295</b>	<b>(7,510)</b>	<b>(12,228)</b>	<b>6,740</b>	<b>(146)</b>	<b>140</b>	<b>127</b>	<b>74</b>	<b>39</b>
<b>Ending Cash</b>	<b>n.a.</b>	<b>28,188</b>	<b>40,452</b>	<b>32,942</b>	<b>20,714</b>	<b>27,454</b>	<b>27,308</b>	<b>27,448</b>	<b>27,575</b>	<b>27,649</b>	<b>27,688</b>
CapEx as % of Revenue	1.6%	0.6%	0.5%	0.8%	0.5%	2.5%	2.5%	1.6%	1.6%	1.6%	1.6%
D&A as % of Revenue	2.2%	2.5%	2.4%	1.8%	1.4%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
Amortization as % of Revenue	0.1%	0.2%	0.3%	0.9%	1.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Dividend as % of Net Income	70.6%	134.5%	9.4%	199.9%	130.4%	40.0%	50.0%	50.0%	60.0%	70.0%	80.0%

Source: Statutory accounts and JPA analysis

## Key financial ratios

Table 25  
NVQ's Key Financial Ratios

	FY10A	FY11A	FY12A	FY13A	FY14A	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
<b>Liquidity Ratios</b>											
Current Ratio (%)	176.1%	180.0%	186.0%	177.6%	161.2%	163.6%	163.4%	163.6%	163.7%	163.7%	163.7%
Quick Ratio (%)	163.3%	171.9%	180.9%	167.3%	155.8%	155.9%	155.7%	156.1%	156.1%	156.2%	156.1%
Cash Ratio (%)	19.6%	17.9%	24.5%	21.3%	14.1%	18.6%	18.4%	18.4%	18.4%	18.4%	18.4%
<b>Efficiency Ratios</b>											
Total Assets Turnover (x)	1.20	1.11	0.97	1.01	1.05	0.97	0.96	0.96	0.96	0.96	0.95
Accounts Receivables Turnover (x)	2.36	2.05	2.04	2.12	1.92	2.03	2.03	2.03	2.03	2.03	2.03
Collection Period (days)	155	178	179	172	190	180	180	180	180	180	180
Inventory Turnover (x)	NA	19	25	22	21	21	21	21	21	21	21
Days in Inventory (days)	NA	19	15	17	17	17	17	17	17	17	17
Payables Turnover (x)	NA	7	6	7	7	7	7	7	7	7	7
Payables Period (days)	NA	49	61	54	52	52	52	52	52	52	52
Operating Cycle (days)	NA	197	194	189	208	197	197	197	197	197	197
Cash Cycle (days)	NA	148	133	135	156	145	145	145	145	145	145
<b>Profitability Ratios</b>											
Gross Profit Margin (%)	29.9%	29.0%	33.5%	32.2%	32.9%	32.1%	32.7%	33.3%	33.3%	33.5%	33.6%
EBITDA Margin (%)	9.4%	6.2%	8.5%	6.9%	6.6%	5.4%	5.5%	6.0%	6.2%	6.4%	6.9%
EBITDA Margin - BSo (%)	13.6%	12.2%	12.9%	10.9%	8.2%	7.2%	7.3%	7.3%	7.3%	7.3%	7.3%
EBITDA Margin - IMS (%)	8.4%	5.3%	6.2%	4.2%	4.1%	3.2%	3.3%	4.4%	4.8%	5.2%	6.2%
EBITDA Margin - VC (%)	12.5%	(100.4%)	(7.5%)	(2.8%)	34.9%	9.9%	10.4%	11.6%	11.8%	11.6%	15.4%
EBIT Margin (%)	7.1%	3.5%	5.8%	4.2%	4.0%	2.9%	2.9%	3.5%	3.7%	3.9%	4.4%
Net Profit Margin (%)	5.5%	1.2%	3.7%	3.5%	1.4%	1.0%	1.1%	1.8%	2.1%	2.2%	2.7%
ROA (%) (NI/TA)	6.6%	1.3%	3.6%	3.5%	1.5%	1.0%	1.1%	1.7%	2.0%	2.1%	2.6%
ROCE (%)	8.5%	3.9%	5.6%	4.3%	4.2%	2.8%	2.8%	3.4%	3.6%	3.7%	4.2%
ROE (%)	13.3%	2.6%	7.1%	7.4%	3.1%	2.2%	2.4%	3.6%	4.2%	4.5%	5.3%
EPS (€)	0.43	0.09	0.26	0.24	0.10	0.07	0.08	0.12	0.15	0.16	0.19
SG&A/revenue (%)	21.3%	22.5%	24.6%	25.1%	27.1%	27.5%	28.0%	28.1%	27.8%	27.9%	27.4%
<b>Solvency Ratios</b>											
Debt over TA (%)	6.2%	8.4%	7.6%	10.0%	7.8%	12.7%	13.1%	12.4%	11.8%	11.4%	11.1%
Debt to Equity Ratio (x) (TLiab./E)	0.99	1.01	0.97	1.11	1.12	1.20	1.20	1.16	1.12	1.10	1.08
Equity Multiplier (x)	1.99	2.01	1.97	2.11	2.12	2.20	2.20	2.16	2.12	2.10	2.08
Debt to EBITDA	0.55	1.22	0.92	1.44	1.12	2.44	2.48	2.15	1.97	1.86	1.68
Interest Coverage Ratio (x)	6.35	9.18	5.18	(13.17)	10.20	7.08	4.82	5.50	5.60	6.34	6.27
<b>Value Creation and Cash Flow Ratios</b>											
Economic Value Added (EVA)	NA	NA	NA	NA	NA	(12,154)	(12,129)	(11,120)	(10,570)	(10,378)	(9,535)
Debt Coverage	1.90	0.34	2.05	0.34	(0.08)	0.45	0.23	0.30	0.35	0.37	0.42
Cash to Income	0.10	0.03	0.16	0.03	(0.01)	0.06	0.03	0.04	0.04	0.04	0.05
Earnings Quality: CFO/(NI+D&A+ΔNWC)	NA	0.38	3.67	0.62	(0.14)	1.58	0.83	0.91	0.92	0.92	0.93

Source: Statutory accounts and JPA analysis

Please note that EVA is negative, meaning that the newly invested funds are harmful, lowering the overall return of the company. EVA measures the additional value added if more money is invested in the business. Note also that, EVA increases over time reflecting the increasing operating efficiency through the increase of the return on existing assets.

## Revenue Forecast: Adjusted exponential smoothing

Table 26  
BSO's revenue forecast

Date	Revenue	Moving Average	Ratio	Seasonal index	Seasonally adj. Data	Forecast	Error	Reseasonalized forecast
1T10	20,696			99.1%	20,882	20,882	-	20,696
2T10	20,696			104.4%	19,816	20,882	(1,066)	21,809
3T10	19,634	20,284	96.8%	92.6%	21,202	20,801	401	19,262
4T10	19,634	20,691	94.9%	103.8%	18,906	20,830	(1,924)	21,631
1T11	21,648	21,139	102.4%	99.1%	21,842	20,684	1,158	20,500
2T11	22,998	21,855	105.2%	104.4%	22,020	20,768	1,252	21,690
3T11	20,916	22,605	92.5%	92.6%	22,587	20,860	1,727	19,317
4T11	24,086	23,311	103.3%	103.8%	23,194	20,990	2,204	21,797
1T12	23,190	23,884	97.1%	99.1%	23,398	21,158	2,240	20,970
2T12	27,107	24,217	111.9%	104.4%	25,954	21,332	4,622	22,280
3T12	21,393	24,721	86.5%	92.6%	23,102	21,689	1,414	20,084
4T12	26,269	24,781	106.0%	103.8%	25,296	21,810	3,486	22,649
1T13	25,039	24,941	100.4%	99.1%	25,264	22,090	3,174	21,893
2T13	25,735	25,425	101.2%	104.4%	24,640	22,351	2,289	23,344
3T13	24,046	25,482	94.4%	92.6%	25,967	22,550	3,417	20,881
4T13	27,489	25,453	108.0%	103.8%	26,471	22,837	3,634	23,716
1T14	24,279	25,608	94.8%	99.1%	24,497	23,145	1,351	22,940
2T14	26,264	25,981	101.1%	104.4%	25,147	23,287	1,860	24,322
3T14	24,757	26,876	92.1%	92.6%	26,735	23,469	3,266	21,732
4T14	29,756	28,001	106.3%	103.8%	28,654	23,759	4,895	24,673
1T15	29,178	29,138	100.1%	99.1%	29,440	24,177	5,263	23,962
2T15	30,359	29,766	102.0%	104.4%	29,068	24,629	4,439	25,723
3T15				92.6%	25,027	25,027	-	23,175
4T15				103.8%	25,096	25,096	-	26,062
1T16				99.1%	25,166	25,166	-	24,942
2T16				104.4%	25,236	25,236	-	26,357
3T16				92.6%	25,305	25,305	-	23,433
4T16				103.8%	25,375	25,375	-	26,351
1T17				99.1%	25,445	25,445	-	25,218
2T17				104.4%	25,514	25,514	-	26,648
3T17				92.6%	25,584	25,584	-	23,691
4T17				103.8%	25,654	25,654	-	26,640
1T18				99.1%	25,723	25,723	-	25,494
2T18				104.4%	25,793	25,793	-	26,939
3T18				92.6%	25,863	25,863	-	23,949
4T18				103.8%	25,932	25,932	-	26,930

Table 27  
Forecast inputs

Unnormalized Seas. Index	Normalized Seas. Index	Alpha	0.268
92.5%	92.6%	RMSE	2,339
103.7%	103.8%	Auto(1)	0.54
99.0%	99.1%	Auto(2)	0.42
104.3%	104.4%	Auto(3)	0.29
<b>399.4%</b>	<b>400.0%</b>	Auto(4)	0.12
		Auto(5)	0.22

Source: JPA analysis

Source: JPA analysis

**Table 28**  
**IMS' revenue forecast**

Date	Revenue	Moving Average	Ratio	Seasonal index	Seasonally adj. Data	Forecast	Error	Reseasonalized forecast
1T10	25,876			93.7%	27,609	27,609	-	25,876
2T10	25,876			97.6%	26,522	27,609	(1,087)	26,937
3T10	25,678	25,548	100.5%	99.6%	25,785	27,527	(1,743)	27,413
4T10	25,678	24,859	103.3%	109.1%	23,530	27,395	(3,864)	29,895
1T11	24,047	23,481	102.4%	93.7%	25,658	27,099	(1,442)	25,398
2T11	22,193	22,036	100.7%	97.6%	22,747	26,981	(4,234)	26,324
3T11	18,332	20,771	88.3%	99.6%	18,408	26,651	(8,243)	26,541
4T11	21,463	19,552	109.8%	109.1%	19,668	26,012	(6,345)	28,387
1T12	18,142	21,385	84.8%	93.7%	19,357	25,505	(6,148)	23,904
2T12	18,350	24,571	74.7%	97.6%	18,808	25,004	(6,196)	24,395
3T12	36,835	26,342	139.8%	99.6%	36,988	24,490	12,498	24,389
4T12	28,452	28,299	100.5%	109.1%	26,072	25,376	696	27,692
1T13	25,317	26,938	94.0%	93.7%	27,013	25,390	1,622	23,796
2T13	26,836	24,564	109.3%	97.6%	27,506	25,476	2,030	24,855
3T13	17,460	24,680	70.7%	99.6%	17,533	25,594	(8,061)	25,488
4T13	28,831	24,809	116.2%	109.1%	26,420	24,955	1,465	27,232
1T14	25,871	26,050	99.3%	93.7%	27,604	25,022	2,582	23,451
2T14	27,310	27,550	99.1%	97.6%	27,992	25,175	2,817	24,562
3T14	26,916	27,621	97.4%	99.6%	27,028	25,350	1,678	25,245
4T14	31,373	27,382	114.6%	109.1%	28,749	25,443	3,306	27,765
1T15	23,898	27,469	87.0%	93.7%	25,499	25,660	(162)	24,050
2T15	27,372	26,591	102.9%	97.6%	28,055	25,622	2,433	24,998
3T15				99.6%	25,778	25,778	-	25,672
4T15				109.1%	25,755	25,755	-	28,106
1T16				93.7%	25,732	25,732	-	24,116
2T16				97.6%	25,709	25,709	-	25,082
3T16				99.6%	25,685	25,685	-	25,579
4T16				109.1%	25,662	25,662	-	28,004
1T17				93.7%	25,639	25,639	-	24,029
2T17				97.6%	25,616	25,616	-	24,992
3T17				99.6%	25,592	25,592	-	25,486
4T17				109.1%	25,569	25,569	-	27,903
1T18				93.7%	25,546	25,546	-	23,942
2T18				97.6%	25,523	25,523	-	24,901
3T18				99.6%	25,499	25,499	-	25,394
4T18				109.1%	25,476	25,476	-	27,801

Source: JPA analysis

**Table 29**  
**Forecast inputs**

Unnormalized Seas. Index	Normalized Seas. Index	Alpha	RMSE
99.4%	99.6%	0.038	3.447
108.9%	109.1%	Auto(1)	0.21
93.5%	93.7%	Auto(2)	0.16
97.3%	97.6%	Auto(3)	0.09
<b>399.1%</b>	<b>400.0%</b>	Auto(4)	(0.35)
		Auto(5)	0.07

Source: JPA analysis



Table 30  
VC's revenue forecast

Date	Revenue	Moving Average	Ratio	Seasonal index	Seasonally adj. Data	Forecast	Error	Reseasonalized forecast
1T10	791			111.1%	712	712	-	791
2T10	791			109.2%	724	712	12	777
3T10	852	762	111.8%	87.4%	974	713	262	623
4T10	852	654	130.2%	92.2%	924	732	191	675
1T11	313	532	58.8%	111.1%	282	747	(466)	830
2T11	410	378	108.4%	109.2%	375	713	(337)	779
3T11	254	406	62.6%	87.4%	290	687	(397)	601
4T11	220	559	39.4%	92.2%	239	657	(419)	606
1T12	1,167	686	170.2%	111.1%	1,050	625	426	694
2T12	780	816	95.5%	109.2%	714	655	59	715
3T12	898	873	102.9%	87.4%	1,027	658	369	576
4T12	621	1,005	61.8%	92.2%	673	685	(12)	632
1T13	1,215	1,089	111.5%	111.1%	1,093	684	409	760
2T13	1,788	1,127	158.7%	109.2%	1,637	714	923	780
3T13	568	1,189	47.8%	87.4%	650	784	(134)	685
4T13	1,251	1,047	119.5%	92.2%	1,357	775	581	715
1T14	1,081	984	109.9%	111.1%	973	820	152	912
2T14	785	1,024	76.6%	109.2%	719	834	(115)	911
3T14	1,067	998	106.9%	87.4%	1,220	827	393	724
4T14	1,077	1,029	104.7%	92.2%	1,168	859	309	792
1T15	1,047	1,062	98.6%	111.1%	942	885	57	984
2T15	1,061	1,058	100.3%	109.2%	971	893	79	975
3T15				87.4%	902	902	-	788
4T15				92.2%	905	905	-	835
1T16				111.1%	908	908	-	1,009
2T16				109.2%	912	912	-	996
3T16				87.4%	915	915	-	800
4T16				92.2%	918	918	-	847
1T17				111.1%	922	922	-	1,024
2T17				109.2%	925	925	-	1,010
3T17				87.4%	928	928	-	812
4T17				92.2%	932	932	-	859
1T18				111.1%	935	935	-	1,039
2T18				109.2%	938	938	-	1,025
3T18				87.4%	942	942	-	823
4T18				92.2%	945	945	-	871

Source: JPA analysis

Table 31  
Forecast inputs

Unnormalized Seas. Index	Normalized Seas. Index	Alpha	RMSE
86.4%	87.4%	0.098	289
91.1%	92.2%	Auto(1)	0.15
109.8%	111.1%	Auto(2)	0.19
107.9%	109.2%	Auto(3)	0.22
<b>395.2%</b>	<b>400.0%</b>	Auto(4)	(0.26)
		Auto(5)	0.13

Source: JPA analysis

## Weighted Average Cost of Capital

Table 32  
BSo's WACC

DCF analysis	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F
Risk free rate	0.65%	0.65%	0.65%	0.65%	0.65%	0.65%
Industry risk premium	0.0	0.0	0.0	0.0	0.0	0.0
Country risk premium	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%
Risk free rate (Rf)	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
Market Risk Premium (Rm - Rf)	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Beta unlevered	0.64	0.64	0.64	0.64	0.64	0.64
Beta re-levered	0.78	0.78	0.78	0.79	0.79	0.79
<b>Ke (Rf+βL*MRP)</b>	<b>8.7%</b>	<b>8.7%</b>	<b>8.7%</b>	<b>8.7%</b>	<b>8.7%</b>	<b>8.7%</b>
Risk-free rate	0.65%	0.65%	0.65%	0.65%	0.65%	0.65%
Rating Adjusted CDS	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Average spread	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
Pre-tax cost of debt (Rd)	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
Corporate income tax (T)	24.4%	21.5%	19.6%	17.0%	17.0%	17.0%
<b>Kd after tax (Rd*(1-T))</b>	<b>3.29%</b>	<b>3.42%</b>	<b>3.50%</b>	<b>3.61%</b>	<b>3.61%</b>	<b>3.61%</b>
Debt to equity ratio (D/E)	0.28	0.28	0.28	0.28	0.28	0.28
Equity (E/(D+E))	77.9%	77.9%	77.9%	77.9%	77.9%	77.9%
Debt (D/(D+E))	22.1%	22.1%	22.1%	22.1%	22.1%	22.1%
<b>WACC</b>	<b>7.5%</b>	<b>7.5%</b>	<b>7.6%</b>	<b>7.6%</b>	<b>7.6%</b>	<b>7.6%</b>

Source: JPA analysis

Table 33  
IMS' WACC

DCF analysis	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F
Risk free rate	0.65%	0.65%	0.65%	0.65%	0.65%	0.65%
Industry risk premium	0.0	0.0	0.0	0.0	0.0	0.0
Country risk premium	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%
Risk free rate (Rf)	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
Market Risk Premium (Rm - Rf)	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Beta unlevered	0.69	0.69	0.69	0.69	0.69	0.69
Beta re-levered	0.92	0.93	0.93	0.94	0.94	0.94
<b>Ke (Rf+βL*MRP)</b>	<b>9.5%</b>	<b>9.5%</b>	<b>9.5%</b>	<b>9.6%</b>	<b>9.6%</b>	<b>9.6%</b>
Risk-free rate	0.65%	0.65%	0.65%	0.65%	0.65%	0.65%
Rating Adjusted CDS	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Average spread	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
Pre-tax cost of debt (Rd)	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
Corporate income tax (T)	24.9%	21.3%	19.7%	17.0%	17.0%	17.0%
<b>Kd after tax (Rd*(1-T))</b>	<b>3.27%</b>	<b>3.43%</b>	<b>3.50%</b>	<b>3.61%</b>	<b>3.61%</b>	<b>3.61%</b>
Debt to equity ratio (D/E)	0.44	0.44	0.44	0.44	0.44	0.44
Equity (E/(D+E))	69.6%	69.6%	69.6%	69.6%	69.6%	69.6%
Debt (D/(D+E))	30.4%	30.4%	30.4%	30.4%	30.4%	30.4%
<b>WACC</b>	<b>7.6%</b>	<b>7.7%</b>	<b>7.7%</b>	<b>7.8%</b>	<b>7.8%</b>	<b>7.8%</b>

Source: JPA analysis

Table 34  
VC's WACC

DCF analysis	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F
Risk free rate	0.65%	0.65%	0.65%	0.65%	0.65%	0.65%
Industry risk premium	3.75%	3.75%	3.75%	3.75%	3.75%	3.75%
Country risk premium	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%
Risk free rate (Rf)	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%
Market Risk Premium (Rm - Rf)	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Beta unlevered	0.33	0.33	0.33	0.33	0.33	0.33
Beta re-levered	0.53	0.53	0.54	0.54	0.54	0.54
<b>Ke (Rf+βL*MRP)</b>	<b>11.1%</b>	<b>11.1%</b>	<b>11.1%</b>	<b>11.1%</b>	<b>11.1%</b>	<b>11.1%</b>
Risk-free rate	0.65%	0.65%	0.65%	0.65%	0.65%	0.65%
Rating Adjusted CDS	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Average spread	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
Pre-tax cost of debt (Rd)	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
Corporate income tax (T)	22.5%	20.3%	19.0%	17.0%	17.0%	17.0%
<b>Kd after tax (Rd*(1-T))</b>	<b>3.37%</b>	<b>3.47%</b>	<b>3.53%</b>	<b>3.61%</b>	<b>3.61%</b>	<b>3.61%</b>
Debt to equity ratio (D/E)	0.75	0.75	0.75	0.75	0.75	0.75
Equity (E/(D+E))	57.3%	57.3%	57.3%	57.3%	57.3%	57.3%
Debt (D/(D+E))	42.7%	42.7%	42.7%	42.7%	42.7%	42.7%
<b>WACC</b>	<b>7.8%</b>	<b>7.8%</b>	<b>7.9%</b>	<b>7.9%</b>	<b>7.9%</b>	<b>7.9%</b>

Source: JPA analysis

## Unlevered Free Cash Flows / Enterprise Value calculation

**Table 35**  
**BSO's DCF**

Currency €000	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	DCF analysis	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F
EBIT	4,055	4,079	4,086	4,137	4,177	4,222	UFCF	8,646	5,979	5,878	5,599	5,166	4,486
EBIT(1-marginal tax rate)	3,066	3,201	3,284	3,434	3,467	3,504	WACC	7.5%	7.5%	7.6%	7.6%	7.6%	7.6%
D&A	3,830	4,087	4,137	4,182	4,228	4,274	<b>PV of UFCF</b>	<b>8,646</b>	<b>5,560</b>	<b>5,080</b>	<b>4,493</b>	<b>3,852</b>	<b>3,109</b>
Capex & addit. Intangibles	(750)	(1,076)	(1,421)	(1,950)	(2,435)	(3,225)							
Changes in NWC	2,500	(233)	(123)	(67)	(93)	(67)							
<b>UFCF</b>	<b>8,646</b>	<b>5,979</b>	<b>5,878</b>	<b>5,599</b>	<b>5,166</b>	<b>4,486</b>							

Source: JPA analysis

**Table 36**  
**BSO's Perpetuity Growth Method**

WACC	7.6%
NPV of FCF	22,093
Terminal growth rate	1.5%
Terminal value	74,489
Present value of the terminal value	51,614
<b>Enterprise value</b>	<b>73,707</b>

Source: JPA analysis

**Table 37**  
**IMS' DCF**

Currency €000	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	DCF analysis	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F
EBIT	1,956	2,127	3,322	3,792	4,115	5,179	UFCF	4,598	1,802	2,486	2,548	2,373	2,605
EBIT(1-marginal tax rate)	1,469	1,674	2,668	3,148	3,415	4,298	WACC	7.6%	7.7%	7.7%	7.8%	7.8%	7.8%
D&A	1,439	1,365	1,255	1,251	1,248	1,242	<b>PV of UCF</b>	<b>4,598</b>	<b>1,674</b>	<b>2,143</b>	<b>2,035</b>	<b>1,759</b>	<b>1,792</b>
Capex & addit. Intangibles	(724)	(1,017)	(1,323)	(1,789)	(2,205)	(2,875)							
Changes in NWC	2,414	(220)	(114)	(62)	(85)	(60)							
<b>UFCF</b>	<b>4,598</b>	<b>1,802</b>	<b>2,486</b>	<b>2,548</b>	<b>2,373</b>	<b>2,605</b>							

Source: JPA analysis

**Table 38**  
**IMS' Perpetuity Growth Method**

WACC	7.8%
NPV of FCF	9,404
Terminal growth rate	1.5%
Terminal value	42,160
Present value of the terminal value	28,997
<b>Enterprise value</b>	<b>38,401</b>

Source: JPA analysis

**Table 39**  
**VC's DCF**

Currency €000	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	DCF analysis	Dec15F	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F
EBIT	223	247	296	332	341	383	UFCF	379	301	337	337	315	440
EBIT(1-marginal tax rate)	173	197	239	275	283	318	WACC	7.8%	7.8%	7.9%	7.9%	7.9%	7.9%
D&A	146	148	151	132	120	236	<b>PV of UCF</b>	<b>379</b>	<b>279</b>	<b>290</b>	<b>268</b>	<b>233</b>	<b>300</b>
Capex & addit. Intangibles	(26)	(37)	(49)	(67)	(84)	(112)							
Changes in NWC	86	(8)	(4)	(2)	(3)	(2)							
<b>UFCF</b>	<b>379</b>	<b>301</b>	<b>337</b>	<b>337</b>	<b>315</b>	<b>440</b>							

Source: JPA analysis

**Table 40**  
**VC's Perpetuity Growth Method**

WACC	7.9%
NPV of FCF	1,370
Terminal growth rate	1.5%
Terminal value	6,948
Present value of the terminal value	4,746
<b>Enterprise value</b>	<b>6,116</b>

Source: JPA analysis

## Market Approach valuation

Table 41  
BSO's Multiples Valuation

Company Name	TEV/Total Revenues	TEV/EBITDA	TEV/EBIT	TEV/Forward Total Revenue	TEV/Forward EBITDA	TEV/Forward EBIT
Datagroup AG	1x	12x	20x	1x	8x	12x
Digia Oyj	1x	15x	20x	1x	11x	14x
Sygnity Spółka Akcyjna	0x	6x	17x	0x	3x	5x
Cybercom Group AB	0x	5x	8x	0x	5x	8x
Cancom SE	1x	10x	15x	0x	7x	10x
Ctac N.V.	0x	7x	11x	0x	6x	9x
EVERY ASA	1x	9x	16x	-	-	-
Engineering Ingegneria Informatica S.p.A.	1x	6x	8x	1x	6x	7x
SMT S.A.	1x	12x	12x	-	-	-
ProAct IT Group AB	0x	7x	10x	0x	-	8x

Company Name	Revenue FY15A	EBITDA FY15A	EBIT FY15A	Revenue FY16F	EBITDA FY16F	EBIT FY16F
Novabase Business Solutions	108,774	7,885	4,055	111,150	8,166	4,079

Total Enterprise Value Multiples	TEV/Total Revenues	TEV/EBITDA	TEV/EBIT	TEV/Forward Total Revenue	TEV/Forward EBITDA	TEV/Forward EBIT
High	1x	15x	20x	1x	11x	14x
Low	0x	5x	8x	-	-	-
Mean	1x	9x	14x	1x	7x	9x
Median	1x	8x	14x	0x	5x	8x

### Implied Enterprise Value

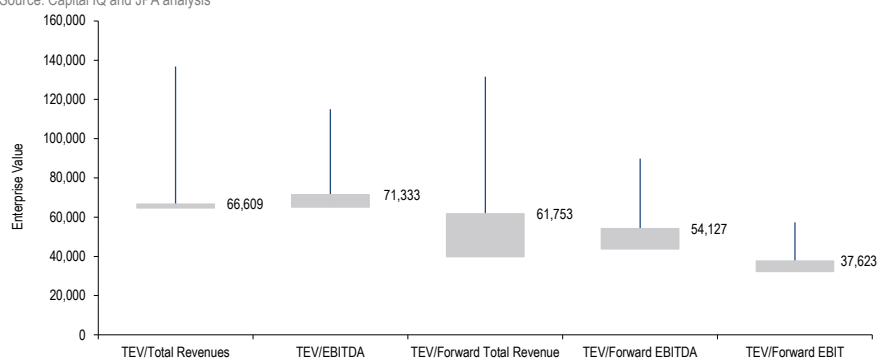
High	136,733	115,048	82,136	131,624	89,794	57,358
Low	33,162	39,797	30,554	-	-	-
Mean	66,609	71,333	55,744	61,753	54,127	37,623
Median	64,709	65,108	55,534	39,889	43,759	32,305

Mean EV across multiples	Enterprise value
High	102,115
Low	34,504
Mean	57,865
Median	50,217

Source: Capital IQ and JPA analysis

Figure 50  
BSO's EV through multiples valuation

Source: Capital IQ and JPA analysis



**Table 42**  
**IMS' Multiples Valuation**

Company Name	TEV/Total Revenues	TEV/EBITDA	TEV/EBIT	TEV/Forward Total Revenue	TEV/Forward EBITDA	TEV/Forward EBIT
T Clarke plc	0x	24x	45x	0x	8x	10x
Datagroup AG	1x	12x	20x	1x	8x	12x
Harvey Nash Group plc	0x	7x	8x	0x	6x	7x
Digia Oyj	1x	14x	20x	1x	11x	14x
Sygnity Spółka Akcyjna	0x	7x	17x	0x	3x	5x
WASKO Spółka Akcyjna	0x	4x	7x	-	-	-
Hawe Spółka Akcyjna	1x	11x	72x	1x	4x	5x
Ctac N.V.	0x	7x	10x	0x	6x	9x
Cancom SE	1x	10x	15x	0x	7x	10x
EVERY ASA	1x	9x	16x	-	-	-

Company Name	Revenue FY15A	EBITDA FY15A	EBIT FY15A	Revenue FY16F	EBITDA FY16F	EBIT FY16F
Novabase IMS	105,047	3,395	1,956	105,004	3,492	2,127

Total Enterprise Value Multiples	TEV/Total Revenues	TEV/EBITDA	TEV/EBIT	TEV/Forward Total Revenue	TEV/Forward EBITDA	TEV/Forward EBIT
High	1x	24x	72x	1x	11x	14x
Low	0x	4x	7x	-	-	-
Mean	1x	11x	23x	0x	7x	9x
Median	0x	10x	17x	0x	6x	8x

#### Implied Enterprise Value

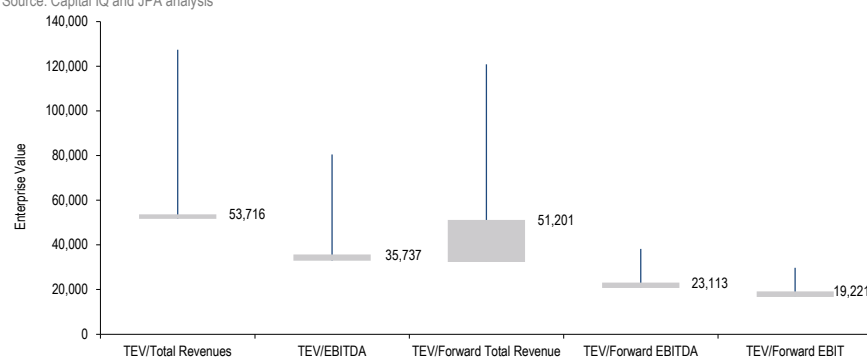
High	127,325	80,440	140,343	120,866	38,241	29,727
Low	10,266	15,174	12,938	-	-	-
Mean	53,716	35,737	44,970	51,201	23,113	19,221
Median	51,626	32,891	32,752	32,308	20,756	16,685

Mean EV across multiples	Enterprise value
High	89,490
Low	12,793
Mean	37,993
Median	31,170

Source: JPA analysis

**Figure 51**  
**IMS' EV through multiples valuation**

Source: Capital IQ and JPA analysis



**Table 43**  
**VC's Multiples Valuation**

Company Name	TEV/Total Revenues	TEV/EBITDA	TEV/EBIT	TEV/Forward Total Revenue	TEV/Forward EBITDA	TEV/Forward EBIT
SECURE PROPERTY Development & Investment PLC	20x	53x	53x	-	-	-
Alpha Trust Mutual Fund and Alternative Investment Fund Management S.A.	3x	16x	17x	-	-	-
Blue Cap AG	1x	9x	13x	-	-	-
Open Finance Spolka Akcyjna	1x	6x	12x	1x	8x	14x
Compagnie Lebon	2x	20x	30x	2x	16x	11x
The Scottish Investment Trust PLC	6x	-	7x	-	-	-
Matador Private Equity AG	7x	-	8x	-	-	-
Alba Private Equity S.p.A.	1x	5x	5x	-	-	-
CapMan Oyj	3x	13x	13x	4x	12x	14x
Value8 NV	1x	10x	15x	-	-	-

Company Name	Revenue FY15A	EBITDA FY15A	EBIT FY15A	Revenue FY16F	EBITDA FY16F	EBIT FY16F
Novabase Venture Capital	3,731	369	223	3,805	396	247

Total Enterprise Value Multiples	TEV/Total Revenues	TEV/EBITDA	TEV/EBIT	TEV/Forward Total Revenue	TEV/Forward EBITDA	TEV/Forward EBIT
High	20x	53x	53x	4x	16x	14x
Low	1x	-	5x	-	-	-
Mean	4x	16x	17x	2x	12x	13x
Median	2x	9x	13x	-	-	-

#### Implied Enterprise Value

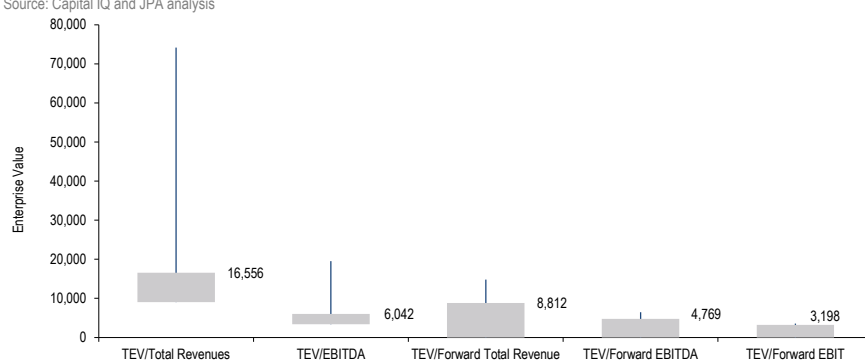
High	74,176	19,501	11,924	14,820	6,452	3,556
Low	2,196	-	1,180	-	-	-
Mean	16,556	6,042	3,898	8,812	4,769	3,198
Median	9,061	3,372	2,978	-	-	-

Mean EV across multiples	Enterprise value
High	21,738
Low	1,688
Mean	7,213
Median	5,137

Source: JPA analysis

**Figure 52**  
**VC's EV through multiples valuation**

Source: Capital IQ and JPA analysis





## Effective Tax Rate

The general CIT rate of 21% is increased by (i) a municipal surcharge (Derrama Municipal) varying from 0% to 1.5% to be levied over the taxable profit and (ii) a State surcharge (Derrama Estadual) of 3% to be levied over the taxable profit between €1.5m and €7.5m, 5% to be levied over the taxable profit between €7.5m and €35m and 7% on the part exceeding €35m.

According to the Corporate Income Tax Reform (2015), the corporate tax rate is expected to be further reduced between FY15F and FY18F, as follows (CIT rate / Municipal Surcharge / State Surcharge): FY16F (17% to 19% / 1.5% / 5%); FY17F (17% to 19% / 1.5% / 2%); and FY18F (17% to 19% / 0% / 0%). However, these measures will just take place depending of future performance of the Portuguese economy and the State deficit in the next years.

Table 44

### Effective Tax Rate assumed for DCF

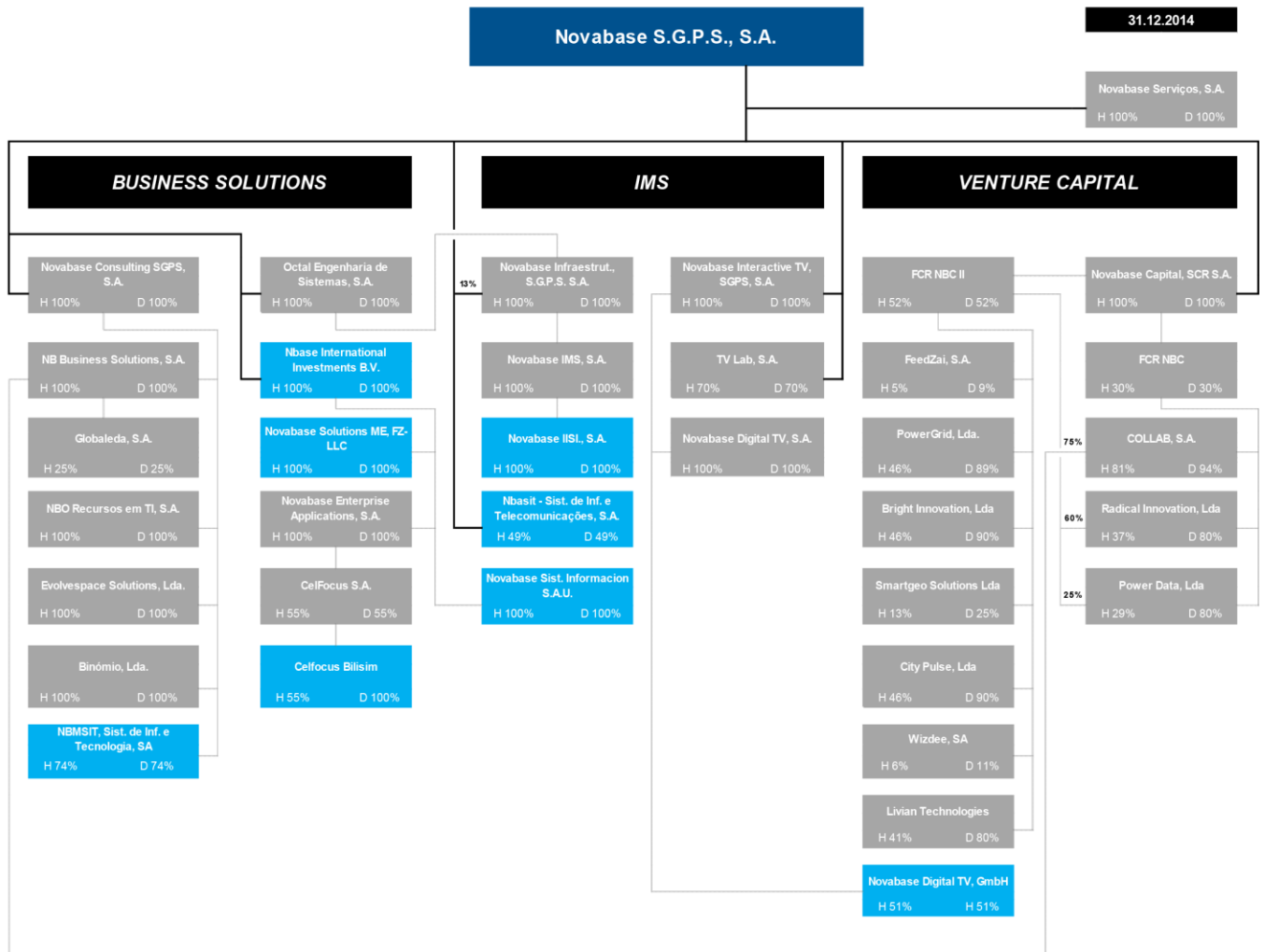
%	FY15F	FY16F	FY17F	FY18F	FY19F	FY20F
CIT + Municipal Surcharge	22.5%	20.3%	19.0%	17.0%	17.0%	17.0%
State Surcharge level 1	3.0%	2.0%	1.0%	- %	- %	- %
State Surcharge level 2	5.0%	3.0%	2.0%	1.0%	- %	- %
State Surcharge level 3	7.0%	5.0%	3.0%	3.0%	- %	- %
CIT Rate	21.0%	19.0%	18.0%	17.0%	17.0%	17.0%
Municipal Surcharge	1.5%	1.3%	1.0%	- %	- %	- %

Source: KPMG 2015 and JPA analysis

# Corporate tree

Figure 53  
NVQ's corporate tree

Source: NVQ's Governance report 2014



H - % Held by the Holding  
D - % Held Directly

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S&P Capital IQ, Capital IQ Market Insight Database.

ThomsonONE, Public/Private Company Overviews Database.

## Abbreviations

€	Euro
€...k	Thousand euros
€...m	Million euros
6mxxA	Actual figures as at 31 June 20xx
6mxxG	Management Guidance for 31 June 20xx
A	Actual
AEM	Associação de Empresas Emitentes de Valores Cotados em Mercado
β	Beta
BL	Beta Levered
BS	Balance sheet
BSo	Business Solutions
Bu	Beta unlevered
CAGR	Compound Annual Growth Rate
CapEx	Capital Expenditure
CAPM	Capital Asset Pricing Model
CDS	Country Default Swap
CFF	Cash Flow from Financing Activities
CFI	Cash Flow from Investing
CFO	Cash Flow from Operations
CIT	Corporate Income Tax
CMVM	Comissão do Mercado de Valores Mobiliários
CR	Current Ratio
CRP	Country Risk Premium
D	Debt
D&A	Depreciations & Amortizations
DCF	Discounted Cash Flow
DecxxA	Actual figures as at 31 December 20xx
DecxxF	Forecasted figures as at 31 December 20xx
DPO	Days payable outstanding
DSCR	Debt Service Cover Ratio
DSO	Days sales outstanding
E	Equity
EBIT	Earnings before Interest and Tax
EBITDA	Earnings before Interest, Tax, Depreciation & Amortization
EBT	Earnings before Tax
EMEA	Europe, Middle East and Africa Region
ESS	External services and supplies
EU15	European Union of the fifteen
EV	Enterprise Value
EY	Ernst & Young
FCF	Free cash flow
FCFF	Free cash flow to the Firm

FiT	Feed-in-tariff
Forward EBIT	EBIT consensus estimates for the next year end
Forward EBITDA	EBITDA consensus estimates for the next year end
FY	Fiscal Year
FYxxA	Financial years ended as at 31 December 20xx
FYxxF	Financial years forecasted for 31 December 20xx
FYxxG	Financial years Management Guidance for 31 December 20xx
g	Terminal growth rate
GAAP	Generally accepted accounting principles
GBV	Gross book value
GDP	Gross Domestic Product
GM	Gross Margin
IAPMEI	Agência para a Competitividade e Inovação, I.P.
IDC	International Data Corporation
IMF	International Monetary Fund
IMS	Infrastructure & Managed Services
INE	Instituto Nacional de Estatística
IPQ	Portuguese Institute of Quality
IRP	Industry Risk Premium
ISCTE	ISCTE Business School
ISEG	Lisbon School of Economics & Management
IT	Information Technology
IVM	Industry Volatility Multiplier
JunxxA	Actual figures as at 31 June 20xx
Kd	Cost of debt
Ke	Cost of equity
KPI	Key Performance Indicator
LT	Long term
LTD	Long Term Debt
MayxxA	Actual figures as at 31 May 20xx
MPT	Municipal Property Tax
MRP	Market Risk Premium
MVP	Market Volatility Multiplier
NBV	Net book value
NI	Net Income
NVQ	Novabase SGPS SA
NWC	Net working capital
O&M	Operation and maintenance expenses
OpEx	Operational Expenditure
PIT	Personal income tax
PL	Profit & Loss
PP&E	Property, Plant and Equipment

PwC	PricewaterhouseCoopers
R	Return
Rd	Cost of debt
Rf	Risk free rate
Rm	Market return
RMSE	Root Mean Squared Error
ROA	Return on Assets
S&P	Standard & Poor's
SG&A	Selling, General & Administrative Expense
SOP	Sum of the Parts
SS	Social Security
ST	Short term
STD	Standard Deviation
T	Corporate income tax rate
TA	Total Assets
TEV	Total Enterprise Value
UCP	Portuguese Catholic University
UFCF	Unlevered Free Cash Flows
VAT	Value Added Tax
VC	Venture Capital
VN	Turnover
WACC	Weighted Average Cost of Capital
WC	Working Capital
Wd	Weight of debt
We	Weight of equity
xxx margin	xxx over Revenue
YExx	Year ending as at 31 December 20xx
YExxF	Year ending forecasted for 31 December 20xx