Germany's Attractiveness as a Financial Center

An evaluation from the perspective of investment professionals

CFA Society Germany

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CFA Society Germany e.V. is a non-profit organization based in Frankfurt / Main in Germany. It was founded in 2000 and is Germany's largest association for investment professionals. It promotes the following professional education programs: the CFA® (Chartered Financial Analyst), the CIIF® (Certificate in Investment Foundations), and the CIPM® (Certificate in Investment Performance Measurement). It also provides numerous Continuing Professional Development ('CPD') events and the annual Research Challenge of the CFA Institute in Germany. Apart from providing full-range member services, CFA Society Germany fosters best practice in Germany's financial industry through participation in various specialized expert panels (such as the German Asset Management Standards Committee) and through the organization of manifold interdisciplinary expert activities, e.g., the German Advocacy Committee, the CFA Round Table, conferences and workshops.

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List of Abbreviations and Symbols

AuA	assets under administration
AuM	assets under management
(app.)	see Appendix
BaFin	Bundesanstalt für Finanzdienstleistungsaufsicht, Federal Financial Supervisory Authority
bn	billion
CFA	Chartered Financial Analyst
CIIF	Certificate in Investment Foundations
CIPM	Certificate in Investment Performance Measurement
CPD	Continuing Professional Development
Dr.	Doktor, doctor
E- / e-	Electronic / electronic
ECB	European Central Bank
e.g.	exempli gratia, for example
EIB	European Investment Bank
EIOPA	European Insurance and Occupational Pensions Authority
ESG	environmental, social and governance
ESM	European Stability Mechanism
etc.	et cetera, and so on
ETF	Exchange-traded fund
EU	European Union
EUR	Euro
e.V.	eingetragener Verein, registered association
FinTech	Financial Technology
ISBN	International Standard Book Number
MiFID	Markets in Financial Instruments Directive
UK	United Kingdom
USA	United States of America
XETRA	Exchange Electronic Trading (the electronic trading platform of Deutsche Börse)

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&	et, and
%	percent
®	registered trademark

Preface

Dear readers!

With Brexit looking to become a reality, many decision-makers, political experts, and stakeholders in the financial centers of continental Europe are asking themselves about its consequences – and to what extent their country and financial industry might be impacted by this significant event. Germany, as one of London's major competitors, has been considering these questions from various perspectives, including whether Germany's financial industry ('Financial Germany') is prepared to take on a larger international role. However, credibly assessing Financial Germany without sufficient knowledge of the merits of competing financial centers has always been an attempt to square the circle.

To evaluate the attractiveness of Financial Germany, this study takes a distinct approach. It obtains input from a very broad spectrum of stakeholder groups in Germany's financial industry, and draws on their aggregate domestic as well as international work experience in important financial centers in order to build an informed and holistic view. The result, presented in this report, is a colorful and detailed picture of strengths and weaknesses of our financial industry. Moreover, the perspective goes beyond well-known Frankfurt towards Germany's other national financial centers, and discusses their respective pros and cons.

Finally, after summarizing the main topical insights, the study makes recommendations for decision-makers of the various stakeholder groups to get Financial Germany into even better shape.

Welcome to a discovery trail through Financial Germany!

Susan Spinner, CFA
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1. Management Summary

This comprehensive study attracted 819 survey respondents from the core, as well as more peripheral realms of the German investment industry, representing a broad range of institutions, professional expertise and experience, and an international base of knowledge about other important financial centers abroad.

The overall findings reflect both an optimistic as well as a realistic picture of 'Financial Germany'. A first impressive finding is the degree of internationalization of Germany's investment industry. Almost a quarter of participants responded in English, and more than 42% of the respondents have substantial international work experience in relevant financial centers. Our financial industry's biggest asset turned out to be Germany's stable and fair legal and regulatory framework. The financial regulator is perceived to provide a level playing field without preferential treatments for any stakeholder group, but exhibits scope for improvement, especially in terms of efficiency and practicality of regulation as well as ensuring an appropriate framework that fosters innovation.

Germany's financial culture turned out to be quite heterogeneous: low levels of the average citizen's knowledge and use of financial products and instruments contrast with a strong financial infrastructure and the presence of international financial institutions, as well as fairly good levels of communication amongst financial practitioners and connections with academia. Also, financial education in Germany is in good shape – be it on the professional track, in the academic field or with regard to continuing professional development. On the other hand, the financial job market appears more precarious that would be expected, with job security, work-life balance and income opportunities showing rather moderate levels.

Interesting insights were gained from the industry's various sub-sectors: the 'FinTechies' provided many contrarian opinions and revealed highly diverse degrees of familiarity with their products and services. Germany's Asset Managers were assessed solidly, especially with regard to their core competencies and their handling of traditional asset classes. However, a tendency towards self-praise was observed. Asset administrators are considered to be in even better shape and were complimented particularly for their controlling skills by respondents. Outsourcing, both in asset management and asset administration, has reached high and still rising levels, though varying along the value chain of activities.

Participants' 'wish list' for products and services is clearly headed by a tax-efficient, flexible private pension scheme. Also, there are strong requests for additional alternative investment opportunities, such as infrastructure and other long-term investments, micro finance and vehicles designed around crypto-currencies and volatility.

Finally, there is more to Financial Germany than Frankfurt. The city on the Main river is certainly an overall attractive location, reflecting something of a compromise across several important aspects, but there are clearly many good reasons to also consider alternative cities such as Munich, Stuttgart, Hamburg, the Rhine / Ruhr region, and Berlin.

2. Introduction

When CFA Society Germany was founded in the year 2000, the European Union ('EU') was a one-way expansionary road: the European Commission suggested that Greece become the twelfth member state of the EU, and consultations with Balkan, Eastern European and Mediterranean countries subsequently further enlarged the bloc. Additionally, accession talks with Turkey were prepared, and the EU's Charter of Human Rights was solemnly adopted. However, the first hairline cracks in this road became visible soon after: in the same year 2000, the Euro fell to a record low of 0.8285 against the US dollar and caused concerted intervention by the world's major central banks. In addition, the Danish people voted against the Euro's introduction.

In 2016, the ever-EU-skeptical United Kingdom ('UK'), which had joined the EU somewhat late in 1973 and never adopted the Euro, formally declared its willingness to leave the EU completely, with a positive 'Brexit' vote. This would mean that London, the dominant European financial marketplace, would leave the common market. Such a withdrawal raises hopes across other European financial centers of securing some portion of the business that may move out of London after 'Brexit'. Germany is among the first countries mentioned in this context.

CFA Society Germany, the country's largest association of investment professionals, is motivated to partake in these discussions on a number of levels, including through this study.

Firstly, this study seeks to develop a comprehensive profile of strengths and weaknesses regarding Germany's investment industry, including FinTech and including the framework and conditions under which companies and professionals operate. By applying and contrasting the collective domestic and international work experience of the study's 816 participants, representing a broad range of relevant stakeholder groups, one gains a starting point for gauging what kind of financial business might be more or less likely to flow towards Germany.

For the evaluation of Germany's attractiveness as a financial center, expert members of the German Advocacy Committee, one of CFA Society Germany's expert panels, carefully selected core criteria from all major aspects that comprise 'Financial Germany': its regulatory framework and enabling conditions, Germany's financial education, talent pool, job market and networks, its competence regarding financial products and services, and, last, but not least, its socio-economic attractiveness when competing for international financial companies and talent. Special attention is also paid to the FinTech sector, which is growing quickly and poses to substantially challenge and transform 'Financial Germany'.

Secondly, this study stretches beyond Frankfurt. Germany's federal tradition in many areas of life is also reflected in a variety of regional financial centers across the country which enrich 'Financial Germany' with their specific profiles of attractiveness. These considerations also inform international companies and staff when deciding to build a base in Germany.

Thirdly, with this study, CFA Society Germany wishes to provide initial guidance for both political and financial decision-makers on how to further improve the attractiveness of Financial Germany. In due time, follow-up studies of this kind might follow, to build upon the insights gained in this first study.

3. Methodology

3.1 Perspectives

When discussing a financial center's attractiveness, the question of whether and how to compare it with competing financial centers invariably comes up. This study considers the collective international experience of survey respondents by comparing answers of those with an international background with the overall answers on a financial center-specific basis. Thus, conclusions can be reached indirectly about which financial center aspects are likely to be of higher or lower quality respective locations.

In many cases, the answers given are analyzed overall first, and then subsequently along different layers of demographic characteristics, such as professional sub-sector, professional status, duration of domestic professional experience and region of international professional experience. In all cases, the overall score provided as an answer is the weighted average of the group-specific scores.

3.2 Group-specific attribution of questions

In order to account for the different levels of knowledge among participants from different occupations, participants were first asked to categorize themselves according to their professional background. The online survey tool then automatically selected the relevant group-specific sets of questions from the total catalogue of survey questions. Figure 1 illustrates the categories of questions and the number of questions asked of participants within each category:

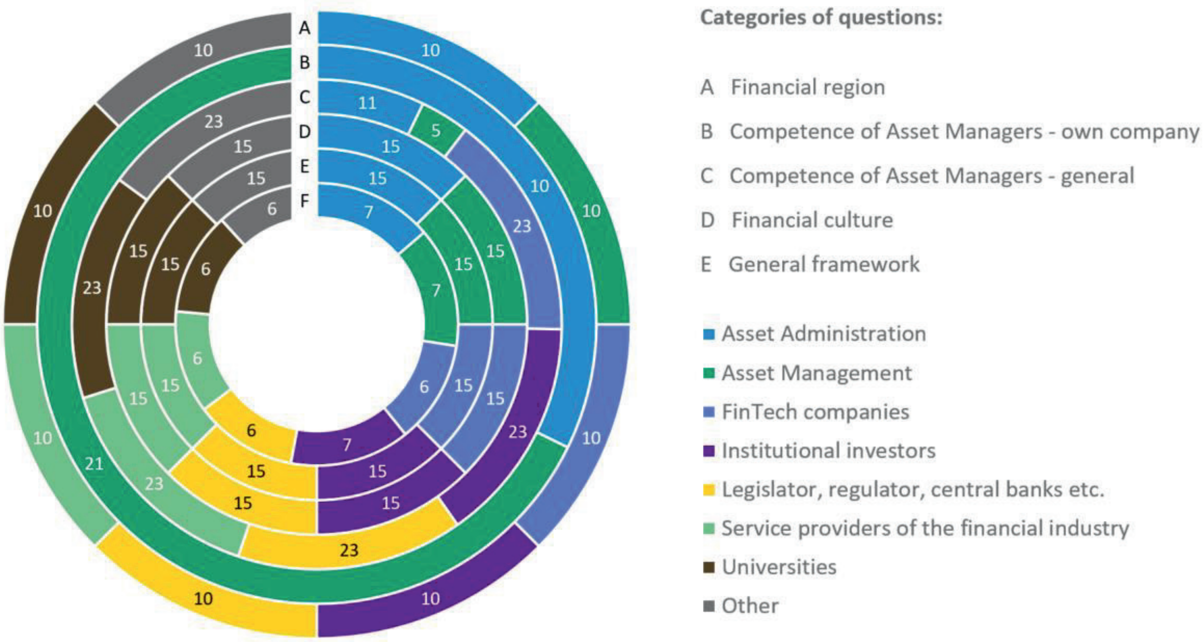

Figure 1 - Group-specific attribution of questions

3.3 Recategorizations

Professional responsibilities: 54 participants originally classified their professional responsibilities as 'other', but provided descriptions of their activities as well. Based on this information, the following recategorization measures were taken:

- 11 participants were recategorized into the sub-group of 'asset management', because the descriptions of their activities were clearly centered around specialized responsibilities for asset classes or processes along the value chain of investment management
- 10 participants were recategorized into the sub-group of 'service providers', because the descriptions of their activities were clearly in line with the type of activities as outlined in the survey for this sub-group

Financial regions: originally, 40 respondents classified their working areas as 'other'. In 14 cases, the locations they provided as further descriptions could be attributed to one of the major financial centers and were reclassified. 26 cases remained as 'other'.

Scope for improvement and wish list for financial products & services: these free text field sections of the survey sometimes and naturally evoked prosaic descriptions of participants for identical aspects from various angles and with differing terminology. Answers which obviously were related to identical aspects were recategorized by the author and aggregated for analytical purposes.

Reasons for outsourcing in asset management and asset administration: in these two free text field sections of the survey, participants could describe the considerations underlying the outsourcing activities within their companies. Naturally, they used differing vocabulary describing them, but the results could easily be grouped into a few consistent categories by the author.

Demographic category 'Other': this category can further be subdivided into groups of 'General Banking & Investment Banking' (1.8%), group 'Corporate Finance / Corporate Treasury' (1.3%), 'Investor Relations' (1.0%) and 'Media' (0.7%). However, these small groups are built only for the purpose of information, not for group-specific analyses or interpretation of results.

3.4 Scale

For all standardized survey questions, the scale according to figure 2 is used. Its main features are: bipolarity, equidistance, seven fully verbalized answer categories including a middle, neutral category, a corresponding numerical value for each category, and the waiver of a 'don't know' category:

very poor	poor	rather poor	no opinion	rather good	good	very good
-3	-2	-1	0	+1	+2	+3

Figure 2 - Survey scale

These characteristics are considered advantageous in terms of comprehensibility, range of choice in the specific context of the survey, and in light of the targeted groups of participants[1]. The conscious decision for a single 'neutral', middle category as opposed to a 'don't know' category instead or additionally, accounts for the comparatively high level of knowledge about Financial Germany across all participating stakeholder groups, but might have entailed a 'tendency to the middle' when answering.

[1] Menold, N. & Bogner, K. (2015): ‘SDM Survey Guidelines: Gestaltung von Ratingskalen in Fragebögen‘, pp 1-8

4. Results

4.1 Insights regarding demographics and Internationalization

Response, sub-groups, and sample

A total of 819 respondents from core and more subsidiary sectors of the investment industry took part in the survey from May 29th through July 9th, 2017. The total sample can be distinguished by various demographic sub-groups, most of which represent sample sizes above 35 (green) which are deemed statistically significant. Sub-groups with a lower level of statistical significance are cautiously included for interpretation (yellow) or not commented on at all (red). Table 1 gives an overview of all demographic sub-groups and their respective sub-sample sizes.

Demographic sub-groups	Sample size category: n is above …				
	10	20	35	100	350
By professional status					
Employees without leadership responsibilities					x
Team, department or division heads				x	
Top management			x		
Self-employed			x		
Not employed		x			
By focus of organization					
Asset management companies, total				x	
Assets under management < 10 bn EUR				x	
Assets under management 10-100 bn EUR			x		
Assets under management > 100 bn EUR			x		
Asset administration companies, total			x		
Assets under administration < 10 bn. EUR	x				
Assets under administration 10-100 bn. EUR	x				
Assets under administration > 100 bn. EUR		x			
FinTech companies			x		
Institutional investors, total			x		
Investment strategy is decided in Germany			x		
Investment strategy is decided outside Germany	x				
Service providers to financial industry				x	
Universities and 'financial think tanks'			x		
Legislator, regulator, central banks, federal agencies			x		
Other			x		
By professional experience in Germany					
< 2 years			x		
2 – 10 years				x	
11 – 20 years				x	
> 20 years				x	
By professional experience of > 6m outside Germany					
United Kingdom			x		
United States of America			x		
Switzerland		x			
Luxembourg		x			
Other - Europe			x		
Other - rest of world		x			

Table 1 - Demographic sub-groups and sample-sizes

Demographic structure of participants

Participants were asked to categorize themselves into seven main organizational categories provided, or to classify themselves as 'other' with the possibility to describe their area of work. The main categories are:

- **Asset administration companies** (for example ('e.g.'), when working as / in middle / back office, controlling, reporting, performance measurement, accounting, taxes) – this category was subsequently subdivided by size categories of assets under administration.
- **Asset management companies** (e.g., when working as / in investment advisor, research, portfolio / fund management, trading, client relationship management) – this category was subsequently subdivided by size categories of assets under management.
- **FinTech companies**.
- **Institutional investors** (e.g., when working as / in treasury of banks and large non-bank companies, insurance companies, pension funds and foundations) – this category was subsequently subdivided by the location where investment decisions are taken: either in or outside Germany.
- **Legislator, regulator, central banks, etc.,** including Germany's federal financial agencies (e.g., when working as / in German Federal Ministry of Finance, Deutsche Bundesbank, Bundesanstalt für Finanzdienstleistungsaufsicht ('BaFin'), European Central Bank, The Federal Republic of Germany - Finance Agency etc.).
- **Service providers** of the financial industry (e.g., when working as / in securities exchanges, auditor, consultancy, law firms, rating agencies, information / data providers).
- **Universities**, also including research institutes and financial think tanks.
- **Other**.

Figure 3 displays the survey participants' distribution according to organizational focus:

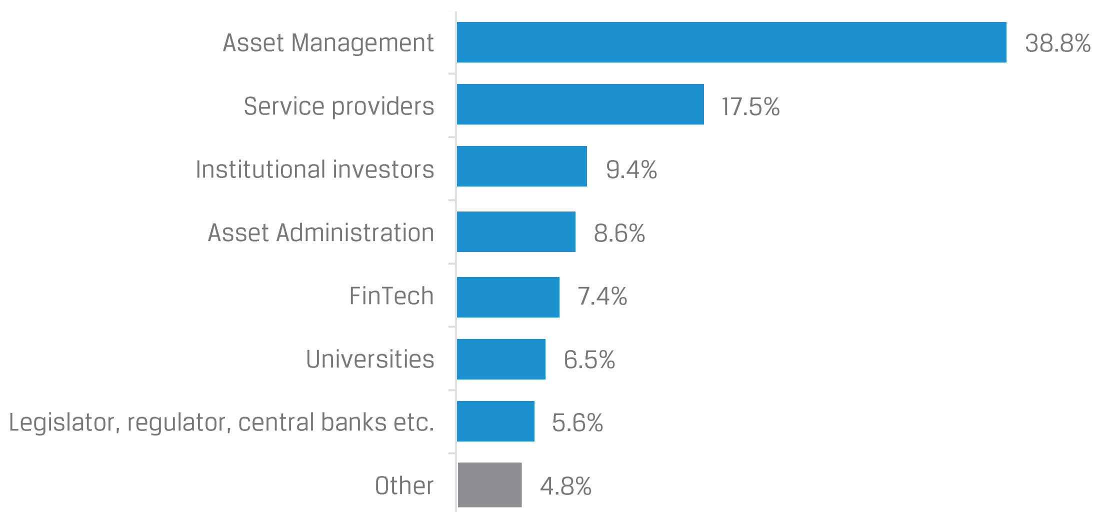

Figure 3 - Participants' organizational focus

With regard to domestic professional experience and professional status, as shown in figure 4, the study participants represent a broad sample of Germany's financial industry. With the exception of respondents who are currently not employed, the sample sizes are sufficient to allow for group-specific analyses and interpretation of results.

Figure 4 - Professional experience and status

As figure 5 displays, the assets under administration (AuA) and assets under management (AuM) represented by the participants' companies also stretch across various size classes. However, the asset administrators group allows for statistically significant analyses and interpretation only at an aggregate level, due to it sample size being below 35.

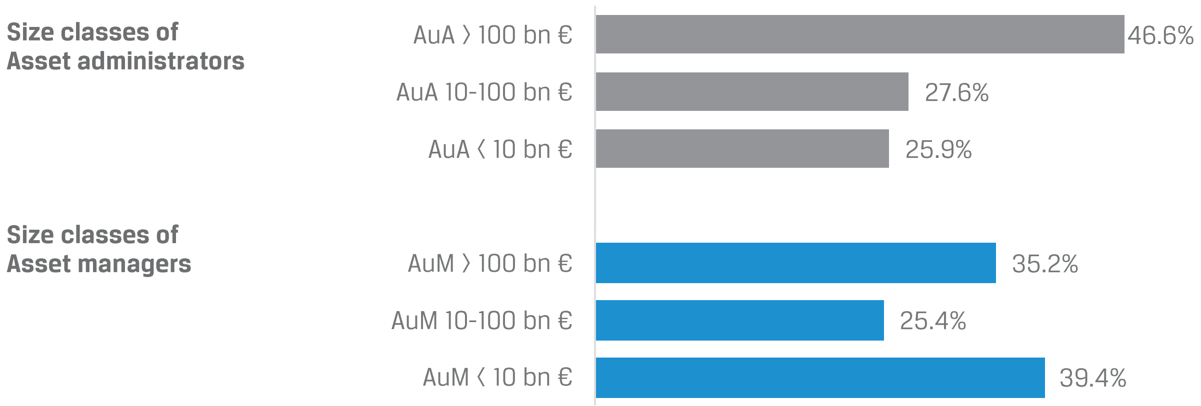

Figure 5 - Size classes of asset administrators and asset managers

Language and international experience

Out of 819 questionnaires returned, 631 are answered in German and 188 in English (figure 6). This proportion serves as a first proxy for the degree of internationalization of the German financial sector.

Figure 6 - Language proportions of responses

Figure 7 displays the share of answers in English for each demographic sub-group:

Figure 7 - Group-specific proportion of answers in English

Regarding domestic professional experience, a negative correlation exists between its duration and answering in English. Almost half of the financial professionals with less than two years of experience replied in English.

With respect to organizational focus, FinTech companies stand out by being the only sector where English appears to be more important than German. Also remarkable is a high English share of answers on the side of legislator, regulator, central banks and federal financial agencies, which reflects their high degree of contact and relations with other national and international financial authorities. The third rank is taken by universities, and the fourth by the group named 'other', which comprises participants from financial media, investor relations, general banking and corporate finance. Participants representing 'old-established' professions in asset management and asset administration as well as institutional investors display the highest affinity to answer in German.

Concerning professional status, a higher affinity to English seems to correspond with an increase in role-specific responsibility: participants without leadership responsibilities exhibit the lowest, and self-employed respondents the highest figure of English responses.

A further indicator for the internationalization of Germany's financial sector is the professional experience of its employees in foreign financial centers, as shown in figure 8. For purposes of this study, a minimum requirement of six months of work experience in a foreign financial center was deemed appropriate to build sufficiently substantiated views about other financial centers, and also to critically re-evaluate Germany in light of those experiences. Each participant was allowed to mention only one foreign financial center, even though he or she might have had multiple qualifying international assignments. This approach ensures a reasonably representative picture of the breadth of international experience amongst the financial employees in Germany, whilst accepting that its depth is most likely to be understated.

While a majority has no such work experience abroad, a remarkable 42% has already worked in at least one foreign financial center for at least half a year. Figure 8 gives an overview:

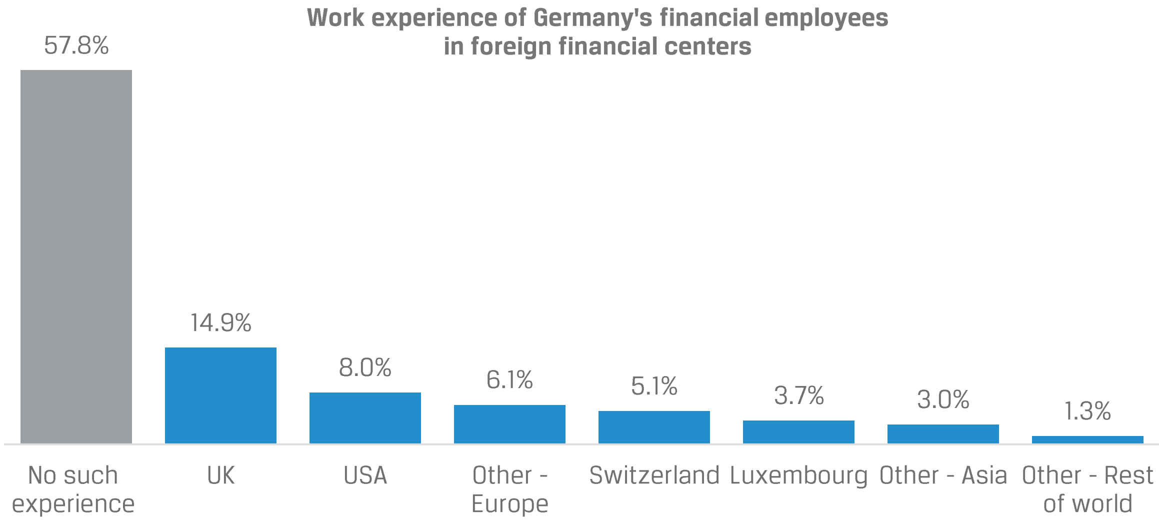

Figure 8 - Work experience in foreign financial centers

Figure 9 shows the composition of work experience in each financial center by domestic organizational focus of the professionals who have worked there:

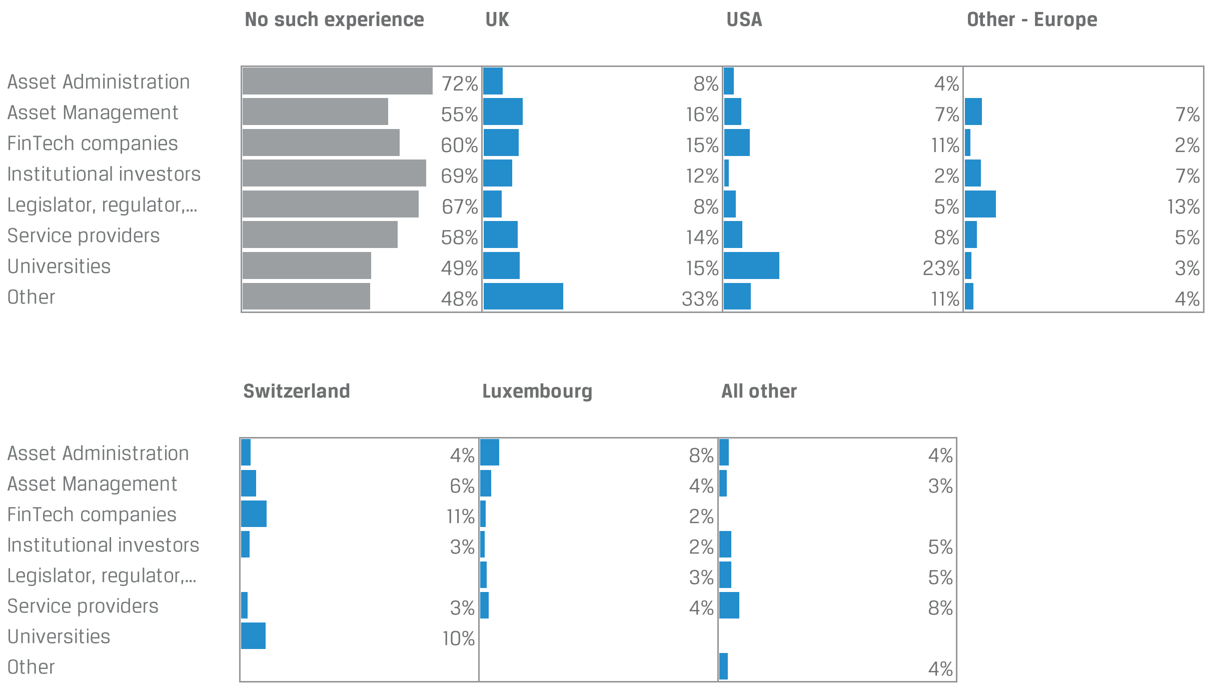

Figure 9 - Work experience abroad in % of group

Employees of universities emerge as the most international group, with a combined 'Anglo-Saxon' work experience of close to 40%. Another 10% of this group have experience working in Switzerland. Among the group of 'others', again a majority of respondents possess international work experience – predominantly in the UK. 45% of asset managers have worked abroad before, and also here the majority have had assignments to the UK. The FinTech sector also exhibits an affinity to the Anglo-American realm, and also for working in Switzerland. The groups with the least international experience are the federal institutions, the institutional investors and the asset administrators. The latter tend to have subsidiaries or partners in Luxembourg, which explains their high score there. The federal institutions naturally have stronger ties to 'other Europe', such as Brussels, which stands out with a high figure.

Competing financial centers

Each participant was asked to name the financial center perceived to be the main competitor to Germany within his or her professional area of expertise. As displayed by figure 10, a remarkable 37% of participants state that they are not competing against financial centers abroad. The overall result as shown in figure 10 identifies the UK as Germany's main rival for its financial industry:

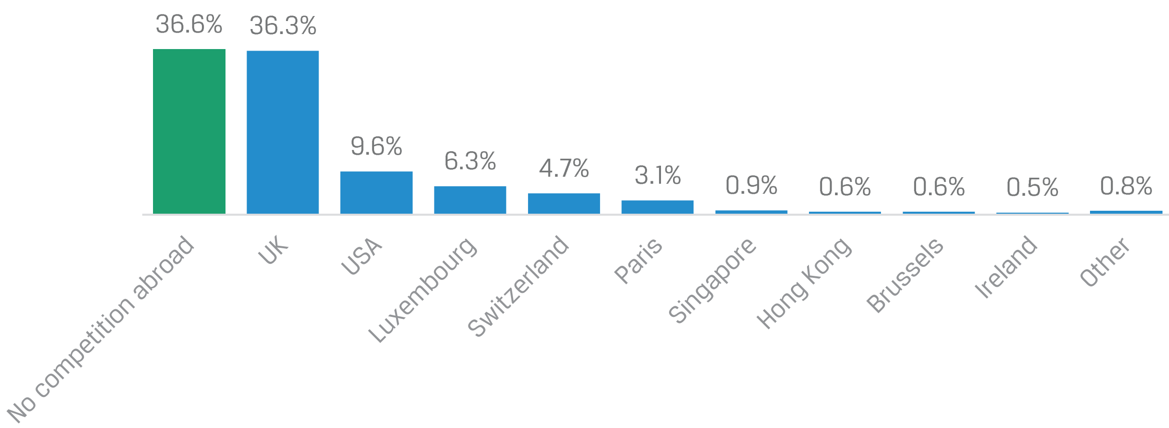

Figure 10 - Financial centers perceived as competitors

Figure 11 shows the contributions of the German financial industry's sub-sectors to the perception of each of these financial centers as a competitor:

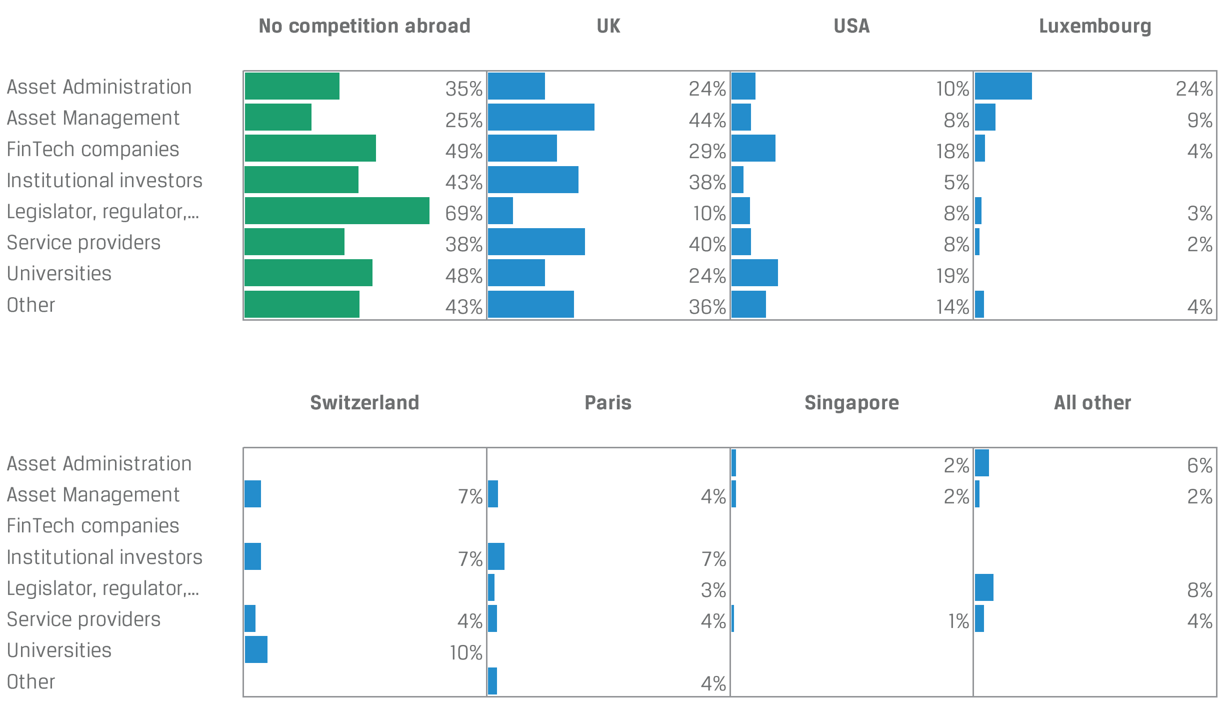

Figure 11 - 'Rivalry perception' of foreign financial centers in % of group

From these results, the United Kingdom emerges as Financial Germany's main competitor – in absolute terms, the responses mentioning UK as the number one rival clearly outweigh the responses for all other financial centers taken together.

This is largely driven by Germany's asset management sector, which – in absolute figures – provides almost half of the answers for the UK. The overall degree of competition felt varies across sectors: asset managers and asset administrators face the most competitive headwinds, whereas the federal institutions (not surprisingly) and FinTech (more surprisingly) provide the highest figures for not competing against foreign rivals.

Moreover, each of the 'big five' competing centers can be attributed a characteristic competitor profile:

- **London**, first and foremost, competes against German asset managers. All other sectors are of lesser competitive importance.
- **United States of America** ('USA') is a major rival to German FinTech companies and to universities' finance programs.
- **Luxembourg**, not surprising, constitutes serious competition to German asset administrators besides the UK.
- **Switzerland** challenges Germany mainly in the sectors of asset management and financial academic education. It also strongly competes for German institutional investors.
- **Paris** is not among the main competitors for Financial Germany – it competes somewhat for German institutional investors and with Germany's asset management sector.

Location of decision on investment strategy

Institutional investors were asked whether the decisions on their investment strategy are made in Germany or somewhere abroad. As figure 12 illustrates, a clear majority of institutional investors answered to make decisions on their investment strategy in Germany.

Figure 12 - Location of decision on institutional investors' investment strategy

4.2 General framework

Legal and political stability

With overall scores north of 2 and invariably positive responses from all demographic groups, legal and political stability emerge as Financial Germany's biggest assets. They are crucial for investors, companies and employees to make Germany their domicile of choice. Only the FinTech sector, as well as the top management and self-employed segments, contribute markedly below-average scores. Amongst others, service providers and institutional investors express above-average appreciation of the legal and political systems' reliability. Somewhat remarkable is the below-average appreciation of the legal and political setup expressed by the federal institutions. Professionals who have worked in Switzerland are somewhat less convinced about Germany's stability. Also, political stability seems to be an asset which is treasured more, the longer one works in Germany's financial industry. Figure 13 displays the results for political stability, figure 42 (see Appendix ('app.')) for legal stability, which reaches an overall score of 2.08.

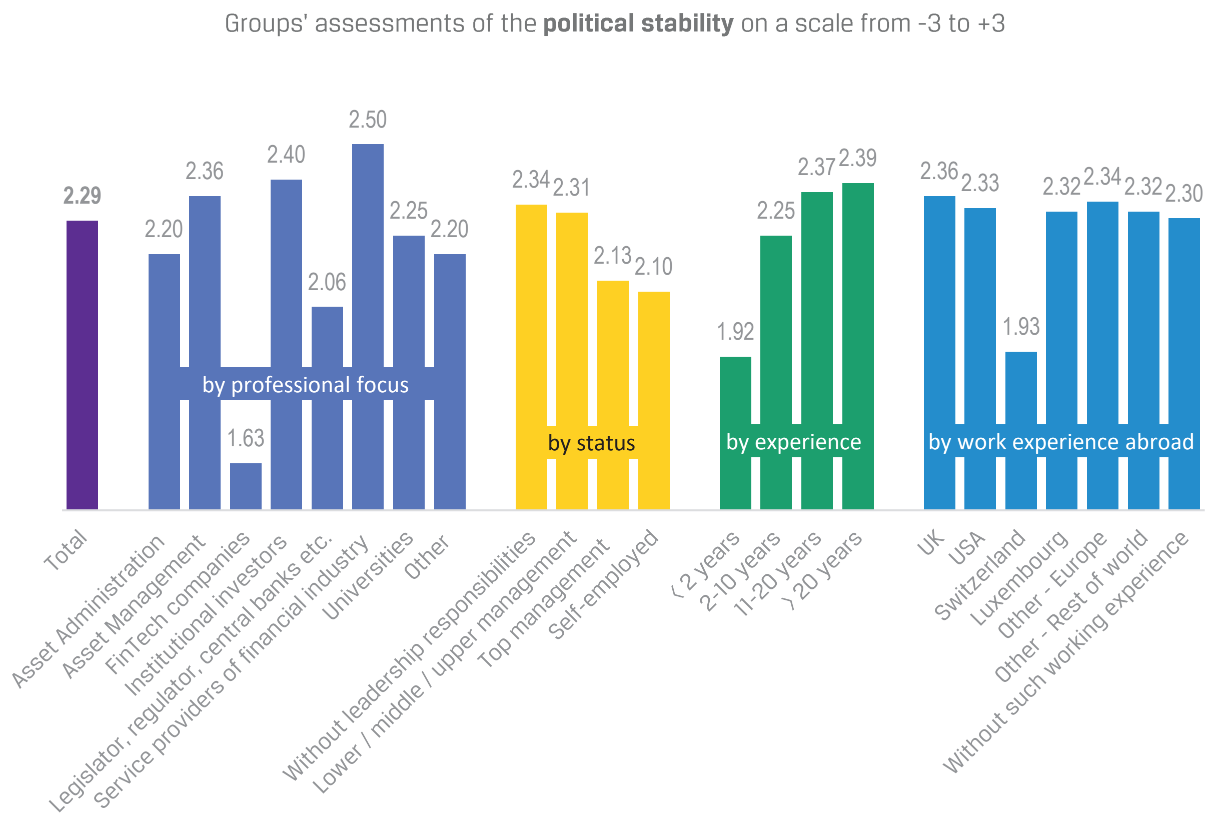

Figure 13 - Political stability

Efficiency of public administration

A further valuable asset is Germany's public administration, whose efficiency reaches unanimously positive responses and an overall result of 'rather good' (0.94) on a scale from -3 (very poor) to +3 (very good). As figure 43 (app.) displays, universities and federal institutions are most positive about Germany's public administration, and the FinTech sector judges the public administration not too far below the average. Self-employed participants display the least satisfaction: being driven by entrepreneurial spirit, things could always be administered better and faster from their perspective. The appreciation for public administration seems to grow over time during one's professional lifetime. Professionals with work experience in the USA and Luxembourg have the highest esteem for Germany's public administration.

Taxation of financial companies

The overall score of 0.28, as laid out in figure 14, suggests participants are neither satisfied nor dissatisfied with the corporate taxation system. Since Germany has never had the ambition to be a corporate tax haven, this overall score reflects its federal fiscal philosophy.

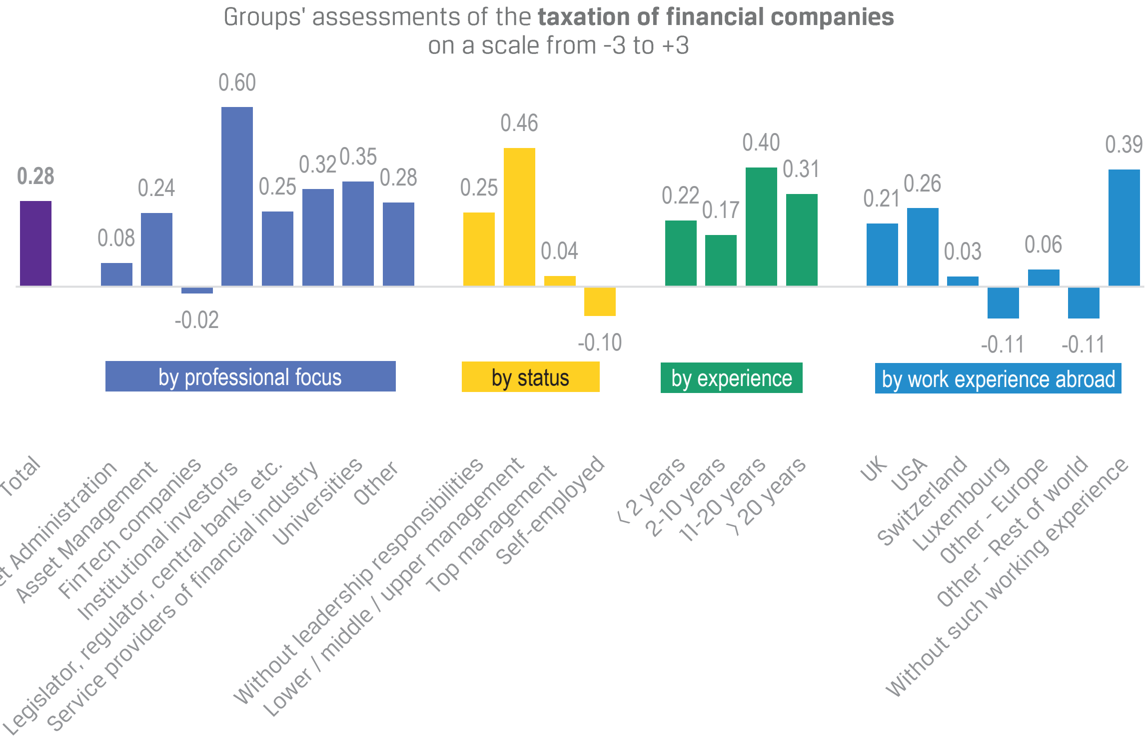

Figure 14 - Taxation of financial companies

Institutional investors, which are either financial companies themselves or clients thereof, express the highest level of satisfaction. Asset administrators, who often compete against Luxembourg and other low-tax countries, are least satisfied with the taxation of financial companies. Low scores are delivered by the FinTech sector and the self-employed respondents, both of which are affected more directly by taxes due to their entrepreneurial stage or need to build-up operations. Internationally experienced professionals contribute lower figures than their colleagues without such experience.

Taxation of employees' income

Figure 44 (app.) delineates a common perception of dissatisfaction regarding the taxation of employees' income, though on a moderate total level of -0.46. The FinTech sector turns out most skeptical. Unhappiness with taxation grows as one climbs up the career ladder, but one also takes a more relaxed attitude the longer one works in the financial sector. Most respondents with work experience in major financial centers are disproportionally unhappy with German income taxation.

Taxation of private investments

Within an overall result of 0.09, asset administrators and asset managers are most skeptical: they work closest with customers' money. Thus, taxation of investment income works against their active performance figures and their asset base, which in most cases serve as the calculation bases for their fees. On the contrary, representatives of the federal and academic sectors assign positive scores to private investment taxation, as shown in figure 45 (app.).

Regulatory consideration of the interests of institutional investors

Results for all subsequent aspects related to the regulator's consideration of group-specific interests hint at high degrees of impartiality on the regulator's side, as exemplified in figure 15.

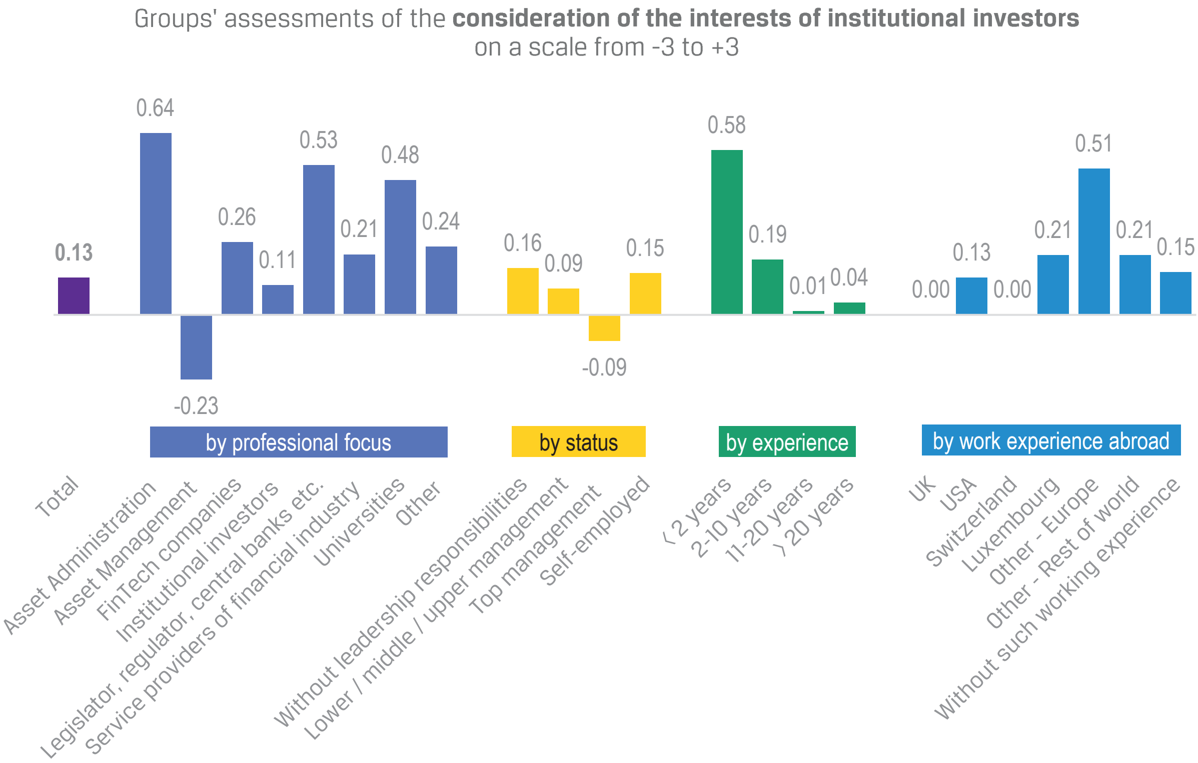

Figure 15 – Regulatory consideration of the interests of institutional investors

Asset administrators' high scores might reflect recent years' EU-driven regulation on custodial and other back office functions, which constitute considerable improvements in terms of security and transparency for asset owners, whereas asset managers might tend to side with institutional investors when it comes to potential detrimental economic effects from MiFID II. The 'regulatory' subgroup, which contains the regulator, has a higher esteem for its work than anybody else apart from universities, which are least affected by financial regulation. Top managers are organizationally much more exposed to financial regulation than the lower ranks – and their vote is more negative.

Regulatory consideration of the interests of financial companies

Very similar patterns emerge for this aspect as in the preceding section, this time centered around an overall score of -0.04, as displayed in figure 46 (app.). A possible explanation, again, is the overall workload imposed by recent, mainly EU-induced, financial regulation which affects asset managers companies in particular. This assumption is supported by the negative sentiment of institutional investors, amongst which are many commercial banks as well.

Regulatory consideration of the interests of private investors

The last aspect covering the regulator's considerations of specific groups demonstrates high impartiality. Figure 47 (app.) exhibits an overall score of 0.15. Asset administrators and asset managers, both working with client assets, provide negative scores here. Apart from regulatory burden, a possible explanation might be the 'incomplete' range of investment possibilities (see figure 31 in section 3.5). The below-average scores from Switzerland- and Luxembourg-experienced employees indicate that taxation might have played a role again in their considerations.

Competence of the financial regulator

The quality of financial regulation is a key criterion for every financial center. Though the vast majority of regulation affecting Financial Germany is decided at the EU level, putting the laws and rules into practice by enabling and enforcing market participants' compliance is overseen by two national federal institutions in Germany: first, by the Bundesanstalt für Finanzdienstleistungsaufsicht ('BaFin'), Germany's federal financial supervisory authority, and, secondly, by Deutsche Bundesbank, Germany's central bank, which oversees the operational supervision of the banking sector to a large extent. Thus, the 'financial regulator' in Germany is essentially represented by two closely cooperating federal institutions. Figure 16 shows an overall and unanimously positive score of +0.80 for the regulator's competence, which reflects a sound degree of acceptance and trust.

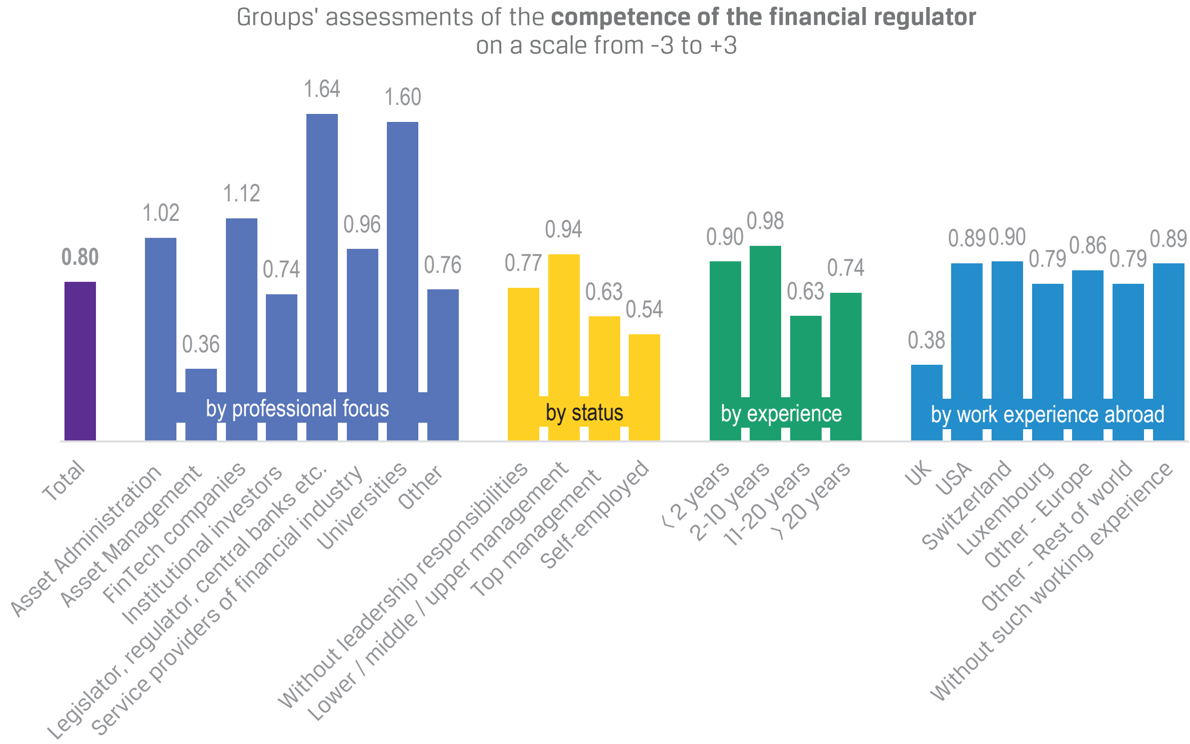

Figure 16 - Competence of the financial regulator

The high degree of appreciation also among participants from the FinTech sector certainly is a positive signal for the future. However, the regulator's group as well as universities, both of which are more distant to financial practice, provide the highest scores. Domestic employees with experience in the UK provide a more cautious score.

Regulator's readiness to engage in dialogue with industry stakeholders

This aspect provides another unanimously positive assessment (with an overall score of 0.50) for the regulator: as figure 48 (app.) lays out, the highest score is contributed by the regulator's group itself, which might be a starting point to question the nature of the 'dialogue'. However, asset management - by far the biggest stakeholder group, at least within this survey - expresses the least satisfaction with the regulator's dialogue than all other professional groups. Self-employed survey participants, on a relative basis, seem to feel slightly neglected. Regarding responses from participants with international experience, there are indications that foreign regulators' approach to stakeholder dialogue, compared to Germany, is worse in Switzerland but better in Luxembourg, the USA, and the UK.

Practicality of regulation

Experience shows that regulation tends to evoke negative connotations, because naturally it entails some restrictions, paperwork and bureaucracy. Especially in the financial sector, which for many years and for the foreseeable future, is faced with a regulatory 'tsunami' which largely reflects efforts of crises prevention and international harmonization. Bearing this in mind, an overall score of around zero, as on view in figure 17, may be considered a positive result.

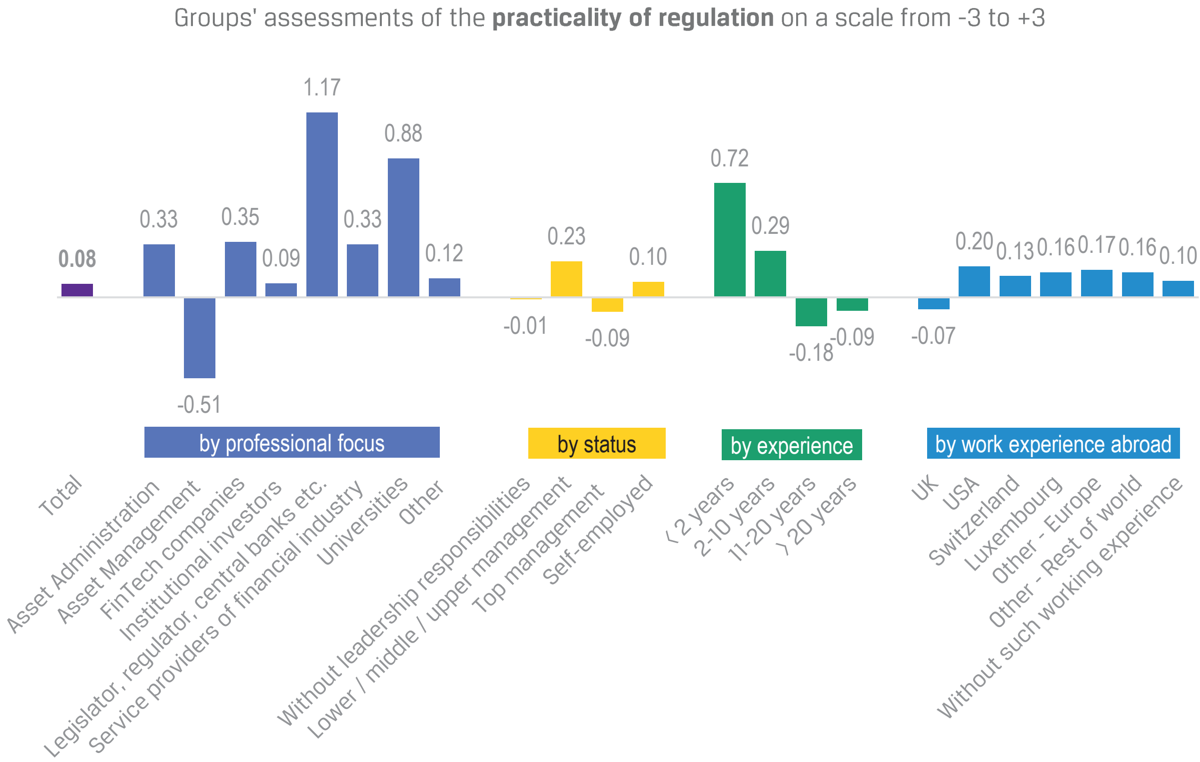

Figure 17 - Practicality of regulation

The low score contributed by asset managers might be explained by their high load of EU-induced regulation such as MiFID II, which requires substantial implementation efforts. The FinTech sector's above-average score is encouraging. The fact that the regulator's group itself and universities, which are naturally distant to practice, provide the highest scores should cause some reflections. In terms of work experience, it appears that the longer one works in financial professions, the more of a burden regulation becomes. Except for the UK, all groups representing work experience abroad express a more positive attitude on regulation in Germany than purely domestic employees.

Efficiency of the financial regulator

With an overall score of 0.06 as delineated in figure 49 (app.) and with very similar patterns as the preceding topic, the regulator's efficiency indicates scope for improvement without constituting a real hindrance for those affected. Not surprising is the comparatively low score assigned by the group of self-employed, who might suffer most from regulatory burdens due to lack of organizational resources. Respondents with international work experience hint at financial centers with a potentially higher regulatory efficiency, namely the UK, Switzerland and Luxembourg. 'Others' are mainly comprised of employees with experience in Asia. Interestingly, respondents with professional experience in the USA have a higher esteem for regulatory efficiency in Germany – just as those who have worked in 'other' Europe.

Regulator's consideration of innovative trends

The innovation aspect scores lowest amongst all questions related to regulator's activities, but still close to 'neutral terrain' as presented in figure 18.

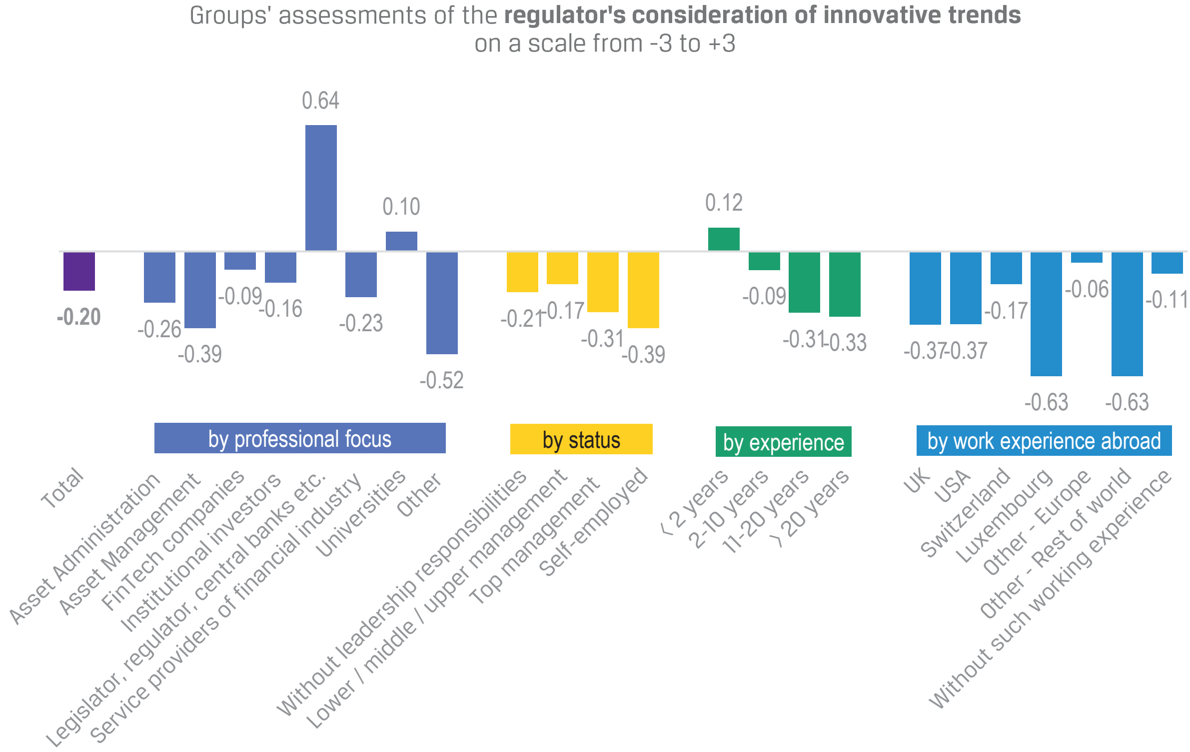

Figure 18 - Regulator's consideration of innovative trends

However: the score provided by the 'regulatory' group once more contrasts sharply with everybody else, and the large group of asset managers has a markedly negative opinion. On the other hand, the lowest score is contributed by the diverse group of 'others', which is more peripheral to the financial sector and less affected by the regulator - which indicates the possibility of prejudice-based judgement for this topic. The low score provided by self-employed participants might be due to the fact that this group has the most drive for innovation and thus has higher expectations regarding the consideration thereof by the regulator. Skepticism seems to increase as duration of domestic work experience grows, and employees with two different working backgrounds abroad are particularly negative; most notably, those with backgrounds in Luxembourg (which indeed has quite a reputation for speed and innovation), and in 'other' financial centers, which are largely driven by Asia.

Timely regulation of FinTech companies

This specific aspect of regulating innovation yields a moderately negative total score of -0.31, which, quite surprisingly, is not caused by the FinTech sector itself, but by almost everybody else. This hints at potential prejudices against the regulator's ability to handle the FinTech sector properly. Interestingly, even the regulator's group is less positively tuned here compared to other aspects. There might also be problems or competitive disadvantages arising from missing FinTech regulation, which affect other groups such as asset management and asset administration, but not the FinTech sector. Of course, there are other possible interpretations of the pattern in figure 50 (app.). Of note is the very negative assessment by self-employed participants. Maybe, in light of their own entrepreneurial nature, they have a particularly high esteem for clear sets of rules – and apparently miss them on the FinTech side.

4.3 Financial culture

People's general knowledge of financial instruments and products

This chapter's first aspect results in a total score of -1.39 and thus lies in a judgement somewhere between 'rather poor' and 'poor'. Its negative stance might not be surprising given known problems regarding financial literacy in Germany, but the absolute extent and the unanimity of judgement as displayed in figure 19 are somewhat surprising.

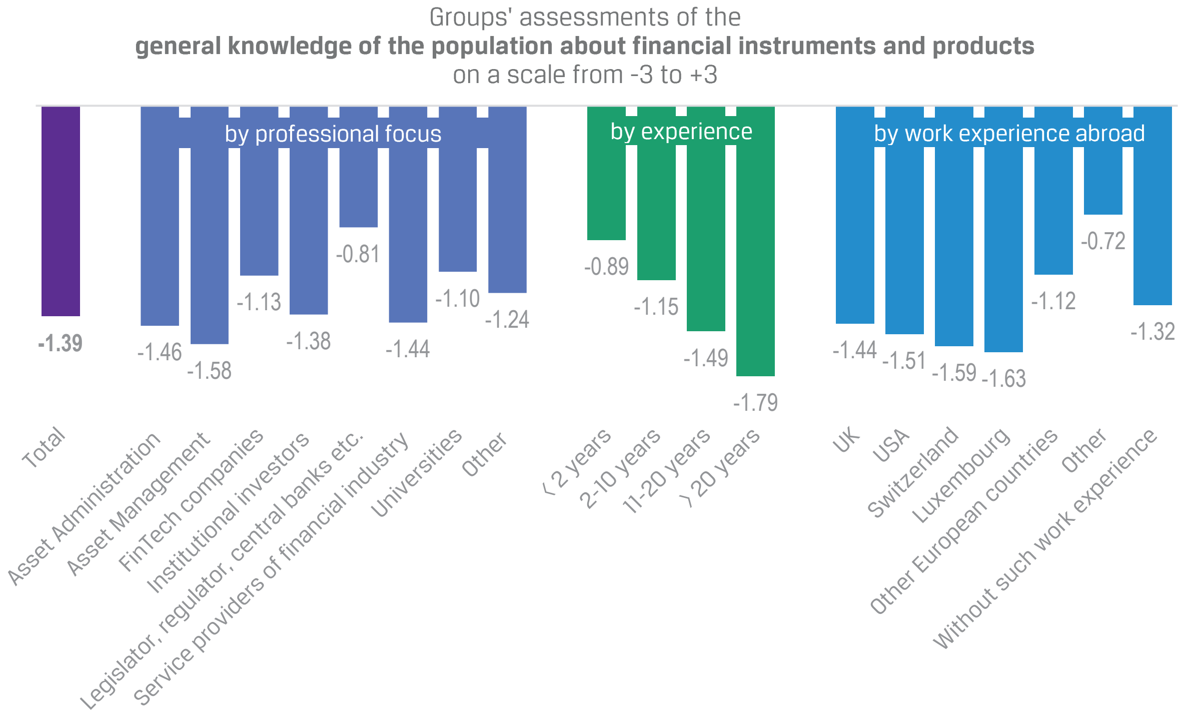

Figure 19 - People's knowledge of financial instruments and products

Asset managers and administrators, who care for people's assets, have the lowest esteem for their customers' knowledge, though these groups have a responsibility to educate their clients. Also, groups which have a framing influence on people's financial knowledge, namely legislators, regulators, central banks and universities seem to be the least conscious of the problem, which is also remarkable. Moreover, the green bars' pattern might be interpreted as 'the longer one looks at this problem, the more of a hopeless case it gets'. Apparently, there is not much hope on the horizon for the time being, and there are not really encouraging signals when looking at responses of professionals with international work experience: when having worked in important financial centers abroad, one tends to judge more negatively about people's general knowledge of financial instruments and products.

People's general use of financial markets

A further analysis evaluates the extent to which people make use of financial markets – not only by directly buying and selling securities, but also including, e.g., their indirect investments related to retirement provisions or life insurance contracts. The overall score is -1.26, as demonstrated in figure 51 (app.). The response pattern resembles very much the preceding aspect. Interestingly, FinTech provides the lowest score this time. Maybe future FinTech solutions will enable a higher financial market participation of the population.

Presence of international financial institutions

The overall and unequivocally positive assessment of this aspect is certainly driven by the European Central Bank ('ECB ') and the European Insurance and Occupational Pensions Authority ('EIOPA'), both of which are domiciled in Frankfurt. Figure 20 illustrates the details.

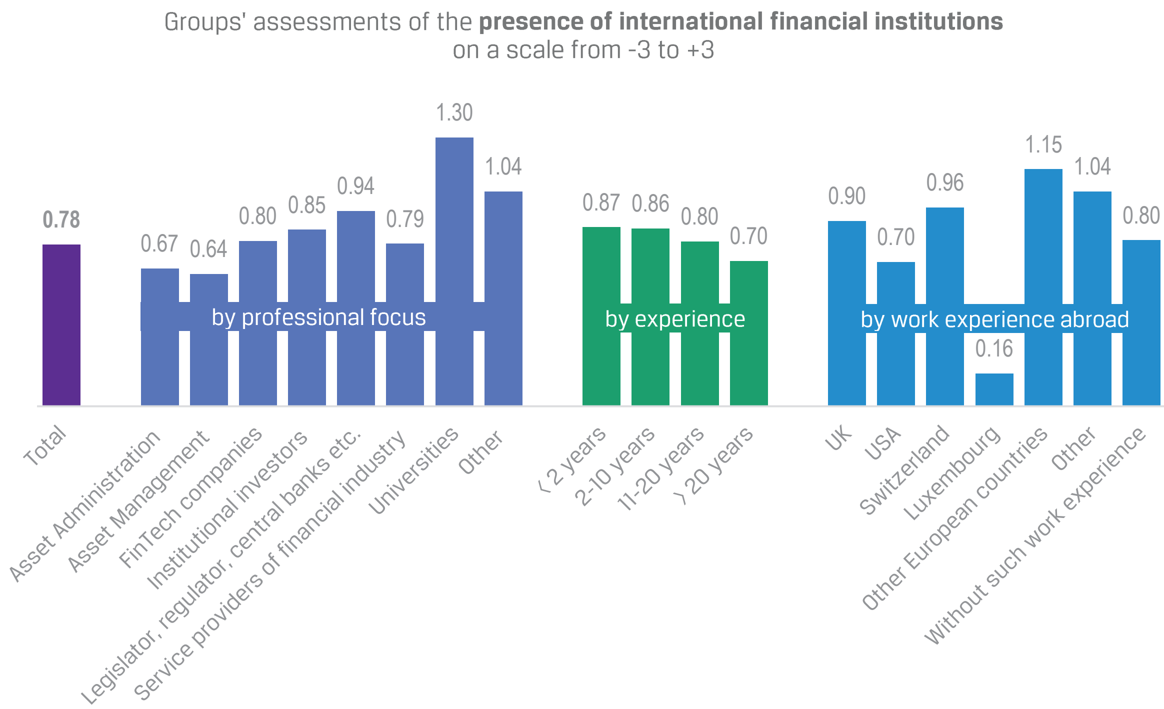

Figure 20 - Presence of international financial institutions

Groups which are more peripheral to operational financial activities such as universities and 'other', Groups which are more peripheral to operational financial activities such as universities and 'other', are more positively tuned than those at the financial industry's core, and also the federal institutions' group expresses above-average scores. Professionals seem to be somewhat more impressed with international financial institutions at the beginning of their career, but become less enthusiastic as time goes on. Luxembourg-experienced employees stand out with a very low positive score – no wonder in light of the fact that in that small country – besides numerous EU-related political and legal institutions – resides the headquarters of both the European Investment Bank ('EIB') as well as the European Stability Mechanism ('ESM'). Also remarkable: UK-experienced professionals assign above-average scores to Germany.

Presence of financial exchanges and organized trading platforms

The presence of trading floors and platforms are still important factors for a financial center's attractiveness in terms of connecting market participants, even in an age where electronic trading prevails. The overall and unanimously positive score for this aspect is 0.53, as exhibited in figure 52 (app.). The response pattern is very similar to the preceding one. This time, the FinTech sector contributes the lowest, but still positive assessment. Apparently, this group sees scope for technology-driven extensions of trading activity in Germany. The diverse and more market-distant group of 'others' provides a markedly higher score here. Regarding financial professionals with an international working background, there is a division between those who have worked in first-tier financial centers in Europe and the Anglo-American realm, and those who have international experience elsewhere. The latter seem to be easier to impress with German trading facilities than the former. Germany has securities exchanges in Frankfurt, Munich, Stuttgart, Berlin, Düsseldorf, Hamburg and Hannover, plus several electronic trading platforms such as XETRA and Tradegate.

Communication between financial practitioners

The responses concerning financial practitioners' peer-to-peer communication are unanimously positive and on the 'rather good' level (Figure 21), which hints at a feeling of professional togetherness among Germany's financial community in spite of geographical dispersion.

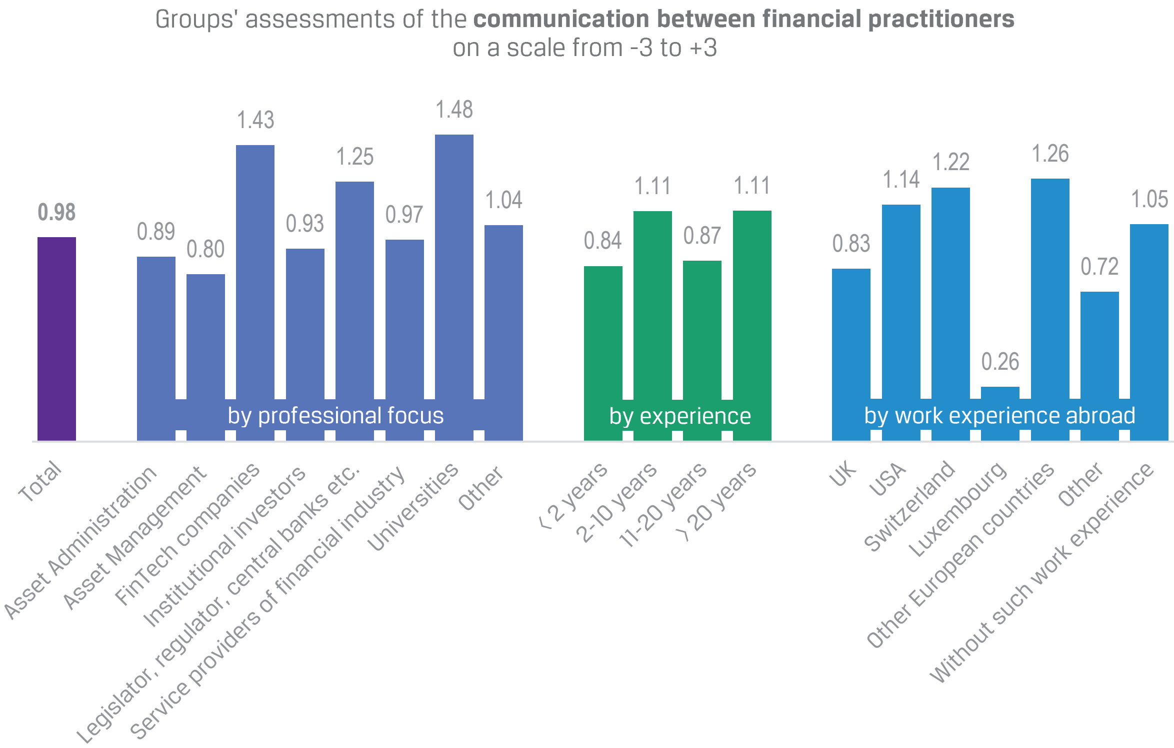

Figure 21 - Communication between financial practitioners

The young FinTech sector expresses the highest esteem for this aspect of all 'practicing' professional groups. This might be due to their strongly growing and vivid 'meet-up culture', e.g., in Frankfurt, Munich and Berlin. Interestingly, 'old' asset management provides the lowest score. Across the further demographic layers, just Luxembourg-experienced employees stand out with a low score – no wonder, because that small financial center naturally provides perfect conditions for communication within the sector.

Communication between financial academia and financial practice

Figure 53 (app.) exhibits an overall figure of 0.33 for this aspect, indicating much upside potential, especially in interesting times of recent market crises, intense regulation and ongoing international integration: such developments provide an abundance of interesting topics which deserve both academic research and sharing of newly gained insights with financial practice. A closer look at the professional groups' results suggest a call for scientific support by those groups closest to financial market developments, namely asset managers and institutional investors – as well as the diverse group of service providers, ranging from financial data providers to auditors and consultants. Interestingly, the FinTech sector awards a comparatively good score, just as the group containing federal institutions, which are most optimistic about communication between academia and financial practice. Regarding domestic professional experience, hopes of richer exchanges between practitioners and academics appear to decrease over one's professional life. Luxembourg again stands out, where conditions for this aspect appear to be much better than in Germany.

Quality of financial study programs at universities

The academic field of financial education in Germany is awarded a high overall score, as displayed in figure 22. Striking, however, is the fact that the academic sector appreciates its own educational work much higher than any other demographic group involved.

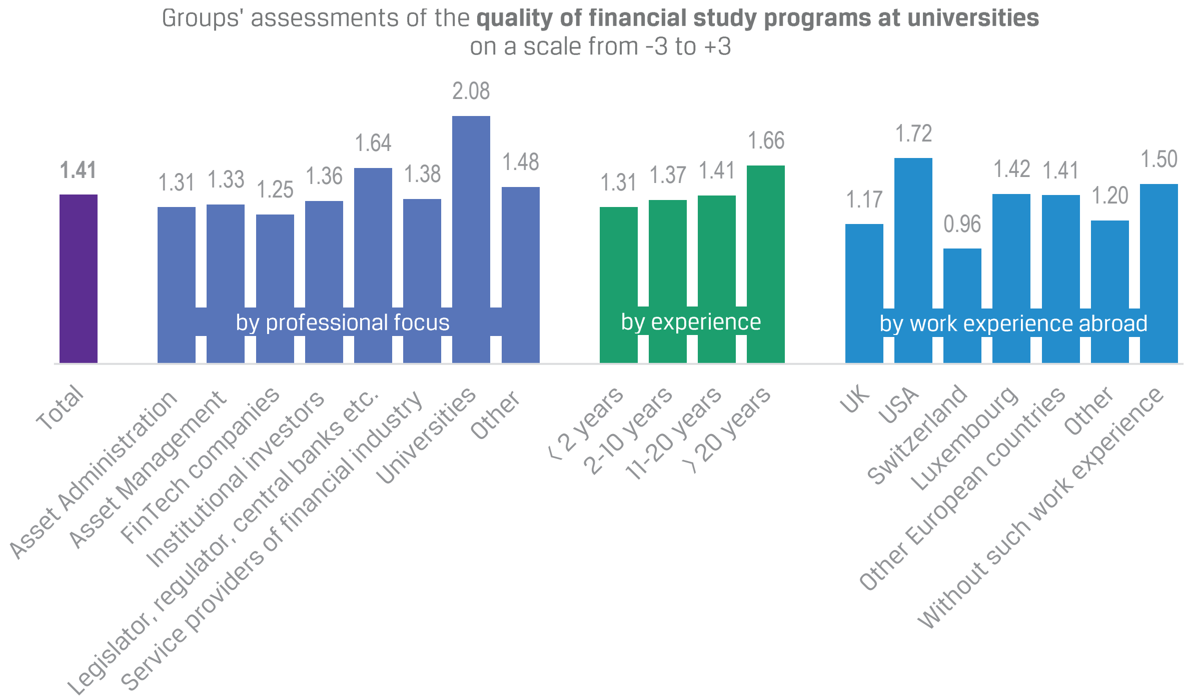

Figure 22 - Quality of financial study programs at universities

Since scores get higher as experience grows (which holds true also for the subsequent educational aspects), one might conclude that education per se is more appreciated as one grows older in one's profession. Employees with experience in the USA are above-average positive for the quality of financial study programs in Germany, while results from professionals who have worked in the UK and Switzerland indicate that academic offerings in those countries might be of higher standard.

Quality of German dual professional education

'Banking', just as 327 other commercial and industrial 'dual professional educations' in Germany[2], can be learned within 2 – 3 years of alternating practical and theoretical training blocks. One becomes a certified 'Business person in Banking' (*Bankkaufmann / -frau*). For decades, this way of professional education has been considered a solid and comprehensive approach to professional life and a success model specific to Germany. The overall score for this traditional form of education is 1.34. Figure 54 (app.) reflects broad demographic support.

Quality of continuing professional development

CPD offers for Germany's financial sector are provided by professional associations, universities, professional schools, financial academies or employers themselves. They are awarded an overall, univocally positive score of 1.27 with low group-specific deviations, as laid out in figure 55 (app.).

[2] Source: https://de.statista.com/statistik/daten/studie/156901/umfrage/ausbildungsberufe-in-deutschland/, accessed on: September 19, 2017

Demand for qualified employees for the financial industry

The overall score for the demand side of the employment market, as figure 23 exhibits, amounts to a meager 0.48.

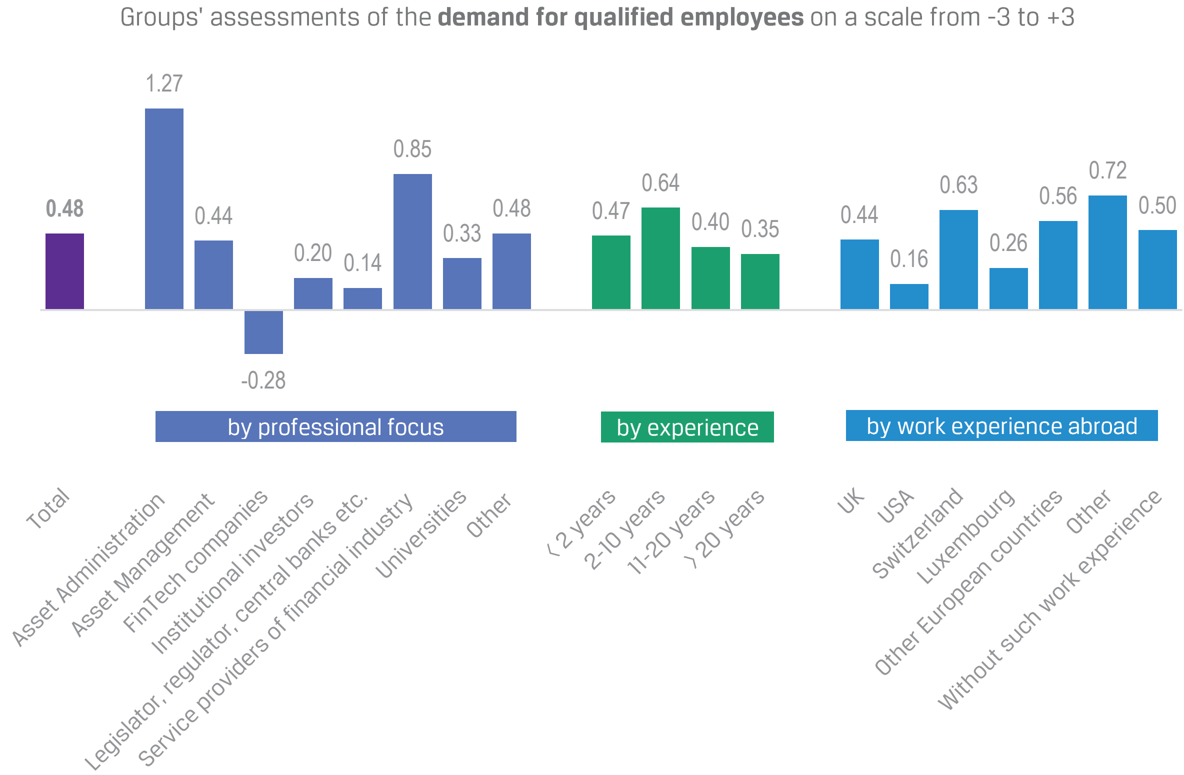

Figure 23 - Demand for qualified employees for the financial industry

The future-oriented FinTech sector provides a negative score (somewhat surprisingly), and only asset administrators provide a higher group-specific figure, which may reflect that sector's need for specialist staff in response to increase regulation. Also, the regulator's group is overly optimistic. Professionals who have worked in the Anglo-Saxon world, where the financial industry is assumed to be further ahead on the evolutionary curve, are also more skeptical here.

Supply of qualified employees for the financial industry

Contrasting with the preceding section, the supply side of the employment market yields an overall positive score of 0.95, as illustrated in figure 56 (app.). This reflects a fairly positive situation, in which the country brings forth sufficient professionals for its financial sector. Apart from the somewhat 'distant' group of universities, the high score provided by institutional investors catches one's eye – this group has a high stake in ensuring there are qualified professionals who care about their assets, so their judgement is of particular interest. Also noticeable is the positive feedback from employees with professional experience in the USA, with similar results provided by respondents with a professional background in 'other Europe'. On the contrary, countries with geographically very concentrated talent pools such as the UK, Switzerland and Luxembourg, contribute more cautious evaluations.

Although both the demand and the supply figures are on the positive side overall, the alarming signal rises that the employment market for the financial sector is not balanced.

Work-life balance

An important factor of a financial center's attractiveness is the extent to which one can enjoy private life independently from intrusions and excessive demands of one's professional responsibilities. The just slightly positive overall score of 0.25, as displayed in figure 24, might reflect the demanding environment of Germany's financial sector, where unions are traditionally weak.

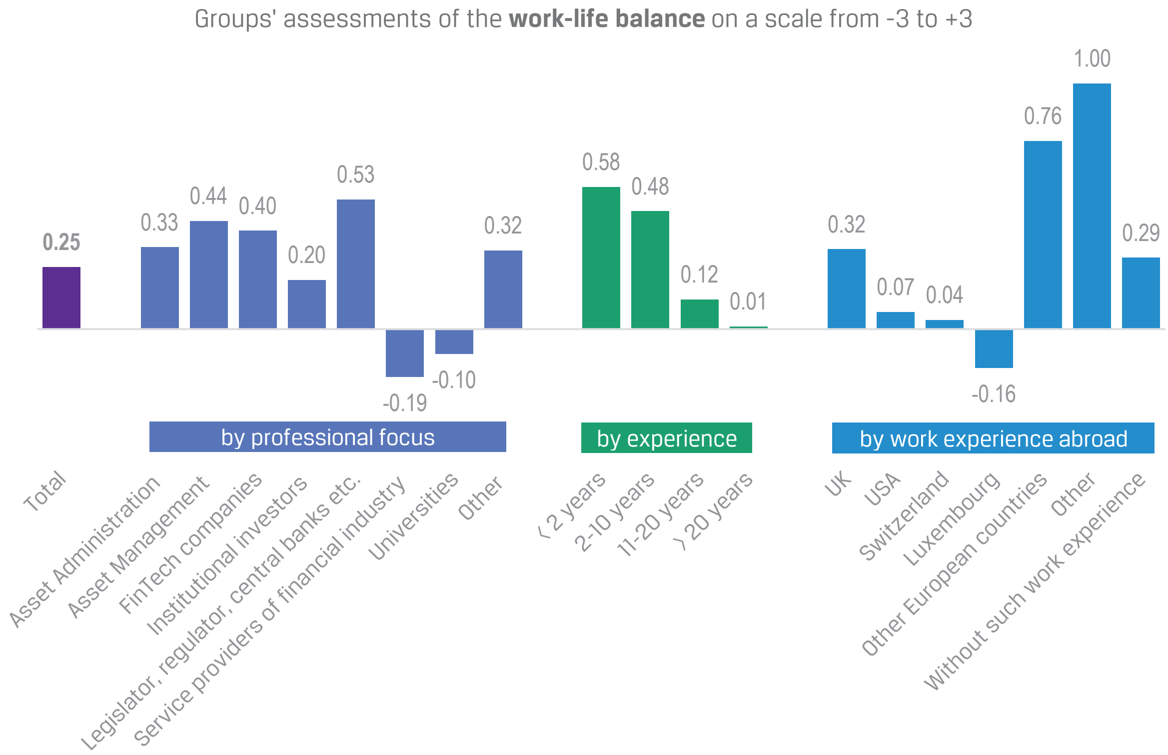

Figure 24 - Work-life balance

The federal sector, which has a fairly good reputation to care well for its employees, provides a high score. Also of no surprise are the results provided by the service providers: this group contains a large proportion of very labor-intense professions such as management consultants and auditors. Somewhat unexpected is the universities' response with a negative group-specific score. Also interesting is the illumination that the longer one works in Germany's financial sector, the worse one's work-life balance gets. The international context is quite informative: those groups with the most 'distant' work experience ('other Europe' and 'other', with the latter being mostly driven by Asia) contribute the most positive assessments for work-life balance in Germany, whereas professionals who worked in Switzerland and Luxembourg show less appreciation for this aspect. Concerning the Anglo-Saxon world, the low score contributed by employees who used to be on professional assignments in the USA is a surprise – given the broadly-assumed intensity of the US financial sector.

Job security

The overall score substantially north of zero and lack of group-specific negative results, as set out in figure 25, is encouraging. However, this figure must be set in context against Germany's employment law, which provides a much higher level of worker protection than most other countries in the world. Additionally, the financial sector in particular is known for both economically and socially very acceptable solutions when it comes to reducing staff. In light of this, the overall figure is surprisingly low.

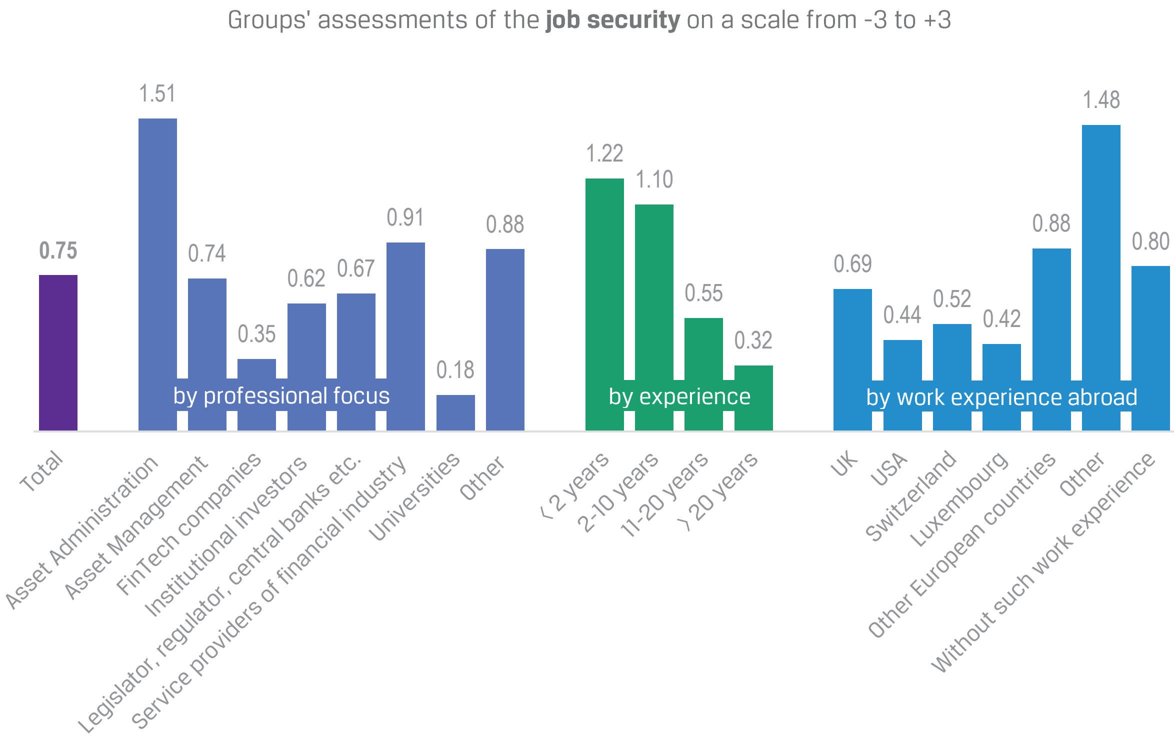

Figure 25 - Job security

Asset administrators appears to feel safer in their jobs, which corresponds to their earlier high score regarding the 'demand' side of employment. The FinTech sector is much less optimistic, probably in light of technological developments they envision ahead for the financial sector. The low score provided by universities is surprising, but might stem from academic research on 'Financial Germany'. Apparently, junior staff consider themselves much safer than employees who have spent more years in the financial industry. Again, this contradicts German employment law as well as the industry's established conventions to provide more protection for longer-serving staff. Younger professionals' optimism may be attributed to an old, widespread German notion of financial jobs as being safe.

More surprises are contributed by employees with former international assignments: not only Luxembourg- and Switzerland-experienced staff return low scores for Germany, but also those who worked in the USA and UK, whose 'hire and fire' mentalities could have caused a much higher esteem for job security in Germany.

Level of income

When asking employees, their income could almost always be higher. Thus, the overall and unequivocally positive score of 0.55 for this aspect, as presented in figure 57 (app.) isn't too bad. FinTech-related respondents appear to have somewhat higher ambitions regarding levels of income. It appears as if groups which are more distant to operational financial activity consider income levels of the sector more attractive than those groups which are directly involved. Also, a clear pattern evolves that one appreciates the income level of the financial sector the higher, the longer one works in it. Workforce with professional experience in Switzerland, Luxembourg and the USA – all of which are generally known for high salaries in financial professions – assesses Germany less favorably than others. However, those who have worked in the UK, which is also known for big payouts as well as for extremely high living costs in London, appear to have a more favorable impression of income levels offered in Germany.

4.4 Competence of asset management & administration

Overarching capabilities of asset managers

For all three aspects, figure 26 puts positive total scores on display. The resulting order puts strategic competence highest, then organizational efficiency, and finally innovative strength. Exclusively, the FinTech sector assesses all three aspects negatively, and the highest appreciation for these qualities of asset managers is expressed by asset administrators, who award above-average scores for all three aspects.

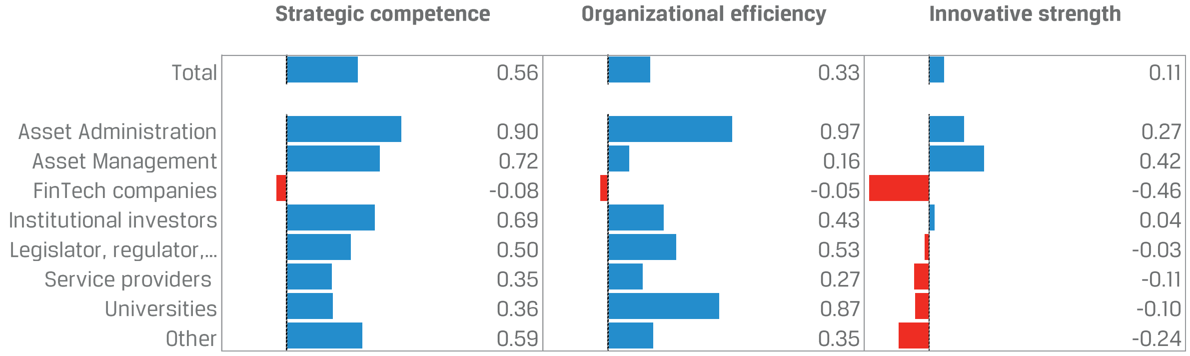

Figure 26 - Strategic capabilities of asset managers

A fair amount of asset managers' self-praise is visible. However: in terms of organizational efficiency, they are very reluctant and attribute themselves the second-lowest score. Thereby, asset managers are in sharp contrast with groups they work closely together with, especially asset administrators and institutional investors. This hints at structural and / or procedural internal change or unrest. Somewhat worrisome is the aspect of innovative strength: if it was not for asset managers themselves and for their 'admirers' from asset administration, the overall judgement would be clearly in negative territory. The FinTech sector is very critical here, as are institutional investors. However, since demographic groups which are more distant to operational asset management provide the most negative scores, asset managers might face an image problem.

Competences of asset managers along the value chain

The results shown in figure 27 indicate that asset managers are doing particularly well (scores above 1) in their core activities, namely capital market research, portfolio management and risk management. However, their other, more peripheral activities also reach total scores between 0 and 1, and are thus considered to be of reasonable quality as well.

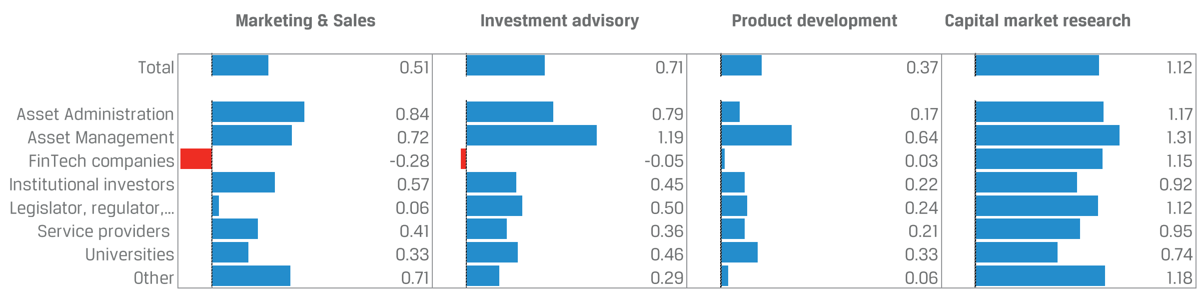

Figure 27a - Competences of asset manages along the value chain – part 1/2

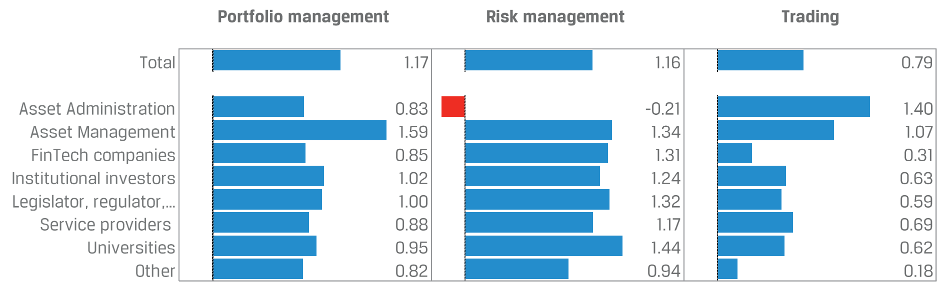

Figure 27b - Competences of asset manages along the value chain part 2/2

With regard to the 'operational' value chain, the FinTech side becomes less skeptical: just concerning marketing & sales as well as investment advisory, the FinTech sector apparently has higher expectations or sees higher potential for technological advancements in the future. The crucial activity of risk management is assessed highly overall - except by asset administration. But in fact, they know best. It's asset administrators who execute ex post-transaction controls for asset managers, and they know the number and extent of asset managers' violations against legal, client-specific and product-specific restrictions attached to each portfolio. The high score by asset administrators for trading quality indicates again that there must be a problem with observing restrictions, because the mere technical execution of orders apparently does not constitute a problem. The weak assessment for product development blends well with the lack of innovativeness as stated in the previous section.

Asset category-specific competences of asset managers

According to CFA Institute's taxonomy[3], there are three asset categories: 'traditional' investments of equities and bonds, 'traditional alternative' investments of private equity, commodities and real estate, and 'modern alternative' investments such as hedge funds, managed futures and distressed securities. The homogeneous results set out in figure 28 display a declining degree of management competence along the evolutionary path. Quite remarkably, asset managers consider themselves to manage all three categories of asset classes better than 'neutral', and they are even joined by the group of federal institutions in their judgement. However, the group that matters most are the institutional investors, because it is predominantly their money which is under management.

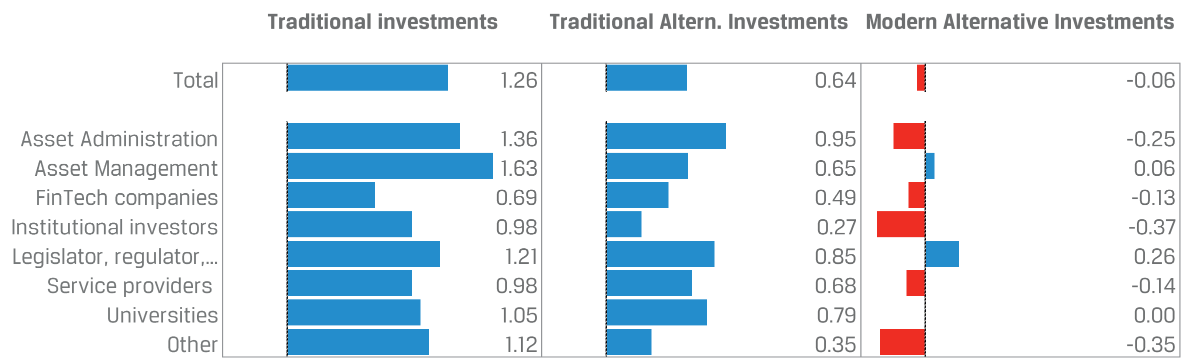

Figure 28 - Asset category-specific competences of asset managers

3 CFA Institute (2016): Curriculum of the CFA© program

Competences of asset administrators along the value chain

Generally speaking, the middle- and back office-related activities of the value chain, which are covered by asset administrators, are awarded higher scores on average compared to the front office-related activities covered by asset managers as analyzed earlier. Additionally, as exhibited in figure 29, this overall very positive judgement is not very controversial, and there is not even a single negative group-specific score, which reflects a broad and fairly high industry-wide satisfaction with the services of asset administrators in Germany.

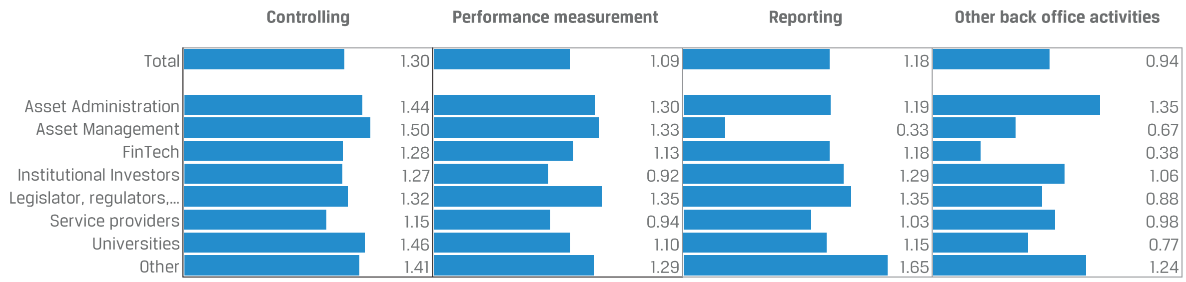

Figure 29 - Competences of asset administrators along the value chain

Noticeable nuances within the overall picture are the somewhat weaker score assigned by institutional investors for the asset administrators' competence regarding performance measurement. This group awards higher scores for all other back- and middle office services, which means that customers hope for improvements in the fields of performance calculation, attribution or presentation. Maybe institutional investors team up for that matter with the FinTech sector, which also provides below-average scores and most likely sees technological scope for better solutions.

Also remarkably, asset managers seem to be considerably less satisfied with asset administrators' competence regarding reporting than everybody else. Owing to the fact that institutional investors and the group containing the regulator (who is setting the standards for investment reporting) are quite satisfied with the reporting competence, the conclusion might be that reporting for asset managers is distinctly suboptimal.

One more conclusion that can be derived stems from 'other back office activities': FinTech awards a much less positive score here than for the three specific categories, which hints at a large general potential for FinTech companies to reshape middle- and back office activities.

Scope for improvement in asset management and asset administration

Survey participants suggest several improvements along asset managers' and asset administrators' value chains. Figure 30 summarizes the responses. Whilst the perceived gaps in innovation and back office efficiency fit well with findings in other sections of this study, the additional and number one aspect, namely credibility and independence in investment advice, is worth pondering over by all means.

Figure 30 - Scope for improvements in asset management & asset administration

Wish list for products & services

73 survey participants handed in proposals for investment products and services they most desire to be developed or emphasized in the future. Figure 31 summarizes the suggestions. The number one product in demand could be labeled as the 'German 401 (k) pension plan', since many respondents enumerate several features of the famous US model, such as independence of one's employer, a wide range of investment products, and flexibility to take out money before retirement. Also on the winners' podium are long-term investments such as infrastructure-related products and alternative investments beyond hedge funds. Remarkably, a strong demand for crypto currency-related investment possibilities emerge as well. Impact investments, led by micro finance, are also amongst the top five items on participants' wish list for the future. The further wish list is dominated by specific alternative or FinTech-related investments. It also hints at a possible polarization into low-cost or passive offers versus more ambitious products with a higher degree of individualization.

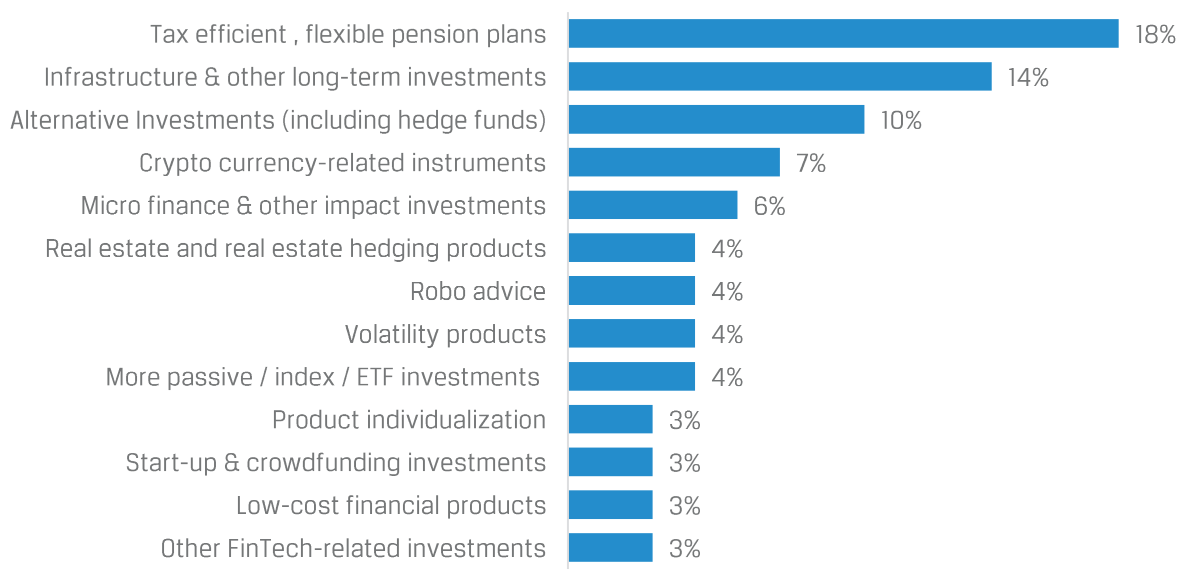

Figure 31 - Wish list for products & services

Outsourcing in asset management and asset administration

Reasons for outsourcing in asset management

A total of seven different reasons for outsourcing of asset management activities are mentioned by respondents. Apparently, some of the reasons are related to one another – efficiency inherently has to do with costs, just as conflicts of interest might be a consequence of organizational structure or a result of not observing regulatory requirements. Nevertheless, and regardless of those interdependencies which are beyond the scope of this study, the importance of each reason as displayed in figure 32 is based on the number of mentions. The number one reason for outsourcing of asset management activities is the concentration on core competences. The second reason is organizational structure; in several instances, participants specified this second category also as 'group structure', which is included here. The last of the three biggest blocks is cost cutting, mentioned by nearly a quarter of respondents.

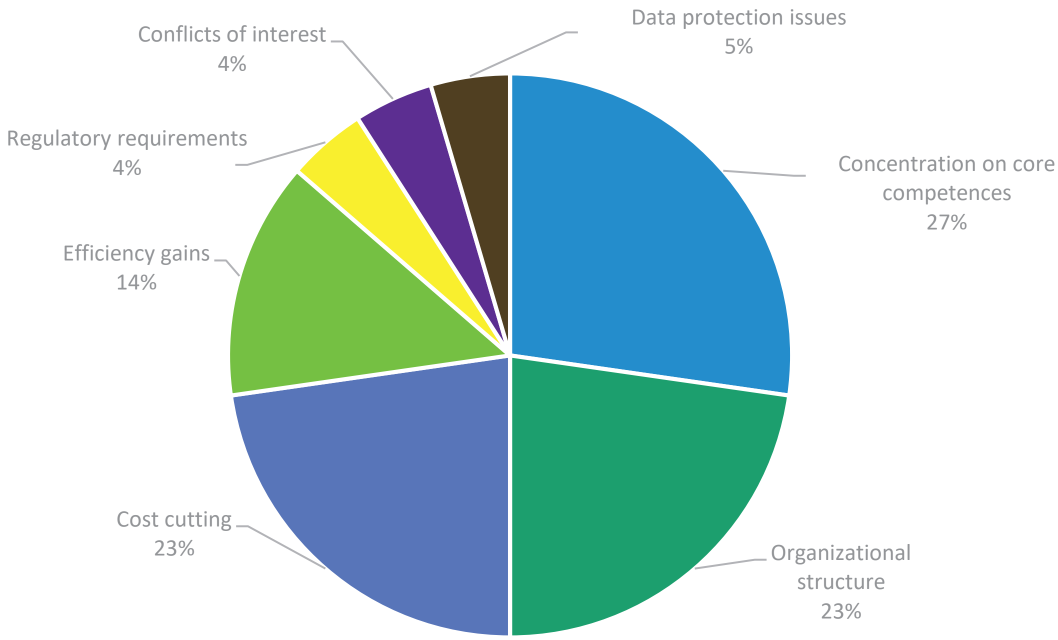

Figure 32 - Reasons for outsourcing of activities in asset management

Reasons for outsourcing in asset administration

For asset administration, the same limitations apply as to the reasons for outsourcing in asset management: they might be interrelated. For asset administration, the situation is less complex, because only three reasons are mentioned: cost cutting (50%) is the dominating motivation, followed by the concentration on core competences (37%) and group structure, which is mentioned by 13% of participants. All in all, these reasons are in line with the three main motivations seen before in the context of outsourcing in asset management, which is also illustrated by figure 58 (app.).

Extent of outsourcing in asset management

Along the entire value chain and also within its constituting elements, only a small portion of around 20% of all asset management activities in Germany are outsourced. Most respondents have a clear knowledge about the outsourcing considerations at their companies; only a small fraction answers to be 'not sure'. With capital market research and risk management, two of three 'core' activities exhibit an above-average degree of outsourcing. Figure 33 presents an overview.

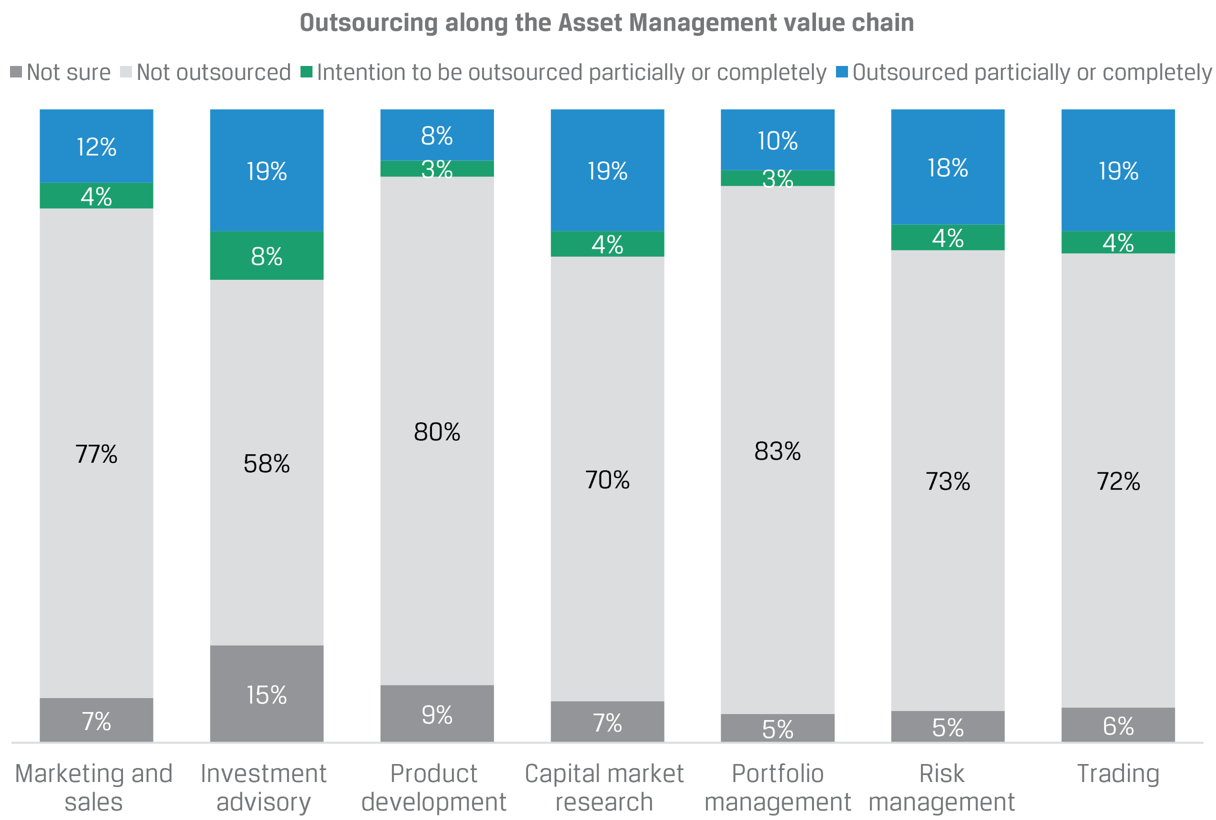

Figure 33 - Outsourcing in asset management

The high degree of outsourcing of the investment advisory function certainly has to do with the fact that many asset managers are not 'advising' clients in a legal sense at all, but instead manage their portfolios on a discretionary basis after investors have been advised by, e.g., group-owned private banking departments to have their portfolio managed professionally.

For some elements of asset managers' value chain, results hint at a 'stuck in the middle' phenomenon: smaller players lack (expensive) specialized employees and / or technical equipment. Therefore, they are most inclined to outsource specific activities externally. Also, players of the biggest size class, tend to outsource specialized stages of the value chain to large, group-internal entities. On the contrary, mid-sized asset managers tend to try to mirror larger portions of the value chain internally, such as investment advisory, product development, and capital market research.

The study's appendix (figures 59 – 65) contains highly detailed figures of activity-specific analyses. They cover actual and intended outsourcing of the various asset management activities, distinguish between outsourcing domestically or abroad, and also look at different size classes of asset managers.

Extent of outsourcing in asset administration

Along the relevant elements of its value chain, a considerable proportion of more than 30% of all asset administration activities in Germany are outsourced, as presented in figure 34. A decided majority of participants are well informed about the outsourcing considerations at their companies. Just a small percentage of them responded 'not sure'. If one considers controlling, performance measurement and reporting to be the 'core' activities of asset administration, then all of these core activities exhibit nearly the same degree of either realized or intended outsourcing, namely a combined 31% to 33%. Interestingly, this figure is much higher with regard to 'other' back office activities: a striking 58% for functions revolving around activities such as tax services, book keeping, settlement etc. This deserves more attention in additional research.

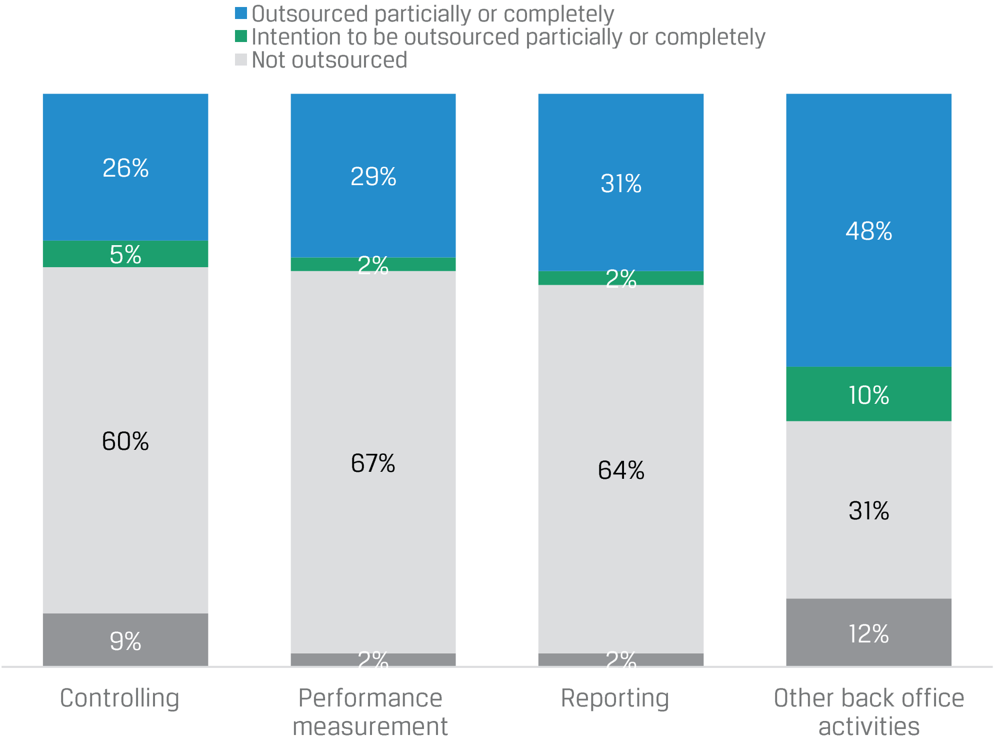

Figure 34 - Outsourcing in asset administration

Highly detailed results of activity-specific analyses are offered additionally in the study's appendix (figures 66 – 69). They cover actual and intended outsourcing of the various asset administration activities, differentiate between domestic and international outsourcing, and look at different size classes of asset administrators. With regard to size classes, no clear picture arises; whereas 'other back office activities' follow the 'stuck in the middle' pattern already visible for asset managers, a declining order prevails for controlling and reporting activities.

Performance measurement, where mid-size players exhibit the highest degree of outsourcing, is strongly dependent on IT systems: the smallest asset administrators offer basic solutions for their clients which can be achieved with basic IT. Mid-size players aim for more sophistication in performance measurement, e.g. also attribution, which requires more expensive IT systems. Up to a certain asset base, it is advantageous to outsource for that purpose. From a specific AuA level upwards, it pays off to buy one's own IT systems; that's why the biggest size category exhibits a markedly lower degree of outsourcing for this activity.

4.5 Quality of FinTech services

Overall assessment

The survey clustered the various FinTech-related services in accordance with the German regulator's taxonomy[4] at the time the study was conceptualized. BaFin has updated and expanded this taxonomy in the meantime, e.g., by adding 'block chain' as an additional category. The abbreviation 'e' characterizes 'electronic' services. As demonstrated in figure 35, respondents significantly differentiate with regard to the perceived quality of the various FinTech services and award a slightly positive score on average.

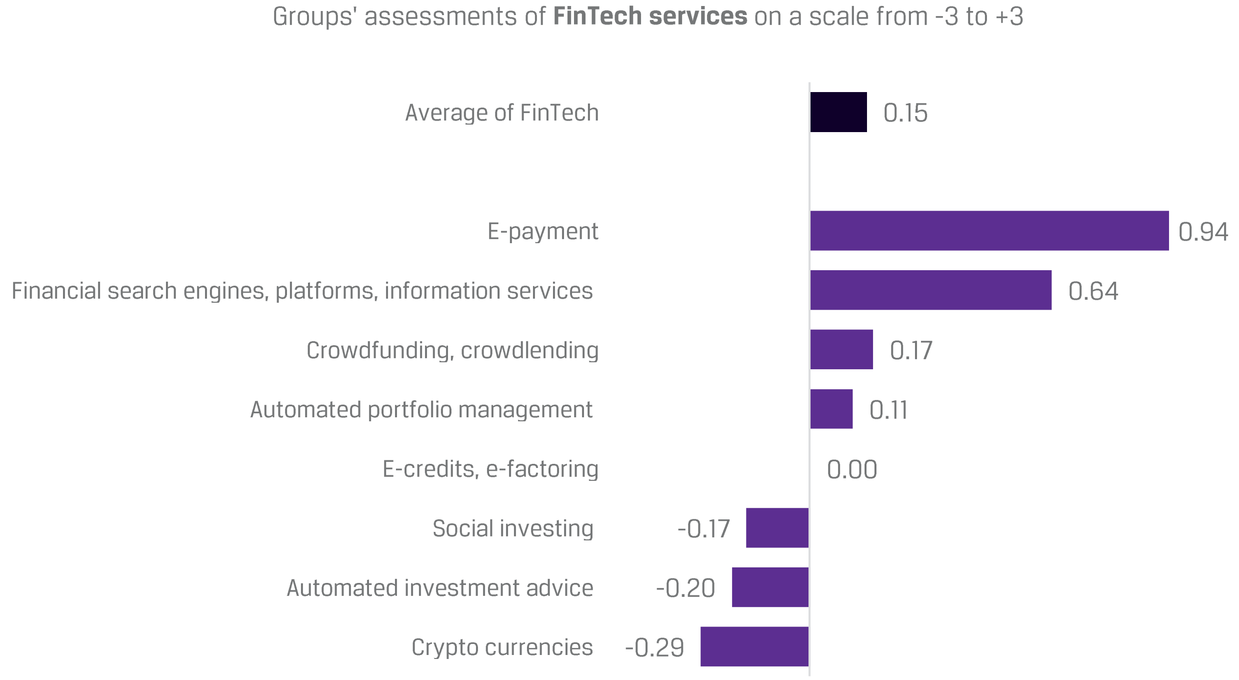

Figure 35 - Overall assessment of FinTech services

The declining order of the overall results per FinTech service appears to reflect also the degree of its proliferation into daily life – and thus the average citizen's everyday familiarity with it, which therefore might be taken as a proxy for each FinTech service's quality-based success as well.

Subsequently, the insights concerning the various FinTech-related services are stated in declining order according to total scores. The FinTech sector, as the one intrinsically affected, is highlighted with green bars in the corresponding detailed charts in the appendix.

[4] Source: https://www.bafin.de/SharedDocs/Downloads/DE/Jahresbericht/dl_jb_2016.pdf?__blob=publicationFile&v=9, accessed on: September 19, 2017

E-payment services

In spite of the highest positive overall score, there is a lot of upward potential. But considering the fact that in 2017, Germans – even when shopping online – still prefer traditional payment methods such as money transfers or payments based on a debit note over the likes of PayPal[5], the absolute score of 0.94 appears pretty high. Interestingly, two sectors with an above-average technological (FinTech) or operational (asset administration) involvement in e-payment award relatively high scores. For more details, see figure 70 (app.).

Financial search engines, platforms, information services

This group of services is also attributed an unanimously positive score by all demographic groups. Remarkably, not only respondents from the FinTech sector itself, but also from the realm where the search for information and knowledge has high professional priority, namely universities, provide the two highest group-specific scores. For more details, see figure 71 (app.).

Crowdfunding & crowdlending

The bronze medal is awarded to services revolving around crowdfunding and crowdlending. Several hundred platforms for crowdfunding and several dozens for crowdlending services exist in Germany[6]. Respondents deliver unanimously positive results for both of these services. The highest appreciation comes from the FinTech sector itself – as well as from the group which contains the federal institutions. With regard to the gap in figure 35 between the two preceding services' scores and the score for crowdfunding and crowdlending, sufficient personal experience with an e-service really seems to matter here, when assessing its quality. For more details, see figure 72 (app.).

Automated portfolio management

The last type of FinTech services with an overall positive score is also known as 'robo advice'. In Germany there are several dozen providers, whose services closely resemble one another[7]. They include automated risk, restrictions and objectives profiling; suggestions for portfolio structure and suitable investment instruments; and finally, specific transactions. These services are offered at comparatively low-costs. FinTech itself is skeptical regarding the service's quality, and participants from the academic sector are even more negative. Finally, the traditional asset managers' somewhat positive score might reflect a limited optimism in light of the competing nature of this service to their own activities – as well as an advanced awareness of both the possibilities and the shortcomings of such FinTech services compared to their old-school type of managing investors' money. For more details, see figure 73 (app.).

Automated portfolio management

The assessment for services pertaining to the online procurement and / or provision of credits which are collateralized by various types of securities or – in the case of e-factoring – by accounts receivables, results in an exact 0.00 overall score. Also, there is no larger group-specific oscillation around this level. The FinTech sector, which is closest to the technical fabric of e-credits and e-factoring, takes a positive view on these e-services. Online credits provided by commercial banks or specialized companies have been around for more than 10 years in Germany, and the absence of stronger or more differentiated opinions are somewhat surprising. For more details, see figure 74 (app.).

[5] Source: EHI Retail Institute (2017): study 'Online-Payment 2017'
[6] Source: https://www.crowdfunding.de/plattformen, accessed on: September 19, 2017
[7] Source: https://roboadvisorvergleich.de, accessed on: September 19, 2017

Social investing services

There is no legal definition of ,'social investing'. There might be overlaps with 'impact investing', 'mission investing' or 'environmental, social and governance ('ESG') investing'. In the context of FinTech, it refers to online services that facilitate or / and effectuate the investment of one's fund for a desirable purpose along specific ideas. Thus, there might be overlaps with the concept of crowdfunding, which social investing services could be considered to be a subset of. As for preceding service categories, the FinTech sector and the universities answer in sync – presumably driven by superior technical and / or theoretical insights about the actual quality and the technical fabric of these services. For more details, see figure 75 (app.).

Automated investment advice

As opposed to 'robo advice', where a contractual and fee-based agreement links investor and service provider, automated investment advice is generally provided free of charge by commercial banks or specialized investment companies and not necessarily bound to a portfolio. It aims at suggesting appropriate investment products to investors on a case-by-case basis, which then decide on the product(s) offered at their discretion. Automated investment advice might also – as opposed to robo advice – include some human (online) contact at some point during the advisory process. This kind of FinTech investment service is less widespread in Germany. Interestingly, the highest score is provided by the group of 'others', which contains respondents from commercial banks as its largest sub-group. This hints at positive experiences in that sub-sector. For more details, see figure 76 (app.).

Crypto currency services

This category of FinTech-related services gets the worst overall result, but the score of -0.29 is still pretty close to neutral. Interestingly, this time there is a clear division line between those who work close to the crypto currency phenomenon, namely the positively-voting respondents from the FinTech sector, and everybody else, who unanimously hand in negative views on these services. In light of the findings from other sections of the study, where crypto currency-related services rank pretty high up on the wish list for financial products and services to be provided or emphasized in the future, there seems to be some work ahead – both to technologically enhance those services and to educate investors. For more details, see figure 77 (app.).

4.6 Attractivity of Germany's financial regions

Composition of Financial Germany

For purposes of this study, the share of each region's respondents as presented in figure 36 serves as a proxy for the relative importance of Germany's various financial centers:

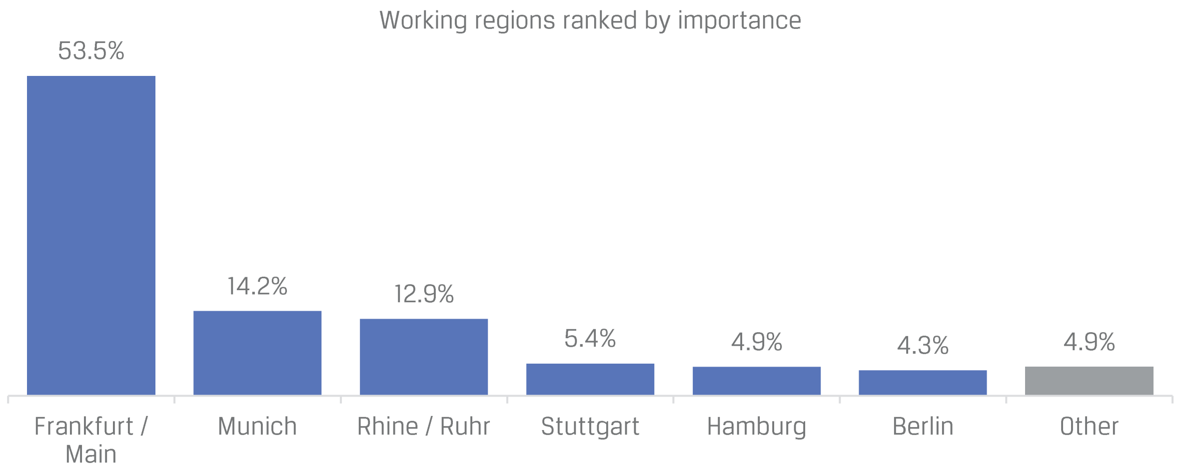

Figure 36 - Working regions of respondents

As a result, Germany's financial centers can be divided into three categories by size: the top category is indisputably taken by Frankfurt / Main. The second category is made up by the two considerably smaller financial centers of Munich on the one side, and the Rhine / Ruhr area (the latter mainly revolving around Düsseldorf and Cologne) on the other, followed by Stuttgart, Hamburg and Berlin. All other responses are contributed by participants from all over the rest of Germany. The single biggest groups within the 'other' category are financial professionals from Hannover, which sums up to 1.3% of the total, and from Nürnberg, which amounts to 0.9%.

The subsequent sections define criteria of attractivity and compare and contrast Germany's financial centers according to them.

Criteria of attractivity

Though Frankfurt has always been one of Europe's most important financial and commercial centers due to its highly advantageous location at the crossroads of several important continental trade routes, and perhaps as the coronation city of many German kings for a long period in the middle ages, this study's ambition is to identify modern criteria of attractivity for financial centers and to develop profiles for all major German financial centers of today. Prior to conducting the survey, extensive research was conducted across all relevant sub-sectors to identify those criteria. Since weighting would be arbitrary, any attempt to calculate an overall ranking is omitted on purpose. However, substantial differences are found and presented, and they might serve decision-makers to steer and further develop the attractiveness of the German financial regions appropriately.

Economic power of financial regions

Figure 37 captures the basic level and the dynamics of the financial regions' economic prosperity as perceived by the respondents. These are important factors to attract the financial sector's customers, players and employees. Munich and Stuttgart, Germany's mighty southern hotspots of the 'real' or manufacturing economy, outshine Frankfurt clearly in these categories. Frankfurt is seen at about eye level with Hamburg in the middle ranks, followed by a considerably weaker Rhine / Ruhr area and Berlin. The German capital is the only financial center with a negative score for its real economy. However, there is some hope, given the positive stance on growth and the fact that Berlin is the only region where the growth score exceeds the strength score.

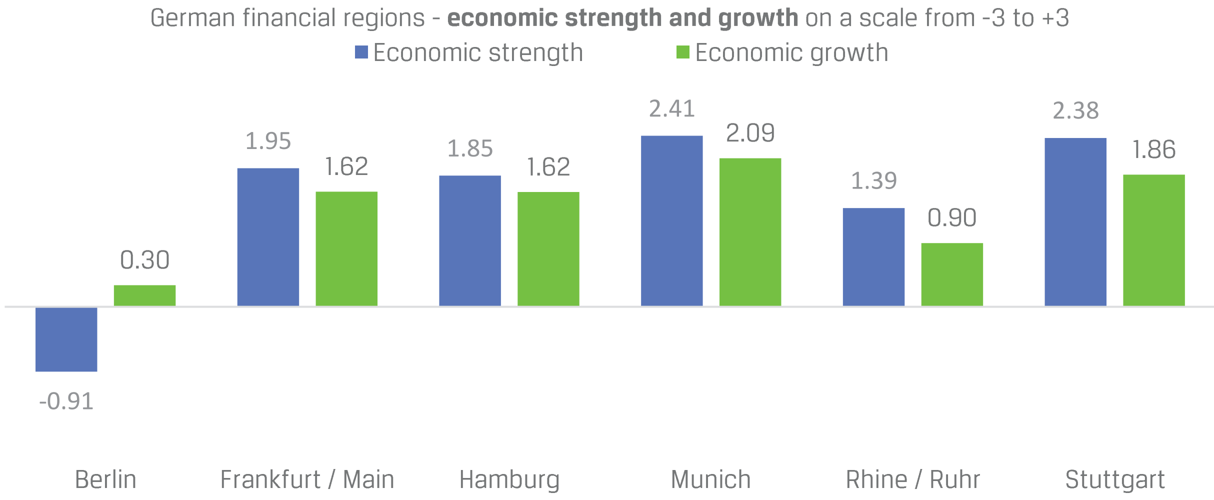

Figure 37 - Economic attractiveness

Recreational value

In order to encourage professionals to move or to relocate to a financial center, attractive conditions regarding its natural surrounding as well as in terms of culture and leisure are indispensable. Figure 38 presents Munich once more in front, followed this time by Hamburg and Stuttgart. Frankfurt lags by comparison, while Berlin holds its own. With regard to culture and leisure, the scores of Berlin and the Rhine / Ruhr area rise more than for the other regions.

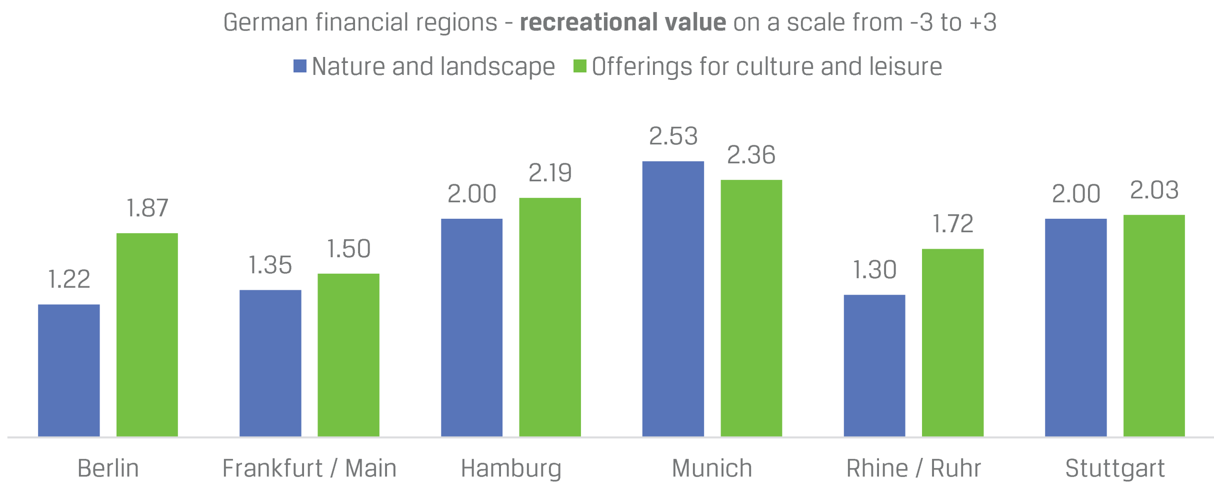

Figure 38 - Recreational value

Housing and infrastructure

Other key factors are the availability of housing space, as well as the quality of transportation and telecommunication networks. In these respects, Frankfurt is in much better shape: As delineated in figure 39, it receives a double second place. A relative advantage for Frankfurt seems to be its housing situation compared to Munich and Stuttgart, where the 'real' economy absorbs a lot of housing space. All in all, Frankfurt ranks second to Hamburg regarding these important factors. The Rhine / Ruhr area and Berlin are the only financial regions with a somewhat relaxed housing situation.

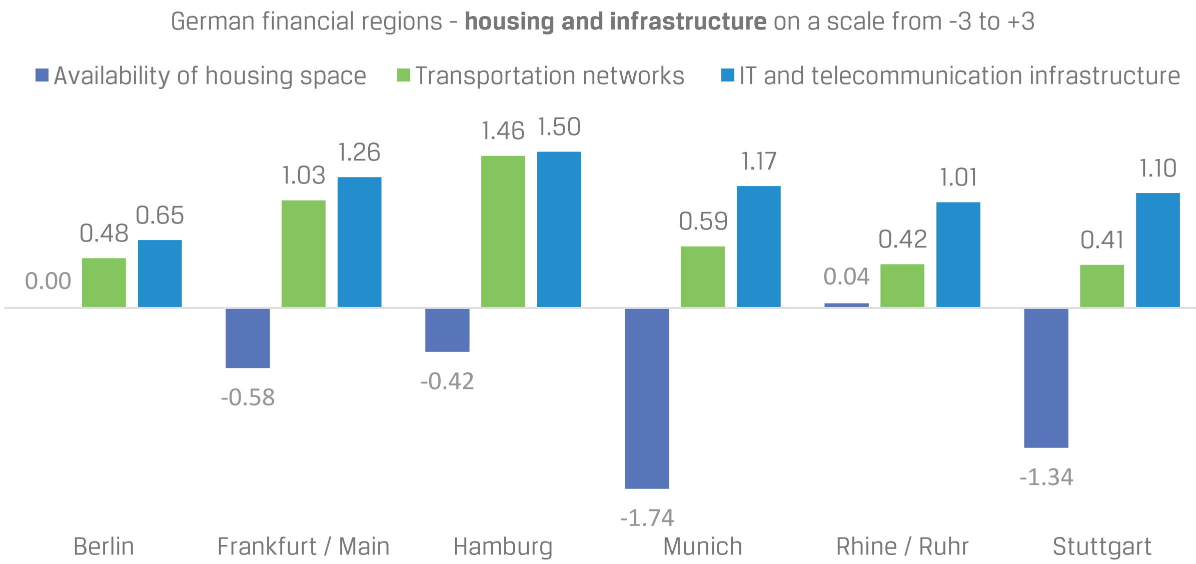

Figure 39 - Housing and infrastructure

Multilingual educational offers

In order to attract talent and the respective families from other financial regions, in particular at present from London's City in light of Brexit, a further crucial factor is the availability of multilingual pre-schools and elementary schools. Here, Frankfurt is markedly ahead of all other centers, followed by Hamburg, Germany's famous harbor city and 'gate to the world' since the middle ages. Even with the Rhine / Ruhr area lacking somewhat behind, all German financial regions earn a positive score for these criteria and thus do not constitute a major hindrance to the attraction of talent from abroad. Figure 40 exhibits the details.

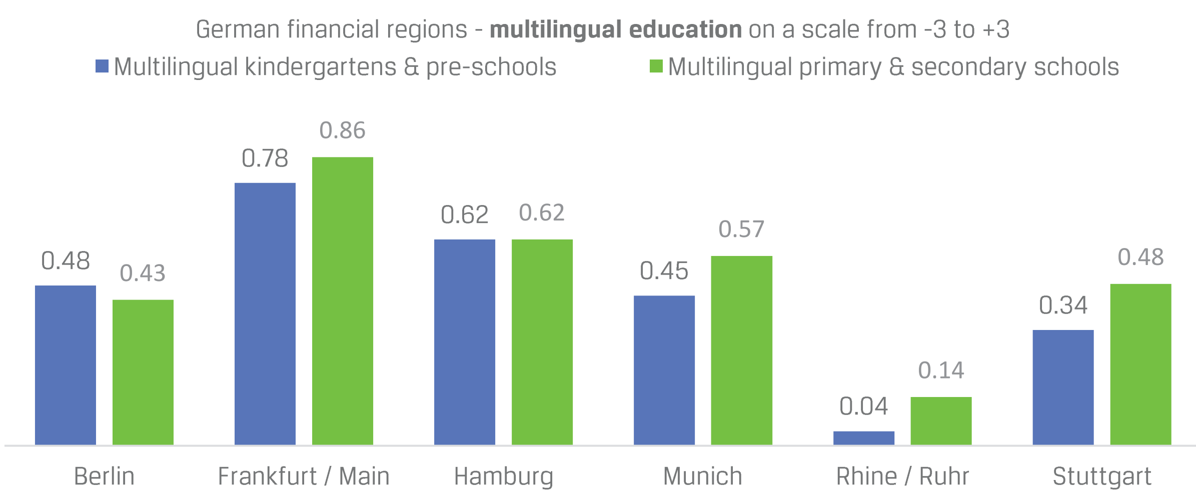

Figure 40 - Multilingual education

5. Conclusions & Recommendations

5.1 Conclusions

Overall picture

As we near the end of this study, a bird's eye perspective on Financial Germany seems appropriate. Although there are manifold possible alternatives and arguments around heterogeneity, grouping and weighting of aspects, a comparison of the main categories of Germany's attractiveness as a financial center is presented in figure 41, where each figure is built from the simple average of its constituting aspects. The good news is: all of the category scores are in positive territory.

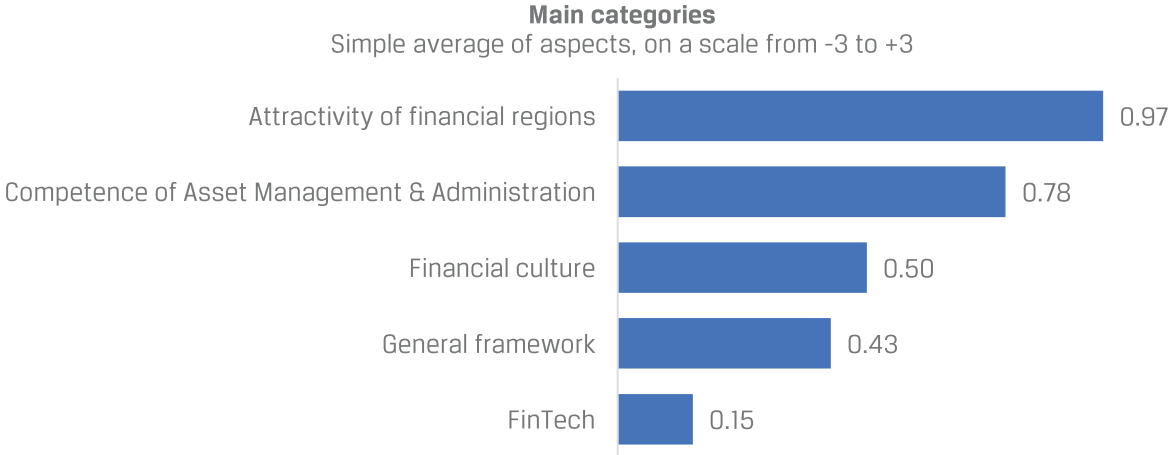

Figure 41 – Average-based scores of main categories

Impressive and targeted internationalization

Internationalization – as captured by this study – has several aspects. First of all, language: for a survey which addressed professionals working in or for the domestic investment industry across Germany, a proportion of 23% responding in English is impressive. Looking at figures of 'future-oriented' sub-groups, there is a 45% response rate in English for professionals with less than 2 years domestic work experience, and a 51% figure for the German FinTech sector. Another impressive result are the 42.2% of respondents who have worked at least for 6 months in at least one foreign financial center. Moreover, the main countries of foreign work experience match up very well with the countries perceived as Financial Germany's main competitors: UK, USA, Switzerland, and Luxembourg. How does that stratagem read? – 'Know your competitor'. Germany appears to be prepared.

Stable public framework and fair taxation

Unanimously, respondents praise Germany's high political and legal stability with overall scores north of 2. The appreciation for its political stability is particularly high among respondents with a long domestic working life. Also, public administration gets good marks. The survey questions on taxation of different groups yield an almost ideal result. Assuming that no government can renounce taxes, but rather has to settle on levying them in a way that different groups do not feel disadvantaged, the German government apparently does a good job: financial companies feel slightly positive about taxation, employees slightly negative; taxation of private investments gets an overall neutral response. From a systemic perspective, this would be hard to improve upon.

Regulator: fair and competent, if somewhat sluggish

The above-mentioned impression of a fair balance of group interests is supported by answers pertaining to regulatory bias: whether asking about regulatory consideration of the interests of financial companies, of institutional investors or private investors, the overall resulting figures are in a very narrow band from -0.04 to +0.15. Among the 23 different demographic groups, which are built along four different categories, not a single one provides a score even close to -1.00 or +1.00. In other words: Nobody within Germany's financial industry feels group-specifically advantaged or disadvantaged by the financial regulator. Shortly put: Germany's financial regulator is perceived to act extremely fairly. Also quite positive, but certainly with scope for improvement, are participants' assessments of the regulator's competence and readiness to engage in dialogue with the financial industry's stakeholders.

However, shortcomings on the regulator's side are identified as well. They are not dramatic with regard to their extent, but nevertheless important to highlight: both the practicality of regulation and the regulator's efficiency gets neutral feedback at best from participants. The regulator's ability to translate financial legislation into operable rules, as well as its timeliness and responsiveness when interacting with the financial industry, are important factors for financial companies in their comparative assessments of financial centers' attractiveness. Finally, on the 'future' side of things, the German regulator gets its lowest marks: consideration of innovative trends receives an overall -0.20, and the aspect of timeliness of FinTech regulation ends up with anaverage of -0.31. However: on a scale from -3.00 to +3.00, this is far from being fatal.

Educated finance professionals and market-averse population

Germany's 'financial culture', as it turns out, consist of facets of very different quality: first, the study confirms the widespread notion that Germany's population – which builds the core customer base of the country's financial sector – is only rudimentarily familiar with most financial instruments and products, and it utilizes financial markets only to a limited extent for transactions and the accumulation of wealth. Overall scores of about -1.3 for these aspects are self-explanatory. A more positive response is noted regarding the presence of financial exchanges, platforms and – especially – international financial institutions with overall scores between +0.5 and +0.8. Finally, the survey researched into communication between financial academia (with slightly positive results of around 0.3) as well as into peer-to-peer communication among financial practitioners, which was markedly better than with academia (close to 1.0).

Far better results are produced for financial education in Germany: in broad accordance by all demographic groups, the 'dual education', a unique traditional German approach to professional education, gets a lot of praise in the financial sector, even slightly topped by responses regarding the quality of financial study programs at universities. Continuing professional education in the financial sector also receives fairly high assessments. Overall, financial education, with overall scores around 1.3 or higher, leaves a strong mark among all cultural aspects investigated.

Finally, the job market for qualified financial professionals appears out of balance. Unfortunately, there seems to be substantial overhang on the supply side, which is a clear indication that Financial Germany is not in an expansionary stage. This aspect corresponds with comparatively low degrees of job security, work-life balance and level of income (all between 0.2 and 0.8).

FinTech – a valuable contrarian voice

The FinTech sector plays an important and twofold role for this study: first of all, the FinTech sector is defined as a separate demographic group and turns out to have distinct and often contrarian views on Financial Germany's qualities: all in all, 'FinTechies', as they call themselves in Germany, are most skeptical concerning 'the system' and the quality of 'traditional' asset management as well as the future demand for financial professionals.

Secondly, the analyses regarding various FinTech products and services also reveal contrarian viewpoints regarding the FinTech sector itself and indeed of every other sector on many topics, leading to the conclusion that one's degree of familiarity with specific FinTech services strongly influences one's judgement about their quality.

A solid asset management industry

The asset managers' strategic and organizational competence is assessed as solid, and also their drive for innovation is awarded a positive score on average. However, if asset managers and asset administrators themselves had not voted positively, the innovation aspect would have ended up markedly negatively. Along the value chain, asset managers get fairly good assessments from all parties, particularly with regard to their core competences, excepting very few contrarian views. With regard to asset categories, a clear trichotomy appears: while traditional investments are perceived to be managed pretty well in Germany and so-called 'traditional' alternative investments at least fairly well, the management qualities for 'modern' alternative investments is perceived far more skeptically.

Asset administration – hidden stars in middle and back office

Overall, asset administrators are in good shape. They are attributed substantially higher competence levels along their value chain than asset managers, and there aren't really any outliers to detract from this positive picture. Controlling turns out to be the most highly regarded single competence of asset administrators, and this is all the more valuable, as this quality-assuring activity feeds back into the preceding asset management operations.

Outsourcing on the run

In Germany, outsourcing to domestic and international service providers is prevalent, on average, to an extent of 20% in asset management and to a degree of more than 30% in asset administration. The degree of outsourcing varies considerably across size classes of companies and along the different activities of the value chain. The main drivers for outsourcing for asset managers, as well as for asset administrators, are the concentrations on core competencies, aspects of organizational structure and efforts to cut costs.

Attractive private pension schemes on top of product wish list

At the top of the wish list, is a tax efficient, flexible private pension scheme. This certainly does not astonish the average German citizen or financial professional, because what's on the market thus far does lag behind international best practice, such as the well-known US 401 (k) pension plans. Also, there is a strong request for a much broader scope of alternative investment possibilities, ranging, e.g., from infrastructure, to micro finance and other impact investments, to crypto-currencies and volatility products.

Germany's financial regions: discoveries ahead

Frankfurt comprises more than half of Financial Germany. Munich and the Rhine / Ruhr region centered around Cologne and Düsseldorf encompass another quarter of it, and the remaining quarter is made up by Stuttgart, Hamburg, Berlin, and others. Frankfurt doesn't look so attractive at first sight, because in many categories other centers rank higher up. For example, Munich and Stuttgart have stronger economies, and Hamburg and Munich are ahead in recreational aspects. However, Frankfurt offers an attractive combination of a good infrastructure, a housing space situation which is tight, but still much better than in Munich or Stuttgart, and – maybe most importantly – the clearly highest availability of multilingual kindergartens, pre-schools and primary as well as secondary schools.

5.2 Recommendations for stakeholder groups

Recommendations for asset administration companies

Asset administration is the sector where staff has the lowest level (28%) of foreign work experience, although two thirds of respondents feel rivaled by competition from abroad. Thus, especially with regard to the UK and Luxembourg, an increase in knowledge about competing financial centers seems advisable – be it via work assignments abroad or by acquiring expertise from main competing centers.

Asset administrators appear to align closely with private investors, by contributing the lowest scores for the tax treatment of that group and by expressing the opinion that the regulator provides more for the interests of institutional investors and financial companies than for private investors. Because asset administrators are directly involved, e.g. in the operational and technical side of investment taxation, there must be reasons for this perception of disparate treatment of private investors. It would be helpful if asset administrators brought their insight and concerns to the attention of the financial community and the legislator.

When analyzing the competence of asset managers along the value chain, the persistently high scores provided by asset administrators catches the reader's eye. Thus, in order to derive recommendations, it might be worth looking at the exceptions from their admiration for the front-end side of things, and there are a few: caution comes into play at the following two elements of the value chain: product development and risk management. The latter is even attributed a negative score by asset administrators. It is reasonable to assume that asset administrators suffer severe consequences in their middle and back office operations in the case of imperfectly developed new products, or insufficient risk management procedures. Therefore, asset administrators should insist on being even more involved at early stages of product development, in order to contribute to the administrative perspective of things, and also to have a bigger say in asset managers' risk management processes – particularly with regard to the prevention of post-trade risks.

Regarding their own competencies, asset administrators are overall awarded good scores with only a few exemptions: they should work on improving reporting quality, which asset managers obviously find lacking. Reporting is also outsourced to a considerable extent (33%) by asset administrators, and the relative dissatisfaction with this element of the value chain might imply quality assurance issues for the outsourcing administrators as well. Also, exchanging thoughts with the FinTech sector could be fruitful: apparently, the latter sees scope for improvements in the so-called 'other' back office activities – and might have solutions in store.

Recommendations for asset management companies

Of all sectors, Germany's asset management faces the most competition from abroad. With 44% of participants considering the UK as the main rival, far ahead of any other financial center, there seems to be scope for acquiring more knowledge and experience in Germany concerning the UK: just one out of six respondents has ever worked there.

Asset managers are generally not unhappy with the legal and political system, but they are upset with current regulation, including its practicality. Their irritation goes as far as attributing the lowest scores of all groups to the regulator's competence and efficiency. Combining their restrictive assessment of the dialogue between regulator and industry stakeholders, the best recommendation here is to insist more strongly on regulatory inclusion and to institutionalize dialogue with the regulator themselves. The same holds true for the low communication levels that the asset managers bemoan among several stakeholder groups of Financial Germany – it's also up to them to organize opportunities to improve on that.

Concerning financial culture, asset managers also have strong feelings about the low level of general knowledge of the population regarding financial instruments and products. Assuming that better-educated investors are a net positive, asset managers should continue to intensify their effort to increase financial literacy.

Value chain analyses also imply recommendations for asset management companies: astonishingly, they are pretty skeptical with regard to their own organizational efficiency. While they otherwise tend to be overly optimistic about their own capabilities, organizational competence seems to be a real issue, which should be addressed.

Reality checks are advisable for the aspects of innovativeness, advisory capabilities and portfolio management skills – the latter especially with regard to traditional investments. It is not that asset managers completely overshoot with their self-assessment, but they are considerably above the other groups' judgements. It would be in their own interest to sharpen their profile of strengths and weaknesses here. Since investment advisory is often performed by other group entities or outsourced to external providers, asset managers might also intensify their quality assurance efforts towards their partners. In this context, the results of the study's 'improvement' section comes into play: number one on that list is 'credibility and independence in investment advice', which would suggest the advantage of making also external best-in-class investment solutions available for one's own investors.

Moreover, the study's 'wish list' for products and services contains a clear call on asset managers to work on the development of tax-efficient, flexible private pension models similar to the US 401 (k) plans, in addition to providing a much wider range of alternative investment possibilities for investors, such as infrastructure and other long-term investments, crypto currency instruments and micro finance.

Recommendations for FinTech companies

The FinTech sector emerges as the contrarian and skeptic within Germany's financial industry, with regard to many topics. Representing an important evolutionary path of the industry, it would be most valuable if the FinTech sector shared its views in detail on legal and political frameworks and on taxation and provided it to the financial community and to federal institutions to influence the direction of their further decisions.

Since the FinTech sector also expresses pessimistic views in terms of demand for financial professionals, job security and income levels, its skepticism should be transformed into contributions to the discussion of the future of financial professions and to the competencies that will be required for the next generations.

A final task that's left for the FinTech sector is to better explain their products to ordinary people. As the survey clearly shows, participants' rankings for the various FinTech services and products largely reflect the degree of their familiarity with them, instead of being driven by substantiated knowledge.

Recommendations for institutional investors

Institutional investors display, overall, low degrees of internationalization, as measured in this study by the proportion of answers in English and work experience abroad. Also, 83% name Germany as the location where their investment strategy is decided. At the same time, a majority of respondents from this group state that competition from abroad exists. Thus, it may be advantageous to raise the level of international experience for institutional investors. This group also seems to be somewhat cut off from communication between financial academia and financial practice and provides the lowest score of all financial sub-groups for that aspect. Even the younger group of FinTech companies exhibits a much higher score. Maybe a more formal and aggregated representation of their group interests, reflected in appropriate associations, would help them to better interact with the academic world.

Institutional investors are least satisfied with domestic asset managers' capabilities to manage alternative investments. Since they are a very important customer group, they would be advised to pressure their asset managers to increase efforts and improve quality in this field. As the 'product wish list' shows, novel and alternative investment opportunities are ranking high in all responses, so success in this effort could benefit all other stakeholders.

Recommendations for service providers to financial industry

The group of service providers represents diverse professions, which do not easily facilitate targeted and specific recommendations. However, it is good to see that the representatives of such overarching functions as consultants, law-firms, auditors and data providers contribute some of the highest scores with regard to the legal and political system. By and large, their responses are inconspicuous or average, but concerning a few aspects, their answers are stronger and hint at a potential role they can play in further developing the quality of Germany as a financial center: for example, service providers attribute rather low scores to communication between financial academia and financial practice: here, management consultancies for the financial sector, which typically have strong ties to academia, are ideally positioned, and are hereby asked to organize more platforms and events to bring these groups together. Also, service providers see above-average demand for qualified financial employees and could contribute to the development of future career paths by sharing their viewpoints with employers and professional associations. Service providers, with their overarching perspective and consulting nature, are also an invaluable voice with regard to the identification of areas for improvement for asset managers and asset administrators, which they state as strategic competence, organizational efficiency and controlling.

Recommendations for universities and 'financial think tanks'

Academia is the natural carrier of research – and thus, this group of participants should examine all aspects which yield interesting or unusual results, such as the 'contrarian opinion phenomenon' of FinTech representatives.

Universities and financial think tanks are much more optimistic about certain aspects than other groups – such as legal stability, efficiency of public administration, practicality of regulation, the general level of the regulator's competence, efficiency and consideration of the interests of various groups, and the supply of qualified financial professionals. Thus, a research-based reality check could help to reconcile these different viewpoints. Some eye-catching results are also shown by the perceived quality of FinTech products and services: universities and think tanks are much more pessimistic about automated portfolio management, automated investment advice and social Investing services than other groups. Assuming that participants are basing their answers on academic studies on those fields, it would be helpful if academia contributed their insights to the public discussion about chances and limitations of such FinTech products and services.

Universities' self-praise for the quality of academic financial study programs should be noted, though they also concede high scores to the non-academic path of financial education.

Along the asset management value chain, universities also surprise with some strong opinions: as optimistic as they are in terms of asset managers' organizational efficiency and risk management capabilities, they are more pessimistic when it comes to strategic competence, innovative strength and capital market research. More research in those fields would be helpful to explain the variety of different groups' perceptions.

Recommendations for legislator, regulator, central banks and federal agencies

Participants have made very clear what they long most for: a flexible, tax-efficient private pension model for Germany. The legislator is asked to pursue this. Schemes commensurate with successful international concepts would also contribute very positively to overarching societal goals such as keeping the living standard high, preventing old-age poverty and increasing social stability in Germany.

Two-thirds of respondents of federal institutions have not worked abroad for a longer period of time, and those who have, had a clear preference for Europe. As a result, just 13% have personal experience with the financial industry of the UK and the USA. This fits with the fact that 69% of respondents from this see no foreign competition. Although that might be personally true in their roles, it certainly looks different for those whom they regulate and govern. Thus, considering the competitive importance of the Anglo-American realm for the German financial sector, it would seem advisable to raise the level of such experience at the German legislator and other federal institutions.

Less ideal is that the group containing the regulator expresses the highest esteem of all groups for the aspects of practicality of regulation and the consideration of the interest of financial companies – there is a huge gap compared to the perception of asset managers and institutional investors. Similar is the assessment of the financial regulator's competence, efficiency, consideration of innovative trends and readiness to engage in dialogue with industry stakeholders: there are considerable gaps between their own and the other groups' perceptions. By better involving the industry stakeholders and systematically collecting feedback to their actions, the federal institutions could narrow these gaps.

Taxation of employees' income gets substantially negative marks. The legislator should be aware of the fact that this aspect plays a major role in an employer's ability to attract international financial professionals to Germany.

Also, by providing above-average scores to many aspects, the federal institutions appear to have a somewhat 'rosy picture' about the financial culture in Germany – be it with regard to the general level of knowledge and use of financial instruments and products, the level of communication between various groups, the quality of financial education or work-life balance in the finance sector: reality appears less rosy to most other groups most of the time.

A few to dos are addressed by the federal institutions themselves: they identify weakness in asset managers' innovative strength as well as in their marketing & sales capabilities, and they seem to have a different notion of asset managers' competence regarding 'modern alternative investments' – reflecting on these issues should be a starting point for setting a better framework for financial practice.

Recommendations for decision makers in domestic financial regions

Consider alternatives to Frankfurt! Germany's financial hotspot, after all, is a good compromise when weighing up important aspects, but it excels in just one category, namely multilingual education – which, of course, might matter a lot when it comes to attracting international specialist with families. However, in case that aspect is of lower importance, financial companies might also look at the manifold assets of other German cities: such as Munich and Stuttgart with their economic power and high recreational value. Or Hamburg, which also gets high scores for nature, landscape, culture and leisure – and turns out to have a far better housing situation, as well as better IT and transportation networks, than the two southern state capitals.

If the housing space situation is of high importance when considering a location, the Rhine / Ruhr area around Cologne and Düsseldorf is a really good option, and represents good compromises in several other respects. Berlin, though somewhat struggling in this beauty-contest, offers a relatively good housing situation and ranks number two in terms of providing international education. It is also the capital of Germany and boasts a lively atmosphere. Thus: make full use of the variety and attractiveness of Germany's seven major financial regions, help improve selective weaknesses and enjoy its manifold strengths!

Groups' assessments of the **legal stability** on a scale from -3 to +3

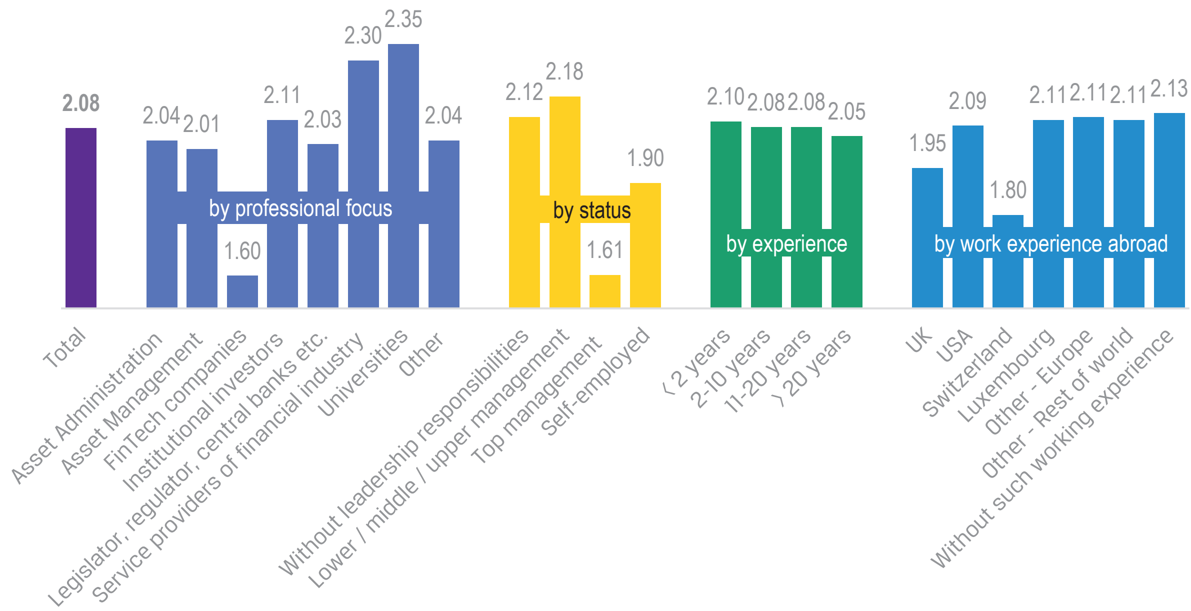

Figure 42 - Legal stability

Groups' assessments of the **efficiency of public administration** on a scale from -3 to +3

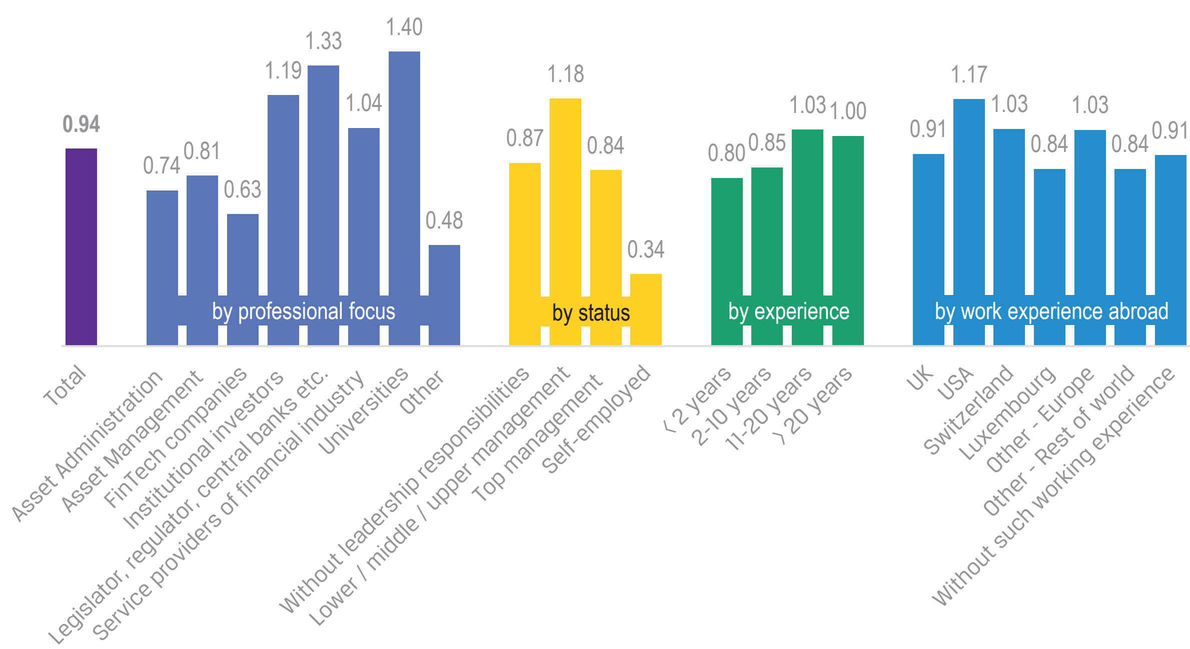

Figure 43 - Efficiency of public administration

Groups' assessments of the **taxation of employees' income** on a scale from -3 to +3

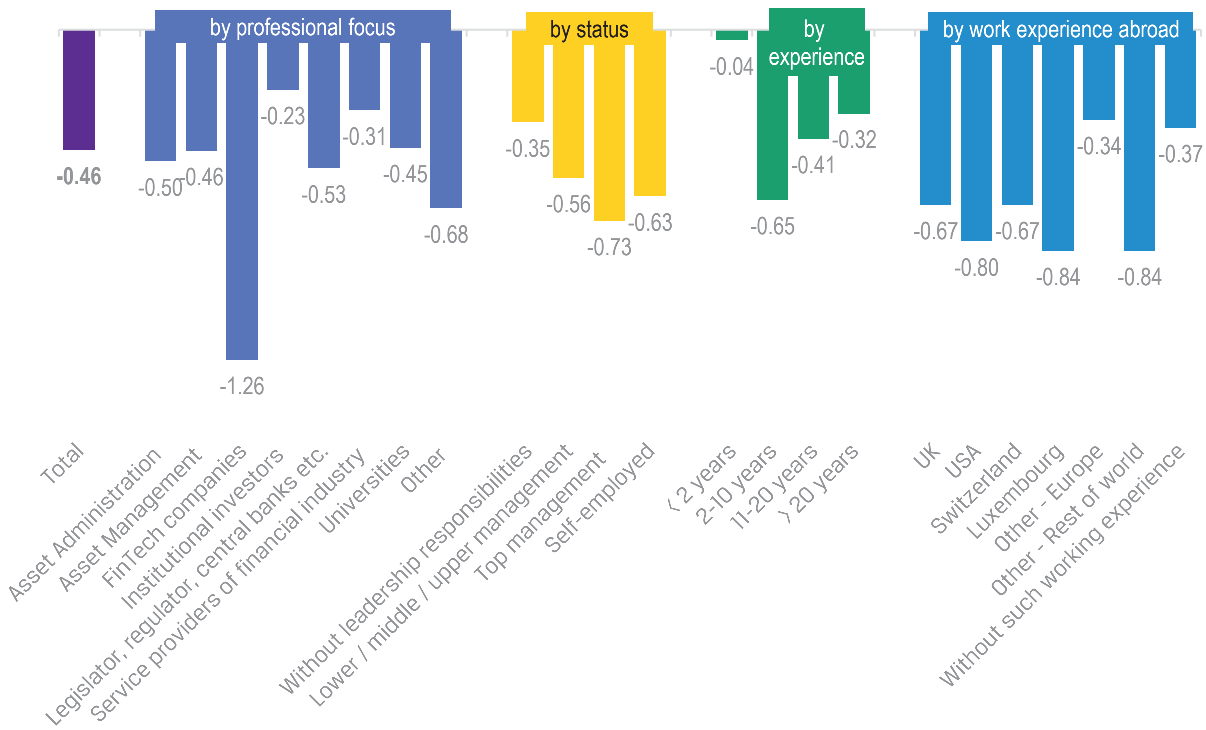

Figure 44 - Taxation of employees' income

Groups' assessments of the **taxation of private investments** on a scale from -3 to +3

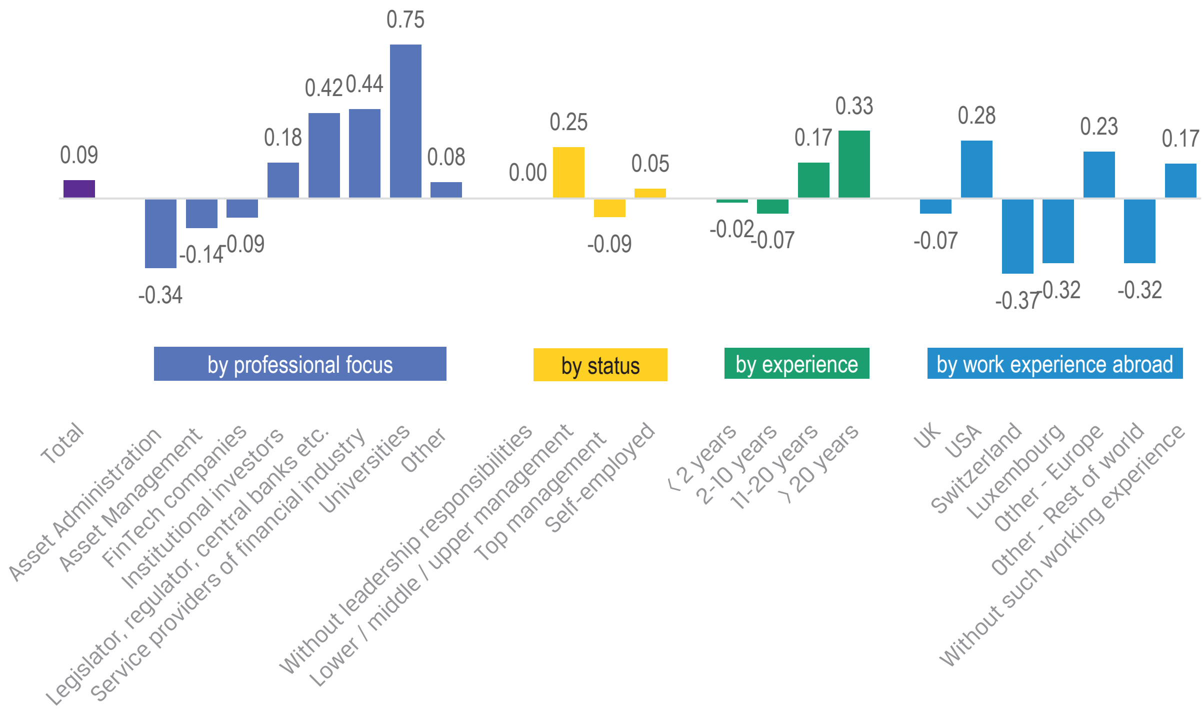

Figure 45 - Taxation of private investments

Groups' assessments of the **regulatory consideration of the interests of financial companies** on a scale from -3 to +3

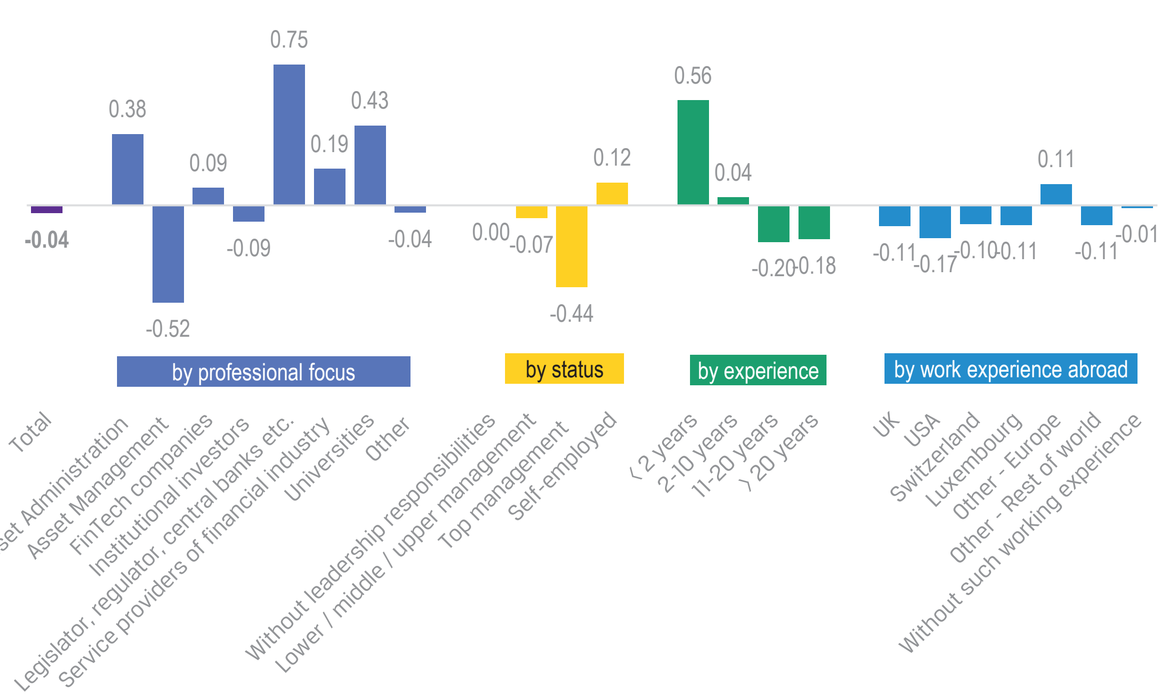

Figure 46 – Regulatory consideration of the interests of financial companies

Groups' assessments of the **consideration of the interests of private investors** on a scale from -3 to +3

Figure 47 – Regulatory consideration of the interests of private investors

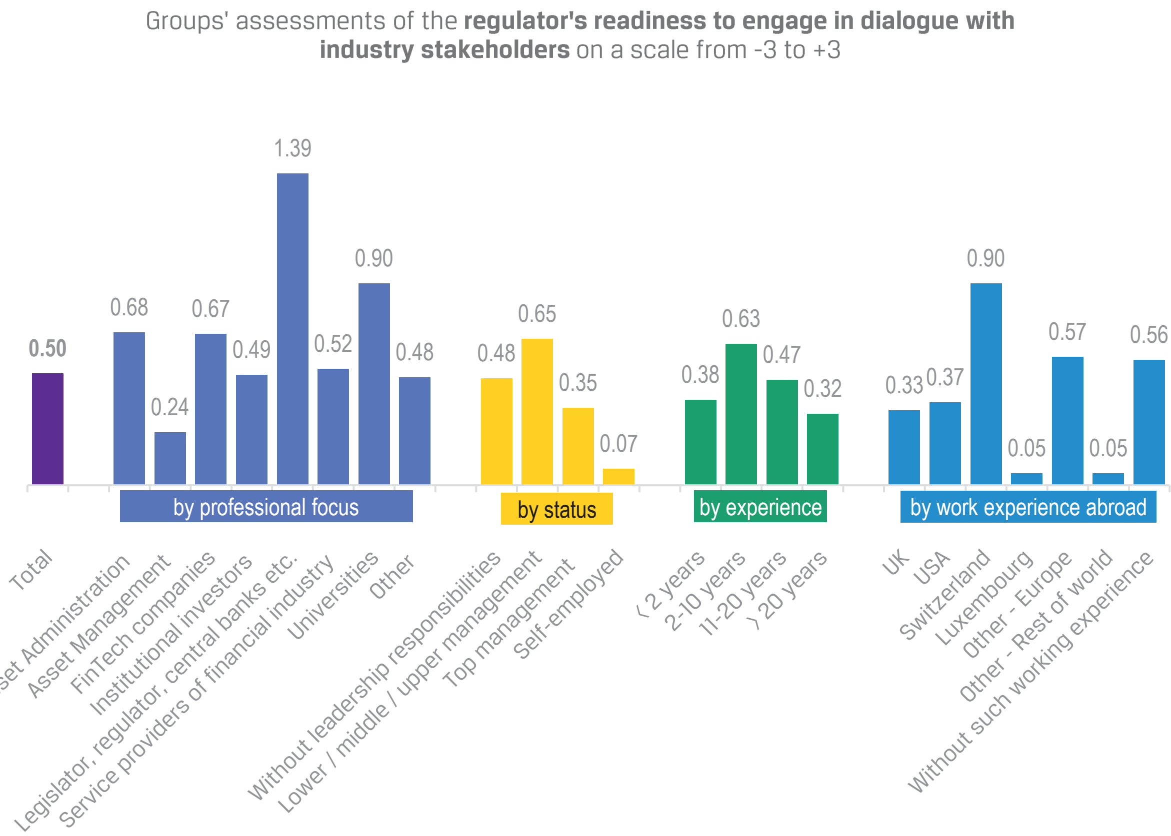

Figure 48 - Regulator's readiness to engage in dialogue with industry stakeholders

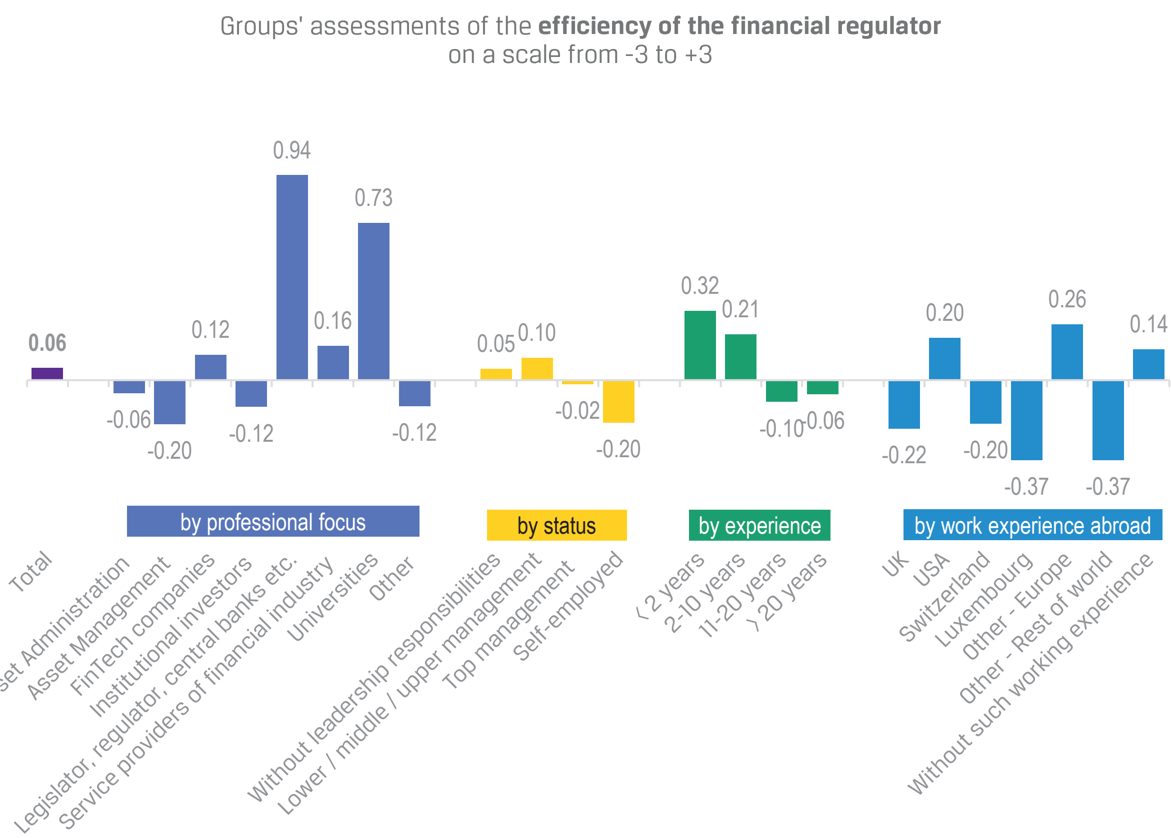

Figure 49 - Efficiency of the financial regulator

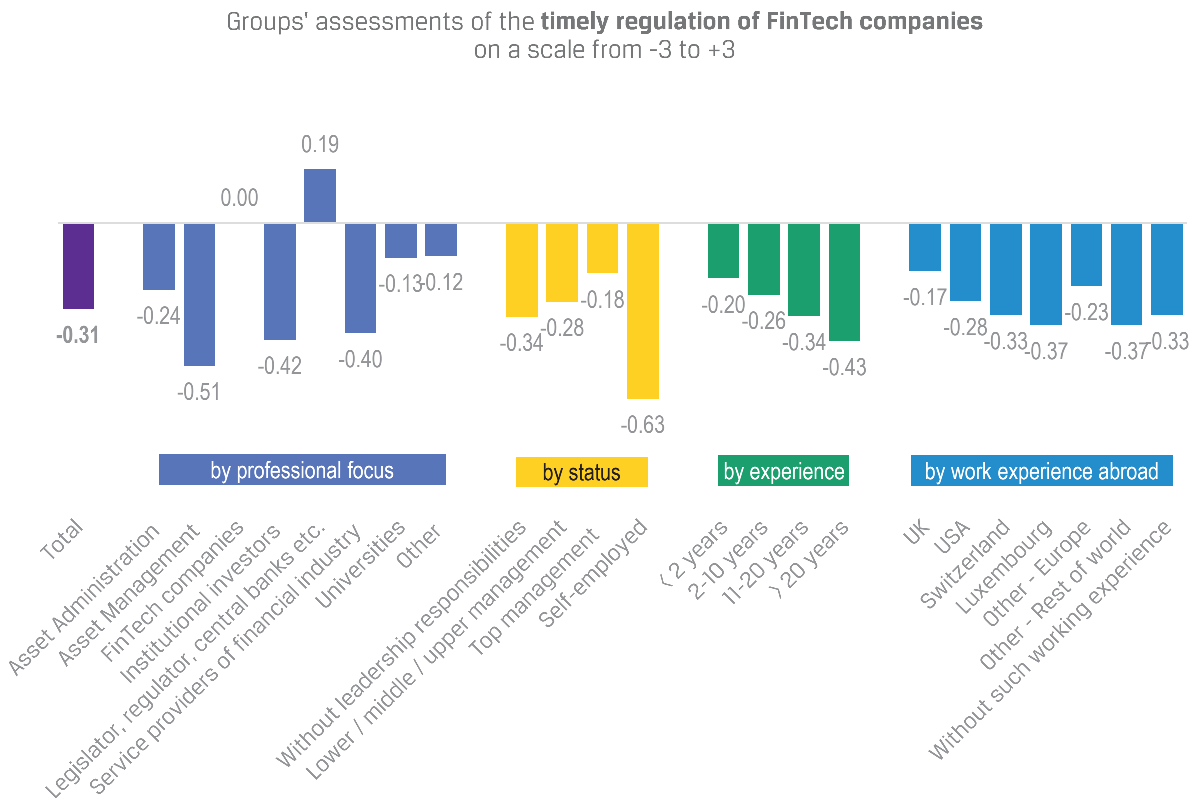

Figure 50 - Timely regulation of FinTech companies

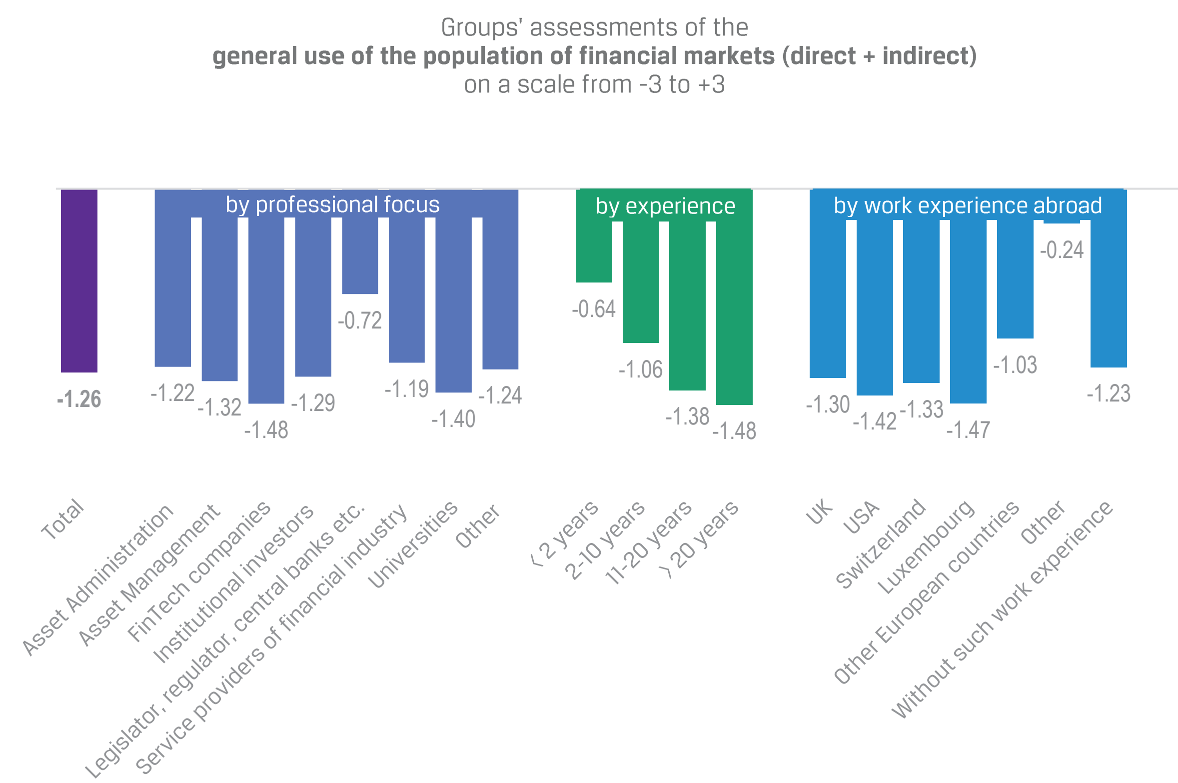

Figure 51 - People's use of financial markets

Groups' assessments of the **presence of financial exchanges and organized trading platforms** on a scale from -3 to +3

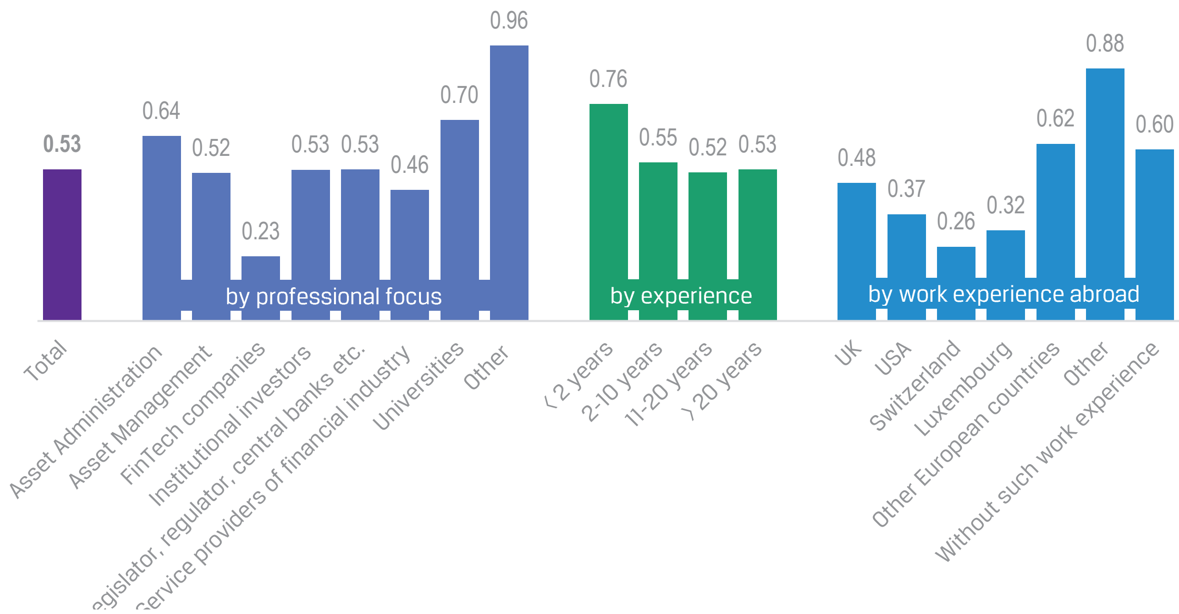

Figure 52 - Presence of financial exchanges and organized trading platforms

Groups' assessments of the **communication between financial academia and financial practice** on a scale from -3 to +3

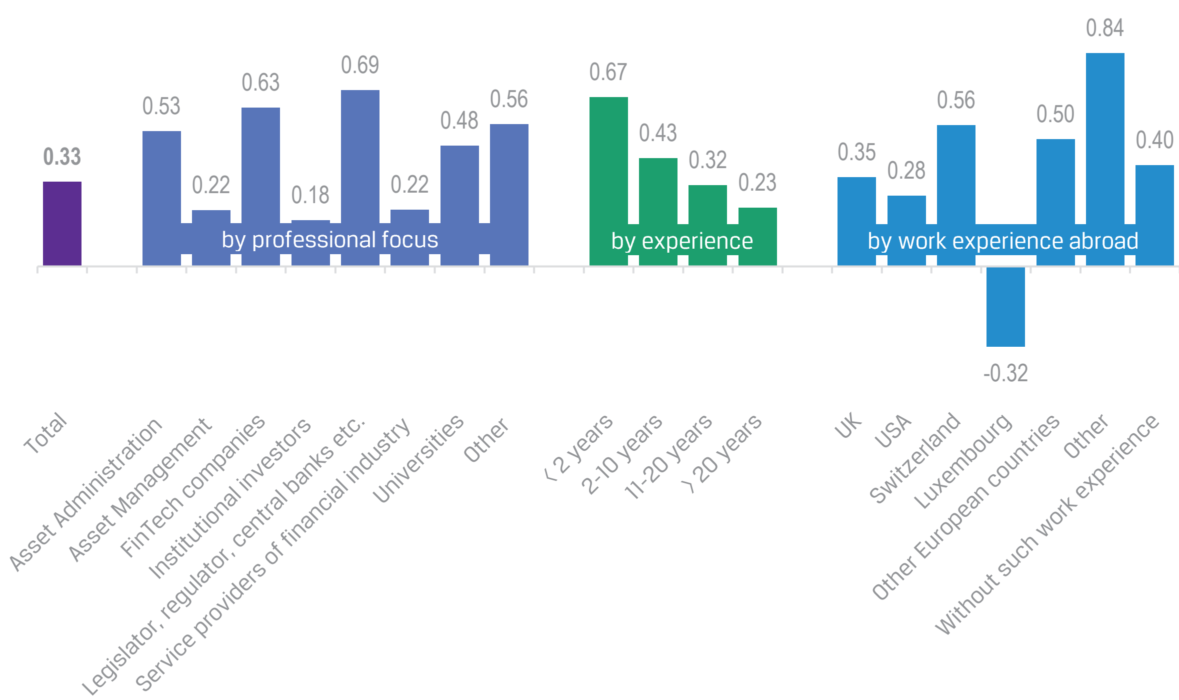

Figure 53 - Communication between financial academia

Groups' assessments of the **quality of German dual professional education**
on a scale from -3 to +3

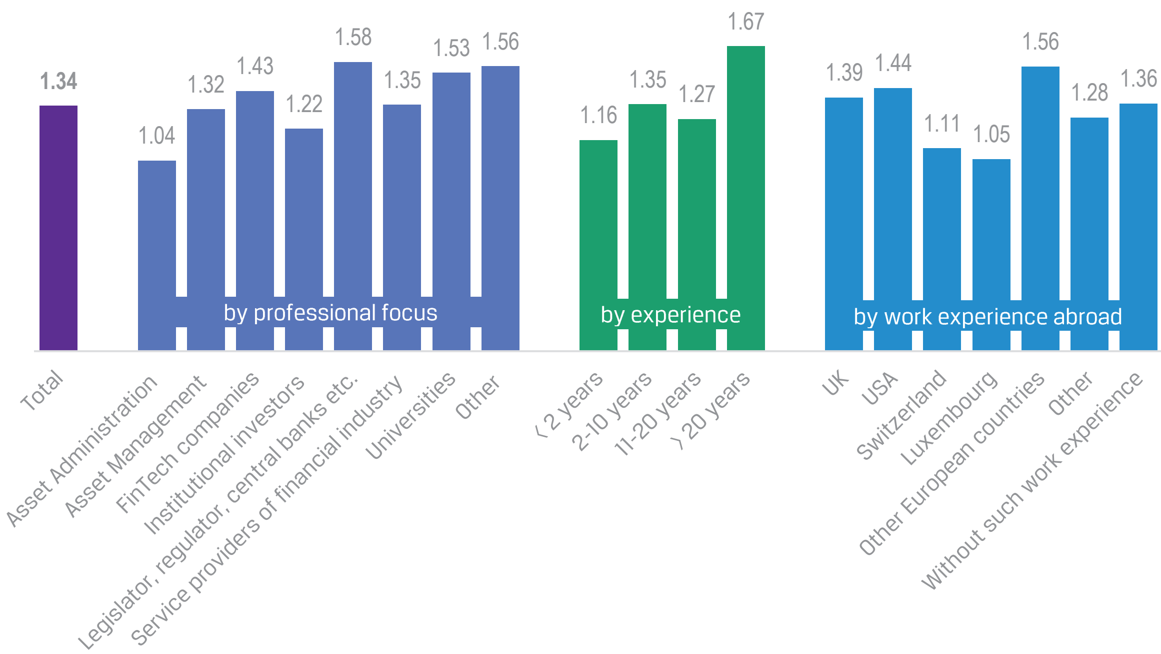

Figure 54 - Quality of German dual professional education

Groups' assessments of the **quality of continuing professional development**
on a scale from -3 to +3

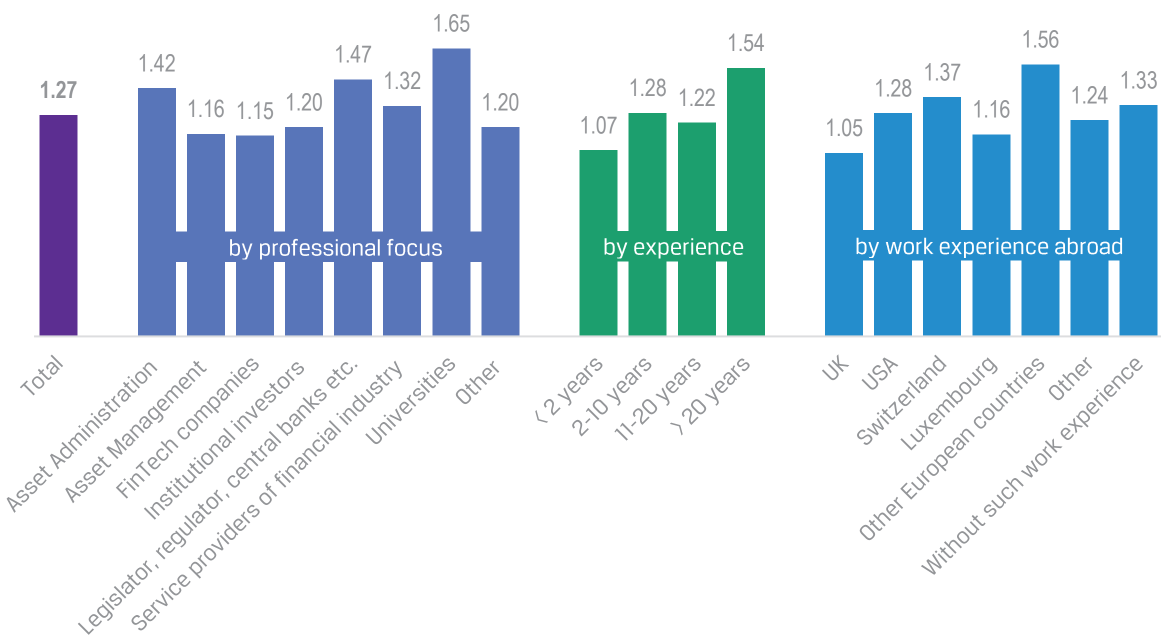

Figure 55 - Quality of continuing professional development

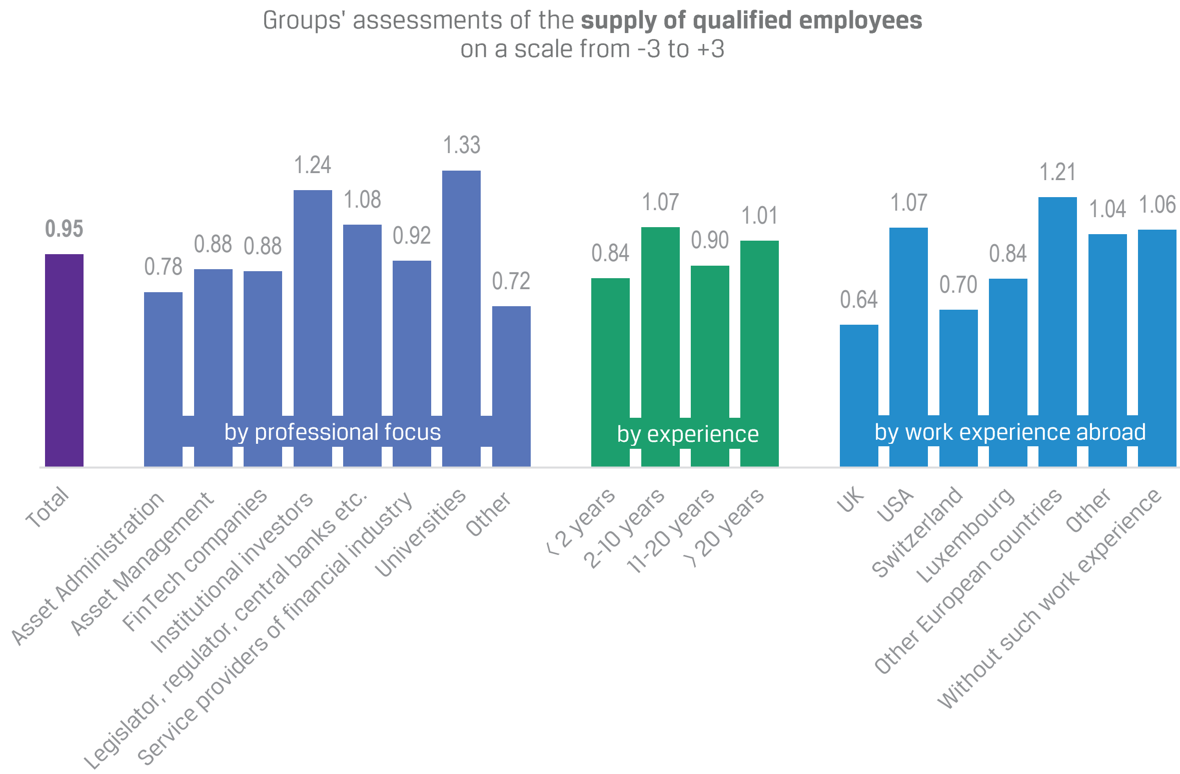

Figure 56 - Supply of qualified employees for the financial industry

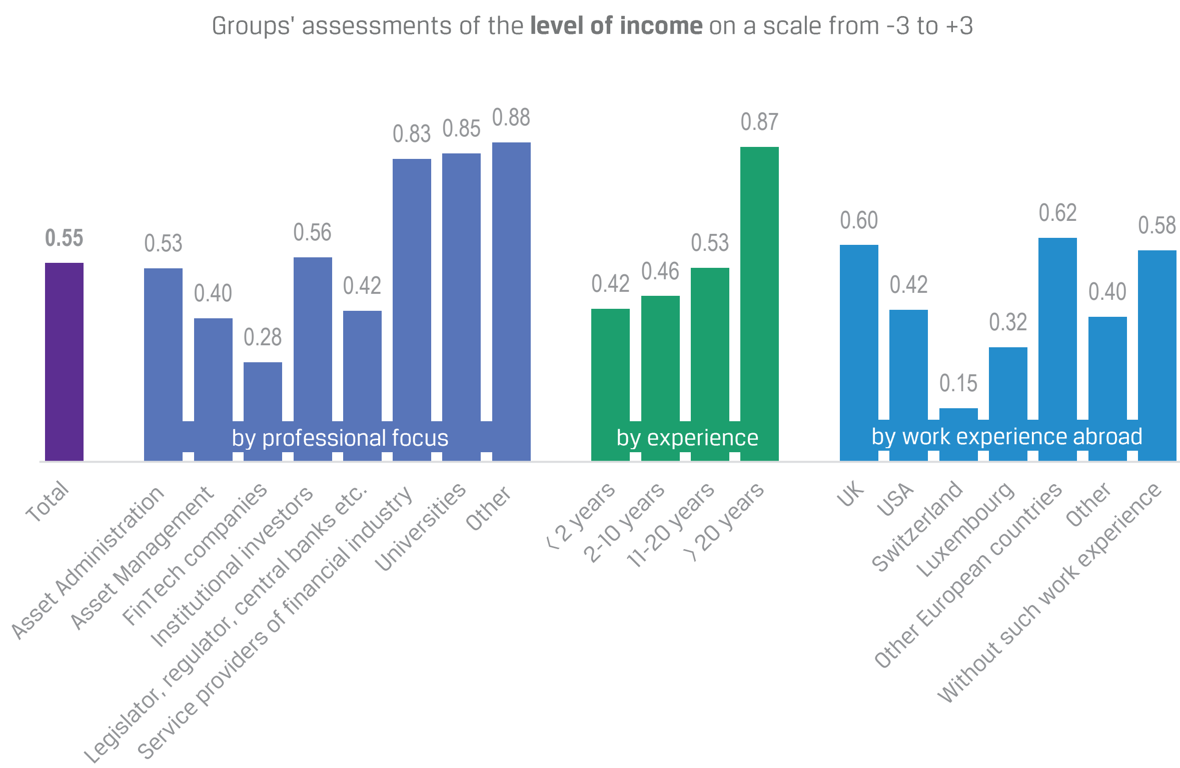

Figure 57 - Level of income

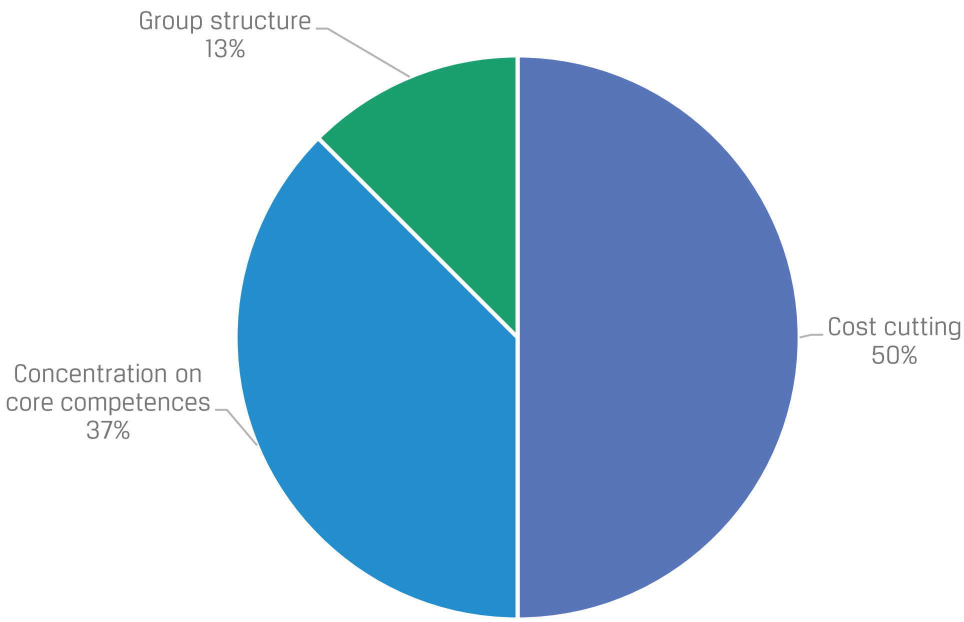

Figure 58 - Reasons for outsourcing of activities in asset administration

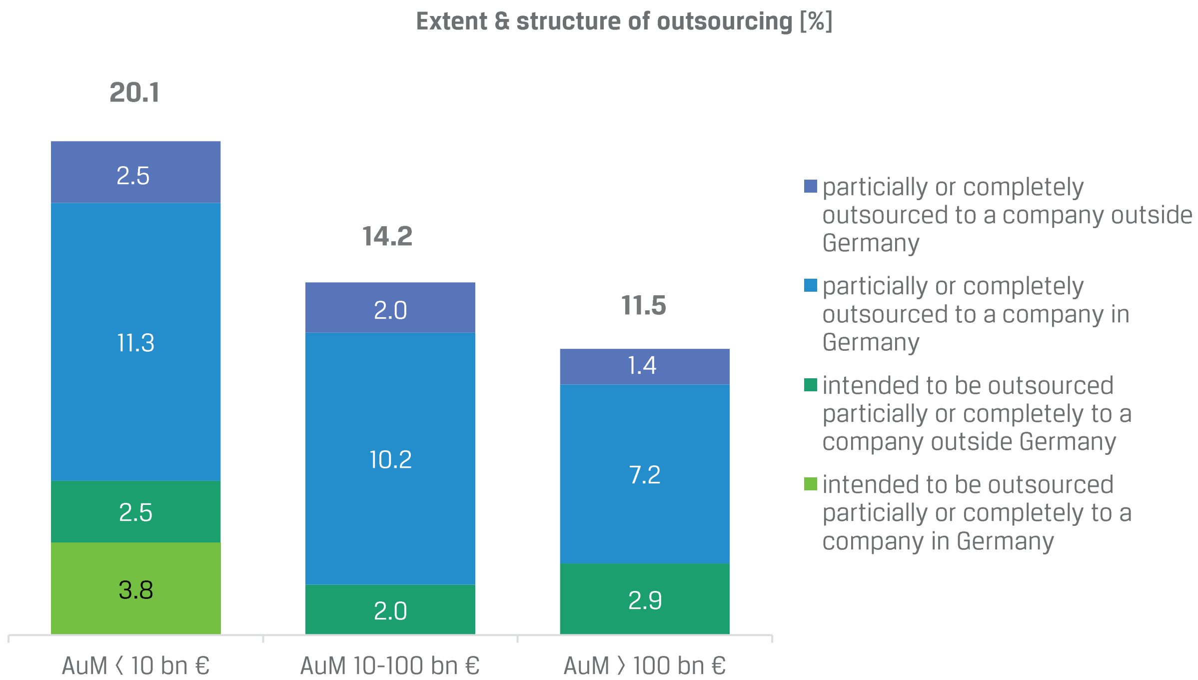

Figure 59 - Outsourcing of marketing & sales

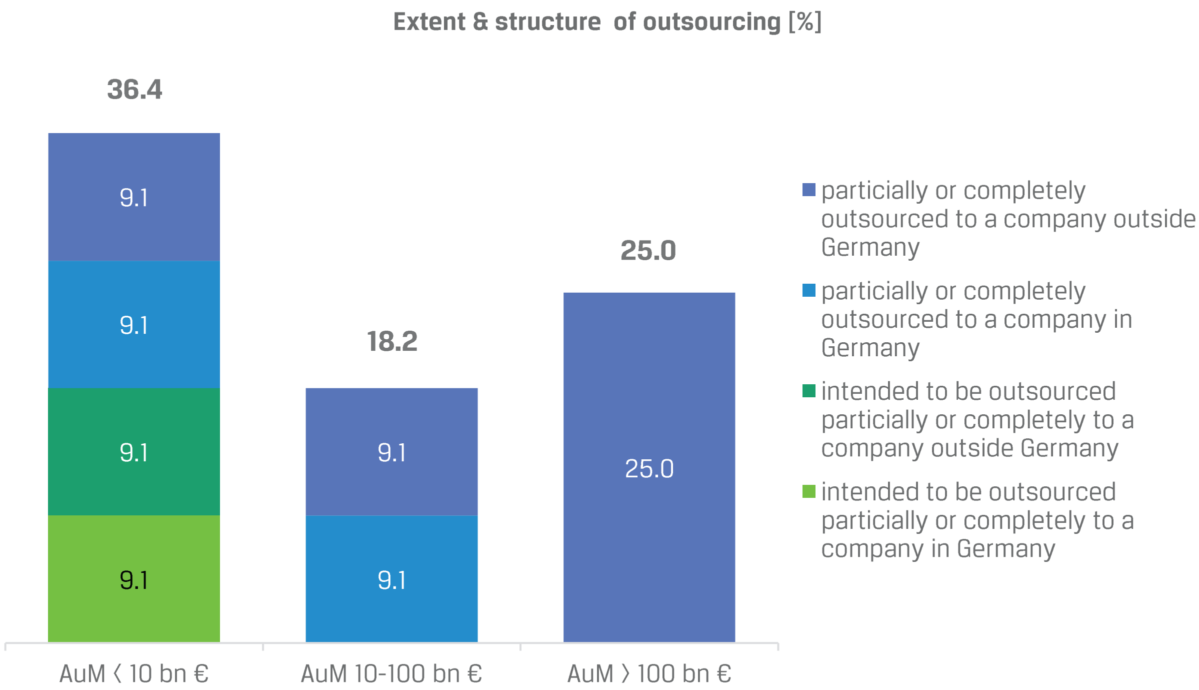

Figure 60 - Outsourcing of investment advisory

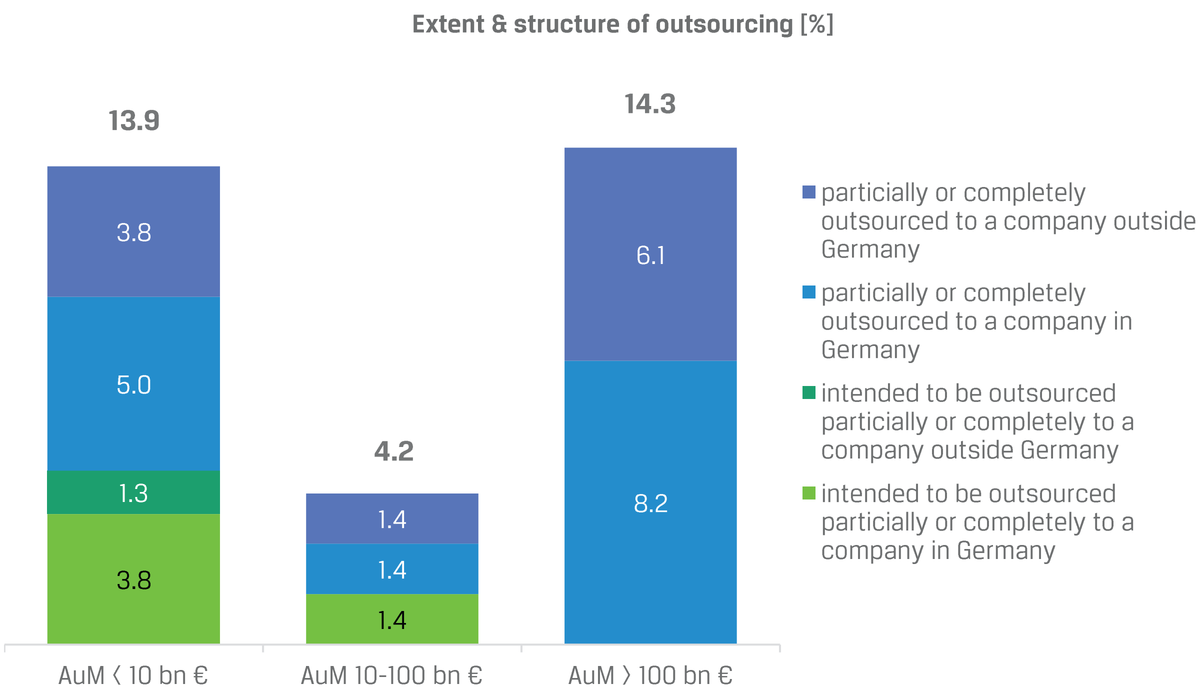

Figure 61 - Outsourcing of product development

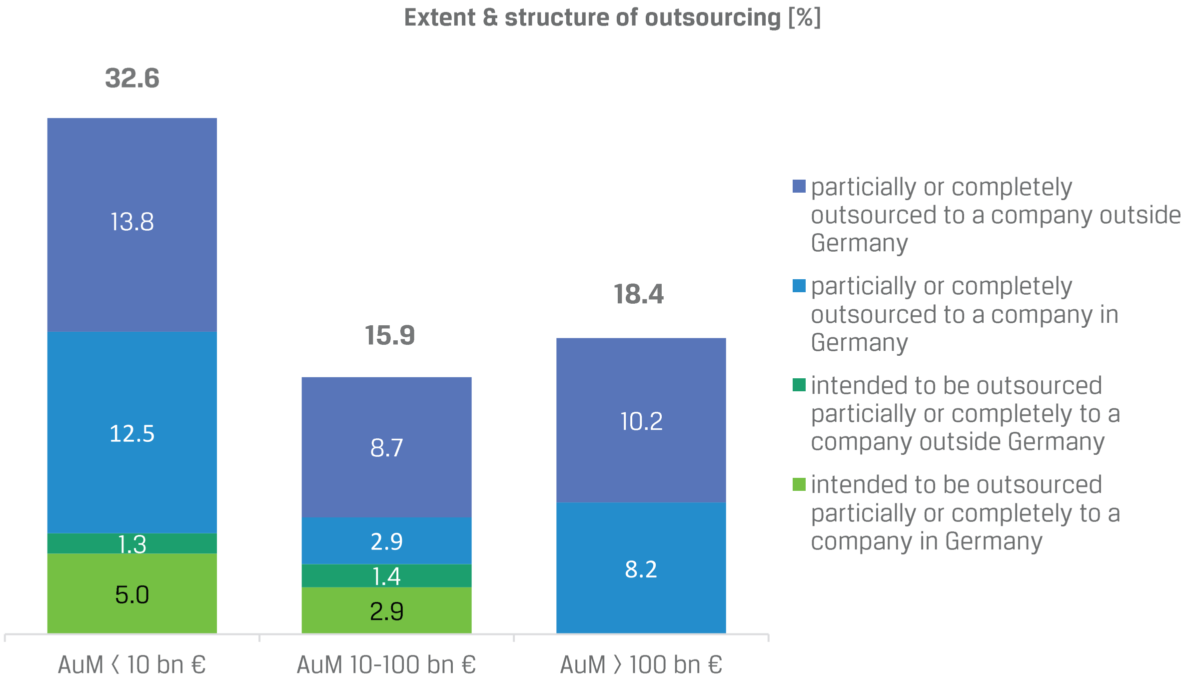

Figure 62 - Outsourcing of capital market research

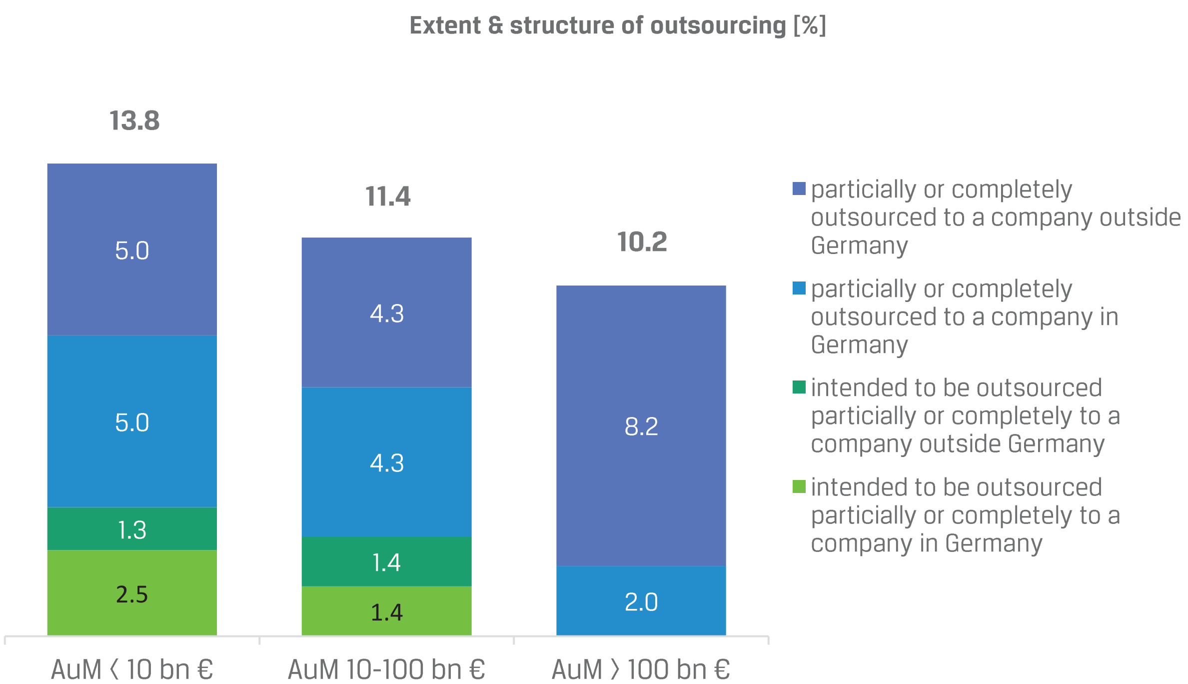

Figure 63 - Outsourcing of portfolio management

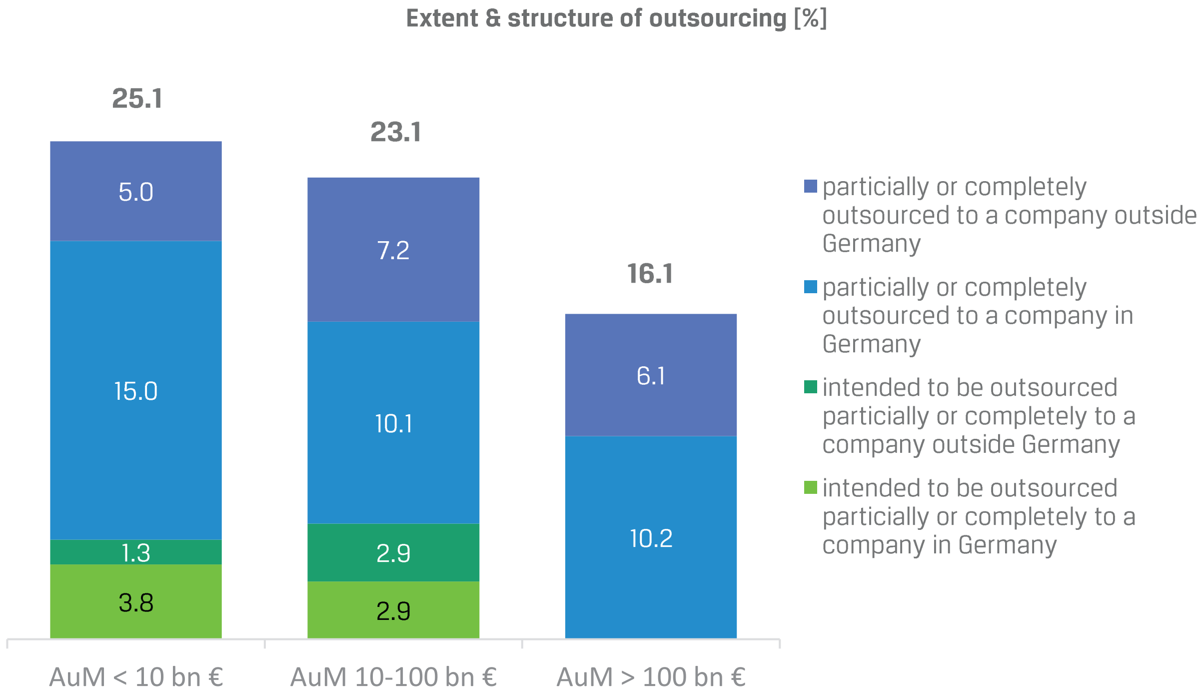

Figure 64 - Outsourcing of risk management

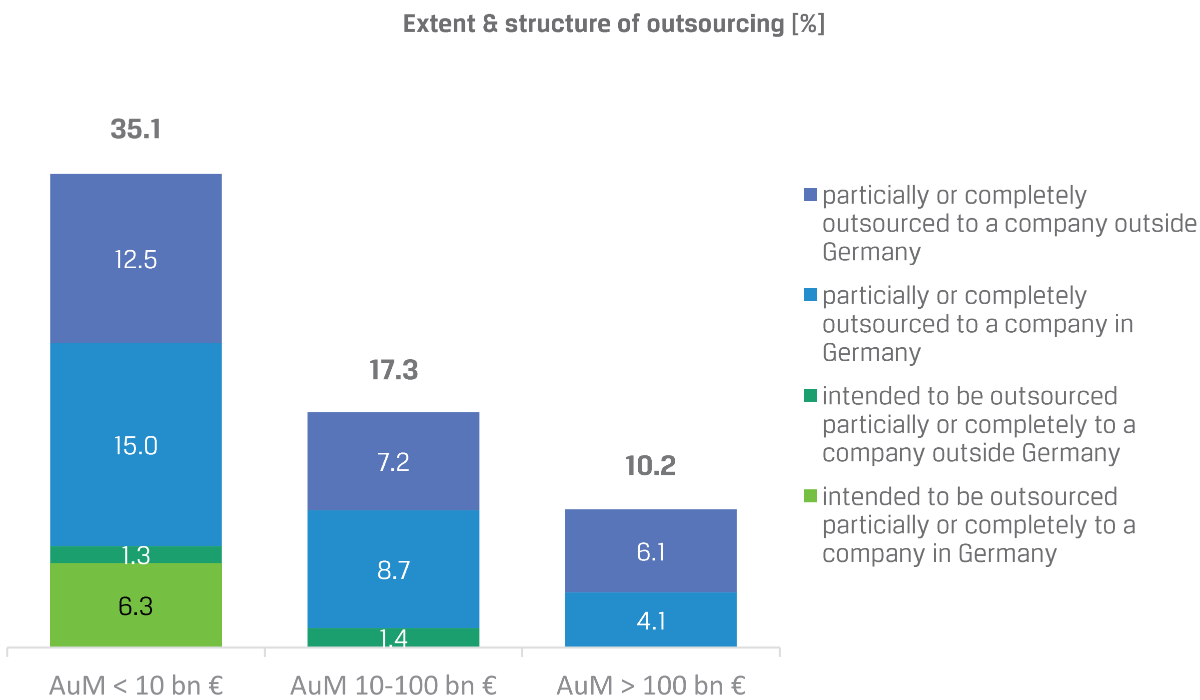

Figure 65 - Outsourcing of trading

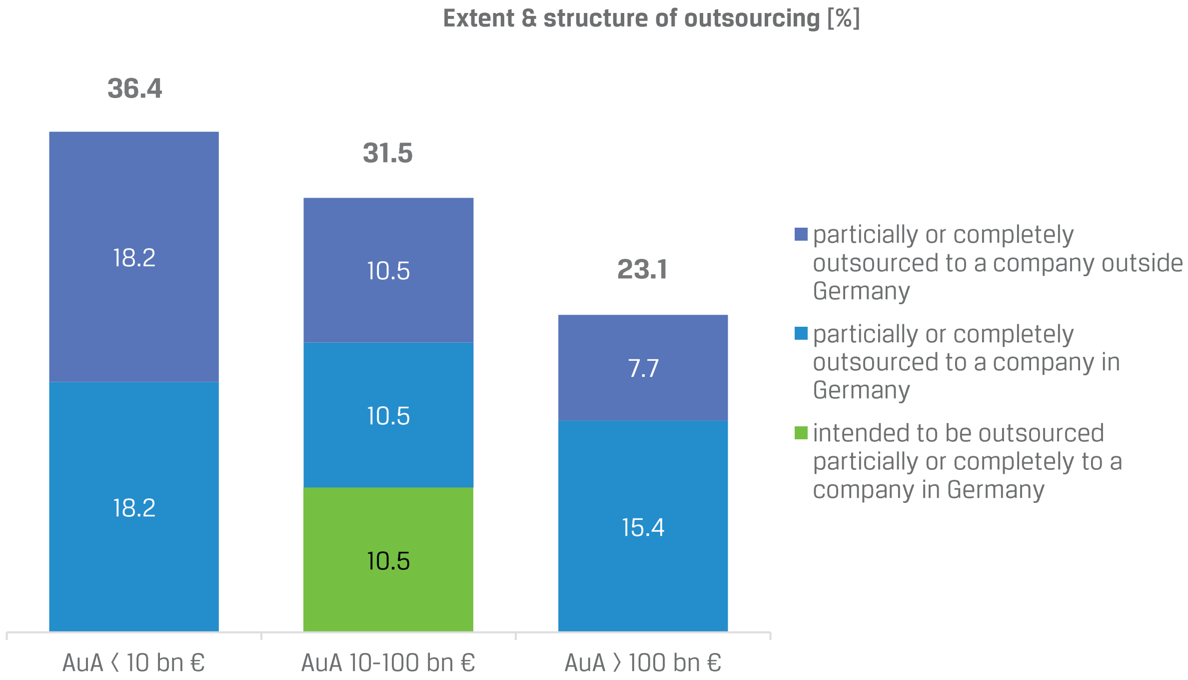

Figure 66 - Outsourcing of controlling

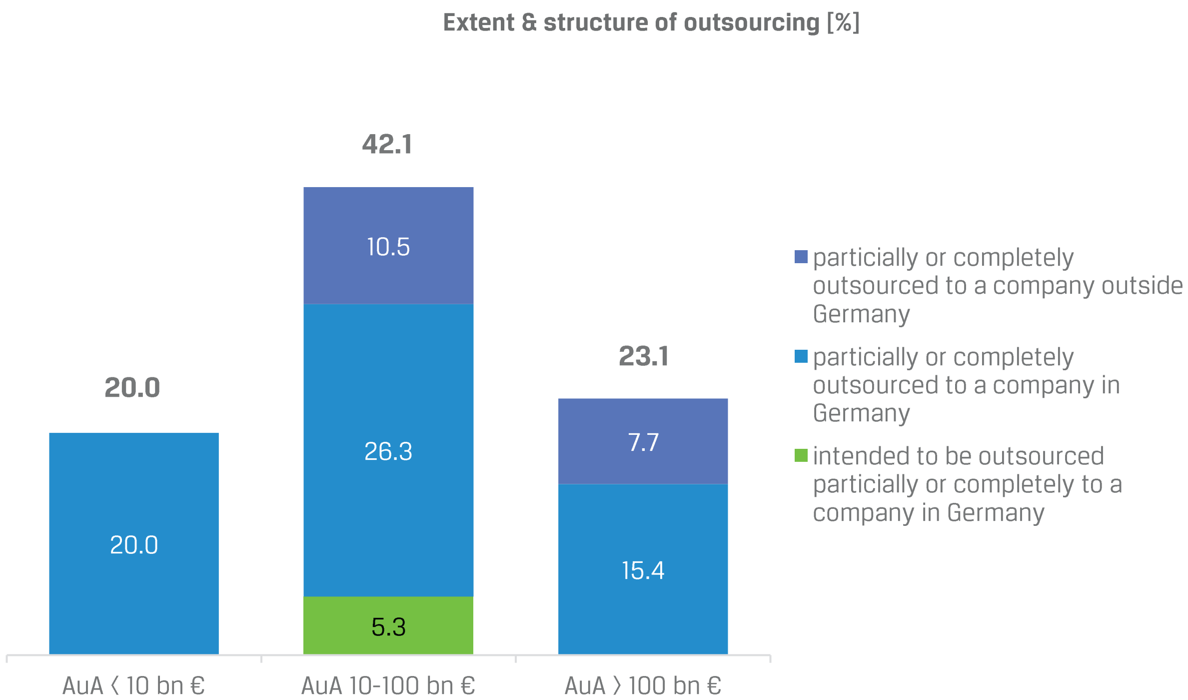

Figure 67 - Outsourcing of performance measurement

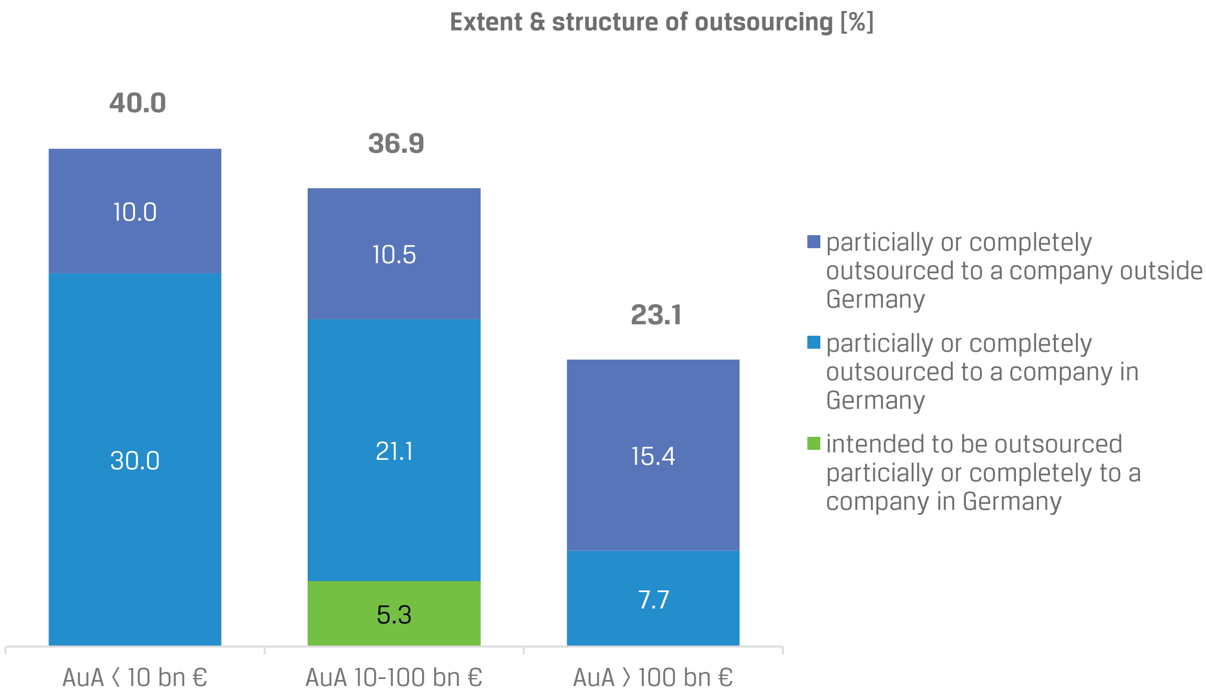

Figure 68 - Outsourcing of reporting

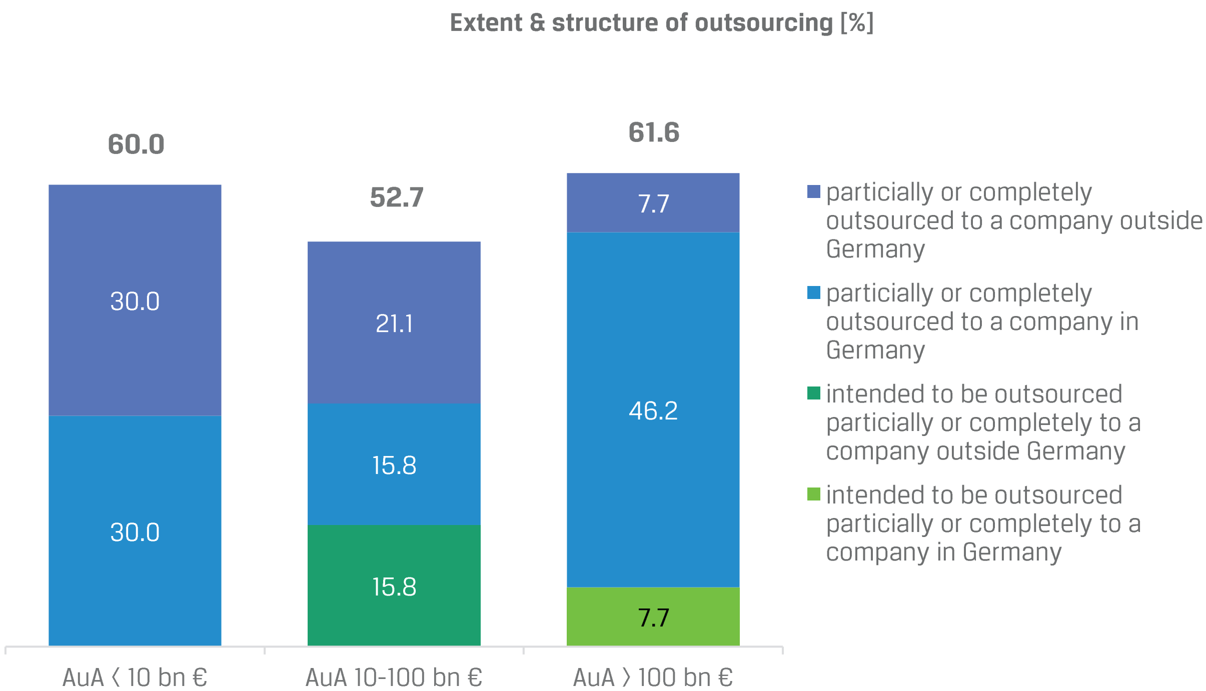

Figure 69 - Outsourcing of other back office activities

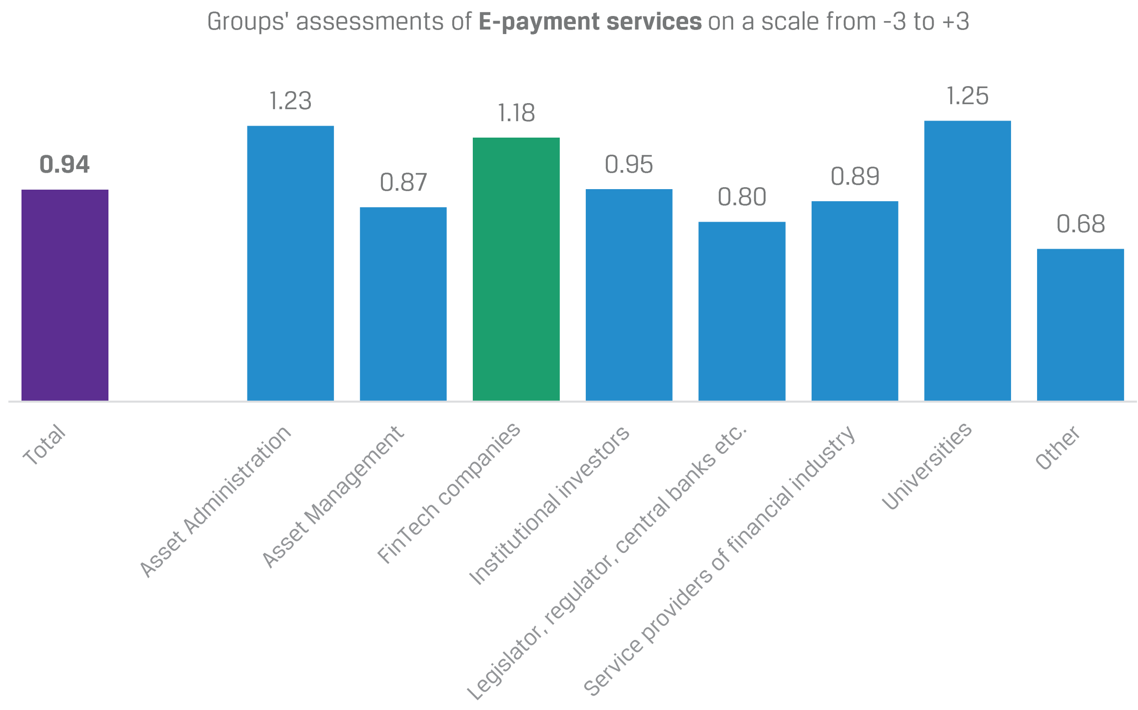

Figure 70 - E-payment services

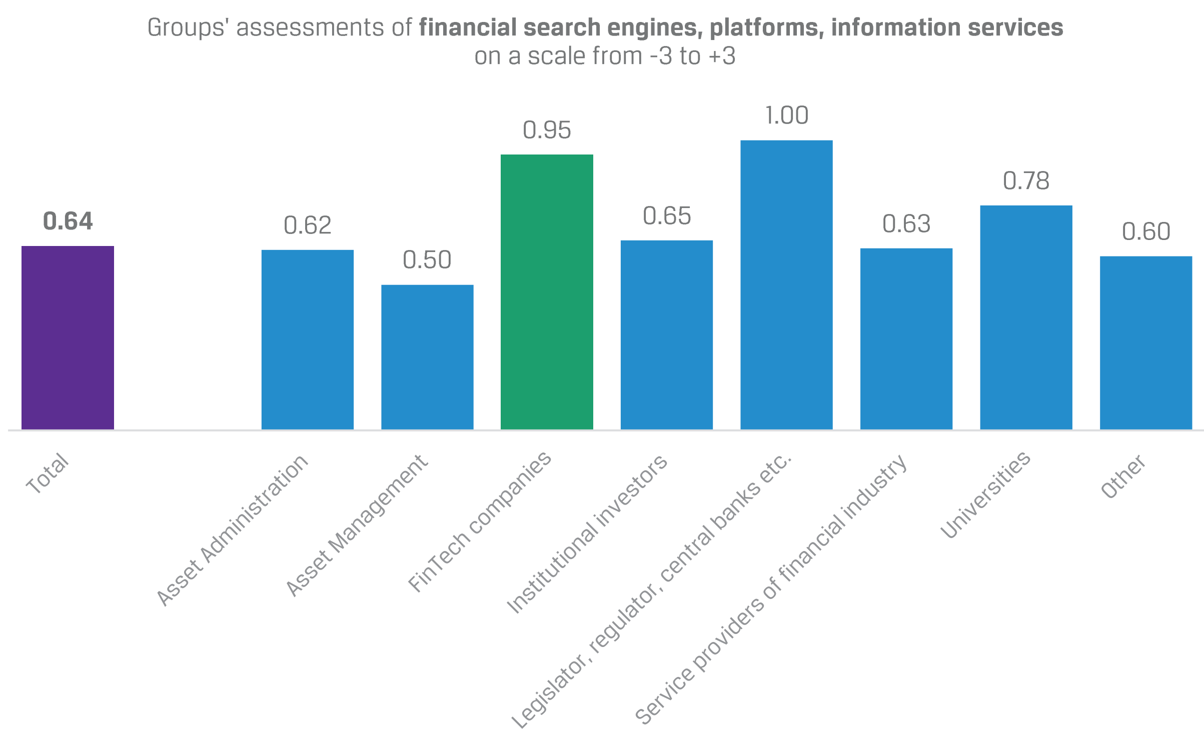

Figure 71 - Financial search engines, platforms, information services

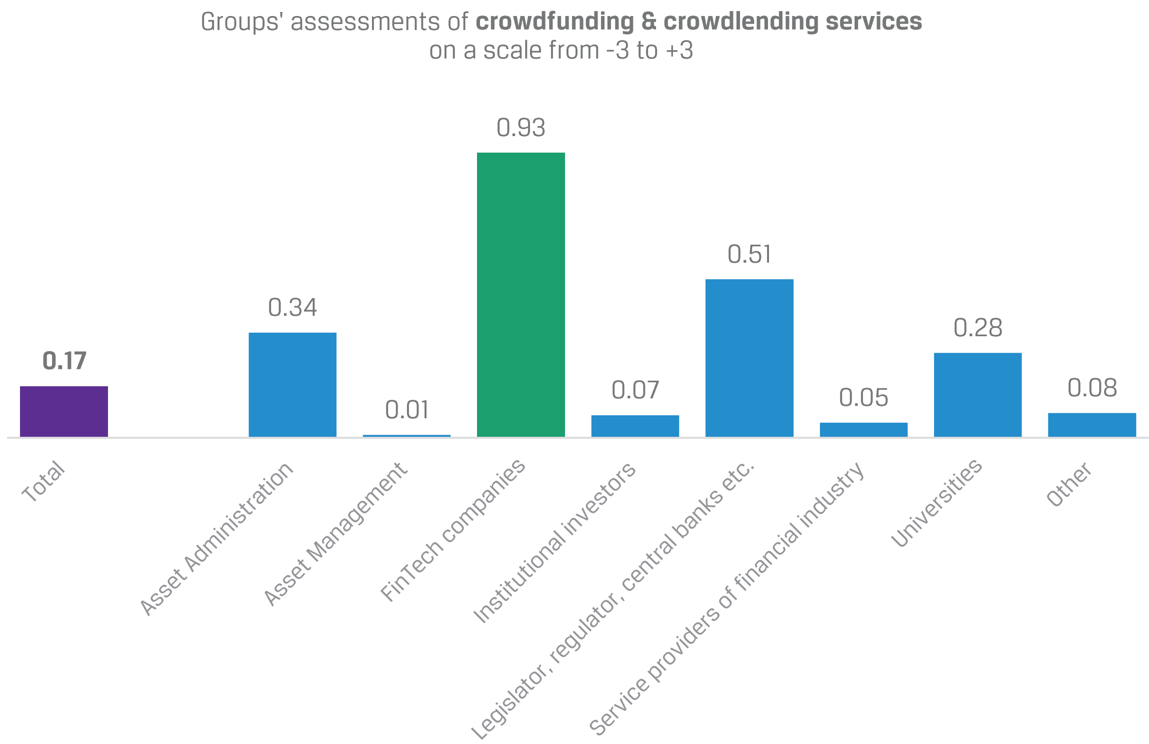

Figure 72 - Crowdfunding & crowdlending services

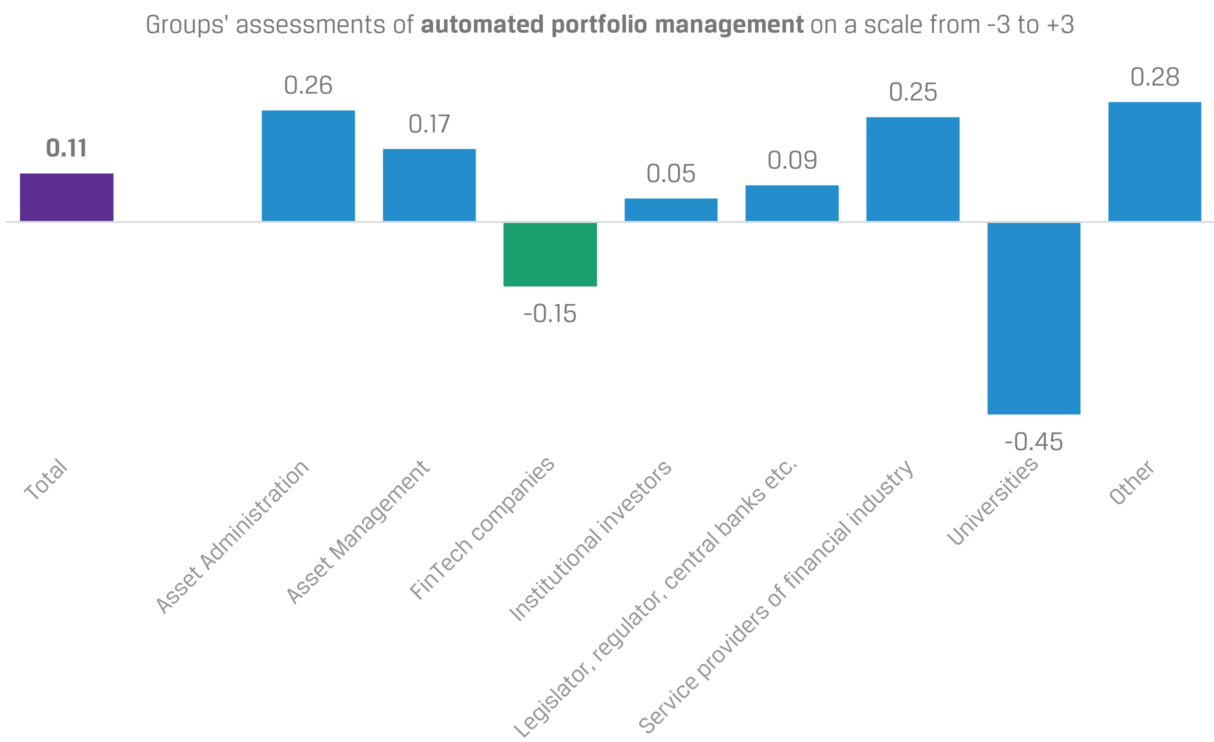

Figure 73 - Automated portfolio management

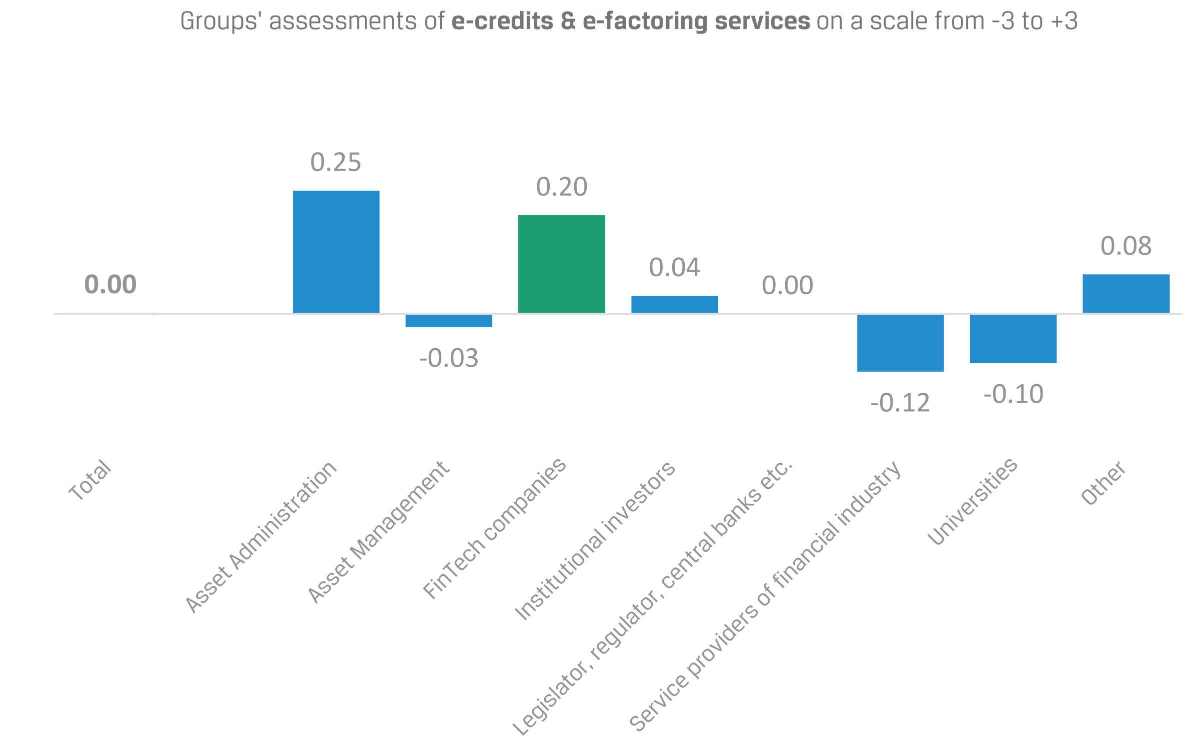

Figure 74 - E-credits & e-factoring services

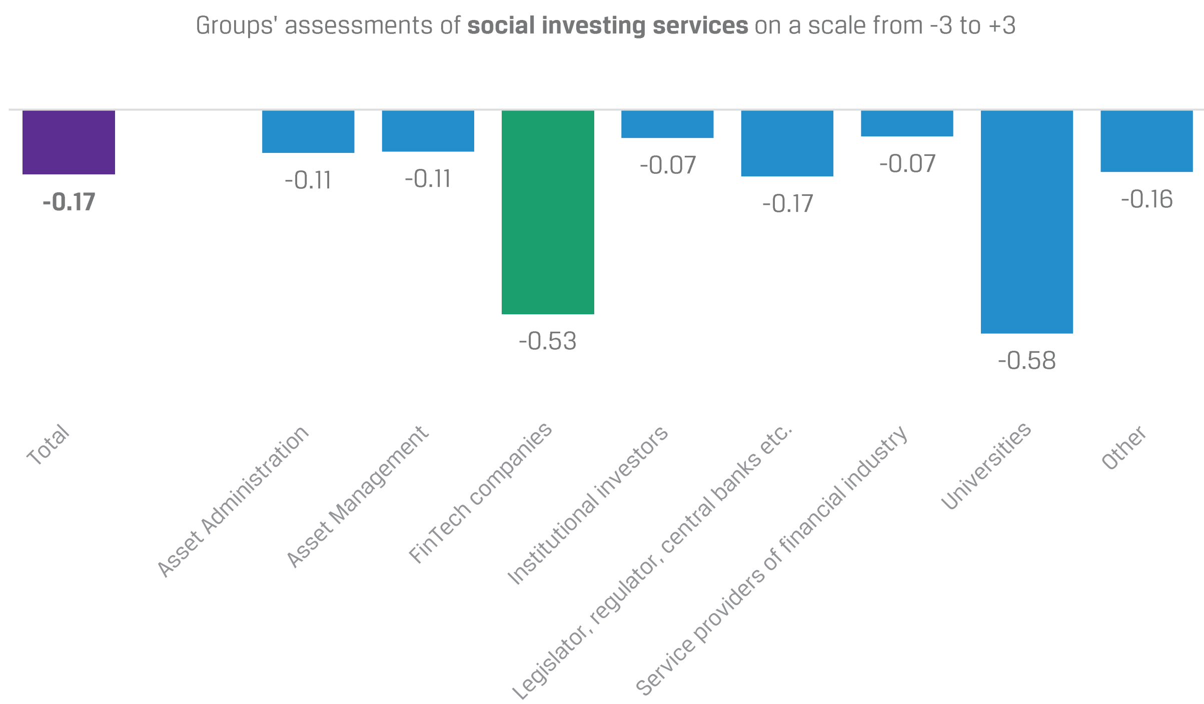

Figure 75 - Social investing services

Groups' assessments of **automated investment advice** on a scale from -3 to +3

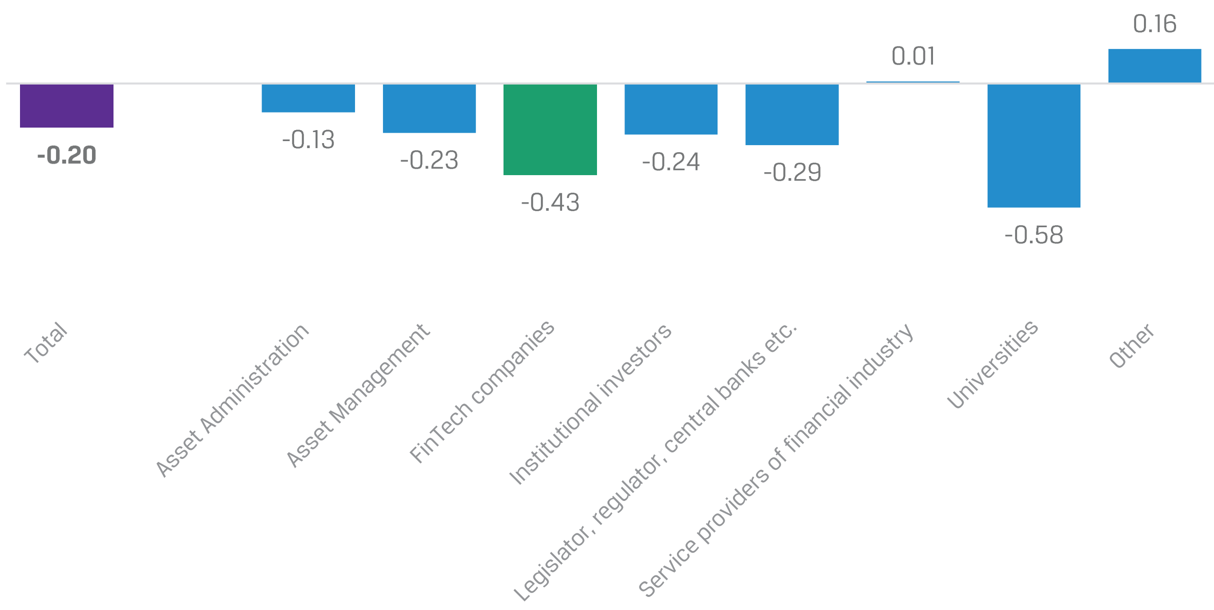

Figure 76 - Automated investment advice

Groups' assessments of **crypto currency services** on a scale from -3 to +3

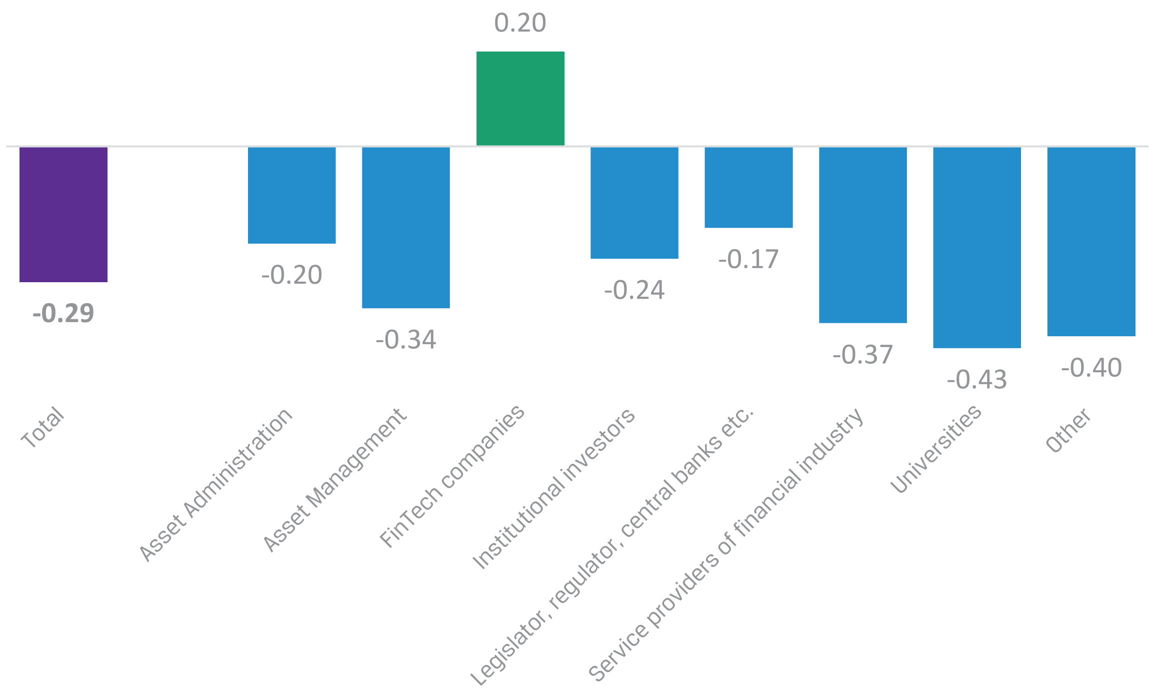

Figure 77 - Crypto currency services

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