OXFORD ECONOMICS

THE CONTRIBUTION OF LUXEMBOURG'S FINANCIAL CENTRE TO THE EUROPEAN ECONOMY

JUNE 2017

LuxembourgforFinance
Agency for the Development of the Financial Centre

CONTENTS

EXECUTIVE SUMMARY

75%
Of all the Luxembourg financial centre's income is from international customers.

This compares to a Europe-wide average of just 14 percent.

27%
Of all investment funds domiciled in the EU.

Luxembourg was home to 4,144 funds and 14,595 fund units, with net assets of €3.7 trillion at end 2016.

23%
Of all bonds listed in the EU.

More bonds are listed on the Luxembourg Stock Exchange than any other centre in the EU.

Luxembourg is home to one of the most significant cross-border financial centres in the world. It occupies an almost unique position in the extent to which it serves international customers across a host of services. In this it differs from all other financial centres in the European Union (EU). It offers a familiar, trusted and responsive regulatory and legal environment that enables its products and services to operate effectively across jurisdictions and in mutiple currencies. Over time, it has built up a concentration of skills and know-how that is globally recognised. Consequently, the financial centre has a solid reputation in the complex cross-border environment, as a key facilitator of international business.

Illustrating its international orientation, more than 75 percent of the Luxembourg financial centre's turnover originates outside the country's borders. This compares to the EU average of just 14 percent as coming from international revenues, with 86 percent coming from domestic customers. Its exports of financial services are worth €53 billion a year—more than any other Euro-area country and the second largest of any EU Member State.

Luxembourg's outward-looking focus means it has a positive economic impact on households and businesses all across Europe. This report explores the substantial and tangible difference that the centre makes to the real economy of the EU, whether in helping governments to finance public infrastructure, making it easier for businesses to grow, or in providing life insurance and banking services to households and individuals.

Luxembourg specialises in four core areas—investment funds, capital markets, insurance and banking. In each, its ability to serve customers across the globe is helped by its international workforce, with their accumulated expertise and linguistic skills. Some 46,000 people based in the country work in the financial sector—some 81 percent are foreign workers and many commute in from neighbouring countries.

A third of the Luxembourg financial centre's earnings come from offering capital or financial products to non-financial corporations. This provides businesses with capital to undertake investments, to reduce their reliance on bank loans and to manage risks. The centre particularly provides this kind of support to companies in the services and manufacturing sectors. The majority of its customers are based in the largest and wealthiest EU economies, but its attractiveness as a cross-border centre extends throughout the EU and beyond.

In 2015, some €944 billion of debt was issued as bonds on the Luxembourg Stock Exchange, of which €186 billion met the external financing needs of non-financial corporations. By diversifying funding away from bank loans in this way, Luxembourg helps to make firms less vulnerable to external shocks, such as constrained bank lending as in the recent financial crisis, with knock-on benefits for consumers.

Public bodies also make significant use of bonds listed in Luxembourg to fund long-term public sector investments in infrastructure projects, bringing societal benefits. EU governments funded 72 percent of debt finance through bonds in 2015. Luxembourg is the leading centre for bond listings—23 percent of all bonds in the EU are listed in Luxembourg, more than in any other centre. In 2015, governments of eight Member States issued bonds in Luxembourg, financing everything from roads to schools.

The international distribution of funds domiciled in Luxembourg attracts capital into Europe from across the globe. These funds invest just over half of this in instruments issued by corporations and governments within the EU. Some €1,422 billion was invested in the Euro area, with another €358 billion invested in other EU Member States in 2016. At least €877 billion of this was invested in bonds and other debt instruments, with at least €471 billion in equities issued by corporates. This in turn earns income for the investors, funding many individuals' pensions.

The capital attracted into the EU is initially deposited in Luxembourg's banks, boosting liquidity across the continent, and reaching Europe's companies as loans and debt finance. Reflecting the Duchy's specialist position, some 40 percent of deposits in Luxembourg banks are received from financial corporations, including funds, compared to just eight percent as the EU average. This makes Luxembourg central to the functioning of the European and global financial system, as its banks are able to redistribute these deposits, from fund and custodian activities, throughout Europe. In turn, this supports the liquidity needed for households and businesses to be able to borrow, invest and grow.

Nearly a quarter of the Luxembourg financial centre's earnings come from the provision of financial products to individuals and families. This includes providing mortgages, unsecured loans and credit cards to help with day-to-day and one-off costs, and providing savings and investment products that help people to save for their future.

In these ways, Luxembourg's banks and other credit institutions help individuals and households to manage their assets and liabilities. At the end of 2016, Luxembourg banks and other credit institutions had lent some €54 billion in loans to households and charities. By helping to overcome cost and information barriers, products listed in Luxembourg, such as investment funds, help to widen access to capital ownership across society. This benefits households directly but also, ultimately, means more money is available to the market. This, in turn, feeds into overall growth rates and prosperity, boosting living standards, supporting jobs across the EU.

81%
Foreign workers in the financial sector's workforce.

More than 46,000 people work in Luxembourg's financial sector.

€186 bn
Bonds issued on the Luxembourg Stock Exchange in 2015 for non-financial firms.

In particular, companies in services, utilities and manufacturing listed bonds.

€1,422 bn
Invested in the Euro-area in 2016.

Funds domiciled in Luxembourg invested €1,422 billion in Euro-area corporations and governments in 2016, with a further €358 billion invested in other EU Member States.

1. INTRODUCTION

Luxembourg is a major financial centre with an enviable status both within Europe and globally. It has a specialised offer and a skilled workforce. It is conveniently located and has a stable social and political environment. These factors, combined with the pragmatic, responsive approach of the Luxembourg regulator, have long made Luxembourg's provision of financial services very attractive to individuals, corporates and governments alike.

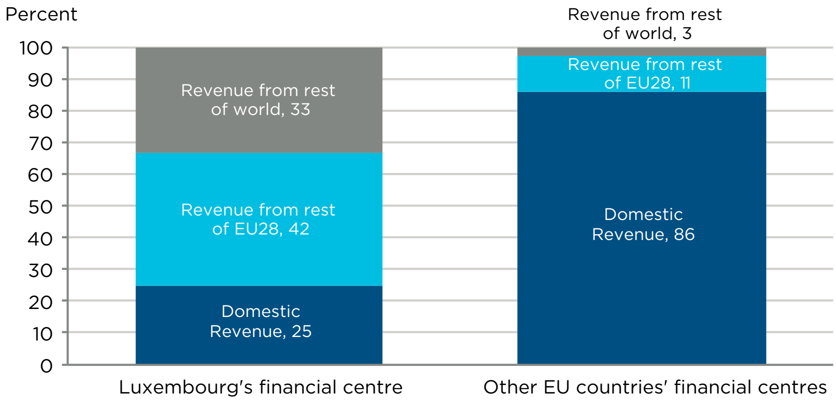
Like any international financial centre, Luxembourg meets a whole range of financial needs for these customers. But more than this, Luxembourg has a particular specialism in the provision of cross-border products and services and an almost unique international orientation that means that it differs from virtually all other financial centres in the EU.

For Luxembourg, only 25 percent of the financial sector's revenue is generated within the country's own borders—75 percent is international in origin, and of this, 42 percent comes from the other EU countries (see figure 1).

This report, commissioned by Luxembourg for Finance, explores what this degree of international activity means for Europe's economy, its businesses and its citizens. It investigates the ways in which Luxembourg differs from other financial centres, and the particular areas in which it specialises. It considers who benefits from its activities, collectively and individually, and ways in which the economy of Europe more widely is strengthened by Luxembourg's financial sector.

Whether for Luxembourg, London or New York, it is not always easy to make the connection between the activities of financial centres and the way that businesses operate in the real economy. This report sets out to explain that link, and show how the Luxembourg financial centre oils the wheels of the EU economy, creating substantial and tangible benefits for businesses and citizens. Whether it is helping to raise the finance needed for new public motorways, to invest in machinery for Europe's industry leaders or to finance the growth of some of Europe's most innovative tech firms, Luxembourg's financial centre has a substantive and particular impact on economies in countries all across the EU.

Fig. 1. Origin of the income of the financial sector in Luxembourg and in other EU countries



Source: OECD (2015), Oxford Economics

2. HOW LUXEMBOURG DIFFERS FROM OTHER FINANCIAL CENTRES?

The Luxembourg financial centre's long-established and wide expertise, coupled with the variety of financial and legal services it offers, which cover multiple jurisdictions, mean that it punches well above its weight. In 2015, the centre's sales of financial, insurance and pension services abroad generated €53 billion in export earnings (figure 2). This was 18 percent of all the export earnings for these types of services received by all European countries. It was more than Germany and Ireland, combined.

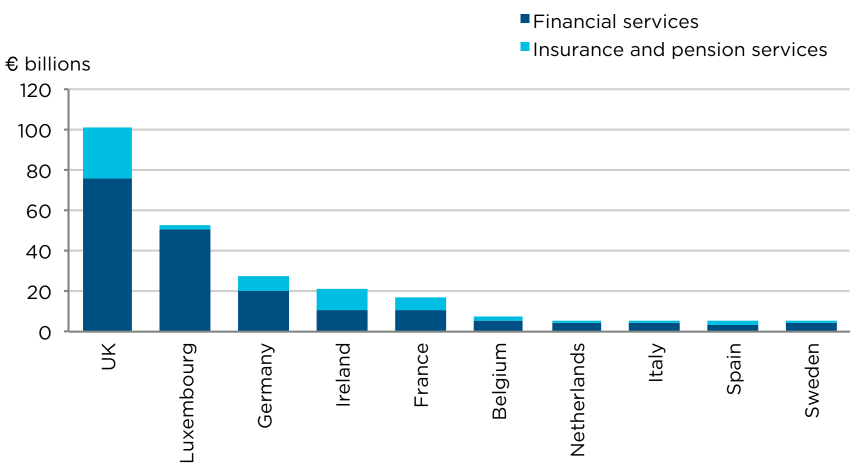
Several factors are at play in determining Luxembourg's international focus. Historically, this has been supported by its geographic and political position at the heart of Europe. It is also a reflection of the wider business culture in Luxembourg in which, given the limited size of the domestic market, firms have been forced to seek growth through providing financial products to international customers.

Consequently, Luxembourg has, for several decades now, looked outwards and has flourished as a result. In recent years, Luxembourg's stability has become an important positive, not least vis-à-vis its closest competitors.

Across a host of cross-border services, its position is unapparelled in Europe. In particular, it offers an adapatable legal framework that allows for the creation of appropriate investment vehicles and financial products that can operate effectively across several jurisdictions and in multiple currencies. For governments and corporations wishing to attract a global investor base, this capacity to work in the complex cross-border environment is crucial and reinforces its pan-European advantage and appeal.

The centre's ability to serve customers across the globe is helped by its international workforce, with their accumulated expertise and language skills. Of the 46,000 people that work in the financial sector in Luxembourg, 81 percent are foreign workers and 19 percent Luxembourgers. Many workers live outside the country but commute into Luxembourg from Belgium, France and Germany.

Fig. 2. Export earnings from financial, insurance and pension services, 2015



Source: UNCTAD (2016)

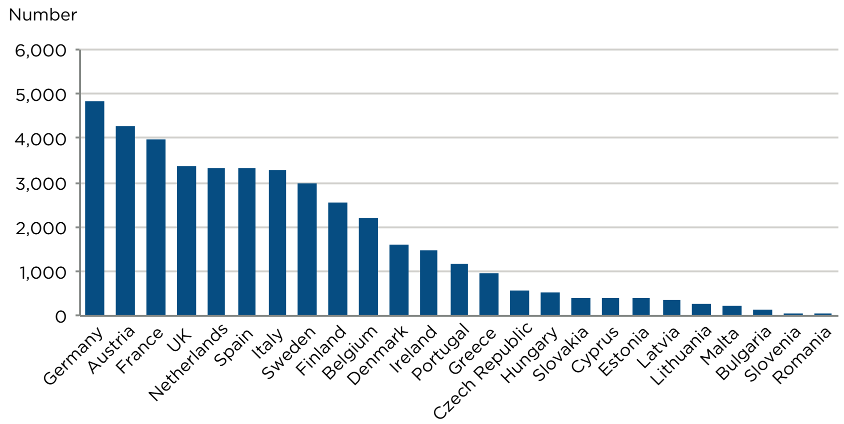
3. WHO BENEFITS FROM LUXEMBOURG'S EXPERTISE?

Luxembourg's financial centre makes a substantial difference to the lives of citizens and the workings of businesses in the real economy day-to-day. Because of its international orientation, its reach extends to homes and businesses all across the continent.

The data on fund registrations show that Luxembourg funds contribute to investor choice all across the EU. As might be expected, this is mainly focused on the largest and wealthiest economies. Seven countries—Germany, Austria, France, the Netherlands, the UK, Spain and Italy (figure 3)—account for 62 percent of registrations for cross-border distribution by Luxembourg-domiciled funds, matching their aggregate share of EU GDP. Likewise, the client base of Luxembourg-domiciled funds reflects their widespread attractiveness in Europe, with nearly three-quarters of investors (by asset value) in Luxembourg funds coming from Europe, and 14 percent from within Asia Pacific (figure 4).[1]

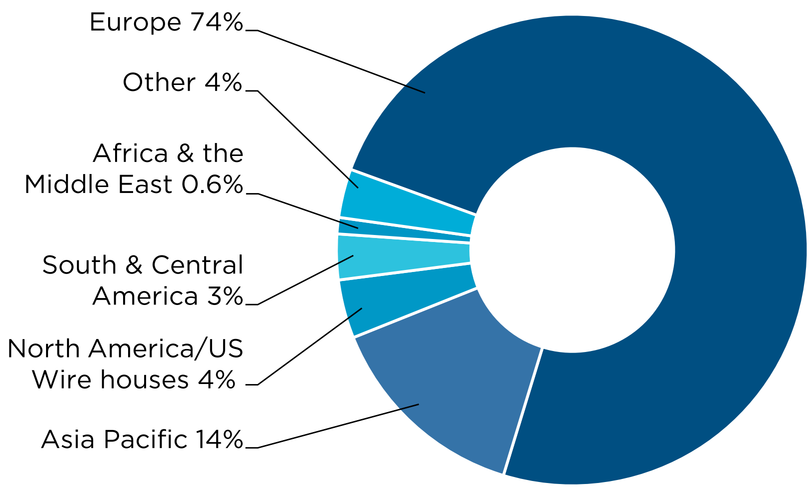
In insurance too, the market is dominated by European customers. Only eight percent of life insurance premiums written in Luxembourg are bought by Luxembourg residents themselves but 33 percent come from France, and a further 33 percent come from customers in three other EU countries: Belgium, Italy and Germany. In total, 90 percent of life insurance premiums written in Luxembourg originate from the EEA, making a tangible difference to lives across Europe.

Fig. 3. Registrations by Luxembourg-domiciled funds in other EU Member States, 2015



Source: PwC (2016)

Fig. 4. Source of invested assets in Luxembourg-domiciled investment funds, 2014



Source: Broadridge

[1] Broadridge SalesWatch. Based on proprietary data contributed by over 50 of Europe's leading cross-border groups (estimated to represent around 70 percent of third party cross-border UCITS business.

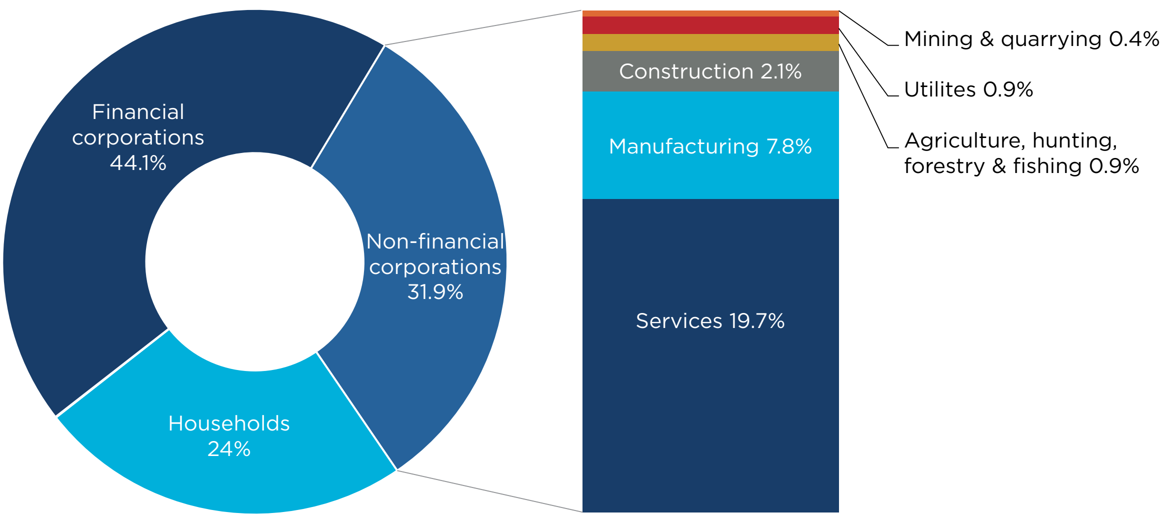
Overall, some 59 percent of the Luxembourg financial centre's international turnover comes from customers in other EU Member States, with the largest export markets being Italy, Germany, France and Ireland. The remaining 41 percent comes from elsewhere in the world.

In all these countries, Luxembourg's activities have a substantial impact not just on the financial sector itself but across the real economy. The financial centre contributes to economic and social well-being for three important types of beneficiaries: households; non-financial corporations and governments. Whether it is an individual saving for his pension, a business raising finance for expansion, or a government seeking to fund investment in public services, each benefits from the linkages that exist in a cross-border financial centre (explored in detail in later sections).

As shown in figure 5, nearly a quarter (24 percent) of Luxembourg's financial centre's earnings come from the provision of financial products directly to individuals and families. These products help them access credit—mortgages, unsecured loans, credit cards, overdrafts—and help people plan for their financial future, by offering savings and investment products—for example, life insurance and pension products, or private banking for high net worth individuals.

Nearly a third of the Luxembourg financial centre's earnings come from offering financial products to non-financial corporations, again providing them with working capital, funds to undertake investment and services that manage risk. The majority of these customers are from service sector firms. Manufacturing firms, on the other hand, purchase 25 percent of the value of the financial centre's products sold to non-financial corporations, while firms in the construction sector rank third at seven percent. The case study of Bracco on page 26—a healthcare company that manufactures surgical robots—demonstrates how products made available through Luxembourg's financial centre assist important and innovative employers in Europe to diversify and grow.

Fig. 5. The Luxembourg financial centre's earnings by type of organisation



Source: OECD (2015), Oxford Economics

CASE STUDY: THE MARGUERITE FUND

The "Marguerite" fund was set up in Luxembourg in 2009 as a joint initiative by six of Europe's leading public sector financial institutions and with support from the European Commission. The first of its kind, and sponsored by the major investment and development banks in each of France, Italy, Spain, Germany and Poland, as well as the European Investment Bank, the fund acts as a catalyst for new infrastructure development across Europe, predominantly in the areas of transport and energy.

Since its launch, the fund has attracted substantial, additional private sector finance which it has subsequently been able to channel into a host of significant infrastructure projects in many countries, including in central and eastern Europe. For example, the fund is supporting the construction of a new airport in Zagreb, Croatia and both wind and waste energy plants in Poland, as well as the building of motorways in both Ireland and Spain and a high-speed fibre optic broadband network in France.

Due to its complex nature, options within Europe for the establishment of the fund were limited. For the funds managers, Luxembourg, was the obvious choice, reflecting important strengths in the investment fund market there.

Most importantly, the Marguerite fund—a complex multinational fund intending to invest in infrastructure projects throughout Europe—is atypical in its management structure. Luxembourg, with its more flexible range of legal instruments and high level of expertise was able to meet the unusual requirements. With its cross-border specialism, Luxembourg's financial centre offered the necessary know-how to set up and administer such a highly specialised fund. It could offer a comprehensive toolbox of investment fund options, including experience of structured/layered and multi-compartment funds. It also offered a whole host of high-quality ancillary services—legal, administrative, financial—in close proximity to one another, as well as the kind of social and political stability that is important to investors. Finally, its relatively small scale makes it faster and nimbler than some of those centres with which it competes.

The Luxembourg offer to a fund like Marguerite highlights its effective role in supporting the real economy. The fund enables major and much-needed investments in public and private infrastructure that are very capital intensive. Through its joint commitment to financial return and social good the fund is able to support projects that might otherwise struggle to raise finances but which are making a huge and tangible difference to both everyday lives and longer-term economic prospects.

In Zagreb, for example, the new airport, financed by the fund, will tackle problems of outdated airport infrastructure and insufficient capacity. Air connectivity is a key factor in economic success in a globalised world. Improvements in air infrastructure therefore help to boost productivity—making the country a more attractive place to do business and to visit. The fund is also supporting major investment in virtual infrastructure. Over the next five years it is helping to finance the development of the broadband network in rural Alsace that will see as many as 380,000 households and businesses provided with high-speed fibre connections, boosting business productivity and making day-to-day tasks simpler and easier.

The fund has also invested in a host of energy and renewable projects, including wind power projects in Germany, Romania and Poland, and solar in France. Also in Poland, the Marguerite fund has invested in a landmark project—the first waste management project in the country to be delivered in public-private partnership. Already operational, the new plant will transform household waste into energy and heat for homes across Poznan. In so doing it will provide energy security for the municipal area and help to reduce landfill, assisting with the country's environmental obligations.

4. WHAT ARE LUXEMBOURG'S SPECIALISMS?

Luxembourg specialises in four financial activities, all reflecting its cross-border expertise in multi-jurisdictional and multi-currency operations. These are investment funds, capital markets, banking and insurance. In each area, Luxembourg's distinction reflects its concentration and specialisation.

The concentration of **investment funds** in Luxembourg provides a solid, trusted and flexible platform by which investors from across the EU and beyond can access diverse investment opportunities. In this way, the centre plays an important role in attracting investment into Europe from other parts of the world, particularly Asia and the US.

Luxembourg-based funds invest in European equities and corporate debt, injecting finance into the real economy. In 2016, Luxembourg-domiciled funds held a total of €1,422 billion in debt and equities invested in Euro-area countries, and a further €358 billion in other EU Member States (figure 6).

By purchasing €1,780 billion in assets, investment funds channel external finance to corporates and governments, providing them with working capital and funds for significant capital expenditure, boosting growth in EU economies and helping governments to deliver essential public services.

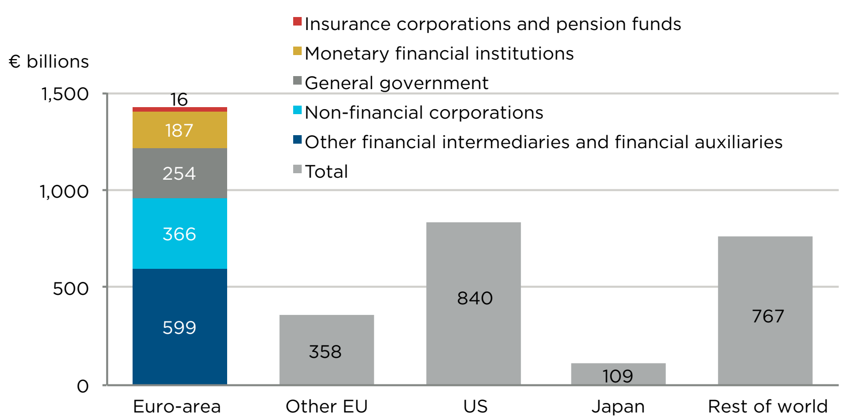
Listing on a respected stock exchange such as Luxembourg's is important in attracting investors, providing transparency, legal security and reassurance. At the same time, by pooling money from different investors to enable the collective purchase of financial securities or other assets, listed funds offer greater opportunities, reduced risk, access to expertise, and lower costs than would be available to investors going it alone.

From an investor's point of view, Luxembourg investment funds are appealing due to the Duchy's long-standing reputation and familiar EU-wide regulatory environment. Its fund structures are internationally recognised by both private and, in particular, institutional investors as providing solid, safe and trusted instruments in which to invest. For institutional investors such as pension funds and insurance companies, which largely invest in highly liquid and regulated products so as to limit risk, this legal and reputational security is vital.

As such, Luxembourg dominates the European market for transnational funds. At the end of 2015, 68 percent of all registrations by EU funds for cross-border distribution in other EU Member States—some 42,000 registrations—were made in Luxembourg. This allows funds domiciled in Luxembourg to overcome the fragmentation of the EU market, enabling investors to benefit from pan-European economies of scale.

Likewise, the fund administration and distribution expertise that has built up in Luxembourg would otherwise be difficult to achieve in funds operating only domestically and within local regulatory and tax frameworks. Consequently, all the major fund managers have set up funds in the country, whether major global firms like

Fig. 6. Luxembourg-domiciled investment funds' holdings of equities and debt, December 2016



Source: Banque Centrale du Luxembourg

Pictet or smaller specialist ones like AIM Luxembourg.

As a result Luxembourg is unsurpassed in Europe in the creation of investment funds. At the end of 2016, Luxembourg was home to 14,595 fund units with net assets totaling €3.7 trillion. This was 27 percent of the total number of funds located in the EU and 28 percent of the net assets of funds located in the EU. To give a sense of scale, these net assets equate to 25 percent of EU GDP in 2016. This has grown from 13 percent of EU GDP in 2005.

The Luxembourg Stock Exchange is also Europe's leading exchange for the listing of **international bonds,** with more bonds listed on it than in any other European country. In 2015, some €944 billion was issued by businesses and public bodies through the Luxembourg Stock Exchange in the form of bonds: 69 percent of it by financial corporations. Luxembourg's stock exchange is highly regarded for the level of information and degree of transparency that it provides for investors about organisations that list bonds with it. As with investment funds, in this way the stock exchange facilitates and underpins capital markets. It also provides the necessary regulatory compliance and gives reassurance to investors that a ready market exists for the public resale of their bonds, which must be listed in order to be bought and sold. Again this is highlighted in our case studies —such as Bracco, which issued its bond in order to reduce reliance on bank loan financing. In turn, this reduces the cost of debt finance for governments and companies seeking to raise funds to invest.

Listing on a major, recognised stock exchange like Luxembourg's provides issuers with a much wider investor base than would otherwise be the case. Our case studies highlight this as a key advantage of Luxembourg instruments—that they are more palatable to investors from all across the globe than many other structures that might be available. In particular, institutional investors such as pension or insurance funds will often favour listed securities and are reassured by bonds with a Luxembourg listing.

FUNDS

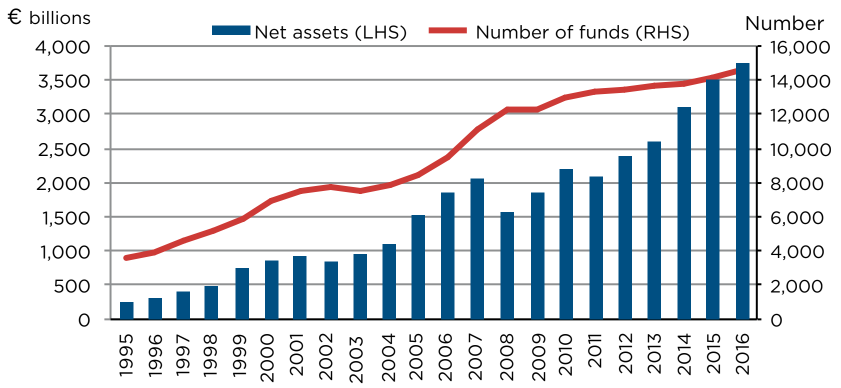
BONDS

INSURANCE

BANKING

There are also tax advantages to listing an international bond on a recognised exchange, and as a result, many investors will only buy bonds that are listed on a recognised stock exchange such as Luxembourg.

Fig. 7. Luxembourg-domiciled funds and assets under management, 1995-2016



Source: CSSF

Luxembourg's strength in capital markets reflects the factors that underpin its other specialisms too. The Luxembourg Stock Exchange's customers benefit from the concentration and expertise of firms that are based in Luxembourg and service the financial centre.

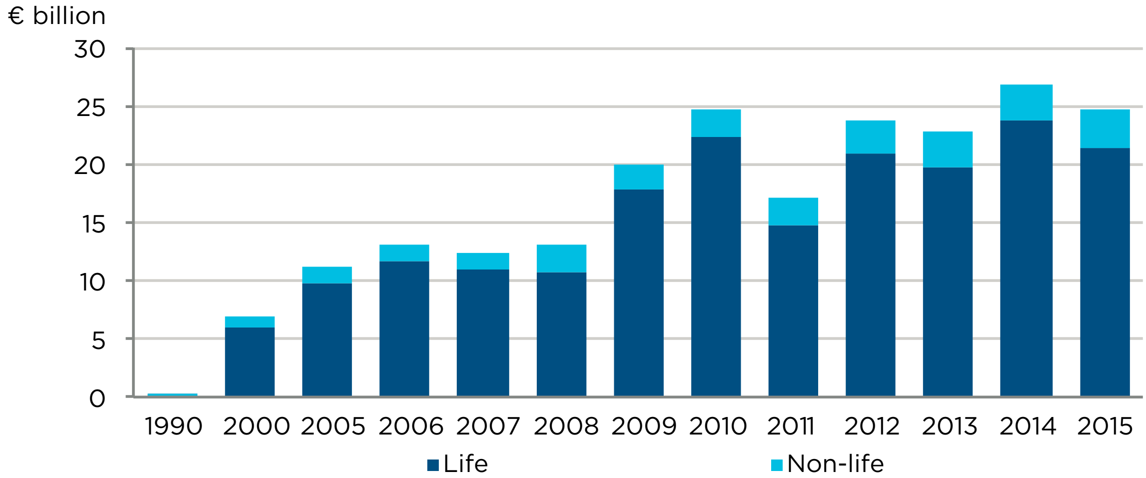
This expertise, combined with the development of advanced financial, IT and regulatory infrastructure, has evolved over time. In the case of bonds, the first supranational institution listed a bond on the Exchange in 1953 and Autostrade (the builder and operator of the Italian motorway network) issued the first Eurobond in 1963. Luxembourg's expertise has enabled it to be innovative and adaptable to the needs of customers for bonds. It issues bonds in a wide variety of currencies—55 in 2015—enabling firms to avoid exchange rate risk by raising external finance in the currency in which it intends to spend. In 2011, for example, Volkswagen issued the first international bonds denominated in Chinese Yuan on the Luxembourg Stock Exchange, with proceeds invested in its Chinese operations.

Luxembourg's strong cross-border emphasis on serving the international market has also helped it to become a leading insurance centre for both life insurance and specialist reinsurance services that spread risk amongst insurance companies.

European residents are free to take out a life insurance contract with an insurer based in any EU Member State, providing them with a wide choice of policies in terms of cost, coverage, and alignment to individual needs and circumstances. Strong technical expertise has enabled life insurance firms in Luxembourg successfully to develop markets for their products in other European countries by creating financially attractive, portable and tax efficient products which are sometimes not available from other markets. Consequently. Luxembourg's insurance firms help customers to manage risk across the continent. There are 22 European countries where at least 30 insurance companies originating in Luxembourg are authorised to operate, and more than 60 Luxembourg insurance companies are authorised to operate in each of Belgium, Germany and France.

Luxembourg's insurance sector also benefits from a favourable tax regime, where

Fig. 8. Gross insurance premiums written In Luxembourg by type of insurance, 1990-2015



Source: The Statistics Portal of Luxembourg

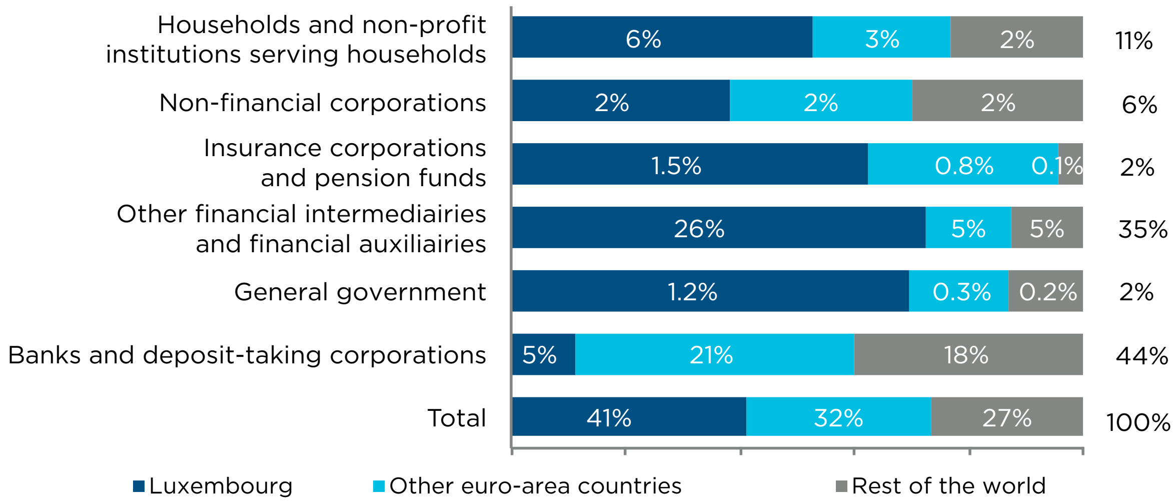
[3] For example, a CAA mandated mechanism commonly referred to as the "Triangle of Security" requires insurance companies to deposit their policy-holders' assets with a CAA-approved custodial bank, thereby separating these funds from the insurance company's other bank accounts. The custodial bank must also maintain a strict separation between these deposits and other accounts, such that policy-holders are consistently protected.

neither premiums nor capital gains (from the surrender or maturity of a contract) are taxed and policyholders and beneficiaries instead pay tax in line with the regime in their country of residence. This is not always the case amongst EU countries: indeed in some cases non-residents can be subject to double-taxation. Luxembourg also offers strong protection to policyholders, with all insurance companies being subject to the supervision of the Commissariat aux Assurances (CAA); and there are a range of measures in place to protect policyholders' interests in the event that a life insurance company goes bankrupt.[3]

Finally, the fourth of Luxembourg's specialisms is in **banking**. Luxembourg's banks facilitate transactions and take deposits for customers all around the globe. In a typical year, customers make 18 billion individual withdrawals from ATMs at home and abroad using cards issued by Luxembourg banks. Moreover, the banks make 59 billion credit transfers, 57 billion debit card payments, process 17 billion direct debits and honour 264 million cheques to payees at home and abroad. In addition, 55 billion transactions a year are made with credit cards issued by Luxembourg banks.[4]

Banks underpin these payment services for all customers, but the sector also has a symbiotic relationship with each of the centre's other specialist fund, capital and insurance industries. Indeed, such interlinkages between sectors are an important part of Luxembourg's strength, not just in banking. The proximity of the Luxembourg fund management industry to life insurers, further strengthens the technical expertise of the latter, and supports the development of innovative investment products, in some cases tailored to an individual client's needs. Such products ultimately deliver financial returns to citizens and corporate customers across Europe that help to boost economic growth and European prosperity.

Fig. 9. Deposits received by credit institutions in Luxembourg by counterpart at December 2016



Source: Banque Centrale du Luxembourg

[4] Data for 2015.

CASE STUDY: POLAND'S GREEN BOND

In December 2016, Poland became the first national government in the world to issue a green bond. It did so using Luxembourg's dedicated Green Exchange—a platform explicitly designed for listing environmentally friendly securities. Although the green bond market has developed rapidly since the first green bond was issued in Luxembourg in 2007, previously only companies or finance institutions, such as the European Investment Bank or World Bank, had issued green bonds.

Luxembourg is the leading centre for green bonds in Europe and globally. More than 50 percent of all the green bonds listed to date were issued on the Luxembourg Exchange. As at[5] Luxembourg-listed instruments had raised €47 billion for investment in green projects, in 19 different currencies and for 24 international issuers. Reflecting this strength, Luxembourg was the obvious choice for the Polish government, providing it with access to a wide pool of global investors within a trusted framework.

The issuance by a national government reflects that the market for green securities is coming of age—no longer a niche market, the investor base has expanded to include pension funds, insurance companies, asset managers and retail investors. The entry of national governments into the green bond market is expected to further encourage private investment into renewable energy and other sustainable projects.

Reflecting this shift in investor interest, Luxembourg's Green Exchange was launched in 2016, with the intention of providing investor confidence about the environmental credentials of any bonds listed as 'green'. Luxembourg's financial centre already had a solid reputation in terms of transparency and informational requirements, and this was further reinforced through the establishment of a dedicated green platform. For example, listing on the Green Exchange requires issuers to provide an external review from a third-party expert before applying to join—in the Polish case, this was provided by Sustainalytics, a leading provider of environmental and social governance support.

Sustainalytics' second opinion, given in advance of issuance, concluded that Poland's Green Bond Framework would contribute to achieving Polish and European carbon emission targets, and to advancing the UN Sustainable Development Goals, and confirmed it as transparent, robust and credible.

Beyond this, listing on the Luxembourg Green Exchange also places monitoring requirements on issuers to demonstrate compliance with green standards as the proceeds are spent on projects. This provides additional reassurance to investors in respect of their environmental and social responsibility.

In this case, for example, the bond commits Poland's State Treasury to report annually on how the proceeds are used, until all the investment has been allocated, and to report on compliance with the Green Bond Framework, as well as the environmental and social impacts resulting from the projects that are funded by the green bond issuance.

The proceeds from Poland's green bond will be used exclusively to finance projects promoting growth that is 'climate resilient' and that helps Poland with its transition to a lower carbon economy. The prospectus specifies that the bond will support clean transport investment—in particular, in rail infrastructure—as well as a series of land-based investments—for example, in sustainable agriculture, forest and national park management, and in the decontamination of land. The bond explicitly cannot be used for less environmentally friendly investments, including in fossil fuel or nuclear power generation.

[5] Luxembourg Green Exchange (2017).


Bourse de
Luxembourg

5. HOW DOES EUROPE'S ECONOMY BENEFIT?

5.1 BENEFITS FOR INDIVIDUALS AND HOUSEHOLDS

The finance industry in Luxembourg earns 24 percent of its income by providing services to households. Virtually all of these services are made to households in other countries.

The services provided by Luxembourg's cross-border financial centre help individuals and households to manage their assets: around 10 percent of deposits with Luxembourg banks are from households and non-profit organisations. The centre also helps households to borrow funds. At the end of 2016, Luxembourg banks and other credit institutions had lent some €54 billion in loans to households and charities. The breakdown of loans to Euro-area residents suggest 66 percent of this was for house purchase, 6 percent was consumer credit and 28 percent loans for other purposes.

Through pension funds and other investment funds, individuals can access capital and see their savings grow faster as a result. Without these kinds of products it can be difficult for individuals and households to access the returns available in capital markets, in the face of barriers around information and expertise. Without them, individual investors would face a number of barriers—some practical and risk-based—that would constrain choice. Even high net worth individuals with resources at their disposal would struggle to know enough about ambitious or innovative companies in sectors such as tech or energy to invest in a way that was not excessively risky. For the shop floor worker, even more so, the costs and information barriers would be almost entirely prohibitive.

In this way, Luxembourg's products and services help to widen access to capital ownership across society. This benefits households directly through the returns they receive but it also, ultimately, increases the funds invested in the financial markets, which in turn, support capital investment—boosting growth and living standards.

To illustrate: an individual investor seeking to build assets to fund retirement will be able to access asset types, such as bonds, investment approaches, and sectors, such as high tech (see Pictet Asset Management case study on page 25), that might not otherwise be open to him. Consequently, individuals benefit from the higher long-term rate of return available through such mechanisms that would be otherwise inaccessible. In terms of costs too, in some jurisdictions investors face tax charges when buying and selling securities but can avoid these by investing with funds that do not face the same charges.

Equally, in terms of information barriers, few households or non-financial businesses have the time or knowledge to build efficient investment portfolios, and instead, through funds, are able effectively to purchase that expertise. Using these products also mitigates the short-term volatility inherent in directly purchasing these kinds of financial securities. The greater choice, available in this way, allows investors to spread risks by diversifying their portfolio, across geographies, currencies and risk levels.

In insurance too, benefits accrue to individuals as a result of increased choice and tailored products. This is most clearly illustrated in the case of life insurance provision, which dominates the insurance industry in Luxembourg, in terms of premiums written. Life premiums totaled almost €21 billion in 2015, an increase of more than 250 percent since 2000, with particularly strong growth in 2009 as new taxes on banks increased the relative attractiveness of life insurance investment products.

For the families of insured individuals these policies offer a measure of financial security, covering things like support for dependents, mortgage payments or general standards of living.

5.2 BENEFITS TO BUSINESSES THROUGHOUT EUROPE

Perhaps the most straightforward way in which companies (and individuals) benefit from Luxembourg's financial centre is in the provision of an effective banking sector, which is vital to the functioning of any advanced economy. Taking deposits in Luxembourg, banks then re-allocate their surpluses across their groups, in the form of interbank loans that in turn provide liquidity to businesses throughout Europe.

More directly, for business customers, including many SMEs, the banking sector's provision of deposits and payment services helps them to manage their assets, assisting with cashflow and financing everyday activity. As of December 2016, credit institutions in Luxembourg held deposits worth €613 billion for households, corporations and governments from across the world—representing four percent of total deposits held by the Euro-area banks at that point. Some 79 percent of the deposits placed with Luxembourg banks as at March 2017 were available for immediate withdrawal, compared to 51 percent across all Euro-area banks, meaning they were readily accessible to help customers finance transactions or repay debts.

In insurance too, the financial centre in Luxembourg helps non-financial corporations with their day-to-day insurance and risk-management needs. For most firms these services help to protect them against claims from clients, members of the public or staff as well as protecting them against catastrophic risks, such as natural disasters or financial risk by hedging.

Luxembourg also plays a particular role as one of the world's largest markets for what is called captive reinsurance, in which insurance is purchased by insurers themselves as a means of spreading risk, and thereby lowering the costs they will incur if there is a major claim. Luxembourg is home to around 220 reinsurance companies, which issued insurance with premiums worth €9.3 billion in 2014.

These kinds of services mean financial risks are borne by those more willing to bear them, which ultimately lowers the price of the goods and services these companies produce for their customers. In turn, the premium income generated by Luxembourg's insurance sector provides a substantial source of finance that funds a whole range of public and private sector investments, especially since life insurance premiums are an inherently long-term undertaking, and so represent a stable and long-term source of capital for European capital markets and that is attracted into Europe by the Luxembourg centre.

It is estimated that in 2014 Luxembourg life insurance companies managed €140 billion of assets. These assets were invested by insurance companies into a range of financial products—reinforcing the specialisation of Luxembourg's financial centre—36 percent of these assets were invested in investment funds, 26 percent in bonds and nine percent in equities.

Beyond the everyday, it is through this role as a provider of finance to European business, through a range of means—from issuing bonds and shares, to various forms of bank loans—that Luxembourg's financial centre most directly helps firms in the real economy to thrive. Having a range of options through which to borrow such funds is crucial to the effective functioning of modern business.

Small and medium-sized firms are the most dependent on bank loans, particularly when they are young. They often struggle to access external finance from other types of institutions as their credit risk is difficult to judge. This source of finance is therefore, even more essential for these kinds of firms, and to sustaining a dynamic growing economy, rich in innovation and competition, for the benefit of consumers.

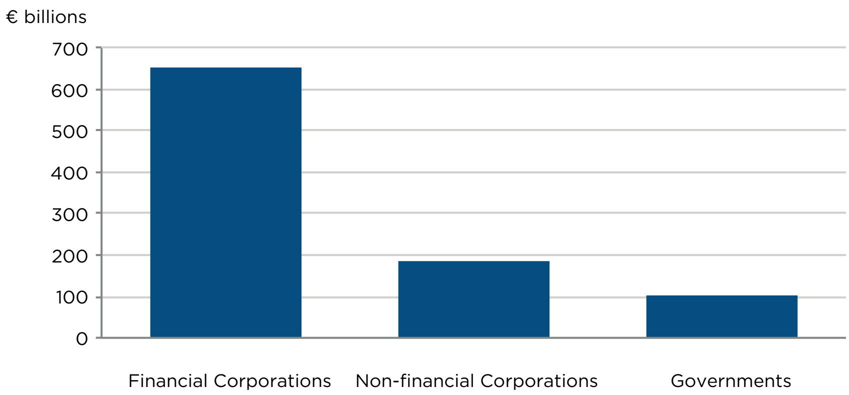
The second largest group of customers for loans (after other banks) from Luxembourg banks were indeed these non-financial corporations. In December 2016, Luxembourg banks had lent €100 billion to manufacturing, services and other types of non-financial firms, many of them SMEs. Such funding provides working capital and finances investments in capital equipment and other firms, within Luxembourg itself, elsewhere in Europe and beyond. In December 2016, 21 percent of these loans were to non-financial corporations in Luxembourg, 46 percent to their counterparts in the Euro area and the remaining 33 percent elsewhere in the world.

Beyond bank loans, Luxembourg plays a major role in the listing of bonds, as another vital source of finance for businesses across Europe. In 2015, some €944 billion of debt was issued on the Luxembourg Stock Exchange in the form of bonds. Some 69 percent was issued by financial corporations since, for banks and other financial institutions, bond finance provides a vital source of medium-term wholesale funding. But non-financial corporations also raised €186 billion in external finance through the issuing of bonds listed on the Luxembourg Stock Exchange in 2015, although this amounted to only five percent of their external financing requirement (compared to 25 percent for financial corporations).

Among non-financial corporations, the major users of the Luxembourg Stock Exchange were companies operating in the service sector, which issued €93 billion in bonds. Service sector companies issuing bonds on the Luxembourg Stock Exchange in 2015 include Carrefour, the retail company, and McDonald's the restaurant company. Second and third were the utilities (for example, Eni) and manufacturing sectors (such as Daimler and Heineken). The Bracco case study on page 26 highlights how a leading EU healthcare company made use of a Luxembourg-listed bond to strengthen its business.

As the pre-eminent stock exchange in Europe for the listing of bonds, the Luxembourg financial centre plays an important role in the allocation of capital from investors to borrowers, supporting economic growth throughout the EU and the rest of the world. It also serves to diversify the funding sources available to European corporations, away from their dependence on bank loans, making firms less vulnerable to external shocks, such as when bank lending tightens as it did during the recent financial crisis. For example, the desire to move away from a reliance on bank loans was cited as a key motivation for Bracco to opt for bond issue. This makes the financial system

Fig. 10. Value of bonds issued on the Luxembourg Stock Exchange in 2015 by national accounts sector



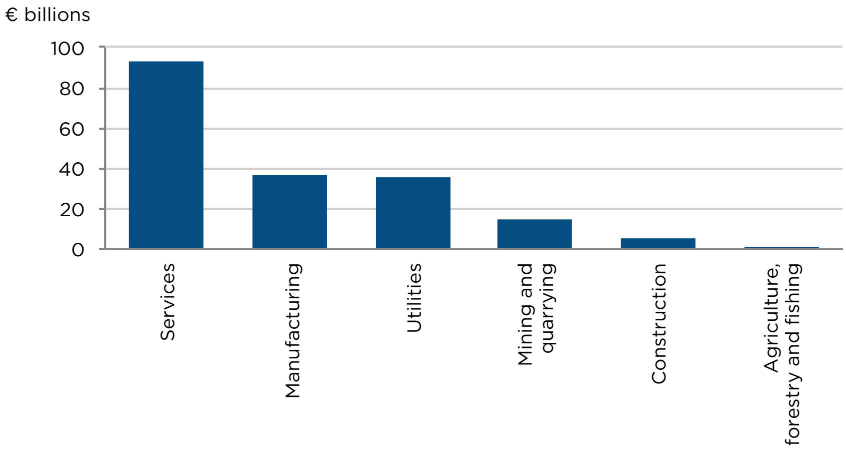
Source: Luxembourg Stock Exchange / Oxford Economics more resilient and smooths the ability of corporates to borrow. Evidence suggests that following the financial crisis, medium-sized firms, in particular, opted to access the bond market in the face of de-leveraging by banks, with an uplift in issuance by companies that had not accessed the bond market previously.

Luxembourg-domiciled funds invest significant amounts in equities and debt issued by European entities. In 2016, they held €471 billion in equities issued by corporates located in EU Member States. They held a further €877 billion in debt issued by both EU corporates and governments. In addition, they held another €433 billion in other funds, which ultimately purchase financial assets issued by corporates and government. This €1,780 billion (see figure 6 in section 4) holding of assets channels finance to corporates, fostering spending on capital equipment and economic growth.

This is particularly important in the EU, as corporates based there are more dependent on bank loans for external finance than their equivalents in other geographies. EU non-financial corporates rely on bank loans for 30 percent of their funding, compared to 14 percent for their US counterparts, reflecting the under-development of Europe's capital markets compared to the United States.

The Pictet Asset Management case study on page 25 also highlights the importance of equity as a source of finance for certain types of firm. Indeed, high tech firms tend to rely more on equity than debt as a means to raise money for expansion an innovation. In this way, both the investment funds and bonds listed in Luxembourg enable businesses to raise vital external finance for working capital and to finance investments in capital equipment, allowing firms to expand their output, improve their efficiency and generate growth. This is echoed again with Akuo Energy, in France, where a fund set up by AIM Luxembourg has directed finances to a whole range of green energy projects, including wind, solar and biomass generation, providing energy to meet the needs of thousands of European households.

Fig. 11. Value of bonds issued on the Luxembourg Stock Exchange in 2015 by non-financial corporations



Source: Luxembourg Stock Exchange / Oxford Economics

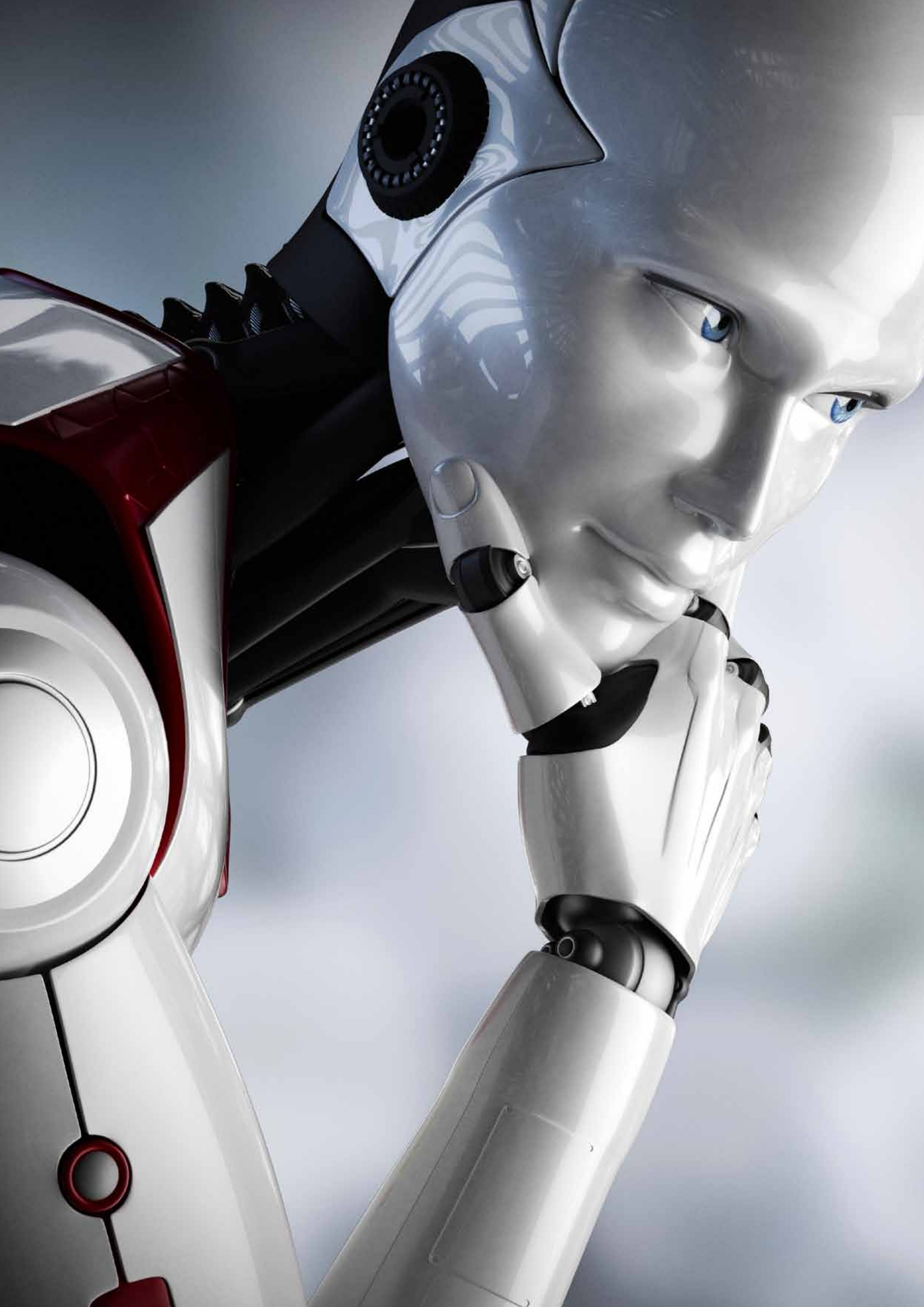
CASE STUDY: AIM LUXEMBOURG

AIM Luxembourg is an asset management firm, which, for the past 10 years, has specialised in the establishment of funds to finance 'green' infrastructure. It considers itself to be an impact investor, and prioritises investments in long-term projects that are socially or environmentally beneficial. Over that period, AIM Luxembourg has raised private equity to fund a total of 32 mainly solar, wind and renewable projects in France, Corsica and elsewhere in Europe. For example, it has set up funds to support local renewable energy developers with equity.

For AIM Luxembourg it was undoubtedly the transnational specialism of the Luxembourg financial centre that attracted it to establish a firm presence in the country, particularly the ease of access to its important German and French markets. The stability of the country vis-à-vis other options was also cited as significant in the location decision. Moreover, unlike locally-domiciled funds, the appeal of Luxembourg funds was seen in their attractiveness to a pan-European audience, enabling investors from countries throughout Europe to more easily invest outside of their home nation, in a way that would be often prohibitively complex, for example for a German investor seeking to invest in a French-domiciled fund, using a French legal instrument.

Most important, perhaps, was the scale and quality of the services industry that exists in Luxembourg and which means that fund managers such as AIM Luxembourg are able to outsource lots of ancillary work to local firms—in accounting, custodian and legal services, for example. For a relatively small operator like AIM Luxembourg this ability to externalise many functions is critical, and regarded as more straightforward and more cost efficient in Luxembourg's financial centre than in other countries without the same deep and specialised supplier base.

Interactions with the regulator, tax authorities, and other government departments were also perceived to be easier in Luxembourg than in other countries. This was felt to be because fund creation was at the heart of financial sector activity in Luxembourg. It was therefore better understood and valued by the authorities.



CASE STUDY: PICTET ASSET MANAGEMENT

Pictet Asset Management is one of the world's leading asset management firms. It provides asset and wealth management services to corporate and individual investors, as well as asset services, such as fund administration and governance. In 2016, Pictet managed more than €24 billion worth of assets in a whole range of investment funds. It has built a thematic approach to investment that seeks to identify longer-term socio-economic 'mega-trends' and target companies working within fields that have the potential to reshape the world in some way.

Pictet has recently launched its Luxembourg-based Robotic Fund, which is a pure equities fund that invests in companies at the forefront of robotic technology, whether this is driverless cars, industrial robots or surgical robots in the healthcare sphere. The existence of specialist funds like this provides a route through which investors are able to invest in the most innovative companies, relatively early in their development. The use of a Luxembourg fund vehicle, at the same time as providing exposure to opportunities for investors, also offers a high degree of regulatory protection and information transparency, reducing risk.

The fund has invested in many diverse and innovative companies, including: KUKA—a German manufacturer of industrial robotics; FANUC—a multinational group of companies that includes FANUC Europe, based in Luxembourg, and that builds laser and CNC robotics; ABB—a Swiss-Swedish robotic company based in Zurich that has installed over 300,000 robots worldwide; and SK Robotics, a Mumbai-based company focused on household and healthcare robotics, and which has sold more than 3,500 surgery robots in the last year alone.

Pictet's support for these kinds of firms through its investment funds is crucial to their ability to innovate and grow. Tech companies, more than most, tend to make use of equities over debt finance as a means to raise money, reflecting the inherently riskier nature of their business, by comparison to, say, utilities or pharmaceutical companies.

In this context, careful investment management and a diversified portfolio (for example, combining equities of more resilient healthcare and logistics robotics companies in a fund with other types of firms) are important to providing investor confidence. For Pictet, the use of the trusted, established Luxembourg UCITS fund structure is valuable in reassuring investors. Our discussions highlighted that the use of a well-known, well-established Luxembourg financial instrument was very important in the ability of Pictet to distribute and sell its products, whereas use a of a more exotic investment structure would make doing so harder. Our interviewees regarded the Luxembourg UCITS fund structure as being the most popular, and widely recognised around the world. For them, using it made the whole process simpler and enabled the focus to be on strategy and impact, rather than on the legal instrument.

As a result, the firm naturally opts for Luxembourg fund structures for funds focused on European markets. To a large extent also, they opt for Luxembourg funds when targeting the Asian and US markets—UCITS structures are also well-known and viewed as safe in these markets, where a non-Luxembourg fund would potentially make it harder to attract investors. In this sense, Luxembourg's UCITS structures play an important role in attracting foreign investment into Europe, and making it possible for European businesses to gain access to investment finance from outside of Europe.

CASE STUDY: BRACCO

Bracco, a healthcare company, was founded by Elio Bracco in Milan, Italy, in 1927 and is currently run by the fourth generation of his family. Today, it is a key player in the healthcare sector, a world leader in diagnostic imaging and a multinational integrated group. Some 3,300 employees are employed in the company worldwide and its consolidated turnover is more than €1 billion. Over one tenth of this turnover is invested every year in research and development (R&D), which is at the root of over 1,500 patents registered by the company.

Until 2007, the Group relied mostly on bank financing for its liquidity needs and to fund this R&D, with a particular dependence on the Italian banking system. The financial crisis pushed the company to review alternative financing sources and created a desire to move away from reliance on bank loans alone.

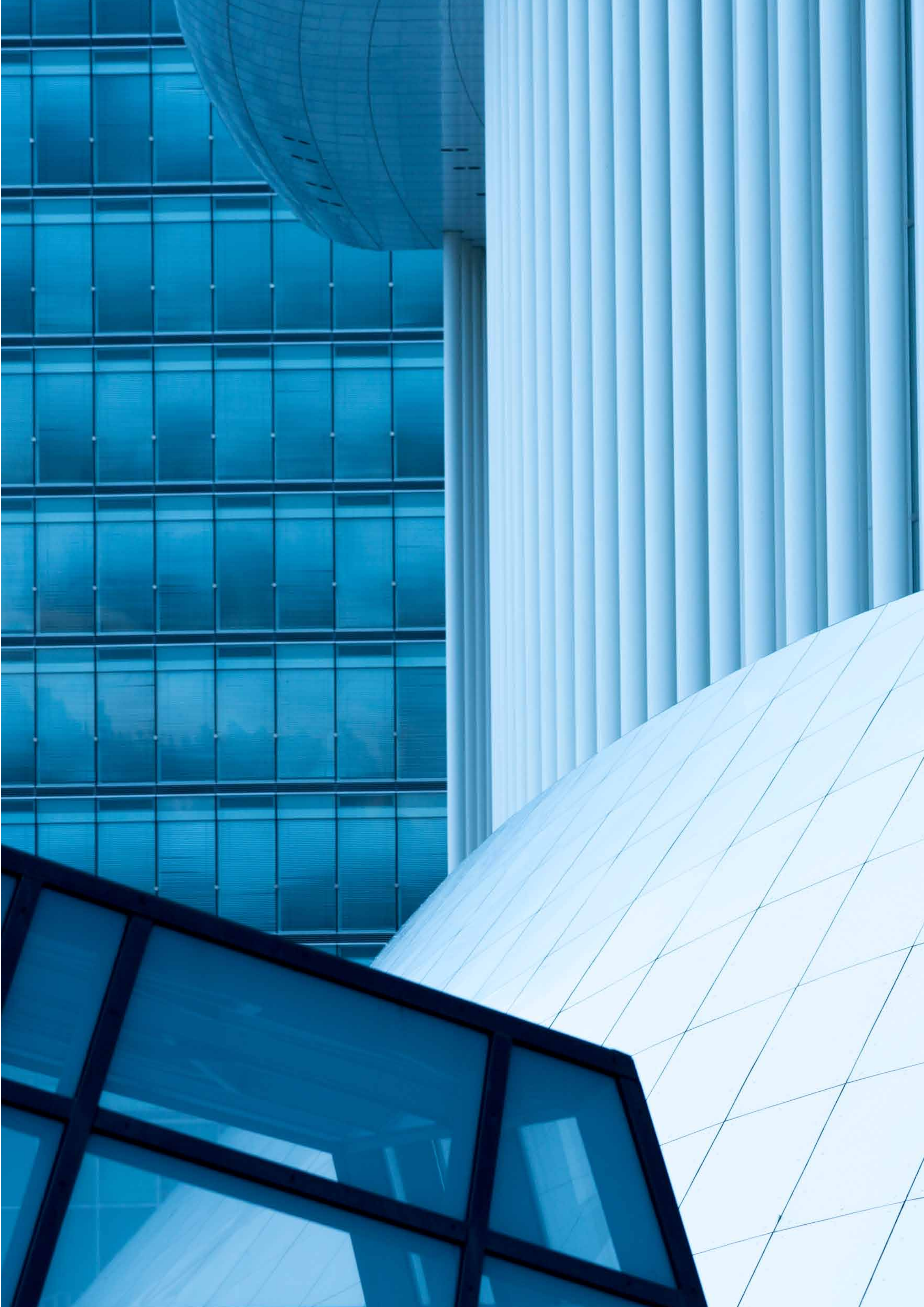
Two main alternative financing sources were considered as being viable: a line of credit from the European Investment Bank (EIB) and accessing debt capital markets. Through the former channel, the EIB lent €100 million for R&D investments to the Group, with a seven year maturity. Various options for accessing debt capital markets were evaluated, both in Europe and in the US. The Group and its investors chose the European market for bond issuance, as it met their needs for both the amount required and pricing. Although investors needed higher interest rates than banks did, the company decided to undertake this listing to help Bracco's name become known to European investors as well.

At this point, the company's senior management had to make a choice as to which stock exchange best suited investors' requirements. Preferences expressed by investors included, for example, the obligation to have a prospectus for the listed bond, the prestige of the stock exchange and the certainty of having the listing processed. The speed of the procedure, and of course the cost, were also considered as important factors in the choice of exchange, echoing the benefits of Luxembourg cited by the Marguerite fund (see page 10).

The Luxembourg Stock Exchange and the Irish Stock Exchange were shortlisted on these grounds, with the final decision favouring Luxembourg thanks to its renowned speed and the certainty of the feedback process. In addition, information requested in the prospectus was sufficiently detailed to reassure investors, but at the same time, not overly burdensome for Bracco. Bracco's Finance & Treasury Director, Luca Di Palma, spoke of how fast they were able to reach an agreement: after receiving initial feedback on their first prospectus submission, the following set of comments was very limited and the whole process was finalised extremely smoothly.

Through the Luxembourg bond listing, Bracco raised €100 million. The money raised was used to remodel Bracco's debt structure; in other words, to replace bank loans from the Group's liabilities and to put the firm's finances on a more sustainable long-run footing.

The Bracco example highlights the importance of Luxembourg bond listing activities, not only to meet extraordinary financing needs, but also in diversifying the debt structure of a company. This has proved more and more necessary for companies, particularly in light of the recent credit crunch; a diversified balance sheet reduces the dependence on a single sector of the economy and lowers the risk of liquidity problems.



CASE STUDY: BANQUE DE LUXEMBOURG

Banque de Luxembourg has existed since the 1920s. It is a universal bank located primarily in Luxembourg, providing a wide variety of financial services from private banking, to asset management, and asset servicing. Through its offer, it helps channel finance to the real economy all around Europe.

Across many types of investment fund, the establishment of new funds acts to inject money into the real economy—whether that is through private equity funds which finance business expansion or growth, real estate funds that direct finances towards brown- or green-field development, or venture capital funds that invest in start-up ideas.

For the Banque de Luxembourg, however, perhaps the most immediate impact it has on the real economy is through its own micro-finance funds and infrastructure funds, and its provision of asset servicing to a larger portfolio of the same type of funds run by third parties.

Luxembourg's financial centre plays a leading role in the micro-finance fund sector, hosting a large share of the world's micro-finance funds and having established the first fund label dedicated to micro-finance in 2006. Micro-finance funds channel finance from large investors to small business to help them develop and expand. They do so through a local in-country bank or micro-finance institution. The fund provides the bank or micro-finance institution with loans, or other types of debt finance, and those recipient institutions then lend the money on to small businesses or local projects. The intermediary bank or micro-finance institution uses its local expertise to screen and monitor the small businesses to which it lends.

The presence of micro-finance funds that are able to finance institutions in less stable markets is critical to economic development in those countries. Without these kinds of funds to provide loans, local banks or micro-finance institutions would struggle to raise the money needed to support their populations on the ground. They would find it either impossible to access the international capital markets, or to do so on terms that were competitive. For example, our interviewee cited a micro-finance fund that invests in south-eastern European markets, enabling local financial institutions to onward lend to small businesses in countries such as Serbia, Montenegro and Georgia.

Relatedly, the bank has also supported the establishment of micro-finance funds that have a more specific remit that enables institutional and supranational investors to improve energy efficiency and drive forward green growth. Again, the funds raise finance that is channeled to financial intermediaries in European countries, who then have the means to support local projects or initiatives that benefit European households. This might include, for example, a fund providing financing to a local bank to support the development of an energy efficiency lending product, that would in turn enable households in a country like Croatia or Albania to reduce energy costs, consumption and CO_2 emissions.

The bank also supports more traditional infrastructure investment funds that have a tangible impact on the ground across Europe. Such funds operate in a similar way to micro-finance funds, providing loans or similar debt finance to local banks or other conduits with expertise of the target country to select and monitor infrastructure projects needing finance. Given the nature of infrastructure projects, the loans tend to be far longer term, than their micro-finance counterparts. One such fund, invests only in infrastructure projects sponsored or completely controlled by municipalities in Albania, Bosnia-Herzegovina, Kosovo, Macedonia, Montenegro, and Serbia, enabling critical projects such as road and bridge building to go ahead and underpinning local economic growth.

By enhancing these countries' infrastructure the fund is helping to foster economic development in the locality, making a tangible difference to the businesses and households who receive financial support that they would not otherwise be able to access.

5.3 BENEFITS TO PUBLIC BODIES

Public sector entities, such as local and national governments, as well as supranational bodies borrow almost exclusively through debt, and especially by use of bonds. Bond markets are able to provide large amounts, typically at longer maturity than is available from banks, and at a fixed rate of interest. These advantages are particularly important to public sector bodies seeking to finance longer-term investments. Bonds allow governments to raise revenue to supplement their tax take and spend on public services and vital infrastructure projects—from school refurbishment and new motorways to capital investment in defence equipment, as well as to refinance existing debt.

Governments in the EU funded 72 percent of their debt finance through bonds in 2015. Many of them do so through Luxembourg as the leading centre in Europe for such listings.

In 2015, for example, national governments in eight Member States, including Italy and Belgium, raised debt finance through bonds issued in Luxembourg. Supranational bodies like the EU, European Stability Mechanism (ESM) and European Financial Stability Facility (EFSF) also issued debt on the Luxembourg Stock Exchange in 2015. Indeed, the ability of the EFSF since 2010 and the ESM since 2012 to raise funds on the Exchange when other sources of funding were drying up helped safeguard financial stability in the Euro area: the funds raised were subsequently lent to Euro-area Member States experiencing, or threatened by, severe difficulties in raising finance.

In 2016, Luxembourg-domiciled investment funds owned €254 billion of Euro-area government debt. Again, channeling funds to pay for the provision of public services.

In insurance too, there is clear governmental benefit: the provision of financial support through private insurance means that the burden on government finances is lower than might otherwise be the case. Arguably, as Europe's population ages in the coming years, placing significant pressure on public finances, the role of insurance in funding retirement will increase and Luxembourg can be expected to play a key role given its dominant position.

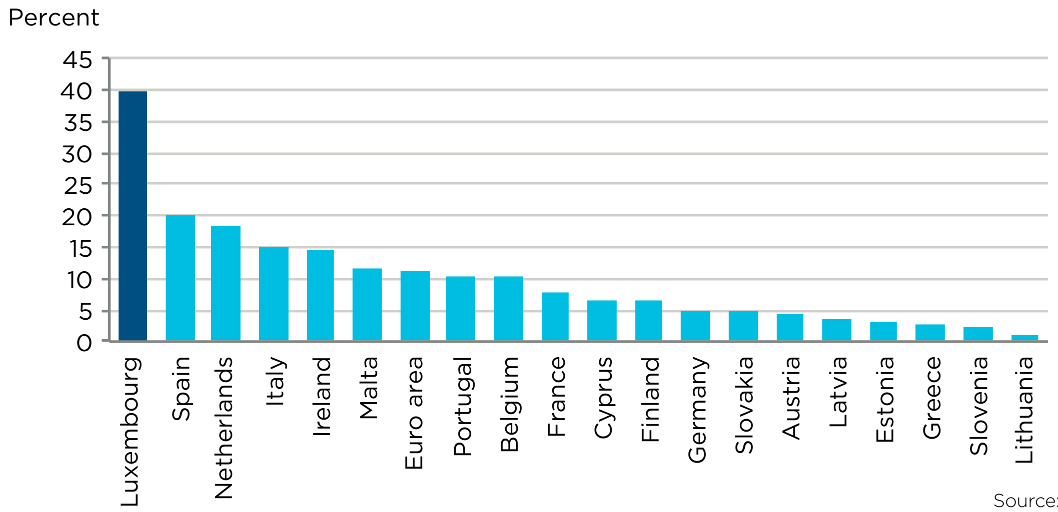
5.4 WIDER ECONOMIC BENEFITS TO THE EU AND BEYOND

The financial centre in Luxembourg also plays a much wider role, in boosting prosperity. The services provided by Luxembourg's financial centre attract large amounts of business investment and capital to the region. For example, wide international acceptance of Luxembourg's offer by both regulators and investors (as explored in the case studies) also provides an important feedback loop that attracts further financial (especially fund-based) activity to the EU. For example, the broad market acceptance of Luxembourg-domiciled funds means they also dominate international registrations by EU-domiciled funds around the world, with over 16,000 registrations in place outside of the EU at the end of 2015. As international promoters recognise the benefits of a Luxembourg domicile for their funds over competing international centres, extra demand boosts export earnings for the EU and supports additional employment in the fund sector.

But more than this, it plays an important role in the functioning of the European and global financial system, delivering the capital and liquidity necessary for economic growth. For example, the presence of investment funds on such a large scale in Luxembourg means that large volumes of deposits are made with Luxembourg-based banks. Deposits from other financial organisations comprise 40 percent of all Luxembourg bank deposits (figure 12). This compares to an average of just under eight percent across other Euro-area banking systems.

This makes Luxembourg's cross-border function very important for liquidity in the rest of the European banking system. Large-scale deposits give Luxembourg banks a surplus which they re-allocate to the rest of Europe's financial sector as interbank loans. In turn, this enables banks to provide loans to households and businesses in the real economy, helping to finance economic activities around throughout Europe. Without such deposits being redistributed by Luxembourg institutions in this way, liquidity, and the ability of businesses to access the finances they need to operate and expand, would be constrained.

Fig. 12. Deposits placed by financial corporations other than MFIs and ICPFs, as a proportion of total deposits from euro area residents at December 2016 [6]



Source: ECB / Oxford Economics

[6] Monetary financial institutions (MFI); Insurance corporations and pension funds (ICPF).

6. CONCLUSION

This report has explored the many ways in which Luxembourg's financial centre fosters economic growth and supports economic competitiveness around the EU to the benefit of European businesses and consumers. The financial centre has a vital role in the efficient allocation of resources around the European financial system. This means that all across Europe businesses are able to borrow funds for working capital and to finance expansion and innovation, driving growth and jobs. It also provides direct access to finance through bond listings and indirectly through investment fund activity.

As the Marguerite fund shows, Luxembourg's particular cross-border expertise, built up over many years, its trusted regulatory regime, and responsive legal instruments enable new models of investment to be developed effectively and efficiently. In that case, the flexibility of Luxembourg's legal instruments enabled substantial private investment to be channelled to the rapid delivery of major infrastructure projects from energy to roads, having a positive impact on public well-being for citizens throughout Europe. The same is true of the innovative products and services being developed as a result of fund finance set up in Luxembourg, and helping European companies such as Akuo Energy and KUKA, to invest in and expand the knowledge base in fields as diverse as green energy and industrial robotics.

Likewise, the Bracco example highlights how bonds listed with Luxembourg assist European businesses to flourish. The centre plays a critical role in the effective and competitive functioning of the global bond market, meaning that corporates and governments can raise large amounts of external finance to invest in capital equipment and business growth. This enables them to reduce risk and to finance vital public services.

Luxembourg's strength is built on decades of successful operation and a specialised offer, reinforced by efficient provision of all required auxiliary services. Because of this it is preeminent as a cross-border centre in mainland Europe, and is active in lots of different markets, in the EU and beyond. The Luxembourg centre has a an enviable expertise in the navigation of complex multi-jurisdictional and multi-currency regulatory, legal environments. The growth in export sales that Luxembourg delivers as a result will continue to be crucial to the sector's development but opportunities also exist for it to expand its offer and further cement the value it brings to Europe even more deeply.

Luxembourg undoubtedly has a strong foundation and impressive reputation built on its four core strengths, which each reinforce its status as a prominent cross-border financial centre in Europe and around the world. This status places it in a solid position to continue to provide real benefits to businesses and households throught the EU.

OXFORD ECONOMICS

Oxford Economics was founded in 1981 as a commercial venture with Oxford University's business college to provide economic forecasting and modelling to UK companies and financial institutions expanding abroad. Since then, we have become one of the world's foremost independent global advisory firms, providing reports, forecasts and analytical tools on 200 countries, 100 industrial sectors and over 3,000 cities. Our best-of-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social and business impact.

Headquartered in Oxford, England, with regional centres in London, New York, and Singapore, Oxford Economics has offices across the globe in Belfast, Chicago, Dubai, Frankfurt, Hong Kong, Mexico City, Miami, Milan, Paarl, Paris, Philadelphia, San Francisco, Sydney and Tokyo. We employ over 200 full-time people, including more than 150 professional economists, industry experts and business editors—one of the largest teams of macroeconomists and thought leadership specialists. Our global team is highly skilled in a full range of research techniques and thought leadership capabilities, from econometric modelling, scenario framing, and economic impact analysis to market surveys, case studies, expert panels, and web analytics. Underpinning our in-house expertise is a contributor network of over 500 economists, analysts and journalists around the world.

Oxford Economics is a key adviser to corporate, financial and government decision-makers and thought leaders. Our worldwide client base now comprises over 1,000 international organisations, including leading multinational companies and financial institutions; key government bodies and trade associations; and top universities, consultancies, and think tanks.

June 2017

The modelling and results presented here are based on information provided by third parties, upon which Oxford Economics has relied in producing its report and forecasts in good faith. Any subsequent revision or update of those data will affect the assessments and projections shown.

Global headquarters
Oxford Economics Ltd
Abbey House
121 St Aldates
Oxford, OX1 1HB
UK
Tel: +44 (0)1865 268900

London
Broadwall House
21 Broadwall
London, SE1 9PL
UK
Tel: +44 (0)20 7803 1400

New York
5 Hanover Square, 8th Floor
New York, NY 10004
USA
Tel: +1 (646) 786 1879

Singapore
6 Battery Road
#38-05
Singapore 049909
Tel: +65 6850 0110

Belfast
Tel: + 44 (0)2892 635400

Paarl
Tel: +27(0)21 863-6200

Frankfurt
Tel: +49 69 95 925 280

Paris
Tel: +33 (0)1 78 91 50 52

Milan
Tel: +39 02 9406 1054

Dubai
Tel: +971 56 396 7998

Philadelphia
Tel: +1 (610) 995 9600

Mexico City
Tel: +52 (55) 52503252

Boston
Tel: +1 (617) 206 6112

Chicago
Tel: +1 (773) 372-5762

Los Angeles
Tel: +1 (424) 238-4331

Florida
Tel: +1 (954) 916 5373

Toronto
Tel: +1 (905) 361 6573

Hong Kong
Tel: +852 3103 1096

Tokyo
Tel: +81 3 6870 7175

Sydney
Tel: +61 (0)2 8458 4200

Melbourne
Tel: +61 (0)3 8679 7300

Email:
mailbox@oxfordeconomics.com

Website:
www.oxfordeconomics.com