Jagger & Associates

Investment Update

July 2017

Investment Headlines & Comment

- A good month for Far East and Emerging Market equities.
 LIBOR is set to be replaced in the next few years.
- Another auction with huge demand for the **2056 ILG**.

Feature SectionThis month, we update our past features on corporate debt default rates, using the Standard & Poors <u>annual survey</u>, which now covers data to the end of 2016. With government bond yields still at extremely low levels, earning <u>and keeping</u> the credit margin is crucial.

Figure 1a: Average <u>Cumulative</u> Default Rates (%) (Extracts from "Table 24" in S&P)

Time	1 year	5-year	10-year
Investment grade	0.10	0.96	2.11
AAA	0.00	0.35	0.72
AA	0.02	0.33	0.77
A	0.06	0.53	1.41
BBB	0.18	1.78	3.76
High Yield	3.83	15.29	21.67
BB	0.72	7.45	13.33
В	3.76	18.32	25.43
CCC/C	26.78	46.42	51.03
All ratings	1.52	6.25	9.18

Source: Standard & Poor's (also for the Figures below)

Figure 1a shows historical default rates averages across global corporate bonds in 1-, 5- and 10-year versions. The dataset covers 1981-2016 (and the 5- and 10-year figures use rolling sets of overlapping periods, not successive distinct ones), but it does not show comparable recovery rate statistics. However, as per our Figure 5 (on page 4) for Sterling investment grade bonds, actual default rates have been below those priced into yields, even if with no recovery. For example, over the last 5 calendar years, the iBoxx All-Dated Non-Gilts Index returned 7.3% p.a. vs 4.5% p.a. for the FT-A All-Dated Gilt Index (which has longer maturity). Over 10 years, the position is closer with 6.0% p.a. versus 6.1% p.a. Over 15 years, it is 6.2% p.a. vs 5.8% p.a. (Ideally, you would make the comparison over a period of similar start and end yields, likewise for credit margins, to avoid distortions from these factors.)

Figure 1b shows 2016's moves in isolation (row = start rating, column = end rating). For investment grade it was a pretty good year, with very few bonds falling into sub-investment grade, and some going the opposite way with upgrades. Most bonds retain the same credit rating at the end of the year as at the start, hence a dominant diagonal for the figures in bold, but with a block of rating downgrades for AAA bonds. Eventually there is a sharp decline on the CCC row, reflecting a greater instability for bonds that have got that close to the edge. There were 8 defaulted entities in 2016 that S&P had initially rated investment grade, and the time between first rating and date of default averaged 14 years. Figure 1c gives an alternative way of looking at the 1-year data from Figure 1a, with the minimum and maximum

Figure 1b: Global Credit Rating Transitions % in 2016 in isolation (Extracts from "Table 20" in S&P, with D = Default, N.R. = not rated)

	AAA	AA	A	BBB	BB	В	CCC	D	N.R.
AAA	81.25	12.50	-	-	-	-	-	-	6.25
AA	-	90.11	6.50	-	-	-	-	-	3.39
A	-	0.82	91.02	4.01	-	-	-	-	4.15
BBB	-	-	2.62	87.70	3.23	0.17	0.06	-	6.23
BB	-	-	-	3.12	80.37	6.07	0.23	0.47	9.74
В	-	-	-	-	3.84	74.00	5.55	3.68	12.92
CCC	-	-	-	-	0.99	14.36	40.59	32.67	11.39

Figure 1c: Profile of individual year default percentages (Extracts from "Table 4" in S&P)

	AAA	AA	A	BBB	BB	В	CCC
Min	-	-	-	-	-	0.25	-
Max	-	0.38	0.39	1.01	4.22	13.84	49.46
Average	-	0.02	0.06	0.18	0.72	3.76	26.78

1-year default rates by credit rating, which in renews question on what level of deduction it might be prudent to make from investment grade bond yields in actuarial valuations. example, the average cumulative investment grade 10-year default rate is 2.11%, and the worst is 4.12% (from "Table 31", for the 10 years to 1991, when the market was much smaller than now). So, there still does not seem

reasonable case for making a deduction of more than, say, 0.3% p.a. from the yield as an allowance for future defaults. (If you do not yet hold the bonds, or expect to reinvest maturing proceeds, there may be an argument for reducing the yield for the risk that credit margins contract before you buy the bonds, but that remains quite a separate issue.)

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Asset Returns and Financial Measures [in Sterling unless marked otherwise]

The cells in bold with light shading show the best and worst performing asset classes from each column. The commodities and \$-based and unhedged-£-conversion hedge fund returns are excluded from that.

[NB Future returns <u>cannot</u> be inferred from this table alone, but coupled with other items within *Update*, readers can make inferences as to whether they should be higher or lower than the past returns shown below.]

Table 1: Investment Data to 31 July 2017

Asset Class	1 month	3 months	12 months	3 years	5 years	10 years	20 years
	(%)	(%)	(%)	(% p.a.)	(% p.a.)	(% p.a.)	(% p.a.)
UK Equities	1.2	3.0	14.9	7.9	10.5	5.8	6.3
Overseas Equities	1.3	3.6	18.8	16.7	15.9	9.8	7.4
US Equities	0.5	2.2	17.1	20.2	18.8	12.6	7.5
Europe ex UK Equities	1.8	5.6	24.4	13.3	15.1	6.3	8.1
Japan Equities	0.5	4.2	16.1	16.2	15.2	6.4	3.2
Pacific ex Japan Equities	3.2	6.8	23.8	13.4	11.8	9.0	7.2
Emerging Markets	4.5	8.3	26.2	11.6	8.8	6.8	7.4
UK Long-dated Gilts	0.2	-2.3	-5.0	11.6	6.7	8.6	7.8
UK Long-dated Corp. Bonds	0.7	0.6	0.2	10.3	8.0	8.2	-
UK Over 5 Yrs Index-Linked Gilts	-1.4	-6.3	4.1	12.3	8.9	9.2	8.2
High Yield (Global)	0.2	1.3	12.2	13.4	10.6	12.7	-
Overseas Bonds	0.1	1.2	-2.6	9.1	3.6	8.4	5.8
Property *	1.0	2.5	5.1	10.3	10.4	3.9	8.8
Cash	0.0	0.1	0.4	0.5	0.5	1.4	3.4
Commodities £-converted	3.0	-0.9	6.0	-15.6	-11.0	-5.8	-0.9
Hedge Funds original \$ basis *	0.3	1.1	7.9	2.6	4.9	3.0	6.6
Illustrative £-converted version *	-0.7	-2.7	11.1	12.4	8.9	7.6	7.9
Euro relative to Sterling	1.8	6.2	6.2	4.1	2.6	2.9	-
US \$ relative to Sterling	-1.5	-1.9	0.7	8.6	3.5	4.4	1.1
Japanese Yen relative to Sterling	0.2	-1.0	-6.6	6.0	-3.4	5.2	1.4
Sterling trade weighted	-0.6	-3.0	-3.1	-4.5	-1.8	-3.1	-1.3
Price Inflation (RPI) *	0.2	1.1	3.5	2.0	2.4	2.8	2.8
Price Inflation (CPI) *	0.0	0.8	2.7	1.0	1.6	2.3	2.0
Price Inflation (RPIX) *	0.3	1.1	3.8	2.2	2.5	3.1	2.8
Earnings Inflation **	-0.9	-2.9	1.9	2.4	1.9	2.0	3.2
All Share Capital Growth	1.1	2.1	10.7	4.1	6.7	2.1	2.9
Net Dividend Growth	0.0	3.3	12.3	6.9	6.2	4.3	-
Earnings Growth	-1.7	-0.6	26.2	-17.1	-11.0	-5.5	0.8

Note: All market returns are total returns for pension funds with income reinvested monthly. Indices used are as follows:

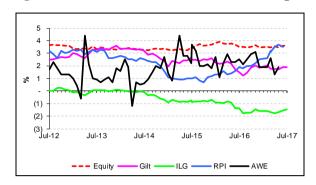
- UK Equities (incl. dividends and earnings) FT-A All Share.
- Overseas Equities (incl. regions) blend of FT All-World / World subindices
- Emerging Markets from MSCI US \$ based total return index (overall Index to 31 Oct 2001, Free Index from 1 Nov 2001 to take account of foreign investment restrictions), conversion to UK £ by J&A.
- UK Bonds FT-A indices (Gilts Over 15 Years, ILG Over 5 Years)
- UK Corporate Bonds iBoxx Non-Gilt Over 15 Year index (all credit ratings combined)
- High Yield Merrill Lynch Global, £ Unhedged
- Overseas Bonds JP Morgan Traded Unhedged World ex UK
- Property MSCI IPD UK Monthly Property Index

- Commodities GSCI Total Return, converted to UK £ by J&A
- Hedge Funds Composite HFRI US \$ based total return index plus converted to UK £ by J&A. NB A smooth "cash+x%" return will only be shown in the base 'hedged' currency, here the US \$.
- Cash an indicative index based on the three-month London Interbank Sterling mid-rate, calculated internally by J&A
- Price and earnings inflation RPI, CPI, RPIX, and Average Weekly Earnings (whole economy, not seasonally adjusted, latest provisional data)
- Currency data London close, from the Financial Times
- * denotes data lagged by 1 month, ** by 2 months these reflect the later publication dates of these data items.

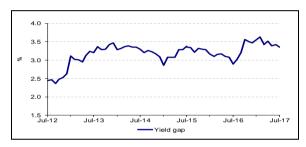
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Yields and Yield Gaps

Figure 2: Yields, Inflation and Yield Gaps



The yield gap is a measure of expected average future inflation, derived as long bond yield minus ILG yield.



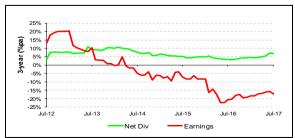
The gap gives a current expectation around 3.4% for longer-term inflation + risk premium for gilts, relative to index-linked gilts.

Growth in Earnings and Dividends

These charts show movements in rolling 12-month and 3-year dividend and earnings growth for UK Equities over the last 5 years. [NB the charts have different scales]

Figure 3: Dividend & Earnings Growth

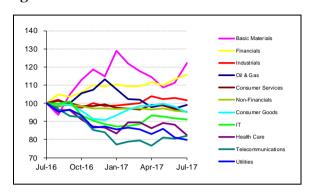




Note: Earnings data from mid 2015 onwards is under review by FTSE Russell as one-off events may be affecting the prospective P/E ratios

UK Equity Sector Returns

Figure 4a: Sectors relative to All Share



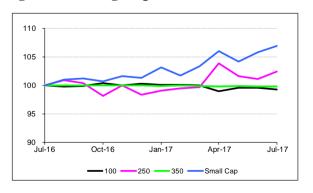
Note: Sector labels for relative lines are in end-value order

There was a slight rise this month in the rolling 12-month sector dispersion (from 40% to 43%).

(% absolute return)	1 mth	3 mth	12 mth
Oil & Gas	3.2	4.3	13.8
Basic Materials	11.2	10.1	40.6
Industrials	0.0	0.8	16.7
Consumer Goods	-2.1	-1.0	8.9
Health Care	-5.8	-1.9	-5.5
Consumer Services	-0.4	-1.0	9.4
Telecommunications	3.1	10.6	-5.6
Utilities	-0.5	-1.3	-8.4
Non-Financials	0.4	1.5	9.4
Financials	3.4	7.0	33.0
IT	0.6	0.4	4.6
All Share	1.2	3.0	14.9

UK Equity Size Returns

Figure 4b: Size groups relative to All Share



Mid Cap and Small Cap rose in relative terms this month.

Sources for charts on this page: Financial Times, Office for National Statistics, J&A

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Bond market information

Figure 5: £ Non-Gilt Credit Margins

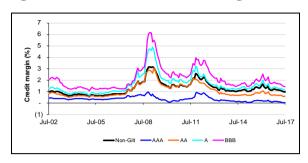


Table 2a: Over 15 Yr Corporate Yields & Margins

Month	iBoxx Corp	FT 20 yr	Margin
End	AA Y'ld (%)	Gilt (%)	(%)
Feb '17	2.50	1.77	0.73
Mar '17	2.50	1.76	0.74
Apr '17	2.50	1.75	0.75
May '17	2.41	1.71	0.70
Jun '17	2.55	1.89	0.66
Jul '17	2.53	1.88	0.65

Tables 2b, 2c: £ Market Size (£bn) and Maturity

Category	Mkt Val			Weight
	@ Jul	17 & 14	4, 11	(%)
Gilts (41)	1,357	1,117	844	70.7
Non Gilts (1,028)	564	541	475	29.3
AAA (130)	109	104	128	5.7
AA (171)	87	90	74	4.5
A (335)	166	174	168	8.6
BBB (392)	201	173	106	10.5

Category	Mkt Val @		W't	Dur'n
	Jul 1	7 & 14	(%)	(yrs)
Gilts (41)	1,357	1,117	70.7	11.5
< 5 Yrs (11)	385	308	20.0	2.7
5–15 Yrs (12)	397	390	20.6	8.0
> 15 Yrs (18)	575	419	30.0	19.8
Non Gilts (1,028)	564	541	29.3	8.2
< 5 Yrs (363)	175	164	9.1	2.8
5–15 Yrs (446)	241	225	12.6	7.7
> 15 Yrs (219)	148	153	7.7	15.4

£ Gilt Market "main" Issuance

- o £3.16bn 3/4% 2023 (3.10x, 0.77%, new)
- o £2.87bn 11/4% 2027 (2.28x, 1.38%, Jun 17)
- o £2.50bn 1½% 2047 (2.17x, 1.83%, Jun 17)
- £2.5bn ¹/₈% IL 2056 (**5.96x**, ry -1.36%, Nov 16)
 Note: Issuance amounts are nominals.

Tables 2d, 2e: € Market Size and Maturity (Jul 17)

Category	Mkt Val (€bn)	Weight (%)
Sovereigns (340)	5,891	59.6
Non Sovereigns	3,987	40.4
AAA (795)	1,154	11.7
AA (626)	1,000	10.1
A (848)	826	8.4
BBB (1,152)	1,007	10.2

Category	Mkt Val (€bn)	Weight (%)
1 – 3 Yrs (794)	2,107	21.3
3 – 5 Yrs (1,019)	2,170	22.0
5 – 7 Yrs (798)	1,690	17.1
7 – 10 Yrs (760)	1,774	18.0
10+ Yrs (390)	2,137	21.6

Table 2f: Breakdown of £ Index-Linked Market

Category (Number of issues)	Mkt Val (£bn @ Jul 17 & 14)		W't (%)	Dur'n (yrs)
Gilts (28)	637	415	100.0	22.4
< 5 Yrs (3)	51	43	8.0	1.8
5 – 15 Yrs (7)	148	128	23.2	8.3
> 15 Yrs (18)	438	243	68.8	29.6

Table 2g: High Yield bond yields (BB-B indices)

Month End	US (%)	Euro (%)	Sterling (%)
Feb '17	5.32	3.30	5.52
Mar '17	5.43	3.42	5.59
Apr '17	5.30	3.23	5.49
May '17	5.24	3.10	5.30
Jun '17	5.32	3.09	5.42
Jul '17	5.21	2.97	5.35

Sources: DMO, iBoxx, J&A, MLX, TradeWeb

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