JAGGER & A SSOCIATES

Investment Update

April 2022

Investment Headlines & Comment

- A rather poor month for many government and corporate bond markets across the world.
- A strong month for the US Dollar, mainly in anticipation of higher interest rates.
- UK property continues to rally strongly after subdued returns during the pandemic.

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 2021.

The main Covid casualties in 2021 were consumer services and energy and natural resources (with 29 defaults combined, or 40% of the total), but in general it was a year of recovery after the 2020 market shock.

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

Time	1 year	5-year	10-year
Investment grade	0.08	0.83	1.81
AAA	-	0.34	0.69
AA	0.02	0.30	0.68
A	0.05	0.44	1.15
BBB	0.15	1.48	3.10
High Yield	3.60	14.16	20.04
BB	0.60	6.19	11.24
В	3.18	16.67	23.50
CCC/C	26.55	46.91	51.05
All ratings	1.50	6.10	8.86

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 1981-2021 (and 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 5.4% p.a. vs 4.9% p.a. for the FT-A All-Dated Gilt Index. This gap may look smaller than the c.1% p.a. you might expect, but the Gilt index has longer maturity, so its greater gain from the prolonged fall in yields offsets about half of the credit margin from the Corporate Bond index.

Figure 1b shows 2021'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 2021 CCC default rate was down dramatically from the 47% seen in 2020. In 2021, there were just 3 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

Figure 1b: Global Credit Rating Transitions % in 2021 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	100.00	ı	ı	-	ı	ı	1	-	-
AA	-	91.72	5.17	-	-	-	-	-	3.10
A	-	0.50	92.74	3.99	-	-	-	-	2.78
BBB	-	-	2.02	91.78	1.74	0.05	-	-	4.41
BB	-	-	-	3.89	85.30	3.21	0.17	-	7.43
В	-	-	•	0.10	4.54	77.20	1.96	0.52	15.68
CCC	-	-	•	-	-	21.76	50.99	10.99	16.26

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

	AAA	AA	A	BBB	BB	В	CCC
Minimum	-	-	-	-	-	0.25	-
Maximum	-	0.38	0.39	1.02	4.24	13.84	49.46
Average	1	0.02	0.05	0.15	0.60	3.18	26.55

from investment grade bond yields in actuarial valuations. With the average cumulative investment grade 10year default rate being 1.8%, 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 vield 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 actually buy the bonds, but that remains quite a separate issue.)

Jagger & Associates Investment Update April 2022



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 30 April 2022

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	0.3	1.1	8.9	4.5	4.8	7.2	6.3
Overseas Equities	-3.6	-2.1	4.5	11.7	10.9	13.0	9.1
US Equities	-4.6	-2.4	8.4	15.1	14.2	16.5	7.4
Europe ex UK Equities	-1.8	-6.2	-2.2	6.8	6.1	9.9	10.0
Japan Equities	-4.1	-3.8	-4.4	4.6	4.7	9.1	5.5
Pacific ex Japan Equities	-0.5	0.3	-7.2	6.4	6.6	8.5	10.1
Emerging Markets	-0.9	-4.2	-9.0	3.9	5.3	6.0	9.4
UK Long-dated Gilts	-5.0	-10.8	-12.7	-1.6	-0.2	4.4	5.7
UK Long-dated Corp. Bonds	-6.1	-12.0	-15.4	-0.7	0.7	5.2	5.7
UK Over 5 Yrs Index-Linked Gilts	-7.2	-10.4	-3.0	1.2	1.2	5.8	7.0
High Yield (Global)	0.3	-1.3	-1.0	2.5	3.3	7.3	7.8
Overseas Bonds	-0.8	-3.1	-3.9	-0.4	0.5	2.4	4.5
Property *	2.9	5.6	23.9	8.4	8.4	9.2	7.9
Cash	0.1	0.2	0.3	0.4	0.5	0.5	2.0
Commodities £-converted	10.2	34.0	77.5	15.7	12.2	-0.2	1.6
Hedge Funds original \$ basis *	1.2	-1.0	3.2	8.5	6.3	5.2	5.7
Illustrative £-converted version *	3.2	1.9	8.1	8.1	5.2	7.3	6.1
Euro relative to Sterling	-0.6	0.6	-3.2	-0.8	0.0	0.3	1.5
US \$ relative to Sterling	4.9	6.9	11.1	1.3	0.6	2.6	0.7
Japanese Yen relative to Sterling	-1.8	-5.0	-6.6	-3.7	-2.4	-2.2	0.7
Sterling trade weighted	-0.9	-2.5	-0.7	0.3	0.3	-0.4	-1.1
Price Inflation (RPI) *	1.0	1.8	9.0	4.3	3.7	3.0	3.1
Price Inflation (CPI) *	1.1	1.7	7.0	3.1	2.7	2.1	2.3
Price Inflation (RPIX) *	1.0	1.8	9.1	4.4	3.8	3.1	3.2
Earnings Inflation **	0.3	5.1	4.8	3.8	3.4	2.4	2.7
All Share Capital Growth	-0.1	-0.2	5.2	1.0	1.1	3.4	2.6
Dividend Growth	3.5	7.9	19.7	-7.2	-0.7	2.6	3.5
Earnings Growth	-1.4	3.3	104.5	4.0	14.0	-0.2	4.8

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

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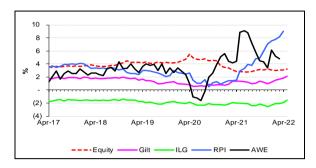
- UK Equities (incl. dividends and earnings) FT-A All Share.
- Overseas Equities (incl. regions) blend of FT All-World / World sub-indices
- Emerging Markets from MSCI US \$ based total return index (overall Index to 31 Oct 2001, Free Index from 1 Nov 2001 to take account of foreign investment restrictions), 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)
- $\bullet \ \ \textit{High Yield-ICE Global}, \pounds \ \textit{Unhedged}$
- 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.

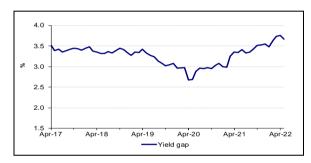
Jagger & Associates Investment Update April 2022

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.

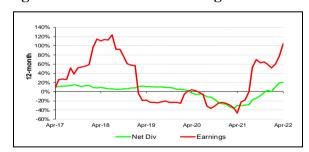


The gap gives a current expectation around 3.7% for longer-term inflation *including the (unknown) risk* premium for gilts, relative to index-linked gilts.

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

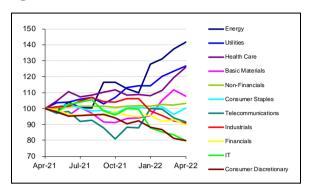




Note: Earnings data from mid-2015 onwards is no longer reliable as one-off events may be affecting the prospective P/E ratios

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 (rising from 50% to 62%).

(% absolute return)	1 mth	3 mth	12 mth
Energy	3.6	12.1	54.3
Basic Materials	-3.5	13.9	17.1
Industrials	-1.1	-6.6	-1.2
Consumer Staples	4.4	1.4	9.3
Health Care	5.9	17.9	37.1
Consumer Discretionary	-1.5	-8.4	-13.2
Telecommunications	-2.2	-7.4	-0.2
Utilities	3.0	12.1	37.9
Non-Finan	1.3	3.2	12.4
Financials	-3.1	-5.5	-2.3
IT	-3.7	-7.9	-13.0
All Share	0.3	1.1	8.9

UK Equity Size Returns

Figure 4b: Size groups relative to All Share



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

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

Jagger & Associates Investment Update April 2022

Bond market information

Figure 5: £ Non-Gilt Credit Margins

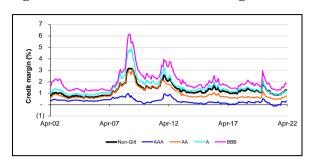


Table 2a: Over 15 Yr Corporate Yields & Margins

Month	iBoxx Corp	FT 20 yr	Margin
End	AA Y'ld (%)	Gilt (%)	(%)
Nov '21	1.64	1.00	0.64
Dec '21	1.89	1.20	0.69
Jan '22	2.25	1.52	0.73
Feb '22	2.62	1.67	0.95
Mar '22	2.71	1.84	0.87
Apr '22	3.05	2.13	0.92

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

Category	Mk @ Ap	Weight (%)			
Gilts (55)	1,607	1,324	1,243	72.8	/
Non-Gilts (1,186)	601	587	534	27.2	
AAA (139)	126	119	103		5.7
AA (151)	77	83	96		3.5
A (378)	157	159	158		7.1
BBB (518)	241	225	176		10.9

Category	Mkt Val (£bn @ Apr 22, 19)		W't (%)	Dur'n (yrs)
Gilts (55)	1,607	1,324	72.8	11.8
< 5 Yrs (12)	407	313	18.4	2.7
5–15 Yrs (16)	504	363	22.8	7.9
> 15 Yrs (27)	696	649	31.6	20.0
Non-Gilts (1,186)	601	587	27.2	7.1
< 5 Yrs (462)	250	200	11.3	3.0
5–15 Yrs (492)	231	246	10.5	7.3
> 15 Yrs (232)	120	141	5.4	15.3

Tables 2d, 2e: € Market Size and Maturity (Apr 22)

Category	Mkt Val (€bn)	Weight (%)
Sovereigns (445)	7,090	58.5
Non-Sovereigns	5,034	41.5
AAA (1,037)	1,332	11.0
AA (794)	1,203	9.9
A (1,336)	1,068	8.8
BBB (1,985)	1,431	11.8

Category	Mkt Val (€bn)	Weight (%)
1 – 3 Yrs (1,401)	2,755	22.7
3 – 5 Yrs (1,377)	2,508	20.7
5 – 7 Yrs (1,054)	1,976	16.3
7 – 10 Yrs (953)	2,033	16.8
10+ Yrs (812)	2,850	23.5

Table 2f: Breakdown of £ Index-Linked Market

Category (Number of issues)	Mkt Val Apr 22		W't (%)	Dur'n (yrs)
Gilts (32)	781	710	100.0	19.6
< 5 Yrs (4)	93	79	12.0	2.0
5 – 15 Yrs (9)	218	169	28.0	9.3
> 15 Yrs (19)	469	463	60.1	28.0

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

Month	US	Euro	Sterling
End	(%)	(%)	(%)
Nov '21	4.73	3.14	4.84
Dec '21	4.46	2.99	4.80
Jan '22	5.09	3.38	5.22
Feb '22	5.36	4.16	5.86
Mar '22	5.70	4.23	6.08
Apr '22	6.56	5.01	6.68

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

£ Gilt Market "main" Issuance

- \circ £3.25bn, $\frac{3}{8}$ % 2026 (2.34x, 1.52%, 0%, Jan '22)
- o £3.12bn, 1% 2032 (2.64x, 1.93%, 25%, Feb '22)
- o £2.50bn, 1¹/₈% 2039 (2.95x, 2.16%, 25%, Oct '21)
- £1.80bn, ¹/₈% IL 2073 (*11.39x*, -1.65%, n/a, Nov '21)

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 tender or syndication cases.

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