



HARVARD | BUSINESS | SCHOOL

The Dublin International Financial Services Cluster

Final Report



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Microeconomics of Competitiveness

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INTRODUCTION

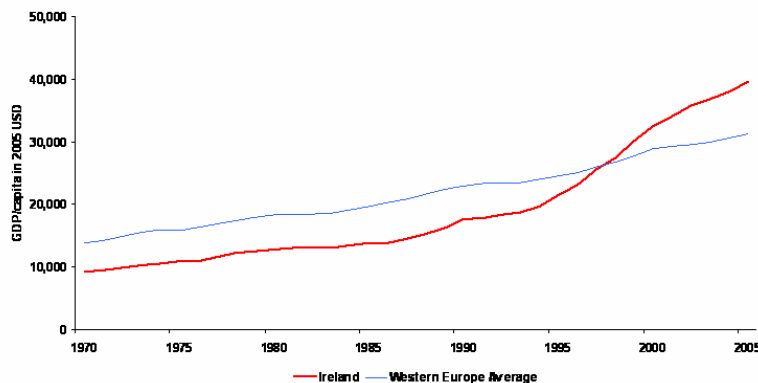
From economic crisis in the mid 1980s, Ireland became a case study for export-led success in the 1990s. Taking advantage of fundamental reforms and large FDI inflows, Ireland is now a mature, wealthy nation and faces new challenges if it is to maintain the performance its citizens have come to expect.

Ireland Summary	
Independence	1922
GDP per capita, PPP	\$36,140
GDP	\$130 billion
Population	4.0 million
Median age	33.7
Land area	27,000 sq. miles
Unemployment	4.30%
Current Taoiseach (prime minister)	Bertie Ahern
Ruling coalition	Fianna Fáil (center) / Progressive Democrats (right)

ECONOMIC PERFORMANCE

Irish PPP adjusted GDP per capita growth - from \$13,082 in 1990 to \$36,140 in 2005 - outperformed all comparable countries, making Ireland one of the wealthiest countries in the EU, if not the world (EIU, 2005). With an average annual growth rate of 7.2% from 1990-2004, the 'Celtic Tiger' far outstripped the EU25 average of 4.2% and the US annual growth of 4.0% (EIU, 2005).

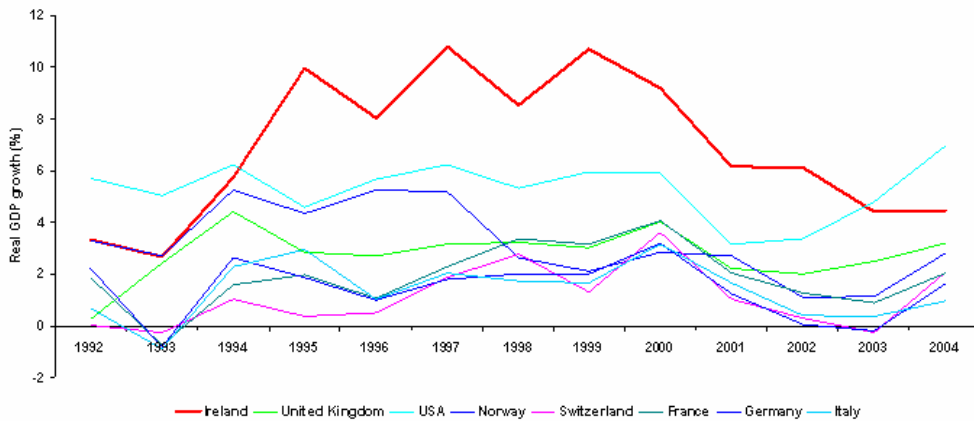
Exhibit 1: GDP/Capita in 2005 US Dollars for Ireland and Western Europe



Source: The Conference Board and Groningen Growth and Development Centre, Total Economy Database, Jan 2006.

However, increasing convergence of Ireland's growth rates to the European average, as illustrated in Exhibit 2, raises concerns about future growth

Exhibit 2: Annual Real GDP Growth Rates for Select Economies (1992-2004)



Source: Economist Intelligence Unit (EIU), 2005

Much of Ireland's economic growth has been driven by Foreign Direct Investment (FDI), with over 40% of Gross Fixed Investment between 1992 and 2004 coming from abroad (EIU, 2005). Due to repatriation of profits by these investors, Ireland has a Gross National Product (GNP) of 83% of GDP, significantly less than the EU25 average of 99.5% (CSO, 2003).

Nevertheless, FDI has focused on high-value-added manufacturing, generating significant labor and total factor productivity (TFP) improvements. Concurrent heavy investment in the country's capital stock suggests that the increase in TFP is not simply the effect of higher capacity utilization, but actually an increase in the overall capacity of the country's workforce. Exhibits 3 and 4 illustrate the growth in TFP and Gross Fixed Investment and highlight Ireland's significantly higher growth rates relative to its peers.

Exhibit 3: Average Annual Growth in Total Factor Productivity

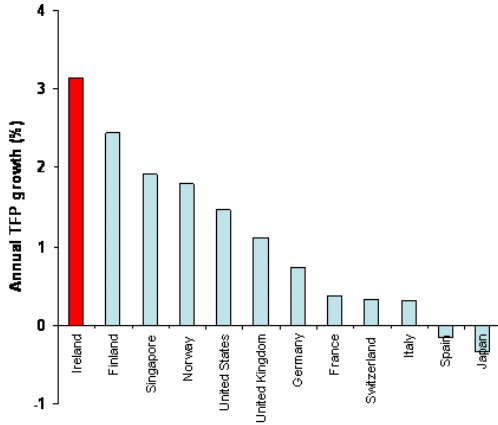
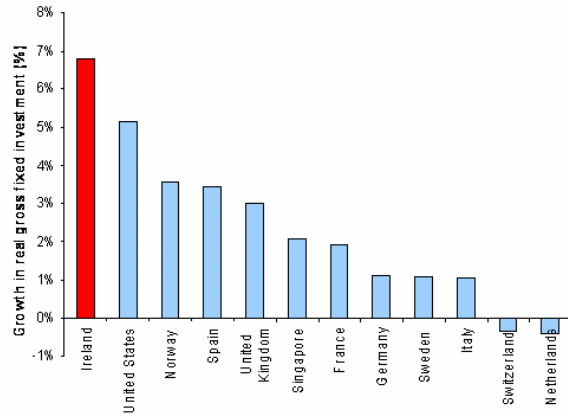


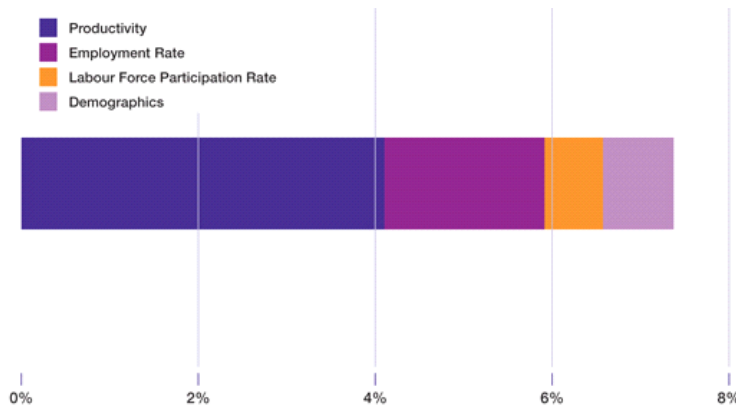
Exhibit 4: Average Growth in Real Gross Fixed Investment



Source: EIU 2005

An analysis by the Irish Central Statistics Office suggests that productivity improvements accounted for more than half of Ireland’s per capita GNP growth between 1994 and 2004 (Exhibit 5). Increased employment and labor force participation rates, as well as favorable demographic shifts, accounted for the remainder (CSO, 2005).

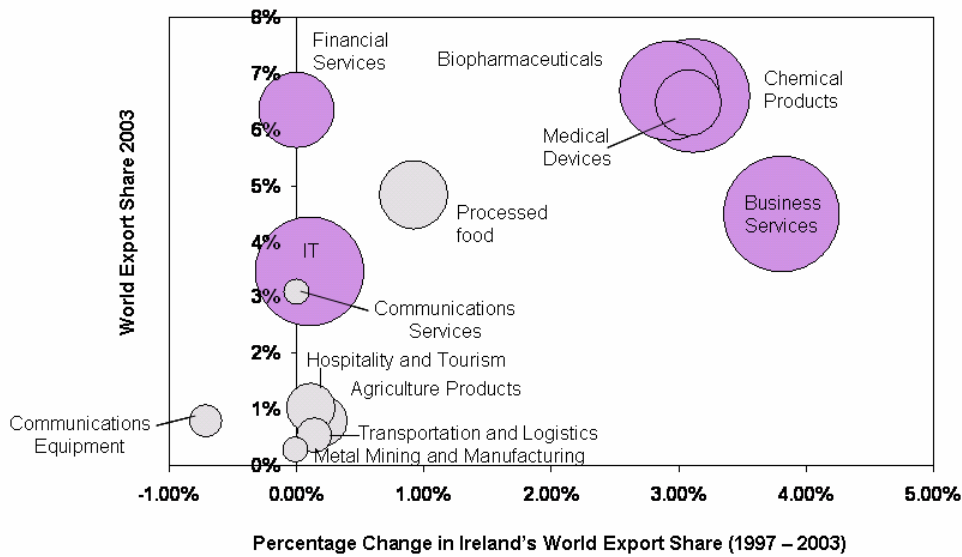
Exhibit 5: –Contribution to Per Capita GNP Growth, 1994-2004



Source: Central Statistics Office of Ireland

Productivity gains have been concentrated in several dominant clusters such as chemicals, IT and life sciences. Exhibit 6 highlights the significance of these clusters in the Irish economy.

Exhibit 6: Ireland's Export Performance in Goods by Cluster 1997 - 2003



Source: International Cluster Competitiveness Project

THE NATIONAL DIAMOND

Factor Conditions

Given Ireland's low domestic demand, inclusion in the EU has been a key factor condition for Ireland since 1973. Access to the large regional Europe market has been critical to attracting major companies, primarily from the United States, seeking bases from which to export to EU member states.

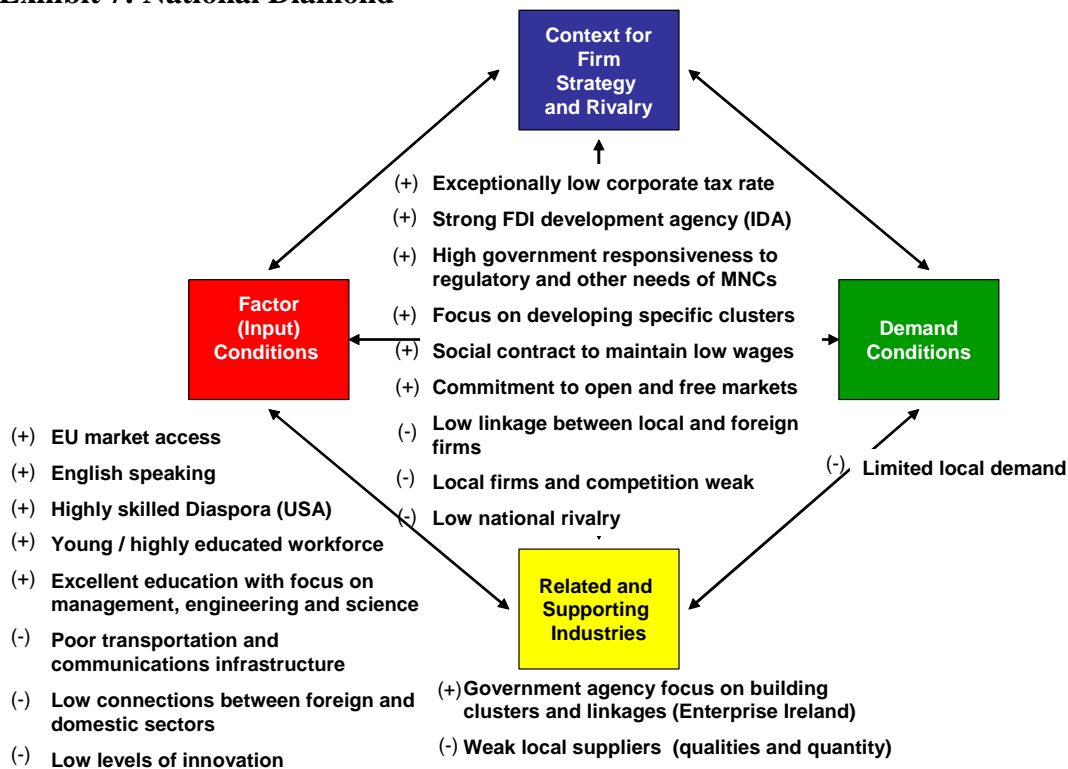
Supporting EU market access is a young and highly educated English speaking workforce. In 2004, 60% of college graduates earned a degree in science, engineering or business (Higher Education Authority, 2006). The Irish diaspora also encouraged FDI, with several major investments led by second or third generation emigrants interested in investing in their parents' native country. Richard Egan, Irish-American and founder of EMC, a large information storage systems company, told us that affinity for his family's homeland was a principle reason he built a plant in Ireland (Egan, 2006). As the economy improved, the diaspora returned with management and scientific training

developed abroad. Fully 20% of Irish workers aged 30-50 have worked in another country, compared to a 3% EU average (McWilliams, 2005).

An independent judiciary, common law system and low levels of bureaucratic red tape also serve to make Ireland an attractive location for foreign firms.

In contrast, overall transportation and communication infrastructure remains underdeveloped on a national level. Also, Irish workers and firms, known for executing on ideas developed elsewhere, have yet to demonstrate the degree of innovation found in comparable countries (Enterprise Strategy Group, 2004).

Exhibit 7: National Diamond



Context for Strategy and Rivalry

Ireland has done an exceptional job of creating a context to take advantage of its core factor advantages. Probably the single most important government policy in attracting FDI has been an exceptionally low corporate tax rate of 12.5%. Other European

countries “usually have a large Corporate Tax revenue stream to begin with. But... Ireland didn’t have a corporate sector, so... had nothing to miss.” (McGowan, 2004). Brian Cogan of Forfás estimated that 80% of FDI initially depended on low tax rates. Other direct incentives cost an estimated \$20,000 to \$25,000 per job. Return on investment may have been an issue, for Cogan notes that “grants are not a part of Ireland’s pitch any more” (Cogan, 2004).

Proactive government has also distinguished Ireland’s business environment. Ireland’s low-wages due to its struggling economy and high unemployment attracted labor intensive manufacturing. The Irish government worked closely with employers and union leaders in the “social partnership” agreements to negotiate restraint in wage increases, helping keep Ireland competitive.

Since the 1980s, Ireland has gradually moved away from seeking any FDI which brought jobs, and towards a strategy focused on attracting investors in a small number of high-value industries. These industries were chosen on the basis of long-term growth potential, and on how well Ireland’s workforce and infrastructure could meet the sectors’ needs. A heavy bias was placed on pharmaceuticals and IT, as several companies already had presence in Ireland. The Irish government greatly facilitated these investments through their flexibility, responsiveness and willingness to adapt legislation to business needs. The IDA, a government sponsored FDI development agency, had primary responsibility for maintaining these strong links between government and foreign industry (see IDA discussion and Exhibit 10 below).

Irish policymakers have yet to find a way to increase rivalry among domestic firms. Local firms have generally not found success in traded clusters and have achieved low level of linkages with the large multinationals that account for the bulk of FDI.

Domestically-owned firms tend to participate in non-traded sectors plus areas like food processing, transport and light manufacturing.

Demand Conditions

Although increasing wealth has raised local quality expectations, overall Irish buyer sophistication is low, and demand for the products developed by the targeted clusters is limited. However, integration with the EU market has created access to large and sophisticated “local” demand.

Related and Supporting Industries

Both the quality and quantity of local suppliers is frequently weak. However, Ireland’s chosen clusters generally require globally traded inputs and do not rely as heavily on local suppliers. Meanwhile, small scale supporting industries have emerged around specific clusters as needed. For example a vital legal and accounting services sector has emerged in Dublin to support the Financial Services sector.

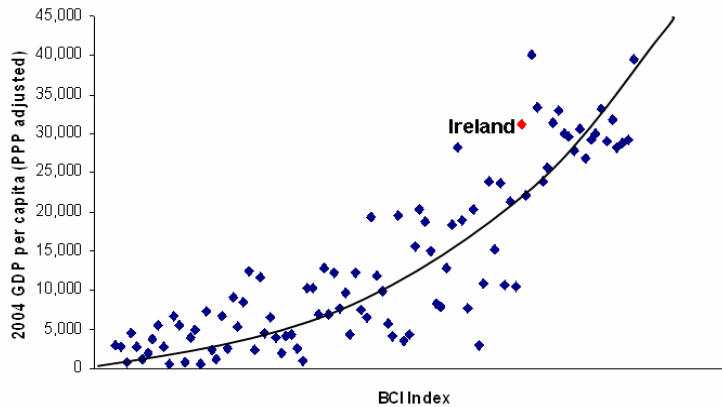
SPECIAL FEATURES OF THE BUSINESS ENVIRONMENT

BCI Outperformance

Ireland outperforms its BCI predicted GDP (Exhibit 8), despite significant weaknesses, such as poor infrastructure, low levels innovation and weak local business development. Productivity and demographic advantages have contributed to this success. However, it may also be that the BCI is an insufficient measure of Ireland’s competitiveness, given its focused economic development strategy. Our discussions with the IDA, revealed many examples in which improvements to infrastructure and other factor conditions were targeted towards specific companies or industries, not generic or regional improvement. In this way, Ireland was able to develop a productive export

manufacturing sector and attracted FDI, while overall infrastructure, innovation and domestic industries lagged behind. Exhibit 9 highlights these differences.

Exhibit 8: GDP/capita relative to BCI ranking for world economies



Source: Business Competitiveness Index, 2005

Exhibit 9: Ireland: Competitiveness Strengths and Weaknesses

	Strengths in Creating an Environment for Ease of Foreign Business Operation	Weaknesses in Infrastructure and Local Innovation
Context for Firm Strategy and Rivalry	Efficacy of corporate boards 9 Favoritism in decisions of gov't officials 9 Intellectual property protection 13 Effectiveness of antitrust policy 15 Prevalence of trade barriers 15	Intensity of local competition 43
Factor (Input) Conditions	Quality of public schools 3 Venture capital availability 4 Judicial independence 5 Extent of bureaucratic red tape 11 Efficiency of legal framework 12	Railroad infrastructure development 55 Telephone/fax infrastructure quality 50 Port infrastructure quality 45 Air transport infrastructure quality 42 Overall infrastructure quality 39
Company operations and strategy	Prevalence of foreign tech licensing 6 Reliance on professional management 12	Capacity for innovation 22
Related and Supporting Industries		Local supplier quantity 26
Demand Conditions		Buyer sophistication 22

Source: Global Competitiveness Report, 2005.

The Industrial Development Authority (IDA or IDA Ireland):

A critical actor in the FDI process, the IDA aggressively attracts new companies to Ireland and encourages existing companies to increase investments and relocate higher-value activities to Ireland.

The IDA was one of the first national FDI organizations of its kind, and many of Ireland's early wins can be attributed to its responsiveness. This first mover advantage continues to help Ireland today because public-private relationships often must be established and nurtured for years before an investment decision is made. The IDA's intense focus on a small number of tradable clusters has also contributed to its success in that IDA professionals can more deeply understand the needs of the candidates that they approach.

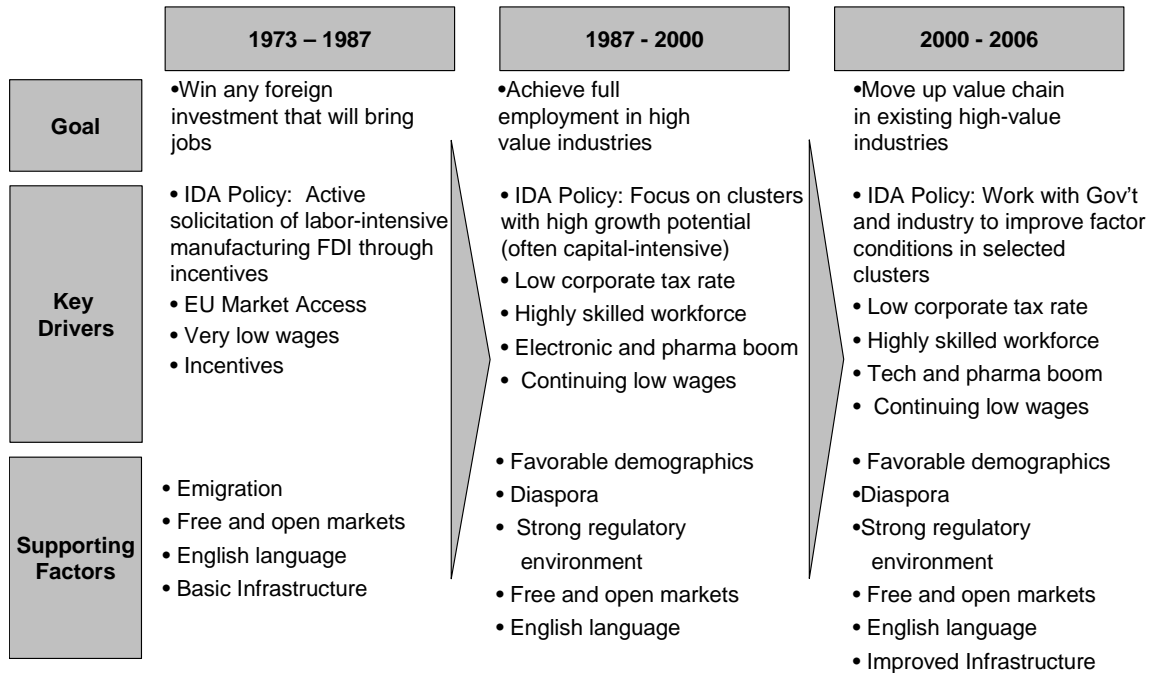
When Intel in 1987 was concerned over availability of semiconductor engineering talent for a new fab in Ireland, the Industrial Development Authority (IDA) tracked down as many Irish engineers working at semi-conductor businesses abroad - who would be willing to return to Ireland. They were able to present "a booklet to Intel with the names, addresses and phone numbers of 85 people", helping convince Intel to invest (McGowan, 2004).

Due to its impressive record of success, the IDA has effectively been granted authority to "close the deal with a handshake" (McGowan, 2004). As of 2005 it supported over 1,000 companies active in Ireland, employing nearly 130,000 people. These companies generated exports of €8 billion per annum including €15.5 billion of expenditure in the Irish economy (Forfás, 2006).

However, now that Ireland is near full employment, the IDA has the new goal of upgrading activities carried out in Ireland, it is unclear if the IDA will be as successful in

this new task. There is a risk that the political will and social cohesion that has allowed the IDA and FDI to influence government and the entire business environment in the past could deteriorate.

Exhibit 10: FDI Timeline



The European Union

Ireland’s access to the large EU market was critical in attracting FDI, as US companies could use Ireland as a base from which to export to the rest of Europe. In the last decade, however, exports to the United States have also increased significantly, reflecting Irish competitiveness on a global level.

EU membership also brought structural funds and regional aid from Brussels. these allowed Ireland to invest in infrastructure upgrades when it could not afford to do so on its own. Maastricht criteria needed to join the Euro fostered policies that kept inflation and interest rates low. Finally, in recent years, Ireland has benefited from immigration from the newly acceded EU countries..

Ireland's reliance on the EU is not without risks. A competitive advantage of low cost EU access, (formerly) low wages and low tax rates is facing competition from several new EU countries, offering lower labor costs and similar tax structures. If Ireland cannot differentiate itself through innovation and skilled management, future FDI may be lost to Eastern European competition. Possible tax harmonization within the EU, although currently unlikely also poses risks as other more centrally located Western European countries might be more attractive bases given equivalent tax rates. Finally, EU regulation and social requirements have been criticized as harmful to European competitiveness. While the Irish government has been able to secure any concessions needed to remain competitive thus far, the recent vetoing in Brussels of a grant to Intel may presage further restrictions.

STRATEGIC ISSUES

Current Strategy

“Enterprise in Ireland, while having highly developed manufacturing ability, lacks capability in two essential areas: international sales and marketing and the application of technology to develop high value products and services.”

- Mary Harney, TD, Tánaiste (Enterprise Strategy Group report, 2004)

National economic development policy is currently focused on developing world-class capabilities in marketing and R&D. This is a significant departure from the previous goal of developing links between domestic and foreign sectors. The new, more cluster-centric approach seeks to build out from manufacturing and deepen clusters like IT, pharmaceuticals and financial services. The government encourages these companies to deepen their committed to Ireland by upgrading the types of activities they locate in Ireland. Other national objectives are: fostering development outside Dublin, encouraging

internationally traded services in Ireland and spurring higher ambitions for indigenous firms.

Specifically, a new division of Enterprise Ireland, “Export Ireland” will focus on export-related advice and promotional activities for indigenous industry. The agency will also part-fund the placement of 1,000 sales and marketing graduates and professionals in domestic firms (Enterprise Strategy Group, 2004). To boost R&D, Science Foundation Ireland and the Programme for Research in Third Level Institutions will increase funding for applied research. “Technology Ireland”, another new division of Enterprise Ireland will focus on market-led applied research and technological development. Like Israel, Ireland will now appoint a national “Chief Scientist” and develop a national research and innovation strategy. Other elements of national industrial strategy include encouragement of internationally traded services (finance, aviation, education, healthcare, tourism, consulting, creative, maritime, construction, agricultural) and actions to increase the competition and efficiency in non-traded domestic business (for example, the repeal of a law for minimum prices in retail stores). Finally, investment in infrastructure will continue apace.

Challenges

“In the 1980s, everyone could agree on the need to reduce unemployment. It’s not so clear now that people will subordinate their own interests for the national well being”
– Kieran McGowan (Former Head of the IDA)

The competitive position of domestic firms has remained poor. Growth and exports have been almost entirely FDI driven. Few links between domestic and foreign firms have been established and the intensity of local competition remains weak, creating a two-tiered economy. While Irish labor excels at adopting worldwide best practices in processing complicated engineering and business problems, innovation largely happens

elsewhere. Finally, as past successes lead to wage increases, Ireland's former advantage as a low-cost base from which to access the EU market is undermined. In our view, complacency is perhaps the greatest risk Ireland faces. Today's challenges – innovation and domestic efficiency – require 'softer', and more complex solutions than the grants, low taxes or wage freezes described in the earlier sections of this report.

POLICY RECOMMENDATIONS

Ireland must encourage domestic competitiveness and innovation, while continuing to build the core strength of foreign-owned, ultra-productive manufacturing and services.

- **Foster innovation:** Existing efforts such as “Technology Ireland” are commendable, but more can be done. Specific tax incentives as dramatic as the 12.5% corporate rate should be created for R&D, to extend Ireland's favorable tax regime to research departments, traditionally cost centers. Universities must be weaned off reliance on state funding and look to business and alumni support if they are to develop into world class institutions that offer the specialized education Ireland's clusters need to grow.
- **Maintain current FDI strengths:** Continue to focus on attracting high skill jobs and upgrading existing industries. Infrastructure investment, more flexible immigration policies, and remaining responsive to investors will be crucial for Ireland as it tries to maintain its current position.
- **Spur domestic competitiveness:** Increase competition in the small Irish market by facilitating new entry, removing anticompetitive regulations and strengthening the competition and consumer authorities. Ireland should discourage overinvestment in

real estate in favor of venture capital and other forms of investment capital, perhaps by implementing a differential capital gains tax.

- **Adopt a cluster approach:** The development agencies should incorporate a cluster approach to their advising and lending activities, supporting geographic networks of mutually supporting firms rather than high potential individual cases. Taking the diamond factors seriously in their strategy will re-emphasize the importance of real local strengths and competitive advantages. Agencies should encourage the development of cluster associations and interaction between local universities, Institutes of Technology and both foreign and domestic firms.

Although Ireland is now wealthy, future success is far from guaranteed. The new challenges Ireland faces are in many ways harder. Without continued cooperation between the Irish public and private sectors, Ireland will not be able to stay 'ahead of the curve', as they have so successfully done for the past 20 years.

THE GLOBAL FINANCIAL SERVICES INDUSTRY

The financial services industry includes banking, insurance, and asset management companies. Financial services firms have historically located in major metropolitan hubs, such as New York or London. However, industry globalization and consolidation coupled with advances in technology and telecommunications have enabled new business models. Headquarter functions (e.g., human resources, finance, IT), processing centers and branches are being rationalized and certain activities moved offshore.

The proportion of global financial institutions off-shoring at least some portion of their business rose to 70% in 2005, up from 26% in 2003 (Deloitte, 2005). The scope and variety of off-shoring activities has increased substantially. Financial services firms that off-shore multiple functions have realized average cost savings of up to 50%, relative to 20% savings from off-shoring a single function, suggesting significant economies of scope can be achieved (Deloitte, 2005).

CREATION OF A FINANCIAL SERVICES CLUSTER IN DUBLIN

The initial impetus for building Dublin into an international financial services center came from wealthy financier, Dermot Desmond. Interested in a potential low-cost way to generate jobs and revenue, Taoiseach Charles Haughey asked Desmond to lead a public-private committee to launch the cluster. The committee involved all the relevant Government departments, key private sector financial businesses, and advisors in the areas of finance, law and tax. The committee had strong support from Haughey and was led by a private businessman with little patience for bureaucratic backlogs. Proposals and recommendations were quickly acted upon.

The IDA set up a research and marketing team, the “Three Wise Men” to tour the world asking financial firms about the activities they might engage in at the center, and changing the initial plans based on their discoveries (Walsh, 2006). The Central Bank of Ireland, the prime regulator of financial services was actively engaged in concept development, and the legislative changes to trust and insurance laws . The tax authority extended the 10% corporate tax rate then available to manufacturing to financial services companies located in the center. Domestic financial institutions served as ‘anchor clients’ at the site, creating early momentum.

Exhibit 11: Cluster Timeline

1985-1995: from crisis to launch and early growth

1986:	1987:	1987-1990:	1988-1990:	1990-1995:
<ul style="list-style-type: none"> •’80s economic crisis •wealthy financier Dermot Desmond envisions and supports future financial services hub in Dublin 	<ul style="list-style-type: none"> •Charles Haughey wins election, puts personal “messianic zeal” behind project 	<ul style="list-style-type: none"> •Public-private committee •laws changed for trusts, funds and insurance; •10% tax rate extended to financial services 	<ul style="list-style-type: none"> •Domestic banks agree to move into the new financial center, soon joined by Dresdner Bank, Kredietbank, AIG and Chase 	<ul style="list-style-type: none"> •Steady increase: by 1995, 270 enterprises, plus 100 insurance captives and 100 treasury centers: \$14Bn assets

1996-2006: deregulation and outsourcing lead to rapid expansion

1996:	2001:	2003:	2004:	2005:
<ul style="list-style-type: none"> •Foreign bank assets outstrip domestic for the first time 	<ul style="list-style-type: none"> •New regulator – IFSRA – spun off from Central Bank. •Value uplift begins – Citi, Merrill, GMAC and GE begin running global product management from Dublin 	<ul style="list-style-type: none"> •Depfa Bank issues first “Irish Covered Bond” (€5 Bn), launching large new market – worth €30 Bn by end 2004 	<ul style="list-style-type: none"> •Level 1 directive of Lamfalussy deregulation of EU financial markets published 	<ul style="list-style-type: none"> •Citigroup launches financial research center in Dublin

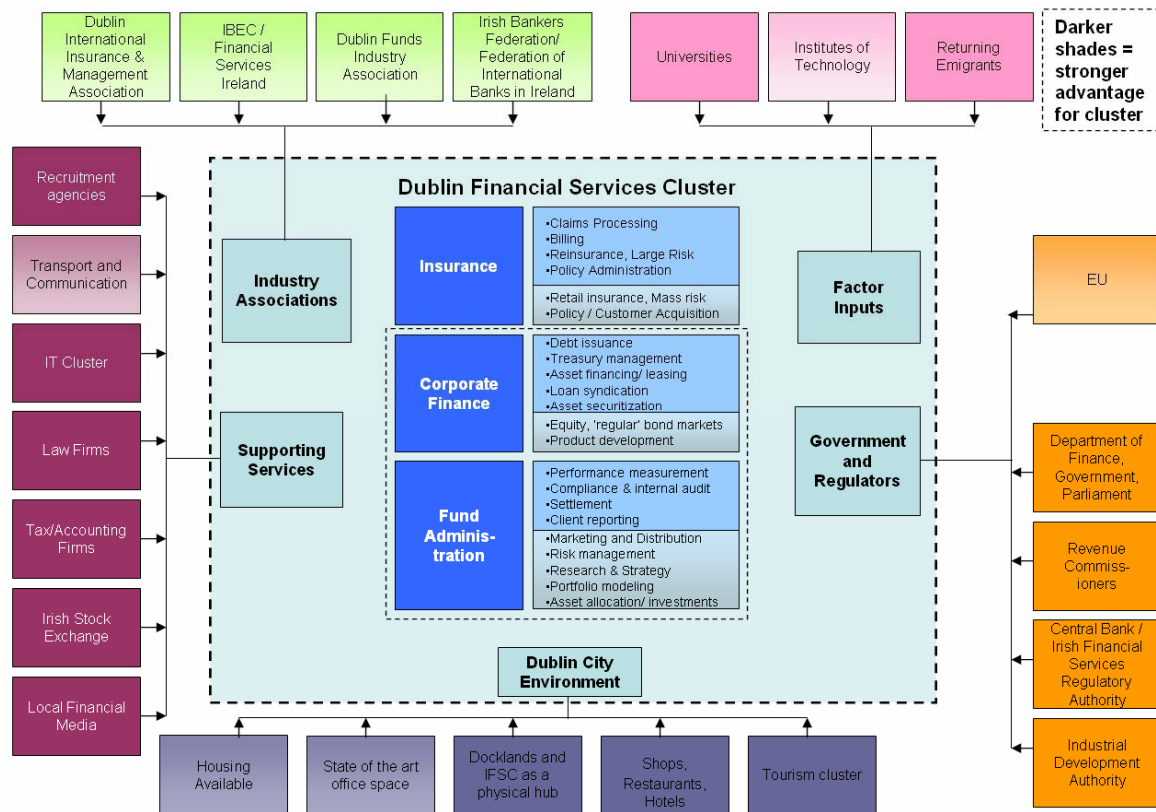
Source: Finance Ireland, 2001; interviews with Lyons, Clohessy and Walsh, 2006

DUBLIN FINANCIAL SERVICES CLUSTER OVERVIEW

More than half of the world’s top fifty banks and almost all major global insurers, mutual funds and corporate treasury offices have a presence in Dublin. Over 21,000

people work in international financial services (IDA Ireland, 2005), and perhaps another 25,000 are employed in the professional and other support services necessary for the cluster's success (see Exhibit 12 below). Local financial institutions' internationally focused operations are included in the cluster but purely domestic ones (i.e. retail banking) are not. The cluster has seen employment growth of 70% over the last fifteen years. Currently 443 standalone IFS companies, 700 outsourced managed entities, and tens of thousands of funds and listed vehicles compose the dynamic international financial services cluster (IDA; Finance Dublin, 2005).

Exhibit 12: Cluster Map



Banking

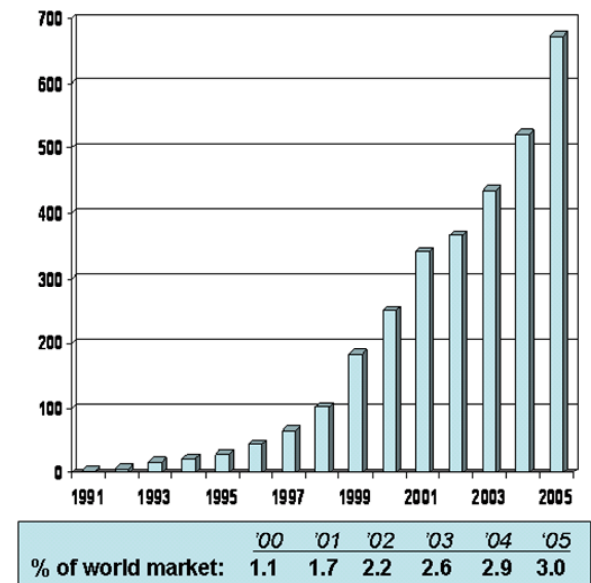
Dublin is the location for significant operations of top global banks, such as Citibank, Bank of America, JP Morgan, Bear Stearns, and Merrill Lynch. Over 160 banks

have set up in the IFSC since 1987, employing over 6,850 people. International bank assets of over \$410 billion and total bank assets of \$885 billion have grown by a CAGR of over 16% since 1999 (IDA, 2006). Dublin has also developed into a major center for treasury and asset finance with activities that include lending, loan syndication, securitization, treasury operations, bond and commercial paper issuance, and client treasury services. A €30 billion Irish Covered Bond market (low risk bonds collateralized by public sector or mortgage loans), over 9,700 debt securities traded on Irish Stock Exchange and cumulative listings of €48 trillion in asset-backed securities (1st in Europe) make Dublin a leader in European securitization (Irish Stock Exchange, 2003-2005). Furthermore, the development of these markets has attracted aircraft leasing and financing companies from the US, Europe and Asia, such as Airbus, Boeing, Babcock & Brown, CIT and ORIX Aviation Systems.

Asset Management

Ireland is both as a domicile for funds and a centre from which to administer, market and service funds in all other international locations. Net asset value of funds administered in Ireland are almost \$1 trillion, with about \$630 billion domiciled in Ireland (Fitzrovia, 2005). Furthermore, 25% of global hedge funds are now administered in Ireland. Over 265 international fund promoters from 30 different countries are located in Dublin, including industry leaders such as Barclays, BNP Paribas, Fidelity, and Charles Schwab. Over 8,600 people are employed in this sector. Total assets under

Net Asset Value of Dublin Domiciled Funds (\$ Bn):



Source: Lipper Fitzrovia, Nov 2005, Based on Irish Financial Services Regulatory Authority Figures

management in Ireland have increased from 1.1% of the world market in 2000 to 3% in 2005.

Irish law allows for a range and flexibility of fund legal structures. These extend to both UCITS (collective investment vehicles in transferable securities which are sold throughout the EU on the basis of the single EU “passport”) and non-UCITS structures. Total domiciled funds in Ireland amount to \$660 billion (IDA, 2006). There were 2,128 UCITS and 1,674 non-UCITS pension funds in 2006 and 1,902 investment Funds, 2,284 sub-funds, and 8,827 fund classes were listed on the Irish Stock Exchange at end of 2005 (Irish Stock Exchange, 2005).

Currently, the main activities in asset management include domiciling (authorization), requiring substantial legal work, which has spurred a competitive legal services industry, and administration, which includes activities such as valuation, client reporting, and accounting. The sector in Dublin does not participate in either distribution (collection of funds from investors) or investment management (investment strategy and trading). However, Gary Palmer, CEO of Dublin Funds Industry Association sees administration as “a business sector within itself” and “a seed that might fruit further business services activities” (Palmer, 2006).

Insurance

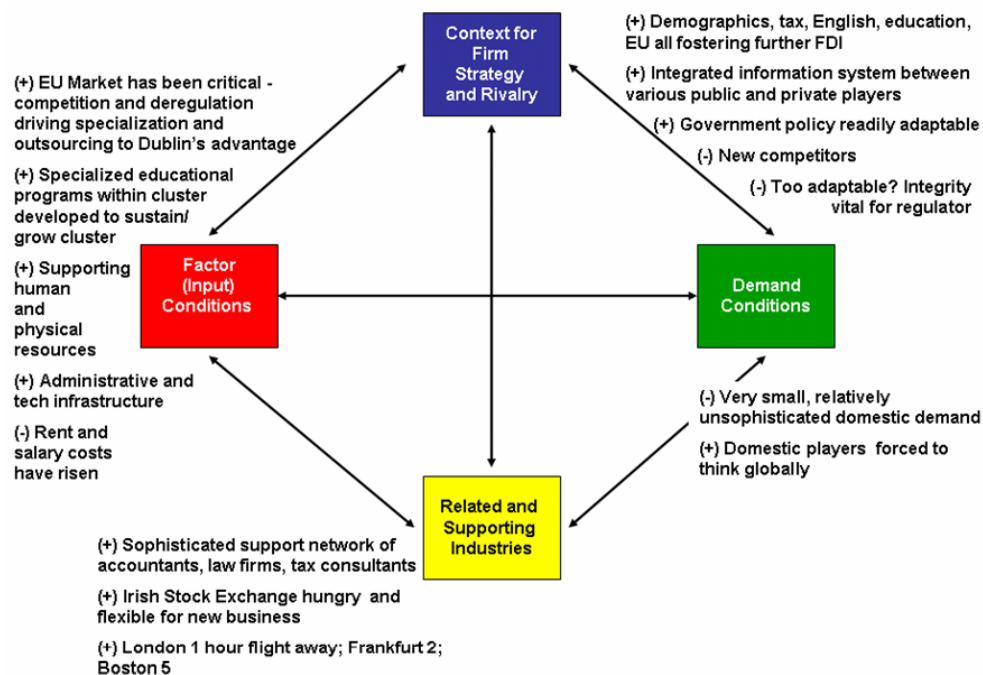
Dublin is Europe’s largest cross border insurance hub employing over 2,700 people (Finance Dublin, 2005). \$17.1 billion in life and \$11.5 billion in non-life premiums were written in 2004. Ireland is the fourth largest reinsurance market in the world and over 33 of the 126 international life companies in Ireland have chosen the country as its HQ for their pan-European business (Finance Dublin, 2005). Of the world’s leading insurance companies with established operations in Dublin include ACE, Aon,

AIG, Allianz, and Swiss Re. In addition, 200 captive insurers have set up shop, including subsidiaries of Motorola, IBM, Intel, Philip Morris, Coca Cola, Hitachi, HP, Siemens, Volvo and Nokia.

INTERNATIONAL FINANCIAL SERVICES CLUSTER DIAMOND

A combination of strong factor inputs and a favorable context for rivalry enabled Ireland's international financial services cluster to become globally competitive, even without sophisticated local demand and initially few specialized supporting businesses. Although factor costs have increased and other off-shore locations have emerged, demand conditions and the emergence of a strong network of supporting businesses might be able to sustain the cluster into the 21st century.

Exhibit 13: Cluster Diamond



Factor inputs

Financial services require a high quality pool of human capital with specific skills.

High levels of unemployment among English speaking, educated Irish provided a good

initial supply of talent at relatively low cost. As the cluster developed, employment opportunities attracted Irish, foreign-trained emigrants back from the US, UK and Europe.

Specialized educational programs to support the cluster have been slow to develop. There are a small number of masters graduates from programs in risk management and financial mathematics. An additional 2,500 students graduate with business degrees annually, but these degrees are not specialized for cluster needs (HEA, 2006). The Institutes of Technology (focused on more vocational higher level education than the universities) and some private colleges are beginning to offer specialized courses, in, for example, fund administration. These programs will help supply the skills that the cluster demands, but require expansion and further specialization. The cluster's original physical space, the International Financial Services Center, a reclaimed industrial zone with state of the art facilities is a factor advantage. Twice expanded, it provides geographic proximity to facilitate interaction and sharing of ideas and best practices. For hardworking finance professionals, Dublin also provides an attractive lifestyle: "a capital city where art, learning, culture, fringe and enterprise combine." (Smurfit Business School, 2006).

The EU Market has been critical to Dublin's advantage in financial services as demand conditions are largely determined externally and do not differ greatly from those of any financial services firm located in Europe. Lamfalussy Regulations allow EU based firms to provide investment management activities across the common market. Therefore, financial services customers are from across the continent and are world class in their sophistication and demands.

Related and supporting industries

The international financial services cluster in Dublin contains capable local-based suppliers. Ireland's progressive legal, tax and regulatory environment in financial services resulted in a sophisticated degree of legal, tax and accounting specialized services in the cluster. The broader support network is reasonably developed as well, including shared services centers, software development and other companies centered around the IFSC.

There are also competitive related industries located in the cluster. For example, the Irish Stock Exchange in competing with other European exchanges, took a "pragmatic and commercial" approach to listing funds on its exchange (Finance Dublin). This approach became a major selling point for the IFSC and developed into a competitive advantage for Ireland. In a telling example, the exchange moved quickly in 1997 at the urging of the IDA to make special rules concerning the listing of asset-backed securities (ABS) for a potential client. The Exchange's receptiveness led the client to withdraw its application from the Luxembourg exchange and to list in Dublin. From that foundation, the Irish Exchange is now generally accepted as the exchange of choice for ABS listings in Europe with over 1,000 ABS currently listed (Finance Dublin).

Lastly, it is reassuring for outsourcing financial services companies that Ireland has strong links to European markets and that other major global financial centers such as London, Paris, Milan, Frankfurt and Luxembourg are all within a 2 hour flight from Dublin; and Boston and New York are both within 5 or 6 hours.

Demand conditions

There is a limited domestic demand for the type of international financial services that Ireland provides. Indeed, originally, IFSC tenants were prohibited from serving

domestic clients. However, as mentioned above in *Factor Inputs*, increased EU integration has blurred the lines between Irish and European demand and offshoring has created significant US demand. For both US and European clients, Ireland's advantage comes from financial services companies focus on reducing delivery and management costs, as well as the diversification of risk. For example, after September 11, US firms transferred many functions to Dublin and they have remained there since.

As mentioned earlier, Ireland has become the preferred location for certain services such as hedge fund domiciling and ABS listings. Related clusters have leveraged the latter to develop in areas like aircraft leasing and maritime services.

Context for firm rivalry

The Irish legal and regulatory frameworks, which specify the range of investment vehicles that can be used and authorize the Irish stock and bond exchanges, are the backbone of the cluster. To ensure Ireland's legal and regulatory adequacy for governing financial services companies, various Irish public sector agencies and departments have been heavily involved in the cluster, and have maintained 'open door' and 'fast track' policies to respond to cluster concerns. In particular, the Department of Finance, the Irish Central Bank, and the IDA played key roles in the cluster's initial development and its ongoing progress (through the "clearing house committee" – regular meetings between cluster representatives and government). Tax policy has been critical in the financial services cluster, particularly the corporate rate, the absence of withholding taxes on interest and dividends and 44 international double taxation treaties.

Industry associations such as the Dublin Funds Industry Association, Dublin International Insurance and Management Association, Financial Services Ireland and the

Irish Banker's Federation have also been part of the cluster's ongoing development. Each sub-cluster (banking, asset management and insurance) has developed a specialized association. Gary Palmer, CEO of the Dublin Funds Industry Association, explained the key role that DFIA and the other industry associations play in representing their respective industries, engaging with authorities (legislators, regulators, government authorities), and working through an industry association network to share best practices. However, our conclusion is that many associations have relied on their lobbying and social roles for legitimacy, and have found it difficult to provide value-added knowledge sharing, perhaps due to measurement difficulties and possibly also the embedded nature of the activities.

One issue the cluster must address is the integrity of its regulatory systems. The soundness of regulatory enforcement mechanisms in Ireland is essential to provide financial services companies with protection against liabilities, and their clients with peace of mind regarding the soundness of their investments. Adaptability and flexibility can lead to illegal activities. The cluster recently attracted the attention of Eliot Spitzer for lack of oversight in reinsurance. According to one securities litigation expert, "my general understanding is that Dublin is viewed, along with the Cayman Islands and Bermuda, as a haven for reinsurance companies to set up offices and get away with doing things they would not be able to do elsewhere." (Gass in Brennan and Carey, 2005) In the current environment of emphasis on compliance, Ireland must be seen as a well regulated market while still preserving an absence of red tape. That this is a difficult balance to achieve was clearly laid out by an executive who asked to remain anonymous: "the IDA is now out of the picture and IFSRA is in control...the spirit of the late 1980s and early

1990s has been lost. It's over-reaction to Spitzer. BMW [captive insurance] has just moved to Malta and others will follow".

STRATEGIC ISSUES

Current Strategy

The current cluster strategy is to build on existing strength to become a hub for specialist debt financing, pan-European insurance and funds servicing; and in the medium term, to add capabilities in regional banking and asset management (Deloitte, 2004). Structured debt and securitization should grow considerably, given increased emphasis on risk management (Basel II for example), existing expertise and a faster, more responsive regulatory system than Luxembourg. Pan-European insurance ought to benefit from deregulation and a move from existing strength in reinsurance, large-risk and life to retail and general insurance. Funds servicing is already very well developed but should now add 'middle office' activities such as performance management, risk management, product development, product/sales support and regulatory compliance. Plans for becoming a regional banking hub will depend on continuing EU financial integration. Finally, asset management is high value-add but difficult to attract.

Challenges

The cluster faces several related challenges in moving to the next level: talent constraints, competing as a high cost location, balancing regulatory oversight with constant adaptation, and innovation.

Most of the diaspora talent that will return now has and the education system has not provided as much specialized support as needed. Ireland is now a high-cost location – and tax competition has materialized in Eastern Europe. Dublin has many rivals

internationally, particularly the longer-established Luxembourg cluster (see Exhibit 14 below). Regulation has the challenge of maintaining integrity while retaining attractiveness as a location. Finally, in the past financial services innovation has been the result of individual practitioners developing and selling profitable new products, usually directly on the trading floor: how can innovation occur in a location removed from the main capital markets action?

Exhibit 14: Overview of Rival Locations for International Financial Services

Overview of Rival Locations		
Main rivals	Competes in:	Comments
Luxembourg	Fund administration; pension investment pooling; treasury	\$1,400bn offshore assets and the world's largest offshore funds' domicile, with \$800bn; also one of the largest offshore banking and wealth management centers. Highest GDP per capita in the world. Central location in EU. Concern over regulatory and government complacency.
London	Wholesale banking; securitization; fund administration; asset management	Very strong in investment banking, wholesale banking and asset management. Deep, skilled labor pool including many non-Britons. High cost location. Frequently praised for sensible regulation of sector.
Bermuda	Insurance; fund administration	Largest captive insurance industry in the world. Experienced trust industry, growing as a fund management domicile including hedge funds. Strong regulation.
Channel islands	Fund administration; insurance	Well-established banking, wealth management, and fiduciary fund financial services industry Around £250bn in assets. Finance contributes around 60% of government tax revenues.
Caymans	Fund administration; insurance	Began with "medical malpractice" insurance in the 1970s. Now 580 banks, 520 insurance companies and 3,000 mutual funds with assets of \$215bn. No personal or corporate taxes. Concerns over financial regulation.
British Virgin Islands	Fund administration; insurance	Came to prominence with low-tax International Business Company legislation in 1984. 2,000 mutual funds worth an estimated \$55bn currently incorporated in the BVI; several hedge funds. Concerns over financial regulation.
Malta	Insurance	Growing presence in captives. "Firm but flexible" regulation. Lowest cost English-speaking EU member.
Frankfurt	Wholesale banking	Hub for Germany in wholesale and investment banking
Switzerland	Wholesale banking; treasury	Very strong in private banking, less so in wholesale. High cost location.
New York	Wholesale banking; asset management	Very strong in investment banking, wholesale banking and asset management. Deep, skilled labor pool. High cost location. Seen becoming more burdensome in terms of regulation.
Isle of Man	Fund administration; insurance	Small player but quite successful in domiciling, trying to capture some of pensions market. Zero tax for shipping, insurance and fund management.
India	Treasury; securitization	So far, mainly just BPO and captive operations
Toronto	Wholesale banking; asset management	Smaller player. Hub for Canada. Capital taxes and regulation seen as weaknesses.
Amsterdam	Treasury, pensions	Smaller player
Brussels	Treasury	Smaller player
Gibraltar	Insurance	Smaller player

Source: IDA Ireland internal documents; greencompany.com, Luxembourg Statec report, London Oxera report

POLICY RECOMMENDATIONS

The Dublin Financial Services Cluster needs a new strategic direction. So far, what has developed in Dublin is not so much a cluster as an outcrop of certain activities from the main hubs of New York, Frankfurt and London. The cluster lacks definition and

public awareness and has not attracted sufficient interest or support of key institutions, such as universities. This is disappointing, because financial services are precisely the kind of high value, high skill, low-transport-cost arena where Ireland's educated, English speaking workforce and stable, proactive government could provide the basis for a far larger component of national prosperity. Luxembourg for example, employs 76,000 people in financial services (up from 19,000 in 1985 – Statec Luxembourg, 2003) whereas Dublin employs just 21,000 directly in financial services. The Dublin cluster has been externally focused since its founding and domestic funds management and insurance demand is not particularly sophisticated or demanding. One exception is asset financing, where domestic firms make use of and even drive on the cluster's expertise.

Cluster vision:

Dublin's combination of asset financing, fund servicing and insurance/reinsurance has one unifying theme – they are all some form of “business to business” financial services. Selling an image of Dublin as the place for “finance for business” - wholesale banking, corporate financial services like treasury and captives, reinsurance, and fund domiciling and administration services - would clarify what the cluster is about, and allow points of distinction to be developed versus London, Frankfurt, Luxembourg and Bermuda. Specifically:

- Marketing – brand Dublin as the place for B2B finance services – and ensure that this image is communicated in Ireland as well as abroad.
- Hedge funds – “double-down” on top domiciling and administration position.
- Skills – radically increase the number of finance graduates coming from universities.

Continue expanding postgraduate finance options. Focus on ITs to develop specialized administrative staff. Open immigration for finance professionals from any country.

- Innovation – replicate Citigroup R&D center. Encourage focus on process as well as product innovation (particularly appropriate for the funds servicing business).
- Regulation – ensure IFSRA has resources to keep up with innovation and ‘Wild West’ accusations remain groundless. Continue improving process times and businesslike attitude. Maintain “principles-based” approach.

With a renewal of the entrepreneurial spirit in both public and private domains, Dublin’s international financial services cluster will continue to take advantage of the macro trends in its favor – deregulation, technological advances, globalization - and be a key part of Ireland’s next series of economic successes.

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