

Expert System

FY16 results

Turning the AI hype into reality

Expert System spent FY16 investing in its corporate structure post the TEMIS acquisition. While this led to a small loss in FY16, it leaves the company better positioned with a unified technology offering and offices established in the key growth markets. New business in H216 confirmed that these changes are starting to have a positive effect. Converting the increasing interest in Expert's cognitive computing solutions into new business should support strong revenue growth and a return to profitability.

| Year end | Revenue (€m) | EBITDA (€m) | EPS* (c) | DPS (c) | P/E (x) | EV/EBITDA (x) |
|----------|--------------|-------------|----------|---------|---------|---------------|
| 12/15 | 19.4 | 1.4 | (4.1) | 0.0 | N/A | 43.1 |
| 12/16 | 25.1 | (2.2) | (22.0) | 0.0 | N/A | N/A |
| 12/17e | 29.7 | 3.2 | (3.2) | 0.0 | N/A | 19.6 |
| 12/18e | 35.4 | 6.6 | 3.9 | 0.0 | 47.3 | 9.6 |

Note: *EPS is normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments. FY15 results have been restated.

Pace of new business accelerated in H2

After a weak H1, Expert accelerated the pace of new contract wins, generating 73% h-o-h revenue growth in H2. While FY16 sales were in line with our forecast, grant income came in lower and other operating expenses were higher than expected, resulting in EBITDA of -€2.25m (our forecast: €0.07m). Good control over working capital resulted in a better than forecast year-end net debt position.

Increasing interest in commercial application of AI

Artificial intelligence (AI) is a hot topic but, until recently, companies were not allocating budget to it as they were unclear on the commercial applications. Expert is now seeing more interest in its technology, with an increasing level of RFIs and pitches against the larger players, and proof of concept trials converting to full contracts. The availability of vertical applications, for example in banking and insurance, provides a faster route for companies to adopt cognitive computing and helps companies understand use cases for the technology. Expert has outlined its three-year plan for double-digit annual sales growth, expanding EBITDA margins and debt reduction. Our forecasts assume slightly more conservative growth in FY17 and FY18, with EBITDA margins increasing to nearly 19% in FY18.

Valuation: Reflects growth potential

Expert System trades on an EV/EBITDA of 19.6x FY17e and 9.6x FY18e. On FY18 metrics, which assume that revenue growth converts to strong EBITDA margin expansion, it is trading at a discount to enterprise search, information management and big data analytics software companies. Our DCF valuation of Expert System suggests a value of €2.59/share (previous: €2.60). Expert's ability to convert customer interest in the fast-growing data mining and analytics market into commercial contracts will be key to share price upside from this point.

Software & comp services

27 April 2017

Price €1.83

Market cap €51m

 Net debt (€m) at end FY16* 12.4
 *Excludes short-term investments

Shares in issue 27.8m

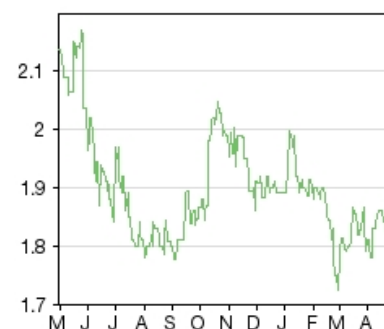
Free float 65.2%

Code EXSY

Primary exchange AIM Italia

Secondary exchange N/A

Share price performance



% 1m 3m 12m

Abs (0.8) (2.8) (14.0)

Rel (local) (4.0) (10.3) (24.0)

52-week high/low €2.2 €1.7

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

H117 results 29 September

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 FY16 results

| Exhibit 1: Results highlights | | | | | |
|--|---------------|---------------|---------------|----------------|----------------|
| €m | FY15 | FY16 | FY16 estimate | Difference | y-o-y |
| Sales | 16.39 | 23.37 | 23.57 | -0.9% | 42.6% |
| Grants and other income | 2.98 | 1.69 | 2.16 | -21.8% | -43.3% |
| Total revenue | 19.37 | 25.06 | 25.73 | -2.6% | 29.4% |
| Capitalised development costs | 3.62 | 5.67 | 4.80 | 18.1% | 56.5% |
| Changes in WIP | 0.17 | (1.17) | 0.40 | -392.4% | -769.4% |
| Total production value | 23.16 | 29.55 | 30.93 | -4.4% | 27.6% |
| Staff costs | 11.30 | 18.49 | 18.44 | 0.3% | 63.6% |
| Other costs | 10.40 | 13.31 | 12.42 | 7.2% | 28.0% |
| EBITDA | 1.46 | (2.25) | 0.07 | N/A | -253.5% |
| Depreciation & amortisation - in-house | 2.69 | 3.70 | 2.33 | 58.4% | 38.2% |
| Normalised EBIT | (1.23) | (5.94) | (2.27) | -162.1% | 384.6% |
| Depreciation & amortisation - acquired | 2.55 | 2.61 | 3.00 | -13.1% | 2.3% |
| Reported EBIT | (3.77) | (8.55) | (5.27) | -62.3% | 126.5% |
| Reported net income | (3.28) | (8.13) | (3.97) | -104.7% | 147.4% |
| Net debt | 12.43 | 12.41 | 14.14 | -12.2% | -0.1% |

Source: Expert System accounts

Expert System reported FY16 sales essentially in line with our forecast. H2 sales accelerated to €14.8m compared to the €8.6m reported in H1. In addition to benefiting from typical H2 seasonality, the company had seen a slowdown in sales in H1 as the integration process distracted the sales team from closing deals – this reversed in H2 with a 73% sequential increase in sales. Total revenue came in lower than our forecast due to lower than expected income from grants. Capitalised development costs were 18% higher than forecast, and changes in work in progress contributed a negative €1.2m to production value, which overall was 4% below our forecast.

Staff costs were in line with our forecast whereas other costs were 7% higher than forecast. We understand that this was due to the use of external consultants for implementation work. The combination of higher operating costs and lower production value resulted in EBITDA €2.2m below our forecast. The company incurred net financing costs of €0.2m (our forecast €1.2m), including net interest expense of €0.6m and currency gains of €0.3m. A tax credit of €0.6m was recorded versus our forecast of €2.5m.

Good working capital control resulted in net debt essentially flat compared to FY15, despite lower than forecast EBITDA.

Geographic performance

| Exhibit 2: Performance by geography | | | | | | |
|-------------------------------------|-------|------|-------|--------|-------|-------|
| €m | Sales | | | EBITDA | | |
| | FY15 | FY16 | y-o-y | FY15 | FY16 | y-o-y |
| Italy | 9.3 | 12.9 | 39% | 0.7 | 1.3 | 86% |
| UK and rest of EU | 2.9 | 5.4 | 86% | 0.6 | (2.5) | N/A |
| US | 4.2 | 5.1 | 21% | 0.1 | (1.0) | N/A |

Source: Expert System

Revenues generated in Italy showed strong growth year-on-year, and even stronger growth in EBITDA. In the UK and the rest of the EU, the majority of growth came from the TEMIS acquisition. The head of sales in France was changed, which slowed sales for some time. The company also decided to stop selling some of TEMIS's older products (while still continuing to support them), and this had a negative impact on sales. The US business saw some growth, although investment during FY16 to establish two separate businesses (public sector and enterprise) reduced EBITDA. At a group level, orders were 20% higher at the end of FY16 versus FY15.

Business update

New wins show vertical focus paying off

Expert has developed vertical specific solutions for various industries, including banking & insurance, life science & pharma, oil & gas and media & publishing. The company recently announced it had signed a strategic partnership with **Zurich Insurance Group** to provide its cognitive computing solutions to the group globally. In February, it was selected by **Intesa SanPaolo** to provide its Cogito software for use in cognitive banking services.

New partnerships announced

In April, the company announced that it is partnering with **Blue Prism**, a provider of robotic process automation (RPA) software. Expert's software can be used to extract data from a variety of unstructured data sources, which in turn can be used as the input data for process automation robots such as Blue Prism's. For example, an administrator could use Expert's software to gather crucial pieces of information from documents containing unstructured data (such as customer forms and reports from specialists) to provide data that is then fed into the process automation robot. This in turn would automatically populate all relevant fields in the company's systems. This can improve process efficiency and save employee input for areas that require judgment or for dealing with customers.

Expert has expanded its partnership with **Esri** from Italy to working together globally. Esri software manages spatial and geo-reference data. The partnership integrates Esri's ArcGIS platform with Expert's Cogito platform.

Launching latest version of the Cogito platform

In February the company launched Cogito 14, which integrates TEMIS solutions and rebrands them as Cogito. The same solutions are now available in every country. Improvements to the platform include:

- Cogito Knowledge Graph¹ enriched with **domain knowledge** for finance and biopharma;
- **Machine learning algorithms** added to enable users to enrich knowledge automatically from text, with or without supervision from subject matter experts;
- **Cogito Studio Express** added to make it simpler for end-users to design and maintain their taxonomy/ontology and govern the text analytics process; and
- Extended version of the **Cogito API** to simplify the development and integration of Cogito-based applications with other existing platforms or architectures, speeding up implementation.

Industry recognition

Over the last year, Expert has been recognised by several industry analysts for its technology. This includes a position in Knowledge World's "100 companies that matter in Knowledge Management in 2017", inclusion in the Forrester Wave as a top 10 provider of big data text analytics software and inclusion in the Gartner Magic Quadrant for Insight Engines.

This recognition is crucial for Expert as the endorsement of its technology provides a useful marketing tool for the company in its international ambitions, particularly when selling in the US.

¹ Knowledge Graph embeds millions of concepts, their lexical forms, properties and relationships, helping to precisely disambiguate the meaning of words and expressions contained in text.

Gartner Magic Quadrant for Insight Engines

Gartner recently published its inaugural Magic Quadrant for Insight Engines. This is an evolution from the previous enterprise search market analysis. Insight engines provide the user with the means to access information and insights in a more proactive manner via interfaces beyond the traditional query box. Expert is one of 13 companies included, and is positioned as a niche player. We note that enterprise search is a sub-sector of Expert's business, whereas for many of the peers it is their main business. Expert rates well on its ability to implement complex projects and provide tools for customisation to "fine tune" the software.

Outlook and changes to forecasts

The company has outlined its three-year plan (Exhibit 3), expecting strong growth in sales over the next three years. Total production value assumes capitalised development costs of €4.7m and income from grants of €1.6-1.7m per annum. In terms of the cost base, the company expects to show a small increase in staff costs in 2017, but expects to cut the level of external costs from the 2016 level. From 2018, it expects growth in both cost lines at a lower rate than revenue growth. The acceleration of EBITDA should enable the company to move to a cash flow positive position from FY17.

| Exhibit 3: Company three-year business plan | | | | | | |
|---|-------|------|------|--------|------|------|
| €m | FY17 | FY18 | FY19 | Growth | | |
| | | | | FY17 | FY18 | FY19 |
| Sales | 28.2 | 34.9 | 47.4 | 21% | 24% | 36% |
| Production value | 34.5 | 41.4 | 54.0 | 17% | 20% | 30% |
| EBITDA | 3.6 | 7.3 | 11.6 | N/A | 103% | 59% |
| Net income | (3.4) | 0.1 | 2.7 | | | |
| Net debt* | 9.8 | 9.7 | 5.5 | | | |

Source: Expert System. Note:*Includes short-term investments worth c €1.3m that we exclude from our net debt forecasts.

We have revised our forecasts to take account of management's outlook and FY16 results.

| Exhibit 4: Changes to forecasts | | | | | | |
|--|-----------|-----------|---------|---------|-----------|--------|
| €m | FY17e old | FY17e new | Change | y-o-y | FY18e new | y-o-y |
| Sales | 28.3 | 28.0 | -0.9% | 20.0% | 33.6 | 20.0% |
| Other income & grants | 2.1 | 1.6 | -22.7% | -3.8% | 1.7 | 6.2% |
| Total revenues | 30.4 | 29.7 | -2.4% | 18.4% | 35.4 | 19.2% |
| Capitalised development costs & changes in WIP | 5.5 | 4.7 | -13.9% | 4.5% | 4.7 | 0.0% |
| Production value | 35.8 | 34.4 | -4.1% | 16.3% | 40.1 | 16.6% |
| EBITDA | 3.4 | 3.2 | -4.5% | -243.1% | 6.6 | 104.4% |
| EBITDA margin | 11.1% | 10.8% | -0.2% | 19.8% | 18.6% | 7.7% |
| D&A | (2.6) | (4.0) | 55.2% | | (4.4) | |
| Normalised operating profit | 0.8 | (0.8) | -207.2% | -86% | 2.2 | -364% |
| Normalised operating margin | 2.5% | -2.8% | -5.3% | 20.9% | 6.1% | 8.9% |
| Amortisation of acquired intangibles | (3.0) | (2.6) | | | (2.6) | |
| Reported operating profit | (2.2) | (3.4) | 53.5% | 59.9% | (0.4) | 87.1% |
| Normalised EPS (c) | (0.5) | (3.2) | 486.2% | | 3.9 | |
| Net debt | 18.4 | 11.6 | -36.8% | -6.4% | 10.7 | -8.0% |

Source: Edison Investment Research

Valuation

The majority of Expert's direct competitors are private companies or subsidiaries of large companies such as IBM or HP Enterprise. We have compared Expert's valuation and operating metrics to peers operating in the natural language processing, e-commerce search, big data analytics, enterprise search and information management markets. With a forecast return to positive EBITDA in FY17, Expert is trading on an EV/EBITDA multiple of 19.6x FY17, falling to 9.6x in FY18. For FY18 this is at a discount to enterprise search, information management and big data analytics companies.

Our 10-year DCF analysis values the company at €2.59/share, substantially unchanged from our previous €2.60 valuation. Rolling forward our valuation by one year, we forecast a revenue CAGR of 11% from FY16 to FY26, with EBITDA margins rising to 25%. We assume capex/sales decline from 14% in FY18 to 7% by FY26 and use a WACC of 9% and long-term growth of 3%. A 1% increase in the WACC results in a valuation of €2.09/share, while a 1% decrease results in a valuation of €3.31.

Exhibit 5: Peer multiples

| | Market cap (€m) | CY EV/S | NY EV/S | CY EV/ EBITDA | NY EV/ EBITDA | CY P/E | NY P/E | CY sales (€m) | CY EBIT margin | CY EBITDA margin | NY sales growth | NY EPS growth |
|---|-----------------|-------------|-------------|---------------|---------------|--------------|--------------|---------------|----------------|------------------|-----------------|---------------|
| Natural language understanding | | | | | | | | | | | | |
| Expert System | 50.6 | 2.1x | 1.8x | 19.6x | 9.6x | N/A | 47.3x | 29.7 | -2.8% | 10.8% | 19% | N/A |
| Nuance Communications | 5,123 | 3.4x | 3.3x | 8.5x | 8.0x | 11.1x | 10.5x | 2,036 | 28.9% | 40.0% | 4% | 6.1% |
| E-commerce search | | | | | | | | | | | | |
| SLI Systems | 13 | 0.4x | 0.4x | N/A | N/A | N/A | N/A | 32 | N/A | N/A | 7% | N/A |
| Big data analytics | | | | | | | | | | | | |
| Splunk | 8,051 | 6.5x | 5.1x | 56.1x | 38.7x | 107.4x | 72.1x | 1,191 | 7.9% | 11.5% | 26% | 48.9% |
| Tableau | 3,861 | 3.8x | 3.5x | 60.9x | 40.9x | N/A | 805.7x | 874 | 0.1% | 6.2% | 8% | N/A |
| Teradata | 3,772 | 1.7x | 1.8x | 9.7x | 9.4x | 21.9x | 21.9x | 2,123 | 13.4% | 18.0% | -1% | 0.1% |
| Average | | 4.0x | 3.5x | 42.2x | 29.7x | 21.9x | N/A | | 7.1% | 11.9% | 11% | N/A |
| Enterprise search and information management | | | | | | | | | | | | |
| OpenText | 8,312 | 4.2x | 3.7x | 12.3x | 10.1x | 16.6x | 13.8x | 2,310 | 26.8% | 29.7% | 15% | 20.3% |
| IHS Markit | 16,353 | 6.1x | 5.8x | 15.5x | 14.2x | 21.3x | 18.4x | 3,532 | 23.6% | 25.7% | 5% | 15.8% |
| CommVault | 2,095 | 2.9x | 2.7x | 21.8x | 18.9x | 50.6x | 45.3x | 644 | 11.5% | 12.5% | 7% | 11.8% |
| Average | | 4.4x | 4.0x | 16.5x | 14.4x | 29.5x | 25.8x | | 20.6% | 22.6% | 9% | 16.0% |

Source: Bloomberg (as at 25 April 2017), Edison Investment Research

Exhibit 6: Financial summary

| | €'000s | 2012 | 2013 | 2014* | 2015** | 2016 | 2017e | 2018e |
|--|--------|---------|----------|----------|----------|----------|----------|----------|
| 31-December | | IT GAAP | IT GAAP | IT GAAP | IT GAAP | IT GAAP | IT GAAP | IT GAAP |
| PROFIT & LOSS | | | | | | | | |
| Revenue | | 11,593 | 11,109 | 13,045 | 19,368 | 25,057 | 29,666 | 35,374 |
| EBITDA | | 2,624 | 2,014 | 2,339 | 1,463 | (2,245) | 3,214 | 6,568 |
| Operating Profit (before amort. and except.) | | 1,765 | 916 | 609 | (1,226) | (5,941) | (821) | 2,166 |
| Intangible Amortisation | | 0 | 0 | 0 | (2,549) | (2,608) | (2,608) | (2,608) |
| Exceptionals | | (319) | 45 | 59 | 0 | 0 | 0 | 0 |
| Other | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Operating Profit | | 1,446 | 961 | 669 | (3,775) | (8,549) | (3,429) | (442) |
| Net Interest | | (298) | (376) | 29 | 213 | (156) | (520) | (517) |
| Profit Before Tax (norm) | | 1,467 | 539 | 638 | (1,013) | (6,097) | (1,342) | 1,649 |
| Profit Before Tax (reported) | | 1,148 | 584 | 697 | (3,562) | (8,705) | (3,949) | (959) |
| Tax | | (452) | (359) | (609) | 277 | 579 | 1,382 | 336 |
| Profit After Tax (norm) | | 1,015 | 180 | 29 | (934) | (5,692) | (872) | 1,072 |
| Profit After Tax (reported) | | 697 | 225 | 89 | (3,284) | (8,126) | (2,567) | (623) |
| Average Number of Shares Outstanding (m) | | 22.0 | 22.0 | 22.0 | 22.8 | 25.8 | 27.7 | 27.7 |
| EPS - normalised (c) | | 4.6 | 0.8 | 0.1 | (4.1) | (22.0) | (3.2) | 3.9 |
| EPS - normalised and fully diluted (c) | | 4.6 | 0.8 | 0.1 | (4.1) | (22.0) | (3.2) | 3.9 |
| EPS - (IFRS) (c) | | 3.2 | 1.0 | 0.4 | (14.4) | (31.5) | (9.3) | (2.3) |
| Dividend per share (p) | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gross Margin (%) | | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| EBITDA Margin (%) | | 22.6 | 18.1 | 17.9 | 7.6 | -9.0 | 10.8 | 18.6 |
| Adj Operating Margin (%) | | 15.2 | 8.2 | 4.7 | -6.3 | -23.7 | -2.8 | 6.1 |
| BALANCE SHEET | | | | | | | | |
| Fixed Assets | | 6,691 | 9,905 | 5,719 | 20,301 | 20,379 | 18,636 | 16,626 |
| Intangible Assets | | 1,111 | 2,462 | 4,640 | 18,539 | 18,372 | 16,689 | 14,652 |
| Tangible Assets | | 635 | 606 | 692 | 916 | 915 | 856 | 882 |
| Investments | | 4,945 | 6,836 | 387 | 846 | 1,092 | 1,092 | 1,092 |
| Current Assets | | 12,767 | 15,491 | 32,681 | 42,588 | 37,012 | 36,727 | 38,761 |
| Stocks | | 722 | 476 | 1,563 | 1,797 | 627 | 627 | 627 |
| Debtors | | 5,488 | 5,820 | 7,866 | 10,228 | 10,233 | 11,768 | 13,533 |
| Cash | | 2,065 | 2,967 | 4,900 | 11,249 | 9,063 | 9,861 | 10,795 |
| Other | | 4,492 | 6,228 | 18,352 | 19,314 | 17,088 | 14,471 | 13,806 |
| Current Liabilities | | (8,871) | (10,333) | (13,639) | (20,517) | (22,679) | (23,218) | (23,866) |
| Creditors | | (6,538) | (7,350) | (10,698) | (15,082) | (16,459) | (16,999) | (17,647) |
| Short term borrowings | | (2,332) | (2,984) | (2,940) | (5,435) | (6,219) | (6,219) | (6,219) |
| Long Term Liabilities | | (4,642) | (5,172) | (7,803) | (22,227) | (18,275) | (18,275) | (18,275) |
| Long term borrowings | | (4,642) | (5,172) | (4,799) | (18,240) | (15,252) | (15,252) | (15,252) |
| Other long term liabilities | | 0 | 0 | (3,005) | (3,987) | (3,023) | (3,023) | (3,023) |
| Net Assets | | 5,945 | 9,890 | 16,958 | 20,145 | 16,437 | 13,870 | 13,247 |
| CASH FLOW | | | | | | | | |
| Operating Cash Flow | | 8,077 | 2,891 | 737 | 2,738 | 2,088 | 6,218 | 6,451 |
| Net Interest | | (298) | (376) | 29 | (324) | (155) | (520) | (517) |
| Tax | | (452) | (359) | (609) | (1,576) | 0 | 0 | 0 |
| Capex | | (3,095) | (2,384) | (3,905) | (20,045) | (6,378) | (4,900) | (5,000) |
| Acquisitions/disposals | | 0 | 0 | (6,436) | 3,045 | 46 | 0 | 0 |
| Financing | | 0 | 0 | 12,341 | 6,573 | 4,418 | 0 | 0 |
| Dividends | | 0 | (180) | 0 | 0 | 0 | 0 | 0 |
| Net Cash Flow | | 4,232 | (408) | 2,156 | (9,588) | 18 | 798 | 934 |
| Opening net debt/(cash) | | 6,352 | 4,909 | 4,822 | 2,839 | 12,426 | 12,408 | 11,610 |
| HP finance leases initiated | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | | (2,788) | 128 | (173) | 0 | 0 | 0 | 0 |
| Closing net debt/(cash) | | 4,909 | 5,189 | 2,839 | 12,426 | 12,408 | 11,610 | 10,676 |

Source: Expert System accounts, Edison Investment Research *FY14 was first year of consolidation for some subsidiaries. **FY15 results restated.

Edison is an investment research and advisory company, with offices in North America, Europe, the Middle East and AsiaPac. The heart of Edison is our world-renowned equity research platform and deep multi-sector expertise. At Edison Investment Research, our research is widely read by international investors, advisers and stakeholders. Edison Advisors leverages our core research platform to provide differentiated services including investor relations and strategic consulting. Edison is authorised and regulated by the [Financial Conduct Authority](#). Edison Investment Research (NZ) Limited (Edison NZ) is the New Zealand subsidiary of Edison. Edison NZ is registered on the New Zealand Financial Service Providers Register (FSP number 247505) and is registered to provide wholesale and/or generic financial adviser services only. Edison Investment Research Inc (Edison US) is the US subsidiary of Edison and is regulated by the Securities and Exchange Commission. Edison Investment Research Limited (Edison Aus) [46085869] is the Australian subsidiary of Edison and is not regulated by the Australian Securities and Investment Commission. Edison Germany is a branch entity of Edison Investment Research Limited [4794244]. www.edisongroup.com

DISCLAIMER

Copyright 2017 Edison Investment Research Limited. All rights reserved. This report has been commissioned by Expert System and prepared and issued by Edison for publication globally. 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. Opinions contained in this report represent those of the research department of Edison at the time of publication. The securities described in the Investment Research may not be eligible for sale in all jurisdictions or to certain categories of investors. This research is issued in Australia by Edison Aus and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act. The Investment Research is distributed in the United States by Edison US to major US institutional investors only. Edison US is registered as an investment adviser with the Securities and Exchange Commission. Edison US 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. As such, Edison does not offer or provide personalised advice. We publish information about companies in which we believe our readers may be interested and this information reflects our sincere opinions. The information that we provide or that is derived from our website is not intended to be, and should not be construed in any manner whatsoever as, personalised advice. Also, our website and 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 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. This document is provided 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. Edison has a restrictive policy relating to personal dealing. 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. Edison or its affiliates may perform services or solicit business from any of the companies mentioned in this report. The value of securities mentioned in this report can fall as well as rise and are subject to large and sudden swings. In addition it may be difficult or not possible to buy, sell or obtain accurate information about the value of securities mentioned in this report. Past performance is not necessarily a guide to future performance. 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. 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 (ie 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. To the maximum extent permitted by law, Edison, its affiliates and contractors, and their respective directors, officers and employees will not be liable for any loss or damage arising as a result of reliance being placed on any of the information contained in this report and do not guarantee the returns on investments in the products discussed in this publication. FTSE International Limited ("FTSE") © FTSE 2017. "FTSE®" is a trade mark of the London Stock Exchange Group companies and is used by FTSE International Limited under license. All rights in the FTSE indices and/or FTSE ratings vest in FTSE and/or its licensors. Neither FTSE nor its licensors accept any liability for any errors or omissions in the FTSE indices and/or FTSE ratings or underlying data. No further distribution of FTSE Data is permitted without FTSE's express written consent.