

# Statistical Annex

## The international banking market

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## 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).<sup>1</sup>

### 1. International banking statistics (Tables 1A, 1B, 2A and 2B)

The locational reporting system provides quarterly data on the international financial claims and liabilities of banks resident in the 42 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 30 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 3A and 3B)

These statistics are derived from various national, market and institutional data sources and provide information on amounts outstanding and flows of debt securities issuance in both international and domestic markets. Nominal values are used and the data are broken down using similar criteria as for the banking statistics, ie sector, currency and maturity. However, only the liabilities of the issuers are covered.

International debt securities comprise domestic and foreign currency issues by residents of a given country outside their respective domestic market, foreign currency issues by residents in their domestic market and foreign and domestic currency debt securities issued in the domestic market by non-residents. Breakdowns are available in terms of currency, sector and maturity.

Domestic debt securities comprise issues in domestic markets in national currency for 49 countries. Breakdowns are provided in terms of sector and maturity. As far as possible, the BIS endeavours to eliminate any overlap between its international and domestic debt securities statistics.

### 3. Derivatives statistics (Table 4)

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.

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

**Table 1A: International positions of banks by residence of counterparty, September 2009<sup>1</sup>**

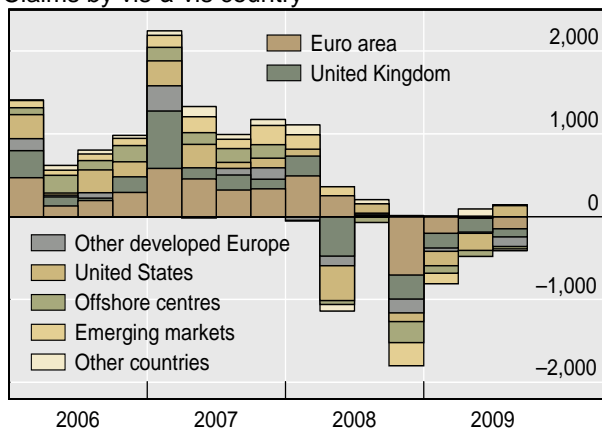
In billions of US dollars

	Vis-à-vis developed countries	Vis-à-vis offshore centres	Vis-à-vis emerging markets					All countries
			Total	Africa	Asia	Europe	Latin America	
<b>Amounts outstanding</b>								
<b>Total claims</b>	<b>26,881</b>	<b>3,888</b>	<b>2,827</b>	<b>465</b>	<b>1,010</b>	<b>873</b>	<b>479</b>	<b>34,291</b>
<b>Total cross-border claims</b>	<b>23,953</b>	<b>3,529</b>	<b>2,398</b>	<b>465</b>	<b>729</b>	<b>803</b>	<b>402</b>	<b>30,575</b>
Loans	16,837	2,882	1,888	427	542	636	283	21,907
Securities	5,739	527	291	19	101	92	79	6,641
Claims on banks	15,529	2,268	1,133	184	442	393	114	19,532
Claims on non-banks	8,424	1,261	1,265	280	288	410	287	11,043
US dollar	8,445	2,294	1,004	264	249	219	271	11,805
Euro	10,859	391	514	87	44	363	20	11,998
<b>Foreign currency claims on residents</b>	<b>2,928</b>	<b>359</b>	<b>429</b>	<b>...</b>	<b>281</b>	<b>71</b>	<b>78</b>	<b>3,716</b>
<b>Estimated exchange rate adjusted changes during the quarter<sup>2</sup></b>								
<b>Total claims</b>	<b>-343</b>	<b>-53</b>	<b>42</b>	<b>4</b>	<b>57</b>	<b>-26</b>	<b>6</b>	<b>-360</b>
<b>Total cross-border claims</b>	<b>-240</b>	<b>-30</b>	<b>8</b>	<b>4</b>	<b>23</b>	<b>-31</b>	<b>12</b>	<b>-268</b>
Loans	-315	2	-22	4	7	-29	-4	-353
Securities	21	-32	22	0	7	4	10	16
Claims on banks	-191	-21	-28	3	7	-32	-6	-240
Claims on non-banks	-49	-9	36	1	16	1	18	-29
US dollar	125	43	-17	-2	8	-23	0	145
Euro	-146	-36	-9	5	0	-14	0	-183
<b>Foreign currency claims on residents</b>	<b>-103</b>	<b>-23</b>	<b>34</b>	<b>...</b>	<b>35</b>	<b>5</b>	<b>-6</b>	<b>-92</b>
<b>Amounts outstanding</b>								
<b>Total liabilities</b>	<b>21,428</b>	<b>5,310</b>	<b>2,647</b>	<b>721</b>	<b>1,029</b>	<b>446</b>	<b>451</b>	<b>32,802</b>
<b>Total cross-border liabilities</b>	<b>18,366</b>	<b>4,584</b>	<b>2,123</b>	<b>721</b>	<b>677</b>	<b>342</b>	<b>383</b>	<b>28,489</b>
Deposits	16,498	4,456	2,060	712	647	340	361	23,428
Securities	1,230	92	29	4	18	0	7	4,033
Liabilities to banks	13,655	3,257	1,300	473	439	240	148	21,020
Liabilities to non-banks	4,711	1,327	822	248	237	102	235	7,469
US dollar	7,096	2,924	1,140	423	277	141	300	12,167
Euro	7,612	625	378	161	43	137	37	9,641
<b>Foreign currency liabilities to residents</b>	<b>3,063</b>	<b>726</b>	<b>524</b>	<b>...</b>	<b>352</b>	<b>105</b>	<b>67</b>	<b>4,313</b>
<b>Estimated exchange rate adjusted changes during the quarter<sup>2</sup></b>								
<b>Total liabilities</b>	<b>-299</b>	<b>-81</b>	<b>31</b>	<b>-5</b>	<b>22</b>	<b>17</b>	<b>-3</b>	<b>-273</b>
<b>Total cross-border liabilities</b>	<b>-194</b>	<b>-81</b>	<b>-5</b>	<b>-5</b>	<b>-12</b>	<b>12</b>	<b>0</b>	<b>-203</b>
Deposits	-202	-80	-3	-4	-11	13	-2	-278
Securities	11	-5	-3	0	-2	0	-1	73
Liabilities to banks	-248	-57	-7	-1	-18	11	1	-257
Liabilities to non-banks	54	-24	2	-4	6	1	-1	54
US dollar	159	14	-7	-12	-9	12	2	195
Euro	-153	-54	-12	5	-13	-1	-3	-203
<b>Foreign currency liabilities to residents</b>	<b>-106</b>	<b>1</b>	<b>36</b>	<b>..</b>	<b>34</b>	<b>5</b>	<b>-3</b>	<b>-70</b>

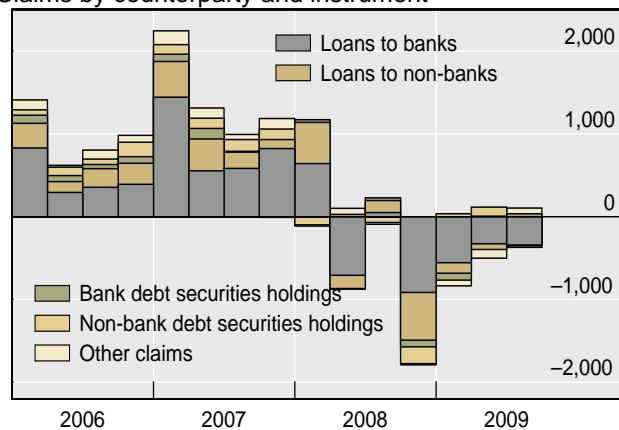
### Cross-border positions

Exchange rate adjusted changes in stocks

#### Claims by vis-à-vis country



#### Claims by counterparty and instrument



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

**Table 1B: International positions of banks by nationality of head office, September 2009<sup>1</sup>**

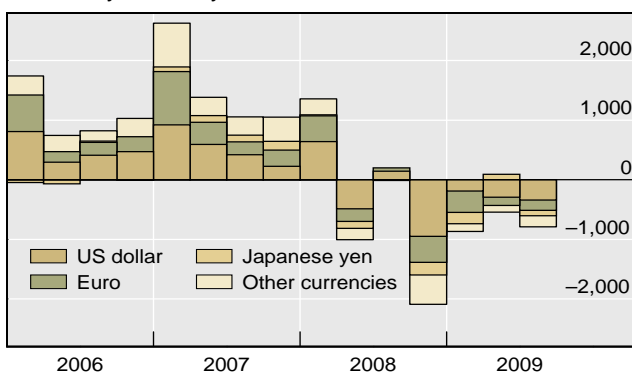
In billions of US dollars

	Nationality of banks										All countries
	France	Germany	Italy	Netherlands	Spain	Switzerland	United Kingdom	Japan	United States	Emerging markets	
<b>Amounts outstanding</b>											
<b>Total claims</b>	<b>4,143</b>	<b>4,934</b>	<b>1,021</b>	<b>2,081</b>	<b>970</b>	<b>2,796</b>	<b>3,905</b>	<b>3,218</b>	<b>3,613</b>	<b>992</b>	<b>34,259</b>
on banks	2,793	2,733	601	1,190	521	1,852	2,121	1,321	2,629	511	20,060
on related foreign offices	1,079	1,433	227	584	343	831	952	556	1,618	120	9,595
on other banks	1,689	1,288	373	603	178	1,003	1,148	764	1,005	371	10,347
on official monetary institutions	25	11	0	3	0	17	21	1	6	20	117
on non-banks	1,351	2,201	420	891	449	944	1,784	1,898	984	481	14,199
US dollar	1,328	1,495	138	528	323	1,253	1,617	1,581	2,534	688	13,196
Euro	2,109	2,661	790	1,135	472	758	1,353	577	513	96	12,592
Other currencies	707	778	93	418	175	785	935	1,061	566	208	8,470
<b>Estimated exchange rate adjusted changes during the quarter<sup>2</sup></b>											
<b>Total claims</b>	<b>5</b>	<b>-193</b>	<b>-55</b>	<b>-23</b>	<b>-24</b>	<b>-114</b>	<b>-65</b>	<b>-6</b>	<b>-215</b>	<b>23</b>	<b>-790</b>
on banks	19	-103	-59	-15	-42	-85	-103	-30	-215	3	-700
on related foreign offices	-42	-60	-35	9	-37	34	-30	-29	27	-15	-186
on other banks	63	-34	-23	-24	-5	-114	-76	-1	-237	17	-495
on official monetary institutions	-2	-9	0	0	0	-5	3	0	-4	1	-19
on non-banks	-14	-90	3	-8	18	-29	38	24	-1	20	-89
US dollar	44	-81	1	-5	-8	-22	-51	39	-213	9	-342
Euro	-6	-78	-54	14	-21	-32	40	8	6	7	-170
Other currencies	-33	-34	-2	-31	6	-60	-55	-54	-8	7	-278
<b>Amounts outstanding</b>											
<b>Total liabilities</b>	<b>3,899</b>	<b>3,662</b>	<b>1,062</b>	<b>2,128</b>	<b>1,006</b>	<b>2,992</b>	<b>3,990</b>	<b>1,822</b>	<b>4,313</b>	<b>1,083</b>	<b>32,805</b>
to banks	2,686	2,665	699	1,162	586	1,748	2,006	1,170	2,315	566	19,487
to related foreign offices	1,053	1,463	208	614	314	1,090	845	507	1,570	83	9,361
to other banks	1,519	1,125	466	512	241	645	1,046	619	603	455	9,340
to official monetary institutions	114	77	25	36	31	12	116	44	142	29	785
to non-banks	1,212	996	363	966	420	1,244	1,983	652	1,998	517	13,318
US dollar	1,394	1,393	179	627	369	1,340	1,427	940	3,252	716	13,980
Euro	1,722	1,383	741	967	420	822	1,208	310	506	107	10,303
Other currencies	782	886	143	534	216	830	1,354	572	555	261	8,522
<b>Estimated exchange rate adjusted changes during the quarter<sup>2</sup></b>											
<b>Total liabilities</b>	<b>-48</b>	<b>-148</b>	<b>-35</b>	<b>-21</b>	<b>-19</b>	<b>-166</b>	<b>45</b>	<b>-8</b>	<b>-234</b>	<b>42</b>	<b>-722</b>
to banks	-52	-103	-52	16	-39	-132	12	-30	-88	5	-563
to related foreign offices	12	-63	-23	15	-37	-31	-9	-14	33	-6	-111
to other banks	-52	-39	-27	5	-2	-88	11	-29	-114	16	-379
to official monetary institutions	-12	-1	-2	-4	-1	-13	10	13	-7	-5	-74
to non-banks	4	-45	17	-37	21	-34	33	22	-145	37	-159
US dollar	49	-41	3	-5	1	-50	3	24	-233	33	-278
Euro	-45	-81	-28	11	-33	-46	40	11	-10	6	-227
Other currencies	-53	-26	-10	-27	12	-70	1	-43	9	4	-217

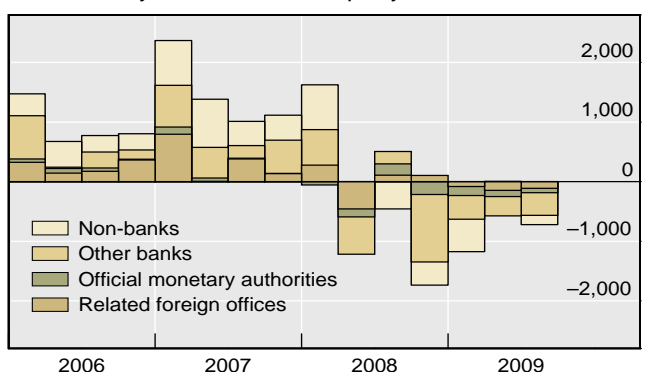
### International positions of BIS reporting banks

Exchange rate adjusted changes in stocks

#### Claims by currency



#### Liabilities by sector of counterparty



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

**Table 2A: Consolidated claims, immediate borrower basis, September 2009<sup>1</sup>**

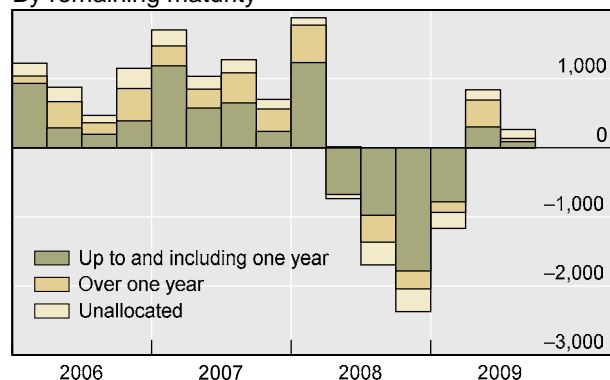
Amounts outstanding, in billions of US dollars

	Vis-à-vis developed countries				Vis-à-vis offshore centres	Vis-à-vis emerging markets					All countries
	Total	United States	Euro area	Japan		Total	Africa	Asia	Europe	Latin America	
<b>Foreign claims</b>	<b>24,954</b>	<b>5,659</b>	<b>11,298</b>	<b>1,114</b>	<b>2,150</b>	<b>4,346</b>	<b>593</b>	<b>1,344</b>	<b>1,437</b>	<b>972</b>	<b>31,543</b>
<b>International claims</b>	<b>16,498</b>	<b>2,590</b>	<b>8,620</b>	<b>634</b>	<b>1,728</b>	<b>2,466</b>	<b>384</b>	<b>833</b>	<b>860</b>	<b>389</b>	<b>20,783</b>
Up to and including one year	8,262	893	3,970	509	800	1,089	167	462	298	162	10,169
Over one year	5,609	1,071	3,255	78	615	1,144	196	265	495	187	7,403
Unallocated by maturity	2,627	626	1,394	47	312	234	21	106	67	40	3,211
<b>Local currency claims</b>	<b>8,456</b>	<b>3,069</b>	<b>2,678</b>	<b>480</b>	<b>423</b>	<b>1,881</b>	<b>209</b>	<b>511</b>	<b>577</b>	<b>583</b>	<b>10,760</b>
<b>Local currency liabilities</b>	<b>6,579</b>	<b>2,723</b>	<b>1,907</b>	<b>360</b>	<b>433</b>	<b>1,415</b>	<b>190</b>	<b>375</b>	<b>371</b>	<b>479</b>	<b>8,428</b>
<b>Unadjusted changes during the quarter<sup>2</sup></b>											
<i>Foreign claims</i>	193	-151	272	36	25	132	17	69	18	28	357
<i>International claims</i>	165	-90	244	31	24	69	14	44	-7	18	264
<i>Local currency claims</i>	29	-61	28	5	1	63	3	25	25	10	93
<i>Local currency liabilities</i>	-56	-126	38	51	3	30	3	9	21	-3	-22
<b>Nationality of reporting banks:</b>											
<b>Foreign claims</b>											
<b>Domestically owned banks (total)</b>	<b>20,983</b>	<b>5,342</b>	<b>9,082</b>	<b>841</b>	<b>2,077</b>	<b>4,112</b>	<b>555</b>	<b>1,234</b>	<b>1,387</b>	<b>936</b>	<b>27,261</b>
Euro area	10,940	2,025	5,791	319	543	2,152	240	309	1,105	498	13,681
Switzerland	1,529	667	435	106	158	145	21	53	45	26	1,839
United Kingdom	2,560	1,114	1,062	112	506	627	195	289	39	105	3,712
Japan	1,840	883	562	0	384	213	27	134	23	29	2,437
United States	1,868	0	711	285	273	573	48	276	57	193	2,714
Other countries <sup>3</sup>	2,245	653	521	20	213	401	24	173	118	86	2,879
<b>Other foreign banks</b>	<b>3,971</b>	<b>317</b>	<b>2,216</b>	<b>272</b>	<b>73</b>	<b>234</b>	<b>38</b>	<b>110</b>	<b>50</b>	<b>36</b>	<b>4,281</b>
<b>International claims, all maturities</b>											
<b>Domestically owned banks (total)</b>	<b>12,527</b>	<b>2,273</b>	<b>6,404</b>	<b>361</b>	<b>1,654</b>	<b>2,232</b>	<b>346</b>	<b>723</b>	<b>810</b>	<b>353</b>	<b>16,502</b>
Euro area	6,777	864	3,937	133	492	1,153	168	227	598	160	8,467
Switzerland	778	138	349	63	152	113	18	41	36	17	1,049
United Kingdom	1,250	390	658	60	245	235	75	104	28	28	1,748
Japan	1,534	658	531	0	355	173	27	96	23	28	2,062
United States	1,223	0	604	94	241	291	34	146	33	78	1,755
Other countries <sup>3</sup>	965	224	325	11	170	266	24	108	92	42	1,421
<b>Other foreign banks</b>	<b>3,971</b>	<b>317</b>	<b>2,216</b>	<b>272</b>	<b>73</b>	<b>234</b>	<b>38</b>	<b>110</b>	<b>50</b>	<b>36</b>	<b>4,281</b>
<b>International claims, short-term</b>											
<b>Domestically owned banks (total)</b>	<b>5,250</b>	<b>814</b>	<b>2,297</b>	<b>218</b>	<b>740</b>	<b>928</b>	<b>133</b>	<b>361</b>	<b>290</b>	<b>145</b>	<b>6,938</b>
Euro area	2,731	379	1,232	60	197	407	53	86	206	61	3,339
Switzerland	437	73	166	47	109	57	13	23	15	6	605
United Kingdom	533	197	256	27	124	106	29	50	15	12	766
Japan	161	48	55	0	43	56	7	38	6	4	260
United States	855	0	414	78	190	200	21	110	21	49	1,245
Other countries <sup>3</sup>	533	118	173	6	76	103	10	54	26	13	723
<b>Other foreign banks</b>	<b>3,012</b>	<b>79</b>	<b>1,674</b>	<b>290</b>	<b>60</b>	<b>160</b>	<b>35</b>	<b>101</b>	<b>8</b>	<b>17</b>	<b>3,231</b>

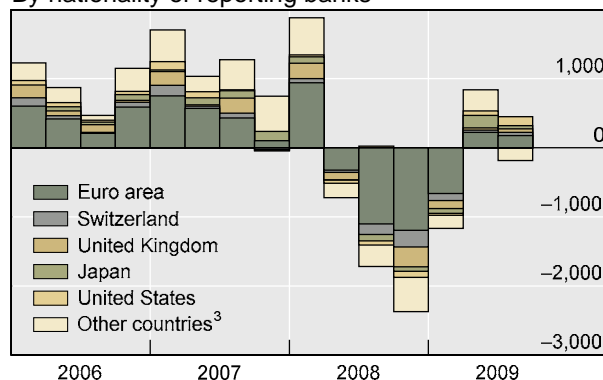
**International claims of BIS reporting banks on an immediate borrower basis<sup>4</sup>**

 Changes in stocks<sup>2</sup>

By remaining maturity



By nationality of reporting banks



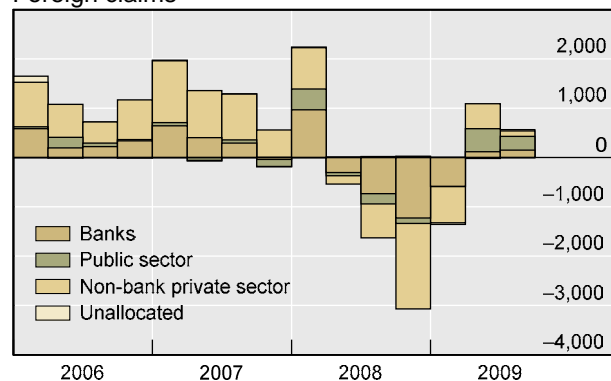
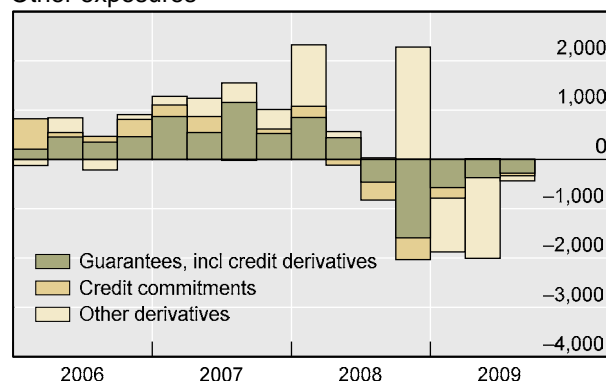
<sup>1</sup> Detailed breakdowns and time series data are available at <http://www.bis.org/statistics/consstats.htm> and <http://www.bis.org/statistics/consstatsweb.htm> (Tables 9A–9B and CB10). <sup>2</sup> Quarterly difference in outstanding stocks, excluding effects of breaks in series. <sup>3</sup> Domestically owned banks in other reporting countries. <sup>4</sup> Worldwide consolidated positions of domestically owned banks and unconsolidated positions of foreign banks in 30 reporting countries.

**Table 2B: Consolidated claims, ultimate risk basis, September 2009<sup>1</sup>**

Amounts outstanding, in billions of US dollars

	Vis-à-vis developed countries				Vis-à-vis offshore centres	Vis-à-vis emerging markets					All countries
	Total	United States	Euro area	Japan		Total	Africa	Asia	Europe	Latin America	
<b>Foreign claims</b>	<b>20,580</b>	<b>5,377</b>	<b>8,945</b>	<b>879</b>	<b>1,635</b>	<b>3,949</b>	<b>529</b>	<b>1,161</b>	<b>1,346</b>	<b>912</b>	<b>26,239</b>
Banks	5,473	934	2,670	230	155	702	100	279	209	114	6,339
Public sector	3,745	894	1,915	370	135	867	81	231	267	288	4,798
Non-bank private sector	11,185	3,494	4,311	277	1,328	2,360	347	649	854	509	14,877
Unallocated	176	54	42	2	18	20	1	2	16	1	226
<b>Cross-border claims</b>	<b>11,418</b>	<b>2,397</b>	<b>6,116</b>	<b>344</b>	<b>1,104</b>	<b>1,720</b>	<b>306</b>	<b>575</b>	<b>558</b>	<b>282</b>	<b>14,309</b>
<b>Local claims in all currencies</b>	<b>9,162</b>	<b>2,980</b>	<b>2,794</b>	<b>535</b>	<b>532</b>	<b>2,229</b>	<b>224</b>	<b>586</b>	<b>789</b>	<b>630</b>	<b>11,930</b>
<b>Unadjusted changes during the quarter<sup>2</sup></b>											
Foreign claims	404	-128	361	45	27	133	17	77	22	18	564
Cross-border claims	448	-38	338	37	20	90	14	51	10	14	557
Local claims in all currencies	-44	-90	11	8	7	44	3	25	12	4	7
<b>Nationality of reporting banks<sup>3</sup></b>											
<b>Foreign claims</b>											
<b>Total</b>	<b>20,580</b>	<b>5,377</b>	<b>8,945</b>	<b>879</b>	<b>1,635</b>	<b>3,949</b>	<b>529</b>	<b>1,161</b>	<b>1,346</b>	<b>912</b>	<b>26,239</b>
Euro area	10,716	2,013	5,670	313	470	2,086	227	285	1,085	489	13,304
France	3,021	678	1,552	212	135	424	123	104	155	42	3,589
Germany	2,906	585	1,475	56	193	355	47	78	199	31	3,460
Italy	776	44	641	6	19	198	12	8	172	6	1,000
Spain	922	196	310	1	20	385	5	5	10	365	1,329
Switzerland	1,569	688	480	101	107	135	18	51	39	27	1,818
United Kingdom	2,630	1,107	1,112	131	472	622	192	289	37	104	3,743
Japan	1,841	958	526	0	230	195	24	116	23	32	2,266
United States	1,886	0	710	311	201	566	47	274	54	192	2,653
Other countries	1,938	611	446	23	154	344	21	145	109	69	2,455
<b>Cross-border claims</b>											
<b>Total</b>	<b>11,418</b>	<b>2,397</b>	<b>6,116</b>	<b>344</b>	<b>1,104</b>	<b>1,720</b>	<b>306</b>	<b>575</b>	<b>558</b>	<b>282</b>	<b>14,309</b>
Euro area	6,244	935	3,740	123	396	909	162	199	420	127	7,581
France	1,689	241	944	64	105	236	74	68	66	28	2,039
Germany	2,096	406	1,203	36	180	254	47	65	116	26	2,535
Italy	338	28	239	4	17	46	6	7	27	6	408
Spain	266	29	181	1	16	52	5	5	5	37	336
Switzerland	717	142	395	57	87	100	15	38	21	25	910
United Kingdom	1,265	388	681	52	181	174	54	75	24	21	1,637
Japan	1,538	743	495	0	197	141	24	64	22	31	1,876
United States	994	0	585	99	157	250	31	129	27	62	1,401
Other countries	660	189	221	13	85	146	19	68	42	17	904
<b>Other exposures</b>											
Derivatives contracts	4,243	1,152	1,661	108	169	197	35	89	29	44	4,624
Guarantees extended	7,667	958	2,816	257	446	737	112	226	268	132	8,850
Credit commitments	2,829	952	1,050	58	377	590	99	151	160	180	3,801

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

 Changes in stocks<sup>2</sup>
**Foreign claims**

**Other exposures<sup>4</sup>**


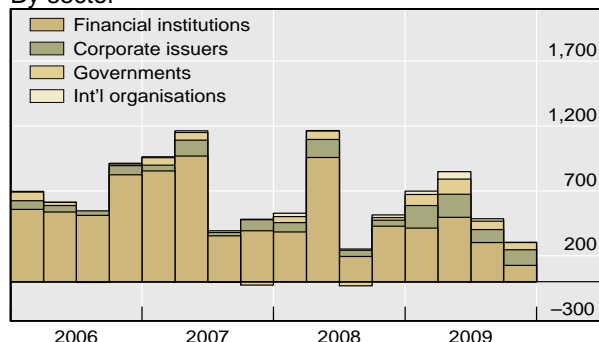
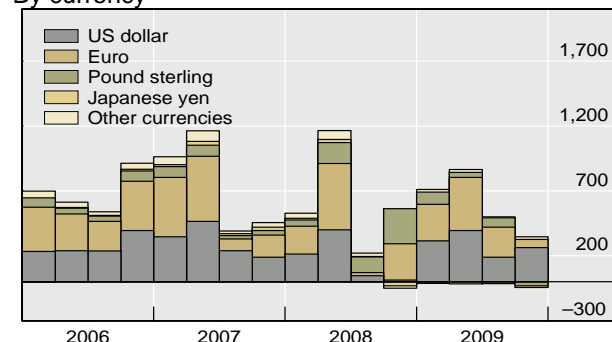
<sup>1</sup> Detailed breakdowns and time series data are available at <http://www.bis.org/statistics/consstats/htm> (Tables 9C–9D). <sup>2</sup> Quarterly difference in outstanding stocks, excluding effects of breaks in series. <sup>3</sup> Worldwide consolidated positions of domestically owned banks of 24 reporting countries.

<sup>4</sup> 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 3A: International debt securities issuance, December 2009<sup>1</sup>**

In billions of US dollars

	Developed countries				Off-shore centres	Emerging markets					Int'l organisations	All countries
	Total	United States	Euro area	Japan		Total	Africa	Asia	Europe	Latin America		
<b>Amounts outstanding</b>												
<b>Total issues</b>	<b>23,674</b>	<b>6,035</b>	<b>11,790</b>	<b>170</b>	<b>1,504</b>	<b>1,030</b>	<b>141</b>	<b>289</b>	<b>258</b>	<b>343</b>	<b>802</b>	<b>27,010</b>
<b>Money market instruments</b>	<b>891</b>	<b>62</b>	<b>489</b>	<b>3</b>	<b>24</b>	<b>9</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>932</b>
Financial institutions	824	59	438	3	24	9	1	7	0	1	0	857
Corporate issuers	34	2	27	0	0	0	0	0	0	0	0	34
Governments	33	0	25	0	0	0	0	0	0	0	0	33
US dollar	299	47	147	0	10	5	0	3	0	1	6	320
Euro	435	10	277	0	6	1	0	1	0	0	0	443
Other currencies	157	4	65	2	8	3	0	3	0	0	1	169
<b>Bonds and notes</b>	<b>22,783</b>	<b>5,973</b>	<b>11,301</b>	<b>168</b>	<b>1,480</b>	<b>1,021</b>	<b>139</b>	<b>282</b>	<b>258</b>	<b>341</b>	<b>794</b>	<b>26,078</b>
Financial institutions	18,368	4,709	9,000	116	1,396	266	45	134	45	42	0	20,030
Corporate issuers	2,736	1,253	854	49	47	239	43	88	30	77	0	3,022
Governments	1,679	11	1,447	3	37	516	51	60	183	222	0	2,233
US dollar	7,415	4,969	1,083	37	1,035	704	95	225	114	270	274	9,429
Euro	11,727	644	9,303	16	223	198	17	17	121	44	239	12,386
Other currencies	3,641	360	914	114	222	119	28	40	23	28	281	4,264
Floating rate	7,606	1,230	4,018	21	599	104	39	39	17	10	49	8,358
Straight fixed rate	14,845	4,656	7,154	105	821	861	93	199	238	331	745	17,273
Equity-related	332	87	128	42	60	55	7	45	3	0	0	447
<b>Net issuance during the quarter</b>												
<b>Total issues</b>	<b>263</b>	<b>108</b>	<b>111</b>	<b>-1</b>	<b>-2</b>	<b>42</b>	<b>2</b>	<b>6</b>	<b>8</b>	<b>26</b>	<b>1</b>	<b>303</b>
<b>Money market instruments</b>	<b>-141</b>	<b>-3</b>	<b>-63</b>	<b>0</b>	<b>-2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>-141</b>
Financial institutions	-102	-2	-28	0	-2	0	0	0	0	0	0	-104
Corporate issuers	-15	-1	-12	0	0	0	0	0	0	0	0	-15
Governments	-24	0	-23	0	0	0	0	0	0	0	0	-24
US dollar	-2	3	-4	0	1	-1	0	0	0	0	3	2
Euro	-98	-5	-54	0	-3	0	0	0	0	0	0	-100
Other currencies	-42	-1	-5	0	-1	0	0	0	0	0	0	-42
<b>Bonds and notes</b>	<b>404</b>	<b>111</b>	<b>174</b>	<b>-1</b>	<b>-1</b>	<b>42</b>	<b>2</b>	<b>6</b>	<b>8</b>	<b>26</b>	<b>-2</b>	<b>444</b>
Financial institutions	231	44	101	0	-1	1	-5	-1	-1	7	0	230
Corporate issuers	117	67	36	-1	1	18	0	5	3	10	0	136
Governments	57	0	37	0	0	24	7	2	6	9	0	80
US dollar	205	122	22	3	11	33	4	5	3	22	12	261
Euro	176	-3	165	-2	-7	4	0	-1	3	2	-8	164
Other currencies	24	-8	-13	-1	-5	5	-1	2	1	3	-6	19
Floating rate	-51	-50	3	0	-12	-4	-3	-1	-1	0	-4	-71
Straight fixed rate	432	149	166	-1	12	46	6	5	8	26	2	492
Equity-related	23	12	5	0	-1	1	-1	1	0	0	0	23
<i>Memo: Announced international equity issuance</i>	<i>201</i>	<i>85</i>	<i>55</i>	<i>15</i>	<i>6</i>	<i>41</i>	<i>1</i>	<i>30</i>	<i>4</i>	<i>7</i>	<i>0</i>	<i>248</i>

**Net international debt securities issuance**
**By sector**

**By currency**


<sup>1</sup> Detailed breakdowns and time series data, including for gross international debt securities issuance, are available at <http://www.bis.org/statistics/secstats.htm> (Tables 11, 12A–D, 13A–B, 14A–B, 15A–B and 17B).



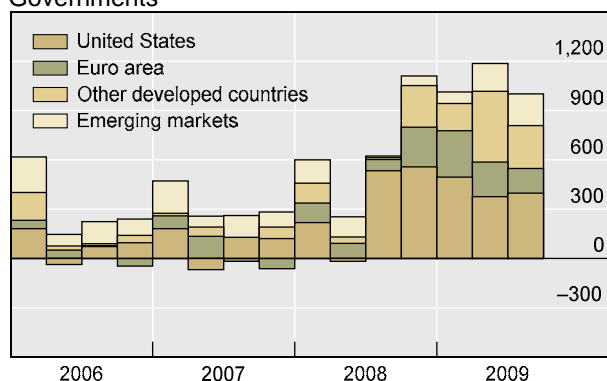
**Table 3B: Domestic debt securities issuance, September 2009<sup>1</sup>**

In billions of US dollars

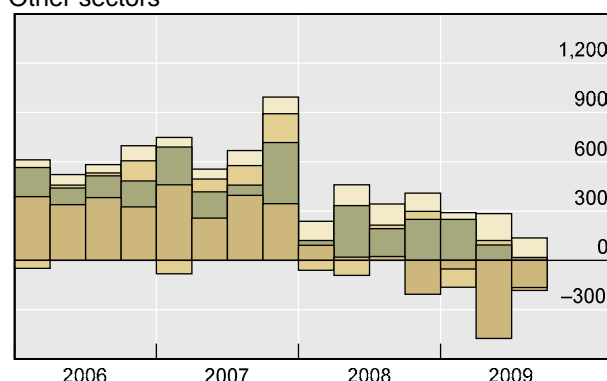
Amounts outstanding											
	All countries	United States	Euro area	France	Germany	Italy	Spain	Other developed	Canada	Japan	United Kingdom
<b>Total issues</b>	<b>64,448</b>	<b>25,105</b>	<b>14,899</b>	<b>3,188</b>	<b>2,927</b>	<b>3,770</b>	<b>2,071</b>	<b>16,797</b>	<b>1,260</b>	<b>11,602</b>	<b>1,566</b>
Governments	33,977	9,152	7,502	1,692	1,561	2,054	704	12,380	866	9,705	1,142
Of which: short-term <sup>2</sup>	9,417	2,651	1,930	460	477	509	171	3,066	214	2,566	145
Financial institutions	23,439	13,130	5,193	1,214	1,020	1,218	636	3,337	260	1,113	402
Of which: short-term <sup>2</sup>	6,982	2,937	1,706	525	970	24	100	1,495	105	372	402
Corporate issuers	7,033	2,822	2,203	283	346	498	731	1,080	134	784	22
Of which: short-term <sup>2</sup>	690	109	250	68	48	2	33	152	10	114	0
Changes in stocks during the quarter											
	All countries	United States	Euro area	France	Germany	Italy	Spain	Other developed	Canada	Japan	United Kingdom
<b>Total issues</b>	<b>954</b>	<b>232</b>	<b>167</b>	<b>-19</b>	<b>25</b>	<b>110</b>	<b>23</b>	<b>244</b>	<b>21</b>	<b>105</b>	<b>68</b>
Governments	1,001	398	149	26	-2	64	34	262	30	125	82
Of which: short-term <sup>3</sup>	61	-14	88	41	17	-10	11	-42	3	-49	-3
Financial institutions	-149	-146	-26	-51	18	10	0	-14	-9	-13	-13
Of which: short-term <sup>3</sup>	-191	-70	-77	-75	14	0	-11	-40	-10	-6	-13
Corporate issuers	102	-19	44	6	9	36	-12	-4	0	-6	-1
Of which: short-term <sup>3</sup>	-56	-22	-8	-4	-3	0	0	-23	-1	-22	0
	Emerging markets	Brazil	China	Chinese Taipei	Czech Republic	India	Malaysia	Mexico	South Africa	South Korea	Turkey
<b>Total issues</b>	<b>7,647</b>	<b>1,227</b>	<b>2,413</b>	<b>211</b>	<b>118</b>	<b>554</b>	<b>180</b>	<b>350</b>	<b>132</b>	<b>1,071</b>	<b>217</b>
Governments	4,942	802	1,416	128	95	492	86	206	81	426	217
Of which: short-term <sup>2</sup>	1,770	328	703	14	51	29	1	90	18	122	11
Financial institutions	1,778	417	698	29	17	45	40	116	30	320	0
Of which: short-term <sup>2</sup>	844	417	65	4	0	45	17	27	5	248	0
Corporate issuers	927	8	299	54	6	16	54	28	21	325	0
Of which: short-term <sup>2</sup>	179	8	53	21	0	16	3	2	1	68	0
	All countries	United States	Euro area	France	Germany	Italy	Spain	Other developed	Canada	Japan	United Kingdom
<b>Total issues</b>	<b>311</b>	<b>50</b>	<b>105</b>	<b>-3</b>	<b>2</b>	<b>35</b>	<b>...</b>	<b>9</b>	<b>5</b>	<b>48</b>	<b>13</b>
Governments	192	53	25	-2	1	34	...	9	3	10	13
Of which: short-term <sup>3</sup>	29	14	-21	-2	0	-2	...	3	0	0	3
Financial institutions	38	-4	50	-1	0	-1	...	-1	1	-6	0
Of which: short-term <sup>3</sup>	-4	-4	0	0	0	-1	...	-3	-1	4	0
Corporate issuers	81	0	30	0	0	2	...	2	1	44	0
Of which: short-term <sup>3</sup>	-3	0	-5	0	0	2	...	0	0	0	0

### Changes in stocks of domestic debt securities

#### Governments



#### Other sectors<sup>4</sup>



Euro area: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Slovakia, Spain; Other developed countries: Australia, Canada, Denmark, Iceland, Japan, New Zealand, Norway, Sweden, Switzerland, the United Kingdom; Emerging markets: Argentina, Brazil, Chile, China, Chinese Taipei, Colombia, Croatia, the Czech Republic, Hong Kong SAR, Hungary, India, Indonesia, Lebanon, Malaysia, Mexico, Pakistan, Peru, the Philippines, Poland, Russia, Singapore, South Africa, South Korea, Thailand, Turkey, Venezuela.

<sup>1</sup> Detailed breakdowns and time series data are available at <http://www.bis.org/statistics/secstats.htm> (Tables 16A–16B and 17A). <sup>2</sup> Issues with a remaining maturity to final repayment of up to one year. <sup>3</sup> Money market instruments. <sup>4</sup> Financial institutions plus corporate issuers.

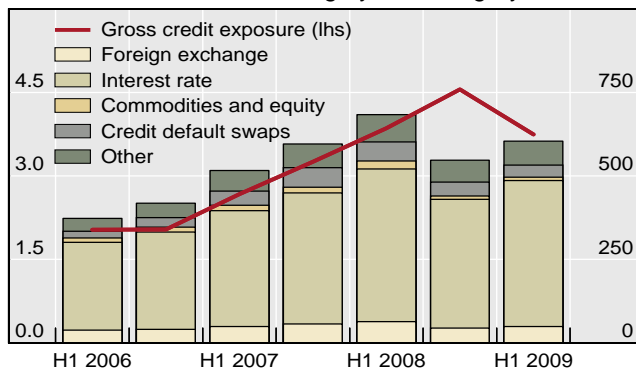
**Table 4: Global OTC derivatives market, end-June 2009<sup>1</sup>**

In billions of US dollars

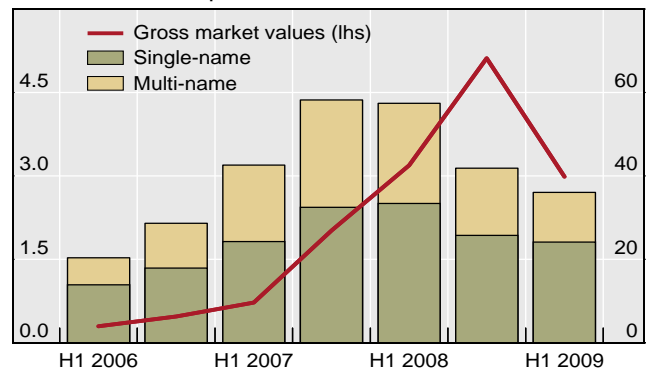
	Forwards and swaps				Options			
	Total	with reporting dealers	with other financial institutions	with non-financial customers	Total	with reporting dealers	with other financial institutions	with non-financial customers
<b>Notional amounts outstanding</b>								
<b>All contracts<sup>2</sup></b>	<b>529,893</b>	<b>179,430</b>	<b>298,471</b>	<b>49,777</b>	<b>74,729</b>	<b>35,088</b>	<b>31,040</b>	<b>6,580</b>
<b>Foreign exchange</b>	<b>38,179</b>	<b>14,033</b>	<b>17,370</b>	<b>6,777</b>	<b>10,596</b>	<b>4,858</b>	<b>4,071</b>	<b>1,666</b>
US dollar	32,521	12,671	14,953	4,898	8,216	3,961	2,985	1,269
Euro	16,794	5,723	7,484	3,587	3,859	1,753	1,297	809
Japanese yen	7,141	3,248	2,826	1,067	4,297	2,106	1,662	529
Pound sterling	5,600	1,780	2,573	1,246	613	233	255	125
Other	14,303	4,644	6,904	2,755	4,206	1,663	1,943	600
Up to one year	23,752	9,270	9,871	4,611	6,551	3,190	2,293	1,068
Over one year	14,427	4,763	7,499	2,165	4,045	1,669	1,779	597
<i>Memo: Exchange-traded<sup>3</sup></i>	136	.	.	.	104	.	.	.
<b>Interest rate</b>	<b>388,684</b>	<b>124,323</b>	<b>229,108</b>	<b>35,253</b>	<b>48,513</b>	<b>23,827</b>	<b>20,961</b>	<b>3,726</b>
US dollar	136,993	45,569	79,202	12,222	17,174	7,590	8,123	1,460
Euro	136,441	41,261	85,662	9,518	24,204	12,607	9,859	1,739
Japanese yen	54,271	18,404	28,508	7,359	3,181	1,990	1,069	121
Pound sterling	30,285	8,174	18,919	3,192	2,306	927	1,177	202
Other	30,694	10,915	16,816	2,964	1,649	712	733	203
Up to one year	150,630	58,058	78,782	13,790	8,513	4,578	3,141	794
Over one year	238,054	66,265	150,326	21,463	40,001	19,249	17,820	2,931
<i>Memo: Exchange-traded<sup>3</sup></i>	18,812	.	.	.	38,921	.	.	.
<b>Equity</b>	<b>1,709</b>	<b>447</b>	<b>979</b>	<b>283</b>	<b>4,910</b>	<b>2,209</b>	<b>2,298</b>	<b>403</b>
<i>Memo: Exchange-traded<sup>3</sup></i>	737	.	.	.	4,569	.	.	.
<b>Commodities</b>	<b>1,950</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>1,779</b>	<b>...</b>	<b>...</b>	<b>...</b>
<b>Credit default swaps</b>	<b>36,046</b>	<b>19,184</b>	<b>15,347</b>	<b>1,516</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
<b>Unallocated</b>	<b>63,325</b>	<b>21,443</b>	<b>35,669</b>	<b>5,949</b>	<b>8,930</b>	<b>4,193</b>	<b>3,709</b>	<b>786</b>
<b>Gross market values</b>								
<b>All contracts</b>	<b>21,825</b>	<b>7,067</b>	<b>13,215</b>	<b>1,543</b>	<b>2,770</b>	<b>1,383</b>	<b>1,134</b>	<b>254</b>
<b>Foreign exchange</b>	<b>2,081</b>	<b>703</b>	<b>942</b>	<b>437</b>	<b>389</b>	<b>190</b>	<b>125</b>	<b>75</b>
US dollar	1,650	609	743	299	312	158	97	57
Euro	917	266	421	230	115	50	34	31
Japanese yen	336	135	136	65	195	110	52	34
Pound sterling	416	132	179	105	18	7	6	5
Other	843	264	405	175	139	55	60	23
<b>Interest rate</b>	<b>14,064</b>	<b>4,031</b>	<b>9,317</b>	<b>716</b>	<b>1,414</b>	<b>728</b>	<b>611</b>	<b>75</b>
US dollar	5,844	1,790	3,759	295	628	309	288	31
Euro	5,629	1,444	3,924	262	625	341	252	32
Japanese yen	743	278	425	39	57	36	19	2
Pound sterling	1,044	229	741	74	74	30	38	6
Other	804	290	469	45	29	12	13	4
<b>Equity</b>	<b>225</b>	<b>58</b>	<b>130</b>	<b>37</b>	<b>654</b>	<b>309</b>	<b>270</b>	<b>75</b>
<b>Credit default swaps</b>	<b>2,987</b>	<b>1,476</b>	<b>1,332</b>	<b>179</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
<b>Unallocated</b>	<b>2,467</b>	<b>799</b>	<b>1,494</b>	<b>174</b>	<b>313</b>	<b>156</b>	<b>128</b>	<b>29</b>

**Global OTC derivatives<sup>4</sup>**

Notional amounts outstanding by risk category



Credit default swaps



<sup>1</sup> 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). <sup>2</sup> Due to incomplete counterparty breakdowns for the commodity derivatives, components do not add up to the total. <sup>3</sup> 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. <sup>4</sup> 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.

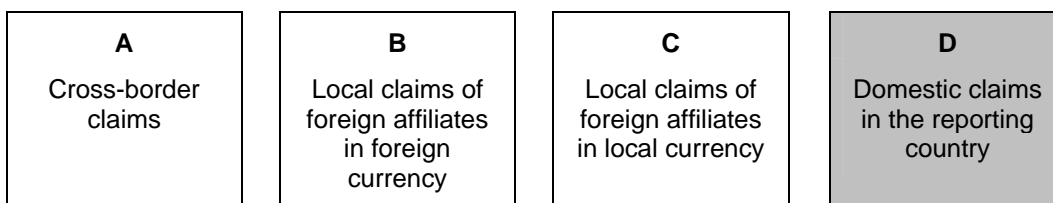
Tables 1A–1B The data in Tables 1A–1B (the locational BIS banking statistics) cover banks' unconsolidated gross international on-balance sheet assets and liabilities. These data are based on the residence of the reporting institution and therefore measure the activities of all banking offices residing 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, Cyprus, Denmark, Finland, Greece, Guernsey, Hong Kong SAR, India, Ireland, Isle of Man, Jersey, Korea, Luxembourg, Macao SAR, Malaysia, Mexico, the Netherlands Antilles, Norway, Panama, Portugal, Singapore, 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 1A provides aggregated figures by residence of banks in all reporting countries. Table 1B 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 <http://www.bis.org/statistics/bankstats.htm>.

Tables 2A–2B 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 2A 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 30 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 2B 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 24 countries which reports both sets of data and comprises Australia, Austria, Belgium, Canada, Chile, Chinese Taipei, Finland, France, Germany, Greece, India, Ireland, Italy, Japan, the Netherlands, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The data in Table 2A cover both foreign and international claims, while Table 2B 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.

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### Types of claims

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***International claims*** (A + B)

***Foreign claims*** (A + B + C)

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

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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 <http://www.bis.org/statistics/breakstables.pdf>. The second quarter data of Brazil has been rolled forward from the first quarter of 2009. The third quarter data of Mexico has been rolled forward from the second quarter of 2009.

Tables 3A–3B The methodology used to compile the international and domestic debt securities statistics and a description of the coverage can be found on pages 13 to 17 of the *Guide to the international financial statistics*, available at <http://www.bis.org/publ/bispap14.htm>.

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. “Governments” comprise central governments, other governments and central banks. “Financial institutions” comprise commercial banks and other financial institutions.

The international debt securities data include “repackaged securities”, for example the new global issues of Argentina, resulting from the April 2005 exchange offer.

Table 4 The data in Table 4 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 <http://www.bis.org/publ/bispap14.htm>.

## Special features in the BIS Quarterly Review

December 2009	Macro stress tests and crises: what can we learn?	R Alfaro & M Drehmann
December 2009	Monetary policy and the risk-taking channel	L Gambacorta
December 2009	Government size and macroeconomic stability	M S Mohanty & F Zampolli
December 2009	Issues and developments in loan loss provisioning: the case of Asia	S Angklomkiew, J George & F Packer
December 2009	Dollar appreciation in 2008: safe haven, carry trades and dollar shortage	P McGuire & R McCauley
September 2009	The future of securitisation: how to align incentives	I Fender & J Mitchell
September 2009	Central counterparties for over-the-counter derivatives	S Cecchetti, J Gyntelberg & M Hollanders
September 2009	The cost of equity for global banks: a CAPM perspective from 1990 to 2009	M King
September 2009	The systemic importance of financial institutions	N Tarashev, C Borio & K Tsatsaronis
June 2009	Government debt management at low interest rates	R McCauley & K Ueda
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March 2009	Assessing the risk of banking crises - revisited	C Borio & M Drehmann
March 2009	The US dollar shortage in global banking	P McGuire & G von Peter
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September 2008	Reducing foreign exchange settlement risk	R Lindley
September 2008	The ABX: how do the markets price subprime mortgage risk?	I Fender & M Scheicher
June 2008	International banking activity amidst the turmoil	P McGuire & G von Peter
June 2008	Managing international reserves: how does diversification affect financial costs?	S Ramaswamy
June 2008	Credit derivatives and structured credit: the nascent markets of Asia and the Pacific	E Remolona & I Shim
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March 2008	The spillover of money markets turbulence to FX swap and cross-currency swap markets	N Baba & F Packer
March 2008	Interbank rate fixings during the recent turmoil	J Gyntelberg & P Wooldridge
March 2008	What drives interbank rates? Evidence from the Libor panel	FL Michaud & C Upper
March 2008	Monetary operations and the financial turmoil	C Borio & W Nelson

# Recent BIS publications<sup>1</sup>

## BIS Papers

### **Globalisation, labour markets and international adjustment - Essays in honour of Palle S Andersen** January 2010

<http://www.bis.org/publ/bppdf/bispap50.htm>

This book celebrates the life and work of Palle Schelde Andersen, a Danish economist who was for over two decades the main macroeconomist of the Bank for International Settlements (BIS). The book contains the papers and proceedings of a conference that was held at the BIS in Mr Andersen's honour on 3 December 2007. One of his papers, co-authored with Karen Johnson, on the role of emerging Asia in the build-up of global current account imbalances, is published for the first time. The theme of the conference reflects Mr Andersen's long-standing research interest in wage determination and inflation dynamics. The papers included in the volume analyse the macroeconomic effects of increased flows of labour across borders; the effect on global inflation of the integration of labour from emerging markets and former command economies into the global market economy; and the impact of globalisation on the inflation process and the transmission mechanism of monetary policy.

### **Monetary policy and the measurement of inflation: prices, wages and expectations** January 2010

<http://www.bis.org/publ/bppdf/bispap49.htm>

Issues of inflation measurement are fundamental to the conduct of monetary policy. Price indices form the foundation of central bank policy frameworks around the world. They serve as guides to decision-making, as well as providing the primary mechanism for holding independent policymakers accountable. To shed some light on the role of inflation measurement, the annual meeting of Deputy Governors of emerging market economies (EMEs), held in Basel on 5-6 February 2009, explored three issues: price indices used by central banks; the role of wages and productivity in inflation policy; and the measurement and assessment of inflation expectations. This volume contains contributions by senior central bankers and BIS staff. The issues are summarised in an overview chapter by Stephen Cecchetti.

## Working Papers

### **The Assessing the systemic risk of a heterogeneous portfolio of banks during the recent financial crisis**

Xin Huang, Hao Zhou and Haibin Zhu

<http://www.bis.org/publ/work296.htm>

This paper extends the approach of measuring and stress-testing the systemic risk of a banking sector in Huang, Zhou, and Zhu (2009) to identifying various sources of financial instability and to allocating systemic risk to individual financial institutions. The systemic risk measure, defined as the insurance cost to protect against distressed losses in a banking system, is a summary indicator of market perceived risk that reflects expected default risk of individual banks, risk premia as well as correlated defaults. An application of our methodology to a portfolio of twenty-two major banks in Asia and the Pacific illustrates the dynamics of the spillover effects of the global financial crisis to the region. The increase in the perceived systemic risk, particularly after the failure of Lehman Brothers, was mainly driven by the heightened risk aversion and the squeezed liquidity. Further analysis, which is based on our proposed approach to quantifying the marginal contribution of individual banks to the systemic risk, suggests that "too-big-to-fail" is a valid concern from a macroprudential perspective of bank regulation.

### **Consumption and real exchange rates in professional forecasts**

Michael B Devereux, Gregor W Smith and James Yetman

<http://www.bis.org/publ/work295.htm>

Standard models of international risk sharing with complete asset markets predict a positive association between relative consumption growth and real exchange-rate depreciations across countries. The striking lack of evidence for this link - the consumption/real-exchange-rate anomaly or Backus-Smith puzzle - has prompted research on risk-sharing indicators with incomplete asset markets. That research generally implies that the association holds in forecasts, rather than realizations. Using professional forecasts for 28 countries for 1990-2008 we find no such association, thus deepening the puzzle. Independent evidence on the weak link between forecasts for consumption and real interest rates suggests that the presence of 'hand-to-mouth' consumers may help to explain the evidence.

### **The risk of relying on reputational capital: a case study of the 2007 failure of New Century Financial** Allen B Frankel

<http://www.bis.org/publ/work294.htm>

The quality of newly originated subprime mortgages had been visibly deteriorating for some time before the window for such loans was shut in 2007. Nevertheless, a bankruptcy court's directed ex post examination of New Century Financial, one of the largest originators of subprime mortgages, discovered no change, over time, in how that firm went about its

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<sup>1</sup> 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](http://www.bis.org)).

business. This paper employs the court examiner's findings in a critical review of the procedures used by various agents involved in the origination and securitisation of subprime mortgages. A contribution of this paper is its elaboration of the choices and incentives faced by the various types of institutions involved in those linked processes of origination and securitisation. It highlights the limited roles played by the originators of subprime loans in screening borrowers and in bearing losses on defective loans that had been sold to securitisers of pooled loan packages (ie, mortgage-backed securities). It also illustrates the willingness of the management of those institutions that became key players in that market to put their reputations with fixed-income investor clients in jeopardy. What is perplexing is that such risk exposures were accepted by investing firms that had the wherewithal and knowledge to appreciate the overall paucity of due diligence in the loan origination processes. This observation, in turn, points to the conclusion that the subprime episode is a case in which reputational capital, a presumptively effective motivator of market discipline, was not an effective incentive device.

### **Ten propositions about liquidity crises**

**Claudio Borio**

<http://www.bis.org/publ/work293.htm>

What are liquidity crises? And what can be done to address them? This short paper brings together some personal reflections on this issue, largely based on previous work. In the process, it questions a number of commonly held beliefs that have become part of the conventional wisdom. The paper is organised around ten propositions that cover the following issues: the distinction between idiosyncratic and systematic elements of liquidity crises; the growing reliance on funding liquidity in a market-based financial system; the role of payment and settlement systems; the need to improve liquidity buffers; the desirability of putting in place (variable) speed limits in the financial system; the proper role of (retail) deposit insurance schemes; the double-edged sword nature of liquidity provision by central banks; the often misunderstood role of "monetary base" injections in addressing liquidity disruptions; the need to develop principles for the provision of central bank liquidity; and the need to reconsider the preventive role of monetary (interest rate) policy.

### **Unconventional monetary policies: an appraisal**

**Claudio Borio and Piti Disyatat**

<http://www.bis.org/publ/work292.htm>

The recent global financial crisis has led central banks to rely heavily on "unconventional" monetary policies. This alternative approach to policy has generated much discussion and a heated and at times confusing debate. The debate has been complicated by the use of different definitions and conflicting views of the mechanisms at work. This paper sets out a framework for classifying and thinking about such policies, highlighting how they can be viewed within the overall context of monetary policy implementation. The framework clarifies the differences among the various forms of unconventional monetary policy, provides a systematic characterisation of the wide range of central bank responses to the crisis, helps to underscore the channels of transmission, and identifies some of the main policy challenges. In the process, the paper also addresses a number of contentious analytical issues, notably the role of bank reserves and their inflationary consequences.

## **Basel Committee on Banking Supervision**

### **Vendor models for credit risk measurement and management**

**February 2010**

[http://www.bis.org/publ/bcbs\\_wp17.htm](http://www.bis.org/publ/bcbs_wp17.htm)

A number of vendors produce and sell products that are designed to support credit-risk measurement and management functions within financial institutions. Such products may comprise risk measurement models, data, or systems developed by external commercial entities. Interest in such vendor products has grown recently, as financial institutions seek to meet new requirements such as the internal ratings-based (IRB) approaches of the Basel II framework.

Even though individual institutions have primary responsibility for assessing the suitability of vendor products as part of their validation processes, supervisors have a natural interest in understanding the details of these products as well. Supervisors need to assess whether the use of the model, as opposed to the model itself, is in accordance with regulatory expectations and requirements.

Against this backdrop, the Research Task Force of the Basel Committee initiated a review of selected vendor credit-risk products, focusing on models that could be used to estimate probability of default, loss-given-default, or exposure at default, and models that could be used to assign ratings or produce credit scores, for wholesale or retail credit exposures. This paper provides a high-level discussion of certain observations from the RTF review of vendor products for credit risk measurement and management

### **Microfinance activities and the Core Principles for Effective Banking Supervision - consultative document**

**February 2010**

<http://www.bis.org/publ/bcbs167.htm>

The Basel Committee on Banking Supervision has issued for consultation a report that contains the guidance for the application of the Basel Core Principles for Effective Banking Supervision (BCP) to microfinance activities, and the range of practices on regulating and supervising microfinance activities.

The report is based on a careful analysis of key regulatory and supervisory issues relevant to microfinance activities as identified through a questionnaire conducted by the Basel Committee, as well as secondary research to provide a more comprehensive snapshot of current practices and experience in countries from different geographical regions and income levels. The main conclusions from the report essentially illustrate the general applicability of the BCP to the supervision of microfinance activities and consistently highlight the following four key considerations on the need to:

- a) allocate supervisory resources efficiently, especially where depository microfinance does not represent a large portion of the financial system but comprises a large number of small institutions;
- b) develop specialised knowledge within the supervisory team to effectively evaluate the risks of microfinance activities, particularly microlending;
- c) recognise proven control and managerial practices that may differ from traditional banking but may suit the microfinance business both in small and large institutions; and
- d) achieve clarity in the regulations with regard to permitted microfinance activities to different institutional types, while retaining flexibility to deal with individual cases.

### **Compensation Principles and Standards Assessment Methodology** January 2010

<http://www.bis.org/publ/bcbs166.htm>

The Basel Committee on Banking Supervision's Compensation Principles and Standards Assessment Methodology aims to guide supervisors in reviewing individual firms' compensation practices and assessing their compliance with the FSB Principles for Sound Compensation Practices and their implementation standards. It seeks to foster supervisory approaches that are effective in promoting sound compensation practices at banks and help support a level playing field.

### **Review of the Differentiated Nature and Scope of Financial Regulation - Key Issues and Recommendations** January 2010

<http://www.bis.org/publ/joint24.htm>

This report analyses key issues arising from the differentiated nature of financial regulation in the international banking, insurance, and securities sectors. It also addresses gaps arising from the scope of financial regulation as it relates to different financial activities, with a particular focus on certain unregulated or lightly regulated entities or activities. The Joint Forum prepared this report at the request of the G-20 to help identify potential areas where systemic risks may not be fully captured in the current regulatory framework and to make recommendations on needed improvements to strengthen regulation of the financial system.

### **International framework for liquidity risk measurement, standards and monitoring - consultative document** December 2009

<http://www.bis.org/publ/bcbs165.htm>

Throughout the global financial crisis which began in mid-2007, many banks struggled to maintain adequate liquidity. Unprecedented levels of liquidity support were required from central banks in order to sustain the financial system and even with such extensive support a number of banks failed, were forced into mergers or required resolution. These circumstances and events were preceded by several years of ample liquidity in the financial system, during which liquidity risk and its management did not receive the same level of scrutiny and priority as other risk areas. The crisis illustrated how quickly and severely liquidity risks can crystallise and certain sources of funding can evaporate, compounding concerns related to the valuation of assets and capital adequacy.

A key characteristic of the financial crisis was the inaccurate and ineffective management of liquidity risk. In recognition of the need for banks to improve their liquidity risk management and control their liquidity risk exposures, the Basel Committee on Banking Supervision ("the Committee") issued Principles for Sound Liquidity Risk Management and Supervision in September 2008. These sound principles provide consistent supervisory expectations on the key elements of a robust framework for liquidity risk management at banking organisations. Such elements include:

- board and senior management oversight;
- the establishment of policies and risk tolerance;
- the use of liquidity risk management tools such as comprehensive cash flow forecasting, limits and liquidity scenario stress testing;
- the development of robust and multifaceted contingency funding plans; and the maintenance of a sufficient cushion of high quality liquid assets to meet contingent liquidity needs.

Supervisors, for their part, are expected to assess both the adequacy of a bank's liquidity risk management framework and its liquidity risk exposure. Supervisors are also expected to take prompt action to address the bank's risk management deficiencies or excess exposure in order to protect depositors and enhance the overall stability of the financial system.

To reinforce these supervisory objectives and efforts, the Committee has recently focused on further elevating the resilience of internationally active banks to liquidity stresses across the globe, as well as increasing international harmonisation of liquidity risk supervision. The Committee has developed two internationally consistent regulatory standards for liquidity risk supervision as a cornerstone of a global framework to strengthen liquidity risk management and supervision. The standards also respond to recommendations of the G20 that called for the Committee to "...enhance tools, metrics and benchmarks that supervisors can use to assess the resilience of banks' liquidity cushions and constrain any weakening in liquidity maturity profiles, diversity of funding sources, and stress testing practices". Furthermore, the G20 recommended that "...the BCBS and national authorities should develop and agree by 2010 a global framework for promoting stronger liquidity buffers at financial institutions, including cross-border institutions."

It should be stressed that the standards establish minimum levels of liquidity for internationally active banks. Banks are expected to meet these standards as well as adhere to all the principles set out in the September 2008 Sound Principles document mentioned above. As under the Basel Accord (for capital adequacy), national authorities are free to adopt arrangements that set higher levels of minimum liquidity.

To further strengthen and promote consistency in international liquidity risk supervision, the Committee has also developed a minimum set of monitoring tools to be used in the ongoing monitoring of the liquidity risk exposures of cross-border institutions and in communicating these exposures among home and host supervisors.



## **Strengthening the resilience of the banking sector - consultative document December 2009**

<http://www.bis.org/publ/bcbs164.htm>

This consultative document presents the Basel Committee's proposals to strengthen global capital and liquidity regulations with the goal of promoting a more resilient banking sector. The objective of the Basel Committee's reform package is to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy.

The proposals set out in this paper are a key element of the Committee's comprehensive reform package to address the lessons of the crisis. Through its reform package, the Committee also aims to improve risk management and governance as well as strengthen banks' transparency and disclosures. Moreover, the reform package includes the Committee's efforts to strengthen the resolution of systemically significant cross-border banks. The Committee's reforms are part of the global initiatives to strengthen the financial regulatory system that have been endorsed by the Financial Stability Board (FSB) and the G20 Leaders.

A strong and resilient banking system is the foundation for sustainable economic growth, as banks are at the centre of the credit intermediation process between savers and investors. Moreover, banks provide critical services to consumers, small and medium-sized enterprises, large corporate firms and governments who rely on them to conduct their daily business, both at a domestic and international level.

One of the main reasons the economic and financial crisis became so severe was that the banking sectors of many countries had built up excessive on- and off-balance sheet leverage. This was accompanied by a gradual erosion of the level and quality of the capital base. At the same time, many banks were holding insufficient liquidity buffers. The banking system therefore was not able to absorb the resulting systemic trading and credit losses nor could it cope with the reintermediation of large off-balance sheet exposures that had built up in the shadow banking system. The crisis was further amplified by a procyclical deleveraging process and by the interconnectedness of systemic institutions through an array of complex transactions. During the most severe episode of the crisis, the market lost confidence in the solvency and liquidity of many banking institutions. The weaknesses in the banking sector were transmitted to the rest of the financial system and the real economy, resulting in a massive contraction of liquidity and credit availability. Ultimately the public sector had to step in with unprecedented injections of liquidity, capital support and guarantees, exposing the taxpayer to large losses.

The effect on banks, financial systems and economies at the epicentre of the crisis was immediate. However, the crisis also spread to a wider circle of countries around the globe. For these countries the transmission channels were less direct, resulting from a severe contraction in global liquidity, cross border credit availability and demand for exports. Given the scope and speed with which the current and previous crises have been transmitted around the globe, it is critical that all countries raise the resilience of their banking sectors to both internal and external shocks.

To address the market failures revealed by the crisis, the Committee is introducing a number of fundamental reforms to the international regulatory framework. The reforms strengthen bank-level, or microprudential, regulation, which will help raise the resilience of individual banking institutions to periods of stress. The reforms also have a macroprudential focus, addressing system wide risks that can build up across the banking sector as well as the procyclical amplification of these risks over time. Clearly these two micro and macroprudential approaches to supervision are interrelated, as greater resilience at the individual bank level reduces the risk of system wide shocks.

## **Committee on Payment and Settlement Systems**

### **Statistics on payment and settlement systems in selected countries - Figures for 2008 December 2009**

<http://www.bis.org/publ/cpss88.htm>

This is an annual publication that provides data on payments and payment systems in the CPSS countries.

This version of the statistical update contains data for 2008 and earlier years. There are detailed tables for each individual country as well as a number of comparative tables.

A preliminary version was published in September 2009

## **Speeches**

### **Financial stability: 10 questions and about seven answers**

Speech delivered by Mr Jaime Caruana, General Manager of the BIS, at the 50th Anniversary Symposium of the Reserve Bank of Australia, Sydney, 9 February 2010.

<http://www.bis.org/speeches/sp100209.htm>

The speech poses questions about, inter alia, the stability of markets, sufficiency of private risk control and capital requirements, policies towards systemic risk, their relationship to monetary policy and international cooperation. Three points are made. First, financial stability requires not only that bank regulation be improved at the micro level but also that, at the macroprudential level, margins of safety be built up in good times and that large and connected firms internalise their contribution to systemic risk. Second, financial stability requires that macroeconomic policies, including monetary policy, play a role. Finally, international cooperation is vital to maintain financial stability.

### **Unwinding public interventions after the crisis**

Speech by Hervé Hannoun, Deputy General Manager of the Bank for International Settlements, at the IMF High-Level Conference on "Unwinding Public Interventions - Preconditions and Practical Considerations", Washington DC, 3 December 2009.

<http://www.bis.org/speeches/sp091208.htm>

The "leverage-led growth model" – a combination of excessive leverage in the financial system, overindebtedness of households, low interest rates and global imbalances – was at the heart of the crisis. But the paradox is that the policies that have been adopted to remedy the crisis consist, all in all, of even more of the same: borrowing, debt, leverage. This raises questions about the risk of overcalibrated stimulus. This in turn has a bearing on the issue of the timing and speed of the unwinding of crisis-related public interventions. Experience suggests that the biggest risk is exiting too late and too slowly or, in the case of fiscal policy, not exiting at all. Finally, the paper discusses the areas where international coordination of unwinding is essential.

### **Unconventional monetary policies in time of crisis**

SUERF Annual Lecture delivered by Mr Jaime Caruana, General Manager of the BIS, Brussels, 16 November 2009.

<http://www.bis.org/speeches/sp090911.htm>

Unconventional monetary policy reshapes the balance sheet of the central bank as a result of efforts to make bank funding and other money markets function better, to restore credit flows, to reduce credit or term spreads or to boost bank reserves. These efforts are distinct from efforts to target a short-term policy rate. Implementing and exiting from such policies poses a number of practical challenges. While central banks are likely to retain some features of recent innovations in their operating procedures associated with unconventional monetary policy, they are likely to use such policies only in exceptional circumstances.