optiver

ANNUAL REPORT 2019

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WE ARE OPTIVER



OPTIVER IS A LEADING GLOBAL ELECTRONIC MARKET MAKER. OUR MISSION IS TO IMPROVE THE MARKET.

We provide liquidity to the market, using our own capital, at our own risk, by trading in tens of thousands of financial instruments on more than 50 exchanges around the world.

Founded more than 30 years ago as a single trader on the floor of Amsterdam's European Options Exchange, we have grown to become a global firm with offices in Amsterdam, Chicago, Sydney, Shanghai, Hong Kong, Taipei and London.

We employed 1,108 full-time equivalents (FTEs) at end-2019 (2018: 1,038 FTEs).

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RESULTS AT A GLANCE

Optiver reported a net profit attributable to equity holders of € 397 million in 2019, compared to € 515 million in 2018. Our 2019 result from operating activities was € 525 million versus € 673 million in 2018. Net trading income 2019 amounted to € 1,133 million, 13% less than in 2018.

Optiver exhibited a robust financial position at the end of 2019, with total equity of € 1,532 million (compared to € 1,321 million at end-2018). We maintain a conservative capital structure, to meet business and regulatory requirements. Total assets were € 22.5 billion as at 31 December 2019, an increase of 10% compared to 2018.

OUR CORE ACTIVITIES IN 2019

Geopolitical developments were the main driver of movements in the financial markets in 2019. Factors such as the US-China trade negotiations, Brexit and central bank monetary policy impacted market conditions throughout the year.

The continuous efforts of our people around the globe made 2019 a profitable year for Optiver. Our profits were primarily generated by our core activity: trading in listed derivatives for our own account. Throughout the year, we focused strongly on the three components of our core activity – pricing, trade execution and risk management.

PRICING

Last year saw a continued focus on improving our pricing engine. We contribute to efficient, transparent and healthy markets by accurately pricing financial instruments and enhancing price discovery.

Our commitment to improving the market is apparent in our tightening

of the bid-ask spread, which results in competitive prices for end-investors. Our aim is to provide the best prices to global financial markets on a continuous basis, which benefits market participants such as asset managers, pension funds and, ultimately, the end-investors.

TRADE EXECUTION

In 2019, our engineers collaborated closely with the trading and relevant control departments to keep on improving trade execution technology.

Optiver's engineers employ a disciplined and scientific approach to building and maintaining a trading system that is reliable and able to respond swiftly to market events. Cooperation between engineers and specialists from all parts of the business – from trading and tax to risk and compliance – is essential.

Although being able to provide the best pricing is key, it is not the sole success factor for a trading firm. Also important is the ability to execute trades effectively. Technology is a key driver of this, so investing in technology and toptalented engineers is crucial to remaining successful. We anticipate that the role of engineering within Optiver will continue to grow in years to come.

RISK MANAGEMENT

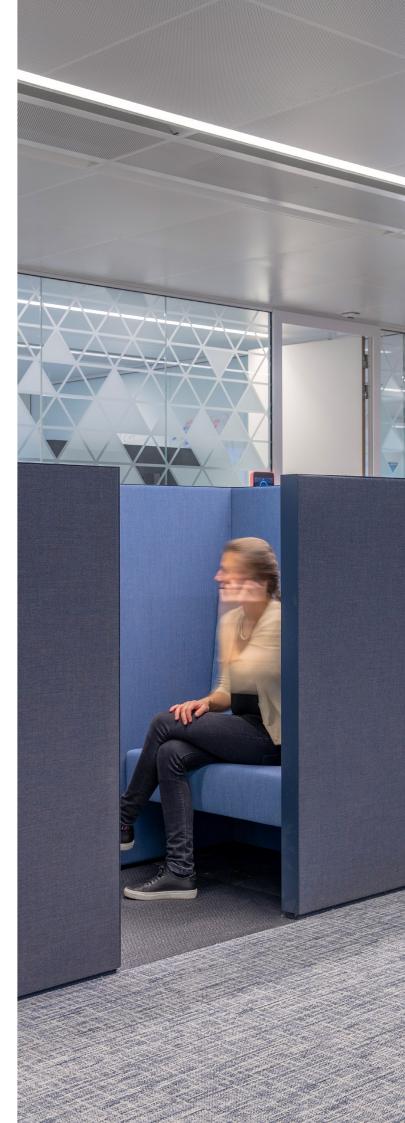
Risk management is central to what we do; we constantly work to balance innovation with control. We continued strengthening our control framework, including our risk models, in 2019.

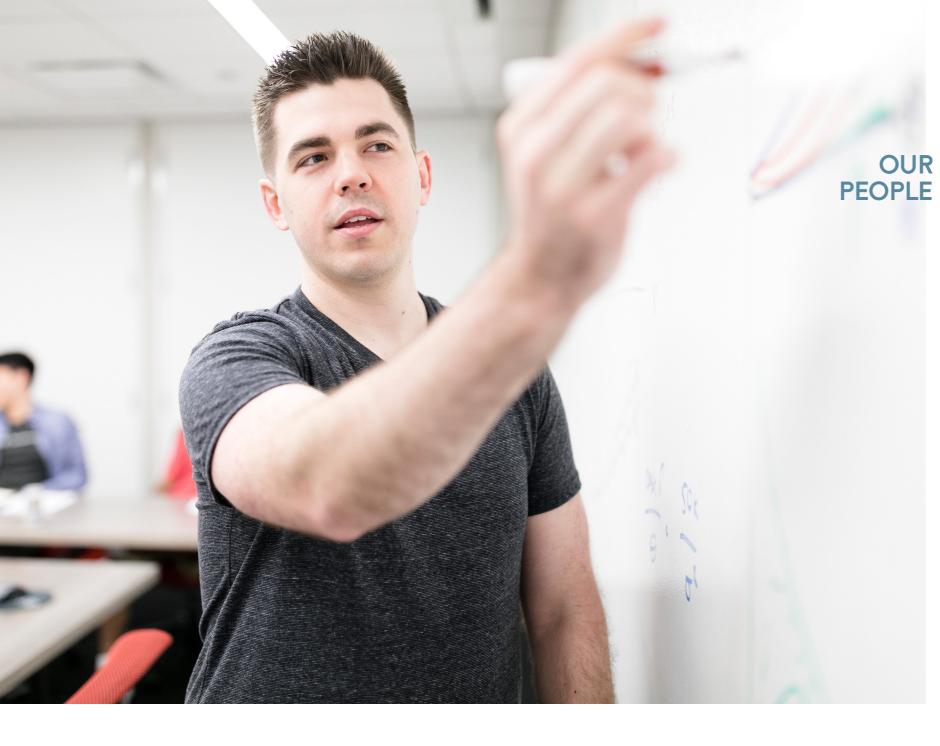
As part of our control framework, we embed awareness of risk throughout the organisation, educating employees and encouraging them to take ownership so that all see risk as part of their day-to-day work and responsibility.

We have defined risk appetite statements that indicate our tolerance level for the key risks we face. These statements cover capital and liquidity risks, market and trading book exposure risks, operational risks, tax risks, legal risks, compliance and regulatory risks, valuation risks, automated trading risks, system availability risks, information risks and staffing risks. We regard automated trading risk as one of the most relevant risks to our business, so mitigating this remains an important focus.

Cybersecurity is an ever-present threat in the technology space - and is only likely to grow. As the cyber threat landscape evolves, we are fully focused on our responsibilities and accountability with regards to data protection and safeguarding against hacking and unauthorised access to our systems.

Obtaining assurance on our key controls is integral to our control framework. Group Audit provides additional insight into our key control processes, using a risk-based approach that focuses on the key risk areas. This allows us to improve our main processes and strengthen our key controls. The annual audit plan is defined based on risk assessment. Local offices address recommendations by Group Audit in their management action plans and follow up through periodic progress reports to the Executive Committee (ExCo) and the Supervisory Board. In addition, the local risk teams conduct peer reviews of other local risk teams' work in selected areas.





PEOPLE ARE OPTIVER'S MOST IMPORTANT ASSET AND INVESTING IN THEM REMAINS A PRIORITY.

People are Optiver's most important asset and investing in them remains a priority. Our whole operation is built on our workforce of top-tier talent closely cooperating across departments and countries. Our corporate governance structure is specifically designed to foster collaboration and cohesion.

Our Executive Committee (ExCo) held frequent meetings in 2019 with parties including the Supervisory Board, subject matter experts and external stakeholders. These meetings helped the ExCo make strong progress in setting a long-term vision for Optiver and ensuring we operate as a global team. The creation of the ExCo has resulted in more direct internal communication lines and greater cohesion among regional offices, which in turn has boosted efficiency and knowledge-sharing. The selection of ExCo members strives to achieve diversity and to create a robust body that can actively oversee the activities of Optiver and its business.

In order to remain successful, various Optiver teams were strengthened last year through the appointment of several talented new employees. We continued to invest in the wellbeing of our people and their families, to ensure employees are supported, motivated and committed.

We continued to foster collaboration through internal events, bringing employees together from across regions. Our people are actively encouraged to work across disciplines, boosting their understanding of their colleagues' activities and needs. Strong relationships between employees enable us to better learn from each other, which helps to continuously improve our daily business.

Over the decades, we have witnessed the tremendous value of diversity as people

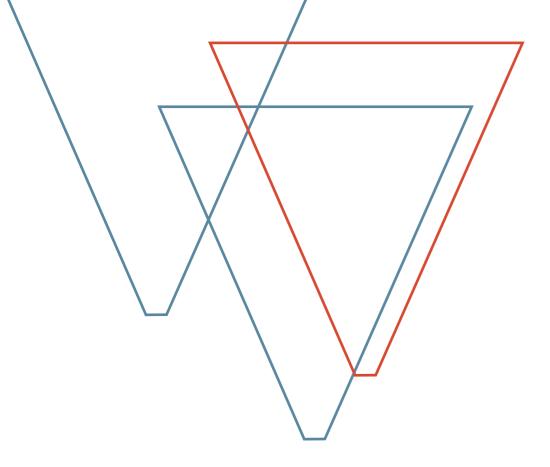
from varied backgrounds bring different perspectives to business questions and problems, leading to better solutions.

From a business point of view, Optiver has a keen interest in expanding the available talent pool. We strengthened our efforts to attract new talent in 2019 by enhancing our contact with talented university students on campus and at industry events and conferences. In 2020, Optiver will sponsor the European Girls Mathematics Olympiad, to be held in Amsterdam. By getting involved at a grass roots level, we hope to promote mathematics as a study path at school and to encourage students to pursue careers in science, technology, engineering and mathematics-related fields.

For Optiver, 2019 will be remembered as a year tinged with sadness. On 31 January 2019, our colleague Marc Molenaar passed away aged 55, after having been ill for more than a year. Friendly, honest, smart, dedicated and always trying to improve, Marc was an example to all Optiverians. We are grateful to have had him in our team, and for his contributions to Optiver's success. Our thoughts are with his wife and children.

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OUR INDUSTRY

OUR EXTERNAL PARTNERSHIPS

To help shape the industry in which we operate, we invested significant time and energy in 2019 giving insight into our activities to external stakeholders such as policymakers, regulators and exchanges. We also discussed with them the trends, opportunities and risks for Optiver and for our industry more broadly.

Conscious of the positive - and negative - role finance can play in the economy and society, and our own responsibilities, we take our commitment to improve the markets seriously, investing in continual dialogue and engagement with our external stakeholders.

In this way, the outside world learns about Optiver and – even more importantly - we learn about the world around us. This creates a deeper understanding of each other and of what is ultimately needed to contribute to a better society. Optiver is an active member of the FIA European Principal

Traders Association and the FIA Principal Traders Group in the US and Japan.

Last year, we partnered with the reputable Utrecht University to develop and present a 10-week Algorithms in Finance Master's course for science and finance students. Subject matter experts from across Optiver – including engineers, data analysts, risk managers and mathematicians – contributed by giving lectures and workshops. Around 60 students completed the course, learning how to design and code stock and option trading algorithms using financial market data. This partnership is set to continue in 2020, along with new academic partnerships for similar Master's programmes.

ESG

We believe, that besides our responsibility towards our shareholders and staff, we have an important responsibility towards the environment and the communities in which we

operate. Optiver's success would not be possible without the contribution of society at large: we benefit from universities, infrastructure and technologies that are funded, invented and founded by people, communities, governments and other institutions outside Optiver. Conscious of this, we are keen to make our own contribution to the community and environment.

We view ESG (environmental, social and governance) as one of the pressing issues of our time and it is an important topic for Optiver in 2020 and the years to come. That is why we are dedicating resources from across our business to assess how we can have an even greater impact in this domain.

MARKET DATA

As market makers, we believe that markets best serve the economy when they are transparent, multilateral and centrally cleared. Markets should be easily accessible to all, to ensure healthy

competition and diversity among market participants. This enables efficient price discovery and lowers trading costs for end-investors.

Market data has historically been important for Optiver and other market participants. The past decade has seen a significant increase in complexity around use limitations, reporting obligations and audit procedures by exchanges and other data licensors, as well as in the cost of market data.

REGULATORY DEVELOPMENTS

Around the world, there is renewed regulatory interest in automated trading. In addition, a growing number of exchanges are proposing to introduce technical features to their ordermatching engines, to slow down trading (so-called 'speed bumps'). Through our participation in industry associations such as FIA PTG, FIA EPTA, FIA JPTG and ASIFMA, we actively contribute to these discussions.

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We continued to take a proactive role in engaging with regulators and exchanges in 2019, to discuss key developments and their regulatory context.

The leverage ratio (LR) requirements for banks are constraining the services that clearing members can offer to market participants in general and options market makers in particular. Legislators and rule makers across the globe have recognised that the existing LR framework is not optimally calibrated.

Optiver supports the proposed new rules to solve this issue, which will allow for better offsetting of positions in different yet correlated financial products. These rules are expected to be enforced in many countries in 2021.

In the European Union, legislators have concluded that the existing Capital Requirements Directive and Regulation (CRD IV and CRR) were drafted for banks and have led to disproportionate outcomes when applied to investment

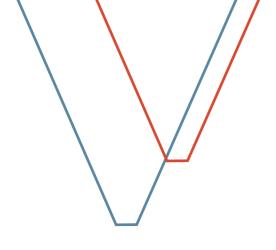
firms. In 2019, the European Parliament and European Council adopted a new set of capital requirements, tailor-made for investment firms. The concrete impact of this Investment Firm Directive and Regulation (IFD and IFR) is not yet completely clear, as the legislation for so-called level 2 implementation – to be put before member-state representatives for voting - will only be drafted in 2020. The new regulatory capital framework for investment firms will take effect in 2021.

Extended trading hours and further globalisation meant that global financial markets continued to become more interconnected last year, creating an opportunity for Optiver and other global market makers to improve pricing capabilities. However, the increased interconnectivity between markets also created questions around regulatory requirements. Local regulatory requirements are not always sufficiently aligned across the globe and certain cross-border regulatory questions are difficult to answer. In 2019, we continued to take a proactive role in engaging with regulators and exchanges, to discuss these developments and the regulatory context thereof.

BREXIT

We continue to monitor developments around Brexit and the relationship between the European Union and the United Kingdom. With the City of London being an important financial centre in Europe and an important centre of liquidity for the financial markets, future cooperation between the EU and the UK on financial services will be crucial in maintaining an attractive business environment for Optiver in the EU. We expanded our business activities in the UK in 2019 and obtained the required trading licences from the Financial Conduct Authority.

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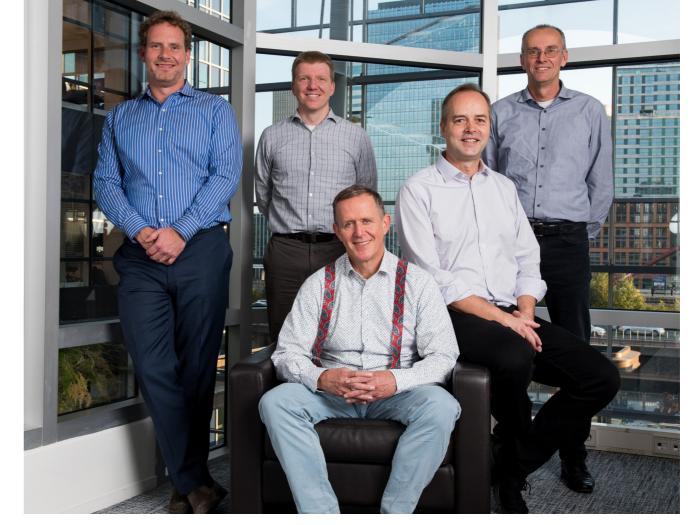
LOOKING AHEAD

In 2020, we will continue to pursue our mission to improve the market. This means we will keep investing in our people, to further improve our pricing, trade execution and risk management.

In light of recent growing concerns regarding the global spread of the novel corona virus, Optiver has taken the necessary precautionary measures to protect the health and safety of our employees as a matter of priority. Business continuity plans are in place to ensure that, as far as possible, we can continue to provide liquidity to the market when its needed most.

THANKS We would like to thank all our employees for their efforts in 2019. We are deeply grateful to them for their continued hard work, and look forward to another successful year ahead.

Amsterdam, 4 March 2020



Executive Committee (L/R): Sebastiaan Koeling, Wouter Stinis, Johann Kaemingk, Jan Boomaars, and Edwin Duijn

Jan Boomaars

CEO Group, CEO Europe and member of the Management Board and Executive Committee

Johann Kaemingk

CRO Group and member of the Management Board and Executive Committee

Edwin Duijn

CFO Group and member of the Management Board and Executive Committee

Sebastiaan Koeling

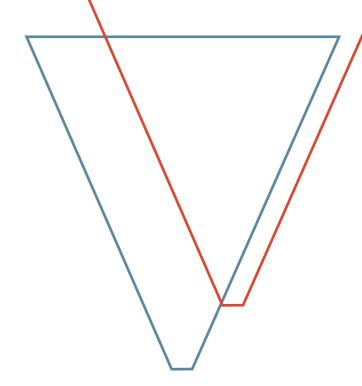
CEO US and member of the Executive Committee

Wouter Stinis

CEO APAC and member of the Executive Committee

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The Optiver Supervisory Board oversees the Management Board and the general course of affairs of Optiver and its businesses. The Supervisory Board advises the members of the Management Board on how to perform their duties, in accordance with the best interests of Optiver, its businesses and all relevant stakeholders.

The Supervisory Board is very satisfied with yet again an excellent year where the organisation has further matured based on a strong culture of collaboration, innovation and responsibility. In particular, the Supervisory Board was closely involved in (i) developing Optiver's strategic direction, (ii) the progress made in terms of the risk and control framework, and (iii) evaluating the Optiver corporate governance structure and succession planning.

PROFILE AND COMPOSITION

The Supervisory Board operates as a collegial body; the knowledge, experience and background of its individual members is considered in the context of the Supervisory Board as a whole. With their varied strengths and types of expertise, Supervisory Board members act critically and independently of one another, and of the Executive Committee and Management Board.

The Supervisory Board aims to have a strong representation of diversity (including in terms of experience, expertise, age and gender). The selection of Supervisory Board members strives to achieve this diversity and to create a robust body that can effectively oversee the activities of Optiver and its businesses.

Supervisory Board members are not members of the Management Board or employees of Optiver. This ensures sufficient distance from daily operations, so that the Supervisory Board can give critical, constructive advice to the Management Board. In the Supervisory Board's opinion, the independence requirements as set out in the Dutch corporate governance code have been fulfilled.

The current members of the Supervisory Board are Hector de Beaufort, Miriam van Dongen, Jelle Elzinga and Harry de Grijs. The board's Chair, Hector de Beaufort, was reappointed as a Supervisory Board member for a fresh four-year term at an extraordinary general meeting of shareholders held in September 2019. The Supervisory Board agreed to reappoint him as Chair.



Supervisory Board (L/R): Harry de Grijs, Miriam van Dongen, Hector de Beaufort, and Jelle Elzinga

	H.W.L. de Beaufort	M.R. van Dongen	H.J.A. de Grijs	J.R. Elzinga
Nationality	Dutch	Dutch	Dutch	Dutch
Year of birth	1956	1969	1963	1971
Gender	Male	Female	Male	Male
Initial appointment	2015	2016	2017	2017
Termination / reappointment	2023	2020	2021	2021
Education	Law	Business Economics	Business Economics	Business Administration
Expertise	Corporate governance, corporate law	Corporate Finance	IT / Digital	Trading, business development, financial markets
Supervisory Board committees	Review and Remuneration Committee	Audit Committee	Audit Committee	Review and Remuneration Committee

SUPERVISORY BOARD MEETINGS

The Supervisory Board held six formal meetings with the Management Board and members of the Executive Committee in 2019. There were a further six meetings where only Supervisory Board members were present. The percentage of members attending the meetings was again high, at over 90%. In addition to the formal meetings, Supervisory Board members had regular face-to-face meetings and phone contact with each other and with Executive Committee and Management Board members throughout the year.

Five formal meetings were held in Amsterdam. One took place in June 2019 at Optiver's Shanghai office, during what the Supervisory Board regards as a productive and interesting visit that enhanced its understanding of local business operations, opportunities and challenges. Besides the formal meeting with the Management Board and Executive Committee, the Supervisory Board had meetings with the local leadership team and other colleagues in the Shanghai office. The Supervisory Board and Executive Committee visited the Shanghai Stock Exchange and had successful meetings with the exchange's CEO and chairman.

The Supervisory Board is kept up-to-date on all relevant developments and issues in the company, not only by means of the formal meetings but also through additional meetings when necessary and via the regular contact between the Supervisory Board Chair and the company CEO.

As well as discussing ongoing topics and issues, the Supervisory Board was involved in developing the long-term strategy for Optiver Group. During the process to define the strategic framework for Optiver Group, the Supervisory Board had several meetings with the Executive Committee and Management Board to advise, challenge and supervise them. The Supervisory Board is pleased with the outcome of these discussions and fully supports the strategic framework as defined by the Executive Committee and Management Board in close cooperation with the senior leaders of each of the Optiver business unit.

Other topics discussed by the Supervisory Board, besides the regular topics, were the prudential regime, the risk and control framework, market developments, HR-related matters such as recruitment and retention, and technology developments. The Supervisory Board also spent significant time on succession planning in 2019.

Senior staff were frequently invited to Supervisory Board meetings, to present on specific topics in their field of expertise such as technology, risk management, tax, finance, compliance and legal. Outside the meetings, the Supervisory Board also makes sure to meet members of staff regularly, to enhance its understanding of all matters relevant to the business of Optiver.

In addition, the Supervisory Board meets regularly with the external auditor through the Audit Committee. Supervisory Board member Harry de Grijs has bi-annual update meetings with the CTOs of all business units and with the CEO to discuss technology-related developments and issues.

AUDIT COMMITTEE

The Audit Committee helps the Supervisory Board to perform its duties and prepares its decision-making. The Audit Committee is tasked with supervising (i) all matters relating to financial reporting and controlling, and (ii) the effectiveness of the risk management and control framework and Optiver's major risk areas. The Audit Committee consists of Miriam van Dongen (Chair) and Harry de Grijs.

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The Audit Committee had six meetings in 2019, all attended by the external auditor, the CFO, the head of Group Audit and the head of Group Finance. Besides the regular items on the agenda, such as the financial reports, interim and final dividend proposals, key audit matters reported by internal and external audit, and the scope and planning for Group Audit, the Audit Committee also spent time on the IFRS accounting policy for aggregation and offsetting, risk appetite for IT security, the risk and control framework, and share-based payments. The Chairman of the Supervisory Board and Chairman of the Audit Committee had 2 meetings with the external auditor in 2019.

REVIEW AND REMUNERATION COMMITTEE

The Review and Remuneration Committee advises the Supervisory Board and prepares its decision-making with regard to the remuneration and performance reviews of all members of the Executive Committee and the Management Board. The Review and Remuneration Committee helps the Management Board fulfil its employer responsibilities in relation to the CEOs of the business units of Optiver in APAC, Europe and the US. The Committee consists of Jelle Elzinga (Chair) and Hector de Beaufort.

In 2019, the Review and Remuneration Committee had two formal meetings and held mid-year review meetings and end-year performance meetings with each member of the Executive Committee and Management Board. The Review and Remuneration Committee also performed its annual talent review, prepared by the Management Board and Executive Committee.

The Supervisory Board has always believed in sound and proper governance, which includes succession planning. Succession planning and leadership development are focus areas for the Review and Remuneration Committee, which was closely involved in the succession process for the Group CRO role.

SUCCESSION PLANNING

After careful consideration and extensive consultation with the Supervisory and Management Boards, Optiver co-founder Johann Kaemingk has decided to step down as Management Board member and Group CRO of Optiver Holding B.V.. He will, however, remain an active member of the Executive Committee. The Supervisory Board had several meetings last year to discuss succession planning and after careful consideration agreed to nominate Sebastiaan Koeling (current CEO of Optiver US) as a member of the Management Board of Optiver Holding B.V. in the capacity of Group CRO.

The Supervisory Board is confident that Sebastiaan's in-depth knowledge of all aspects of the business, combined with his extensive executive experience gained as CEO and ExCo member, will make him a successful Management Board member and Group CRO. With the proposed appointment of Sebastiaan, the Management Board of Optiver Holding will consist of Jan Boomaars (Group CEO), Edwin Duijn (Group CFO) and Sebastiaan Koeling (Group CRO).

Scott Richardson, current Head of Trading of Optiver in the US, will succeed Sebastiaan as CEO of Optiver US. Scott will be appointed an ExCo member.



At the Annual General Meeting of Shareholders, scheduled for 8 April 2020, the Supervisory Board will propose that shareholders appoint Sebastiaan to the Management Board.

SELF-ASSESSMENT AND GOVERNANCE EVALUATION

As in previous years, the Supervisory Board evaluated its own performance and the performance of its committees in 2019. An external party provided support in reviewing the functioning of the Supervisory Board as a whole, as well as the governance structure of the most senior layer of the company. Each member of the Supervisory Board, Management Board and Executive Committee, as well as the Corporate Secretary, were interviewed by an external expert in corporate governance and board dynamics. This expert drew up a report containing findings, conclusions and recommendations, which each of the boards discussed in separate meetings. In addition, a combined meeting of the Supervisory Board, Executive Committee and Management Board took place to discuss in more detail the report and follow-up actions.

The role of the Management Board is to manage Optiver Holding, which means, among other things, that it is responsible for achieving Optiver Holding's goals, the strategy and associated risk profile and the development of the financial results. To create more direct lines of communication and cohesion among the regional offices in an increasingly global firm, the governance structure was amended in 2017. The Executive Committee was established to ensure more involvement by local CEOs in the overall decision-making and implementation of Optiver's group strategy, and to connect the Supervisory Board to the local businesses. The responsibilities of the Executive Committee include the overall management of Optiver Group (i.e. Optiver Holding and its Business Units in Europe, APAC and the US), including its business strategy, the risk and control functions and safeguarding the Optiver culture.

The Supervisory Board is pleased with the progress made since the new corporate governance structure took effect in 2018 and concluded that the Management Board and Executive Committee, as well as the Supervisory Board and Supervisory Board committees, are functioning properly. The working relationship between the Supervisory Board, the Executive Committee and Management Board is professional and pleasant. As anchored in the culture of Optiver, the Supervisory Board too strives for continuous improvement and is dedicated to further improving and optimising the way it works and to increasing its value to the company.

EDUCATION

Optiver is a content-driven organisation and the Supervisory Board is continuously learning more about the specific business of the company. Several one-on-one meetings were organised last year for the Supervisory Board members with senior leaders and experts in both the Shanghai office and the Amsterdam office. In addition, the Supervisory Board held meetings in June 2019 with industry experts in Shanghai and was educated on the macroeconomic environment and IT developments in China. In October 2019, the US CTO provided an extensive update on technology, which was very insightful.

OUR THANKS

The Supervisory Board would like to extend its gratitude to all Optiverians for their excellent work and commitment in 2019, and to compliment them on a job very well done.

We encourage employees to keep up the good work this year and look forward to continued success in 2020 and beyond.

