

STOXX

SIX



DEUTSCHE BÖRSE  
GROUP

White Paper

# The benchmark industry

---

An introduction and outlook

1.	Introduction	4
2.	Fundamentals of the benchmark industry	5
2.1	Benefits of indices	6
2.2	How the benchmark industry works	10
2.3	Types of indices	12
3.	Imperatives for a well-functioning benchmark industry	14
4.	Recent regulatory efforts in the benchmark industry	18
4.1	Overview on regulatory efforts	19
4.2	An assessment of the EU Commission's proposal	20
5.	Conclusion	23

## Executive summary

Indices get everybody's attention; the news spread movements on capital markets mostly by referring to indices. But it is not only their role as an information tool which makes them important – because of their various benefits they are also vital for the investment industry, individual investors, corporations, governments, financial markets, and a variety of other stakeholders. Indices increase market transparency, facilitate diversification and risk management, simplify performance measurement, and support decision making. And by developing innovative index products, index administrators foster investments in areas that are economically, socially, and environmentally beneficial (detailed in chapter 2.1).

Recent market manipulation related to benchmarks such as the London Interbank Offered Rate (Libor) has triggered a debate about the safety and integrity of indices. Although these market manipulations were only related to subjective indices – that is to say, indices based on panel input data, e.g. from surveys, or on a partly discretionary methodology – the current debate also extends to the question of objective indices, which are based on input data from real market transactions on regulated markets and a traceable methodology.

In order to preserve the benefits of indices as well as to enable a well-functioning benchmark industry, the adherence to at least four overarching imperatives is crucial. These are: (1) the reliability and traceability of the index provision should be ensured, (2) conflicts of interest should be avoided to prevent manipulation, (3) index administrators should have incentives to develop beneficial index innovations, and (4) a global level playing field that allows EU end customers to choose from a full range of index products should be ensured (detailed in chapter 3).

In line with these imperatives, the International Organization of Securities Commissions (IOSCO) has recently published its Principles for Financial Benchmarks as an internationally agreed standard for the industry.

The proposal of the EU Commission on benchmark regulation (“the Proposal”), which is currently under discussion, aims to transfer the IOSCO principles into binding European law. The Proposal addresses

several important topics that will help ensure adherence to the outlined imperatives. Amongst others, it focuses on critical benchmarks, more reliable benchmark processes, the avoidance of conflicts of interest, and the requirement of regulatory standards for non-EU members. On other dimensions, however, the Proposal goes beyond the IOSCO standards while expressing only a low degree of differentiation. For instance, the Proposal hardly distinguishes between objective and subjective indices, imposes far-reaching transparency requirements, assumes neutral providers of market infrastructure have conflicts of interest, and potentially requires regulatory standards from non-EU members that go beyond the IOSCO standards (detailed in chapter 4).

This report aims to facilitate an informed discussion about the benchmark industry and future regulatory principles. To do so, it provides an introductory overview on the industry and points out its benefits as well as important differences between business models and index types. Based on these fundamentals, the paper argues in favour of regulation that effectively preserves the various benefits of indices to its end customers.

---

### A quick overview of the contents of this paper

- For a **five-minute overview** on all major topics, please focus on the “key messages” at the beginning of each chapter.
- To **understand indices**, what they are used for and why they are important, please focus on chapter 2.1.
- To grasp **how the benchmark industry works** and who its main players are, please focus on chapter 2.2.
- For an understanding about the important differences between **various types of indices**, please focus on chapter 2.3.
- For a view on what is necessary for a **well-functioning industry** that is **free from manipulation**, please focus on chapter 3.
- For an overview on current **regulatory efforts** and an in-depth **look at the EU Commission's proposal**, please focus on chapters 4.1 and 4.2, respectively.

# 1. Introduction

The index industry plays an important role in a modern economy. It produces indices that make markets more transparent, facilitate diversification of investments and risk management, simplify performance measurement, and support decision making for a wide range of people and institutions. Yet, recent revelations about how the calculation of certain indices, such as the Libor, has been manipulated have triggered global concern about standards in the industry as well as wide debate about how to ensure its integrity.

The debate is an important one since the benefits outlined above are dependent on the reliability of indices. Yet, it is also crucial that the debate is informed by a clear understanding of the industry and the different types of indices that exist. In particular, it is necessary to distinguish between what are known as objective indices – for example, the NASDAQ 100 or DAX<sup>®</sup>, and subjective indices such as the Libor. It is subjective indices that lend themselves to manipulation and may require regulatory oversight.

Therefore, this paper aims to contribute to the on-going debate by explaining how the benchmark industry works, its purpose, and its benefits. It also sets out the essential elements of a well-functioning industry and, in this light, considers the draft legislation put forward by the EU Commission to regulate the industry.

The paper is structured as follows: chapter 2 explains the fundamentals of the industry: its purpose and benefits, the value chain, the different types of companies involved in the industry, and the different types of indices. Chapter 3 suggests four elements that are imperative for a well-functioning benchmark industry. With this in mind, chapter 4 looks at current initiatives to improve standards and particularly at the Proposal put forward by the EU Commission. Chapter 5 provides conclusions to the report.

## 2. Fundamentals of the benchmark industry

### Key messages of the chapter

- Indices provide their benefits by serving as information aggregates, reference values, and benchmarks for financial instruments.
- Innovations in the benchmark industry help to address new investor needs. In this way, the industry contributes to an increase in capital flows into new areas of the economy that, besides promoting growth, can support wider social and environmental goals.
- There are four main types of benchmark-related players: (1) those that contribute the data; (2) the administrators who provide the indices; (3) the product issuers who issue index-related products; and (4) the end customers. In some cases, organisations are active in several or all of these areas.
- Index administrators have different business models – they can be pure index providers, exchanges, banks, asset managers, data vendors, public bodies, or trade organisations.
- Indices can be compiled as either objective or subjective indices. Objective indices are based on publicly available market data and a rule-based methodology. Subjective indices, in contrast, are based on input data from panels that is usually hard to verify, or on a methodology that is less transparent.

## 2.1 Benefits of indices

Indices are data aggregates, be they of stock prices, interest rates, commodity prices, or government statistics, for example. Financial indices more formally can be defined as an aggregation of market data of financial instruments or acquirable assets which are used either as a basis for financial products (underlying) or to evaluate financial investments. There are indices for almost any financial asset class as well as for all manner of goods and concepts such as economic growth or job market data. Estimates suggest that the five largest index providers alone offer more than 1.8 million indices.<sup>1)</sup> These play an important

role in global asset allocation for investors. Exhibit 1 shows that in 2012, €5.9 trillion in assets under management (AuM) were invested globally in products linked to indices. Europe accounted for €1.4 trillion of this, or 24 percent. Contrary to financial indices, macro-economic indicators have no direct relation to investable assets and are therefore excluded from this paper.

1) Source: publications of the five largest global index providers (FTSE, MSCI, Russell, Standard & Poor's, and STOXX).

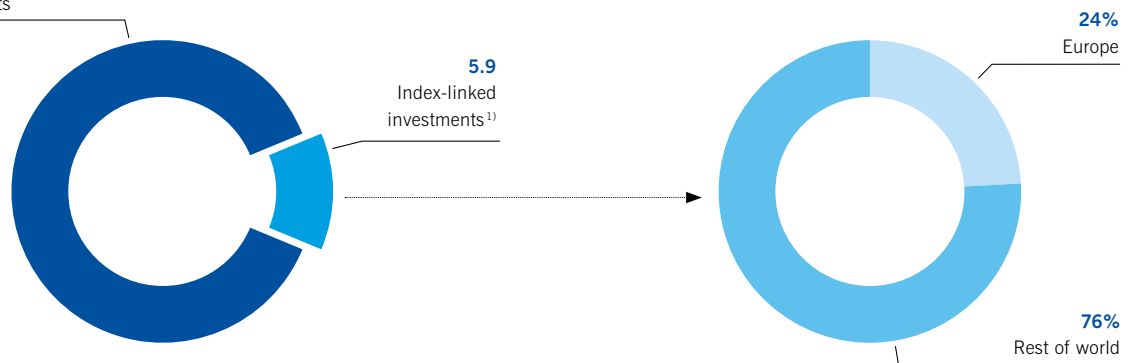
### Exhibit 1

#### Global assets under management, 2012: share of index-linked investments

€ trillion  
Total: 43.5

#### 37.6

Actively managed investments



1) Index-linked investments include index-linked exchange-traded products, index funds, and structured products. Derivatives and products referenced to interest rate benchmarks are not included.

Source: Blackrock ETF Report, Cerulli, fund associations, Simfunds database

Indices assist organisations and individuals in three ways. First, they aggregate information and thus facilitate decision making. Second, they serve as reference values and thus increase market transparency and simplify performance measurement. Third, they are an integrated building block for financial instruments and used as underlyings, which constitutes the term “benchmark”. Consequently, they facilitate diversification and risk management for investors. Moreover, constant innovation in the benchmark industry helps to address new investor needs and makes new superior investment strategies accessible especially for retail investors. Thereby, they drive capital flows into new areas of the economy that can promote growth and wider social and environmental goals.

### Aggregated information, reference values, benchmarks

Indices provide their benefits by serving as information aggregates, reference values, and benchmarks for financial instruments.

**Aggregated information.** By collecting and consolidating prices for a certain market, indices are a comprehensive measure of performance that can help guide a wide range of decision makers, including businesses, investors, governments and a variety of other stakeholders.

The S&P 500 index<sup>2)</sup>, for example, is one of ten components in The Conference Board’s Leading Economic Index that helps signal peaks and troughs in the US business cycle. It can help policy makers, and investors in general, evaluate the economy and so guide their decisions.

Indices are also efficient measures of market developments. It would take a long time for an end customer to collate enough data to get the same overview of any one particular market or economy that an index provides.

**Reference values.** Indices serve as references for comparing performance. Therefore, they are important in making financial markets more transparent. For example, an investor keen to evaluate the performance of a mutual fund that is focused on European blue-chip companies could compare it to the movement of the EURO STOXX 50<sup>®</sup>,<sup>3)</sup> an index that is similarly focused.

Data from the EDHEC EU Index Survey 2011 suggests that the majority of equity and bond investors use indices when making their investment decisions.<sup>4)</sup> Also, the Rimes Buy-Side Survey 2013 on Index and Benchmark Data Management, shows that most investment management firms expect the number of indices and benchmarks they are using to increase.<sup>5)</sup>

**Benchmarks for financial instruments.** When an index is used as a reference price for a financial instrument or contract it becomes a benchmark.<sup>6)</sup> Certain financial instruments give investors exposure to all the components of an index without them having to invest in each single one. Index funds, for example, aim to replicate the performance of the underlying assets in the index. If an index fund is traded on an exchange, it is known as an exchange-traded fund (ETF). Exhibit 2 shows the AuM for different index-related products.

2) The S&P 500 is a stock market index, based on the market capitalisations of 500 large companies having common stock listed on the NYSE or NASDAQ.

3) The EURO STOXX 50 is a stock market index which contains 50 large corporates from Eurozone countries.

4) See EDHEC-Risk Institute 2011.

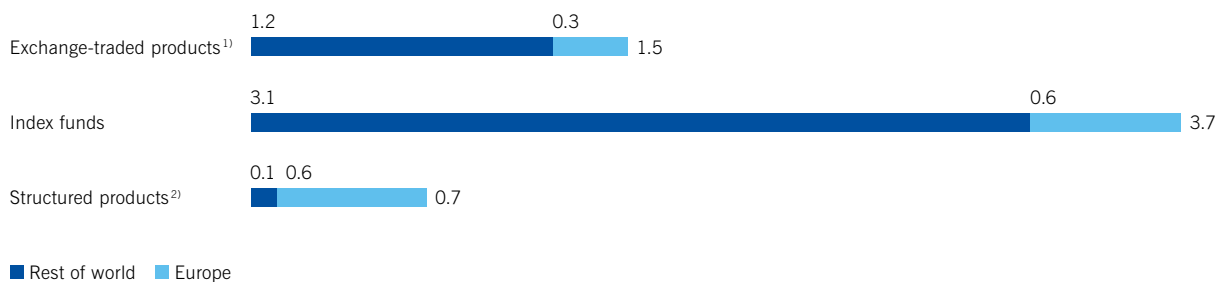
5) See RIMES Technologies 2013.

6) See EU Commission 2013.

## Exhibit 2

## Index-linked investments under management by product type, 2012

€ trillion  
Total: 5.9



1) Includes exchange-traded funds and exchange-traded commodities

2) Based on estimate that 80% of structured products are index-linked; analysis excludes products referenced to interest rate benchmarks and derivatives

Source: Blackrock ETF Report, Cerulli, fund associations, Simfunds database

Buying an index product rather than trading all its components is both quicker and more cost-efficient. Hence, indices assist investors in diversifying their investments and, in addition, help them to manage risks at relatively low costs. The risk benefit from indices comes from allowing access to further risk premia in a systematic way, as shown by Fama and French<sup>7)</sup>. Risks can be better managed, for example, by using derivatives such as forward and futures contracts that reference a benchmark.

Some economists argue that indices are the most rational investment to make: for instance, index investing is the logical investment strategy according to the “efficient market hypothesis”<sup>8)</sup> put forward by Eugene Fama – one of the 2013 winners of the Nobel Prize in Economics.<sup>9)</sup> It suggests that investors can do just as well or better by investing in stock index funds as they can by trying to time the market and pick individual stocks.

Here are two examples of the advantages of indices as benchmarks:

- An investor believes the German economy will grow strongly and that the stock market will rise accordingly. Rather than buying all 30 stocks in DAX, which would require significant capital, he or she instead buys an index fund that uses DAX as a benchmark, thus saving time, money and transaction costs in the process. The investment will perform fully identical to the benchmark.
- An energy wholesaler wants to manage the risk inherent in the fluctuating prices on the energy market. By buying forward or futures contracts on an energy price index, the company locks in the price that will be paid at a set date in the future to protect itself from falling prices. Some 85 to 90 percent of all forward and futures contracts in energy wholesale markets are based on indices.<sup>10)</sup>

7) See Fama and French 1993.

8) See Fama 1965.

9) See Rauterberg and Verstein 2013.

10) See European Federation of Energy Traders 2012.



### **Innovation and the promotion of environmental, social, and developmental goals**

In addition to the benefits described above, constant innovation in the index industry allows investors to participate in new markets and strategies. In doing so, the industry increases capital flows into new areas of the economy that, besides promoting growth, support wider social and environmental goals.

For example, indices have been particularly important in facilitating the flow of funds to emerging economies. In fact, it can be said that investments in emerging markets have been made popular mostly by the development of new indices. Companies in emerging economies also benefit. Academic research shows that those companies that are included in an emerging markets index enjoy higher investor awareness, leading to a permanent, positive price impact and helping to expand their investor base.<sup>11)</sup>

Another area of innovation is the indexing of sustainable companies. A variety of indices exist that help investors evaluate the economic performance of such firms. The FTSE Environmental Technologies Index Series is one such index, designed to measure the performance of companies whose core business is derived from environmental markets and technologies. The STOXX® Global ESG Environmental Leaders index<sup>12)</sup> is another such example, representing the leading global companies in terms of environmental criteria. There are also many ETFs on the market that help investors focus on environmentally responsible investments. According to recent estimates, some US\$1 billion are currently invested in sustainable ETFs in Europe.<sup>13)</sup>

Lastly, there is also a growing number of indices that focus on ethical issues. The FTSE4Good Index series, for example, measures the performance of companies that meet globally recognised corporate responsibility standards and offers sub-indices for themes such as the protection of human rights or the fight against corruption.

11) See Hacibedel and van Bommel 2007.

12) The STOXX Global ESG Leaders index offers a representation of the leading global companies in terms of environmental, social and governance criteria. The STOXX Global ESG Environmental Leaders is one of its sub-indices.

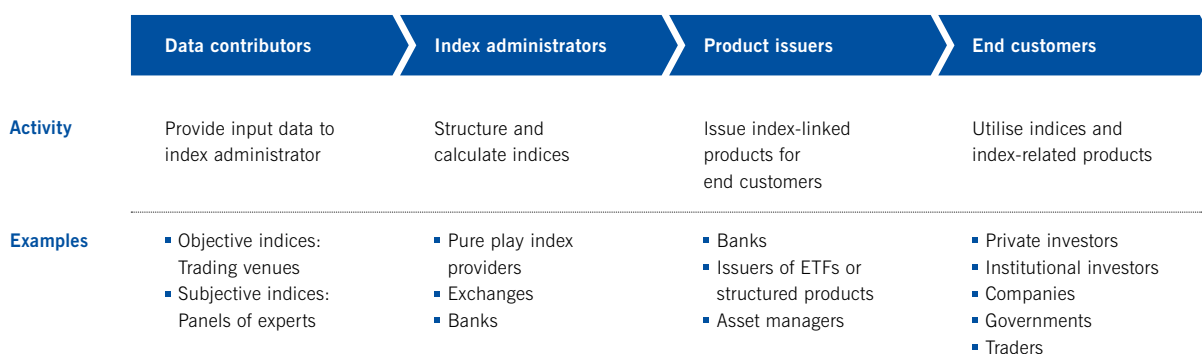
13) See Deutsche Bank 2013.

## 2.2 How the benchmark industry works

There are four main types of benchmark-related players: first, those that contribute the data; second, those that provide indices, namely the index administrators; third, the product issuers who issue index-related products; and fourth, the end customers.

Some players have integrated business models and thus play several roles. Exhibit 3 illustrates this “value chain”, and gives examples of some of the key players.

Exhibit 3  
The benchmark industry value chain



- **Data contributors** often sell the input data that is used for an index and earn a fee in return. Regulated data venues are contributors to objective indices, providing market data such as transaction prices or firm quotes. They need to be distinguished from panels of contributors, such as a group of banks or experts that supply the input data for subjective indices.

- **Index administrators** or providers design the indices. They develop the methodology for compiling an index and calculate it based on the data they receive from the data contributors. Moreover, they maintain the indices based on clearly defined rules. There are several different administrator business models, which are discussed later. Administrators have two main sources of income: they charge a subscription fee to customers who use detailed data of the indices directly, and they charge a licensing fee to those that issue financial products based on their indices (the product issuers).

- **Product issuers** issue index-linked products that use indices as a benchmark (i.e. as an underlying). They sell the issued products to investors and earn a fee in return. Product issuers differ in the way they earn money and whether they are incentivised by the development of the index value or not. They may earn a fixed fee for each product they issue to clients or charge volume-based or performance-related fees.

- **End customers** utilise both indices and index-related products. As described in chapter 2.1, they use indices, for example, for their investment decisions or to diversify their risks.

Index administrators play a central role in the value chain of the index industry as they create the indices. We estimate that administrators account for some 5,000 full-time jobs globally and 1,500 in Europe. Given their importance, a closer look at their business models follows.

## Index administrators

Index administrators create value by developing an index methodology and by calculating the index, a complex process that requires considerable knowledge and resources. Developing a good objective index is not easy. The typically cited qualities of such an index are that it is representative and transparent, and that its constituents are both liquid<sup>14)</sup> and investable.<sup>15), 16)</sup>

To develop an objective index, administrators must first decide on its focus – a geography or sector for example. They then define how to select individual assets from within that universe using a number of selection criteria such as market capitalisation or liquidity. In addition, index administrators have to determine how to weight the constituents of the index to derive its value, using another composite set of factors. Finally, administrators set the rules for dealing with special situations, such as stock splits or dividend payments, to make sure that the index value is not affected inappropriately by such events. Besides developing the methodology, index administrators continuously have to calculate their index products. The calculation follows a difficult process that reflects the administrator's expertise, requiring the extensive filtering and management of data.

Indices are provided by a variety of different types of administrators, who compete against each other on a global scale. Generally, they come in one of seven different business models, as detailed below:

- **Pure play index providers** create indices in the manner described above. Furthermore, they offer pure index calculation services and risk/return analyses to clients. Their overriding function is to develop the proprietary methodology for an index and calculate it.

- **Exchanges** often have a business that creates indices for the asset classes that are traded on their platforms especially for the regime/country they operate in. They earn money through licensing or data service models.
- **Asset managers** typically have businesses that calculate indices as a basis for their own proprietary investment products and strategy offerings.
- **Banks** are also active in the provision of indices, typically through their investment banking research function and again mainly for their own use. Most large investment banks and many universal banks provide indices to their clients.
- **Data vendors** who enjoy strong, reliable brands provide indices mainly to enrich the content of their platform. Often these indices are offered as part of comprehensive data packages to customers.
- **Public bodies and multilateral organisations** create indices – for example, to help gauge economic performance.
- **Trade organisations** provide indices for a wide range of purposes, often as a reference value for trading activities.

14) An asset's *liquidity* refers to its ability to be sold without causing a significant movement in the price and with minimum loss of value – see Keynes 1971, p. 67.

15) See Arnott, Hsu and West 2008; and Kamp 2008.

16) *Representative* means that the index should reflect the underlying data in its entirety. *Transparent* usually means that indices should be designed reasonably and reliably by means of publicly available and non-discretionary rules. Objective financial indices are usually also required to represent data, which cannot only be invested in, but which is also liquid. The former means that the included constituents are accessible to all investors.

## 2.3 Types of indices

As already noted, indices can be compiled in two different ways and are known as either objective or subjective. These need to be differentiated clearly as they are based on different input data and on different methodologies, leading to different rules for manipulation.

### Objective indices

Objective indices fulfill three criteria. First, they are based entirely on publicly available data from market transactions or firm quotes. Second, they are rule-based, having a clearly defined methodology. Finally, they can be replicated using existing financial instruments. Examples of objective indices include familiar stock market indices such as the United States' S&P 500 and, for Europe, the EURO STOXX 50. The criteria in detail are as follows:

**1. Transactional market data.** Objective indices use reliable, transparent data, be it the actual traded price of the underlying financial instruments or firm quotes from a regulated market where a trade can be made at any time for that given quote. The data upon which an objective index is based is publicly available, whether free (in case of delayed data) or by purchasing a subscription or licensing agreement.

**2. Clearly documented methodology.** Objective indices are fully rule-based. They leave no room for discretion when it comes to making ordinary adjustments to the index that might be required, such as

when a company issues a dividend. There are also clear governance rules for extraordinary events, such as a complex dividend arrangement. The rules are freely accessible and published in great detail.<sup>17)</sup> In addition, the methodology defines how both the incoming data and the actual index are checked to avoid any mispricing.

**3. Possibility of full replication.** Objective indices can be replicated with existing financial instruments without significant deviations. So if an investor were to acquire a portfolio of all the constituents of the index, in accordance with the rules of its methodology, it would perform the same as the index.

### Subjective indices

Subjective indices do not meet one or more of the criteria of objective indices. Rather than being based on market transactions, the data is typically supplied by a panel of contributors – for instance a panel of banks, as in the case of Libor and many of the other interest rate indices. Hence, the reliability of a subjective index depends on the accuracy and reliability of the data contributed. In addition, the methodology and rules of subjective indices are not always disclosed and if they are, may include discretionary elements. As a result, subjective indices cannot be reproduced accurately by a third party.

Exhibit 4 summarises the main differences between the two types of indices.

17) As an example for such publications, see STOXX 2013a, b.

Exhibit 4  
High-level comparison of objective and subjective indices

	Objective indices	Subjective indices <sup>1)</sup>
<b>Data</b>	<ul style="list-style-type: none"> <li>▪ Use transactional data</li> <li>▪ Prices based on transactions and firm quotes</li> <li>▪ Data publicly available (at a charge)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Use panel data</li> <li>▪ No obligations (yet) attached to data submission</li> <li>▪ Data may not be publicly available</li> </ul>
<b>Methodology</b>	<ul style="list-style-type: none"> <li>▪ Rule-based</li> <li>▪ Rules freely accessible and published in full</li> </ul>	<ul style="list-style-type: none"> <li>▪ Discretionary elements</li> <li>▪ Rule books not freely accessible and/or not completely published</li> </ul>
<b>Ability to replicate</b>	<ul style="list-style-type: none"> <li>▪ Index performance can be replicated with existing financial instruments</li> </ul>	<ul style="list-style-type: none"> <li>▪ Replication not possible</li> <li>▪ Index constituents may not be investable or highly illiquid</li> </ul>
<b>Examples</b>	<ul style="list-style-type: none"> <li>▪ DAX®</li> <li>▪ EURO STOXX 50®</li> <li>▪ S&amp;P 500</li> <li>▪ FTSE Global Bond Index</li> </ul>	<ul style="list-style-type: none"> <li>▪ "Ibor" indices (Libor, Euribor, etc.)</li> <li>▪ EUREPO</li> <li>▪ Hedge fund indices</li> </ul>

1) Compliance with one of the criteria defining subjective indices sufficient to qualify an index as subjective

### 3. Imperatives for a well-functioning benchmark industry

#### **Key messages of the chapter**

Four elements are imperative to a well-functioning benchmark industry:

- the assurance of a reliable and traceable index provision
- the absence of any conflicts of interest, as these provide an incentive to potentially manipulate an index
- the encouragement for innovation to meet investors' changing needs and to channel the flow of capital into emerging areas of the economy
- a global level playing field in order to promote fair international competition and to ensure that all investors have access to the full range of indices

After recent revelations about manipulated submissions for the Libor, several banks have made settlements in response to the allegations. There is also an ongoing investigation into the rigging of the Euro Interbank Offered Rate (Euribor). In order to preserve the benefits of indices for the economy as well as for end customers, such manipulation must be prevented in the future.

Steps taken to do so will need to start with an understanding of what constitutes a well-functioning index market. Certainly, such an ideal market leaves no room for the manipulation of indices. In the first place, there are no incentives for manipulation because index administrators and other players are not able to benefit from it. In addition, control mechanisms detect immediately any attempt of manipulation or unintentional errors in the calculation of indices. At the same time, in a well-functioning index industry the focus is on end customers and on the wider economy. This means that administrators are incentivised to develop new products constantly. Further, competition among the different players is encouraged, allowing end customers the choice from the widest possible range of index products, since this is crucial for them to benefit the most from indices.

From this perspective, a well-functioning index industry has four overarching imperatives.

### **1. Ensure the reliability and traceability of index provision.**

Indices are only beneficial if users can trust them fully. To ensure this, all indices need adequate control mechanisms. However, the level of control that is needed will differ, particularly according to the type of index: when it comes to input data, objective indices arguably need less oversight as the input data is based on transactions or firm quotes from regulated markets and hence falls under the supervision of the market. Subjective indices, however, rely on panel data, such as surveys or estimates, and are therefore less reliable by nature.

The methodology used to compile indices should be traceable and reliable. Control mechanisms and the disclosure of certain information to some form of supervisory body or more widely are thus important. However, the extent to which information is disclosed should differ between supervisors, product issuers, and end customers according to their need of the information.

Supervisors should have access to all index data including input data, weightings, and index values to be able to oversee the index provision. For other stakeholders, the adequate level of disclosure should be differentiated. Product issuers are paying customers of the index administrators and should get access to index values as well as to input data and details on the index methodology. They need this comprehensive disclosure to be able to license index-related products. The full transparency about the data also allows them to fully replicate and recalculate the indices. End customers, in contrast, need transparency about the index methodology to understand what the index is measuring. For this, however, disclosure of input data and weightings is not necessary. This data should thus not be disclosed to the wider public, since the free disclosure would inappropriately affect the index administrator's property rights. The latter may create adverse long-term effects on market transparency in general.

**2. Avoid conflicts of interest.** Conflicts of interest are the reason for the manipulation of indices. They can be formally defined as a set of circumstances that create a risk of professional judgment or actions regarding a primary interest, being unduly influenced by a secondary interest.<sup>18)</sup> In the benchmark industry, conflicts of interest typically arise in situations where product issuers or end customers who profit from changes in the index values have a possibility to influence them. Such situations can occur if the business that sells or trades index-linked products also compiles the benchmark for these products – in other words, if the index administrator is also a product issuer or end customer.

In the case of subjective indices, data contributors may also be exposed to conflicts of interest, as they can influence the development of an index by the data they contribute. It was in this way that the Libor was manipulated. On the contrary, in the case of objective indices, data contribution is not prone to manipulation as the input data merely reflects market data.

As mentioned before, some players in the benchmark industry have integrated business models and straddle different parts of the value chain. If this is the case, it is important that data contribution or index provision is operationally and functionally separated from any other part of the business where conflicts of interest might arise. This is particularly relevant at self-indexing firms (see explanatory text). However, an integrated business model does not necessarily create a conflict of interest. The involvement of a neutral provider of market infrastructure, such as an exchange, is unproblematic, as these players cannot profit from the level or development of an index value.

---

**Self-indexing** is the practice whereby an index-linked product uses as the underlying a benchmark that is administered or influenced by the issuer of the product. This can lead to a conflict of interests if the administrator stands to gain or lose as a result of the development of the index value.

**Example.** A bank provides a subjective index and issues certain bonus certificates that entitle the holder to a bonus if the benchmark exceeds a certain threshold. The bank, as the issuer of the certificate, is not a neutral product issuer as its profits and losses depend on the development of the index values it administers. If the index exceeds the threshold, the bank has to pay the bonus to the holder, but if it stays below the threshold, it does not have to pay. Hence, the bank is subject to a conflict of interest and has an incentive to manipulate the index so that it stays below the threshold.

**3. Encourage innovation.** A well-functioning benchmark industry is one in which index administrators have an incentive to invest continuously in innovation in order to deliver the benefits outlined in chapter 2.

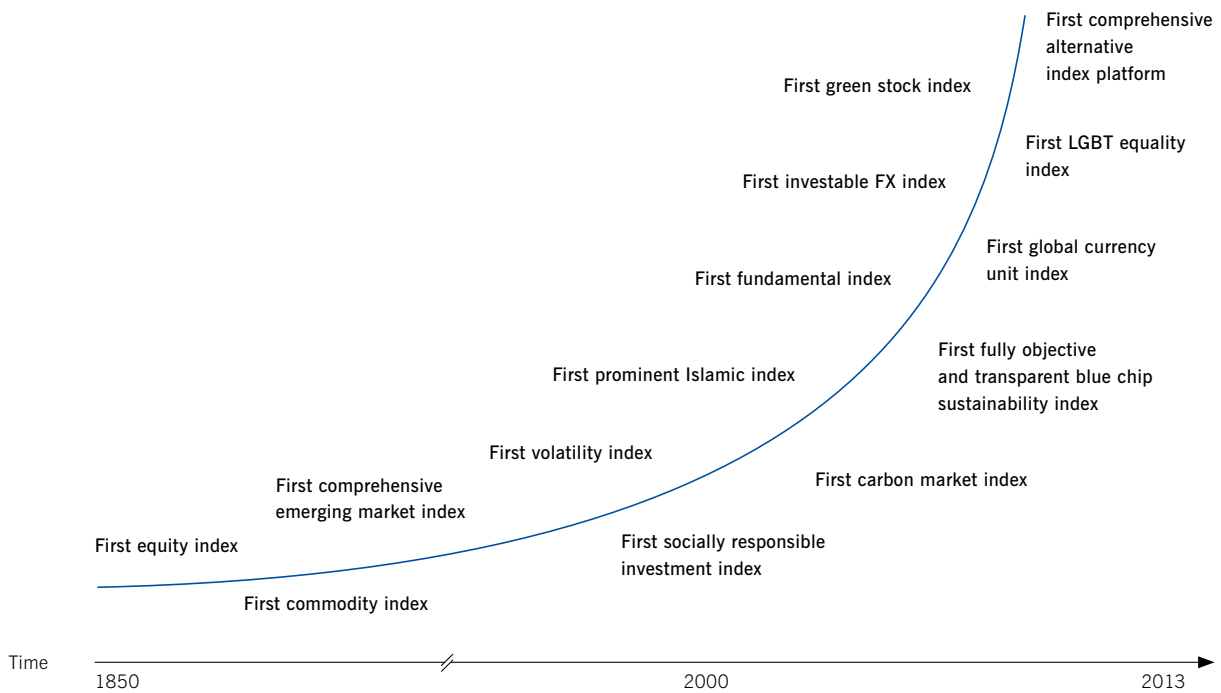
The global benchmark industry has seen enormous growth in response to innovations such as volatility indices or low risk-weighted indices that have added value for end customers. Index-linked products have been issued on the back of these indices, helping investors to better manage their risk exposure or to diversify their investments in markets that were not previously accessible to most investors – currencies or specific commodities<sup>19)</sup>, for example. In addition, as explained earlier, these innovations have encouraged a flow of capital into emerging areas of the economy that can promote not just growth but wider social and environmental goals. Exhibit 5 indicates the accelerating pace of innovation in the industry, with a large number of new indices emerging in recent years.

18) See Thomson 1993.

19) For a brief history of innovations related to commodity indices, see, for example, Dunsby and Nelson 2010.



Exhibit 5  
Illustrative timeline of innovation in the benchmark industry



Source: publications of index administrators

If the pace of innovation in the benchmark industry is to remain high, index administrators will need to be certain that their property rights are effectively protected and that they can license their products commercially and so recoup their research and development (R&D) investments. Without this incentive, innovation and competition in the industry is likely to decrease. A well-functioning benchmark industry, however, would encourage both.

**4. Ensure a global level playing field.** A well-functioning index industry is one where there is a global level playing field, to the benefit of both end customers and index administrators.

For end customers, a global level playing field ensures that they have access to the widest possible index product range and thus can find the product best suited to their specific needs. This requires

that the principles that govern the benchmark industry are comparable worldwide. Indices of administrators from other regulatory systems should not be segregated only due to the fact that their regulatory system has a different standard. It is therefore important that regulatory authorities agree on a global standard. If standards are not aligned, this could lead to a lack of information that could disadvantage local companies and end consumers.<sup>20)</sup>

For index administrators, a global level playing field guarantees fair competition: globally comparable rules ensure that index administrators can compete on a global scale. Local principles that govern the industry do not disadvantage or even segregate any players from specific regions. This ensures the greatest possible level of competition and hence pressure to innovate and to provide the highest quality of products.

20) See also the committee recommendation of the German Bundesrat 2013.

## 4. Recent regulatory efforts in the benchmark industry

### Key messages of the chapter

- Various institutions and regulatory bodies have responded to recent concerns about the manipulation of some subjective indices. Particularly important are the Principles for Financial Benchmarks published by the IOSCO, which are an internationally agreed upon standard. The EU Commission's proposal aims to transfer the principles into binding European law.
- The Proposal covers several important topics that are in line with the IOSCO standards. In particular, it proposes measures to make index administration processes more transparent and to mitigate potential conflicts of interest. In addition, it suggests regulatory standards for non-EU countries operating within the EU and proposes focusing attention on certain critical benchmarks. Thus, it supports the first and second imperative of a well-functioning benchmark industry.
- Elsewhere, the Proposal goes beyond the scope of the IOSCO standards and does not provide the required differentiation between different index types. For instance, it suggests the publication of real-time data, and the setting of regulatory standards more stringent than the IOSCO principles for non-EU industry participants. This could hurt international competition and deprive EU end customers of a full range of products. When it defines conflicts of interest, the Proposal does not recognise that market infrastructure providers, such as exchanges, are neutral. A low level of differentiation could lead to the unnecessarily strict regulation of some players, which could harm innovation and the competitiveness of the EU benchmark industry.

## 4.1 Overview on regulatory efforts

In the wake of revelations that certain subjective indices have been manipulated, various bodies have responded to concerns about practices within the benchmark industry. These bodies include the IOSCO, the European Securities and Markets Authorities (ESMA), the European Banking Authority (EBA) and the EU Commission.

- In June 2013, ESMA and EBA jointly published an EU-level framework of principles governing financial benchmarks.
- In July 2013, IOSCO's Principles for Financial Benchmarks were published, setting down overarching guidelines for the benchmark industry worldwide.
- In September 2013, the EU Commission proposed a draft legislation to regulate the activities of all index administrators within the EU; the Proposal is currently being discussed by the European Parliament and Council.

Of these, the EU Commission's proposal is the most widely recognised approach towards regulating Europe's benchmark industry. It aims to transfer the non-binding IOSCO principles into binding and directly applicable European law. The remainder of this report therefore focuses on the Proposal. It has the following objectives:<sup>21)</sup>

- to improve the governance of and controls over the benchmark process and in particular to ensure that index administrators avoid conflicts of interest, or at least manage them
- to improve the quality of the input data and methodologies used by index administrators and in particular to ensure that sufficient and accurate data is used in the determination of benchmarks
- to ensure that contributors to benchmarks are subject to adequate controls, in particular to avoid conflicts of interest
- to ensure adequate protection for consumers and investors by enhancing transparency and ensuring adequate rights of redress

The Proposal covers six key regulatory topics: (1) the scope and definition of critical benchmarks, (2) the establishment of transparency requirements, (3) the avoidance and mitigation of conflicts of interest, (4) the establishment of rules for non-EU members, (5) the establishment of external control and oversight, and (6) rules for administration and reporting.

21) See European Commission 2013.

## 4.2 An assessment of the EU Commission's proposal

A comparison of the IOSCO guidelines and the Proposal is outlined in exhibit 6. Although it was the explicit intention of the Proposal to transfer

the internationally agreed IOSCO principles into binding regulation, in certain aspects the Proposal goes beyond the IOSCO principles.

### Exhibit 6

#### Comparison of IOSCO principles and EU Commission's proposal

Key regulatory topic	Requirements of IOSCO principles	Additional EU Commission requirements
1. Scope of regulation and definition of critical benchmarks	<ul style="list-style-type: none"> <li>General remark on criticality: application and implementation of principles should be proportional to the size and risks posed by each benchmark.</li> </ul>	<ul style="list-style-type: none"> <li>Supervision of critical benchmarks by college of competent authorities</li> </ul>
2. Establishment of transparency requirements	<ul style="list-style-type: none"> <li>General explanation to facilitate understanding on how benchmark was developed</li> <li>Indices based on regulated data only have to publish methodology.</li> </ul>	<ul style="list-style-type: none"> <li>Immediate publication of input data for all benchmarks (some exemptions apply)</li> </ul>
3. Avoidance and mitigation of conflicts of interest	<ul style="list-style-type: none"> <li>Establishment of independent oversight function in case of conflicts of interest</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of separate oversight function when administrator is owned or controlled by data contributor or index user</li> </ul>
4. Establishment of rules for non-EU members	<ul style="list-style-type: none"> <li>International framework, therefore not applicable</li> </ul>	<ul style="list-style-type: none"> <li>Third-country legal framework and regulatory practice has to be accepted as equivalent by EU.</li> </ul>
5. Establishment of external control & oversight	<ul style="list-style-type: none"> <li>Monitoring of input data</li> <li>Oversight and code of conduct only for contributors of non-regulated market data</li> </ul>	<ul style="list-style-type: none"> <li>Responsibility of administrator to ensure compliance with regulation for all data contributors</li> </ul>
6. Rules for administration & reporting	<ul style="list-style-type: none"> <li>Control and accountability frameworks</li> <li>Written plans for changes/cessation</li> </ul>	<ul style="list-style-type: none"> <li>No additional requirement except for registration with ESMA</li> </ul>

Bearing in mind the imperatives of a well-functioning benchmark industry, the first four of the six regulatory topics covered by the Proposal merit particular attention; namely, the scope and definition of critical

benchmarks, the establishment of transparency requirements, the avoidance of conflicts of interest and the establishment of rules for non-EU members.

### Scope of regulation and definition of critical benchmarks

The Proposal encompasses almost all indices,<sup>22)</sup> but suggests particularly strict monitoring of what are termed “critical” benchmarks. These are defined by their systemic importance, measured by the notional value of referenced products,<sup>23)</sup> and the extent to which they may be open to manipulation. The latter is assessed by the proportion of data sourced from what are described as supervised contributors for subjective indices, such as credit institutions and investment firms.<sup>24)</sup>

The Proposal takes an important first step as it differentiates monitoring activities according to specified criteria measuring the criticality of different indices.

Unfortunately, the specified criteria of the Proposal do not sufficiently distinguish between subjective and objective indices. As explained in chapter 2, subjective indices are based upon panel input data and/or a discretionary methodology. Thus, they are prone to manipulation and should be strictly monitored. In contrast, objective indices have a traceable methodology and rely on high-quality, publicly available data. They are thus not open to manipulation. Therefore, an increased monitoring of objective indices would be of little value, but could harm the competitiveness of their providers. The latter is because the additional costs related to the imposed control measures put an operational and financial burden on the affected index administrators that would disadvantage them compared to less supervised players. Against the background of these considerations, a high level of differentiation and in particular a judgement based on the proportionality of the potential monitoring activities is desirable.

### Establishment of transparency requirements

To foster transparency, the Proposal aims to ensure that the input data of indices are reliable, and that the methodologies as well as potential adjustments to it are traceable. Both objectives support a well-functioning market and are in line with the IOSCO principles.

Unfortunately, at some points, the Proposal is not sufficiently precise and leaves room for interpretation. One reading suggests that it goes beyond the IOSCO principles in that index administrators may be required to make all input data, including the weightings applied and the input data they do not have intellectual property rights for,<sup>25)</sup> immediately available to everyone. If this was the case, administrators would be forced to offer their intellectual property regarding the development of an index for free, effectively depriving them of their licensing and data business. This would also allow certain players of the investment industry to free-ride on work and know-how of the index administrators for their own business, which still charges the end customers. The possible consequences are negative for both the industry and for end customers. Without financial incentives arising from licensing income, index administrators are unlikely to put much effort into innovation. This would be detrimental to end customers and to overall market transparency and efficiency. The latter appears to be an unnecessarily high price to pay given that immediate publishing of input data and weightings is not necessary to fulfill end customers’ only information need: the general evaluation of an index.

22) The Proposal applies to all published benchmarks that are used to reference a financial instrument traded or admitted to trading on a regulated venue, or a financial contract (such as mortgages) and benchmarks that measure the performance of an investment fund.

23) The notional value of financial products linked to a benchmark has to be greater than €500 billion for the index to be classified as “critical”.

24) According to the Proposal, the “majority” of data has to be sourced from supervised data contributors for the benchmark to be classified as “critical”.

25) The property rights for such data are held by the data contributors, who make this data publicly available.

### Avoidance and mitigation of conflicts of interest

The Proposal aims to prevent conflicts of interest and bad incentive structures – both critical features of a well-functioning benchmark industry.

To avoid conflicts of interest, the Proposal to some extent goes further than the IOSCO principles, but on the other side does not consequently limit the conflicts arising from self-indexing. It assumes potential conflicts of interest between index administrators and both data contributors and index users if they are not operationally and functionally separated from each other and suggests the introduction of a separate oversight function. Thereby, it proposes a relatively broad user definition, covering any issuer or owner of a financial contract. This would also include neutral providers of market infrastructure such as exchanges.

It appears that a greater degree of differentiation than currently suggested by the Proposal's user definition would be appropriate. As discussed in chapter 2, market infrastructure providers are neutral. They report market prices from their venues and neither invest in index-related products nor profit from the developments in index values. Therefore, there is no conflict of interest between, for example, an exchange and an index administrator, even if they belong to the same group.

In addition, it seems important that conflicts of interest at self-indexing<sup>26)</sup> firms are adequately addressed. As discussed in chapter 3, self-indexing can lead to conflicts of interest if the index administrator stands to profit (or lose) from the development of the index values it provides. The Proposal does not address this issue directly by suggesting any appropriate measures. Again, a differentiated approach would be important to ensure that conflicts of interest at self-indexing firms can be spotted and avoided.

### Establishment of rules for non-EU members

The Proposal aims to impose similar regulatory standards on index administrators from non-EU countries. As suggested by the first imperative, it is important that end customers in the EU can trust all available indices including those provided by non-EU index administrators. Therefore, a certain common standard between index administrators in the EU and worldwide is important.

However, the Proposal goes beyond the IOSCO principles and may require non-EU members to comply with regulatory standards stricter than those imposed by IOSCO. This implies that only indices from countries that adhere to the required regulatory standards would be available in the EU. Given that there may be some countries that choose to conform to the IOSCO principles but not to the Proposal's regulatory standards, the Proposal could lead to a deprivation of the index product range available in the EU. End customers from the EU would then have fewer indices to choose from and may not get the best product for their needs. In addition, the Proposal may discourage global competition and thus lower pressure on innovation as there would not be a fair, common regulatory standard that allows index administrators to compete globally.

In conclusion, the rules for non-EU members suggested by the Proposal might not be in line with the fourth outlined imperative, which describes the importance of a global level playing field. A possible solution would be the acceptance of the IOSCO principles as a common and internationally agreed upon standard.

In addition, it is remarkable that the Proposal does not explicitly outline an adequate transition period. Given that it takes a significant amount of time to introduce a new regulation, this could result in the abrupt disappearance of many indices before EU administrators have time to replace them.<sup>27)</sup>

26) Self-indexing can be defined as the practice whereby an index-related product uses as the underlying a subjective benchmark that is administrated or influenced by the issuer of the product.

27) According to the law firm Clifford Chance, the banning of unauthorised benchmarks is likely to result in a significant restriction in the use of benchmarks; see Clifford Chance 2013.

## 5. Conclusion

Indices help to increase the transparency of financial markets, simplify risk management, facilitate the diversification of portfolios as well as the measurement of performance, and support decision making.

Four elements are imperative for a well-functioning benchmark industry: (1) the provision of reliable, traceable indices, (2) the avoidance of conflicts of interest, (3) incentives to foster innovation, and (4) a global level playing field.

The Proposal suggests measures to make benchmark processes more transparent and to mitigate conflicts of interest. It also suggests regulatory standards for non-EU countries operating within the EU, and proposes focusing attention on certain critical indices. These suggestions mainly support the first and second imperatives of a well-functioning industry.

Other aspects of the Proposal, however, go beyond the IOSCO principles. For instance, the Proposal may require administrators to immediately publish

all input data – potentially including data for which administrators do not have property rights. And it sets regulatory standards that are more stringent than IOSCO's for non-EU index administrators, which could hurt international competition and deprive EU end customers of the full range of products. Meanwhile, the proposals to address conflicts of interest do not recognise that some market participants are neutral.

A low level of differentiation could lead to an unnecessarily high level of regulation over some players that could harm what is currently an innovative and competitive industry. In contrast, tailored industry regulation that differentiates between different types of indices and players would support a well-functioning benchmark industry that protects its end customers.

## List of exhibits

### Exhibit 1

Global assets under management, 2012: share of index-linked investments

### Exhibit 2

Index-linked assets under management by product type, 2012

### Exhibit 3

The benchmark industry value chain

### Exhibit 4

High-level comparison of objective and subjective indices

### Exhibit 5

Illustrative timeline of innovation in the benchmark industry

### Exhibit 6

Comparison of IOSCO principles and EU Commission's proposal

## Glossary

### Active investment

Investment approach that involves ongoing buying and selling actions by the investor/fund manager

### Benchmark

→ Index that is used as a reference price for a financial instrument or contract

### Bond

Interest-bearing or discounted government or corporate security that obliges the issuer to pay the bondholder a specified sum of money, usually at specified intervals, and to repay the original amount of the loan at the maturity date

### Data contributor

Type of player in the benchmark industry that provides input data to → index administrators

### Dividend

Amount of a company's profits that the board of directors decides to distribute to ordinary shareholders; normally expressed as a percentage of the nominal value of the ordinary share capital or as an absolute amount per share

### End customer

User of indices and index-related products or services, such as private a investor, institutional investor, corporation or government

### Equity

Money raised by companies for business investment; can be raised in two ways: (1) by borrowing money or (2) by issuing shares/stocks; by buying equity stocks and shares, an investor is buying an interest in a company and then takes a share in the company's future profits

### Exchange-traded fund (ETF)

Mutual fund whose indefinitely dated shares can be bought or sold in continuous trading on the stock exchange; tracks the performance of the index on which it is based

### Forward (contract)

Non-standardised contract between two parties to buy or to sell an asset at a specified future time at a price agreed upon today



**Futures (contract)**

Standardised contract between two parties to buy or to sell an asset at a specified future time at a price agreed upon today

**Hedging**

Use of financial instruments (usually derivatives) to reduce or protect against risk

**Index**

Measure, typically of a price or quantity, determined from time to time from a representative set of underlying data

**Index administrator**

Type of player in the benchmark industry that controls and manages the provision of indices

**Liquidity**

Ability to buy or sell a security at any point in time and in large volumes without substantially affecting its price

**Objective index**

Type of index that meets the following three criteria: (1) it is based entirely on data from observable market transactions; (2) its compilation methodology is rule-based and clearly documented; (3) it can be replicated with existing financial instruments

**Product issuer**

Type of player in the benchmark industry that issues index-linked products for end customers

**Regulated market**

Public trading venue that is subject to stricter regulation and supervision than multilateral trading facilities, e.g. rules for trading instrument admission, trade controlling and reporting

**Self-indexing**

Practice whereby an index-related product uses as the underlying a subjective benchmark that is administered or influenced by the issuer of the product

**Subjective index**

Index that does not meet one or more of the requirements of an → objective index

**Underlying**

Financial instrument, physical asset or variable upon which a financial instrument is based

**Volatility**

Measure of the variability of returns over a chosen time period, revealing the extent by which the returns of an index value change from the average

## References

- Arnott, R., Hsu, J., West, J. (2008).** The fundamental index: A better way to invest. New Jersey: John Wiley & Sons, Inc.
- Clifford Chance (2013).** The new EU Benchmark Regulation. Briefing Note September 2013. London: Clifford Chance.
- Deutsche Bank (2013).** Europe Monthly ETF Market Review. July 2013. Frankfurt: Deutsche Bank.
- Dunsby, A., Nelson, K. (2010).** A Brief History Of Commodities Indexes. *Journal of Indices*, 13(3), 36–39.
- EDHEC-Risk Institute (October 2011).** EDHEC-Risk European Index Survey. EDHEC-Risk Institute.
- European Commission (2013).** Proposal for a regulation of the European Parliament and of the Council on indices used as benchmarks in financial instruments and financial contracts. 18 Sep 2013, COM(2013) 641 final. Brussels: European Commission.
- European Federation of Energy Traders (2012).** Response to the public consultation of the European Commission on a possible framework for the regulation of the production and use of indices serving as benchmarks in financial and other contracts. 28 Nov 2012. Amsterdam: European Federation of Energy Traders.
- European Securities and Markets Authority & European Banking Authority (2013).** ESMA-EBA principles for benchmark-setting processes in the EU – Final report. 6 Jun 2013. Paris: European Securities and Markets Authority.
- Fama, E. (1965).** The behavior of stock market prices. *Journal of Business*, 38, 34–105.
- Fama, E., French, K. (1993).** Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33(1), 3–56.
- German Bundesrat (2013).** Committee recommendation on the proposal for a regulation of the European Parliament and of the Council on indices used as benchmarks in financial instruments and financial contracts. Meeting of the Bundesrat on 8 November 2013.
- Hacibedel, B., van Bommel, J. (2007).** Do emerging market stocks benefit from index inclusion? Working Paper, University of Oxford.
- International Organization of Securities Commission (2013).** Principles for financial benchmarks. July 2013. Madrid: The Board of the International Organization of Securities Commissions.
- Kamp, R. (2008).** Debunking 130/30 benchmarks. *Institutional Investor Journals*, 2008 (Special Issues), 60–63.
- Keynes, J. M. (1971).** A treatise on money: The applied theory of money (Vol. II). New York: John Wiley & Sons.
- Rauterberg, G., Verstein, A. (2013).** Index theory: The law, promise and failure of financial indices. *Yale Journal on Regulation*, 30(1).
- RIMES Technologies (2013).** RIMES 2013 Buy-side Survey: Index & benchmark data management. New York: RIMES Technologies.
- STOXX (2013a).** STOXX equity index calculation guide. October 2013. Zurich: STOXX Limited.
- STOXX (2013b).** STOXX index methodology guide. October 2013. Zurich: STOXX Limited.
- Thomson, D. F. (1993).** Understanding financial conflicts of interest. *New England Journal of Medicine*, 329(8), 573–6.

## List of abbreviations

<b>AuM</b>	Assets under management
<b>CME</b>	Chicago Mercantile Exchange
<b>EBA</b>	European Banking Authority
<b>ESMA</b>	European Securities and Markets Authorities
<b>ETF</b>	Exchange-traded fund
<b>EU</b>	European Union
<b>Euribor</b>	Euro Interbank Offered Rate
<b>IOSCO</b>	International Organization of Securities Commission
<b>Libor</b>	London Interbank Offered Rate
<b>NYSE</b>	New York Stock Exchange
<b>R&amp;D</b>	Research and development

**Published by**

STOXX Ltd.  
Selnaustrasse 30  
8021 Zurich  
Switzerland  
[www.stoxx.com](http://www.stoxx.com)

Deutsche Börse AG  
60485 Frankfurt/Main  
Germany  
[www.deutsche-boerse.com](http://www.deutsche-boerse.com)

SIX Group AG  
Selnaustrasse 30  
8021 Zurich  
Switzerland  
[www.six-group.com](http://www.six-group.com)

December 2013  
Order number 9010-4496

**Registered trademarks**

DAX® is a registered trademark of  
Deutsche Börse AG. EURO STOXX 50®  
and STOXX® are registered trademarks  
of STOXX Ltd.