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Pension Perspectives: Q4 2012

- Pensions
- Quarterly

Lifting the lid on discount rate calculations

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- **Discount rate divergence** — Companies used a wider range of pension discount rates in 2011, and we expect this to continue in 2012 annual reports. This reduces comparability of reported pension liabilities, which are highly sensitive to discount rate assumptions. Falling discount rates are driving pension liabilities higher, raising concerns that the low yields reflect technical factors (eg few bonds in relevant indices). The IFRS Interpretations Committee is considering whether companies should be permitted to reference single-A corporate bonds given the shortage of Eurozone AA bonds; this could provide some relief from the very low AA yields.

- **Funding stable in Q4** — UK and European IFRS pension funding levels were broadly unchanged in Q4, with FTSE 350 schemes 91% funded on average, and Stoxx 50 schemes 56% funded. Increases in assets were offset by a continuing fall in AA corporate bond yields (increasing liabilities).

- **UK pension funding consultation** — The UK government has initiated two consultations which could result in lower funding requirements for UK pension schemes. The consultations will consider whether asset and liability values should be smoothed in funding deficit calculations, and if the affordability of deficit recovery plans for companies should be explicitly considered by the regulator. Other countries (eg US, Netherlands) introduced measures to reduce funding pressure in 2012, but the UK regulator has previously dismissed calls to soften UK rules.

- **Invensys disposal to improve pension funding** — Invensys announced the sale of its Rail division to Siemens for £1.7bn, with a one-off contribution of £400m into its UK pension scheme, together with a contingent payment of £225m. While the pension funding position has been improved and no deficit recovery payments will now be needed until 2018, it does not materially reduce the company's pension risk (in our view), as this is driven more by the scheme size.

- **Deutsche Post issues debt to fund pension** — Deutsche Post has followed a number of US companies in issuing debt in order to fund pension contributions. The company cited favourable market conditions, and has raised €2bn through a €1bn convertible bond and €1bn of other bonds. The debt issuance reduces ongoing pension contributions and increases security for the company's German pension scheme members, but essentially replaces one form of debt with another.

- **Most exposed** — We update our screens for corporate pension exposure, highlighting those companies most exposed to pension risk in Japan and the USA as well as in the UK and Europe. Most exposed UK and European companies include Fiat (pension liabilities 461% of market cap), IAG (422%), FirstGroup (419%), Go Ahead Group (335%), and BT Group (213%).

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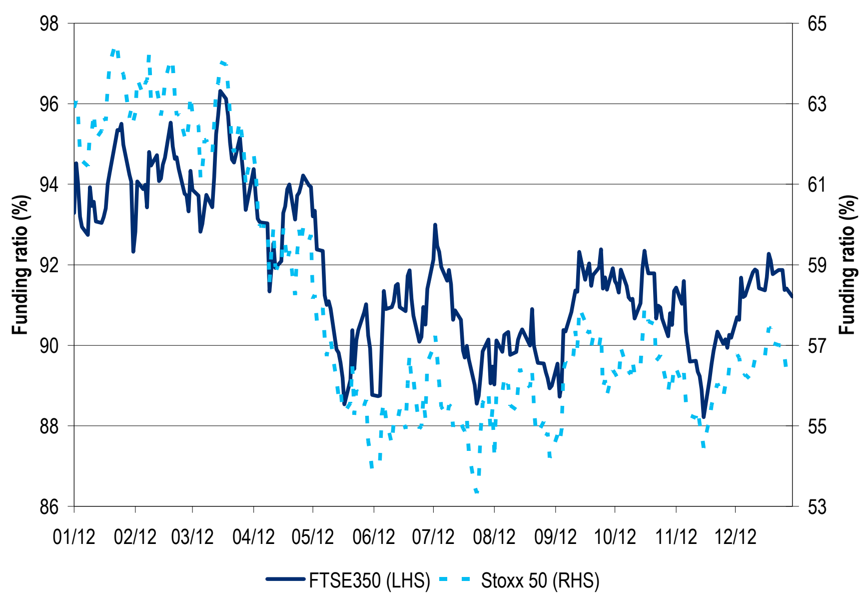
Pension funding levels unchanged in Q4

FTSE 350 pension schemes 91% funded, Stoxx 50 schemes 56% funded

The FTSE 350 and Stoxx 50 funding ratios did not change meaningfully during Q4, according to actuarial firm Hewitt. During Q4, FTSE 350 pension schemes funding remained at 91% on an IAS 19 basis, but were down from 94% at the end of 2011. The Stoxx 50 funding ratio ended 2012 at 56%, also unchanged during Q4, but down by 9% since the end of 2011.

Hewitt uses “indicative AA corporate bond yields” as discount rate for estimates of FTSE 350 liabilities and the iBoxx European AA corporates 10+ years index for the discount rate on Stoxx 50 liabilities. As we discuss from page 5, some companies are moving to apply a different methodology for calculating discount rates, and the IFRS Interpretations Committee has been asked to consider whether companies should be permitted to consider single-A bond yields, due a shortage of suitable AA bonds (particularly in the Eurozone). Therefore, the average change in pension liabilities and deficits reported by companies may differ from the Hewitt figures.

Figure 1. FTSE 350 and Stoxx 50 funding ratios were unchanged in Q4, but fell in 2012



Source: Hewitt, Citi Research. Note: funding level defined as assets/liabilities. Stoxx 50 funding ratio lower on absolute basis due to prevalence of unfunded pension schemes in some European countries.

UK – FTSE 350

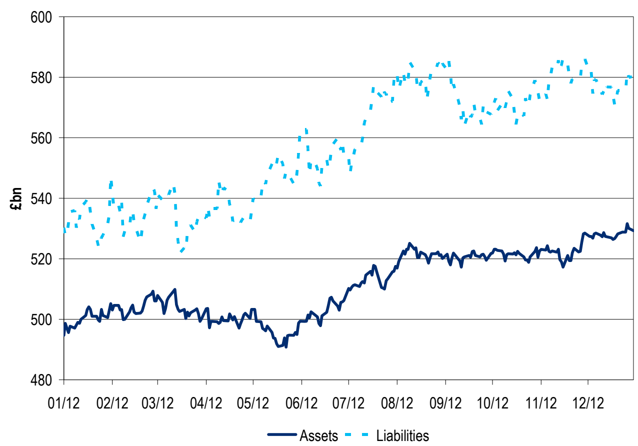
FTSE 350 pension deficit of £51bn at end 2012

In the UK, FTSE 350 pension assets rose by 7% in 2012, reaching £529bn, while pension liabilities rose by 9% to reach £580bn, as shown in Figure 2. This leaves a FTSE 350 deficit at end 2012 of £51bn, up by £15bn since the start of the year.

High grade sterling bond yields rose slightly in Q4, from 4.02% to 4.07% (Figure 3), The Q4 trend has continued into 2013, with the iBoxx index yield rising to 4.20%. According to KPMG, the median UK discount rate assumption among KPMG clients at 31 December 2012 is 4.4%, with a range of between 4.1% and 4.7%. This represents a 40bps fall in median discount rates compared to 31 December 2011. The median is approximately 30bps above the iBoxx level, which in part represents the duration mismatch between iBoxx (duration of 13.75 years at 31 December) and the average pension scheme liability duration of c.20 years, and does not appear

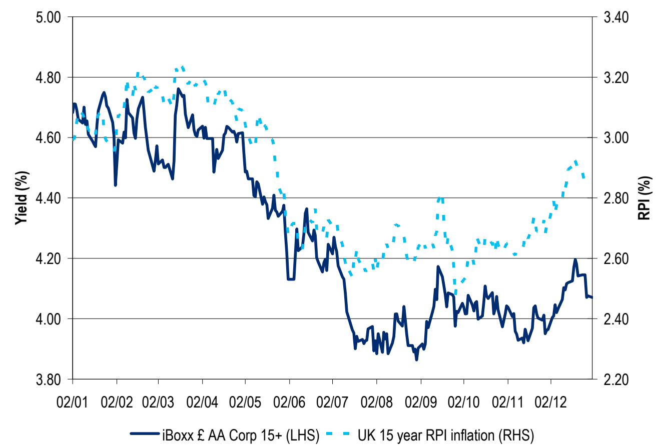
unreasonable based on the published relevant yield curve (the longest duration sterling corporate AA index published by iBoxx is 15+ years).

Figure 2. FTSE 350 pension assets and liabilities both rose in 2012…



Source: Hewitt

Figure 3. …but liabilities grew faster as discount rates fell



Source: DataStream, Bank of England

Long-run RPI inflation rates also rose in Q4, from 2.51% to 2.84% (Bank of England data). Like discount rates, implied RPI inflation has also jumped in 2013 so far, reaching 3.20%. This is largely driven by the UK government decision not to change the calculation of RPI, although we do not expect companies to factor this change into calculations as of 31 December (see page 10). According to KPMG, the median RPI inflation assumption at 31 December is 2.9%, with a median spread between RPI and CPI of 70bps (implying median CPI of 2.2%).

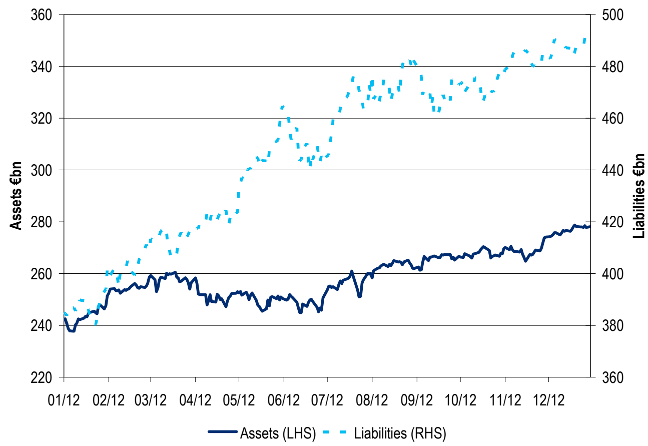
Europe – Stoxx 50

Stoxx 50 deficit reached €215bn by end 2012

Stoxx 50 pension liabilities rose a further 4% in Q4, reaching €439bn, according to Hewitt. Pension assets were €278bn, meaning that the Stoxx 50 deficit reached €215bn, up €4bn in the quarter. Despite strong asset returns (Stoxx 50 pension assets rose by 15% in 2012), the funding position of Eurozone pension schemes deteriorated in 2012, as pension liabilities rose an estimated 34% during the year.

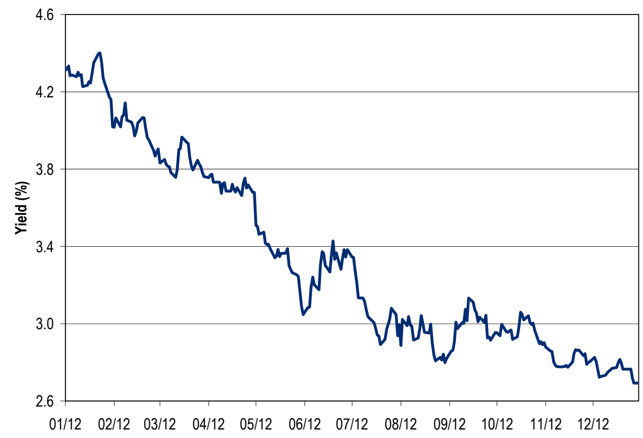
The iBoxx Euro AA corporate bond index yield kept falling during Q4 2012, from 2.91% to 2.69%. It remains questionable whether companies will follow the index closely given a fall of 191bps (from 4.60%) in 2012, due to concerns about the reliability of the relevant Eurozone bond indices. The IFRS Interpretations Committee has been asked to consider whether IFRS rules should be changed to permit a wider range of bonds to be incorporated into discount rate calculations (see page 6). However, our analysis below suggests that some companies do continue to refer to the benchmark index yields, and we have seen some companies report low discount rates in recent annual reports. For example, Siemens disclosed a discount rate for Germany (€) of 3.1% as at 30 September 2012, compared to an iBoxx index yield of 2.9% on the same date.

Figure 4. Stoxx 50 liabilities grew much faster than assets in 2012



Source: Hewitt

Figure 5. Euro AA corporate bond yields have fallen below 3%



Source: DataStream. Index: iBoxx € AA corporate 10+

Lifting the lid on discount rate calculations

Discount rate estimation has become a bigger issue as yields have fallen

In recent years long duration, high quality corporate bond yields have fallen significantly, and as a result the value of pension liabilities (and deficits) has risen. At the same time, the number of bonds from which to generate indices for calculating pension discount rates has fallen. As a result, companies have begun to change the way that pension discount rates are calculated, making greater use of curve fitting and extrapolation techniques to derive appropriate discount rates. At the same time, there have been numerous calls for changes to be made to IFRS to permit a wider population of bonds to be referenced when calculating discount rates.

IFRS (as well as US GAAP and Japanese GAAP) requires companies to determine the pension liability discount rate with reference to market yields on high quality corporate bonds. The currency and term of the bonds must be consistent with the currency and estimated term of the pension liabilities. If there is no sufficiently deep market for appropriate corporate bonds, companies must refer to market yields on government bonds. The valuation of pension liabilities is sensitive to discount rates, and we calculate (based on the latest available annual reports) that a 10bps fall in the discount rate increases pension liabilities by 1.6% on average.

IFRS not prescriptive on which bonds should be used for discount rates

The term “high quality corporate bonds” has been generally taken to mean bonds rated AA, while IFRS does not contain any specific guidance on the range of bonds which should be referred to. In the US, SEC guidance which forms part of US GAAP states that bonds rated AA or higher should be used. Specific guidance was also a feature in some legacy European accounting standards which were superseded by IFRS. For example, UK GAAP stipulates that AA bonds be referenced.

Methods for calculating discount rates

Traditionally, many companies have made use of public indices (such as those published by iBoxx) when selecting discount rates, and companies (particularly UK) have disclosed discount rate assumptions within a fairly tight range. For example, in 2010 the average variation between UK company assumptions and the relevant iBoxx index was 6bps.

In recent years, some companies have revised the method applied (we highlighted disclosures by BT in this regard in the Q2 *Pension Perspectives*). From discussions with industry consultants it appears that some companies began to move toward using a yield curve methodology in 2007/08.

Emerging 'yield curve' methodology involves discounting liabilities using derived AA curve

The 'yield curve approach' involves a number of steps:

1. Start with either a published yield curve or a curve derived from a population of appropriate bonds
2. Apply curve fitting methods beyond the maturity of the last liquid bonds to extend the curve to cover the necessary maturity
3. Model the expected scheme cash flows (ie benefit payments)
4. Discount each cash flow using the calculated yields to determine the present value
5. Determine the weighted average discount rate (ie the single rate which discounts the cash flows to the present value)

More judgement in applying yield curve approach

The key difference between the index based approach and the yield curve approach is that the yield curve approach requires more judgement. For example, there are a number of areas where different (but equally valid) decisions could be reached when building a pension discount rate yield curve:

- Whether to include bonds rated AAA, AA+ and AA-
- Which rating agencies to follow (the SEC guidance refers to Moody's as an example), and how many AA ratings to require (eg two from Moody's, S&P, and Fitch)
- Whether to include non-standard bonds (eg convertibles, callables/puttables, etc)
- Inclusion of collateralised bonds
- Whether to include all bonds or to strip out yield outliers
- Whether to include smaller issues (eg iBoxx requires a minimum of £250m/€500m of bonds outstanding for index inclusion, whereas other indices have lower thresholds).

There are also other differences in possible methodology eg what duration to begin extrapolation (market yields generally used up to between 20 and 30 years), and which statistical method to use when extrapolating long end yields.

Call for more IFRS guidance on definition of 'high quality'

The number of eligible bonds has been falling in recent years, particularly long duration bonds. The main driver of this has been issuer downgrades, with relatively few AA (or better) corporate bonds remaining, particularly Euro denominated. Within the iBoxx Euro AA corporate 10+ years index nine bonds remain, from only seven issuers.

IFRS Interpretations Committee asked to clarify which bonds should be used for discount rates

In response to this, alongside the sharp fall in the relevant bond yields, there have been calls for changes to IFRS to alleviate the impact of lower bond yields on the valuation of pension liabilities (and therefore deficits).

Specifically, the IFRS Interpretations Committee (IFRIC) has been petitioned by the German national accounting body (the Accounting Standards Committee of Germany) to permit the use of single-A bonds in calculating pension discount rates under IFRS.

The IFRIC discussed this proposition in November, and is scheduled to discuss further in the next IFRIC meeting later this month. IFRIC noted that IAS 19 does not specify which bonds to use, and therefore it is a question of judgement as to the population referred to. A staff paper prepared ahead of the January IFRIC meeting proposes permitting reference to single-A bonds when there is not a sufficiently deep market for AA bonds, with a credit risk adjustment made to the yield of single-A instruments to adjust for the perceived additional credit risk. This could also impact on companies referring to government bonds at present (as companies would be required to use single-A bonds ahead of government bonds if available).

Unclear if IFRIC will issue guidance; meet later this month

The calculation of discount rates is a contentious area, and the IASB's previous work in this area (the Board initiated a project in 2009) did not result in any change. It therefore appears somewhat doubtful that IFRIC will agree on a solution, at least in the short term.

Current practice

Perhaps unsurprisingly, given the absence of detailed guidance in IFRS, current company practice does not appear uniform. Unfortunately, many companies provide relatively limited information on the calculation of discount rates (aside from including boilerplate extracts from IAS 19).

Lack of clear disclosure over techniques applied by companies

We surveyed the most exposed UK European companies (the top 50 in the UK and the top 50 in mainland Europe, ranked by pension liabilities against market cap) to assess which techniques were being applied. Our discussions with IASB staff suggested that some companies may already be referring to single-A bonds when calculating discount rates, but we did not see any evidence of this in the (2011/12) annual reports we reviewed, and the IFRIC committee was clear that companies should provide details of any change in the methodology applied. By and large there were three types of approach discussed:

- Some companies do not yet appear to have adopted the new yield curve methodology, with 11 companies specifically referring to the use of external indices. These were ArcelorMittal, BAE Systems, Capgemini, Dairy Crest, Electrolux, GKN, Lafarge, Philips, Sainsbury, Thales, and Veolia.

- Nine companies referred specifically to the use of a yield curve methodology. These were AXA, Barclays, BT Group, DE Master Blenders, Howdens, KPN, Michelin, Phoenix Group, and Zurich Insurance.

- The other 80 companies reviewed either did not disclose a method for calculating the pension discount rate or included only generic references to IAS 19, making it difficult to ascertain the actual approach taken.

Overall, it is difficult to assess the extent to which companies have changed their calculation of pension discount rates in recent years, or the amount of companies which have adopted a yield curve methodology.

Conclusions and future implications

In general, we expect that companies will continue to report a relatively wide range of pension discount rate assumptions, given that the iBoxx indices fell considerably in 2012. We do not expect the IASB/IFRIC to provide formal guidance in the near term (certainly not in time for 2012 reporting), and it remains to be seen if the IFRIC will commit to publishing any new guidance.

Pensions a 2012 reporting priority for European markets regulator

The European Securities and Markets Regulator (ESMA) made pension liability measurement one of its key enforcement priorities for 2012 annual reports (as we discussed in *The Standards*, 5 December). Specifically, ESMA noted that companies should not change the discount rate calculation methodology in anticipation of a decision from IFRIC, and that there is “a particular need for transparency” in disclosing how discount rates are calculated.

As we noted above, discount rates are a key input into pension liability valuation. Given the disparities in practice, we think that investors should be cautious when comparing companies’ reported pension deficits, and should consider the discount rates applied and the justification for these rates.

Other Pension Developments

UK consultations could provide pension funding relief

Two consultations to focus on UK pension funding

In the Autumn Statement published in December 2012[1], the UK Chancellor initiated two consultations which could be positive for companies with large UK pension schemes. Firstly, whether the UK Pensions Regulator should be required to consider the long-term affordability of deficit recovery plans to companies; and secondly if companies undergoing valuations in 2013 and beyond should be allowed to smooth asset and liability values.

Precedents set by other European countries and the US…

The UK would be following a number of other countries in taking steps to reduce the burden of pension funding, as we discussed in the Q2 *Pension Perspectives*. The US and Sweden introduced temporary floors on regulatory discount rates, while Denmark and the Netherlands increased the rates applied to long dated liabilities.

… but UK regulator previously dismissed calls to soften UK rules

The UK Pension Regulator has previously dismissed calls to soften UK funding rules in response to falling gilt yields. Its current statutory objectives are to protect pensioners and reduce the risk of compensation payments by the Pension Protection Fund. It is therefore not clear how an explicit objective to consider sponsor affordability would fit with these, whilst it could be argued that the regulator already implicitly considers sponsor affordability when determining the sustainability of deficit recovery plans. The Pension Regulator acknowledged the government’s intended consultations, but noted that its approach will not change until it is clear that the legislative framework is to be amended.

The consultations are to be undertaken by the Department of Work and Pensions, but consultation papers have not yet been issued. Any changes to UK pension regulation could reduce the minimum funding requirements for UK companies. However, IFRS rules are unaffected, so reported deficits would not be affected by any change from the consultations.

[1] See www.hm-treasury.gov.uk, 5 December 2012.

Invensys to use division disposal proceeds to fund UK deficit

Invensys to use part of Rail division sale proceeds to fund pension deficit

In November Invensys announced it had agreed to sell its Rail division to Siemens for £1.7bn, proposing that £400m be contributed to the UK pension scheme, with a further £225m locked in trust as a contingent scheme asset[2]. The deal is expected to complete in Q2 2013 (subject to all relevant approvals).

Removing annual deficit repair obligations up to 2018 at least

The proposed actions, which have been approved by the UK Pensions Regulator, would mean that Invensys is unlikely to be required to make deficit repair payments until 2018 at the earliest, removing the obligation of scheduled payments of £40-47m p.a. over this period.

Invensys has previously been open about its objectives for mitigating UK pension risk, with the ultimate goal of achieving a pension buy-out. We featured Invensys as a case study in our review of pension risk management tools in last quarter's *Pension Perspectives*, noting that while Invensys' UK pension scheme is large (gross liabilities of £4.5bn at 30 September 2012), it is also mature (1% active members, 63% pensioners) with a relatively low risk asset allocation.

Transaction crystallises conservative buy-out valuation of Rail division's pension liabilities

While the announced disposal and associated pension funding clearly improves the UK pension funding position and reduces the burden of pensions on operating cash flows, the transaction does not represent a significant reduction in pension risk, in our view. The disposal of a part of the business without also transferring any significant pension liabilities (Siemens are assuming only c.2.5% of total pension liabilities) in effect crystallises a conservative buy-out (section 75) valuation of the liabilities, with the amount contributed representing the amount needed to fund the relevant schemes on a full buy-out basis. Invensys will still be sponsor to c. £6bn of UK pension liabilities, and therefore remains exposed to the risks associated with these (as well as investment risk on the plan assets).

Our analyst's view is that the deal is positive given the valuation attributed to the Rail business, and a better funded pension scheme makes it easier for prospective acquirers to gain shareholder support. In his view, it is in any case arguable that the pension scheme is a major barrier for larger players (such as Emerson) which have shown interest in acquiring Invensys.

Deutsche Post issues debt to fund pension scheme

€2bn debt issuance to be used to improve German schemes' funding

Deutsche Post recently announced the issuance of €2bn of debt, which the company intends to use to obtain long-term funding for some of its pension obligations[3]. The company issued a €1bn 7-year convertible and two other bonds, a €300m 8-year and a €700m 12-year. The company noted that its intention was to take advantage of favourable capital market conditions currently available to companies with strong credit quality, and noted that the move would have a small positive effect on the financial result and net income (as the discount rate used to accrue interest on the pension deficit is greater than the cost of the debt instruments). Overall it appears the impact on EPS will be at least neutral.

Average total cash cost of defined benefit pensions €610m over 2006-2011

Deutsche Post intends to use the cash raised to "almost double" the plan assets available to pay pensions to Germany employees. The move will improve operating cash flows; Deutsche Post has contributed an average of €194m into German plan

[2] See www.invensys.com, 28 November 2012.

[3] See www.dp-dhl.com, 4 December 2012.

assets over 2006-2011, and has paid an average of €287m p.a. in German scheme benefits from operating cash flows over 2006-2011.

As shown in Figure 6, Deutsche Post reported €2.1bn of German plan assets in 2011, and a deficit of €1.9bn on its German funded schemes. The company also has unfunded pension liabilities of €3.4bn in Germany, and an additional deficit on overseas schemes of €0.5bn (with average cash contributions of €130m over 2006-2011).

Figure 6. Deutsche Post pension exposure analysis, 2006-2011 (€m)

	2006	2007	2008	2009	2010	2011
Wholly/partly funded pension liabilities - Germany	4,150	3,686	3,558	3,879	4,003	4,097
Pension assets - Germany	1,852	1,914	1,992	2,073	2,122	2,106
Wholly/partly funded pension deficit - Germany	**2,298**	**1,772**	**1,566**	**1,806**	**1,881**	**1,991**
Unfunded pension liabilities - Germany	3,749	3,237	3,123	3,251	3,272	3,377
Total pension deficit - Germany	**6,047**	**5,009**	**4,689**	**5,057**	**5,153**	**5,368**
Other pension liabilities	5,709	5,179	4,172	4,534	5,074	5,783
Other pension assets	5,551	5,466	3,851	4,399	4,897	5,263
Other pension deficit	**158**	**-287**	**321**	**135**	**177**	**520**
Total pension liabilities	13,608	12,102	10,853	11,664	12,349	13,257
Total pension assets	7,403	7,380	5,843	6,472	7,019	7,369
Total pension deficit	**6,205**	**4,722**	**5,010**	**5,192**	**5,330**	**5,888**
Cash contributions						
Employer contributions - Germany	217	200	215	203	169	160
Benefits paid from corporate cash - Germany	291	291	301	280	278	279
Total employer contributions - Other	116	129	113	134	151	134
Total employer contributions	**624**	**620**	**629**	**617**	**598**	**573**

Source: Company reports, Citi Research. Deutsche Postbank figures excluded for 2006-2008. Other pension liabilities include unfunded liabilities. Other employer contributions include benefits paid out of corporate cash.

Practice of issuing debt to fund pensions more common in US to date

We are not aware of other major European companies having issued debt with the specific purpose of funding pension schemes. However, there have been examples of similar debt issues (but not convertibles) in the US in the past few years, including CSX Corp, Kroger, NiSource, and Raytheon. From a practical perspective we understand the appeal of this transaction, as it enables Deutsche Post to secure funding in favourable conditions, and reduces the strain of pensions on operating cash flows. However, on the basis that pensions are in effect an alternative form of debt, the company is simply replacing pension debt with financial debt, and therefore replacing future operating cash flows (ie pension contributions) with financing cash flows.

It is notable that the transactions have taken place ahead of changes to IAS 19, which took effect from 1 January 2013, as the €2bn of additional pension funding is likely to offset the additional c. €1.9bn of pension deficit (based on the end 2011 position) required to be recognised on balance sheet, as the corridor rule has been abolished. For more details on the changes to IAS 19, refer to *The Standards: New Pension Rules*.

UK government opt against changing RPI calculation

ONS retains current RPI methodology, which overstates inflation due to 'formula effect'

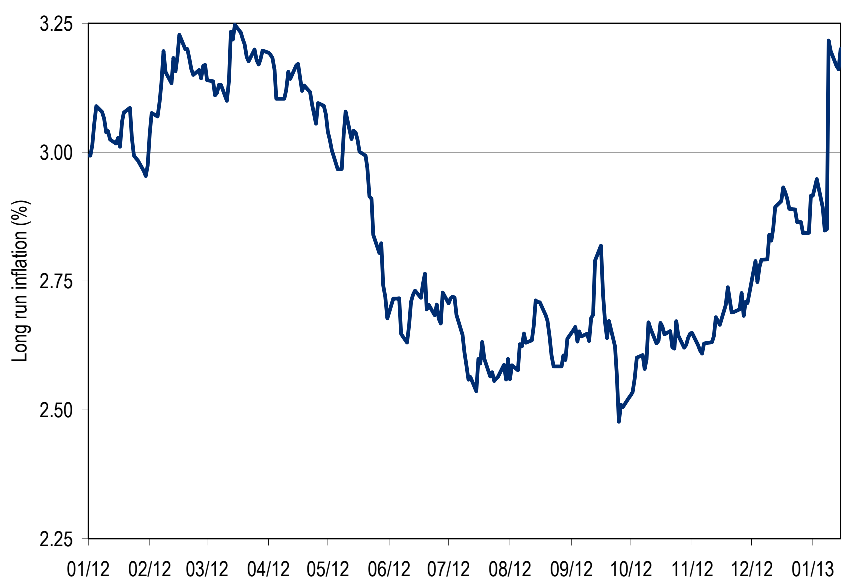
In the Q3 *Pension Perspectives* we highlighted that the UK Office of National Statistics (ONS) was consulting on potential changes to the calculation of the Retail Price Index (RPI), one of the key measures of inflation and the basis of minimum pension indexation for many schemes (despite the statutory move to CPI in 2010). The key aspect of the consultation was changes to the RPI calculation, as the

current RPI calculation overstates inflation due to use of arithmetic rather than geometric means (known as the 'formula effect').

The ONS has subsequently decided to maintain the status quo for calculating RPI (as discussed by Citi Economists: *UK - ONS Decide on Option 1*, 10 January), although it will introduce an alternative measure known as 'RPIJ' which will calculate retail price inflation excluding the formula effect. This decision could be a significant negative factor for pension schemes which apply RPI indexation. Companies are required to base long-run inflation estimates on market expectations, and so the spike in long run implied RPI inflation on the 10 January (as shown in Figure 7) is likely to result in higher inflation estimates for companies reporting after this date. IAS 19 requires the use of market inputs at the balance sheet date, and therefore (based on discussions with Big 4 auditors) we do not expect companies to specifically incorporate the impact of the ONS decision on 31 December 2012 inflation estimates. However, the ONS announcement is likely to be considered a non-adjusting post balance sheet event under IFRS rules, and some companies may therefore comment on the impact of the ONS decision on future liability valuations if the impact is material.

Long-run RPI spike may lead to higher pension liability valuations for some companies in 2013

Figure 7. Long run implied RPI inflation spiked on the ONS announcement on 10 January



Source: Bank of England

Corporate pension exposure screens

For screens including all index constituents email neil.dawson@citi.com

We include three screens to assess a company's exposure to pension risk. This quarter we include pension screens for the US and Japan, as well as the UK and Europe. We use the most recent annual report for pension data and current prices for market caps. Differing company year-ends reduce the comparability of the data. The three screens are:

- **Pension liabilities compared to market cap** – This is our primary screen. Companies with the largest pension liabilities are generally most at risk of large changes in pension deficits due to changes in discount rate, inflation, mortality

assumptions and asset returns[4]. This screen captures companies which may have small pension deficits or surpluses but are exposed to significant pension risk due to the scheme size.

- **Pension deficits compared to market cap** – This screen indicates which companies have the largest net liability relating to pensions and therefore largest potential cash outflows in forthcoming years. Pension deficits can be volatile from quarter to quarter so may have changed significantly since the last annual report. Note that the pension deficits shown below are gross of any associated tax asset. For valuation purposes (e.g. in Enterprise Value or DCF calculations) we prefer to take the net-of-tax pension deficit, but these figures are not disclosed consistently by all companies.

- **Pension fund equity exposure compared to market cap** – We compare the value of equities held in the pension fund to the market cap of the company. This indicates which companies might be most exposed via the pension fund to a decline in equities, and indicates riskier asset allocation. A large equity holding relative to the company's market cap should (theoretically) increase the beta of the company's share price.

This screening is a crude tool for identifying pension risk. It does not identify the extent to which pension risks have been mitigated, e.g. through asset-liability matching techniques. Further, companies may have special circumstances that affect the nature and risks of the pension liabilities, such as specific regulatory treatment of pensions or employee risk-sharing arrangements. Nevertheless, companies appearing on these screens have potential material exposure to pension risk that we believe warrants further investigation.

UK – FTSE 350

FTSE 350 companies most exposed to pension risk: IAG, FirstGroup, Go-Ahead Group, BT Group, and Invensys

Figure 8. FTSE 350 pension liabilities as a percentage of market cap (m)

Company	RIC	Curr	Year End	Price (local)	Mkt cap	Liabilities	Liabilities as % Mkt Cap
IAG	ICAG.MC	EUR	12/11	2.55	4,726	19,947	422%
FirstGroup[1]	FGP.L	GBP	03/12	1.94	933	3,910	419%
Go-Ahead Group[1]	GOG.L	GBP	06/12	12.79	550	1,843	335%
BT Group	BT.L	GBP	03/12	2.45	19,273	40,989	213%
Invensys	ISYS.L	GBP	03/12	3.39	2,762	5,801	210%
BAE Systems	BAES.L	GBP	12/11	3.45	11,202	23,146	207%
Phoenix Group	PHNX.L	GBP	12/11	5.69	1,677	3,043	181%
Kier Group	KIE.L	GBP	06/12	13.72	546	941	172%
WS Atkins	ATKW.L	GBP	03/12	7.71	772	1,330	172%
Carillion	CLLN.L	GBP	12/11	3.21	1,382	2,204	159%
Dairy Crest Group	DCG.L	GBP	03/12	3.99	544	846	155%
Balfour Beatty	BALF.L	GBP	12/11	2.90	1,994	2,915	146%
RSA Insurance Group	RSA.L	GBP	12/11	1.26	4,542	6,002	132%
Mitchells & Butlers	MAB.L	GBP	09/12	3.16	1,296	1,698	131%
Stagecoach Group[1]	SGC.L	GBP	04/12	3.04	1,751	2,265	129%
Interserve	IRV.L	GBP	12/11	4.35	551	695	126%
Marks and Spencer	MKS.L	GBP	03/12	3.63	5,835	6,096	104%
Dixons Retail	DXNS.L	GBP	04/12	0.27	987	992	101%
WH Smith	SMWH.L	GBP	08/12	6.15	786	776	99%
QinetiQ	QQ.L	GBP	03/12	1.79	1,162	1,139	98%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013. [1]Companies participate in Railways Pension Scheme where liability is limited by duration of franchise agreements, but we have included 100% of reported liabilities.

[4] Assuming the pension liabilities are backed by assets.

Largest deficits: BAE Systems, WS Atkins, FirstGroup, Dixons, and Carillion

Figure 9. FTSE 350 pension deficits as a percentage of market cap (m)

Company	RIC	Curr	Year End	Price (local)	Mkt cap	Liabilities	Assets	Deficits	Deficits as % Mkt Cap
BAE Systems[1]	BAES.L	GBP	12/11	3.45	11,202	23,146	17,577	4,604	41%
WS Atkins	ATKW.L	GBP	03/12	7.71	772	1,330	1,079	251	33%
FirstGroup[2]	FGP.L	GBP	03/12	1.94	933	3,910	3,397	268	29%
Dixons Retail	DXNS.L	GBP	04/12	0.27	987	992	730	262	27%
Carillion	CLLN.L	GBP	12/11	3.21	1,382	2,204	1,898	306	22%
GKN Plc	GKN.L	GBP	12/11	2.42	3,947	3,561	2,693	868	22%
TUI Travel Plc	TT.L	GBP	09/12	2.92	3,261	1,991	1,343	648	20%
Morgan Crucible	MGCR.L	GBP	01/12	2.73	767	567	432	135	18%
Synthomer PLC	SYNTS.L	GBP	12/11	1.99	675	322	204	118	17%
John Menzies	MNZS.L	GBP	12/11	6.54	394	306	242	64	16%
De La Rue	DLAR.L	GBP	03/12	9.38	934	843	698	146	16%
Invensys	ISYS.L	GBP	03/12	3.39	2,762	5,801	5,409	426	15%
Dairy Crest Group	DCG.L	GBP	03/12	3.99	544	846	766	80	15%
Balfour Beatty	BALF.L	GBP	12/11	2.90	1,994	2,915	2,640	275	14%
Whitbread	WTB.L	GBP	03/12	24.67	4,419	1,940	1,341	599	14%
BT Group	BT.L	GBP	03/12	2.45	19,273	40,989	38,541	2,448	13%
Smiths Group	SMIN.L	GBP	07/12	12.18	4,788	3,945	3,348	597	12%
Howdens	HWDN.L	GBP	12/11	1.81	1,162	778	641	137	12%
Kier Group	KIE.L	GBP	06/12	13.72	546	941	883	58	11%
Home Retail Group	HOME.L	GBP	03/12	1.37	1,111	880	764	115	10%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013. Deficits reflect unrecognised surplus due to application of asset ceiling. [1]BAE Systems attributes portion of deficit to other companies; we include 100% of assets and liabilities but include the adjusted deficit as reported. [2]Company participates in Railways Pension Scheme where liability is limited by duration of franchise agreements. We have included 100% of assets and liabilities but include adjusted deficit as reported.

Most exposed to equities in pension fund: Go-Ahead Group, IAG, Kier Group, FirstGroup, and Stagecoach Group

Figure 10. FTSE 350 equity exposure from pension funds (m)

Company	RIC	Curr	Year End	Price (local)	Mkt cap	Assets	Equities %	Bonds %	Other %	Exposure*
Go-Ahead Group[1]	GOG.L	GBP	06/12	12.79	550	1,576	70%	5%	24%	202%
IAG	ICAG.MC	EUR	12/11	2.55	4,726	19,515	33%	47%	20%	137%
Kier Group	KIE.L	GBP	06/12	13.72	546	883	72%	26%	2%	116%
FirstGroup[1]	FGP.L	GBP	03/12	1.94	933	3,397	27%	26%	47%	99%
Stagecoach Group[1]	SGC.L	GBP	04/12	3.04	1,751	1,974	73%	13%	14%	83%
BAE Systems	BAES.L	GBP	12/11	3.45	11,202	17,577	51%	40%	9%	80%
WS Atkins	ATKW.L	GBP	03/12	7.71	772	1,079	51%	44%	6%	71%
Carillion	CLLN.L	GBP	12/11	3.21	1,382	1,898	48%	50%	1%	66%
Interserve	IRV.L	GBP	12/11	4.35	551	639	44%	47%	9%	51%
QinetiQ	QQ.L	GBP	03/12	1.79	1,162	1,108	53%	34%	13%	50%
Balfour Beatty	BALF.L	GBP	12/11	2.90	1,994	2,640	38%	52%	11%	50%
Dixons Retail	DXNS.L	GBP	04/12	0.27	987	730	66%	28%	6%	49%
National Express Group	NEX.L	GBP	12/11	2.14	1,091	821	60%	38%	2%	45%
BT Group	BT.L	GBP	03/12	2.45	19,273	38,541	21%	38%	41%	42%
De La Rue	DLAR.L	GBP	03/12	9.38	934	698	51%	41%	8%	38%
Mitchells & Butlers	MAB.L	GBP	09/12	3.16	1,296	1,610	30%	66%	4%	38%
John Menzies	MNZS.L	GBP	12/11	6.54	394	242	61%	27%	12%	37%
RSA Insurance Group	RSA.L	GBP	12/11	1.26	4,542	5,813	26%	79%	-5%	33%
Smiths Group	SMIN.L	GBP	07/12	12.18	4,788	3,348	46%	14%	40%	32%
National Grid	NG.L	GBP	03/12	6.83	25,011	19,957	41%	50%	10%	32%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013. *Value of equity assets in pension fund as percentage of market cap. [1]Companies participate in Railways Pension Scheme where liability is limited by duration of franchise agreements, but we have included 100% of reported assets.

Europe – MSCI Europe ex UK

MSCI Europe ex UK companies most exposed to pension risk: Fiat, Lufthansa, Peugeot, KPN, and Akzo Nobel

Figure 11. MSCI Europe ex UK pension liabilities as a percentage of market cap (m)

Company	RIC	Curr	Year End	Price (local)	Mkt cap	Liabilities	Liabilities as % Mkt Cap
Fiat SpA	FIA.MI	EUR	12/11	4.50	5,627	25,964	461%
Lufthansa	LHAG.DE	EUR	12/11	15	6,757	12,941	192%
Peugeot SA	PEUP.PA	EUR	12/11	6.44	2,284	3,787	166%
KPN NV	KPN.AS	EUR	12/11	4.44	6,360	8,299	130%
Akzo Nobel	AKZO.AS	EUR	12/11	52.28	12,455	15,110	121%
Philips	PHG.AS	EUR	12/11	21.50	20,578	22,413	109%
EDF	EDF.PA	EUR	12/11	14.71	27,188	28,267	104%
RWE AG	RWEG.DE	EUR	12/11	29.33	17,961	18,141	101%
Thales	TCFP.PA	EUR	12/11	26.40	5,340	4,787	90%
Salzgitter AG	SZGG.DE	EUR	12/11	36.74	2,208	1,901	86%
Delta Lloyd	DLL.AS	EUR	12/11	14.50	2,563	2,080	81%
Lonza Group AG	LONN.VX	CHF	12/11	56.65	2,998	2,394	80%
ATOS	ATOS.PA	EUR	12/11	54.86	4,672	3,285	70%
Commerzbank	CBKG.DE	EUR	12/11	1.66	9,677	6,242	65%
Deutsche Post	DPWGn.DE	EUR	12/11	17.38	21,013	13,257	63%
Baloise Holding AG	BALN.VX	CHF	12/11	83.95	4,198	2,648	63%
Finmeccanica	SIFI.MI	EUR	12/11	4.97	2,871	1,798	63%
Swiss Life Holding	SLHN.VX	CHF	12/11	135.90	4,360	2,646	61%
TDC	TDC.CO	DKK	12/11	41.65	34,361	20,340	59%
Aegon	AEGN.AS	EUR	12/11	4.97	9,793	5,581	57%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013. IAG excluded from MSCI Europe ex UK as included in FTSE 350.

Largest deficits: Fiat, Salzgitter, Delta Lloyd, Lufthansa, and EDF

Figure 12. MSCI Europe ex UK pension deficits as a percentage of market cap (m)

Company	RIC	Curr	Year End	Price (local)	Mkt cap	Liabilities	Assets	Deficits	Deficits as % Mkt Cap
Fiat SpA	FIA.MI	EUR	12/11	4.50	5,627	25,964	20,004	5,960	106%
Salzgitter AG	SZGG.DE	EUR	12/11	36.74	2,208	1,901	8	1,893	86%
Delta Lloyd	DLL.AS	EUR	12/11	14.50	2,563	2,080	65	2,023	79%
Lufthansa	LHAG.DE	EUR	12/11	14.69	6,757	12,941	8,186	4,755	70%
EDF	EDF.PA	EUR	12/11	14.71	27,188	28,267	12,594	15,673	58%
Swiss Life Holding	SLHN.VX	CHF	12/11	135.90	4,360	2,646	1,059	1,587	36%
Aegon	AEGN.AS	EUR	12/11	4.97	9,793	5,581	2,543	3,038	31%
Thales	TCFP.PA	EUR	12/11	26.40	5,340	4,787	3,227	1,560	29%
Peugeot SA	PEUP.PA	EUR	12/11	6.44	2,284	3,787	3,137	650	28%
Deutsche Post	DPWGn.DE	EUR	12/11	17.38	21,013	13,257	7,369	5,890	28%
Solvay SA	SOLB.BR	EUR	12/11	114.10	9,664	4,233	1,818	2,426	25%
AXA SA	AXAF.PA	EUR	12/11	13.71	32,736	16,353	8,311	8,049	25%
UniCredit Group	CRDI.MI	EUR	12/11	4.34	25,138	8,700	3,292	5,499	22%
RWE AG	RWEG.DE	EUR	12/11	29.33	17,961	18,141	14,355	3,846	21%
Baloise Holding	BALN.VX	CHF	12/11	83.95	4,198	2,648	1,947	890	21%
Volkswagen AG	VOWG.DE	EUR	12/11	165.25	79,117	23,251	6,559	16,739	21%
Capgemini SA	CAPP.PA	EUR	12/11	34.56	5,590	3,027	1,898	1,129	20%
EADS	EAD.PA	EUR	12/11	33.70	27,882	10,639	5,135	5,504	20%
KPN NV	KPN.AS	EUR	12/11	4.44	6,360	8,299	7,224	1,075	17%
Deutsche Telekom	DTEGn.DE	EUR	12/11	9.02	38,970	6,969	860	6,112	16%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013. Deficits reflect unrecognised surplus due to application of asset ceiling.

Most exposed to equities in pension fund: Fiat, Peugeot, KPN, Lufthansa, and Lonza

Figure 13. MSCI Europe ex UK equity exposure from pension funds (m)

Company	RIC	Curr	Year End	Price (local)	Mkt cap	Assets	Equities %	Bonds %	Other %	Exposure*
Fiat SpA	FIA.MI	EUR	12/11	4.50	5,627	20,004	25%	43%	32%	89%
Peugeot SA	PEUP.PA	EUR	12/11	6.44	2,284	3,137	35%	65%	0%	48%
KPN NV	KPN.AS	EUR	12/11	4.44	6,360	7,224	37%	41%	23%	41%
Lufthansa	LHAG.DE	EUR	12/11	15	6,757	8,186	31%	46%	23%	37%
Lonza Group AG	LONN.VX	CHF	12/11	56.65	2,998	2,001	42%	13%	45%	28%
Baloise Holding	BALN.VX	CHF	12/11	83.95	4,198	1,947	50%	21%	29%	23%
Thales	TCFP.PA	EUR	12/11	26.40	5,340	3,227	32%	55%	13%	20%
Capgemini SA	CAPP.PA	EUR	12/11	34.56	5,590	1,898	56%	40%	4%	19%
ING Groep NV	ING.AS	EUR	12/11	7.60	29,110	20,077	27%	60%	13%	19%
Akzo Nobel	AKZO.AS	EUR	12/11	52.28	12,455	14,605	15%	73%	12%	18%
Philips	PHG.AS	EUR	12/11	21.50	20,578	21,249	16%	73%	11%	17%
RWE AG	RWEG.DE	EUR	12/11	29.33	17,961	14,355	20%	54%	25%	16%
Lafarge SA	LAFP.PA	EUR	12/11	47.98	13,781	3,855	53%	43%	5%	15%
Alstom	ALSO.PA	EUR	03/12	32.25	9,933	4,097	35%	53%	12%	14%
EDf	EDF.PA	EUR	12/11	14.71	27,188	12,594	30%	64%	6%	14%
Michelin	MICP.PA	EUR	12/11	71.28	12,973	4,810	37%	47%	16%	14%
Aegon	AEGN.AS	EUR	12/11	4.97	9,793	2,543	52%	39%	8%	14%
Veolia	VIE.PA	EUR	12/11	8.88	4,637	1,282	47%	43%	10%	13%
Electrolux	ELUXb.ST	SEK	12/11	166.60	51,494	18,468	35%	47%	18%	13%
ATOS	ATOS.PA	EUR	12/11	54.86	4,672	3,082	19%	63%	18%	13%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013. *Value of equity assets in pension fund as percentage of market cap. IAG excluded from MSCI Europe ex UK as included in FTSE 350.

USA – S&P 500

S&P 500 companies most exposed to pension risk: US Steel, Goodyear, Northrop, ALCOA, and Ford

Figure 14. S&P 500 pension liabilities as a percentage of market cap (USD m)

Company	RIC	Year End	Price (local)	Mkt cap	Liabilities	Liabilities as % Mkt Cap
US Steel Corp	X.N	12/11	24.70	3,564	10,770	302%
Goodyear Tire	GT.O	12/11	13.88	3,400	8,711	256%
Northrop Corp	NOC.N	12/11	67.14	16,479	24,129	146%
ALCOA	AA.N	12/11	8.94	9,541	13,526	142%
Ford Motor	F.N	12/11	14.22	53,209	73,979	139%
JC Penney	JCP.N	01/12	18.14	3,977	5,297	133%
Lockheed Martin	LMT.N	12/11	94.75	30,660	40,616	132%
Boeing	BA.N	12/11	75.26	56,752	67,651	119%
Raytheon	RTN.N	12/11	58.25	19,215	21,613	112%
Owens Illinois	OI.N	12/11	22.69	3,733	4,100	110%
Xerox Corp	XRX.N	12/11	7.58	9,646	10,505	109%
Pitney Bowes	PBI.N	12/11	11.73	2,355	2,289	97%
Hewlett-Packard	HPQ.N	10/12	17.11	33,333	32,334	97%
Computer Science	CSC.N	03/12	41.76	6,488	6,016	93%
Allegheny Tech	ATI.N	12/11	30.07	3,227	2,750	85%
The AES Corp	AES.N	12/11	11.07	8,236	6,833	83%
Textron Inc	TXT.N	12/11	27.09	7,635	6,325	83%
PG&E	PCG.N	12/11	40.82	17,552	14,000	80%
Gannett	GCI.N	12/11	19.68	4,522	3,351	74%
Consol Edison	ED.N	12/11	55.28	16,190	11,825	73%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013.

Largest deficits: Goodyear, US Steel, Lockheed Martin, ALCOA, and Raytheon

Figure 15. S&P 500 pension deficits as a percentage of market cap (USD m)

Company	RIC	Year End	Price (local)	Mkt cap	Liabilities	Assets	Deficits	Deficits as % Mkt Cap
Goodyear Tire	GT.N	12/11	13.88	3,400	8,711	5,614	3,097	91%
US Steel Corp	X.N	12/11	24.70	3,564	10,770	8,353	2,417	68%
Lockheed Martin	LMT.N	12/11	94.75	30,660	40,616	27,292	13,324	43%
ALCOA	AA.N	12/11	8.94	9,541	13,526	10,311	3,181	33%
Raytheon	RTN.N	12/11	58.25	19,215	21,613	15,552	6,061	32%
Boeing	BA.N	12/11	75.26	56,752	67,651	51,051	16,600	29%
Ford Motor	F.N	12/11	14.22	53,209	73,979	58,612	15,367	29%
Consol Edison	ED.N	12/11	55.28	16,190	11,825	7,800	4,025	25%
Xerox Corp	XRX.N	12/11	7.58	9,646	10,505	8,277	2,228	23%
DuPont	DD.N	12/11	46.36	43,229	27,083	17,794	9,289	21%
Gannett	GCI.N	12/11	19.68	4,522	3,351	2,409	943	21%
Owens Illinois	OI.N	12/11	22.69	3,733	4,100	3,336	764	20%
Hewlett-Packard	HPQ.N	10/12	17.11	33,333	32,334	25,557	6,777	20%
The AES Corp	AES.N	12/11	11.07	8,236	6,833	5,162	1,671	20%
Computer Science	CSC.N	03/12	41.76	6,488	6,016	4,714	1,302	20%
Ryder System	R.N	12/11	54.80	2,801	1,968	1,418	550	20%
Safeway	SWY.N	12/11	18.06	4,327	2,425	1,641	783	18%
Pitney Bowes	PBI.N	12/11	11.73	2,355	2,289	1,865	424	18%
Whirlpool Corp	WHR.N	12/11	107.40	8,361	4,245	2,743	1,502	18%
Rockwell Collins	COL.N	09/12	60.15	8,312	3,967	2,501	1,466	18%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013.

Most exposed to equities in pension fund: US Steel, Goodyear, JC Penney, Washington Post, and Owens Illinois

Figure 16. S&P 500 equity exposure from pension funds (USD m)

Company	RIC	Year End	Price (local)	Market Cap	Pension Assets	Equities %	Bonds %	Other %	Exposure *
US Steel Corp	X.N	12/11	24.70	3,564	8,353	54%	27%	19%	127%
Goodyear Tire	GT.N	12/11	13.88	3,400	5,614	49%	44%	7%	81%
JC Penney	JCP.N	01/12	18.14	3,977	5,176	53%	38%	9%	69%
Washington Post	WPO.N	12/11	381.21	2,813	1,817	90%	10%	0%	58%
Owens Illinois	OI.N	12/11	22.69	3,733	3,336	57%	41%	3%	51%
Northrop Corp	NOC.N	12/11	67.14	16,479	21,340	31%	46%	24%	40%
Raytheon	RTN.N	12/11	58.25	19,215	15,552	46%	32%	22%	38%
ALCOA	AA.N	12/11	8.94	9,541	10,311	34%	50%	16%	37%
Ford Motor	F.N	12/11	14.22	53,209	58,612	33%	51%	17%	36%
Computer Science	CSC.N	03/12	41.76	6,488	4,714	49%	46%	5%	36%
Textron Inc	TXT.N	12/11	27.09	7,635	5,013	50%	30%	20%	33%
Pitney Bowes	PBI.N	12/11	11.73	2,355	1,865	41%	50%	9%	32%
Ryder System	R.N	12/11	54.80	2,801	1,418	64%	32%	4%	32%
Xerox Corp	XRX.N	12/11	7.58	9,646	8,277	36%	43%	21%	31%
Lockheed Martin	LMT.N	12/11	94.75	30,660	27,292	34%	40%	26%	30%
Consol Edison	ED.N	12/11	55.28	16,190	7,800	61%	32%	7%	29%
PG&E	PCG.N	12/11	40.82	17,552	10,993	45%	50%	5%	28%
Allegheny Tech	ATI.N	12/11	30.07	3,227	2,233	39%	47%	14%	27%
Safeway	SWY.N	12/11	18.06	4,327	1,641	66%	33%	1%	25%
Gannett	GCI.N	12/11	19.68	4,522	2,409	46%	39%	15%	25%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013. *Value of equity assets in pension fund as percentage of market cap

Japan – Nikkei 225

Nikkei 225 companies most exposed to pension risk: TEPCO, Fujitsu, Panasonic, NEC, and Oki Electric Industry

Figure 17. Nikkei 225 pension liabiities as percentage of market cap (JPY bn)

Company	RIC	Year End	Price (local)	Mkt cap	Liabilities	Liabilities as % Mkt Cap
TEPCO	9501.T	03/12	210	337	1,004	298%
Fujitsu	6702.T	03/12	338	699	1,871	268%
Panasonic	6752.T	03/12	564	1,304	2,294	176%
NEC	6701.T	03/12	210	546	930	170%
Oki Electric Industry Co Ltd	6703.T	03/12	100	73	107	147%
Fuji Electric Co Ltd	6504.T	03/12	208	149	203	137%
Nippon Paper Group Inc	3893.T	03/12	1,212	140	180	128%
Toshiba	6502.T	03/12	347	1,470	1,607	109%
Meidensha Corp	6508.T	03/12	285	65	64	98%
Sony	6758.T	03/12	1,024	1,035	1,011	98%
Mitsui Chemicals	4183.T	03/12	204	204	194	95%
Pioneer	6773.T	03/12	213	68	64	93%
Sharp	6753.T	03/12	338	382	349	91%
Mitsubishi Chemical Holdings	4188.T	03/12	422	622	561	90%
Nippon Suisan Kaisha Ltd*	1332.T	03/12	183	51	45	90%
Hitachi	6501.T	03/12	528	2,486	2,210	89%
Furukawa Electric Co Ltd	5801.T	03/12	182	129	114	89%
NTN Corp	6472.T	03/12	229	122	97	80%
Nisshinbo Holdings	3105.T	03/12	709	124	98	79%
NTT	9432.T	03/12	3,775	4,519	3,505	78%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013. *English annual report disclosures unavailable, data not checked.

Largest deficits: TEPCO, Fujitsu, Meidensha, Furukawa Electric, and NEC

Figure 18. Nikkei 225 pension deficits as percentage of market cap (JPY bn)

Company	RIC	Year End	Price (local)	Mkt cap	Liabilities	Assets	Deficits	Deficits as % Mkt Cap
TEPCO	9501.T	03/12	210	337	1,004	583	421	125%
Fujitsu	6702.T	03/12	338	699	1,871	1,352	519	74%
Meidensha Corp	6508.T	03/12	285	65	64	18	46	71%
Furukawa Electric Co Ltd	5801.T	03/12	182	129	114	43	71	55%
NEC	6701.T	03/12	210	546	930	628	302	55%
Toshiba	6502.T	03/12	347	1,470	1,607	829	778	53%
West Japan Railway*	9021.T	03/12	3,515	681	345	7	338	50%
Nippon Paper Group Inc	3893.T	03/12	1,212	140	180	111	69	49%
Showa Shell Sekiyu	5002.T	12/11	487	183	105	17	88	48%
Unitika Ltd*	3103.T	03/12	50	29	14	1	13	46%
Maruha Nichiro Holdings Inc*	1334.T	03/12	158	78	53	18	35	45%
Panasonic	6752.T	03/12	564	1,304	2,294	1,721	572	44%
Nippon Suisan Kaisha Ltd*	1332.T	03/12	183	51	45	23	22	44%
Kansai Electric Power	9503.T	03/12	891	796	350	3	347	44%
IHI Corp	7013.T	03/12	237	347	146	0	146	42%
Pioneer	6773.T	03/12	213	68	64	37	27	39%
Oki Electric Industry Co Ltd	6703.T	03/12	100	73	107	79	28	39%
Nisshinbo Holdings	3105.T	03/12	709	124	98	52	47	38%
NTN Corp	6472.T	03/12	229	122	97	52	45	37%
Hitachi	6501.T	03/12	528	2,486	2,210	1,297	913	37%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013. *English annual report disclosures unavailable, data not checked.

Asset allocation disclosures not required under Japan GAAP; therefore relatively little data available

Figure 19. Nikkei 225 equity exposure from pension funds (JPY bn)*

Company	RIC	Year End	Price (local)	Mkt cap	Pension Assets	Equities %	Bonds %	Other %	Exposure[1]
Panasonic	6752.T	03/12	564	1,304	1,721	36%	41%	23%	48%
Toshiba	6502.T	03/12	347	1,470	829	42%	33%	25%	24%
Sony	6758.T	03/12	1,024	1,035	707	28%	51%	21%	19%
Fujifilm Holdings	4901.T	03/12	1,782	858	571	27%	35%	38%	18%
Mitsubishi Electric	6503.T	03/12	747	1,604	683	41%	40%	19%	17%
Hitachi	6501.T	03/12	528	2,486	1,297	30%	45%	25%	16%
NTT	9432.T	03/12	3,775	4,519	1,970	30%	58%	12%	13%
Ricoh	7752.T	03/12	999	724	304	27%	49%	24%	11%
TDK	6762.T	03/12	3,240	408	135	31%	31%	38%	10%

Source: dataCentral, DataStream, Company annual reports. Market data as of 18 January 2013. *Asset allocation disclosures are not required under Japanese GAAP so limited data is available. We have included companies where data is available and equity exposure is at least 10% of market cap. [1]Value of equity assets in pension fund as percentage of market cap.

Appendix A-1

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