

# annual

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On the year 2016 and prospects  
for Deutsche Börse Group



## ANNUAL 2016 CONTENTS



### STATUS

#### One year of Accelerate. A look back

New structures, new products, a new mentality: things are changing at Deutsche Börse Group. Efficiency and customer focus are centre stage.

### AMBITION

#### An alternative for Europe

When the British electorate voted in favour of leaving the EU on 23 June 2016, it came as a shock. Now we must draw the right lessons from this event.

### INNOVATION

#### The value of data

Data help us create extremely useful products for our customers – incorporating features which seemed unrealisable only a few years ago. What's more, new data products now allow for even more efficient markets.

### AMBITION

#### Energy trading in Europe: EEX

Trading in electricity and gas has changed markedly over the past few years. The European Energy Exchange has its finger on the pulse of the market and its customers – and continues its course for growth.

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*Dear readers,*

This is the second edition of our “Annual”, the magazine section of our corporate report. You can look forward to concise, vivid, easy-to-read reports – covering business topics in an attractive magazine format. Find out about Deutsche Börse Group’s key achievements over the past year, and about the projects the company envisages for the near future – and further ahead.

Our responsibility to society is a key aspect in this exercise of determining where we are, and where we are going. To us, aligning our business conduct with the needs of our clients and investors is just as important as considering the interests of those stakeholders that are indirectly affected: our members of staff, the locations where we do business, and the regulatory and political environment.



Once again, we can look back on a successful year. “Accelerate”, our strategy to boost growth, is working. During 2017, we will adhere to our goal for Deutsche Börse Group to become the top-ranked or second provider amongst all competitors, globally, in all of our businesses. We have made quite some progress on our way to achieving this goal during the past year: we fulfilled our forecast for growth while keeping costs under control. Net revenue was up by 8 per cent as costs increased by a mere 1 per cent – resulting in net income rising by 14 per cent. In addition, we intensified our efforts to support the real economy – particularly SMEs and start-ups, with Deutsche Börse Venture Network® assisting companies even before their listings.

Likewise, we are driving innovation within our own enterprise. One example is the European Energy Exchange (EEX), our stronghold in an asset class offering high growth rates: contracts on energy and other commodities. The governance and control model that is in place at EEX helps us achieve performance: clients – who are also co-shareholders – have a vested interest in ensuring that their company is doing well. Another showcase for innovation is our Content Lab, where we are developing and testing new ideas with the intention of turning them into marketable products and services. Right now, the Lab’s work focuses on market data, and on turning it into analysis and investment tools. As you can see, we are constantly working on “Exchange 4.0”, everywhere throughout the company. Being a successful innovator also requires an innovation-friendly corporate culture – which, in turn, requires constructive criticism. We have taken an important step in this direction by introducing 360-degree feedback for managers. We will not rest in our endeavours to continue pushing this cultural change throughout 2017.

Dear readers, I also look forward to receiving your feedback at [carsten.kengeter@deutsche-boerse.com](mailto:carsten.kengeter@deutsche-boerse.com). Let me know your thoughts, and help make our Annual even better.

Enjoy reading!

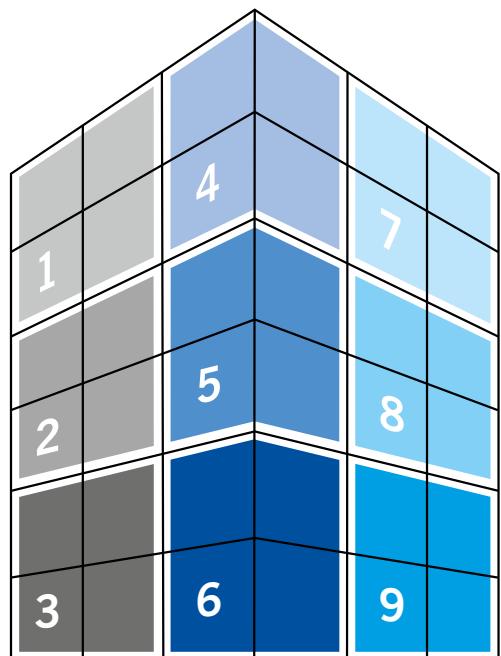
Yours sincerely,

A handwritten signature in blue ink, appearing to read "Carsten Kengeter".

Carsten Kengeter  
Chief Executive Officer

**STATUS – DEUTSCHE BÖRSE GROUP**

# Overview



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As a diversified exchange organisation, Deutsche Börse Group's products and services cover the entire value chain in the financial services sector. Its business areas range from the admission of securities to listing, through trading, clearing and settlement to custody services for securities and other financial instruments, along with collateral and liquidity management. Additionally, the Group provides IT services, indices and market data worldwide. We have divided our products and services into nine groups, as follows.



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## Pre-IPO and listing

Start-up companies often enter into a decisive phase when their business requires liquid funds in order to boost their market profile and to expedite growth. It is specifically for companies in this phase that Deutsche Börse launched Deutsche Börse Venture Network®. In addition, Deutsche Börse invests in attractive fintech companies via DB1 Ventures. An IPO (initial public offering) on the stock exchange marks a company's debut on the capital market. When they list at the Frankfurt Stock Exchange, companies of all kinds and sizes – SMEs or large enterprises, domestic or international – can raise equity or debt capital. Investors may participate in the growth of the real economy – promoting it at the same time by providing capital.

Our brands: Deutsche Börse, Deutsche Börse Venture Network®, DB1 Ventures, Börse Frankfurt



2

## Trading

Deutsche Börse Group operates regulated markets for equities, exchange-traded products (ETPs), bonds and numerous other products for the two trading venues Xetra® and Börse Frankfurt. The Group also facilitates trading of derivatives – i.e. contracts derived from other assets or reference values (including equities, indices, German and European government bonds, foreign exchange or commodities), which are traded on its electronic T7® platforms. These also include a variety of products of the European Energy Exchange, which include not only energy (e.g. electricity) but also energy-related products (e.g. emission allowances) as well as commodity products (e.g. agricultural products). 360T operates an off-exchange (over-the-counter, OTC) trading platform for financial instruments such as foreign exchange, money market or interest rate products. Additionally, 360T provides platform solutions for closed user groups.

Our brands: Xetra®, Börse Frankfurt, Tradegate, Eurex®, European Energy Exchange, 360T®



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## Clearing

Eurex Clearing AG and European Commodity Clearing AG, Deutsche Börse Group's clearing houses, act as partner to each buyer and each seller to minimise credit default risk. In this manner, we reduce risk positions and achieve financing and capital efficiency gains for our customers. These benefits – along with the regulators' intent to boost clearing via central counterparties (CCPs) – make CCP clearing both an anchor of stability and a vital component of the financial services industry. Deutsche Börse Group offers efficient clearing for derivatives, securities and securities financing transactions as well as foreign-exchange and commodity transactions.

Our brands: Eurex Clearing, European Commodity Clearing



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## Settlement

Following trading and clearing, settlement involves the accurate booking of individual items, with the exchange of securities against money. The correct booking of securities transactions to individual client securities accounts also takes place during this process. Clearstream, Deutsche Börse Group's provider of post-trading services, is responsible for efficient global securities settlement.

Our brands: Clearstream, LuxCSD, REGIS-TR



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## Custody

Once assets have been settled correctly, they are held in safe custody. Clearstream administers assets throughout the period for which they are held, offering services such as the handling of corporate actions and dividend payments – across all types of securities. Moreover, comprehensive reporting and the segregation of collateral margins allow market participants to efficiently comply with their regulatory obligations.

Our brands: Clearstream, LuxCSD

Company headquarters  
The Cube, Eschborn



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## Collateral and liquidity management

Through Clearstream's Global Liquidity Hub, Deutsche Börse Group offers financial institutions optimal collateral and liquidity management. Due to its links to depository banks, trading platforms, central counterparties and other national central securities depositories, the open architecture provides real-time access to a rich pool of liquidity.

Our brands: Clearstream, Eurex Repo®



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## Market data

Private and institutional investors make decisions based on market data, creating new information in turn. Deutsche Börse's most prominent data products include (real-time) price data generated from its various trading systems, as well as historical market data, plus analytical indicators from trading at its cash and derivatives exchanges.

Our brand: Deutsche Börse



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## Indices

Through STOXX Ltd., Deutsche Börse Group disseminates indices tracking markets around the world. The index families are differentiated by country, region, product type, investment theme or strategy; customised indices facilitate tailor-made market analysis in real-time. Among the Group's benchmark products are the EURO STOXX 50® index and the DAX® index, which track the performance of the 50 industry-leading companies in the eurozone and the 30 largest German companies, respectively.

Our brands: STOXX®, DAX®



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## Technology

Resilient, state-of-the-art IT systems provide the foundation for virtually all capital markets services. Deutsche Börse Group develops and operates IT systems for trading and clearing as well as for settlement, custody and market data services.

Our brands: Deutsche Börse, 7 Market Technology®:  
C7®, F7®, M7®, N7®, T7®

# Our Supervisory Board and Executive Board

## OUR SUPERVISORY BOARD

### SHAREHOLDER REPRESENTATIVES

#### **Joachim Faber**, \*1950

Chairman

Independent Management Consultant, Grünwald  
Nationality: German

#### **Richard Berland**, \*1962

Deputy Chairman

Management Consultant – Executive Director  
Richard Berland Limited, Ashtead Surrey  
Chairman of the Management Committee  
Renshaw Bay LLP, London  
Nationality: British

#### **Ann-Kristin Achleitner**, \*1966

(since 11 May 2016)

Scientific Co-Director Center for Entrepreneurial  
and Financial Studies (CEFS) at the Technische  
Universität München (TUM), Munich  
Nationality: German

#### **Karl-Heinz Flöther**, \*1952

Independent Management Consultant, Kronberg  
Nationality: German

#### **Craig Heimark**, \*1954

Managing Partner  
Hawthorne Group LLC, Palo Alto  
Nationality: US-American

#### **Monica Mächler**, \*1956

Member of different supervisory bodies,  
Pfäffikon  
Nationality: Swiss

#### **Erhard Schipporeit**, \*1949

Independent Management Consultant, Hanover  
Nationality: German

#### **Amy Yip**, \*1951

Managing Partner  
RAYS Capital Partners Limited, Hong Kong  
Executive Director  
Vitagreen, Hong Kong  
Nationality: Chinese (Hong Kong)

## OUR EXECUTIVE BOARD

### FORMER MEMBER OF THE SUPERVISORY BOARD

#### **Gerhard Roggemann**, \*1948

(until 11 May 2016)

Senior Advisor  
Edmond de Rothschild  
Private Merchant Banking LLP, London  
Nationality: German

### EMPLOYEE REPRESENTATIVES

#### **Marion Fornoff**, \*1961

Staff member in the HR  
Europe & US section  
Deutsche Börse AG, Frankfurt/Main  
Nationality: German

#### **Hans-Peter Gabe**, \*1963

Staff member in the HR Compensation,  
Workforce & Talent Management section  
Deutsche Börse AG, Frankfurt/Main  
Nationality: German

#### **Jutta Stuhlfauth**, \*1961

Lawyer, M.B.A. (Wales) and  
Head of the unit Policies & Procedures  
Deutsche Börse AG, Frankfurt/Main  
Nationality: German

#### **Johannes Witt**, \*1952

Staff member in the Financial  
Accounting & Controlling department  
Deutsche Börse AG, Frankfurt/Main  
Nationality: German

### Carsten Kengeter, \*1967

Chief Executive Officer

#### **Andreas Preuss**, \*1956

Deputy Chief Executive Officer  
and responsible for IT & Operations,  
Data & New Asset Classes

#### **Gregor Pottmeyer**, \*1962

Chief Financial Officer

#### **Hauke Stars**, \*1967

responsible for Cash Market,  
Pre-IPO & Growth Financing

#### **Jeffrey Tessler**, \*1954

responsible for Clients,  
Products & Core Markets

**STATUS – STRATEGIC PERSPECTIVES**

# One year of Accelerate

In 2016, Deutsche Börse's Group-wide growth strategy was the crucial milestone for the company's further development. The strategy's motto "Accelerate" has defined the relationship between us and our stakeholders: our clients, employees, shareholders, other companies and (potential) partners.

Title of our Annual 2015





**Hauke Stars,**  
member of the Executive Board,  
responsible for Cash Market,  
Pre-IPO & Growth Financing

“In one and a half years, Deutsche Börse Venture Network – our growth financing platform – has mobilised more than €1 billion for funding innovative ideas. We are connecting European start-ups and growth companies with an international investor base to build an ecosystem for growth.”

#### FIVE-ELEMENT GROWTH STRATEGY

Our long-term objective with “Accelerate” is to become the global market infrastructure provider of choice – being top-ranked in all our activities along the entire value chain. Our focus is on our clients; they are the ones who benefit from more efficient workflows.

#### These are the five elements “Accelerate” is comprised of:

1. to better fulfil client needs, through a more rigorous organisation
2. to improve performance measurement and performance-oriented remuneration
3. to review the medium-term financial planning
4. to exploit opportunities for external growth
5. to review and examine the portfolio of businesses and investments

What have we done in the past year in order to implement these elements into our corporate practice?

#### BETTER FULFILMENT OF CLIENT NEEDS

Since the beginning of 2016, the core business segments of Deutsche Börse Group have been bundled in the Executive Board portfolio of Jeffrey Tessler. Deputy CEO Andreas Preuss, also responsible for market data and IT, is head of the growth areas commodities and foreign exchange (European Energy Exchange and 360T). And the cash market business, headed by Hauke Stars, has been expanded to include an additional area: a pre-IPO ecosystem is being created – especially for young, innovative companies. These organisational changes will enable us to better meet new client needs, and to tap sales potential which we have not been able to explore to date. We have already successfully implemented many parts of this programme.

With Group Sales, Group Business & Product Development and Group Marketing, we have established three centralised functions, thus already noticeably improving coverage of our top clients, and enhancing our cross-

**“Information technology is a competitive factor as well as a driver of innovation. In this regard, we consistently focus on state-of-the-art technology, processes and tools. Clients benefit from our enhanced agility and innovative strength in product development, whilst they can rely upon our established track record in operations.”**



**Andreas Preuss,**  
Deputy CEO,  
responsible for IT & Operations,  
Data & New Asset Classes

divisional offers. The task of onboarding new clients is now also in one hand, leading to a significant acceleration of the process.

State-of-the-art information technology is a key competitive factor as well as a driver of innovation. Nowadays, our software development takes place within the framework of a product organisation which realises business objectives in cooperation with market operations. This strengthens profit responsibility, product innovation and client orientation. At the same time, we consistently pursue the introduction of modern technologies, processes and tools – such as cloud computing and continuous deployment – in the development and operation of our products. Combined with agile working methods, we develop and operate top-quality software that sets the standards within our industry. Our clients benefit from the quick realisation of their requirements, and from enhanced product innovation – whilst being able to rely upon the established track record of our infrastructure in daily operations.

#### **REWARDING GOOD PERFORMANCE**

In order to strengthen the responsibility for profit and loss, we have introduced a new remuneration system

for members of the Executive Board and top level management immediately beneath Executive Board level in 2016: in the year under review, we used the same performance parameters for both groups for the first time. Step by step, we will roll out the performance assessment system to cover further management levels. We are now evaluating which elements of this system will in future also be applied to our other employees. Our objective remains the same: to raise the Group's attractiveness for the top talents in our sector, and also to increase performance orientation on all levels.

#### **FASTER GROWTH**

It remains our goal to invest into new markets and asset classes at a faster pace than in the past. This is why we revised our financial planning for the period up until 2018, and already identified opportunities for additional organic growth. We set clearly defined targets for profit growth, in the course of which we emphasise the importance of safeguarding the scalability of our business model: that is, to distinctly expand the number of transactions, at minimal cost.

As such, for 360T we invested into a new clearing solution and a completely re-drafted open order book

**Jeffrey Tessler,**  
member of the Executive Board,  
responsible for Clients,  
Products & Core Markets



**“Our staff are dedicated to using further regulation and projects like TARGET2-Securities as continuing opportunities to support our customers’ business.”**

for foreign-exchange trading. We expect this to generate further growth. EEX – principally an energy exchange but also a comprehensive commodities marketplace – is active in very dynamic markets which offer further growth potential. The investment fund services area of our post-trade services provider Clearstream is also geared for growth. We also expect further stimuli especially from TARGET2-Securities, the European Central Bank project aimed at harmonising cross-border securities settlements within Europe. As the largest participant in this new system, we can use it to offer our clients additional services. Finally, we also see growth opportunities in the index business, as they provide the underlying instruments for passive investment strategies – which are increasingly gaining popularity.

On a long-term horizon, these initiatives also aim at decoupling us from the cyclical nature of our core markets. Historically low interest rates have had a dampening effect on many of our business areas. We want to mitigate this effect by carrying out activities on markets with lower (or ideally contrasting) cyclicalities, thus creating favourable conditions for significant further growth.

Against the background of these growth opportunities, we will also adhere to the objectives of our financial planning for the period up until 2018. Index derivatives at Eurex, the index business and EEX have performed particularly well during the financial year 2016. We are also continuing our successful cost management, with the objective of structurally reducing our costs and, thus, enhancing our efficiency and creating additional scope for growth.

#### **ENHANCING OUR NETWORK OF COOPERATIONS**

In the world of exchanges, growth is largely created through consolidation. The largest exchange organisations owe their top positions – among other factors – to successful acquisitions and mergers. And Deutsche Börse is no exception – a significant part of our growth is attributable to consolidation. Indeed, we created our integrated business model this way. We want to continue to actively shape the consolidation processes within our sector. Thus, we want to create favourable growth conditions and be able to meet the leading exchanges in the US and Asia at eye level.

Our positive stance on cooperations in Asia also remains unchanged. The fact that global wealth distribution is

**“Our target is to grow earnings by 10 to 15 per cent every year. We remain firmly committed to our active cost management and attractive capital management.”**



**Gregor Pottmeyer,**  
Chief Financial Officer

undergoing changes in favour of China and India, accompanied by the rise of an affluent middle class in those regions, are two points no long-term oriented business strategy can ignore. We are already successfully cooperating with the Korea Exchange and the Taiwan Futures Exchange (TAIFEX), jointly offering products based on their respective blue-chip indices. We are also collaborating with the Bombay Stock Exchange (BSE) via a strategic alliance. Since 2013, BSE markets have been operating on T7®, Deutsche Börse's trading architecture. And with the launch of CEINEX, we founded a worldwide unique cooperation with key Chinese players in the capital markets.

#### **ENHANCING OUR INVESTMENTS**

Pursuing a growth strategy also implies cutting loose from low-growth stakes, and ceasing unsuccessful initiatives. In the past year, this included the divestiture of the International Securities Exchange, the news agency Market News International and the securities information provider Infobolsa.

However, we also invested in Digital Assets, an innovative company active in the field of blockchain technology. In November 2016, we acquired a stake in

figo, a Hamburg-based fintech: figo is Europe's first “banking service provider”, offering third parties innovative services through banking functionality. By integrating figo's application programming interface (API), they can link their applications, products and services to more than 3,100 financial sources in a very short time.

With DB1 Ventures we have introduced a platform that invests in new holdings and actively manages the already existing minority shareholdings of Deutsche Börse. That way, we want to make use of the full potential of our strategic investments. Our focus lies on fintech businesses in their seed phase and growth stage. We reinforce promising partnerships in our portfolio, divesting those that fail to develop sufficient potential. Sustainability is also an increasingly important criterion.

Therefore, we will continue to examine our portfolio of businesses and investments, whilst maintaining our very sound balance sheet structure and attractive dividend policy.

The bottom line is: Deutsche Börse Group has laid the groundwork for accelerated growth and structural



Carsten Kengeter,  
Chief Executive Officer

“At Deutsche Börse, we are committed to supporting the real economy throughout Europe – directly and indirectly. With a broad set of pre-IPO services and an extensive overall product portfolio, we aim to assist European companies to be able to get ready to deal with the challenges of the future. It is our chief objective to further increase the customer focus in our work.”

cost reduction. But there is still a lot left to do. We will continue to exercise cost discipline and work at reducing the dependence of our income on economic cycles and at expanding our business model. Our strength lies in setting up and operating liquidity pools

in which our clients' transactions flow together – and which are thus beneficial for private business as well as for the public. Effective risk management is our top priority. Growth and safety go hand in hand. That is what “Accelerate” is all about. ✕



“Accelerate” is our way to become the leading market infrastructure provider.

Frankfurt/Main: compact  
and connected



**AMBITION – STRENGTHENING THE CAPITAL MARKETS**

# An alternative for Europe

The referendum decision on 23 June 2016 by British voters to leave the European Union was a moment of shock. Now it is important to draw the right lessons from this event. Deutsche Börse, a global company with firm European roots, has a particular responsibility in this respect – like other large companies in Europe.

Yet not everything is new since that 23rd of June. Britons will remain Europeans, even if they are to leave the EU. Hence, Brexit negotiations will be decisive for the long-term future – not only as far as the European Union is concerned. As Europeans we must uphold our tried-and-tested fundamental principles of liberty, even though these are not very popular right now.

These principles have brought us peace and prosperity for many decades. Looking at current developments, we can see that this is something we cannot take for granted.

Continental Europe will therefore have to continue its close cooperation with the United Kingdom. This is something the market will realise, since the rules applic-

able to international markets and to competition do not change overnight. But of course, these rules call for new, more intelligent solutions in order to prevent imbalances, especially in Europe. To maintain its stance in global competition, Europe must do its homework.

**CAPITAL MARKETS UNION AS A REALISTIC OPTION**

It will thus be all the more important for financial market players to focus on implementing the Capital Markets Union envisaged by the European Commission. There are numerous points in favour of such a union, with a pragmatic view being the most compelling one right now. In contrast to the integration of European countries on other levels, harmonising financial markets appears achievable, since it would neither interfere with the

rights of national governments nor their populations' vested rights. Quite clearly, there is simply no acceptance for such extensive intervention from Brussels, as evidenced dramatically by Brexit.

A fully fledged fiscal union, however welcome it may be for very good reasons, would bring high-volume, Europe-wide capital transfers in its wake, which would only reinforce the feeling of politics and responsibility drifting further and further apart. What we need is a true European capital market – not in spite of, but because of Brexit coming. A Capital Markets Union would help secure a strong European position in the face of global competition, and can count on the self-interest-driven approval of the parties involved. Such a union is a very effective solution to many of the challenges we as Europeans are facing today: developing and preserving infrastructure, establishing sustainable pension schemes, identifying and taking structural action to reduce the high level of unemployment reigning in certain countries, financing growth.

The European Commission's push for a Capital Markets Union is encouraging. It would be quite the opposite of governmental intervention: in fact it could unleash an

#### CAPITAL MARKETS UNION

The Capital Markets Union is a project of the European Commission, to mobilise capital for companies and infrastructure projects and link savings with growth potential. In September 2015, the European Commission presented its Action Plan for Building a Capital Markets Union, which set out a programme until 2019.

equally strong macroeconomic power that would heal disparities caused by the European Monetary Union – and, as a consequence, re-invigorate acceptance for the single-currency project, with positive political feedback.

#### OPPORTUNITIES PROVIDED BY A SINGLE EUROPEAN CAPITAL MARKET

It is as clear as day that more intensive cross-border capital flows would flush significant benefits into the European economy; it would make capital more accessible all over Europe, and unlock new investment potential that would then move in the market transparently, under the same conditions for everyone. Users on all sides have already been identified. Large state pension schemes as well as insurance companies are currently looking for long-term investment opportunities. Countries in Europe are facing the challenge of expanding and modernising infrastructure: railway lines, motorways, bridges, airports, local transport in densely populated regions – these are just a few examples for areas where all European countries have some catching up to do. It is especially in these areas that a swift and sustained expansion would benefit the real economy – and hence, the people. From large conglomerates to tradesmen, from frequent fliers to holidaymakers,

**“The Capital Markets Union offers a very effective solution for numerous challenges we are currently facing in Europe. For the real economy, it will provide easy and secure access to capital.”**

**Carsten Kengeter,**  
Chief Executive Officer,  
at the Luxembourg Financial  
Markets Forum, 17 October 2016

whether you are in a car, on a local train or a long-distance express train: we all need a reliable infrastructure that is ready for the future.

Free movement of capital across Europe would provide relief for public-sector budgets. Infrastructure bonds tradeable across Europe would provide for efficient flows of capital, in line with requirements. In addition, this would create advantages for the countries and societies where measures would be implemented and buildings constructed – particularly as far as transparency, efficiency and jobs are concerned. This is because such new funding would flow into areas with sufficient transparency regarding planning, construction and operations. Such an approach might be beneficial, for instance, for regions where public funds have “trickled away”: if transparency becomes a sine qua non for investments, these will actually reach local people. This would trigger a self-reinforcing process throughout Europe – and in fact, it might be the starting point for a more vibrant equity culture in Europe.

#### **FINANCING THE REAL ECONOMY**

The mechanism of a Capital Markets Union, as we have outlined it here, would facilitate the matching of capital

and investment projects, regardless of whether banks are involved, providing more long-term perspective. At the same time, it would make European capital markets more robust and diversified, providing a new level of transparency that would facilitate infrastructure investments bringing bridges, rails, and school buildings to the people who need them. But above all, the Capital Markets Union will provide easier and safer access to capital for the real economy, and for Europe’s growth companies. Brexit is a warning signal as well as a call to finally seize this opportunity. ✕

**INNOVATION – EXCHANGES AND THE REAL ECONOMY**

# Capital meets entrepreneurial power

Creativity, ideas and courage can be found throughout Germany and Europe. What is largely missing, however, is capital for faster growth. In the US, garage start-ups have evolved into billion-dollar enterprises: a development that Germany has largely missed out on.

As the Cologne Institute for Economic Research pointed out in a policy paper on the topic of start-ups in early 2016: “Highly innovative start-ups that grow to become global companies the size of Google or Amazon within just a few years are not being founded here.”

For innovations to turn into solid businesses in Germany as well, we need more openness towards young enterprises and disruptive innovations from a strong manufacturing industry and from the Mittelstand – Germany’s sector of small and medium-sized enterprises (SMEs) –, which rightly enjoys a great reputation, to open up to young enterprises and disruptive innovations. We need start-up centres at the universities – with young people who know about economic interrelationships and who have the courage to get something started. We also need investors and capital. All of these elements together may create a fruitful ecosystem. At Deutsche Börse, we are actively working on fostering such an ecosystem for growth.

In 2015, we took decisive steps to further develop the pre-IPO growth market, i.e. the market for companies preparing for an exchange listing: Deutsche Börse Venture

Network®, our platform for bringing together investors and founders, has mobilised more than €1 billion for funding innovative ideas since its foundation. At the end of September 2016, Würzburg-based va-Q-tec AG was the first Venture Network company to go public (see the [photo report](#)). Venture Match is a service that matches offers of capital and financing projects reviewed by our experts. This improves the “hit rate” of investments: it allows companies to focus more strongly on their core business – rather than devoting lots of energy to raising capital. At the same time, transparency is enhanced in this important market, as investors receive better insight into promising companies.

Through our DB1 Ventures subsidiary, established in June 2016, we are constantly looking for attractive investments in the fintech area which suit Deutsche Börse Group’s business portfolio well. We are firmly determined to repeat a success story such as the acquisition of 360T. At the same time, DB1 Ventures has the goal of providing capital to trendsetting companies from our environment – to enable them to develop viable concepts, and to create growth.

# Start-up in focus: va-Q-tec in Würzburg

The company develops and manufactures high-performance vacuum insulation panels as well as thermal packaging which is rented out all over the world. Over the past 15 years, va-Q-tec has re-invented itself multiple times in order to meet its customers' needs. "In 2016, Deutsche Börse Venture Network provided a major impetus for us," says founder Joachim Kuhn, who gave us some insight into his company. "We are proud to be the first IPO to have resulted from this growth network."



Joachim Kuhn, CEO, and Christopher Hoffmann, CFO: "Development, products, systems and leasing – we basically do everything the market needs."



Containers on demand:  
"Our containers are very popular. We hold 80 patents and patent applications altogether."

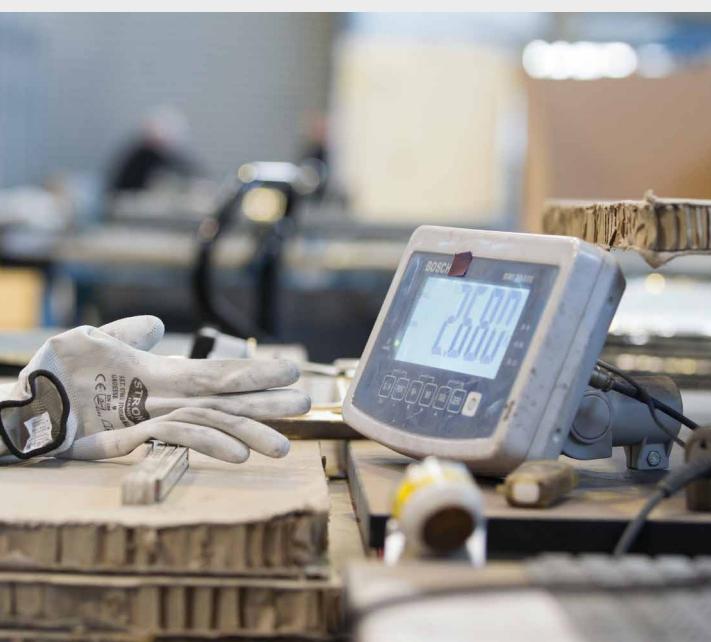
Routing slips for containers: "Everything from works of art and pallets to medication and organs, blood bottles ... Medical transports are currently our main business."



On the factory floor in Würzburg: "The special film we use is flexible and efficient to process."

The vacuum panels consist of porous nano-sized sand covered with a high-tech film. "We construct a 'rigid' vacuum; otherwise, the panel would collapse immediately."





Focus on manufacturing:  
“Our passive insulation boxes can maintain consistent temperature levels for five days – without a power supply.”

With the FinTech Hub, we are looking to bring something of a start-up culture to Frankfurt. The city is home to key regulatory authorities as well as national and international banks.

On 1 March 2017, Deutsche Börse launched Scale, a new exchange segment designed to enhance access to investors and growth capital for SMEs. As a segment of the exchange-based Regulated Unofficial Market, Scale has replaced the Entry Standard for equities and corporate bonds. The target group for the new segment encompasses companies which have already established their track record with investors: admission requirements include cooperation with a Deutsche Börse Capital Market Partner that will verify whether a company is suitable for inclusion into the new segment. This includes a due diligence process during which the company's legal and financial circumstances are carefully examined and analysed. Admission and post-admission requirements also comprise research reports designed to improve liquidity and enhance transparency for investors. These company analyses are mandatory – and independent, since they are commissioned by Deutsche Börse. Furthermore, companies listed in the segment are subject to the EU Market Abuse Regulation, and are therefore obliged to publish ad-hoc disclosures.

Bit by bit, these elements start to form an ecosystem for growth, whose components support innovative, high-growth companies at every stage of their development. As the leading European market infrastructure provider, Deutsche Börse Group contributes to developing this ecosystem. After all, we want young and growing German and European enterprises to swiftly turn into major businesses, too. ✎



**INNOVATION – TECHNOLOGY AND THE MARKET OF THE FUTURE**

# Data and networks, innovation and security

How will companies still be able to be productive and profitable in 20 years? New technologies and new market participants bring both opportunities and challenges for established providers such as Deutsche Börse Group. We aim to ensure that young and highly innovative providers experience Deutsche Börse as the fast-acting and competent partner we have been for many years. We are committed to building upon our track record as a pioneer in the financial sector and to shaping its future, say Olga Wenge and Ankur Kamalia from Deutsche Börse Group.

**ANKUR KAMALIA:** So, this is an interesting topic when we talk about how we are seeing the world transforming itself today. What is your perspective, what are these trends [in key technologies] that are actually shaping and changing the way we do business?

**OLGA WENGE:** Over the last years, we have collected a significant amount of information. If we wanted to read all the information we have accumulated in just one year, it would take us about 300 years. We will – of course – need additional technologies to understand or to be able to collect and process this information. This has an impact on Deutsche Börse Group as well. I think that currently, there are different technologies which could be applied to our business, for example cloud computing where we can work with new collaborative partners. Machine learning is another aspect that could help us to understand the data and to engage in predictive analytics regarding new products and new customers.

**ANKUR KAMALIA:** That's true. It's not that cloud computing is new, but it seems that the financial services landscape is only now starting to embrace the advantages of this technology.

**OLGA WENGE:** What do you think? How will these new technologies impact our markets?

**ANKUR KAMALIA:** There are three key trends. Number one is collaboration – amongst clients, ourselves, regulators, start-ups. Collaboration is critical to the adoption of some of these new technologies. Why is this relevant? Let's look at fintech as an example: we operate in an environment where safety and security are very important. Fintechs have great solutions and they are building new ones enabled by some of these new technologies. Partnering with people like us gives them a much broader platform, because we have client connectivity, we run reliable and scalable markets, we have regulatory expertise, and they are able



Ankur Kamalia has been Managing Director at Deutsche Börse Group since November 2015. As Head of Venture Portfolio Management he is responsible for DB1 Ventures.

## “At the end of the day, it is very simply about providing solutions.”

to leverage that. And for us, and organisations like us, it is no longer enough, I believe, to just rely on internal innovation.

**OLGA WENGE:** New ideas are coming up ...

**ANKUR KAMALIA:** ... Ideas and technology trends that we have seen in the marketplace, and business solutions. Number two is probably a shift towards more B2B solutions. And I think the third – perhaps most important – point which relates to what you were saying is this: we are really starting to see early signs of adoption of some of these technologies. This is what is needed if we imagine that five or ten years down the line, one of these new technologies will need to become more mainstream within our value chain.

**OLGA WENGE:** Do you think that some of these technologies, for example blockchain, will replace our value chain or will the marketplace stay as it is?

**ANKUR KAMALIA:** If you ask the direct question whether I believe blockchain is going to completely replace the way we actually operate as a marketplace:

I do not believe that this is likely to be the case. There are certain parts of our ecosystem which can be made materially more efficient with the use of blockchain technology. But it is not going to be dramatically different within the next two or three years. But I think we will continue to see material progress being made in parts of the value chain that we operate. And there will be certain parts which will become a lot more relevant, because of the use of some of these new technologies. But that is probably more of a five-to-ten-year horizon. At the end of the day, whether you talk about cloud computing, distributed ledger or artificial intelligence and machine learning, the question is always the same: what about external threats? Is the ecosystem prepared to deal with them?

**OLGA WENGE:** I think when you enter into collaborations, risks increase: not only regulatory but also security risks. Thus, we have to understand the ecosystem of our collaborative partners to understand the technology and the level of security. Deutsche Börse as a strictly regulated body is subject to a great number of regulations. And we have to guarantee the protection of the data of our customers.

**“Sharing knowledge would bring us advantages in creating securer products.”**

Olga Wenge holds a doctoral degree in engineering and is an IT expert. She works in Group Compliance at Deutsche Börse Group.



**ANKUR KAMALIA:** It is indeed very important for us to continue to work with the regulators, to work with clients and other partners to ensure that we can manage external threats and the like to ensure that we still have a safe, secure and a very reliable marketplace.

**OLGA WENGE:** I think that is the right direction, because the data is stored not only by Deutsche Börse, it is a worldwide data flow. And the data is interconnected with all our collaborative partners and with governmental bodies – in different geographical and jurisdictional locations. Sharing knowledge would bring us advantages in creating securer products.

**ANKUR KAMALIA:** I think that's a fair point – at the end of the day, it is very simply about providing business solutions. So we can leverage state-of-the-art technology to provide the right solutions to our clients. ✎

#### DISTRIBUTED LEDGER

A public ledger, allowing transactions to be recorded and verified on a peer-to-peer basis. The blockchain is the distributed ledger for transactions in bitcoin, a digital currency. Applications for transactions involving other objects are being developed.

#### CYBER ATTACK

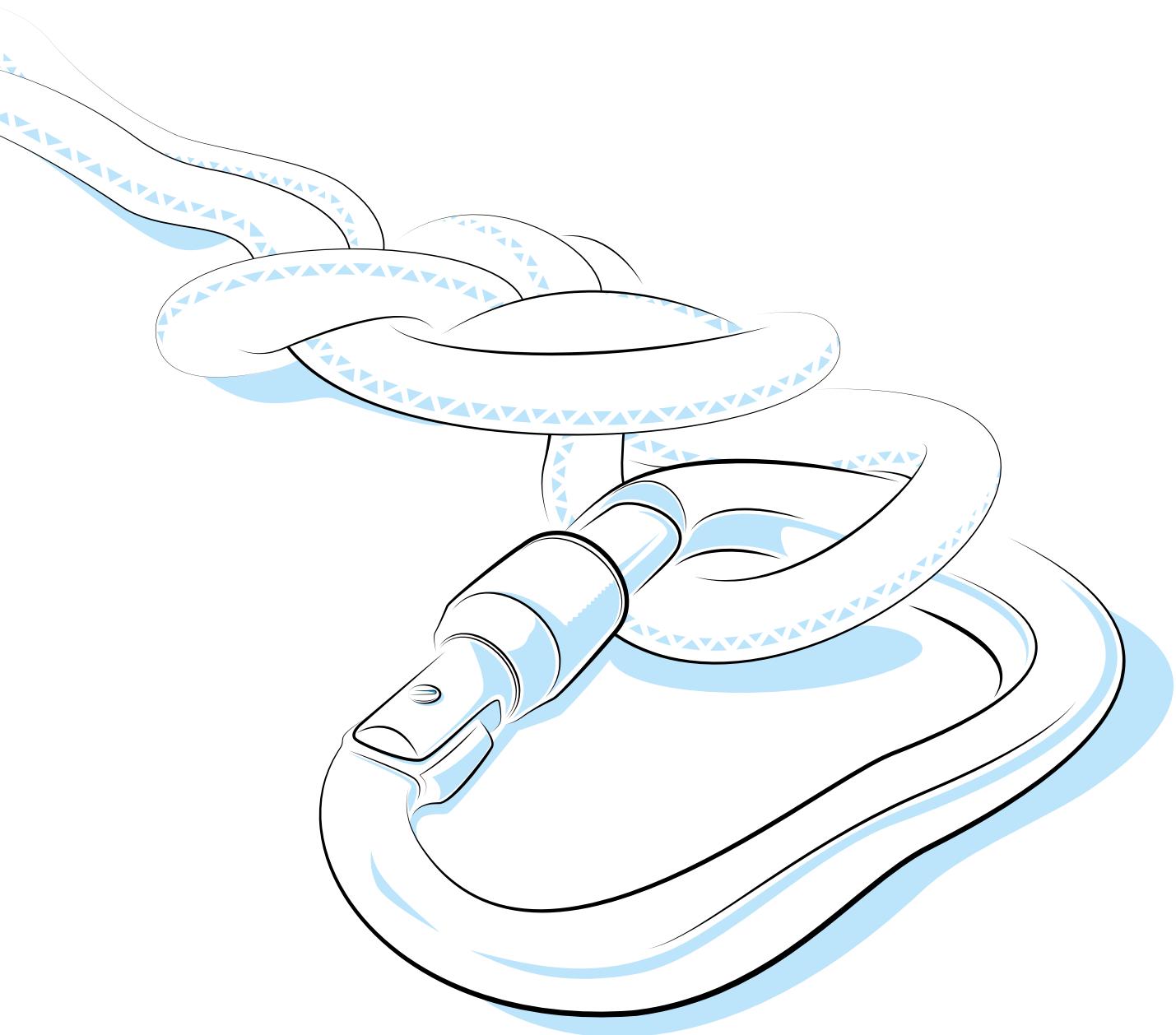
Targeted attack on an IT infrastructure from an external source. Many attacks are directed at financial services providers; governments and public administrations are also often the focus of criminal attention.

#### ARTIFICIAL INTELLIGENCE

The attempt to simulate functions of human intelligence using computer operations.

#### MACHINE LEARNING

Describes the analysis of patterns and “experience” by computers, resulting in a learning system which is not limited to pre-programmed responses and capable of integrating and processing new data.



**STATUS – CENTRAL COUNTERPARTY CLEARING**

# Prepared for any eventuality

Managing risks arising from securities, currencies, commodities or forward transactions by clearing such trades via a central counterparty (CCP) will become more and more important, especially as CCP clearing can include many different financial products.

By turning to a CCP, market participants can reduce their credit risks vis-à-vis other parties, while at the same time leveraging portfolio and netting effects to push their financing and capital costs down, thereby increasing profitability. To expand these efficiency gains, Eurex Clearing has redefined access to the clearing house and extended its product range.

#### **CLEARING IS BECOMING MORE DIRECT: ISA DIRECT**

Up to now, clearing members at Eurex Clearing, one of the clearing houses of Deutsche Börse Group, consisted primarily of banks. Investment funds, pension funds or insurance companies, generally referred to as the buy side, had only indirect CCP access. Within such a structure, the buy side remains exposed to the credit risk of the direct clearing participant, and must bear significantly higher costs now than a couple of years ago, when capital requirements for clearing banks were more favourable.

Since summer 2016, a new service has been available for buy-side clients who become direct participants with Eurex Clearing. Under the new regime, certain services that these clients so far have received from their clearing bank remain with the clearing bank. One of the main benefits of the new structure is that the buy-side client can significantly reduce their counterparty risk. In addition, the model allows the clearing bank to substantially cut down on capital costs, supporting return on capital invested – even when reducing service fees for the buy side.

This access model is currently available for OTC (over-the-counter) interest rate swaps as well as repo transactions (agreements on buying and buying back securities), and is planned to be expanded to include securities lending and exchange-traded derivatives transactions. Further efficiency increases can be realised where a buy-side

#### **OTC CLEARING**

OTC derivatives are contracts that are traded directly between two parties, without involving an exchange (such as Xetra® or Eurex®) as an intermediary. Today, products such as swaps, OTC forward transactions, “exotic” options – and other “exotic” derivatives – are traded almost exclusively in this way. OTC derivatives is the world’s largest derivatives market segment.

Once an OTC transaction has been concluded on a bilateral basis, these transactions are forwarded to a clearing house for centralised netting and risk management purposes. The clearing process of OTC transactions in the CCP is nearly identical with the clearing of exchange-traded derivatives. The difference lies in the degree of standardisation of the products, and the resulting complexity associated with measuring risk.

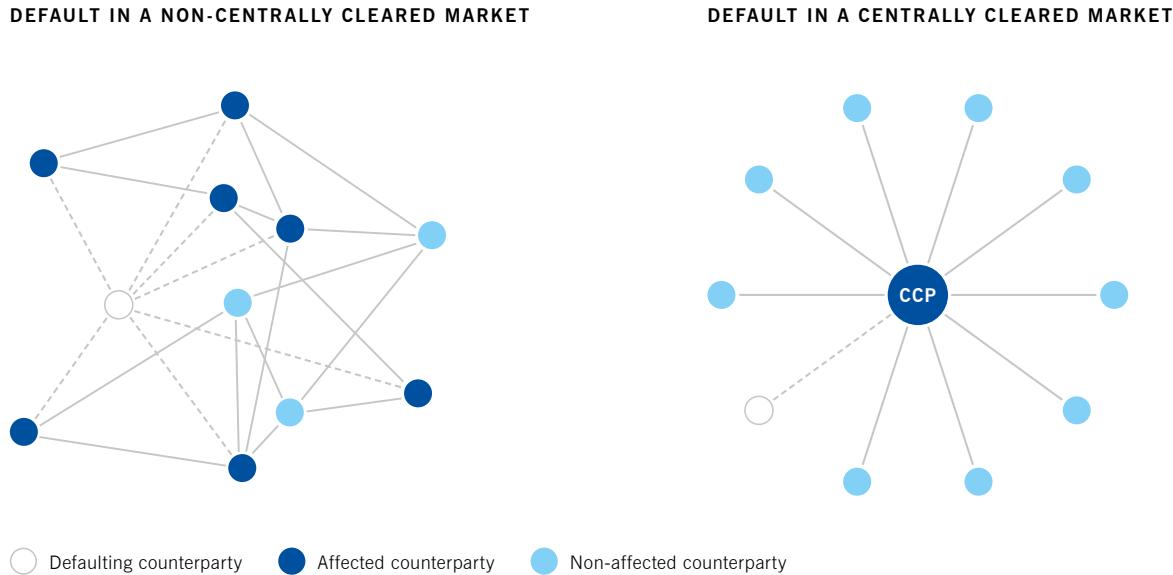
client uses more than one offering, especially with regard to the use of securities collateral offered by Eurex Clearing and Clearstream.

The new offer is called “ISA Direct” (ISA = individual segregated account). ISA Direct is aimed at small and medium-sized credit institutions, insurance and reinsurance companies, pension funds and investment funds. Apart from the advantages mentioned above, clients benefit from a more stable clearing house and, as a consequence, a more stable financial system – since concentration of the clearing business upon only a small number of clearing banks (as is the case at present) is dissolved. On the flip side, in case of an emergency – if a clearing bank fails to meet its obligations – the size of the portfolios to be settled becomes smaller, and the systemic risks in the clearing house are thus reduced. The more buy-side clients opt for direct CCP access, the better for Eurex Clearing participants and the entire financial market.

#### **CENTRALISED CLEARING OF SECURITIES LENDING TRANSACTIONS**

The mostly bilateral OTC transactions, e.g. between two banks, continue to account for the lion’s share of the securities lending market. Such OTC transactions are generally concluded for a longer period of time, and there are credit default risks that may threaten the performance in case of one party defaulting.

## Effect of a counterparty default in a non-centrally and centrally cleared market



Source: White paper Deutsche Börse Group, July 2014

By clearing transactions, a central counterparty minimises counterparty risk – both in exchange trading and OTC. The CCP nets positions, reviews, continuously determines the risk associated with any given business portfolio, and requests collateral from its clearing participants. In other words, the clearing participants associated with the CCP are protected on a daily basis, and no bilateral (and non-transparent) risks accrue (see [diagramme “Effect of a counterparty default in a non-centrally and centrally cleared market”](#)). The risks converge instead in the CCP, where they are netted and risk-adequately hedged.

### SECURITIES LENDING TRANSACTIONS

Eurex Clearing is the first CCP worldwide to also offer clearing services for securities lending transactions between investors and banks. The so-called Lending CCP enhances the security and efficiency of a market that traditionally has been defined by OTC transactions: it is important to involve a central counterparty particularly for lending transactions to hedge against changes in the credit risk profile – or even against a counterparty default. This also allows positions to be netted – so-called multilateral netting, which reduces capital employed and therefore the costs associated with a transaction.

The business customs of the securities lending market influenced the design of the Lending CCP, which also features the well-known strengths of the CCP clearing service offered by Deutsche Börse. This approach pursues the evolution of the markets, and their customs, and takes the interests of market participants into account. There are advantages not only for the individual clearing participants; the markets will become more transparent and secure in general. This represents a truly sustainable offer from Deutsche Börse Group for the financial sector. ✕

#### CLEARING IN FX TRADING

“It is important to us that our clients have access to comprehensive service and product range via a single provider. With the acquisition of 360T by Deutsche Börse, we have now added foreign exchange (FX) as an additional asset class. Within the scope of our EurexOTC Clear service, we plan to also offer an OTC FX swaps, OTC FX spot and OTC FX forwards clearing facility, as from summer 2017,” said Erik Tim Müller, CEO of Eurex Clearing. “We are proud of these innovative offers, as they will provide our clients with further post-trading process and cost efficiency.”

**STATUS – POST-TRADING SERVICES**

# Issuers on a single platform: the Global Issuer Hub

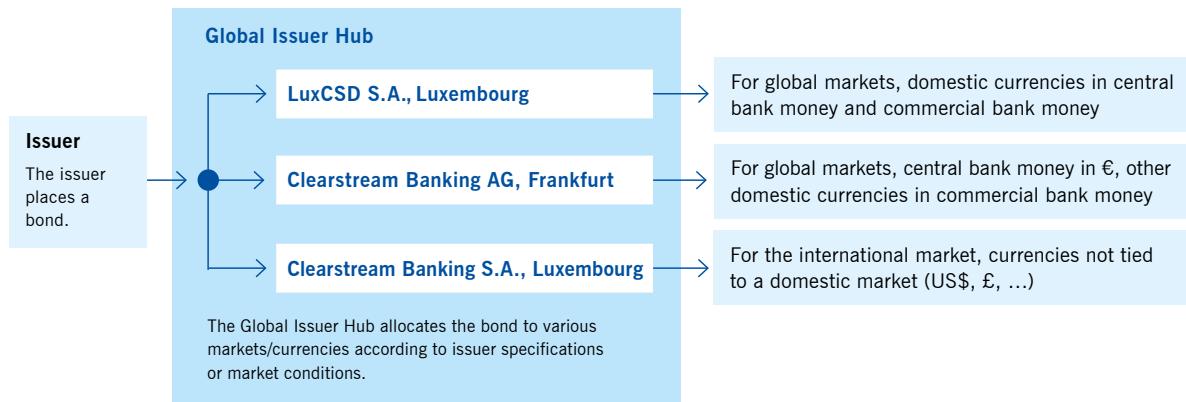
Investors use Deutsche Börse Group's products and services to buy bonds and other securities. Once the purchase as such has been cleared and settled, Clearstream – Deutsche Börse Group's post-trade services provider – assumes custody and management of the securities. Further innovative offers are linked along the value chain, such as efficient collateral and liquidity management, as well as securities lending.

**OFFERS FOR ISSUERS**

Approaching the issuers of securities directly is a more recent concept. The following example of a specific request clearly shows the great support Deutsche Börse Group's teams can offer issuers. Some three years ago, a large European issuer was looking for an alternative

to its domestic central securities depository (CSD). It was apparent even then that the significance and power of the national CSDs would decline under TARGET2-Securities (T2S). The issuer wanted to distribute its offer widely in different markets, without having to increase the expense and number of contacts if possible.

## How the Global Issuer Hub works



The client and post-trading experts at Clearstream discussed this in depth. The issuer finally placed a large tranche of mortgage bonds with Clearstream's central securities depository in Luxembourg, LuxCSD. With the services of Clearstream's so-called Global Issuer Hub, this request was in the right hands. It allows issuers to conduct settlements across the entire issuing cycle via a single point of access: admission, distribution and administration. The hub is designed for debt instruments, warrants, equities and investment funds. Furthermore, Clearstream's presence on more than 50 markets supports the distribution from a single source – in practical terms, therefore, issuers can tap into all markets from a central location. Although they are only in contact with one CSD, their issue has a global presence via the link between LuxCSD and Clearstream's international central securities depository (ICSD).

### CENTRAL ACCESS TO CURRENCY ZONES

CSDs as access points to domestic markets face increased competition with the new European settlement system T2S. At the same time, a growing number of issues are being placed using central bank money. Central bank money refers to money or balances which a central bank credits in return for bills of exchange or securities. Balances held with the central bank are traded mainly between banks. Issuers can achieve wide distribution of their issues via the Global Issuer Hub, with minimised effort and reduced risk.

Clearstream settles the securities for all euro markets centrally. It is no longer necessary to split across different CSDs, which used to be standard practice for

the issuers: Clearstream can carry out the settlement in euro central bank money for different legal and regulatory systems within its own CSDs.

The Global Issuer Hub significantly reduces the effort for issuers to place bonds efficiently and internationally. The ICSD in Luxembourg additionally provides the opportunity to reach currency zones outside the euro area with their bonds, using central bank money. For instance, there is a connection in place through which securities can be issued in the Chinese offshore renminbi. This is all available more cheaply than before – the European Central Bank's T2S initiative is taking effect.

### EFFICIENCY GAINS UNDER T2S

The new kind of cooperation encourages issuers to integrate the services offered by Deutsche Börse Group in their processes (more information about this in the [article "Integrated thinking"](#)). Now is the right time for issuers to review their placement strategies, as the national CSDs may no longer have sufficient liquidity to guarantee efficient placement in the markets on a medium-term horizon. The central services available via the Global Issuer Hub are the ideal solution to this challenge.

Completely new solutions will evolve next year, developed both within the teams and in cooperation with clients. It was ultimately a client request that prompted us to address the new requirements of issuers. ✅



Nathalie Zeghmouli,  
Clearstream Banking,  
responsible for the  
Issuer Sales campaign,  
London

“LuxCSD allows us to tailor a broad range of services to meet the requirements of different issuers. With the largest European central securities depository and LuxCSD, we have very well-founded arguments when it comes to the efficient issuance of securities.”

“The launch of T2S has been a success. In pushing the standardisation process forward, T2S now represents a key instrument to ensure the smooth functioning of the capital market in Europe.”

Mehdi Manaa,  
T2S Programme Manager,  
European Central Bank,  
Frankfurt/Main



# A AUTHORITIES

Governments around the world have agencies in place that regulate and oversee financial markets and companies, e.g. the Basel Committee on Banking Supervision or the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin, German Federal Financial Supervisory Authority). One of Europe's most influential authorities is the European Securities and Markets Authority (ESMA), whose tasks include ensuring compliance with the harmonised rulebooks for EU financial markets. ESMA is the supervisor of credit rating agencies as well as trade repositories such as Deutsche Börse Group's REGIS-TR.

# B BENCHMARK REGULATION

Benchmarks are reference values, serving as a yardstick for the performance of financial instruments. As such, they are of vital importance to financial markets. In order to combat manipulation and ensure their integrity, the EU has adopted the new Benchmark Regulation, set to become applicable in 2018. Deutsche Börse Group publishes around 10,850 global indices and benchmarks; its STOXX® and DAX® indices serve as underlyings for a range of financial products and are used to measure the risk and performance of investment activities. Deutsche Börse Group is already ensuring compliance with various international benchmark principles.

## AMBITION – REGULATORY UPDATES

# Regulation from A to Z

As a provider of a highly regulated financial market infrastructure, Deutsche Börse Group shares the objective of the national legislator, the European Union as well as the G20 member states to strengthen transparent and regulated markets. The Group helps its customers keep abreast of regulatory changes and offers services to facilitate and ensure compliance.

# C CAPITAL MARKETS UNION (CMU)

The CMU is a flagship initiative of the European Commission. Its central aim is to enhance economic growth in the EU by strengthening the role of capital markets and further integrating financial markets. As a market infrastructure provider, Deutsche Börse Group is actively involved in shaping the CMU and has launched several market-led initiatives, such as Deutsche Börse Venture Network®, Venture Match, FinTech Hub, or the new growth segment Scale, which it considers essential to the CMU's success.

# C NEW CAPITAL REQUIREMENTS DIRECTIVE AND REGULATION (CRD V/CRR II)

The EU's CRR II package, proposed in November 2016, is the fourth revision of the original CRD for credit institutions and investment firms of 2006. The CRD's key aim is to strengthen the resilience of the EU banking sector by ensuring that institutions' capital is of sufficient quantity and quality. It also covers remuneration rules, corporate governance principles and an EU-wide single rule book. In this context, Deutsche Börse Group will continuously analyse the capitalisation of its regulated entities, adjusting it if needed, to ensure risks are adequately covered.

## CENTRAL SECURITIES DEPOSITORY REGULATION (CSDR)

The CSDR is one of the key regulations adopted in the aftermath of the 2008 financial crisis. A central securities depository (CSD) is a post-trade infrastructure which provides a central point for depositing financial instruments, e.g. shares and bonds. CSDs are not yet regulated on a European level. The CSDR is set to close this gap and improve the safety and efficiency of securities settlement. The new requirements will likely become effective in 2018. Clearstream, Deutsche Börse Group's CSD, is actively involved in the legislative process and on track with preparing its applications for licences.

## EUROPEAN MARKET INFRA-STRUCTURE REGULATION (EMIR)

Regulators worldwide focus on derivatives markets. New regulations mandate that all standardised derivatives contracts must be cleared through central counterparties. In addition, large parts of off-exchange trading must be settled on a collateralised basis and reported to central trade repositories. To meet these objectives, the EU implemented EMIR in 2012. Deutsche Börse Group helps its customers achieve EMIR compliance, e.g. via Eurex Clearing's client segregation models (ISA Direct) or REGIS-TR's trade repository services. Read more about central counterparty clearing in the [article "Clearing"](#).

## MIFID II/MIFIR

The revised Markets in Financial Instruments Directive (MiFID II) and the accompanying regulation (MiFIR) regulate the provision of investment services in a multitude of financial instruments – at regulated trading venues as well as in OTC trading. The revision will transform the European securities market; key amendments include expanded transparency provisions, measures to boost the stability and integrity of the financial market infrastructure and improvements to the quality and availability of market data.

## RECOVERY AND RESOLUTION REGULATION FOR CCPS

Recovery and resolution regulation for central counterparties (CCPs) is the next legislative step in implementing the G20 objectives, strengthening the CCPs' role as neutral risk managers for financial markets. Its objective is to define measures to be taken in extreme but plausible events of financial distress in order to ensure orderly recovery and resolution of CCPs and thus exclude the use of public resources. The EU Commission published a first proposal in November 2016. Deutsche Börse Group, with its clearing houses Eurex Clearing and European Commodity Clearing, supports the spirit of these efforts.

## REGULATORY TECHNOLOGY (REGTECH)

Regtech describes technology specifically designed to meet regulatory mandates around the world. Due to the sheer amount of data involved and the rapid clip at which regulations are introduced and amended, reporting obligations place high demands on companies and regulators alike. Regtech aims to provide agile and intelligent IT solutions which ease this burden through digitisation and automation, and which are capable of quickly adapting to changing regulatory requirements. Learn more about innovative technology at Deutsche Börse Group in the [article "Technology and the market of the future"](#).

## TARGET2-SECURITIES (T2S)

T2S, a central platform for securities settlement in central bank money, allows banks to reduce cross-border settlement costs and pool collateral. Clearstream migrated to T2S in February 2017.



## INNOVATION – INTEGRATED THINKING

# Keeping an eye on everything

Looking beyond boundaries, thinking outside the box, seeing the big picture – easier said than done. But how exactly do you do this? Deutsche Börse Group looks in all directions, all the time.

### IN TOUCH WITH THE BUSINESS

Sustainable business provides a major contribution to a company's ongoing success. Sustainability is thus not just something that is "nice to have", but a key part of the business. In order to maximise the potential of our own sustainability profile, we established the Group Sustainability Board in 2016: its 16 members – from all parts of the enterprise – contribute their expertise in order to further enhance Deutsche Börse Group's sustainability performance along the entire value chain. The Board convenes twice a year, to discuss opportunities and risks related to environmental, social and governance (ESG) aspects. The Group Sustainability Board advises the Executive Board; it also develops new business concepts based on sustainability – discussing issues such as a code of conduct for employees or an infrastructure for sustainable investments. These concepts are reviewed from all angles. This is also evident in the corporate report: we have been pursuing the concept of integrated reporting since 2012. ESG parameters are not shown in a separate annex – instead, they form an integral part within all sections of the report, demonstrating their interconnection with traditional financial reporting.

### POOLED CLIENT SERVICE

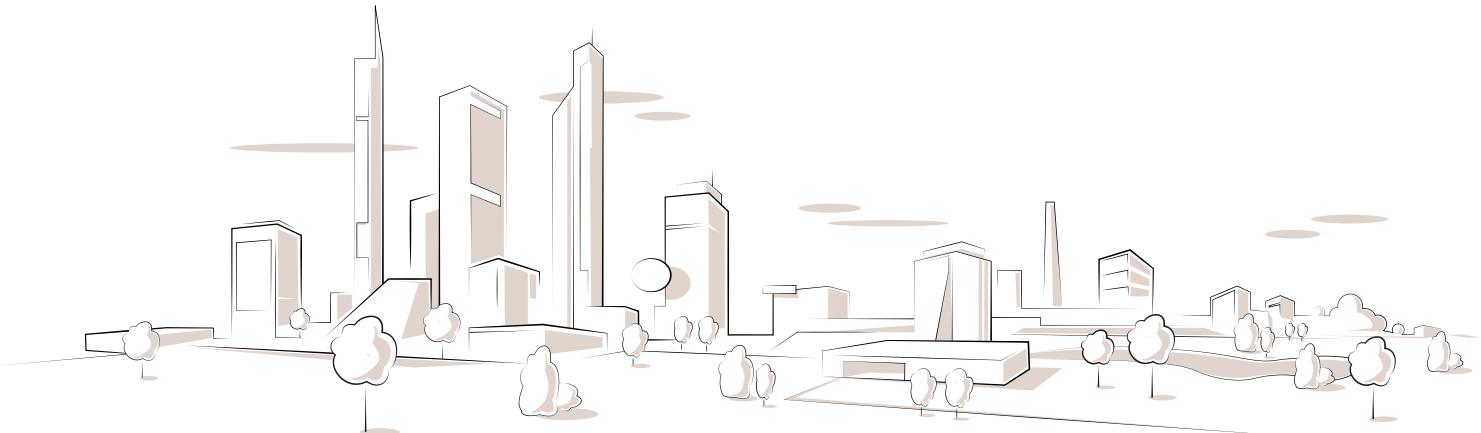
When it is about providing state-of-the-art products and services to clients, holistic thinking and acting are essential aspects: given the plethora of different issues

### SUSTAINABILITY KEY FIGURES

The importance of so-called ESG information (details concerning environmental, social and governance aspects) has been increasing since the financial crisis of 2008, as part of the comprehensive assessment and medium- to long-term forecasts of entrepreneurial performance. Various stakeholder groups – investors, clients, analysts, and not least regulators – increasingly insist that companies disclose ESG opportunities and risks relevant to their core business, besides traditional key financial indicators. This means that reporting enterprises are required to keep an eye on the impact of their entrepreneurial actions across the entire value chain, and to provide a holistic view of their work.

### PERSONAL CONTACTS – FAST AND COMPETENT ASSISTANCE

Each client of Deutsche Börse Group has specified contact persons, via clearly defined communication channels: in this way, we implement client services – effectively, and at all times. For instance, more than 100 staff members attend to more than 18,000 client requests every month, around the clock. Whenever necessary, additional experts are being involved in a targeted manner in order to swiftly deal with specific issues. After each instance of contact, every client is given the opportunity to indicate whether they are satisfied with the service provided – and once a year, a comprehensive survey is conducted.



along the value chain in the securities business, multiple business areas ensure that knowledge does not disappear – and that synergies are created across the entire organisational structure, and used in the interest of clients. This is why we have pooled product development, sales and marketing in matrix structures: they are key to providing new, integrated solutions.

Likewise, we have bundled our client services across the Group, in Group Client Services & Administration, headed by Berthold Kracke. This means that new and existing clients will obtain all the services – trading, clearing, post-trading, custody, as well as market data – from a single source. Group Client Key Account Management maintains clients across all divisions. It is all about client focus: rather than business divisions setting the pace, business is driven by what clients actually need. What are their requirements? In which way should their accounts be structured? Which trading memberships and what technical connections are necessary – and what is dispensable? Together with clients, Key Account Managers and the Group Client Middle Office analyse client needs, and define the specifications of the requisite technology. “Key Account Managers have profound product-specific knowledge – this is essential for offering clients the right solution. These experts exchange information, allowing clients to reap the benefits of knowledge from all areas,” says Berthold Kracke. At the same time, the division’s Group Client Middle

Office supports clients with detailed knowledge of processes and regulations – during the onboarding process as well as during regular operations. It handles specific client requests – such as fee reporting, technical connectivity, or price lists – across the Group.

So how does the Group-wide support concept resonate with clients? “We have had a lot of positive feedback. In fact, sometimes we can even help clients improve their internal processes, because we have a comprehensive overview and can adopt an external perspective. This is very valuable indeed,” explains Kracke. “Thanks to the restructuring, we are able to offer our services as a package across the entire Group. Our newly composed international teams secure visible successes, which are immediately noticeable to clients,” Kracke summarises. “This is something we are proud of.” ✕

**RESPONSIBILITY – 360-DEGREE FEEDBACK**

# A drive towards more openness

Deutsche Börse introduced its 360-degree feedback for executives in summer 2016. The self-evaluation was compared with feedback received from different groups of persons. The summary of the process is positive.

**THE FIGURES**

**348** feedback recipients  
**5,358** feedbacks were given  
**15** responses per feedback recipient  
**91** per cent response rate  
(third-party and self-evaluation)

**SABINE ROECKL-SCHMIDT, HEAD OF HUMAN RESOURCES**

"The tool was well received by employees and executives; as shown by the large number of assessments. Their quality is also very good: there is a desire for a more open feedback culture, and the 360-degree feedback represents a step towards achieving that. It also requires courage for the feedback recipient to be open to the results – our executives have proven this, thus laying down a good standard for a change in culture. Our task now is to really benefit from the feedback. Sportsmanlike ambition can even be applied to a very good result: there is always another mountain that is worthwhile scaling."

## FEEDBACK RECIPIENT



### **FERDINA YARZADA, GROUP BUSINESS & PRODUCT DEVELOPMENT, ESCHBORN**

"Constructive feedback is fundamentally very important to me, allowing me to recognise my own individual strengths and where there is room for improvement. It also helps me to consciously work on these areas. I am therefore always open to relevant suggestions, and really appreciate them. Aspects were taken up within the scope of the 360-degree feedback that might not have otherwise been addressed outside the framework of such a process. In order to achieve as diversified a feedback as possible and gain major insights, I consciously included colleagues in my feedback group with whom cooperation was challenging at times. The feedback received matches my self-assessment in most aspects. But I now have a much clearer picture of my strengths and scope for improvement, especially thanks to the different perspectives. For example, in certain situations where I should conduct myself differently, I recall the feedback very consciously, and try to implement it accordingly."

## **ROBERT TABET, RELATIONSHIP MANAGEMENT ASIA, SINGAPORE**

"The 360-degree feedback is a fantastic tool. The feedback you receive prompts you to reflect, and to take a closer look: how can I improve? What did I expect in the first place? Moreover, this reminded me once again that I am not working in isolation – I am surrounded by colleagues who are watching me, who have an opinion of me. And they want me to improve – if it wasn't for that, they would not have given me feedback. I am convinced that there is always something I can work on. To me, my career is a journey during which you never stop learning. For instance, 360-degree feedback has taught me that members of my team want to have a more precise idea as to where we stand, and what they can contribute towards achieving our goals. Now I try to give them more frequent – and more structured – feedback."



## FEEDBACK GIVER



### **THILO WESSELY, STRATEGIC EXECUTION, ESCHBORN**

"I found it easy to offer open feedback to my supervisor because of the opportunity it gives me to become involved in the potential growth of the company, in an alternative manner. Thanks to the 360-degree view, the tool is more objective and informative than hierarchical evaluation models that involve only two individuals. It also affords the opportunity to uncover and develop potential. Because I appreciate an open culture of feedback, I would like to see the 360-degree feedback tool being extended to employees too, rather than restricting it to executives only."

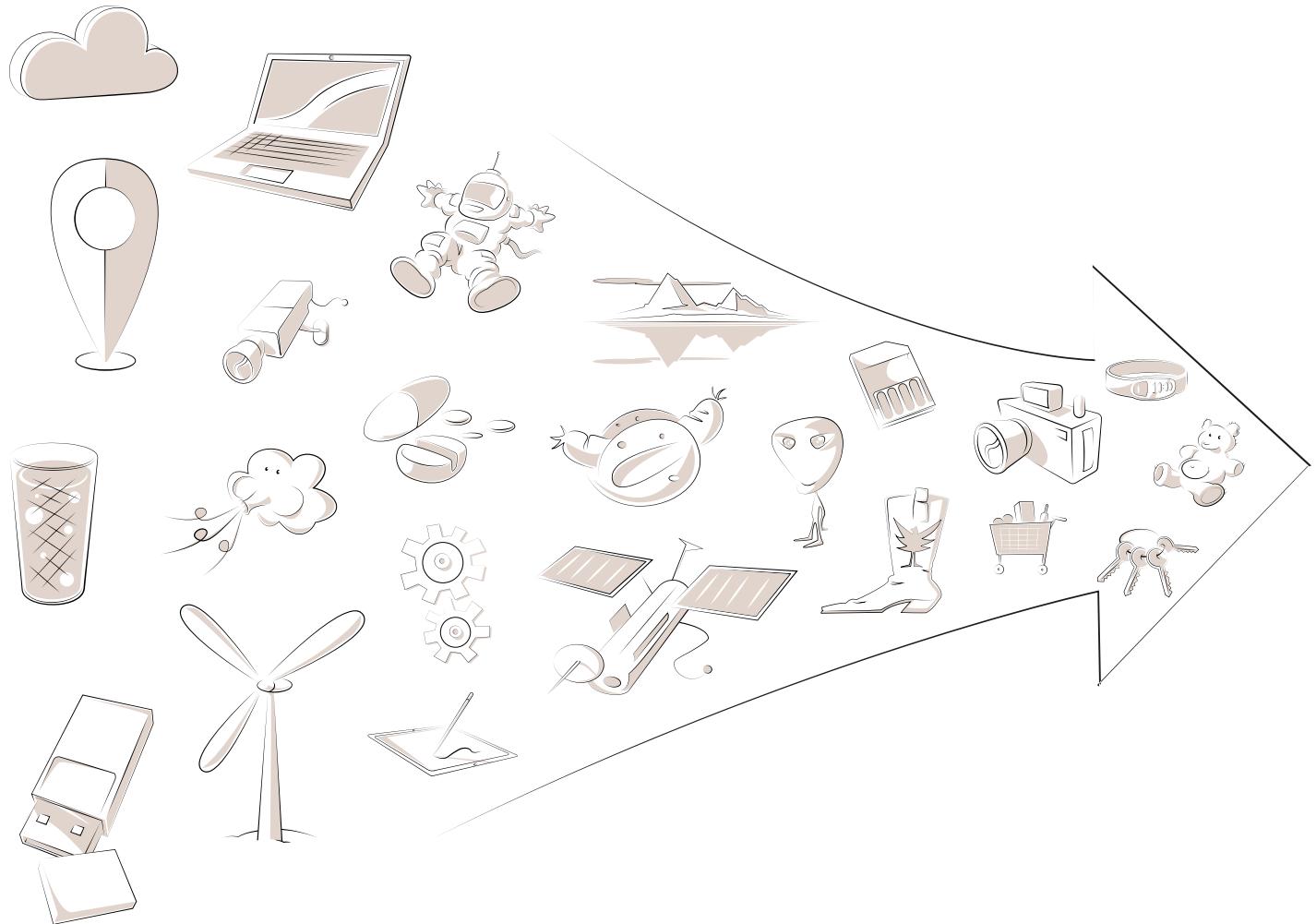
## **MELANIE DANNHEIMER, CLEARING DESIGN, LONDON**

"I am thrilled that feedback and the feedback culture were brought up. One needs a structured process to start with, so as to establish a culture of openness and to make feedback an everyday issue. I gave feedback to two of my colleagues and found it good how detailed the questions were. It really forced me to reflect on the evaluation. I offered my colleagues the opportunity to discuss my feedback afterwards. They took my evaluation very seriously. I have the impression that we now deal with one another in a more open fashion. You get to know each other better. The 360-degree feedback also makes it easier to cooperate with one another."



# The value of data

## INNOVATION – A LOOK INTO THE CONTENT LAB



Market Data + Services has been one of Deutsche Börse Group's reliable growth areas for years. Its range of products and services comprises indices, market data (including real-time data), analytical data streams, regulatory data, as well as IT infrastructure and trading platforms. Given stable demand and the ongoing trend of digitisation, a provider has every reason to be content. However, this area in particular is also especially dynamic, as technical opportunities and client requirements are changing rapidly.

Deutsche Börse created its Content Lab in mid-2016: a “laboratory” which is not designed to develop any concrete products. “We are the research department within Deutsche Börse Group’s Market Data + Services segment,” says Konrad Sippel, Head of the Content Lab. “We are looking for solutions which are not directly driven by specific client requests – that is something other departments are already doing very successfully” (see [chapter “Post-trading services”](#)). The Lab provides a space to work on new things – beyond incremental improvements to existing solutions – to anticipate customer needs and requirements and try them out without any “self-imposed censorship”.

(or data products) must never put individual customers at a disadvantage. “But from a research perspective, it’s a thrill to be working with ‘real’ data – or with what we call big data: data packages which are so big that they cannot be processed in a regular way. It enables us to prepare very attractive new offers.”

### UNEXPECTED PRODUCTS

In fact, the Lab just succeeded in creating a new product in cooperation with their colleagues at foreign-exchange (FX) trading platform 360T®: “360T has many points generating interesting data. The Content Lab has analysed some of these data points, creating a new data



### TRUE INNOVATION

“We are not under any obligation to justify each and every one of our steps along the way. The Lab is not about any specific product – we are looking at concepts which will be attractive for the next 10 to 20 years. It’s a true privilege within the company,” says Sippel, a trained mathematician who holds an MBA of Fuqua School of Business at Duke University. “This degree of freedom means a huge challenge to our team.” Nonetheless, Sippel is certain that this is the only way to invoke true innovation. The Content Lab’s “think tank” concept is thus a perfect match for Deutsche Börse Group’s growth strategy: a small, agile team that has the ability to swiftly try out things, being able to think outside the box.

“We also have the opportunity to work with data – in an encrypted, aggregated and anonymised form, of course – that would never make it into specific products, such as trading data on a participant level.” Sippel emphasises that as a matter of principle, ideas

feed which highlights FX market movements much faster than a simple aggregation of all data would do,” Sippel explains. This is what he calls a “low-latency product” – a solution involving minimum delay in market data transmission. Developing the new product was only possible through full access to 360T trading data. At present, the new feed is being tested with a few select customers and enhanced where possible. “This is right in line with our company’s new vision of closely cooperating with customers, making intelligent use of technological opportunities, and of recognising – and exploiting – new contexts.” Sounds abstract? “Well, you need to think in abstract and networked ways in order to come up with truly original solutions,” Sippel states with certainty.

### THE VALUE OF DATA – FOR MARKETS

At the end of the day, customers are set to benefit – as are the markets as a whole. “In the shape of various products, our ideas and concepts are designed to help clients make better investment decisions. At the same



Konrad Sippel heads Deutsche Börse Group's recently created Content Lab.

## “Data improves our products.”

time, they are set to further enhance market transparency – for us, as developers and providers of market infrastructure, this is the rationale of sustainable products.”

At 360T, the potential inherent in the data paved the way towards development of the product. At the Eurex derivatives exchange, the Content Lab team chose a different path: “from paper to practice” is how Sippel summarises the team’s approach taken for developing a model predicting credit default probabilities, based on option premiums traded at Eurex. The starting point was a complex scientific model that colleagues at Eurex product development had discovered (and had already patented) for application in options markets. “It then became clear to us – as well as to our colleagues at Eurex – that we are not only right at the source of the necessary data, but that we also have the right tools and skills in order to compute the model based on empirical evidence, to validate it, and to optimise it for application in practice.” At the moment, the model is being validated and fleshed out further where necessary. “At the end of this process, we will have a new, highly viable tool which will have been developed across divisions, and which will have a plethora of applications – from being a pure data product to serving as an underlying instrument for new futures and options contracts.”

A further approach concerns predicting transaction costs – another development where the Lab team closely cooperates with customers of Deutsche Börse Group. “We are interested in gaining insights into customers’ internal decision-making processes – which we would not obtain in the course of our everyday business. We are delighted that within the framework of the Lab, we can achieve at least selective intelligence in this respect. This provides us with exactly those parameters which subsequently help us optimise the effectiveness of our offering for our customers.” An offering which – provided it can be realised – will

enhance markets. “This is quite an essential aspect when we’re talking about the value of data,” Sippel says: “Data improves markets! All you need to do is to compile and process it in a smart way. That sounds much easier than it is – but we are working on it.”

### LONG-TERM PERSPECTIVES

Personally, Sippel is particularly interested in the long-term prospects: “Experience tells us that resources for more long-term – and consequently riskier – research and development projects are more difficult to obtain, especially if normal, everyday business is already challenging. I’m sure this is something employees in the modern business world are facing every day.” In fact, this is the precise notion based on which the Content Lab was founded. “Deutsche Börse has been a pioneer in the digitisation of markets, and we are determined to maintain our ground-breaking role in developing and deploying new technologies in the financial markets,” Sippel points out.

What are the scenarios for new products over the long term? “How about an automated, self-learning asset allocation function for pension funds and insurance companies, to support and supplement portfolio specialists?” Sippel asks. For him, this is an artificial intelligence (AI) issue. “Such a tool would not only know all products and trading venues – it would also be able to determine the impact of any potential orders in advance, just prior to execution, enabling the specialist to adapt his strategy on a short-term basis.” In conjunction with the tool, he would be superhuman: “He would perform better than a human being, in precisely this aspect, given the vast amount of underlying data and ultra-fast strategy adjustments.” Of course, Sippel is well aware of the reservations against the so-called robo advisors. “But combining big data and AI is a fascinating concept – right now for our Content Lab, and also for our customers, over a medium- to long-term horizon.” ✕

**AMBITION – ENERGY TRADING IN EUROPE**

# EEX: a global multi-commodity platform

The transition to renewable energies is turning the electricity markets upside down. Power producers are facing rapid changes. “Our customers’ requirements change just as fast,” says Peter Reitz, Chief Executive Officer of Leipzig-based European Energy Exchange (EEX).



Successful across markets: the European Energy Exchange

## SHORT-TERM TRADING – 24/7

Systems buzzing, monitors flashing, and right in the middle: the market surveillance team at work. Business as usual, is what one might think. That's simply what electronic trading centres look like nowadays. However, it is only quite recently that – driven by the transition to renewable energies – electricity trading has also started to become more and more of a short-term market. Electricity trading is increasingly turning into real-time trading, a development which is closely linked to the new energy sources being tapped.

"When revenues from the feed-in of wind or solar power are higher or lower than predicted – and that happens all the time – we have to take countermeasures at very short notice. Current technology doesn't yet allow us to store great volumes of energy. Thus, production and consumption must always be balanced. 'Volatile' situations on the electricity market – with very high or even negative prices – aren't unusual," Reitz explains. You may have heard about these phenomena and the challenges involved from the many press reports dealing with the technical consequences of the Energiewende – Germany's transition to alternative means of energy production. "To us, as a power exchange, this is not an abstract discussion – our trading systems have to be able to deal with the new overall market situation."

Compared to a few years ago, trading has changed drastically. EEX's customers are making use of the new opportunities: "On the physical spot markets, i.e. when trading with physical amounts of electricity, the standard nowadays is 15-minute contracts traded 24/7 and up to 30 minutes before delivery," says Reitz. "Our derivatives market is responding to this development as well." Using new products, market participants can not only hedge against increasingly volatile prices, but also against the specific volume risks associated with marketing renewable energy, e.g. due to deviations from predictions concerning the feed-in of wind power.

## STRONG GROWTH

Established in 2002 as a result of the merger of the two German power exchanges in Leipzig and Frankfurt/Main, EEX has come a long way, evolving from a

### EUROPEAN ENERGY EXCHANGE AT A GLANCE

- established in 2002 as a result of the merger of the power exchanges in Leipzig and Frankfurt/Main
- 63 per cent of the shares held by Deutsche Börse AG
- fully incorporated into the consolidated financial statements of Deutsche Börse Group since 2014
- EEX group includes Powernext, EPEX SPOT, Cleartrade Exchange (CLTX), Gaspoint Nordic, Power Exchange Central Europe (PXE) and European Commodity Clearing (ECC)
- employing a total of 450 staff members at 15 locations
- clearing and settlement of trading transactions is provided by ECC

local German power exchange into the leading European energy exchange. Today, EEX group covers large parts of the European continent: electricity markets in 16 countries, gas markets in nine countries and trading with emission allowances in 27 EU Member States. "Our capacities and technical possibilities are growing, as is our product range," Reitz adds. Overall, a record spot and derivatives volume of 4,456 terawatt hours (TWh – 1 terawatt is the equivalent of 1 trillion watts) was traded in 2016, compared to 3,062 TWh in 2015. PEGAS®, the gas trading platform (spot and futures market) of EEX group, registered a total volume of 1,756 TWh in 2016, compared to only 1,042 TWh in the previous year.

Is there a secret to EEX's success? "I wouldn't call it a secret, but it has worked anyhow," is Peter Reitz's answer. "We rely on a combination of physical and derivatives trading, and offer trading, clearing – settlement and delivery – and reporting services, all from one provider. All in all, our aim is to establish a firm partnership with our clients, some of whom are also our shareholders."

## A BALANCED GOVERNANCE MODEL

EEX's governance model accounts for a large part of the company's sustainable economic growth, and strengthens the excellent competitive position of the energy exchange. "We have a strong presence in the area as well as local political support," says Reitz. It is natural for customers who are also shareholders to be interested in the company's positive strategic devel-

## “Volatility and structural effects are closely linked in our somewhat unique sector.”



**Peter Reitz,**  
Chief Executive Officer,  
European Energy Exchange AG

opment. As a result, strategic management decisions are oriented towards the needs of the market and those of the customers. As Reitz states: “We won’t make decisions which don’t coincide with the market’s and our customers’ requirements.”

In recent years, this approach has proven to be very successful. EEX has gained considerable market share – compared to off-exchange (over-the-counter, OTC) trading – with its exchange model. A certain degree of reliability, a decisive factor in this industry, has also played a role. Sudden product and service changes can cause uncertainty. EEX’s products and services have become the market standard and are trusted by market participants. One such example is the Phelix future, which has become the established market standard in the European wholesale electricity market thanks to its liquidity. Reitz sums it up like this: “We worked hard for this success. From where we are now, it is our strategic objective for EEX to become a leading global multi-commodity platform.”

### THE ENERGY SECTOR

“Volatility and structural effects are closely linked in our somewhat unique sector,” Reitz explains. Both are capable of being growth drivers for EEX – and already have been in the past. However, Reitz is sure that “there is only one type of growth that we, ourselves, can shape in a sustainable manner, and that is structural growth.” He is referring to growth in core markets, the geographic expansion of services, and venturing into new business areas.

#### DID YOU KNOW?

1 terawatt, 1012 watts or 1 billion kilowatts – equals the output of around 1 billion vacuum cleaners. With one terawatt hour, you could iron 15,000,000,000 shirts. Germany’s annual electricity usage amounts to around 600 terawatt hours.

“It is possible for market volatility to boost trading activity,” Reitz adds, citing the politically motivated shut-down of nuclear power plants in Germany after the nuclear disaster in the Japanese town of Fukushima as an example. “But we can’t foresee these external events – and their impact is hardly calculable. Therefore, they don’t just offer great potential, but also pose risks.”

Meanwhile, the computers at EEX in Leipzig are still humming although it is now late in the evening. The company’s location, an attractive Saxon boomtown, offers a tempting night life – but trading at the energy exchange continues. The office is staffed all night. “24/7 really means 24/7,” Reitz says, smiling. ✎



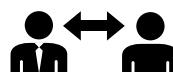
## EMPLOYEE COMMITMENT

Deutsche Börse Group promotes the social commitment of its employees worldwide. For instance, volunteers from Frankfurt gave pupils the opportunity to gain an insight into the economy. Staff in London helped maintain a park, and Singapore employees painted together with a group of special-needs youths. This is only a snapshot of the wide variety of actions taken last year.



## MENTORING

Mentoring makes it easier for new employees to get off to a good start at Deutsche Börse Group. Experienced staff members assist them in networking beyond their own department, and offer a comprehensive cross-divisional understanding of the company. The “New Role” mentoring programme makes it easier for colleagues to take on a new management role.



## TOP MANAGEMENT DIALOGUE

Deutsche Börse Group managers come together to hold intensive talks, where they focus above all on overarching issues and significant strategic initiatives.

## RESPONSIBILITY – FOCUS ON CORPORATE CULTURE

# Working at Deutsche Börse Group



## PROMOTING WOMEN

Deutsche Börse Group views the promotion of women as a strategic task, and offers various tools for this purpose – such as network events and training sessions (see also the [chapter “Non-financial key performance indicators”](#) in the combined management report).



## BOOK CLUB

Employees are invited to talk about their favourite book. Group discussions about the works of literary fiction lead to a more in-depth understanding and often reveal surprising insights.



## LUNCHTIME FORUMS

Strengthening the exchange of views among colleagues and enhancing inward transparency are the strategic goals of the training and information format for employees during lunch time. The topics concern the working environment in general and important projects of the individual departments.



## TRAINING

Employees benefit from a number of individual training options, thus improving the company's efficiency and effectiveness. New employees are given a comprehensive overview of Deutsche Börse Group within the scope of introductory events.



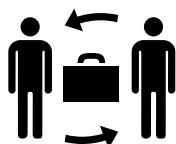
## WORK-LIFE BALANCE

Specific courses to promote health and well-being are central to the company's work-life balance programme. Employees are also made aware of health aspects in order to achieve a better balance between work and leisure.



## ART COLLECTION DEUTSCHE BÖRSE

Deutsche Börse Group combined its commitment to transmitting, promoting and collecting art in the non-profit Deutsche Börse Photography Foundation. Employees are afforded regular guided tours to view the latest art collection directly at their place of work.



## JOB ROTATION

Horizontal career moves promote employees' mutual understanding and ongoing development. This is facilitated by job rotation options for employees and executives.



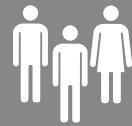
## PARENTS' NEEDS

We offer flexible solutions regarding working hours and locations, which are adjusted to meet the individual needs and family circumstances of our employees. There is a parent-child office available at several locations for employees with children requiring care. Frankfurt offers its own childcare service for short-term emergencies.



## LUNCH DATING TOOL

Groups of employees selected at random from different departments have lunch together. The lunch dating tool allows employees to get to know the work done in other departments and teams, on a personal level.

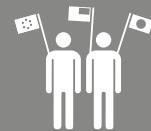


## 5,176 MEMBERS OF STAFF

are employed by Deutsche Börse Group.



Our corporate culture has been enhanced by  
**760 NEW EMPLOYEES**  
who joined since 2016.



## EMPLOYEES BY REGION

Germany: 43%  
Luxembourg: 21%  
Czech Republic: 15%  
Ireland: 6%  
Others: 15%



## AGE STRUCTURE BY GENDER

Age	Women	Men
<30	380	379
30–39	866	1,077
40–49	561	985
>50	289	639



## AGE STRUCTURE BY LOCATION

Age	Germany	Luxembourg
<30	274	104
30–39	673	270
40–49	704	475
>50	575	227



## AMBITION – OPPORTUNITIES AND EXPECTATIONS

# The exchange of tomorrow

To be the partner of choice to our clients around the world, and to be top-ranked in all of our business segments: this remains our long-term ambition.

Our “Accelerate” growth strategy is based around a clear focus on growth, whether organically or through acquisitions – to explore new asset classes, for example. Our vision of “Exchange 4.0” will elevate our business to the next level. We deliberately and consciously take the lead with respect to relevant developments – be it in terms of technology or in dealing with regulatory requirements – thus creating new products and services which help our clients face future challenges with ease. As a strong and innovative partner, Deutsche Börse will join forces with policymakers and regulators to create new perspectives for Frankfurt as a financial centre, and indeed for Europe.

We are going to turn Deutsche Börse Group from a client-oriented enterprise into a client-centric enterprise. In order to achieve this, we constantly review what we are doing, and establish new structures where necessary. For instance, we have centralised product development, sales and marketing for the entire Group – which means that we now offer a one-stop service. Our clients are already noticing the difference, and we anticipate connecting a growing number of new clients.

Moreover, we are actively targeting fast and innovative enterprises. Many of our potential clients were not even on the market five or ten years ago.

A second key aspect of our “Accelerate” growth strategy is the scalability of our business. This means generating strong revenue growth with only moderate growth in costs. In this way, we are growing the business in a sustainable manner, and will gradually reduce our dependence upon economic cycles. This remains our overall strategic objective.

## AT THE LEADING EDGE OF DEVELOPMENTS: EXCHANGE 4.0

The pace of change in the financial industry is getting faster and faster. Big data, cloud computing and artificial intelligence are but a few of the factors driving this change. Disruptive technologies such as blockchain will redefine parts of the financial markets in just a few years’ time. Deutsche Börse Group actively invests in digital innovation – taking a pioneering role in shaping this change.

With our FinTech Hub in Frankfurt and Deutsche Börse Venture Network®, we are promoting a culture of innovation and investment, bringing together innovative companies and international investors. In March 2017, we launched a new exchange segment for successful small and medium-sized enterprises: "Scale" offers benefits to innovative companies which have already built a track record in the market. All of these are key components of an ecosystem for growth.

Likewise, we invest in disruptive technology within the company: jointly with Deutsche Bundesbank, we showcased a prototype for securities settlements based on blockchain technology in November 2016. Our investment in Digital Asset Holdings LLC, a blockchain pioneer, will also help us to realise the potential for innovation in this area. Development projects in our Content Lab include solutions based on artificial intelligence, whilst the Product Development Lab, launched in March 2017, conducts research into the potential of cloud-based technology for the financial markets.

### **BUILDING BRIDGES WITHIN EUROPE**

Yet, Deutsche Börse is not just pursuing its own growth story, which started under "Accelerate". We also live up to our responsibility for a strong European market infrastructure: this is about strengthening the Capital Markets Union planned by the European Commission, and ensuring the straightforward and efficient movement of capital across Europe. This is in the interests of individual countries, of pension and retirement funds, and of savers looking to invest their assets over the long term. Hence, the Capital Markets Union is also in the best interests of people across Europe, whose everyday lives benefit from modern and sustainable infrastructure. These are just a few examples for our motivation to remain actively committed to an integrated European economy going forward.

### **KEEPING A GLOBAL BALANCE: STABLE FINANCIAL MARKETS**

Governments and central banks increased their focus on financial markets regulation in the aftermath of the financial crisis of 2008. In the view of Deutsche Börse Group, regulation within the framework of the objectives set by the G20 has been successful overall. Financial markets have become safer. The EU drew up a regulation (EMIR) designed to regulate over-the-counter (OTC) derivatives trading. Even ahead of the start of EMIR

implementation in June 2016, Eurex Clearing developed a central counterparty for the clearing of OTC derivatives products. Transactions formerly executed on a bilateral and uncollateralised basis are now increasingly settled through a central clearing house.

Clearstream was connected to TARGET2-Securities (T2S), the European Central Bank's settlement platform, in February 2017. This allows clients to use Clearstream as a central access point for domestic and international securities settlements, in commercial bank or central bank money. It is in cross-border and cross-market initiatives such as these that Deutsche Börse Group sees an opportunity to contribute to the stability of financial markets in Europe. T2S has in turn facilitated the development of numerous products which will gradually be introduced.

### **GROWTH IN MANY AREAS**

Bucking the general market trend, the foreign-exchange trading platform 360T® continued its marked growth during the year under review. New products will be launched to generate further growth in 2017. Likewise, European Energy Exchange successfully boosted its market share to 30 per cent – in a market characterised by off-exchange trading. Amongst other factors, this is due to demand for safe and structured solutions for the trading and clearing of energy and commodity products. We expect the need for protection in energy trading will continue to support our business.

Lots of things are changing – at many points throughout the company. Our way ahead will lead via sustainable growth in various areas, safeguarding our technological leadership under the heading of "Exchange 4.0". For 2017, we expect consolidated net profit for the period to increase between 10 and 15 per cent. Our approach in this regard encompasses sustainability criteria – such as the United Nations' Sustainable Development Goals – to be integrated into our business model and our reporting. ✕

**Share price development**

Closing price on 31 Dec 2016

**€77.54****-5%<sup>1)</sup>****Dividend per share<sup>2)</sup>****€2.35****+4%<sup>1)</sup>**

# Key figures 2016

**Operating costs****€1,317.4 million****+3%<sup>1)</sup>****Earnings before interest and tax<sup>4)</sup>**

(EBIT)

**€1,108.2 million****+18%<sup>1)</sup>****Cash flows from operating activities**

excluding CCP positions

**€856.6 million****+8%<sup>1)</sup>****Net revenue (total)<sup>4)</sup>****€2,388.7 million****+8%<sup>1)</sup>****Net revenue by segment (€ million)**

Eurex

**1,032.2****+16%<sup>1)</sup>**

Xetra

**164.6****-11%<sup>1)</sup>**

Clearstream

**781.9****+5%<sup>1)</sup>**

Market Data + Services

**410.0****+2%<sup>1)</sup>****Return on shareholders' equity<sup>3)</sup>**

annual average

**19%****Credit rating Deutsche Börse AG****AA<sup>5)</sup>**

1) Growth rate compared to 2015

2) Proposal to the Annual General Meeting 2017

3) Adjusted for non-recurring effects

4) Figure excluding International Securities Exchange, Inc., which was sold on 30 June 2016

5) On 19 December 2016, Standard &amp; Poor's confirmed the negative outlook.

# Our locations



## NORTH AMERICA

CHICAGO  
NEW YORK

## EUROPE

AMSTERDAM  
BERLIN  
BERN  
BRUSSELS  
CORK  
ESCHBORN  
FRANKFURT/MAIN  
LEIPZIG  
LONDON  
LUXEMBOURG  
MADRID  
MILAN  
MOSCOW  
OSLO  
PARIS  
PRAGUE  
VIENNA  
ZURICH

## ASIA

BEIJING  
DUBAI  
HONG KONG  
MUMBAI  
SINGAPORE  
TOKYO

## AUSTRALIA

SYDNEY

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**Bibliographical references**

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Institut der deutschen Wirtschaft (2016): Unternehmensgründungen – Mehr innovative Startups durch einen Kulturwandel für Entrepreneurship? In: IW Policy Paper, 2/2016, p. 4.

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