

Expert System

FY19 results

Focused on international growth

Expert System generated sales growth of 10% in FY19, slightly below guidance, and reported EBITDA at the midpoint of guidance. The company made good progress in shifting to subscription licensing (76% of licences sold) and reported its first sales via channel partners, which made up c 10% of sales. Reflecting the potential for COVID-19 to delay projects and new business, we have revised down our FY20 forecasts and assume an acceleration in revenue growth in FY21.

Year end	Revenue (€m)	EBITDA* (€m)	EPS* (c)	DPS (€)	P/E (x)	EV/EBITDA (x)
12/18	30.5	4.6	(1.4)	0.0	N/A	18.8
12/19	33.7	5.5	(1.3)	0.0	N/A	16.0
12/20e	35.5	5.1	(4.5)	0.0	N/A	17.2
12/21e	39.7	6.9	(0.5)	0.0	N/A	12.6

Note: *EBITDA and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

FY19 EBITDA meets guidance

Expert System reported FY19 sales of €31.7m (+10% y-o-y), 4% below our forecast and company guidance. EBITDA of €5.5m was in the middle of Expert System's guidance range and the company ended the year with a net debt position of €2.8m, down from €12.6m a year ago. Subscription licences were the driver of revenue growth, up 28% y-o-y, while perpetual licences and services were flat y-o-y. Recent management changes highlight Expert System's desire to grow the business in the US and the company recently opened an office in Switzerland. The company has shifted to remote working to cope with COVID-19 restrictions and has made its Clinical Research Navigator tool available to medical researchers for free for the next three months to help in the effort to find treatments and a vaccine for the virus.

Factoring in COVID-19 disruption in FY20

Expert System has delayed the publication of its three-year strategic plan while dealing with the disruption from COVID-19. As we assume that there could be a delay in signing new business as well as some customers delaying the implementation of certain projects, we have reduced our FY20 sales forecast by 8%, which implies 7% growth y-o-y. Our cost forecasts are relatively unchanged (assuming continued investment in the US), resulting in a 33% cut to EBITDA. In FY21, we forecast a reacceleration in sales growth to 12.5% and 37% growth in EBITDA.

Valuation: Reflects growth potential

Compared to a diverse set of peers, Expert System is forecast to grow faster but is less profitable. Based on EV/Sales, it is trading at a premium to Italian peers and at a discount to all other peer groups. On an EV/EBITDA basis, it is trading at a premium to Italian and enterprise search and information management peers, and at a discount to data analytics peers. Evidence that recent investment is accelerating revenue growth would be a key driver of share price upside once a more normal business environment resumes. Progress towards operating profitability and cash generation should also provide support.

Software & comp services

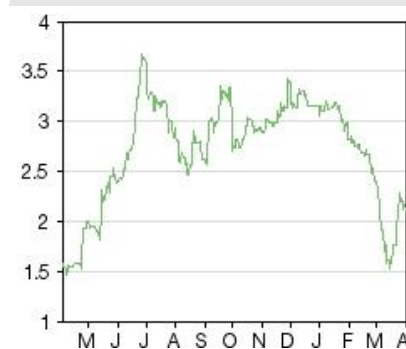
2 April 2020

Price €2.11

Market cap €84m

Net debt (€m) at end FY19	2.8
Shares in issue	40.0m
Free float	73%
Code	EXSY
Primary exchange	AIM Italia
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	(9.1)	(31.0)	36.6
Rel (local)	18.4	(2.2)	78.1
52-week high/low		€3.68	€1.47

Business description

Expert System has developed and patented technology that extracts useful information from unstructured text using semantic-based techniques. It applies this technology to a number of verticals including enterprise search, customer experience management and big data analytics.

Next events

Shareholders' meeting 26 June 2020

Analyst

Katherine Thompson +44 (0)20 3077 5730

tech@edisongroup.com
[Edison profile page](#)

Expert System is a research client of Edison Investment Research Limited

Review of FY19 results

Exhibit 1: FY19 results highlights

€m	FY18a	FY19e	FY19a	Diff	y-o-y
Sales	28.7	33.0	31.7	(4.0%)	10.3%
Other income & grants	1.8	1.5	2.1	37.2%	17.0%
Total revenues	30.5	34.5	33.7	(2.2%)	10.7%
Capitalised development costs & changes in WIP	5.1	5.1	6.0	18.0%	19.1%
Production value	35.5	39.6	39.7	0.4%	11.9%
EBITDA	4.6	5.6	5.5	(2.1%)	17.7%
EBITDA margin	15.2%	16.2%	16.2%	0.0%	1.0%
D&A	(5.3)	(5.7)	(5.8)	1.6%	8.9%
Normalised operating profit	(0.7)	(0.1)	(0.3)	202.1%	(52.9%)
Normalised operating margin	(2.2%)	(0.3%)	(0.9%)	(0.6%)	1.2%
Amortisation of acquired intangibles	(2.6)	(2.6)	(2.6)	0.0%	0.0%
Exceptional items	0.0	0.0	0.0	0.0%	N/A
Reported operating profit	(3.2)	(2.7)	(2.9)	7.8%	10.9%
Exceptional items	0.0	2.3	2.2	(5.3%)	N/A
Net financial income/(expense)	0.1	(0.7)	(0.1)	(86.1%)	N/A
Normalised PBT	(0.6)	(0.8)	(0.4)	(50.6%)	26.8%
Reported PBT	(3.1)	(1.1)	(0.8)	(27.8%)	75.1%
Normalised net income	(0.5)	(0.8)	(0.5)	(30.8%)	(2.5%)
Reported net income	(3.8)	(1.0)	(1.0)	1.0%	74.0%
Diluted normalised EPS (c)	(1.4)	(1.9)	(1.3)	(30.8%)	5.1%
Net debt	12.6	1.4	2.8	97.7%	(77.5%)

Source: Expert System, Edison Investment Research

Expert System reported sales of €31.7m for FY19, 10.3% higher y-o-y. This was 4% below our forecast and the company's guidance of c €33m. Once other income & grants are included, total revenue reached €33.7m, +10.7% y-o-y and 2.2% below our forecast. EBITDA of €5.5m was at the midpoint of the company's guidance (€5–6m). We note that this was after the capitalisation of €6.1m of development costs (versus our €5.1m forecast). Staff costs increased 1.2% y-o-y compared to our forecast for a 6.4% increase – the difference is explained by the higher rate of capitalisation of development costs. Other operating costs increased 25.8% y-o-y compared to our 15.7% forecast. We understand that more consultants were needed in H219 to complete several projects that had a year-end deadline.

Net financial expense was lower than forecast due to €0.4m in exchange rate gains. We have treated the €2.2m gain on disposal of Expert System's stake in the ADmantX JV as an exceptional item.

Net debt at year-end was 78% lower than a year ago, helped by the €7m equity issuance in H119 and the sale of the ADmantX stake in November 2019. We note that the company had a gross cash balance of €21.6m at the end of FY19, with only a quarter of year-end debt due for repayment in FY20.

The shift to subscription licensing continues

The company reported that FY19 revenue was generated from Licences & Maintenance (61%), Services (36%) and Other (3%). Of licences sold, 76% were sold on a subscription basis, up from 72% in FY18 and 41% in FY17. We estimate that revenues from perpetual licence sales were effectively flat y-o-y, whereas subscription revenues increased c 28%. Revenues from services were also essentially flat y-o-y. We assume that maintenance revenues are gradually declining year-on-year as more customers opt for subscription licences.

While the company has been keen to shift licensing over to subscription, it has typically delivered the software on-premise or in the private cloud. It is planning to launch a new SaaS platform that will enable customers to deploy the software in the public cloud.

Work developing the channel starting to bear fruit

Over the last year, the company increased its efforts to attract and support channel partners. Its training and certification programme attracted 500 professionals from more than 40 companies covering more than 25 countries. The company has targeted global system integrators, global consulting firms and local mid-size players. In FY19, this resulted in c €3m/10% of revenues being generated via partners.

Key deals generated via the channel include:

- multi-year defence programmes in two EU countries;
- an automation project for an EU primary bank; and
- an automation project for a UK government agency.

Technology update

The company refined its product offerings for its core insurance and finance markets. It released Cogito 14.5, which improved the performance of Arabic and Dutch language understanding. Expert System also successfully integrated its software with software from various third-party robotic process automation (RPA) vendors to support intelligent process automation.

Management changes reflect focus on US growth

In February, the company announced that it had appointed a new group CEO, Walt Mayo. Walt is based in the US and has a background of helping businesses to scale up. In March, the company announced that it had hired a COO, Gabriele Donino, who most recently headed up Digital and AI Solutions for Swiss Re. Stefano Spaggiari, one of Expert System's founders and the previous CEO, is moving to the role of CEO of the Italian business.

Targeting growth outside Italy

In FY19, revenues generated in Italy grew 15% y-o-y, were flat in the rest of Europe (although France grew 41% y-o-y) and grew 15% in the US. The company is keen to expand its presence in the US and plans to focus on the key verticals of Bank & Insurance and Information/Publishing/Media. Expert System has also opened an office in Switzerland.

COVID-19 response

As an Italy-headquartered company, Expert System moved to remote working as soon as the lockdown started in Italy. Many of its teams around the world already operate for much of the time on a remote basis so this has not been a big shift in behaviour for staff.

From a **customer** perspective, some are looking to delay certain projects, and we would expect signing up new business in the current environment to be more difficult.

From a **product** perspective, the company has made its Clinical Research Navigator (CRN) tool available to medical researchers to search, filter and cross-reference critical information against every major clinical trial registry, publications database, funder research and social media streams (<https://www.youtube.com/watch?v=FxrFIdY9hkg>). Expert System is offering biomedical researchers worldwide free access to the tool until 1 July. Expert System's CRN tool is available as

a cloud-based SaaS application, and is able to aggregate information from multiple sources and structure the content in an intuitive user interface.

Strategic focus for FY20

The company's focus for FY20 includes:

- **US push:** invest in sales, marketing and customer success for the US corporate market, focusing on the insurance, finance, and information/publishing/media sectors.
- **Grow the partner channel:** accelerate the reach of the partner network, including select global system integrators, and local vertically and AI/RPA-focused vendors.
- **Develop OEM relationships:** the company wants to work with software companies involved in cognitive search, sales & marketing augmented insight, and point solutions that depend on language understanding in order to provide Expert System's language understanding layer in their stack.
- **Accelerate shift in licensing:** Expert System wants to accelerate adoption of annual recurring and consumption-based pricing with existing and new customers.
- **Strengthen delivery capabilities:** the company is planning to strengthen and optimise its delivery and professional services functions to support scaling up the business.

Outlook and changes to forecasts

In the current environment, management has decided to delay publishing its next three-year strategy plan (the previous one ran to FY19). We have reduced our revenue forecasts, reflecting both the lower base in FY19 and a lower rate of growth in FY20. We leave our cost forecasts substantially unchanged, reflecting the continuing investment in the US, resulting in a reduction in our EBITDA forecast for FY20. This investment should, however, support growth in the longer run and we factor in accelerating growth in FY21.

Exhibit 2: Changes to forecasts

€m	FY20e old	FY20e new	Change	y-o-y	FY21e new	y-o-y
Sales	37.0	34.0	(8.3%)	7.3%	38.2	12.5%
Other income & grants	1.5	1.5	0.0%	(27.1%)	1.5	0.0%
Total revenues	38.5	35.5	(8.0%)	5.2%	39.7	11.9%
Capitalised development costs & changes in WIP	5.2	6.1	17.3%	1.3%	6.1	0.0%
Production value	43.7	41.6	(5.0%)	4.6%	45.8	10.2%
EBITDA	7.6	5.1	(32.9%)	(7.1%)	6.9	36.8%
EBITDA margin	19.6%	14.3%	(5.3%)	(1.9%)	17.5%	3.2%
D&A	(6.0)	(6.3)	4.3%		(6.4)	
Normalised operating profit	1.5	(1.2)	(177.6%)	285.0%	0.6	(146.9%)
Normalised operating margin	4.0%	(3.4%)	(7.4%)	(2.5%)	1.4%	4.8%
Amortisation of acquired intangibles	(0.9)	(0.9)			0.0	
Exceptional items	0.0	0.0			0.0	
Reported operating profit	0.7	(2.1)	(397.3%)	N/A	0.6	N/A
Normalised net income	0.7	(1.8)		242.3%	(0.2)	(88.9%)
Reported net income	(0.1)	(2.6)		(159.7%)	(0.2)	92.3%
Diluted normalised EPS (c)	1.6	(4.5)	(370.4%)	(230.5%)	(0.5)	88.9%
Net debt	2.2	7.2	219.7%	153.2%	9.9	38.0%

Source: Edison Investment Research

Valuation

Most of Expert System's direct competitors are private companies or subsidiaries of large companies such as IBM or Micro Focus. We have compared Expert System's valuation and operating metrics to peers operating in the natural language processing, big data analytics, enterprise search and information management markets, as well as to Italian software and IT services peers.

Based on EV/Sales, Expert System is trading at a premium to Italian peers and at a discount to all other peer groups, with forecast revenue growth towards the upper end of the group. On an EV/EBITDA basis, Expert System is trading at a premium to Italian and enterprise search and information management peers, and at a discount to data analytics peers. Evidence that the recent investment in sales and support is driving accelerating revenue growth would be a key driver for share price upside. Progress towards net cash generation and operating profitability should provide key support to the share price.

Exhibit 3: Peer group metrics

	Year end	Market cap (€m)	CY EV/Sales (x)	NY EV/Sales (x)	CY EV/EBITDA (x)	NY EV/EBITDA (x0)	CY P/E (x)	NY P/E (x)	CY sales (€m)	CY EBIT margin	CY EBITDA margin	Sales growth NY	EPS growth NY
Natural Language Understanding													
Expert System	Dec-20	84	2.5x	2.2x	17.2x	12.6x	N/A	N/A	35.5	-3.4%	14.3%	11.9%	N/A
Nuance Communications	Sep-20	4,546	3.8x	3.7x	14.1x	13.1x	19.0x	17.5x	1,360	23.6%	27.0%	3.5%	8.7%
Big Data Analytics													
Splunk	Jan-20	15,813	7.3x	6.0x	44.6x	32.8x	61.6x	49.6x	2,047	14.4%	16.4%	21.8%	24.2%
Teradata	Dec-19	3,119	1.8x	1.7x	9.1x	7.6x	20.8x	14.8x	1,750	12.0%	19.3%	3.0%	40.7%
Average			4.5x	3.9x	26.9x	20.2x	41.2x	32.2x		13.2%	17.9%	12.4%	32.4%
Enterprise search and information management													
OpenText	Jun-20	11,311	3.7x	3.4x	10.2x	8.9x	11.5x	10.0x	2,860	33.9%	35.1%	9.3%	15.2%
IHS Markit	Nov-20	21,415	6.7x	6.3x	15.7x	14.4x	21.4x	18.9x	3,909	37.6%	39.1%	6.3%	13.4%
Elastic	Apr-20	3,984	9.7x	7.3x	N/A	N/A	N/A	N/A	382	-20.5%	-16.9%	32.6%	17.5%
CommVault	Mar-20	1,623	2.1x	2.1x	12.9x	11.9x	24.4x	24.2x	619	13.9%	14.2%	2.0%	0.8%
Average			5.6x	4.8x	12.9x	11.7x	19.1x	17.7x		16.2%	17.8%	12.6%	11.7%
Italian software & services													
TXT e-solutions	Dec-20	80	0.6x	0.6x	7.0x	5.2x	16.3x	N/A	63	10.0%	5.9%	7.9%	N/A
Exprivia	Dec-19	36	0.5x	0.4x	7.4x	5.8x	N/A	7.0x	560	2.9%	4.3%	7.9%	N/A
Piteco	Dec-19	96	4.8x	4.6x	11.3x	11.1x	16.4x	16.0x	24	31.2%	42.6%	5.0%	2.3%
Reply	Dec-20	1,925	1.5x	1.3x	9.3x	8.5x	16.9x	15.4x	1,253	12.7%	13.0%	8.4%	10.0%
Average			1.8x	1.7x	8.8x	7.7x	16.5x	12.8x		14.2%	16.5%	7.3%	6.2%

Source: Edison Investment Research, Refinitiv (as at 30 March).

We have performed a reverse DCF to calculate the growth and profitability that is factored into the share price beyond our forecast period. We estimate that the share price is factoring in a revenue CAGR of 12.5% from FY22 to FY29, with EBITDA margins rising to 29.5% by FY29. Assuming the company continues to capitalise development spend, we forecast capex/sales reducing to 9.4% by FY29, with a terminal EBIT margin of 20% (in line with established software companies). We use a WACC of 8% and long-term growth of 3%. A 1% increase in the WACC results in a valuation of €1.85/share, whereas a 1% decrease results in a valuation of €3.29.

Exhibit 4: Financial summary

	€'000s	2015	2016	2017	2018	2019	2020e	2021e
31-December		IT GAAP	IT GAAP	IT GAAP	IT GAAP	IT GAAP	IT GAAP	IT GAAP
PROFIT & LOSS								
Revenue		19,368	25,057	27,783	30,457	33,712	35,465	39,702
EBITDA		1,463	(2,245)	1,711	4,638	5,459	5,069	6,933
Operating Profit (before amort. and except.)		(1,226)	(5,941)	(3,189)	(662)	(312)	(1,199)	563
Intangible Amortisation		(2,549)	(2,608)	(2,608)	(2,567)	(2,567)	(855)	0
Exceptionals		0	0	(700)	0	0	0	0
Other		0	0	0	0	0	0	0
Operating Profit		(3,775)	(8,549)	(6,496)	(3,229)	(2,878)	(2,054)	563
Net Interest		213	(156)	(2,191)	97	(102)	(782)	(782)
Profit Before Tax (norm)		(1,013)	(6,097)	(5,380)	(565)	(413)	(1,981)	(219)
Profit Before Tax (reported)		(3,562)	(8,705)	(8,687)	(3,131)	(780)	(2,836)	(219)
Tax		277	579	348	(650)	(203)	284	22
Profit After Tax (norm)		(934)	(5,692)	(5,164)	(508)	(521)	(1,783)	(197)
Profit After Tax (reported)		(3,284)	(8,126)	(8,339)	(3,781)	(983)	(2,553)	(197)
Average Number of Shares Outstanding (m)		22.8	25.8	28.1	35.8	38.6	40.0	40.0
EPS - normalised (c)		(4.1)	(22.0)	(18.3)	(1.4)	(1.3)	(4.5)	(0.5)
EPS - normalised and fully diluted (c)		(4.1)	(22.0)	(18.3)	(1.4)	(1.3)	(4.5)	(0.5)
EPS - (IFRS) (c)		(14.4)	(31.5)	(29.6)	(10.6)	(2.5)	(6.4)	(0.5)
Dividend per share (c)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA Margin (%)		7.6	-9.0	6.2	15.2	16.2	14.3	17.5
Adj Operating Margin (%)		-6.3	-23.7	-11.5	-2.2	-0.9	-3.4	1.4
BALANCE SHEET								
Fixed Assets		20,301	20,379	18,864	16,655	14,708	14,185	14,415
Intangible Assets		18,539	18,372	16,944	14,734	13,092	12,582	12,839
Tangible Assets		916	915	792	715	702	689	661
Investments		846	1,092	1,128	1,206	915	915	915
Current Assets		42,588	37,012	37,634	38,004	51,495	49,890	49,930
Stocks		1,797	627	99	109	59	59	59
Debtors		10,228	10,233	12,384	15,792	20,447	22,901	25,649
Cash		11,249	9,063	11,235	7,883	21,647	17,305	14,575
Other		19,314	17,088	13,916	14,220	9,342	9,626	9,648
Current Liabilities		(20,517)	(22,679)	(19,480)	(21,170)	(22,839)	(23,264)	(23,731)
Creditors		(15,082)	(16,459)	(14,104)	(15,511)	(16,945)	(17,370)	(17,837)
Short term borrowings		(5,435)	(6,219)	(5,376)	(5,659)	(5,893)	(5,893)	(5,893)
Long Term Liabilities		(22,227)	(18,275)	(17,742)	(18,411)	(22,464)	(22,464)	(22,464)
Long term borrowings		(18,240)	(15,252)	(14,683)	(14,811)	(18,588)	(18,588)	(18,588)
Other long term liabilities		(3,987)	(3,023)	(3,060)	(3,600)	(3,876)	(3,876)	(3,876)
Net Assets		20,145	16,437	19,276	15,077	20,901	18,348	18,151
CASH FLOW								
Operating Cash Flow		2,738	2,088	(1,921)	2,583	3,144	3,016	4,628
Net Interest		(324)	(155)	(626)	(441)	(694)	(758)	(758)
Tax		(1,576)	0	0	0	0	0	0
Capex		(20,045)	(6,378)	(6,321)	(5,830)	(6,401)	(6,600)	(6,600)
Acquisitions/disposals		3,045	46	1,275	(76)	7,189	0	0
Financing		6,573	4,418	11,178	0	7,000	0	0
Dividends		0	0	0	0	0	0	0
Net Cash Flow		(9,588)	18	3,585	(3,764)	10,237	(4,342)	(2,730)
Opening net debt/(cash)		2,839	12,426	12,408	8,824	12,587	2,834	7,176
HP finance leases initiated		0	0	0	0	0	0	0
Other		0	0	0	0	(484)	0	(0)
Closing net debt/(cash)		12,426	12,408	8,824	12,587	2,834	7,176	9,906

Source: Expert System, Edison Investment Research

General disclaimer and copyright

This report has been commissioned by Expert System and prepared and issued by Edison, in consideration of a fee payable by Expert System. Edison Investment Research standard fees are £49,500 pa for the production and broad dissemination of a detailed note (Outlook) following by regular (typically quarterly) update notes. Fees are paid upfront in cash without recourse. Edison may seek additional fees for the provision of roadshows and related IR services for the client but does not get remunerated for any investment banking services. We never take payment in stock, options or warrants for any of our services.

Accuracy of content: All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report and have not sought for this information to be independently verified. Opinions contained in this report represent those of the research department of Edison at the time of publication. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations.

Exclusion of Liability: To the fullest extent allowed by law, Edison shall not be liable for any direct, indirect or consequential losses, loss of profits, damages, costs or expenses incurred or suffered by you arising out of or in connection with the access to, use of or reliance on any information contained on this note.

No personalised advice: The information that we provide should not be construed in any manner whatsoever as, personalised advice. Also, the information provided by us should not be construed by any subscriber or prospective subscriber as Edison's solicitation to effect, or attempt to effect, any transaction in a security. The securities described in the report may not be eligible for sale in all jurisdictions or to certain categories of investors.

Investment in securities mentioned: Edison has a restrictive policy relating to personal dealing and conflicts of interest. Edison Group does not conduct any investment business and, accordingly, does not itself hold any positions in the securities mentioned in this report. However, the respective directors, officers, employees and contractors of Edison may have a position in any or related securities mentioned in this report, subject to Edison's policies on personal dealing and conflicts of interest.

Copyright: Copyright 2020 Edison Investment Research Limited (Edison).

Australia

Edison Investment Research Pty Ltd (Edison AU) is the Australian subsidiary of Edison. Edison AU is a Corporate Authorised Representative (1252501) of Crown Wealth Group Pty Ltd who holds an Australian Financial Services Licence (Number: 494274). This research is issued in Australia by Edison AU and any access to it, is intended only for "wholesale clients" within the meaning of the Corporations Act 2001 of Australia. Any advice given by Edison AU is general advice only and does not take into account your personal circumstances, needs or objectives. You should, before acting on this advice, consider the appropriateness of the advice, having regard to your objectives, financial situation and needs. If our advice relates to the acquisition, or possible acquisition, of a particular financial product you should read any relevant Product Disclosure Statement or like instrument.

New Zealand

The research in this document is intended for New Zealand resident professional financial advisers or brokers (for use in their roles as financial advisers or brokers) and habitual investors who are "wholesale clients" for the purpose of the Financial Advisers Act 2008 (FAA) (as described in sections 5(c) (1)(a), (b) and (c) of the FAA). This is not a solicitation or inducement to buy, sell, subscribe, or underwrite any securities mentioned or in the topic of this document. For the purpose of the FAA, the content of this report is of a general nature, is intended as a source of general information only and is not intended to constitute a recommendation or opinion in relation to acquiring or disposing (including refraining from acquiring or disposing) of securities. The distribution of this document is not a "personalised service" and, to the extent that it contains any financial advice, is intended only as a "class service" provided by Edison within the meaning of the FAA (i.e. without taking into account the particular financial situation or goals of any person). As such, it should not be relied upon in making an investment decision.

United Kingdom

This document is prepared and provided by Edison for information purposes only and should not be construed as an offer or solicitation for investment in any securities mentioned or in the topic of this document. A marketing communication under FCA Rules, this document has not been prepared in accordance with the legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

This Communication is being distributed in the United Kingdom and is directed only at (i) persons having professional experience in matters relating to investments, i.e. investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "FPO") (ii) high net-worth companies, unincorporated associations or other bodies within the meaning of Article 49 of the FPO and (iii) persons to whom it is otherwise lawful to distribute it. The investment or investment activity to which this document relates is available only to such persons. It is not intended that this document be distributed or passed on, directly or indirectly, to any other class of persons and in any event and under no circumstances should persons of any other description rely on or act upon the contents of this document.

This Communication is being supplied to you solely for your information and may not be reproduced by, further distributed to or published in whole or in part by, any other person.

United States

Edison relies upon the "publishers' exclusion" from the definition of investment adviser under Section 202(a)(11) of the Investment Advisers Act of 1940 and corresponding state securities laws. This report is a bona fide publication of general and regular circulation offering impersonal investment-related advice, not tailored to a specific investment portfolio or the needs of current and/or prospective subscribers. As such, Edison does not offer or provide personal advice and the research provided is for informational purposes only. No mention of a particular security in this report constitutes a recommendation to buy, sell or hold that or any security, or that any particular security, portfolio of securities, transaction or investment strategy is suitable for any specific person.

Frankfurt +49 (0)69 78 8076 960
Schumannstrasse 34b
60325 Frankfurt
Germany

London +44 (0)20 3077 5700
280 High Holborn
London, WC1V 7EE
United Kingdom

New York +1 646 653 7026
1,185 Avenue of the Americas
3rd Floor, New York, NY 10036
United States of America

Sydney +61 (0)2 8249 8342
Level 4, Office 1205
95 Pitt Street, Sydney
NSW 2000, Australia