



DEUTSCHE BÖRSE
GROUP

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Financial report 2017

Excerpt: report on opportunities



Report on opportunities

Organisation of opportunities management

Deutsche Börse Group's opportunities management aims to identify, evaluate and assess opportunities as early as possible and to take appropriate measures in order to transform opportunities into business success.

Deutsche Börse Group evaluates organic growth opportunities both on an ongoing basis throughout the year in the individual business areas and systematically at Group level as part of its annual budget planning process. Suggestions from the Group's business areas for new products, services or technologies serve as the starting point. The process begins with a careful analysis of the market environment: this considers both customer wishes and factors such as market developments, competitors and regulatory changes.

Ideas for growth initiatives are developed further using uniform, Group-wide templates and subjected to a profitability analysis. Qualitative aspects are documented in a business plan, and expenses and revenues are projected in detail for multiple years.

Once a business plan and profitability analysis have been prepared for a specific growth initiative, the Executive Board of Deutsche Börse AG decides on its implementation. This decision is taken as part of the annual budget planning process. The initiatives that, after taking into consideration the associated risks, add the most value and that can be financed from the budget allocated are selected by the Executive Board and included in the budget.

Budgeting for growth initiatives involves reserving a full-year budget comprising expenditures and expenses for each selected growth initiative included in the investment portfolio. The Group Project Committee (GPC) monitors progress of growth initiatives throughout the year, checking and overseeing projects on a regular basis. In this context, the GPC focuses on whether defined milestones have been reached, on the potential impact of changes in the competitive environment on commercial performance, and on the utilisation of budgets compared to planning.

Where budget adjustments are required during the course of the year, project management must first submit a corresponding application to the GPC. The GPC may also recommend adjustments to full-year budgeted funds, to bring them into line with general business developments. Where needed, this also provides for the opportunity to approve new growth initiatives during the course of the year.

Furthermore, supervision of growth initiatives is supported by regular reporting. This report is coordinated by central functions and created in cooperation with the individual projects from the business areas and compares planned costs with actual budget utilisation. In addition, the financial planning is adjusted, forecasts are updated and changes to the scope of the project are made transparent. Checks are made to establish whether milestones have been reached and whether project-specific risks and the countermeasures taken are described.

Organic growth opportunities

When assessing organic growth opportunities, Deutsche Börse Group makes a basic distinction between structural and cyclical opportunities. Structural opportunities arise, for example, as a result of regulatory changes or new customer requirements, and can be influenced directly by the company. Cyclical opportunities cannot be influenced directly by the company and are driven by macroeconomic changes. In addition, the Group intends to seize opportunities arising as a result of the technological transformation.

Structural growth opportunities

The focus of Deutsche Börse Group's structural growth potential is on product- and service-driven initiatives designed to satisfy new client needs as well as regulatory requirements. In order to ensure the Group is optimally positioned and in order to explore new opportunities, the Group already has gradually realigned its organisational structure with its growth strategy. Moreover, it regularly examines options for growth in high-potential asset classes, products or services – organically or through external acquisitions and cooperations.

The Group anticipates the strongest revenue increases in its Eurex segment. Among other things, this is due to the clearing of over-the-counter (OTC) derivatives and further growth in the trading of power and gas products. 360 Treasury Systems (360T) will also provide a contribution to net revenue growth in this segment. In the Clearstream segment, the focus is on developing the investment funds business, cross-border securities settlements via TARGET2-Securities (T2S), as well as collateral and liquidity management. The growth focus in the Market Data + Services segment is on the expansion of the index business. The business potential of the above-mentioned initiatives are described in more detail below.

Clearing of OTC derivatives

The liquidity problems experienced by major market participants during the financial crisis were triggered by the failure to settle bilateral OTC transactions that were mainly entered into on an unsecured basis. In light of this, the leading industrialised nations (G20) agreed to create an effective regulatory environment to make off-exchange derivatives transactions more transparent and more secure. In response, the European Union developed the European Market Infrastructure Regulation (EMIR), which is aimed at regulating OTC trading in derivatives. EMIR includes the following regulatory requirements:

- An obligation to clear standardised OTC derivatives transactions using a central counterparty
- Special risk management requirements for transactions in non-standardised derivatives
- An obligation to report the transactions to a trade repository

The obligation for market participants to comply with EMIR requirements kicked in on 21 June 2016, with the first of four phases. Preparing for mandatory clearing, Eurex Clearing AG has developed a central counterparty to clear OTC derivatives. The offering, which may later be extended to other asset classes, is aimed primarily at institutional customers and the interest rate swaps they enter into. It especially focuses on security and efficiency, allowing customers to gain the full benefit of Eurex Clearing's risk and collateral management services for their OTC transactions as well. The majority of

transactions entered into by these clients has been subject to mandatory clearing since the start of phase 2 on 21 December 2016. As expected, clearing volumes in OTC interest rate derivatives rose significantly in 2017. The Group expects this trend to accelerate further in 2018.

Moreover, Brexit – and the associated uncertainty as to whether clearing houses outside the scope of EU regulation will still be permitted to clear euro-denominated interest rate swaps in the future – offers another opportunity to build market share in this product area. Against this background, Eurex Clearing created an alternative for clearing interest rate swaps within the EU, through its partner programme announced in November 2017, which has met with broad market acceptance. By the beginning of February 2018, 25 market participants from the US, the UK, Asia and Continental Europe had already opted to participate in the programme.

Trading and clearing of power and gas products (EEX)

With the acquisition of a majority stake in European Energy Exchange AG (EEX), based in Leipzig, Deutsche Börse Group expanded its product range to include trading and clearing of spot and derivatives contracts on power and gas as well as emission certificates – in order to benefit from markedly higher demand for energy trading and clearing services. The double-digit growth rates which the Group has achieved since then have been the result of external growth but also reflect structural organic growth which Deutsche Börse Group has been able to exploit, thanks to its good position. For instance, EEX has evolved into the central marketplace for energy, energy-related and commodities products in Continental Europe; its product range includes the markets in Germany, France, the Netherlands, Belgium, Italy and Spain. EEX also generated organic growth, especially in the power and gas business. While this growth momentum is based on the changing importance of renewable energy sources – wind power in particular – for power generation, the resulting gains are difficult to predict, also due to the strong fragmentation of the European energy market, and the fact that market participants predominantly trade off-exchange. Given this high degree of fragmentation, as well as the inefficiency of OTC markets, demand for on-exchange trading and clearing solutions for such transactions has been growing over recent years. While OTC trading clearly continues to be the bigger market, EEX was able to significantly increase market share in recent years. At the end of 2017, it amounted to around 30 per cent. EEX continues to anticipate strong demand for efficient trading and clearing solutions for the energy markets, and resulting structural growth.

Expansion into foreign-exchange trading (360T)

Deutsche Börse AG successfully explored a new asset class – foreign-exchange trading – with the full acquisition of 360T. 360T® is a leading, globally active foreign-exchange trading platform which has generated double-digit annual growth rates almost continually since its inception in 2000. The broad client base of 360T includes corporate and buy-side clients as well as banks. The acquisition of 360T by Deutsche Börse is expected to further boost the company's organic growth momentum. In the medium-term horizon, the combination offers the potential for revenue synergies in the range of an eight-figure sum (in euros), with 360T using Deutsche Börse Group's international sales network and expertise to grow business, especially through the introduction of electronic trading in order to further improve liquidity and transparency in Q3/2017. To date, regulatory obligations such as EMIR have not yet been expanded to cover the foreign-exchange market. If this were to happen, Deutsche Börse Group would be able to tap further growth opportunities from its extensive portfolio of products and services it offers in the context of regulatory requirements. For instance, in the first half of 2018, the Group plans to establish a foreign-exchange clearing house in order to service the fundamental demand for capital-efficient solutions. Thanks to its leading position, 360T further benefits from a structural trend. Even

though, at present, the vast majority of daily foreign-exchange trading volumes are executed off-exchange, demand for transparent, electronic multi-bank trading platforms such as 360T is rising. By combining the skills and experience of 360T in foreign-exchange trading with Deutsche Börse's IT competence, the Group will be able to explore the resulting revenue potential.

Cross-border settlement of investment funds

Clients of Deutsche Börse Group can use Clearstream's settlement and custody services for their entire fund portfolio – covering traditional investment funds, exchange-traded funds (ETFs) as well as hedge funds. Given that regulatory authorities demand more efficient settlement and custody solutions in order to achieve a maximum safety level for customer assets, the Group anticipates that it will acquire additional client portfolios.

Cross-border securities settlement (T2S)

Initiated by the ECB, the purpose of the T2S project is to harmonise cross-border securities settlement using central bank funds across Europe. For Deutsche Börse Group, this holds the opportunity of winning new clients for Clearstream's innovative services, such as global liquidity management. Furthermore, the Group expects higher custody volumes and new services from T2S, which can only be provided through Clearstream via its integrated international central securities depository (ICSD). Clearstream has been connected to T2S within the scope of the fourth migration wave in February 2017. Since then, clients have been able to use Clearstream as a central point of access for domestic and international settlements, both in central bank and commercial bank funds. National central securities depositories (CSDs) – Clearstream Banking AG in Germany and LuxCSD S.A. in Luxembourg – offer their clients T2S settlements at ECB terms, without any mark-up. Full interoperability between national and international CSDs will enhance liquidity and collateral management.

Collateral and liquidity management

Clearstream's collateral and liquidity management offering, developed as part of its Global Liquidity Hub growth initiative, helps customers cope with the structural changes they are facing, such as those resulting from the additional liquidity requirements under Basel III and the clearing obligations under EMIR which came into force in December 2015. The Global Liquidity Hub allows banks to use the assets held in custody by Clearstream on their behalf more efficiently across different platforms and countries.

Expansion of the index business

Deutsche Börse Group's objective in its index business is to re-position its established European index provider STOXX with a global profile, in order to develop further indices (on top of its DAX[®] and STOXX[®] index families) and to market them on a worldwide basis. The goal is to acquire new client groups, both within Europe as well as in Asia and the Americas, through diversification. In addition, the Group will position its index business to better exploit the structural trend towards passive investment products (ETFs). An increasing number of private clients and asset managers now follow this trend; not only are the costs lower, but many active investment strategies have been returning under-average performance.

Other structural growth opportunities

In addition to these initiatives, the Group has identified a number of other structural factors that should have a positive impact on its business success.

- In January 2014, agreement was reached at a European level on the amended Markets in Financial Instruments Directive (MiFID II). It came into force in January 2018: among other things, OTC derivatives transactions will in future have to be settled via organised trading facilities, a requirement that is expected to benefit Eurex. In addition, a decision was taken to limit the volume of equities traded in dark pools. The Group expects this restriction to have a positive impact on the volumes traded on the cash market. The Group's Regulatory Reporting Hub went live at the beginning of January 2018. Developed in cooperation with the Group's clients, the Hub offers a one-stop shop for solutions, helping clients to fulfil their reporting duties under MiFID II. Altogether, more than 2,200 institutions have connected to the Regulatory Reporting Hub.
- Risk management is becoming more important in the wake of the financial crisis. The company expects market participants to make greater use of Eurex Clearing's clearing services to net out transactions in different asset classes and hence to eliminate counterparty risk.
- In line with the European legal and administrative framework governing certain undertakings for collective investment in transferable securities (UCITS V), the company expects that traditional investment funds will increasingly include derivatives in their portfolio strategies. This could result in additional business for the Eurex segment.
- With respect to Clearstream's post-trade activities, the company anticipates a long-term increase in capital raising through equity and debt financing on the capital markets. This ties in with the higher capital and liquidity requirements for banks and the resulting negative impact on the total volume of available credit. For Clearstream, this could have a positive effect on custody volumes, especially in the international bond segment. In addition, given the growing internationalisation of the capital markets, the company is continuing to expect a sharper rise in the bond volume issued internationally compared with national bond issues.

Cyclical opportunities

In addition to its structural growth opportunities, Deutsche Börse Group has cyclical opportunities, for instance as a result of positive macroeconomic developments. Although the company cannot influence these cyclical opportunities directly, they could lift Deutsche Börse Group's net revenue and net profit for the period attributable to Deutsche Börse AG shareholders significantly in the medium term:

- In the cash and derivatives market segments (Xetra and Eurex), sustained positive economic development, a lasting rise in investor confidence in the capital markets leading to a renewed rise in risk appetite among market participants and a sustained increase in market volatility could again stimulate trading activity by market participants and boost trading volumes.
- The volumes of interest rate derivatives traded on the Group's derivatives markets could rise if speculation on trends in long-term yields on German and other European government bonds grows, and if the spread between the various European government bonds continues to narrow.
- While the company does not expect the ECB to change its low interest rate policy during the forecast period, the US Federal Reserve might continue to gradually hike its key interest rates during 2018, following the turnaround of its policy. Among other things, this would positively impact Clearstream's net interest income from banking business as some 53 per cent of its daily cash balances are denominated in US dollars. A rise in key interest rates of one basis point affecting all customer cash deposits could lift income by some €120 million.
- In the market data business, an increase in the number of employees at companies active on the financial markets could lead to growing demand for data packages.

Technological opportunities

New developments such as those related to artificial intelligence (AI), big data, robotics, or blockchain technology, combined with the innovation potential of fintechs, are driving change in the financial services sector. This new wave of technology might help overcome barriers to market harmonisation, while creating new efficiency and mitigating risks. This development is expected to last for the next ten years, with digitisation set to accelerate. The challenge for incumbent providers is in finding the right way to open up new business models and innovative technologies.

Some consider blockchain as a disruptive technology – at present, the financial services sector is evaluating the associated opportunities. Thanks to its decentralised nature, it facilitates direct interaction between participants, thus offering the potential for simplifying complex processes. Established market infrastructure providers such as Deutsche Börse Group, which covers the entire value chain from a single source, play an important role when it comes to tapping this potential – meeting existing industry standards at the same time. Besides legal and regulatory requirements, this involves adhering to security standards, as well as limiting risks and ensuring cost efficiency.

As part of its corporate strategy, Deutsche Börse Group pursues a cooperative approach with regard to new technological developments. This approach is designed to further strengthen the Group's leading technological role, while gauging the potential of new technologies along the value chain (from the issue of securities to trading, clearing, and settlement). Against this background, for example, the Group developed various blockchain prototypes in cooperation with Deutsche Bundesbank, Eurex Clearing as the central counterparty, and other central securities depositories, in order to showcase how this technology might be applied to solve business issues. One of these prototypes involved a concept for the risk-free transfer of commercial bank money, based on blockchain technology. The goal is to enhance efficiency by integrating blockchain technology into the Group's post-trading infrastructure. Through Deutsche Börse Group's central counterparty, it will be possible to reduce the credit risks involved in the transfer of digital commercial bank money. Moreover, through the interface between Eurex Clearing and Clearstream, the Group's central securities depository, the new concept could also contribute to enhancing the efficiency of post-trading processes such as settlement services or asset servicing. Joining forces with three other central securities depositories, the Group is also working on a blockchain-based initiative designed to simplify the cross-border provision of securities collateral. The objective of this joint initiative is to remove existing obstacles to the transfer of collateral between different countries, thus making the process faster and more efficient.

Further Group projects are the newly created Content Lab, working on improving the use of data in providing client services, and the Product Development Lab, which develops micro-services. Beyond this, Deutsche Börse Group is currently examining whether to offer application programming interface (API) connectivity to its systems, in order to use cloud technology to facilitate new data and analytical offers to clients.

External growth opportunities

In addition, the company regularly explores external growth opportunities, which are subject to the same kind of stringent analysis as its organic growth initiatives. For this reason, only a small number of the opportunities analysed are ultimately realised. Examples of external growth in the past few years include the takeover of Citco's hedge fund custody business, the majority interests in EEX, the full acquisition of Powernext and the joint ventures STOXX including Indexium, as well as the full acquisition of 360T.

Report on expected developments

The report on expected developments describes Deutsche Börse Group's expected performance in financial year 2018. It contains statements and information on events in the future and is based on the company's expectations and assumptions at the time of publication of this corporate report. In turn, these are subject to known and unknown opportunities, risks and uncertainties. Numerous factors influence the Group's success, its business strategy and its financial results, many of them outside the company's control. Should opportunities, risks or uncertainties materialise or should one of the assumptions made turn out to be incorrect, the Group's actual performance could deviate either positively or negatively from the expectations and assumptions contained in the forward-looking statements and information contained in this report on expected developments.

Developments in the operating environment

Macroeconomic environment

Deutsche Börse Group anticipates that the global economy will further grow moderately during the forecast period. In the case of the emerging markets, the Group expects that countries with a current account surplus will expand at an above-average rate. Due to cyclical as well as structural factors, these countries will no longer be able to achieve the high growth rates seen in the past. Moreover, the Group expects a continued recovery of developed economies, with growth rates set to rise compared to previous years. Looking at Europe, the Group expects further improvement of the economic situation, driven by developments in Germany and France, the two largest economies. Against this generally positive background, the Group assumes that market participants will have more confidence in the capital markets compared to the previous year, which was marked events such as the French presidential elections, the very slow progress in negotiations concerning the terms for the UK's impending exit from the EU, or disillusionment in the US following the November 2016 elections. However, current uncertainties could once again upset the markets. These include geopolitical crises, the development of commodity prices, monetary policy moves by the Federal Reserve (Fed) in the US and the European Central Bank (ECB) in Europe, or a crisis of confidence in the growth of certain emerging market countries, especially in Asia. It remains unclear as to how the UK's exit from the EU will work out, and what the impact on markets will be. Regarding interest rate trends, the Group does not expect to see any fundamental departure from the current low interest rate policy in Europe. While the monthly volumes of the ECB's bond-buying programme will be further reduced and the programme is set to expire in September 2018, the deposit rate is expected to remain at -0.4 per cent. In the absence of any material impact of this monetary policy on cash and derivatives markets trading volumes during 2017, the Group does not expect any such stimulus for 2018 either. The turnaround in US interest rates continued in 2017, and we expect further hikes in 2018 – provided that the economy (and inflation) accelerate further.

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