Statistical Annex

The international banking market

Securities markets

Derivatives markets

The BIS international financial statistics summary tables

The BIS publishes a variety of international financial statistics, most of them on a quarterly basis. They cover banking statistics on both a locational and a consolidated basis, debt securities issues in both domestic and international markets, and statistics on derivatives traded on exchanges and over the counter. The main purpose of the statistics is to provide a measure of the size and structure of key segments of the global financial market and to monitor their development. A summary of the most recent data is presented in seven tables (see below).①

1 International banking statistics (Tables A1, A2, B1 and B2)

The locational reporting system provides quarterly data on the international financial claims and liabilities of banks resident in the 44 reporting countries on a gross basis. The methodology is consistent with the principles underlying the compilation of national accounts, balances of payments and external debt statistics. Breakdowns are provided in terms of instrument, currency, sector and vis-à-vis country. The currency breakdown allows the BIS to approximate global bank credit flows adjusted for exchange rate fluctuations.

The consolidated banking statistics cover banks' worldwide on-balance sheet claims, on both a contractual (immediate borrower) and an ultimate risk basis (ie net of risk mitigants such as guarantees and collateral). Positions are reported by head offices in their home country and include all branches and subsidiaries on a worldwide consolidated basis, net of inter-office accounts. Breakdowns are available in terms of instrument, sector, maturity and vis-à-vis country. Information is also available on key off-balance sheet items such as guarantees extended, credit commitments and derivative contracts. Currently 31 countries provide consolidated banking data.

While the locational statistics are appropriate for measuring lending flows in a given period, the consolidated statistics are more suited to gauging the size of banks' country and liquidity risk exposures. The data are compiled by the BIS on the basis of national data reported by the respective central banks, which in turn collect these data from the internationally active banks in their jurisdiction.

2 Debt securities statistics (Tables C1 and C2)

Securities statistic are harmonised with recommendations from the Handbook on Securities Statistics Part 1 (jointly released by BIS, ECB and IMF; available at the IMF web site www.imf.org/external/np/sta/wgsd/pdf/051309.pdf). There are three datasets, each covering a different market of issue: international debt securities, domestic debt securities and total debt securities.

The sectoral breakdown presents data based on the sector of the borrower itself and not on the sector of the parent of the borrower or any guarantor. "General government" comprises central government and other governments, while "Financial corporations" comprises commercial banks, central bank, and other financial institutions.

The compilation methodology was changed in December 2012 for the full history of the statistics. For statistics compiled according to the old methodology, see the detailed Annex Tables in pre-December 2012 version of the *BIS Quarterly Review*.

3 Derivatives statistics (Table D)

Semi-annual data are compiled for activity in over-the-counter (OTC) markets whilst quarterly data are available on activity in exchange-traded markets. The data on OTC derivatives are based on the reporting to the BIS by central banks in major financial centres that in turn collect the information on a consolidated basis from reporting dealers headquartered in their respective country, while those on exchange-traded derivatives are obtained from market sources.

The derivatives data cover notional amounts outstanding and gross market values for a number of risk categories: foreign exchange, interest rates, equity-linked, commodities and credit default swaps. Gross credit exposure in OTC markets after bilateral netting is also available.

① More detailed tables and options to download the data in time series form are available at www.bis.org/statistics/index.htm.

Table A1: International positions of banks by residence of counterparty, June 2014[1]

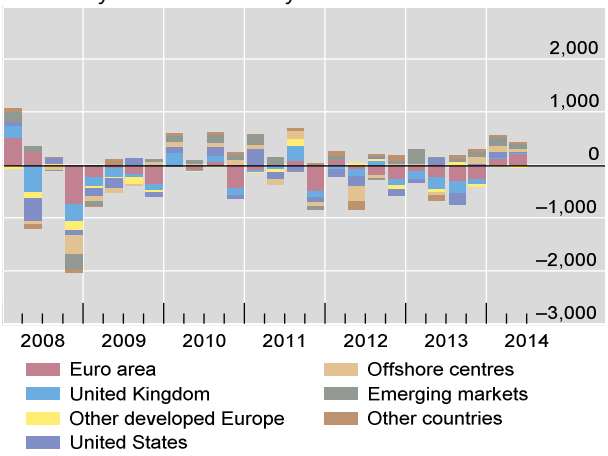
In billions of US dollars

	Vis-à-vis advanced economies	Vis-à-vis offshore centres	Vis-à-vis emerging market economies					All countries
			Total	Africa	Asia	Europe	Latin America	
Amounts outstanding								
Total claims	**24,231**	**4,931**	**4,630**	**505**	**2,433**	**927**	**766**	**34,459**
Total cross-border claims	**21,701**	**3,997**	**3,934**	**496**	**2,065**	**711**	**662**	**29,954**
Loans	14,652	3,137	3,087	450	1,629	536	472	20,943
Securities	4,676	620	493	19	290	65	118	6,039
Claims on banks	13,193	2,175	2,209	207	1,351	381	270	17,687
Claims on non-banks	8,509	1,821	1,724	288	715	330	391	12,267
US dollar	8,276	2,389	1,531	287	575	207	462	12,255
Euro	8,951	299	451	75	63	285	28	9,898
Foreign currency claims on residents	**2,530**	**935**	**696**	**9**	**367**	**216**	**104**	**4,161**
Estimated exchange rate-adjusted changes during the quarter[2]								
Total claims	**285**	**73**	**104**	**1**	**100**	**6**	**-3**	**487**
Total cross-border claims	**255**	**52**	**98**	**1**	**96**	**-2**	**3**	**401**
Loans	138	41	69	2	66	1	0	246
Securities	67	11	25	2	22	-2	2	99
Claims on banks	161	-11	43	-6	47	1	0	194
Claims on non-banks	94	62	56	7	49	-3	3	207
US dollar	27	16	9	4	8	-5	3	52
Euro	171	5	-2	-2	1	0	-1	168
Foreign currency claims on residents	**29**	**21**	**6**	**0**	**3**	**8**	**-6**	**56**
Amounts outstanding								
Total liabilities	**21,240**	**5,393**	**3,643**	**934**	**1,621**	**497**	**590**	**33,645**
Total cross-border liabilities	**18,275**	**4,208**	**2,891**	**922**	**1,116**	**346**	**506**	**26,484**
Deposits	15,144	3,943	2,728	880	1,063	331	455	22,096
Securities	1,614	98	34	7	13	2	12	2,567
Liabilities to banks	12,831	2,654	1,828	575	754	256	243	18,220
Liabilities to non-banks	5,444	1,554	1,063	347	363	90	263	8,263
US dollar	7,385	2,725	1,633	630	465	161	377	12,112
Euro	6,976	397	295	97	44	111	43	8,188
Foreign currency liabilities to residents	**2,965**	**1,185**	**752**	**12**	**505**	**151**	**84**	**4,902**
Estimated exchange rate-adjusted changes during the quarter[2]								
Total liabilities	**222**	**-17**	**152**	**-6**	**151**	**8**	**-1**	**492**
Total cross-border liabilities	**183**	**-33**	**149**	**-7**	**124**	**22**	**11**	**309**
Deposits	76	-24	141	-8	119	22	7	196
Securities	51	-2	3	1	0	0	1	57
Liabilities to banks	205	-53	124	-10	106	25	3	281
Liabilities to non-banks	-22	20	25	3	18	-4	8	28
US dollar	66	-52	92	-6	84	12	2	124
Euro	62	-2	3	-4	-6	9	4	49
Foreign currency liabilities to residents	**39**	**16**	**3**	**0**	**28**	**-13**	**-12**	**59**

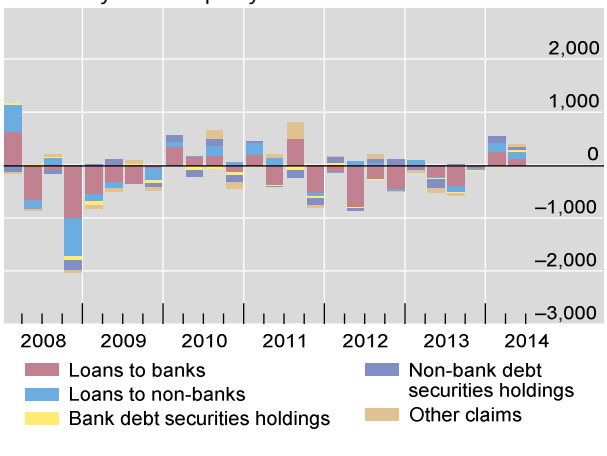
Cross-border positions

Exchange rate-adjusted changes in stocks

Claims by vis-à-vis country



Claims by counterparty and instrument



[1] Detailed breakdowns and time series data are available at www.bis.org/statistics/bankstats.htm (Tables 1–7B). [2] Taking into account exchange rate effects on outstanding balances in non-US dollar currencies.

Table A2: International positions of banks by nationality of head office, June 2014[1]

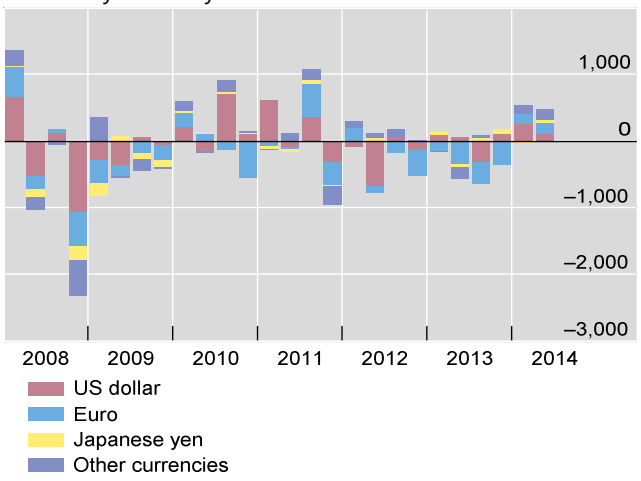
In billions of US dollars

	Nationality of banks										All countries
	France	Germany	Italy	Nether-lands	Spain	Switzer-land	United Kingdom	Japan	United States	Emerging markets	
Amounts outstanding											
Total claims	**3,752**	**3,739**	**902**	**1,797**	**731**	**2,604**	**3,890**	**4,560**	**3,946**	**1,695**	**34,422**
On banks	2,377	2,129	564	815	370	1,464	1,950	1,883	2,386	874	18,836
On related foreign offices	1,399	1,123	182	495	226	1,048	1,237	1,116	1,602	343	10,954
On other banks	954	969	381	307	144	410	677	764	744	461	7,605
On official monetary institutions	24	37	1	13	1	6	36	3	40	70	277
On non-banks	1,375	1,610	338	982	361	1,140	1,940	2,677	1,559	821	15,586
US dollar	1,139	1,250	151	516	249	1,272	1,665	2,575	2,448	1,276	15,137
Euro	1,924	1,949	660	964	336	570	1,183	605	734	137	10,766
Other currencies	689	540	90	316	146	763	1,042	1,380	764	281	8,519
Estimated exchange rate-adjusted changes during the quarter[2]											
Total claims	**-9**	**98**	**18**	**98**	**-6**	**64**	**-76**	**43**	**59**	**59**	**487**
On banks	-29	73	8	36	4	0	-67	22	46	32	175
On related foreign offices	-9	46	0	30	-4	-6	-73	12	51	22	114
On other banks	-18	23	8	15	9	5	11	9	-3	2	69
On official monetary institutions	-1	4	0	-9	-1	1	-5	0	-1	7	-8
On non-banks	20	25	9	62	-10	63	-9	21	13	27	312
US dollar	-29	62	-7	68	-8	28	-52	-2	0	33	109
Euro	28	19	26	28	4	28	-40	11	13	1	171
Other currencies	-7	17	-2	1	-1	8	16	33	46	24	207
Amounts outstanding											
Total liabilities	**3,672**	**3,441**	**710**	**1,744**	**714**	**2,754**	**4,040**	**2,693**	**4,714**	**1,804**	**33,699**
To banks	2,010	1,760	431	621	455	1,417	1,815	1,730	2,417	930	17,584
To related foreign offices	1,148	1,098	176	406	169	1,088	1,178	903	1,379	245	9,605
To other banks	766	574	240	186	256	307	508	746	786	651	6,967
To official monetary institutions	96	88	15	29	31	22	129	81	252	33	1,012
To non-banks	1,662	1,680	280	1,123	259	1,338	2,224	963	2,297	874	16,115
US dollar	1,293	1,339	150	593	274	1,379	1,676	1,764	3,250	1,262	16,142
Euro	1,745	1,471	508	744	352	617	1,123	359	659	154	9,483
Other currencies	634	630	53	407	89	759	1,241	570	805	389	8,074
Estimated exchange rate-adjusted changes during the quarter[2]											
Total liabilities	**-27**	**93**	**8**	**70**	**-15**	**55**	**-68**	**45**	**121**	**43**	**500**
To banks	2	73	13	39	-12	16	-27	33	53	4	311
To related foreign offices	-45	47	0	29	-3	27	-35	9	21	3	88
To other banks	50	20	15	11	-1	-15	-3	24	6	8	178
To official monetary institutions	-3	6	-2	0	-8	4	11	0	26	-6	45
To non-banks	-29	21	-4	30	-3	39	-42	12	67	39	189
US dollar	-50	88	0	42	-9	36	-37	17	50	19	245
Euro	10	-22	13	19	-3	7	-37	0	20	-2	51
Other currencies	12	27	-5	8	-3	12	5	27	51	26	204

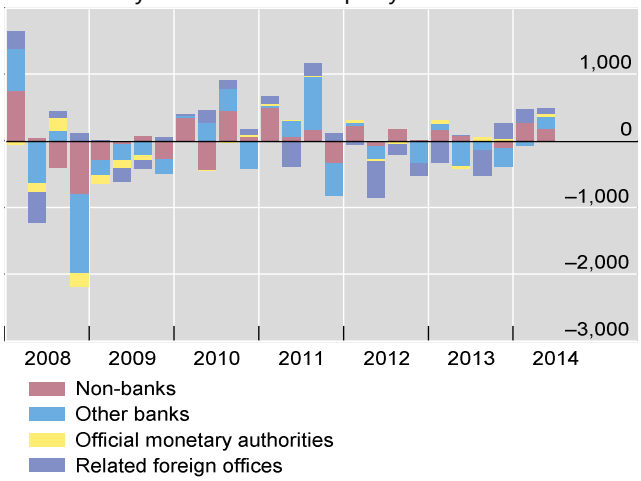
International positions of BIS reporting banks

Exchange rate-adjusted changes in stocks

Claims by currency



Liabilities by sector of counterparty



[1] Detailed breakdowns and time series data are available at www.bis.org/statistics/bankstats.htm (Tables 8A–8B). [2] Taking into account exchange rate effects on outstanding balances in non-US dollar currencies.

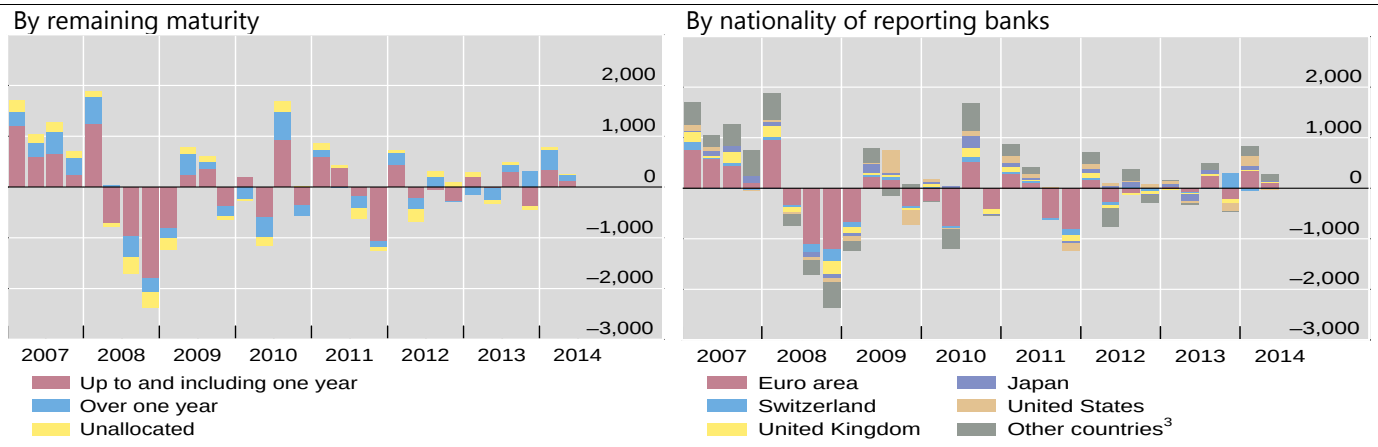
Table B1: Consolidated claims, immediate borrower basis, June 2014[1]

Amounts outstanding, in billions of US dollars

	Vis–à–vis advanced economies				Vis-à-vis offshore centres	Vis–à–vis emerging market economies					All countries
	Total	United States	Euro area	Japan		Total	Africa	Asia	Europe	Latin America	
Foreign claims	**22,939**	**6,218**	**9,092**	**1,222**	**3,017**	**6,313**	**651**	**2,844**	**1,469**	**1,349**	**32,620**
International claims	**14,181**	**2,584**	**6,773**	**824**	**2,414**	**3,833**	**435**	**2,013**	**797**	**588**	**20,779**
Up to and including one year	6,942	945	3,009	681	1,231	2,128	195	1,384	298	251	10,375
Over one year	4,958	1,037	2,600	82	738	1,418	212	493	423	291	7,266
Unallocated by maturity	2,281	603	1,163	61	444	286	28	136	76	47	3,138
Local currency claims	**8,757**	**3,634**	**2,319**	**398**	**604**	**2,480**	**216**	**831**	**672**	**761**	**11,841**
Local currency liabilities	**6,359**	**2,408**	**2,124**	**188**	**496**	**1,809**	**177**	**502**	**537**	**593**	**8,907**
	Unadjusted changes during the quarter[2]										
Foreign claims	*143*	*-3*	*78*	*17*	*58*	*129*	*-5*	*118*	*-8*	*25*	*321*
International claims	*110*	*-27*	*160*	*-18*	*56*	*97*	*-6*	*110*	*-13*	*6*	*254*
Local currency claims	*33*	*24*	*-82*	*35*	*2*	*32*	*1*	*7*	*5*	*19*	*67*
Local currency liabilities	*13*	*-53*	*31*	*5*	*11*	*0*	*-2*	*-4*	*1*	*5*	*2*
Nationality of reporting banks:	**Foreign claims**										
Domestically owned banks (total)	**19,263**	**5,778**	**7,357**	**743**	**2,879**	**5,476**	**606**	**2,223**	**1,400**	**1,247**	**27,956**
Euro area	8,098	1,686	4,097	219	394	2,336	224	385	1,109	618	11,034
Switzerland	1,374	639	394	.	236	144	30	.	.	.	1,787
United Kingdom	2,173	1,005	814	103	646	947	212	535	65	134	3,817
Japan	2,300	1,230	623	.	665	463	34	328	40	62	3,429
United States	2,037	.	807	305	511	760	64	347	101	249	3,329
Other countries[3]	3,280	1,218	622	116	427	826	42	627	86	184	4,560
Other foreign banks	**3,675**	**440**	**1,735**	**479**	**138**	**837**	**45**	**622**	**69**	**102**	**4,664**
	International claims, all maturities										
Domestically owned banks (total)	**10,624**	**2,179**	**5,119**	**346**	**2,275**	**3,001**	**392**	**1,392**	**730**	**487**	**16,239**
Euro area	4,495	571	2,491	116	360	1,122	154	301	512	156	6,182
Switzerland	749	172	370	25	221	141	28	67	19	27	1,144
United Kingdom	999	297	542	37	271	439	90	257	46	45	1,761
Japan	1,775	829	593	.	616	324	34	194	38	58	2,715
United States	1,355	.	717	127	455	419	46	190	62	120	2,249
Other countries[3]	1,252	309	405	40	352	555	41	382	52	80	2,187
Other foreign banks	**3,557**	**406**	**1,654**	**478**	**138**	**832**	**43**	**622**	**67**	**101**	**4,541**
	International claims, short–term										
Domestically owned banks (total)	**4,626**	**715**	**2,048**	**224**	**1,144**	**1,535**	**172**	**881**	**273**	**209**	**7,376**
Euro area	2,061	299	892	76	201	461	56	174	161	70	2,755
Switzerland	387	74	187	10	179	98	19	51	11	16	686
United Kingdom	444	123	256	10	171	251	41	160	29	21	867
Japan	191	62	58	.	58	124	6	97	13	9	373
United States	864	.	429	99	327	261	31	140	32	58	1,461
Other countries[3]	679	156	226	29	208	339	18	259	27	35	1,233
Other foreign banks	**2,316**	**230**	**961**	**457**	**87**	**594**	**23**	**503**	**25**	**42**	**2,999**

International claims of BIS reporting banks on an immediate borrower basis[4]

Changes in stocks[2]



[1] Detailed breakdowns and time series data are available at www.bis.org/statistics/consstats.htm (Tables 9A–9B) and BIS WebStats. [2] Quarterly difference in outstanding stocks, excluding effects of breaks in series, not adjusted for exchange rate movements. [3] Domestically owned banks in other reporting countries. [4] Worldwide consolidated positions of domestically owned banks and unconsolidated positions of foreign banks in 31 reporting countries.

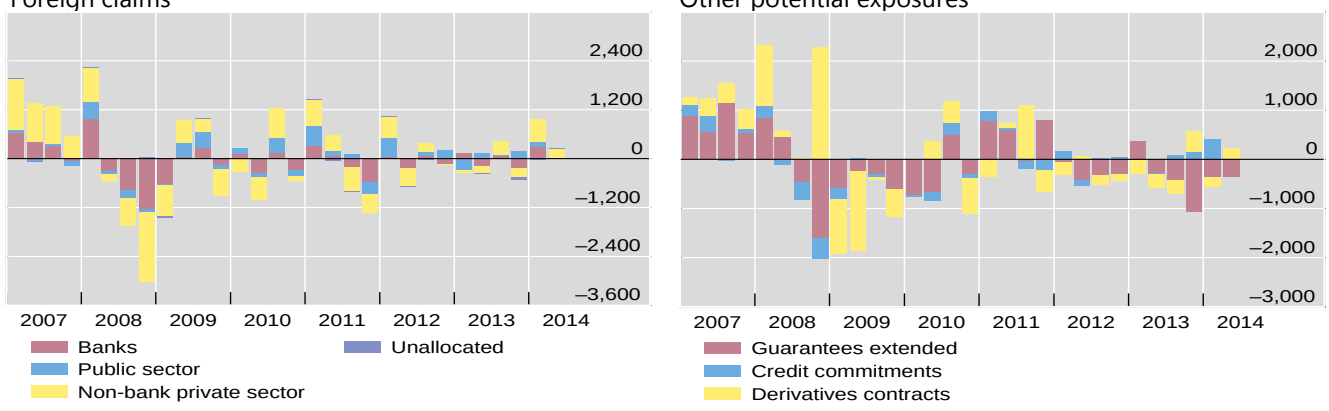
Table B2: Consolidated claims, ultimate risk basis, June 2014[1]

Amounts outstanding, in billions of US dollars

	Vis–à–vis advanced economies				Vis–à–vis offshore centres	Vis–à–vis emerging market economies					All countries
	Total	United States	Euro area	Japan		Total	Africa	Asia	Europe	Latin America	
Foreign claims	**18,621**	**5,757**	**7,069**	**768**	**2,269**	**5,210**	**536**	**2,166**	**1,337**	**1,171**	**26,403**
Banks	3,755	686	1,660	200	180	1,069	78	666	188	137	5,016
Public sector	4,524	1,884	1,622	283	219	1,199	115	420	311	353	6,186
Non–bank private sector	10,292	3,171	3,767	282	1,866	2,928	342	1,078	828	681	15,132
Unallocated	51	17	20	2	4	13	1	2	10	1	68
Cross–border claims	**9,577**	**2,387**	**4,798**	**280**	**1,387**	**2,202**	**276**	**1,139**	**450**	**338**	**13,468**
Local claims in all currencies	**9,044**	**3,371**	**2,271**	**488**	**882**	**3,007**	**260**	**1,027**	**886**	**834**	**12,934**
	Unadjusted changes during the quarter[2]										
Foreign claims	*129*	*-10*	*54*	*42*	*56*	*74*	*4*	*52*	*-3*	*21*	*251*
Cross–border claims	*53*	*-59*	*124*	*-2*	*41*	*45*	*5*	*41*	*-2*	*1*	*131*
Local claims in all currencies	*76*	*48*	*-70*	*45*	*15*	*29*	*-2*	*11*	*-1*	*20*	*120*
Nationality of reporting banks[3]	**Foreign claims**										
Total	**18,621**	**5,757**	**7,069**	**768**	**2,269**	**5,210**	**536**	**2,166**	**1,337**	**1,171**	**26,403**
Euro area	7,827	1,656	3,957	219	355	2,242	199	373	1,066	605	10,624
France	2,523	628	1,326	157	118	509	120	157	193	40	3,166
Germany	2,089	531	891	39	139	290	31	119	118	21	2,579
Italy	612	35	501	…	9	225	9	14	199	3	859
Spain	940	238	263	7	16	589	3	11	66	508	1,578
Switzerland	1,257	656	345	.	105	6	6	.	.	.	1,369
United Kingdom	2,217	984	848	124	600	964	208	553	67	137	3,834
Japan	2,319	1,289	601	.	490	454	31	321	38	64	3,263
United States	2,051	.	792	336	427	763	59	354	102	247	3,264
Other countries	2,951	1,172	526	89	291	780	33	566	64	117	4,050
	Cross–border claims										
Total	**9,577**	**2,387**	**4,798**	**280**	**1,387**	**2,202**	**276**	**1,139**	**450**	**338**	**13,468**
Euro area	3,868	525	2,304	98	232	780	117	274	291	98	5,080
France	1,233	146	743	56	73	251	66	112	45	29	1,574
Germany	1,372	278	762	24	101	196	29	82	65	20	1,730
Italy	259	18	175	…	8	48	3	13	29	3	328
Spain	209	18	132	7	13	47	3	10	4	30	302
Switzerland	800	389	322	.	80	4	4	.	.	.	884
United Kingdom	1,017	292	562	45	153	353	59	213	41	40	1,576
Japan	1,815	914	572	.	411	260	27	139	34	60	2,486
United States	1,119	.	696	101	344	359	38	169	53	99	1,844
Other countries	959	267	343	36	167	446	30	345	32	40	1,600
	Other potential exposures[4, 5]										
Derivatives contracts	3,405	701	1,175	97	101	143	29	54	22	37	3,657
Guarantees extended	6,557	1,106	3,172	229	295	1,201	167	388	390	257	8,319
Credit commitments	3,232	1,077	1,067	70	260	556	74	188	130	164	4,114

Consolidated claims and other potential exposures of BIS reporting banks on an ultimate risk basis

Changes in stocks[2]



[1] Detailed breakdowns and time series data are available at www.bis.org/statistics/consstats/htm (Tables 9C–9E). [2] Quarterly difference in outstanding stocks, excluding effects of breaks in series, not adjusted for exchange rate movements. [3] Worldwide consolidated positions of domestically owned banks of 25 reporting countries. [4] Not included in foreign claims. [5] Derivatives relate to positive market values recorded as on- or off-balance sheet items. Credit commitments and guarantees are recorded as off-balance sheet items.

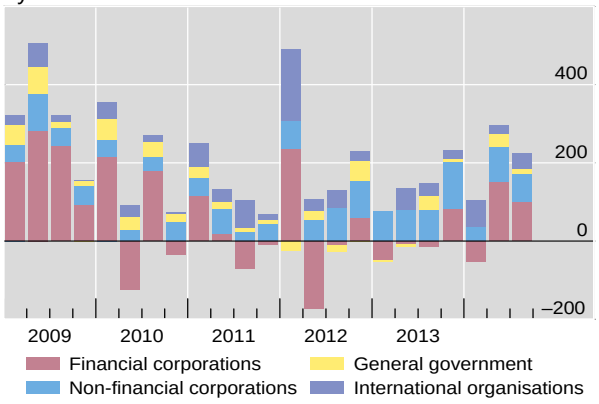
Table C1: International debt securities issuance, September 2014

In billions of US dollars

	Developed countries				Off-shore centres	Emerging markets					Int'l organi-sations	All countries
	Total	United States	Euro area	Japan		Total	Africa	Asia	Europe	Latin America		
Amounts outstanding												
Total issues	**17,028**	**2,110**	**8,937**	**234**	**1,959**	**1,807**	**233**	**474**	**445**	**655**	**1,524**	**22,319**
Money market instruments	**781**	**15**	**422**	**5**	**97**	**18**	**7**	**7**	**4**	**1**	**20**	**916**
Financial corporations	709	11	376	5	96	18	7	7	3	0	0	824
Non-financial corporations	39	4	25	0	0	0	0	0	0	0	0	39
General government	33	0	21	0	0	0	0	0	0	0	0	33
US dollar	285	2	156	2	49	12	4	4	3	1	13	359
Euro	292	8	165	1	9	3	0	2	0	0	1	304
Other currencies	205	5	101	2	39	3	2	1	0	0	6	253
Bonds and notes	**16,247**	**2,096**	**8,515**	**229**	**1,862**	**1,789**	**226**	**467**	**442**	**654**	**1,504**	**21,403**
Financial corporations	13,104	1,744	6,816	174	1,712	529	72	224	103	129	0	15,345
Non-financial corporations	2,329	347	1,118	49	93	508	66	137	63	242	0	2,931
General government	814	4	581	6	57	752	87	105	276	283	0	1,622
US dollar	5,061	1,474	1,478	142	1,488	1,356	187	360	272	536	453	8,358
Euro	7,984	370	6,153	10	126	230	21	18	137	54	680	9,020
Other currencies	3,202	252	884	76	248	203	18	88	33	64	372	4,025
Floating rate	4,861	405	2,717	28	558	62	10	26	10	16	145	5,625
Fixed rate	11,076	1,564	5,703	169	1,249	1,686	207	416	428	634	1,360	15,370
Equity-related	310	126	95	32	55	42	9	25	3	4	0	408
Net issuance during the quarter												
Total issues	**88**	**41**	**-42**	**14**	**50**	**44**	**5**	**8**	**5**	**26**	**41**	**224**
Money market instruments	**26**	**6**	**4**	**0**	**4**	**0**	**0**	**-1**	**1**	**0**	**5**	**35**
Financial corporations	28	4	7	0	3	0	0	-1	1	0	0	32
Non-financial corporations	-1	2	-3	0	0	0	0	0	0	0	0	0
General government	-1	0	0	0	0	0	0	0	0	0	0	-1
US dollar	5	1	3	0	4	1	0	-1	1	0	5	14
Euro	15	3	-5	0	-1	0	0	0	0	0	0	13
Other currencies	6	2	7	0	1	0	0	0	0	0	1	8
Bonds and notes	**62**	**35**	**-46**	**14**	**47**	**44**	**5**	**9**	**4**	**26**	**36**	**188**
Financial corporations	6	20	-58	10	43	20	4	5	5	6	0	68
Non-financial corporations	58	15	16	3	3	11	-4	5	-1	12	0	72
General government	-1	0	-4	0	1	14	5	0	0	8	0	14
US dollar	87	34	26	12	44	28	3	5	0	20	17	175
Euro	-26	0	-68	3	-2	9	1	5	2	1	18	-2
Other currencies	2	1	-4	-1	5	6	1	-1	2	5	2	15
Floating rate	-12	1	-16	0	18	0	0	0	0	0	1	6
Fixed rate	60	25	-34	12	31	44	5	8	5	26	35	169
Equity-related	14	9	4	1	-2	0	0	1	-1	0	0	13

Net international debt securities issuance

By sector



By currency

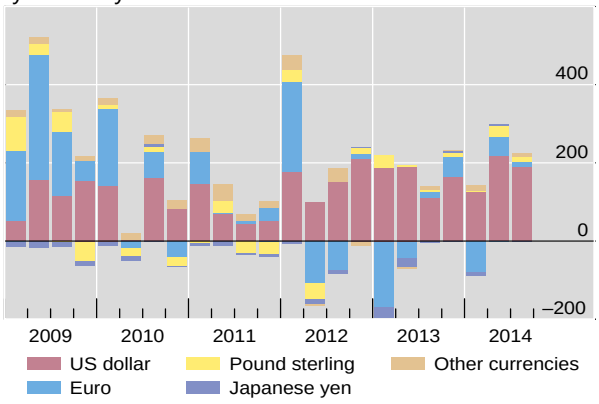


Table C2: Domestic and total debt securities, June 2014

In billions of US dollars

Domestic debt securities

	China	Brazil	Korea	Mexico	Malaysia	Thailand	Turkey	South Africa	Russia	Israel	Indonesia	Singapore
Amounts outstanding												
All issuers	4,240	668	1,518	640	347	288	210	209	286	223	116	80
Financial corporations	1,864	668	420	178	57	128	16	43	87	30	13	...
Non-financial corporations	839	171	575	47	125	53	2	26	78	49	7	...
General government	1,538	1,413	523	415	164	107	192	140	121	145	96	80
Short-term	...	...	117	108	45	63	12	27	...	1	...	6
Long-term	...	...	1,401	532	302	225	199	183	286	143	...	74
Unallocated	4,240	2,252	0	0	0	0	0	0	0	79	116	0
Exchange rate adjusted changes												
All issuers	113	32	25	13	0	4	1	9	7	3	6	-7
Financial corporations	45	32	3	4	-1	3	1	1	9	0	0	...
Non-financial corporations	16	6	2	-2	-2	2	0	1	-1	0	0	...
General government	53	64	21	11	3	-1	0	7	-1	3	6	-7
Short-term	...	...	2	0	-3	4	1	0	...	0	...	-11
Long-term	...	...	24	12	4	1	0	8	7	3	...	4
Unallocated	113	102	0	0	0	0	0	0	0	0	6	0

Total debt securities

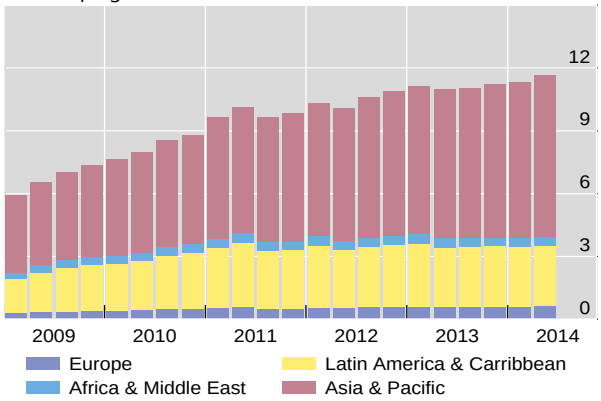
	United States	Japan	United Kingdom	France	Germany	Italy	Spain	Netherlands	Canada	Australia	Ireland	Denmark
Amounts outstanding												
All issuers[1]	34,947	12,966	6,214	4,891	4,286	4,054	2,323	2,427	2,248	2,028	1,180	836
Financial corporations	14,730	2,577	3,026	1,861	1,873	1,384	1,110	1,794	542	1,217	1,014	638
Non-financial corporations	4,964	730	634	685	166	174	32	133	412	216	11	37
General government	15,026	9,659	2,550	2,345	2,247	2,496	1,180	500	1,294	596	155	161

Outstanding amounts

In trillions of US dollars

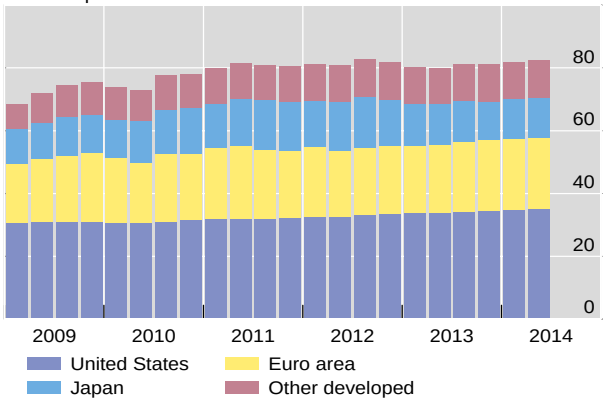
Domestic debt securities

Developing countries



Total debt securities

Developed countries



[1] All issuers include households and non-profit institutions serving households.

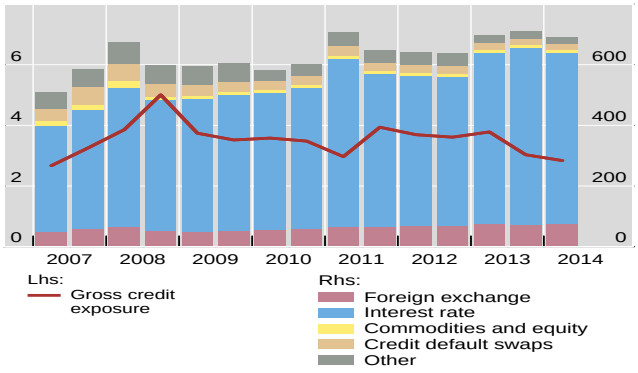
Table D: Global OTC derivatives market, end-June 2014[1]

In billions of US dollars

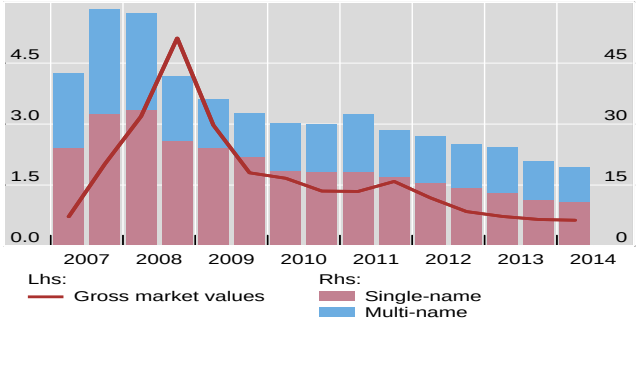
	Forwards and swaps				Options			
	Total	with reporting dealers	with other financial institutions	with non-financial customers	Total	with reporting dealers	with other financial institutions	with non-financial customers
	Notional amounts outstanding							
All contracts[2]	**620,823**	**95,406**	**501,413**	**22,475**	**70,668**	**37,790**	**27,894**	**4,226**
Foreign exchange	**61,331**	**25,820**	**27,708**	**7,803**	**13,451**	**6,151**	**5,992**	**1,308**
US dollar	53,693	24,161	23,822	5,710	11,442	5,154	5,018	1,269
Euro	22,586	8,881	9,852	3,852	3,864	1,895	1,507	462
Japanese yen	10,071	5,055	3,877	1,139	3,108	1,652	1,169	287
Pound sterling	8,264	3,019	3,937	1,308	920	402	404	114
Other	28,049	10,523	13,928	3,597	7,569	3,199	3,886	484
Up to one year	44,212	16,761	22,022	5,430	10,902	4,868	5,042	993
Over one year	17,119	9,060	5,686	2,374	2,549	1,284	951	315
Memo: Exchange-traded[3]	*242*	.	.	.	*137*	.	.	.
Interest rate	**513,848**	**55,968**	**444,434**	**13,446**	**49,442**	**28,552**	**18,586**	**2,303**
US dollar	143,943	15,367	123,728	4,848	16,862	8,222	7,689	951
Euro	198,502	15,129	178,278	5,095	23,353	15,485	6,890	978
Japanese yen	47,858	7,700	39,167	992	3,848	2,448	1,292	108
Pound sterling	57,272	3,852	52,806	614	3,551	1,732	1,703	116
Other	66,274	13,921	50,457	1,897	1,827	665	1,011	151
Up to one year	214,106	16,533	195,086	2,487	14,793	7,386	6,713	694
Over one year	299,743	39,436	249,348	10,959	34,649	21,166	11,873	1,610
Memo: Exchange-traded[3]	*27,272*	.	.	.	*38,352*	.	.	.
Equity	**2,433**	**655**	**1,562**	**217**	**4,508**	**1,731**	**2,314**	**463**
Memo: Exchange-traded[3]	*1,588*	.	.	.	*5,873*	.	.	.
Commodities	**1,474**	**...**	**...**	**...**	**732**	**...**	**...**	**...**
Credit default swaps	**19,462**	**9,540**	**9,719**	**203**	**...**	**...**	**...**	**...**
Unallocated	**22,274**	**3,423**	**17,990**	**806**	**2,535**	**1,356**	**1,001**	**152**
	Gross market values							
All contracts	**15,084**	**3,934**	**9,961**	**1,190**	**2,059**	**1,227**	**664**	**168**
Foreign exchange	**1,510**	**603**	**615**	**292**	**213**	**106**	**77**	**29**
US dollar	1,236	529	515	192	162	85	52	25
Euro	533	181	208	144	69	24	36	8
Japanese yen	252	120	83	50	100	62	24	14
Pound sterling	234	74	95	65	9	4	4	2
Other	764	302	330	132	86	38	38	10
Interest rate	**12,168**	**2,833**	**8,515**	**820**	**1,292**	**886**	**356**	**50**
US dollar	2,948	805	1,969	174	298	206	81	11
Euro	6,528	1,277	4,769	482	833	578	225	30
Japanese yen	707	226	457	23	53	41	11	1
Pound sterling	992	229	690	73	87	52	29	6
Other	993	295	629	69	21	10	9	2
Equity	**191**	**34**	**135**	**23**	**475**	**187**	**205**	**82**
Credit default swaps	**635**	**313**	**313**	**9**	**...**	**...**	**...**	**...**
Unallocated	**580**	**151**	**383**	**46**	**79**	**47**	**26**	**6**

Global OTC derivatives[4]

Notional amounts outstanding by risk category



Credit default swaps



[1] Detailed breakdowns and time series data are available at http://www.bis.org/statistics/derstats.htm (Tables 19, 20A–C, 21A–C, 22A–C and 23A–B). [2] Due to incomplete counterparty breakdowns for the commodity derivatives, components do not add up to the total. [3] Futures and options. Data on exchange-traded and OTC derivatives are not directly comparable; the former refers to open interest while the latter refers to gross positions. [4] In trillions of US dollars.

Notes to tables

Data for the most recent period are provisional. Data on changes in stocks have been calculated by converting the relevant stocks into their original currencies using end-of-period exchange rates and subsequently converting the changes in stocks into US dollar amounts using period average rates. Flow and turnover data have been calculated by converting flows and turnover in original currencies into US dollar amounts using period average exchange rates.

Tables A1–A2

The data in Tables A1–A2 (the locational BIS banking statistics) cover banks' unconsolidated gross international on-balance sheet assets and liabilities. These data are based on the residence of the reporting institution and therefore measure the activities of all banking offices residing in each reporting country. Such offices report exclusively on their own unconsolidated business, which thus includes international transactions with any of their own affiliates. BIS reporting banks include banks residing in the G10 countries, plus Australia, Austria, the Bahamas, Bahrain, Bermuda, Brazil, the Cayman Islands, Chile, Chinese Taipei, Curacao, Cyprus, Denmark, Finland, Greece, Guernsey, Hong Kong SAR, India, Indonesia, Ireland, Isle of Man, Jersey, Korea, Luxembourg, Macao SAR, Malaysia, Mexico, the Netherlands Antilles (till Q3 2010), Norway, Panama, Portugal, Singapore, South Africa, Spain and Turkey. Breakdowns by currency are compiled from actual reported data and do not include any estimates done by the BIS for reporting countries that provide incomplete or partial currency information. Table A1 provides aggregated figures by residence of banks in all reporting countries. Table A2 provides figures by nationality of banks in reporting countries. The nationality statistics are prepared by regrouping the locational data into categories based on the control or ownership of the banking offices in question. Thus, for a reporting country, total assets and total liabilities of all banks reported under locational by residence statistics should be equal to the total assets and total liabilities of all banks reported under nationality statistics. Detailed tables, including time series data in CSV files, guidelines and information on breaks in series in the locational banking statistics, are available on the BIS website under www.bis.org/statistics/bankstats.htm.

Tables B1–B2

The consolidated statistics are based mainly on the country of incorporation of the reporting institutions and measure the international lending activities of banks' head offices in the reporting countries and all their offices at home and abroad, with positions between offices of the same bank being netted out. The data in Table B1 cover BIS reporting banks' worldwide consolidated claims on an immediate borrower basis. These contractual claims are not adjusted for risk mitigants, such as guarantees and collateral. The 31 reporting countries comprise the G10 countries plus Australia, Austria, Brazil, Chile, Chinese Taipei, Denmark, Finland, Greece, Hong Kong SAR, India, Ireland, Luxembourg, Mexico, Norway, Panama, Portugal, Singapore, Spain and Turkey. The data in Table B2 cover BIS reporting banks' worldwide consolidated claims on an ultimate risk basis. These contractual claims are adjusted for risk mitigants, such as guarantees and collateral. The reporting population is a subset of 25 countries which reports both sets of data and comprises Australia, Austria, Belgium, Canada, Chile, Chinese Taipei, Finland, France, Germany, Greece, India, Ireland, Italy, Japan, Korea, the Netherlands, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The data in Table B1 cover both foreign and international claims, while Table B2 covers foreign claims only. International claims are defined as BIS reporting banks' cross-border claims in all currencies plus the local claims of their foreign affiliates in foreign currency. Foreign claims include, in addition, reporting banks' foreign affiliates' local claims in local currency, as shown below.

Austria and Portugal report on a partially consolidated basis. Detailed information on breaks in series in the consolidated banking statistics is available on the BIS website under www.bis.org/statistics/consstats.htm.

Types of claims

A	**B**	**C**	**D**
Cross-border claims	Local claims of foreign affiliates in foreign currency	Local claims of foreign affiliates in local currency	Domestic claims in the reporting country

International claims (A + B)

Foreign claims (A + B + C)

The shaded area indicates claims excluded from the consolidated banking statistics; bold italics indicate claims published within the consolidated banking statistics.

Tables C1–C2

Securities statistic are harmonised with recommendations from the Handbook on Securities Statistics Part 1 (jointly released by BIS, ECB and IMF; available at the IMF web site, www.imf.org/external/np/sta/wgsd/pdf/051309.pdf). There are three datasets, each covering different market of issue: international debt securities, domestic debt securities and total debt securities.

The sectoral breakdown presents data based on the sector of the borrower itself and not on the sector of the parent company of the borrower or any guarantor. "General government" comprises central governments and other governments, while "Financial corporations" comprises commercial banks, central banks, and other financial institutions.

Detailed information about the compilation of the statistics on domestic and total debt securities is available on the BIS website.

Table D

The data in Table D cover the activity recorded in the global over-the-counter (OTC) and exchange-traded derivatives markets. The data on exchange-traded derivatives are obtained from market sources, while those on OTC derivatives are based on the reporting to the BIS by central banks in major financial centres that in turn collect the information on a consolidated basis from reporting dealers headquartered in their respective countries.

The data on OTC derivatives are available in terms of notional amounts outstanding, gross market values and gross credit exposure. Gross credit exposure excludes credit default swap contracts for all countries except the United States. These statistics are adjusted for inter-dealer double-counting and cover foreign exchange, interest rate, equity, commodity and credit derivatives.

For the exchange-traded derivatives, data on open interest measured in terms of US dollars are available for the main financial derivatives contracts (interest rate, currency and equity-linked derivatives).

Information on the methodology used to compile these statistical sets and a more detailed description of their coverage can be found on pages 18 to 21 of the Guide to the international financial statistics, available at www.bis.org/publ/bppdf/bispap14.htm.

Special features in the BIS Quarterly Review

September 2014	Asset managers in emerging market economies	Ken Miyajima & Ilhyock Shim
September 2014	Risks related to EME corporate balance sheets: the role of leverage and currency mismatch	Michael Chui, Ingo Fender & Vladyslav Sushko
September 2014	Cross-border bank lending during the taper tantrum: the role of emerging market fundamentals	Stefan Avdjiev & Előd Takáts
September 2014	Residential property price statistics across the globe	Michela Scatigna, Robert Szemere & Kostas Tsatsaronis
March 2014	Financial structure and growth	Leonardo Gambacorta, Jing Yang & Kostas Tsatsaronis
March 2014	Forward guidance at the zero lower bound	Andrew Filardo & Boris Hofmann
March 2014	The credit-to-GDP gap and countercyclical capital buffers: questions and answers	Mathias Drehmann & Kostas Tsatsaronis
March 2014	Non-deliverable forwards: 2013 and beyond	Robert N McCauley, Chang Shu & Guonan Ma
March 2014	Non-US banks' claims on the Federal Reserve	Robert N McCauley & Patrick McGuire
December 2013	The anatomy of the global FX market through the lens of the 2013 Triennial Survey	D Rime & A Schrimpf
December 2013	FX market trends before, between and beyond Triennial Surveys	M Bech & J Sobrun
December 2013	FX and derivatives markets in emerging economies and the internationalisation of their currencies	T Ehlers & F Packer
December 2013	The OTC interest rate derivatives market in 2013	J Gyntelberg & C Upper
September 2013	How have banks adjusted to higher capital requirements?	B Cohen
September 2013	CoCos: a primer	S Avdjiev, A Kartasheva & B Bogdanova
September 2013	Interest rate pass-through since the financial crisis	A Illes & M Lombardi
September 2013	Mind the gap? Sources and implications of supply-demand imbalances in collateral asset markets	I Fender & U Lewrick
September 2013	Database for policy actions on housing markets	I Shim, B Bogdanova, J Shek & A Subelyte

Recent BIS publications[1]

BIS Papers

Re-thinking the lender of last resort
September 2014

Proceedings in this volume were prepared for a workshop which brought together a small group of academics, policy advisers and former and active central bankers at the Bank for International Settlements on 15 May 2014.

The lender of last resort (LOLR) is perhaps the most controversial role of a central bank. On the one hand, providing emergency liquidity assistance to financial institutions is a core central bank responsibility, given its unique ability to create liquid assets in the form of central bank reserves, its central position within the payment system, and its macroeconomic stabilisation objective. On the other hand, acting as LOLR is seen as very risky, potentially creating moral hazard on a massive scale, exposing the central bank to large financial risks, and blurring the boundary with fiscal policy. Moreover, liquidity assistance to individual institutions is typically deeply unpopular, creating reputation risks.

The financial crisis has served as reminder of the critical importance of the LOLR in restoring financial stability. But it has also raised fundamental questions about the design of LOLR frameworks and the execution of LOLR policies. How to strike the right balance between limiting risks for central banks and ensuring that the LOLR function can be performed effectively when needed? Should central banks be ambiguous in public about the terms and conditions of liquidity support? Or is there a case for well-articulated LOLR policies communicated ex ante as part of a broader financial stability framework?

The aim of the BIS workshop was to explore issues related to the future design of LOLR policies, including governance, operational arrangements, and international aspect. The discussions in this volume do not, of course, converge on simple answers. They do, however, underscore the importance of careful consideration of the articulation of the LOLR function going forward.

BIS Working Papers

The leverage ratio over the cycle
Michael Brei and Leonardo Gambacorta

This paper analyses how the Basel III leverage ratio (Tier 1 capital/exposure) behaves over the cycle. The analysis proposes a setup to test for the cyclical properties of bank capital ratios, taking into account structural shifts in banks' behaviour during the global financial crisis and its aftermath. Using a large data set covering international banks headquartered in 14 advanced economies for the period 1995–2012, we find that the Basel III leverage ratio is significantly more countercyclical than the riskweighted regulatory capital ratio: it is a tighter constraint for banks in booms and a looser constraint in recessions.

[1] Requests for publications should be addressed to Bank for International Settlements, Press & Communications, Centralbahnplatz 2, CH-4002 Basel. These publications are also available on the BIS website (www.bis.org).

The impact of liquidity regulation on banks

Ryan Banerjee and Hitoshi Mio

To the best of our knowledge, this is the first study to estimate the effect of liquidity regulation on bank balance sheets. It takes advantage of the fact that not all banks were made subject to tighter liquidity regulation by the UK Financial Services Authority (FSA) in 2010. Under this new regulation a subset of banks operating in the UK were required to hold a sufficient stock of high quality liquid assets (HQLA) to withstand two scenarios of stressed funding conditions. We find that banks adjusted both their asset and liability structures to meet tighter liquidity requirements. Banks increased the share of HQLA and funding from more stable UK non-financial deposits while reducing the share of short-term intra-financial loans and short-term wholesale funding. We do not find evidence that the tightening of liquidity regulation had an impact on the overall size of bank balance sheets or a detrimental impact on lending to the non-financial sector either through reduced lending supply or higher interest rates on loans. Overall, in response to tougher liquidity regulation, banks replaced claims on other financial institutions with cash, central bank reserves and government bonds - and so reduced the interconnectedness of the banking sector without affecting lending to the real economy.

When firms and industries matter: understanding the sources of productivity growth

Ulf Lewrick, Lukas Mohler and Rolf Weder

This paper presents a framework to assess the relative importance of three key sources of productivity growth that research on international trade focuses on: (i) inter-industry specialisation; (ii) intra-industry reallocation of resources across heterogeneous firms, including firm entry and exit; and (iii) technological progress. Detailed data on Swiss manufacturing firms illustrate how the framework can be empirically applied. Based on this example, we find that intra-industry reallocations are the most important source of growth in aggregate total factor productivity, reflecting in particular the productivity growth of large, incumbent firms and the entry of new firms. That said, inter-industry specialisation and general technological progress remain important supplementary sources of growth in Swiss manufacturing.

The redistributive effects of financial deregulation: wall street versus main street

Anton Korinek and Jonathan Kreamer

Financial regulation is often framed as a question of economic efficiency. This paper, by contrast, puts the distributive implications of financial regulation at center stage. We develop a formal model in which the financial sector benefits from financial risk-taking by earning greater expected returns. However, risk-taking also increases the incidence of large losses that lead to credit crunches and impose negative externalities on the real economy. We describe a Pareto frontier along which different levels of risk-taking map into different levels of welfare for the two parties, pitting Main Street against Wall Street. A regulator has to trade off efficiency in the financial sector, which is aided by deregulation, against efficiency in the real economy, which is aided by tighter regulation and a more stable supply of credit. We also show that financial innovation, asymmetric compensation schemes, concentration in the banking system, and bailout expectations enable or encourage greater risk-taking and allocate greater surplus to Wall Street at the expense of Main Street.

Managing default risk

Anna Zabai

High sovereign debt in advanced economies has recently revived the debate about the role of coordination problems and self-fulfilling beliefs as drivers of sovereign default risk. I show how default risk can be decomposed in a solvency-risk component and a coordination-risk component. I then study how fiscal policy can be effective in managing the risk of coordination and I characterise how the shape of the optimal policy is affected by the presence of this risk: making the deficit contingent on interest rate movements is more effective in managing default risk than using non-contingent fiscal targets.

Benchmark tipping in the global bond market

Lawrence L Kreicher, Robert N McCauley and Philip Wooldridge

We analyse the turnover of fixed income derivatives in seven currencies to test the hypothesis that market participants increasingly use contracts based on private rather than government rates to hedge and to take positions. In the US dollar money market, private benchmarks long ago displaced government benchmarks. In the bond markets, evidence from organised exchanges and the Triennial Central Bank survey on over-the-counter (OTC) markets suggests that the benchmark is tipping from government bond futures to private interest rate swaps. The global financial crisis seems only to have interrupted this process in the US dollar bond market, the European sovereign bond strains may have accelerated it in the euro bond market; and the policy to clear centrally OTC trades does not seem to be impeding it. Cross-sectional analysis of 35 bond markets identifies bond market size and GDP per capita as key determinants of the existence of government bond futures. Based on these results, one may expect successful introduction of government bond futures in China and Brazil even as such contracts continue to lose ground in today's major markets.

Developing an underlying inflation gauge for China

Marlene Amstad, Ye Huan and Guonan Ma

The headline consumer price inflation (CPI) is often considered too noisy, narrowly defined, and/or slowly available for policymaking. On the other hand, traditional core inflation measures may reduce volatility but do not address other issues and may even exclude important information. This paper develops a new underlying inflation gauge (UIG) for China which differentiates between trend and noise, is available daily and uses a broad set of variables that potentially influence inflation. Its construction follows the works at other major central banks, adopts the methodology of a dynamic factor model that extracts the lower frequency components as developed by Forni et al (2000) and draws on the experience of the People's Bank of China in modelling inflation. The paper is the first application of this type of dynamic factor model for inflation to any large emerging market economy. Our UIG for China is less noisy but still closely tracks the headline CPI. It does not suffer from the excess volatility reduction that plagues traditional core inflation measures and instead provides additional information. Finally, when forecasting the headline CPI, our UIG for China outperforms traditional core measures over different samples.

Decaying expectations: what inflation forecasts tell us about the anchoring of inflation expectations

Aaron Mehrotra and James Yetman

Well anchored inflation expectations are considered to be a reflection of credible monetary policy. In the past, anchoring has been assessed using either long-run inflation surveys or break-even inflation rates on financial assets with long maturities. But neither of these is ideal. Here we propose an alternative measure of inflation anchoring that makes full use of readily available, multiple-horizon, fixed event forecasts. We show that a model where forecasts are assumed to diverge away from a long-run anchor towards actual inflation as the forecast horizon shortens fits the data well. It also provides simple estimates of the degree to which inflation expectations are anchored. Based on our estimation results we argue that inflation expectations have become more tightly anchored over time in both inflation targeting economies and in those following other regimes. However, inflation targeting regimes have seen a greater change along three dimensions: the level of the anchor has fallen further; the tightness of anchoring has increased more; and the relationship between the anchor and actual inflation outcomes has weakened to a greater degree.

Monetary analysis and the global financial cycle: an Asian central bank perspective

Andrew Filardo, Hans Genberg and Boris Hofmann

EM Asia has seen a transformation of its monetary policy environment over the past 2 decades. By far, the most relevant change has been the maturing of its financial systems and the growing relevance of the global financial cycle: financial inclusion has spread, financial markets have deepened and financial globalisation has linked domestic markets closer to international markets. One consequence of the maturing of the financial systems has been the weakening of the traditional case for the monetarist view of the roles of monetary and

credit aggregates in the conduct of monetary policy: velocity has been unstable in ways similar to that in the advanced economies decades earlier; yet, longer-term monetary growth correlations with inflation are evident.

In addition, the maturing of the financial systems has elevated concerns of financial stability, as both a source of shocks and as something central banks have a responsibility for. These developments have been further complicated by monetary policy spillovers from the advanced economies. The challenge now is how best to integrate mandates for financial stability into monetary policy frameworks, both conceptually and practically. Moreover, the exchange rate choice is particularly relevant in EM Asia. While managed exchange rate regimes in EM Asia have been implemented with mixed success, the risks associated with the choice can be seen through the lens of aggregates based on central bank balance sheets. The size and growth of central bank balance sheets suggest an ongoing build-up in risks.

All these points to the need to consider alternatives to conventional inflation targeting frameworks. This paper lays out a policy framework based on a multi-pillar monetary policy approach as a potentially attractive alternative for EM Asia. The three pillars are based on economic, financial and exchange rate stability, respectively. This framework not only offers an alternative conceptual framework but also implies institutional reforms to ensure central banks take a longer term perspective when setting policy.

The effects of intraday foreign exchange market operations in Latin America: results for Chile, Colombia, Mexico and Peru
Miguel Fuentes, Pablo Pincheira, Juan Manuel Julio, Hernán Rincón, Santiago García-Verdú, Miguel Zerecero, Marco Vega, Erick Lahura and Ramon Moreno

This paper analyses the effects of sterilised, intraday foreign exchange market operations (non-discretionary and discretionary) on foreign exchange returns and volatility in four inflation targeting economies in Latin America. The distribution of exchange rates during intervention and non-intervention days are first compared, and then event study regressions are used to estimate the impact of intervention (and macro surprises) on exchange rate returns and exchange rate volatility as well as on foreign exchange market turnover (in Colombia). In general, the results suggest that the impact of both non-discretionary and discretionary operations is at times significant but transitory. However, an analysis of Chile's experience suggests that the announcement effects of even non-discretionary programmes may be significant and persistent.

A policy model to analyse macroprudential regulations and monetary policy
Sami Alpanda, Gino Cateau and Césaire Meh

We construct a small-open-economy, New Keynesian dynamic stochastic general-equilibrium model with real-financial linkages to analyse the effects of financial shocks and macroprudential policies on the Canadian economy. Our model has four key features. First, it allows for non-trivial interactions between the balance sheets of households, firms and banks within a unified framework. Second, it incorporates a risk-taking channel by allowing the risk appetite of investors to depend on aggregate economic activity and funding conditions. Third, it incorporates long-term debt by allowing households and businesses to pay back their stock of debt over multiple periods. Fourth, it incorporates targeted and broader macroprudential instruments to analyze the interaction between macroprudential and monetary policy. The model also features nominal and real rigidities, and is calibrated to match dynamics in Canadian macroeconomic and financial data. We study the transmission of monetary policy and financial shocks in the model economy, and analyse the effectiveness of various policies in simultaneously achieving macroeconomic and financial stability. We find that, in terms of reducing household debt, more targeted tools such as loan-to-value regulations are the most effective and least costly, followed by bank capital regulations and monetary policy, respectively.

Traditional and matter-of-fact financial frictions in a DSGE model for Brazil: the role of macroprudential instruments and monetary policy
Fabia de Carvalho, Marcos Castro and Sílvio Costa

This paper investigates the transmission channel of macroprudential instruments in a closed economy DSGE model with a rich set of financial frictions. Banks' decisions on risky retail loan concessions are based on borrowers' capacity to settle their debt with labour income. We also introduce frictions in banks' optimal choices of balance sheet composition to better reproduce banks' strategic reactions to changes in funding costs, in risk perception and in the regulatory environment. The model is able to reproduce not only price effects from macroprudential policies, but also quantity effects. The model is estimated with Brazilian data using Bayesian techniques. Unanticipated changes in reserve requirements have important quantitative effects, especially on banks' optimal asset allocation and on the choice of funding. This result holds true even for required reserves deposited at the central bank that are remunerated at the base rate. Changes in required core capital substantially impact the real economy and banks' balance sheet. When there is a lag between announcements and actual implementation of increased capital requirement ratios, agents immediately engage in anticipatory behaviour. Banks immediately start to retain dividends so as to smooth the impact of higher required capital on their assets, more particularly on loans. The impact on the real economy also shifts to nearer horizons. Announcements that allow the new regulation on required capital to be anticipated also improve banks' risk positions, since banks achieve higher capital adequacy ratios right after the announcement and throughout the impact period. The effects of regulatory changes to risk weights on bank assets are not constrained to impact the segment whose risk was reassessed. We compare the model responses with those generated by models with collateral constraints traditionally used in the literature. The choice of collateral constraint is found to have important implications for the transmission mechanisms.

Spillovers, capital flows and prudential regulation in small open economies
Paul Castillo, Cesar Carrera, Marco Ortiz and Hugo Vega

This paper extends the model of Aoki et al. (2009) considering a two sector small open economy. We study the interaction of borrowing, asset prices, and spillovers between tradable and non-tradable sectors. Our results suggest that when it is difficult to enforce debtors to repay their debt unless it is secured by collateral, a productivity shock in the tradable sector generates an increase in asset prices and leverage that spills over to the non-tradable sector, generating an appreciation of the real exchange and an increase in domestic lending. Macro-prudential instruments are introduced under the form of cyclical loan-to-value ratios that limit the amount of capital that entrepreneurs can pledge as collateral. Cyclical taxes that respond to the movements in the price of non-tradable goods are analysed. Simulation results show that this type of instruments significantly lessen the amplifying effects of borrowing constraints on small open economies and consequently reduce output and asset price volatility.

Cross-border banking and global liquidity
Valentina Bruno and Hyun Song Shin

We investigate global factors associated with bank capital flows. We formulate a model of the international banking system where global banks interact with local banks. The solution highlights the bank leverage cycle as the determinant of the transmission of financial conditions across borders through banking sector capital flows. A distinctive prediction of the model is that local currency appreciation is associated with higher leverage of the banking sector, thereby providing a conceptual bridge between exchange rates and financial stability. In a panel study of 46 countries, we find support for the key predictions of our model.

The international monetary and financial system: a capital account historical perspective
Claudio Borio, Harold James and Hyun Song Shin

In analysing the performance of the international monetary and financial system (IMFS), too much attention has been paid to the current account and far too little to the capital account. This is true of both formal analytical models and historical narratives. This approach may be

reasonable when financial markets are highly segmented. But it is badly inadequate when they are closely integrated, as they have been most of the time since at least the second half of the 19th century. Zeroing on the capital account shifts the focus from the goods markets to asset markets and balance sheets. Seen through this lens, the IMFS looks quite different. Its main weakness is its propensity to amplify financial surges and collapses that generate costly financial crises - its "excess financial elasticity". And assessing the vulnerabilities it hides requires going beyond the residence/non-resident distinction that underpins the balance of payments to look at the consolidated balance sheets of the decision units that straddle national borders, be these banks or non-financial companies. We illustrate these points by revisiting two defining historical phases in which financial meltdowns figured prominently, the interwar years and the more recent Great Financial Crisis.

The international monetary and financial system: its Achilles heel and what to do about it
Claudio Borio

This essay argues that the Achilles heel of the international monetary and financial system is that it amplifies the "excess financial elasticity" of domestic policy regimes, ie it exacerbates their inability to prevent the build-up of financial imbalances, or outsize financial cycles, that lead to serious financial crises and macroeconomic dislocations. This excess financial elasticity view contrasts sharply with two more popular ones, which stress the failure of the system to prevent disruptive current account imbalances and its tendency to generate a structural shortage of safe assets - the "excess saving" and "excess demand for safe assets" views, respectively. In particular, the excess financial elasticity view highlights financial rather than current account imbalances and a persistent expansionary rather than contractionary bias in the system. The failure to adjust domestic policy regimes and their international interaction raises a number of risks: entrenching instability in the global system; returning to the modern-day equivalent of the divisive competitive devaluations of the interwar years; and, ultimately, triggering an epoch-defining seismic rupture in policy regimes, back to an era of trade and financial protectionism and, possibly, stagnation combined with inflation.

Basel Committee on Banking Supervision

Impact and implementation challenges of the Basel framework for emerging market, developing and small economies
November 2014

This Working Paper assesses the potential impact and implementation challenges of specific standards issued by the Basel Committee in the context of emerging market, developing and small economies. Additionally, it outlines practical steps that can be taken by authorities in these jurisdictions to implement global standards and enhance their supervisory approaches.

The report captures the main findings and recommendations by the Basel Consultative Group (BCG), the main outreach group established by the Basel Committee to enhance the understanding of key supervisory and regulatory issues worldwide. It responds to a request from the G20 and the Financial Stability Board (FSB) for the Committee to monitor and report on such issues, without prejudice to the G20 commitment for globally-agreed regulatory reforms to be implemented.

Implementation of Basel standards
November 2014

Full, timely and consistent implementation of Basel III remains fundamental to building a resilient financial system, maintaining public confidence in regulatory ratios and providing a level playing field for internationally active banks. This report updates G20 Leaders on progress in the implementation of the Basel III regulatory reforms since the Basel Committee on Banking Supervision issued its August 2013 report. The report provides an update on the steps taken by Basel Committee member jurisdiction to adopt the Basel III standards and the

banks' progress in bolstering their capital and liquidity positions. The report also highlights specific implementation-related challenges that are surfacing.

Reducing excessive variability in banks' regulatory capital ratios
November 2014

The Basel Committee's report to G20 Leaders sets out the measures the Committee is taking to improve consistency and comparability in bank capital ratios, and thereby to restore confidence in risk-weighted capital ratios. These measures include: policy proposals to revise the standardised (non-modelled) approaches for calculating regulatory capital ratios that will also provide the basis for a capital floor; and reducing the modelling choices in the capital framework when determining internal-model based estimates of credit, market and operational risk-weighted assets. The report also discusses the role of disclosure, implementation monitoring and additional analytical and policy work in progress.

Basel capital framework national discretions
November 2014

The Basel standards include a number of national discretions that allow countries to adapt the international standards to reflect differences in the structure and development of financial systems. However, the use of national discretions can also impair comparability across jurisdictions and has been found to be a driver of variability in risk-weighted assets. The Committee is therefore reviewing the use of national discretions with a view to removing a number of them from the framework.

As a first step, the Committee is publishing a list showing the use of each national discretion by each Basel Committee member. It covers national discretions in the Basel capital framework and thereby provides greater transparency to market participants to aid comparability.

The G-SIB assessment methodology - score calculation
November 2014

In conjunction with today's publication by the Financial Stability Board (FSB) of the updated list of global systemically important banks (G-SIBs), the Basel Committee on Banking Supervision has released supporting information.

This information includes a technical summary which further explains the methodology and the denominators used to calculate the scores for banks in the end-2013 exercise and the cut-off score that was used to identify the updated list of G-SIBs. Also provided are the thresholds used to allocate G-SIBs to buckets for the purposes of calculating the specific higher loss absorbency (HLA) requirements for each institution, as well as links to the disclosures of the G-SIBs designated in 2014.

As detailed in the Committee's July 2013 publication, the methodology for assessing the systemic importance of banks consists of an indicator-based measurement approach. The indicators are calculated based on data for the previous fiscal year-end supplied by banks and validated by national authorities. These indicators and the denominators are then used to calculate a score.

After the automated calculation is produced, bank scores may in exceptional cases be adjusted by supervisory judgment. Consistent with the Basel framework, supervisors may use a variety of supporting evidence to propose such adjustments, including the use of additional data and qualitative information. These changes are subject to scrutiny by the Basel Committee and the FSB.

The final score, including the use of judgment, is then mapped to the corresponding bucket using the cut-off score and bucket thresholds. The assignment to a bucket determines the HLA requirement for each G-SIB.

The agreed methodology also requires banks to disclose, at a minimum, the 12 indicators used. However, given the potential for the use of supervisory judgment to adjust scores, the data disclosed by banks may not always be perfectly consistent with the final bucketing published today.

The HLA requirements will be phased in from 1 January 2016, based on the end-2013 results published today, with the full amount of the requirement in effect by 1 January 2019, consistent with the implementation schedule for the capital conservation buffer. By 1 January 2016, therefore, banks will only need to meet 25% of the HLA requirement published today. An illustrative example of the calculation methodology can be found in the technical summary published today.

Supervisory Basel III: the net stable funding ratio
October 2014

The NSFR is a significant component of the Basel III reforms. It requires banks to maintain a stable funding profile in relation to their on- and off-balance sheet activities, thus reducing the likelihood that disruptions to a bank's regular sources of funding will erode its liquidity position in a way that could increase the risk of its failure and potentially lead to broader systemic stress. The NSFR will become a minimum standard by 1 January 2018.

Proposals on the NSFR were first published in 2009, and the measure was included in the December 2010 Basel III agreement. At that time, the Committee put in place a rigorous process to review the standard and its implications for financial market functioning and the economy. In January 2014 the Committee issued a revised standard that was recalibrated to focus on the riskier types of funding profile employed by banks while improving alignment with the Liquidity Coverage Ratio (LCR) and reducing cliff effects in the measurement of available and required stable funding.

The final NSFR retains the structure of the January 2014 consultative proposal. The key changes introduced in the final standard published today cover the required stable funding for:

- short-term exposures to banks and other financial institutions;

- derivatives exposures; and

- assets posted as initial margin for derivative contracts.

In addition, the final standard recognises that, under strict conditions, certain asset and liability items are interdependent and can therefore be viewed as neutral in terms of the NSFR.

The Basel Committee wishes to thank all those who contributed time and effort to express their views during the consultation process.

Supervisory Corporate governance principles for banks - consultative document
October 2014

The Basel Committee's revised principles on corporate governance at banks build on the Committee's 2010 document Principles for enhancing corporate governance. Specifically, the revised principles:

- strengthen the guidance on risk governance, including the risk management roles played by business units, risk management teams, and internal audit and control functions (the three lines of defence) and the importance of a sound risk culture to drive risk management within a bank;

- expand the guidance on the role of the board of directors in overseeing the implementation of effective risk management systems;

- emphasise the importance of the board's collective competence as well as the obligation on individual board members to dedicate sufficient time to their mandates and to remain current on developments in banking;

- provide guidance for bank supervisors in evaluating the processes used by banks to select board members and senior management; and

- recognise that compensation systems form a key component of the governance and incentive structure through which the board and senior management of a bank convey acceptable risk-taking behaviour and reinforce the bank's operating and risk culture.

Effective corporate governance is critical to the proper functioning of the banking sector and the economy as a whole. While there is no single approach to good corporate governance, the Committee's revised principles provide a framework within which banks and supervisors should operate to achieve robust and transparent risk management and decision-making and, in doing so, promote public confidence and uphold the safety and soundness of the banking system.

Frequently asked questions on the Basel III leverage ratio framework
October 2014

The Basel Committee on Banking Supervision has today issued frequently asked questions (FAQs) on the Basel III leverage ratio. To promote consistent global implementation of the requirements, the Committee has agreed to periodically review frequently asked questions and publish answers along with any technical elaboration of the standard and any interpretative guidance that may be necessary.

The Committee has received a number of interpretation questions related to the January 2014 publication of the Basel III leverage ratio framework. The FAQs published today correspond to the text set out in that standard.

Review of the principles for the sound management of operational risk
October 2014

This paper reviews banks' implementation of the 2011 Principles for the Sound Management of Operational Risk. The principles embody the lessons from the financial crisis and evolving sound practice in operational risk management.

The principles set out the Committee's expectations for the management of operational risk. All internationally active banks should implement policies, procedures and practices to manage operational risk commensurate with their size, complexity, activities and risk exposure, and seek continuous improvement in these areas as industry practice evolves. In order to enhance operational risk management, the principles provide comprehensive guidance regarding the qualitative standards that should be observed to achieve more rigorous and comprehensive operational risk management.

This review of implementation covered 60 systemically important banks (SIBs) in 20 jurisdictions. It took the form of a questionnaire against which banks self-assessed the extent and quality of their implementation.

Progress in implementing the principles varies significantly across banks and, overall, more work is needed to achieve full implementation. In particular, four principles that have been identified as among the least thoroughly implemented are: (i) operational risk identification and assessment; (ii) change management; (iii) operational risk appetite and tolerance; and (iv) disclosure.

Operational risk - Revisions to the simpler approaches - consultative document
October 2014

This consultation paper sets out the Committee's proposed revisions to the standardised approach for measuring operational risk capital. Once finalised, the revised standardised approach will replace the current non-model-based approaches, which comprise the Basic Indicator Approach (BIA) and the Standardised Approach (TSA), including its variant the Alternative Standardised Approach (ASA). In addition to streamlining the framework, the new approach will address weaknesses identified in the existing approaches.

A statistically superior measure of operational risk, termed the Business Indicator (BI) is proposed to replace gross income as a key input for determining operational risk capital. In addition, the proposal removes the differentiation by business-line, which was found not to be a significant risk-driver. Instead, size is found to be a significant risk-driver and is incorporated into the new methodology.

Seventh progress report on adoption of the Basel regulatory framework
October 2014

This updated Progress report on adoption of the Basel regulatory framework provides a high-level view of Basel Committee members' progress in adopting Basel II, Basel 2.5 and Basel III standards as of end-September 2014.

The report focuses on the status of domestic rule-making processes to ensure that the Basel standards are transformed into national law or regulation according to the internationally agreed timeframes. The report is based on information provided by individual members as part of the Committee's Regulatory Consistency Assessment Programme (RCAP). The report includes the status of adoption of the risk-based capital standards, the standards for global and domestic systemically important banks (SIBs), the Basel III leverage ratio and the liquidity coverage ratio (LCR).

In addition to periodically reporting on the status of adoption, all Committee members undergo an assessment of the consistency of their domestic rules with the Basel standards. The Committee believes that disclosure provides additional incentive for members to fully comply with the international agreements.

Basel III Monitoring Report as of 31 December 2013
September 2014

This report presents the results of the Basel Committee's Basel III monitoring exercise. The study is based on the rigorous reporting process set up by the Committee to periodically review the implications of the Basel III standards for banks. The results of previous exercises in this series were published in March 2014, September 2013, March 2013, September 2012 and April 2012.

A total of 227 banks participated in the current study, comprising 102 large internationally active banks ("Group 1 banks", defined as internationally active banks that have Tier 1 capital of more than €3 billion) and 125 Group 2 banks (ie representative of all other banks).

The results of the monitoring exercise assume that the final Basel III package is fully in force, based on data as of 31 December 2013. That is, they do not take account of the transitional arrangements set out in the Basel III framework, such as the gradual phase-in of deductions from regulatory capital. No assumptions were made about bank profitability or behavioural responses, such as changes in bank capital or balance sheet composition. For that reason, the results of the study are not comparable to industry estimates.

Data as of 31 December 2013 show that most large internationally active banks now meet the Basel III risk-based capital minimum requirements, and capital shortfalls have been further reduced relative to the target levels. For example, at the Common Equity Tier 1 (CET1) target level of 7.0% (plus the surcharges on G-SIBs as applicable), the aggregate shortfall for Group 1 banks is €15.1 billion, compared to €57.5 billion on 30 June 2013. As a point of reference, the sum of after-tax profits prior to distributions across the same sample of Group 1 banks for the year ending 31 December 2013 was €419 billion.

Under the same assumptions, the capital shortfall for Group 2 banks included in the sample is estimated at €2.0 billion for the CET1 minimum of 4.5% and €9.4 billion for a CET1 target level of 7.0%. This represents a decrease compared to the previous period of €10.4 billion and €18.3 billion, respectively.

The average CET1 capital ratios under the Basel III framework across the same sample of banks are 10.2% for Group 1 banks and 10.5% for Group 2 banks.

Basel III's Liquidity Coverage Ratio (LCR) will come into effect on 1 January 2015. The minimum requirement will be set initially at 60% and then rise in equal annual steps to reach 100% in 2019. The weighted average LCR for the Group 1 bank sample was 119% on 31 December 2013, up from 114% six months earlier. For Group 2 banks, the average LCR remained unchanged at 132%. For banks in the sample, 76% reported an LCR that met or exceeded 100%, while 92% reported an LCR at or above 60%.

Basel III also includes a longer-term structural liquidity standard - the Net Stable Funding Ratio (NSFR). In January 2014, the Basel Committee published a consultative document on proposed revisions to the NSFR. The end-December 2013 reporting period is the first data collection exercise for which a comprehensive calculation of the revised NSFR could be conducted. The average NSFR for the Group 1 bank sample was 111% while for Group 2 banks the average NSFR was 112%. As of December 2013, 78% of the 208 banks in the NSFR sample reported a ratio that met or exceeded 100%, while 88% of the banks reported an NSFR at or above 90%.

Analysis of the trading book hypothetical portfolio exercise
September 2014

The Basel Committee on Banking Supervision has today issued the results of the trading book test portfolio exercise that was conducted in parallel with the Basel Committee's Basel III monitoring exercise as of 31 December 2013. The report assesses the impact of proposals to revise the internal models-based approach for market risk, as set out in the second consultative paper of the Basel Committee's fundamental review of the trading book (October 2013).

Quantitative impact studies (QIS) are an essential element of the Committee's work to revise the trading book standards. The Committee has planned two such exercises in 2014. The report published today presents the results of the first exercise, which focused exclusively on the revised internal models-based approach and is based on hypothetical portfolios.

The main objective of this exercise was to provide an understanding of the implementation challenges associated with the proposed internal models-based approach, including areas where the draft standards could be made clearer and to provide banks with necessary clarifications. The second QIS exercise focuses on banks' actual portfolios and is being conducted in parallel with the Basel III monitoring exercise that commenced in July 2014.

This report provides preliminary findings on some of the potential effects of the proposed standards on regulatory capital for market risk.

Variability of the new risk measures: The variability of the proposed expected shortfall (ES) and incremental default risk (IDR) measures is similar to the measures in the current regulatory capital framework.

Comparison of the new risk measures to current risk measures: The aggregate impact of the proposed internal models approach would be an increase in capital requirements for all asset classes with the exception of equities. As this exercise was based only on a sample of portfolios specifically designed to test variability, more concrete analysis of the capital impact will be conducted via the second QIS exercise, which will be based on actual portfolios.

Implementation of varying liquidity horizons: Scaling expected shortfall (ES) based on a 10-day or a one-day measure results in consistent median capital outcomes.

Impact of constraining diversification and hedging benefits: Reducing a bank's unconstrained use of correlation factors across asset classes increases the overall level of capital requirements.

Computation of non-modellable risk factors (NMRF) and the incremental default risk measure for equities: Only a small proportion of participating banks properly computed the capital charges for NMRFs and the IDR capital charge on equity instruments. Further specification on the definitions and calculation method for NMRFs and IDR will be provided in the subsequent phase of the QIS.

The findings from this report and the Committee's analysis of the capital impact data derived from the second QIS exercise will inform the Committee's deliberations on the final calibration of the new framework for the trading book capital standard.

Report on supervisory colleges for financial conglomerates
September 2014

The Joint Forum has today released its report on supervisory colleges for financial conglomerates.

The report, the result of a recent self-assessment survey of Joint Forum members, presents findings on how far cross-sectoral issues, and specific questions related to financial conglomerates, are effectively addressed within supervisory colleges.

This stocktaking exercise also provides information on the implementation of the Joint Forum Principles for the Supervision of Financial Conglomerates and, in particular, Principle 6 relating to supervisory cooperation, coordination and information-sharing.

The Joint Forum notes the general progress that has been made in this area since the previous study in 2011, however the present report identified several gaps and issues in relation to the implementation of Principle 6, such as:

- not all jurisdictions have in place a specific supervision framework for financial conglomerates or coordination agreements with other supervisors of financial conglomerates on a cross-sectoral level. Gaps also exist in the coordination of on-site and off-site supervision with other domestic or international supervisors, and in arrangements or processes for taking enforcement actions with other domestic or international authorities; and

- there appear to be insufficient specific mechanisms for supervisory cooperation and coordination in periods of crisis/stress, thereby possibly hindering effective intervention in times of crisis.

Committee on the Global Financial System

Market-making and proprietary trading: industry trends, drivers and policy implications
November 2014

Market-makers serve a crucial role in financial markets by providing liquidity to facilitate market efficiency and functioning. This report - prepared by a Study Group chaired by Denis Beau (Bank of France) - assesses changes in the supply of and demand for market-making services as well as their potential impact on fixed income markets. These markets are of particular interest to policymakers, given their relevance to monetary policy and financial stability. The Study Group identifies signs of increased liquidity bifurcation and fragility, with market activity concentrating in the most liquid instruments and deteriorating in the less liquid ones. Drivers are both conjunctural and structural in nature. While it remains difficult at this stage to provide a definitive overall assessment, it seems likely that the compressed pricing of immediacy services observed in the past will give way to liquidity premia more consistent with actual market-making capacity and costs.

Several supporting initiatives, such as strengthening liquidity risk management, improving market transparency and monitoring or adjusting incentive schemes for market-makers, would help making this outcome more likely and would support the robustness of market liquidity. Regular liquidity-providing activities by central banks, in turn, can provide an important backstop. Considering other, more direct measures by central banks to support market functioning, however, involves several difficult cost-benefit trade-offs

Committee on Payments and Market Infrastructures

Cyber resilience in financial market infrastructures
November 2014

Given the critical role that financial market infrastructures (FMIs) play in promoting the stability of the financial system, the Committee on Payments and Market Infrastructures (CPMI) has sought to understand the current cyber risks faced by FMIs and their level of readiness to effectively deal with worst case scenarios. The report Cyber resilience in financial

market infrastructures analyses the relevance of cyber security issues for FMIs and their overseers within the context of the Principles for Financial Market Infrastructures (PFMIs).

Recovery of financial market infrastructures - final report
October 2014

The Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) have today published a report entitled Recovery of financial market infrastructures.

The report provides guidance to financial market infrastructures (FMIs) such as central counterparties (CCPs) on how to develop plans to enable them to recover from threats to their viability and financial strength that might prevent them from continuing to provide critical services to their participants and the markets they serve. It also provides guidance to relevant authorities in carrying out their responsibilities associated with the development and implementation of recovery plans.

The report was issued for consultation in August 2013. The final version now published takes account of the comments received during the consultation process.

The report supplements the Principles for financial market infrastructures (PFMI) , the international standards for FMIs published by the CPSS and IOSCO in April 2012. It does not create additional standards for FMIs but does provide guidance on how FMIs can observe the requirements laid down in the PFMI that they have effective recovery plans. The report is also consistent with the Key attributes of effective resolution regimes for financial institutions of the Financial Stability Board (FSB), which is being reissued today.

FMIs, which include payment systems, securities settlement systems, central securities depositories, CCPs and trade repositories, play an essential role in the global financial system. The disorderly failure of an FMI could lead to severe systemic disruption if it caused markets to cease to operate effectively.

Statistics on payment, clearing and settlement systems in the CPMI countries - Figures for 2013 – preliminary release
September 2014

This is an annual publication that provides data on payments and payment, clearing and settlement systems in the CPMI countries.

This version of the statistical update contains data for 2013 and earlier years. There are detailed tables for each individual country as well as a number of comparative tables.

Developments in collateral management services
September 2014

In a report published today, the Committee on Payments and Market Infrastructures (CPMI) examines developments in the collateral management services industry and the attendant potential settlement-related benefits and risks.

The report, *Developments in collateral management services*, describes how collateral management services are changing in an effort to address expected increases in demand for collateral. It provides an overview of the variety of approaches being undertaken by many of the service providers to furnish customers with better tools to monitor their securities holdings and increase efficiencies in the deployment of those securities.

While the report identifies a number of benefits resulting from the ongoing innovations, it also highlights that proposed services have led to increased complexity and operational risks.

Non-banks in retail payments
September 2014

The Committee on Payments and Market Infrastructures (CPMI) has issued the report Non-banks in retail payments to examine the role of non-banks in retail payment services and analyse the implications of the growing importance of these entities in retail payments.

The report is based on several fact-finding exercises that were conducted to support the analysis, revealing a significant presence of non-banks in all stages of the payment process and across different payment instruments. The report analyses the factors influencing the growing importance of non-banks, the main implications for both the efficiency of and risks in retail payment systems (including their possible influence on financial inclusion) and the diverse regulatory approaches for the different types of non-bank in various jurisdictions.

The report concludes with an analysis of the main issues and implications for central banks and other authorities. The main issues identified relate to the potential impact of non-banks on operational risk, level playing field issues, consumer protection aspects and the risks that might emerge if outsourcing of payment services is concentrated in a single or a few non-banks. Central banks are invited to consider the challenges identified, including risk and level playing field issues, and take action as appropriate in their jurisdictions.

Speeches

Central banks and the global debt overhang

Speech by Mr Hervé Hannoun, Deputy General Manager of the Bank for International Settlements, prepared for the 50th SEACEN Governors' Conference, Port Moresby, Papua New Guinea, 20 November 2014.

In my address, I will focus on what is a central global economic policy issue: debt has reached record levels in many countries and, seven years since the start of the global financial crisis, it is still rising. There is no hard and fast rule to tell exactly when debt is excessive, but I believe there are signs that debt is already well past safe levels in many advanced economies. Financial market participants remain largely complacent about this risk. But they are apt to change their minds abruptly.

With some exceptions, emerging market economies are in better shape than advanced economies, but they too are not immune to the risk of excessive debt. The pace of debt accumulation has indeed accelerated in emerging markets since the start of the crisis.

I will structure my intervention into three main parts:

I. First, I will discuss the build-up of the global debt overhang and its fundamental causes;

II. Second, I will deal with the various approaches for resolving the debt overhang;

III. Finally, I will turn to the dilemmas that central banks need to confront in dealing with the problem.

Debt trouble comes in threes

Luncheon speech by Mr Jaime Caruana, General Manager of the BIS, on the occasion of the International Finance Forum 2014 Annual Global Conference, Beijing, 1 November 2014.

Debt as a share of GDP has risen by 20 percentage points globally since the global financial crisis, driven primarily by the expansion of public sector debt in the advanced economies and the rapid rise in private sector debt in the emerging market economies. Debt can in principle serve many essential economic functions, but in practice it is often not put to the most productive use - or is even used in potentially destabilising ways.

The debt problem usually does not come alone. Most obviously, the build-up of leverage can increase the vulnerability of the financial sector, induce adverse market dynamics and result in growth-impeding debt overhangs. Less obviously, but no less importantly, credit booms tend to be associated with overinvestment in certain sectors, ie a misallocation of resources in the real economy. And last but not least, the feel-good effect of credit booms can mask the distortions and weaknesses that are already in place, resulting in their not being detected and addressed in a timely manner.

The global economy needs to move away from the debt-driven growth model of the last few decades in order to truly recover from the crisis. This requires not only efforts to restore the resilience and reliability of the financial sector, but also a rebalancing of economic policies to support greater flexibility and productivity in the real economy.

Welcoming remarks at the 2nd Conference on Standard-Setting Bodies and Financial Inclusion

Welcoming remarks delivered by Mr Jaime Caruana, General Manager of the BIS, on the occasion of the 2nd Conference on Standard-Setting Bodies and Financial Inclusion - "Standard-setting in the changing landscape of digital financial inclusion", Basel, Switzerland, 30 October 2014.

Ladies and gentlemen, good morning. It is my pleasure and privilege to welcome all of you to this unique gathering, which brings together key representatives from financial sector standard-setting bodies, multilateral organisations and national authorities on a most timely topic of common interest: that is, the fast-changing landscape of digital financial inclusion.

That we gather once again under the joint auspices of the G20 Global Partnership for Financial Inclusion (GPFI) and the BIS's Financial Stability Institute is particularly appropriate. The theme of this event reflects growing recognition of the power and importance of bringing formal financial services to the estimated 2.5 billion adults who have limited or no access to them - and the vital role digital technology plays in making this possible.

I am amazed how much things have advanced in just the last few years. I recall that the BIS discussed the issue of digital financial inclusion in a May 2011 working paper. 1 At the time, the authors urged risk-proportionate regulation of innovations such as M-Pesa, the mobile phone-based digital transaction platform in Kenya. This service had already captured international attention for its financial inclusion potential. But on the issue of whether viable business models would emerge that could be replicated globally, the authors judged that the jury was still out.

Since then, the jury has returned, and its verdict is positive. Similar digital financial services have now been launched in more than 80 countries. As of June 2013, there were over 60 million active mobile money accounts. 2 But the potential is arguably much greater than this figure, given the huge number of people who now have access to a mobile phone but do not yet have a bank account or access to credit from a formal financial institution.

The proliferation of ever cheaper smartphones, such as a $33 model that went on sale in India just a couple of months ago, can be a game changer for unserved and under-served low-income households as well as micro- and small enterprises. It is predicted that, by the year 2020, smartphones will account for two out of every three mobile connections globally, and that many of those will be in the developing world. That amounts to six billion out of the nine billion mobile connections forecast by that time. 3 The regulatory, supervisory and standard-setting challenges - and likewise the solutions - include those we currently face, and others we can only imagine as billions of new digital finance users go online.

The representatives of standard-setting bodies, public authorities and development partners gathered here today are all trying to assess the impact of these changes, to predict what lies ahead, and to determine how innovations will play out in various economies. For example, in Myanmar, where only an estimated 20% of the population currently has access to formal financial services, 4 as the country opens up the largely disconnected population will probably bypass earlier technology and go directly to smartphones.

As we will hear from our keynote speaker Dr Nachiket Mor, reforms in India are well under way to establish a new category of digital transactional platform, which is to come under the country's regulatory and supervisory system. It combines with India's much watched "Unique ID" initiative 5 to realise the stated goal of extending financial services to the country's entire population - the second largest in the world.

The implications for standard-setting bodies of technology-enabled connectivity among retail customers are exciting, yet also cross-cutting. The discussions today and tomorrow are likely to highlight that banking and retail payments can no longer be seen as separate

domains - nor are they the exclusive province of traditional players such as universal banks. The often specially tailored products in savings, credit, insurance and investment - even micro-pensions - that are already reaching low-income households via innovative digital transactional platforms pose new questions, and even challenges, to all the standard setters in the room.

I am mindful of the G20 Leaders' call to all the standard-setting bodies at the 2013 summit in Saint Petersburg. 6 On that occasion, the Leaders endorsed the recommendations of the GPFI, 7 which included three aspects quite relevant to this gathering:

First, the standard-setting bodies should continue their impressive progress on financial inclusion - consistent, of course, with their important core mandates.

Second, they should participate in GPFI activities related to financial inclusion and also engage GPFI representatives in their activities where relevant. This conference is an excellent example of that commitment.

Third, they should give attention to emerging issues in financial inclusion that are relevant to multiple standard-setting bodies. Digital financial inclusion may be one of the most important issues in this regard.

We will need more of this kind of forum - and the one provided by the third meeting of standard-setting bodies' Chairs and Secretaries General on financial inclusion. That meeting was convened here at the BIS earlier this month by Her Majesty Queen Máxima of the Netherlands, in her capacity as the UN Secretary General's Special Advocate for Inclusive Finance for Development and Honorary Patron of the GPFI, together with the Basel Committee Chairman. At that gathering, the commitment to ongoing engagement was palpable.

We need to be proactive in recognising the customer protection and financial stability implications of the exciting and radical changes ahead. Addressing this future will call for the kind of foresight we had in the 1990s when dealing with the emergence of global financial conglomerates. In that context, the Basel Committee on Banking Supervision, the International Association of Insurance Supervisors, and the International Organization of Securities Commissions were brought together to establish the Joint Forum. In the financial inclusion context, the standard-setting bodies will again need to work together. But when it comes to digital financial inclusion, those represented in this room alone are not likely to cover all of the relevant landscape. In December, for example, the International Telecommunications Union will launch a new Focus Group on Digital Financial Services, 8 and other collaborative forums are likely to emerge.

In the context of international cooperation, I often refer to the "Basel Process" - that is, the synergies that result from the interaction among the standard-setting bodies and committees hosted by the BIS here in Basel. The proximity of these groups at the BIS and the long tradition of joint work make the BIS an excellent venue for exchanging ideas and information on topics that range beyond the day-to-day work of any single standard setter or committee.

Over the next day and a half, we have the opportunity - and indeed the responsibility - to prepare the standard-setting world for both the risks and the rewards of the digitisation of financial services. Once again, I am honoured that the BIS can offer such an appropriate venue for this gathering.

I wish you all a successful meeting.

Opening remarks - Seventh Irving Fisher Committee Conference on Central Bank Statistics

Opening remarks by Mr Hervé Hannoun, Deputy General Manager of the BIS, at the Seventh Irving Fisher Committee Conference on Central Bank Statistics, Basel, 4 September 2014.

The focus of today's conference is particularly apt: "Indicators to support Monetary and Financial Stability Analysis: Data Sources and Statistical Methodologies". In the wake of the global financial crisis, it is indeed the right time to revisit the data sets we need for financial and monetary stability purposes.

Indeed, the increasing involvement of central banks in macroprudential policy will certainly bring new data requirements, in addition to those required for supporting monetary policy. Data collections, processing and analysis will all need to adapt accordingly. The specific topics of the various sessions indicate the richness of new initiatives. These include new indicators for financial stability analysis; new statistical techniques and methodologies, particularly the use of surveys by central banks; and ventures into new domains such as those related to household finance. I very much look forward to the summaries of your deliberations that will be included in the next IFC Annual Report to Governors.

Financial stability is a field where the IFC has already made substantial contributions towards improving statistics of interest to central banks. I need only cite your 2008 workshop on securities statistics, which resulted in the joint BIS, ECB and IMF Handbook on Securities Statistics. Likewise, your work on housing price statistics led to the Handbook on Residential Property Price Statistics and further initiatives by the BIS on global property prices. And it was at the IFC conference in mid-2008 that the idea was first floated of identifying possible data gaps as revealed by the global financial crisis. This, in a sense, foreshadowed the launch of the Data Gaps Initiative by the G20, the Financial Stability Board and the IMF.

As monetary stability is no less important, I find it highly appropriate that the first session of this conference is devoted to "New monetary policy indicators". No topic could be more topical, given the vigour of the current debate about the supposed threat of deflation. But no debate can be productive, especially at the policy level, unless the supporting data are sound. In this light, measures of inflation and inflation expectations are surely an appropriate focus for an intensive review by central bank statisticians - and I would like to raise the question here if the IFC might not play a catalytic role in that process. Let me start by revisiting the intricacies of inflation measurement.