Discussion Paper No. 13-022

# What is the Wind Behind the Sails to Go Abroad?

## Empirical Evidence from the Mutual Fund Industry

Gunnar Lang and Henry Schäfer

Zentrum für Europäische
Wirtschaftsforschung GmbH

Centre for European
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# Non-technical summary

This paper analyzes the domiciliation decision in the mutual fund market. The intensified competition among fund companies in the EU has provided incentives to relocate companies' activities and to domicile their investment funds in financial centers which offer the most favorable regulatory environment.

The empirical analysis suggests that the decision on where to domicile a UCITS fund is primarily driven by fund-specific legislation, conditions in the approval process, and the cluster of specialized experts. By contrast, traditional cost factors such as registration charges, fund company tax burden and labor costs are generally considered to be less important. A further central implication of the analysis is that fund companies sort their preferences on the domiciliation decision in a very similar manner and that managers' assessments are more persistent the more relevant the determinants are. This finding also reinforces the results' significance. Further, this work stresses that despite virtually uniform regulation conditions for UCITS funds, differences in practice still exist between countries (e.g., relationship between actors in the fund company and authorization body). Luxembourg remains the winner in almost all considered determinants, whereas countries with a large domestic market size, such as France and Germany, lag behind. Hence, the common divergence of funds' production and distribution is still motivated by clear reasons.

# Das Wichtigste in Kürze

Diese empirische Arbeit untersucht die Domizilierungsentscheidung in der Investmentfondsindustrie. Der verstärkte Wettbewerb unter Fondsgesellschaften in der EU hat Anreize zur Verlagerung von Unternehmensaktivitäten gebracht, so dass Fonds in Finanzzentren domiziliert werden, die die günstigsten Rahmenbedingungen bieten.

Die Ergebnisse deuten darauf hin, dass die Entscheidung, wo ein OGAW-Fonds aufgelegt wird, in erster Linie von fondsspezifischen Rechtsvorschriften, Bedingungen im Genehmigungsprozess und der Ausprägung des Netzwerks von Experten im Cluster abhängt. Im Gegensatz dazu spielen traditionelle Kostenfaktoren wie Registrierungskosten, steuerliche Belastung und Arbeitskosten eine untergeordnete Rolle. Weitere wichtige Implikationen der Arbeit sind, dass Fondsgesellschaften ihre Präferenzen bezüglich der Domizilierungsentscheidung in sehr ähnlicher Weise sortieren und diese Ähnlichkeit mit der eingeschätzten Wichtigkeit der Determinante zunimmt. Dies untermauert zudem die Aussagekraft der Ergebnisse. Darüber hinaus betonen die Ergebnisse, dass trotz eigentlich einheitlicher rechtlichen Bedingungen für OGAW-Fonds, in der Praxis Unterschiede zwischen den EU-Mitgliedsländern vorherrschen (beispielsweise Beziehung zwischen Akteuren der Fondsgesellschaft und Finanzaufsicht). Luxemburg bleibt der Gewinner bei fast allen betrachteten Determinanten, so dass die Divergenz im Standort zwischen Produktion und Absatz durch deutliche Gründe weiterhin motiviert ist.

# What is the Wind behind the Sails to Go Abroad? – Empirical Evidence from the Mutual Fund Industry

Gunnar Lang[1]
*Centre for European Economic Research (ZEW), Mannheim, Germany*

Henry Schäfer[2]
*University of Stuttgart, Germany*

This version: April 2013

*Abstract:* Specific industry factors determining cross-border business set-up in the European mutual fund industry are analyzed to contribute to the understanding of production specificities in the financial industry. The findings indicate that the decision on where to domicile a fund is not primarily driven by traditional cost factors, such as registration charges and labor costs. Network conditions with respect to the knowledge-based production process of mutual funds and the interaction with regulating authorities such as the approval process embedded in the legal framework and the quality of the workforce in a dense specialized cluster matter most. Differences in such network conditions may allow fund companies to set up more innovative and complex funds in a shorter period of time in one country than in other countries. The findings highlight also that the practitioners agree on such network determinants as being most important.

*Keywords:* Mutual Funds, Business Location Decision, Financial Regulation, Networks in Capital Markets
*JEL-Classification:* D22, F36, G15, G28

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[1] Gunnar Lang, Centre for European Economic Research (ZEW), Dept. of International Finance and Financial Management, P.O. Box 10 34 43, 68161 Mannheim, Germany, Phone +49 621-1235-372, Email lang@zew.de
[2] Henry Schaefer, University of Stuttgart, Institute for Business Administration, Dept. III (Corporate Finance), Keplerstr. 17, 71440 Stuttgart, Germany, +49 711-685-86001, Email h.schaefer@bwi.uni-stuttgart.de

Acknowledgement: We are grateful to Matthias Köhler, Sandra Schmidt, Michael Schröder, and Peter Tufano for discussions. Moreover, we thank Stefanie Ahrens, Anna-Lena Huthmacher, and Christian Wuttke for valuable research assistance. The paper was partially written while Gunnar was Visiting Researcher at Harvard Business School, whose hospitality he greatly appreciated. All errors are our own.

# 1 Introduction

In general, investors are not interested in how the funds in their portfolio have been produced. Instead, investors rather look for indicators of performance, risk, and their individual investment emphasis. Nevertheless, the production conditions and especially the decision of a fund company on where to domicile a fund have decisive implications at both the level of competing governments and the level of the individual company. The domiciliation decision also has tremendous consequences on the political side. Financial centers and their governments compete for added value stemming from companies' revenues and jobs.[3] For instance, since a barrier separates the US and the European markets and forbids simple distribution between the two, companies from the US, but also from other countries around the globe, have always been faced with the question in which European country to register a new fund for distribution on the continent, thus spurring competition between the countries.

As competition increases, it is important to identify the reasons motivating fund companies to set up in one place and to avoid another location. The mutual fund market provides an excellent arena for a detailed investigation of the quality of value-creating network clusters, since it shows a high level of market integration (Heinemann, 2002).

The network character of mutual fund industries and the tendency to establish local clusters around the globe is obvious: Porter (2008: 245) illustrates that the cluster of the mutual fund industry in the United States is located in Boston, Massachusetts, the same place in which the first open-end mutual fund was launched in 1924 (Rouwenhorst, 2004). In Europe, as well, clusters for mutual funds exist: Luxembourg is famous for fund domiciliation; according to the data of EFAMA (2011c) one out of four European funds was domiciled in this small country by mid-2011. Favorable financial regulation and tax laws have led to a transformation of Luxembourg into a major center for offshore mutual funds. Parallel facts apply for Dublin (e.g., Khorana et al., 2005). All these locations have in common a distinctive knowledge network in which specialized intermediaries and public authorities play major roles. Particularly the (de-)regulation of national financial markets played the most important role for the expansion of financial services and caused

[3] The level of direct and indirect employment linked to investment fund companies is larger if one takes into consideration specialized suppliers, such as administrators, custodians, transfer agents, lawyers, consulting, IT, and others.

a competition between national regulations to attract the domicilation of financial services providers.

In the EU, competition for the best regulatory framework is intensified by the directive on Undertakings for Collective Investments in Transferable Securities (UCITS), which has created a standardized pan-European market through the introduction of a "product passport" for mutual funds. This passport allows any fund registered in one EU country to be sold in any other EU country without further lengthy authorization proceedings. This standardization also applies to fund companies from outside the EU searching for the one domicile in Europe from which to offer funds to the entire continent. Moreover, when existing funds are to be merged, the question of the preferred domicile arises. The implementation of the new UCITS IV Directive (2009/65/EC) in mid-2011 may further increase the freedom to locate operations in the European Union and lead to new decision opportunities for fund companies to geographically optimize their business models. As competition increases, it is important to identify the reasons which motivate financial intermediaries to settle in one place and avoid another location.

This paper examines the relevant determinants of the production function of mutual funds with a special emphasis on the fund domiciliation decision. It analyzes how competing European countries differ in terms of these relevant factors. Hence, this work investigates the rationale behind the domiciliation decision. For a precise examination, this analysis concentrates on the uniform UCITS funds. Production and distribution of these funds often diverge.

The fundamental goal of this analysis is to provide a detailed empirical analysis of location factors in the European fund industry.  We focus on the fund industry in six European countries: France, Germany, Ireland, Luxembourg, Switzerland, and the United Kingdom. This group comprises more than 83 percent of the entire European market and of the European UCITS market at the end of mid-2011. Further, we stress that despite virtually uniform regulation conditions, differences in practice still exist between the countries (e.g., relationship between actors in the fund company and authorization body). Luxembourg remains the winner in almost all considered determinants, whereas countries with a large domestic market size, such as France and Germany lag behind. Hence, the common divergence of funds' production and distribution is still motivated by clear reasons; indications for path dependence seem not to exist.

Despite its economic importance, little empirical research examines the behavior of fund companies. This lack of research is primarily due to the difficulty of obtaining data on individual-level behavior. Identifying the behavior of individuals is, however, of central importance if one is to adequately understand the implications of their decisions. The uniqueness of the data stems from its disaggregated, individual-level observations and specific assessments of the decision makers. To our knowledge, this is the first empirical study in the academic literature on domiciliation decision to analyze manager-level data on location factors and the country-specific characteristics included in the sample.

The results show that the cross-border distribution of funds has increased around the globe over the past decades, owing to a reduction of barriers to cross-border sale. This has intensified competition among fund companies, has provided incentives to relocate companies' activities and to domicile their funds in countries which offer the most favorable regulatory environment. This, in turn, has led to greater competition among countries seeking to attract fund companies. Due to this financial liberalization, offshore locations have become the most important mutual fund domiciles worldwide. In the EU, Luxembourg and Ireland have benefited from the fast implementation of the UCITS directive and the creation of a favorable environment for the European mutual fund industry. The legal and regulatory environment thus created a competitive edge for Luxembourg as a first mover over rival financial centers. An important implication of this paper is that fund-specific legislation, conditions in the approval process, and the cluster of specialized experts play the most important role in the domiciliation decision of a UCITS fund. By contrast, traditional cost factors are generally considered to be less important. A further important implication of the analysis is that fund companies sort their preferences on the domiciliation decision in a very similar manner and that managers' assessments are more persistent the more relevant the determinants are.

Using only public data, it is difficult to determine whether a selected location decision would be repeated. For this reason, the survey method is applied. The results are based on a survey conducted in mid-2009 among 47 senior managers in the German fund sector who are responsible for the domiciliation decisions of their company. The sample is representative with a focal market share of 78 percent.

This paper contributes to the literature as it is the first to understand the production of the mutual fund industry as a knowledge-based and regulation-driven process in which location factors and country-specific characteristics count most. The focus will be the analysis of the location decision behind setting up an open-end mutual investment fund. In particular, the determinants fund companies consider in their decision to open a new fund or to merge existing funds have not been closely examined. Using a data set from 1979 to 1992, Khorana and Servaes (1999) indicate that fund set-ups are significantly related to the level of total invested assets, capital gains embedded in other funds with the same objectives, fund companies' prior performance, and fund company size. The probability to set up a new fund increases with the number of existing funds in the same fund family. The authors look into the determinants leading to new fund starts, i.e., the opportunity to generate additional income or high reputation, and do not acknowledge the decision on where a fund is started. Khorana et al. (2005) find that the size of mutual fund demand is larger in countries with stronger rules, laws, and regulations, specifically where mutual fund investors' rights are better protected. The fund industry is larger in countries with a wealthier and more educated population, and where the industry itself is older. In a similar register, Fernando et al. (2003) focus on the growth of mutual funds.

The structure of this paper is as follows. Chapter 2 discusses the background to the study and illustrates the specific regulation and market development, and Chapter 3 presents the data and methods. Afterwards in Chapter 4, we examine why individuals choose the separation of countries for set-up and sales. Chapter 5 concludes.

# 2 Background Information

## 2.1 Specific Industry Regulation in Europe

In order to explain the emergence of financial centers, findings from the literature (e.g., Kim, 1995 and 1999; Ellison and Glaeser, 1999; Rosenthal and Strange, 2004) emphasize that it is necessary to focus on the early location decisions of fund companies, and on how companies make subsequent location decisions to the early arrivals of companies. It is broadly recognized that the framework conditions in regulation have had a strong influence on the early decision to go abroad. Therefore, the industry-specific regulation is in the focus of this section. The subsequent location decisions based on the regulatory environment will be examined in the following chapter. Moreover, being familiar with the background of fund market integration in Europe allows for a better understanding of the important role of financial regulation for the behavior of fund companies and how recent regulatory changes affect it.

The development of the European investment fund market is mainly determined by the Undertakings for Collective Investments in Transferable Securities (UCITS) Directive to create a single market for open-ended funds[4] in Europe. Specific requirements are imposed on the fund (e.g., regarding eligible asset categories) and on the fund company (e.g., techniques and instruments for the portfolio management) in order to set up and manage UCITS. It is worth noting that the UCITS directives have been adopted by the EU and the European Economic Area (EEA) countries, covering the vast majority of the European market.

Switzerland as one of the most important centers for mutual funds is not a member of the EEA, hence does not take part in the UCITS framework, but has adopted a largely compatible regulatory framework to go in line with EU law (Schweizerischer Bundesrat, 2005; EFAMA, 2010: 231-232). This regulatory framework facilitates the distribution of funds that cannot be sold to retail investors in Europe as easily as UCITS since they lack the fund passport. UCITS, however, can simply be marketed in Switzerland (EFAMA, 2010).

The first directive (85/611/EEC) on UCITS was passed in 1985 and was followed by three refinements. They were all created to promote the establishment of a single market for mutual funds (so-called "European passport"). The first update of the UCITS framework, referred to as UCITS II, was made in 1993. It proposed the inclusion of money market instruments, bank deposits, and funds of funds in the directive (European Commission, 1993). However, it was eventually abandoned as no agreement could be reached (European Commission, 1999). The UCITS framework was first amended in 2001 with two directives (2001/107/EC and 2001/108/EC), jointly referred to as UCITS III, addressing the management and the product aspects of funds, respectively.

The UCITS IV Directive (2009/65/EC), which came into force in July 2011, advanced the existing regulation in multiple ways. As with the preceding directives, Luxembourg was the first country to pass a national law; however, not all Member States have transposed the directive into national law yet[5]. The UCITS IV Directive introduced a full management company passport, which allows fund companies to provide all their services in all Member States. This includes the possibility to set up and manage funds in

[4] Mutual funds are open-end pooled investment vehicles that allow new investors to buy and old investors to sell shares of the fund at the fund's Net Asset Value (NAV). The number of shares and thus the size of the fund vary depending on demand. Mutual funds invest in transferable securities (e.g., Khorana et al., 2008: 1281).

[5] For an overview of the fund regulation, see Arendt & Medernach (2012); RBC Dexia (2011); EFAMA (2011d).

a different Member State, instead of merely selling them, as was effectively the case under UCITS III. Thus, the new directive allows fund companies to establish and manage UCITS funds in another Member State without having to fulfill the previous local, so-called "substance" criteria of minimum capital requirements, human and technical infrastructure. This facilitates a greater centralization of fund management by eliminating fund companies' need for a local management company. Each step of modernizing UCITS contributed in specific ways to the current regulation and the labour distribution between the different groups of agents in the value chain of a mutual fund's production. UCITS also developed country-specific networks of knowledge sharing between agents, service bundling, and cooperation with legal authorities.

## 2.2 Market Development

The introduction of the UCITS framework has also led to very different benefits for the participating countries, i.e. financial centers. Luxembourg and Ireland have benenfited from first mover advantages. They were the first to transpose the UCITS I directive into national law and also enjoy more liberal supervisory and taxation framework conditions for mutual funds in general. Moreover, while the UCITS III directives were adopted in Luxembourg in December 2002, not even one year after they had been approved by the European Parliament, its adoption in Germany with clearly more restrictive requirements for mutual funds took place with the "Investmentmodernisierungsgesetz" in 2004. It took even three more years for Germany to adopt characteristics of Luxembourgish legislation (Investmentänderungsgesetz).

The domicilation effect of regulations, resp. the UCITS, is the cornerstone of our contribution. Table 1 reveals the global distribution of assets under management in mutual funds, whereas non-UCITS were excluded for an international comparison. Around the world nearly 25,927 billion US dollars were invested in mutual funds at the end of June 2011. More than half of the entire global amount comes from US fund companies and about one third from Europe. Outside the United States, Luxembourg stands out with a share of 10.5 percent in the global and around 32 percent in the European market. This picture was not so clear in 1998, when France led the European list and the Irish fund market was minuscule. The importance of the French market can be explained by the fact that French private investors are investing a major part of their savings in UCITS directly or through life insurance contracts which are tax-advantaged and account for one third of households' financial assets (OEE and ZEW, 2006; Grillet-Aubert and Rifaldi, 2009: 5). The total of assets invested in mutual funds increases with the factor 2.7 from the year 1998 to mid-2011. However, this amount of assets under management fluctuates according to the price of the funds' enclosed assets at the time of reporting. It is thus rational to take a look at the numbers of funds.

[insert Table 1 about here]

Table 2 displays the development of the number of mutual funds in the same period of time. It is evident that the average fund's assets increase more than the pure number of funds. By the end of June 2011, 70,819 mutual funds were listed for sale around the world. At the same point in time, there were 41 percent more mutual funds on the global market than in 1998. About 50 percent stem from Europe, whereas it is conspicuous that the number of funds in Europe (35,406) is about fivefold larger than that of funds in the United States (7,518). However, when combining the two tables, one can observe that the average US fund is nearly seven times larger than its European counterpart. This is accounted for by the formerly highly segmented European fund market. Nowadays, in times of European market integration and a single market approach, one might believe that the number of funds will decrease in the long run. Consistent with the invested assets, Luxembourg, France, and Ireland stand out in Europe.

[insert Table 2 about here]

However, it is worthwhile to take a closer look at the nature of the European market and to include UCITS in the perspective. With EUR 5,921 billion invested in UCITS, this fund type accounted for over 73 percent of European domiciliation at the end of June 2011, with the remaining 27 percent composed of non-UCITS (EFAMA, 2011b). UCITS also have attracted investment from foreign investors, in particular from Asia, Latin America, and the Middle East.[6] Table 3 shows the distribution of UCITS and non-UCITS in the countries in our focus. In total, the two groups constituted more than 84 percent of the whole European market and even more than 87 percent of the non-UCITS submarket at the end of September 2011. In this way, the magnitude of Germany increases immensely due to its large fraction of non-UCITS funds, which is exceptionally high in

[6] These three regions represent 23.6 percent of assets under management of UCITS at the end of 2008, of which 16.9 percent, 3.5 percent and 3.2 percent were held by Asian, Middle Eastern, and Latin American investors, respectively (EFAMA, 2009).

comparison with the other countries, with an average share of more than 60 percent in UCITS. Contrary to UCITS funds, a large fraction of non-UCITS funds are traditionally set up in Germany where the share of all European non-UCITS was 41 percent at end of September 2011.

Three fourths of the non-UCITS can be explained by just two types of funds (see Table 4). German ‘Spezialfonds” represent 27 percent of invested assets in non-UCITS, whereas the largest number of assets under management are institutional funds; approximately every second Euro in a non-UCITS is invested by institutional investors. More than 50 percent of UCITS were domiciled in Luxembourg and France, whereas market characteristics and the reasons for their leadership strongly differ between both. This importance of the French UCITS can be explained by the described fact that French private investors invest a major part of their savings in UCITS directly or through life insurance contracts which are tax-advantaged and account for one third of households’ financial assets (OEE and ZEW, 2006; Grillet-Aubert and Rifaldi, 2009: 5).

[insert Table 3 about here]

[insert Table 4 about here]

Equity funds always remain the largest share of all funds worldwide. At the end of June 2011, 42 percent of global total net assets were held in equity funds, 23 percent in bond funds, almost the same share in money market funds (19 percent) and the remaining in balanced-mixed (12 percent) and other types of funds (see ICI, 2011b).[7] The same descending order applies to Europe. Figure 1 shows the composition of invested assets in European countries regarding fund types. A total of 32 percent of investments in mutual funds are held in equity funds. Most investments in the United Kingdom are made in equity funds with a share of 59 percent. In Germany large amounts are invested in equity funds also, whereas Ireland and France have a large fraction in money market funds, above the European average. In Switzerland, investments in balanced and mixed funds exceed the share in equity funds.

[insert Figure 1 about here]

[7] As their name already reveals, these funds primarily invest in equity, bond funds invest mainly in bonds or other types of securities. Money market funds invest in short-term instruments (e.g., certificates of deposit, commercial papers, treasury bills, etc.) and liquid assets (cash and savings accounts, term deposits, etc.), whereas in particular the average maturity usually does not exceed one year. Balanced-Mixed funds invest in all types of funds.There also exist other types of funds (ICI, 2010).

Figure 2 gives a further impression of cross-border activity between the countries. A fund's domiciliation can only be implemented one time but the number of countries in which the fund is notified for sale varies. As can be seen, domiciliation in Luxembourg constitutes a large fraction for all countries. The proportions in Ireland and the United Kingdom point into the same direction. However, most of the funds distributed to French investors were also set up in France, which can be explained by the described country-specific life insurance business.

[insert Figure 2 about here]

**2.3 Value creation process**

In order to understand the procedures of setting up and running a fund, one has to split the organizational activities of a fund company and direct functions conducted by auxiliary industries into the components of a funds' value chain. It is very difficult to get a feeling for the composition of the involved functions in the value chain of a mutual fund. Since the literature does not provide a detailed description, it was necessary to consult business experts from Germany, the UK, Luxembourg, Switzerland, and the US about general market conventions.

Porter's value chain framework is a common means to display and analyze the logic behind firm-level value creation (and relative cost position) by decomposing the company into strategically important activities (Porter, 1985). According to Porter, the overall value-creating logic of the value chain is valid in all industries (Porter, 1985 and 1990), but comprehensive overviews of the services sector, in particular the banking and securities sectors, are viewed with reservation (Stabell and Fjeldstad, 1998). These reservations can be traced back to current product associations such as tangibility or storage life, which do not exist for financial products. Ergo, they do not exist for mutual funds.

Therefore, the services sector is thought to comprise not products but services, which are characterized by intangibility of the results, the uno actu principle, and the absence of storage and transportation. In a strict sense of the word, the custodian does store securities, but this tangible-representative characteristic makes the mutual fund, as typical for financial products, a so-called contractual good. Financial services contracts usually do not address all aspects inherent in the provision of services. These aspects comprise, e.g., promises to customers (for instance, the efforts of the fund manager regarding performance, or risk and liquidity), which are implicitly contractual and could lead to insecurities in investor behavior (see Gallouj and Savona (2009); Ng et al. (2012)).

In order to illustrate the required activities, Figure 3 briefly depicts the value chain of a mutual fund before listing these activities in greater detail. Table 5 gives the relatively detailed listed overview of the involved activities.

The value chain (Figure 3) illustrates the value creation process of a mutual fund referring to the dominating understanding in production theories of services. It differentiates between (1) primary activities, which are directly involved in creating value for the investor, and (2) support activities that enable and improve the performance of the primary activities. The value creation process of the primary activities is sequential and begins with product innovation, which is almost always initiated by sales and marketing units. Domiciliation decisions are typically taken by the administration as well as internal jurists and external lawyers. Once having taken a domiciliation decision, a number of administrative tasks have to be completed before the fund can be marketed and sold to the investor. Within the value chain, different further workforces are necessary to set up and run a fund (support activities). These are not only employees who run the infrastructure, but also, and especially, administrators, fund managers, custodians, and transfer agents. All activites can be outsourced, depending on the business strategy pursued and often create specific networks between agents situated in different countries, e.g. fund administration is relatively often carried out in Dublin. Fund managers in asset management are located independently from legal domiciliation and frequently work in teams, which may have offices in different locations. According to the findings of Bär et al. (2011), fund companies prefer a team of managers to manage a portfolio when the included funds are larger and specialized knowledge is essential. In some cases, fund companies employ another company, called the sub-advisor, to handle the fund's day-to-day management, e.g., due to industry-specific knowledge. In these instances, the portfolio manager is generally located in the same place as the fund's sub-advisor. According to Kuhnen (2009), the majority of funds use in-house asset management.

[insert Figure 3 about here]

[insert Table 5 about here]

Figure 4, based on Lipper data (2010b) illustrates the proportion of domicilied assets under management of fund companies in European cities. The strong position of

Luxembourg, followed by Paris and London, is easily perceived. In Germany for instance, the major cities that agglomerate mutual fund companies (Figure 5) show a similarly high market share in the asset management of mutual funds (Figure 6), whereas fund managers are also spatially distributed outside financial centers in more rural areas. A total of 59 fund management companies are located in Frankfurt and manage 1,387 mutual funds; Munich is home to 44 mutual fund managers who manage the portfolios of 336 mutual funds.

CRA (2006) estimates the expected benefits of a closer integration of the European fund market and inter alia analyzes equity funds' production costs by conducting interviews. The results suggest that operating costs in European countries lie within a range of about 37 basis points (France) to 53 basis points (United Kingdom).

According to Stabell and Fjeldstad (1998: 418) it is generally difficult to obtain reliable and precise cost data for value chain activities, since accounting data are most often not collected and reported in a consistent fashion. This corresponds to the experience made in conversations with business experts. It is therefore all the more interesting that, according to the analysis of CRA (2006), the fractions of the involved functions seem to be relatively similar across countries. The costs can approximately be subsumed in the components: Asset management (30 percent), Fund accounting (28 percent), Custody (14 percent), Company's overhead costs (14 percent), Tranfer agency (8 percent), Regulator compliance (3 percent), and Audit (1 percent).

The subsequent analysis will shed more light on the production process of mutual funds. In the following the focus will be on the interaction between input variables of the production process and their spatial distribution. The subsequent analysis will set out the relevant location factors for domiciliation and examine their incidence in several countries. The underlying dataset and methods will be outlined in the ensuing chapter.

[insert Figure 4 about here]

[insert Figure 5 about here]

[insert Figure 6 about here]

# 3 Data and Empirical Approach

### 3.1.1 Sample and Methods

The survey focuses on mutual fund companies which domicile and distribute UCITS funds in Germany. To determine the relevant location factors, the described literature on location theory in general and for the finance sector in particular as well as research on mutual funds were analyzed intensively. The derived location factors were discussed in five interviews with industry experts. Based on the results, the first questionnaire was set up and pre-tested on three fund companies which are compatible with the sample. The pre-test feedback was included to adjust the final questionnaire. All 68 identified focal companies reported by the German fund companies' industry association (BVI, 2009) were approached with a questionnaire between July 1 and August 30, 2009. The managers addressed were responsible for the domiciliation decision regarding the company's mutual funds. Overall, 47 usable questionnaires were submitted (see Table 6 for the participating companies), representing a focal market share of 78 percent in the overall UCITS market in Germany (data from BVI, 2009: Appendix 3-14; EFAMA, 2010). The focal market share is measured by the assets under management in UCITS funds of the participating fund companies in relation to the overall UCITS market. The experts were contacted and informed of the survey by phone before receiving the questionnaire by mail.

This analysis uses survey data on the fund industry. This procedure has obvious pros and cons; however, any survey entails potential limitations for the inferences that can be drawn. The survey approach is not conventional in the finance literature but has certain methodological advantages (see van der Sar, 2004; Menkhoff and Schmidt, 2005; Lins et al., 2010). In order to determine relevant factors in the domiciliation decision, applying the survey method was appropriate for several reasons. Due to the lack of data and earlier scientific research on domiciliation decisions of fund companies, a primary data collection was necessary. For this purpose, the survey method with a standardized questionnaire has several advantages over qualitative interviews, as the questioning features a higher degree of autonomy and anonymity. Furthermore, a representatively large sample size could be achieved, providing a more reliable interpretation space. The survey method followed the typical steps of defining the research objective and its operationalization in variables, the extension of primary knowledge and revision of the variables model, questionnaire setup, pre-test, and revision of the model, questioning, and evaluation of the results (see Groves et al., 2009; Schaeffer, 2003; Bradburn et al., 2004). Several results were also presented at various seminars of practitioners and academics. This direct back and forth allowed the testing of some of the inferences this paper was attempting to draw from the formal survey.

It is assumed that the survey questions were generally well understood. According to Lins et al. (2010), several concerns can arise when working with surveys. It is noted that there is a potential concern regarding the respondents' understanding of questions. Therefore it is important to formulate appropriate questions in the practitioners' language. It is impossible to verify that each individual fully understood each question, but intensive personal interviews with members of the group in advance of the survey confirm that the questions were generally well understood and gave further advice. Moreover, in a later stage a beta version of the questionnaire was used in a pre-test with three experts as a final check of its appropriateness and acceptance.

A main concern is the possibility that the respondents are not the proper representatives to portray the domicile decisions taken by their companies. It was expected that unsorted mailings to official addresses might in the best case be answered by press representatives. Therefore the persons responsible for the domiciliation process in fund companies were identified and direct telephone contact with each was established before sending out the questionnaire. Moreover, at the end of each questionnaire recipients were asked to score the general appropriateness and make comments in the space provided.

The data collected contains very commercially sensitive information. Consequently, there is the potential concern that managers may choose not to answer questions truthfully. Since the survey is completely anonymous, there are fewer reasons to believe that there is any systematic reason to answer questions in anything other than a truthful manner.[8] This implies that only information at an aggregate level is presented. For this reason, this analysis reports results on the level of averages and does not reveal quantitative information that could be used to identify a particular company. Finally, there may be also concerns about response biases and sample selection biases in general (Lins et al, 2010). The results do not indicate that either bias is likely decisive for the survey data, as the characteristics of the participating companies are in particular similar to those studied in the other research work.

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[8] Lins et al. (2010) refer to Graham and Harvey (2001) and stress that upper-level managers would not take the time to respond to a lengthy survey if their intent was to be untruthful.

Overall, the fact that this paper uncovers clear results that are economically meaningful is evidence against the notion that the gathered responses are just noise.

### 3.1.2 Survey Design

The survey is standardized and follows the principles of Groves et al. (2009). It asks two types of questions on every prompted aspect of fund domiciliation. First, each aspect begins with a hypothetical question about how relevant the respective aspect is assessed to be for the domiciliation decision. These are also aspects that appear within the other stages of the value-added process, yet they could remain relevant for the decision-making process in the domiciliation stage. For example, managers were asked how important they would consider the process and duration of the fund issue approval in the whole process of domiciliation decision to be. Thus, it is possible to rank the individual determinants in order of their attributed worthiness. Second, perceptual questions regarding real country-specific characteristics were asked. For example, managers were asked how they would judge the supervisory authority with respect to process and duration of fund domiciliation approval in the respective countries. In the course of these perceptual and hypothetical questions, this empirical work was oriented by theoretical and practical explanations of fund domiciliation and location attractiveness, which have been discussed previously.

To capture the respondents' general assessment of the relationship between sales opportunities abroad and the location of domiciliation, the questionnaire starts out with a question on worldwide sales importance and suitability of the countries of interest. The three European countries chosen by market size are Germany, France, and the UK. The countries chosen due to their position as special financial hubs are Luxembourg, Ireland, and Switzerland. Altogether, these six countries host 84.35 percent of total net assets of mutual funds and 73.68 percent of the total number of mutual funds in Europe. The next questions are divided into four main categories which are:

1. Regulatory framework conditions (collaboration with supervisory authorities, disclosure requirements, legal requirements placed on management company, fund industry stability),
2. Costs of mutual fund domiciliation (tax burden of investment companies, labor costs, issuance costs),

3. Concentration in the cluster and competition (spatial proximity to other fund companies, availability of services providers for the fund administration, availability of other services and specialists/local infrastructure, availability and qualification of the workforce in the fund industry),
4. Soft location factors (government support for the fund industry and marketing, quality and performance of the indudustry, international reputation of the fund industry, quality of life, and leisure time).

# 4 Relevant Location Factors and Country-Specific Characteristics

First, a short overview of the most relevant factors for fund domiciliation will be provided. Afterwards, this paper will take a closer look at country-specific characteristics. The findings provide clear results of which location factors are considered most relevant for the UCITS domiciliation decisions of fund companies. Table 7 reports the mean degree of importance the respondents allocated to the respective location factors ordered from the most relevant to the least relevant factor. The scale ranges from very unimportant (1) to very important (5), whereas the center (3) indicates a neutral position.

In general, the majority of factors can be judged as relevant. Hence, it is worth noting that just two factors considered rank below the neutral level and are thus assessed to be rather unimportant. This corresponds to the variety of chosen questions, since all of them were considered important in the interviews with experts before the survey. But all other surveyed factors have a more or less than neutral impact on the participants' fund domiciliation decision. The lead group of the five most relevant factors with a mean importance above category "4", i.e., which were ranked between important and very important in the mean, consists of legal stability with the highest valuation (4.76), the domiciliation approval process (4.51), availability (4.47) and qualification (4.45) of specialized workforce and the requirement conditions for the management company (4.23).

Interestingly, lower standard deviations[9] in responses on more relevant factors suggest that the group of managers agreed on the importance of the respective factors. Higher standard deviations of the answers on less relevant factors show that responses

[9] Standard deviation refines the analysis of managers agreeing or differing in their responses better than just presenting mean ranges, because outliers could change the range in a misleading way. The simple instrument of standard deviation provides further distributional information, in particular on the observations in the distribution tails.

were not as in line as for the lead group of factors. This could also be interpreted as a signal of respondents' uncertainty about these issues or a merely selective relevance for a minority group of fund companies.

[insert Table 7 about here]

In the following, the top five location factors with their country-specific peculiarities are highlighted individually. A high level of relevance is assigned to regulatory conditions in general. Legal stability (4.76) plays the most important role for fund companies' domiciliation decisions. The standard deviation is remarkably small (0.43), implying that most questioned managers seem to agree on the role of legal stability. As all included countries can be considered more or less similar in political stability, legal stability here aims at planning reliability and continuity for the fund industry, i.e., few changes that affect internal processes of the companies. Due to costs of internal reorganization, maintaining existing legal frameworks may be preferred over frequent changes towards more efficient rules.

The second most relevant factor, the approval process and duration of fund issues (4.51), is closely related to this industry-specific legal stability. The start-up process is almost always initiated by sales staff. The time needed to fulfill authorities' requirements may decide on the sales pitch. The findings suggest that fund companies prefer to domicile UCITS funds abroad if the start-up time is shorter than at home. UCITS domiciliation seems to be most favorable in Luxembourg, as almost 93 percent of all questioned managers rate the approval process and its duration as either good or very good, similarly to Ireland where only 17 percent assess the authority's registration efforts as neutral.[10]. France lags a little behind with almost 72 percent of the experts assessing approval and duration conditions as either neutral or bad and only 28 percent as good. The situation seems to be similar in Switzerland, where, due to the lack of the "UCITS fund passport," compatible regulatory framework conditions have been implemented to go in line with EU law. According to practitioners, the approval duration was very long in Germany in the past and has been significantly reduced in the last few years. For instance, it takes three weeks in Germany, at least two weeks in Luxembourg, four weeks

[10] The vanguard role of Luxembourg is similar for fund mergers. Especially in the aftermath of a financial crisis, when assets under management shrink, fund companies are prompted to consolidate existing funds in order to reduce fixed costs. Merging funds from multiple countries necessitates a new domiciliation decision.

in France, six weeks in Ireland and the United Kingdom to obtain a regulatory approval. Also, notification takes from as little as two weeks (Ireland) to up to eight weeks (CRA, 2006; KPMG, 2010).

The next two most relevant factors concern human capital. The findings show that availability (4.47) and qualification of the workforce (4.45) seem to also be very important, as the mutual fund business naturally relies on highly qualified staff. Within the value chain, different specialized workforces are necessary. There are fund managers, administrators, custodians, transfer agents, and sales staff. Fund managers usually do not have to be at the fund's domicile. Fund administration can also take place elsewhere. The results show that although Ireland and France trail somewhat behind, the availability of a specialized workforce seems to be guaranteed in almost all countries. However, Luxembourg is appreciated a bit more when qualified staff is available.

The fifth most important location factor refers to requirements for the fund management company (4.23). This factor encompasses regulatory and supervisory conditions, such as minimum capital requirements, risk management, and infrastructure. In this regard, the new implementation of the UCITS IV Directive of 2011 is very important, as it allows setting up and managing a UCITS fund in another EU Member State without having to comply with local "substance-criteria" of infrastructure, i.e., the de facto requirement of having a subsidiary in the country in which the fund is domiciled. This leads to further decision opportunities for fund companies to geographically optimize their business models. The results suggest that Luxembourg provides favorable conditions for fund management companies in terms of their requirements, followed by Ireland and Switzerland.

Existing alternative legal types of funds appear to be important (e.g., SICAF, SICAV, and FCP in Luxembourg). The tax burden for the domiciled fund also appears to be important in the decision process. In the last decade several efforts were made to create a level playing field in taxation. In 2003, fund experts identified taxation policy to be the most important barrier to cross-border financial business (Heinemann et al., 2003). Best results are obtained for Ireland, Luxembourg, and Switzerland, each with above 70 percent of respondents favoring them over the other countries. In line with the findings in the analysis of the general location factors for financial centers' attractiveness, Germany seems to be at a disadvantage.

A similar impression can be drawn when focusing on governmental efforts promoting the fund industry. Government support is judged as important (3.96). In this point, Luxembourg and Ireland show a very competitive position. Almost all of the surveyed managers give a very good reference to both countries. As many as 94 percent and 87 percent of the managers assess government support as either good or very good in Ireland and Luxembourg, respectively. This strong commitment may be the result of the important economic role of the financial sector for these countries so that the government makes a great effort in supporting it. For instance, high-ranking politicians promote fund activities in international road shows. On the other side, 37 percent of respondents assess the German government's support as bad or very bad, compared to only 17 percent of respondents that perceive it as good. Practitioners sometimes view the German fund regulation as bureaucratic, prone to gold-plating. These results seem not to be determined by a different performance of domestic industry associations in promoting their financial center, as the mean assessments are very similar. However, beneficial governmental support influences a country's international reputation as a domiciliation location. According to the findings, Luxembourg also leads in this point, although sharp distinctions cannot be observed. The level of disclosure requirements is considered weakly relevant (3.36), which can be traced to the widely standardized framework of UCITS, i.e., differences between the countries of choice tend to be minor. Hence, the countries do not differ so much regarding investor protection.

Generally, labor costs are high in all compared countries and are considered weakly relevant (3.64), while Ireland is best rated (3.67) and Great Britain worst (2.31). Many administrative functions in the fund industry have been outsourced to Ireland in the past. The domiciliation provisions (i.e., fees) for fund domiciliation play a minor role and all countries march to the same tune. For instance, according to CRA (2006: 36-38) the pure authorization costs imposed by the national regulator were EUR 1,500 in Germany, EUR 2,650 in Luxembourg, and EUR 8 per million assets under management for a single fund in France; it is almost always payable annually (ex Germany, EUR 500 p.a.).[11]

Similarly, real estate costs are high in all countries and assessed as not important. Several questions were posed regarding cluster concentration effects. They account for the described cluster explanations due to agglomeration economies and positive externalities, such as knowledge and information spillover effects. The relevance of these factors is principally moderate. However, the position of Luxembourg leads in almost all cases. Last but not least, the prime position in terms of leisure facilities is achieved by

[11] See CRA (2006) for a detailed overview of costs components.

Switzerland, closely followed by Germany. In the open space for comments, the managers additionally refer to aspects of infrastructure, transport connection and mobility, and double taxation agreements as further determinants of their domiciliation decisions. As all additional factors were named only once, their significance can be considered to be limited to individual cases.

The dimensions of relevance and perceived configuration of individual factors are combined in Figure 7, which gives clear evidence on the de facto microeconomic business conditions for fund companies in the major European financial centers. Overall, the results indicate that differences in the framework conditions on the micro level across the regarded countries still exist; although this paper focuses on very standardized UCITS funds in a predominantly harmonized sub-segment of the European financial market. However, Luxembourg leads the list for almost all factors crucial for the domiciliation decision. The assessment regarding Ireland also suggests business advantages.

[insert Figure 7 about here]

## 5 Conclusion

In this paper, the rationale behind the domiciliation decision in the European fund industry has been empirically investigated. In order to carry out this research, the paper has analyzed the relevant production process and its input variables. It is argued that the decision for a fund company's location is determined by a set of network factors and opportunities for cooperation that differs between countries. Such country-specific determinants of a fund's production justify the idea that the most important factors for network creation and the production process in the mutual fund industry depend on the relevant location factors and relevant country-specific characteristics. This paper focuses on UCITS as the main relevant regulation in Europe and beyond the EU. The quality of relevant microeconomic business environments for setting up UCITS funds in six European countries has been explored. These countries represent more than 83 percent of the entire UCITS market. The used survey evidence provides us with detailed information on the assessments of managers responsible for domiciliation, which cannot be obtained from publicly available statement data. The respondents represent a focal market share of 78 percent. In particular, this analysis provides new evidence about the production process in the financial industry and in particular in the legal environment of UCITS (and related regulations such as in Switzerland). Several findings stand out; the data confirms the notion that the production of mutual funds is driven by network arrangements, in which the regulator plays a very important role. The outcome of the empirical study indicates that the decision on where to domicile a fund is not primarily driven by cost factors, such as registration charges and labor costs, but rather by the conditions of the approval process embedded in the legal framework and the quality of the workforce. Differences in these factors may allow fund companies to set up more innovative and complex funds in a shorter period of time in one country than in other countries. Traditional cost factors (i.e., economies of scale) thus play a mediocre role for the domiciliation decisions and do not seem to be the primary reason to locate in a financial center. Lower standard deviations in responses on more relevant factors suggest that the group of managers agreed on their importance. It is evident that Luxembourg is appraised to best fulfill the most important factors. The development of Luxembourg as a special financial center for funds is attributed to governmental efforts to create favorable framework conditions, causing first-mover advantages regarding the implementation of the UCITS directives. As a result, Luxembourg is the second largest domiciliation hub in the world and located specialized experts and ancillary industries may continue to strengthen its position.

Against the backdrop of the financial crisis, mutual funds tended to become smaller as assets lost value and investors switched to other asset classes and divested out of funds. Fund companies, in turn, increased fund consolidations in order to reduce fixed costs. Merging funds from multiple countries necessitates a new domiciliation decision.

In summary, the results indicate that the methods and the gathered responses were useful for the research purposes. Nonetheless, the inferences drawn from this study have to be interpreted with the understanding that the dataset arises from a specific survey and not from archival data obtained from an ample data provider.

Beyond the new insights into the value creation process of mutual funds and the relevant determinants for decision-makers, policy recommendations can be derived from these results. Once financial institutions have settled in a certain location in which the infrastructure necessary for production is already given, relocation is usually only possible at high costs and risk and will therefore be avoided despite harmonized regulations. Consequently, favorable or unfavorable political decisions taken in the past tend to have long-term effects for the future. Therefore, the results are relevant both academically for the formulation of a theory and for economic practice.

# Appendix

## *Tables:*

**Table 1: Worldwide Total Net Assets of Mutual Funds**

| | 1998 | 2000 | 2002 | 2004 | 2006 | 2008 | 2010 | mid-2011 |
|---|---|---|---|---|---|---|---|---|
| **World** | **9,595** | **11,871** | **11,324** | **16,165** | **21,809** | **18,920** | **24,699** | **25,928** |
| **Americas** | **5,867** | **7,424** | **6,776** | **8,792** | **11,470** | **10,582** | **13,587** | **14,178** |
| Mexico | n/a | 18 | 31 | 35 | 63 | 60 | 98 | 106 |
| United States | 5,525 | 6,965 | 6,390 | 8,107 | 10,398 | 9,604 | 11,821 | 12,238 |
| **Europe** | **2,743** | **3,296** | **3,463** | **5,640** | **7,804** | **6,231** | **7,903** | **8,425** |
| Austria | 57 | 57 | 67 | 104 | 128 | 93 | 95 | 97 |
| Belgium | 56 | 70 | 75 | 118 | 137 | 105 | 96 | 101 |
| Finland | 6 | 13 | 17 | 38 | 68 | 49 | 71 | 76 |
| France | 626 | 722 | 845 | 1,371 | 1,769 | 1,591 | 1,617 | 1,695 |
| Germany | 191 | 238 | 209 | 296 | 340 | 238 | 334 | 357 |
| Ireland | 50 | 137 | 250 | 468 | 855 | 720 | 1,014 | 1,113 |
| Italy | 440 | 424 | 378 | 512 | 453 | 264 | 234 | 234 |
| Luxembourg | 508 | 747 | 804 | 1,396 | 2,188 | 1,861 | 2,513 | 2,685 |
| Netherlands | 80 | 94 | 84 | 102 | 109 | 77 | 86 | 92 |
| Norway | 11 | 16 | 15 | 30 | 54 | 41 | 85 | 98 |
| Portugal | 23 | 17 | 20 | 31 | 31 | 14 | 11 | 11 |
| Spain | 239 | 172 | 179 | 318 | 368 | 271 | 217 | 234 |
| Sweden | 55 | 78 | 58 | 107 | 177 | 113 | 205 | 215 |
| Switzerland | 69 | 83 | 83 | 94 | 160 | 135 | 262 | 300 |
| United Kingdom | 278 | 361 | 289 | 493 | 755 | 505 | 854 | 896 |
| **Asia and Pacific** | **972** | **1,134** | **1,064** | **1,678** | **2,456** | **2,038** | **3,067** | **3,181** |
| India | 9 | 14 | 20 | 33 | 58 | 63 | 111 | 119 |
| Taiwan | 20 | 32 | 62 | 77 | 56 | 46 | 59 | 61 |
| **Africa** | **12** | **17** | **21** | **54** | **78** | **69** | **142** | **143** |

Source: Own calculations, data based on ICI (2011a, 2011b) and EFAMA (2011b); Non-UCITS are not reported; in billions of U.S. dollars, end of period.

**Table 2: Worldwide Number of Mutual Funds**

| | 1998 | 2000 | 2002 | 2004 | 2006 | 2008 | 2010 | mid-2011 |
|---|---|---|---|---|---|---|---|---|
| **World** | **50,266** | **51,692** | **54,110** | **55,524** | **61,855** | **69,032** | **69,519** | **70,819** |
| | | | | | | | | |
| **Americas** | **10,376** | **12,676** | **13,884** | **14,064** | **14,475** | **16,459** | **18,019** | **18,496** |
| Mexico | n/a | 305 | 364 | 411 | 437 | 431 | 434 | 461 |
| United States | 7,314 | 8,155 | 8,244 | 8,041 | 8,118 | 8,022 | 7,581 | 7,518 |
| | | | | | | | | |
| **Europe** | **20,107** | **25,524** | **28,972** | **29,306** | **33,151** | **36,780** | **35,292** | **35,406** |
| Austria | 704 | 760 | 808 | 840 | 948 | 1,065 | 1,016 | 1,012 |
| Belgium | 631 | 918 | 1,141 | 1,281 | 1,549 | 1,828 | 1,797 | 1,787 |
| Finland | 114 | 241 | 312 | 280 | 376 | 389 | 366 | 371 |
| France | 6,274 | 7,144 | 7,773 | 7,908 | 8,092 | 8,301 | 7,791 | 7,855 |
| Germany | 793 | 987 | 1,092 | 1,041 | 1,199 | 1,675 | 2,106 | 2,049 |
| Ireland | 851 | 1,344 | 1,905 | 2,088 | 2,531 | 3,097 | 2,899 | 3,017 |
| Italy | 703 | 967 | 1,073 | 1,142 | 989 | 742 | 650 | 654 |
| Luxembourg | 4,524 | 6,084 | 6,874 | 6,855 | 7,919 | 9,351 | 9,353 | 9,455 |
| Netherlands | 334 | 494 | 680 | 542 | 473 | 458 | n/a | n/a |
| Norway | 264 | 380 | 419 | 406 | 524 | 530 | 507 | 507 |
| Portugal | 189 | 195 | 170 | 163 | 175 | 184 | 171 | 175 |
| Spain | 1,866 | 2,422 | 2,466 | 2,559 | 3,235 | 2,944 | 2,486 | 2,522 |
| Sweden | 366 | 509 | 512 | 461 | 474 | 508 | 504 | 506 |
| Switzerland | 325 | 368 | 512 | 385 | 609 | 572 | 653 | 670 |
| United Kingdom | 1,576 | 1,766 | 1,787 | 1,710 | 1,903 | 2,371 | 2,204 | 1,997 |
| | | | | | | | | |
| **Asia and Pacific** | **19,592** | **13,158** | **10,794** | **11,617** | **13,479** | **14,909** | **15,265** | **15.974** |
| India | 97 | 234 | 312 | 394 | 468 | 551 | 658 | 683 |
| Taiwan | 174 | 288 | 351 | 445 | 447 | 443 | 487 | 517 |
| | | | | | | | | |
| **Africa** | **191** | **334** | **460** | **537** | **750** | **884** | **943** | **943** |

Source: Own calculations, data based on ICI (2011a) and EFAMA (2011b); Non-UCITS are not reported; end of period.

## Table 3: Proportions of Net Assets and Number of Funds in Europe

| | Number of funds | *Share* | Net assets in mio. Euro | *Share* |
|---|---|---|---|---|
| **UCITS and non-UCITS funds** | | | | |
| France | 11,925 | *22.09%* | 1,476,467 | *18.22%* |
| Germany | 5,884 | *10.90%* | 1,140,540 | *14.07%* |
| Ireland | 4,893 | *9.06%* | 974,335 | *12.02%* |
| Luxembourg | 13,164 | *24.38%* | 2,184,999 | *26.96%* |
| Switzerland | 893 | *1.65%* | 268,010 | *3.31%* |
| United Kingdom | 3,024 | *5.60%* | 791,677 | *9.77%* |
| | *39,783* | *73.68%* | *6,836,028* | *84.35%* |
| Europe | 53,993 | *100.00%* | 8,104,111 | *100.00%* |

**of which UCITS funds**

| | Domestic market share, by net assets | Domestic market share, by numbers | Overall share in Europe |
|---|---|---|---|
| France | 79.44% | 65.87% | 19.81% |
| Germany | 21.69% | 34.82% | 4.18% |
| Ireland | 79.02% | 61.66% | 13.00% |
| Luxembourg | 85.02% | 71.82% | 31.37% |
| Switzerland | 77.37% | 75.03% | 3.50% |
| United Kingdom | 85.02% | 82.24% | 11.37% |
| | | | *83.23%* |

**of which non-UCITS funds**

| | Domestic market share, by net assets | Domestic market share, by numbers | Overall share in Europe |
|---|---|---|---|
| France | 20.56% | 34.13% | 13.90% |
| Germany | 78.31% | 65.18% | 40.92% |
| Ireland | 20.98% | 38.34% | 9.36% |
| Luxembourg | 14.98% | 28.18% | 14.99% |
| Switzerland | 22.63% | 24.97% | 2.78% |
| United Kingdom | 14.98% | 17.76% | 5.43% |
| | | | *87.39%* |

Source: Own calculations, data based on ICI (2011a), EFAMA (2011b).

## Table 4: Breakdown of Non-UCITS Assets in Europe

| Fund types | Eur bn | Share | Number of funds | Share |
|---|---|---|---|---|
| Special / Institutional | 1,428 | 65% | 8,439 | 48% |
| *of which German "Spezialfonds"* | *798* | *36%* | *3,781* | *21%* |
| British investment trusts | 55 | 3% | 312 | 2% |
| French employees savings | 89 | 4% | 2,392 | 14% |
| Luxembourg "other" funds | 84 | 4% | 967 | 5% |
| Real estate funds | 241 | 11% | 892 | 5% |
| Other | 298 | 14% | 4,705 | 27% |
| Total | 2,195 | 100% | 17,707 | 100% |

Source: EFAMA (2011a).

## Table 5: Description of the Functions in the Value Chain

| Responsibility | Function | Brief description |
|---|---|---|
| **Management overheads and systems** | Management company overheads | Overhead allocation for premises, senior management, HR, cost of capital requirements at the company level |
| | Systems maintenance | Planning and implementation of new IT, Operational and technical maintenance |
| **Fund Manager, Asset Management** | Research | Fundamental and technical economic and company analysis |
| | Cash management | Placing deposits, foreign exchanges |
| | Strategic and tactical Asset allocation | Long-term asset allocation, currency and risk management |
| | Operational asset management and dealing decisions | Asset selection, decision making and implementation, decisions to buy and sell investments, netting of trades, pre-trade broker liaison, deal administration and control, post-trade liaison with brokers and custodian |
| | Guarantee provision | Hedging portfolio in order to provide a guarantee on the capital value of the fund or on the returns made |
| **Administration, Legal** | *Fund domiciliation* | *Set-up decision, characteristics of a new fund, authorization and notification of the fund* |
| | Fund compliance, disclosure | Ensuring fund meets necessary tax rules in domicile location |
| | Documentation production | Designing and producing any necessary documents about the fund for investors |
| | Regulatory compliance | Regulatory reporting and monitoring activities related to the fund |
| | Fund accounting | Provisions of valuations, tax reclaims and management information, calculation of the net asset value |
| | Fund order processing | Automated processing from the deal to the administrator |
| | Performance measurement | Provision of investment performance reports, attribution analysis of returns |
| | Stock lending | Arranging and processing loans of stocks and bonds |
| **Custodian** | Safe custody | Security safe-keeping and control |
| | Depositary / trustee oversight | Oversight of the fund by the depositary |
| **Transfer Agent** | Administration of shares | Client dealing and associated administration including contract notes, distribution and trustee liaison, opening accounts for client |
| | Shareholder services | Payment of income, dividends, valuation, reports to customers |
| **Sales unit, Marketing** | *Fund domiciliaton* | *To have a nose for the demand of fund types* |
| | Promotional activity | Advertising to gather assets (including internal sales and marketing costs) |
| | Compensation to distributors | Sales activities including commission to distributors |
| | Documentation provision | Provision of marketing and product documentation |
| | Distribution compliance | Regulatory requirements regarding the conduct of business or sale of investment funds |
| **External Auditor** | Auditing | External audit of the fund and fund company |
| **Advisor, Service Company** | Advice, Services | Consulting, IT, Lawyers and others |

Source: Own illustration, based on CRA (2006); interviews in the pre-test in Mai 2009, and ICI (2011a).

**Table 6: Mutual Fund Companies in the Sample (by name and city)**

- Allianz Global Investors Kapitalanlagegesellschaft mbH, Frankfurt/Main
- ALTE LEIPZIGER Trust Investment-Gesellschaft mbH, Oberursel
- AmpegaGerling Investment GmbH, Cologne
- Barclays Global Investors (Deutschland) AG, Munich
- BayernInvest Kapitalanlagegesellschaft mbH, Munich
- Commerz Real AG, Wiesbaden
- Credit Suisse Asset Management Funds AG, Zurich
- Deutsche Asset Management Investmentgesellschaft mbH, Frankfurt/Main
- DB PLATINUM ADVISORS, London
- DEGI Deutsche Gesellschaft für Immobilienfonds mbH, Frankfurt/Main
- DEKA Bank Deutsche Girozentrale, Frankfurt/Main
- Dewey & LeBoeuf LLP, Frankfurt/Main
- DJE Investment S.A., Luxembourg
- DWS Investment GmbH, Frankfurt/Main
- ETFlab Investment GmbH, Munich
- Fidelitiy FIL Investment Services GmbH, Kronberg im Taunus
- First Private Investment Management KAG mbH, Frankfurt/Main
- FRANKFURT-TRUST Investment-Gesellschaft mbH, Frankfurt/Main
- FWW GmbH, Haar b. München
- Generali Investments Deutschland Kapitalanlagegesellschaft mbH, Cologne
- Hanseatische Investment-GmbH, Hamburg
- Helaba Invest Kapitalanlagegesellschaft mbH, Frankfurt/Main
- HSBC Global Asset Management (Deutschland) GmbH, Dusseldorf
- Invesco Asset Management Deutschland GmbH, Frankfurt/Main
- Lazard Asset Management (Deutschland) GmbH, Frankfurt/Main
- LBBW Asset Management Investmentgesellschaft mbH, Stuttgart
- LRI Invest S.A., Munsbach
- MEAG MUNICH ERGO AssetManagement GmbH, Munich
- Merrill Lynch International, London
- Metzler Asset Management GmbH, Frankfurt/Main
- Monega Kapitalanlagegesellschaft mbH, Cologne
- NORDCON Investment Management AG (NORD/LB), Hannover
- Oppenheim Kapitalanlagegesellschaft mbH, Cologne
- Pioneer Investments Kapitalanlagegesellschaft mbH, Unterföhring
- RBC Dexia Investor Services Bank S. A., Esch-sur-Alzette
- RREEF Spezial Invest GmbH, Frankfurt/Main
- SEB Asset Management AG, Frankfurt/Main
- Structured Invest S.A., Luxembourg-Kirchberg
- UBS Global Asset Management (Deutschland) GmbH, Frankfurt/Main
- Union Asset Management Holding AG, Frankfurt/Main
- Union Investment Privatfonds GmbH, Frankfurt/Main
- Union Investment Institutional GmbH, Frankfurt/Main
- Universal-Investment-Gesellschaft mbH, Frankfurt/Main
- Xchanging Transaction Bank GmbH, Frankfurt/Main

Source: Organized by the authors.

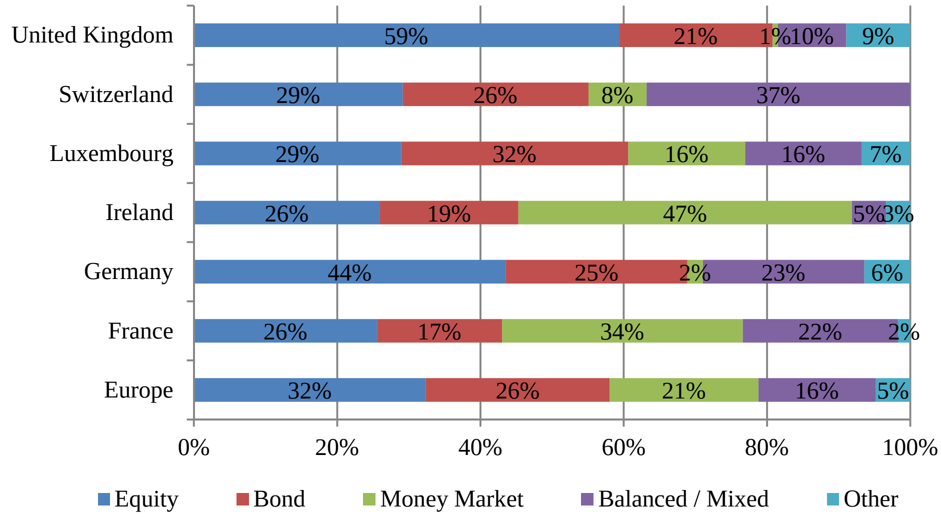
**Table 7: Relevance of Location Factors for Domiciliation**

| Location Factor | Mean | Standard Deviation |
|---|---|---|
| (1) Fund legislation | 4.76 | 0.4346 |
| (2) Approval process | 4.51 | 0.5850 |
| (3) Workforce: availability | 4.47 | 0.6606 |
| (4) Workforce: qualification | 4.45 | 0.7299 |
| (5) Business regulation | 4.23 | 0.6982 |
| (6) Alternative legal forms | 4.00 | 0.8892 |
| (7) Taxation | 4.00 | 0.7868 |
| (8) Government support | 3.96 | 0.8516 |
| (9) International reputation | 3.95 | 0.8340 |
| (10) Quality industry association | 3.91 | 0.8577 |
| (11) Investor protection | 3.89 | 0.9454 |
| (12) Custodian service, proximity/cooperation | 3.70 | 1.0300 |
| (13) Service companies, proximity/cooperation | 3.68 | 0.9350 |
| (14) Sales channels, proximity/cooperation | 3.64 | 1.0478 |
| (15) Labor costs | 3.64 | 0.7640 |
| (16) Approval process of mergers | 3.54 | 1.0479 |
| (17) Administrators, proximity/cooperation | 3.51 | 1.0606 |
| (18) Quality of life | 3.38 | 1.0507 |
| (19) Disclosure requirements | 3.36 | 0.9190 |
| (20) Authorisation costs | 3.36 | 0.9806 |
| (21) Partner fund companies, proximity/cooperation | 3.24 | 0.9690 |
| (22) Market authority, proximity/cooperation | 3.04 | 1.3015 |
| (23) Office expenses | 2.96 | 0.9878 |
| (24) Rival fund companies, proximity/cooperation | 2.60 | 1.0966 |

Source: Own calculations; mean relevance scale 1 to 5, 1= very unimportant, 5= very important.

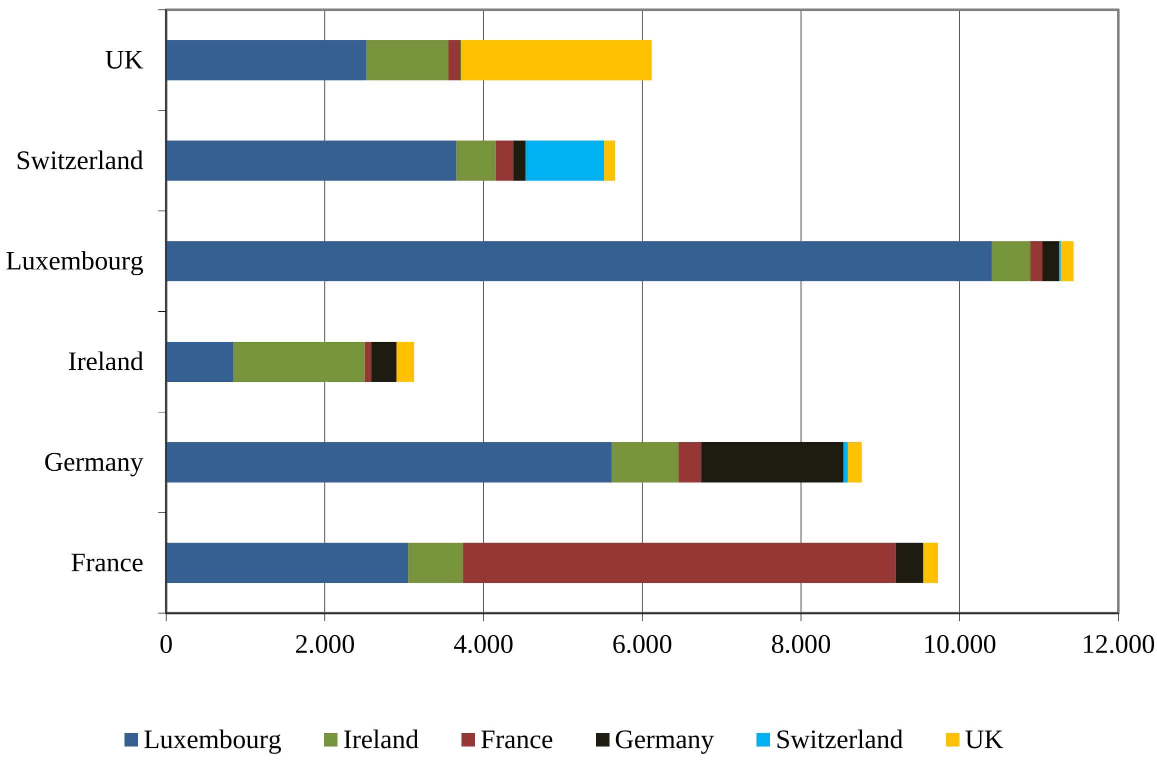
## *Figures:*

**Figure 1: Breakdown of Fund Types in Europe**



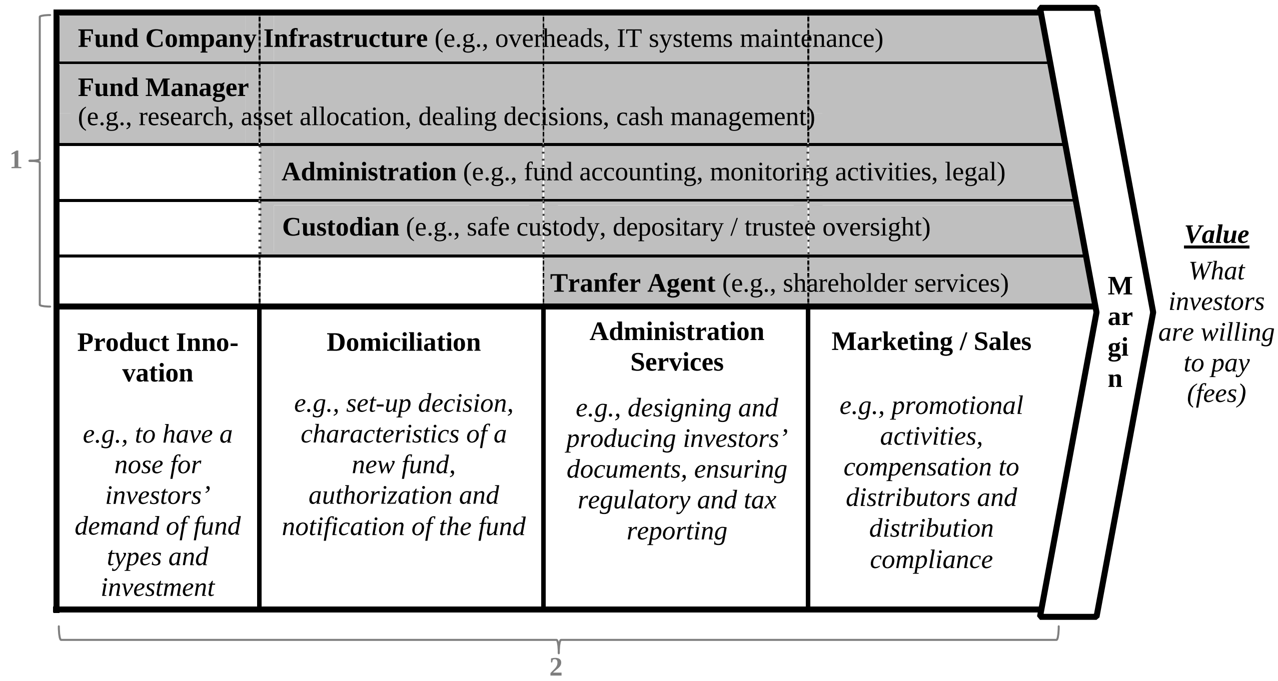

Source: Own calculations, data based on EFAMA (2011c); fund type "other" was not available for Switzerland.

**Figure 2: Number of Funds by Domicile and Country of Notification**



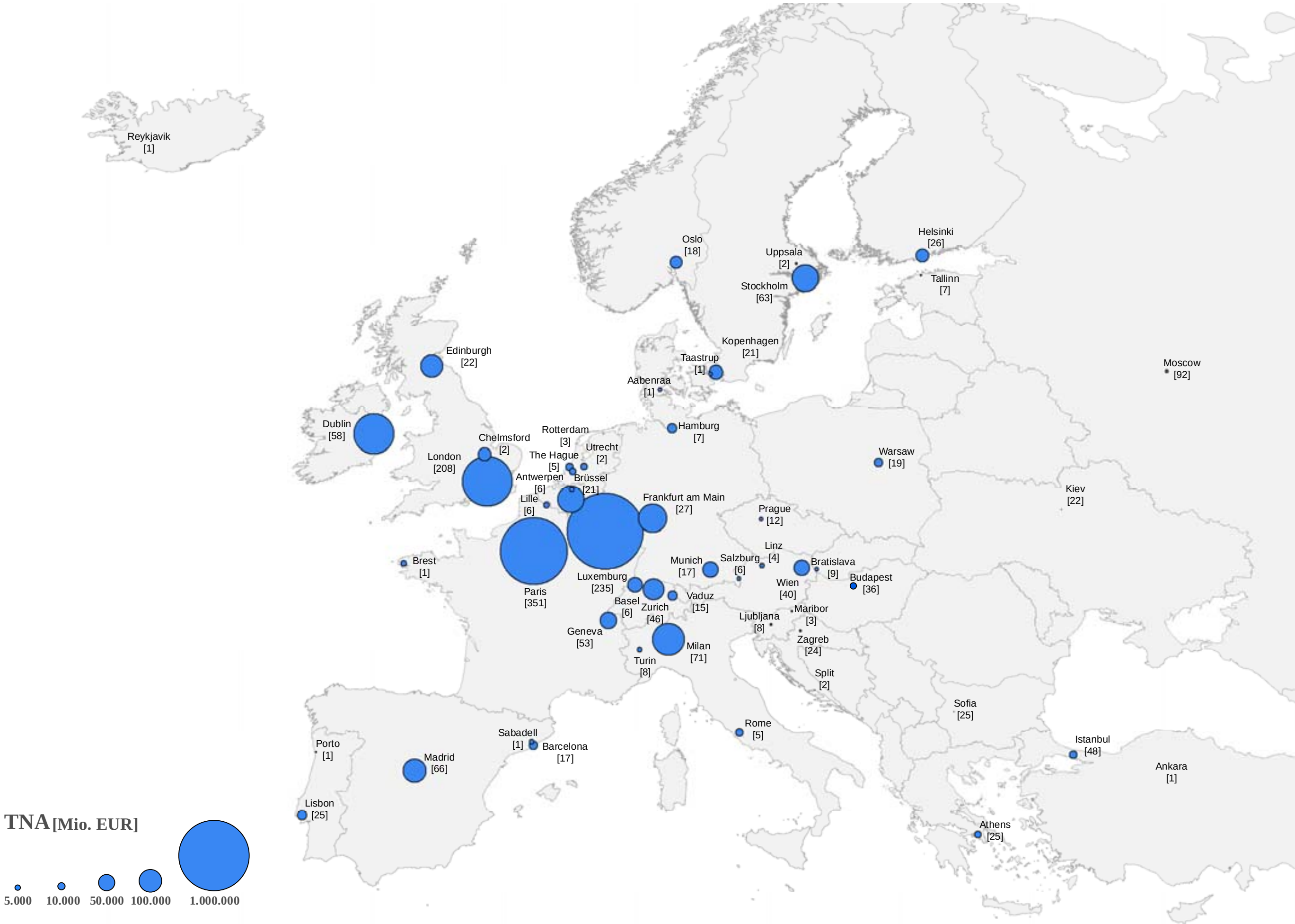

Source: Own calculations, data based on Lipper (2010a).

**Figure 3: Value Chain Diagram for a Mutual Fund**



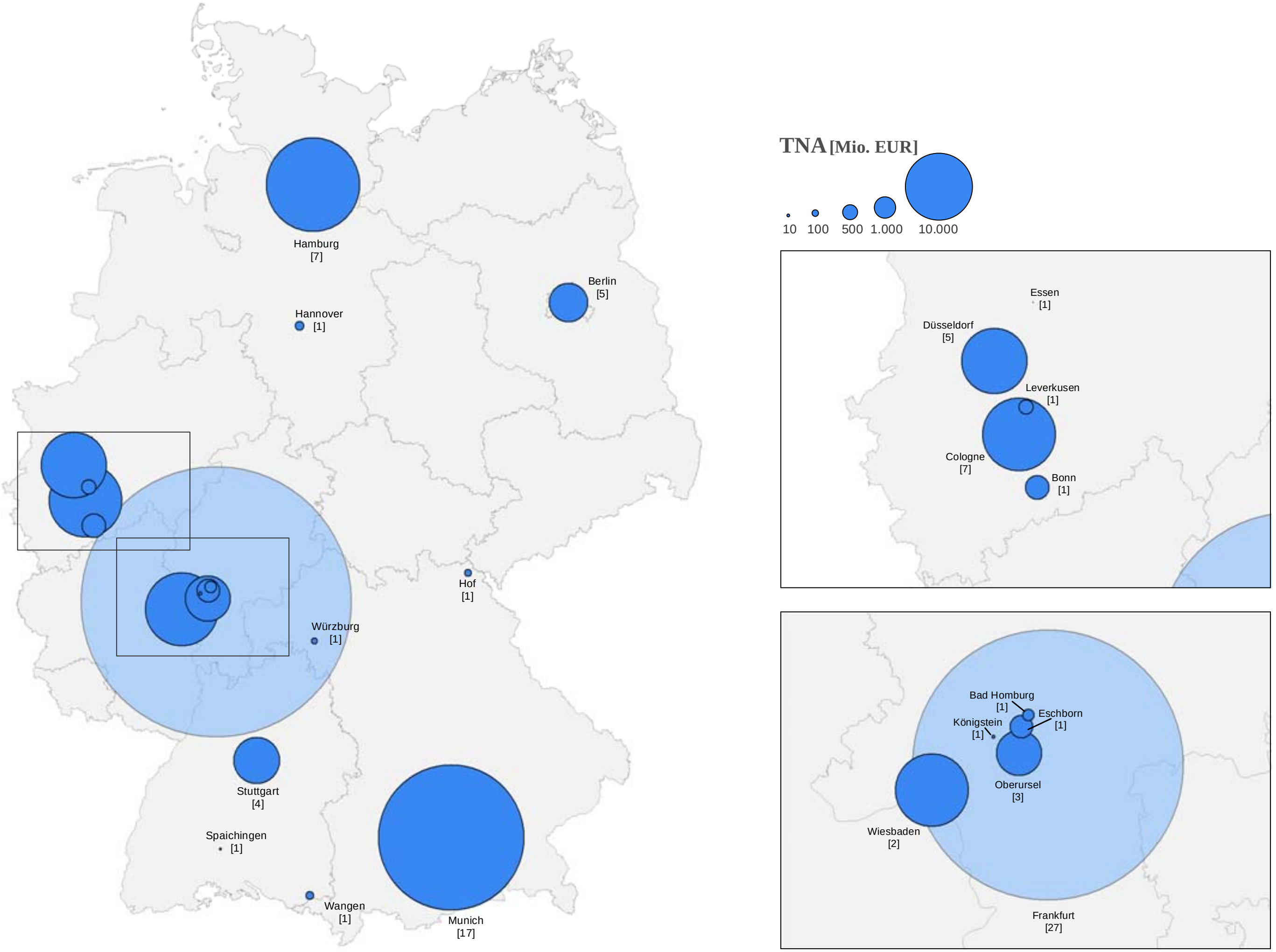

Source: Organized by the authors; based on the Model of Porter (2008: 310); 1 = support activities, grey markings indicate their functional relation to primary activities (= 2).

## Figure 4: Distribution of Mutual Fund Companies in Europe



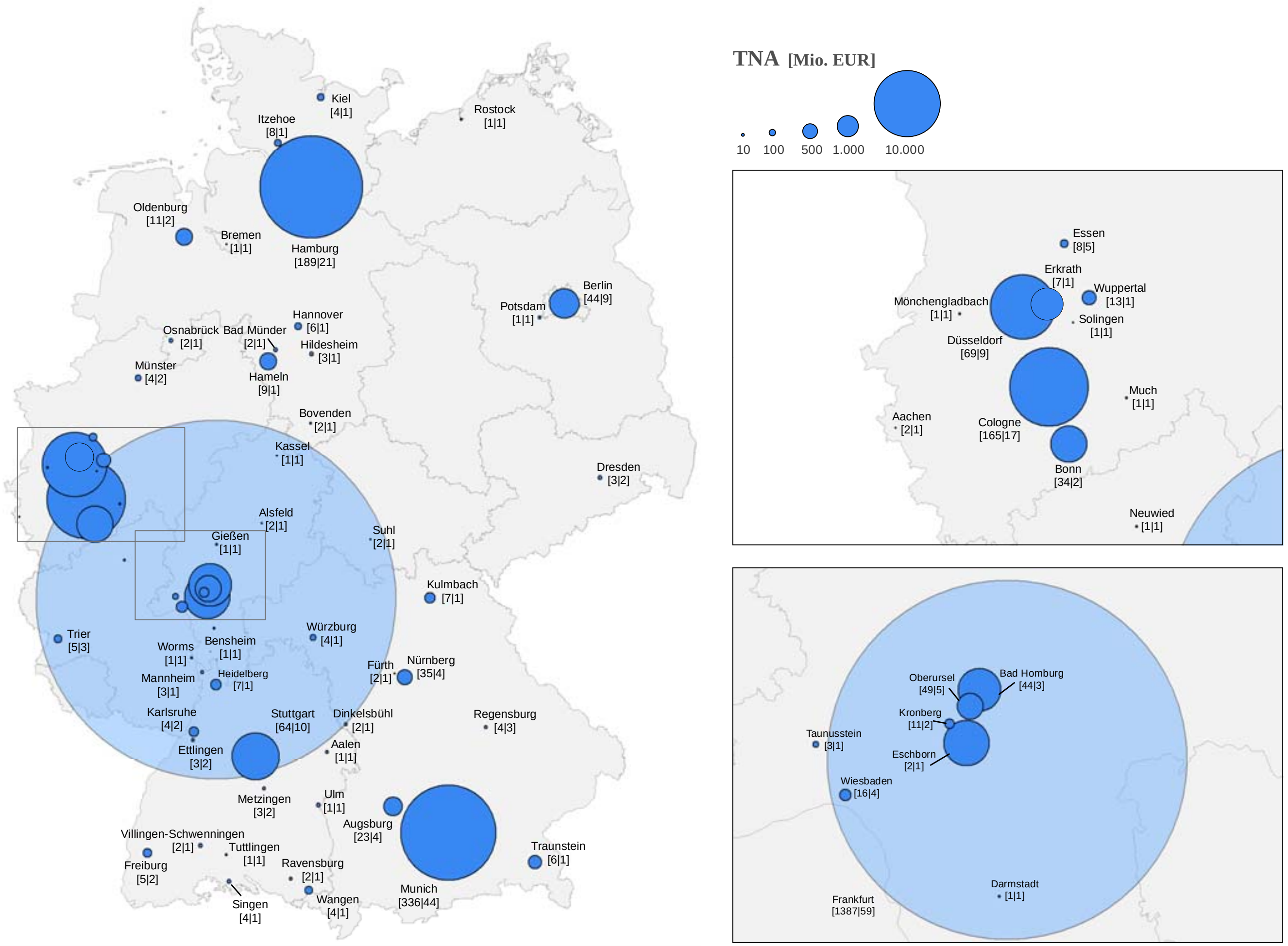

Source: Own calculations, based on the database of Lipper (2010b), bracket illustrates the number of fund companies; bubble latitude represents the magnitude of the total net assets (TNA), in mio. Eur, domiciled by these fund companies in this city; information of active funds and their oldest share class are considered to prevent a multiple add-up; the largest three cities in a country are illustrated for the sake of brevity.

**Figure 5: Distribution of Mutual Fund Companies in Germany**



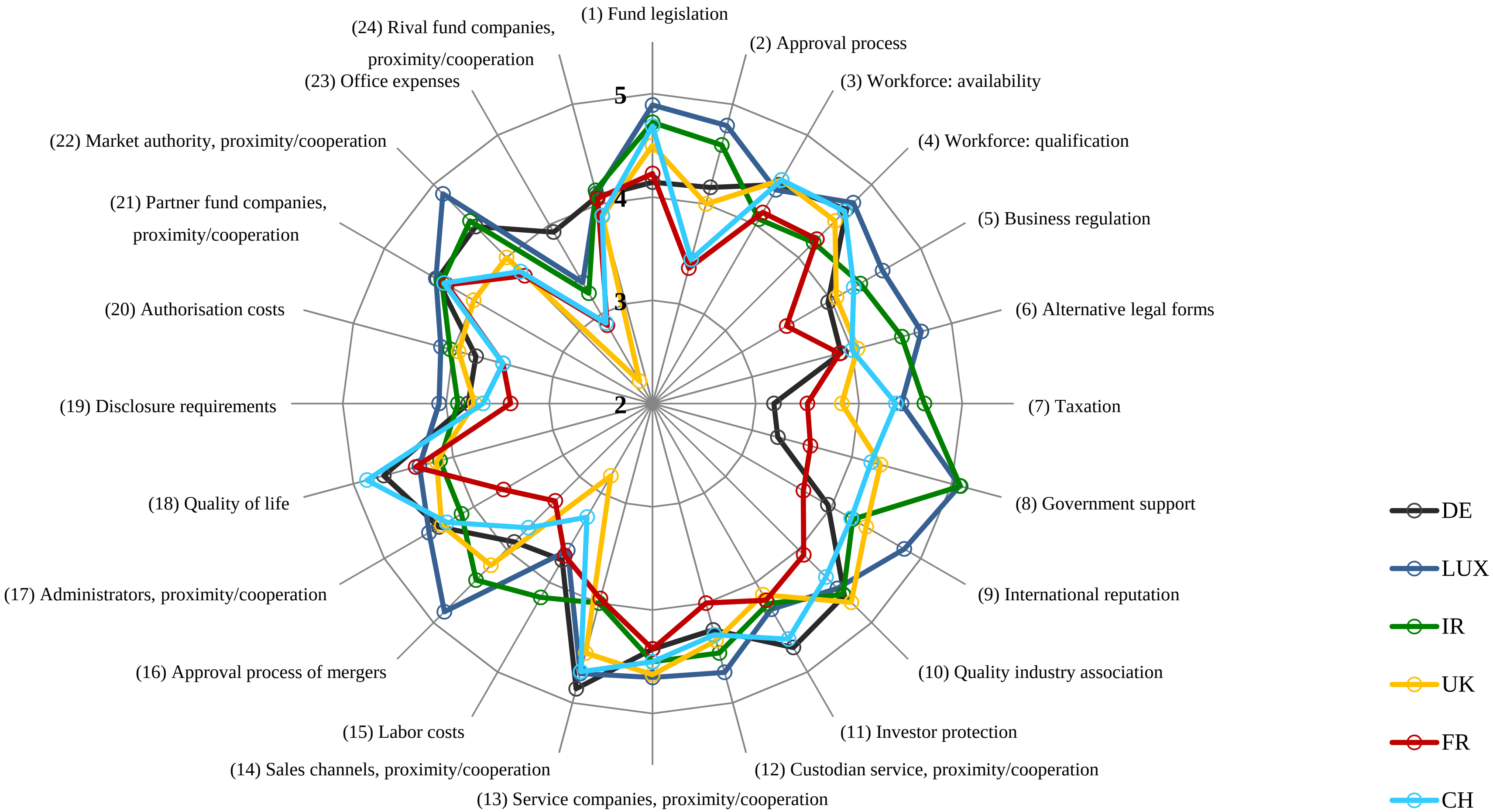

Source: Own calculations, based on the database of Lipper (2010b); bracket illustrates the number of fund companies; bubble latitude represents the magnitude of the total net assets (TNA), in mio. Eur, domiciled by these fund companies in this city; information of active funds and their oldest share class are considered to prevent a multiple add-up.

## Figure 6: Distribution of Fund Managers in Germany




Source: Own calculations, based on the database of Lipper (2010b); bracket shows (1) the number of funds (first part) that are managed by a (2) number of fund management companies (second part) in this city; bubble latitude represents the magnitude of the total net assets (TNA), in mio. Eur, managed by these fund managers in this city; information of active funds and their oldest share class are considered to prevent a multiple add-up.

## Figure 7: Fulfillment of relevant Location Factors




Source: Own calculations; location factors are sorted in a clockwise direction of mean relevances; the level of assessed country-specific characteristics is considered by the highest mean valuation at the outside border and lowest in the center of the circle.

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