

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta National Treasury Management Agency

Ciste Infheistíochta Straitéisí d'Éirinn Ireland Strategic Investment Fund

Economic Impact Report FY 2015

June 2016



Economic Impact Highlights – 2015

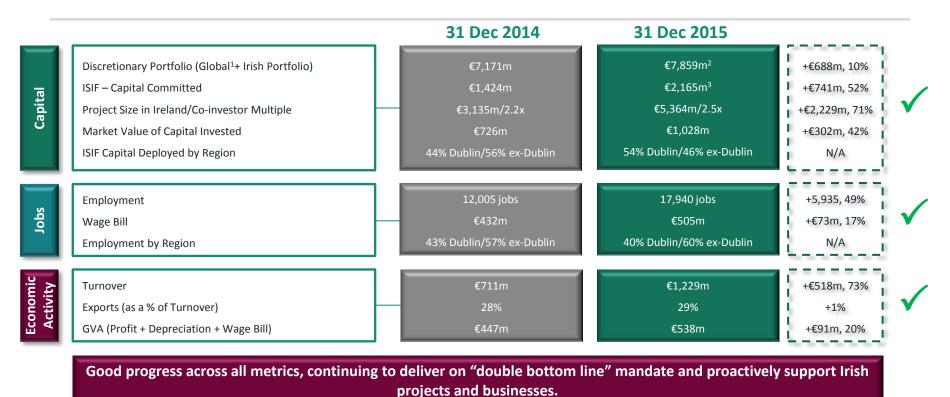
Committed €2.2bn to Irish investments with €1bn drawn and total €5.4bn capital committed to Ireland including third party capital.

Employment supported by ISIF increased by 5,935 jobs to almost **18,000 jobs. Majority of increase from SME sector (84%)** with the **regional split of employment 40% Dublin/60% ex-Dublin.**

Turnover significantly increased (73%) of which 29% was exported for 2015.

Gross Value Add of €538m with SMEs the biggest profit contributors.

Summary Metrics – Irish Portfolio



¹Global Portfolio will be transitioned to investments in Ireland over a number of years.

²The Discretionary Portfolio's value increased by €688m which includes €280m from the Directed Portfolio following payment of a preference share dividend from AIB and €335m was allocated to a new Connectivity Fund within the Discretionary Portfolio following the sale of State's holding in Aer Lingus.

³There is some time lag between the achievement of economic impact and the commitment to an investment. Typically, economic impact is generated when there is a drawdown on committed capital and this can be months/years after a commitment to an investment.

Snapshot of Underlying Investees FY 2015







Qstream.









€5.4bn Capital Committed to Ireland

€2,165m ISIF Committed Capital at 31 Dec 2015

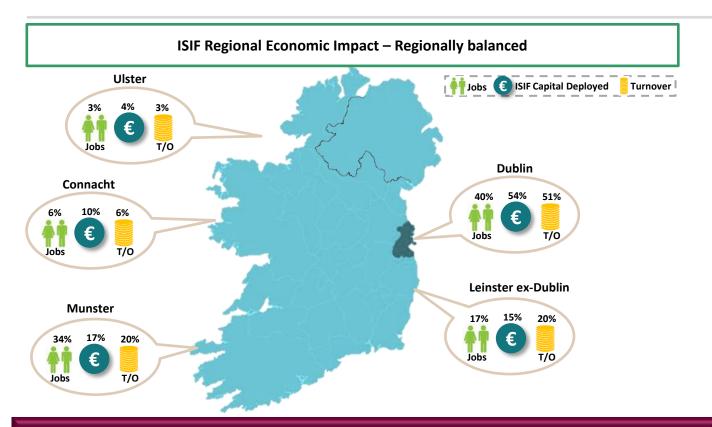




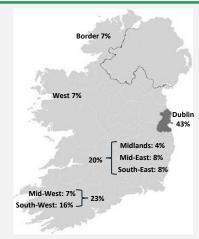
ISIF €2.2bn has unlocked third party capital, total commitment of **€5.4bn** to Ireland of which

€3.0bn invested as at 31 Dec 2015.

Regional Analysis



As compared with CSO GVA per Region¹

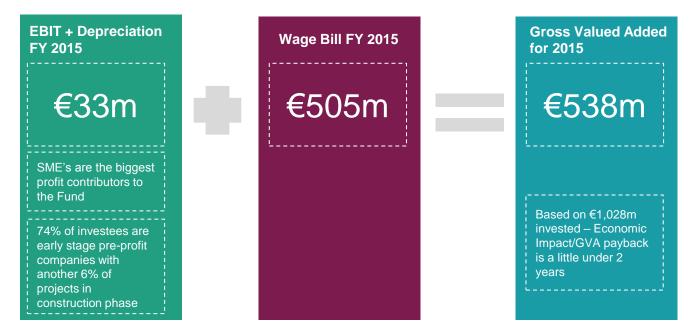


¹ Regions based on Eurostat/CSO methodology (2014). Gross Value Added (GVA) is a measurement of economic activity in an area. Source: CSO

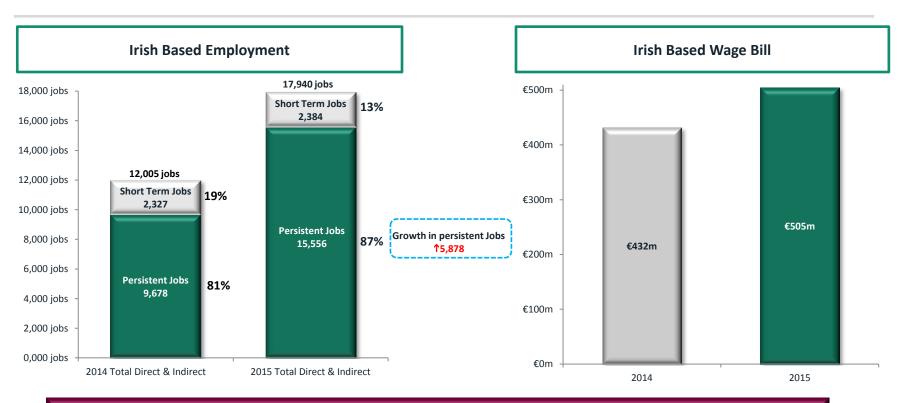
Gross Value Add

Gross Value Add (GVA) is a standard measure of economic activity, employment is a subset of GVA, GDP comprises the aggregate of GVA at enterprise level across the economy.

Some investments will contribute significantly to employment whereas some projects will contain lower levels of employment but higher levels of profitability. Both contribute to the GVA and therefore GDP and economic impact. The calculation of GVA is indifferent as to whether it comes from profits or wage bills.



Underlying Investees Employment

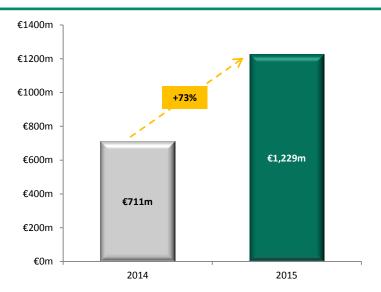


Gross employment increased by 7,085 jobs with 1,150 job losses due to the completion of construction projects.

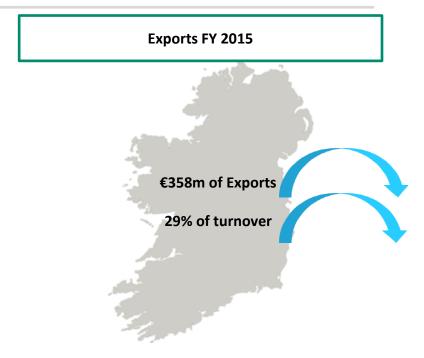
1,700 jobs for every €100m invested

Underlying Investees Turnover

Underlying Investee Turnover Analysis¹

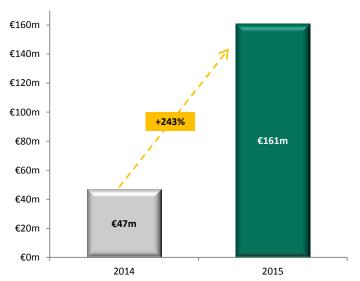


¹Turnover generated from underlying investees that contribute no economic impact in Ireland is excluded (e.g. foreign businesses). Additionally, turnover does not necessarily capture all of the economic impact benefits associated with an investment – many of the early stage companies in the ISIF portfolio are at pre-revenue stage.



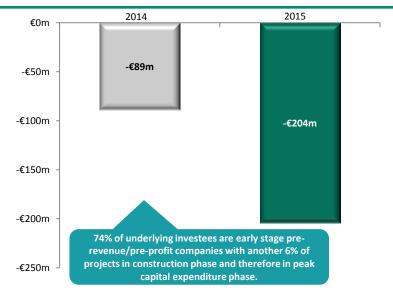
Underlying Investees Profitability Analysis

Underlying Investees Earnings (Profitable¹)



¹The profitable category accounts for profits but also includes mature companies which have made a loss.

Underlying Investees Earnings (Pre-Profit²)



²The pre-profit category is for early stage businesses.

Early stage investees/projects in construction (80% of investees) initially generate low levels of economic activity but should improve as businesses transition from the start-up stage to the growth/expansion stage.

ISIF's Long-Term Strategic "Enabling" Agenda

There are key economic benefits which are not captured through economic impact metrics, outlined earlier in the report, which support long term future productivity and competitiveness of the economy

ISIF's investment facilitating...

Provision of

2,300 Student accommodation units

across 3 DCU campuses, alongside significant transformation of campus infrastructure.

The delivery of a key strategic link in the national road network, upgrade to the N11 & the Newlands Cross junction upgrade.

Decarbonisation agenda through commitment to NTR potential to deliver

120MW of renewable energy generation with

potential to supply 70,000 homes.

Activate has to date provided site and working capital finance for the delivery of over **800 homes** and Ardstone has acquired sites to deliver up to **1,250 new**

homes. Ardstone and Activate combined have potential to unlock 10,000 – 15,000 new homes.

The delivery of **8 schools** with **5,700** school places

in Westmeath, Leitrim, Galway, Limerick, Donegal, Waterford providing under the PPP Schools Bundles 3. Dublin Waste to Energy capacity to process up to **600,000**

tonnes of waste

when complete, the facility will generate

clean renewable energy to 80,000 homes.

MilkFlex Fund launched in March 2016 with potential to support over

1,000 dairy farmers

enhancing the productive capacity of the sector.

ISIF Transaction Update











¹ The purpose of this slide is to provide an update on the ISIF's commitments. Please note that due to the time lag of commitments and drawdowns, the majority of the investments presented here do not contribute to the FY 2015 economic impact. As capital is invested the economic impact will be captured in future reports.



Appendix 1 – Assumptions, Methodology and Disclaimer

Assumptions & Methodology

- 1. The NTMA collected data on 108 underlying investees. While economic impact data is somewhat complicated, the NTMA has adopted a structured approach to the collection and analysis of the data.
- 2. Underlying investees are either direct or indirect (i.e. through Funds), the economic impact data is gathered through a semi-annual survey process of the direct and indirect underlying investees. The economic impact of an underlying investee is only included once i.e. where the ISIF has more than one indirect investment in an underlying investee the duplicate economic impact is removed from the analysis.
- 3. There is some time lag between the achievement of economic impact and the commitment to a investment. Typically, economic impact is generated when there is a draw down on committed capital and this can be months/years after a commitment to an investment.
- 4. The NTMA completes a check of all survey data for reasonableness. However, the NTMA is reliant on the underlying investees to provide accurate data and is not in a position to verify the data submitted.
- 5. Surveys provided in USD were converted to EUR, income statement metrics were converted to EUR using a 12 month average FX rate sourced from Bloomberg.
- 6. The high/low economic impact split is based on an internal NTMA assessment of the economic impact of the capital committed as at 31 December 2015, the high/low split as at 31 December 2015 was 62% high and 38% low. 80:20 split is the long term target with 60:40 identified as the initial guideline for year end 2015. High economic impact is defined as persistent additional economic impact whereas low economic impact is defined as either short term economic impact or an accelerator investment.
- 7. The regional distribution of capital deployed (slide 7) is weighted based on the capital deployed as at 31 December 2015 and data provided by the underlying investees detailing the location/regional activities of the underlying investee/project. Where underlying investees operate on a nationwide basis, the capital deployed is weighted by population, this population data is sourced from the Central Statistics Office.
- 8. The regional distribution of underlying investees employment and turnover (slide 7) is based on data provided by the underlying investees detailing the number of jobs and turnover generated regionally.

 Where underlying investees operate on a nationwide basis and a reliable regional employment split is unavailable, the total jobs and turnover is weighted by population.
- 9. The majority of underlying investees (101 out of 108 underlying investees) provided the number of jobs and wages paid as at 31 December 2015 directly. There are some exceptional cases where the data was unavailable and the following assumptions were applied:
 - 1. In the case of construction projects where reliable headcount was not available, we evaluated the drawn capital of the project over the 12 month period to 31 December 2015 and applied a Construction Industry Federation multiplier to the capital expenditure to estimate the number of employees. All of these employees are accounted for in the short term employment numbers (slide 9).
 - 2. In the case of construction projects where third party/contracted headcount was provided but a wage bill was not available, an average wage was applied to the third party/contracted headcount. The average wage by sector was sourced from the CSO.
- 10. In line with industry standards, an indirect employment multiplier is applied to direct jobs. The NTMA calculation of employment multipliers is based on CSO methodology and verified by CSO (slide 9).
- 11. Exports are weighted based on turnover and an estimate provided by the underlying investee of the percentage of turnover generated from exports (slide 10).
- 12. The underlying investee profitability analysis (i.e. the earnings before interest and tax) is split between early stage companies, which have not yet made a profit, and more mature companies, which can either be profitable or loss-making (slide 11).

Disclaimer

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Appendix 2 – Summary of Underlying Investments (1/4)

Fund/Company/Project	Company/Project	Principal Product/Service
Arch	Carrick Therapeutics	Drug development targeting cancer resistance
	Evolv-x	Novel electronic materials derived from a self-learning, closed-loop synthetic reactor system
	Genomics Medicine Ireland	Products and services derived from advanced genomic research, analysis & global partnerships
	Movidius	A fabless semiconductor company in computer visioning sector
	Accuris Networks	WiFi off-load and roaming technologies
	Boxfish	Developer of second screen television platforms
Atlantic Bridge	Civic	Internet of Things
Attailtic Bridge	Fieldaware	Provider of mobile, cloud-based field service solutions
	Movidius	A fabless semiconductor company in computer visioning sector
	Swrve	Mobile marketing automation software platform
	Abrakebabra Investments	leading fast food franchise owner and operator in Ireland with five trading businesses
	Airspeed Telecom	rish broadband provider offering high performance internet for enterprise, public sector and SME business
	BB Muffins	Chain of coffee and muffin retail stores across the UK and Ireland
	Carne Global Financial Services	Provider of governance and oversight solutions within the asset management industry
	Centric Health	Healthcare services business providing (i) diagnostic imaging; (ii) primary care and (iii) medical recruitment services
Bluebay (BICC 1)	Excelsys	Designer and manufacturer of high power density high efficiency power supplies
	Gaelectric	rish-based developer of onshore wind farms in Ireland and the US and offshore wind farms in Ireland
	Killiney Hotels (FitzPatrick Castle Hotel)	Hotel and conference centre
	Carlton Hotel Kinsale	4* hotel in Kinsale, Co. Cork
	Mainstream Renewable Power	leading player in the global renewable energy development market focusing on wind (onshore and offshore) and solar power
	TV3	reland's only independent free-to-air commercial broadcasting chain
	Abtran	Business Process Outsourcing
	Carroll Cuisine	Production and distribution of sliced cooked ham and other food products
Carlyle Cardinal Ireland	General Secure Logistics Services (GSLS)	Cash-in-transit and money processing
	Lily O'Briens	Manufacturer and distributor of chocolate
	Payzone	Multi-channel payment solutions
	Accuris Networks	WiFi off-load and roaming technologies
China Ireland Growth Technology Fund	Fieldaware	Provider of mobile, cloud-based field service solutions
. coo.og , and	Movidius	A fabless semiconductor company in computer visioning sector
Dublin Waste to Energy	Dublin Waste to Energy	Thermal waste treatment and electricity production

Appendix 2 – Summary of Underlying Investments (2/4)

Fund/Company/Project	Company/Project	Principal Product/Service	
	Betapond	Marketing app provider for social networks	
	BriteBill	Provides bill presentment solutions to telecommunications and utility companies	
	Clavis	Reference data quality solutions	
	Cleverbug (CleverCards)	Personalised greeting cards and gifts	
	Cloudium	Thin Client software and hardware solutions	
	Davra Networks	Management system for Internet of Things devices for Cisco distributed networks	
	Digit Game Studios	Online multiplayer multiplatform games	
Delta Partners	Homestay	Accommodation portal	
	Luzern Solutions	Online retailer and online store provider for new and refurbished goods	
	mADme	Mobile advertising solutions	
	Mobatravel (MobaCar)	Online car rental software platform	
	Neuravi	beveloper of clot retrieval medical devices	
	Sim Travel	Local sims for international travellers	
	What Clinic	Medical treatment search portal	
	Zapa Technologies	Telecom expense and value management	
	Datahug	saaS relationship intelligence management/CRM platform	
Draper Esprit	GetBulb	Data visualisation software	
Diaper Espiit	Mobile Travel Technologies	Develops mobile apps, mobile web and mobile technology products for airlines and travel management companies	
	Movidius	A fabless semiconductor company in computer visioning sector	
First Forestry Fund	First Forestry Fund	Invests directly in forestry plantations diversified across Ireland	
	Genable Technologies	A development stage gene therapy company for the treatment of inherited diseases	
	Inflection Biosciences	Developing small molecule therapeutics for the treatment of cancer.	
	Innocoll	Collagen based drug delivery platform	
Fountain	Mainstay Medical	Manufacturer of medical device for treatment of chronic lower back pain	
Fountain	Neuravi	Developer of clot retrieval medical devices	
	Opsona Therapeutics	Developer of drugs for the treatment of autoimmune and inflammatory diseases	
	Trino Therapeutics	Drug Discovery and early drug development company that focuses on anti inflammatory therapeutics	
	Vivasure Medical	Research and Development medical device company	
	Barricade Security Systems Ltd	Intrusion Detection as a Service	
	Boxever Ltd	SaaS customer intelligence platform for airline and travel industry	
Frontline	BuildingEye	Planning permission tracking	
	CurrencyFair Ltd	P2P Currency Exchange	
	Drop	Connected kitchen products	

Appendix 2 – Summary of the Underlying Investments (3/4)

Fund/Company/Project	Company/Project	Principal Product/Service
	LogEntries	Developer of web-based log management services
	Linked Finance	P2P SME lending marketplace
	PageFair Ltd	Ad-blocking software
Frontline Ventures	Pointy	Putting shops online automatically
	Qstream, Inc.	Mobile Sales enabling service
	Reep Rewards	Retailer & consumer brand insights
	Verifly	Drone technology
Highland Europe	AMCS	software solutions for the waste management industry
Highlanu Europe	Malwarebytes	Anti-malware software
	Accuris Networks	WiFi off-load and roaming technologies
	AMCS	Software solutions for the waste management industry
	Betapond	Marketing app provider for social networks
	BlueTree	Developer of GPS fleet software, telematics and vehicle tracking solutions
	BriteBill	Provides bill presentment solutions to telecommunications and utility companies
	Davra Networks	Management system for Internet of Things devices for Cisco distributed networks
	Diona Technologies	Diona is addressing the demand for mobile solutions in the HHS market
Investec Ventures	Ferfics	The company designs and develops components (radio frequency switches)
invested ventures	HeyStaks Technologies	HeyStaks enables users to collaboratively search the web using search engines
	Mick's Garage	The company e-tails car parts and is Ireland's leading on-line car-parts retailer
	Rainmaker Business Technologies	Provider of business intelligence and performance software to the airline sector
	RAPT Touch	Develops multi-touch screen technologies for incorporation into large screens
	SilverCloud Health	silverCloud Health Limited provides online therapeutic solutions via tailored clinical programs
	Terminal Four Solutions	Developer of enterprise web content management software for the higher education market globally
	Vearsa	Helps traditional publishers distribute electronic copies of their books ("eBooks")
	Zamano	Zamano is a mobile marketing and mobile products company
	Convention Centre Dublin	reland's only purpose built convention centre positioned on the banks of the River Liffey in the centre of Dublin
Irish Infrastructure Fund	Cyclone Wind Farm Portfolio	Portfolio of 10 wind farms located in both the RoI and NI, generating electricity for sale into the Single Electricity Market
	Towercom Limited	Largest independent telecom tower / mast owner in the Republic of Ireland and owns/controls 406 telecom tower/mast sites
Irish Water	Irish Water	National service provider of water and treatment of wastewater
Lightstone Ventures	FIRE1	Developing a novel, therapeutic medical device for a major unmet medical need

Appendix 2 – Summary of Underlying Investments (4/4)

Fund/Company/Project	Company/Project	Principal Product/Service	
Malin	Altan	Develops, manufactures and markets generic injectable drugs	
	AN2H Discovery	Designs novel small molecule therapeutics	
	Emba Medical	Develops vascular embolisation devices	
	Emba Neuro	Develops embolisation devices for application in neurovascular field	
	Seranus	Specialises in in-licensing, registering and commercialising certain approved therapeutics to address unmet needs in the African market	
	3D4 Medical	Develops medical, educational and health fitness apps	
	Boxever	SaaS customer intelligence platform for airline and travel industry	
Polaris Partners	Logentries	Developer of web-based log management services	
rolalis rai tileis	Novaerus	Manufacturer of wall mounted airborne pathogen control devices	
	Profitero	Competitive pricing, intelligence and e-commerce insights for brand manufacturers and retailers	
PPPs	N11 Arklow Rathnew PPP	Construction and O&M of roads	
	Heart Metabolics	Biopharmaceutical development company focusing on clinical development of a therapy for hypertrophic cardiomyopathy	
Seroba Kernel	Novate Medical	Convertible vena cava filter for prevention of pulmonary embolism	
	Opsona Therapeutics	Developer of drugs for the treatment of autoimmune and inflammatory diseases	
	PQ Bypass	Medical devices required to perform a percutaneous femoro-politeal bypass procedure	
	Veryan Holdings	Development of stents with a unique 3D geometry, for treatment of vascular disease	
Silicon Valley Bank	Fifteen underlying investees – bank confidentiality precludes disclosure of borrower names		
Sofinnova	Innocoll	Collagen based drug delivery platform	
	Investment 1	Apartment development	
	Investment 2	Commercial real estate	
	Investment 3	Commercial real estate	
WLR Cardinal	Investment 4	Commercial real estate	
	Investment 5	Commercial real estate	
	Investment 6	Commercial real estate	
	Investment 7	Commercial real estate	

 $Note: this \ appendix \ does \ not \ include \ a \ small \ number \ of \ investees \ where \ confidentiality \ precludes \ disclosure \ of \ investee \ names.$

Note: this appendix excludes investments where capital is committed but not invested as at 31 December 2015; Leeds Private Equity Fund 5, DCU Student Accommodation, Activate, Quadrant, Causeway Capital.

Appendix 3 - Investment Overview 31 December 2015

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DF J X pre 2011 Fountain I pre 2011 Investec Ventures pre 2011 Polaris VI pre 2011 Seroba Kernel II pre 2011 Soffinova Venture Partners VIII 2011 Highland Technology Europe 2012 SVB Capital Strategic Investors Fund V 2012 China Ireland Growth Technology Fund 2013 Lightstone Ventures I 2013 WestSummit Global Technology Fund Arch VIII 2013 Arch VIII 2014 Fountain II 2014 Fountain III 2014 Polaris VII 2014 Frontline Ventures I 2015 Highland Europe Technology Growth Fund II 2015 Venture Capital Funds Total 2015 Malin 2015 Surve 2015 Surve 2015 Direct Equity Total 2015	
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Polaris VI	15
Seroba Kernel I	18
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SVB Capital Strategic Investors Fund V 2012 China I reland Growth Technology Fund 2013 Lightstone Ventures I 2013 Strategic Investors Fund VI 2013 WestSummit Global Technology Fund 2013 Arch VIII 2014 Atlantic Bridge Fund III 2014 Fountain II 2014 Polaris VII 2014 Frontline Ventures I 2015 Highland Europe Technology Growth Fund II 2015 Venture Capital Funds Total 2015 Malin 2015 Swre 2015 Swre 2015 Direct Equity Total 2015	9
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Highland Europe Technology Growth Fund II 2015 Venture Capital Funds Total 3015 Malin 2015 AMCS 2015 Swrve 2015 Direct Equity Total 2015	40
Venture Capital Funds Total 2015 Malin 2015 AMCS 2015 Swrve 2015 Direct Equity Total 2015	11
Venture Capital Funds Total 2015 Malin 2015 AMCS 2015 Swrve 2015 Direct Equity Total 2015	10
Malin 2015 AMCS 2015 Swrve 2015 Direct Equity Total 2015	403
AMCS 2015 Surve 2015 Direct Equity Total	50
Swrve 2015 Direct Equity Total	6
Direct Equity Total	11
	67
Other Total	67 92
Total Live Commitments	92
Expired / Matured Commitments	92 92
PPP Schools Bundle 3 2012	92 92 2,165
PPP N11 2013	92 92 2,165 Expired
Better Capital 2013	92 92 2,165 Expired 2014 14
Irish Water Government Guarantee (matured facility) 2013	92 92 2,165 Expired 2014 14 2015 18
Total Expired Commitments	92 92 2,165 Expired 2014 14 2015 18 2014 50
Total Live & Expired Commitments	92 92 2,165 Expired 2014 14 2015 18

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