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Keynote speech (~20 minutes)

Transatlantic Conference

At the heart of the transatlantic economy

American Chamber of Commerce Ireland

Croke Park, Dublin 3

10:20-10:40

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Context, message and structure

As VP of the EIB, the Irish chapter of the American Chamber of Commerce has invited you to give a keynote speech of 20 minutes. (~ 2000 words)

Check Against Delivery

Seul le texte prononcé fait foi

Es gilt das gesprochene Wort

Together with the ensuing panel discussion, your speech will form **Theme II** and will focus on **Ireland an Island of Innovation at the Centre of the Transatlantic Relationship.**

The issues highlighted for this session are:

- *How can Ireland can embrace the opportunities presented by Industry 4.0 and disruptive technologies to meet economic and societal challenges?*
- *What must be done to continue to foster an environment for attractive high-value and innovative-led investment in Ireland?*
- *How can Ireland build and leverage its knowledge linkages across industry and the research system while acting as hub between the US and Ireland?*

In discussing this Irish and European context, this touches on EIB's support for innovation and new technologies, the types of new investment (including research) the EIB can finance and the importance of research, industry linkages and the broader innovation ecosystem in supporting growth. Implicit in this is the question of how EIB can work with US owned enterprises in supporting new investment in Ireland/the EU.

After the keynote, a 30-minute discussion will take place with this panel:

- **Cliodnha Murphy**, Vice President Research & Development at PepsiCo
- **Lorraine Griffin**, Chair of the Chamber Tax Group and Head of Tax at Deloitte
- **Dr Nuala Murphy**, President of ICON Clinical Services
- **Mark Ferguson**, Director General of SFI and Chief Scientific Advisor to the Government

(The panel preceding your speech will have considered **The State of Play**, including the geo-political climate, trade relations and two-way investment, while Taoiseach Leo Varadkar will address the Conference immediately before your session.)

As a message for your speech you have chosen to highlight the role that the EIB can play in promoting 8 in Ireland, both by supporting MNCs' activities in Ireland as well as, together with these, in support of developing the innovation capacity of the indigenous economy.

Your speech is structured as follows:

1. Greeting and gratitude
2. Introduction –
    a. Timeliness of important topic: I4 and role for & impact on IE, incl. as US-EU gateway;
    b. Outline speech
        i. introduce EIB Group, its raison d'être and evolving modus operandi, instruments;
        ii. In the context of the 4th Industrial Revolution and the structural features of the US economy, consider the EU economy, in general, and that of Ireland, in particular;
        iii. Then I will highlight some policy challenges and identify a role for public policy, notably the financial aspects and the EIB, in particular.
        iv. Conclusion
3. EIB Group - Essentials and evolution:
        i. Size, composition, ownership, strength, raison d', focus
        ii. lending, blending, advisory
        iii. evolution of risk attitude: EIF and EFSI
4. 4th IR – EU-IE-US
    a. Consider global innovation trends, notably US benchmark
    b. EU
        1. Market union and barriers;
        2. EMU: BU and CMU: volumes, depth, variety;
        3. Policy: H2020, EFSI, EU innovation union pilot, etc.
    c. Ireland

    1. Location (geographic bridgehead [traditionally one way, but EU open other way], culture, business)
    2. Duality
    3. Home grown innovation
    4. EIB support for innovation and growth in Ireland

5. Conclusions

Greetings & gratitude

Good morning ladies and gentlemen,

Thank you for this opportunity to speak on such a vital economic topic in front of this select audience.

Introduction

"The pace of innovation has never been this fast – yet it will never be this slow again". So said Justin Trudeau, Prime Minister of Canada at the World Economic Forum in 2018.

The topic of rapid technological change, represented by developments such as Industry 4.0 and advances in automation and artificial intelligence, and how we respond to these is highly relevant as it touches on many of the challenges that we are facing today, in Ireland, in the EU, and in the US.

Indeed, the ongoing fourth industrial revolution combining technological advances across a wide set of fields may surpass earlier waves of innovation in terms of potential for creative destruction.

At the same time, the resulting opportunities offer the promise of better living standards and can help address many of the challenges facing us globally, including climate change.

Markets can be quite efficient and effective in choosing winners. Therefore, the role of public policy should mainly be to ensure that the right environment, incentives and means are available for market-based innovation to thrive (and complement markets, where they fall short).

At the same time, innovation inherently challenges established ways, powerful interests and sensitive social structures. For instance, automation will substantially affect labour markets. A recent study at the University of Cork suggests that some two out of five jobs in Ireland are at risk due to automation, with significant differences across occupations and regions. Clearly, policy makers are also expected to manage the social and distributional consequences of economic change.

Technological transfer and innovation, together with open trade, have been key drivers behind globalisation. Although this has been largely positive – helping lift many out of poverty - it has also been associated with economic disruption and rising inequality.

The effects of the global financial crisis has aggravated this and brought many of these issues to the fore. Indeed, we are seeing a backlash, with increased challenges to the global multilateral framework, to which the transatlantic relationship is central, and even a pending reconstitution of the EU in light of Brexit: it is notable that politically and geographically, Ireland appears to be located at an intersection of fault lines.

At times like these it is therefore all the more important to remember what lies behind these bonds that have served us so well in the past while also addressing these challenges by adapting our attitudes and policies, not least in terms of public policy and financial requirements.

I would like to focus on three points this morning:

1. I will introduce the European Investment Bank Group, explain why we do what we do and specifically how we work to promote innovation and risk-sharing;

2. In the context of the Fourth Industrial Revolution and the structural features that allow it to thrive in the US, I'll share some thoughts on the innovation performance of the EU economy, and that of Ireland, in particular;
3. Finally, I'll suggest some areas where the EIB can support Ireland's positioning as a trans-Atlantic innovation hub.

So first, let me tell you about the EIB.

EIB Group

Established in 1958, the European Investment Bank is the EU Bank, owned by the 28 Member States of the EU.

Our mission is to support investment projects that serve the EU's policy goals through our low-cost financing and advice.

With just two cash capital injections since then, we have over time become the largest multilateral lending institution in the world, with a a balance sheet of just over Eur 550 billion, an annual financing volumes averaging about Eur70 billion in recent years, funded through issuances on the global markets on the back of our AAA rating.

But – as a public bank - economic and social impact rather than volumes must be our guiding star. The Bank acts commercially and follows Best Banking Practices in terms of prudential risk management and conduct. What distinguishes the bank from private finance is the concept of “Additionality” in the delivery of EU policy goals. This means we are not there to displace commercial sources of finance, but rather to complement commercial finance by addressing investment gaps caused by market failures.

In general, we only finance up to 50% of an investment project, with our financing decisions aimed at crowding in other financiers. We only finance new asset creation, rather than changes of ownership (mergers and acquisitions), though our definition of new assets (either tangible or intangible) goes beyond strict accounting requirements.

Priority areas for EIB support now are:

- Energy and decarbonisation
- R&D, innovation and education
- telecommunications and digitalization

- the bio-economy, including food production
- access to finance for SMEs

We are active in over 100 countries, though ninety percent of our financing goes to projects in the 28 Member States. We have been active in Ireland since 1973, and committed almost Eur 1 billion last year to about 20 projects.

Institutional evolution: the EIF, EFSI, and how the EIB Group changed the way it does business

Among the EU’s responses to the banking and sovereign debt crises of the last decade was a call on the capacities of the EIB. In additional to a capital increase for the Bank, the most prominent of these initiatives has been the **Investment Plan for Europe**, a three-pronged initiative launched in 2015 to jump-start faltering investment in Member States, by:

1. The identification of investment barriers;
2. Setting up the **European Investment Advisory Hub within the EIB Group**;
3. And the operation of the **European Fund for Strategic Investment, EFSI, which is implemented by the EIB.**

This is essentially a partial guarantee from the EU budget for EIB loans that finance higher-risk projects that could not have taken place without the benefit of the guarantee, or at least to the same extent. EFSI aims to support at least 500 billion euros of investment by 2021, taking on an important share of the risk.

The assumption of greater risk as part of the Investment Plan for Europe has fundamentally changed the DNA of the EIB. Our SME subsidiary, the European Investment Fund, plays a key role, with new equity and guarantee products that improve access to finance for small businesses. We are more focused on **smaller projects that expand our client base**. We have stepped-up **regional outreach**, including enhanced cooperation with National Promotional Banks and Institutions and opening local offices. Our Dublin office opened just over two years ago, with Cormac Murphy heading it.

We have also increased **technical assistance** through advisory arms, such as InnovFin Advisory, which guides its clients on how to structure their Research & Innovation projects.

The 4th Industrial Innovation

A hallmark of the fourth industrial revolution is a rise in the importance of **intangible assets,** such as patents, copyright and forms of intellectual property, data, algorithms, software, human capital and business processes. Recent surveys suggest that in many advanced economies the intangible capital formation now outpaces that of traditional tangible assets, such as property, equipment and machinery.

The rise of intangible assets as the key driver of business competitive advantage has profound implications for market dynamics, the nature of national competitiveness and for public policy design in areas such as competition, education and skills and infrastructure.

Those of us charged with financing the real economy also need to adapt. Traditional bank credit – still dominant in Europe – alone is not optimal for financing innovation. By their nature, intangibles require expertise for valuation and their usability as collateral is limited (it is difficult to mortgage an algorithm). Further, high levels of risk, including the possibility of failure, is an inherent feature of the innovative process.

Deep and diversified risk capital markets with specialist capabilities are essential to innovation. This includes access to a wider variety of equity and debt risk capital.

The USA economy remains the gold standard of private sector-driven RDI. There are important structural features of the US economy and its financial system that support innovation, including:

i) Access to skills and human capital;
ii) large, well-developed product and service markets;
iii) capital market depth and diversity;
iv) higher tolerance for failure coupled with strong incentives to succeed;
v) links with higher education; and
vi) public sector support.

These are important yardsticks for EU policy makers.

Of course, Europe also contributes enormously to primary research and technological development. In terms of its share of GDP, the public sector contribution to RDI is broadly in line with that of the US. A glance at a list of Nobel winners illustrates the range of cutting-edge research done in Europe.

Where the EU falls short is in terms of commercialisation and market development in innovation, and it lags in technological diffusion. The EU private sector does not come close to matching the R&D intensity of US peers, including through links with university researchers. U.S. firms investment in R&D has been almost half a percentage point higher than in the EU for well over a decade; In Ireland, we know well the story of innovators departing for the US to grow their locally-hatched ideas with readily available finance and larger markets.

So how can Europe do better?

As it with most things, it must start with political priorities and choices. Europe needs to choose to prioritise the creation of the conditions needed to support not just basic science, but the commercialisation incentives needed by firms to compete in the global economy. Europe has been in an introspective crisis mode for over a decade, focused on solving the sovereign debt and banking crises. All the while the rest of the world has been racing ahead in terms of technological capacities. The election of a new parliament and subsequent appointment of a new Commission over the coming months create an opportunity for a new agenda.

Capital market development and integration will be critical. Europe's financial markets remain too bank-based and fragmented. Two-thirds of external financing come from banks, with one-third from capital markets; the opposite of the USA. Therefore, completion of the Capital Market Union – the EU initiative to remove the barriers that hamper the formal of deeper, more liquid risk financing markets in Europe - is essential to facilitate deeper and more diverse financing.

EU policy makers and public sector institutions can take other important steps to bridge the gap. The removal of barriers to the creation of a truly single digital market could help. Other EU initiatives that need adequate resourcing are the Innovation Union, whose financial instrument is Horizon

2020, and its dedicated financial instrument, InnovFin. The European Research Area can contribute further to an already strong primary research sector. Complementing this is the pilot of the EU Innovation Council, whose High-level Group of Innovators incidentally includes two young Irish entrepreneurs, Paddy Cosgrave and Gráinne Dwyer.

As mentioned, EFSI has been another step in the right direction. Greater advisory and financing support (just under Eur 20 billion in 2018) for highly innovative projects and clients has been facilitated by the expansion of the EIB's product offer under EFSI, including:

- more support for venture capital
- new risk-sharing arrangements with commercial banks that reduce traditional bank collateral requirements and extend loan maturities
- new high risk instruments to support first-of-a-kind energy demonstration projects
- the creation of a new venture debt product

Situation in Ireland

Let me turn briefly to Ireland's innovation performance

The European Union's innovation scoreboard recognises Ireland as a strong innovator, and this country scores particularly well in terms of human resources and employment in knowledge-intensive sectors.

This comes as no surprise, as these strengths played a crucial role enabling Ireland to attract such a strong multinational presence in recent decades.

I want to pay tribute to the work of the Department of Business, Employment and Innovation and its agencies, notably IDA Ireland, Enterprise Ireland and Science Foundation Ireland for their work in transforming Ireland's research and innovation environment over the last two decades, notably rigorous prioritisation of research funding and its validation through peer review and ambitious targets for industry cost sharing.

Investment in Research and Innovation by the Department of Business, Enterprise and Innovation and its agencies is delivering in terms of attracting and developing innovation across the economy. Ireland has moved up to eleventh place in global rankings of the overall quality of scientific research. Business expenditure for Research and Development for R&D enterprises shows that Ireland is on target to reach the goal of 1,200 significant R&D performers.

Indeed, statistics published by the CSO show that since 2011 alone *Business Expenditure on Research and Development* increased by nearly one-third, reaching an estimated EUR 2.3bn in 2016.[1]

However it is clear that Ireland still faces major challenges in completing its transformation into a true innovation leader in global terms. Let me name just three:

First, a decade of post-crisis fiscal constraint has limited the public resources available for investment in R&D and the higher level education infrastructures essential for innovation. The share of RDI in economic activity has declined continuously since 2010, mainly related to public sector spending cuts in the

[1] Actual for 2015 was EUR 2.23bn

years following the financial crisis. It is now roughly one-third below the 2020 target of 2.5% of GNI.

Second, Ireland's financial sector still struggles to support private innovation investment. As with other EU countries (and especially the periphery), enterprise financing is primarily bank-based. Bank credit is ill-suited to financing innovation and intangibles, which require different risk assumptions and constitute poor collateral. Moreover, smaller firms are more reliant on external financing and, in light of underdeveloped capital markets, more likely to be financially restrained, especially for innovation investment.

Third, Brexit uncertainty has reduced overall investment, including in innovation activities. The EIB's own investment survey shows that, in spite of the strong economy, Irish firms are showing a level of reticence towards investment that is unique among their EU peers. While many firms' investment priorities include a substantial focus on innovation (new products and services), a similarly large share of largely smaller firms has suspended investment plans (likely due to Brexit).

Fourth, there is a clear duality in Ireland's R&D and innovation performance. The innovation profile of Irish firms differs by ownership, with domestic firms exhibiting a profile similar to that of the EU while that of foreign-owned firms substantially more geared towards innovation. The challenge for Ireland is to continue to provide an excellent environment for the multinational sector, especially in the area of high-tech, while growing domestic RDI capacities and increasing the synergies between these and multinationals.

How Can EIB Support Ireland's Innovation Efforts?

In this context, how can the European Investment Bank support Ireland's ongoing transformation into a European and global innovation hub?

I see five ways in which the European Investment Bank Group can use its strengthen financing and advisory engagement in Ireland to support innovation.

Firstly, we can look at new ways to finance public investment in R&D in Ireland, drawing from experiences in other EU countries. Options range from traditional loans – through the NTMA – for exchequer investment in R&D (within planned budget caps) to more innovative structures, involving leveraging future cashflows associated with public-private R&D collaborations. We could also look at how to use EIB funding to support the Disruptive Technologies Innovation Fund. I am delighted that the Department of Business, Enterprise and Innovation with Science Foundation Ireland have been working with the EIB's Innovation Finance Advisory team to explore potential for new innovative funding models. Indeed, I was pleased to host Professor Mark Ferguson in Luxembourg at the EIB recently to explore this and other items in detail.

Second, we will continue to finance the investment plans of the higher education sector in Ireland. Over the last decade the EIB has provided more than EUR 1.3 billion to support education investment across Ireland, including about EUR 900m for the higher education sector, including all the universities, DIT and RCSI (we are the only major lender for capex by the Irish universities). Looking ahead we expect to confirm new support to RCSI to upgrade their facilities and we are working with Trinity to see how to best finance the planned Trinity Innovation District.

Third, we can improve access – via local intermediaries - to bank financing for SMEs lacking collateral that need to invest, including in digitilisation. Indeed, alongside the Strategic Banking Corporation of Ireland, the EIB Group is supporting – through guarantees - almost EUR 1 billion of low cost financing from commercial banks to be provided to SMEs most impacted by Brexit uncertainty and potential lost markets. Ensuring that innovative firms can access both working capital and investment finance may be crucial for the Irish economy in the months ahead.

Fourthly, we will continue to work with Enterprise Ireland and others to build a dynamic venture capital market in Ireland. Together with EI, the European Investment Fund has been the largest financier of Irish VC and PE in Ireland over the last two decades. Indeed, 2018 represented a record year for European Investment Fund engagement in Ireland with EUR 163 million of new equity and guarantee financing, including support for Ireland based Atlantic Bridge.

And fifthly, we will further strengthen our direct debt and quasi-equity financing of innovation by mid-sized Irish corporates, supported by our Innovation Financing Advisory services. Tomorrow we will celebrate the signature of a EUR 30 million loan for a Galway based medtech firm, and while there meet representatives of more than 70 companies from the sector to discuss a new, streamlined EIB financing facility for corporate R&D and innovation activities. Similarly, a few weeks ago we signed a EUR 30 million venture debt facility to support pioneering use of artificial intelligence to improve healthcare by Nuritas out of their impressive new Dawson Street research centre. Direct EIB corporate financing is also supporting agribusiness innovation by world leading animal food firm Devenish, and new drug development by Malin and Amryt. We are also working with Irish energy companies on demonstration projects for new technologies that will help Ireland – and the world - to reduce GhG emissions. The EIB **can** work with **US-based companies that are undertaking significant capital investment in Ireland,** including research and development.

Ladies and Gentlemen, in conclusion,

As the EU bank, we support investment in Europe. Ireland's special relationship with the US is clear, as is the US's strength in innovation and innovation-supporting means and capabilities.

The EIB is actively supporting Ireland. The EIB, as an EU institution, is eager to engage with you, as you consider how to expand your level of innovation through Finance and Advisory resources. We look forward to expanding our dialogue with you.

Thank you.