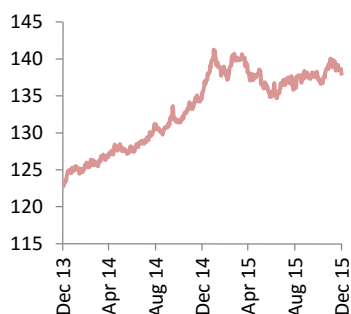


FTSE ORB Index



Source: FTSE

- ▶ Slight improvement in the ORB Index in Q4 on a total return basis, though capital only was down
- ▶ No new issues during the quarter

Retail Bond Review No. 11

Feature Article: Oil Prices and Credit

- ▶ The falling oil price has had many consequences, both politically and economically. In this article we look at the financial effects and, in particular at the shale oil industry.
- ▶ We give a brief history of its development and show how its combination of a high cost of production and higher debt funding, together with some technical failings, have led to the difficulties it now finds itself in.
- ▶ We also briefly consider the two ORB born oil and gas bonds, from Premier Oil and EnQuest.
- ▶ Both are trading with yields over 20%, a level many consider distressed, and outline some of the issues for investors.
- ▶ Reflecting the growing importance of this market to both retail investors and issuers, Hardman & Co has produced the following detailed report. This work has been undertaken by our Financials Analyst Brian Moretta.

Analyst

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London
Stock Exchange

A range of source data for retail bonds traded on London Stock Exchange, in addition to further information on the ORB market, is available at

www.londonstockexchange.com/retail-bonds

Table of Contents

Introduction	3
Feature Article: Oil Prices and Credit	4
Market Performance	9
Index Data Tables	9
Yield Curve	10
New Issues	11
Significant Economic and Market News.....	11
Glossary.....	13
Disclaimer	18
Hardman Team.....	19

Introduction

This is the eleventh issue of our regular publication on the retail bond market. Its aim is to offer a comprehensive periodic review of this growing market, as well as providing information on the performance of this security class and a reference on individual bonds within it. Each issue will also carry a feature article covering a topical issue. This edition explores the effect of oil prices on credit.

About Hardman & Co

Hardman & Co is a research company based in London which has been established for nearly 20 years. We have a team of experienced investment analysts who provide research that is distributed globally. Research is undertaken on quoted and private companies as well as individual projects. We cover both equity and bond markets. Sector expertise includes: Agriculture, Building & Construction, Business Services, Education, Financial Services, Life Sciences, Media, Mining, Oil & Gas, Property, Technology and Retail Bonds. Research is only one part of the suite of services which we offer to enable investors and companies to engage with each other.

Brian Moretta, Financials Analyst

Brian has had a 20-year career in financial services, including over a decade as a fund manager. He started as a trainee actuary, but followed that with a spell in academia, where he completed his actuarial qualification and gained a PhD in Applied Probability. He then joined SVM Asset Management, where he specialised in analysing financial services companies. While there, Brian managed two traded endowment funds and an equity fund, worked on hedge funds and the quantitative risk management function. Since leaving SVM he has followed a pluralist lifestyle, mixing financial/investment consulting with spells lecturing on actuarial science and financial economics.

Feature Article: Oil Prices and Credit

Executive Summary

The falling oil price has had many consequences, both politically and economically. In this article we look at the financial effects and, in particular at the shale oil industry. We give a brief history of its development and show how its combination of a high cost of production and higher debt funding, together with some technical failings, have led to the difficulties it now finds itself in.

We also briefly consider the two ORB born oil and gas bonds, from Premier Oil and EnQuest. Both are trading with yields over 20%, a level many consider distressed, and outline some of the issues for investors.

Introduction

In the summer of 2014 Brent crude oil hit a peak price for the year of \$115. By the end of 2015 it was trading at \$37 and has since moved lower. A small drop in oil prices is positive for most economies, and both manufacturers and consumers gain a benefit from the reduction. The exceptions are economies that are dependent on oil production as their primary revenue source, for who decreases are largely negative unless they have the effect of stimulating demand, which allows them to compensate by boosting volumes.

However large falls in the oil price, such as the one we have experienced can have more complex effects.

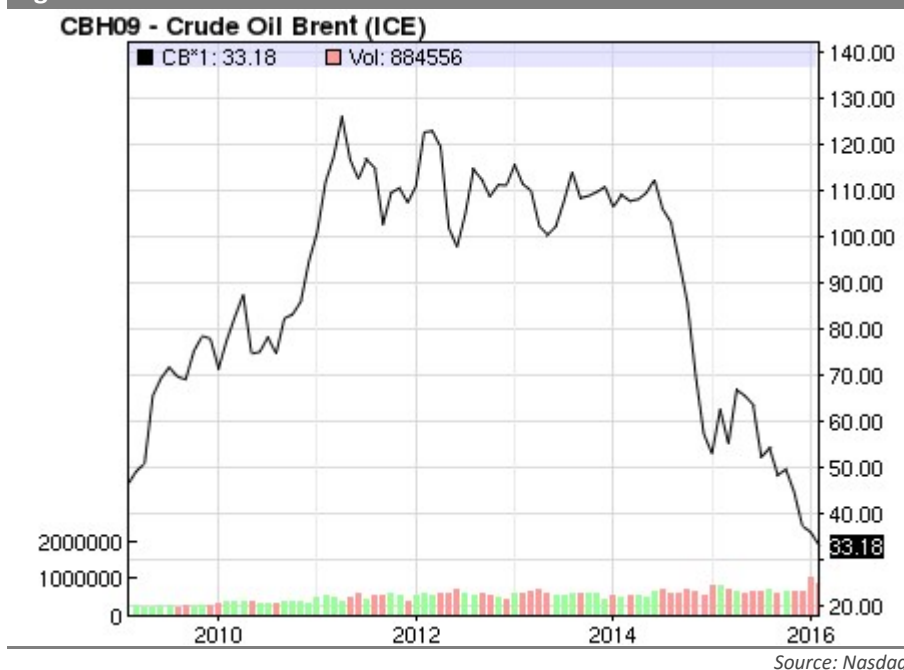
Why has the oil price fallen?

Oil has some peculiarities compared to many commodities.

- ▶ Oil has a relatively steep demand curve. This means that even small changes in the supply/demand balance can give dramatic movements in the oil price.
- ▶ For several decades the price has not been entirely market based. The Organization of Petroleum Exporting Countries (OPEC) has been very influential in determining the price.
- ▶ A lot of the production takes place in countries that are not politically stable. Which causes which is a matter for debate, but it does mean that supply can be rather volatile.

It should also be noted that oil comes in various qualities which differ by the density of various hydrocarbons. Each has its own price, though they do tend to move in parallel. The two most commonly quoted are Brent (based on North Sea oil) and WTI (West Texas Intermediate), though that may be more to do with locations of financial markets than sources of oil.

Figure 1: Oil Price



If we look at the history the oil price we can see three distinct phases since 2008. Each of these can be described in very broad terms, though of course these mask many nuances.

- ▶ 2009-2011: the global recovery steadily boosted demand leading to a higher price.
- ▶ 2012-2014: supply had increased to roughly match demand, most notably due to greater production from North American shale oil.
- ▶ 2014 onwards: OPEC, particularly Saudi Arabia, stopped restricting supply leading to a falling oil price.

The last phase has arguably been extended by economic weakness, most notably in China. In this article it is the second and third phases that are of the most interest to us.

Shale Oil Boom

Shale oil is conventional oil that is trapped in rock that has low porosity and permeability, which makes it difficult for producers to extract the hydrocarbons. There have been significant technological improvements which have made extraction a practical prospect. However, compared to more conventional extraction methods the costs remain much higher¹ and it took a rise in the oil price to make extraction economically viable. For comparison production costs are typically \$50-\$100 per barrel for shale oil, compared to \$10-\$25 for conventional drilling methods in the middle east.

Drilling intensity shot up in the US in the early part of this decade, with a few hundred wells brought online before 2011 rising to over 4,000 in 2012. Canada shows a similar

¹ As well as the financial costs, environmental concerns seem to be higher too, particularly around fracking.

pattern, together with the US far exceeding the growth in the rest of the world. By 2014 the US had become (on a net basis) self sufficient in oil. Overall shale oil production rose from under 2m barrels per day (bpd) to over 5.5m bpd by early 2015.

However, more recently the industry has run into two problems. One was a technical one, with some shale oil wells turning out to be significantly less productive than anticipated. Consequently drilling costs are being spread over smaller production amounts, pushing effective costs up.

The second is the one described above i.e. the falling oil price. With oil below \$40 the vast majority of shale oil producers struggle to be economic. It should be noted that this is a deliberate consequence of OPEC policy, in particular that of Saudi Arabia. Historically it has been the swing producer, growing or shrinking its production to keep the oil price stable. Recently it has kept production up and let the price fall with the explicit aim of shrinking US shale oil production.

However, the cost of setting up a well is a large part of the overall cost and, consequently, the marginal cost of production is much lower than the overall cost. So established wells are continuing to produce, but few new ones are being commissioned.

If interest costs are still being covered then the question then becomes whether an oil well will earn enough to recover the costs sunk into opening the wells in the first place. The credit issue puts in an appearance here – with interest rates over the last few years at long-term lows a large part of the industry has been financed by debt rather than equity (64% of total over 2011-2013 by figures from Tudor Pickering Holt). This is a much higher percentage than earlier developments, which used more equity.

Credit Issues

In the short term, with the odd exception, the industry can stumble along for a while. Even at current oil prices, many producers can service the interest payments of their debts by running their existing wells as fast as possible. The issues will arise either when a well starts to become less productive or refinancing is required.

The fading of US shale oil production has already started, with the peak of overall production passing around a year ago. Finance for new wells has, understandably stopped and, with wells drying up faster than originally modelled, we now see some producers starting to struggle.

This may accelerate when the debt comes up for refinancing. At the moment there is little, if any, new money available for shale oil producers and the value of the assets these companies own have been much reduced by the falling oil price. If the industry is really going to have problems that will probably be the cause.

It should be noted that this is a substantial problem, with FactSet estimating aggregate debt at \$169bn at last June. This is much smaller than, say, the mortgage figures that caused the last recession. Substantial defaults will hurt the financial industry, but in themselves should not cause any systemic issues. However, there will be secondary effects, as laid off workers represent an increased credit risk. These are harder to estimate, but systemic issues are only likely to arise if other problems coincide.

Oil Producers on ORB

There have been two oil producers who have issued bonds on ORB – Premier Oil and EnQuest. As noted in the market reports below, the price of both of these fell sharply in the second half of last year. At the end of 2015 they yielded 22% and 24% respectively. It is fair to say that while the falling oil price has presented challenges for both companies, they are not as badly off as many shale oil producers.

Premier Oil

Premier Oil has oil and gas assets around the world, some of which are at the exploratory stage and others that are primarily production fields. It should be noted that at the time of writing the shares, but not the bonds, are suspended as the company is purchasing assets from E.On and this has been deemed to be a reverse takeover.

It estimates the average cost of production in 2015 will be \$16 per barrel, so has some headroom operationally. Like many it has reined in its capital expenditure plans too. The balance sheet has 59% of its capital from debt. In aggregate it has just under \$2.5bn of debt, roughly three quarters of which comes due before 2020. All these figures look likely to change significantly after the E.On deal.

The Premier Oil retail bond was issued in December 2013 with a seven-year term and 5% coupon, so it currently has an unexpired term of just under four years. The bond is unsecured, as are the other debts in the group. However, the majority of assets and debt are held in subsidiaries. This has the effect of ranking the bond behind those debts in the event of a wind-up up, something known as structural subordination. If there is a default and the assets fall short of the aggregate debts then the retail bond is first in line to lose out.

EnQuest

EnQuest is more focussed on development and production than exploration, and is also less geographically diverse than Premier Oil with three quarter of production in the North Sea and the balance in Malaysia.

With a greater UK focus the company is running with a higher operating cost base than Premier Oil and estimates that production costs in 2016 will be \$26-28 per barrel (this is comparable with Premier's UK operations). With net debt at the half year of \$1.2bn and equity at the full year of \$1.4bn the balance sheet is slight less geared than Premier's.

The EnQuest retail bond was issued in February 2013, with a further tap later that year. It initially had a 9-year term and a coupon of 5.5%. The bond is unsecured, but other debts in the group are not. Like Premier Oil, the majority of the assets are held in subsidiaries. However, in EnQuest's case the revolving debt that is held at company level is secured on the shares of the subsidiaries and their assets. The net result is the same, in that the retail bond ranks behind other debts in the event of the company winding up. In a similar way to Premier Oil, in the event of a default and the assets being less than the aggregate debts, the retail bond holders would be first in line to take the shortfall.

Factors for Retail Bondholders

Clearly whether the future trajectory of the oil price is an important factor in whether either of these bonds are a good investment. Those who believe the price will rise will probably get better performance from either company's shares if they are right. If they are wrong then the bond will give more downside protection than the equity, though a default in either case is unlikely to give a full return of capital. However, the current price of both bonds is well below the nominal value and whether the recovery in a default would be more than that is harder judgement to make.

Operationally the position is more nuanced. Premier Oil's position is complicated by the forthcoming E.On transaction. Both companies have much lower operating costs than the share oil industry and better balance sheets, so would seem to be likely to be able to wait longer for any upturn. We do caveat that, however, by observing that the book values of many of their assets are based on higher oil prices than current levels and may not achieve those values in the event of a sale or liquidation.

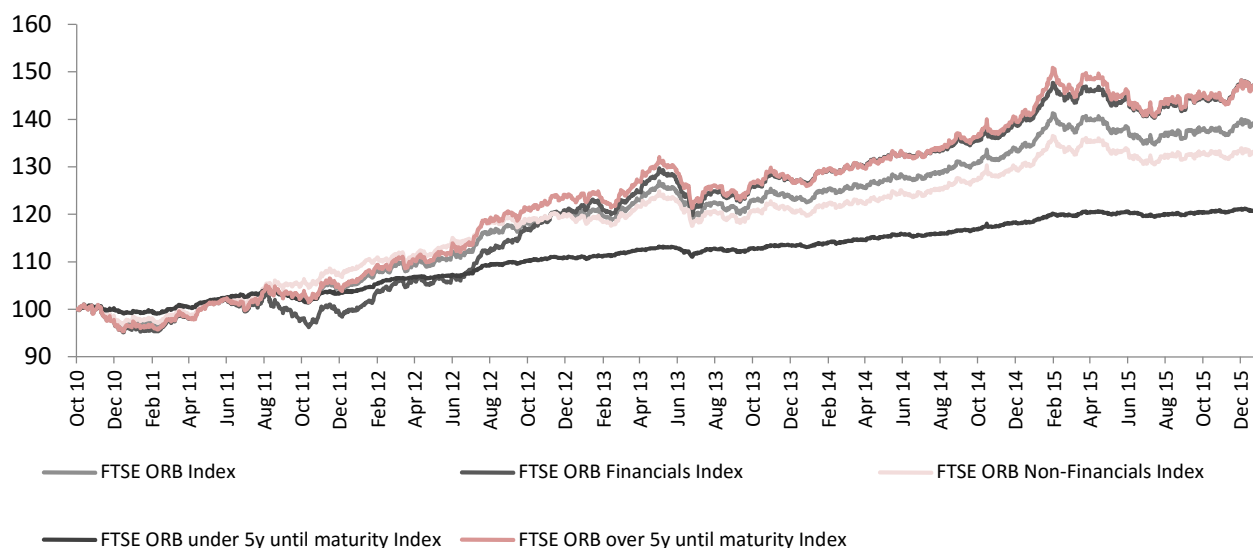
Summary

There has been much concern about the oil industry and the debts it carries. The shale oil companies in the US and Canada are the highest cost producers and the most burdened with debt, and it is right that the most intense concerns are focussed on them. The rest of the oil and gas industry still require scrutiny, but many are likely to be able to survive until the shale industry has cleared out somewhat. Their hope has to be that if supply falls away then the oil price starts to rise again and the pressure comes off them.

The ORB listed bonds in the area are trading at significant discounts. The risks are elevated for them too, but they are in a better position than many others.

Market Performance

Graph title – One picture page width



Source: FTSE, Hardman & Co

The 4th quarter of 2015 saw a slight improvement in the FTSE ORB Index on a total return basis, though a decrease of just over 1% in the capital only one. November was a stronger month, with both October and December showing weakness. As the table shows, it was a really mixed quarter for the segment indices, with the oil companies having a strong adverse effect on the non-financials index.

Index Data Tables

Performance & Volatility – Total Return (GBP)

Index	No Issues	Nominal £bn	Performance %			
			3M	1yr	3yr	5yr
FTSE ORB Index	88	21.71	0.21	1.92	12.39	30.93
FTSE ORB Financials Index	48	9.74	1.02	3.48	15.20	46.11
FTSE ORB Non-Financials Index	40	11.97	-0.47	0.64	10.14	21.53
FTSE ORB under 5y until Maturity Index	43	8.43	0.14	1.62	6.50	16.04
FTSE ORB over 5y until Maturity Index	45	13.28	0.26	1.97	15.06	37.11

Index Characteristics

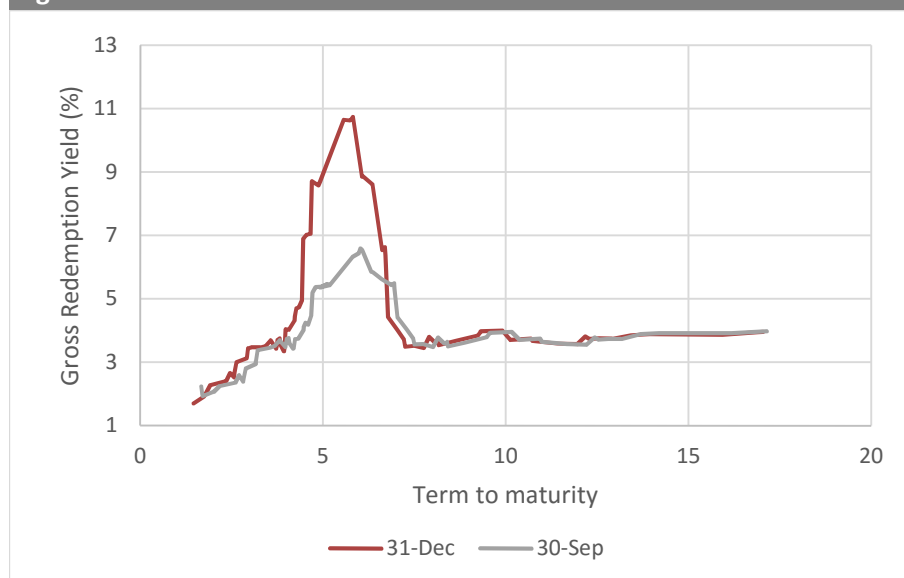
Index	Gross redemption yield* (%)			Modified Duration*		
	3mths ago	now	change	3mths ago	now	change
FTSE ORB Index	3.66	3.73	0.07	6.70	6.61	-0.09
FTSE ORB Financials Index	3.90	3.89	-0.01	7.31	7.26	-0.05
FTSE ORB Non-Financials Index	3.43	3.56	0.14	6.19	6.06	-0.13
FTSE ORB under 5y until Maturity Index	2.82	3.21	0.39	2.73	2.61	-0.12
FTSE ORB over 5y until Maturity Index	3.80	3.82	0.01	8.91	8.90	-0.01

Source: FTSE, Hardman & Co

* See glossary

Yield Curve

Figure 3: Yield curves for bonds in the FTSE ORB Index



Source: FTSE, Hardman & Co Research

The final quarter of 2015 continued the trend of contrasting themes moving different parts of the ORB markets in different directions. This quarter was dominated by moves in individual credits, with the yields on the two oil company bonds and Eros International all rising to over 20%. The former are clearly seeing the effect of the continued weak oil price affect perceptions of their credit risk. This has driven the rise in the 'hump' in the ORB yield curve.

Gilt yields increased a little over the quarter, with the middle of the curve gaining 15-20bps. Moves in credit spreads broadly offset this move with a slight narrowing, leaving much of the yield curve outside some specific credits little changed.

The shape of the curve is influenced by the variety of credit qualities available in the market. Broadly in the 5-10 year range there is a much greater GRY spread, suggesting a greater variety in credit quality. The main article in Retail Bond Review No 2 looked at this in more detail.

New Issues

The fourth quarter was the first quarter since the summer of 2001 that saw no new issues. The total amount raised in 2015 was £394m.

Significant Economic and Market News

The most significant single item of news in the fourth quarter was the move by the US Federal Reserve to start raising interest rates. There was much debate before and afterwards about whether this was the right move or not. Those against point to the lack of inflation and insipid growth rates that the US has been experiencing. Those in favour point to the much improved employment situation and the inflated asset prices that cheap money has brought. That both cases have merit suggest it was not an easy decision. The Federal Reserve to some extent committed itself with earlier statements, and having surprised the markets in the Autumn by not make a move probably did not want to do so again.

The reality is that a single 25bps rise will have little effect on the US economy and it is the pace of future increases that will matter. Immediately after the increase the market expectation was for another 25bps increase each quarter in 2016, though this has faded and the markets are now pricing in only one or two rises.

The other notable price move has been the fall in the oil price. Brent finished the year at \$37, having started the quarter at \$51, with the decline continuing into 2016. While this has some positive effects on most economies in the developed world, markets appear to have focussed on the weak demand that this suggests.

As we discuss in the main article, the global credit markets in turn are worried about the financial health of many oil companies. The main focus is on US and Canadian shale oil producers, most of who have a higher cost of production than the rest of the world and a significant amount of debt funding. This is exacerbated by concerns that shale oil may be less productive in the long run than intended. Debt from this sector was among the worse performing of 2015.

Economic concerns have continued to focus on China in particular. Growth forecasts continue to be downgraded, aggravated by concerns about the reliability of the statistics. The fear is even if the official figures are declining that the underlying reality is worse. With debt levels well above those of 2007 China's ability to stimulate the economy may be weaker than in the last recession.

The UK economy, however, continued its steady improvement and remains amongst the strongest in the developing world. Overall inflation still hovers around zero, but excluding oil it is slightly better. Employment and GDP remain steady rather than spectacular, and Mark Carney made comments after the quarter end that he did not think the overall environment was robust enough to start rate rises. Pundits are now deferring moves to 2017, but there is probably too much uncertainty to make a prediction with any confidence. Despite that gilt yields rose slightly over the quarter, with the 10 year yield moving to 1.96% from 1.76%, though they have fallen sharply since.

Europe on the other hand continued to be sluggish on average, though there is still considerable variation between countries. With no apparent threat of an economic crisis and no significant changes from the ECB it felt like a quiet quarter.

The corporate bond markets had a record year for issuance, but prices suffered towards the end of the year. Credit spreads rose, particularly for weaker credits though there was significant sector divergence as noted above, and most major categories recorded losses in 2015. The new year has started weakly, with only top rated companies managing to get any traction in the new issues market.

Glossary

Flat (running) yield	The interest earned expressed as a % of the price paid for the asset. Note that this ignores the capital gain or loss inherent by buying the asset at a price greater than or lower than the eventual redemption price (see Gross Redemption Yield).
Gross Redemption Yield	The annual interest rate at which the present value of all future payments on a bond equals its current price. It takes into account any capital gain/loss incurred as well as the coupon payments.
Modified Duration	The average time of future payments, weighted by their present value. It is a measure of interest rate sensitivity, with higher values denoting greater sensitivity.

Bond Statistics as of 31st December 2015: Fixed Rate ORB Corporate Bonds (alphabetically by issuer)

Name	ISIN	Maturity Date	Coupon Value	Next Coupon Date	Period of Coupon	Price	Flat Yield	GRY	Duration	Liquidity
A2D FUNDING II PLC A2D FUND.26	XS1103286305	30 Sep 26	4.5	30 Mar 16	6 month	102.90	4.37	4.21	8.57	6983439
A2D FUNDING PLC A2D FUND. 22	XS0975865949	18 Oct 22	4.75	18 Apr 15	6 month	106.05	4.48	3.77	5.86	3044935
ALPHA PLUS HOLDINGS PLC ALPHA PLUS 19	XS0853358801	18 Dec 19	5.75	18 Dec 15	6 month	106.88	5.38	3.89	3.60	1560786
ANGLIAN WATER SERVICES FINANCING PLC ANGLIANWTR6.875	XS0089553282	21 Aug 23	6.625	19 Aug 16	12 month	127.25	5.21	2.64	6.30	9410
ANHEUSER-BUSCH INBEV NV AB INBEV 6.50%	BE6000183549	23 Jun 17	6.5	23 Jun 16	12 month	107.00	6.08	1.62	1.41	2618395
AVIVA PLC AVIVA 6.125%36€	XS0138717441	14 Nov 36	6.125	14 Nov 16	12 month	106.55	5.75	5.58	12.50	12572537
B.A.T. INTERNATIONAL FINANCE PLC B.A.T.IF6.375%	XS0182188366	12 Dec 19	6.375	12 Dec 16	12 month	115.58	5.52	2.20	3.62	1313171
BARCLAYS BANK PLC BARCLAYS.5.75%	XS0134886067	14 Sep 26	5.75	14 Sep 16	12 month	111.58	5.15	4.37	8.30	12204298
BEAZLEY PLC BEAZLEY 5.375%	XS0827693663	25 Sep 19	5.375	25 Mar 16	6 month	103.00	5.22	4.54	3.38	1941858
BRITISH TELECOMMUNICATIONS PLC BR.TEL.5.75%BDS28	XS0097283096	07 Dec 28	5.75	07 Dec 15	12 month	120.40	4.78	3.73	9.77	979234
BRITISH TELECOMMUNICATIONS PLC BR.TEL.8.625%	XS0052067583	26 Mar 20	8.625	26 Mar 16	12 month	124.95	6.90	2.35	3.59	135492
BRITISH TELECOMMUNICATIONS PLC BRIT.TEL.NTS16	XS0123682758	07 Dec 16	7.5	07 Dec 15	12 month	106.60	7.04	0.41	0.93	8792652
BRUNTWOOD INVESTMENTS PLC BRUNTWOOD 6%	XS0947705215	24 Jul 20	6	24 Jan 16	6 month	103.88	5.78	5.10	3.96	1245204
BURFORD CAPITAL PLC BURFORD 22	XS1088905093	19 Aug 22	6.5	19 Jan 16	6 month	105.33	6.17	5.60	5.40	3171477
DAILY MAIL & GENERAL TRUST PLC DMGT.5.75%18	XS0170485204	07 Dec 18	5.75	07 Dec 15	12 month	108.55	5.30	2.67	2.77	377512
EASTERN GROUP EAST.GP.8.5%2025	XS0058209106	31 Mar 25	8.5	31 Mar 16	12 month	140.75	6.04	3.31	6.87	130318
EASTERN POWER NETWORKS PLC EAST.POWER5.75%	XS0187202303	08 Mar 24	5.75	08 Mar 16	12 month	117.95	4.88	3.22	6.61	3080170
ENQUEST PLC ENQUEST 22	XS0880578728	15 Feb 22	5.5	15 Feb 16	6 month	41.63	13.21	25.80	4.46	2763380
ENTERPRISE INNS PLC ENTER INNS 2018	XS0163019143	06 Dec 18	6.5	06 Dec 15	6 month	106.60	6.10	4.12	2.70	2002702
EROS INTERNATIONAL PLC EROS INT 21	XS1112834608	15 Oct 21	6.5	15 Apr 16	6 month	42.88	15.16	27.93	4.20	4615172
EUROPEAN INVESTMENT BANK EURO.I.BK.16	XS0602217159	07 Dec 16	3.25	07 Dec 15	12 month	101.70	3.20	1.40	0.93	15948697
EUROPEAN INVESTMENT BANK EURO.IV.8.75	XS0055498413	25 Aug 17	8.75	25 Aug 16	12 month	113.13	7.74	0.72	1.58	8098637
FIRSTGROUP PLC FIRSTGROUP6.125	XS0181013607	18 Jan 19	6.125	18 Jan 16	12 month	109.00	5.62	2.98	2.72	358267
GE CAPITAL UK FUNDING GE CAP.UK 18	XS0381559979	06 Aug 18	6.75	06 Aug 15	12 month	112.45	6.00	1.77	2.41	1337476
GE CAPITAL UK FUNDING GE CAP.UK 33	XS0340495216	18 Jan 33	5.875	18 Jan 16	12 month	131.60	4.46	3.40	11.51	3088
GE CAPITAL UK FUNDING GE CAP.UK5.625%	XS0297507773	25 Apr 19	5.625	25 Apr 16	12 month	111.48	5.05	2.00	3.02	1203803
GKN HOLDINGS PLC GKN 6.75% BDS19	XS0103214762	28 Oct 19	6.75	28 Oct 16	12 month	112.90	5.98	3.11	3.48	507492
GLAXOSMITHKLINE CAPITAL PLC GLAXOSMSC 5.25%	XS0140516864	19 Dec 33	5.25	18 Dec 15	6 month	122.00	4.30	3.61	12.45	2094942
HAMMERSON PLC HAMMERSON 6%26	XS0184639895	23 Feb 26	6	23 Feb 16	12 month	120.20	4.99	3.59	7.77	897220
HAMMERSON PLC HAMMERSON 7.25%28	XS0085732716	21 Apr 28	7.25	21 Apr 16	12 month	133.75	5.42	3.77	8.76	9291117
HAMMERSON PLC HAMMERSON6.875%	XS0109514538	31 Mar 20	6.875	31 Mar 16	12 month	117.00	5.88	2.58	3.69	633348
HELICAL BAR PLC HELICAL B.20	XS0942129957	24 Jun 20	6	24 Jun 16	6 month	103.85	5.78	5.09	3.99	2287161
HSBC BANK PLC HSBC BK.5.375%	XS0174470764	22 Aug 33	5.375	22 Aug 16	12 month	111.03	4.84	4.46	11.93	16265603
HSBC BANK PLC HSBC BK.6.5%NT2	XS0088317853	07 Jul 23	6.5	07 Jul 16	12 month	116.30	5.59	3.94	6.12	2369011
ICAP PLC ICAP 5.50%	XS0805454872	31 Jul 18	5.5	31 Dec 15	6 month	103.73	5.30	4.00	2.38	3708110

Bond Statistics as of 31st December 2015: Fixed Rate ORB Corporate Bonds (alphabetically by issuer)

Name	ISIN	Maturity Date	Coupon Value	Next Coupon Date	Period of Coupon	Price	Flat Yield	GRY	Duration	Liquidity
IMPERIAL TOBACCO FINANCE PLC IMP.TOB.FIN.6.25%	XS0180407602	04 Dec 18	6.25	04 Dec 16	12 month	111.33	5.61	2.19	2.75	15713
INTERMEDIATE CAPITAL GROUP PLC INT.CAP.GRP	XS0716336325	21 Dec 18	7	21 Jun 16	6 month	106.15	6.59	4.80	2.73	580699
INTERMEDIATE CAPITAL GROUP PLC INT.CAP.GRP20	XS0818634668	19 Sep 20	6.25	19 Mar 16	6 month	104.15	6.00	5.31	4.09	2433251
INTERMEDIATE CAPITAL GROUP PLC INT.CAP.GRP23	XS1200576699	24 Mar 23	5	24 Sep 15	6 month	99.63	5.02	5.13	6.06	5180845
INTERNATIONAL PERSONAL FINANCE PLC INTER.PERS.20	XS0919406800	08 May 20	6.125	08 May 16	6 month	88.88	6.89	9.51	3.80	4609503
LADBROKES GROUP FINANCE PLC LADBROKES GP.22	XS1066478014	16 Sep 22	5.125	16 Mar 16	6 month	97.75	5.24	5.61	5.65	2556270
LEGAL & GENERAL FINANCE PLC LEG&GEN.5.875%	XS0121464779	11 Dec 31	5.875	11 Jun 16	6 month	127.35	4.61	3.64	11.20	307204
LLOYDS BANK PLC LLOYDS BK 5.50%	XS0604804194	25 Sep 16	5.5	25 Mar 16	6 month	103.10	5.34	1.24	0.72	6167636
LLOYDS BANK PLC LLOYDS BK. 25	XS0503834821	22 Apr 25	7.625	22 Apr 15	6 month	128.33	5.94	3.99	7.07	2431229
LLOYDS BANK PLC LLOYDS BK.40	XS0543369184	17 Sep 40	6.5	17 Sep 16	12 month	141.25	4.60	3.87	14.56	14478968
LLOYDS BANK PLC LLOYDS BK.9.625%	XS0043098127	06 Apr 23	9.625	06 Oct 16	12 month	134.45	7.16	4.04	5.51	2754916
LONDON POWER NETWORKS PLC LONDON POW.27	XS0148889420	07 Jun 27	6.125	07 Jun 16	12 month	124.03	4.94	3.53	8.63	35786
LONDON STOCK EXCHANGE GROUP PLC LON.STK.EX21	XS0846486040	02 Nov 21	4.75	02 May 16	6 month	109.00	4.36	3.07	5.15	5140385
NATIONAL GRID ELECTRICITY TRANSMISSION PLC NAT.GRID 5.875%	XS0094073672	02 Feb 24	5.875	02 Feb 16	12 month	122.60	4.79	2.72	6.52	994264
NATIONAL GRID ELECTRICITY TRANSMISSION PLC NAT.GRID6.50%£	XS0132735373	27 Jul 28	6.5	27 Jan 16	12 month	133.58	4.87	3.21	9.29	508254
NATIONAL GRID GAS PLC NAT.GRD.G 6%	XS0141704725	07 Jun 17	6	07 Jun 16	12 month	106.55	5.63	1.31	1.37	3301651
NESTLE FINANCE INTERNATIONAL LTD NESTLE FIN 23	XS0860561942	30 Nov 23	2.25	30 Nov 15	12 month	100.55	2.24	2.17	7.31	3709894
NORTHUMBRIAN WATER FINANCE PLC NTHNBN.WTR.6%17	XS0139335029	11 Oct 17	6	11 Oct 16	12 month	107.73	5.57	1.52	1.71	761460
PARAGON GROUP OF COMPANIES PLC PARAGON GP20	XS0891023086	05 Dec 20	6	05 Mar 16	6 month	98.55	6.09	6.46	4.05	2214393
PARAGON GROUP OF COMPANIES PLC PARAGON GP24	XS1275325758	28 Aug 24	6	28 Feb 16	6 month	98.40	6.10	6.34	6.71	4260243
PLACES FOR PEOPLE CAPITAL MARKETS PLC PLACES PEO 5%	XS0635014177	27 Dec 16	5	27 Dec 15	6 month	102.50	4.88	2.43	0.98	3209285
PREMIER OIL PLC PREMIER OIL20	XS0997703250	11 Dec 20	5	11 Jun 16	6 month	50.55	9.89	23.07	4.15	4113178
PRIMARY HEALTH PROPERTIES PLC PRIMARY HLTH 19	XS0795445823	23 Jul 19	5.375	23 Jan 16	6 month	103.45	5.20	4.34	3.23	1099839
PROVIDENT FINANCIAL PLC PROV.FIN 23	XS1209091856	09 Oct 23	5.125	09 Mar 16	6 month	101.73	5.04	4.91	6.44	1245970
PROVIDENT FINANCIAL PLC PROV.FIN 7.5%	XS0605672558	30 Sep 16	7.5	30 Mar 16	6 month	103.13	7.27	3.22	0.73	1533600
PROVIDENT FINANCIAL PLC PROV.FIN 7% 17	XS0762418993	04 Oct 17	7	04 Apr 16	6 month	105.00	6.67	4.04	1.65	2797934
PROVIDENT FINANCIAL PLC PROV.FIN6%21	XS0900863084	27 Sep 21	6	27 Mar 16	6 month	104.25	5.76	5.20	4.87	1880204
PROVIDENT FINANCIAL PLC PROVIDENT 7.00%	XS0496412064	14 Apr 20	7	14 Apr 16	6 month	108.50	6.45	4.83	3.74	316252
PRUDENTIAL PLC PRU.6 7/8%2023	XS0083544212	20 Jan 23	6.875	20 Jan 16	12 month	125.75	5.47	2.80	5.67	490217
RETAIL CHARITY BONDS PLC RETAIL CB21	XS1066485902	29 Jul 21	4.375	29 Jan 16	6 month	103.53	4.23	3.70	4.92	320349
RETAIL CHARITY BONDS PLC RETAIL CB25	XS1200788369	30 Apr 25	4.4	29 Apr 16	6 month	99.63	4.42	4.50	7.68	617297
ROLLS-ROYCE PLC ROLLS-R 7.375%	XS0112487482	14 Jun 16	7.375	14 Jun 16	12 month	102.70	7.18	1.36	0.46	955439
ROYAL BANK OF SCOTLAND PLC ROY.BK.SC.20	GB00B3N3WC23	01 Feb 20	5.1	01 Feb 16	12 month	109.47	4.66	2.62	3.64	415683
SAFEWAY PLC SAFEWAY 6.00%	XS0140144204	10 Jan 17	6	10 Jan 16	12 month	104.20	5.76	1.78	0.96	835524

Bond Statistics as of 31st December 2015: Fixed Rate ORB Corporate Bonds (alphabetically by issuer)

Name	ISIN	Maturity Date	Coupon Value	Next Coupon Date	Period of Coupon	Price	Flat Yield	GRY	Duration	Liquidity
SAFEWAY PLC SAFEWAY 6.125%	XS0093004736	17 Dec 18	6.125	16 Dec 16	12 month	109.05	5.62	2.88	2.79	1741498
SCOTTISH POWER UK PLC SCOT.PWR.UK8TE%	XS0073359548	20 Feb 17	8.375	20 Feb 16	12 month	107.90	7.76	1.25	1.05	1702744
SEGRE PLC SEGRE 6%19	XS0179346274	30 Sep 19	6	30 Mar 16	6 month	112.55	5.33	2.48	3.38	77284
SEGRE PLC SEGRE.5.75	XS0221324154	20 Jun 35	5.75	20 Jun 16	12 month	124.38	4.62	3.93	12.68	97730
SEGRE PLC SEGRE.6.75	XS0107099466	23 Feb 24	6.75	23 Feb 16	6 month	124.00	5.44	3.38	6.47	1282181
SEGRE PLC SEGRE5.50%	XS0221323693	20 Jun 18	5.5	20 Jun 16	12 month	108.39	5.08	1.96	2.31	193498
SEVERN TRENT UTILITIES FINANCE PLC SEVERN T.6.125%	XS0094475802	26 Feb 24	6.125	26 Feb 16	12 month	121.10	5.06	3.15	6.52	20056
SEVERN TRENT UTILITIES FINANCE PLC SEVERN T.6.25%BD	XS0097777253	07 Jun 29	6.25	07 Jun 16	12 month	129.33	4.83	3.48	9.72	19675
SMITHS GROUP PLC SMITH IND 7.25%	XS0111725049	30 Jun 16	7.25	30 Jun 16	12 month	102.73	7.06	1.68	0.50	33025
SSE PLC SSE.5.875%	XS0095371638	22 Sep 22	5.875	22 Sep 16	12 month	118.05	4.98	2.88	5.75	460265
ST.MODWEN PROPERTIES PLC ST.MODWEN 19	XS0841076465	07 Nov 19	6.25	07 May 16	6 month	105.70	5.91	4.66	3.45	1188626
TESCO PERSONAL FINANCE PLC TESCO PF 5.2%	XS0591029409	24 Aug 18	5.2	24 Jan 16	6 month	102.00	5.10	4.43	2.46	2262033
TESCO PERSONAL FINANCE PLC TESCO PF 5%	XS0780063235	21 Nov 20	5	21 May 16	6 month	101.00	4.95	4.82	4.37	4069167
TESCO PLC TESCO 6%NT29	XS0105244585	14 Dec 29	6	14 Dec 16	12 month	99.80	6.01	6.02	9.79	1102179
TESCO PLC TESCO5.50% NT19	XS0159013068	13 Dec 19	5.5	13 Dec 16	12 month	106.35	5.17	3.73	3.65	3322289
TOYOTA MOTOR CREDIT CORPORATION TOY.MTR.17	XS0595707570	07 Dec 17	4	07 Dec 15	12 month	105.20	3.80	1.24	1.88	0
TULLETT PREBON PLC TULLETT 5.25%	XS0859261520	11 Jun 19	5.25	11 Jun 16	6 month	102.30	5.13	4.57	3.18	2031720
UBS AG UBS 16	XS0440316635	20 Jul 16	6.375	20 Jul 16	12 month	102.90	6.20	1.06	0.55	23457694
UNILEVER PLC UNILEVER 4.750%	XS0434423926	16 Jun 17	4.75	16 Jun 16	12 month	105.35	4.51	1.00	1.40	656742
UNITE GROUP PLC UNITE GRP 20	XS0856594642	12 Jun 20	6.125	12 Jun 16	6 month	107.03	5.72	4.41	3.96	3467270
UNITED UTILITIES WATER LIMITED UTD WTR. 5.375%	XS0168054673	14 May 18	5.375	15 May 16	12 month	108.30	4.96	1.74	2.21	140891
UNITED UTILITIES WATER LIMITED UTD WTR.5.625%	XS0159728236	20 Dec 27	5.625	20 Dec 16	12 month	121.20	4.64	3.43	9.30	9508
VODAFONE GROUP PLC VODAFONE 5.90%	XS0158715713	26 Nov 32	5.9	26 Nov 16	12 month	116.95	5.05	4.45	11.54	1229277
VODAFONE GROUP PLC VODAFONE NTS25	XS0181816652	04 Dec 25	5.625	04 Dec 16	12 month	115.90	4.85	3.68	8.00	239478
WASPS FINANCE PLC WASPS 22	XS1221940510	13 May 22	6.5	13 May 16	6 month	101.65	6.39	6.28	5.27	2384139
WESSEX WATER SERVICES FINANCE PLC WESSEX 5.375%	XS0214275785	10 Mar 28	5.375	10 Mar 15	12 month	119.08	4.51	3.43	9.18	0
WESSEX WATER SERVICES FINANCE PLC WESSEX W.S.5.75	XS0178489844	14 Oct 33	5.75	14 Oct 16	12 month	126.63	4.54	3.68	12.20	4731318
WORKSPACE GROUP PLC WORKSPACE 6%	XS0832324981	09 Oct 19	6	09 Mar 16	6 month	106.35	5.64	4.20	3.39	1432042

Source; London Stock Exchange, FTSE, Hardman & Co.

Definitions

Data as of 31/12/2015 except liquidity:

Next Coupon – date next coupon will be paid.

Flat Yield – coupon rate as percentage of price.

GRY – Gross Redemption Yield.

Liquidity – Average monthly value traded over 4th quarter of 2015. New issues are NA.

Non-Standard Corporate Bonds on ORB (alphabetically by issuer)

Name	ISIN	Maturity Date	Coupon Value	Coupon Type	Next Coupon Date	Period of Coupon	Price	Flat Yield (%)	GRY	Duration (years)	Liquidity (£)	Note
COVENTRY BUILDING SOCIETY COVENTRY.6.092%	GB00B177CL57	Irredeemable	6.092	Fixed	29 Dec 15	6 month	101.00	6.03	6.031	17	606,996	Irredeemable
LEGAL & GENERAL GROUP PLC LEGAL&GEN.5.875	XS0189013823	Irredeemable	5.875	Fixed	01 Oct 15	6 month	104.43	5.63	5.623	18	7,930,467	Irredeemable
NATIONAL GRID PLC NAT.GRID BD 21	XS0678522490	06 Oct 21	1.25	Variable	06 Apr 16	6 month	110.00	1.14			3,344,404	Index-linked
PLACES FOR PEOPLE CAPITAL MARKETS PLC PLACES PEO 1%	XS0731910765	31 Jan 22	1	Variable	31 Dec 15	6 month	104.48	0.96			985,435	Index-linked
SEVERN TRENT PLC SEVERN T.22	XS0796078193	11 Jul 22	1.3	Variable	11 Jan 16	6 month	106.40	1.22			954,164	Index-linked
STANDARD CHARTERED BANK STAN.CH.BK5.375	XS0222434200	Irredeemable	5.375	Fixed	14 Jul 16	12 month	98.25	5.47	5.472	18	8,379,386	Irredeemable
TESCO PERSONAL FINANCE PLC TESCO PF 1%	XS0710391532	16 Dec 19	1	Variable	16 Jun 16	6 month	100.28	1.00			3,237,216	Index-linked

Source; London Stock Exchange, FTSE, Hardman & Co.

THIS DOCUMENT IS THE 11TH IN A SERIES ASSESSING DEVELOPMENTS IN THE ORB MARKET. IF YOU HAVE ANY TOPICS YOU WOULD LIKE HARDMAN & CO TO FOCUS ON IN THE NEXT ISSUE, PLEASE CONTACT US ON research@hardmanandco.com.

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