Summary of May Index Duration Changes and Projected Duration Change for June 1, 2019

							Long		Intermediate		US	Canada
	Treasury	Agency	Credi	Govt/Credit	MBS*	Aggregate	Gov/Cred	Credit	Govt	Govt/Credit	High Yield	Aggregate
Duration As of End of April	6.15	4.08	7.16	6.54	4.36	5.89	15.23	4.13	3.75	3.89	3.38	7.82
Aging of Bonds	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Yield Change (Month-to-Date)	0.09	0.02	0.02	0.06	-0.67	-0.15	0.12	-0.01	0.00	0.00	0.08	0.06
Current Index (Passive Portfolio) Duration **	6.19	4.05	7.13	6.54	3.63	5.69	15.30	4.07	3.70	3.84	3.41	7.83
New Issuance	0.00	-0.15	0.03	0.01	0.00	0.02	0.00	0.02	0.01	0.02	0.03	0.00
Issues Dropping from Index	0.10	0.15	0.04	0.07	0.00	0.04	0.03	0.05	0.07	0.06	0.00	0.04
Coupon & Principal Payments	0.01	0.01	0.01	0.02	0.00	0.03	0.07	0.01	0.00	0.00	0.01	0.00
New Index Duration	6.30	4.06	7.21	6.64	3.69	5.78	15.40	4.15	3.78	3.92	3.45	7.87
Forecast Duration Change***	0.11	0.01	0.08	0.10	0.05	0.09	0.10	0.08	0.08	0.08	0.04	0.04

US TIPS (Series-L) real extension at 0.02 years****

US Government Inflation-Linked (Series-B) Index extension at 0.02 years

- * Given the complex structure of the MBS Index, duration changes are attributed to yield changes, new production and principal paydowns.
- ** Index Duration as of May 23, 2019.
- *** "Forecast Duration Change" can help gauge the margin by which passive managers will need to adjust portfolio duration.
 - "Forecast Duration Change" is the difference between "New Index Duration" and "Current Index Duration" and will remain constant through month-end despite possible yield fluctuations.
 - The "Current Index Duration" and "New Index Duration" will fluctuate as yields change throughout the remainder of the month.
- **** Empirical duration is not being reported for Series-L US TIPS.



Summary of May Index Duration Changes and Projected Duration Change for June 1, 2019

	Pan-Euro Aggregate <i>i</i>	Pan-Euro Agg Treasury	Pan-Euro Agg Agency		Pan-Euro Agg Securitized	Pan-Euro High Yield	Euro Aggregate	Euro Agg Treasury	•	Sterling Agg Treasury
Duration As of End of April	7.40	8.52	5.76	6.03	4.82	4.14	6.85	7.80	10.73	12.08
Aging of Bonds	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06
Yield Change (Month-to-Date)	0.05	0.07	0.02	0.01	0.02	-0.04	0.03	0.04	0.18	0.22
Current Index (Passive Portfolio) Duration**	7.39	8.53	5.72	5.98	4.78	4.04	6.82	7.78	10.85	12.23
New Issuance	0.02	0.02	0.02	0.01	0.04	0.02	0.02	0.01	0.04	0.06
Issues Dropping from Index	0.04	0.04	0.04	0.02	0.03	0.03	0.04	0.05	-0.01	-0.02
Coupon & Principal Payments	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.00
New Index Duration	7.45	8.59	5.78	6.02	4.85	4.10	6.89	7.85	10.89	12.27
Forecast Duration Change***	0.06	0.06	0.06	0.04	0.07	0.06	0.07	0.07	0.04	0.04

The "Current Index Duration" and "New Index Duration" will fluctuate as yields change throughout the remainder of the month.

Index Duration as of May 23, 2019.

[&]quot;Forecast Duration Change" can help gauge the margin by which passive managers will need to adjust portfolio duration.

[&]quot;Forecast Duration Change" is the difference between "New Index Duration" and "Current Index Duration" and will remain constant through month-end despite possible yield fluctuations.

Summary of May Index Duration Changes and Projected Duration Change for June 1, 2019

	Asia-Pac Aggregate	Asia-Pac Treasury	Asia-Pac Agency	Asia-Pac Credit	Japan Aggregate	Japanese Agg Treasury
Duration As of End of April	8.77	9.22	4.86	3.99	9.39	9.67
Aging of Bonds	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06
Yield Change (Month-to-Date)	0.04	0.04	0.02	0.01	0.03	0.03
Current Index (Passive Portfolio) Duration**	8.75	9.20	4.82	3.94	9.36	9.64
New Issuance	0.00	0.00	0.01	0.00	0.00	0.00
Issues Dropping from Index	-0.01	0.00	0.01	0.05	0.05	0.04
Coupon & Principal Payments	0.01	0.01	0.01	0.01	0.00	0.00
New Index Duration	8.75	9.21	4.85	4.00	9.41	9.68
Forecast Duration Change***	0.00	0.01	0.03	0.06	0.05	0.04

Index Duration as of May 23, 2019.

[&]quot;Forecast Duration Change" can help gauge the margin by which passive managers will need to adjust portfolio duration.

[&]quot;Forecast Duration Change" is the difference between "New Index Duration" and "Current Index Duration" and will remain constant through month-end despite possible yield fluctuations.

The "Current Index Duration" and "New Index Duration" will fluctuate as yields change throughout the remainder of the month.

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