JAGGER & ASSOCIATES

Investment Update
May 2023

Investment Headlines & Comment

- A poor month for UK bonds.
- A poor month for UK Equities.
- High demand for new 40 yr gilt.

Feature Section

This month we update our past feature on corporate debt default rates, using the Standard & Poor's annual survey, which now covers data to the end of 2022. The main casualties in 2022 were again consumer services (with 21 defaults combined, or 25% of the total).

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

Time	1 year	5-year	10-year
Investment grade	**0.08**	**0.80**	**1.76**
AAA	-	0.34	0.69
AA	0.02	0.29	0.67
A	0.05	0.42	1.11
BBB	0.14	1.42	2.99
High Yield	**3.52**	**13.80**	**19.50**
BB	0.59	6.04	10.94
B	3.07	16.12	22.72
CCC/C	25.70	45.63	49.70
All ratings	**1.48**	**5.99**	**8.70**

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 1981-2022 (but the 5- and 10-year figures use rolling sets of overlapping periods, not successive distinct ones), but unfortunately it does not show recovery rate statistics. However, as per our Figure 5 for Sterling investment grade bonds (on page 4), actual default rates have still been below those priced into yields, even if with no recovery. For example, over the last 20 calendar years, the iBoxx All-Dated Non-Gilts Index returned 3.9% p.a. vs 3.1% p.a. for the FT-A All-Dated Gilt Index. This gap is up from 0.5% p.a. last year, and is now looking more "normal" after the rise in gilt yields in 2022.

Figure 1b shows 2022's moves in isolation (row = start rating, column = end rating). 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. Eventually there is a *sharp* decline on the CCC row, reflecting a greater instability for bonds that have got that close to the edge – however, the 2022 CCC default rate was again down dramatically from the 47% seen in 2020. In 2022, there were just 5 defaulted entities originally rated investment grade by S&P, 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 1-year default rates by credit rating, which in turn renews the question on what level of deduction it might be prudent to make from investment grade bond yields in actuarial valuations. With the average *cumulative* investment grade 10-year default rate being 1.76%, and the worst is 4.24% (from "Table 31", for the 10 years to 1991, when the market was much smaller than now), there still does not seem to be a reasonable case for making a deduction of more than, say, 0.2% or 0.3% p.a. from the yield as an allowance for future defaults.

Figure 1b: Global Credit Rating Transitions % in 2022 in isolation (Extracts from "Table 20" in S&P, with D = Default, N.R. = not rated)

	AAA	AA	A	BBB	BB	B	CCC	D	N.R.
AAA	**87.50**	12.50	-	-	-	-	-	-	-
AA	-	**95.27**	1.09	-	-	-	-	-	3.64
A	-	0.86	**94.98**	1.72	-	-	-	-	2.44
BBB	-	0.05	1.64	**91.71**	1.11	0.05	-	-	5.44
BB	-	-	-	3.53	**82.29**	2.82	0.31	0.31	10.74
B	-	-	-	0.09	3.74	**76.30**	5.02	1.09	13.74
CCC	-	-	-	-	-	17.61	**56.92**	**13.84**	11.64

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

	AAA	AA	A	BBB	BB	B	CCC
Minimum	-	-	-	-	-	0.25	-
Maximum	-	0.38	0.39	1.02	4.24	13.84	49.46
Average	-	0.02	0.05	0.14	0.59	3.07	25.70

(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 actually buy the bonds, but that remains quite a separate issue.)

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 cannot 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 May 2023

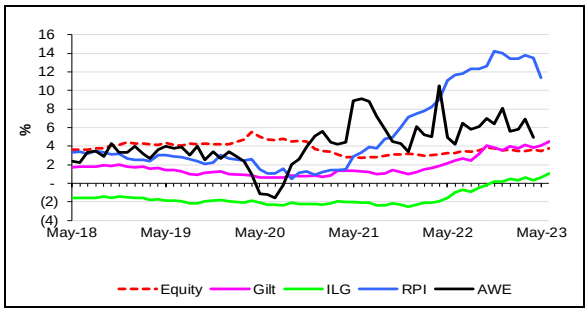
Asset Class	1 month (%)	3 months (%)	12 months (%)	3 years (% p.a.)	5 years (% p.a.)	10 years (% p.a.)	20 years (% p.a.)
UK Equities	-4.6	-4.2	0.4	10.2	2.9	5.3	7.4
Overseas Equities	0.6	1.5	3.1	10.5	9.1	10.9	10.4
US Equities	2.1	3.2	4.7	**12.4**	**12.4**	**14.2**	9.0
Europe ex UK Equities	-4.0	-0.9	**8.5**	9.6	6.6	7.9	**11.4**
Japan Equities	**2.8**	**3.6**	6.8	4.4	3.4	7.6	7.6
Pacific ex Japan Equities	-0.8	-3.5	-5.7	5.4	2.5	6.2	10.9
Emerging Markets	-0.3	-2.1	-6.5	3.8	1.1	4.3	10.2
UK Long-dated Gilts	-6.6	**-5.1**	**-28.6**	**-20.5**	**-8.4**	**-0.2**	2.9
UK Long-dated Corp. Bonds	-4.8	-2.9	-18.8	-13.2	-4.4	1.1	3.6
UK Over 5 Yrs Index-Linked Gilts	**-6.9**	-4.8	-26.9	-15.7	-6.3	0.6	4.1
High Yield (Global)	0.0	-1.6	1.4	1.3	3.3	5.2	7.9
Overseas Bonds	-0.6	-0.7	-3.2	-6.0	-0.2	1.8	3.7
Property *	0.5	1.0	-15.7	3.4	2.8	7.2	6.5
Cash	0.4	1.1	3.5	1.3	1.1	0.8	**2.0**
Commodities £-converted	-4.8	-10.0	-22.8	25.3	3.6	-2.0	0.1
Hedge Funds original $ basis *	0.2	-1.2	-0.4	9.0	4.7	4.4	5.6
Illustrative £-converted version *	-1.3	-3.2	-0.6	9.1	6.6	6.7	6.9
Euro relative to Sterling	-2.1	-1.8	1.2	-1.5	-0.4	0.1	0.9
US $ relative to Sterling	1.4	-2.3	1.7	-0.1	1.4	2.0	1.4
Japanese Yen relative to Sterling	-1.2	-4.8	-6.4	-8.4	-3.5	-1.2	0.6
Sterling trade weighted	1.0	2.7	0.5	1.7	0.6	0.1	-0.8
Price Inflation (RPI) *	1.5	3.5	11.4	8.4	5.9	4.1	3.7
Price Inflation (CPI) *	1.2	3.2	8.7	6.3	4.3	2.9	2.8
Price Inflation (RPIX) *	1.4	3.2	10.4	8.2	5.8	4.1	3.7
Earnings Inflation **	10.7	11.5	4.9	6.5	4.6	3.6	3.4
All Share Capital Growth	-5.1	-5.5	-3.2	6.5	-0.7	1.6	3.7
Dividend Growth	1.7	2.4	10.7	-1.6	-0.2	2.8	4.1
Earnings Growth	-19.5	0.7	-10.8	0.9	-4.2	0.2	4.0

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

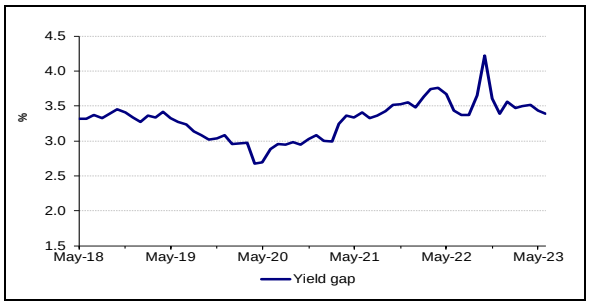
- *UK Equities (incl. dividends and earnings) – FT-A All Share.*
- *Overseas Equities (incl. regions) – blend of FT All-World / World sub-indices*
- *Emerging Markets from MSCI US $ based total return index (overall Index to 31 Oct 2001, Free Index from 1 Nov 2001 to take account of foreign investment 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 – ICE 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.*

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.

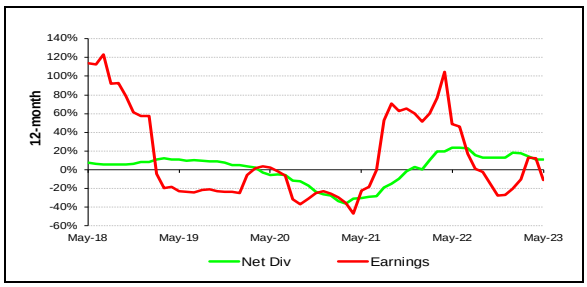


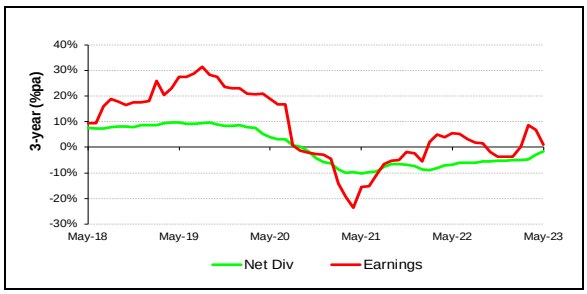
The gap gives a current expectation of around 3.4% p.a. for longer-term inflation *including the (unknown) risk premium for gilts, relative to index-linked gilts.*

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

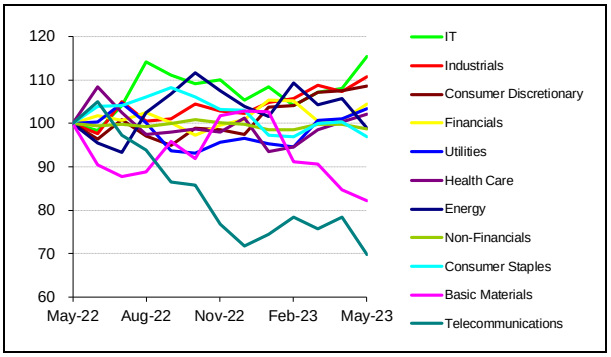




Note: Earnings data from mid-2015 onwards is no longer reliable as one-off events may be affecting the prospective P/E ratios

UK Equity Sector Returns

Figure 4a: Sectors relative to All Share



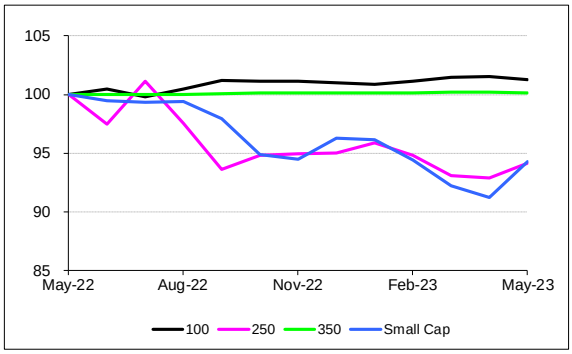
Note: Sector labels for relative lines are in end-value order

There was a rise this month in the rolling 12-month sector dispersion (up from 33% to 46%).

(% absolute return)	1 mth	3 mth	12 mth
Energy	-10.7	-13.4	-0.6
Basic Materials	-7.5	-13.8	-17.6
Industrials	-1.5	0.4	11.3
Consumer Staples	-8.0	-4.3	-2.7
Health Care	-2.9	3.5	2.6
Consumer Discretionary	-3.7	-0.1	9.1
Telecommunications	-15.1	-14.6	-29.9
Utilities	-2.5	4.6	3.9
Non-Finan	-5.7	-4.0	-0.8
Financials	-1.0	-4.9	4.9
IT	1.9	6.2	16.0
All Share	-4.6	-4.2	0.4

UK Equity Size Returns

Figure 4b: Size groups relative to All Share



This month, Mid Cap and Small Cap both rose relative to the All Share.

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

Bond market information

Figure 5: £ Non-Gilt Credit Margins

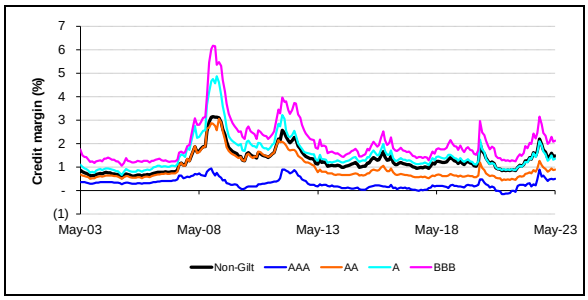


Table 2a: Over 15 Yr Corporate Yields & Margins

Month End	iBoxx Corp AA Y'ld (%)	FT 20 yr Gilt (%)	Margin (%)
Dec '22	4.72	4.02	0.70
Jan '23	4.40	3.77	0.63
Feb '23	4.81	4.14	0.67
Mar '23	4.67	3.84	0.83
Apr '23	4.78	4.06	0.72
May '23	**5.20**	**4.47**	**0.73**

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

Category	Mkt Val (£bn @ May 23 & 20, 17)			Weight (%)
Gilts (56)	1,342	1,592	1,374	71.4
Non-Gilts (1,223)	538	661	568	28.6
AAA (150)	115	142	110	6.1
AA (154)	70	87	89	3.7
A (410)	149	181	172	7.9
BBB (509)	203	250	198	10.8

Category	Mkt Val (£bn @ May 23 & 20)		W't (%)	Dur'n (yrs)
Gilts (56)	1,342	1,592	71.4	9.6
< 5 Yrs (13)	420	334	22.3	2.8
5–15 Yrs (16)	442	445	23.5	7.9
> 15 Yrs (27)	481	814	25.6	17.0
Non-Gilts (1,223)	538	661	28.6	5.9
< 5 Yrs (518)	260	227	13.8	2.7
5–15 Yrs (478)	194	275	10.3	6.8
> 15 Yrs (227)	84	159	4.5	13.3

Tables 2d, 2e: € Market Size and Maturity (May 23)

Category	Mkt Val (€bn)	Weight (%)
Sovereigns (483)	6,821	57.3
Non-Sovereigns	5,089	42.7
AAA (1,195)	1,645	13.8
AA (811)	979	8.2
A (1,496)	1,139	9.6
BBB (1,978)	1,326	11.1

Category	Mkt Val (€bn)	Weight (%)
1 – 3 Yrs (1,556)	2,905	24.4
3 – 5 Yrs (1,600)	2,638	22.2
5 – 7 Yrs (1,106)	1,902	16.0
7 – 10 Yrs (933)	1,970	16.5
10+ Yrs (768)	2,495	20.9

Table 2f: Breakdown of £ Index-Linked Market

Category (Number of issues)	Mkt Val (£bn @ May 23 & 20)		W't (%)	Dur'n (yrs)
Gilts (32)	544	798	100.0	15.7
< 5 Yrs (4)	95	71	17.5	2.3
5 – 15 Yrs (9)	191	194	35.1	9.1
> 15 Yrs (19)	258	534	47.4	25.5

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

Month End	US (%)	Euro (%)	Sterling (%)
Jan '23	7.48	6.47	9.54
Feb '23	7.97	6.76	9.46
Mar '23	7.75	6.85	9.93
Apr '23	7.70	6.86	10.11
May '23	**8.11**	**6.94**	**10.28**

Sources: DMO, FTSE, iBoxx, ICE, J&A

£ Gilt Market "main" & "Green" Issuance

- £4.00bn, 3½% 2025 (2.56x, 4.12%, 0%, Mar 23)
- £4.65bn, $4^{1}/_{8}$% 2027 (2.60x, 3.96%, 24%, Apr 23)
- £4.37bn, 3¼% 2033 (2.81x, 3.85%, 25%, Apr 23)
- £3.00bn, $^{7}/_{8}$% Gr 2033 (3.02x, 4.24%, n/a, Feb 23)
- £0.75bn, $^{1}/_{8}$% IL 2051 (2.82x, 1.11%, 0%, Mar 23)
- £5.50bn, 4% 2063 (***9.85***x, 4.12%, n/a, new)

Note: Issuance amounts are nominals. The second % figure in each row is the yield or real yield. The third % figure is the additional amount taken up under the Post Auction Option Facility (PAOF), as a % of the amount of the issue. No PAOF applies for Green Gilt (Gr), tender or syndication cases.

JAGGER & ASSOCIATES

Contact: Ground Floor, 14 Exchange Quay,
Salford Quays, Manchester M5 3EQ
Tel.: 0161 873 9350, Fax: 0161 877 4851
web: www.jaggerandassociates.co.uk
e-mail: enquiries@jaggerandassociates.co.uk

See our website for details of the investment consultancy services we provide to actuarial firms, pension funds, universities and other endowment funds, and charities.