

IPE SURVEY MANAGERS OF GOVERNMENT BONDS

Company	Aberdeen Standard Investments	Achmea Investment Management	Aegon Asset Management	Amundi	ASR Vermogensbeheer	AXA Investment Managers	Banleon Bank	Barings	BlackRock	BlueBay Asset Management
As at	31/12/18	31/03/19	31/12/18	31/03/19	31/12/18	31/12/18	29/03/19	31/03/19	29/03/19	31/03/19
Total assets invested in government bond strategies	36,090.86	37,464	75,870	220,139	2,670	9,015	1,837.2	4,008	529,553	5,814
Total assets invested in government bonds overall	NA	0	75,870	NA	12,327	204,644	2,674.2	16,362	762,956	19,190
Total group assets under management worldwide	562,701.38	137,616	1,476,000	668,000	56,224	729,815	5,370	283,397	5,802,507	55,421
Total assets in fixed income worldwide	152,273.83	70,559	668,000	42,139	457,794	4,984.7	210,524	1,807,867	55,421	55,421
Assets invested in government bond strategies										
Vehicle type (€m)										
Segregated account mandates	26,681.51	33,444	55,220	176,630		5,788	211.8	3,174	176,002	0
Pooled funds	9,409.35	4,020	20,650	43,509		3,227	1,625.4	834		5,814
Client type (€m)										
Europe-based institutional clients	22,932.91	37,464	55,371	1,837.2	2,670	8,077	1,837.2	28	139,732	591
Institutional clients worldwide	31,344.44	37,464	64,356	2,670			1,837.2	3,119	220,184	591
Europe-based pension fund clients	4,115.83	21,710	7,944			1,984		28	105,120	489
Europe-based insurance company clients	15,503.19	14,249	40,548			4,130		0	1,287	86
All other Europe-based institutional clients	3,313.89	0	6,879			1,963		0	33,325	16
Location of issuance (€m)										
Europe	28,249.07	NA	NA				1,825	357	166,803	4,175 ⁽ⁱ⁾
US	2,557.27	NA	NA				12.2	1,620	323,598	198
Other issues	5,284.52 ⁽ⁱⁱ⁾	NA	NA					2,032	39,152	1,441
Currency of issue (€m)										
Euro-denominated bonds	5,433.39	37,464			2,670		1,825		82,873	4,747 ⁽ⁱⁱ⁾
Dollar-denominated bonds	2,557.27	0			0		12.2	1,620	323,598	1,067
Sterling-denominated bonds	22,815.68	0			0			357	81,486	
Other-denominated bonds	5,284.52 ⁽ⁱⁱ⁾							2,032	41,596	
Amount held within rating (€m)										
AAA-A	NA	30,983			11,549 ⁽ⁱⁱⁱ⁾		1,653.5	3,949	515,200	2,326 ⁽ⁱⁱ⁾
BBB-B	NA	6,331			775		183.7	39	12,882	3,488
CCC-C	NA	0			0				0	
Unrated	NA	150			3				1,471	
Active/passive/unconstrained (€m)										
Passive	0	8,998							305,058	0
ETFs	0								102,859	0
Benchmarked active	35,584.72	24,030					1,837.2	4,008	26,359	4,740
Benchmarked against an enhanced/alternatively-weighted index									1,515	1,074
Managed against a customised benchmark or risk/return target	506.14	4,436							0	0
Unconstrained	0								0	0
Flagship government bond strategy										
Information ratio	0.64	0.23 ^(iv)		0.79	0.5-0.75				0.121 ^(iv)	1.7
Acceptable tracking error	1-2%	0.5% ^(iv)		6%	1%				1.50% ^(iv)	0-3%
Targeted contribution to excess return (%)										
Credit analysis	0						30	50		60
Duration management	30						40	10		30
Sector rotation	0						30	40		0
Credit default swaps	0							0		0
Currency	10							0		10
Other	60 ⁽ⁱⁱ⁾				100					
Proportion of government bond research done in-house (%)	70	100	90	75	100	90	100	100	100	100
Number of credit analysts working on government bond portfolios	50	7	8	43	7		5	19		12

IN SUMMARY

Survey overview

Total number of managers in survey	43
Total invested:	€m
In government bond strategies	2,098,605
Through segregated account mandates*	768,100
Through pooled funds*	332,387
For institutional clients worldwide*	632,297
For Europe-based institutional clients*	586,087
For Europe-based pension fund clients*	251,215
For Europe-based insurance company clients*	209,273
For all other Europe-based institutional clients*	97,698

*Where disclosed

Top managers: Assets in government bond strategies

Company	€m	As at
1 BlackRock	529,553	29/03/19
2 Vanguard	422,885	31/03/19
3 Amundi	220,139	31/03/19
4 State Street Global Advisors	170,996	31/03/19
5 Franklin Templeton	115,748	31/03/19
6 MEAG	108,016	31/12/18
7 Legal & General Investment Management	77,317	31/12/18
8 Aegon Asset Management	75,870	31/12/18
9 Swiss Life Asset Managers	43,418	31/12/18
10 Achmea Investment Management	37,464	31/03/19
11 Aberdeen Standard Investments	36,091	31/12/18
12 Helaba Invest	29,501	31/12/18
13 BNP Paribas Asset Management	27,424	31/12/18
14 DWS	24,437	31/12/18
15 Colchester Global Investors	23,154	30/04/19
16 Eurizon Asset Management	20,097	31/03/19
17 Insight Investment	18,911	31/03/19
18 DekaBank	18,795	28/12/19
19 Payden & Rygel	13,139	31/03/19
20 Robeco	12,155	31/12/18
21 Generali Investments	10,216	31/12/18
22 Columbia Threadneedle Investments	10,108	31/03/19
23 AXA Investment Managers	9,015	31/12/18
24 Union Investment	7,782	28/02/19
25 Candriam	7,741	31/03/19
26 Ostrum Asset Management	6,751	31/03/19
27 BlueBay Asset Management	5,814	31/03/19
28 Morgan Stanley Investment Management	5,089	31/03/19
29 Universal-Investment	4,400	31/12/18
30 Swisscanto Invest (Zürcher Kantonalbank)	4,390	31/03/19
31 Barings	4,008	31/03/19
32 Degroof Petercam Asset Management	4,005	31/12/18
33 ASR Vermogensbeheer	2,670	31/12/18
34 Kempen Capital Management	2,291	31/12/18
35 Banleon Bank	1,837	29/03/19

Top managers: Government bond assets invested for European institutional clients

Company	€m	As at
1 BlackRock	139,732	29/03/19
2 MEAG	98,111	31/12/18
3 Legal & General Investment Management	62,878	31/12/18
4 Aegon Asset Management	55,371	31/12/18
5 Achmea Investment Management	37,464	31/03/19
6 Helaba Invest	29,501	31/12/18
7 Aberdeen Standard Investments	22,933	31/12/18
8 State Street Global Advisors	15,042	31/03/19
9 Vanguard	12,700	31/03/19
10 Generali Investments	10,216	31/12/18
11 DWS	9,962	31/12/18
12 BNP Paribas Asset Management	9,835	31/12/18
13 Insight Investment	9,160	31/03/19
14 AXA Investment Managers	8,077	31/12/18
15 Robeco	7,157	31/12/18
16 Ostrum Asset Management	6,718	31/03/19
17 Columbia Threadneedle Investments	6,683	31/03/19
18 Candriam	6,613	31/03/19
19 Union Investment	5,679	28/02/19
20 Eurizon Asset Management	5,256	31/03/19
21 Universal-Investment	4,400	31/12/18
22 Swisscanto Invest (Zürcher Kantonalbank)	4,170	31/03/19
23 Degroof Petercam Asset Management	4,005	31/12/18
24 Colchester Global Investors	2,949	30/04/19
25 ASR Vermogensbeheer	2,670	31/12/18
26 Kempen Capital Management	2,180	31/12/18
27 Banleon Bank	1,837	29/03/19
28 Franklin Templeton	1,812	31/03/19
29 Payden & Rygel	936	31/03/19
30 BlueBay Asset Management	591	31/03/19
31 Macquarie Investment Management	411	31/03/19
32 Mondrian Investment Partners	357	31/03/19
33 Olz	293	31/03/19
34 Morgan Stanley Investment Management	211	31/03/19
35 OFI Asset Management	148	29/03/19

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Company	Helaba Invest	Insight Investment	Kempen Capital Management	La Française Asset Management	Legal & General Investment Mngt.	Macquarie Investment Management	MEAG	Mondrian Investment Partners	Morgan Stanley Investment Management	OFI Asset Management	Olz
As at	31/12/18	31/03/19	31/12/18	31/12/18	31/12/18	31/03/19	31/12/18	31/03/19	31/03/19	29/03/19	31/03/19
Total assets invested in government bond strategies	29,500.5	18,911	2,291	1,250	77,317	887.22	108,016	1,830	5,088.54	148	367
Total assets invested in government bonds overall	29,500.5	67,877.1	15,393	3,705	212,112	18,678.83	108,016		17,390.25	9,584	367
Total group assets under management worldwide	61,191.35	751,612.7	58,929	65,755	1,131,342	334,777.65	254,308	45,576	427,500.11	71,090	2,791
Total assets in fixed income worldwide	38,253.4	318,931.7	30,438	8,552	425,517	132,432.24	183,013	3,057	69,721.27 ^{(1)(H)}	47,461	496
Assets invested in government bond strategies											
Vehicle type (€m)											
Segregated account mandates	29,200.5	14,586.1	2,161	796	24,490	444.15	92,442	1,385	4,482.22	0	0
Pooled funds	300	4,324.9	130	454	52,827	443.08	15,574	446	606.32	148	293 ^{(2)(H)}
Client type (€m)											
Europe-based institutional clients	29,500.5	9,160.3	2,180	1,250	62,878	411.15	98,111	357	211.35	148	293
Institutional clients worldwide	29,500.5	18,736.5	2,180	74,325	514.15	98,111	1,830	4,741.7			293
Europe-based pension fund clients	9,735.16	2,980.6	1,914	54,873	29	2,676 ^{(1)(H)}	276	0			
Europe-based insurance company clients	8,260.14	1,169.8	182	2,466	75	105,340	0		211.35		
All other Europe-based institutional clients	11,505.2	5,009.9	84	5,539	0	0	0	82	0		
Location of issuance (€m)											
Europe		9,043.3	2,291	1,242	307	98,111	614	1,185	148		186
US		8,407.4		8	574.62	7,374	717	3,053.02	0		44
Other issues		1,460.3			5.6	2,531	500	850.51	0		136
Currency of issue (€m)											
Euro-denominated bonds		5,520.1	2,291	1,243	303	68,477	560	230.86	148		54
Dollar-denominated bonds		8,378		7	572.62	18,161	690	3,548.74	0		44
Sterling-denominated bonds		3,157.3			5	3,189	41	44.44	0		47
Other-denominated bonds		1,855.6		60	6.6	17,989	540	1,264.29			222
Amount held within rating (€m)											
AAA-A		16,778.3	2,291	882	769.22		1,625	4,385.05	103		367
BBB-B		1,669.3		308	118		205	609.7	45		0
CCC-C							0		0		0
Unrated		463.4		60			0	93.78			0
Active/passive/unconstrained (€m)											
Passive						40					0
ETFs						0					0
Benchmarked active			2,291	1,250		847.22	1,830	5,088.54	148		367
Benchmarked against an enhanced/alternatively-weighted index											0
Managed against a customised benchmark or risk/return target											0
Unconstrained											0
Flagship government bond strategy											
Information ratio		0.70 ^{(1)(H)}	0.05		NA	1.27 ^{(1)(H)}	2.62	0.5	0.47	-1.09	0.08
Acceptable tracking error		+3%	1.05%		0-1.5%	0.58% ^{(1)(H)}	NA	1-3%	0.87%	0.71%	3%
Targeted contribution to excess return (%)											
Credit analysis		15	25	20	4	15	20	20	0		0
Duration management		60	50	40	24	30	40	40	0		0
Sector rotation		5	5	0	0	0	0	0	0		0
Credit default swaps		10	5	0	0	0	0	0	0		0
Currency		15	25	25	72 ^{(1)(H)}	15	40	25	25		100
Other						75 ^{(1)(H)}		40 ^{(1)(H)}	35		100
Proportion of government bond research done in-house (%)	90	100	100	100	100	90	90-95	90-95	80		100
Number of credit analysts working on government bond portfolios	8	5	3	9	17	24	20	8	9	1	

Key:
NA= Not available

Footnotes:

- [1] Global Bond strategies
- [2] Country selection, 30%; curve, 30%
- [3] 5-year
- [4] Duration positioning, 35%; curve positioning, 20%; country positioning, 35%; other (relative value/security selection), 10%
- [5] Breakdown relates to total assets invested in government bonds overall
- [6] 7-year
- [7] Breakdown does not include cash or derivatives
- [8] Includes developed market government bonds only
- [9] Country selection
- [10] Country allocation, 20%; yield curve positioning, 15%; issuer selection, 10%; off-benchmark selection, 20%
- [11] Global fixed income platform
- [12] Relates to country allocation
- [13] Yield curve
- [14] 3-year
- [15] Curve, 12%; country, 24%; peripheral, 10%; stock selection, 6%; inflation/breakdowns, 20%
- [16] Curve positioning, 25%; sector allocation, 25%; security selection, 25%
- [17] Breakdown relates to total assets invested in government bond strategies
- [18] Market
- [19] Excludes money market
- [20] Relates to Europe-based institutional clients
- [21] 10-year
- [22] Country allocation, 30%; yield curve positioning, 15%; relative value, 25%
- [23] Yield curve positioning, 30%; country selection, 10%
- [24] Curve strategies
- [25] Relates to institutional clients worldwide
- [26] Yield curve structure, 15%; security selection, 15%

Company	Ostrum Asset Management	Payden & Rygel	PineBridge Investments	Putnam Investments	Robeco	State Street Global Advisors	Swisscanto Invest (Zürcher Kantonalbank)	Swiss Life Asset Managers	Union Investment	Universal-Investment	Vanguard	Wellington Management Co.
As at	31/03/19	31/03/19	31/12/18	31/03/19	31/12/18	31/03/19	31/03/19	31/12/18	28/02/19	31/12/18	31/03/19	31/03/19
Total assets invested in government bond strategies	6,751	13,139	764.6	520	12,155	170,996	4,390	43,418	7,782	4,400	422,885	407
Total assets invested in government bonds overall	98,029	38,360	764.6	3,028	14,905	216,616	NA	44,749	73,976	4,400		
Total group assets under management worldwide	265,584	101,705	78,216.8	151,915	161,886	2,498,440	143,603	206,697	336,785	36,010	4,818,387	955,116.5
Total assets in fixed income worldwide	232,132	99,424	50,473.6		38,844		50,549	107,482	163,289	6,900		373,449.3
Assets invested in government bond strategies												
Vehicle type (€m)												
Segregated account mandates	1,420	12,745	762.8		6,262		105	5,066		4,400		347
Pooled funds	5,331	394	1.8		5,893		4,285	2,716		0		60
Client type (€m)												
Europe-based institutional clients	6,718	936	0	0	7,157	15,042	4,170	5,679	4,400		12,700	
Institutional clients worldwide		13,139	226.6		7,207		4,170	5,679	4,400			407
Europe-based pension fund clients	1,702	221	0	0	6,533	9,708		143	3,000		3,573	
Europe-based insurance company clients	1,548	79	0	0	128			336	50			
All other Europe-based institutional clients	2,928	636	0	0	496			5,200	1,350			407 ^{(2)(H)}
Location of issuance (€m)												
Europe	5,234	1,046	203.4		10,457		1,955	6,771	3,400			
US	1,169	11,866	350.7		536		1,105	553	200			72
Other issues	348	227	210.5		1,162		1,330	458	800			335
Currency of issue (€m)												
Euro-denominated bonds	4,885	366	156.2		10,582			7,296	3,400			
Dollar-denominated bonds	1,190	11,886	509		548			302	200			
Sterling-denominated bonds	287	566	31.5		137			95	0			
Other-denominated bonds	389	322	67.9		888			89	800			
Amount held within rating (€m)												
AAA-A	5,315	13,095	662.1		11,249			6,093	2,900			
BBB-B	1,284	44	87		488			1,675	700			
CCC-C	0	0	0					0	0			
Unrated	152	0	2		44			14	800			
Active/passive/unconstrained (€m)												
Passive		6,968	0				3,833			4,400		
ETFs		0	0				0			0		
Benchmarked active	3,274	2,096	764.6		12,155		557	7,782	0			
Benchmarked against an enhanced/alternatively-weighted index	4	0	0				0		0			
Managed against a customised benchmark or risk/return target	3,315	4,074	0				0		0			
Unconstrained	155	0	0				0		0			
Flagship government bond strategy												
Information ratio	0.27 ^{(2)(H)}	0.35+	0.5		-0.81 ^{(1)(H)}		0.4		0.69 ^{(2)(H)}			
Acceptable tracking error	Max. 2.5% ^{(1)(H)}	50-150bps	100bps		3.50%		2%		2.50%			
Targeted contribution to excess return (%)												
Credit analysis		20	50				10		10			
Duration management	30	25	20		30		50		40		100	
Sector rotation	40	20	0				0		10		0	
Credit default swaps		0	0				0		5		0	
Currency		25	30				0		25		0	
Other	30 ^{(2)(H)}	10			70 ^{(2)(H)}		40 ^{(2)(H)}		10 ^{(2)(H)}			100
Proportion of government bond research done in-house (%)	95	80	80		100		100		90-100		100	
Number of credit analysts working on government bond portfolios	4	NA	9		46		8		26		3	