Lucerne University of Applied Sciences and Arts OCHSCHULE **ASSET MANAGEMENT** UZERN IFZ/AMP Asset Management **Study 2018** An Overview of Swiss Asset Management Editors Jürg Fausch, Thomas Ankenbrand

Institute of Financial Services Zug IFZ www.hslu.ch/ifz

IFZ/AMP Asset Management Study 2018

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Preface

The financial sector is of central importance for the Swiss economy and accounts for approximately ten percent of GDP. However, financial services in Switzerland are still mainly associated with private banking and wealth management. Strong expertise in asset management is relevant for the Swiss economy since it helps to diversify and complete the Swiss financial services industry. Moreover, it offers the opportunity to compensate for diminishing business opportunities in some areas of private banking and wealth management.

A key strategic goal of the financial industry is to develop asset management into a main pillar of the Swiss financial sector. To reach this goal the Swiss Bankers Association (SBA) and the Swiss Funds & Asset Management Association (SFAMA) established the Asset Management Platform Switzerland with the aim to further establish Swiss asset management as a provider of high quality services and products domestically and abroad.

This study gives an overview of the breadth and diversity of Swiss asset management and is divided into two parts. The first part, which constitutes the main body of this study, starts with Chapter 1 in which a definition of the term asset management is given and the methodological framework for the subsequent chapters is outlined. Chapter 2 to 5 describe the environment of the Swiss asset management industry in a qualitative way. Chapter 2 gives a brief overview of the political and legal framework with a focus laid on relevant regulatory developments for asset management companies. Chapter 3 describes the economic environment asset managers operate in and gives an overview of the importance of asset management for the overall economy. The fourth chapter provides information about current and future developments of the social environment. This includes customer needs, new competitors, as well as talent and skill which are of particular importance for a successful asset management industry. In Chapter 5 the technological environment with respect to asset management is analyzed. A focus is set on financial markets' infrastructure and technological innovation in asset management. In Chapter 6 globally leading asset management hubs are evaluated by deriving a quantitative hub ranking based on political/legal, economic, social and technological aspects. The ranking shows that Switzerland offers good conditions for the asset management industry and has a strong position as a hub. Finally, Chapter 7 focuses on analyzing the Swiss asset management industry on a company level and provides information about business models and market size. The analysis is based on survey data. A summary of the findings is given in the final chapter of part one.

In the second part of this study, the factsheets of 60 asset managers that participated in the survey are presented. These factsheets contain information on the companies' business models such as their value propositions, customer segments and offered asset management services.

At this point, we would like to thank all parties who have contributed to this study. A very special thanks goes to the Asset Management Platform Switzerland for their financial and content-related support. We also would like to express our appreciation to our partners Swiss Funds & Asset Management Association, Swiss Bankers Association and The Boston Consulting Group as well to all asset management companies that participated in our survey and provided valuable data and information. Last but not least, our thanks go to Nicola Louise Illi for her outstanding research assistance.

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Executive Summary

Accounting for about ten percent of the national GDP, the financial sector is a vital part of the Swiss economy. While Switzerland is well known as a world leading private banking and wealth management location, the growing importance of asset management has led to calls for strengthening this particular sector of the Swiss financial center. A starting point was the creation of the Asset Management Platform Switzerland by the Swiss Funds & Asset Management Association (SFAMA) and the Swiss Bankers Association (SBA) in an attempt to develop Switzerland into a leading asset management location.

In this light, the IFZ/AMP Asset Management Study 2018 provides an overview of the scope and diversity of asset management in Switzerland based on a survey conducted among Swiss based asset managers capturing the facts, current dynamics of the industry, as well as the most important challenges faced. In addition, the PEST analysis describes the political, economic, social and technological environment for the field and highlights the effects the developments in the Swiss financial industry have had or are expected to have on Switzerland as an asset management location. Also incorporated in the study, the hub ranking takes an international perspective in comparing the conditions in Switzerland to other asset management hubs worldwide.

In this study, asset management is defined as the production and management of investment solutions in the form of collective investment schemes or individual, institutional mandates, which implies asset management firms offer their products and services primarily to institutional clients such as pension funds, insurance companies, sovereign wealth funds or corporations.

Asset Management is relevant for Switzerland

The study indicates that about 9'600 people are directly employed by asset managers in Switzerland and about 44'500 people are indirectly employed in the wider scope of the industry. In terms of the market size, the total volume of assets managed by banks, fund management companies, securities dealers and FINMA-supervised asset managers in Switzerland at the end of 2017 amounted to CHF 2'208 billion, which is approximately three times the size of the Swiss GDP.

Switzerland offers good conditions for the asset management industry and has a strong position as an asset management hub

Switzerland has proven a stable and resilient financial center following the developments from the financial crisis and has been accompanied by accommodative monetary policies. Factors such as positive economic growth expectations, low government debt, a sound fiscal position and low expected inflation reinforce the good conditions for the asset management industry. On the one hand, the typically high saving rates in Switzerland, the high disposable income and low unemployment, as well as the established pension system create stable demand for asset management products and services. On the other hand, customer needs are changing with higher life expectancy and the presence of millennials as the largest client segment. Developments in the technological environment such as cloud computing, artificial intelligence, distributed ledger technology, quantum computing and robotics for example create interesting opportunities for the Swiss asset management industry.

A quantitative hub ranking based on political/legal, economic, social and technological indicators evaluates the globally leading asset management hubs. The two Swiss cities Zurich and Geneva incorporated in this analysis are placed on rank 4 and 8, respectively. The ranking is led by Singapore followed by a group of cities (rank 2 to 12) that perform very similarly and differ only marginally in their competitiveness. Switzerland offers good conditions, especially with respect to a stable and reliable political/legal environment as well as social environment with a strong education system and good infrastructure quality. In terms of the technological environment, the two Swiss cities lag behind the leading hubs. However, this is mainly driven by the fact that Switzerland is particularly weak in terms of offering online governmental services and the associated low degree of e-participation by Swiss residents. However, a more important positive aspect in the technological dimension is the use of information and communication technology (ICT Use) as well as the university-industry research collaboration where Switzerland

takes a leading position in each indicator. From an asset management perspective, this is very encouraging and indicates the potential of Switzerland for taking a leading position in the digitization of the asset management industry as well as the importance of a collaboration between the industry and academia.

Regulation is the most pressing challenge in the Swiss asset management industry

The sentiment analysis conducted as a part of the survey among asset managers in Switzerland reveals the challenges faced. Regulation was identified as the most pressing challenge among them, with an average score of 7.7 out of 10. Though Switzerland performs well in the political and legal dimension in the hub ranking, an examination of the political environment highlights the appearance of certain challenges posed by the introduction of new regulatory standards in recent years. Political support is needed in order for Switzerland to comply with global regulatory standards. A differentiated approach is necessary, as different regulatory regimes need different approaches and practices of licensing supervision. The stable political environment in Switzerland may become a useful instrument for the power to act with global standards and ensure a level playing field in global markets.

Swiss based asset managers accept the race for performance

81 percent of the asset managers participating in this survey provide actively managed investment solutions while 17 percent offer both, active and passive portfolio management. The fact that the majority of surveyed asset managers follow an active portfolio management approach is consistent with the observation that asset managers in Switzerland have a strong exposure to alternative asset classes, which are very often based on active portfolio management strategies. This observation supports the view that Swiss based asset managers try to find sound investment opportunities in order to generate alpha for their customers.

Innovation as a key factor for a successful future

The success of Switzerland as an innovative economy is well proven. Due to its optimal conditions for attracting internationally recognized researchers and experts Switzerland has strong industry clusters, especially in life sciences, information technology or the mechanical, electrical and metal industry (MEM industry). In addition, based on a talent pool in engineering and economic sciences as well as a major international financial center, Switzerland offers good conditions for innovation driven growth in the asset management industry. This implies that asset managers in Switzerland possess the requirements to face future challenges and to push the digitization of the asset management industry ahead.

Definition & Framework of Asset Management

By Thomas Ankenbrand & Jürg Fausch, Institute of Financial Services Zug IFZ

This chapter describes the methodological approach and the overall framework of the study. First, a definition of the term "asset management" as it is used in this study is given. Second, the PEST concept is illustrated which builds the foundation for evaluating the macro-environmental factors which impact an industry. Section three and four focus on the framework of the survey, conducted to analyze the Swiss asset management market and to capture their attitudes towards current challenges in the industry.

1.1. Definition of Asset Management

There is no common or universally accepted definition of the term asset management. In the context of this study we define asset management as follows:

Asset management is the production and management of investment solutions in the form of collective investment schemes or individual, institutional mandates.

Under such a definition, asset managers invest on behalf and in the best interest of their customers. This involves the development of an investment strategy and an asset allocation that is in line with the investment goals and risk preferences of their clients. Asset managers use a broad variety of asset classes in order to implement their investment strategy. This includes exchange-listed securities such as stocks and bonds or investments into real estate, but also more alternative asset classes like hedge funds or private equity. In order to support the investment process, asset managers conduct research on macroeconomic developments, financial markets, industries and individual companies to find attractive and sustainable investment opportunities. One of the key tasks performed by asset managers is risk management since every investment is associated with risk. Asset management firms offer their products and services primarily to institutional clients such as pension funds, insurance companies, sovereign wealth funds or corporations. Moreover, they manage assets that are pooled in collective investments schemes (CIS), especially investment funds and investment foundations.

Based on the definition of asset management it follows that wealth managers and private banks are not considered asset managers in this study since these firms have a clear focus on serving private clients comprehensively with regards to their financial needs. Based on the definition of asset management and the exclusion of wealth managers and private banks, the aim of this study is to describe the Swiss asset management industry with a clear focus on the production side. Hence, for all asset managers considered in this study Switzerland must be the physical location where investment decisions are made, and the corresponding portfolios are managed.

1.2. PEST-Approach

The PEST-approach is a widely used methodology to analyze macro-environmental factors surrounding a specific sector. The method derives its name from the four underlying dimensions, i.e. the political (including legal and regulation), economic, social and technological dimension. The political/legal dimension covers factors, such as the regulatory framework and how this regulation affects the business environment. The economic dimension deals with the current macroeconomic environment including financial markets and monetary policy as well as the savings behavior in the economy. The social dimension is based on an analysis of customer needs and the availability of talent and skill. The fourth dimension, concerning the technological environment, evaluates the financial market infrastructure and provides insights into technological innovation in asset management. The PEST analysis builds the foundation for the asset management hub ranking described in Chapter 6.

1.3. Business Model Canvas

In order to classify and categorize the business models in asset management and to get an overview of the asset management industry structure we apply the Business Model Canvas from Osterwalder and Pigneur (2010), illustrated in Figure 1.1.

The canvas is an established strategic management tool and consists of nine building blocks, which aim to show the logic and the strategy of a company's busi-

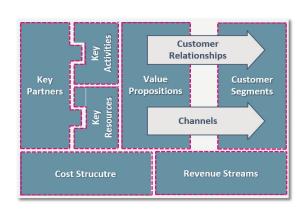


Figure 1.1.: Business model canvas (Osterwalder & Pigneur, 2010)

ness model. The nine blocks cover the four main areas of every business: customers, offer, infrastructure and financial viability. Seven of these building blocks are incorporated in the factsheet, coloured dark blue and framed with red dashed lines in Figure 1.1. The building blocks "Channels" and "Customer Relationship", which are coloured white and framed with a solid blue line, are excluded from the analysis. These building blocks account for the way the company interacts and com-

municates with its customer segments. Since the focus of this study is on Switzerland as an asset management production location the distribution view is only of marginal importance for the analysis. All other building blocks are described next with respect to the asset management industry.

Customer Segments

The building block "Customer Segments" defines the customer base the asset management company wants to offer its products and services to (Table 1.1). A company may group its customers into distinct segments with common characteristics in order to better satisfy their specific needs. In this context, we distinguish among three different aspects: a segmentation in terms of product groups, i.e., discretionary mandate, advisory mandate, collective investment scheme or exchange traded fund, a segmentation according to the type of customer, i.e., private or institutional, and a geographical segmentation, i.e., national or international.

Value Propositions

The "Value Propositions" building block is the core of the Business Model Canvas and describes the bundle of products and services offered to create value and satisfy customer needs (Table 1.2). In terms of products, the following solutions are offered by asset management firms:

| Custo | omer Segment | Description | |
|---|--|--|--|
| | Advisory Mandate | Mandate given by a client to an institute to provide advice on a portfolio of assets with only the client deciding on the execution of the advice given by the institute. The mandate is constituted by a contract between the client and the institute. | |
| ct Group | Discretionary Mandate | Mandate given by a client to an institute to manage a portfolio of assets and execute orders in compliance with a predefined set of rules and principles at the institute's sole and full discretion in order to achieve the predefined investment objectives. | |
| Product | Collective Investment Scheme | Collective Investment Scheme (CIS) as governed by Swiss or foreign law on Collective Investment Schemes. An exchange traded fund is not considered a CIS in the survey. | |
| | Exchange Traded Fund | Marketable security that tracks a commodity, bond, or a reference portfolio, often an index fund. An ETF trades like a common stock on a stock exchange. In this survey, an ETF shall be distinguished from CIS. | |
|)e | Private Beneficial Owner that entered a mandate contract or invested in a CIS or ETF is a p | | |
| Type | Institutional | Beneficial Owner that entered a mandate contract or invested in a CIS or ETF is a legal entity or institution. | |
| National The institute focuses on serving customers | | The institute focuses on serving customers in Switzerland. | |
| Geography | International | The institute focuses on serving international customers (Switzerland included). | |

Table 1.1.: Customer segments of asset management companies

| Product | Description | |
|----------------|--|--|
| Money Market | Cash or cash equivalents with stated maturity of one year or less. | |
| Bond | Fixed income securities with maturity of more than one year. | |
| Equity | Investments in the stock market. | |
| Multi-Asset | Investments in a combination of equity, fixed income and other asset classes. | |
| Commodity | Investments in commodities, directly or indirectly via derivatives. | |
| Real Estate | Investments in real estate directly or indirectly. | |
| Infrastructure | Investments in infrastructure projects. | |
| Private Equity | Investments in companies generally not traded and exhibiting equity-like features. | |
| Hedge Fund | Investments in a variety of assets, often with aggressive and skill-based investment strategies. | |
| ILS Fund | Investment in insurance linked securities (ILS) including catastrophe (CAT) bonds. | |
| Other | Investments in other asset classes not attributable to the above. | |

Table 1.2.: Value propositions of asset management companies

| Investment Style | Description |
|------------------------------|---|
| Active Portfolio Management | The company follows an active investment strategy to generate a positive alpha by outperforming a reference portfolio (benchmark). |
| Passive Portfolio Management | The company follows a passive investment strategy by creating a portfolio allocation that is the same as or similar to the reference portfolio. The purpose of passive portfolio management is to generate a return that is the same as the chosen reference portfolio. |

Table 1.3.: Value propositions in terms of investment style of asset management companies

| Revenues | Description | |
|-----------------|---|--|
| Management fee | Proportional to the value of assets being managed and charges are typically expressed as a percentage of assets under management. | |
| Performance fee | The asset management firm is paid contingent on some measure of the underlying performance of their service. | |

Table 1.4.: Revenue sources of asset management companies

Moreover, the value proposition of asset management firms differs in terms of the chosen investment approach where a distinction between active and passive investment management is made.

Revenue Streams

The building block "Revenue" describes how the company earns money from each customer segment. Asset management firms generate revenue by levying fees for their services. We distinguish between two types of fees. The first source of revenue in this context are investment management fees that are proportional to the value of the assets being managed

and charges are typically expressed as a percentage of assets under management. The second source of revenue are performance fees where the asset management firm is paid contingent on some measure of the underlying performance of their service (Table 1.4). In this context it is important to note that on average 60 percent of the management fee of an actively managed fund consists of distribution fees. Ten percent are related to administration and 30 percent to asset management (Fuchs, 2012).

Compared to a commission-based compensation, in which firms' revenues are based on the amount of

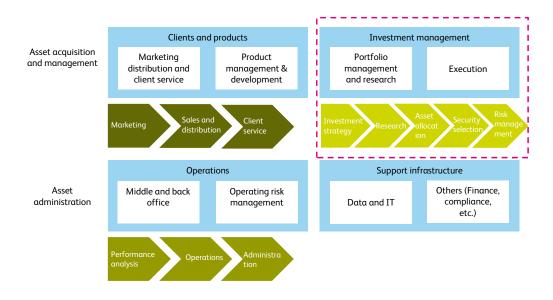


Figure 1.2.: Asset management operating model (based on Oliver Wyman, 2015)

trades made or the amount of assets sold, a management fee-based remuneration depends on the managed assets. A direct implication of such a compensation model is that lower assets under management (AuM) due to market movements or client withdrawals result in lower revenues for the asset management firm.

Key Activities

The building block "Key Activities" emphasizes the most important activities the company performs in order to operate its business successfully and generate revenue streams. Key activities are required to create and deliver the company's value proposition.

From the asset management operating model illustrated in Figure 1.2, the following key activities in Table 1.5 can be derived for investment management.

Key Resources

The "Key Resources" building block describes the company's most important resources required to make a business model work. These resources allow the company to create a value proposition, reach markets, maintain customer relationships and earn revenues. The number of employees is identified as the key resource in asset management. In the context of this study we distinguish between employees involved in

| Key Activities | Description | |
|---------------------|--|--|
| Investment Strategy | Development of an investment strategy which can be based on an active or passive approach. | |
| Research | Economic and financial market research to provide fundamental information for investment decisions. | |
| Asset Allocation | Allocation of funds to different asset classes. | |
| Security Selection | Security selection is the process of implementing the asset allocation by determining which specific securities are included in the portfolio. | |
| Risk Management | Forecast and evaluation of risks that have an adverse impact on the assets under management together with the identification of procedures to avoid or minimize their impact on the portfolio. | |

Table 1.5.: Key activities of asset management companies

| Key Resources | Description | |
|---------------------|--|--|
| FTE Core Task | Indicates how many human resources in terms of full time equivalents (FTE) are currently deployed to perform a core asset management task i.e. investment strategy, investment research, asset allocation, security selection and risk management. | |
| FTE Supportive Task | Indicates how many human resources in terms of full time equivalents (FTE) are currently deployed to perform a supportive asset management task, i.e., sales, middle office, compliance, administration and other services (e.g., HR, IT) etc. | |

Table 1.6.: Key resources of asset management companies

supportive tasks to asset management, i.e., sales, middle office, compliance, administration and other services (e.g., Human Resources (HR), Information Technology (IT)), etc., and employees involved in core asset management tasks, i.e., investment strategy, investment research, asset allocation, security selection and risk management.

Key Partners

"Key Partners" involve the partners that make a business work. Some of these partnerships are essential to create and deliver the value proposition. A company may enter into a partnership or a strategic alliance for different reasons, for example to reduce risk, optimize their business models or acquire resources. Key partners of asset management firms in a business-to-business context are mainly distribution partners like private banks and wealth management firms, insurance companies or pension funds.

Cost Structure

The "Cost Structure" building block provides a description of the most important costs incurred while operating under a particular business model. For asset management firms these costs are mainly related to staff expenses, administration-costs (office, IT infrastructure, marketing costs) and distribution fees.

1.4. Sentiment Analysis of Asset Management Companies

We use a sentiment questionnaire, which was created to determine the perceived, most pressing issues faced by the asset management industry. The questionnaire is based on the Survey on the Access to Finance of Enterprises in the Euro area, conducted by the European Central Bank (ECB) in 2017 among the member states of the European Union, and includes the six challenges depicted in Figure 1.3.

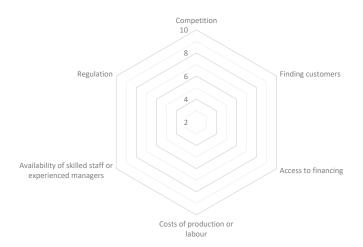


Figure 1.3.: Challenges of the Swiss asset management industry

The in-scope companies were asked to evaluate each of the corresponding challenges on a scale from 1 (not pressing) to 10 (extremely pressing). The Institute of Financial Services Zug IFZ conducted a similar survey among small and medium-sized enterprises in Switzer-

land. The corresponding sentiment questionnaires included all challenges depicted in Figure 1.3. Based on this analysis a comparison between asset management companies in Switzerland and Swiss SMEs can be drawn.

2. Political & Legal Environment

By Lorenz Arnet, Markus Fuchs & Diana Imbach Haumüller, Swiss Funds & Asset Management Association

A reliable political and regulatory environment is essential for a recognized financial center. Asset management in particular, needs internationally recognized standards and a sustainable framework for a thriving development. In this chapter we provide a brief overview of the most important aspects in the political and legal dimension of the PEST-analysis. The main focus of this part lies on the regulatory and supervisory aspects related to Swiss asset management.

2.1. Compliance to Global Regulatory Standards

A sustainable framework is vital, especially for the implementation and compliance of international standards to the regulatory and supervisory system. In the last few years, many new standards were introduced abroad. Switzerland, as a diversified global financial center was strongly affected by this trend. Important decisions on economic cooperation, the development of the financial system and the regulation of financial markets are made within standard-setting organizations like the OECD, G20, FSB and IOSCO. It is important for Switzerland to have access to any of those organizations and to be able to participate actively in the development of these rules and standards. Moreover, for Switzerland as a financial center it is fundamental to provide its know how, in order to contribute towards the design of a stable and open global financial system. This is a significant condition for sustainable growth, which should be accompanied and supported by political efforts.

The global market offers great potential for the Swiss financial center. A basic condition for the export of Swiss financial services and products is, however, that the Swiss financial regulation is compliant with international standards. Besides of adequate rules of conduct, which are stated in the Financial Services Act (FFSA), a further essential standard is the supervision of all asset managers, which is to be ensured by the Financial Institutions Act (FinIA). Only when these

two aspects are fully embedded in the Swiss financial regulatory system, will Switzerland be consistent with international standards.

As Swiss financial services and products are primarily exported to the European Union (EU), alignment with the EU financial market regulation is vital. In addition, this does not weaken Switzerland's position towards countries outside of the EU, as they are also gradually positioning themselves more and more in line with this set of rules and standards. Moreover, EU regulation often mirrors the implementation of international standards. However, the EU regulation should only be used as a guideline as long as it is necessary to ensure future export opportunities for the Swiss financial industry. This balance is yet to be found. But the current drafts of the FFSA and the FinIA already constitute an important step.²

2.2. Different Regulatory Regimes

Swiss asset managers who seek to provide services in other jurisdictions are essentially faced with three different regulatory regimes: the EU/EEA system, the US regime and the Asian regimes. The EU/EEA system is based on a high degree of harmonization and cooperation which allows for efficient access across borders if certain conditions are fulfilled. On the contrary, the US regime does not allow for access based on a certain degree of equivalence but rather requires a registration with the national supervisory authority. The Asian system lies between the two and requires cooperation with the authorities and/or local presence, as well as additional supervisory parameters for access to the local market.

A convergence towards the EU/EEA regulation with regards to the possibility of a non-discriminatory market access, is essential and makes sense from an economic and commercial perspective. For the asset management industry, this implies that Swiss based asset managers manage EU-based collective investment schemes, provide institutional asset management for pension funds, and sell Swiss financial products in the EU. A punctual and static equivalence would probably lead

¹ See announcement from 4 November 2015 concerning the Financial Services Act (FFSA) and the Financial Institutes Act (FinIA), BBI 2015 8901.

For any information on the current state of the draft, as well as the current debates, see: https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaeft?AffairId=20150073

to a state of permanent amendments and negotiations. Thus, Switzerland should strive for an integrated solution, which should at the least provide a clear mechanism for continuous updates and ensure equivalence. In the best case, it should provide complete access to the free movement of services.

For the US market, it is important for Switzerland to avoid any negative listings in other areas. For access in Hong Kong, the recognition by the Swiss Financial Market Supervisory Authority (FINMA) is a requirement. Important in this context is therefore the recently achieved equivalence of the inspection regime. In addition, a sustainable process for the exchange of information would have to be established. The access to Singapore is to be achieved by bilateral agreements. In line with the national guidelines, it will be hard to avoid the requirement for physical local presence, but at least access for Swiss asset managers should be able to be facilitated and the process accelerated.

Some jurisdictions (USA, Hong Kong, Singapore) do not differentiate between asset management and advisory services from a regulatory perspective, and thus attach the same legal consequences to both of them. Others, in particular the European system (to which the Swiss system was made compatible with various guidelines such as the Market in Financial Instruments Directive (MiFID)³), differentiate between the two services and apply the element of discretion, but demand prudential supervision as soon as, for example, the border of MiFID relevant services is crossed. To enable market access for Swiss providers who are subject to the condition of equivalence, the creation of a licencing system is required.

2.3. Differentiated Practice of Licencing Supervision

Jurisdictions with policies strongly focusing on asset management, have created a balance between investor protection and the encouragement of competition, within their supervisory approach. Whether FINMA, who has an explicit mandate to encourage competition within the domestic market, should be equipped to deal with the needs of investors, is part of an ongoing controversial debate. Increasingly, a trend towards a system of diversified licensing and supervisory practice, to support risk and protection needs, is being observed. Switzerland also pursues this approach with the foreseen Financial Institutions Act. Any loopholes or possible "Swiss finish"-approaches within the Swiss asset management regulation framework should be revised. In addition, Switzerland should strive to develop a coordinated strategy with the inclusion of all stakeholders to promote the country internationally as a hub for asset management services.

Also, a continuous and binding dialogue between the authorities and the asset management industry is vital in order to ensure that the interests of the industry are taken into account and that developments, as well as experience is integrated into the regulatory and supervisory process. The practical experiences made in the last few years support this claim. Never before has asset management received such a high degree of attention from the public, politics and media as it does today.

2.4. More Power to Act Thanks to Global Standards

Many trade associations currently demand cutbacks to the waves of regulation and more power to act internationally. These rarely contested goals also enjoy a high priority within the continuous discussions concerning the FFSA/FinIA regulation.

It is important to realize that with the FFSA/FinIA regulatory framework Switzerland is not giving up a competitive advantage, but rather is preventing the risk of being considered a dubious financial center without the respective regulation. In order to strengthen this insight, one has to recognize that competing financial centres outside of Europe have also adjusted to international standards and that Switzerland is in fact lagging behind these developments.

³ See guideline 2014/65/EU from the European Parliament and Council from 15 May 2014 concerning the markets for financial instruments, as well as the amendment of guideline 2002/92/EG and 2011/61/EU (MiFID II), available under https://eur-lex.europa.eu/legal-content/DE/ALL/?uri=celex%3A32014L0065

3. Economic Environment

By Thomas Ankenbrand & Jürg Fausch, Institute of Financial Services Zug IFZ

3.1. Asset Management in the Economy

The key function of the asset management industry is to channel savings into the investment needs of the real economy. Asset managers do this by transferring funds from households, firms and governments that have saved surplus funds to those that have a shortage of funds. More specifically, asset managers invest in companies that have productive investment opportunities but need additional funding to facilitate these new investments. In this context asset managers play an important intermediary role in financial markets and contribute considerably to an efficient allocation of capital, which leads to higher production and efficiency for the overall economy. In particular, this financing role of the asset management industry spurs economic growth and creates jobs.4 However, asset managers do not only act as financial intermediaries, also they are one of the most important providers of liquidity, which is an essential characteristic of wellfunctioning financial markets.

From an operational point of view, asset managers act as agents for their clients by providing access to a wide range of investment solutions that enable their clients to reach their investment objectives and to increase their prosperity in a cost-efficient way. By helping investors diversifying their financial wealth across different asset classes, products and markets, asset managers lower the risk of their clients' portfolios. Besides providing their expertise in reaching the right level of diversification, asset managers also lower investment risk by monitoring developments in industries, countries and regions. This screening process reduces information asymmetries and makes the separation between good and bad investment opportunities less costly for the individual investor due to economies of scale on the side of the asset manager.

3.2. Business Cycle Perspectives

The global macroeconomic environment has been characterized by unprecedented low interest rates in the aftermath of the financial crises. This can be observed for advanced economies in general and for Switzerland in particular. However, these developments are only partly driven by expansionary monetary policy since in times of heightened uncertainty the Swiss franc is perceived as a safe haven currency by international investors. The associated increase in demand for risk-free assets denominated in Swiss francs has put additional downward pressure on interest rates and caused a strong appreciation of the exchange rate.

However, the Swiss economy has shown substantial resilience to these developments and an accommodative monetary policy is further supporting growth and the return to price stability. Moreover, the real depreciation of the Swiss franc and the positive development of leading business cycle indicators, e.g. purchasing manager index and the KOF Economic Barometer, as well as higher levels of consumer confidence, imply a solid real GDP growth for 2018. Additional stimulus to these growth perspectives is expected from an improved macroeconomic environment abroad. In particular, the accelerated growth in the Eurozone and a depreciation of the CHF/EUR exchange rate will be beneficial for the Swiss economy in general and the export sector in particular, since about 50 percent of Swiss exports go to countries in the Eurozone. Globally the IMF projects an expansion of the world economy in 2018 at a rate of 3.9 percent (IMF, 2018). For Switzerland, the KOF Swiss Economic Institute (KOF) and the State Secretariat for Economic Affairs (SECO) project a real GDP growth of 2.5 percent (KOF, 2018) and 2.4 percent (SECO, 2018) respectively for 2018, while the forecast of the Organisation for Economic Cooperation and Development (OECD) is more conservative with a projected real growth of 1.7 percent (OECD, 2017a). These positive growth perspectives also have an impact on the labor market since according to Okun's law the unemployment rate is strongly related to GDP (Okun, 1962). According to OECD data the employment rate has reached 80 percent and the unemployment rate

⁴ Rajan and Zingales (1998) show that industrial sectors that are relatively more in need of external finance develop disproportionately faster in countries with more-developed financial markets. In their study financial development is related to the "variety of intermediaries and markets available, the efficiency with which they perform the evaluation, monitoring, certification, communication and distribution functions, and the legal and regulatory framework assuring performance."

is projected to further decrease in 2018 to 4.5 percent (ILO definition)⁵ due to the positive economic and currency situation (OECD, 2017a). Overall, improved labor market conditions and potential wage increases allow workers to increase consumption but also acquire more financial assets, which is beneficial for the asset management industry.

Another characteristic of the Swiss economy with a growth and business cycle implication is its low government debt and sound fiscal position. In the last 15 years, government debt has been declining relative to GDP which can partly be attributed to the introduction of a federal fiscal rule in 2003. The basic aim of the rule is to balance the budget over the business cycle but includes an asymmetry in the sense that structural deficits have to be offset by future budgets and surpluses are used to pay down debt (OECD, 2017a). Among all OECD countries, Switzerland has one of the lowest government debt ratios. This low debt level leaves room for fiscal policy to support near-term growth by investing in new or speed up planned infrastructure projects (OECD, 2017a). Government debt as a percentage of GDP is one of the economic indicators considered in the economic dimension of the asset management hub ranking conducted in Chapter 7 of this study.

3.3. Monetary Policy and Financial Markets

Despite the previously described growth perspectives in GDP, the inflation rate is projected to remain in low positive territory in 2018. One major reason for these subdued inflation dynamics is the fall in housing rent due to an increase in the supply of rental accommodation in Switzerland and the fall in the base rate in 2018 (SECO, 2017). The conditional inflation forecast of the *Swiss National Bank* (SNB) indicates that the inflation rate will be below the two percent upper bound until mid-2020 which implies monetary policy will likely remain expansionary (SNB, 2018). Moreover, it is unlikely to observe an interest rate normalization in the Swiss economy before the Euro area policy rate begins to increase. A premature interest rate rise would increase the interest rate differential between these

monetary areas and counteract the easing in the exchange rate. This prevailing low interest environment has direct implications for asset management. Lowrisk financial instruments like money market funds or government bonds yield very low or even negative nominal returns.

Institutional investors like pension funds find it increasingly difficult to generate an adequate investment performance for the sustainable financing of their benefits without accepting higher risks. A recent study by Credit Suisse found that pension funds adjusted their investment strategies in response to the persistently low interest environment (Credit Suisse, 2017). The reaching-for-yield phenomenon during a period of low interest rates implies that investors are willing to invest in more complex financial products. In this context, the asset allocation moved away from bonds and towards equities, real estate and alternative investments like Insurance Linked Securities, Private Equity or Hedge Funds. Part of this development is driven by the general price development on these particular markets, but strategic investor decisions also played a significant role (Credit Suisse, 2017). This development also shows that investors are willing to take higher risk to achieve their investment goals.

However, stock market performance has been positive in Switzerland, the Eurozone and the United States. Global economic growth and expansionary monetary policy further provide a favorable macroeconomic environment for stocks. However, geopolitical tensions or an unexpected shift in monetary policy pose the largest risks for a market correction.

3.4. Saving

Switzerland has one of the highest saving rates, e.g. household saving relative to GDP, among all *OECD* countries.⁶ Figure 3.1 illustrates the saving rate in Switzerland from 1990 to 2015. The *OECD* defines saving as the difference between disposable income plus the change in net equity of households in pension funds and final consumption expenditure.

⁵ According to the International Labour Organisation (ILO) unemployed people are defined as permanent residents who do not have a job, who are looking for work and who can start work within a short period of time. This definition also includes unemployed people who are not registered with regional employment offices and are not claiming unemployment benefits.

⁶ In 2015 only Chile, Norway and Korea had a higher saving rate than Switzerland.

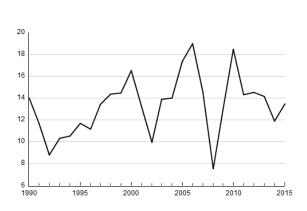


Figure 3.1.: Saving rate in Switzerland from 1990–2015 in percent of GDP (Source: OECD)

It follows from this definition that saving reflects the residual income used to acquire financial and non-financial assets. Part of this high household savings could be linked to the rising share of Swiss citizens approaching retirement and their retirement savings. Moreover, in recent years, consumption and investment expenditures of households declined relative to GDP. The high propensity of Swiss households to save is also reflected in a large current account surplus of around ten percent of GDP (OECD, 2017a). This significant amount of savings acquired by Swiss households indicates a large demand for asset management since households seek to convert savings into managed in-

vestments. Moreover, financial literacy, i.e. the financial knowledge to make well-informed investment and borrowing decisions, is higher in Switzerland compared to other *OECD* countries (Brown and Graf, 2013; Klapper et al., 2015) which further emphasizes the market potential for asset management services in Switzerland. However, in the long run, an aging population implies that older households dissave and the savings rate will decline (Peters and Winkler, 2016).

Another number that illustrates savings behavior in Switzerland is related to savings in the pension system. A recent study of Willis Towers Watson (2018) shows that Swiss pension savings account for more than 130 percent of GDP, which is one of the highest figures worldwide. In absolute numbers this means that about CHF 900 billion in assets need to be managed on behalf of pension funds in Switzerland (Willis Towers Watson, 2018). Asset managers provide products and services in order to manage these assets. Moreover, a study of the Swiss Bankers Association indicates that about one third of the assets in Swiss pension funds have been generated by market returns. Between 2005 and 2014 investment returns accounted for almost 40 percent of the total contributions to pension funds and exceeded both employers' and employees' contributions (Swiss Bankers Association, 2017). These numbers illustrate the importance of financial markets in order to save for retirement and the need of asset managers to offer products and services that serve this purpose.

4. Social Environment

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4.1. Customer Needs

Switzerland has a strong economy as illustrated in Chapter 3. On average, disposable incomes are high and unemployment is low. Beside these economic factors and the associated high standard of living, life expectancy at 83.3 years is among the highest in the OECD and has risen significantly during the 20th century (OECD, 2017c). These demographic changes have profound implications for the asset management industry. A shrinking population between 25 and 55 years of age within most European countries including Switzerland means that the traditional target market for asset managers will decrease significantly in the coming decades (PwC, 2012). However, an aging population also represents an opportunity for asset managers. A rise in longevity requires that an increasing number of people have to plan for old age in order to dispose of sufficient retirement income. The asset management industry needs to develop products that provide solutions to long-term wealth accumulation in order to comply with these requirements. Capital growth, liability matching and inflation protection as well as achieving sustainable returns with limited risk are essential. A recent PwC survey among asset managers indicates that customers will demand more incomegenerating assets and that the demand for solutionsbased products tailored specifically for the retirement market are expected to grow significantly (PwC, 2014).

Another increasingly important factor in investing is the incorporation of environmental, social and governance (ESG) factors into investment decisions. It might be the case that in uncertain economic times companies and funds with sustainable attributes are considered as more stable by investors in the long run. A recent survey by *Morgan Stanley* revealed that in particular the generation of millennials shows a strong interest in socially responsible investing themes (Morgan Stanley, 2017).

Millennials are going to be the largest adult segment by the end of the decade and are about to enter their prime earning years. Moreover, they will benefit from an extensive wealth transfer from their baby boomer parents (Deloitte, 2015). Estimates for the USA anticipate that over the next 30 years USD 30 trillion are passed on between these generations (PwC, 2016a).

As millennials accumulate wealth, adopting socially responsible investment products is becoming a requirement for asset management firms in order to accommodate the investment preferences of this generation. The *IFZ Sustainable Investments Study 2017* shows that the number of sustainable investment funds in Switzerland has grown by 14.7 percent annually since 2007 and currently 3.7 percent of all distributed stock and bond funds have a sustainability focus (Stüttgen and Mattmann, 2017). In the light of the described demographic change, this development will possibly continue and the demand for socially responsible investment products will further grow.

Millennials were also heavily influenced by major financial incidents like the bursting of the technology bubble in early 2000 or the recent financial crisis of 2007-2008 and its aftermath (PwC, 2016a). These events and the associated volatility of financial markets made millennials cautious and conservative in regard to financial matters and at least partially explain the collective inherent distrust of this generation towards financial services providers (Deloitte, 2015). Moreover, millennials are price sensitive and have lower financial literacy levels (Deloitte, 2015 and Goldman Sachs, 2016). These characteristics have important implications for the product development in asset management as well as the pricing of asset management services. Pricing transparency and performance related fees are more accepted by this demographic than nontransparent flat fees (Deloitte, 2015). As digital natives, millennials are keen on technology and very active on social media. Robo advisory solutions and social trading platforms are consistent with many millennial characteristics as they encourage transparency, facilitate community through strategy discussion and offer lower management fees than incumbent asset management firms. For the asset management industry, it is important to recognize this demographic change and to position themselves with products and services that consider and fulfill the needs of millennials.

4.2. New Competitors and Markets

New market entrants are a potential source of disruption for the asset management industry. In particular social media and technology companies could represent a big challenge to incumbent asset management firms. These technology companies combine their reach,

influence and trusted brand with banking alliances to offer a competitive value proposition in asset management

Firms like Amazon, Apple, Facebook or Google could provide distribution services and partner with a bank or acquire a back-office servicing firm to create a corresponding asset management structure (PwC, 2014). One recent example where this digital disruption in asset management has already occurred is China where Ant Financial, an affiliate of Alibaba, launched a money market fund named Yu'e Bao for its digital payment ecosystem, Alipay. The initial idea was to provide a store of value to Alipay customers without the need to access outside banks. Since its launch, Yu'e Bao has grown dramatically to become the largest money market fund in the world (Moody's, 2018).

4.3. Talent & Skill

One of the key resources in asset management are skilled employees. In a survey conducted by *PwC*, 70 percent of financial services CEOs see the limited availability of skills as a threat to the growth of their business. The disruptive impact of new technologies, new regulation and changing customer expectations requires employees with a very diverse skill set (PwC, 2016b).

Since Switzerland is an economy with only few natural resources, education and know-how have always been key factors for the country's economic success. According to the World Economic Forum (WEF) Human Capital Report 2017 the Swiss education system is considered the best in the world (WEF, 2017). Switzerland follows a worldwide unique dual-education system combining apprenticeships in a company and vocational education in schools. This tight combination of theoretical and practical knowledge is one of the main reasons why the Swiss education system is so competitive. Approximately two thirds of all young people finishing compulsory education enroll in vocational education, which provides them with a solid foundation in a given occupation (State Secretariat for Education, Research and Innovation SERI, 2017). The other third attends a general education school, usually to prepare for a tertiary academic education at a university, university of applied sciences or a university of teacher education. In the academic year 2016/17 more than 244'000 students were enrolled in one of the Swiss higher education institutions (Federal Statistical Office, 2017a).

Relating national education expenditures to the total number of people undergoing education and training in a particular country, Switzerland has the second highest level of expenditures on education each year worldwide. Switzerland spends USD 17'436 per capita on education, which is significantly above the OECD average of USD 10'759 per capita (OECD, 2017b). Switzerland has a strong higher education sector with widely recognized institutions. Among others, one indicator reflecting the quality of the Swiss higher education system are international university rankings. Various cantonal universities and the two Swiss Federal Institutes of Technology, the Eidgenössische Technische Hochschule Zürich (ETHZ) and the École polytechnique fédérale de Lausanne (EPFL), hold strong positions in international ranking lists. For example Times Higher Education, a weekly magazine based in London, known for publishing the annual Times Higher Education-QS World University Rankings, ranks ETHZ among the top ten universities in the world. Moreover, the EPFL (38) and the universities of Basel (95), Bern (105), Geneva (130), Zürich (136) and Lausanne (152) are among the top 200 universities in the world according the latest 2018 ranking (Times Higher Education, 2017).

The asset management industry demands a broad variety of well educated specialists. Next to knowledge in business and economics, people with skills in MINT related (mathematics, IT, natural sciences and technology) subjects are of special interest for asset management firms. In particular, functions with a strong focus on quantitative models along the value chain, like risk or portfolio management, are often filled with people coming from a MINT background. In the academic year 2016/2017, 32.5 percent of all students enrolled at a Swiss university or university of applied sciences were attending a MINT degree course (Federal Statistical Office, 2017b).

However, no specialized degree program at the tertiary academic level is offered with a clear focus on asset management. Nevertheless, many bachelor and master's degree programs in economic sciences or finance at Swiss universities and universities of applied sciences offer courses and specializations related to financial markets, portfolio management or investments. However, in order to boost the scientific knowledge about asset management and to develop a strong domestic skill pipeline, academic institutions in Switzerland, in cooperation with the asset management industry, could do more to provide an asset manage

ment specific education and conduct research in topics of particular interest for the industry. Potential topics for academic research include, among others, the habits and preferences of future generations of savers or behavioral finance which can be used to optimize the investment process.

As illustrated above, skilled employees are essential for the asset management industry in order to operate successfully. Switzerland's strong higher education systems offers a pool of highly educated people with deep expertise in finance or technology. However, the demand for skilled workers exceeds the supply such that workers were recruited from abroad. An important motivation for these people to move to Switzerland is the high quality of life. According to *Mercer's Quality of Living Survey 2017*, an international comparison of 230 cities worldwide, Zurich, Geneva and Basel are ranked 2nd, 8th and 10th respectively, whereas Bern, the capital of Switzerland, is ranked 14th. The study is based

on a number of different criteria, including the political, economic and socio-cultural environment as well as public services like education, transport, safety and health (Mercer, 2017).

However, political initiatives like the popular initiative "Stop mass immigration" make it more difficult for Switzerland to attract skilled labor from abroad by limiting immigration. In January 2018 the Swiss People's Party launched the collection of signatures for a further federal popular initiative to restrict immigration into Switzerland. The popular initiative "For a modest immigration" is far more rigid then the initiative "Stop mass immigration" and requires that Switzerland may not sign new or adjust existing treaties according to international law that allow free movements of persons. The approval and possible acceptance of such an initiative would probably have a more severe impact on the Swiss immigration system and the attraction of top international talent.

⁷ The popular initiative "Stop mass immigration" was accepted in February 2014 and implemented into federal law in 2016 in a version that did not endanger the bilateral agreements with the European Union.

For such an initiative to be organized, the signatures of 100'000 voters must be collected within 18 months.

5. Technological Environment

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The technological environment constitutes the final dimension of the PEST analysis. This chapter provides an overview of the relevant financial markets infrastructure and major technological developments and their impact in the field of asset management.

5.1. Financial Market Infrastructure and Third Party Vendors

Switzerland, has a well-developed and stable financial market infrastructure, which is essential for asset management firms to provide their services efficiently (IMF, 2014). In terms of the technological environment, the asset management ecosystem includes securities and futures exchanges, which are electronic trading platforms through which trades are executed and confirmation platforms through which trades are confirmed with counterparties. Moreover, a variety of data including security terms and conditions, ratings, benchmark data and prices are vital for this ecosystem to thrive. In general, this data is provided by third party providers of data services, or in the example of ratings, by specialized rating agencies (BlackRock, 2014). In terms of financial market infrastructure the main securities trading platform for equity and structured products in Switzerland is SIX Swiss Exchange, which offers a fully integrated value chain including automatic trading, settlement and clearing combined with an efficient and fast listing process. Moreover, SIX Financial Information provides reliable access to market data, regulatory data and pricing information. As mentioned above asset management services rely heavily on the use of data in almost every part of the value chain and is fundamental for key investment functions like portfolio management, risk management and trading. Moreover, data is the backbone for key operational functions like accounting, pricing of securities and net asset values (NAVs) as well as for compliance related issues. This variety of responsibilities requires that asset managers need systems to manage all this data and information in an efficient way.

Some asset managers use internally built technology solutions to comply these tasks while others have de-

cided to purchase systems from third party vendors to help them perform a variety of tasks related to investment decision making and execution, as well as operational functions. However, in many cases asset managers use a combination of third party and internally developed systems (BlackRock, 2016).

The services offered by third party vendors can be categorized into data providers and system providers. In many cases the same vendors provide solutions for both the data and systems. Services offered by data providers include security and pricing data, as well as market indices while systems refer to the area of risk models and analytics, order management systems, trade execution systems and accounting systems.⁹

The landscape of technological platforms offered by third party vendors also depends on the asset class and varies across the value chain. For instance, whereas the technology life cycle of trading and execution platforms in equity markets is more mature, one can observe a more fragmented and still highly dynamic landscape of platform innovations in the area of fixed income trading. Since the microstructure of bond markets has evolved considerably in the last two decades, there have been new trading innovations that fundamentally changed the way market participants trade fixed income securities. As a result, bond markets have reached a degree of complexity that requires market participants to adopt their trading infrastructures in order to trade fixed income products efficiently. The Swiss bond trading report 2018 finds that especially smaller-sized market participants in Switzerland are required to adopt their trading systems in order to ensure an appropriate level of market access (Mattmann, 2018).

5.2. Technological Innovation in Asset Management

Novel IT technologies are strongly affecting the asset management industry. The *World Economic Forum* identifies the following seven technologies as the foundation of the next generation financial services infrastructure (World Economic Forum, 2016)

- Biometrics
- Cloud computing

An overview of third party vendors in the respective area are reported in BlackRock (2016). The market for investment technology is highly competitive with many third party vendors in each category.

- Cognitive computing
- Distributed ledger technology
- Machine learning / predictive analytics
- Quantum computing
- Robotics

Different applications based on some of these technologies are already in use and have the potential to transform the asset management industry significantly. Big data analytics will become more important for asset managers to better understand their customer needs and align product development, pricing, risk and financial data to organize and smooth the flow of information to senior management (PwC, 2014).

In general, technology will play a key role in cost efficiency in the asset management industry. The following subsections give a more detailed overview of the use of some innovative technologies.

5.3. Distributed Ledger Technology

Distributed ledger technology (DLT), also known as blockchain technology, is a decentralized database that keeps a record of all transactions that take place across a peer-to-peer network consisting of computers known as nodes. All transactions are cryptographically secured, and participants can validate and authorize these transactions without the need for a centralized authority. Once these transactions are validated by consensus of the network, they are immutably stored. One important component of DLTs are smart contracts which can be understood as self-executing and selfenforcing computer protocols that facilitate, verify or enforce the fulfillment of a contract at a low cost. Smart contracts open the possibility of disintermediating the entire legal system since assets can be exchanged without third parties being aware of the transfer (Deloitte, 2017a).

More generally, all activities along the asset management value chain that are related to registering, recording or the execution of transactions might be replaced by blockchain technology. For instance, various clearing and settlement activities could be automatically executed by the DLT infrastructure, which would imply an increase in operating efficiency and a reduction in costs. Another application of DLT in asset management is to track investors and asset ownership on a shared ledger without relying on a fund administrator

(Smith, 2017). However, DLT solutions are not restricted to middle or back office processes. DLT technology could also be used by asset managers to instantly communicate portfolio changes to all clients and enable real-time views of individual portfolio performance (Ernst & Young, 2017).

One example of a blockchain-based asset management solution is the Melon protocol, developed by the Zug based *Melonport AG*. The protocol is a tool to set up and manage pooled investment solutions for digital assets and aims to automate traditional asset management processes by utilizing smart contracts. *SwissBorg AG*, located in Lausanne, pursues a similar goal. The company is currently developing a blockchain-based roboadvisor platform for investments in cryptocurrencies, among other services.

In a nutshell, DLT applications have the potential to disintermediate many processes, thereby increasing efficiency and reducing costs. However, there are also some challenges related to the implementation of new innovative technologies. DLT and its application to asset management firms is still in the early stages. A survey conducted by *Ernst & Young* (2017) indicates that scalability and the handling of large volumes of data with a high degree of reliability and security are the main concerns of the industry. Other hurdles mentioned are regulatory uncertainties as well as the high cost of replacing legacy infrastructure (Ernst & Young, 2017).

5.4. Digital Investment Management

Artificial intelligence and its application in digital investment solutions is another cutting-edge technology in the asset management industry. Particularly, the emergence of FinTech start-ups offering digital or online investment management services pose a significant challenge to established financial services providers. Recently, traditional financial advisory and asset management firms have started to enter this growing market and provide digital investment advice and investment management services to retail investors. Investment guidance and portfolio management services are personalized and usually based on machine learning algorithms and models.

Moreover, the combination of big data and machine learning have the potential to improve alpha generation by using a factor investing approach. The basic

idea of this method is to find factors that historically earned a risk premium and were important in explaining portfolio returns in standard performance risk and attribution models. Academic asset pricing research shows that these risk factors mainly consist of fundamental factors like value, size, momentum (Carhart, 1997; Fama and French, 1993, Fama and French, 1996) or macroeconomic factors like surprises in inflation, surprises in GDP, surprises in the yield curve and other measures of the macroeconomy (Chen et al., 1986).¹⁰

For instance, smart beta strategies target these factors using a rules-based approach with the goal to outperform a corresponding market capitalization weighted benchmark. Rules-based factor investing uses large volumes of data to establish relationships between the chosen factors, their risks and returns (Rajan, 2017). In this context advances in artificial intelligence will become a very powerful tool to blur the lines between active and passive investment management.

According to Dietrich et al. (2015) four different business models in digital investment management can be identified. These business models differ in their degree of personalization and sophistication. Table 5.1 provides a summary of business models in digital investment management.

In the Swiss digital investment management market, both established financial services providers as well as start-ups are currently active as market participants. The business models of the start-up companies can be classified into "Robo Advisor" or "Social Trading"

based on the relatively high degree of automatization and standardization of their products. In comparison, the products offered by established financial services providers are more personalized and tend to show a higher degree of sophistication. This implies that these incumbent firms follow a "Hybrid Model" or an "Advicesupported Digital Investing" business model. Currently the Swiss market for digital investing is at an early development stage. However, a shift from traditional asset managers to providers of digital investment solutions can be expected. Estimates indicate that the AuM managed with digital investing solutions will grow to CHF 50 billion by the year 2020 (Dietrich et al., 2015). In the future, a hybrid approach where human interaction is complemented with computer algorithms might be the appropriate business model to choose. In the US this path has been adopted by major traditional asset management firms like Vanguard and Schwab.

5.5. RegTech

Increasing levels of regulation and more challenging regulatory expectations have a significant operational impact on asset management firms (Deloitte, 2016). A good recent example is the implementation of MiFID II in January 2018 requiring asset management firms to disclose their fees. To address these regulatory challenges new innovative technology solutions, collectively known as Regulatory Technology (RegTech) have been implemented. The use of advanced data analytics and artificial intelligence provides asset management firms with powerful tools to monitor risks, comply with regula-

| Business Model | Description | |
|------------------------------------|--|--|
| Robo Advisor | Highly standardized, automated solutions that have a comparably low degree of sophistication. Robo advisors apply algorithm-based investment processes to generate client portfolios. | |
| Social Trading | This business model relies on the principles of social networks. Users share their own trading ideas or invest in previously published trading strategies of other users. | |
| Advice-supported Digital Investing | Highly sophisticated solutions that enable a high degree of personalization and offer the opportunity for comprehensive personal advice. | |
| Hybrid Model | This business model includes aspects of both "Robo Advisors" and "Advice-supported Digital Investing". It combines the standardization of a robo advisor and the opportunity for occasional supportive advice. | |

Table 5.1.: Descriptions of business models

¹⁰ Another approach is to identify factors based on statistical factor models. These models use statistical techniques such as principal component analysis where the factors are not pre-specified in advance (Brender et al., 2013).

tory requirements and improve operational efficiencies and cost effectiveness in the back office (Confluence, 2017). RegTech solutions often rely on automation and information management technologies, delivered as Software-as-a-Service (SaaS) or on a cloud-based approach (Deloitte, 2017b). The main value of RegTech

solutions is that asset management firms can demonstrate and verify at any time that the relevant regulations have been applied. Moreover, from a regulators perspective an ongoing automated supervision and transparency in the applied regulation is guaranteed.

6. Comparison of Asset Management Hubs

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The aim of this chapter is to evaluate the competitiveness of Switzerland as a center for asset management on a global scale by deriving a ranking of multiple asset management hubs. The ranking evaluates the conditions for asset management in a country based on the PEST-analysis described in section 1.2. The ranking framework and methodology is outlined in detail in section 6.2

6.1. Introduction

Switzerland is one of the leading financial centers in the world and has a long tradition in private banking and wealth management. The financial sector is an important pillar for the Swiss economy and contributes significantly to GDP. In 2017, the financial sector generated CHF 60.74 billion in gross value added which corresponds to a share of 9.1 percent of Switzerland's total economic output. Compared to other major financial centers only Luxembourg (27.3%) and Singapore (12.5%) have a higher relative contribution to the financial sector to GDP. In terms of overall employment measured in full time equivalents, 5.5 percent can be attributed to the financial sector (SIF, 2018).

Asset managers based in Switzerland manage more than CHF 2 trillion on behalf of domestic and international clients, which is approximately three times the size of the Swiss GDP¹¹ and about twice the amount that is held by Swiss pension funds¹². Moreover, asset management firms in Switzerland employ a large number of highly qualified investment specialists and contribute significantly to cantonal and federal tax revenues.

6.2. Ranking Methodology

The following hub ranking is constructed as a metaranking based on 69 publicly available indicators from various sources. ¹³ Eight of these indicators are ignored either due to high correlation (>0.8) and/or similar in-

formation content. Moreover, three indicators on a country level have not been included since corresponding data on a city level was available as well. The remaining 58 factors constitute the data source for the hub ranking and are categorized into one of the four PEST-dimensions, i.e., political/legal, economic, social, or technological. The detailed classification of the indicators is illustrated in Figure 6.1.

The data for the indicators in bold font were available on a city level while the data for the remaining indicators was collected on a country level. All indicators used in this meta-ranking adopt the form of a ranking of the considered economies. It might be the case that not every in-scope country is incorporated in every indicator and missing values occur. These missing values are replaced by the average indicator rank of the relevant country in the respective PEST-dimension. To derive the overall ranking three steps are required which are illustrated in detail below:

- 1. In a first step, for every indicator, a ranking based on the individual performance of all considered inscope cities is derived. Since the analysis consists of 35 different asset management centers, it follows that for every indicator the city ranking ranges from 1 (worst performance) to 35 (best performance).
- 2. In a second step, for each in-scope asset management hub the four PEST dimension scores are derived by averaging the ranks of the underlying indicators of each PEST-dimension for every city. This implies that the PEST-dimension scores are again bound between 1 and 35 with the interpretation that the higher the score, the better the performance. Moreover, this procedure allows retaining the relative differences in the performance of the cities in the individual PEST-dimensions.
- 3. In a third step the final hub ranking is derived by aggregating the sub-ranking scores for every inscope city and sorting the resulting values in descending order. The asset management hub with the highest aggregated PEST-dimension score ranks first, the one with the lowest on the last position. Due to the derivation of the overall scores by aggregation, the four PEST dimensions are equally weighted in the overall asset management hub ranking.

¹¹ According to SECO data GDP in Switzerland was CHF 668'149 million at the end of 2017.

¹² According to a recent study by Willis Towers Watson, autonomous Swiss pensions funds did manage approximately CHF 900 billion in assets at the end of 2017 (Willis Towers Watson, 2018).

¹³ The detailed sources are listed in the Appendix.

| Political/Legal | Economic | Social | Technological |
|--|--|---|--|
| Political Stability Gov. Effectiveness Ease of Paying Taxes Global Peace Regulatory Quality Visa Restriction Corruption Perception Corporate Tax Rates Press Freedom Index | Ease of Getting Credit Credit to Private Sector Ease of Protecting Minority Investors Market Capitalization Value of Stocks Traded Domestic Market Size Foreign Direct Investments Starting a Business Resolving Insolvency Financial Secrecy Number of HNWI Economic Freedom of the World Government Debt as % of GDP GDP per person per capita Islamic Finance Country Index Purchasing Power Global Financial Centres Cities Competitiveness Wage Level | Number of Students from Abroad Graduates in Science and Engineering Graduates in Social Science, Business and Law Expenditure on Education PISA Ranking Tertiary Enrolment University Ranking Knowledge-intense Employment Labour Force Quality University Education Talent Environment Demographics Openness Proclivity to Attracting Talent Human Capital Global Skills World Talent Infrastructure Quality Expat Ranking Quality of Life Global Cities Report Cost of Living | ICT Access CT Use Gov. Online Services E-Participation University-Industry Research Collaboration Researchers Research Talents in Businesses Innovation Cities |

Figure 6.1.: Classification of indicators used in the hub ranking (bold factors on a city-level)

The ranking is purely based on objective indicators of competitiveness along the four PEST dimensions and does not incorporate any subjective views based on investors' perception or sentiment. This approach allows evaluating and identifying the strengths and weaknesses of each asset management hub quantitatively on an objective basis. Moreover, the ranking does not reflect size factors like assets under management, which are more of an effect than a cause of a competitive asset management hub. Moreover, it is important to note that the hub ranking shows some sensitivity with respect to the considered indicators. This means not considering particular indicators or a different combination of indicators in the corresponding PEST dimension will affect the ranking order. However, the baseline hub ranking illustrated below does incorporate every indicator reported in Figure 6.1.

6.3. Asset Management Hub Ranking

The ranking methodology outlined in the previous section leads to the overall asset management hub ranking depicted in Figure 6.2.

The hub ranking is led by Singapore followed by a group of cities (rank 2 to 12) that perform very similarly and differ only marginally in their competitiveness. The dominance of Singapore is broadly supported by having a front position with respect to each PEST dimension. Singapore's progressive political and legal environment combined with an excellent and vibrant education system (social dimension) and a strong position in technology explains the leading position of the city-state as an asset management hub. The two Swiss cities Zurich and Geneva incorporated in this analysis are placed on rank 4 and 8, respectively. Both perform very similarly in each PEST dimension since for most of the indicators the data is only available on a country level. Differences are due to the indicators that are collect-

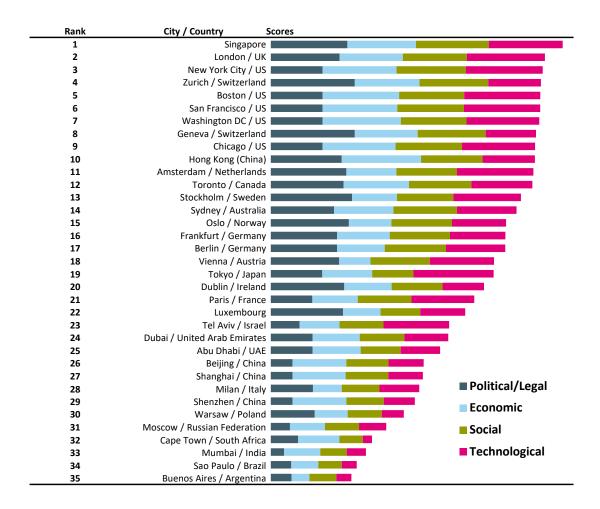


Figure 6.2.: Asset management hub ranking

ed based on a city level in the economic, social and technological dimension. A comparison of the Swiss cities with the top three in the asset management hub ranking (Singapore, London, New York) depicted in Figure 6.3 reveals that the political and legal environment is Switzerland's key strength. This dimensional ranking is jointly led by the Swiss hubs Zurich and Geneva. Their leading position is based on political stability and a progressive legal regulatory environment. The high level of political stability, the low level of corruption, the high level of freedom of press and moderate corporate tax rates are factors that strengthen Switzerland's position in this PEST dimension. However, room for improvement is identified in terms of visa restrictions with Zurich and Geneva ranking on position 17.

Looking at the top three ranked asset management hubs one immediately recognizes that all these cities perform very well in the technological dimension. Singapore, New York and London take a position in the top five in this dimensional ranking, while Zurich and Geneva are ranked on position 19 and 21, respectively, among all 35 in-scope cities. A deeper analysis reveals that this result is mainly driven by the fact that Switzerland is particularly weak in terms of offering online governmental services and the associated low degree of e-participation by Swiss residents. However, a positive aspect in the technological dimension is the use of information and communication technology (ICT Use) as well as the university-industry research collaboration where Switzerland takes a leading posi-

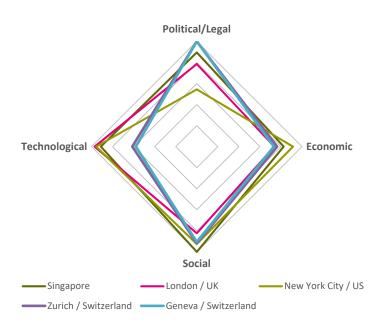


Figure 6.3.: Performance of the top three ranked asset management hubs (Singapore, New York, London) and the Swiss hubs (Zurich, Geneva) in relation to the top performer in each PEST dimension.

tion in each indicator. From an asset management perspective, this is very encouraging and indicates the potential of Switzerland for taking a leading position in the digitization of the asset management industry as well as the importance of a collaboration between the industry and academia. Regarding the remaining two dimensions, the two Swiss cities perform sustainably well. Particularly in the social dimension ranking, Zurich and Geneva are the runner-up cities right behind Singapore. Potential for improvement is mainly identified in the comparably low level of tertiary level education enrolments in Switzerland. The economic environment for Swiss asset management is comparable to those of the three leading global asset management hubs. Only New York is embedded in a slightly stronger economic environment, which can be explained by the size and importance of financial markets, the domestic market size and the number of high net worth individuals.

Considering only European asset management hubs, it follows that Zurich is ranked second and Geneva is ranked third place, lead only by London. In summary, both Zurich and Geneva offer good conditions for asset management companies, especially with regard

to the political/legal and social environment. In terms of the economic environment Switzerland is competitive compared to the top three asset management hubs. Room for improvement is identified in the technological dimension where Zurich nor Geneva belong to the leading cities in the ranking.

Moreover, it is important to keep in mind that global market access is a core success factor for Swiss financial services providers in general and asset managers in particular to be able to offer its services and products to clients abroad. Due to its geographic proximity, for Switzerland as non EU/EEA country, access to the EU single market based on equivalence and a standardized principle-based recognition process at EU level are essential. This requires that the regulatory and supervisory framework of a non-member country like Switzerland is equivalent in the specific area. As illustrated in Chapter 3, this applies for instance in the area of investment protection where Switzerland aims to take the core issues of the corresponding EU provisions (MiFID II) into account in the creation of its Financial Services and Financial Institutions acts (Credit Suisse, 2018).

Asset Management Companies in Switzerland

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In Chapter 2 to 5 we focused on the description of the Swiss asset management environment based on a PEST analysis. In this chapter we aim to give a deeper insight into Swiss asset management by providing an overview of key characteristics of the industry. This is mainly based on the business model canvas and a descriptive analysis of the asset management market including a market sizing as well as an analysis of the most pressing challenges faced in the sector based on a sentiment analysis.

7.1. Scope and Methodology

The foundation of our analysis consists of FINMA authorized banks and securities dealer, fund management companies, as well as asset managers of collective investment schemes licensed under the collective investment schemes act (CISA). Among these institutions, we identified 191 companies, which consider asset management as their main value proposition and are in line with our definition of asset management outlined in subchapter 1.1. In order to avoid double counts we removed firms that have more than one FINMA-license, which leaves us with 186 asset managers to be surveyed. All surveyed companies were asked to participate in the market sizing survey, fill in the sentiment questionnaire, as well as provide infor-

mation about operational data, customer segments, offered asset management services, revenue model and management style in the form of a company factsheet. This information serves as the foundation for our database on Swiss asset management. The corresponding factsheets of all the asset managers that participated in this study are presented in Chapter 9.

Figure 7.1 shows that out of the 186 surveyed institutions, 60 participated in the study and returned at least one questionnaire (market sizing survey or sentiment questionnaire), as well as the company factsheet. This corresponds to an overall response rate of 32 percent. Among the respondents are 39 asset managers that operate under the collective investment schemes act (29% response rate), eleven fund management companies (44% response rate) and ten institutions that are licensed as banks/securities dealers (36% response rate). From a methodological point of view, it is important to note that the findings and conclusions drawn in this chapter are based on descriptive statistics and that no statistical inference is applied. In the market sizing part of this study we use extrapolation techniques in order to determine the size of Swiss asset management in terms of assets under management.

Figure 7.2 illustrates the AuM of the participating firms that reported their assets under management. 55 percent of the asset management companies analyzed in this study have less than CHF 5 billion AuM, while 20 percent indicate to manage AuM between CHF 5

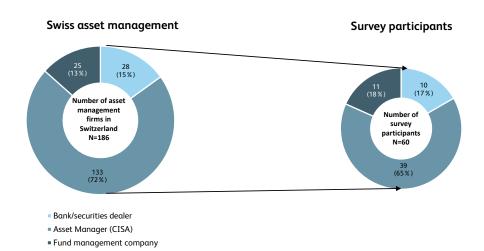


Figure 7.1.: Asset management firms in Switzerland and number of respondents by institution

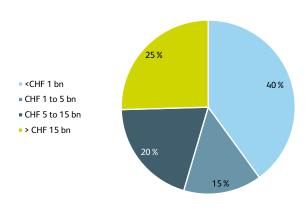


Figure 7.2.: Assets under management of participating companies (N=55)

to 15 billion and another 25 percent have more than 15 billion AuM. This last group of large asset managers includes five CISA licensed asset managers, four banks/securities dealers, as well as five fund management companies. Moreover, it is important to note that all asset management companies operating in Switzerland with AuM larger than CHF 50 billion participated in the survey. As experience has shown, these large asset management companies manage a significant amount of all AuM in Switzerland. This holds true in particular for the institutional mandate business (SFAMA, 2017).

7.2. Overview of Asset Management Companies in Switzerland

The analysis of the Swiss asset management industry is based on the asset management database, which is designed according to the Business Model Canvas described in section 1.3. The database was created by conducting a two-step approach. In a first step, information on asset management companies in Switzerland was gathered by using public sources such as the companies' websites, newspaper articles and academic studies. Based on this information a company fact-sheet on every Swiss asset management firm was created. In a second phase, the factsheet was sent to the respective company with the request to fill in remaining gaps and to correct false entries. The following facts and figures are sourced from this database containing all the verified factsheets.

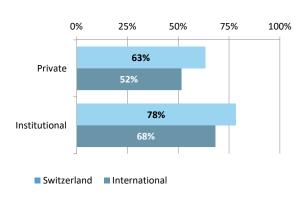


Figure 7.3.: Customer segments of asset management companies in Switzerland (N=58)

Figure 7.3 gives an overview of the customer segments in an asset management business model. The figure shows that institutional clients represent the largest client group of the Swiss asset management industry. 78 percent of all surveyed asset managers report to serve institutional clients in Switzerland while 68 percent offer their products and services to institutional clients abroad. These numbers illustrate the importance of institutional clients for the industry. Note that for this part of the analysis we disclose Swiss and international clients for each customer segment (private/institutional) separately in order to get a clearer picture about the geographic segmentation. However, in the company factsheets reported in Chapter 9, if an asset management company serves both Swiss and international customers, Swiss customers are included in the international customer segment. For example if an asset manager indicates to serve institutional international clients in the factsheet, it follows that the respective asset management firm serves Swiss clients as well.

Insurance companies and pension funds control large amounts of financial assets and delegate the management of all or part of their assets to external asset managers. Very often asset managers offer their services to other institutional clients like corporates, endowments and foundations, family offices or sovereign wealth funds. These clients very often invest through a combination of investment funds and discretionary mandates (EFAMA, 2017).

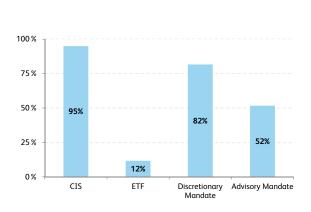


Figure 7.4.: Services offered by asset management companies in Switzerland (N=60)

In terms of asset management services Figure 7.4 shows that almost all (95%) surveyed asset managers offer collective investment schemes as investment solutions to their clients. Moreover, 82 percent of asset manage-

ment companies manage their client's assets in the form of discretionary mandates. About half of the participating institutes in this survey offer advisory services where the aim of the mandate is to provide advice on a portfolio of assets with only the client deciding on the execution of the advice given by the asset manager. Finally, Figure 7.4 shows that among the surveyed asset managers only a relatively small fraction of twelve percent offers investment solutions based on exchange traded funds (ETF).

In terms of their value proposition, Swiss asset managers offer their customers a broad variety of products and services based on different asset classes. Figure 7.5 shows that the two most frequently used asset classes among all surveyed asset managers are equity (77%) and bond (53%) investments, followed by multi asset approaches where investments as a combination of equity, fixed income and other asset classes are made. Moreover, the figure illustrates that Swiss asset management is diverse in the sense that asset management institutions offer products and expertise in a variety of

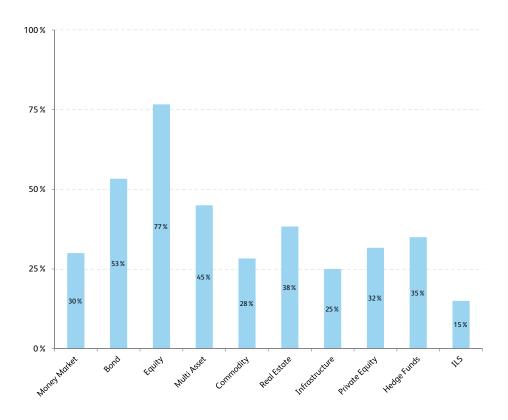


Figure 7.5.: Proportion of asset classes used by asset management companies in Switzerland (N=60)

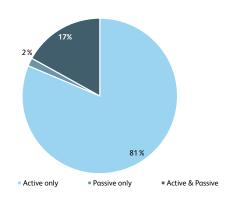
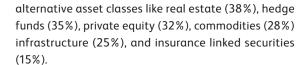


Figure 7.6.: Proportion of asset managers by investment strategy (N=59)



Investments in the alternative space complement traditional investment portfolios in terms of return enhancement, portfolio diversification and inflation protection. An allocation of funds to alternative assets classes offers a return pattern that differs for example from equity market movements. These diversification benefits allow to gain risk premia on non-equity market beta (e.g. style-based risk premia) or alpha generation where returns are derived from active management decisions in order to exploit market inefficiencies. However, it is important to note that even though alternative assets offer potential for returns that have a low correlation with traditional asset classes, it is crucial to recognize that these assets very often involve a higher degree of idiosyncratic risks or are less liquid (Mercer, 2016). A recent study by PwC reveals that alternative assets are expected to grow from USD 7.9 trillion in 2013 to a range between USD 13.6 trillion in their base scenario and USD 15.3 trillion in their high case scenario by the year 2020 (PwC, 2015). These numbers illustrate the market potential in this segment and the opportunity for Swiss asset managers to provide their expertise.

The value proposition is not only related to the asset classes offered by asset managers it also differs in terms of the chosen investment approach where a distinction between active and passive investment man-

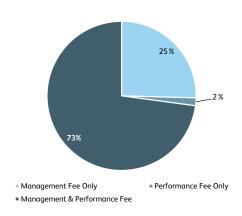


Figure 7.7.: Proportion of asset management companies by revenue model (N=59)

agement is made. Among the surveyed asset managers that provided information on which management style they follow, 81 percent indicate using an active investment approach, while only two percent specify following a passive investment strategy. 17 percent of all respondents state that their portfolio management is based on both active and passive investment management. The fact that the majority of surveyed asset managers follow an active portfolio management approach is consistent with the previous observation that asset managers in Switzerland have a strong exposure to alternative asset classes, which are very often based on active portfolio management strategies.

Compensation in the asset management industry is fee based and depends on the volume of assets managed or is paid contingent on some measure of underlying performance. 72 percent of the respondents generate revenues from management and performance fees, while 26 percent of the companies only charge a management fee. Only one asset manager (2%) reported to solely be compensated by a performance fee for his services.

Performance fees are very often related to active portfolio management. This is consistent with the observation reported in Figure 7.6 that the majority of Swiss asset managers follow an active investment management strategy. In this context, actively managed alternative investment products tend to offer higher net revenue margins (management fees net of distribution costs), not just in comparison to passively managed funds but also relative to traditional actively managed

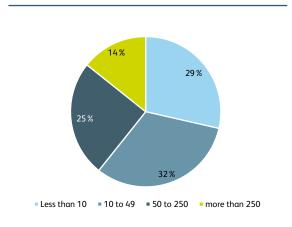


Figure 7.8.: Proportion of asset management companies by employees (in FTE; N=56)

portfolios (BCG, 2011). As illustrated above asset management companies in Switzerland have a strong exposure to a variety of alternative asset classes and offer high margin alternative investment products that affect the profitability of the business model positively. The profitability of specialized asset management firms pursuing an active investment approach is also reflected in stock market valuations. A good example to illustrate this point is the Zug based asset management firm Partners Group, which currently has about USD 74 billion in AuM and a market capitalization of about USD 20 billion. In comparison BlackRock, the world's largest asset manager, manages AuM of USD 6.3 trillion and has a market capitalization of about USD 87 billion at the end of May 2018. Even though the volume of assets managed by BlackRock exceeds those of Partners Group by a factor of 85, the stock market valuation of *BlackRock* is only four times higher.

The key resource in asset management according to the business model canvas outlined in subchapter 1.3 is the number of employees. For that purpose, we illustrate how many people, measured in full-time equivalents (FTEs), are employed by asset managers in Switzerland. The majority of asset management companies operating in Switzerland that participated in this study can be considered as small and medium sized enterprises according to the number of people employed in Switzerland. As illustrated in Figure 7.8, 86 percent of the asset managers reported a workforce of less than 250 FTEs. More specifically, 16 companies (29%) employ

less than ten FTEs, while 18 asset managers (32%) exhibit a workforce of ten to 49 full-time employees. About 40 percent of the respondents (22 companies) employ more than 50 FTEs. Among these companies, 14 (25%) exhibit a workforce of 50 to 250 full-time employees and only eight asset managers (14%) of those who provided data employ more than 250 FTEs in Switzerland. The average number of FTEs employed by survey respondents is 149 while the median is 18.5. In terms of the reported total global workforce employed by asset managers participating in this study, about 29 percent are located in Switzerland. In absolute numbers, this corresponds to approximately 8'300 employees, which can be seen as a lower bound estimate for the number of people directly employed in asset management. To get an indication about the total number of employees in Swiss asset management we extrapolate this number proportional to the estimated AuM. More specifically, given that the surveyed asset managers account for about 85 percent of total AuM¹⁴, we estimate that around 9'600 people are directly employed by the asset management industry in Switzerland.

However, from an economic perspective not only the number of people directly employed by the asset management industry needs to be considered. It is essential to also account for the indirect employment associated with related services and support functions such as accounting, auditing, marketing or distribution (EFAMA, 2017). A study by the French asset management association (AFG) estimated that every direct position in asset management in France, gives rise to 4.6 full time equivalent jobs in related services (AFG, 2011). Applying this number to Switzerland in order to obtain an estimate of indirect employment in asset management would imply that about 44'500 people are indirectly employed in the wider scope of the industry. Based on these estimates total employment in the Swiss asset management industry accounts for approximately 54'100 jobs. In comparison, using the same estimation approach, the European Fund and Asset Management Association (EFAMA) estimates that total employment of the asset management industry in Europe to approximately 560'000 jobs (EFAMA, 2017).

In addition to the current number of FTEs employed globally and in Switzerland, 29 companies revealed information about the expected future growth of fulltime equivalents in their workforce in 2018. Among

 $^{^{14}\,}$ The market sizing is discussed in detail in subchapter 7.3.

these asset managers, the vast majority (> 80%) expects a moderate (66%) or strong growth (17%) of its workforce in 2018. This observation can be interpreted as an indication that asset management is a growing industry. However, our data collection does not allow for any conclusions to be drawn as to where along the asset management value chain these jobs are created.

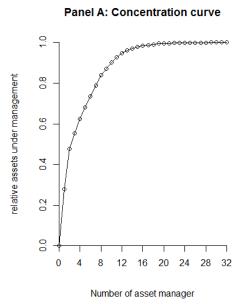
Finally, looking at key partners of asset managers operating in Switzerland it becomes evident that asset management firms rely on a broad network of different partners to provide their services. Among these companies are very often, banks, insurance companies, auditing firms or platform providers.

7.3. Market Sizing

An integral part of this study is to measure the volume of assets managed by Swiss based asset management firms at the end of 2017. For that purpose, we rely on the definition of asset management outlined in subchapter 1.1 and base our estimation on discretionary institutional mandates as well as collective investment schemes. A characteristic of the institutional mandate business in Switzerland is that a relatively small number of large market participants manage the majority

of assets under management (SFAMA, 2017). In the context of this survey-based market sizing, 32 institutions provided data. The participating companies rank among the largest and best-known asset managers in Switzerland. As mentioned before it is a well-known fact that the Swiss asset management market is highly concentrated and assets under management are unequally distributed among market participants.

Figure 7.9, panel A shows a concentration curve, depicting the percentage of total AuM held by the largest n asset managers. The concentration curve illustrates a high market concentration among the participating institutions in this survey. The Herfindahl-Hirschman index (HHI), computed as the sum of squared market shares has a value of 0.14. To put this number into perspective the following thought experiment is helpful. If we assume that every asset manager would have an equal market share the HHI would be 0.03 (1/N). A higher number of the HHI means a higher market concentration. In panel B of Figure 7.9, we plot a Lorenz curve, which shows the cumulative percentage of AuM in relation to the cumulative percentage of asset managers. The empirical Lorenz curve shows that the top 20 percent of the participating asset managers have 80 percent of the assets under management. The corresponding Gini coefficient, measuring the ine-



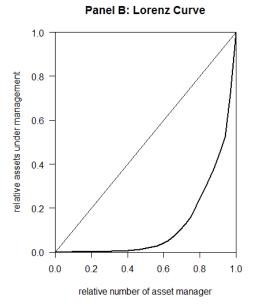


Figure 7.9.: Concentration and Lorenz curves based on survey data (N=32)

quality in terms of the AuM distribution on a scale from 0 (no inequality) to 1 (highest inequality), is estimated to be 0.75 and provides further evidence of the unequal distribution of AuM.

To estimate the total market size, we first compute the growth rate of AuM managed in discretionary institutional mandates of the ten largest asset managers that participated in the 2016 survey¹⁵, as well as in the 2017 survey. Since these asset management firms vary substantially in size we weight the corresponding growth rate with the AuM to obtain a weighted average of twelve percent. Considering that the participating asset management companies account for 71 percent of the total AuM in discretionary institutional mandates in Switzerland, this weighted average serves as a proxy for the growth in institutional discretionary mandates of the remaining asset management firms that did not participate in our survey. As a result, a total of CHF 947 billion were managed in Switzerland in this segment at the end of 2017, corresponding to a twelve percent year-on-year increase versus the end of 2016 (CHF 845 billion).

In addition to the assets in discretionary mandates, we add the volume of assets managed in collective investment schemes (CIS) under Swiss law. As an approximation, we assume that that all CIS under Swiss law are effectively managed in Switzerland. ¹⁶ These assets rose from CHF 785 billion in 2016 to CHF 880 billion in 2017, which implies a growth rate of 12.1 percent. The respective data is obtained from the Swiss National Bank. This growth in AuM managed in CIS will also serve as a proxy in extrapolating the volume of assets held in foreign collective investment schemes, which are managed by asset managers in Switzerland. Applying a growth rate of 12.1 percent to the estimated AuM of CHF 340 billion in 2016 in this segment yields an estimate of CHF 381 billion at the end of 2017.

Based on the data and the applied extrapolation using growth rates, the total volume of assets managed by

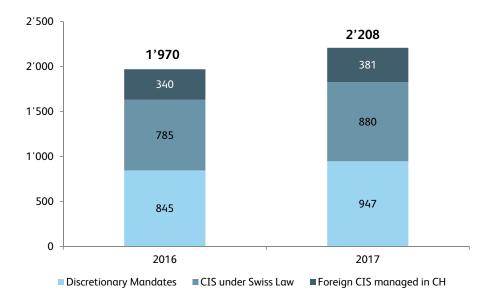


Figure 7.10.: Assets managed in Switzerland for corporate and institutional clients in 2016 and 2017, in CHF billion

¹⁵ The Swiss Funds & Asset Management Association (SFAMA) conducted the market sizing for the year 2016 and estimated the volume of assets managed by asset managers in Switzerland to be CHF 1'970 billion.

This assumption is based on the fact that most CIS under Swiss law are effectively managed in Switzerland. However, it is important to note, that this assumption might slightly overestimate the volume of assets managed in this product group. In this context, our partner, the Swiss Bankers Association, is preparing more detailed data to get a more precise estimate of the volume of CIS under Swiss law which are effectively managed in Switzerland. The results are supposed to be published in early autumn of 2018 together with additional details and numbers about the Swiss management industry.

banks, fund management companies, securities dealers and FINMA-supervised asset managers in Switzerland at the end of 2017 amounted to CHF 2'208 billion (Figure 7.10). It follows that year-on-year the total volume of assets managed by asset managers in Switzerland according to our definition of asset management outlined in Chapter 1 had risen by 12.05 percent.

7.4. Sentiment Analysis of Asset Management Companies in Switzerland

This section evaluates the challenges faced by the Swiss asset management industry. For this purpose, a sentiment analysis among asset management companies in Switzerland was conducted and the corresponding results are shown in Figure 7.11.

With an average score of 7.7, regulation was identified as the most pressing challenge. To some extent, this finding is not surprising, since the analysis of the political & legal environment in Chapter 2 illustrated the need of the Swiss regulatory framework to be in line with global standards in order to ensure that Swiss asset managers have a level playing field with their international competitors.

With regard to the sentiment analysis, it is not possible to make a reliable statement about the specific regulatory concerns of the asset management industry. Regulation is a complex issue and the demand for less regulation is very often at the forefront of demands to improve international competitiveness. However, in the case of asset management, being compliant with international regulatory standards is a fundamental requirement to be able to export Swiss asset management services abroad.

The second most pressing challenge named by Swiss market participants is the challenge of finding customers. With an average score of 6.7 this challenge is not perceived as as pressing as regulation but still achieved a relatively high score. A possible explanation for this observation can be found in the limited size of the domestic market, as well as the fact that competition in asset management is global and very intense which makes it difficult for Swiss asset managers to increase their customer base. This hypothesis is further supported by the fact that competition is ranked as the third most pressing challenge in the sentiment analysis with an average score of 6.0. In order to extend the existing customer base of asset management firms based in Switzerland and to acquire new funds, it is important to increasingly attract foreign investors and export asset management services and products abroad.

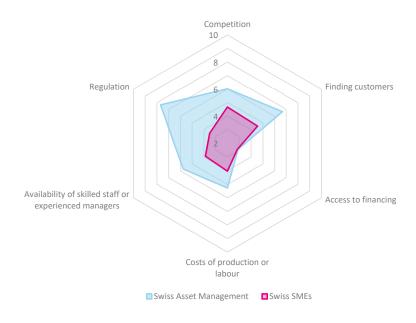


Figure 7.11.: Challenges of asset management companies and SMEs (Nam=58, Nsme=1922)

The availability of skilled staff or experienced managers also seems to pose a challenge to Swiss asset management since a rather high score of 5.8 was obtained. This finding might partially reflect the comparably restrictive Swiss policy in providing visa for foreign employees outside the EU/EEA area and the scarcity of people with a university degree relevant for asset management as illustrated in the social dimension of the PEST analysis. Only of medium relevance for the Swiss asset management industry is the challenge of the costs of production or labor with a score of 5.3. The least pressing challenge in this sentiment analysis with an average score of 2.9 is access to financial capital. This result is not very surprising, since capital requirements in asset management are considerably lower compared to those in the banking or insurance business, as asset managers are not involved in balance sheet transactions.

Because about 85 percent of Swiss based asset management firms have less then 250 employees they can be classified as small and medium-sized enterprises (SME). In 2017, the *Institute of Financial Services Zug IFZ* conducted the same sentiment analysis on behalf of the *State Secretariat for Economic Affairs* among Swiss SMEs. From that vantage point, a comparison of the challenges evaluated by asset management companies in Switzerland in this study with those of Swiss SMEs could be instructive. The analysis illustrated in

Figure 7.11 shows that Swiss SMEs are subjectively less affected by these challenges. Swiss SMEs evaluate the challenges posed by competitors with the highest score of 4.7 followed by finding customers (4.6). Both of these challenges were also pressing among Swiss based asset managers. Moreover, Swiss SMEs feel less burdened by the costs of production or labor (4.0), availability of skilled staff or experienced managers (3.9), and regulation (3.5). The impact of regulation on the business model shows a fundamental difference between the asset management industry and other non-financial sector related industries and explains why regulation is perceived as the most important challenge by asset management companies in Switzerland.

To get a deeper understanding of the sentiment in Swiss asset management we analyze to which extent the surveyed challenges depend on firm size. In this context, we use assets under management as a proxy for the size of an asset management company and rely on the same classification as in subchapter 7.1 (< CHF 1bn, CHF 1 to 5 bn, CHF 5 to 15 bn and > CHF 15 bn). Figure 7.12 shows a breakdown of the six challenges into the four size categories.

A key finding of this analysis is that large asset managers (> CHF 15 bn in AuM) have the highest score with respect to all challenges. Two of the challenges, i.e.

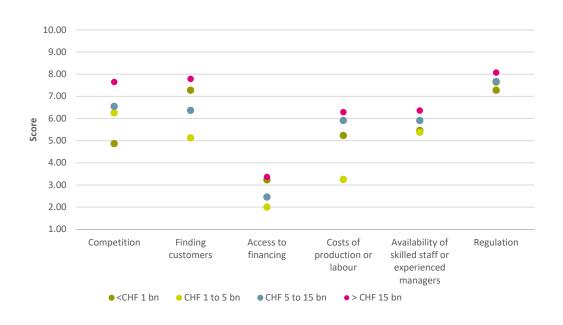


Figure 7.12.: Challenges faced by asset management companies in Switzerland relative to their size measured by AuM (N=55).

regulation and access to finance are subject to relatively small fluctuations across the different size categories. Independent of size, regulation is perceived as the most pressing challenge among Swiss asset managers, while access to financing is unanimously named the least pressing challenge. This is consistent with the aggregate view on challenges in Swiss asset management illustrated in Figure 7.11. The challenges related to competition and finding customers indicate the largest variation among asset managers of different sizes. While for large asset managers competition and finding customers tend to be equally pressing, small asset managers (< CHF 1 bn in AuM) only evaluate finding customers as a big challenge. Among the different size categories, on average small asset managers named competition the least pressing challenge. This might be because small asset managers operate in a market niche more often, where competition is not as intense, but at the same time the market potential for the offered products and services is still not large enough, such that finding customers is perceived as a pressing challenge.

Costs of production or labor and availability of skilled staff or experienced managers tend to be of lower importance for all sizes of asset management firms. However, while costs of production or labor shows a larger variation in the degree of importance, the availability of skilled staff or experienced managers seems to be of equal importance for all asset managers, but not as pressing as regulation, competition and finding customers.

Summarizing the results of the sentiment analysis allows to conclude that regulation is the most pressing challenge in the Swiss asset management industry, followed by finding customers and competition. Otherwise, access to financing does not pose a major problem to asset managers. A comparison of the assessment of the six predefined challenges of the Swiss asset management sector to Swiss SMEs reveals that the latter are consistently less affected by all challenges in this analysis except access to financing.

8. Conclusion & Outlook

With this study, we aimed to give an overview of the current state and the developments in the Swiss asset management industry. Based on our findings presented in the previous chapters, we conclude with the following five statements/hypotheses:

Switzerland offers good conditions for the asset management industry and has a strong position as an asset management hub. A quantitative hub ranking based on political/legal, economic, social and technological indicators evaluates the globally leading asset management hubs. The two Swiss cities Zurich and Geneva incorporated in this analysis are placed on rank 4 and 8, respectively. The ranking is led by Singapore followed by a group of cities (rank 2 to 12) that perform very similarly and differ only marginally in their competitiveness. Switzerland offers good conditions, especially with respect to a stable and reliable political/ legal environment as well as social environment with a strong education system and good infrastructure quality. In terms of the technological environment the two Swiss cities lag behind the leading hubs. However, this is mainly driven by the fact that Switzerland is particularly weak in terms of offering online governmental services and the associated low degree of e-participation by Swiss residents. However, a more important positive aspect in the technological dimension is the use of information and communication technology (ICT Use) as well as the university-industry research collaboration where Switzerland takes a leading position in each indicator. From an asset management perspective, this is very encouraging and indicates the potential of Switzerland for taking a leading position in the digitization of the asset management industry as well as the importance of a collaboration between the industry and academia.

Asset Management is relevant for Switzerland.

Accounting for about ten percent of the national GDP, the financial sector is a vital part of the Swiss economy. While Switzerland is well known as a world leading private banking and wealth management location, the growing importance of asset management is less known. Estimates indicate that about 9'600 people are directly employed by asset managers in Switzerland and about 44'500 people are indirectly employed in the wider scope of the industry. In terms of the market size, the total volume of assets managed by banks,

fund management companies, securities dealers and FINMA-supervised asset managers in Switzerland at the end of 2017 amounted to CHF 2'208 billion, which is approximately three times the size of the Swiss GDP.

Regulation is the most pressing challenge in the Swiss asset management industry. A sentiment analysis among Swiss asset management companies has been conducted to reveal the challenges faced by Swiss asset managers. With an average score of 7.7 (out of 10), regulation has been identified as the most pressing challenge. While the hub ranking provides evidence that Switzerland performs very well in the political/ legal dimension due to a high level of political stability or moderate corporate taxes, Chapter 2 illustrates the need of the Swiss regulatory framework to be in line with international standards. This ensures Swiss asset managers have a level playing field with their international competitors and is a basic prerequisite for access to global markets. However, with regard to the sentiment analysis it is not possible to make a reliable statement about the specific regulatory concerns of the Swiss asset management industry. Regulation is a complex issue and the demand for less regulation is very often at the forefront of demands to improve international competitiveness. However, in the case of asset management, being compliant with international regulatory standards is a fundamental requirement to be able to export Swiss asset management services and products abroad.

Swiss asset managers accept the race for performance.

81 percent of the asset managers participating in this survey provide actively managed investment solutions while 17 percent offer both, active and passive portfolio management. The fact that the majority of surveyed asset managers follow an active portfolio management approach is consistent with the observation that asset managers in Switzerland have a strong exposure to alternative asses classes, which are very often based on active portfolio management strategies. This observation supports the view that Swiss asset managers try to find sound investment opportunities in order to generate alpha for their customers.

Innovation as a key factor for a successful future. The success of Switzerland as an innovative economy is well proven.¹⁷ Due to its optimal conditions for at-

¹⁷ According to the Innovation Indicator 2017 conducted by the Centre for European Economic Research (ZEW) and the Frauenhofer Institute for System and Innovation Research, Switzerland is ranked as the most innovative country globally.

tracting internationally recognized researchers and experts Switzerland has strong industry clusters, especially in life sciences, information technology or the mechanical, electrical and metal industry (MEM industry). In addition based on a talent pool in engineering and economic sciences, as well as a major, interna-

tional financial center Switzerland offers good conditions for innovation driven growth in the asset management industry. This implies that asset managers in Switzerland possess the requirements to face future challenges and to push the digitization of the asset management industry ahead.

9. Factsheets of Asset Management Companies in Switzerland

The last chapter of this study contains the factsheets of all asset management companies in Switzerland that participated in our survey. The factsheets are based on the Business Model Canvas of Osterwalder and Pigneur (2010), described in section 1.3. As mentioned earlier, they were created based on publicly available sources such as the companies' websites, newspaper articles and academic studies. For the purposes of verification, correction and completion, these draft versions were then passed on to the respective asset managers. Note that the companies which did not return the factsheet are not presented in the following pages. Moreover, it is important to note that some participants were not able to provide specific information about their asset management unit. However, in order to provide a comprehensive overview of asset management companies in Switzerland we included these factsheets in the study as well but report numbers on a group level. The factsheets of these companies are marked explicitly. At this point, we would like to thank all companies that took part in our survey and supported the initiative to portray the Swiss asset management industry in a comprehensive way.

Companies

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AG für Fondsverwaltung

www.immofonds.ch

Founded in

1955

Headquarter

Zug

The IMMOFONDS is a leading real estate fund according to Swiss law.

| Key & Cooperation Partners | Key Resources | | |
|----------------------------|-----------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 5 | |
| | of which in CH | 5 | |
| | AuM 2017 (m) | CHF 1'400 | |
| | of which managed in CH (m) | CHF 1'400 | |
| Customer | Segments | Asset Managen | nent Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset (| Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | e Model | Manageme | ent Style |
| Management Fee | Performance Fee | Active | Passive |

AgaNola
Specialised Asset Manager

AgaNola AG

www.aganola.com

Founded in 2007

Headquarter

Pfäffikon SZ

By the means of continuous performance, transparency and proximity to our institutional and private clients we were able to secure their trust and thereby gradually expand our client network and assets under management to over one billion CHF.

| Key & Cooperation Partners | Key Resources | | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 8 | | |
| | of which in CH | 8 | | |
| Credit Suisse Asset Management | AuM 2017 (m) | CHF 1'200 | | |
| | of which managed in CH (m) | CHF 1'200 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Managem | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |

Albin" Kistler

Albin Kistler AG

www.albinkistler.ch

Founded in

1995

Headquarter

Zürich

Our investment success is based on timeless principles and disciplined and independent financial analysis performed by approximately 20 analysts in the field of equities, issuers, interest rates and currencies.

| Key & Cooperation Partners | Key Resources | | |
|--|-------------------------------|------------------------------|-----------------------|
| As of December 31st 2017, Graubündner Kantonalbank | Employees in 2017 | 33 | |
| owns 25% of Albin Kistler AG. | of which in CH | 33 | |
| However, with regards tot he selection of custodian our clients | AuM 2017 (m) | > CHF 4'500 | |
| may choose amongst 5 different custodians (custody banking solutions). | of which managed in CH (m) | > CHF 4'500 | |
| Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue Model | | | |
| Revenue | Model | Managen | nent Style |

AMG Fonds

AMG Fondsverwaltung AG

www.amg.ch

Founded in

2011

Headquarter

Zug

We invest our investors' money professionally, sincerely and responsibly.

| Key & Cooperation Partners | | Key Resources | | |
|---|--------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 9 | | |
| | of which in CH | 9 | | |
| | AuM 2017 (m) | CHF 927 | | |
| | of which managed in CH (m) | CHF 927 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | ilasses | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Revenue Model Management Style | | | |
| Management Fee | Performance Fee | Active | Passive | |

Artico Partners AG

www.artico-partners.com

ARTICO Partners

Founded in

2004 Headquarter

Zürich

We are an asset management company specialized in fundamental bottom-up stock selection. Our main focus is to identify and to invest in good companies globally. Companies we invest in have a simultaneous high score in terms of GROWTH, PROFITABILITY, FINANCIAL HEALTH and VALUATION. This combination is unique and explains the excellent track record.

| Key & Cooperation Partners | Key Resources | | |
|----------------------------|-----------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 6 | |
| | of which in CH | 6 | |
| | AuM 2017 (m) | CHF 450 | |
| | of which managed in CH (m) | CHF 450 | |
| Customer | Segments | Asset Manager | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset (| Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | e Model | Managem | ent Style |
| Management Fee | Performance Fee | Active | Passive |

Investment Managers

AXA Investment Managers Schweiz AG www.axa-im.ch

Founded in

2006/1996

Headquarter

Zürich / Paris

AXA Investment Managers works with its clients today to provide the solutions they need to help secure a better tomorrow for their investments, while creating a positive change for the world in which we all live.

| Key & Cooperation Partners | _ | Key Resources | | |
|----------------------------|---|------------------------------|-----------------------|--|
| | Employees in 2017 | 2'400 | | |
| | of which in CH | 80 | | |
| | AuM 2017 (m) | CHF 872'895 | | |
| | of which managed in CH (m) | CHF 48'488 | | |
| Customer S | Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Revenue Model Management Style | | | |
| Management Fee | Performance Fee | Active | Passive | |

B&I CAPITAL AG

B&I Capital AG

www.bnicapital.com

Founded in

2007

Headquarter

Zürich

B&I Capital's primary goal is to give investors a means to replicate the risk-adjusted returns of multi-class Commercial Real Estate ownership, predominantly via the REIT market.

| Key & Cooperation Partners | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 12 | |
| | of which in CH | 8 | |
| | AuM 2017 (m) | USD 803 | |
| | of which managed in CH (m) | USD 401.5 | |
| Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Managem | nent Style |
| Management Fee | Performance Fee | Active | Passive |



Baloise Asset Management Schweiz AG www.baloise-asset-management.com

Founded in

2001

Headquarter

Basel

Baloise Insurance has been successfully managing its insurance assets for more than 150 years. Nowadays, its investment expertise is grouped under Baloise Asset Management, which looks after both the Baloise Group's own assets and the investments of its clients. As one of Switzerland's 20 biggest asset managers, we know how to seize opportunities in today's complex market and offer tailored investment solutions with attractive performance prospects to meet our clients' needs.

| Key & Cooperation Partners | Key Resources | | |
|--|-------------------------------|------------------------------|-----------------------|
| Baloise Fund Invest, Perspectiva | Employees in 2017 | 146 | |
| Sammelstiftung, Trigona | of which in CH | 146 | |
| Sammelstiftung, Bâloise- Anlagestiftung, Baloise Bank | AuM 2017 (m) | CHF 56'992 | |
| SoBa, Basler Versicherungen | of which managed in CH (m) | CHF 56'992 | |
| Customer Segments Asset Management Services | | | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | ilasses | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Managem | ent Style |
| Management Fee | Performance Fee | Active | Passive |



Banque Cantonale de Genève

www.bcge.ch

Founded in

1816

Headquarter

Geneva

The BCGE contributed to the development of the canton of Geneva and its region by offering all its residents, businesses and institutions banking services which are sustainably competitive and which correspond to the requirements and capacities of a regional institution.

| Key & Cooperation Partners | Key Resources* | | |
|----------------------------|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 791 | |
| | of which in CH | 740 | |
| | AuM 2017 (m) | CHF 23'000 | |
| | of which managed in CH (m) | | |
| Customer | Segments | Asset Manager | nent Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset (| Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Managemo | ent Style |
| Management Fee | Performance Fee | Active | Passive |



Banque Cantonale Vaudoise

www.bcv.ch

Founded in

1845

Headquarter

Lausanne

Fifth-largest universal bank in Switzerland by total assets and the largest bank in Vaud, BCV offers comprehensive range of banking services through four customer-oriented divisions: Retail Banking, Private Banking, Corporate Banking, and Asset Management & Trading. Our mission is to contribute to the development of all sectors of the Vaud economy.

| Key & Cooperation Partners | Key Resources* | | | |
|---|--------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 1922 | | |
| | of which in CH | 1922 | | |
| | AuM 2017 (m) | CHF 86'500 | | |
| | of which managed in CH (m) | CHF 86'500 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Revenue Model Management Style | | | |
| Management Fee | Performance Fee | Active | Passive | |

^{*}Numbers reported on a group level and no detailed information on asset management unit provided.



Bantleon Bank AG

www.bantleon.ch

Institutional Investing

Founded in

1994

Headquarter

Zug

Based in Switzerland and Germany, BANTLEON specialises in institutional investments with a focus on capital preservation. The team behind this process comprises some of the world's best macroeconomic analysts, leading scientists from the technology sector and experienced securities analysts.

| Key & Cooperation Partners | Key Resources | | |
|---|--------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 46 | |
| | of which in CH | 26 | |
| | AuM 2017 (m) | CHF 7'500 | |
| | of which managed in CH (m) | CHF 7'500 | |
| Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | lasses | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Revenue Model Management Style | | |
| Management Fee | Performance Fee | Active | Passive |



Bellevue Asset Management AG

www.bellevue.ch

Founded in

1993

Headquarter

Küsnacht

Bellevue Asset Management is an independent and highly specialized asset management boutique focused on managing healthcare equity strategies as well as specialized equity and multi asset strategies. One of our core areas of specialty that already dates back more than 20 years is the global healthcare sector, for which we offer a diverse spectrum of top tier investment solutions. Our Swiss and European equity strategies focus on family and owner-managed companies a field in which Bellevue is a pioneer. With BB Global Macro we also offer a multi-asset fund focused on absolute returns.

| Key & Cooperation Partners | | Key Resources | | |
|--|-------------------------------|------------------------------|-----------------------|--|
| RBC Investor Services, MDO | Employees in 2017 | 51 | | |
| Management Company SA, PMG Fondsmanagement AG, Swisscanto Fondsleitung, Acolin | of which in CH | 11 | | |
| | AuM 2017 (m) | CHF 6'900 | | |
| Fund Services, Erste Bank, Julius Bär, Krebsliga Schweiz | of which managed in CH (m) | CHF 6'900 | | |
| Customer Segments Asset Management Services | | | ment Services | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | ilasses | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue M | lodel | Managem | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |

BLACKROCK

BlackRock Asset Management

www.blackrock.com

Schweiz AG

Founded in 1999

Headquarter Zürich

Our mission is to combine the global investment expertise of BlackRock for investors in Switzerland.

| Key & Cooperation Partners | Key Resources | | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 117 | | |
| | of which in CH | 117 | | |
| | AuM 2017 (m) | CHF 52'200 | | |
| | of which managed in CH (m) | | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Manageme | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |

BZ BANK

BZ Bank Aktiengesellschaft

www.bzbank.ch

Founded in

1985

Headquarter

Wilen

BZ Bank - an Investment Boutique. The basis for our client relationships is trust. BZ Bank sets very high standards in quality and values, and prescribes the highest others.

| Key & Cooperation Partners | Key Resources* | | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 14 | | |
| | of which in CH | 14 | | |
| | AuM 2017 (m) | CHF 14'600 | | |
| | of which managed in CH (m) | | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset (| Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Manageme | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |

^{*}Numbers reported on a group level and no detailed information on asset management unit provided.



Capital International Sàrl

www.thecapitalgroup.com

Founded in

1963

Headquarter

Geneva

Since 1931, Capital Group has been singularly focused on delivering superior, consistent results for long-term investors using high-conviction portfolios, rigorous research and individual accountability. Our Swiss company, Capital International Sàrl, was founded in 1963 and is active in investment research, investment management and distribution.

| Key & Cooperation Partners | Key Resources | | | |
|----------------------------|-----------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 7500 | | |
| | of which in CH | 150 | | |
| | AuM 2017 (m) | > USD 1'700'000 | | |
| | of which managed in CH (m) | CHF 9'500 | | |
| Customer | Segments | Asset Managen | nent Services | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset (| Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | e Model | Manageme | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |

CARNOT CAPITAL

Carnot Capital AG

www.carnotcapital.com

Founded in

2007

Headquarter

Zürich

Carnot Efficient Energy invests in sustainable companies with energy and resource efficient products and technologies. The investment strategy is a fundamental value approach. The most important investment criteria are a successful business model, valuation of the company, a solid balance sheet, the operational cash flow and the quality of management. The fund invests in shares quoted on the stock exchange, as well as other securities comparable to shares.

| Key & Cooperation Partners | Key Resources | | |
|------------------------------|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 5 | |
| Blue Orchard, AIL Structured | of which in CH | 5 | |
| Finance | AuM 2017 (m) | CHF 80 | |
| | of which managed in CH (m) | CHF 80 | |
| Customer S | iegments | Asset Management Services | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Revenue Model | | ent Style |
| Management Fee | Performance Fee | Active | Passive |



Controlfida (Suisse) SA

www.controlfida.com

Founded in

1989

Headquarter

Lugano

Superior rick-adjusted returns for investors

| Key & Cooperation Partners | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 16 | |
| | of which in CH | 16 | |
| | AuM 2017 (m) | | |
| | of which managed in CH (m) | | |
| Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue Model Management Style | | | nent Style |
| | | | |



Credit Suisse Asset Management (Schweiz) AG

www.credit-suisse.com

Founded in

2017

Headquarter Zürich

Our Swiss Asset Management business is an important hub for our global Asset Management with total AuM of CHF 386bn globally as of end 2017. It is managed to a large extent out of Switzerland and provides its Swiss and international clients abroad offering across various assets and product classes. This bundling of experience and expertise enables us to offer a high degree of product specialization – in alternative as well as traditional investment classes. Our asset management business is a leader in the Swiss market, offering equity, fixed income, real estate, insurance-linked, infrastructure, index and multi-asset class solutions. Our real estate and insurance-linked businesses are the clear market leader in Switzerland and notably one of the largest fund managers in Europe in the respective markets.

| Key & Cooperation Partners | Key Resources | | | |
|----------------------------|---|------------------------------|-----------------------|--|
| | Employees in 2017 | 500 | | |
| | of which in CH | | | |
| | AuM 2017 (m) | CHF 386'000 | | |
| | of which managed in CH (m) | not disclosed publicly | | |
| Customer S | Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Revenue Model Management Style | | | |
| Management Fee | Performance Fee | Active | Passive | |



EFG Asset Management (Switzerland) SA 2009

Founded in

www.efgam.com

Headquarter Geneva

EFGAM SW is an investment management firm providing discretionary portfolio management services to private and institutional

clients and managing a range of investment funds.

| Key & Cooperation Partners | Key Resources | | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 58 | | |
| | of which in CH | | | |
| | AuM 2017 (m) | CHF 9'000 | | |
| | of which managed in CH (m) | CHF 9'000 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Managem | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |

FISCH»Asset Management

Fisch Asset Management AG

www.fam.ch

Founded in 1994 Headquarter Zürich

We are an independent asset management boutique focusing on convertible bonds, corporate bonds, multi asset- and trend following strategies. The company is owned by our employees and characterised by a corporate culture of respect, transparency and entrepreneurship.

| Key & Cooperation Partners | Key Resources | | |
|--|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 87 | |
| Independent Credit View (credit research partner since 2003, | of which in CH | 87 | |
| Fisch Asset Management owns a | AuM 2017 (m) | CHF 10'590 | |
| controlling stake) | of which managed in CH (m) | CHF 10'590 | |
| Customer Segments Asset Management Services | | ment Services | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Managem | ent Style |
| Management Fee | Performance Fee | Active | Passive |



Fontavis AG

www.fontavis.ch

Founded in

2011

Headquarter

Baar

FONTAVIS is a European fund manager that delivers sustainable returns from investments in core and added value clean energy and infrastructure assets. We raise long-term capital to invest in assets and projects that produce renewable energy, improve energy efficiency or provide energy infrastructure. Companies are provided with capital, expertise and committment to steer the businesses to new levels of excellence.

| Key & Cooperation Partners | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 13 | |
| | of which in CH | 13 | |
| Die Mobiliar, UBS | AuM 2017 (m) | CHF 700 | |
| | of which managed in CH (m) | CHF 700 | |
| Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Managen | nent Style |
| Management Fee | Performance Fee | Active | Passive |



Fortuna Investment AG

www.generali.ch

Founded in

1989

Headquarter

Adliswil

Fortuna Investment AG is a specialised financial services provider with many years of experience and provides fund management services for the Fortuna funds in Switzerland. Fortuna Investment AG is 100% owned by Generali (Switzerland) Holding.

| Key & Cooperation Partners | Key Resources | | | |
|---|--------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 23 | | |
| | of which in CH | 23 | | |
| | AuM 2017 (m) | CHF 7'300 | | |
| | of which managed in CH (m) | n/a | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Revenue Model Management Style | | | |
| Management Fee | Performance Fee | Active | Passive | |



FUNDANA SA

www.fundana.ch

Founded in

1993

Headquarter Geneva

Fundana is one of the first independent Swiss institutions fully dedicated to alternative investments.

| Key & Cooperation Partners | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 15 | |
| | of which in CH | 15 | |
| SFAMA, AIMA, GSCGI | AuM 2017 (m) | CHF 919 | |
| | of which managed in CH (m) | CHF 919 | |
| Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset (| Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Manageme | ent Style |
| Management Fee | Performance Fee | Active | Passive |



Galena Asset Management SA

 $www.galena\hbox{-}invest.com$

Founded in

2003

Headquarter

Geneva

By co-investing alongside Trafigura, investors benefit from the Groups' understanding of value opportunities in the commodity markets and long-term growth strategy.

| Key & Cooperation Partners | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 10 | |
| | of which in CH | 10 | |
| None | AuM 2017 (m) | USD 500 | |
| | of which managed in CH (m) | USD 500 | |
| Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Managem | nent Style |
| Management Fee | Performance Fee | Active | Passive |



GAM Investment Management (Switzerland) AG

www.gam.com

Founded in

1983

Headquarter

Zürich

Our job is to help clients achieve their investment goals by putting their capital to work. We share insights, act with integrity and execute with purpose to make the right investment decisions for our clients.

| Key & Cooperation Partners | Key Resources | | |
|----------------------------|---|---|-----------------------|
| | Employees in 2017 | 927 | |
| | of which in CH | 279 | |
| | AuM 2017 (m) | CHF 158'700 of which CHF 74'300 in Investment Managemen and CHF 84'400 in Private Labelling | |
| | of which managed in CH (m) | CHF 19'187 in Investment Management | |
| Customer | Customer Segments Asset Management Services | | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset (| Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue Model | | M | ant Chala |
| Revenue | e Model | Managem | ent Style |

GZC | INVESTMENT MANAGEMENT

GZC Investment Management AG

www.gzcim.com

Founded in

2008

Headquarter

Zug

GZC Investment Mangement is an alternative asset management firm managing fundamental and discretionary strategies in commodity and global macro markets.

| Key & Cooperation Partners | | Key Resources | | | |
|----------------------------|---|------------------------------|-----------------------|--|--|
| | Employees in 2017 | 7 | | | |
| | of which in CH | 5 | | | |
| | AuM 2017 (m) | USD 180 | | | |
| | of which managed in CH (m) | USD 180 | | | |
| Customer S | Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | | |
| | Asset C | Classes | | | |
| Money Market | Bond | Equity | Multi Asset | | |
| Commodity | Real Estate | Infrastructure | Private Equity | | |
| Hedge Funds | ILS | Other | | | |
| Revenue | Model | Managem | ent Style | | |
| Management Fee | Performance Fee | Active | Passive | | |



HBM Partners AG

www.hbmpartners.com

Founded in

2001

Headquarter

Zug

HBM Partners focuses on venture, growth and buy-out financings of private companies as well as investments in public companies in the healthcare sector.

| Key & Cooperation Partners | Key Resources | | |
|----------------------------|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 22 | |
| | of which in CH | 21 | |
| | AuM 2017 (m) | CHF 1'300 | |
| | of which managed in CH (m) | CHF 1'300 | |
| Customer S | egments | Asset Manage | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Managem | ent Style |
| Management Fee | Performance Fee | Active | Passive |



Hérens Quality Asset Management AG www.hqam.ch

Founded in

2003

Headquarter

Pfäffikon SZ

We are one of the pioneers in systematic Quality investments worldwide. Over the years we have built up our own Research team with the aim to find the best Quality companies in the world – from both fundamental and valuation perspectives. We have proved that systematic Quality is a unique investment style with its own performance and risk character.

| Key & Cooperation Partners | | Key Resources | | | |
|----------------------------|---|------------------------------|-----------------------|--|--|
| | Employees in 2017 | | | | |
| | of which in CH | | | | |
| | AuM 2017 (m) | CHF 900 | | | |
| | of which managed in CH (m) | CHF 900 | | | |
| Customer S | Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | | |
| | Asset C | Classes | | | |
| Money Market | Bond | Equity | Multi Asset | | |
| Commodity | Real Estate | Infrastructure | Private Equity | | |
| Hedge Funds | ILS | Other | | | |
| Revenue | Model | Managem | ent Style | | |
| Management Fee | Performance Fee | Active | Passive | | |



$IFR\ Institute\ for\ Financial\ Research\ AG \qquad www.ifr-assetmanagement.com$

Founded in 2005

Headquarter

St. Gallen

IFR is an investment boutique for tactical wealth allocation.

| Key & Cooperation Partners | Key Resources | | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 5 | | |
| | of which in CH | 5 | | |
| Funds/custodian banks | AuM 2017 (m) | CHF 400 | | |
| | of which managed in CH (m) | CHF 400 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Managem | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |

JMS

JMS Invest AG

www.jms-investments.com

INVEST Founded in 2007 Headquarter Zürich

JMS Invest is an established Investment Manager, where hard-work, experience and rigorous discipline serve just one goal: generating outstanding risk-adjusted returns for its investors.

| Key & Cooperation Partners | | Key Resources | | | |
|---|-------------------------------|------------------------------|-----------------------|--|--|
| | Employees in 2017 | 3 | | | |
| D. I. W. A. A. W | of which in CH | 3 | | | |
| Deloitte, Nectar, Nettrust | AuM 2017 (m) | CHF 100 | | | |
| | of which managed in CH (m) | CHF 100 | | | |
| Customer Segments Asset Management Services | | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | | |
| | | | | | |
| | Asset C | lasses | | | |
| Money Market | Bond | Equity | Multi Asset | | |
| Commodity | Real Estate | Infrastructure | Private Equity | | |
| Hedge Funds | ILS | Other | | | |
| _ | | | | | |
| Revenue | Model | Managem | ent Style | | |
| Management Fee | Performance Fee | Active | Passive | | |



www.lgtcp.com

Founded in

2000

Headquarter

Pfäffikon SZ

LGT Capital Partners is a leading global specialist in alternative investing. As a principal investor in our own strategies, we are well aligned with our clients. Partnering with investors in long-term relationships is the key measure of success for us.

| Key & Cooperation Partners | Key Resources | | | |
|--|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 405.5 | | |
| LGT Bank as well as other LGT | of which in CH | 278.5 | | |
| Capital Partners entities outside of Switzerland | AuM 2017 (m) | CHF 58'700 | | |
| | of which managed in CH (m) | CHF 33'100 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Manageme | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |



Lombard Odier Asset Management

www.loim.com

Headquarter

(Switzerland) SA

Founded in

2010

Geneva

Lombard Odier Investment Managers is the asset management business of the Lombard Odier Group, which has been wholly owned and funded by its partners since its establishment in 1796. We provide a range of investment solutions to a group of clients that are all long-term oriented in their many and diverse ways. Our investment capabilities span Fixed Income, Convertible Bonds, Equities, Multi-Asset, Alternatives and Responsible Investing.

| Key & Cooperation Partners | | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 355 | | |
| | of which in CH | 139 | | |
| Banque Lombard Odier & Cie SA | AuM 2017 (m) | CHF 48'154 | | |
| | of which managed in CH (m) | CHF 30'485 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | ilasses | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Managem | nent Style | |
| Management Fee | Performance Fee | Active | Passive | |



Man Investments (CH) AG

www.man.com

Founded in

1994

Headquarter

Pfäffikon SZ

Man Group is a global investment management firm, focused on generating outperformance for clients. This is achieved through a diverse spectrum of specialist active investment disciplines, empowered by the latest technology.

| Key & Cooperation Partners | Key Resources | | |
|----------------------------|-----------------------------|------------------------------|-----------------------|
| | Employees in 2017 | | |
| | of which in CH | | |
| | AuM 2017 (m) | | |
| | of which managed in CH (m) | | |
| Customer | Segments | Asset Manager | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset (| Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | e Model | Managem | ent Style |
| Management Fee | Performance Fee | Active | Passive |



Partners Group AG

www.partnersgroup.com

Founded in

1996

Headquarter Zug

Partners Group is a global private markets investment manager, serving over 1,000 institutional investors worldwide. We have USD 74 billion in assets under management and more than 1,000 professionals across 19 offices worldwide. We realize potential in private markets by financing and developing great companies, desirable real estate and essential infrastructure. We create value in our investments through active and long-term responsible ownership.

| Key & Cooperation Partners | | Key Resources | |
|--|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 1055 | |
| Partners Group Holding AG is an independent company and is | of which in CH | 350 | |
| not affiliated with any other | AuM 2017 (m) | EUR 62'000 | |
| corporate group. | of which managed in CH (m) | EUR 62'000 | |
| Customer Segments Asset Management Services | | | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | lasses | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Managen | nent Style |
| Management Fee | Performance Fee | Active | Passive |

PATRIMONIUM

Patrimonium Asset Management AG www

www.patrimonium.ch

Founded in

2007

Headquarter Baar

Active portfolio management is the key to investment success in alternative asset classes.

| Key & Cooperation Partners | Key Resources | | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 50 | | |
| | of which in CH | 50 | | |
| | AuM 2017 (m) | CHF 3'000 | | |
| | of which managed in CH (m) | | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Managem | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |

QCAM[®]

QCAM Currency Asset Management AG www.q-cam.com

Founded in

2005

Headquarter Zug

QCAM Currency Asset Management AG is a financial services provider with main focus on currency and liquidity management. The offering includes Currency Overlay, FX Best Execution, FX Alpha, FX Advisory & Structuring and Liquidity Management. The company is regulated by the FINMA and the SEC, the client base consists of pension funds, family offices, investment funds, asset managers, corporate and NGO's

| Key & Cooperation Partners | Key Resources | | |
|--|-------------------------------|------------------------------|-----------------------|
| Company is run completely | Employees in 2017 | 18 | |
| independent of any large service | of which in CH | 16 | |
| providers. Depending on clients' needs, we work with different | AuM 2017 (m) | USD 7'000 | |
| external partners. | of which managed in CH (m) | USD 7'000 | |
| Customer Segments | | Asset Management Services | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue Model | | Managem | nent Style |
| Management Fee | Performance Fee | Active | Passive |

QUANTICA CAPITAL

Quantica Capital AG

www.quantica-capital.com

Founded in

2003

Headquarter

Schaffhausen

Quantica Capital is an asset management company focused on quantitative investment strategies. We provide sophisticated investment management services to our institutional and other qualified investors.

| Key & Cooperation Partners | Key Resources | | |
|---------------------------------------|-----------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 12 | |
| | of which in CH | 12 | |
| NFA, CFTC, AIMA, Sbai | AuM 2017 (m) | USD 500 | |
| | of which managed in CH (m) | USD 500 | |
| Customer Segments | | Asset Management Services | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset (| Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue Model | | Manageme | ent Style |
| Management Fee | Performance Fee | Active | Passive |

ROBECOSAM (
We are Sustainability Investing

RobecoSAM AG

www.robecosam.com

Founded in

1995

Headquarter Züri

Founded in 1995, RobecoSAM is an investment specialist focused exclusively on Sustainability Investing. To this end, we offer a comprehensive palette of products including in-house asset management, Sustainability Indices, corporate sustainability assessments, active ownership and engagement, and customized portfolio benchmarking solutions. Our asset capabilities accommodate institutional asset owners and financial intermediaries and cover a range of investment products in public equities which integrate environmental, social and governance (ESG) factors into the investment process. All of our investment strategies and products are designed to make a measurable environmental or societal impact.

| Key & Cooperation Partners | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 97 | |
| Robeco, S&P Dow Jones Indices | of which in CH | 94 | |
| | AuM 2017 (m) | USD 20'000 | |
| | of which managed in CH (m) | USD 14'000 | |
| Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue Model Management Style | | | ent Style |
| Management Fee | Performance Fee | Active | Passive |



Schroder Investment Management (Switzerland) AG

Founded in 1804 Headquarter London

www.schroders.com

At Schroders, our focus is on pure asset management. That means we can approach investment with a focussed perspective and an entrepreneurial attitude. Our overriding objective is to maximise returns for our clients. Schroders Switzerland, based in Zurich and Geneva, offers institutional and private investors a full range of domestic and foreign-domiciled investment funds as well as specific mandate solutions.

| Key & Cooperation Partners | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 4500 | |
| As a global player with a local footprint we have various key & | of which in CH | 136 | |
| cooperation partners around the | AuM 2017 (m) | CHF 545'000 | |
| world. | of which managed in CH (m) | CHF 10'900 | |
| Customer Segments Asset Management Services | | | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue Model Management Style | | nent Style | |
| Management Fee | Performance Fee | Active | Passive |

die Mobiliar

Schweizerische Mobiliar Asset Management AG

www.mobiliar.ch/asset-management

Founded in 2012 Headquarter Bern

Swiss Mobiliar Asset Management Ltd. is organized as a Fund Management Company and regulated by the FINMA (since 2013). Further the SMAM is responsible for managing the assets of the Swiss Mobiliar Group, the pension institutions of the Swiss Mobiliar, the five strategic funds and the real estate fund for institutional investors only. All funds are managed actively.

| Key & Cooperation Partners | Key Resources | | | |
|---|--------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 68 | | |
| | of which in CH | 68 | | |
| Mobiliar Insurance | AuM 2017 (m) | CHF 21'000 | | |
| | of which managed in CH (m) | CHF 21'000 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Revenue Model Management Style | | | |
| Management Fee | Performance Fee | Active | Passive | |



SELVI & Cie SA

www.selvi.ch

Founded in

1970

Headquarter

Geneva

The competence and reputation of Selvi & Cie revolves around four fundamental values: security, performance, confidentiality and trust

| Key & Cooperation Partners | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 15 | |
| | of which in CH | 15 | |
| | AuM 2017 (m) | CHF 394 | |
| | of which managed in CH (m) | CHF 394 | |
| Customer Segments Asset Management Services | | | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Managem | ent Style |
| Management Fee | Performance Fee | Active | Passive |

SEØUOIA

SEQUOIA ASSET MANAGEMENT SA

www.sequoia.ch

Founded in

2000

Headquarter Geneva

SEQUOIA is an independent financial holding which offers non-banking activities thanks to a large network of affiliates.

| Key & Cooperation Partners | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|
| Banque Havilland, bordier, LGT, | Employees in 2017 | 21 | |
| Saxo Bank, UBS, VP Bank, APEX Fund Services, bridport Investor | of which in CH | 21 | |
| Services, InvestGlass, | AuM 2017 (m) | CHF 250 | |
| Bloomberg, Secure Wealth Management, Stream Capital | of which managed in CH (m) | CHF 250 | |
| Customer Segments Asset 1 | | Asset Manage | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | lasses | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Model | Managen | nent Style |
| Management Fee | Performance Fee | Active | Passive |



SIA FUNDS AG

www.s-i- α .ch

Founded in

2005

Headquarter

Lachen

SIA pursues a value approach which it combines with a rigorous and in-depth analysis of the strategic positioning of every company it invests in.

| Key & Cooperation Partners | Key Resources | | | |
|----------------------------|---|------------------------------|-----------------------|--|
| | Employees in 2017 | 7 | | |
| | of which in CH | 7 | | |
| | AuM 2017 (m) | USD 265 | | |
| | of which managed in CH (m) | USD 265 | | |
| Customer S | Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Annak | 1 | | |
| | Asset C | lasses | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| | | | | |
| Revenue | e Model Management Style | | ient Style | |
| Management Fee | Performance Fee | Active | Passive | |



SUSI Partners AG

www.susi-partners.ch

Founded in

2009

Headquarter

Zug

SUSI Partners specialises in financing the development of the thress sustainable infrastructure channels; renewable energy generation, energy efficiency advances and the optimization of energy storage and grid infrastructure.

| Key & Cooperation Partners | Key Resources | | | |
|--|-----------------------------|------------------------------|-----------------------|--|
| UNPRI, United Nations Global | Employees in 2017 | 45 | | |
| Compact, SECA, Swiss Cleantech, DENEFF, ASIP, Hauck | of which in CH | 42 | | |
| & Aufhäuser, WEF Global | AuM 2017 (m) | EUR 750 | | |
| Shapers, Climate Heroes, Pöyry Switzerland AG | of which managed in CH (m) | EUR 750 | | |
| Customer Segments | | Asset Management Services | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue Model Management Style | | | | |
| Revenue | Model | Managem | епт этује | |
| Management Fee | Performance Fee | Active | Passive | |



Swiss Capital Alternative Investments AG, an affiliate of StepStone Group LP

www.stepstoneglobal.com

Founded in

2007 (StepStone),

Headquarter

Global Firm, no headquarter

1998 (Swiss Capital)

StepStone is a leading private markets firm with over 350 professionals currently overseeing \$230bn of private capital allocations, including approximately \$35bn of AUM.

| Key & Cooperation Partners | Key Resources | | |
|----------------------------|-------------------------------|---|-----------------------|
| | Employees in 2017 | 314 | |
| StepStone Group LP | of which in CH | 42 | |
| | AuM 2017 (m) | StepStone USD 35'000, whereof Swiss Capital USD 8'800 | |
| | of which managed in CH (m) | USD 8'800 | |
| Customer Segments | | Asset Manage | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset (| Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue Model | | Managem | ent Style |
| Management Fee | Performance Fee | Active | Passive |

SwissLife

Swiss Life Asset Management AG

www.swisslife-am.com

Founded in

1988

Headquarter Zürich

We are a well-known, ambitious and reliable European asset manager and a leading institutional real estate asset manager in Switzerland, France, Germany, Luxembourg and the UK.

| Key & Cooperation Partners | Key Resources | | | |
|----------------------------|---|------------------------------|-----------------------|--|
| | Employees in 2017 | 1600 | | |
| | of which in CH | 770 | | |
| Swiss Life Group | AuM 2017 (m) | CHF 223'600 | | |
| | of which managed in CH (m) | CHF 140'500 | | |
| Customer S | Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Revenue Model Management Style | | | |
| Management Fee | Performance Fee | Active | Passive | |

symbiotics Symbiotics SA

www.symbioticsgroup.com

Founded in

2004

Headquarter

Geneva

Symbiotics is the leading market access platform for impact investing. We are an investment company offering specialized investment solutions that connect socially responsible investors, to micro-, small and medium enterprises and value chain development projects in low-income economies in emerging and frontier markets.

| Key & Cooperation Partners | Key Resources | | |
|--|-------------------------------|------------------------------|-----------------------|
| Our key partners consist of | Employees in 2017 | 134 | |
| pension funds, banks, foundations and other types of institutional clients, as well as | of which in CH | 90 | |
| | AuM 2017 (m) | CHF 1'900 | |
| impact funds for which we act as investment advisor. | of which managed in CH (m) | CHF 1'900 | |
| Customer Segments Asset Management Services | | | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Revenue Model | | ent Style |
| Management Fee | Performance Fee | Active | Passive |

taviscapital

Tavis Capital AG

www.tavis-capital.com

Founded in

2014

Headquarter Zürich

We are convinced that only personal assistance and tailored solutions can lead to a goal. Trust is the key.

| Key & Cooperation Partners | Key Resources | | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 9 | | |
| | of which in CH | 9 | | |
| Credit Suisse, UBS | AuM 2017 (m) | CHF 800 | | |
| | of which managed in CH (m) | CHF 800 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Managem | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |



Teleios Capital Partners GmbH

www.teleioscapital.com

Founded in

2013

Headquarter

Zug

Teleios Capital is an activist investment firm specialising in European midcap companies with the core objective of creating long-term value for all shareholders. We are an independent investment firm managing assets on behalf of an institutional client base of endowments, foundations and pension plans, as well as family offices.

| Key & Cooperation Partners | | Key Resources | | |
|----------------------------|-----------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 8 | | |
| | of which in CH | 8 | | |
| | AuM 2017 (m) | USD 697 | | |
| | of which managed in CH (m) | USD 697 | | |
| Customer | Segments | Asset Managen | nent Services | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset (| Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenu | e Model | Manageme | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |



Tolomeo Capital AG

www.tolomeo-capital.com

Founded in

2011

Headquarter 2

Zürich

Tolomeo Capital is a systematic asset manager. It was established in 2011 as a spin-off of the quant and risk management unit of one of Switzerland's largest institutional family offices. The firm focuses on quantitative, technology-driven investment strategies with a strong emphasis on risk-adjusted returns.

| Key & Cooperation Partners | Key Resources | | |
|--|--------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 7 | |
| Morgan Stanley Intl., StateStreet, Duff & Phelps Lux, LBSwiss, PwC Lux , BDO | of which in CH | 7 | |
| | AuM 2017 (m) | USD 75 | |
| Switzerland. | of which managed in CH (m) | USD 0 | |
| Customer Segments Asset Management Services | | | ment Services |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Revenue Model Management Style | | |
| Management Fee | Performance Fee | Active | Passive |



Twelve Capital AG

www.twelvecapital.com

Founded in

2010

Headquarter

Zürich

Twelve Capital is an independent investment manager specialising in insurance investments for institutional clients. We are also a leading provider of capital to the insurance and reinsurance industry. Twelve Capital's investment expertise covers the entire insurance balance sheet, including Insurance Bonds, Insurance Private Debt, Catastrophe Bonds, Private Insurance-Linked Securities and Insurance Equity. The firm also runs a number of Best Ideas portfolios as well.

| Key & Cooperation Partners | Key Resources | | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 43 | | |
| | of which in CH | 30 | | |
| | AuM 2017 (m) | USD 4'406 | | |
| | of which managed in CH (m) | | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue Model Management St | | | | |
| Revenue | Model | Managem | ent Style | |



UBS Asset Management AG

www.ubs.com

Founded in

1862

Headquarter

Zürich

UBS provides financial advice and solutions to wealthy, institutional and corporate clients worldwide, as well as private clients in Switzerland. The operational structure of the Group is comprised of our Corporate Center and five business divisions: Wealth Management, Wealth Management Americas, Personal & Corporate Banking, Asset Management and the Investment Bank. UBS's strategy builds on the strengths of all of its businesses and focuses its efforts on areas in which it excels, while seeking to capitalize on the compelling growth prospects in the businesses and regions in which it operates, in order to generate attractive and sustainable returns for its shareholders. All of its businesses are capital-efficient and benefit from a strong competitive position in their targeted markets.

| Key & Cooperation Partners | Key Resources | | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 2'300 | | |
| | of which in CH | 700 | | |
| - | AuM 2017 (m) | CHF 776'000 | | |
| | of which managed in CH (m) | CHF 232'800 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Managen | nent Style | |
| Management Fee | Performance Fee | Active | Passive | |



Union Bancaire Privée, UBP SA

www.ubp.com

Founded in

1969

Headquarter

Geneva

We apply our forward-looking vision, our entrepreneurial spirit and our leading investment expertise to offer our clients significant added value and performance over the long term.

| Key & Cooperation Partners | | Key Resources* | | |
|----------------------------|-----------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 1'697 | | |
| | of which in CH | 1'120 | | |
| | AuM 2017 (m) | CHF 125'300 | | |
| | of which managed in CH (m) | CHF 27'500 | | |
| Custome | Segments | Asset Managen | nent Services | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset (| Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenu | e Model | Manageme | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |

UNIGESTION

Unigestion SA

www.unigestion.com

Founded in

1971

Headquarter

Geneva

Uniaestion is a boutiaue asset manaaer with the scale to deliver alobal tailor-made investment solutions for thouahtful investors.

| Key & Cooperation Partners | Key Resources* | | | |
|---|--------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 230 | | |
| | of which in CH | 120 | | |
| | AuM 2017 (m) | USD 26'500 | | |
| | of which managed in CH (m) | | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Revenue Model Management Style | | | |
| Management Fee | Performance Fee | Active | Passive | |

^{*}Numbers reported on a group level and no detailed information on asset management unit provided.



VALRES Fund Management SA

www.valres.ch

Founded in

2013

Headquarter

Geneva

 $VALRES\ Fund\ Management\ SA\ is\ a\ real\ estate\ fund\ management\ company\ incorporated\ under\ Swiss\ law.\ VALRES's\ ambition\ is\ to\ develop\ and\ offer\ its\ investors\ a\ range\ of\ regulated\ thematic\ real\ estate\ funds.$

| Key & Cooperation Partners | Key Resources | | |
|---|-------------------------------|------------------------------|-----------------------|
| | Employees in 2017 | 10 | |
| ASMA, PwC, Banque J. Safra | of which in CH | 10 | |
| Sarasin SA | AuM 2017 (m) | CHF 386 | |
| | of which managed in CH (m) | CHF 386 | |
| Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset (| Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue Model Management Style | | | ent Style |
| Management Fee | Performance Fee | Active | Passive |

Vontobel

Vontobel Asset Management AG

www.vontobel.com

Founded in

1988

Headquarter Zürich

Vontobel Asset Management is an active asset manager with global reach and a multi-boutique approach. Each of our boutiques draws on specialized investment talent, a strong performance culture and robust risk management. We deliver leading-edge solutions for our clients.

| Key & Cooperation Partners | Key Resources | | |
|--|--------------------------------|------------------------------|-----------------------|
| Virtus (US), Altis (Latam), Raiffeisen (Lux and | Employees in 2017 | 404 | |
| CH),Hexagone (FR), Helvetia | of which in CH | 215 | |
| (CH), Generali (IT), Sumitomo Mitsui Financial Group (JPN), | AuM 2017 (m) | CHF 121'300 | |
| Eastspring (Asia), ANZ (AUS and NZL) | of which managed in CH (m) | CHF 52'500 | |
| Customer Segments Asset Management Services | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate |
| | Asset C | Classes | |
| Money Market | Bond | Equity | Multi Asset |
| Commodity | Real Estate | Infrastructure | Private Equity |
| Hedge Funds | ILS | Other | |
| Revenue | Revenue Model Management Style | | |
| Management Fee | Performance Fee | Active | Passive |

[vv] vermögensverwaltung ag

VV Vermögensverwaltung AG

www.vv-ag.ch

Committed to Swiss Values

Founded in

1995

Headquarter

Zug

We are an independent asset manager that specialized on Swiss small and mid caps. We do have a clear focus on the often mitigated small cap segment. Committed to Swiss Values.

| Key & Cooperation Partners | Key Resources | | | |
|---|-------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 3 | | |
| PricewaterhouseCoopers | of which in CH | 3 | | |
| | AuM 2017 (m) | CHF 750 | | |
| | of which managed in CH (m) | | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | lasses | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Model | Managen | nent Style | |
| Management Fee | Performance Fee | Active | Passive | |

Wydler Asset Management

Wydler Asset Management AG

www.wydlerinvest.ch

Founded in

2007

Headquarter

Wilen bei Wollerau

As an asset manager Wydler Asset Management follows ist own path. We focus substantially on equities, are straightforward and have no obligations to any bank. At Wydler Asset Management, the decision makers are also the owners.

| Key & Cooperation Partners | Key Resources | | | |
|---|--------------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 5 | | |
| | of which in CH | 5 | | |
| | AuM 2017 (m) | CHF 900 | | |
| | of which managed in CH (m) | CHF 900 | | |
| Customer Segments Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset C | Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | Revenue Model Management Style | | | |
| Management Fee | Performance Fee | Active | Passive | |



www.zcapital.ch

2008 Founded in Headquarter Zug

nager specialised in Swiss equities and managing two investment funds.

| Key & Cooperation Partners | Key Resources | | | |
|----------------------------|-----------------------------|------------------------------|-----------------------|--|
| | Employees in 2017 | 8 | | |
| | of which in CH | 8 | | |
| | AuM 2017 (m) | CHF 1'500 CHF 1'500 | | |
| | of which managed in CH (m) | | | |
| Customer | Segments | Asset Managen | nent Services | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | |
| | Asset (| Classes | | |
| Money Market | Bond | Equity | Multi Asset | |
| Commodity | Real Estate | Infrastructure | Private Equity | |
| Hedge Funds | ILS | Other | | |
| Revenue | e Model | Manageme | ent Style | |
| Management Fee | Performance Fee | Active | Passive | |

Swisscanto

Zürcher Kantonalbank

www.swisscanto.ch

Founded in

1883

Headquarter

Zürich

by Zürcher Kantonalbank

| Key & Cooperation Partners | Key Resources | | | | | |
|----------------------------|-----------------------------|------------------------------|-----------------------|--|--|--|
| Other Kantonalbanken | Employees in 2017 | 231 | | | | |
| | of which in CH | 231 | | | | |
| | AuM 2017 (m) | CHF 161'000 | | | | |
| | of which managed in CH (m) | CHF 161'000 | | | | |
| Customer Segments | | Asset Management Services | | | | |
| Private National | Private International | Collective Investment Scheme | Discretionary Mandate | | | |
| Institutional National | Institutional International | Exchange Traded Fund | Advisory Mandate | | | |
| Asset Classes | | | | | | |
| Money Market | Bond | Equity | Multi Asset | | | |
| Commodity | Real Estate | Infrastructure | Private Equity | | | |
| Hedge Funds | ILS | Other | | | | |
| Revenue Model | | Management Style | | | | |
| Management Fee | Performance Fee | Active | Passive | | | |

^{*}The asset management of Zürcher Kantonalbank operates under the product brand of Swisscanto Invest by Zürcher Kantonalbank. All figures are related to the asset management part of the bank.

Authors

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Thomas Ankenbrand holds a Master's degree from the University of St. Gallen and a PhD from the University of Lausanne. He founded several companies and has broad experience as a CEO and board member of various companies in the financial industry. He is currently engaged in Asset Management and FinTech research at the Lucerne University of Applied Sciences and Arts. In addition, he is board member of different companies.

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Lorenz Arnet is Head of the Asset Management Platform Switzerland and a Senior Counsel at the Swiss Funds and Asset Management Association SFAMA. From 2009 to 2016 he was a founding partner of InCube Group, a Swiss-based consulting and technology company focused on the financial services business. From 2002 to 2008 he worked for Barclays Capital in London and Zurich. At Barclays he helped build up and expand the derivatives business in Switzerland. From 2006 onwards he was the head of the derivatives business for Swiss institutional clients and a member of the management team. Lorenz Arnet holds a Master's degree in Finance from the University St. Gallen (HSG) and is a CAIA charter holder.

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Jürg Fausch is an economist and lecturer at the Institute of Financial Services IFZ in Zug. He conducted his graduate studies at Stockholm University and the Stockholm School of Economics and obtained a PhD in Economics from Stockholm University in 2017. Jürg has a research focus on DSGE models, asset pricing, monetary policy and financial markets. His research has been published in the Journal of Macroeconomics. He gained practical experience in the asset management industry while he was involved in the constitution of the first microfinance investment fund in Liechtenstein.

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Markus Fuchs is the Managing Director of the Swiss Funds and Asset Management Association SFAMA. He has been working in the fund and asset management industry since 1992. He built up and headed the Products & Fund Services team at Bank Hoffman, a subsidiary of Credit Suisse in the nineties. From 2000 until 2004 he headed the fund product management team of Swiss Life as CEO of Swiss Life Funds AG. He then joined UBS AG as a Managing Director (Global Wealth Management & Swiss Bank/Products & Services) where he had the overall responsibility for proprietary hedge fund products. In November 2010 he joined the Swiss Funds Association SFA as a Senior Counsel, namely in charge of the areas asset management and alternative investments. In July 2013, he became the Managing Director of SFA, which since then operates under the name Swiss Funds & Asset Management Association SFAMA. He obtained a degree in Economics from the University of Zurich and an Executive MBA from the IMD International Management Development in Lausanne.

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Diana Imbach Haumüller is a Senior Legal Counsel at the Swiss Funds and Asset Management Association SFAMA. She is a Swiss Lawyer specialized in financial services law and compliance matters. Diana has been working for several years as an attorney at law in international law firms in Switzerland and Australia (2006–2012). Before joining SFAMA, Diana had been working for the State Secretariat for International Financial Matters SIF (2012–2014). Diana holds an LL.M from the University of Sydney, Australia and a doctorate in law from the University of Zürich.

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Appendix

Indicator sources of the asset management hub ranking

| Publisher | Factor | Source | Dimension |
|--|---|---|-----------------|
| 2think now | Innovation Cities | Innovation Cities Index 2015 | Technological |
| Credit Suisse | Number of HNWI | Global Wealth Databook 2017 | Economic |
| Economist Intelligence Unit | Global Cities Competitiveness | Hot spots – Benchmarking global city competitiveness | Economic |
| Edbiz Consulting | Islamic Finance Country Index | Islamic Finance Country Index – IFCI 2017 | Economic |
| Fraser Institute | Economic Freedom of the World | Economic Freedom of the World: 2017 Annual Report | Economic |
| Hays | Global Skills | Hays Global Skills Index | Social |
| Heldrick & Struggles | Demographics | Heidrick & Struggles database | Social |
| | Openness | Heidrick & Struggles database | Social |
| | Proclivity to attracting talent | Heidrick & Struggles database | Social |
| | Quality of labor force | Heidrick & Struggles database | Social |
| | Talent environment | Heidrick & Struggles database | Social |
| | University Education | Heidrick & Struggles database | Social |
| Henley & Partners | Visa Restriction | Visa Restrictions Index | Political/Legal |
| IMD | World Talent | World Talent Report | Social |
| University of Sydney, the Economist | Global Peace Index | Global Peace Index | Political/Legal |
| International Labour Organization | Employment in knowledge- intense services | ILOSTAT Database of Labour Statistics | Social |
| International Monetary Fund | Domestic Credit to Private Sector | International Financial Statistics and data files and World Bank and OECD GDP estimates | Economic |
| | Domestic Market Scale | International Monetary Fund Database | Economic |
| | Foreign Direct Investment Net Inflows | International Financial Statistics and data files and World Bank and OECD GDP estimates | Economic |
| | Government Debt as % of GDP | World Economic Outlook (April 2018) | Economic |
| | GDP per capita | World Economic Outlook (April 2018) | Economic |
| International | ICT Access | Measuring the Information Society | Technological |
| Telecommunication Union | ICT Use | Measuring the Information Society | Technological |
| InterNations | Expat Ranking | Expat Insider | Social |
| Knight Frank | Global Cities | Global Cities Report | Social |
| KPMG | Corporate Tax Rates | Corporate tax rates table | Political/Legal |
| Numbeo | Cost of Living City | Numbeo database | Social |
| | Local Purchasing Power Index | Numbeo database | Economic |
| | Quality of Life City | Numbeo database | Social |
| OECD | PISA Ranking | Programme for International Student Assessment (PISA) | Social |
| QS Quacquarelli Symonds Ltd | QS university ranking average score of top 3 universities | QS World University Ranking | Social |

| Reporters without Borders | Press Freedom | World Press Freedom Index | Political/Legal |
|---|--|--|-----------------|
| Tax Justice Network Limited Financial Secrecy | | Financial Secrecy Index | Economic |
| The Global Entrepreneurship and Development Institute | Global Entrepreneurship Index | The Global Entrepreneurship and Development Institute website | Economic |
| The World Bank | Ease of Getting Credit | Doing Business: Measuring Regulatory Quality and Efficiency | Economic |
| | Ease of Paying Taxes | Doing Business: Measuring Regulatory Quality and Efficiency | Political/Legal |
| | Ease of Protecting Minority Investments | Doing Business: Measuring Regulatory | Economic |
| | Ease of Resolving Insolvency | Doing Business: Measuring Regulatory Quality and Efficiency | Economic |
| | Government Effectiveness | World Governance Indicators | Political/Legal |
| | Graduates in Social Science, Business and Law | Statistics | |
| | Political Stability | World Governance Indicators | Political/Legal |
| | Regulatory Quality | World Governance Indicators | Political/Legal |
| | Starting a Business | Doing Business: Measuring Regulatory Quality and Efficiency | Economic |
| Transparency International | Corruption Perception | Corruption Perceptions Index | Political/Legal |
| UBS | Wage Level City | Preise und Löhne | Economic |
| UNESCO Institute | Expenditure on Education | UIS online database | Social |
| for Statistics | Graduates in Science & Eng. | UIS online database | Social |
| | Number of Students from Abroad | UIS online database | Social |
| | Research Talent in Business Enterprise | UIS online database | Technological |
| | Researchers | UIS online database | Technological |
| | Tertiary Enrolment | UIS online database | Social |
| United Nations Public | Government Online Services | e-Government Survey | Technological |
| Administration Network | Online E-Participation | e-Government Survey | Technological |
| World Economic Forum | Quality of Infrastructure | Global Competitiveness Report | Social |
| | Human Capital | The Human Capital Report | Social |
| | University/Industry Research Collaboration | Executive Opinion Survey | Technological |
| World Federation of Exchanges | Market Capitalization | World Federation of Exchanges database: extracted from the World Bank's World Development Indicators database | Economic |
| | Total Value of Stocks Traded | World Federation of Exchanges database: extracted from the World Bank's World Development Indicators database | Economic |
| Z/Yen Group | Global Financial Centers | Global Financial Centers Index | Economic |

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