

EMU Month-end Index Projections

Changes broadly supportive for EGBs

- **EMU Government Bond Index (EGBI):** The EGBI is projected to extend by 0.1 at the end of April. This would be the largest April change in six years. Projected changes should be most supportive for France and Italy.
- **Changes at a country level:** At an individual country level, we expect the Dutch index to extend the most, followed by the French index. This should put flattening pressure on the two cash curves.
- **Changes on domestic curves:** We expect index changes to be supportive for the 10yr sector of Spain and Ireland and 5yr+ Netherlands.
- **EGBI extension in the context of the US and UK:** Among the three indices, the EGBI index is expected to extend the most at the end of April, followed by the Treasury Index. Please see [Citi Treasury Index April Compositional Adjustment](#) for more details.

Aman Bansal, CFA
+91-22-4277-5021
aman1.bansal@citi.com

Figure 1. EGBI: Projected month-end duration change

EGBI Effective Duration			Spectrum of duration changes over last year		
Apr Index	May Index (e)	Duration Change (e)	Minimum	Maximum	Average Absolute Change
6.60	6.70	0.104	0.02	0.15	0.07

Source: Citi Research

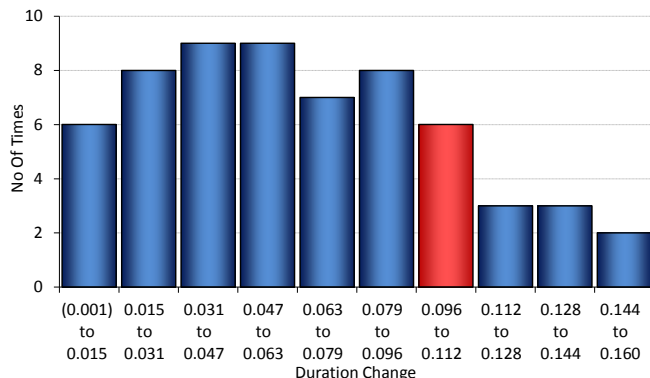
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End-April EGBI changes

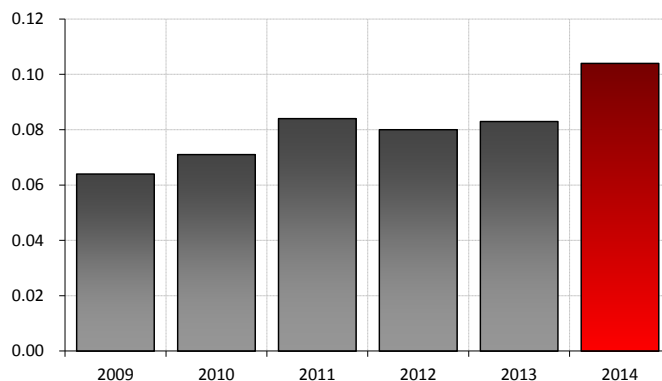
We expect the effective duration of the EGBI to increase by 0.1 at the end of April (Figure 1)¹. This would be the largest April change in six years (Figure 3).

Figure 2. Five-year distribution of month-end EGBI changes



Source: Citi Research

Figure 3. End-April EGBI changes over the last five years



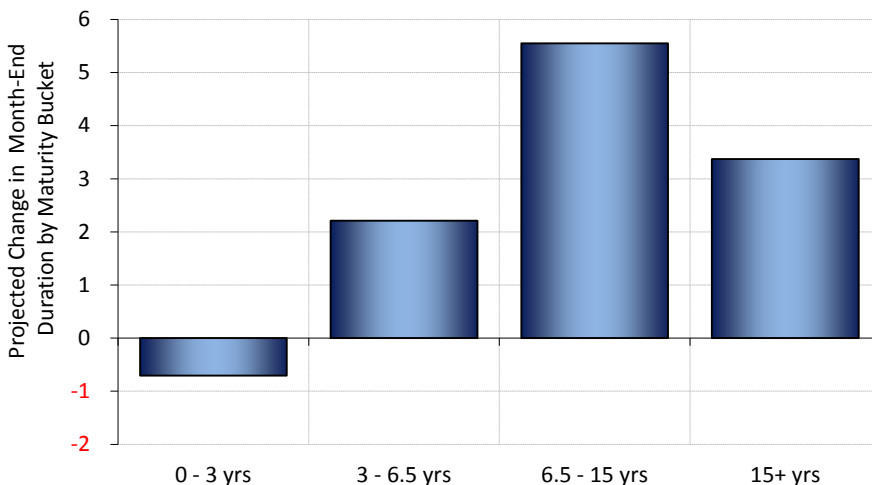
Source: Citi Research

Projected changes on the curve

Support for the 10yr sector on the curve

The projected changes should be supportive for the 10yr sector on the curve. The changes should also put flattening pressure on 2s10s part of the curve (Figure 4).

Figure 4. End-April projected index changes by curve sector (weighted duration)



Source: Citi Research

Figure 5. Bonds dropping out of the EGBI

Country	Bond	Outstanding Amount (€bn)
Spain	2.75% Mar15	10.5
Germany	2.25% Apr15	19
Italy	3% Apr15	17.9
Netherlands	0.75% Apr15	15
France	3.5% Apr15	24.90
Total		87.3

Source: Citi Research

€87bn of bonds to drop out of the EGBI

Issuance over the fixing period – 26 March to 22 April – will be eligible for inclusion in the index at the end of April. On the other hand, bonds that fall below 1 year of residual maturity on the last calendar day of the month are excluded from the index. Based on this criterion, €87bn of bonds across Germany, the Netherlands, France, Spain and Italy will drop out of the EGBI at the end of April (Figure 5).

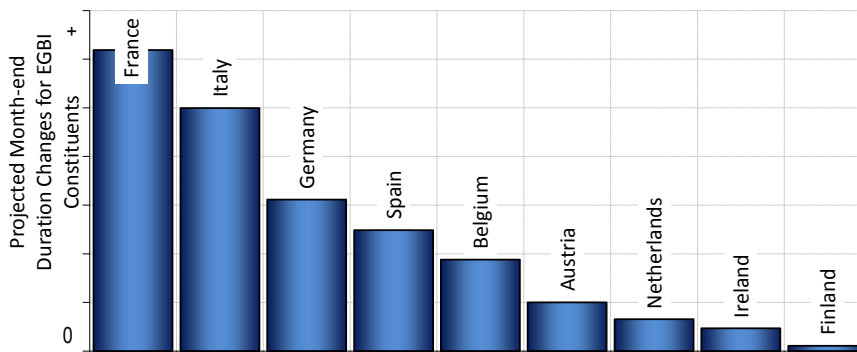
¹ Based on Citi supply estimates. Supply is the main driver of duration projections, but other factors, e.g. yield level and curve shape, also affect the calculations and are subject to change.

Projected changes most supportive for France and Italy

Projected changes broadly supportive for EGBs

No country index is expected to contract at the end of April and the changes should be broadly supportive across the board. In particular, we project France and Italy to extend the most, followed by Germany, Spain and Belgium (Figure 6).

Figure 6. Weighted duration change at the end of April



Source: Citi Research

Detailed analysis of the changes

Figure 7 shows detailed analysis of end-April EGBI changes. Among the individual country indices that make up the EGBI, we expect the Dutch index to extend the most, followed by the French index. This should put flattening pressure on the two cash curves.

For EGBI portfolios, it is the weighted duration change that is most relevant². On this metric as well, the French index is expected to extend the most this month. This would be closely followed by Italy.

Figure 7. Breakdown of end-April EGBI projections

15-Apr-14	Apr Index		May Index*		Projected Change			Duration change range over last year (unweighted)			5yr Z-score	
	% weight in EGBI	Duration	% weight in Index	Duration	Weighted Dur Change X 100	Weight Change	Duration Change	Minimum	Maximum	Average Absolute Change	Unweighted duration	Weighted Duration
Germany	19.8	6.83	19.7	6.93	1.56	(0.06)	0.10	(0.04)	0.13	0.07	0.57	0.40
Italy	23.6	6.31	23.7	6.40	2.50	0.07	0.09	0.01	0.18	0.08	0.25	0.60
France	23.6	6.86	23.6	7.00	3.09	(0.03)	0.14	(0.02)	0.17	0.06	1.24	0.90
Spain	12.9	5.81	12.9	5.90	1.24	0.00	0.09	(0.03)	0.17	0.08	0.47	0.24
Belgium	6.2	7.52	6.3	7.55	0.94	0.10	0.03	(0.01)	0.45	0.09	(0.39)	0.81
Netherlands	6.5	6.79	6.3	7.03	0.33	(0.17)	0.23	(0.04)	0.36	0.08	1.30	(0.24)
Ireland	1.9	5.34	2.0	5.37	0.23	0.03	0.03	(0.03)	0.16	0.03	(0.12)	0.22
Austria	3.9	7.21	4.0	7.25	0.50	0.05	0.04	(0.03)	0.36	0.08	(0.13)	0.54
Finland	1.6	6.29	1.6	6.29	0.05	0.01	0.00	(0.01)	0.55	0.12	(0.56)	(0.29)

Source: Citi Research

*Projected

² Weighted duration of a country is calculated as (market value of that country) * (effective duration) / (total market value of the EGBI). This is very significant for an EGBI portfolio manager as he tries to keep it unchanged through rebalancing at the month-end (within the bounds of his mandate).

Summary of pressures on individual country curves from the projected index changes

Summary of pressures on individual country curves³

Figure 8 summarises the pressures on individual country curves from the projected index changes. Green arrows indicate support for prices relative to other points on the respective domestic curves (and red arrows point to downward price pressure). Double arrows indicate particularly strong pressure on that part of the domestic curve. White/transparent arrows indicate weaker price pressures. The underlying detail is shown below in Figure 9 to Figure 24.

Figure 8. Summary of price pressures on individual domestic curves

	2yr	5yr	10yr	30yr	
Germany			↑↑		Germany
France			↑↑	↑↑	France
Spain			↑↑		Spain
Italy			↑↑		Italy
Ireland			↑↑		Ireland
Netherlands		↑	↑	↑	Netherlands
	2yr	5yr	10yr	30yr	

Source: Citi Research

Putting projected country changes in perspective

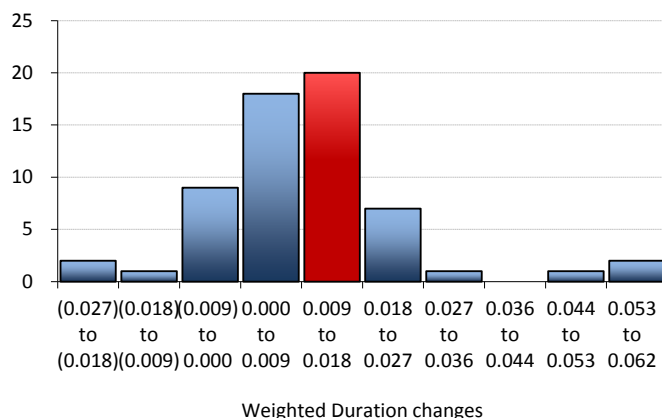
Below we show the distributions of weighted duration changes (charts on the left) and the curve splits (charts on the right) of the projected changes. Based on this, the most historically significant extension is likely in Belgium (Figure 17) and Italy (Figure 21).

Support for 10yr Spain, Ireland and the Netherlands

Flattening pressure on 2s5s Netherlands

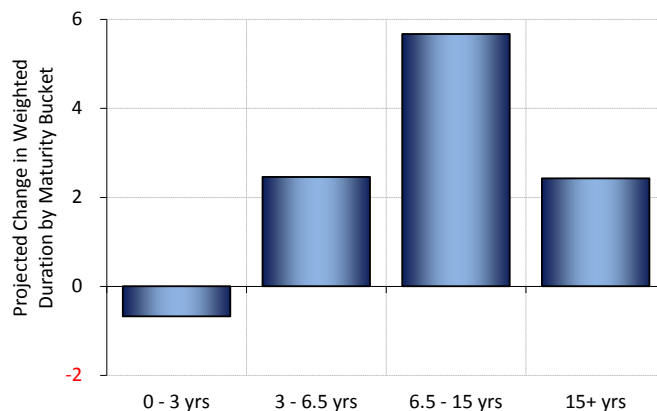
On domestic curves, we expect index changes to be supportive for the 10yr Spain (Figure 20) and Ireland (Figure 24) and 5yr+ Netherlands (Figure 12). The changes might also put flattening pressure on the front end of Dutch and Spanish curves.

Figure 9. Germany: Distribution of month-end duration changes over the last five years (weighted duration)



Source: Citi Research

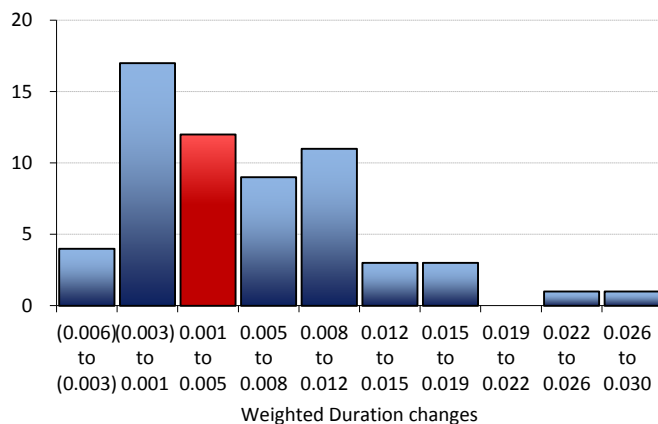
Figure 10. Germany: Maturity split of projected index changes (weighted duration)



Source: Citi Research

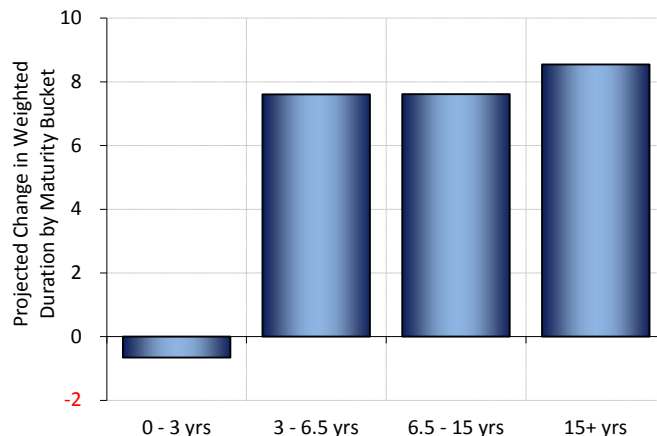
³Note that all these changes are on the domestic curve only, and should not be viewed as necessarily indicating cross-market opportunities.

Figure 11. Netherlands: Distribution of month-end duration changes over the last five years (weighted duration)



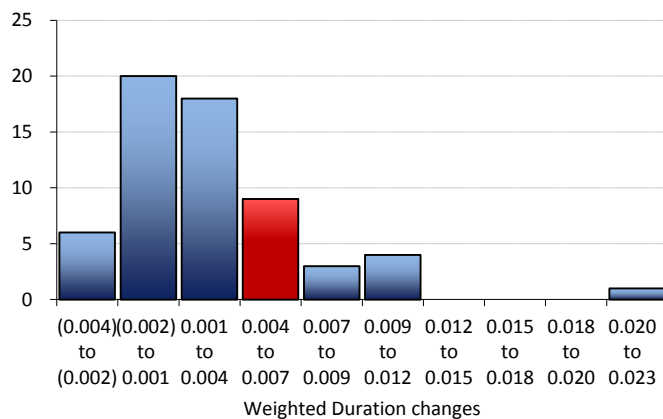
Source: Citi Research

Figure 12. Netherlands: Maturity split of projected index changes (weighted duration)



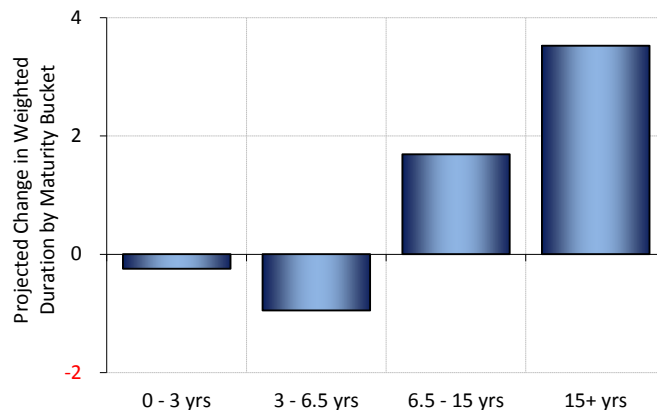
Source: Citi Research

Figure 13. Austria: Distribution of month-end duration changes over the last five years (weighted duration)



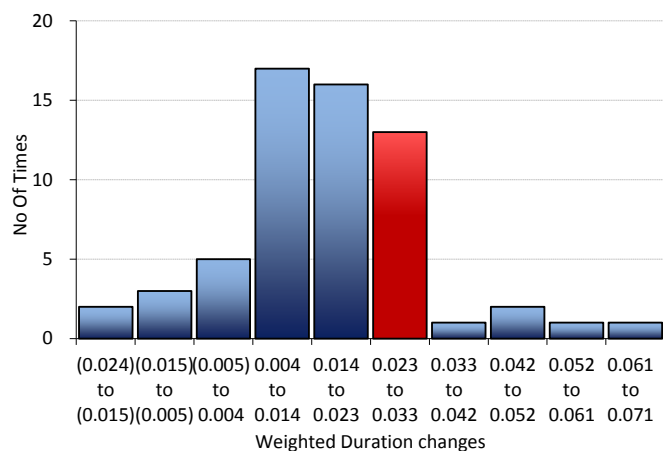
Source: Citi Research

Figure 14. Austria: Maturity split of projected index changes (weighted duration)



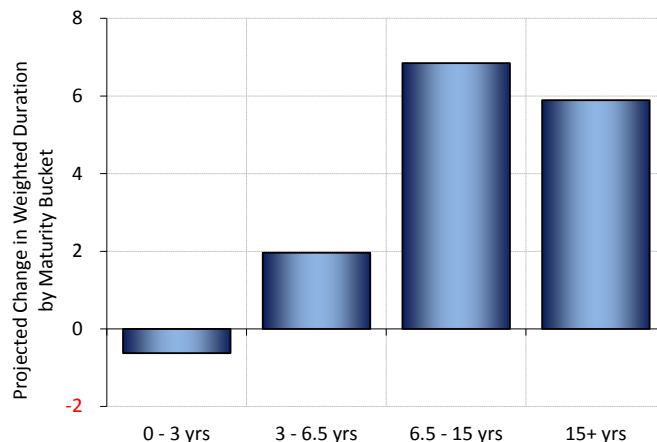
Source: Citi Research

Figure 15. France: Distribution of month-end duration changes over the last five years (weighted duration)



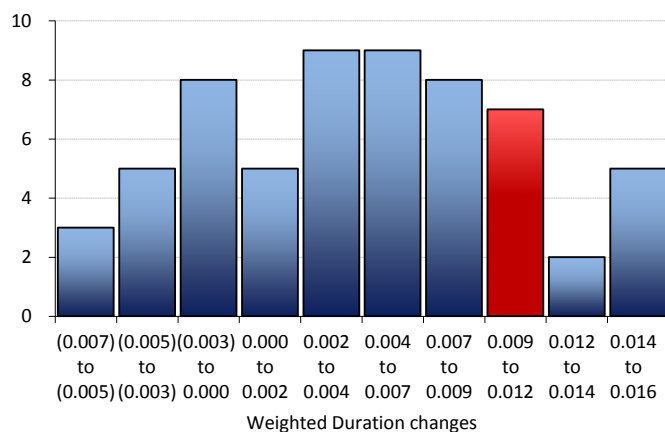
Source: Citi Research

Figure 16. France: Maturity split of projected index changes (weighted duration)



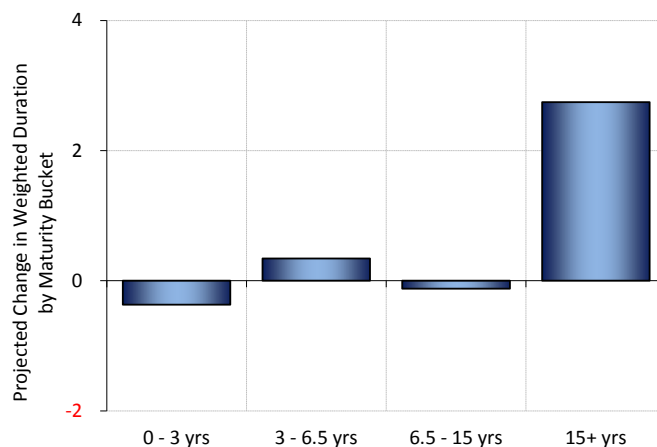
Source: Citi Research

Figure 17. Belgium: Distribution of month-end duration changes over the last five years (weighted duration)



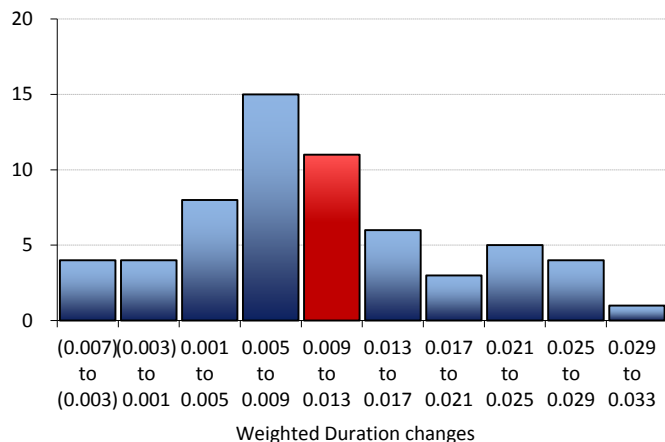
Source: Citi Research

Figure 18. Belgium: Maturity split of projected index changes (weighted duration)



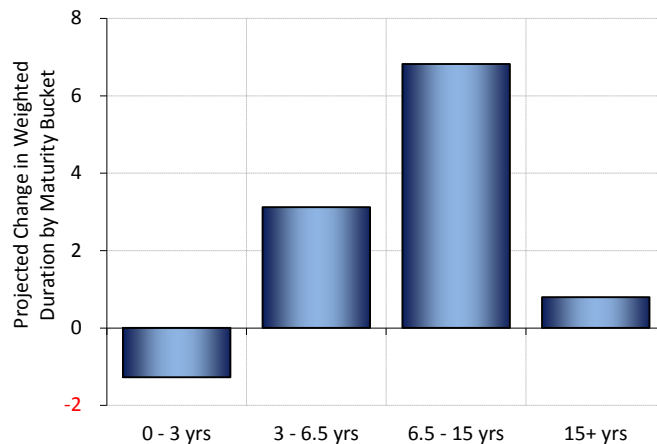
Source: Citi Research

Figure 19. Spain: Distribution of month-end duration changes over the last five years (weighted duration)



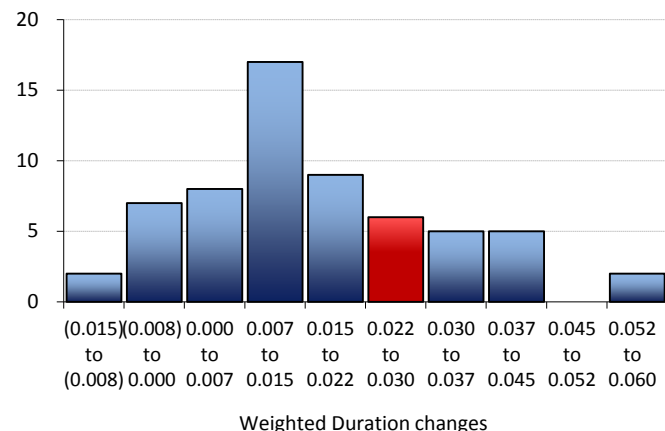
Source: Citi Research

Figure 20. Spain: Maturity split of projected index changes (weighted duration)



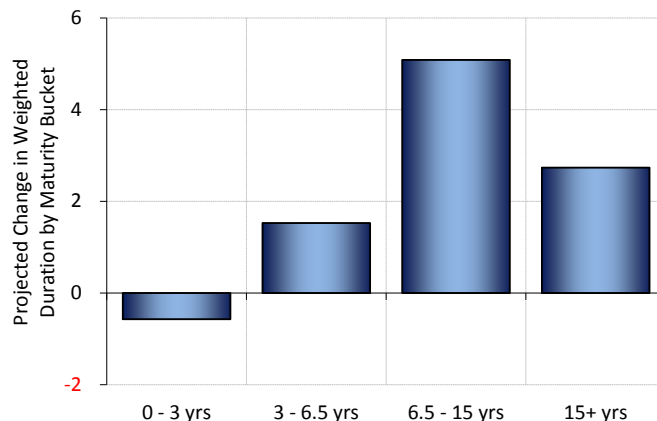
Source: Citi Research

Figure 21. Italy: Distribution of month-end duration changes over the last five years (weighted duration)



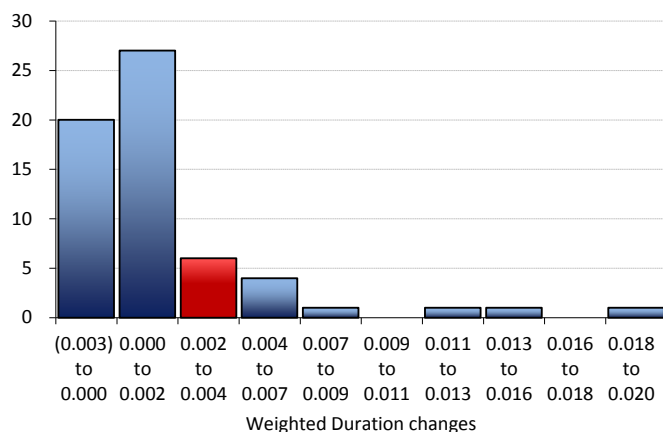
Source: Citi Research

Figure 22. Italy: Maturity split of projected index changes (weighted duration)



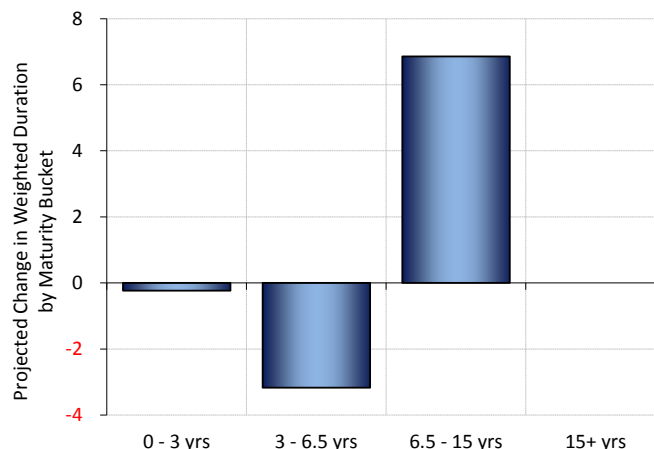
Source: Citi Research

Figure 23. Ireland: Distribution of month-end duration changes over the last five years (weighted duration)



Source: Citi Research

Figure 24. Ireland: Maturity split of projected index changes (weighted duration)



Source: Citi Research

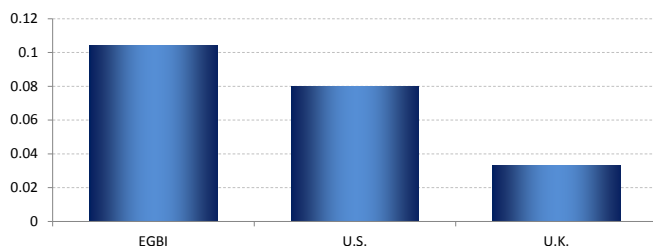
EGBI extension in context of the US and UK

Here we look at the relative extensions in EMU, US and UK (Figure 25) and place them in the context of their respective 12-month ranges (Figure 26).

EGBI to extend the most followed by the Treasury Index

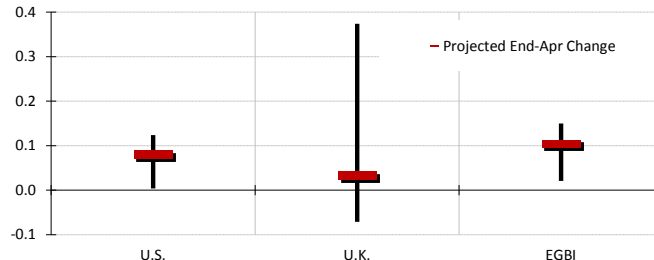
Among the three indices, the EGBI index is expected to extend the most at the end of April, followed by the Treasury Index. *Please see [Citi Treasury Index April Compositional Adjustment](#) for more details.* There is only one conventional gilt issuance during the fixing month and the gilt index would extend only slightly this month.

Figure 25. Relative extensions in EMU, US and UK



Source: Citi Research

Figure 26. Projected duration changes vs 12-month range



Source: Citi Research

Figure 27 shows the detailed breakdown of the projected changes.

Figure 27. Details of month-end changes in EMU, US and UK

15-Apr-14	Apr Index	May Index*	Projected Change	5yr Z-Score	Duration change range over last year		
					Minimum	Maximum	Average Absolute Change
EGBI	6.60	6.70	0.10	1.02	0.02	0.15	0.07
U.S.	5.00	5.08	0.08	0.65	0.00	0.12	0.06
U.K.	9.76	9.80	0.03	(0.07)	(0.07)	0.37	0.09

Source: Citi Research

Appendix A-1

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