HYPOPORT

(SDAX, Financial Services)

WARBURG RESEARCH

Buy	
EUR 250.00	(EUR 190.00)
Price	EUR 186.00
Upside	**34.4 %**

Value Indicators:	EUR
DCF:	249.67

Share data:	
Bloomberg:	HYQ GR
Reuters:	HYQGn.DE
ISIN:	DE0005493365

Description:

Technology-based financial services provider

Market Snapshot:	EUR m
Market cap:	1,207.77
No. of shares (m):	6.49
EV:	1,245.94
Freefloat MC:	743.99
Ø Trad. Vol. (30d):	3.71 m

Shareholders:	
Freefloat	61.6 %
Revenia (Ronald Slabke)	34.6 %
Treasury shares	3.8 %

Risk Profile (WRe):	2018e
Beta:	1.3
Price / Book:	7.9 x
Equity Ratio:	57 %
Net Fin. Debt / EBITDA:	0.9 x
Net Debt / EBITDA:	0.9 x

Game-changing milestones in focus

Hypoport is a provider of fintech services and an operator of online platforms linking lenders, brokers and consumers in the German mortgage market and in the insurance sector. Founded in 1999, Hypoport has, until recently, been operating its business in four segments. Dr. Klein is the B2C brand which provides independent mortgage advisory services and operates on a franchise basis. EUROPACE is the credit platform on the B2B side with its sub-marketplaces FINMAS and GENOPACE. Also on the B2B side is the institutional clients advisory-based business and the fourth, and most recent segment, the insurance platform. With the H1/18 report, the segmentation was altered. A new segment, the real estate platform, now includes the institutional clients business, valuation services and the recently-acquired real estate software business FIO Systems AG, which broadens the company's coverage of the real estate value chain. The integration of FIO is also expected to benefit Hypoport's credit platform business, particularly FINMAS, as many savings banks are already using FIO software. The private clients business at Dr. Klein continues to develop very well but we see significant game-changers in the real estate platform, credit platform, and insurance platform businesses. This note provides a scenario analysis for the credit and insurance platforms, focusing on the following:

<u>Greater penetration of savings banks by the credit platform's sub-marketplace FINMAS</u>

- Current penetration rate in the EUR 60bn savings banks mortgage sector of about 4.5% but growing strongly (+73% yoy in H1/18)
- It is assumed that the majority of savings banks will quickly make the switch to FINMAS after a critical penetration rate (25%) is achieved, which is expected by 2025

<u>Foundations seem to be laid for insurance platform's success</u>

- Most comprehensive and independent software solution for insurance brokers in the EUR 197bn insurance premium market
- Strong IT focus and financial strength in a very fragmented competitive landscape, supported by an excellent track record in the mortgage market, where Hypoport's platform is well established.

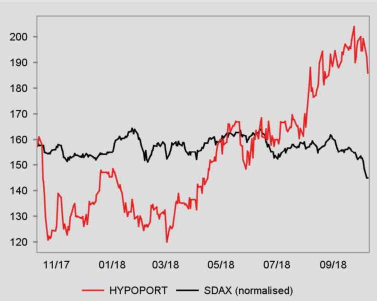
We welcome the company's strategy and see substantial synergy potential in the acquisitions and the future orientation. Hypoport should be in an excellent starting position for success and to take leading roles in its relevant markets with the new segments, the real estate platform and the insurance platform. Taking the base cases of our scenarios, the **Buy rating is reiterated** and **our PT increases to EUR 250.**

Changes in Estimates:

FY End: 31.12. in EUR m	2018e (old)	+ / -	2019e (old)	+ / -	2020e (old)	+ / -
Sales	251.67	0.9 %	297.88	2.1 %	346.95	0.8 %
EBIT	31.01	6.5 %	40.51	-0.9 %	49.27	-4.0 %
EPS	3.71	7.3 %	4.85	-1.0 %	5.89	-5.1 %

Comment on Changes:

- Inclusion of new financial model



Rel. Performance vs SDAX:	
1 month:	4.6 %
6 months:	41.4 %
Year to date:	34.3 %
Trailing 12 months:	29.2 %

Company events:	
05.11.18	Q3

FY End: 31.12. in EUR m	CAGR (17-20e)	2014	2015	2016	2017	2018e	2019e	2020e
Sales	21.5 %	112.33	138.98	156.64	194.86	253.96	304.27	349.76
Change Sales yoy		14.5 %	23.7 %	12.7 %	24.4 %	30.3 %	19.8 %	15.0 %
Gross profit margin		*53.9 %*	*54.9 %*	*58.0 %*	*56.1 %*	*57.6 %*	*57.6 %*	*57.8 %*
EBITDA	26.0 %	12.70	25.08	28.24	30.12	42.79	51.73	60.23
Margin		*11.3 %*	*18.0 %*	*18.0 %*	*15.5 %*	*16.9 %*	*17.0 %*	*17.2 %*
EBIT	26.6 %	7.94	19.26	23.16	23.32	33.02	40.16	47.29
Margin		*7.1 %*	*13.9 %*	*14.8 %*	*12.0 %*	*13.0 %*	*13.2 %*	*13.5 %*
Net income	25.4 %	5.92	15.87	18.07	18.42	25.82	31.16	36.29
EPS	21.7 %	0.97	2.56	3.00	3.10	3.98	4.80	5.59
EPS adj.	21.7 %	0.97	2.56	3.00	3.10	3.98	4.80	5.59
DPS	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend Yield		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FCFPS		0.37	3.16	1.78	-0.48	2.15	3.47	4.42
FCF / Market cap		3.3 %	10.2 %	2.2 %	-0.3 %	1.2 %	1.9 %	2.4 %
EV / Sales		0.6 x	1.4 x	2.8 x	3.5 x	4.9 x	4.1 x	3.5 x
EV / EBITDA		5.6 x	7.8 x	15.6 x	22.6 x	29.1 x	23.9 x	20.2 x
EV / EBIT		9.0 x	10.2 x	19.0 x	29.1 x	37.7 x	30.8 x	25.8 x
P / E		11.3 x	13.2 x	25.0 x	36.8 x	46.7 x	38.8 x	33.3 x
P / E adj.		11.3 x	13.2 x	25.0 x	36.8 x	46.7 x	38.8 x	33.3 x
FCF Potential Yield		15.9 %	11.2 %	5.3 %	3.8 %	2.9 %	3.5 %	4.1 %
Net Debt		4.08	-13.29	-11.46	2.15	38.18	27.65	10.92
ROCE (NOPAT)		15.8 %	38.9 %	39.7 %	27.1 %	18.9 %	15.6 %	16.6 %
Guidance:	2018: Revenue between EUR 240m and 260m and EBIT between EUR 29m and 34m							

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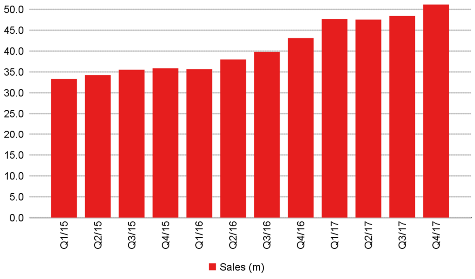
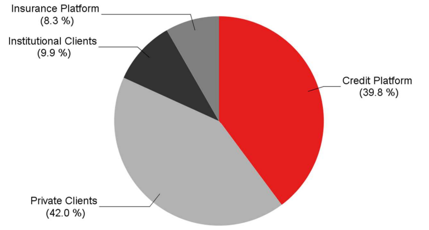
Sales development
in EUR m



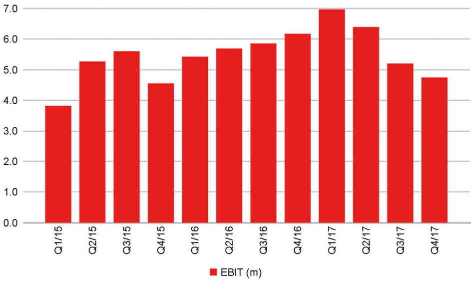
Source: Warburg Research

Sales by Segments
2017; in %



Source: Warburg Research

EBIT development
in EUR m



Source: Warburg Research

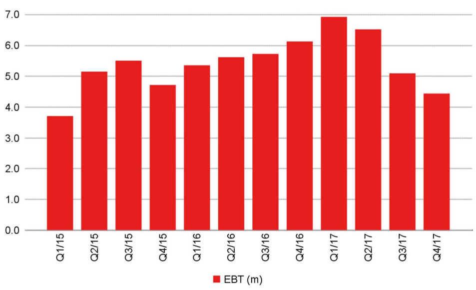
Company Background

- The company, founded in 1999, is specialised as a property financing intermediary and is expanding its value chain towards the insurance and real estate sectors
- With EUROPACE, Hypoport operates the largest German online B2B platform for property financing and similar products
- Under the Dr. Klein brand, Hypoport operates a franchise system of stationary advisors for private customers
- Hypoport is also in a leading position in the area of institutional property financing (also under the Dr. Klein brand)
- An advanced level of technology is shown in all segments (fintech)

Competitive Quality

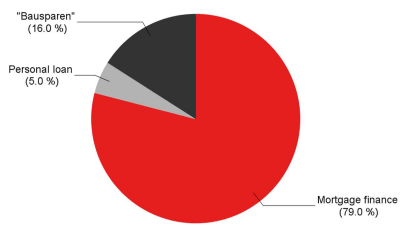
- The online B2B marketplace for property financing (EUROPACE) is the largest of its kind in Germany
- As the number of affiliated suppliers is decisive for marketplaces of this type, this forms a central competitive advantage and a considerable market entry barrier for third parties.
- The Dr. Klein business segments (private clients) benefits from market access over EUROPACE but also from the many years of experience in the area of property financing
- Most importantly however Dr. Klein is strongly focused on property financing and neutral (with offers from every provider). Other financial sales teams or retail banks normally cannot afford both.
- The new platform businesses insurance platform and real estate platform should strongly benefit of the market-leading credit platform and the excellent track record of the company.

EBT development
in EUR m



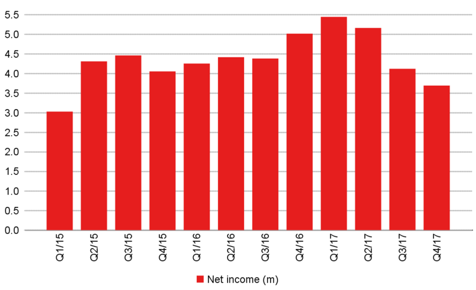
Source: Warburg Research

EUROPACE by product segments
2017; in %



Source: Warburg Research

Net income development
in EUR m



Source: Warburg Research

Summary of Investment Case

Investment triggers

- **Successful establishment of insurance platform assumed –** The insurance platform has the best preconditions to become the most widespread and preferred software solution in the German insurance brokerage market. Therefore we expect continuously high growth rates with ongoing margin expansion, resulting from market share gains and constantly increasing insurance premia on the platform.
- **Momentum in savings banks sector should even accelerate with ongoing market share gains –** More and more savings banks are using Hypoport's sub-marketplace FINMAS in the advisory processes at their points of sale. This development should continue and with more and more banks switching to FINMAS, a general sectoral shift to Hypoport's solution becomes increasingly probable within a short period of time.
- **Leveraging existing data base by expanding the value chain –** The real estate platform is expanding the services of Hypoport to the entire property transaction process. These services should benefit from the existing customer and property information and we expect further services to be added over time.

Valuation

- Our base-case DCF model suggests a **fair value of EUR 250 per share.** Scenario analyses point at fair values between EUR 185 and EUR 275 per share
- Lacking a representative peer group of listed companies, relative valuation is not useful.

The stock is trading on high current and forward multiples. Nonetheless, considering the favourable future prospects of the company, expected margin expansion and the high competitive quality, high multiples might be justifiable.

Growth

- Historic growth rates were mainly attributable to organic market share gains in the credit platform and private clients businesses
- Future growth rates should be substantially influenced by the growing significance of the insurance platform with current organic growth rates of about 50%. Furthermore, the real estate platform is still in its set-up phase. Synergies and the full potential of this platform should unfold over time.

Competitive quality

- Hypoport's segments hold strong market positions within their sectors and show clear differentiating factors.
- The **credit platform** is Germany's largest mortgage brokerage platform. With a market-leading share on the distribution side and all relevant product providers present on the platform, only ING-DiBa-owned Interhyp remains a relevant competitor.
- The **insurance platform** should offer the most comprehensive range of IT services for insurance brokers on the German market. Further supportive factors are the strong focus on digital IT processes, an excellent track record in establishing platform solutions among sales organisations, high financial strength backed by the other segments and complete independence of insurance companies or other market players.
- The **real estate platform** should strongly benefit from the data gathered in the credit platform. The real estate platform is addressing existing customers, particularly in the banking segment. Competitors in this segment are mostly very specialised and niche providers that do not have comparable preconditions.
- With the support of the credit platform, the **private clients** segment is a leading player in the German mortgage advisory market. With over 500 advisors all over Germany, Hypoport is acknowledged for its best-in-class advisory services.

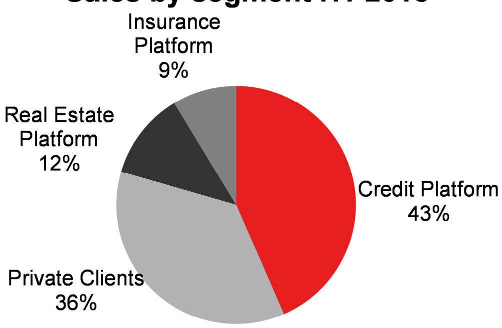
Warburg versus consensus

- While our estimates are broadly in line with consensus until 2020, we believe the potential of the platform businesses and corresponding margin expansion is not reflected in the current price targets.

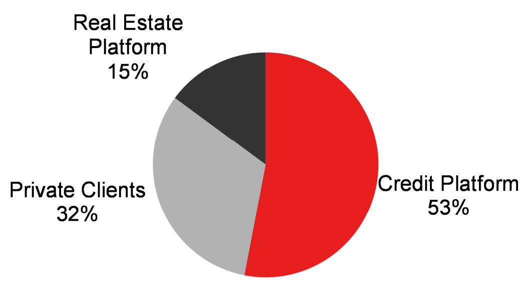
Company Overview

Segments	Credit Platform	Private Clients	Real Estate Platform	Insurance Platform
Unique position	No. 1 brokerage platform for mortgages	Award-winning financial advisory Second biggest private credit broker in Germany	Strong synergies with credit platform	Most comprehensive independent IT provider for insurance brokers
Specialized in	Real Estate Financing Building-society saving plans	Independent private real estate advisory	Mediation & Consulting Valuation of real estate Software as a Service	Supporting software for Insurance and Broker
Business orientation	B2B	B2C	B2B	B2B
Operating brand in segment	EUROPACE FINMAS GENOPACE	Dr. Klein	Dr. Klein Firmenkunden Value AG HYP Service FIO	Smart Insurtech
Customers	Independent advisors and banks	Private customers	Banks and institutional housing companies	Insurance brokers and insurers
Competitors	Interhyp	Interhyp MLP	Banks and smaller specialized competitors	Acturis Fondsfinanz
Sales H1/18 in EUR m	53.2	44.1	14.5	10.6
in % of total	*43.5%*	*36.0%*	*11.8%*	*8.7%*
EBIT H1/18 in EUR m	11.4	6.9	3.2	-1.7
EBIT Margin	*21.4%*	*15.6%*	*22.1%*	*-16.0%*

Sales by segment H1 2018



EBIT by segment H1 2018



** Insurance Platform not incl. due to neg. EBIT*

Source: Warburg Research

Real Estate Platform: expanding the value chain

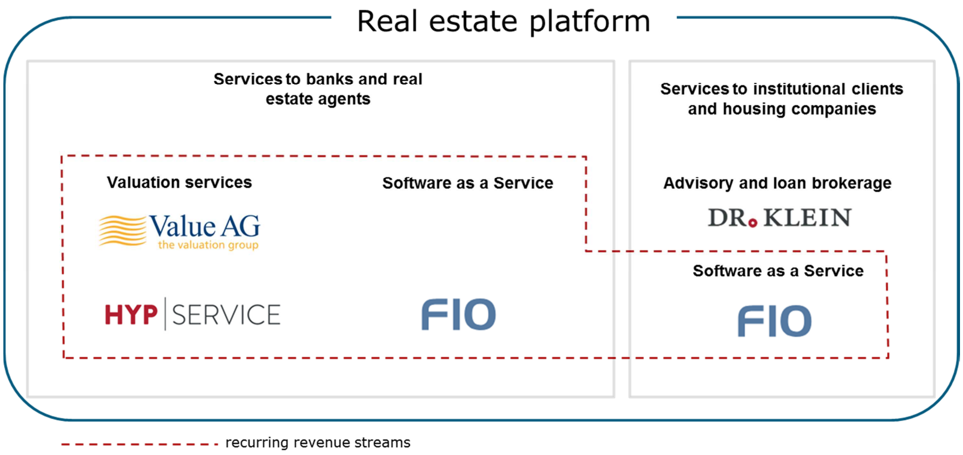
- Increasing the range of services offered in connection with the purchase of real estate
- Strong synergies from existing relationships to banks, advisors and housing industry
- New segment should leverage the data gathered from the credit platform
- Recurring revenues rather than project-based revenues

Entering further parts of the value chain

The newly established segment, Real Estate Platform, includes the former institutional clients business, the activities around valuation services (including the acquired Value AG) and the acquired business of FIO systems AG.

In the past, segment revenues were rather project-oriented but, with this change, revenues will increasingly be recurring in character, which should reduce volatility in this segment substantially.

Newly established real estate platform

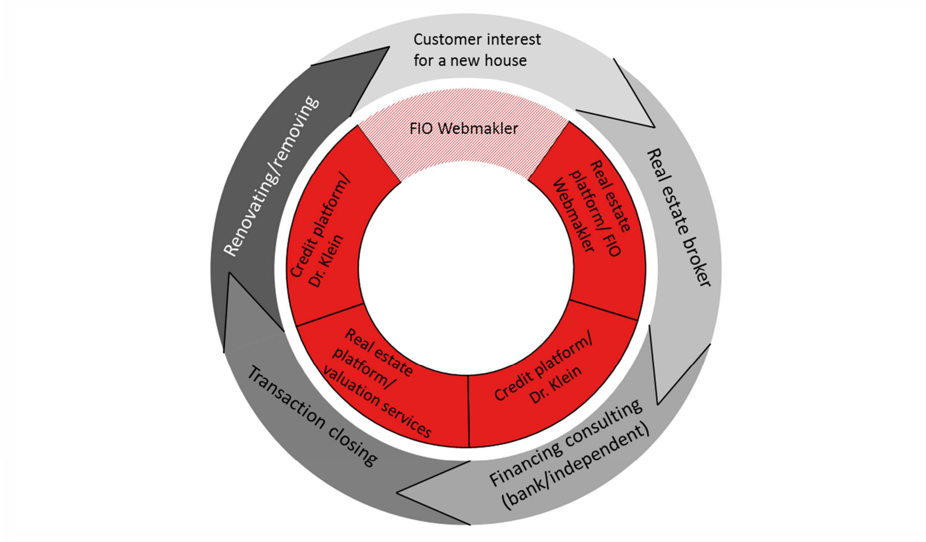


Source: Hypoport, Warburg Research

The chart above shows the structure of the real estate platform. In general, a distinction can be made between services to institutional clients/housing companies and banks and real estate brokers. In contrast to the previous focus on the project-driven and stand-alone institutional clients business, the new real estate platform offers services for more steps along the consumer's real estate purchasing journey and complements the services of the other segments.

There is, obviously, a strong correlation between the real estate market and the mortgage market. While Hypoport focused on the financing side of a real estate transaction in the past, the chart below shows typical steps of a private property transaction in Germany and Hypoport's support services along the way.

Consumer journey and Hypoport services



Source: Warburg Research

As the chart demonstrates, the credit platform and the private clients business were covering only a small number of the necessary stages of a property purchase. With Hypoport's new and more holistic approach, it basically adds services with many overlaps in terms of data and customer relationships.

Valuation services

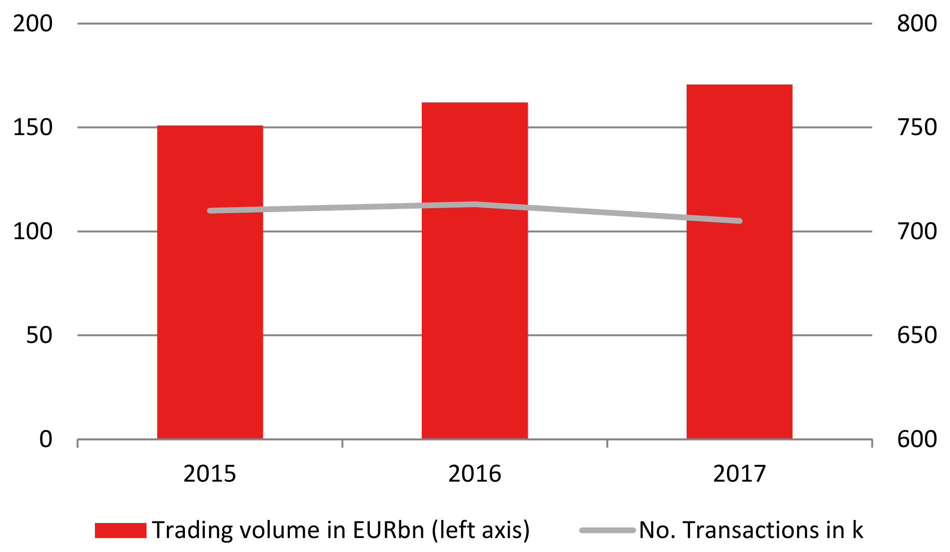
Hypoport acquired **Value AG, a German specialist for independent valuation services** of real estate in May 2018. For all properties financed with a mortgage, **banks are legally obliged to conduct valuation reports**. When refinancing takes place via mortgage bonds, which is the case for approx. 95% of mortgages in Germany, there are special requirements of the valuation report, determined by the legislation governing mortgage bonds (§16 Pfandbriefgesetz). While simplified valuation reports are required for mortgages up to EUR 400k, requirements for mortgages above this threshold are more comprehensive. Valuation reports for residential properties with mortgages of less than EUR 400k can be based on market prices, information about the property and images of the property's exterior. In comparison, reports on properties with mortgages of more than EUR 400k have to be based on three different aspects of valuation (comparative value method, income approach and replacement cost approach). These reports are not only more extensive and time consuming, they also require more specialised personnel.

Banks may either conduct the valuation process in-house or outsource it to specialised service providers. However, many banks lack the critical number of transactions to justify a dedicated in-house valuation department, which makes it more efficient to outsource the valuation process to specialised service providers.

Before the acquisition of Value AG, valuation services for mortgages of up to EUR 400k were already offered by Hypoport's Hypservice GmbH. The acquisition extends the value chain especially in the growing number of mortgages in excess of EUR 400k as Value AG has a great deal of experience and is well-established in this niche. With the constant increase in real estate prices in urban areas, this segment continues to grow.

Furthermore, when it comes to valuation services for banks, we regard it as essential to be a full service provider as a service provider that can offer the full range of reports for all kinds of mortgages is likely to be far more attractive for clients.

Number of transactions in private housing real estate

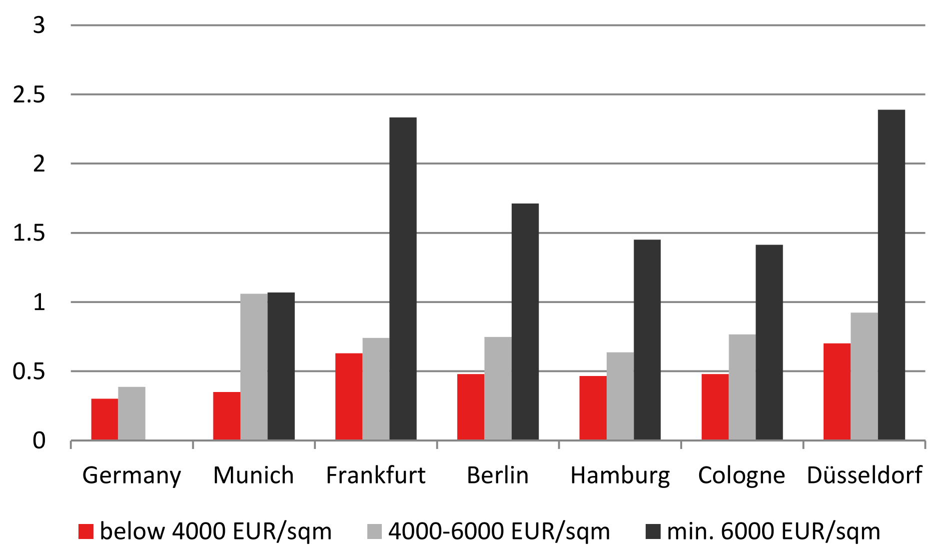


Source: Warburg Research, GEWOS

The chart above shows the number of housing transactions and the corresponding sales volume in total. While the number of transactions remained quite stable at slightly more than 700k transactions per year, the sales volume increased steadily. In 2017, a total of 705k transactions were settled in the market for private living. These transactions were worth EUR 170.7bn, resulting in an average of EUR 242k per transaction. Compared with an average of EUR 212k per transaction in 2015, prices increased by around 14% in the past two years.

The importance of offering more qualified valuation reports for properties with a financing volume of more than EUR 400k becomes even clearer, considering the general urbanisation trend and increasing property prices in larger cities.

Average offering prices for houses in EURm



Source: Warburg Research, Immowelt

The chart above shows offering prices for homes on one of Germany's leading real estate classifieds websites. While the average prices in the lowest price range of up to EUR 4000/sqm lie mostly below EUR 0.5m, the prices in both higher price ranges are well above. This should result in a rather high proportion of mortgages above EUR 400k, which requires, as described above, a more qualified valuation report.

However, assuming that 650k of the 705k transactions in 2017 were financed by mortgages requiring a valuation report costing an average of EUR 100 each, the **German valuation market could be worth around EUR 65m per year**.

This reflects only the private housing real estate market while the average of EUR 100 per report is a rather cautious assumption. The market for valuation services to investors and banks for commercial real estate harbours further potential. However with its excellent network to banks and the services covered, we believe Hypoport should be able to take a dominant position in this market.

Software as a Service

With the acquisition of FIO Systems AG, Hypoport took over a business consisting mainly of two software components. Firstly, a web-based software solution for real estate agents and secondly, an enterprise resource planning (ERP) system for the administration or management of single or larger real estate projects.

The real estate agent software **supports agents during the consulting process** with the coordination of appointments, digital presentation of interesting properties, data transmission, management of customer communication and much more. All services are provided on a web-based software which enables agents to access customer and property data on any device and increases flexibility and efficiency.

Axera, the ERP system for the real estate industry is also a web-based software solution. It provides services to housing companies for the management of real estate. This includes services like the rental management, facility management, accounting, heating-cost billing and more.

A core element of the real estate agent software is **its widespread use among savings banks** institutions. Around 80% of the German savings banks sector use FIO's software solutions in their real estate brokerage departments. Furthermore, the company provides a version to the cooperative banks sector and to private institutions. Obviously, there is **large overlap in the customer groups of FIO's brokerage solution and the credit platform business**.

Potential synergies

Synergies from the real estate platform and the acquired companies with the established business should materialize quickly. As the services focus on the same end consumer and, to some extent, join a broad customer base, we expect the following effects:

- The credit platform and FIO's brokerage **services share large parts of their customer bases**. Therefore customer contact and cross- and up-selling of products should become much more efficient.
- Hypoport offers consumer services in many stages of a property purchase, directly and indirectly. A large amount of **shared data in all process steps** can be used to create more efficient digital processes in an embedded platform environment. Furthermore, the early contact could be used to direct consumers seeking finance to a customer on the B2B credit platform.
- The valuation business should benefit too from the existing customer relationships in the credit platform segment. While nearly all relevant banks are product suppliers of the platform and some even use EUROPACE as their consulting tool, there are many **connecting factors that should simplify selling valuation services** as well.
- Furthermore, the valuation business should benefit from the **joint database**. Hypoport already gathers a large amount of data necessary for the valuation process in the financial transaction process. Therefore the preparation of the report should be fast and convenient and take place in a largely automated fashion. This should reduce the valuation report process to a minimum and put Hypoport in a cost-efficient position.
- Obviously, the ERP system could be offered to existing institutional clients which

should result in a shift towards recurring revenues.

Private clients and real estate platform scenario

The private clients segment is well-established with reliable revenue and EBIT contributions over the past year. However, as there would not seem to be any trigger to assume substantially higher growth rates in future, we are assuming rather low growth rates in the single-digit area. Furthermore, a long-term EBIT margin of about 15% can be considered as realistic which is reflected in the chart below.

Regarding the real estate platform, we welcome the strategic orientation and reflect the potential in our model with double-digit revenue growth rates until 2025. The margin situation in this segment was very good in the past with rates well in excess of 30%, depending on the order situation in the previously project-based business. With the **ongoing shift of revenues towards the new recurring revenue streams**, margins should decline in the short term. However, over time, the valuation business and SaaS should benefit from economies of scale and margins should increase again to about 20% long term. Considering ongoing digitisation in the valuation process and economies of scale in SaaS products, the margin assumption might be too conservative and still offers upside potential.

Private clients and real estate platform expectations

	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e
Private clients										
Revenue	89.7	98.7	106.6	114.6	122.6	129.9	136.4	143.2	150.4	157.9
yoy		*10%*	*8%*	*8%*	*7%*	*6%*	*5%*	*5%*	*5%*	*5%*
EBIT	12.1	13.5	14.8	16.0	17.2	19.0	20.1	21.8	22.9	24.1
margin	*13%*	*14%*	*14%*	*14%*	*14%*	*15%*	*15%*	*15%*	*15%*	*15%*
Real estate platform										
Revenue	32.0	40.0	49.2	59.0	69.7	80.8	91.3	100.5	106.5	110.7
yoy		*25%*	*23%*	*20%*	*18%*	*16%*	*13%*	*10%*	*6%*	*4%*
EBIT	6.5	7.2	8.1	9.4	11.5	14.1	16.4	18.6	20.2	21.6
margin	*20%*	*18%*	*17%*	*16%*	*17%*	*18%*	*18%*	*19%*	*19%*	*20%*

Source: Warburg Research

While we provide various scenario analyses for the credit and insurance platform segments, we anticipate one scenario for the private clients and real estate platform segments. The private clients business should remain relatively stable, lacking an outstanding positive or negative stimulus.

In contrast, the new real estate platform offers a multitude of opportunities. The expansion of the scope of real estate services offered should continue and, for the time being, we rely on a single scenario model for this segment although this might change with more detailed information about the future orientation and pricing of products.

Credit Platform

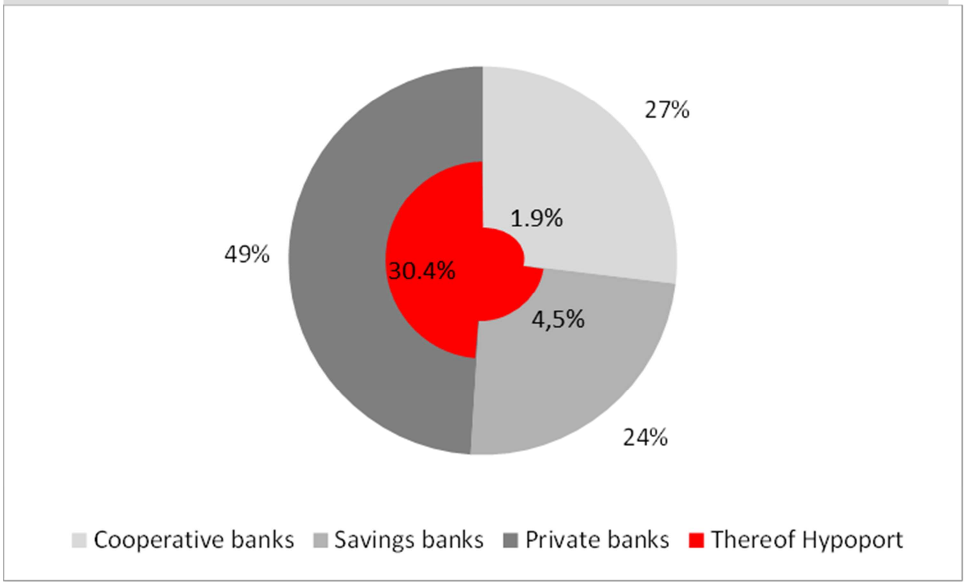
- Market-leading mortgage platform
- Pure B2B business supports real estate financing brokers with fast and most convenient solutions for consultation and comparison
- All relevant banks as product providers on the platform and 50% market share among independent advisors
- Strong company track record and current market share of about 16.5%

The credit platform of Hypoport is the **most widespread and successful platform for mortgages in Germany**. It is a tool for sales organisations, like independent advisors or banks that matches the available products of the majority of German product providers with the customer data. This happens in a fast and convenient process that enables the advisor to select and offer the best product for the specific customer during the consultation. Hypoport charges 10bp for every transaction handled on its platform. The platform and the corresponding frontend solutions are offered under the brand EUROPACE to independent advisors and private banks; with the **sub-marketplaces FINMAS for the savings banks sector** and GENOPACE for the cooperative banks sector.

Savings banks on the credit platform

Compared to the private banks sector the penetration of FINMAS, the sub-marketplace for savings banks, is rather poor. While more than 50% of the savings banks act as product providers on the platform, only about 4% of the distribution volume from the point of sale is processed via FINMAS. This means that mortgages from the savings banks and brokered by e.g. free brokers are probably processed over the platform, whereas mortgages agreed and signed in a savings banks branch are mostly not. Looking at the **total mortgage volume of savings banks which stood at around EUR 55bn** in 2017 (compared to a transaction volume of EUR 38bn on Europace 2017 and a total market volume of EUR 230bn), there is **still huge potential**.

Mortgage market share and Hypoport's proportion



Source: Warburg Researc

In the past, Hypoport aimed to attract more savings banks to FINMAS by convincing and negotiating bank by bank. However, the **acquisition of FIO could be a game-changer**. As 80% of all savings banks in Germany use FIO, the software is crucial for the real estate brokerage business of the banks. While the acquisition of FIO could initially simplify contact to the savings banks to market FINMAS, Hypoport plans to **integrate**

and interlink the services of FIO and EUROPACE/FINMAS in such a manner that makes it difficult for banks to use one solution without the other.

But why should savings banks switch to FINMAS?

Obviously, the advantage has to be worth at least the price per transaction (10bps). The benefits of using FINMAS include a **massive efficiency gain and a broader information base** that allows advisors to offer competitive and suitable conditions to clients. FINMAS is basically a sub-marketplace to EUROPACE with shared data. Its greater degree of efficiency arises from its orientation to the needs of advisors. It gives advisers a quick overview of achievable mortgage conditions and the potential conditions of competitors with only a limited set of relevant data. Therefore significantly less input data is needed, which reduces the average time per consultation. Furthermore, the direct overview of a potential competitor's conditions puts the advisor in an advantageous position and should significantly increase the signing rate.

If savings banks increasingly switch their systems to FINMAS, **support for the incumbent system will decline,** making the operation of the existing joint systems more costly for the remaining banks. This makes the scenario of all savings banks switching to FINMAS even more likely. Savings banks that have already switched to FINMAS show a higher level of efficiency, according to Hypoport, and are gaining market share. Even though it is difficult to predict when a majority of savings banks will switch to FINMAS, the impact on Hypoport will be immense.

A similar scenario could be assumed for the cooperative banking sector. Like the **savings banks, cooperative banks are organised under a federal association that provides software** and other services to the individual banks. Therefore market mechanisms are quite similar. Apparently, growth rates in past quarters were much higher at FINMAS than at GENOPACE which could change with the launch of BAUFINEX, a joint venture between, building society Schwäbisch Hall and Hypoport, and the related IT interface which was non-existent before.

Nevertheless, the big shift of a whole sector towards Hypoport's solutions should start with the savings banks, helped by the potential interlinking of FIO and FINMAS.

Credit platform scenarios

The credit platform business is one of Hypoport's core businesses and, to some extent, the keystone for the company's other businesses. However, while Hypoport has the largest marketplace for mortgages with a market share of more than 16% of all new mortgages processed over EUROPACE, FINMAS and GENOPACE, there is still huge potential.

In our base case scenario, we assume a penetration rate of FINMAS beyond savings banks of 25% by 2024. This should lead to a shift in momentum for the rate of savings banks joining the platform.

Why do we regard 25% as a trigger for this shift? The IT structure of the savings banks sector is predominantly characterised by a joint software provider. As more and more banks join Hypoport's solution, financial support for the savings banks' own joint solution decreases. At one point, financial support for the group's own solution will have decreased to such an extent that it no longer makes sense for the provider to develop the tool any further or to provide new features. Eventually, more and more savings banks will switch to the only remaining alternative, Hypoport.

Based on this assumption, we see strong growth in the penetration of FINMAS beyond savings banks for the years after 2024 to levels of about 75% within a few years. Developments should gain momentum after the mentioned trigger point as the more savings banks that join the platform, the greater the incentive for the remaining banks to switch.

The second scenario for the credit platform encompasses the savings banks sector as well. While we believe that such a mentioned trigger point exists in the environment of savings banks (and should as well exist in the cooperative banking sector) and it is rather a question of where this trigger point lies and when it is achieved, the second scenario assumes that this is not the case. The result would be ongoing market share gains for Hypoport, which come with rather high investment in further growth as seen so far.

The chart below demonstrates the different assumptions for transaction volume, revenue and EBIT development in the complete credit platform segment. As already mentioned, both scenarios differ only with respect to the developments in the savings banks sector. However, keeping in mind that the cooperative banking sector has a market share comparable to the savings banks, comparable upside potential can be attributed to this sector but is not yet reflected in our models due to lower growth rates so far.

Credit platform scenarios

	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e
Market transaction volume (EURbn)	242.8	247.7	252.6	257.7	262.8	268.1	273.4	278.9	284.5	290.2
thereof by savings banks	58.3	59.4	60.6	61.8	63.1	64.3	65.6	66.9	68.3	69.6
Base scenario										
expexted penetration among savings banks	7%	11%	16%	19%	22%	24%	25%	40%	55%	70%
Hypoport total transaction volume in EURbn	54.8	61.0	68.2	73.8	79.4	84.2	88.3	101.2	114.3	128.0
yoy		*11%*	*12%*	*8%*	*8%*	*6%*	*5%*	*15%*	*13%*	*12%*
thereof on FINMAS	4.0	6.5	9.7	11.7	13.9	15.4	16.4	26.8	37.6	48.7
Revenue credit platform (EURm)	100.6	114.2	128.7	138.8	147.7	154.9	161.5	177.1	193.0	209.5
yoy		*13%*	*13%*	*8%*	*6%*	*5%*	*4%*	*10%*	*9%*	*9%*
thereof FINMAS (EURm)	4.0	6.5	9.7	11.7	13.9	15.4	16.4	26.8	37.6	48.7
EBIT credit platform (EURm)	22.1	26.7	31.2	34.0	36.2	37.7	39.0	47.5	56.5	64.9
margin	*22%*	*23%*	*24%*	*24%*	*24%*	*24%*	*24%*	*27%*	*29%*	*31%*
Low scenario										
expexted penetration among savings banks	8%	12%	16%	19%	22%	24%	25%	27%	28%	30%
Hypoport total transaction volume in EURbn	55.5	61.6	68.2	73.8	79.4	84.2	88.3	92.1	95.9	100.1
yoy		*11%*	*11%*	*8%*	*8%*	*6%*	*5%*	*4%*	*4%*	*4%*
thereof on FINMAS	4.7	7.1	9.7	11.7	13.9	15.4	16.4	17.7	19.1	20.9
Revenue credit platform (EURm)	101.3	114.8	128.7	138.8	147.7	154.9	161.5	168.1	174.6	181.7
yoy		*13%*	*12%*	*8%*	*6%*	*5%*	*4%*	*4%*	*4%*	*4%*
thereof FINMAS (EURm)	4.7	7.1	9.7	11.7	13.9	15.4	16.4	17.7	19.1	20.9
EBIT credit platform (EURm)	22.3	26.8	31.2	34.0	36.2	37.7	39.0	40.7	42.4	44.3
margin	*22%*	*23%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*

Source: Warburg Research

As one can easily see, both scenarios differ from the year 2024 on (our expectation for the mentioned trigger year). While the strongly increasing penetration rates in our base scenario from then on result in much higher revenues and EBIT, the linear development of the penetration rate in the low scenario results in around EUR 20m less EBIT in 2027.

Insurance Business

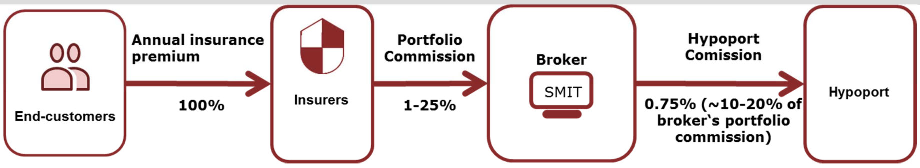
- Hypoport offers the most comprehensive and independent software solution for insurance brokers
- Pure B2B business supports insurance brokers with a single solution for administrative and consulting related business processes and includes comparison services as well
- Competitive landscape is rather fragmented with specialised solutions
- IT background and strong financial position backed by the other segments should be beneficial for Hypoport
- Strong company track record in building platform businesses visible at credit platform
- Hypoport's platform solution should replace many legacy and analogue processes and result in substantial efficiency gains and cost savings for brokers

SMART Insurtech

Hypoport's decision to enter the insurance market in Germany was based on comparable market conditions in the insurance and the mortgage sector. While there was little digitisation in either sector when Hypoport entered the market, the company aims to play a dominant and leading role in transforming processes towards greater efficiency and digitisation. Hypoport's product in the insurance business is a **software platform solution for insurance brokers that supports and digitises business processes** and should result in massive efficiency gains for the broker. Having pursued a buy-and-build strategy, the company distributes the insurance platform under the brand SMART Insurtech. Important to note is that Smart Insurtech is a pure software provider, which excludes Hypoport from the liability chain. Hypoport does not face any risks of the end customer or insurer.

While the credit platform charges users per transaction, the insurance platform's payment is based on the inventory of insurance contracts and customers of a broker. To use the platform, brokers pay 0.75% of the annual premium generated by their customer contracts. Against the backdrop of an annual premium volume of currently EUR 197bn in the German insurance market, the platform could contribute substantially to Hypoport's revenues.

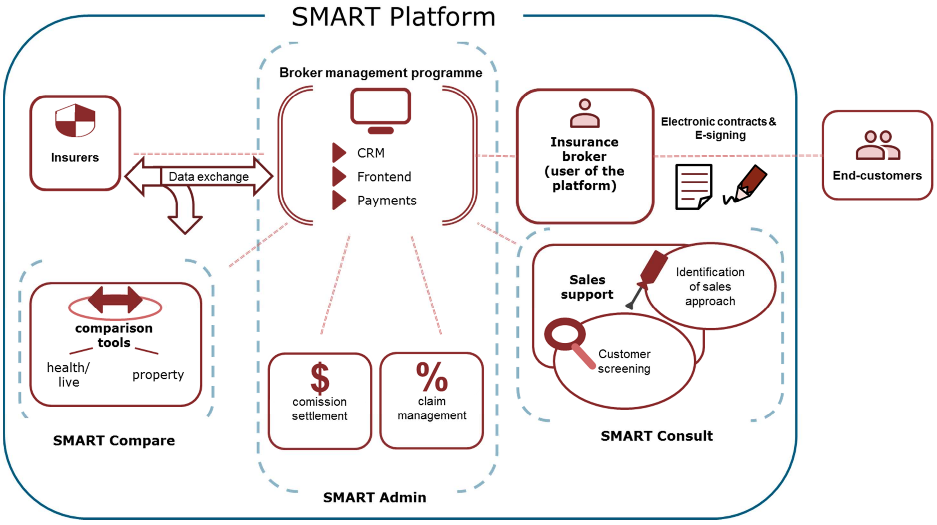
Portfolio commission flow



Source: GDV, Warburg Research

SMART insurtech currently offers its product portfolio on a modular basis. Customers can choose between the different services and solutions. Three modules reflect the core services that are offered to mainly larger distribution companies and insurtechs. There are modules for administration (SMART Admin), consultancy (SMART Consult) and comparison (SMART Compare) services. These modules are complemented by the SMART cloud that contains hosting services to give unrestricted access to the customers at any point in time and place and independent of the customer's device.

Structure insurance platform



Source: Warburg Research

As the chart above demonstrates, the platform creates a **fully digital environment** in brokers' processes. While this requires APIs to insurers' systems, Hypoport already included almost all relevant insurance companies on its platform and is still expanding the number of products and providers included. However, the general structure of the platform is divided into three service modules:

- SMART ADMIN comprises the software solution that handles the administration of insurance contracts. It is the tool that should replace legacy processes in the administration and support of existing policies. The core system brings together the personal data of an end customer with existing contracts and contract data. This includes any kind of correspondence between the broker and the consumer but also between insurers and brokers in terms of specific customer needs and issues. Furthermore, brokers gain an overview of the payment history of his clients. This said it supports the commission settlement of brokers with an automated process. Based on this information, ADMIN prepares different templates and process steps that brokers can use and release with little individualisation. Therefore the tool should substantially reduce brokers' administration effort.

- SMART CONSULT supports brokers in the sales process and makes it as efficient and convenient as possible. The overall design is inspired by the well accepted EUROPACE platform. The tool allows access via browser or app, which makes mobile use at the point of sale extremely comfortable. The input of customer data is limited to the necessary extent and once data are included, they are available in all other tools and future processes as well. Overall, the whole advisory process at the end customer should be much faster and highly intuitive which saves valuable time for advisors.

- SMART COMPARE is the comparison software tool of SMART Insurtech. Like the other SMART tools, COMPARE is accessible and usable via online browser and app. The tool compares available contracts of different insurance companies over different insurance divisions. Furthermore customers can add individual selection criteria and use the tool as a white-label solution in the B2C relationship.

The mentioned modules are embedded into a single platform solution that combines all services on a single surface in the most convenient way for customers. This can be seen as **the "one-size-fits-all" solution for insurance sales agencies**. By implementing all digital solutions of SMART, the platform should provide insurance brokers with highly efficient processes that allow them to concentrate on their core competences of advising and acquiring clients. This in turn should result in a potentially higher number of clients that can be handled per agent at simultaneously lower back office costs.

While a high number of customers currently obtain single modules from the company, either for historical or operative reasons, Hypoport is working on migrating more and more existing customers to the platform solution.

Due to the very fragmented insurance broker software market, Hypoport decided to pursue a buy-and-build strategy and acquired several individual software providers to merge the services into a single product. The chart below provides a quick overview of the past insurance-related acquisitions. Furthermore it contains information about the key element of the business activities, the purchase price, date of acquisition and the module in which the offered services are integrated.

Company acquisitions for the insurance platform

Company	Date	Price	Key element	Module
NKK Programm Service AG	**Q2 2016**	**EUR 3m**	Core product of the company was OASIS, which is a software solution for the administration of contracts and settlement of commission for brokers. After using the software products of NKK for many years, the acquisition of the company can be regarded as starting point for the insurance platform.	**Admin**
Innofinance GmbH & Innosystems GmbH	**Q1 2017**	**EUR 6m**	Innosystems GmbH provides software solutions for insurance brokers, financial distributors, insurance companies, portals, and banks. The core product "Sniver" offers a comprehensive scope of service in the fields of comparing insurance policies. The tool includes the offerings of a multitude of insurers over different insurance divisions.	**Compare**
Maklersoftware.com GmbH	**Q1 2017**	**EUR 4m**	Maklersoftware.com GmbH is an application service provider specialised in solutions for insurance broker companies. Core product is metaSolution, a surface interface that connects and integrates functionalities of different software modules to a single user interface. Furthermore, it offers hosting services to provide brokers with mobile and unlimited access to contract and customer data out of office.	**Consult**
Volz Vertriebsservice GmbH	**Q3 2017**	**Not disclosed**	Volz Vertriebsservice GmbH provides backoffice services for insurance broker companies. The services include underwriting and call center activities but also software for commission settlement and CRM tools. Furthermore, Volz had a broad customer base of over 20k customers, thereof also large and well-known companies like MLP, Axa and Generali.	**Admin**
IWM Software AG	**Q1 2018**	**EUR 8m**	IWM Software AG provides insurance brokers' administration software solutions for small brokers and larger sales organisations. Focus of the products lies in analytics of customer data, process optimisation and integration of third party software modules. The comapany's main product IWM FinanzOffice adds software competences to the new modules Consult and Admin.	**Consult & Admin**
ASC Assekuranz-Service Center GmbH	**Q2 2018**	**EUR 20m**	ASC Assekuranz-Service Center GmbH is the latest acquisition of Hypoport in the insurance business and offers pooling services to smaller insurance brokers. Accordingly to Starpool and Qualitypool in the credit platform business, ASC should be used as an aggregator for small brokers that want to use the platform solution.	**No specific module**

Source: Warburg Research

Smart insurtech AG

To appear as a single brand on the insurance market, Hypoport founded the company Smart InsurTech GmbH in 2017. From then on, all products were offered under the new SMART brand. However, in July 2018, all acquired companies were merged to the new

Smart Insurtech AG, to reflect the operational migration in the corporate structure.

Satus quo

After the integration of the acquired software solutions, SMART appears as a joint brand and single platform to potential new customers. While some integration and development processes continue, customers have access to all offered services via a single administration programme.

With regards to customer acquisitions, focus in a first step lies on **converting existing customers from using single modules to joining the platform solution**. This should take place in the order of dependency on existing solutions. Changing software tools can be a complex process for brokers but not always. While the administration programme represents the centre of a broker's activities, consulting supportive tools should be easier to replace and comparison could be regarded as somewhat interchangeable. Therefore the initial focus lies on converting users of the ADMIN module, then on CONSULT and finally on COMPARE.

Besides the conversion of existing customers, new brokers should be convinced. Innovative players and insurtechs should find the offering particularly appealing and first success is already visible as two of Germany's biggest B2C insurtech companies, **Clark and treefin, are using SMART**. We suspect that there are also other customers of a similar calibre who do not wish to be publicly named.

The current volume of insurance premiums handled by the complete SMART platform **lies at EUR 1.9bn**, which represents around 1% of the overall market. Some of these users are the own brokerage and pooling services. However, the share of brokers using the ADMIN module lies at around 5% of the overall market, revealing the conversion potential.

On the product-provider side, a majority of the relevant insurers are on the platform. Like the credit platform, it is not necessary to have every single product provider in the market but the best ones should be present on the platform. This should already be the case and newcomers are, by now, mostly rather small or very specialised providers.

Competition

While the initial starting point in the insurance business is quite similar to the mortgage business, the competitive landscape differs. While the majority of the mentioned software market is rather fragmented, some players offer more or less comprehensive solutions.

The majority of potential **competitors are in the area of pooling services**. Those poolers play an aggregating role in the insurance market. They spread the products of different insurers in the market of independent brokers, reducing the number of negotiation partners for insurers and brokers. Furthermore, and even more important for Hypoport's business approach, they provide brokers with additional services that should support agents in their businesses. Most of these services are IT solutions that are either self-developed or sourced from other providers. Importantly, the **pooling business is typically a low-margin business** with profit margins in the low single digits. This is also reflected in a rather low cash generation and therefore limited investment and personnel power to develop their own IT solutions.

Furthermore, the character of pooling companies differ from Hypoport. While the IT services offered by those poolers are additional products for brokers, the core service and business focus is the insurance business. This orientation should be reflected in the personnel structure as well. The digital IT orientation at Hypoport comes with a high degree of IT know-how and software engineering capacity, which is unlikely to be the case at smaller pooling companies.

Therefore there is a high chance that pooling services will refrain from developing their own IT solutions but will use or switch to Hypoport's platform as a white label solution. However, four competitors can be identified that offer, to some extent, comparable solutions to independent insurance brokers and sales organisations.

Acturis

Acturis is an IT service provider from the UK that offers solutions in the insurance brokerage environment. In its home market, the company is the leading provider in the software market for multichannel insurance advisors. The success is based on an SaaS approach that offers end-to-end client management and business support tools. The company has been active in Germany since 2014 and entered the market via acquisition of three single software companies (NAFI, assfinet and LUTRONIK). Similar to Hypoport, Acturis acts as a pure B2B player in the insurance market. However, the main focus of lies on assfinet, a broker administration program. It appears that instead of covering the full range of services, assfinet creates interfaces to established other tools like comparison solutions.

Fondsfinanz

Fondsfinanz is the largest insurance pool for independent insurance brokers in Germany and co-operates with Hypoport by processing mortgages via EUROPACE. Next to typical services of an insurance pool like negotiating conditions with insurers, Fondsfinanz offers its brokers IT solutions. However, the company seems to focus on its core competences as a pooling service. In light of this, the IT services are part of the full service package and should not be promoted or distributed independently across brokers that are not part of the pool. Nevertheless, the technological approach appears similar to Smart Insurtech with a web-based administration layout that is supported by different in-house modules.

Wefox

Wefox is an insurtech with a digital platform approach that focuses on the end customer. The company offers insurance brokers, insurance companies and insurance holders a platform to sign and manage insurance contract fully digital. It is not transparent whether Wefox develops its services fully in-house or if the core system interacts with additional services via interfaces. However, the main difference to SMART Insurtech is the customer approach. Wefox targets the end-customer directly and invites him to upload and administrate insurance contracts directly on the platform. For this purpose, Wefox concludes a brokerage contract with the end-customer and acts as a broker itself. However, next to potentially higher marketing and personnel expenses (due to own advisors), Wefox can be considered to partly act as a competitor to own B2B customers.

JDC group

JDC group is a listed company with a market capitalisation of slightly more than EUR 100m. The company operates two segments, Advisortech and Advisory. In Advisortech, JDC offers pooling and IT services to smaller and larger brokerage firms. In the Advisory business, JDC acts as a broker itself with a direct end-customer approach. The future focus should lie on the insurance sector, where it offers a platform, called “allesmeins” for affiliated brokers as well. Furthermore it seems that this platform can be provided to larger insurance sales organisations as a white-label solution as well, which became visible with the “Albatros-Deal” with Deutsche Lufthansa AG. The latest capital increase at JDC could point to possible M&A activities in future.

Our Assessment:

The market for digitisation in the insurance business is much more competitive than the mortgage business. The mentioned competitors offer digital platform and software solutions to insurance brokers with different approaches. However, we regard Hypoport as being in a good position to gain substantial market share at independent insurance brokers. This is based on the following properties:

1. Range of services: SMART should offer the **most comprehensive range of services**. Therefore independent brokers should be able to replace most of their existing fragmented IT landscape with a single solution. Other competitors seem to concentrate on the broker’s administration program and offer interfaces as additional services rather than a core product.

2. Independence: SMART is a **completely independent solution for the whole market**. Hypoport follows a pure B2B approach without direct contact to the end insurance customer. Furthermore, the platform is open for every insurance company and all kinds of insurance contracts as well as every sales organisation and independent brokers for insurance contracts. This follows the principles that are already successful in the mortgage market. As Hypoport does not follow an end-customer approach, there is **no conflict of interest with its B2B clients** and they are all treated and priced equally and transparently in the final scenario. Furthermore, the independence of IT provider and pooler is beneficial for independent brokers as this secures the inclusion of all insurers with the respective products which in turn provides the basis for independent advisory services.

3. IT focus: As already mentioned, most competitors focus on pooling services as their main product. Hypoport's approach is different as it **centres on the digital platform**. The company aims to develop and maintain the most innovative and convenient IT platform for independent insurance brokers on the market. While the pooling services are just a necessary auxiliary service to give small brokers access to the platform, the company focuses strongly on IT which is also reflected in the allocation of resources. Hypoport employs many IT employees and developers. The number of employees in the insurance business as of December 2017 was 183, of which most are engaged in IT and development.

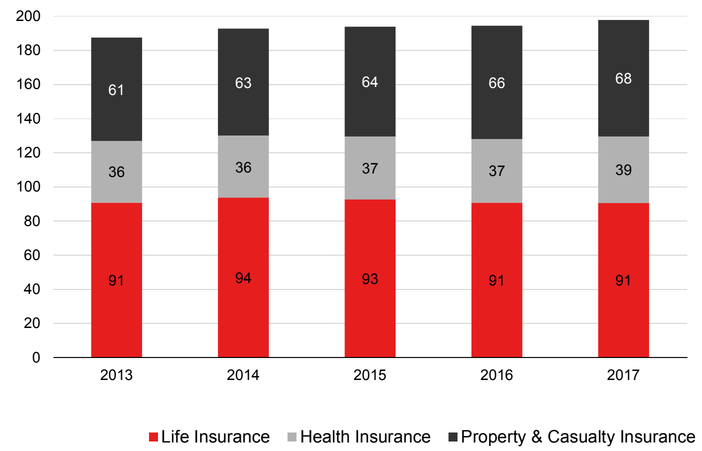
4. Network to brokers: By acquiring different IT service providers that were already active in the market, Hypoport gathered **access to a large number of independent sales organisations** that receive at least one of the legacy products. However, as most of these organisations only received parts of the offering now available, there is huge upselling potential for Hypoport.

5. Financial power: Hypoport's insurance business is **backed by the company's very strong and cash-generating existing business**. Therefore SMART insurtech is regarded as having high staying-power compared to competitors that have to finance their businesses either via capital or their typically low-margin pooling business. Nonetheless Hypoport should be in the strongest financial position. Beyond the ability to invest in future developments, it is important for brokers that their preferred IT provider or even pooler is financially healthy and not at risk of becoming bankrupt.

Insurance market in Germany

The German insurance market is a multi-billion Euro market with total annual contributions of currently over EUR 197bn at moderate growth rates. There are nearly 400m single insurance policies in the market that require some administration.

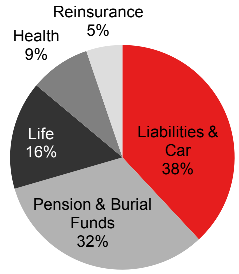
Total annual insurance contributions in Germany (in EURbn)



Source: GDV, Warburg Research

However, looking at the market structure, there are many similarities to the German mortgage market. On the product provider side, there are more than 360 insurers in the market. As in the mortgage market, there are large generalists like Allianz that offer nearly every kind of insurance but also very specialised players that focus on a very specific insurance category. The chart below shows the allocation of the players over the different insurance categories.

360 insurers divided into five sectors



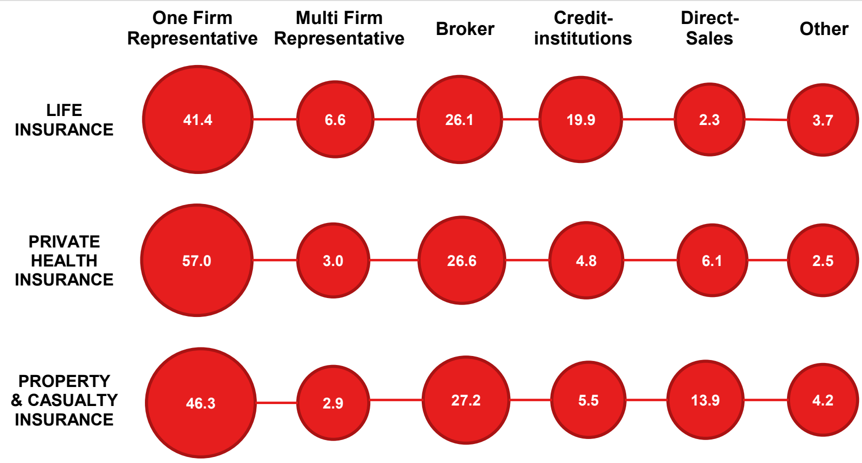
Source: GDV, Warburg Research

Looking at the addressable market for Hypoport on the supply side, the above-mentioned annual contributions are located in the areas Health, Life and Liabilities & Motor.

German insurance broker landscape

The German insurance broker and distribution landscape is comparable to the mortgage market. There is a large number of exclusive brokers that sell the products of a single insurance company only. Then there are brokers that have contracts with multiple insurance companies and, finally, independent brokers, who compare the products of the whole market and give unbiased advice to clients. Besides the traditional insurance distribution channels there are also brokers that sell insurance as by-products such as bank advisors.

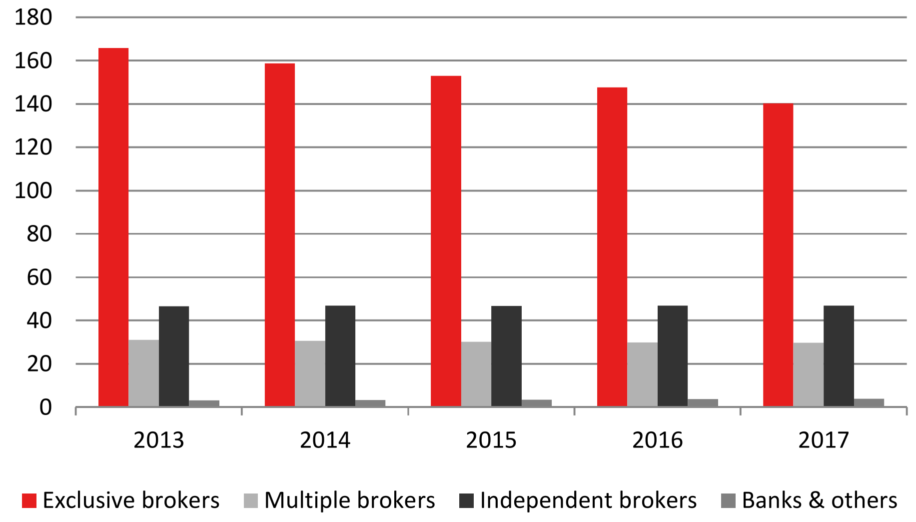
Distribution channels of the German insurance market (in percent)



Source: GDV, Warburg Research

However, the **addressable market** of Hypoport in the first step should comprise of **multi firm representatives, independent brokers and credit institutions**. While the proportions vary, depending on the type of insurance, these sales channels are responsible for around 40% to 45% of the brokered insurance contracts, which in turn forms the addressable market of Hypoport in the initial step.

Insurance brokers in Germany (in k)



Source: GDV, Warburg Research

The chart above shows the number and type of insurance brokers in Germany in the last years. Exclusive brokers were by far the largest group, although their number has been decreasing steadily. While the overall number has also been falling, multiple brokers, independent brokers and banks & others were able to maintain the total number at a level of slightly more than 80k. As this group represents the relevant market for Hypoport in the first step, this is clearly good news for the company.

Money flow to insurance brokers

Taking a closer look at the revenue streams of brokers, they are characterised by both one-off payments (acquisition commission) and recurring revenues (portfolio commission). While acquisition commission is paid whenever a customer signs an insurance contract, **portfolio commission is paid on an annual basis and should compensate for administration and other costs**, brokers have to face by interacting with customers. The commission structure differs largely between the different types of insurance policies. In general, brokers receive a low single-digit to mid-twentieth percentage of the annual premium volume of a contract as acquisition commission upfront.

In the past, insurance brokers in Germany focused strongly on the acquisition of new customers and new contracts as this is, and was, the main source of revenue for brokers. With decreasing acquisition commission, also due to regulatory changes, brokers face decreasing revenue streams but unchanged cost structures. The cost structure though strongly depends on inventory management of existing contracts with clients. To maintain profitability and to be able to focus on the core competence of advising and acquiring clients, there is a great deal of pressure on insurance brokers to digitize business processes.

Although the portfolio commission is paid to interact with the customer, there is little incentive for brokers to intensively advise existing clients with older contracts. While advising new clients is value-creative for brokers in the form of acquisition commission, advising existing clients comes with high opportunity costs. There is no additional income in changing the details of a contract or in keeping existing customers up to date. Therefore more digitised and partly automated inventory processes should increase customer satisfaction, reduce inventory maintenance work and increase time for customer acquisition.

Processes and digitisation

There are several typical processes in the relationship between broker and customer. At the beginning of the relationship is the acquisition and initial advising of the customer. Clear and intuitive consulting software supports advisors to be efficient and can reduce the time required per advisory process. Equipped with a comprehensive comparison tool, advisors can offer best-in-class services. After conclusion of an insurance contract, brokers are responsible for keeping the contract and the customer up to date and to adapt to risk or market changes. Furthermore, brokers are the main contact for customers when it comes to claims and claim regulations. A broker should manage the claim management process and represent the customer's interest in the relationship with the insurance company. Finally, brokers should manage any administrative processes like change of addresses, bank accounts, personal data, etc.

For all these processes, the degree of digitisation varies widely within the broker market. While some brokers still work with paper-based customer files, there are internet-based business models with highly digitised processes. In general, the broker software market is characterised by many different and rather specialised solutions covering single business processes. This results in a rather fragmented market with many smaller companies and no single dominant provider.

Conclusion: market

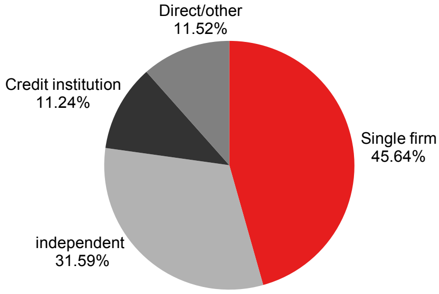
The German insurance market shows some similarities to the mortgage market that favour the successful implementation of an aggregating digital platform:

- Multitude of different independent product suppliers with different product characteristics and IT standards. Thereof some large players but no dominant player.
- A variety of sales channels and organisations with a large proportion of independent advisors, relying on various isolated solutions for the single business processes.
- Low degree of digitisation within the industry and still many analogue and paper-based processes
- No dominant IT leader to be ousted.
- High pressure on existing sales channels to become cost and process efficient as especially digital and internet-based business models are highly competitive and commission rates are decreasing.

Scenarios for the insurance business

As the insurance business is still in its ramp-up phase, we provide a scenario analysis based on three different scenarios. The company is aiming for revenues of EUR 150m by the end of 2026 with EBIT margin between 40% and 50%. We chose a top-down approach to derive a potential market size and Hypoport's role in it. Looking at the distribution channels of the insurance market in Germany (chart below), we see that today about 45% of insurance policies are sold by single firm brokers, 32% by independent brokers, 11% by credit institutions and 12% over other channels. For Hypoport, the share of independent brokers and credit institutions makes up the addressable market for the insurance platform.

Market share of insurance distribution channels 2017



Source: Warburg Research

However, credit institutions have lost market share slightly over the past years while independent brokers gained. Going forward we assume a stable market share for both groups of roughly 42% of all insurance contracts. Furthermore, we calculate a constant growth rate of 1.5% for the insurance market as a whole. The chart below demonstrates the market size, Hypoport's addressable market and potential revenue.

Insurance market and addressable share for Hypoport

	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e
Total ins. premiums (EURm)	201,115	204,132	207,194	210,302	213,456	216,658	219,908	223,207	226,555	229,953
Hypoport addressable share	42.00%	42.00%	42.00%	42.00%	42.00%	42.00%	42.00%	42.00%	42.00%	42.00%
Addressable market (EURm)	84,468	85,735	87,021	88,327	89,652	90,996	92,361	93,747	95,153	96,580
Hypoport commission	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%
Potential revenue (EURm)	633.51	643.02	652.66	662.45	672.39	682.47	692.71	703.10	713.65	724.35

Source: Warburg Research

However, to gain an impression of the potential impact on the fair value, we provide scenarios that deviate from the company's revenue and margin targets.

The high scenario anticipates full success of the insurance business, with growth rates developing well and ongoing market share gains. Furthermore, constant margin expansion should be possible. In this scenario we reflect Hypoport's own ambitions for a 40% EBIT margin from 2026 on.

The base scenario foresees similar penetration and similar top-line growth as the first scenario. The difference lies in the lower margin assumption. While the first scenario expects 40% EBIT margin, the second scenario assumes lower EBIT growth rates and a 5pp lower margin of 35% by 2025. This reflects the possibility that customer acquisition costs might inhibit development in the mid term. Nonetheless, higher margins should be achievable in the long run.

The low scenario can be considered as the worst case scenario. While it assumes even lower margin development than the base scenario, a slower pace of growth is also assumed for market penetration and therefore revenue. This should reflect a high degree of lethargy in the insurance broker market that would result in a rather low willingness of brokers to switch IT systems resulting in a more protracted and costly customer acquisition process for Hypoport.

Insurance platform scenarios

	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e
Potential revenue (EURm)	**634**	**643**	**653**	**662**	**672**	**682**	**693**	**703**	**714**	**724**
High scenario										
expected market share	5.0%	8.0%	10.0%	12.0%	14.0%	16.0%	18.0%	20.0%	21.0%	22.0%
Revenue (EURm)	31.68	51.44	65.27	79.49	94.13	109.20	124.69	140.62	149.87	159.36
yoy		*62%*	*27%*	*22%*	*18%*	*16%*	*14%*	*13%*	*7%*	*6%*
EBIT (EURm)	-0.03	0.51	3.26	7.95	16.00	27.30	39.90	50.62	59.95	63.74
margin	*0%*	*1%*	*5%*	*10%*	*17%*	*25%*	*32%*	*36%*	*40%*	*40%*
yoy			*534%*	*144%*	*101%*	*71%*	*46%*	*27%*	*18%*	*6%*
Base case scenario										
expected market share	5.0%	8.0%	10.0%	12.0%	14.0%	16.0%	18.0%	20.0%	21.0%	22.0%
Revenue (EURm)	31.68	51.44	65.27	79.49	94.13	109.20	124.69	140.62	149.87	159.36
yoy		*62%*	*27%*	*22%*	*18%*	*16%*	*14%*	*13%*	*7%*	*6%*
EBIT (EURm)	-0.03	0.51	1.96	4.77	9.41	16.38	31.17	49.22	52.45	55.78
margin	*0%*	*1%*	*3%*	*6%*	*10%*	*15%*	*25%*	*35%*	*35%*	*35%*
yoy			*281%*	*144%*	*97%*	*74%*	*90%*	*58%*	*7%*	*6%*
Low scenario										
expected market share	5.0%	6.5%	8.0%	10.0%	11.5%	14.0%	16.0%	18.0%	18.0%	18.0%
Revenue (EURm)	31.68	41.80	52.21	66.25	77.32	95.55	110.83	126.56	128.46	130.38
yoy		*32%*	*25%*	*27%*	*17%*	*24%*	*16%*	*14%*	*1%*	*1%*
EBIT (EURm)	-0.03	0.42	1.57	3.97	7.73	14.33	22.17	31.64	32.11	32.60
margin	*0%*	*1%*	*3%*	*6%*	*10%*	*15%*	*20%*	*25%*	*25%*	*25%*
yoy			*275%*	*154%*	*95%*	*85%*	*55%*	*43%*	*1%*	*1%*

Source: Warburg Research

While the differences in the scenarios are substantial, we regard the **base case scenario as the most likely outcome** based on the competitive quality and structure of the insurance market. While our assumption of EUR 150m revenues by 2026 is in line with company's targets, this reflects a mere 9% share of the total insurance market in Germany and a 21% share of the addressable market. Comparing these numbers with the path of EUROPACE, the credit platform had gained a market share of more than 10% of the total mortgage financing market 10 years after starting business. Considering the excellent track record in the credit platform and the existing structure in the insurance business, the targeted market shares seem reasonable.

Consolidation & Valuation

- Base case scenarios point to new PT of EUR 250
- Fair values per share derived from the different scenario combinations range from EUR 185 to EUR 275
- Five out of six combinations yield fair values of more than EUR 200
- Insurance business expected to have a substantial effect on earnings over time, while impact of the private clients business should show a relative decrease as it is less scalable.

In the following chapter, holding costs are added to the previously outlined scenarios and the base case scenario is presented in detail. All scenario combinations are reflected in separate DCF models and the outcome of potential fair values per share is presented in an overview table.

We regard our base case as the most likely considering the strategic orientation, the competitive quality and the market conditions. Including the expected holding effects on EBIT level, we reach the following assumptions for the next decade:

Group consolidation on base case scenarios

	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e
Revenue Private clients	89.7	98.7	106.6	114.6	122.6	129.9	136.4	143.2	150.4	157.9
EBIT Private clients	12.1	13.5	14.8	16.0	17.2	19.0	20.1	21.8	22.9	24.1
Revenue Real estate platform	32.0	40.0	49.2	59.0	69.7	80.8	91.3	100.5	106.5	110.7
EBIT Real estate platform	6.5	7.2	8.1	9.4	11.5	14.1	16.4	18.6	20.2	21.6
Revenue Credit platform	101.3	114.8	128.7	138.8	147.7	154.9	161.5	177.1	193.0	209.5
EBIT Credit platform	22.3	26.8	31.2	34.0	36.2	37.7	39.0	47.5	56.5	64.9
Revenue Insurance platform	31.7	45.0	58.7	72.9	87.4	102.4	117.8	133.6	149.9	159.4
EBIT Insurance platform	0.0	0.5	1.8	4.4	8.7	15.4	29.4	46.8	52.5	55.8
Consolidated Revenue	254.7	298.4	343.2	385.3	427.3	468.0	507.0	554.4	599.8	637.6
yoy		*17%*	*15%*	*12%*	*11%*	*10%*	*8%*	*9%*	*8%*	*6%*
Consolidated EBIT	42.3	49.3	57.1	65.0	75.4	87.3	106.8	135.7	153.3	167.5
Holding cost	-9.0	-9.0	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0	-10.0
Group EBIT	33.3	40.3	47.1	55.0	65.4	77.3	96.8	125.7	143.3	157.5
yoy		*21%*	*17%*	*17%*	*19%*	*18%*	*25%*	*30%*	*14%*	*10%*

Source: Warburg Research

Scenarios for the credit platform and the insurance platform business reflected in different DCF models result in the following fair values per share (see table below). The fair values of the different combinations reflect the growth assumptions and corresponding long-term developments. While all other parameters remain unchanged, this allows a ceteris paribus consideration of the different scenarios and the effect on the fair value per share.

Fair value per share and scenario combination

Insurance platform scenarios	Credit platform scenarios: Base case	Credit platform scenarios: Low case
High case	275	245
Base case	**250**	219
low case	216	185

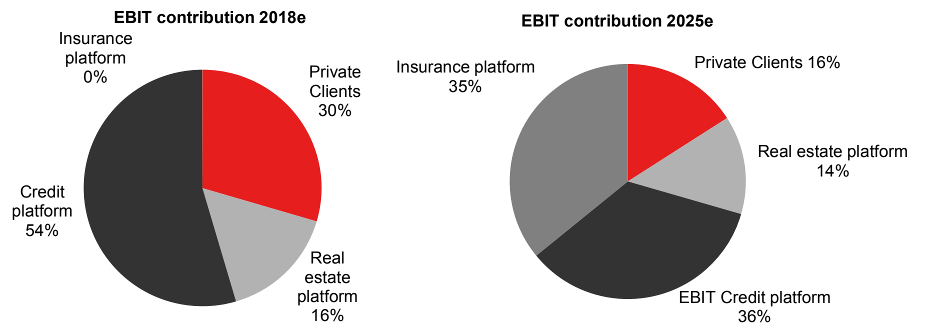
Source: Warburg Research

The fair values derived range from EUR 185 to EUR 275. Five of the six different combinations yield a fair value per share of more than EUR 200. Nonetheless we regard the base case for both platforms as most likely and therefore increase our price target to EUR 250 for the following reasons:

- High growth rates in the savings banks sector demonstrate the willingness to switch to FINMAS.
- Efficiency improvements for savings banks using FINMAS should lead to market share gains for these banks and, as a result, prompt other banks to switch.
- Connection rates for new savings banks using FINMAS in their front-end processes should gain momentum.
- In terms of the preconditions for a successful platform model, the insurance market today is similar to the mortgage market when Hypoport entered.
- A multitude of product providers and a very fragmented sales structure with a high number of individual organisations favour the existence of an aggregating platform in between.
- Functionality of the existing platform that covers all relevant business processes could replace existing multi-provider IT environment at individual brokerages.
- High financial and personnel capacity to further develop and improve the existing platform.
- Excellent track record in establishing a digital platform and bringing relevant partners to it and high expertise in developing efficient and user convenient supporting tools.

Up to now, the credit platform was the main contributor to Hypoport's business and can be considered the main driver of the valuation so far. However with the anticipation of strong development of the insurance platform in the next years, this business should become at least as important as the credit platform.

Expected EBIT contribution over time



Source: Warburg Research

As the chart above shows, the insurance platform is expected to contribute more than one-third of the company's EBIT by 2025. Absolute EBIT is also assumed to expand substantially mainly as a result of the upscaling platform businesses. However the role of the private clients segment should decrease, as it lacks comparable scalability.

While the scenarios provided include different outcomes for the credit and insurance platform, further possible upside potential is not yet reflected:

- Successful establishment of FINMAS in the frontend of the savings banks sector is worth roughly EUR 30 per share. Furthermore the market share of the cooperative banks sector is even several percentage points higher and not fully reflected. A similar scenario in this sector could add another substantial contribution to the fair value.
- The base case in the insurance business is less ambitious than the

communicated assumptions of the company. Development of the platform according to the company's plans would imply further upside potential as well.

- With ongoing development of the newly-established real estate platform, the company is likely to enter further parts of the value chain in future. While the real estate market is even bigger than the already substantial mortgage market, the final orientation of the business remains to be seen.

DCF model

Figures in EUR m	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	Term. Value
	Detailed forecast period			Transitional period										Term. Value
Sales	253.90	304.20	349.68	391.82	433.94	474.76	513.86	561.28	599.63	637.42	666.11	686.09	706.67	
Sales change	*30.3 %*	*19.8 %*	*15.0 %*	*12.1 %*	*10.7 %*	*9.4 %*	*8.2 %*	*9.2 %*	*6.8 %*	*6.3 %*	*4.5 %*	*3.0 %*	*3.0 %*	*3.0 %*
EBIT	33.10	40.18	47.26	55.38	66.04	78.33	98.46	128.17	143.24	157.46	169.86	178.38	187.27	
EBIT-margin	*13.0 %*	*13.2 %*	*13.5 %*	*14.1 %*	*15.2 %*	*16.5 %*	*19.2 %*	*22.8 %*	*23.9 %*	*24.7 %*	*25.5 %*	*26.0 %*	*26.5 %*	
Tax rate (EBT)	*20.6 %*	*21.2 %*	*21.9 %*	*22.0 %*	*22.0 %*	*22.0 %*	*22.0 %*	*22.0 %*	*22.0 %*	*22.0 %*	*22.0 %*	*22.0 %*	*22.0 %*	
NOPAT	26.28	31.65	36.89	43.20	51.51	61.09	76.80	99.97	111.73	122.82	132.49	139.14	146.07	
Depreciation	9.69	11.55	12.97	15.67	17.36	18.99	20.55	22.45	23.99	25.50	26.64	27.44	28.27	
in % of Sales	*3.8 %*	*3.8 %*	*3.7 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	
Changes in provisions	0.00	0.00	0.00	0.21	0.04	0.04	0.04	0.05	0.04	0.04	0.03	0.02	0.02	
Change in Liquidity from														
- Working Capital	10.12	7.20	6.50	4.96	5.90	5.71	5.47	6.64	5.37	5.29	4.02	2.80	2.88	
- Capex	11.50	13.00	14.00	15.67	17.36	18.99	20.55	22.45	23.99	25.50	26.64	27.44	28.27	
Capex in % of Sales	*4.5 %*	*4.3 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	*4.0 %*	
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Free Cash Flow (WACC Model)	14.35	22.99	29.36	38.45	45.66	55.42	71.36	93.38	106.40	117.57	128.50	136.36	143.21	150
PV of FCF	14.35	21.23	25.02	30.25	33.16	37.16	44.17	53.36	56.13	57.26	57.77	56.60	54.87	1,082
share of PVs	3.73 %			29.61 %										66.66 %

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	5.00 %	Financial Strength	1.00
Cost of debt (after tax)	2.1 %	Liquidity (share)	1.20
Market return	7.00 %	Cyclicality	1.60
Risk free rate	1.50 %	Transparency	1.40
		Others	1.30
WACC	**8.32 %**	**Beta**	**1.30**

Valuation (m)

Present values 2030e	541		
Terminal Value	1,082		
Financial liabilities	16		
Pension liabilities	0		
Hybrid capital	0		
Minority interest	0		
Market val. of investments	0		
Liquidity	14	No. of shares (m)	6.5
Equity Value	**1,621**	**Value per share (EUR)**	**249.67**

Sensitivity Value per Share (EUR)

Beta	WACC	Terminal Growth 2.25 %	2.50 %	2.75 %	**3.00 %**	3.25 %	3.50 %	3.75 %
1.49	9.3 %	189.97	194.08	198.51	203.29	208.47	214.09	220.21
1.40	8.8 %	207.97	213.02	218.49	224.42	230.89	237.96	245.74
1.35	8.6 %	218.09	223.71	229.81	236.46	243.73	251.72	260.54
1.30	8.3 %	229.08	235.35	242.19	**249.67**	257.88	266.95	277.00
1.25	8.1 %	241.05	248.08	255.77	264.21	273.54	283.88	295.41
1.20	7.8 %	254.14	262.05	270.73	280.32	290.95	302.81	316.13
1.11	7.3 %	284.34	294.47	305.71	318.26	332.34	348.26	366.41

Beta	WACC	Delta EBIT-margin -1.5 pp	-1.0 pp	-0.5 pp	**+0.0 pp**	+0.5 pp	+1.0 pp	+1.5 pp
1.49	9.3 %	189.52	194.11	198.70	203.29	207.89	212.48	217.07
1.40	8.8 %	209.41	214.42	219.42	224.42	229.42	234.43	239.43
1.35	8.6 %	220.75	225.99	231.22	236.46	241.69	246.93	252.17
1.30	8.3 %	233.19	238.68	244.17	**249.67**	255.16	260.65	266.14
1.25	8.1 %	246.90	252.67	258.44	264.21	269.99	275.76	281.53
1.20	7.8 %	262.07	268.15	274.23	280.32	286.40	292.48	298.56
1.11	7.3 %	297.82	304.63	311.44	318.26	325.07	331.88	338.69

- The growth anticipated for Hypoport is based on robust business development in all segments
- Financial Services (Europace) in particular offers systematic potential for economies of scale and margin growth
- On this basis we assume a positive long-term margin trend
- Based on a sophisticated regional dispersion of tax obligations a low tax rate is assumed long term.

Valuation

	2014	2015	2016	2017	2018e	2019e	2020e
Price / Book	1.7 x	4.0 x	7.0 x	8.2 x	7.9 x	6.5 x	5.5 x
Book value per share ex intangibles	1.25	3.40	3.72	4.41	0.14	2.85	6.34
EV / Sales	0.6 x	1.4 x	2.8 x	3.5 x	4.9 x	4.1 x	3.5 x
EV / EBITDA	5.6 x	7.8 x	15.6 x	22.6 x	29.1 x	23.9 x	20.2 x
EV / EBIT	9.0 x	10.2 x	19.0 x	29.1 x	37.7 x	30.8 x	25.8 x
EV / EBIT adj.*	9.0 x	10.2 x	19.0 x	29.1 x	37.7 x	30.8 x	25.8 x
P / FCF	29.9 x	9.8 x	45.6 x	n.a.	86.4 x	53.6 x	42.0 x
P / E	11.3 x	13.2 x	25.0 x	36.8 x	46.7 x	38.8 x	33.3 x
P / E adj.*	11.3 x	13.2 x	25.0 x	36.8 x	46.7 x	38.8 x	33.3 x
Dividend Yield	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FCF Potential Yield (on market EV)	15.9 %	11.2 %	5.3 %	3.8 %	2.9 %	3.5 %	4.1 %

*Adjustments made for: -

Consolidated profit & loss

In EUR m	2014	2015	2016	2017	2018e	2019e	2020e
Sales	**112.33**	**138.98**	**156.64**	**194.86**	**253.96**	**304.27**	**349.76**
Change Sales yoy	14.5 %	23.7 %	12.7 %	24.4 %	30.3 %	19.8 %	15.0 %
Increase / decrease in inventory	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Own work capitalised	4.18	4.66	5.66	6.99	9.14	10.95	12.59
Total Sales	**116.50**	**143.65**	**162.30**	**201.84**	**263.11**	**315.22**	**362.35**
Material expenses	55.95	67.31	71.44	92.57	116.95	139.96	160.30
Gross profit	**60.55**	**76.34**	**90.86**	**109.27**	**146.16**	**175.26**	**202.06**
Gross profit margin	*53.9 %*	*54.9 %*	*58.0 %*	*56.1 %*	*57.6 %*	*57.6 %*	*57.8 %*
Personnel expenses	35.33	38.22	46.36	58.56	76.19	91.28	104.75
Other operating income	1.83	2.18	3.07	4.52	5.84	6.69	7.00
Other operating expenses	14.50	15.25	19.33	25.35	33.02	38.95	44.07
Unfrequent items	0.15	0.03	0.00	0.26	0.00	0.00	0.00
EBITDA	**12.70**	**25.08**	**28.24**	**30.12**	**42.79**	**51.73**	**60.23**
Margin	*11.3 %*	*18.0 %*	*18.0 %*	*15.5 %*	*16.9 %*	*17.0 %*	*17.2 %*
Depreciation of fixed assets	0.97	1.12	1.24	1.69	1.90	2.13	2.45
EBITA	**11.73**	**23.96**	**27.00**	**28.44**	**40.89**	**49.60**	**57.78**
Amortisation of intangible assets	3.80	4.70	3.84	5.12	7.87	9.43	10.49
Goodwill amortisation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EBIT	**7.94**	**19.26**	**23.16**	**23.32**	**33.02**	**40.16**	**47.29**
Margin	*7.1 %*	*13.9 %*	*14.8 %*	*12.0 %*	*13.0 %*	*13.2 %*	*13.5 %*
EBIT adj.	**7.94**	**19.26**	**23.16**	**23.32**	**33.02**	**40.16**	**47.29**
Interest income	0.14	0.37	0.23	0.55	0.80	0.80	0.80
Interest expenses	0.82	0.52	0.63	0.88	1.40	1.60	1.80
Other financial income (loss)	0.00	0.00	0.08	0.00	0.10	0.20	0.20
EBT	**7.25**	**19.10**	**22.84**	**22.99**	**32.52**	**39.56**	**46.49**
Margin	*6.5 %*	*13.7 %*	*14.6 %*	*11.8 %*	*12.8 %*	*13.0 %*	*13.3 %*
Total taxes	1.32	3.24	4.76	4.56	6.70	8.40	10.20
Net income from continuing operations	**5.93**	**15.87**	**18.07**	**18.43**	**25.82**	**31.16**	**36.29**
Income from discontinued operations (net of tax)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net income before minorities	**5.93**	**15.87**	**18.07**	**18.43**	**25.82**	**31.16**	**36.29**
Minority interest	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Net income	**5.92**	**15.87**	**18.07**	**18.42**	**25.82**	**31.16**	**36.29**
Margin	*5.3 %*	*11.4 %*	*11.5 %*	*9.5 %*	*10.2 %*	*10.2 %*	*10.4 %*
Number of shares, average	6.12	6.19	6.01	5.94	6.49	6.49	6.49
EPS	**0.97**	**2.56**	**3.00**	**3.10**	**3.98**	**4.80**	**5.59**
EPS adj.	0.97	2.56	3.00	3.10	3.98	4.80	5.59

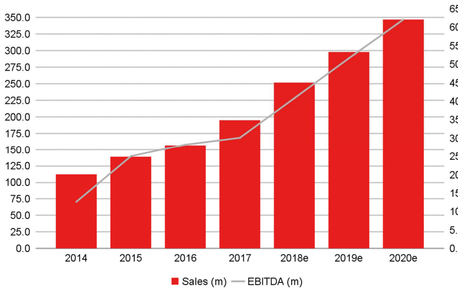
*Adjustments made for:

Guidance: 2018: Revenue between EUR 240m and 260m and EBIT between EUR 29m and 34m

Financial Ratios

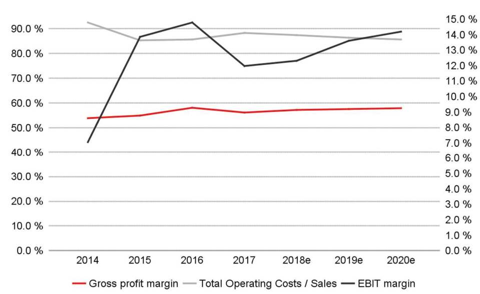
	2014	2015	2016	2017	2018e	2019e	2020e
Total Operating Costs / Sales	92.5 %	85.3 %	85.6 %	88.3 %	86.8 %	86.6 %	86.4 %
Operating Leverage	7.0 x	6.0 x	1.6 x	0.0 x	1.4 x	1.1 x	1.2 x
EBITDA / Interest expenses	15.4 x	48.0 x	45.0 x	34.3 x	30.6 x	32.3 x	33.5 x
Tax rate (EBT)	18.2 %	16.9 %	20.8 %	19.9 %	20.6 %	21.2 %	21.9 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Sales per Employee	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Sales, EBITDA
in EUR m



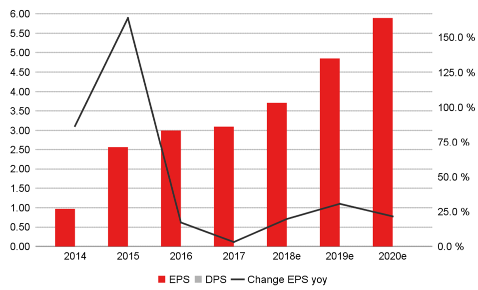
Source: Warburg Research

Operating Performance
in %



Source: Warburg Research

Performance per Share



Source: Warburg Research

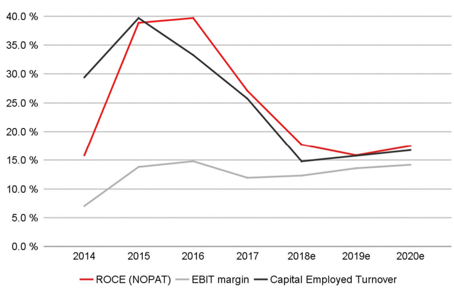
Consolidated balance sheet

In EUR m	2014	2015	2016	2017	2018e	2019e	2020e
Assets							
Goodwill and other intangible assets	30.95	31.89	41.66	55.97	152.60	166.17	179.67
thereof other intangible assets	0.00	0.00	3.83	6.77	103.40	116.96	130.47
thereof Goodwill	0.00	0.00	0.00	24.77	24.77	24.77	24.77
Property, plant and equipment	2.66	3.04	2.63	4.45	4.54	4.41	3.96
Financial assets	0.08	0.03	1.09	1.43	1.43	1.43	1.43
Other long-term assets	1.12	1.42	3.01	4.09	4.09	4.09	4.09
Fixed assets	**34.82**	**36.38**	**48.39**	**65.93**	**162.66**	**176.09**	**189.15**
Inventories	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accounts receivable	29.62	32.85	38.09	49.14	64.00	76.70	88.20
Liquid assets	12.02	24.76	22.41	14.33	30.56	44.68	65.01
Other short-term assets	3.94	2.09	3.21	11.57	11.57	11.57	11.57
Current assets	**45.59**	**59.70**	**63.71**	**75.05**	**106.13**	**132.96**	**164.79**
Total Assets	**80.40**	**96.10**	**112.10**	**141.00**	**268.80**	**309.10**	**353.90**
Liabilities and shareholders' equity							
Subscribed capital	6.20	6.20	6.20	6.20	6.49	6.49	6.49
Capital reserve	2.21	2.35	2.35	2.91	47.67	47.67	47.67
Retained earnings	30.26	44.01	55.54	73.75	99.56	130.73	167.01
Other equity components	-0.08	-0.16	0.05	-0.25	-0.25	-0.25	-0.35
Shareholders' equity	38.59	52.39	64.13	82.60	153.48	184.64	220.83
Minority interest	0.26	0.27	0.27	0.31	0.31	0.31	0.31
Total equity	**38.85**	**52.66**	**64.40**	**82.91**	**153.78**	**184.95**	**221.13**
Provisions	0.20	0.21	0.25	0.18	0.18	0.18	0.18
thereof provisions for pensions and similar obligations	0.20	0.21	0.24	0.18	0.18	0.18	0.18
Financial liabilities (total)	15.90	11.26	10.71	16.30	68.55	72.15	75.75
thereof short-term financial liabilities	4.64	4.34	4.44	2.94	2.94	2.94	2.94
Accounts payable	16.49	20.39	18.71	23.06	27.80	33.30	38.30
Other liabilities	8.96	11.55	18.07	18.53	18.53	18.53	18.53
Liabilities	**41.56**	**43.42**	**47.74**	**58.07**	**115.07**	**124.17**	**132.77**
Total liabilities and shareholders' equity	**80.40**	**96.10**	**112.10**	**141.00**	**268.80**	**309.10**	**353.90**

Financial Ratios

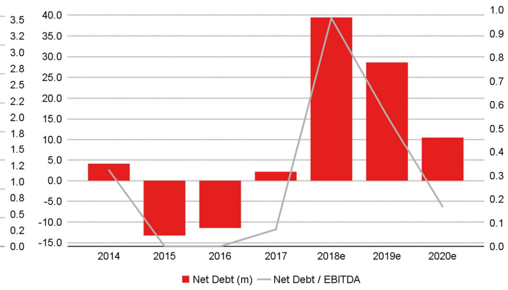
	2014	2015	2016	2017	2018e	2019e	2020e
Efficiency of Capital Employment							
Operating Assets Turnover	7.1 x	9.0 x	7.1 x	6.4 x	6.2 x	6.4 x	6.5 x
Capital Employed Turnover	2.6 x	3.5 x	3.0 x	2.3 x	1.3 x	1.4 x	1.5 x
ROA	17.0 %	43.6 %	37.3 %	27.9 %	15.9 %	17.7 %	19.2 %
Return on Capital							
ROCE (NOPAT)	15.8 %	38.9 %	39.7 %	27.1 %	18.9 %	15.6 %	16.6 %
ROE	16.6 %	34.9 %	31.0 %	25.1 %	21.9 %	18.4 %	17.9 %
Adj. ROE	16.6 %	34.9 %	31.0 %	25.1 %	21.9 %	18.4 %	17.9 %
Balance sheet quality							
Net Debt	4.08	-13.29	-11.46	2.15	38.18	27.65	10.92
Net Financial Debt	3.88	-13.50	-11.70	1.97	37.99	27.47	10.74
Net Gearing	10.5 %	-25.2 %	-17.8 %	2.6 %	24.8 %	15.0 %	4.9 %
Net Fin. Debt / EBITDA	30.5 %	n.a.	n.a.	6.5 %	88.8 %	53.1 %	17.8 %
Book Value / Share	6.3	8.7	10.6	13.7	23.6	28.4	34.0
Book value per share ex intangibles	1.2	3.4	3.7	4.4	0.1	2.8	6.3

ROCE Development



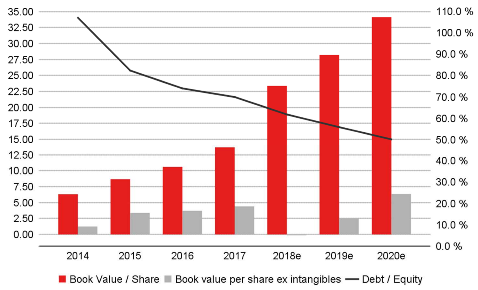
Source: Warburg Research

Net debt
in EUR m



Source: Warburg Research

Book Value per Share
in EUR



Source: Warburg Research

Consolidated cash flow statement

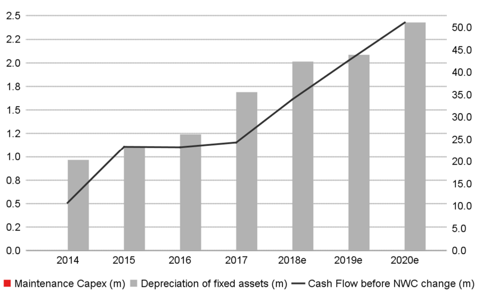
In EUR m	2014	2015	2016	2017	2018e	2019e	2020e
Net income	5.93	15.87	18.07	18.43	25.82	31.16	36.29
Depreciation of fixed assets	0.97	1.12	1.24	1.69	1.90	2.13	2.45
Amortisation of goodwill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amortisation of intangible assets	3.80	4.70	3.84	5.12	7.87	9.43	10.49
Increase/decrease in long-term provisions	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Other non-cash income and expenses	0.03	1.60	0.00	-0.92	0.00	0.00	0.00
Cash Flow before NWC change	**10.72**	**23.28**	**23.19**	**24.31**	**35.59**	**42.73**	**49.23**
Increase / decrease in inventory	-4.13	-1.66	0.00	0.00	0.00	0.00	0.00
Increase / decrease in accounts receivable	0.00	0.00	-5.24	-11.05	-14.86	-12.70	-11.50
Increase / decrease in accounts payable	1.77	4.60	-1.69	4.35	4.74	5.50	5.00
Increase / decrease in other working capital positions	0.05	0.47	2.10	-9.36	0.00	0.00	0.00
Increase / decrease in working capital (total)	-2.31	3.41	-4.83	-16.06	-10.12	-7.20	-6.50
Net cash provided by operating activities [1]	**8.42**	**26.69**	**18.36**	**8.26**	**25.47**	**35.53**	**42.73**
Investments in intangible assets	-5.55	-4.70	-7.67	-8.00	-9.50	-11.00	-12.00
Investments in property, plant and equipment	-0.62	-0.62	-0.80	-2.00	-2.00	-2.00	-2.00
Payments for acquisitions	0.00	0.00	-5.56	-9.56	-95.00	-12.00	-12.00
Financial investments	0.02	0.01	0.03	0.55	0.00	0.00	0.00
Income from asset disposals	0.00	0.05	0.01	0.02	0.00	0.00	0.00
Net cash provided by investing activities [2]	**-6.18**	**-7.06**	**-13.25**	**-21.19**	**-106.50**	**-25.00**	**-26.00**
Change in financial liabilities	-0.85	-4.60	-0.50	4.85	52.25	3.60	3.60
Dividends paid	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purchase of own shares	-0.31	-2.30	-6.91	0.00	0.00	0.00	0.00
Capital measures	0.00	0.00	0.00	0.00	45.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net cash provided by financing activities [3]	**-1.16**	**-6.90**	**-7.41**	**4.85**	**97.25**	**3.60**	**3.60**
Change in liquid funds [1]+[2]+[3]	**1.07**	**12.73**	**-2.29**	**-8.08**	**16.22**	**14.13**	**20.33**
Effects of exchange-rate changes on cash	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cash and cash equivalent at end of period	**12.02**	**24.76**	**22.46**	**14.33**	**30.56**	**44.68**	**65.01**

Financial Ratios

	2014	2015	2016	2017	2018e	2019e	2020e
Cash Flow							
FCF	2.25	19.59	10.69	-2.84	13.97	22.53	28.73
Free Cash Flow / Sales	2.0 %	15.4 %	6.3 %	-0.9 %	5.5 %	7.4 %	8.2 %
Free Cash Flow Potential	11.38	21.84	23.48	25.56	36.09	43.33	50.03
Free Cash Flow / Net Profit	38.0 %	134.7 %	54.7 %	-9.5 %	54.1 %	72.3 %	79.2 %
Interest Received / Avg. Cash	1.2 %	2.0 %	1.0 %	3.0 %	3.6 %	2.1 %	1.5 %
Interest Paid / Avg. Debt	5.0 %	3.8 %	5.7 %	6.5 %	3.3 %	2.3 %	2.4 %
Management of Funds							
Investment ratio	5.5 %	3.8 %	5.4 %	5.1 %	4.5 %	4.3 %	4.0 %
Maint. Capex / Sales	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Capex / Dep	129.5 %	91.4 %	166.6 %	146.9 %	117.6 %	112.4 %	108.2 %
Avg. Working Capital / Sales	10.0 %	9.2 %	10.2 %	11.7 %	12.3 %	13.1 %	13.3 %
Trade Debtors / Trade Creditors	179.6 %	161.1 %	203.6 %	213.1 %	230.2 %	230.3 %	230.3 %
Inventory Turnover	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Receivables collection period (days)	96	86	89	92	92	92	92
Payables payment period (days)	108	111	96	91	87	87	87
Cash conversion cycle (Days)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

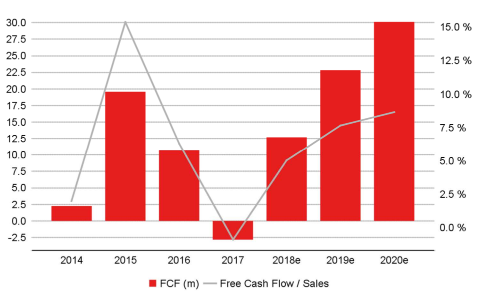
CAPEX and Cash Flow

in EUR m



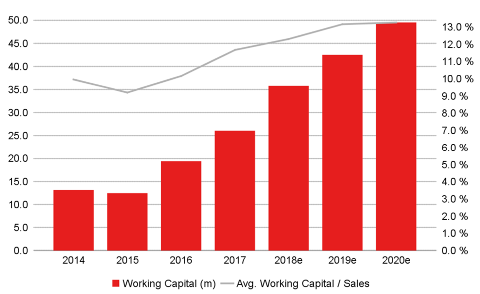
Source: Warburg Research

Free Cash Flow Generation



Source: Warburg Research

Working Capital



Source: Warburg Research

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Company	Disclosure	Link to the historical price targets and rating changes (last 12 months)
HYPOPORT	5	http://www.mmwarburg.com/disclaimer/disclaimer_en/DE0005493365.htm

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Investment recommendation: expected direction of the share price development of the financial instrument up to the given price target in the opinion of the analyst who covers this financial instrument.

-B-	**Buy:**	The price of the analysed financial instrument is expected to rise over the next 12 months.
-H-	**Hold:**	The price of the analysed financial instrument is expected to remain mostly flat over the next 12 months.
-S-	**Sell:**	The price of the analysed financial instrument is expected to fall over the next 12 months.
"-"	**Rating suspended:**	The available information currently does not permit an evaluation of the company.

WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING

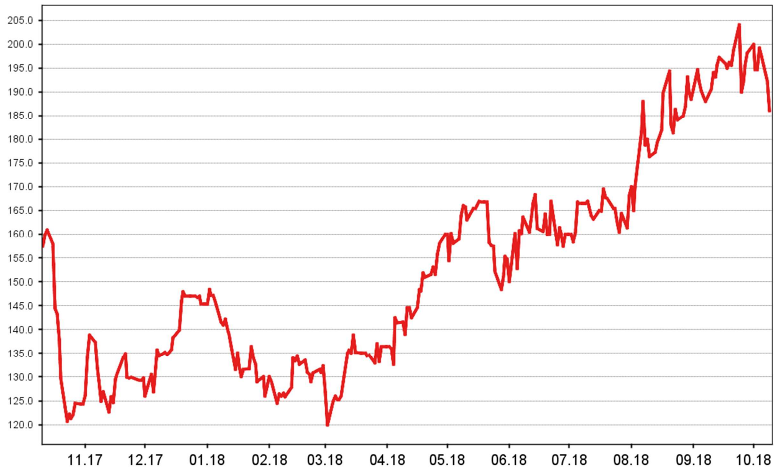
Rating	Number of stocks	% of Universe
Buy	116	56
Hold	87	42
Sell	3	1
Rating suspended	0	0
Total	**206**	**100**

WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING …

… taking into account only those companies which were provided with major investment services in the last twelve months.

Rating	Number of stocks	% of Universe
Buy	33	67
Hold	16	33
Sell	0	0
Rating suspended	0	0
Total	**49**	**100**

PRICE AND RATING HISTORY HYPOPORT AS OF 10.10.2018



Markings in the chart show rating changes by Warburg Research GmbH in the last 12 months. Every marking details the date and closing price on the day of the rating change.

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