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# THE EUROPEAN CONTRARIAN

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June 25, 2019

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## London Stock Exchange Group plc

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(BUY)

**Price:** £54.80  
**52-Week Range:** £38.42 – £55.00  
**Shares Outstanding:** 57.0 million  
**Market Capitalization:** £19.1 billion (\$24.1 billion)<sup>1</sup>

**Ticker<sup>2</sup>:** LSE LN  
**Dividend:** £0.86  
**Yield:** 1.6%

*Data as of June 19, 2019*

<sup>1</sup> One British pound is equivalent to \$1.2641 as of June 19, 2019.

<sup>2</sup>The common shares of LSE LN trade on the London Stock Exchange.



*Exclusive Marketers of  
The European Contrarian Report*

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## Investment Thesis

London Stock Exchange Group (LSE LN), or “LSE,” is one of the largest financial infrastructure companies in the world, operating equity, bond and derivatives markets and offering a variety of services that include market data, securities classification, indexing, clearing and settlement. The ongoing introduction of new products and services, combined with steady increases in the number of listed companies and the total notional value of securities traded, are expected to fuel future earnings growth of 10%-15% a year. There is significant near-term optionality, however, related to the potential acquisition of Euroclear, which would be enormously accretive to earnings. This scenario is not reflected in the company’s current valuation, nor is it a necessary condition for shareholders to earn an adequate return, thus creating an attractive, low-cost option.

LSE trades at 29x and 25x the consensus earnings forecasts for 2019 and 2020, respectively, which is within the range of its global peer group. Free cash flow multiples are on par with earnings due to relatively small capital expenditure requirements, thus implying that LSE trades at a yield of 3.7% based on 2019 estimates. Although these multiples seem high on an absolute basis, exchanges are typically high margin, economically vital, quasi-monopolistic businesses with strong balance sheets, and LSE is no exception. The positive attributes of this business model, combined with the negligible risk profile is therefore fairly reflected in the valuations of these exchanges.

LSE is somewhat unique in the industry, as it is one of the few exchanges with significant upside optionality, as it appears to be in the running to acquire Euroclear. Euroclear settles nearly €800 trillion in securities transactions each year, including LSE’s stock and bond trades, and LSE, recently purchased nearly 5% of the business. The rest could be acquired for an estimated £4.7 billion and could easily be integrated with LSE’s existing platform. Many of its standalone operating costs could be made redundant. Considering that Euroclear had operating expenses of €14 million last year, cutting just 50% of these costs (which is reasonable based on other recent mergers), would improve the business’s operating profit to €900 million (£800 million). Such a scenario would lead to share price appreciation of an estimated 50% assuming current valuation multiples remained constant.

There is a genuine motivation for the other owners, a consortium of banks, to sell Euroclear. The bigger question seems to be whether LSE will be the one to ultimately acquire it. However, again, none of this potential is reflected in LSE’s valuation, while the upside, conservatively estimated to be 50% over the short term, is hard to ignore. Without a deal, the company should continue to grow earnings by 10%-15% per year while paying a dividend of 1.6%, which is attractive given the risk. In this manner, the optionality on Euroclear is free. Based on these factors, shares of LSE are recommended for purchase.

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## Company Description

London Stock Exchange Group is an international markets infrastructure business, operating a number of equity, bond, derivatives markets. These include the London Stock Exchange, Borsa Italiana, the European fixed income platform MTS, and the multilateral trading facility (or self-regulated trading venue) Turquoise. Service offerings such as The Yield Book, Mergent, SEDOL, UnaVISTA, XTF and RNS provide data services, research and analytics, and it is a leader in financial indexing, benchmarking and analytical services through FTSE Russell. Post trade and risk management services are provided through its majority ownership of the multinational clearing house LCH, the Italian clearing house CC&G, and the European custody and settlement business Monte Titoli. Lastly, LSE has a technology division that develops trading, market surveillance and post trade systems, both for the group's own platforms and outside organizations and exchanges.

The history of the exchange dates back to 1571, when The Royal Exchange was first founded. The London Stock Exchange was formed in 1698, while the Group, as it exists today, was created in 2007, when London Stock Exchange merged with Borsa Italiana. In the years that followed, LSE grew by acquisition and through strategic partnerships, joining forces with Oslo Bors in 2008 to provide trading services to its various platforms, purchasing a majority stake in Turquoise in 2009, acquiring the remaining 50% of FTSE International in 2011, and closing on a majority stake in LCH Clearnet in 2013.

The CEO of LSE is David Schwimmer, who was hired in August 2018. Before joining the company, Mr. Schwimmer was employed for twenty years with Goldman Sachs, serving most recently as its Global Head of Market Structure. The Chairman of the Board, Don Robert, was appointed on January 1, 2019. He currently serves as Chairman of Experian plc (EXPN LN), having been appointed in 2014 after eight years as CEO. Mr. Robert will step down as Chairman of Experian in July 2019.

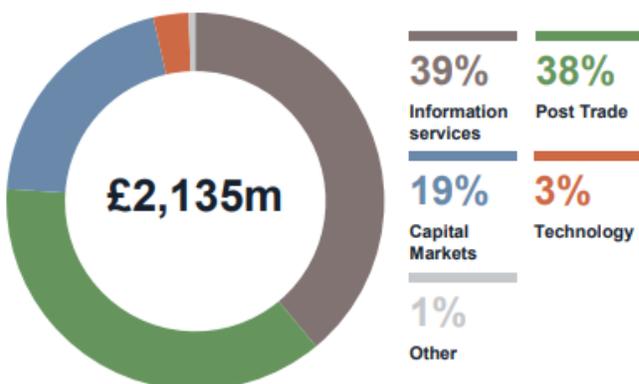
The Group is divided into four business segments; Information Services, Post Trade, Capital Markets, and Technology. As one can see in Exhibit 1, the Capital Markets division, which comprises the traditional exchange/trading business of the group, represented only 19% of total revenues (also called "income" by the company when including net treasury income) in 2018. Information Services and Post Trade operations represent the vast majority of the business, each accounting for nearly 40% of revenues. The contribution from the Technology segment is relatively modest at just 3% last year.

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**Exhibit 1 LSE: Total Income by Segment; 2018**



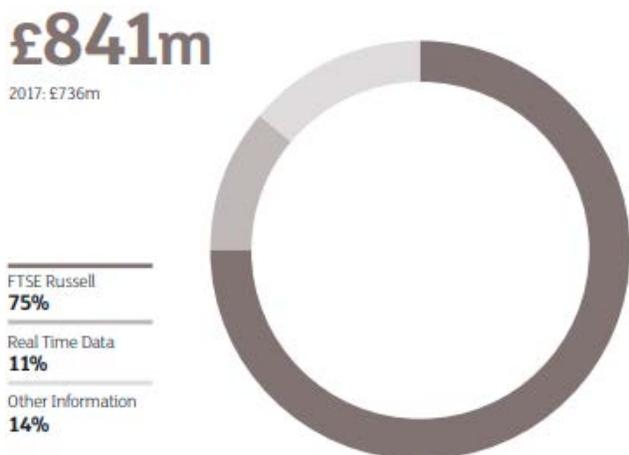
Source: Company reports.

## Information Services

This division supplies subscribers with market information including real time pricing data, product identification, analytics solutions and reporting and reconciliation services.

The FTSE Russell business accounts for 75% of the division's revenues, approximately 65% of which is derived from index data subscriptions. These include licenses, data services and analytics. The remaining 35% is earned from asset-linked fees, with approximately \$16 trillion benchmarked against the indexes that it provides.

**Exhibit 2 LSE: Revenue Breakdown for the Information Services Division; 2018**



Source: Company reports.

The Real Time Data service provides tick-by-tick pricing information, as well as the full depth of the order book, to traders, brokers and fund managers. Simple pricing data is also licensed for display on websites. This business has been in slight decline in recent years, as the number of professional terminals in use has been gradually shrinking.

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The Other Information segment accounts for 14% of revenues, but has been growing rapidly. UnaVista, which is LSE's regulatory reporting platform, has seen business expand with the increased reporting requirements brought about by MIFID II. SEDOL, which provides identification codes for global equity, derivatives and fixed income securities, has also experienced an increase in recurring licenses.

As shown in Exhibit 3, the segment's total revenues expanded by 9% last year, while operating profit grew by nearly 15% due to the significant operating leverage inherent in the data provider/exchange business model.

## **Exhibit 3 LSE: Operating Results for the Information Services Division; 2017-2018**

(£ in millions)

	12 months ended Dec 2018	12 months ended Dec 2017	Variance	Variance at organic and constant currency <sup>1</sup>
	£m	£m	%	%
<b>Revenue</b>				
FTSE Russell	631	546	15	8
Real Time Data	94	94	–	(1)
Other Information Services	116	96	22	24
<b>Total revenue</b>	<b>841</b>	<b>736</b>	<b>14</b>	<b>9</b>
Cost of sales	(70)	(62)	13	8
<b>Gross profit</b>	<b>771</b>	<b>674</b>	<b>14</b>	<b>9</b>
Operating expenses before depreciation, amortisation and impairment <sup>2</sup>	(302)	(274)	10	–
<b>Earnings before interest, tax, depreciation, amortisation and impairment<sup>2</sup></b>	<b>469</b>	<b>400</b>	<b>17</b>	<b>–</b>
Depreciation, amortisation and impairment <sup>2</sup>	(29)	(17)	73	–
<b>Operating profit<sup>2</sup></b>	<b>440</b>	<b>383</b>	<b>15</b>	<b>–</b>

Source: Company reports.

## **Post Trade Services - LCH**

While Post Trade Services accounted for 38% of the business last year, LCH, alone, represented 31%, or £662 million, of LSE's £2,135 million in revenues. This business has clearing operations in the UK, Eurozone, US and the Asia-Pacific region. As shown in Exhibit 4, 41% of LCH's 2018 revenues were generated through OTC Clearing, 33% through Non-OTC Clearing, and 26% was earned through Net Treasury Income, which is effectively the interest earned on collateral lodged with the clearing house. LSE owns 82.61% of LCH Group Holdings Ltd., having acquired a 14.64% stake in December 2018 for €425 million. This implies a valuation for the entire entity of €2.9 billion (£2.6 billion) before factoring in any control premium.

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## Exhibit 4 LSE: Revenue Breakdown for the Post-Trade Services - LCH Division; 2018

£662m

2017: £562m

OTC Clearing  
**41%**

Non-OTC Clearing  
and other revenue\*  
**33%**

Net Treasury Income  
and other income  
**26%**



Source: Company reports.

The OTC Clearing operation is comprised of SwapClear, which is the global leader in OTC Interest Rate Swap clearing, ForexClear, the foreign exchange derivative clearing service, and CDSClear, which handles US and European credit default swaps. The OTC Clearing business experienced significant growth last year, due in part to the continued rollout of Uncleared Margin Rules, which require counter-parties to post margin for non-cleared OTC derivative trades. The implementation of these rules has led to a number of new clients for LCH, as counterparties have chosen to begin having these trades cleared rather than post additional margin. LSE believes these tailwinds are now largely behind the company.

SwapClear has seen an increase in volumes due to the changing interest rate environment in the US and UK. It also launched Non-Deliverable Interest Rate Swaps in five currencies in 2018, with three more currencies expected to be added in 2019. Furthermore, SwapClear offers third-party compression services, which has experienced significant growth in notional compressed values. With OTC derivative securities, simply reversing a trade does not close the position. Instead, it leaves one with a long and a short position. Compression services net these positions out, thus freeing up a significant amount of capital for clients. Finally, ForexClear and CDSClear are launching new products and platforms in 2019, which should lead to continued growth.

Non-OTC Clearing includes RepoClear, which clears across 13 government bond markets, Equity Clear, which clears for over 20 trading venues, and the Listed Derivatives business, which clears for London Stock Exchange Derivatives Market (“LSEDM”) and Euronext Derivatives Market. LSEDM is leaving the platform in June 2019 in favor of CurveGlobal, which is an interest rate derivatives joint venture between LSE, CBOE and a number of leading dealer banks. Clearing of CurveGlobal products will be handled by LCH.

As one can see in Exhibit 5, revenues at LCH increased by 13% last year, while total income, or revenues plus net treasury income, expanded by 18%. The growth was derived primarily from the OTC business and from higher short-term interest rates that led to an increase in net treasury income.

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## Exhibit 5 LSE: Operating Results for Post-Trade Services - LCH; 2017-2018 (£ in millions)

	12 months ended Dec 2018 £m	12 months ended Dec 2017 £m	Variance %	Variance at constant currency %
<b>Revenue</b>				
OTC	268	231	16	17
Non-OTC	136	133	2	2
Other	83	68	22	21
<b>Total revenue</b>	<b>487</b>	<b>432</b>	<b>13</b>	<b>13</b>
Net treasury income	175	120	45	46
Other income <sup>1</sup>	–	10	–	–
<b>Total income</b>	<b>662</b>	<b>562</b>	<b>18</b>	<b>18</b>
Cost of sales <sup>1</sup>	(123)	(88)	40	39
<b>Gross profit</b>	<b>539</b>	<b>474</b>	<b>14</b>	<b>14</b>
Operating expenses before depreciation, amortisation and impairment <sup>2</sup>	(235)	(229)	3	–
<b>Earnings before interest, tax, depreciation, amortisation and impairment<sup>2</sup></b>	<b>304</b>	<b>245</b>	<b>24</b>	<b>–</b>
Depreciation, amortisation and impairment <sup>2</sup>	(62)	(51)	22	–
<b>Operating profit<sup>2</sup></b>	<b>242</b>	<b>194</b>	<b>24</b>	<b>–</b>

Source: Company reports.

### Post Trade Services – CC&G and Monte Titoli (Other)

The remaining operations within Post Trade Services consist of the Italian-based clearing house CC&G and Monte Titoli, the Italian-based Central Securities Depository, which provides settlement, custody, asset servicing, collateral management and issuer services.

## Exhibit 6 LSE: Revenue Breakdown for Post-Trade Services - Other; 2018

£145m

2017: £151m

Clearing (CC&G)  
**28%**

Settlement, Custody & other (Monte Titoli)  
**42%**

Net Treasury Income  
**30%**



Source: Company reports.

These operations generate only about one-fifth the revenue of LCH and, as shown in Exhibit 7, the business contracted slightly last year. The operating margins for this business are fairly robust at

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57% relative to 37% for LCH, due largely to a higher cost of sales at LCH given its offering of services such as third-party compression.

## Exhibit 7 LSE: Operating Results for Post-Trade Services – Other; 2017-2018

(£ in millions)

	12 months ended Dec 2018 £m	12 months ended Dec 2017 £m	Variance %	Variance at constant currency %
<b>Revenue</b>				
Clearing (CC&G)	41	39	6	5
Settlement, Custody and Other (MT) <sup>1</sup>	61	70	(13)	(14)
Inter-segmental revenue	1	1	(25)	(25)
<b>Total revenue</b>	<b>103</b>	<b>110</b>	<b>(7)</b>	<b>(7)</b>
Net treasury income (CC&G)	43	42	2	1
<b>Total income</b>	<b>146</b>	<b>152</b>	<b>(4)</b>	<b>(5)</b>
Cost of sales <sup>1</sup>	(7)	(17)	(62)	(62)
<b>Gross profit</b>	<b>139</b>	<b>135</b>	<b>3</b>	<b>2</b>
Operating expenses before depreciation, amortisation and impairment <sup>2</sup>	(47)	(53)	(10)	–
<b>Earnings before interest, tax, depreciation, amortisation and impairment<sup>2</sup></b>	<b>92</b>	<b>82</b>	<b>12</b>	<b>–</b>
Depreciation, amortisation and impairment <sup>2</sup>	(9)	(11)	(21)	–
<b>Operating profit<sup>2</sup></b>	<b>83</b>	<b>71</b>	<b>17</b>	<b>–</b>

Source: Company reports.

## Capital Markets

The Capital Markets segment comprises what most might consider to be the traditional exchange business. It can be broken down into Primary Markets, which includes admission fees charged to issuers and annual fees based on the market value of the securities issued, and Secondary Markets, which are fees based on the value traded for the UK Equities, Turquoise and MTS fixed income markets. For derivatives, the Italian equities market, and retail fixed income market, a fee is charged on a per trade or per contract traded basis. The Secondary Market segment is subdivided into Equities, which accounted for 41% of revenues in 2018, and Fixed Income, Derivatives and Other, which accounted for 31%.

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## Exhibit 8 LSE: Revenue Breakdown for Capital Markets; 2018

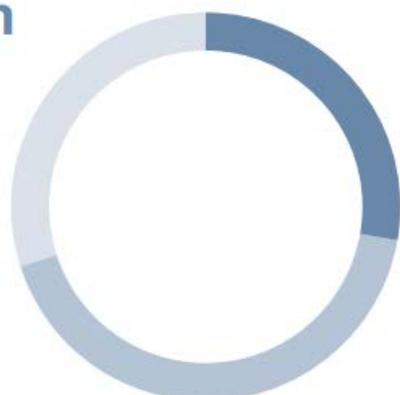
£407m

2017: £391m

Primary Markets  
**28%**

Secondary Markets  
– equities  
**41%**

Secondary Markets  
– fixed income,  
derivatives and other\*  
**31%**



\* Other revenue includes Entrance and Membership fees

Source: Company reports.

Total revenues increased by 4% last year, supported by modest growth across all segments, and operating margins were robust at 45.2%.

## Exhibit 9 LSE: Operating Results for Capital Markets; 2017-2018

(£ in millions)

	12 months ended Dec 2018 £m	12 months ended Dec 2017 £m	Variance %	Variance at constant currency %
<b>Revenue</b>				
Primary Markets	113	110	3	2
Secondary Markets Equities	169	163	4	4
Secondary Markets – Fixed Income, Derivatives and Other	125	118	6	5
<b>Total revenue</b>	<b>407</b>	<b>391</b>	<b>4</b>	<b>4</b>
Cost of sales	(16)	(16)	(2)	(3)
<b>Gross profit</b>	<b>391</b>	<b>375</b>	<b>4</b>	<b>4</b>
Operating expenses before depreciation, amortisation and impairment <sup>1</sup>	(189)	(181)	4	–
Share of loss after tax of associates	(1)	–	–	–
<b>Earnings before interest, tax, depreciation, amortisation and impairment<sup>1</sup></b>	<b>201</b>	<b>194</b>	<b>4</b>	<b>–</b>
Depreciation, amortisation and impairment <sup>1</sup>	(17)	(14)	18	–
<b>Operating profit<sup>1</sup></b>	<b>184</b>	<b>180</b>	<b>3</b>	<b>–</b>

Source: Company reports.

This review of LSE's business should highlight just how integral it is to the financial markets it serves. It is not surprising, therefore, that its operating results display a significant degree of stability and growth. If anything, one might be surprised that revenues and operating profits are as stable as they have been considering that the business can be impacted by any number of exogenous factors such as the economic cycle, which may dictate when and how many companies decide to raise capital, or the market's unpredictable periods of volatility or stability, which have

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positive (or negative, respectively) implications for trading volumes. Increases in trading volumes can add disproportionately to earnings given the high degree of operating leverage in this business. This leverage can work against the company when trading slows, however.

Despite these vagaries, one finds that LSE has experienced consistent growth in revenues and operating profits over the last six years. Although it appears that 2014 was an outlier, the period shown represents only nine months of operations, as the company switched its reporting calendar from a March 31<sup>st</sup> year end to a December 31<sup>st</sup> year end. Adjusted for this, 2014 was another year of expansion for the company. Earnings have been slightly more volatile due primarily to fluctuations in tax expenses, often revolving around the sale or purchase of assets.

## Exhibit 10 LSE: Historical Financial Results; 2012-2018

(£ in millions)

	2012*	2013*	2014**	2015	2016	2017	2018	CAGR***
Total Income	871	1,210	1,044	1,419	1,657	1,955	2,135	16.9%
Operating Profit	348	353	233	404	427	626	751	14.3%
Profit Attributable to Shareholders	217	170	123	328	152	505	480	14.8%

\*LSE's fiscal year ended on March 31st for the years indicated. The year-end figures shown are based on the March 31st figures for the following year.

\*\*Reflects only 9 months of operations as the company switched from a March 31st year end to a December 31st year end.

\*\*\*The compounded annual growth rate is calculated using a period of 5.75 years, from March 31, 2013 (the figures used for 2012) through December 31, 2018

Source: Company reports.

Growth in book value per share, adjusted for dividends, is on par with the annualized increase in earnings. This is particularly notable considering the company has used equity to make sizeable acquisitions, such as the rights issue that was used to acquire the Frank Russell Company in 2014. The rights issue granted shareholders the opportunity to purchase three new LSE shares for every eleven shares held at a 30% discount to the prevailing price. As one can see from the development in book value per share, the transaction was clearly accretive.

## Exhibit 11 LSE: Total Value Created per Share; 2012-2018

(£ in millions)

	2012*	2013*	2014	2015	2016	2017	2018
Equity Attributable to Shareholders	1,531	1,527	2,527	2,744	3,106	3,227	3,343
Shares Outstanding (millions)	271	271	347	348	350	347	348
<b>Book Value per Share</b>	<b>£5.65</b>	<b>£5.63</b>	<b>£7.28</b>	<b>£7.88</b>	<b>£8.87</b>	<b>£9.31</b>	<b>£9.60</b>
Dividends	77	81	56	116	130	159	189
<b>Total Value Created per Share</b>		<b>£5.93</b>	<b>£7.68</b>	<b>£8.60</b>	<b>£9.96</b>	<b>£10.87</b>	<b>£11.70</b>
<b>CAGR: 2012-2018**</b>	<b>13.5%</b>						

\*LSE's fiscal year ended on March 31st for the years indicated. The year-end figures shown are based on the March 31st figures for the following year.

\*\*The compounded annual growth rate is calculated using a period of 5.75 years, from March 31, 2013 (the figures used for 2012) through December 31, 2018

Source: Company reports.

The company made an important acquisition in January 2019, when it purchased a 4.92% equity interest in Euroclear Holding SA/NV for £242 million. Euroclear settles nearly €800 trillion worth of securities transactions per year. It is believed that this equity holding, which will allow LSE a seat on Euroclear's board, will strengthen the existing relationship between the two entities. It also might be viewed as the first step towards a potential acquisition at some point in the future.

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## Valuation Analysis

London Stock Exchange is reasonably priced relative to forward earnings estimates, which implies that returns going forward might approach the 10%-15% annualized earnings growth it has generated historically. This is on par with increases in book value per share adjusted for dividends, and is likely to continue based on the number of new products and initiatives in its pipeline.

In addition, there is a degree of optionality regarding any future periods of extreme market volatility, which should temporarily boost earnings. The greater optionality, however, comes from the potential of another large acquisition, such as Euroclear. The increase in earnings from such a transaction would be massively accretive, as the existing operations could be simply integrated into LSE's existing platform, thus generating significant cost synergies. In the case of Euroclear, which posted 2018 earnings of €22 million on revenues of €1.3 billion, and operating costs of €14 million, the resulting margin expansion and earnings growth to a company like LSE would be significant. Interestingly, the company already settles stock and bond trades for LSE.

There is real potential for Euroclear to be taken over, as a number of existing owners, primarily member investment banks, have been pushing for a sale of the company. There may be other interested parties, however, as Intercontinental Exchange (NYSE: ICE) recently purchased a 10% stake in the company in two separate transactions that took place in 2017 and 2018. Still, the upside should not be overlooked, as it offers meaningful upside to an investment that is already poised to generate steady returns.

To appreciate this, let us first analyze LSE's current valuation. As shown in Exhibit 12, the company trades at 29.2x and 25.3x the consensus earnings forecasts for 2019 and 2020, respectively. While these multiples may appear rich, they are on par with other top exchanges such as CME Group (NASDAQ: CME). Furthermore, the business requires little in terms of ongoing capital expenditures (purchases of property, plant and equipment was £50 million in 2018 relative to depreciation and amortization of £287 million), which means that free cash flow is often greater than earnings.

### **Exhibit 12 LSE: Current Valuation Metrics**

(£ in millions)

Share Price (6/19/2019)	£54.80		
Share Outstanding (millions)	348.2		
<b>Market Capitalization</b>	<b>£19,080</b>		
Net Debt	£1,860		
<b>Enterprise Value</b>	<b>£20,940</b>		
2019E Earnings	654.0	2020E Earnings	755.1
<b>Price/2019E Earnings</b>	<b>29.2x</b>	<b>Price/2020E Earnings</b>	<b>25.3x</b>
2019E EBITDA	1,193.0	2020E EBITDA	1,320.0
<b>EV/2019E EBITDA</b>	<b>17.6x</b>	<b>EV/2020E EBITDA</b>	<b>15.9x</b>

Source: Company reports, Bloomberg, *The European Contrarian* estimates.

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The relationship between earnings and free cash flow is shown in Exhibit 13, which, for the sake of being conservative, includes the purchase of intangible assets in the free cash flow calculation. Although some of these charges might rightly be classified as growth expenditures (such as acquisitions, which contributed to the higher 2017 figure), ongoing investments in IT are also included in these figures. However, even when accounting for these outlays, total free cash flow from 2014 through 2018 was £1.7 billion relative to total profits of £1.6 billion. Based on this, the £654 million consensus earnings estimates for 2019 and 2020 translates into free cash flow yields of approximately 3.7% and 4.25%, which equals free cash flow multiples of 27x and 23.5x.

## **Exhibit 13 LSE: Historical Free Cash Flow, Operating Profit and Earnings; 2012-2018** (£ in millions)

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Cash Flow from Operating Activities	288	498	221	659	722
Purchase of Property, Plant and Equipment	(16)	(30)	(34)	(47)	(50)
Purchase of Intangible Assets	(43)	(87)	(112)	(143)	(144)
<b>Free Cash Flow</b>	<b>229</b>	<b>381</b>	<b>75</b>	<b>469</b>	<b>528</b>
Operating Profit	233	404	427	626	751
Profit Attributable to Shareholders	123	328	152	505	480

Source: Company reports, *The European Contrarian* estimates.

A potential Euroclear acquisition is feasible, as the following analysis shows. Based on LSE's recent 4.92% purchase for £242 million, the implied a total valuation for Euroclear is £4.9 billion. LSE would need £4.7 billion to buy the remaining 95% of the company. Considering it has £1.5 billion in cash on hand, LSE has ample ability to borrow, or issue equity for, the remaining £3.2 billion.

The deal would also offer significant upside to earnings and LSE's valuation. As stated earlier, Euroclear's revenues in 2018 were €1.3 billion and operating costs of €814 million, for operating profits of €14 million (£458 million at today's exchange rate). If one assumes that half of these operating costs are redundant, which is conservative, this would imply that Euroclear could contribute operating profits of €900 million (approximately £800 million) as part of LSE.

Other acquisitions in this industry show us that these estimated cost savings are reasonable. In essence, albeit perhaps overly simplified, a securities exchange, aside from the requisite regulatory approvals and licenses, and the base level of employees and management structure, is little more than a computer platform that matches trades. Therefore, when one exchange acquires another, it can migrate the existing volume of trading and clearing to one system and forego the maintenance expense of the redundant one. Redundancies can include not only pure computer operating expense, but employees, real estate, electric power, and so forth. These are hardly insignificant. For example, when Intercontinental Exchange acquired NYSE Euronext in 2012, NYSE Euronext reported \$1.7 billion in operating expenses, while Intercontinental Exchange had operating expenses of \$536 million. By 2014, total operating expenses for the combined entity were \$1.64 billion, meaning that more than 100% of the Intercontinental Exchange's operating expenses were made redundant after integrating with the larger NYSE platform. If anything, this shows that the

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above analysis of the cost savings and upside related to a Euroclear acquisition may be conservative.

If one adds £4.7 billion to the company's net debt to finance the acquisition, then adds £800 million to the 2019 EBITDA estimate (ignoring, for the sake of simplicity, any depreciation or amortization at Euroclear), one sees that LSE's EV/EBITDA multiple falls from 17.6x at present to 12.8x the 2019 EBITDA estimate pro forma for the Euroclear acquisition. The company would also trade at an estimated 17x pro forma earnings, which is significantly below the current multiple of 29x.

## **Exhibit 14 LSE: EV/EBITDA Valuation Pro Forma for Euroclear Acquisition**

(£ in millions)

Share Price (6/19/2019)	£54.80
Share Outstanding (millions)	348.2
<b>Market Capitalization</b>	<b>£19,080</b>
Net Debt	£6,560
<b>Enterprise Value</b>	<b>£25,640</b>
2019E Pro Forma EBITDA	2,000.0
<b>EV/2019E EBITDA</b>	<b>12.8x</b>

Source: Company reports, *The European Contrarian* estimates.

Should an LSE/Euroclear ultimately trade at 17.5x forward EBITDA forecasts, which is not only the current multiple for LSE, but the current average multiple for the US peer group of CME Group, Intercontinental Exchange, NASDAQ (NASDAQ: NDAQ) and CBOE Global Markets (BATS: CBOE), this would lead to nearly 50% upside to LSE's valuation.

## **Exhibit 15 LSE: Fair Value Target Pro Forma for Euroclear Acquisition**

(£ in millions)

2019E Pro Forma EBITDA	2,000.0
Target Multiple	17.5x
<b>Implied Enterprise Value</b>	<b>£35,000</b>
Net Debt	£6,560
<b>Implied Market Capitalization</b>	<b>£28,440</b>
Current Market Capitalization	£19,080
<b>Potential Upside</b>	<b>49%</b>

Source: Company reports, *The European Contrarian* estimates.

This upside is not reflected in LSE's share price. Nor is the acquisition a necessary condition for shareholders to earn a favorable return, as the business should continue to grow at a double-digit rate in its current state while carrying relatively little risk of long-term impairment. In this sense, shareholders are buying the Euroclear optionality for free, which is an attractive proposition.

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## Conclusion

The world's large financial infrastructure companies are firmly established, economically vital assets and, as such, carry negligible risk. Growth is typically modest, but consistent over time, being generated from new products and the gradual expansion of capital in the markets, both of which lead to increases in the number, and notional value, of securities traded. This risk profile, combined with ongoing growth potential, is reflected in the current valuations of these companies, with LSE trading at a forward free cash flow yield of approximately 3.7%. Its earnings are forecast to grow 15% next year.

There is significant upside to these forecasts, however, as LSE seems interested in acquiring Euroclear. This business could be added to the company's LCH business with little additional overhead, thus making redundant a large portion of Euroclear's operating expenses. LSE could experience a 67% increase in EBITDA from such a transaction, leading to share price appreciation of an estimated 50% in the short term, while allowing for additional future appreciation as the debt used to finance the acquisition is repaid.

This optionality is clearly sizeable, yet investors are paying little for it, as the current valuation is reasonable and allows for adequate risk-adjusted returns even if the company failed to eventually acquire Euroclear. Based on this, shares of LSE are recommended for purchase.

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## Exhibit 16 LSE: Consolidated Income Statement

(£ in millions)

	Notes	2018			2017		
		Underlying Em	Non-underlying Em	Total Em	Underlying Em	Non-underlying Em	Total Em
<b>Continuing operations</b>							
Revenue	5	1,911	–	1,911	1,768	–	1,768
Net treasury income through CCP business	5	218	–	218	162	–	162
Other income	5	6	–	6	25	–	25
<b>Total income</b>		<b>2,135</b>	<b>–</b>	<b>2,135</b>	<b>1,955</b>	<b>–</b>	<b>1,955</b>
Cost of sales	5	(227)	–	(227)	(215)	–	(215)
<b>Gross profit</b>		<b>1,908</b>	<b>–</b>	<b>1,908</b>	<b>1,740</b>	<b>–</b>	<b>1,740</b>
<b>Expenses</b>							
Operating expenses before depreciation, amortisation and impairment	6, 8	(834)	(21)	(855)	(816)	(40)	(856)
Profit on disposal of businesses	8	–	–	–	–	7	7
Share of loss after tax of associates	5, 16	(8)	–	(8)	(9)	–	(9)
<b>Earnings before interest, tax, depreciation, amortisation and impairment</b>		<b>1,066</b>	<b>(21)</b>	<b>1,045</b>	<b>915</b>	<b>(33)</b>	<b>882</b>
Depreciation, amortisation and impairment	6, 8	(135)	(159)	(294)	(103)	(153)	(256)
<b>Operating profit/(loss)</b>		<b>931</b>	<b>(180)</b>	<b>751</b>	<b>812</b>	<b>(186)</b>	<b>626</b>
Finance income		13	–	13	8	–	8
Finance expense		(79)	–	(79)	(70)	–	(70)
Net finance expense	9	(66)	–	(66)	(62)	–	(62)
<b>Profit/(loss) before tax from continuing operations</b>		<b>865</b>	<b>(180)</b>	<b>685</b>	<b>750</b>	<b>(186)</b>	<b>564</b>
<b>Taxation</b>	10	<b>(187)</b>	<b>55</b>	<b>(132)</b>	<b>(168)</b>	<b>190</b>	<b>22</b>
<b>Profit/(loss) for the year from continuing operations</b>		<b>678</b>	<b>(125)</b>	<b>553</b>	<b>582</b>	<b>4</b>	<b>586</b>
<b>Discontinued operations</b>							
Loss after tax for the year from discontinued operations	11	–	–	–	–	(25)	(25)
<b>Profit/(loss) for the year</b>		<b>678</b>	<b>(125)</b>	<b>553</b>	<b>582</b>	<b>(21)</b>	<b>561</b>
<b>Equity holders</b>							
Profit/(loss) for the year from continuing operations		603	(123)	480	513	17	530
Loss for the year from discontinued operations	11	–	–	–	–	(25)	(25)
Profit/(loss) for the year attributable to equity holders		603	(123)	480	513	(8)	505
<b>Non-controlling interests</b>							
Profit/(loss) for the year attributable to non-controlling interests from continuing operations		75	(2)	73	69	(13)	56
Profit/(loss) for the year attributable to non-controlling interests		75	(2)	73	69	(13)	56
		678	(125)	553	582	(21)	561
<b>Earnings per share attributable to equity holders</b>							
Basic earnings per share	12			138.3p			146.4p
Diluted earnings per share	12			136.0p			143.0p
Adjusted basic earnings per share	12			173.8p			148.7p
Adjusted diluted earnings per share	12			170.8p			145.3p

Source: Company reports.

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## Exhibit 17 LSE: Consolidated Balance Sheet

(£ in millions)

At 31 December 2018		Group		Company	
		2018 £m	2017 £m (revised) <sup>1</sup>	2018 £m	2017 £m
	Notes				
<b>Assets</b>					
<b>Non-current assets</b>					
Property, plant and equipment	14	149	129	–	–
Intangible assets	15	4,687	4,589	–	–
Investment in associates	16	25	5	7	3
Investment in subsidiary companies	17	–	–	6,506	6,098
Deferred tax assets	18	42	38	–	–
Derivative financial instruments	20	–	4	–	4
Investments in financial assets	20	31	86	–	–
Retirement benefit asset	19	46	56	–	–
Other non-current receivables	20, 22	30	55	25	37
Contract assets	20, 23	3	–	–	–
		5,013	4,962	6,538	6,142
<b>Current assets</b>					
Trade and other receivables	20, 22	644	689	600	610
Contract assets	23	141	–	–	–
Clearing member financial assets		764,411	673,354	–	–
Clearing member cash and cash equivalents		70,927	61,443	–	–
Clearing member business assets	20	835,338	734,797	–	–
Current tax		147	126	–	–
Investments in financial assets	20	53	19	–	–
Cash and cash equivalents	24	1,510	1,381	6	4
		837,833	737,012	606	614
Assets held for sale	11	–	6	–	–
<b>Total assets</b>		<b>842,846</b>	<b>741,980</b>	<b>7,144</b>	<b>6,756</b>
<b>Liabilities</b>					
<b>Current liabilities</b>					
Trade and other payables	20, 25	538	598	402	275
Contract liabilities	26	153	–	–	–
Derivative financial instruments	20	30	–	30	–
Clearing member business liabilities	20	835,508	734,981	–	–
Current tax		61	70	–	–
Borrowings	20, 27	561	522	544	490
Provisions	29	2	1	–	–
		836,853	736,172	976	765
<b>Non-current liabilities</b>					
Borrowings	20, 27	1,642	1,431	1,642	1,431
Derivative financial instruments	20	17	29	17	29
Contract liabilities	26	118	–	–	–
Deferred tax liabilities	18	475	502	–	–
Retirement benefit obligations	19	22	36	–	–
Other non-current payables	20, 25	11	49	–	–
Provisions	29	10	9	–	–
		2,295	2,056	1,659	1,460
<b>Total liabilities</b>		<b>839,148</b>	<b>738,228</b>	<b>2,635</b>	<b>2,225</b>
<b>Net assets</b>		<b>3,698</b>	<b>3,752</b>	<b>4,509</b>	<b>4,531</b>

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At 31 December 2018	Notes	Group		Company	
		2018 €m	2017 €m (revised) <sup>1</sup>	2018 €m	2017 €m
<b>Equity</b>					
<b>Capital and reserves attributable to the Company's equity holders</b>					
Ordinary share capital	30	24	24	24	24
Share premium	30	965	964	965	964
Retained earnings		424	419	1,701	1,724
Other reserves		1,930	1,820	1,819	1,819
<b>Total shareholders' funds</b>		<b>3,343</b>	<b>3,227</b>	<b>4,509</b>	<b>4,531</b>
<b>Non-controlling interests</b>		<b>355</b>	<b>525</b>	<b>–</b>	<b>–</b>
<b>Total equity</b>		<b>3,698</b>	<b>3,752</b>	<b>4,509</b>	<b>4,531</b>

1. The 31 December 2017 comparatives have been revised for IFRS 3 fair value adjustments on the acquisition of the Yield Book business. Refer to Note 33 for further details

Source: Company reports.