

IPE Survey Investment Grade Credit Managers

Company name	Aberdeen Asset Management	Achmea Inv. Management	Aegon Asset Management	Allianz Global Investors	Amundi	ASR Vermogensbeheer	AXA Investment Managers
Total assets in investment grade credit strategies (€m)	32,401.77	6,911	79,215	155,229	196,546	19,000	216,227
As at	30/06/16	30/09/16	30/09/16	30/09/15	30/09/16	21/11/16	30/09/16
Total group assets under management worldwide (€m)	362,662.53	107,629	336,285	427,092	1,054,499	48,000	699,628
Total assets in fixed income worldwide (€m)	66,268.95	59,863	267,306	163,174	722,272	38,000	439,243
Assets in investment grade credit strategies (€m)							
Segregated account mandates	27,387.06	6,700			187,228	17,000	182,062
Pooled funds	5,014.71	211			9,318	2,000	34,165
Europe-based institutional clients	22,853.58	6,911	34,246		186,023	5,000	195,718
Institutional clients worldwide	28,472.41	0	79,215		194,251	5,000	200,448
European issues	23,040.63	5,183.3				13,000	168,719
US issues	6,188.13	1,036.7				4,000	28,030
Other issues	3,173.01	691				2,000	19,478
Euro-denominated bonds	2,233.17	6,911				18,000	145,183
Dollar-denominated bonds	7,613.03	0				1,000	28,030
Sterling-denominated bonds	22,052.63	0				0	9,742
Other-denominated bonds	502.94						33,272
Passive		0				1,000	
Benchmarked active	32,401.77	4,174.2	79,215			1,000	25,964
Benchmarked against an enhanced/alternatively-weighted index		0				500	190,263
Managed against a customised benchmark or risk/return target		2,736.8				16,500	430
Unconstrained		0					
Flagship investment grade credit strategy							
Information ratio	0.5-1.0 ⁽¹⁾	2.22 ⁽¹⁾				0.5	0.50
Acceptable tracking error	NA	2				2%	200bps
Targeted contribution to excess return (%)							
Credit analysis	75	80				50	60
Duration management	5	0				10	5
Sector rotation	10	10				40	30
Credit default swaps	0	0				0	5
Currency	0	0				0	0
Other	10	10					
% of investment grade credit portfolios held in emerging markets	5	5			≤5	2	3
% of investment grade credit research is done in-house	90	85	90		100	50	100
Number/location of credit analysts working investment grade credit portfolios	UK, 40; Americas, 22; Asia, 15	Zeist, 9	The Hague, 4; Cedar Rapids (IA), 16; Chicago, 2; Baltimore, 2		Durham, 5; London, 1; Paris, 18; Tokyo, 1; Kuala Lumpur, 2; Singapore, 2	Utrecht, 10	London, 10; Paris, 9; Frankfurt, 1; Greenwich, 12; Hong Kong, 1

Company name	Baillie Gifford & Co.	Barings	Barrow, Hanley, Mewhinney & Strauss	BayernInvest Kapital.	Joh. Berenberg Gossler & Co.	BlackRock
Total assets in investment grade credit strategies (€m)	665	4,492	6,943.7	1,616.31	2,290	217,435
As at	30/09/16	30/09/16	30/09/16	30/09/16	30/09/16	30/09/16
Total group assets under management worldwide (€m)	170,523	252,984	85,574.9	71,751.35	40,100	4,553,676
Total assets in fixed income worldwide (€m)	5,979	209,999	12,028.2	49,439.97		1,448,895
Assets in investment grade credit strategies (€m)						
Segregated account mandates	77	4,454	6,943.7	1,561.03	1,540	
Pooled funds	588	38	0	55.28	750	
Europe-based institutional clients	665	1,731		1,616.31	2,290	
Institutional clients worldwide	486	4,492	6,943.7	1,616.31	2,290	
European issues	467	293	0	1,616.31	2,050	
US issues	103	4,062	6,943.7		200	
Other issues	95	137			40	
Euro-denominated bonds	7	43	0	1,149.68	2,030	
Dollar-denominated bonds	41	4,437	6,943.7	466.63	260	
Sterling-denominated bonds	611	11	0	0	0	
Other-denominated bonds	6	0.5				
Passive	0			651.98		104,258
Benchmarked active	665	4,492	4,080.1	964.33	2,290	113,177
Benchmarked against an enhanced/alternatively-weighted index	0					
Managed against a customised benchmark or risk/return target	0		2,863.6			
Unconstrained	0					
Flagship investment grade credit strategy						
Information ratio	0.3 ⁽²⁾	0.99	1.37 ⁽²⁾	1	NA	
Acceptable tracking error	0.5-2.5%	25-75bps	60-75bps	1%	NA	
Targeted contribution to excess return (%)						
Credit analysis	100	65	30	70	50	
Duration management	0	5	5	10	10	
Sector rotation	0	30	25	20	40	
Credit default swaps	0	0	0	0	0	
Currency	0	0	0	0	0	
Other			40 ⁽²⁾			
% of investment grade credit portfolios held in emerging markets	0	7	0	0	10	
% of investment grade credit research is done in-house	100	100	80	80	100	
Number/location of credit analysts working investment grade credit portfolios	Edinburgh, 5	US, 12; London, 3	Dallas, 5	Munich, 5	Hamburg, 4	

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Company name	BlueBay Asset Management	BMO Global Asset Mngt.	BNP Paribas Inv. Partners	Candriam	Columbia Threadneedle Inv.	Danske Capital	Degroef Petercam Asset Management	Deka Investment	Delta Lloyd Asset Mngt.	Deutsche Asset Management	Eurizon Capital	Fidelity International	Fisch Asset Management	La Française	Franklin Templeton Inv.
Total assets in investment grade credit strategies (€m)	21,492	16,673 ⁽²⁾	17,375	2,310	32,578	6,553	1,863.86	16,768	17,000	79,908	5,680	32,046	3,276	8,850	633.33
As at	30/09/16	30/09/16	30/09/16	31/10/16	30/09/16	31/10/16	31/10/16	30/09/16	30/10/16	30/09/16	30/09/16	30/09/16	31/10/16	30/09/16	30/09/16
Total group assets under management worldwide (€m)	49,419	238,616	556,331	100,078	416,000	98,309	35,168.39	209,900	60,000	714,669	279,554	258,013	8,796	58,048	652,553.13
Total assets in fixed income worldwide (€m)	49,419	74,744	225,474	31,870	174,759	57,937	9,756.67	53,784	42,000	313,370	43,669	59,755	8,741	22,215	259,987.01
Assets in investment grade credit strategies (€m)															
Segregated account mandates	8,328	3,601 ⁽⁶⁾	12,152	631	26,564	922		11,181	14,500	68,178	267	5,393	1,125	6,503	392.49
Pooled funds	13,164	1,193	5,223	1,679	6,014	5,631	1,863.86	5,587	2,500	11,730 ⁽¹²⁾	5,413	26,653	2,151	2,347	240.84
Europe-based institutional clients	9,330	3,601 ⁽⁷⁾	12,659	1,028	9,598	922	1,863.86	16,768	17,000	52,224		4,551	3,275	8,043	69.8
Institutional clients worldwide	14,692	3,601	14,518	1,562	26,564	922	1,863.86	16,768	17,000	69,354		8,719	3,276	8,043	382.22
European issues	992	2,918	1,716	1,716	11,344	5,336	1,332.98			55,646 ⁽¹³⁾			934	8,223	211.18
US issues	884 ⁽⁸⁾		466	128	392	370				19,364 ⁽¹³⁾			400	471	294.55
Other issues		884 ⁽⁹⁾								4,898			1,942	156	127.6 ⁽²⁰⁾
Euro-denominated bonds		2,279	16,340	1,959	215	5,375	1,863.86	16,768	17,000	29,385 ⁽¹⁴⁾			574	8,680	185.03
Dollar-denominated bonds		1,236		321	21,070	767	0	0	0	19,364 ⁽¹⁴⁾			2,303	153	442.02
Sterling-denominated bonds		1,247		26	11,129	85	0	0	0	4,174 ⁽¹⁴⁾			118	10	2.47
Other-denominated bonds		32	1,035	4	164	326	0	0	0	26,985 ⁽¹⁵⁾			281	7	3.81
Passive		891		420	0	0				4,457			0	0	
Benchmarked active	17,020	3,496	17,375	1,500	32,578	6,553	1,863.86		17,000	75,451 ⁽¹⁶⁾	5,680		3,276	1,397	633.33
Benchmarked against an enhanced/alternatively-weighted index					0	0							0	0	
Managed against a customised benchmark or risk/return target				295	26,564	0							0	2,903	
Unconstrained	4,472	407		95	0	0							0	4,550	
Flagship investment grade credit strategy															
Information ratio	0.5	1.46	0.5	0.50	2.05	0.5	0.082		1.02	>0.5	-0.10 ⁽¹⁾		0.6		1
Acceptable tracking error	0-3%	0.45%	1-1.5%	100bps	0.5-1.4%	1%	2%	1.5-2%	0.94%	<1%	2%	NA	NA	1-3%	<1.50%
Targeted contribution to excess return (%)															
Credit analysis	90	55	60	40	70	75	30	50		50 ⁽¹⁷⁾	35		40	40	70
Duration management	5	20	20	10	0	0	60	10		5	10		20	20	<10
Sector rotation	0	10	20	40	10	25		20		10	25		20	30	<5
Credit default swaps	5	0	0	10	0	0	10	10					0	10	NA
Currency	0	0	0	0	0	0	0	0			5		0	0	<5
Other		15 ⁽⁹⁾			20 ⁽¹⁰⁾	0		10 ⁽¹¹⁾		35 ⁽¹⁸⁾	25 ⁽¹⁹⁾		20		20 ⁽²⁰⁾
% of investment grade credit portfolios held in emerging markets		3-4%	0	3	0	2.37	1			5	0		45	<5	9.58
% of investment grade credit research is done in-house	100	100	100	100	80	100	100	80	100	100	80		100	50	80
Number/location of credit analysts working investment grade credit portfolios	London, 21; Connecticut, 6	London, 11	New York, 6; Paris, 6; London, 1	Brussels, 6	London, 4; Minneapolis, 6; Boston, 3; Singapore, 1	Copenhagen, 8	Brussels, 6	Frankfurt 18	Amsterdam, 13	Berlin, 1; Seoul, 1; Zurich, 6; Frankfurt, 18; Hong Kong, 3; London, 6; Mumbai, 6; New York, 14; Singapore, 1	Milan, 26		Zurich, 18	Paris, 9; Hong Kong, 1; London & New York, 2	69 ⁽²⁰⁾

Company name	Generali Inv. Europe	Goldman Sachs Asset Management Int.	Groupama Asset Management	Helaba Invest	Henderson Global Inv.	Insight Investment Management (Global)	Invesco	J.P. Morgan Asset Mngt.	Kempen Capital Management	Lazard Asset Management	LBBW Asset Management	Legal & General Inv. Management	Lombard Odier Investment Managers	Lupus alpha Asset Management	M&G Investments
Total assets in investment grade credit strategies (€m)	144,808	62,271.91	19,078	7,339	18,056 ⁽²²⁾	61,117	30,252	36,481	5,523	8,749	6,364.5	93,094.25	5,810.62	750	115,446
As at	30/09/16	30/09/16	31/10/16	30/09/16	30/09/16	30/09/16	30/09/16	30/09/16	30/09/16	30/09/16	31/10/16	30/06/16	30/09/16	31/10/16	30/09/16
Total group assets under management worldwide (€m)	461,510	1,028,152.58	99,956	36,500	116,644	625,865	729,727	1,576,512	47,423	165,965	62,369.03	1,012,603.66	41,675.35	8,000	307,000 ⁽²⁴⁾
Total assets in fixed income worldwide (€m)	333,311	472,540.46	65,209	22,046	32,830	264,717	277,902	418,614	8,359	24,900	277,902	47,591.12	18,624.49	800	199,000 ⁽²⁴⁾
Assets in investment grade credit strategies (€m)															
Segregated account mandates	137,814	55,738.75	13,936	6,376	8,214	43,517	11,777		3,166	8,340	5,845.65	50,348.01	2,925.83	710	
Pooled funds	6,994	6,533.16	5,142	963	9,842	17,600	18,475		2,357	409	518.85	42,746.24	2,884.79	40	
Europe-based institutional clients	144,808	22,388.64	19,078	7,339	10,645	45,016	20,590	8,297	3,810	5,036	6,364.5		4,696.24	750	
Institutional clients worldwide	144,808	59,455.8	19,078	7,339	10,645	60,687	29,599		3,810	7,916	6,364.5		0	750	
European issues	125,558	23,267.4	16,159	5,577	13,839	37,063	5,812		4,197.48	3,319	4,458.93		4,025.19	750	
US issues	14,573	31,274.5	307		3,092	18,776	21,133			4,072	1,101.27		1,017.57	0	
Other issues	4,677	7,730	2,612		1,125	5,278	3,307			1,358	804.30		767.86	0	
Euro-denominated bonds	141,137	421.71	18,720	6,839	3,500	16,853	2,049		5,523	3,407	6,364.5		1,249.45	750	11,460
Dollar-denominated bonds	2,862	20,139	159	500	634	19,739	20,615		0	4,404			554.34	0	10,550
Sterling-denominated bonds	168	2,832.88	79	0	13,920	23,951	888		0	10			123.82	0	93,400
Other-denominated bonds	641	38,811.71	120		2	574	6,700			928			3,883.01		36
Passive	0			400			0			0		24,654	0	0	
Benchmarked active	28,513		19,078	5,439	10,860	61,117	21,987		5,523	8,325	6,364.5	58,295	4,457.36	0	
Benchmarked against an enhanced/alternatively-weighted index	0				7,104		0			0			1,353.26	0	
Managed against a customised benchmark or risk/return target	112,269			1,500	92		8,265			0		9,322	0	750	
Unconstrained	4,026						0			424		824	0	0	
Flagship investment grade credit strategy															
Information ratio	0.5	⁽²³⁾	0.5	1.8	0.43 ⁽¹⁾	1.5	0.91		2.12	0.6	-0.94		1.3	NA	0.57 ⁽¹⁾
Acceptable tracking error	1.5%		<1.5%	1%	2-3%	3%	110bps		1.5%	NA	2%	0-1.5%	0.8%	NA	1-1.5%
Targeted contribution to excess return (%)															
Credit analysis	60		30	30	60	30	50		50	60	60	40	30	100	95
Duration management	5		20	10	10	10	10		15	15	20	10	0	0	5
Sector rotation	10		25	20	10	10	30		15	15	15	40	70	0	0
Credit default swaps	15		-20	20	20		0			0	5	0	0	0	0
Currency	0		0			5	0			10		0	0	0	0
Other	10		25	20 ⁽²¹⁾		55 ⁽²²⁾	10		50			10			
% of investment grade credit portfolios held in emerging markets	1.3		0	4.5	0.8	2	9			7.5	5.5	0	3.99	0	0
% of investment grade credit research is done in-house	100		100	80	100	100	100		100	75	100	100	100	100	100
Number/location of credit analysts working investment grade credit portfolios	Paris, 8; Trieste, 4		Paris, 13	Frankfurt, 10	Philadelphia, 7; London, 17	London, 26; New York, 13	Atlanta, 19; London, 7; Hong Kong, 2; New York, 1; Downers Grove (IL), 11; Palm Harbor (FL), 1		Amsterdam, 7	Frankfurt, 13; New York, 11	Stuttgart, 11	London, 13; Chicago, 9; Hong Kong, 1	London, 5; Zurich, 2; Singapore, 3	Frankfurt, 4	London, 94

Key:

NA= Not available

Footnotes:

- (1) 3-year
- (2) 1-year
- (3) 5-year
- (4) Security selection
- (5) €4,794m is managed by BMO Global Asset Management EMEA
- (6) The subsequent data relates to BMO Global Asset Management EMEA only
- (7) Based solely on segregated accounts
- (8) Includes cash/FX
- (9) Asset and country allocation

(10) Credit market risk

- (11) Single credit selection, relative value
- (12) Includes commingled vehicles and mutual funds
- (13) The figures for European issuers represent the firm's IG Credit strategies that include European currencies. The figures provided for US issues represent the USD denominated IG Credit strategy
- (14) The figures provided refer to dedicated EUR, USD and GBP strategies, as overall portfolio figures for bond denominations are not available
- (15) Multi-currency strategies, such as global or enhanced strategies
- (16) Contains customised as well as enhanced strategies
- (17) Represents security selection, credit allocation and rating allocation
- (18) Country allocation 10; rating allocation 5; debt seniority 10; coupon 10
- (19) Country selection, 15%; yield structure, 5%; execution, 5%
- (20) The subsequent data varies by product
- (21) Beta management/market timing

(22) Includes derivatives and cash

- (23) Yield curve, 10%; security selection, 45%
- (24) As at 30/06/16
- (25) Includes dedicated investment grade credit portfolios only
- (26) Represents dedicated corporate bond strategies managed on a global basis and does not represent a look-through. This AUM encompasses Global Credit strategies, European, Sterling and Emerging Markets Credit strategies
- (27) Does not represent currency of issue, but a breakdown of AUM according to strategies dedicated to Euro, Dollar and Sterling corporate bonds. The "Dollar" category includes global credit, as well as emerging markets corporate debt
- (28) Includes cash and cash equivalents of €15.36m
- (29) Industry analysis
- (30) Dubai, 1; Hyderabad, 6; Kuala Lumpur, 2; London, 3; Melbourne, 1; Mexico Distrito Federal, 2; Mumbai, 1; New York, 2; San Mateo, 48; Sao Paulo, 1; Seoul, 2

(31) Assets represent investment grade corporate bonds, CMBS, ABS, emerging markets debt and municipal bonds

- (32) New York, 21; London, 10; Hong Kong, 8; Los Angeles, 2; Santiago, 2; Singapore, 2; Tokyo, 2; Taipei, 1; Seoul, 1; San Francisco, 1
- (33) Issuer selection (security selection), 65%; active management, 10%; curve management, 5%
- (34) Inflation, relative value, iTrend, iTrend FX, volatility, event driven and sovereign spreads strategies
- (35) Trading/execution
- (36) Represents total dedicated Putnam investment grade corporate credit strategy assets. Putnam manages over \$16bn in investment grade corporate credit when including multi-sector allocations across all accounts
- (37) Beta
- (38) As at 31/08/16
- (39) Rating
- (40) The firm expects outperformance to be driven by alpha from active sector allocation and credit analysis

IPE Survey Investment Grade Credit Managers

Company name	MacKay Shields	Macquarie Asset Management	Man Group	MEAG	Metzler Asset Management	Morgan Stanley Inv. Management	Neuberger Berman	Nordea Asset Management	Payden & Rygel	PGIM Fixed Income	PIMCO	PineBridge Investments	Pioneer Investments	Principal Global Inv.	Putnam Investments
Total assets in investment grade credit strategies (€m)	18,261.11	94,875	7,127	81,804	1,507.99	12,979 ⁽²⁰⁾	21,945	10,066	37,241	345,124.68 ⁽²¹⁾	131,867	12,685.8	11,899	47,392.19	7,781.85 ⁽²⁰⁾
As at	30/09/16	30/09/16	30/09/16	30/09/16	31/10/16	30/09/16	30/09/16	31/10/16	30/09/16	30/09/16	30/09/16	30/09/16	31/10/16	30/09/16	30/09/16
Total group assets under management worldwide (€m)	86,385.12	334,803	71,755	268,000	42,323.06	374,572	226,968	212,399	91,831	606,189.79	1,005,780	73,517.6	226,327	371,927.64	137,026
Total assets in fixed income worldwide (€m)	85,266.55	154,234	9,426	208,700	8,000.84	60,338	106,494	64,965	90,395	603,910.59	913,156	42,441.5	124,027	171,669.74	52,638
Assets in investment grade credit strategies (€m)															
Segregated account mandates	1,019.95 ⁽²⁵⁾	74,093		81,804	1,507.99	7,543	19,897	6,944	34,986	281,139.79	73,107	9,894	3,501	39,288.85	7,743.15
Pooled funds	3,881.44 ⁽²⁵⁾	20,782		0	0	5,436	2,048	3,122	2,255	63,984.89	58,760	2,791.8	8,398	8,103.34	38.7
Europe-based institutional clients	4,519.05 ⁽²⁵⁾	517	2,366	71,650	1,507.99	5,841	1,767	6,944	2,123	20,270.98	49,244	2,581.2	5,873	3,675.25	295.51
Institutional clients worldwide	4,901.39 ⁽²⁵⁾	94,359		81,804	0	10,856	21,130	6,944	37,241	271,907.18	124,863	6,987	7,345	46,537.94	295.51
European issues	440.63 ⁽²⁵⁾	535		71,650	786.33	NA		8,939	4,975	23,537.5	19,136	1,099.9	8,178	7,794.84	0
US issues	4,427.43 ⁽²⁵⁾	91,591		7,907	114.09	NA		1,102	24,336	304,814.12	60,347	6,156.5	3,394	37,572.86	7,781.85
Other issues	33.33 ⁽²⁵⁾	2,749		2,247	607.57			25	7,930	16,773.06	52,384	5,429.4	327	2,024.49	
Euro-denominated bonds	0	486		65,100	945.16	4,681 ⁽²⁷⁾		8,939	552	0	19,136	460.6	10,112	290.85	0
Dollar-denominated bonds	4,901.39 ⁽²⁵⁾	90,683		12,500	0	8,059 ⁽²⁷⁾		1,102	36,265	345,124.68	60,347	8,441.5	1,652	46,847.12	7,781.85
Sterling-denominated bonds	0			2,700	0	239 ⁽²⁷⁾		25		0	4,806	132.4		188.7	0
Other-denominated bonds				1,504	562.83				39		47,578	3,651.3	135	65.52	
Passive	0	9		0	0	0	1,281		0		501			0	0
Benchmarked active	4,901.39 ⁽²⁵⁾	94,745		1,345.57	12,979	17,774				345,124.68	131,366	12,685.8		47,392.19	697.41
Benchmarked against an enhanced/alternatively-weighted index	0	0		0	0	0					0	0		0	0
Managed against a customised benchmark or risk/return target	0	121		0	0	0					40,057	0		0	7,084.44
Unconstrained	0	0		162.42	0	2,890					30,843	0		0	0
Flagship investment grade credit strategy															
Information ratio	0.56	1.14 ⁽²⁾		1.04	0.8	0.54 ⁽²⁾	100bps	0.54	1-2	1.80 ⁽²⁾	0.5	2.25 ⁽²⁾	0.45 ⁽²⁾	1.64	1.08 ⁽²⁾
Acceptable tracking error	2.05	100bps		NA	≤2	1-3%	50-100bps	1%	1-1.5%	100bps	150-300bps	0.47% ⁽²⁾	3%	0.75-1.25%	1.25-2.0%
Targeted contribution to excess return (%)															
Credit analysis	50	90		50	45	50	20-40	100	60	40-60	60	0	37	70	50
Duration management	5	5		10	25	5	5-15	0	10	0-5	10	5	24	10	10
Sector rotation	40	2		20	20	40	40-60	0	25	40-50	20	15	0	20	30
Credit default swaps	0	3		10	0	0	0	0	0	0-10	5	0	0	0	0
Currency	0	0		0	0	5	0	0	5	0	5	0	7	0	0
Other	5			10	10		5-15					80 ⁽²⁰⁾	32 ⁽²⁰⁾		10 ⁽²⁰⁾
% of investment grade credit portfolios held in emerging markets	0	<5		≤5	<5	7	<5	0	7	0.49	0-25	14.7		0-10	1
% of investment grade credit research is done in-house	90	100		60	80	80	100	100	80	100	100	80	90	100	90
Number/location of credit analysts working investment grade credit portfolios	New York, 10	Sydney, 2; London, 1; Philadelphia, 19; Seoul, 2; Vienna, 3		Munich, 16; New York, 13	Frankfurt/Main, 4	London, 8; New York, 16; Singapore, 2	Chicago, 13; London, 4	Copenhagen, 17	Los Angeles, 21; London, 2	Newark, 45; London, 10; Singapore, 3	Hong Kong, 6; London, 7; Munich, 3; New York, 9; Rio de Janeiro, 2; Tokyo, 2; Newport Beach, 26	50 ⁽²⁰⁾	Boston, 15; Dublin, 8; London, 6	London, 2; Des Moines (IA), 19; Chicago, 1	Boston, 11; London, 3

Company name	Quoniam Asset Management	Raiffeisen Capital Management	Robeco	Sparinvest	Standard Life Investments	Stone Harbor Inv. Partners	TKP Investments	TwentyFour Asset Management	Union Bancaire Privée	Union Investment	The Vanguard Group	Vontobel Asset Management	Voya Inv. Management	Wells Capital Management	Western Asset Management Co.	Zürcher Kantonbank
Total assets in investment grade credit strategies (€m)	8,061	4,155	13,882	594	64,116.9	1,647	2,382	474	6,406	18,680	1,757.5	8,815	50,308	192,330.2	41,091	24,777
As at	31/10/16	30/06/16	30/09/16	30/09/16	30/06/16	31/10/16	30/09/16	31/10/16	30/09/16	30/09/16	30/09/16	30/09/16	30/09/16	30/09/16	30/09/16	30/09/16
Total group assets under management worldwide (€m)	26,664	28,809	276,076	10,256	323,653.6	34,956	22,913 ⁽²⁰⁾	8,496	105,854	286,149	3,408,054	79,793	196,805	317,499.5	395,492	135,807
Total assets in fixed income worldwide (€m)	12,005	12,732	39,413	4,885	126,389.3	34,956		8,496	36,769	121,027	67,890	20,563	44,964			
Assets in investment grade credit strategies (€m)																
Segregated account mandates	7,628	1,541	10,208	25.3	46,346.6	1,494	2,382	0	2,616	15,562	NA	3,423	49,418	141,665.4	25,273	5,733
Pooled funds	433	2,614	3,674	568.7	17,770.3	153	0	474	3,790	3,118	1,757.5	5,392	890	50,664.8	15,818	19,044
Europe-based institutional clients	8,061	4,155	10,972	16.64	43,576.2	404	2,382	474	4,350	14,784	523.6	8,751	749	8,366.4	1,778	15,271
Institutional clients worldwide	8,061	4,155	11,547	16.64	46,319.4	1,647	2,382	474	4,936	778	1,299.2	8,815	50,185	192,330.2	41,091	15,271
European issues	2,577	3,365	9,255	523		108	1,550	428	NA	13,076	323.3	7,221	17,597.5	3,360	9,911	
US issues	2,866	574	2,999			1,382	649	28	NA	3,736	1,068		37,492	165,537.4	35,796	8,424
Other issues	2,618	216	1,628			157	183	18		1,868			5,595	9,195.3	1,935	6,442
Euro-denominated bonds	5,536	3,969	10,969	308		14	1,922	7	NA	17,344	124		2,923.3	1,237	5,946	
Dollar-denominated bonds	2,395	102	448			1,601	460	29	NA	1,186	1,757.5		50,072	185,409.3	37,705	16,105
Sterling-denominated bonds	109	4	2,418			30	0	438	NA	150			0	1,813	2,123	1,487
Other-denominated bonds	21	80	47			2							112	2,184.6	26	1,239
Passive	0	278				0	964	104	0	0			0	0		7,371
Benchmarked active	6,143	3,877	7,521		64,116.9	1,647	1,418	370	1,793	14,418		6,423	1,693	192,330.2	29,731	13,301
Benchmarked against an enhanced/alternatively-weighted index	0					0	0	0	0	0			0	0		0
Managed against a customised benchmark or risk/return target	1,918					0	0		3,688	4,262			48,615	NA	10,642	947
Unconstrained	0		6,361	594		0	0		925	0			0	0	718	2,538
Flagship investment grade credit strategy																
Information ratio	0.5-1.0%	0.76	1.88 ⁽²⁾	0.99	1.6	0.4	1.38	NA	-0.45	1.14 ⁽²⁾			0.625	3.57	100-120bps	1.5 ⁽²⁾
Acceptable tracking error	0.5-1.0%	1%	2.50%	NA	<2%	200bps	1-4%	NA	2%	2.0%			150-200bps	NA	200-250bps	2%
Targeted contribution to excess return (%)																
Credit analysis	67	42	70	100	80		70	33	15	80			80-90	50	70	50
Duration management	33	44		0	5		0	33	5	0			10	10	10	15
Sector rotation	0	14		0	15	50	30	33	20	15			10-20	20	20	15
Credit default swaps	0	0		0	0		0		0	5			5			10
Currency	0	0		0	0		0		0	0			5			0
Other			30 ⁽²⁷⁾			50 ⁽⁴⁰⁾			60				10		20 ⁽²⁰⁾	10
% of investment grade credit portfolios held in emerging markets	3.3	2.7	3	13	0	2.65	2	1.5	15	10	9.78		0	1.93	2.44	10
% of investment grade credit research is done in-house	100	70	100	75	70	100	0	50	100	100	100		80	100	100	100
Number/location of credit analysts working investment grade credit portfolios	Frankfurt, 19; London, 1	Vienna, 6	Rotterdam, 15; London, 1; Hong Kong, 1; Singapore, 2	Copenhagen, 5	Edinburgh, 21; London, 10; Boston, 10	New York, 15; London, 3	Groningen, 8	London, 3	Zurich, 7; London, 1; Geneva, 10	Frankfurt, 14; Hong Kong, 4	Malvern, 21; Hong Kong, 1; Melbourne, 2; London, 8	Zurich, 9; New York, 8; New York, 3	Atlanta, 29	San Francisco, 10	Pasadena 4; London, 5; New York, 1; Melbourne, 1; Tokyo, 1	Zurich, 15

Key:

NA= Not available

Footnotes:

- (1) 3-year
- (2) 1-year
- (3) 5-year
- (4) Security selection
- (5) €4,794m is managed by BMO Global Asset Management EMEA
- (6) The subsequent data relates to BMO Global Asset Management EMEA only
- (7) Based solely on segregated accounts
- (8) Includes cash/FX
- (9) Asset and country allocation

- (10) Credit market risk
- (11) Single credit selection, relative value
- (12) Includes commingled vehicles and mutual funds
- (13) The figures for European issuers represent the firm's IG Credit strategies that include European currencies. The figures provided for US issues represent the USD denominated IG Credit strategy
- (14) The figures provided refer to dedicated EUR, USD and GBP strategies, as overall portfolio figures for bond denominations are not available
- (15) Multi-currency strategies, such as global or enhanced strategies
- (16) Contains customised as well as enhanced strategies
- (17) Represents security selection, credit allocation and rating allocation
- (18) Country allocation 10; rating allocation 5; debt seniority 10; coupon 10
- (19) Country selection, 15%; yield structure, 5%; execution, 5%
- (20) The subsequent data varies by product
- (21) Beta management/market timing

- (22) Includes derivatives and cash
- (23) Yield curve, 10%; security selection, 45%
- (24) As at 30/06/16
- (25) Includes dedicated investment grade credit portfolios only
- (26) Represents dedicated corporate bond strategies managed on a global basis and does not represent a look-through. This AUM encompasses Global Credit strategies, European, Sterling and Emerging Markets credit strategies
- (27) Does not represent currency of issue, but a breakdown of AUM according