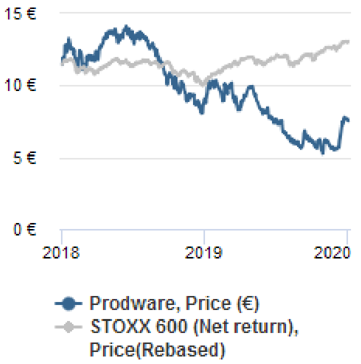
03 Jan 2020
Sponsored research
Application Software
France

Opinion	**Buy**
Upside (%)	71.2
Price (€)	7.52
Target Price (€)	12.9
Bloomberg Code	ALPRO FP
Market Cap (€M)	58.2
Enterprise Value (€M)	37.6
Momentum	GOOD
Governance	3.2/10
Credit Risk	BB→

Research Analysts
Hélène Coumes
+33 (0) 1 70 61 10 50
software@alphavalue.eu



Conflicts of interest

Corporate broking	No
Trading in corporate shares	No
Analyst ownership	No
Advice to corporate	No
Research paid for by corporate	Yes
Corporate access	No
Brokerage activity at AlphaValue	No
Client of AlphaValue Research	No

Prodware

Transformation to SaaS

PROS

- Prodware's business development is based on Microsoft software, essentially. Prodware benefits from its demanding 'Microsoft Gold Certified partner' status and is a member of the Microsoft Dynamics Inner Circle
- The differentiation between Prodware and most traditional software vendors lies in the editing of specific solutions dedicated to a selective number of sectors (retail, manufacturing, professional services, financial services)
- Prodware is involved in a business transformation to SaaS with the expansion of Microsoft Dynamics 365 online. The advantage of SaaS is higher recurring and predictable revenue in the future

CONS

- The switch of software licences to software subscriptions revenue and the need of investments in the business weigh on both growth and margin over the transformation phase
- The SaaS model could facilitate the emergence of new small-sized and agile competitors and, consequently, force price pressure and lower margins for traditional software editors and their vendors
- Restated from the significant impact of the research tax credits, net of fees (€+10.7m in 2017), the group posts a low operating margin (<5% of revenue)

KEY DATA	12/16A	12/17A	12/18E	12/19E	12/20E
Adjusted P/E (x)	**6.66**	**8.70**	**5.97**	**4.76**	**4.16**
Dividend yield (%)	*0.58*	*0.53*	*0.79*	*1.20*	*1.60*
EV/EBITDA(R) (x)	3.34	4.38	3.21	2.28	1.64
Adjusted EPS (€)	**1.04**	**1.29**	**1.69**	**1.75**	**1.81**
Growth in EPS (%)	*52.7*	*23.8*	*30.8*	*3.78*	*3.24*
Dividend (€)	0.04	0.06	0.08	0.10	0.12
Sales (€M)	176	168	176	175	174
EBITDA/R margin (%)	*18.2*	*18.3*	*18.6*	*18.8*	*19.3*
Attributable net profit (€M)	9.44	11.6	14.5	15.0	16.1
ROE (after tax) (%)	**7.95**	**8.94**	**10.6**	**10.2**	**10.1**
Gearing (%)	*48.5*	*49.6*	*40.3*	*32.4*	*25.7*

Prodware (Buy)

Detailed financials at the end of this report

Key Ratios

		12/17A	12/18E	12/19E	12/20E
Adjusted P/E	x	8.70	5.97	4.76	4.16
EV/EBITDA	x	4.38	3.21	2.28	1.64
P/Book	x	0.67	0.55	0.42	0.35
Dividend yield	%	0.53	0.79	1.20	1.60
Free Cash Flow Yield	%	7.18	9.67	12.0	13.2
ROE (after tax)	%	8.94	10.6	10.2	10.1
ROCE	%	2.88	3.83	3.92	4.17
Net debt/EBITDA	x	2.95	2.40	2.07	1.71

Consolidated P&L

		12/17A	12/18E	12/19E	12/20E
Sales	€M	168	176	175	174
EBITDA	€M	20.5	22.3	22.3	23.0
Underlying operating profit	€M	7.18	9.10	9.40	10.2
Operating profit (EBIT)	€M	4.62	7.60	7.90	8.69
Net financial expenses	€M	-4.47	-3.84	-3.72	-3.55
Pre-tax profit before exceptional items	€M	0.16	3.76	4.18	5.14
Corporate tax	€M	10.4	9.93	9.91	9.87
Attributable net profit	€M	11.6	14.5	15.0	16.1
Adjusted attributable net profit	€M	11.1	14.5	15.0	16.1

Cashflow Statement

		12/17A	12/18E	12/19E	12/20E
Total operating cash flows	€M	33.8	33.4	32.4	32.2
Capital expenditure	€M	-23.1	-22.0	-21.0	-21.0
Total investment flows	€M	-24.8	-22.0	-21.0	-21.0
Dividends (parent company)	€M	-0.31	-0.46	-0.62	-0.77
New shareholders' equity	€M	1.36	0.00	0.00	0.00
Total financial flows	€M	-5.04	-9.96	-10.5	-13.5
Change in net debt position	€M	8.94	7.14	7.17	6.99
Free cash flow (pre div.)	€M	6.24	7.54	7.73	7.69

Balance Sheet

		12/17A	12/18E	12/19E	12/20E
Goodwill	€M	34.2	34.2	34.2	34.2
Total intangible	€M	101	107	112	117
Tangible fixed assets	€M	7.44	6.62	5.81	5.01
WCR	€M	11.7	10.7	10.6	11.4
Total assets (net of short term liabilities)	€M	186	190	195	201
Ordinary shareholders' equity (group share)	€M	130	142	154	167
Provisions for pensions	€M	4.35	4.47	4.51	4.56
Net debt / (cash)	€M	60.6	53.4	46.3	39.3
Total liabilities and shareholders' equity	€M	186	190	195	201
Off B/S business guarantees given	€M	79.0			
Contingent considerations	€M	0.00			

Per Share Data

		12/17A	12/18E	12/19E	12/20E
Adjusted EPS (bfr gwill amort. & dil.)	**€**	**1.29**	**1.69**	**1.75**	**1.81**
Net dividend per share	**€**	**0.06**	**0.08**	**0.10**	**0.12**
Free cash flow per share	€	0.72	0.88	0.90	0.86
Book value per share	€	16.8	18.3	19.9	21.6
Number of diluted shares (average)	**Mio**	**8.61**	**8.57**	**8.57**	**8.92**

Contents

Businesses & Trends

Prodware is a software and IT services company with headquarters in France. The group is specialised in the distribution and integration of third-party software, Microsoft Dynamics, Sage and Autodesk, and the editing of specific and sectoral solutions that run on the Microsoft Dynamics ERP and CRM platforms. In 2017, Prodware had revenue of €168m and a workforce of 1,277 employees.

Prodware is an international company with a presence in 15 countries in the world and access to 75 countries through various partnerships and alliances. The group's organisation includes software development centres in France, Israel, Morocco, Tunisia and Central and Eastern Europe (Czech Republic, Romania, Georgia). By geography, 2017 revenue was balanced between the French-speaking countries (46% of the total, including Maghreb) and international (54% of the total), mainly in Europe.

A business development based on Microsoft software

Prodware was created in 1989 by Philippe Bouaziz, actually Chairman of the board of directors of the company, and François Richard. Initially, the group was a vendor and integrator of Sage software in France and became the n°1 in France with 12,000 customers amongst the small- and medium-sized businesses where the software unit price is low and the scope of services is restricted. Proximity with the clients is essential and the sales organisation is currently based on 19 local entities in France.

There was a turning point in 1997 when Prodware was referenced by Microsoft for the distribution of Microsoft software in France and then in Europe. Prodware is actually the largest distributor and integrator of the Microsoft Dynamics ERP and CRM solutions in the EMEA region. The group has the 'Microsoft Gold Certified partner' status and is a member of the Microsoft Dynamics Inner Circle. The customer base includes 2,500 customers in France and 3,000 customers outside France, mainly amongst the medium-sized companies and subsidiaries of international groups. The average deal in terms of licence fees is in the range €100 -500k.

The activity with Microsoft is demanding because it requires obtaining regular mandatory certifications by country, and by speciality for instance. The overall status is evaluated every six months.

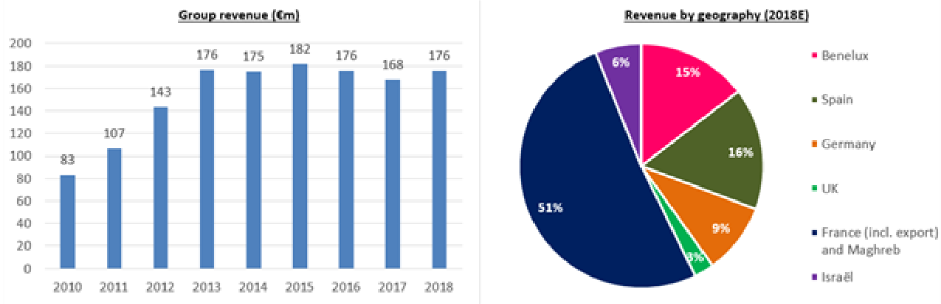
Besides the Sage and Microsoft Dynamics offerings, Prodware has a small activity with Autodesk Innovation & design software in France and has the 'Autodesk Platinum partner' status. This business dates from the acquisition of part of the activities of Arès in 2010. Around 15% of revenue was acquired by Prodware (85% of revenue acquired by GFI Informatique), enabling it to enter big and international accounts. This activity is concentrated on three regions in France, representing 1,500 customers, mainly big accounts such as Airbus, Renault, and RATP amongst others.

More than doubling in size through major acquisitions

Two major operations increased the group's positions in the distribution and integration of Microsoft Dynamics in Europe in 2011-12.

The first significant operation was the step-by-step acquisition of the Dutch company Qurius in which it bought 16% of the capital of Qurius and acquired firstly the subsidiaries in Belgium and Spain (2011), secondly those in the UK and Germany, and finally those in the Netherlands and Czech Republic (2012). The other important operations included the acquisition of the subsidiaries in Spain and France of the Danish company Colombus and the acquisition of MaXimum ERP specialised in the distribution of Microsoft Dynamics AX in Israel. Following these acquisitions, the pro forma group's revenue reached €186m in 2012 (vs €83m in 2010).

Larger size in Europe thanks to Qurius



Source: Annual report Prodware - estimates AlphaValue (breakdown of revenue by geography)

Differentiation in the competitive landscape

The ERP and CRM market is highly competitive. The first stage of competition is between the software editors, SAP, Oracle, Microsoft, Salesforce, and Sage Group amongst others. The second stage of competition is between the software vendors. There are a number of competitors such as Avanade in international markets, a company created by Accenture and Microsoft in 2000, and Absys Cyborg in France (distributor of Sage, Microsoft Dynamics software), a Group Keyrus entity.

The differentiation between Prodware and most traditional software vendors lies in the editing of specific solutions dedicated to a selective number of sectors that are not subject to excessive regulations and where competition is limited, i.e. the retail, distribution and manufacturing (automotive, food industry, life sciences, chemicals) sectors, professional services (IT, services, construction & engineering) and financial services.

These own developed solutions complement the Microsoft Dynamics offerings with e-commerce (e-business suite), mobility (mobility suite), business intelligence (BI suite and Power BI), and logistics (WMS suite) applications which meet specific industry needs and are a sort of "customisation" for the end customer. This strategy adds value to the resale of third-party software and is made possible by Microsoft's open technology contrary to SAP software.

- Project example (2017): implementation of a solution developed by Prodware that runs on Microsoft Dynamics 365 and based on the Microsoft Hololens technology (Augmented Reality headset delivered by Prodware Israel) for Siemens related to its eHighway System project. The Siemens' eHighway System is a project for the electrification of road freight transport where trucks are powered by overhead contact lines and an active pantograph. Prodware has developed also a similar solution for Otis.

The digital issues require an upstream approach to the projects of customers. Another differentiating factor for Prodware lies in the development of consulting services which enables it to be at the very beginning of customers' IT projects and increase the value of the activities.

In 2015, Prodware created the Business Consulting division and the Prodware Academy for the recruitment and training of experts and consultants. In 2017, Prodware employed 45 consultants and posted consulting revenue of €9.3m in 2017 (vs €3.2m in 2016, €0.2m in 2015). In 2018, consulting revenue increased by 6%. The target is to hire 25 to 35 consultants per year in the next two to three years. This recruitment plan is ambitious considering the foreseeable difficulties in attracting consultants in a demanding market.

Next step of development with Microsoft Dynamics 365

The bulk of revenue of Prodware, around €150m, is derived from the Microsoft Dynamics ERP and CRM solutions and related activities, i.e. the editing of own software that works with the Microsoft Dynamics' platforms and the provision of services. Therefore, the activity of Prodware is dependent on Microsoft's strategy with the Dynamics product line and pricing policy. The rest of revenue, around €25m, comes from the distribution and the integration of Sage and Autodesk software. Prodware is resizing its Sage solution business. The group divested the Sage ERP X3 activity (annual revenue of €4.3m) in March 2015 and the Sage HRM and Sustainability activity (annual revenue of €3.9m) in Q4 17.

The core solutions for Prodware include Microsoft Dynamics NAV and AX ERP, on premise and in SaaS (Software as a Service) mode as from July 2018, Microsoft Dynamics CRM, Microsoft Dynamics 365 launched by Microsoft on 1 November 2016 (Microsoft Dynamics AX and CRM-based solution in SaaS and integrated with Microsoft Office 365).

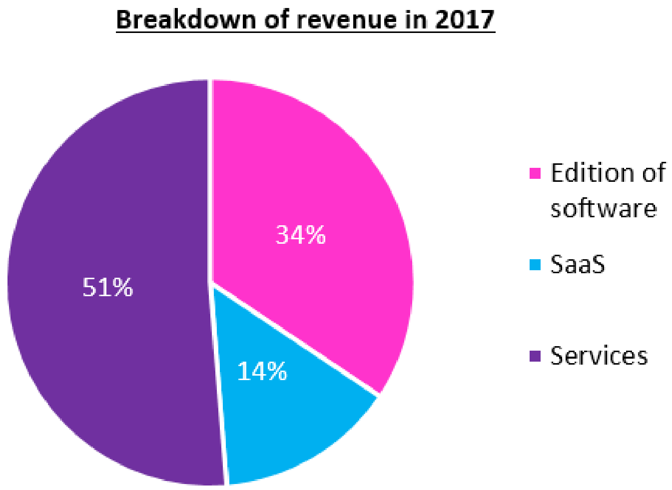
The replacement of existing old ERP software and the increasing adoption of SaaS by customers are the main growth drivers in 2018-19 at the very least. The fast-growing Microsoft Dynamics 365 (+51% in Q1 19 and Q2 19, following +65% reported by Microsoft in FY2018) is positive for Prodware's Microsoft business.

In early January 2018, Prodware signed several contracts for migration onto the Microsoft Dynamics 365 online platform with six customers in Belgium and Luxembourg, i.e. an insurance group, Alliance Bokiau (insurance brokerage firm), Nomacorc (manufacturer of wine corks) which is a customer of Nerea and acquired by Prodware in March 2017, UNESCO, Santhea (professional association for the promotion of care-providing establishments), Tiama (quality control company). The size of these contracts is in the range of €0.5-2.0m.

In March 2018, Prodware signed three contracts based on Microsoft Dynamics 365 online with Liasa (diary producer), Bandalux (manufacturer of blinds for private and business customers) and Parques Reunidos (leisure park operator), both in Spain.

SaaS and business transformation

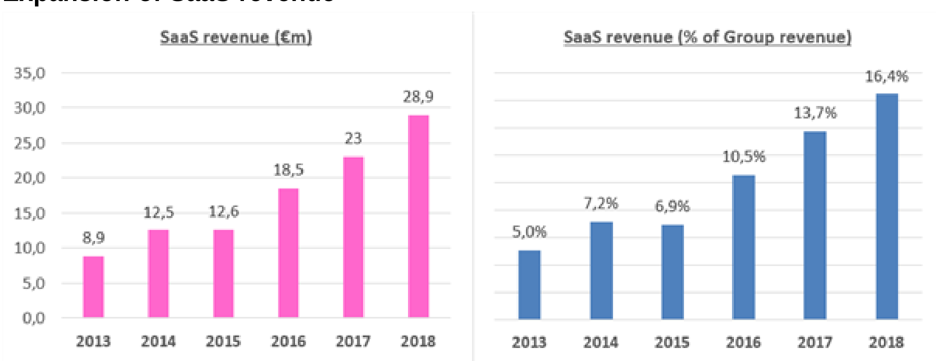
In 2017, the editing of software, which includes the software licences and related services, represented 33.9% of total revenue (-1.1pt), while SaaS surged to 13.7% of revenue (+3.2pts). Services, 52.4% of revenue (-2.1pt), include the consulting services, the integration of software and the maintenance related to the Microsoft, Sage and Autodesk solutions.



Source: Prodware Results Presentation

In the software industry, SaaS is expanding rapidly, replacing the traditional business model based on the payment of licence fees. This transformation is managed by the software editors and the distributors have to follow the move. As for Prodware, SaaS emerged in 2013 and revenue reached €29m (+26% yoy) in 2018, corresponding to 16.4% of total revenue (vs 5% of total revenue in 2013). Management is expecting 80% of the software business (excluding Sage software) in SaaS in three years. Although the SaaS model has a negative impact on revenue in the short term with the replacement of upfront payments (licence fees) by revenue recognisable over time (three-year subscription fees in SaaS mode), it should be positive for Prodware through higher recurring and predictable revenue and customer retention in the medium term. Prodware is actually making the foundations of a solid base for the development of additional services to customers.

Expansion of SaaS revenue



Source: Annual report Prodware

A promising partnership in the US market

Prodware is mainly involved in Europe. The US is a vast market where Prodware was absent until the creation of the joint venture Retail and Digital Venture with the US company ILOVEMOBILE Group in 2016. ILOVEMOBILE Group is specialised in the editing of software for the retail sector. The joint venture is 45%/55% owned by Prodware and its US partner. For Prodware, the stake in the joint venture resulted from the transfer of capitalised software from its balance sheet (€38m) to the joint venture and the conversion of software development on behalf of the joint venture (€22m) into the capital of the joint venture.

The addressable market comprises 40,000 customers who are using Microsoft's old software (Great and Solomon ERP) which should be replaced by Microsoft Dynamics 365. The joint venture will cover New York, Florida and Texas in the short term. In 2017, Retail and Digital Venture had revenue of €10.9m (vs €3.9m in 2016) and net profit of €1.1m (vs 0.2m in 2016). In 2017, contracts were signed with Nestlé and Essilor and, in early 2018, Tiama and Nomacorc mentioned their willingness to migrate their North American operations on to the Microsoft Dynamics 365 online system.

2016-2021 strategic programme

Prodware is in the middle of its 2016-21 strategic programme. The main guidelines (no guidance disclosed) include the expansion of SaaS which should have a negative impact on the top-line during the transition phase and should be positive in the medium term. In order to attenuate the decline of revenue, the target is to push forwards the consulting services and continue to develop the editing business in SaaS mode. Finally, the financing part of the strategic programme, which included debt refinancing to extend the maturity and reduce the interest cost, was completed in 2016.

During the strategic programme, Prodware is anticipating some acquisitions of small-sized companies in order to reinforce its expertise in specific domains like the last acquisitions completed in March 2017, i.e. Nerea in Belgium and Luxembourg, specialised in business consulting, and the implementation of Microsoft Dynamics CRM (annual revenue of €2.8m, 40 employees) and in October 2018, i.e. the Ctac's Microsoft Dynamics activities in the Netherlands (annual revenue of €2m). In addition, switching to SaaS mode could weaken some competitors that would become potential targets for Prodware.

Divisional Breakdown Of Revenues

	Sector	12/17A	12/18E	12/19E	12/20E	Change 18E/17		Change 19E/18E	
						€M	of % total	€M	of % total
Total sales		168	176	175	174	8	100%	-1	100%
O/w organic growth (%)		*-3.60*				*4*	*45%*		
Infrastructure and Saas	Application Software	38.3	40.9	48.6	56.6	3	33%	8	-770%
Own Software Solutions / inte...	Application Software	129	135	126	117	6	75%	-9	900%
Other									

Key Exposures

	Revenues	Costs	Equity
£	2.0%	1.0%	1.0%
Dollar	0.0%	0.0%	0.0%
Emerging currencies	0.0%	0.0%	0.0%
Long-term global warming	0.0%	0.0%	0.0%

Sales By Geography

France	51.2%
Benelux	14.6%
Spain	16.2%
Germany	9.4%
Israel	6.1%
UK	2.6%

We address exposures (eg. how much of the turnover is exposed to the $) rather than sensitivities (say, how much a 5% move in the $ affects the bottom line). This is to make comparisons easier and provides useful tools when extracting relevant data.
Actually, the subject is rather complex on the ground. The default position is one of an investor managing in €. An investor in £ will obviously not react to a £ based stock trading partly in € as would a € based investor. In addition, certain circumstances can prove difficult to unravel such as for eg. a € based investor confronted to a Swiss company reporting in $ but with a quote in CHF... Sales exposure is probably straightforward but one has to be careful with deep cyclicals. Costs exposure is a bit less easy to determine (we do not allow for hedges as they can only be postponing the day of reckoning). How much of the equity is exposed to a given subject is rarely straightforward but can be quite telling
In addition, subjects are frequently intertwined. A $ exposure may encompass all revenues in $ pegged currencies and an emerging currency exposure is likely to include $ pegged currencies as well.
Exposure to global warming issues is frequently indirect and may require to stretch a bit imagination.

Money Making

The segmental reporting is based on two divisions, Own software solutions & Integration of business software solutions, Infrastructures and SaaS. It reflects the way the products are provided. It is different from the breakdown of revenue by activity (Editing of own software, SaaS, Services). The Own software solutions & Integration of business software solutions operating segment regroups Editing of own software and Services, i.e. the consulting services, the integration services and maintenance related to the Microsoft, Sage and Autodesk solutions.

Prodware reports three types of operating result, i.e. operating income (equivalent to EBITDA, including the research tax credit after deduction to staff costs when it is not linked to activated software development), current operating income (before restructuring, integration and acquisition costs, goodwill impairment, share-based payments, gain/loss on the disposal of activities), operating profit (equivalent to a reported EBIT).
We have factored in the divisional EBITDA (see the table below) released by the company which includes the positive impact of the research tax credit, net of fees (€+10.7m in 2017 vs €+11.1m in 2016). Conversely, the EBITDA in the AlphaValue P&L excludes the research tax credit which is reclassified in the 'corporate tax' line.

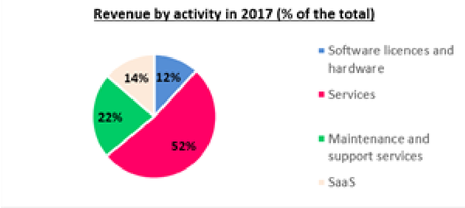
The IFRS 15 standard (new revenue recognition) will be applicable in 2018 and should probably have a negative effect on the non-SaaS revenue as seen in various software and IT services companies that communicate on this subject. Prodware is evaluating the impact on its revenue.

A transition phase for the top-line
Prodware is involved in a business transformation consisting in the replacement of the traditional software licence fees by SaaS revenue. Particularly for software in SaaS, the customer pays a subscription fee over three years for the use of software and the cost of maintenance, instead of paying an upfront payment for the software licence and a maintenance contract of one year in the traditional software model. There is a negative effect on total revenue during the early stage of the transformation phase considering that €3m of traditional software revenue is replaced by €1m of SaaS revenue per year during the subscription period. The switch is positive when stacking of software in SaaS becomes significant and new services to be developed finally bring additional revenue.

According to management, the negative impact on revenue of the switch to a SaaS mode would be in the range of €20-30m in 2018-20 (or 15-20% of revenue of €150m excluding the Sage solutions and taking into account that Autodesk software is already in SaaS) considering lower licence fees and maintenance revenues and SaaS income spread over three years.
The transformation of the business model was pretty well-managed considering the moderate decrease in revenue in 2015-17. We believe that the accumulation of SaaS revenue, the development of the business consulting and digital solutions (editing of own software) should offset the continuing reduction of revenue in 2018-20. This is all the more achievable given the positive economic environment expected in 2018-19 in Europe is favourable concerning IT investments by

customers in their digital transformation. The main risk for the smooth running of this scenario is related to difficulties in the recruitment as seen in Q4 17.

Revenue and revenue variation by activity



Variation of revenue by activity

In €m	2015-17	2017-20E
Software licences and hardware	-22,8	-9,8
Services (incl. Business consulting)	6,4	6,4
Maintenance and support services	-8,1	-11,4
SaaS	10,4	20,7
Variation of revenue in the period	-14,1	5,9
o/w disposal of non-core businesses	*-9,1*	-

Source: Prodware annual report and AlphaValue estimates (2018-20)

Higher recurring revenue and less volatility

The advantage of SaaS is higher recurring and predictable revenue for Prodware in the medium term. Including the maintenance activity, the recurring revenue is estimated to represent at least 48% of revenue in 2020 vs 36% of the total in 2017. In the case of a deterioration in the economic environment, customers would probably reduce their consumption of SaaS but the spread of the contracts over three years would smooth the impact on the group's revenue and operating cash flow.

Potential for a margin improvement

The apparent current operating margin (10.3% of revenue in 2017, +1.3pts yoy) is influenced by the activation of software development costs (production capitalised of €10.5m in 2017, amortisation of software of €-10.8m in 2017) and the accounting of the research tax credit deducted from staff costs (€10.7m net of fees in 2017).

Excluding these characteristics, Prodware is targeting a further improvement in the operating performance but gave no guidance. It is a challenging goal considering no/or low revenue growth expected in 2018-20. The margin improvement is based on the increase in the added value related to the sale of more innovative solutions and the development of business consulting, the fact that the SaaS mode can generate more revenue per customer due to the increase in the use of software and the offering of new services, higher efficiency of the billable headcount thanks to more standardised and packaged solutions, the increase in the nearshore headcount (12% of the workforce in 2017, +2pts yoy), in particular those dedicated to the support services, and, finally, the disposal of non-core businesses enabling a reduction in fixed costs.

Regarding the corporate tax, there was a tax charge of 3.4% in the P&L in 2017. The group has huge tax loss carry forwards (€81.7m in 2017), mainly in the parent company, most of which can be carried forward indefinitely, and deferred tax assets in the consolidated balance sheet (€10.3m in 2017). Finally, as mentioned above, the parent company is benefiting from significant research tax credit year after year as part of its software development activity.

Divisional EBITDA/R

	12/17A	12/18E	12/19E	12/20E	Change 18E/17		Change 19E/18E	
					€M	of % total	€M	of % total
Total	**30.7**	**32.8**	**32.8**	**33.5**	**2**	**100%**	**0**	**NA**
Infrastructure and Saas	5.55	6.42	8.38	10.5	1	41%	2	NA
Own Software Solutions / integration of Business Software S...	25.2	26.4	24.4	23.0	1	57%	-2	NA
Other/cancellations								

Divisional EBITDA/R margin

	12/17A	12/18E	12/19E	12/20E
Total	**18.3%**	**18.6%**	**18.8%**	**19.3%**
Infrastructure and Saas	14.5%	15.7%	17.3%	18.5%
Own Software Solutions / integratio...	19.4%	19.5%	19.3%	19.7%

Valuation

The DCF includes fairly modest revenue and EBITDA growth of respectively 2% and 2.5% in the out-years. EBITDA is restated from the research tax credit (€10.7m in 2017) which is integrated in the corporate tax line. We factored in a negative growth rate in the corporate tax line considering that the current amount of the research tax credit (€10.5m/year estimated in 2018-2020) may not be infinite.

The NAV is based on EV/Sales multiples to value both operating segments. We applied EV/Sales multiples of 2.0x for the Infrastructures and SaaS operating segment and 0.8x for the Own Software Solutions and Integration of Business Software Solutions. These ratios include a discount compared to those seen for the large and international software and IT services companies. Actually, big enterprise software and/or application software companies involved in SaaS such as SAP and Sage Group are trading at EV/Sales above 4.0x. In the IT services sector, the EV/Sales multiple is slightly above 1.3x on average, including a lowest at 0.9x for Indra Sistemas and a highest of 1.7x for Capgemini.

The existing tax loss carry forwards is an issue for the valuation and the question mark is what to do with this item while Prodware is benefiting from significant research tax credits. In 2017, the group had tax loss carry forwards of €81.7m, most of which can be carried forward indefinitely. Based on our estimates which may be cautious (pre-tax income estimated to c.5-6m in 2020, excluding the effect of the research tax credit), they are unlikely to be used over a predictable period. At this stage, we factor in arbitrarily a very modest portion (€5m) that can be used in the NAV calculation.

For the comparison-based valuation, there are no similar companies in our database and the peer group comprises large capitalisations and highly-valued software companies and IT services companies in order to reflect the scope of activities at Prodware (editing of software and services). We apply a discount of 45 -50% due to the smaller size and lower value creation metrics at Prodware (ROE 2018E of c.10% vs c.15% on average for the peer group, ROCE 2018E <5% vs c.12% on average for the peer group).

Valuation Summary

Benchmarks		Values (€)	Upside	Weight
DCF		13.4	78%	35%
NAV/SOTP per share		23.0	205%	20%
EV/EBITDA based		n/a	0%	20%
P/E	*Peers*	3.76	-50%	10%
Dividend Yield	*Peers*	0.00	-100%	10%
P/book based		n/a	0%	5%
Target Price		**12.9**	**53%**	

Comparison based valuation

Computed on 18 month forecasts	P/E (x)	Ev/Ebitda (x)	P/Book (x)	Yield(%)
Peers ratios	15.0	9.34	1.98	2.02
Prodware's ratios	n/a	n/a	n/a	n/a
Premium	-45.0%	-45.0%	-50.0%	0.00%
Default comparison based valuation (€)	**3.76**	**n/a**	**n/a**	**0.00**
Capgemini	15.1	11.2	2.27	1.59
Sage Group (the)	25.8	16.2	4.51	2.32
Atos	10.5	5.61	1.06	2.53
Sopra Steria Group	14.6	8.29	1.83	1.44
Software AG	15.6	9.15	1.75	2.24
Indra Sistemas	11.6	6.32	1.84	3.33

DCF Valuation Per Share

WACC	%	8.76	Avg net debt (cash) at book value	€M	49.8
PV of cashflow FY1-FY11	€M	59.0	Provisions	€M	4.97
FY11CF	€M	8.11	Unrecognised actuarial losses (gains)	€M	0.00
Normalised long-term growth"g"	%	2.00	Financial assets at market price	€M	65.2
Governance weighted "g"	%	1.80	Minorities interests (fair value)	€M	0.38
Terminal value	€M	116	Equity value	€M	119
PV terminal value	€M	50.3	Number of shares	Mio	8.92
PV terminal value in % of total value	*%*	*46.0*	Implied equity value per share	€	13.4
Total PV	€M	109			

Assessing The Cost Of Capital

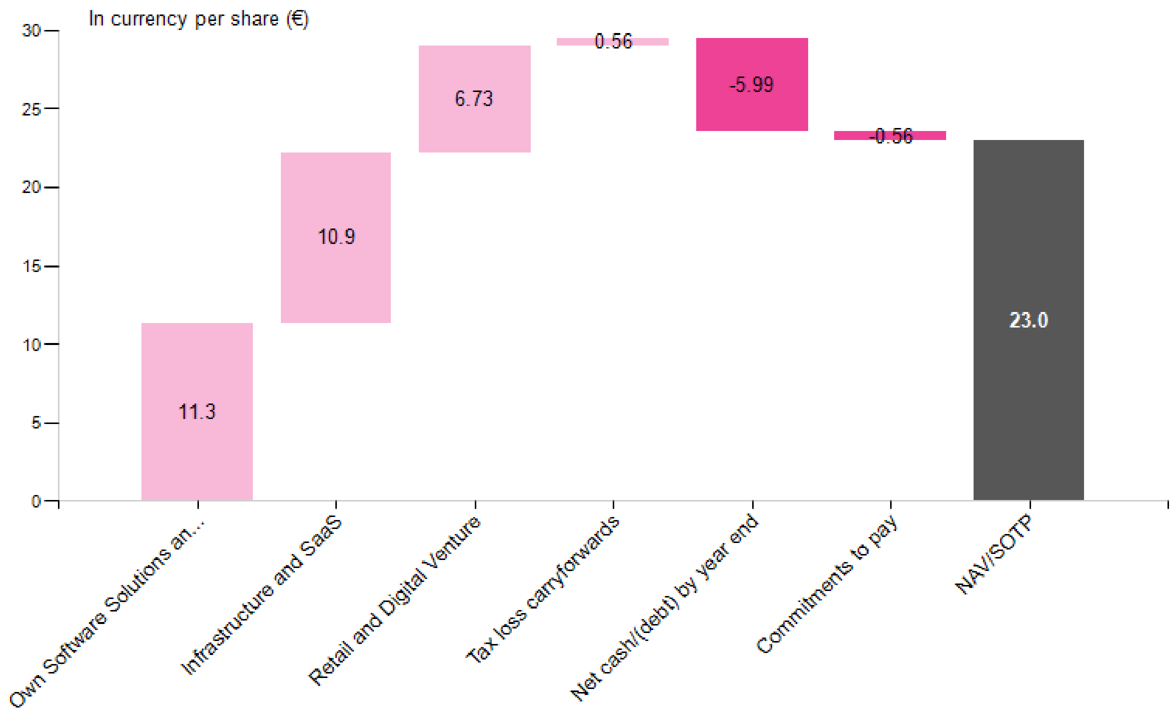
Synthetic default risk free rate	%	3.50	Company debt spread	bp	250
Target equity risk premium	%	5.00	Marginal Company cost of debt	%	6.00
Tax advantage of debt finance (normalised)	%	30.0	**Company beta (leveraged)**	**x**	**1.79**
Average debt maturity	Year	5	Company gearing at market value	%	91.9
Sector asset beta	x	1.14	Company market gearing	%	47.9
Debt beta	x	0.50	**Required return on geared equity**	**%**	**12.5**
Market capitalisation	€M	58.2	Cost of debt	%	4.20
Net debt (cash) at book value	€M	53.4	**Cost of ungeared equity**	**%**	**9.22**
Net debt (cash) at market value	€M	47.0	WACC	%	8.76

DCF Calculation

		12/17A	12/18E	12/19E	12/20E	Growth	12/21E	12/28E
Sales	€M	168	176	175	174	**2.00%**	177	203
EBITDA	€M	20.5	22.3	22.3	23.0	**2.50%**	23.6	28.0
EBITDA Margin	*%*	*12.2*	*12.7*	*12.8*	*13.3*		*13.3*	*13.8*
Change in WCR	€M	7.00	1.00	0.07	-0.79	**2.00%**	-0.81	-0.93
Total operating cash flows (pre tax)	€M	23.5	23.4	22.5	22.4		22.8	27.1
Corporate tax	€M	10.4	9.93	9.91	9.87	**-8.00%**	9.08	5.07
Net tax shield	**€M**	**-1.34**	**-1.15**	**-1.12**	**-1.07**	**-8.00%**	**-0.98**	**-0.55**
Capital expenditure	€M	-23.1	-22.0	-21.0	-21.0	**1.50%**	-21.3	-23.7
Capex/Sales	*%*	*-13.8*	*-12.5*	*-12.0*	*-12.1*		*-12.0*	*-11.6*
Pre financing costs FCF (for DCF purposes)	€M	9.36	10.2	10.3	10.2		9.55	7.95
Various add backs (incl. R&D, etc.) for DCF purposes	€M							
Free cash flow adjusted	**€M**	**9.36**	**10.2**	**10.3**	**10.2**		**9.55**	**7.95**
Discounted free cash flows	**€M**	**9.36**	**10.2**	**9.50**	**8.61**		**7.42**	**3.43**
Invested capital	€	183	188	193	199		202	224

NAV/SOTP Calculation

	% owned	Valuation technique	Multiple used	Valuation at 100% (€M)	Stake valuation (€M)	In currency per share (€)	% of gross assets
Own Software Solutio...	100%	EV/Sales	0.8	101	101	11.3	38.4%
Infrastructure and SaaS	100%	EV/Sales	2	97.1	97.1	10.9	36.9%
Retail and Digital Ven...	45.0%	Adj. historical price		133	60.0	6.73	22.8%
Tax loss carryforwards	100%	AlphaValue valuation		5.00	5.00	0.56	1.90%
Other					0.00	0.00	0.00%
Total gross assets					**263**	**29.5**	**100%**
Net cash/(debt) by year end					-53.4	-5.99	-20.3%
Commitments to pay					-4.97	-0.56	-1.89%
Commitments received							
NAV/SOTP					205	23.0	77.8%
Number of shares net of treasury shares - year end (Mio)					**8.92**		
NAV/SOTP per share (€)					**23.0**		
Current discount to NAV/SOTP (%)					**67.2**		



Debt

A euro PP loan of €79m subscribed in 2016 at the parent company level contributed to the reduction in the average debt cost (3.45% vs 5% previously). This financing included a bank loan of €29m repayable over five years and bond loans of €50m due to mature in December 2019, January 2022 and January 2023.

At year-end 2017, gross debt amounted to €92.9m, including bank loans and ordinary bonds for a total of €67.7m and bank overdrafts of €23.2m, and net debt was reduced by c.€8m to €60.6m, corresponding to conventional gearing of 46%.

In 2017, all covenants were complied with (Consolidated net debt/Consolidated equity <1.2x, Consolidated net debt/Consolidated EBITDA <2.5x, EBITDA/cost of net financial debt >4.5x).

Based on our 2018-20 estimates, the cumulated (three years) amount of free cash flow is estimated at close to €22m which enables a further deleveraging. Taking into account the increase in net earnings during the period, conventional gearing is expected to decrease significantly from 38% in 2018 to 24% in 2020. Therefore, the improvement in the financial situation enables the acquisition of small-sized companies at moderate acquisition prices, such as the purchase of Nerea in 2017 for €1.5m (EV/Sales of 0.54x).

Detailed financials at the end of this report

Funding - Liquidity

		12/17A	12/18E	12/19E	12/20E
EBITDA	€M	20.5	22.3	22.3	23.0
Funds from operations (FFO)	€M	23.4	28.6	28.7	29.6
Ordinary shareholders' equity	**€M**	**130** (1)	**142**	**154**	**167**
Gross debt	€M	93.3	87.6	81.4	72.2
+ Gross Cash	€M	32.8	34.2	35.1	32.9
= Net debt / (cash)	**€M**	**60.6** (2)	**53.4**	**46.3**	**39.3**
Gearing (at book value)	%	49.6	40.3	32.4	25.7
Adj. Net debt/EBITDA(R)	*x*	*2.95*	*2.40*	*2.07*	*1.71*
Adjusted Gross Debt/EBITDA(R)	*x*	*4.79*	*4.16*	*3.88*	*3.36*
Adj. gross debt/(Adj. gross debt+Equity)	*%*	*35.8*	*39.5*	*36.0*	*31.7*
Ebit cover	*x*	*0.66*	*2.46*	*2.62*	*2.97*
FFO/Gross Debt	*%*	*33.0*	*30.9*	*33.2*	*38.2*
FFO/Net debt	*%*	*38.6*	*53.5*	*62.1*	*75.2*
FCF/Adj. gross debt (%)	*%*	*8.66*	*8.14*	*8.94*	*9.96*
(Gross cash+ "cash" FCF+undrawn)/ST debt	*x*	*1.25*	*1.20*	*1.23*	*1.17*
"Cash" FCF/ST debt	*x*	*0.23*	*0.21*	*0.22*	*0.22*

1. In 2017, the increase in shareholders' equity was due to the increase in net earnings (+22% to €11.6m).
2. Including gross debt of €93.3m net of the cash and cash equivalents of €32.8m.

Worth Knowing

Management as the main shareholder

The capital comprises shares with double voting rights. A double voting right is allocated to shares owned for more than two years in registered form.

Management is the main shareholder with actually c.36% of the shares and 44% of the voting rights (vs 25% of the shares and 39% of the voting rights in 2014). The management shareholding includes the shares owned by Phast Invest. In September 2016, the company Phast Invest, whose Chairman is the Deputy Managing director of Prodware, Stéphane Conrard, crossed the statutory threshold of 7.5% of the shares of Prodware and 10.2% of the voting rights. Phast Invest bought additional shares throughout the year 2017 (>400,000 shares) and declared the exercise of 261,900 warrants at an exercise price of €5.62/share for a total of €1.5m on 29 June 2017.
The employee shareholding, 1.2% of the share, is not as large as it is at Capgemini or Sopra Steria (> 5% of the shares) and is rather similar to the level seen at Atos for example.

Share buy-backs

In 2016, Prodware bought 700,433 shares corresponding to 8.5% of the outstanding ordinary shares. In 2017, 776,000 owned shares were cancelled which more than offset the issue of shares related to the exercise of warrants. Additional share buy-backs are expected in 2018.

Significant potential dilution

At year-end 2017, there were 7,741,000 ordinary shares outstanding. The potential dilution is significant with the conversion of the preferred shares into ordinary shares, the granting of bonus shares and the exercise of warrants. The preferred shares and bonus shares were allocated to 150 key managers and employees. The warrants were issued to the benefit of corporate officers and the members of the Executive Management.

Preferred shares: Prodware issued 7,130 preferred shares (B-shares) convertible into ordinary shares (A-shares) at year-end 2016. The preferred shares have no voting rights and no dividend. The preferred shares will be vested on 20 June 2021 at the latest (or at the date of the shareholders' general meeting approving the FY2019 financial statements at the earliest), provided that the financial targets are achieved (revenue growth on average, EBITDA margin on average, increase in the share price). One preferred share gives the right to 100 ordinary shares under the condition that 100% of the criteria are achieved. The preferred share is convertible from the end of the vesting period to June 2027. At the end of December 2017, there was 7,042 preferred shares (704,200 potential ordinary shares).

Bonus shares: there were 77,900 bonus shares at year-end 2017 with a vesting date in June 2021. The definitive attribution is dependent on the achievement of performance criteria (revenue, EBITDA and net profit growth, increase in the share price) and subject to membership in the workforce at this date. For 90% of the beneficiaries, the granting of bonus shares are based on the achievement of performance criteria in their countries. For the rest of the beneficiaries, it is based on the performance of the group.

Warrants: there was a total of 1,168,900 warrants at year-end 2016 (warrants issued in 2012, 2015 and 2016) exercisable until July 2017 (341,900 warrants), June 2020 (265,000 warrants) and March 2026 (562,000). At the end of June 2017, warrants were exercised for a total of €1.8m.

Shareholders

Name	% owned	Of which % voting rights	Of which % free to float
Management	35.9%	44.0%	0.00%
Mandarine Gestion SA	2.15%	2.15%	0.00%
Meeschaert Asset Management SA	1.33%	1.33%	0.00%
Prodware employees	1.20%	2.30%	0.00%
MCA Finance SA	0.71%	0.71%	0.00%
Amplegest SAS	0.67%	0.67%	0.00%
Talence Gestion SAS	0.49%	0.49%	0.00%
Conseil Plus Gestion SA	0.28%	0.28%	0.00%
Rothschild Asset Management SCS	0.14%	0.14%	0.00%
Uzes Gestion SA	0.13%	0.13%	0.00%
Treasury shares	0.10%	0.00%	0.00%
Cornerstone Advisors Incorporated	0.10%	0.10%	0.00%
SEI Investments Management Corp	0.05%	0.05%	0.00%
Apparent free float			**56.8%**

Governance & Management

The board of directors comprises six members: the Chairman, Philippe Bouaziz, who is one of the founders of Prodware, the Managing director of Prodware, Alain Conrard, who was Marketing Manager of the Mid-market department at Sage Group before joining Prodware at the end of 2003, and the Deputy Managing director of Prodware, Stéphane Conrard, with a background in accounting firms before joining Prodware at the end of 2006. There are only two independent members declared by Prodware and therefore less than 50% of independent members on the board of directors.

Governance score

Company (Sector)	Independent board
3.2 (5.9)	No

Parameters	Company	Sector	Score	Weight
Number of board members	6	10	9/10	5.0%
Board feminization (%)	33	26	6/10	5.0%
Board domestic density (%)	100	80	0/10	10.0%
Average age of board's members	N/A	59	0/10	5.0%
Type of company : Small cap, controlled			4/10	10.0%
Independent directors rate (%)	N/A	N/A	0/10	20.0%
One share, one vote			✗	10.0%
Chairman vs. Executive split			✓	0.0%
Chairman not ex executive			✗	5.0%
Full disclosure on mgt pay			✓	5.0%
Disclosure of performance anchor for bonus trigger			✗	5.0%
Compensation committee reporting to board of directors			✗	5.0%
Straightforward, clean by-laws			✓	15.0%
Governance score			**3.2/10**	**100.0%**

Management

Name		Function	Birth date	Date in	Date out	Compensation, in k€ (year) Cash	Equity linked
Alain CONRARD	M	CEO		2003		168 (2017)	0.00 (2017)
Stéphane CONRARD	M	Deputy CEO				312 (2017)	0.00 (2017)
Philippe BOUAZIZ	M	Chairman		1989		195 (2017)	0.00 (2017)

Board of Directors

Name		Indep.	Function	Completion of current mandate	Birth date	Date in	Date out	Fees / indemnity, in k€ (year)	Value of holding, in k€ (year)
Philippe BOUAZIZ	M	✗	President/Chairman of th...	2020		1989		4.00 (2017)	(2017)
Jean-Gérard BOUAZIZ	M	✗	Member	2020		1989		4.00 (2017)	(2017)
Alain CONRARD	M	✗	Member	2019		2005		4.00 (2017)	(2017)
Stéphane CONRARD	M	✗	Member	2019		2010		4.00 (2017)	(2017)
Klara FOUCHET	F	✗	Member	2019		2010		4.00 (2017)	(2017)
Viviane NEITER	F	✓	Member	2019		2010		5.00 (2017)	(2017)

Human resources score

Company (Sector)

6.0 (6.3)

Parameters	Yes ✔ / No ✘	Weight
Accidents at work		**25%**
Set targets for work safety on all group sites?	✔	10.0%
Are accidents at work declining?	✔	15.0%
Human resources development		**35%**
Are competences required to meet medium term targets identified?	✔	3.5%
Is there a medium term (2 to 5 years) recruitment plan?	✔	3.5%
Is there a training strategy tuned to the company objectives?	✔	3.5%
Are employees trained for tomorrow's objectives?	✔	3.5%
Can all employees have access to training?	✔	3.5%
Has the corporate avoided large restructuring lay-offs over the last year to date?	✔	3.5%
Have key competences stayed?	✔	3.5%
Are managers given managerial objectives?	✔	3.5%
If yes, are managerial results a deciding factor when assessing compensation level?	✘	3.5%
Is mobility encouraged between operating units of the group?	✔	3.5%
Pay		**20%**
Is there a compensation committee?	✘	6.0%
Is employees' performance combining group AND individual performance?	✘	14.0%
Job satisfaction		**10%**
Is there a measure of job satisfaction?	✔	3.3%
Can anyone participate ?	✘	3.4%
Are there action plans to prop up employees' morale?	✘	3.3%
Internal communication		**10%**
Are strategy and objectives made available to every employee?	✘	10.0%
Human resources score	**6.0/10**	**100.0%**

Staff & Pension matters

End of the reorganisation related to Qurius

Total headcount decreased significantly since the end of 2012 when Prodware integrated the European subsidiaries of the Dutch company Qurius. In 2012-16, the workforce decreased by 24%. This reflected the reshaping of the group's organisation in 2013 (restructuring costs of €5.5m vs €5m in 2012) and the restructuring of the subsidiaries in Benelux and Germany in 2014 (restructuring costs of €4.5m), in Germany and the Netherlands in 2015 (restructuring costs of €2.5m). Jointly, some non-core activities were sold, of which the Sage ERP X3 French business (revenue of €4.3m) in 2015.

There was a turnaround in 2017 as total headcount increased by 4.2% to 1,277 employees. Prodware recruited new employees in consulting services and digital/cloud and integrated the workforce of Nerea in Belgium and Luxembourg, 40 employees, acquired in March 2017. Conversely, Prodware continued to divest non-core activities (revenue of €4.7m in 2016), of which the Sage HRM and SUSTAINABILITY French business.

Prodware mentioned some difficulties in recruiting people due to the shortage of candidates. This issue impacted the activity in Q4 17 and is a concern for 2018. Nevertheless, it is tempered by the moderate turnover of staff at 12% compared to those at some large IT services companies (19% at Capgemini for instance).

Increase of nearshore

The presence of nearshore and offshore headcounts is a characteristic in the software and IT services sectors in order to benefit from lower labour costs and provide competitive services to customers. In 2017, Prodware had 12% of the employees nearshore (vs 10% of the total in 2016), i.e. in the Czech Republic, Romania, Georgia, Morocco and Tunisia. Management does not anticipate the opening of new nearshore locations. Although nearshore and offshore headcount is below the level seen in large IT services companies such as Capgemini (57% of the total), Atos (>25% of the total), Sopra Steria (19% of the total), we believe that it should increase progressively in line with the software development and support businesses.

No significant pension commitments

The provisions for pensions amounted to €4.3m at year-end 2017 and represented c.3% of the shareholders' equity. The pension risk is not an issue for the group.

Detailed financials at the end of this report

Summary Of Pension Risks

		12/17A	12/18E	12/19E	12/20E
Pension ratio	%	**3.24**	**3.06**	**2.85**	**2.66**
Ordinary shareholders' equity	€M	130 (1)	142	154	167
Total benefits provisions	**€M**	**4.35**	**4.47**	**4.51**	**4.56**
of which funded pensions	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
of which unfunded pensions	*€M*	*4.35*	*4.47*	*4.51*	*4.56*
of which benefits / health care	*€M*		*0.00*	*0.00*	*0.00*
Unrecognised actuarial (gains)/losses	€M	0.00	0.00	0.00	0.00

1. In 2017, the increase in shareholders' equity was due to the increase in net earnings (+22% to €11.6m).

Geographic Breakdown Of Pension Liabilities

		12/17A	12/18E	12/19E	12/20E
US exposure	%	0.00	0.00	0.00	0.00
UK exposure	%	2.00	2.00	2.00	2.00
Euro exposure	%	98.0	98.0	98.0	98.0
Nordic countries	%	0.00	0.00	0.00	0.00
Switzerland	%	0.00	0.00	0.00	0.00
Other	%	0.00	0.00	0.00	0.00
Total	%	100	100	100	100

Recent updates

27/02/2019

EBITDA margin increase anticipated based on good revenue.

Change in EPS	2018 : € 1.69 vs 1.61	+4.58%
	2019 : € 1.75 vs 1.75	-0.08%

The upwards revision of 2018E EPS is due to revenue above expectation (€175.9m vs. €172.2m estimated), thanks to a strong Q4. In 2018, Group EBITDA is now estimated to €32.8m (vs. €32.1m previously), corresponding to a margin rate of 18.6% of revenue (+0.3pt yoy).

Change in Target Price	€ 15.5 vs 15.4	+0.72%

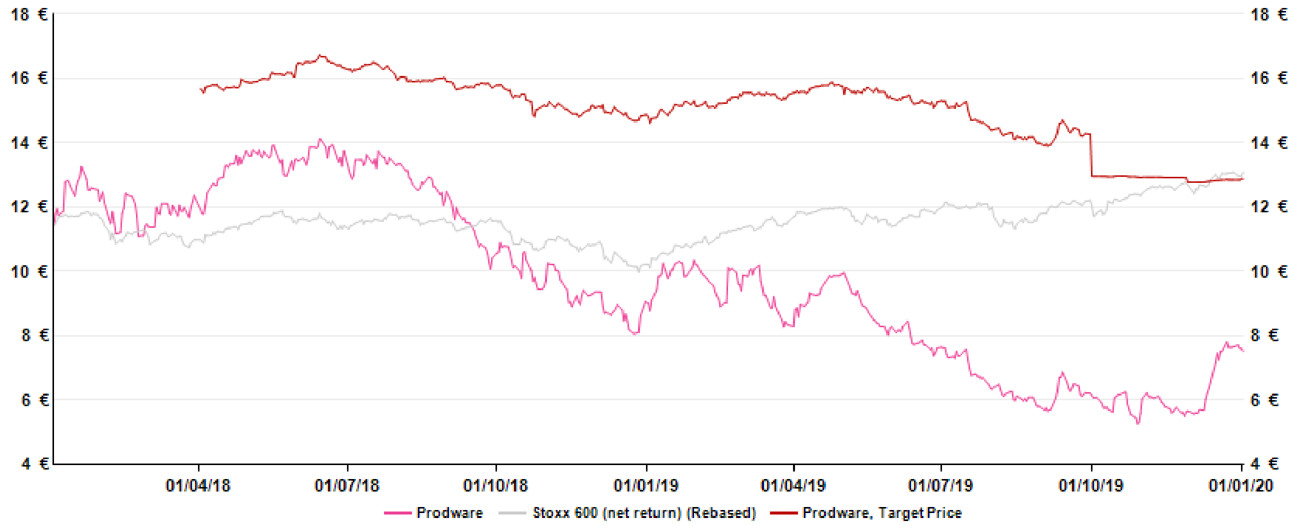
The adjustment of the target price is related to the fine-tuning of our model (see our comments on the change of 2018E EPS).

The share price has recovered since the beginning of the year 2019 (+10% ytd) but has underperformed the software sector (+12.3% ytd) (situation on 25 February 19). The stock is trading at low PE ratios (<8x 2018E and <7x 2019E based on a cautious outlook) and could appreciate further when 2018 earnings are released (11 March 19).

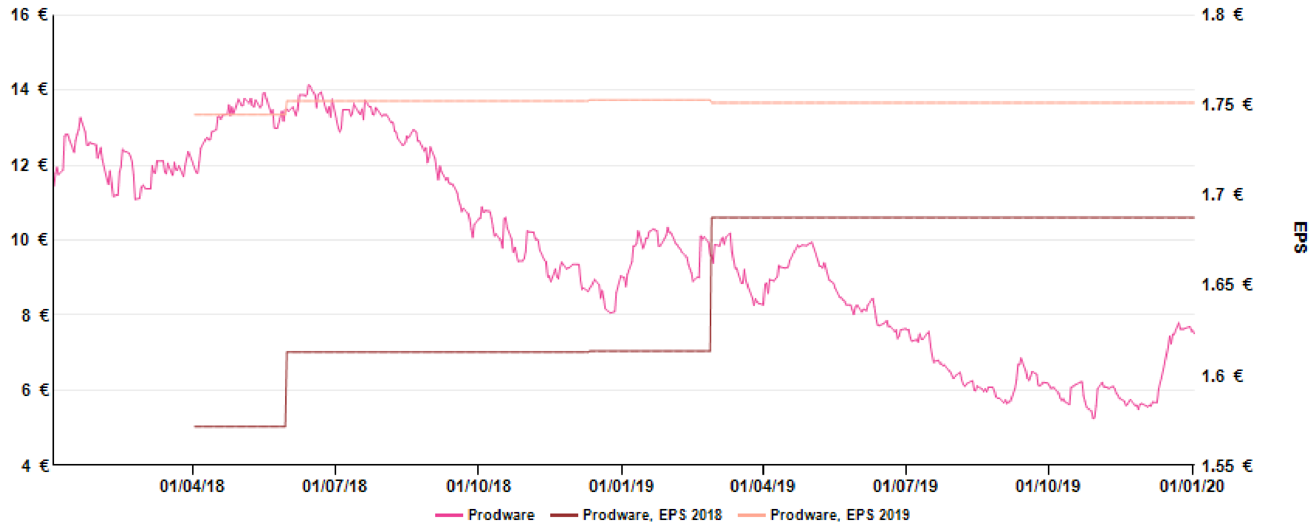
Change in NAV	€ 23.0 vs 21.9	+4.95%

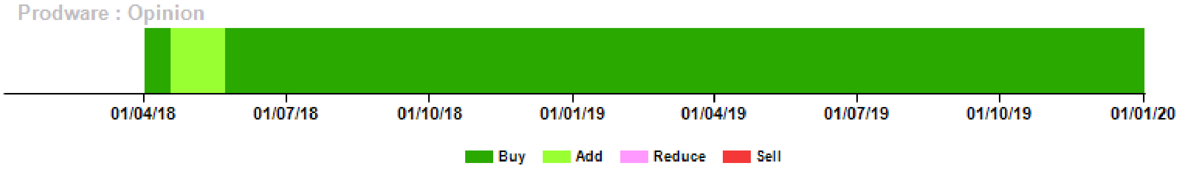
The NAV is based on EV/Sales multiples to value both operating segments, i.e. 2.0x for the Infrastructures and SaaS and 0.8x for the Own Software Solutions in Integration of Business Software Solutions. The upgrade of the NAV is due to the switch to 2019E revenue.

Stock Price and Target Price

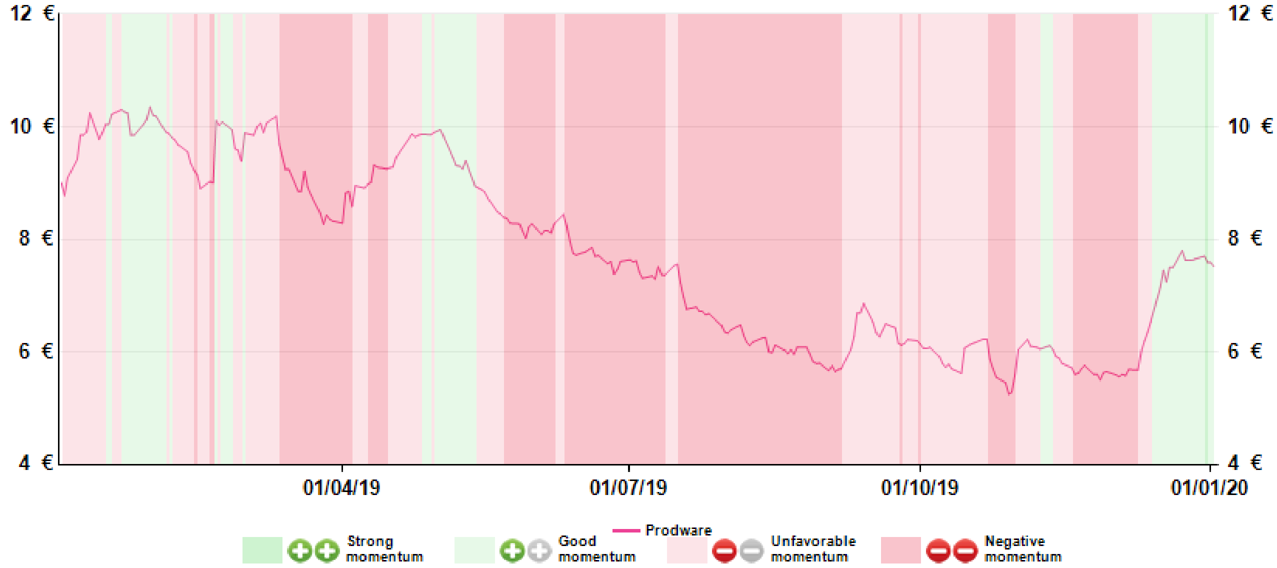


Earnings Per Share & Opinion





Momentum



Momentum analysis consists in evaluating the stock market trend of a given financial instrument, based on the analysis of its trading flows.
The main indicators used in our momentum tool are simple moving averages over three time frames: short term (20 trading days), medium term (50 days) and long term (150 days). The positioning of these moving averages relative to each other gives us the direction of the flows over these time frames.
For example, if the short and medium-term moving averages are above the long-term moving average, this suggests an uptrend which will need to be confirmed. Attention is also paid to the latest stock price relative to the three moving averages (advance indicator) as well as to the trend in these three moving averages - downtrend, neutral, uptrend - which is more of a lagging indicator.
The trend indications derived from the flows through moving averages and stock prices must be confirmed against trading volumes in order to confirm the signal. This is provided by a calculation based on the average increase in volumes over ten weeks together with a buy/sell volume ratio.

: Strong momentum corresponding to a continuous and overall positive moving average trend confirmed by volumes

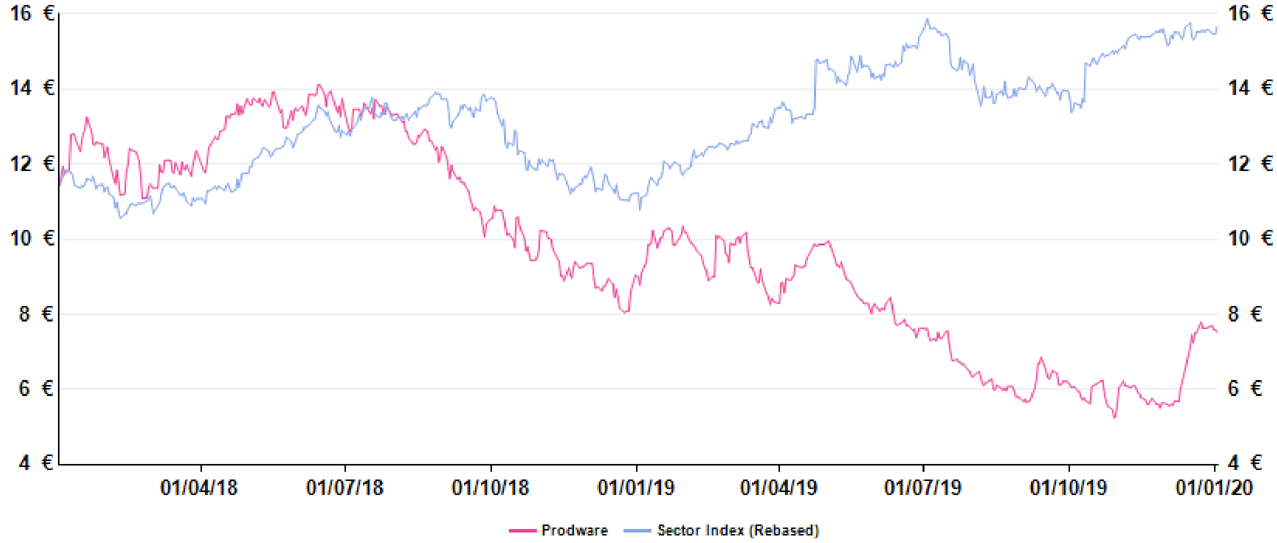
: Relatively good momentum corresponding to a positively-oriented moving average, but offset by an overbought pattern or lack of confirmation from volumes

: Relatively unfavorable momentum with a neutral or negative moving average trend, but offset by an oversold pattern or lack of confirmation from volumes

: Strongly negative momentum corresponding to a continuous and overall negative moving average trend confirmed by volumes

Moving Average MACD & Volume

Sector Software



Detailed Financials

Valuation Key Data

		12/17A	12/18E	12/19E	12/20E
Adjusted P/E	**x**	**8.70**	**5.97**	**4.76**	**4.16**
Reported P/E	x	7.52	5.39	4.30	3.61
EV/EBITDA(R)	**x**	**4.38**	**3.21**	**2.28**	**1.64**
P/Book	**x**	**0.67**	**0.55**	**0.42**	**0.35**
Dividend yield	**%**	**0.53**	**0.79**	**1.20**	**1.60**
Free cash flow yield	*%*	*7.18*	*9.67*	*12.0*	*13.2*
Average stock price	€	11.2	10.1	8.34	7.52

Consolidated P&L

		12/17A	12/18E	12/19E	12/20E
Sales	€M	168	176	175	174
Sales growth	*%*	*-4.64* [3]	*4.90*	*-0.64*	*-0.73*
Sales per employee	*€th*	*134*	*137*	*134*	*131*
Organic change in sales	*%*	*-3.60*			
Purchases and external costs (incl. IT)	€M				
R&D costs as % of sales	%	0.00	0.00	0.00	0.00
Staff costs	€M	-76.5	-79.0	-80.4	-81.9
Operating lease payments	€M				
Cost of sales/COGS (indicative)	€M				
EBITDA	€M	20.5	22.3	22.3	23.0
EBITDA(R)	€M	20.5	22.3	22.3	23.0
EBITDA(R) margin	*%*	*12.2*	*12.7*	*12.8*	*13.3*
EBITDA(R) per employee	*€th*	*16.4*	*17.3*	*17.1*	*17.3*
Depreciation	€M	-2.54	-2.64	-2.62	-2.60
Depreciations/Sales	*%*	*1.51*	*1.50*	*1.50*	*1.50*
Amortisation	€M	-10.8	-10.5	-10.3	-10.2
Underlying operating profit	€M	7.18	9.10	9.40	10.2
Underlying operating margin	*%*	*4.28*	*5.17*	*5.38*	*5.87*
Other income/expense (cash)	€M	-2.08	-1.50	-1.50	-1.50
Other inc./ exp. (non cash; incl. assets revaluation)	€M	-0.48			
Earnings from joint venture(s)	€M				
Impairment charges/goodwill amortisation	€M				
Operating profit (EBIT)	€M	4.62	7.60	7.90	8.69
Interest expenses	€M	-3.46	-3.34	-3.23	-3.06
of which effectively paid cash interest expenses	*€M*	*-3.46*			
Financial income	€M	0.00	0.00	0.01	0.01
Other financial income (expense)	€M	-1.01	-0.50	-0.50	-0.50
Net financial expenses	€M	-4.47	-3.84	-3.72	-3.55
of which related to pensions	*€M*		*-0.07*	*-0.06*	*-0.06*
Pre-tax profit before exceptional items	€M	0.16	3.76	4.18	5.14
Exceptional items and other (before taxes)	€M	0.02	0.00	0.00	0.00
of which cash (cost) from exceptionals	*€M*				
Current tax	€M	-0.27	-0.57	-0.59	-0.63
Impact of tax loss carry forward	€M				
Deferred tax	€M	10.6 [4]	10.5	10.5	10.5
Corporate tax	€M	10.4	9.93	9.91	9.87
Tax rate	*%*	*ns*	*ns*	*ns*	*ns*
Net margin	*%*	*6.27*	*7.78*	*8.06*	*8.65*
Equity associates	€M	0.59 [5]	0.79	0.93	1.12
Actual dividends received from equity holdings	*€M*	*0.17*	*0.17*	*0.17*	*0.17*
Minority interests	€M	-0.02	-0.02	-0.02	-0.02
Actual dividends paid out to minorities	*€M*				
Income from discontinued operations	€M	0.45	0.00	0.00	0.00

3. Revenue decreased by 3.6% at constant scope due to the postponement of some contracts from Q4 17 to H1 18. The change in perimeter corresponded to the disposal of non-core activities (revenue of €4.7m), o/w the Sage HRM and SUSTAINIBILITY business in France.
4. We reclassified in this line the research tax credit (€10.7m net of fees) not linked to activated software development.
5. Corresponding to the share (50%) in the net result of CKL Software in Germany and the share (45%) in the net result of Retail and Digital Ventures in the US.

ALPHAVALUE CORPORATE SERVICES

Attributable net profit	€M	11.6	14.5	15.0	16.1
Impairment charges/goodwill amortisation	€M	0.00	0.00	0.00	0.00
Other adjustments	€M				
Adjusted attributable net profit	€M	11.1	14.5	15.0	16.1
Interest expense savings	€M	0.00	0.00	0.00	0.00
Fully diluted adjusted attr. net profit	€M	11.1	14.5	15.0	16.1
NOPAT	€M	5.27	7.20	7.55	8.30

Cashflow Statement

		12/17A	12/18E	12/19E	12/20E
EBITDA	€M	20.5	22.3	22.3	23.0
Change in WCR	€M	7.00	1.00	0.07	-0.79
of which (increases)/decr. in receivables	*€M*		*-1.22*	*0.88*	*0.58*
of which (increases)/decr. in inventories	*€M*		*-0.02*	*0.00*	*0.00*
of which increases/(decr.) in payables	*€M*		*1.43*	*-1.02*	*-1.03*
of which increases/(decr.) in other curr. liab.	*€M*	*7.00*	*0.82*	*0.20*	*-0.34*
Actual dividends received from equity holdings	€M	0.17	0.17	0.17	0.17
Paid taxes	€M	-0.37	9.93	9.91	9.87
Exceptional items	€M				
Other operating cash flows	€M	6.54	0.00	0.00	0.00
Total operating cash flows	€M	33.8	33.4	32.4	32.2
Capital expenditure	€M	-23.1	-22.0	-21.0	-21.0
Capex as a % of depreciation & amort.	*%*	*174*	*167*	*163*	*164*
Net investments in shares	€M	-1.64	0.00	0.00	0.00
Other investment flows	€M				
Total investment flows	€M	-24.8	-22.0	-21.0	-21.0
Net interest expense	€M	-4.47	-3.84	-3.72	-3.55
of which cash interest expense	*€M*	*-3.46*	*-3.77*	*-3.66*	*-3.49*
Dividends (parent company)	€M	-0.31	-0.46	-0.62	-0.77
Dividends to minorities interests	€M	0.00	0.00	0.00	0.00
New shareholders' equity	€M	1.36	0.00	0.00	0.00
of which (acquisition) release of treasury shares	*€M*	*4.72*	*0.00*	*0.00*	*0.00*
(Increase)/decrease in net debt position	€M	-2.62	-5.72	-6.20	-9.20
Other financial flows	€M				
Total financial flows	€M	-5.04	-9.96	-10.5	-13.5
Change in scope of consolidation, exchange rates & other	€M	2.29	0.00	0.00	0.00
Change in cash position	€M	6.32	1.42	0.97	-2.21
Change in net debt position	€M	8.94	7.14	7.17	6.99
Free cash flow (pre div.)	€M	6.24	7.54	7.73	7.69
Operating cash flow (clean)	€M	33.8	33.4	32.4	32.2
Reinvestment rate (capex/tangible fixed assets)	*%*	*98.6*	*86.9*	*77.4*	*72.6*

Balance Sheet

Balance Sheet		12/17A	12/18E	12/19E	12/20E
Capitalised R&D	€M	62.0	67.5	72.6	77.8
Goodwill	€M	34.2 (6)	34.2	34.2	34.2
Other intangible assets	€M	5.25	5.24	5.24	5.24
Total intangible	€M	101	107	112	117
Tangible fixed assets	€M	7.44	6.62	5.81	5.01
Financial fixed assets (part of group strategy)	€M	62.9 (7)	63.5	64.2	65.2
Other financial assets (investment purpose mainly)	€M	0.00	0.00	0.00	0.00
WCR	€M	11.7	10.7	10.6	11.4
of which trade & receivables (+)	*€M*	*55.1*	*56.3*	*55.4*	*54.8*
of which inventories (+)	*€M*	*0.08*	*0.10*	*0.10*	*0.10*
of which payables (+)	*€M*	*21.4*	*22.9*	*21.8*	*20.8*
of which other current liabilities (+)	*€M*	*22.1*	*22.9*	*23.1*	*22.7*
Other current assets	€M	2.14	2.10	2.10	2.10
of which tax assets (+)	*€M*				
Total assets (net of short term liabilities)	€M	186	190	195	201
Ordinary shareholders' equity (group share)	€M	130 (1)	142	154	167
Minority interests	€M	0.36	0.38	0.39	0.41
Provisions for pensions	€M	4.35	4.47	4.51	4.56
Other provisions for risks and liabilities	€M	0.62 (8)	0.50	0.50	0.50
Deferred tax liabilities	€M	-10.3	-10.5	-10.5	-10.5
Other liabilities	€M				
Net debt / (cash)	€M	60.6 (2)	53.4	46.3	39.3
Total liabilities and shareholders' equity	€M	186	190	195	201
Average net debt / (cash)	€M	64.5	57.0	49.8	42.8
Operating leases and rental agreement contingent obligations	€M	19.2			
Off B/S business guarantees given	€M	79.0			
Contingent considerations	€M	0.00			

6. In 2017, the increase in goodwill related to the acquisition of Nerea.
7. Corresponding to 50% of the capital of CKL Software in Germany and 44.92% of the capital of the JV Retail and Digital Venture.
1. In 2017, the increase in shareholders' equity was due to the increase in net earnings (+22% to €11.6m).
8. In 2017, there was a reversal of provision for litigaton with a client (€2.5m).
2. Including gross debt of €93.3m net of the cash and cash equivalents of €32.8m.

EV Calculations

EV Calculations		12/17A	12/18E	12/19E	12/20E
EV/EBITDA(R)	**x**	**4.38**	**3.21**	**2.28**	**1.64**
EV/EBIT (underlying profit)	**x**	**12.5**	**7.86**	**5.42**	**3.69**
EV/Sales	**x**	**0.54**	**0.41**	**0.29**	**0.22**
EV/Invested capital	x	0.49	0.38	0.26	0.19
Market cap	€M	86.9	77.9	64.5	58.2
+ Provisions (including pensions)	€M	4.97	4.97	5.01	5.06
+ Unrecognised actuarial losses/(gains)	€M	0.00	0.00	0.00	0.00
+ Net debt at year end	€M	60.6	53.4	46.3	39.3
+ Leases debt equivalent	€M	0.00	0.00	0.00	0.00
- Financial fixed assets (fair value) & Others	€M	62.9	65.2	65.2	65.2
+ Minority interests (fair value)	€M	0.36	0.38	0.39	0.41
= Enterprise Value	**€M**	**89.9**	**71.5**	**50.9**	**37.6**

Per Share Data

Per Share Data		12/17A	12/18E	12/19E	12/20E
Adjusted EPS (bfr gwill amort. & dil.)	**€**	**1.29**	**1.69**	**1.75**	**1.81**
Growth in EPS	*%*	*23.8*	*30.8*	*3.78*	*3.24*
Reported EPS	€	1.49	1.87	1.94	2.08
Net dividend per share	**€**	**0.06**	**0.08**	**0.10**	**0.12**
Free cash flow per share	€	0.72	0.88	0.90	0.86
Operating cash flow per share	€	4.45	4.31	4.19	4.17
Book value per share	€	16.8	18.3	19.9	21.6
Number of ordinary shares	**Mio**	**7.74**	**7.74**	**7.74**	**7.74**
Share class 2	Mio	0.01	0.01	0.01	0.00
Ordinaries to class 2 coeff	x	1.00	1.00	1.00	1.00
Number of equivalent ordinary shares (year end)	Mio	7.75	7.75	7.75	7.74
Number of shares market cap.	Mio	7.74	7.74	7.74	7.74
Treasury stock (year end)	Mio	0.01	0.01	0.01	0.01
Number of shares net of treasury stock (year end)	Mio	7.74	7.74	7.74	7.73
Number of common shares (average)	**Mio**	**7.61**	**7.74**	**7.74**	**7.74**
Conversion of debt instruments into equity	Mio	0.00	0.00	0.00	0.00
Settlement of cashable stock options	Mio				
Probable settlement of non mature stock options	Mio				
Other commitments to issue new shares	Mio	0.83	0.83 (9)	0.83	1.53 (10)
Increase in shares outstanding (average)	Mio	1.00	0.83	0.83	1.18
Number of diluted shares (average)	**Mio**	**8.61**	**8.57**	**8.57**	**8.92**
Goodwill per share (diluted)	€	0.00	0.00	0.00	0.00
EPS after goodwill amortisation (diluted)	€	1.29	1.69	1.75	1.81
EPS before goodwill amortisation (non-diluted)	€	1.52	1.87	1.94	2.08
Actual payment	€				
	%	**4.02**	**4.28**	**5.16**	**5.76**
Capital payout ratio (div +share buy back/net income)	**%**	**-38.3**	**4.28**	**5.15**	

9. Corresponding to the the potential number of shares relating to the warrants exercisable until June 2020 (265,000 shares) and until March 2026 (562,000 shares).
10. Corresponding to the potential number of shares relating to the existing warrants and the conversion of preferred shares to ordinary shares (conversion ratio of 1:100). The vesting date is at the date of the shareholders' general meeting approving the FY2019 financial statements at the earliest and on 20 June 2021 at the latest.

Funding - Liquidity

Funding - Liquidity		12/17A	12/18E	12/19E	12/20E
EBITDA	€M	20.5	22.3	22.3	23.0
Funds from operations (FFO)	€M	23.4	28.6	28.7	29.6
Ordinary shareholders' equity	**€M**	**130** [1]	**142**	**154**	**167**
Gross debt	€M	93.3	87.6	81.4	72.2
o/w Less than 1 year - Gross debt	€M	31.3 [11]	34.8	34.8	34.8
o/w 1 to 5 year - Gross debt	€M	37.0	52.8	46.6	37.4
of which Y+2	€M				9.41
of which Y+3	€M			18.6	25.0
of which Y+4	€M		27.8	25.0	3.00
of which Y+5	€M	37.0	25.0	3.00	0.00
o/w Beyond 5 years - Gross debt	€M	25.0	0.00	0.00	0.00
+ Gross Cash	€M	32.8	34.2	35.1	32.9
= Net debt / (cash)	**€M**	**60.6** [2]	**53.4**	**46.3**	**39.3**
Bank borrowings	€M	93.3	86.6	78.2	67.9
Issued bonds	€M	0.00	0.00	0.00	0.00
Other financing	€M	0.00	1.05	3.25	4.35
Gearing (at book value)	%	49.6	40.3	32.4	25.7
Adj. Net debt/EBITDA(R)	*x*	*2.95*	*2.40*	*2.07*	*1.71*
Adjusted Gross Debt/EBITDA(R)	*x*	*4.79*	*4.16*	*3.88*	*3.36*
Adj. gross debt/(Adj. gross debt+Equity)	*%*	*35.8*	*39.5*	*36.0*	*31.7*
Ebit cover	*x*	*0.66*	*2.46*	*2.62*	*2.97*
FFO/Gross Debt	*%*	*33.0*	*30.9*	*33.2*	*38.2*
FFO/Net debt	*%*	*38.6*	*53.5*	*62.1*	*75.2*
FCF/Adj. gross debt (%)	*%*	*8.66*	*8.14*	*8.94*	*9.96*
(Gross cash+ "cash" FCF+undrawn)/ST debt	*x*	*1.25*	*1.20*	*1.23*	*1.17*
"Cash" FCF/ST debt	*x*	*0.23*	*0.21*	*0.22*	*0.22*

1. In 2017, the increase in shareholders' equity was due to the increase in net earnings (+22% to €11.6m).
11. Including bank overdrafts of €25.1m.
2. Including gross debt of €93.3m net of the cash and cash equivalents of €32.8m.

ROE Analysis (Dupont's Breakdown)

ROE Analysis (Dupont's Breakdown)		12/17A	12/18E	12/19E	12/20E
Tax burden (Net income/pretax pre excp income)	x	73.6	3.85	3.59	3.14
EBIT margin (EBIT/sales)	%	2.76	4.32	4.52	5.01
Assets rotation (Sales/Avg assets)	%	90.6	93.7	90.9	87.7
Financial leverage (Avg assets /Avg equity)	x	1.49	1.38	1.30	1.24
ROE	**%**	**9.30**	**10.6**	**10.2**	**10.1**
ROA	%	1.80	6.11	6.15	6.51

Shareholder's Equity Review (Group Share)

Shareholder's Equity Review (Group Share)		12/17A	12/18E	12/19E	12/20E
Y-1 shareholders' equity	€M	118	130	142	154
+ Net profit of year	€M	11.6	14.5	15.0	16.1
- Dividends (parent cy)	€M	-0.31	-0.46	-0.62	-0.77
+ Additions to equity	€M	1.36	0.00	0.00	0.00
o/w reduction (addition) to treasury shares	*€M*	*4.72*	*0.00*	*0.00*	*0.00*
- Unrecognised actuarial gains/(losses)	€M	0.00	0.00	0.00	0.00
+ Comprehensive income recognition	€M	-1.06	-2.47	-2.28	-2.33
= Year end shareholders' equity	**€M**	**130**	**142**	**154**	**167**

Staffing Analytics

Staffing Analytics		12/17A	12/18E	12/19E	12/20E
Sales per staff	€th	134	137	134	131
Staff costs per employee	€th	-61.1	-61.4	-61.6	-61.8
Change in staff costs	*%*	*-0.40*	*3.23*	*1.80*	*1.80*
Change in unit cost of staff	*%*	*-0.48*	*0.46*	*0.30*	*0.30*
Staff costs/(EBITDA+Staff costs)	*%*	*82.6*	*78.0*	*78.3*	*78.1*
Average workforce	**unit**	**1,252**	**1,287**	**1,306**	**1,325**
Europe	unit	0.00	0.00	0.00	0.00
North America	unit	0.00	0.00	0.00	0.00
South Americas	unit	0.00	0.00	0.00	0.00
Asia	unit	0.00	0.00	0.00	0.00
Other key countries	unit	1,252	1,287	1,306	1,325
Total staff costs	**€M**	**-76.5**	**-79.0**	**-80.4**	**-81.9**
Wages and salaries	€M	-76.5	-79.0	-80.4	-81.9
of which social security contributions	*€M*				
Equity linked payments	€M				
Pension related costs	€M		0.00	0.00	0.00

Divisional Breakdown Of Revenues

Divisional Breakdown Of Revenues		12/17A	12/18E	12/19E	12/20E
Total sales	**€M**	**168**	**176**	**175**	**174**
O/w organic growth (%)	*%*	*-3.60*			
Infrastructure and Saas	€M	38.3	40.9	48.6	56.6
Own Software Solutions / integration of Business Software Soluti...	€M	129	135	126	117
Other	€M				

Divisional Breakdown Of Earnings

Divisional Breakdown Of Earnings		12/17A	12/18E	12/19E	12/20E
EBITDA/R Analysis					
Infrastructure and Saas	€M	5.55	6.42	8.38	10.5
Own Software Solutions / integration of Business Software Soluti...	€M	25.2	26.4	24.4	23.0
Other/cancellations	€M				
Total	**€M**	**30.7**	**32.8**	**32.8**	**33.5**
EBITDA/R margin	%	18.3	18.6	18.8	19.3

Revenue Breakdown By Country

Revenue Breakdown By Country		12/17A	12/18E	12/19E	12/20E
France	%	55.7	51.2		
Benelux	%	12.8	14.6		
Spain	%	14.5	16.2		
Germany	%	8.40	9.39		
Israel	%	5.90	6.09		
UK	%	2.70	2.62		
Other	%		0.00		

ROCE/CFROIC/Capital Invested

		12/17A	12/18E	12/19E	12/20E
ROCE (NOPAT+lease exp.(1-tax))/(net) cap employed adjusted*	*%*	*2.88*	*3.83*	*3.92*	*4.17*
CFROIC	*%*	*3.40*	*4.02*	*4.01*	*3.87*
Goodwill	€M	34.2	34.2	34.2	34.2
Accumulated goodwill amortisation	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
All intangible assets	€M	5.25	5.24	5.24	5.24
Accumulated intangible amortisation	*€M*	*0.03*	*0.03*	*0.03*	*0.03*
Financial hedges (LT derivatives)	€M	0.00	0.00	0.00	0.00
Capitalised R&D	€M	62.0	67.5	72.6	77.8
PV of non-capitalised lease obligations	€M	0.00	0.00	0.00	0.00
Other fixed assets	€M	7.44	6.62	5.81	5.01
Accumulated depreciation	*€M*	*16.0*	*18.7*	*21.3*	*23.9*
WCR	€M	11.7	10.7	10.6	11.4
Other assets	€M	62.9	63.5	64.2	65.2
Unrecognised actuarial losses/(gains)	€M	0.00	0.00	0.00	0.00
Capital employed after deprec. (Invested capital)	**€M**	**183**	**188**	**193**	**199**
Capital employed before depreciation	€M	200	206	214	223

Divisional Breakdown Of Capital

		12/17A	12/18E	12/19E	12/20E
Infrastructure and Saas	€M				
Own Software Solutions / integration of Business Software Soluti...	€M				
Other	€M	183	188	193	199
Total capital employed	**€M**	**183**	**188**	**193**	**199**

Pension Risks

Summary Of Pension Risks

		12/17A	12/18E	12/19E	12/20E
Pension ratio	**%**	**3.24**	**3.06**	**2.85**	**2.66**
Ordinary shareholders' equity	€M	130 [1]	142	154	167
Total benefits provisions	**€M**	**4.35**	**4.47**	**4.51**	**4.56**
of which funded pensions	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
of which unfunded pensions	*€M*	*4.35*	*4.47*	*4.51*	*4.56*
of which benefits / health care	*€M*		*0.00*	*0.00*	*0.00*
Unrecognised actuarial (gains)/losses	€M	0.00	0.00	0.00	0.00
Company discount rate	*%*	*1.30*	*1.30*	*1.30*	*1.30*
Normalised recomputed discount rate	%		1.51		
Company future salary increase	*%*	*2.00*	*2.00*	*2.00*	*2.00*
Normalised recomputed future salary increase	%		2.00		
Company expected rate of return on plan assets	*%*	*1.30*	*1.30*	*1.30*	*1.30*
Normalised recomputed expd rate of return on plan assets	%		0.00		
Funded : Impact of actuarial assumptions	**€M**		**0.00**		
Unfunded : Impact of actuarial assumptions	**€M**		**-0.18**		

1. In 2017, the increase in shareholders' equity was due to the increase in net earnings (+22% to €11.6m).

Geographic Breakdown Of Pension Liabilities

		12/17A	12/18E	12/19E	12/20E
US exposure	%	0.00	0.00	0.00	0.00
UK exposure	%	2.00	2.00	2.00	2.00
Euro exposure	%	98.0	98.0	98.0	98.0
Nordic countries	%	0.00	0.00	0.00	0.00
Switzerland	%	0.00	0.00	0.00	0.00
Other	%	0.00	0.00	0.00	0.00
Total	%	100	100	100	100

Balance Sheet Implications

		12/17A	12/18E	12/19E	12/20E
Funded status surplus / (deficit)	€M	0.00	0.00	0.00	0.00
Unfunded status surplus / (deficit)	€M	-4.35	-4.24	-4.30	-4.37
Total surplus / (deficit)	€M	-4.35	-4.24	-4.30	-4.37
Total unrecognised actuarial (gains)/losses	**€M**	**0.00**	**0.00**	**0.00**	**0.00**
Provision (B/S) on funded pension	€M	0.00	0.00	0.00	0.00
Provision (B/S) on unfunded pension	€M	4.35	4.47	4.51	4.56
Other benefits (health care) provision	€M		0.00	0.00	0.00
Total benefit provisions	**€M**	**4.35**	**4.47**	**4.51**	**4.56**

P&L Implications

		12/17A	12/18E	12/19E	12/20E
Funded obligations periodic costs	€M	0.00	0.00	0.00	0.00
Unfunded obligations periodic costs	€M	0.00	-0.07	-0.06	-0.06
Total periodic costs	**€M**	**0.00**	**-0.07**	**-0.06**	**-0.06**
of which incl. in labour costs	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
of which incl. in interest expenses	*€M*	*0.00*	*-0.07*	*-0.06*	*-0.06*

Funded Obligations

		12/17A	12/18E	12/19E	12/20E
Balance beginning of period	**€M**	**0.00**	**0.00**	**0.00**	**0.00**
Current service cost	€M		0.00	0.00	0.00
Interest expense	€M		0.00	0.00	0.00
Employees' contributions	€M				
Impact of change in actuarial assumptions	€M		0.00	0.00	0.00
of which impact of change in discount rate	*€M*		*0.00*		
of which impact of change in salary increase	*€M*		*0.00*		
Changes to scope of consolidation	**€M**				
Currency translation effects	€M				
Pension payments	€M				
Other	€M				
Year end obligation	**€M**	**0.00**	**0.00**	**0.00**	**0.00**

Plan Assets

		12/17A	12/18E	12/19E	12/20E
Value at beginning	**€M**	**0.00**	**0.00**	**0.00**	**0.00**
Company expected return on plan assets	€M		0.00	0.00	0.00
Actuarial gain /(loss)	€M		0.00	0.00	0.00
Employer's contribution	€M		0.00	0.00	0.00
Employees' contributions	€M	0.00	0.00	0.00	0.00
Changes to scope of consolidation	€M				
Currency translation effects	€M				
Pension payments	€M	0.00	0.00	0.00	0.00
Other	€M				
Value end of period	**€M**	**0.00**	**0.00**	**0.00**	**0.00**
Actual and normalised future return on plan assets	€M	0.00	0.00	0.00	0.00

Unfunded Obligations

		12/17A	12/18E	12/19E	12/20E
Balance beginning of period	**€M**	**4.32**	**4.35**	**4.24**	**4.30**
Current service cost	€M		0.00	0.00	0.00
Interest expense	€M		0.07	0.06	0.06
Employees' contributions	€M				
Impact of change in actuarial assumptions	€M		-0.18	0.00	0.00
of which Impact of change in discount rate	*€M*		*-0.18*		
of which Impact of change in salary increase	*€M*		*0.00*		
Changes to scope of consolidation	€M				
Currency translation effects	€M				
Pension payments	€M				
Other	€M	0.03	0.00	0.00	0.00
Year end obligation	**€M**	**4.35**	**4.24**	**4.30**	**4.37**

Fundamental Opinion

It is implicit that recommendations are made in good faith but should not be regarded as the sole source of advice.

Recommendations are geared to a "**value**" approach.

Valuations are computed from the point of view of a **secondary market minority holder** looking at a medium term (say 6 months) performance.

Valuation tools are built around the concepts of **transparency,** all underlying figures are accessible, and **consistency,** same methodology whichever the stock, allowing for differences in nature between financial and non financial stocks. A stock with a target price below its current price should not and will not be regarded as an Add or a Buy.

Recommendations are based on target prices with no allowance for dividend returns. The thresholds for the four recommendation levels may change from time to time depending on market conditions. Thresholds are defined as follows, ASSUMING long risk free rates remain in the 2-5% region.

Recommendation	Low Volatility 10 < VIX index < 30	Normal Volatility 15 < VIX index < 35	High Volatility 35 < VIX index
Buy ●	More than 15% upside	More than 20% upside	More than 30% upside
Add ●	From 5% to 15%	From 5% to 20%	From 10% to 30%
Reduce ●	From -10% to 5%	From -10% to 5%	From -10% to 10%
Sell ●	Below -10%	Below -10%	Below -10%

There is deliberately no "neutral" recommendation. The principle is that there is no point investing in equities if the return is not at least the risk free rate (and the dividend yield which again is not allowed for).

Although recommendations are automated (a function of the target price whenever a new equity research report is released), the management of AlphaValue intends to maintain global consistency within its universe coverage and may, from time to time, decide to change global parameters which may affect the level of recommendation definitions and /or the distribution of recommendations within the four levels above. For instance, lowering the risk premium in a gloomy context may increase the proportion of positive recommendations.

Valuation

Valuation processes have been organized around transparency and consistency as primary objectives.

Stocks belong to different categories that recognise their main operating features : Banks, Insurers and Non Financials.

Within those three universes, the valuation techniques are the same and in relation to the financial data available.

The weighting given to individual valuation techniques is managed centrally and may be changed from time to time. As a rule, all stocks of a similar profile are valued using equivalent weighting of the various valuation techniques. This is for obvious consistency reasons.

Within the very large universe of Non Financials, there are in effect 4 sub-categories of weightings to cater for subsets: 1) 'Mainstream' stocks; 2) 'Holding companies' where the stress is on NAV measures; 3) 'Growth' companies where the stress is on peer based valuations; 4) 'Loss making sectors' where peers review is essentially pointing nowhere (ex: Bio techs). The bulk of the valuation is then built on DCF and NAV, in effect pushing back the time horizon.

Valuation Issue	Normal industrials	Growth industrials	Holding company	Loss runners	Bank	Insurers
DCF	35%	35%	10%	40%	0%	0%
NAV	20%	20%	55%	40%	50%	15%
PE	10%	10%	10%	5%	10%	20%
EV/EBITDA	20%	20%	0%	5%	0%	0%
Yield	10%	10%	20%	5%	10%	15%
Book	5%	5%	5%	5%	10%	10%
Banks' instrinsic method	0%	0%	0%	0%	10%	0%
Embedded Value	0%	0%	0%	0%	0%	40%
Mkt Cap/Gross Operating Profit	0%	0%	0%	0%	10%	0%