

# 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 43 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 55 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, June 2010<sup>1</sup>**

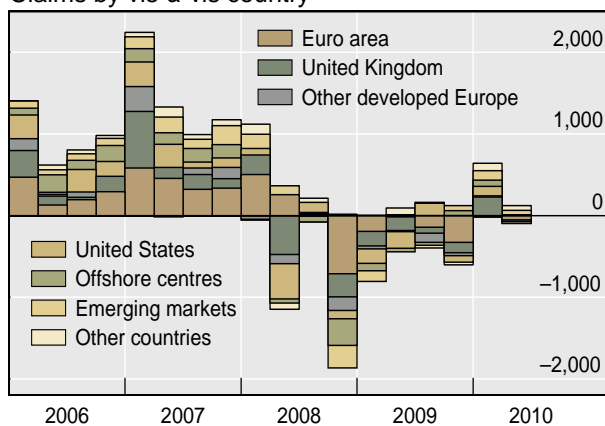
In billions of US dollars

	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>24,832</b>	<b>4,035</b>	<b>2,999</b>	<b>462</b>	<b>1,217</b>	<b>787</b>	<b>533</b>	<b>32,430</b>
<b>Total cross-border claims</b>	<b>22,126</b>	<b>3,619</b>	<b>2,525</b>	<b>459</b>	<b>908</b>	<b>705</b>	<b>453</b>	<b>28,835</b>
Loans	15,674	2,993	1,980	420	696	549	315	20,943
Securities	4,947	501	320	19	122	82	97	5,853
Claims on banks	14,484	2,332	1,261	183	581	357	141	18,556
Claims on non-banks	7,643	1,288	1,263	276	328	348	312	10,279
US dollar	8,371	2,450	1,093	268	319	201	305	11,980
Euro	9,537	303	443	78	43	303	19	10,397
<b>Foreign currency claims on residents</b>	<b>2,706</b>	<b>416</b>	<b>474</b>	<b>4</b>	<b>308</b>	<b>82</b>	<b>80</b>	<b>3,596</b>
<b>Estimated exchange rate adjusted changes during the quarter<sup>2</sup></b>								
<b>Total claims</b>	<b>-209</b>	<b>41</b>	<b>93</b>	<b>-3</b>	<b>72</b>	<b>-5</b>	<b>28</b>	<b>-7</b>
<b>Total cross-border claims</b>	<b>-105</b>	<b>10</b>	<b>53</b>	<b>-3</b>	<b>50</b>	<b>-14</b>	<b>20</b>	<b>26</b>
Loans	66	12	52	-2	47	-7	13	157
Securities	-159	-6	5	-1	3	-4	7	-155
Claims on banks	-33	27	53	1	37	3	11	112
Claims on non-banks	-72	-18	1	-4	13	-17	9	-86
US dollar	-123	3	32	-2	22	-5	18	-81
Euro	127	1	6	4	1	-2	2	188
<b>Foreign currency claims on residents</b>	<b>-104</b>	<b>31</b>	<b>40</b>	<b>0</b>	<b>22</b>	<b>9</b>	<b>8</b>	<b>-33</b>
<b>Amounts outstanding</b>								
<b>Total liabilities</b>	<b>20,586</b>	<b>5,020</b>	<b>2,532</b>	<b>708</b>	<b>994</b>	<b>373</b>	<b>457</b>	<b>31,065</b>
<b>Total cross-border liabilities</b>	<b>17,835</b>	<b>4,288</b>	<b>2,022</b>	<b>701</b>	<b>656</b>	<b>279</b>	<b>387</b>	<b>27,073</b>
Deposits	15,654	4,159	1,949	692	623	276	358	22,140
Securities	1,261	95	21	4	11	0	6	3,762
Liabilities to banks	13,339	3,064	1,205	448	414	192	151	19,990
Liabilities to non-banks	4,496	1,224	818	253	241	87	237	7,084
US dollar	7,254	2,781	1,084	418	254	113	299	12,040
Euro	7,134	500	336	148	47	106	36	8,666
<b>Foreign currency liabilities to residents</b>	<b>2,750</b>	<b>731</b>	<b>510</b>	<b>7</b>	<b>339</b>	<b>94</b>	<b>70</b>	<b>3,991</b>
<b>Estimated exchange rate adjusted changes during the quarter<sup>2</sup></b>								
<b>Total liabilities</b>	<b>108</b>	<b>-41</b>	<b>-31</b>	<b>-14</b>	<b>4</b>	<b>-34</b>	<b>13</b>	<b>8</b>
<b>Total cross-border liabilities</b>	<b>136</b>	<b>-74</b>	<b>-32</b>	<b>-13</b>	<b>7</b>	<b>-32</b>	<b>7</b>	<b>2</b>
Deposits	105	-79	-37	-15	4	-32	6	7
Securities	4	2	2	1	2	0	-1	-99
Liabilities to banks	76	-37	-51	-27	3	-30	3	-17
Liabilities to non-banks	60	-36	19	14	3	-2	4	19
US dollar	-65	-59	-32	-14	-6	-15	3	-221
Euro	203	-27	2	4	11	-14	1	207
<b>Foreign currency liabilities to residents</b>	<b>-28</b>	<b>32</b>	<b>1</b>	<b>0</b>	<b>-3</b>	<b>-2</b>	<b>7</b>	<b>6</b>

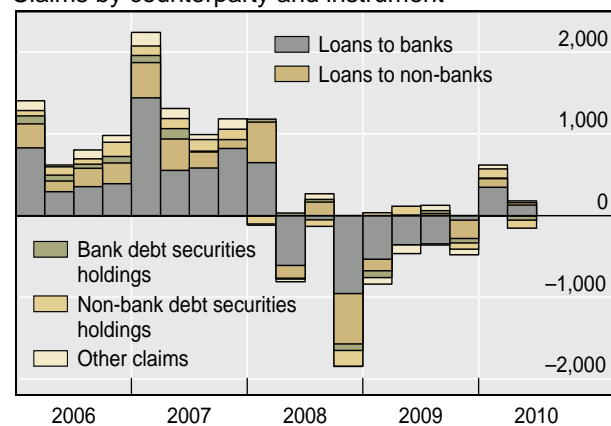
**Cross-border positions**

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.

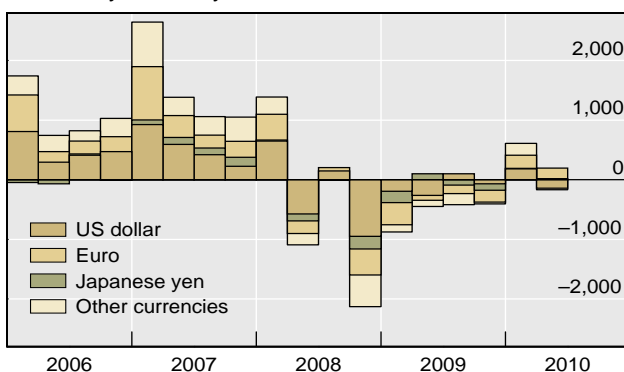
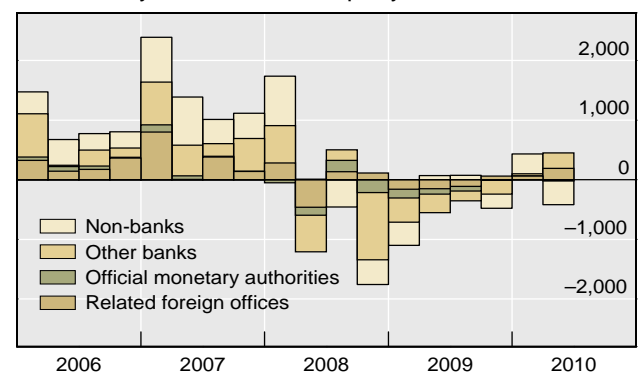
**Table 1B: International positions of banks by nationality of head office, June 2010<sup>1</sup>**

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>3,984</b>	<b>4,313</b>	<b>929</b>	<b>1,377</b>	<b>789</b>	<b>2,376</b>	<b>4,243</b>	<b>3,317</b>	<b>3,900</b>	<b>1,056</b>	<b>32,309</b>
on banks	2,598	2,388	551	861	443	1,532	2,515	1,324	2,750	545	19,119
on related foreign offices	1,034	1,272	221	364	295	741	1,228	580	1,685	157	9,392
on other banks	1,539	1,096	331	496	148	778	1,260	744	1,063	369	9,601
on official monetary institutions	25	20	0	1	0	14	26	0	3	20	126
on non-banks	1,386	1,924	378	516	346	844	1,727	1,993	1,150	511	13,190
US dollar	1,307	1,348	171	384	279	1,159	1,807	1,669	2,768	725	13,286
Euro	1,929	2,260	666	699	347	567	1,474	480	540	95	10,943
Other currencies	748	705	92	295	163	651	962	1,167	593	236	8,080
<b>Estimated exchange rate adjusted changes during the quarter<sup>2</sup></b>											
<b>Total claims</b>	<b>-124</b>	<b>-1</b>	<b>6</b>	<b>-469</b>	<b>-110</b>	<b>1</b>	<b>364</b>	<b>139</b>	<b>105</b>	<b>17</b>	<b>25</b>
on banks	-151	26	-14	-136	-71	16	310	61	82	20	274
on related foreign offices	-61	25	-25	-55	-49	15	215	21	-41	28	204
on other banks	-86	-8	10	-80	-22	1	100	41	125	-9	65
on official monetary institutions	-4	9	0	-2	0	1	-6	0	-3	1	5
on non-banks	27	-26	20	-333	-39	-15	54	78	23	-3	-249
US dollar	-84	-23	-29	-152	-54	-38	86	60	43	13	-143
Euro	-31	37	33	-223	-41	47	219	12	59	2	176
Other currencies	-10	-15	2	-94	-15	-8	59	66	3	2	-8
<b>Amounts outstanding</b>											
<b>Total liabilities</b>	<b>3,731</b>	<b>3,338</b>	<b>913</b>	<b>1,472</b>	<b>864</b>	<b>2,598</b>	<b>4,226</b>	<b>1,817</b>	<b>4,460</b>	<b>1,151</b>	<b>30,984</b>
to banks	2,492	2,376	632	1,070	505	1,522	2,188	1,127	2,426	637	18,725
to related foreign offices	1,036	1,358	198	360	253	877	1,070	509	1,629	116	9,072
to other banks	1,356	946	404	673	224	629	1,000	589	653	508	8,928
to official monetary institutions	100	73	29	37	29	16	118	29	144	14	725
to non-banks	1,239	961	281	402	359	1,076	2,038	690	2,034	514	12,259
US dollar	1,326	1,334	168	476	313	1,216	1,502	973	3,433	732	13,750
Euro	1,627	1,234	637	602	372	662	1,356	255	444	111	9,232
Other currencies	779	770	107	394	179	720	1,367	590	584	308	8,002
<b>Estimated exchange rate adjusted changes during the quarter<sup>2</sup></b>											
<b>Total liabilities</b>	<b>-143</b>	<b>74</b>	<b>-12</b>	<b>-392</b>	<b>-105</b>	<b>-25</b>	<b>293</b>	<b>94</b>	<b>113</b>	<b>33</b>	<b>33</b>
to banks	-130	44	-17	144	-84	20	239	56	85	35	431
to related foreign offices	-84	33	5	-71	-50	-13	201	35	4	13	189
to other banks	-37	11	-18	212	-27	31	40	30	69	28	261
to official monetary institutions	-8	1	-3	3	-7	2	-1	-9	12	-7	-19
to non-banks	-13	30	5	-536	-21	-45	54	38	28	-1	-398
US dollar	-109	49	-44	-122	-75	-31	54	37	47	13	-224
Euro	9	39	36	-188	-9	3	205	10	45	11	211
Other currencies	-42	-15	-4	-83	-21	3	34	47	21	10	46

**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, June 2010<sup>1</sup>**

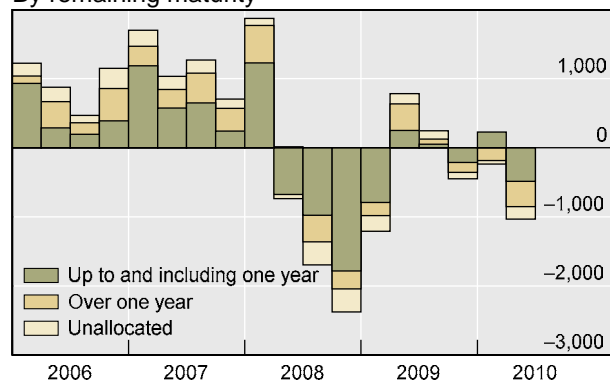
Amounts outstanding, in billions of US dollars

	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>22,423</b>	<b>5,397</b>	<b>9,608</b>	<b>1,024</b>	<b>2,174</b>	<b>4,437</b>	<b>591</b>	<b>1,541</b>	<b>1,255</b>	<b>1,050</b>	<b>29,127</b>
<b>International claims</b>	<b>14,522</b>	<b>2,498</b>	<b>7,160</b>	<b>583</b>	<b>1,718</b>	<b>2,523</b>	<b>388</b>	<b>978</b>	<b>736</b>	<b>421</b>	<b>18,855</b>
Up to and including one year	7,390	885	3,339	475	820	1,248	186	617	257	190	9,477
Over one year	4,887	981	2,710	70	577	1,040	183	250	419	189	6,537
Unallocated by maturity	2,246	633	1,111	38	321	235	20	112	61	43	2,840
<b>Local currency claims</b>	<b>7,901</b>	<b>2,899</b>	<b>2,449</b>	<b>442</b>	<b>456</b>	<b>1,913</b>	<b>203</b>	<b>563</b>	<b>519</b>	<b>629</b>	<b>10,272</b>
<b>Local currency liabilities</b>	<b>5,977</b>	<b>2,520</b>	<b>1,718</b>	<b>321</b>	<b>420</b>	<b>1,402</b>	<b>188</b>	<b>395</b>	<b>317</b>	<b>502</b>	<b>7,801</b>
<b>Unadjusted changes during the quarter<sup>2</sup></b>											
<i>Foreign claims</i>	-1,111	-22	-910	50	11	-74	-18	40	-101	5	-1,175
<i>International claims</i>	-1,011	-8	-814	25	1	-22	-12	37	-47	0	-1,034
<i>Local currency claims</i>	-99	-14	-96	25	10	-52	-6	3	-55	6	-140
<i>Local currency liabilities</i>	-212	-8	-149	7	-4	-44	-9	-3	-37	5	-260
<b>Foreign claims</b>											
<b>Domestically owned banks (total)</b>	<b>18,864</b>	<b>5,140</b>	<b>7,765</b>	<b>757</b>	<b>2,117</b>	<b>4,162</b>	<b>551</b>	<b>1,393</b>	<b>1,214</b>	<b>1,003</b>	<b>25,230</b>
Euro area	9,072	1,746	4,718	231	487	1,986	209	293	975	509	11,587
Switzerland	1,330	627	340	84	160	127	23	60	16	29	1,623
United Kingdom	2,570	1,146	1,021	129	529	748	212	370	48	118	3,867
Japan	1,806	912	497	0	412	256	30	159	19	47	2,474
United States	1,846	0	684	287	302	629	52	310	58	209	2,778
Other countries <sup>3</sup>	2,241	707	505	25	226	417	25	202	98	92	2,901
<b>Other foreign banks</b>	<b>3,559</b>	<b>258</b>	<b>1,843</b>	<b>268</b>	<b>58</b>	<b>274</b>	<b>40</b>	<b>148</b>	<b>41</b>	<b>46</b>	<b>3,897</b>
<b>International claims, all maturities</b>											
<b>Domestically owned banks (total)</b>	<b>10,963</b>	<b>2,240</b>	<b>5,317</b>	<b>315</b>	<b>1,661</b>	<b>2,249</b>	<b>348</b>	<b>831</b>	<b>695</b>	<b>375</b>	<b>14,958</b>
Euro area	5,409	755	3,041	100	438	1,030	149	213	517	151	6,919
Switzerland	656	134	289	42	151	101	20	49	15	17	913
United Kingdom	1,199	416	596	58	256	304	88	151	34	32	1,780
Japan	1,519	695	474	0	381	208	30	112	19	46	2,107
United States	1,223	0	592	103	261	335	38	179	35	83	1,820
Other countries <sup>3</sup>	957	239	324	14	173	271	25	126	76	45	1,419
<b>Other foreign banks</b>	<b>3,559</b>	<b>258</b>	<b>1,843</b>	<b>268</b>	<b>58</b>	<b>274</b>	<b>40</b>	<b>148</b>	<b>41</b>	<b>46</b>	<b>3,897</b>
<b>International claims, short-term</b>											
<b>Domestically owned banks (total)</b>	<b>4,971</b>	<b>775</b>	<b>2,215</b>	<b>214</b>	<b>784</b>	<b>1,086</b>	<b>161</b>	<b>516</b>	<b>239</b>	<b>169</b>	<b>6,860</b>
Euro area	2,283	339	1,027	42	185	380	58	104	158	61	2,852
Switzerland	404	69	170	27	98	58	15	27	10	7	563
United Kingdom	575	167	306	39	134	168	41	92	21	14	882
Japan	193	78	57	0	41	74	7	56	5	6	309
United States	960	0	447	95	232	284	29	164	26	64	1,475
Other countries <sup>3</sup>	555	121	210	11	94	121	10	73	21	17	778
<b>Other foreign banks</b>	<b>2,418</b>	<b>110</b>	<b>1,123</b>	<b>261</b>	<b>35</b>	<b>163</b>	<b>25</b>	<b>100</b>	<b>17</b>	<b>20</b>	<b>2,617</b>

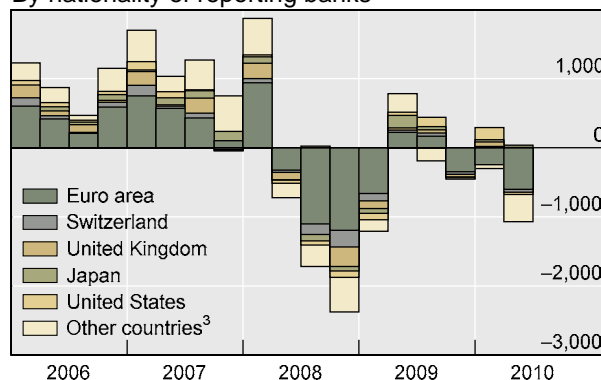
**International claims of BIS reporting banks on an immediate borrower basis<sup>4</sup>**

 Changes in stocks<sup>2</sup>

By remaining maturity



By nationality of reporting banks



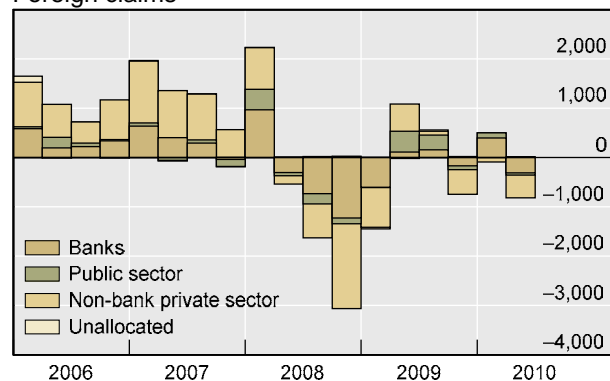
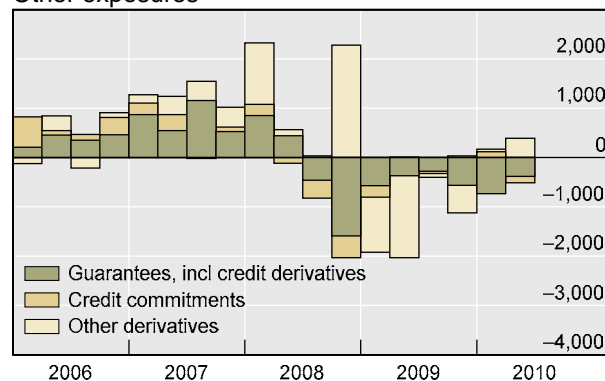
<sup>1</sup> Detailed breakdowns and time series data are available at <http://www.bis.org/statistics/consstats.htm> and <http://www.bis.org/statistics/consstatsweb.htm> (Tables 9A–9B and CB10). <sup>2</sup> Quarterly difference in outstanding stocks, excluding effects of breaks in series. <sup>3</sup> 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, June 2010<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>18,831</b>	<b>5,171</b>	<b>7,758</b>	<b>795</b>	<b>1,637</b>	<b>4,010</b>	<b>521</b>	<b>1,332</b>	<b>1,177</b>	<b>979</b>	<b>24,553</b>
Banks	5,015	819	2,384	248	135	726	90	345	178	114	5,884
Public sector	3,510	985	1,646	314	158	955	85	279	249	342	4,681
Non-bank private sector	10,123	3,295	3,676	231	1,318	2,313	346	707	737	522	13,759
Unallocated	182	72	52	2	25	17	0	2	13	1	229
<b>Cross-border claims</b>	<b>10,294</b>	<b>2,311</b>	<b>5,283</b>	<b>294</b>	<b>1,062</b>	<b>1,749</b>	<b>300</b>	<b>667</b>	<b>471</b>	<b>311</b>	<b>13,176</b>
<b>Local claims in all currencies</b>	<b>8,537</b>	<b>2,860</b>	<b>2,475</b>	<b>500</b>	<b>574</b>	<b>2,261</b>	<b>221</b>	<b>665</b>	<b>706</b>	<b>668</b>	<b>11,376</b>
<b>Unadjusted changes during the quarter<sup>2</sup></b>											
Foreign claims	-725	10	-603	40	-7	-70	-20	38	-97	9	-803
Cross-border claims	-652	11	-527	20	-31	-37	-19	14	-38	6	-721
Local claims in all currencies	-73	-1	-75	20	24	-33	-1	25	-60	3	-83
<b>Nationality of reporting banks<sup>3</sup></b>											
<b>Foreign claims</b>											
<b>Total</b>	<b>18,831</b>	<b>5,171</b>	<b>7,758</b>	<b>795</b>	<b>1,637</b>	<b>4,010</b>	<b>521</b>	<b>1,332</b>	<b>1,177</b>	<b>979</b>	<b>24,553</b>
Euro area	8,931	1,743	4,642	240	389	1,917	196	265	951	505	11,266
France	2,702	549	1,520	145	132	398	104	105	148	41	3,238
Germany	2,528	562	1,197	60	147	310	47	78	152	33	2,992
Italy	657	42	543	...	15	193	11	16	161	5	871
Spain	827	189	232	1	23	404	5	8	8	383	1,257
Switzerland	1,366	663	362	75	111	118	18	55	16	30	1,602
United Kingdom	2,545	1,126	1,003	144	467	749	208	378	46	117	3,782
Japan	1,809	989	463	0	249	237	25	143	20	49	2,294
United States	2,209	0	843	313	256	626	53	311	56	206	3,092
Other countries	1,972	649	446	23	165	362	21	179	89	73	2,517
<b>Cross-border claims</b>											
<b>Total</b>	<b>10,294</b>	<b>2,311</b>	<b>5,283</b>	<b>294</b>	<b>1,062</b>	<b>1,749</b>	<b>300</b>	<b>667</b>	<b>471</b>	<b>311</b>	<b>13,176</b>
Euro area	5,060	803	2,957	94	317	790	143	175	346	126	6,195
France	1,458	200	832	54	102	212	65	66	51	29	1,777
Germany	1,844	380	1,037	23	128	231	45	53	103	29	2,210
Italy	288	28	204	...	14	38	5	9	20	5	346
Spain	190	22	118	1	15	55	5	8	4	38	261
Switzerland	591	144	309	32	88	100	15	42	15	28	785
United Kingdom	1,144	389	578	54	162	232	62	118	28	24	1,560
Japan	1,527	783	438	0	213	170	25	78	19	48	1,910
United States	1,316	0	739	102	204	296	36	164	29	67	1,817
Other countries	656	192	262	11	78	161	19	89	34	20	910
<b>Other exposures<sup>4,5</sup></b>											
Derivatives contracts	4,054	1,021	1,626	107	161	194	35	80	28	50	4,430
Guarantees extended	5,809	724	2,339	216	336	740	106	247	253	133	6,886
Credit commitments	2,724	952	884	71	288	559	84	152	117	205	3,573

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

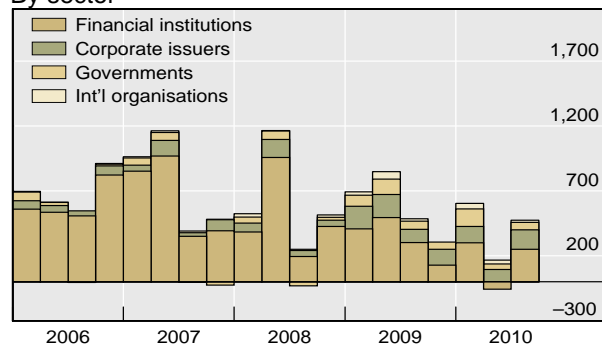
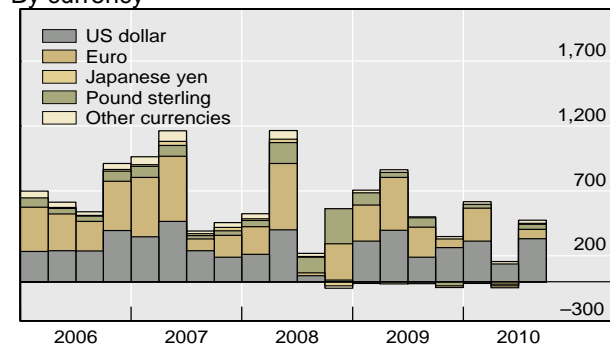
 Changes in stocks<sup>2</sup>
**Foreign claims**

**Other exposures<sup>4,5</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> Not included in foreign claims. <sup>5</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, September 2010<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>24,062</b>	<b>6,402</b>	<b>11,681</b>	<b>183</b>	<b>1,530</b>	<b>1,110</b>	<b>150</b>	<b>302</b>	<b>272</b>	<b>386</b>	<b>889</b>	<b>27,591</b>
<b>Money market instruments</b>	<b>938</b>	<b>89</b>	<b>500</b>	<b>2</b>	<b>26</b>	<b>8</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>978</b>
Financial institutions	865	88	444	2	26	8	0	6	0	2	0	899
Corporate issuers	28	1	20	0	0	0	0	0	0	0	0	28
Governments	45	0	36	0	0	0	0	0	0	0	0	45
US dollar	332	79	136	0	13	4	0	2	0	1	6	354
Euro	432	5	282	0	3	1	0	1	0	0	1	436
Other currencies	175	6	82	2	10	3	0	2	0	0	0	188
<b>Bonds and notes</b>	<b>23,124</b>	<b>6,313</b>	<b>11,181</b>	<b>180</b>	<b>1,504</b>	<b>1,102</b>	<b>149</b>	<b>296</b>	<b>272</b>	<b>385</b>	<b>883</b>	<b>26,613</b>
Financial institutions	18,303	4,793	8,796	128	1,403	278	45	139	34	59	0	19,983
Corporate issuers	3,033	1,509	881	50	62	269	46	91	34	99	0	3,364
Governments	1,789	11	1,504	2	39	555	58	66	204	227	0	2,383
US dollar	8,016	5,399	1,137	46	1,072	779	104	240	126	309	307	10,173
Euro	11,359	570	9,113	14	198	198	18	13	123	43	257	12,012
Other currencies	3,749	344	931	120	234	126	27	44	23	32	319	4,428
Floating rate	7,269	1,135	3,900	22	586	89	33	35	10	11	60	8,005
Straight fixed rate	15,503	5,061	7,170	117	851	956	108	217	259	372	823	18,133
Equity-related	352	117	112	42	66	57	8	45	2	1	0	475
<b>Net issuance during the quarter</b>												
<b>Total issues</b>	<b>394</b>	<b>143</b>	<b>147</b>	<b>6</b>	<b>25</b>	<b>39</b>	<b>6</b>	<b>5</b>	<b>11</b>	<b>17</b>	<b>17</b>	<b>475</b>
<b>Money market instruments</b>	<b>47</b>	<b>11</b>	<b>23</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-4</b>	<b>45</b>
Financial institutions	42	12	18	0	2	0	0	0	0	0	0	45
Corporate issuers	-8	0	-7	0	0	0	0	0	0	0	0	-8
Governments	12	0	12	0	0	0	0	0	0	0	0	12
US dollar	36	12	1	0	1	0	0	0	0	0	-2	35
Euro	-3	-1	11	0	0	0	0	0	0	0	-1	-3
Other currencies	14	1	12	0	1	0	0	0	0	0	-1	14
<b>Bonds and notes</b>	<b>347</b>	<b>132</b>	<b>124</b>	<b>6</b>	<b>23</b>	<b>39</b>	<b>6</b>	<b>6</b>	<b>11</b>	<b>16</b>	<b>20</b>	<b>429</b>
Financial institutions	169	20	82	4	20	17	4	4	3	6	0	206
Corporate issuers	148	112	23	2	2	7	2	1	0	4	0	157
Governments	30	0	19	0	1	15	0	1	8	6	0	45
US dollar	235	149	27	4	21	32	5	5	9	13	10	298
Euro	69	-11	92	0	-3	3	1	-1	2	2	5	75
Other currencies	42	-6	4	2	5	3	0	2	0	2	6	56
Floating rate	-4	-62	51	0	-5	1	0	1	1	0	1	-6
Straight fixed rate	344	185	76	5	23	36	5	5	10	16	20	422
Equity-related	7	9	-3	1	5	2	1	0	0	0	0	13
<i>Memo: Announced international equity issuance</i>	66	32	6	8	4	109	2	36	1	71	0	180

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

**By currency**


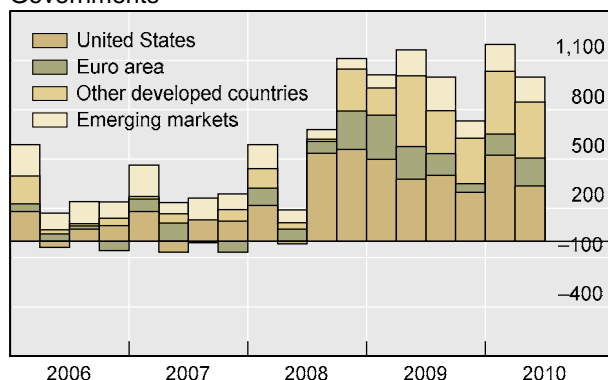
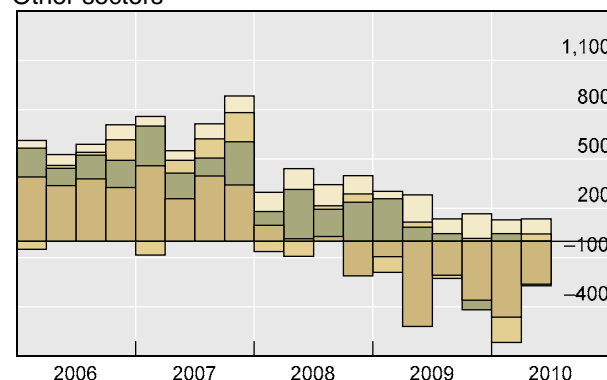
<sup>1</sup> Detailed breakdowns and time series data, including for gross international debt securities issuance, are available at <http://www.bis.org/statistics/secstats.htm> (Tables 11, 12A–D, 13A–B, 14A–B, 15A–B and 17B).



**Table 3B: Domestic debt securities issuance, June 2010<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>63,709</b>	<b>25,081</b>	<b>12,694</b>	<b>2,850</b>	<b>2,411</b>	<b>3,192</b>	<b>1,632</b>	<b>17,583</b>	<b>1,336</b>	<b>12,457</b>	<b>1,550</b>
Governments	35,387	10,327	6,318	1,527	1,387	1,752	535	13,392	931	10,536	1,223
Of which: short-term <sup>2</sup>	9,170	2,491	1,461	354	341	375	154	3,315	197	2,804	156
Financial institutions	21,471	11,909	4,563	1,075	709	1,010	520	3,099	256	1,116	306
Of which: short-term <sup>2</sup>	6,103	2,627	1,341	450	685	20	61	1,330	88	396	306
Corporate issuers	6,850	2,846	1,813	248	315	429	577	1,091	149	805	20
Of which: short-term <sup>2</sup>	666	116	166	61	39	1	22	142	11	110	1
	Emerging markets	Brazil	China	Chinese Taipei	Czech Republic	India	Malaysia	Mexico	South Africa	South Korea	Turkey
<b>Total issues</b>	<b>8,350</b>	<b>1,184</b>	<b>2,843</b>	<b>225</b>	<b>69</b>	<b>655</b>	<b>205</b>	<b>405</b>	<b>152</b>	<b>1,049</b>	<b>216</b>
Governments	5,350	751	1,591	136	48	564	105	238	97	445	216
Of which: short-term <sup>2</sup>	1,902	287	804	15	11	29	1	98	22	125	8
Financial institutions	1,900	424	809	32	15	69	43	135	31	276	0
Of which: short-term <sup>2</sup>	805	424	80	8	0	69	18	32	4	150	0
Corporate issuers	1,101	9	443	58	7	21	58	32	23	329	1
Of which: short-term <sup>2</sup>	242	9	99	22	0	21	3	2	1	75	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>863</b>	<b>75</b>	<b>160</b>	<b>44</b>	<b>17</b>	<b>14</b>	<b>-10</b>	<b>386</b>	<b>29</b>	<b>285</b>	<b>38</b>
Governments	998	336	169	53	44	25	23	342	20	250	39
Of which: short-term <sup>3</sup>	55	-61	-35	1	-15	-2	-2	89	-5	94	2
Financial institutions	-230	-263	-5	-3	-30	-11	-21	20	6	17	-1
Of which: short-term <sup>3</sup>	-260	-249	-13	-4	-4	0	-20	14	0	25	-1
Corporate issuers	95	2	-4	-6	3	-1	-12	24	4	18	0
Of which: short-term <sup>3</sup>	38	7	-2	-4	2	0	-1	13	1	11	0
	Emerging markets	Brazil	China	Chinese Taipei	Czech Republic	India	Malaysia	Mexico	South Africa	South Korea	Turkey
<b>Total issues</b>	<b>242</b>	<b>-17</b>	<b>181</b>	<b>2</b>	<b>1</b>	<b>23</b>	<b>...</b>	<b>15</b>	<b>10</b>	<b>1</b>	<b>0</b>
Governments	151	-25	105	2	1	23	2	10	8	4	0
Of which: short-term <sup>3</sup>	63	8	53	-1	0	0	0	2	3	0	0
Financial institutions	17	8	28	2	0	-4	...	4	1	-21	0
Of which: short-term <sup>3</sup>	-12	8	0	2	0	-4	...	2	0	-20	0
Corporate issuers	74	0	49	-2	0	5	...	1	1	17	0
Of which: short-term <sup>3</sup>	19	0	16	-2	0	5	...	0	0	0	0

**Changes in stocks of domestic debt securities**
**Governments**

**Other sectors<sup>4</sup>**


Euro area: Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, Spain; Other developed countries: Australia, Canada, Denmark, Iceland, Japan, New Zealand, Norway, Sweden, Switzerland, the United Kingdom; Emerging markets: Argentina, Brazil, Bulgaria, Chile, China, Chinese Taipei, Colombia, Croatia, the Czech Republic, Egypt, 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.

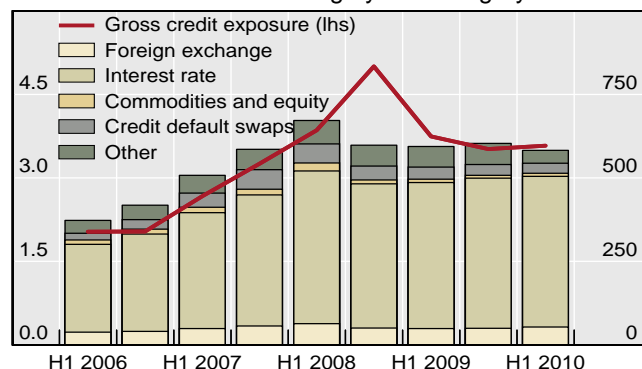
**Table 4: Global OTC derivatives market, end-June 2010<sup>1</sup>**

In billions of US dollars

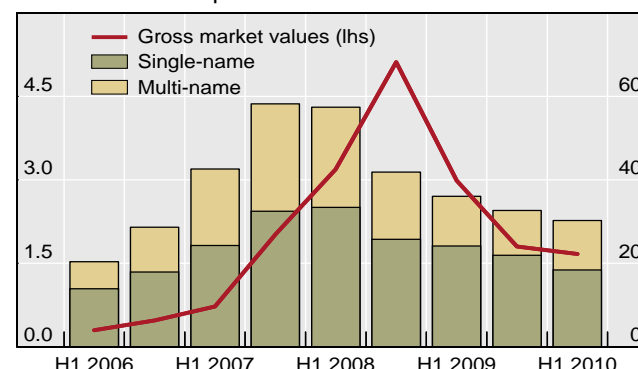
	Forwards and swaps				Options			
	Total	with reporting dealers	with other financial institutions	with non-financial customers	Total	with reporting dealers	with other financial institutions	with non-financial customers
<b>Notional amounts outstanding</b>								
<b>All contracts<sup>2</sup></b>	<b>513,275</b>	<b>151,542</b>	<b>313,892</b>	<b>45,940</b>	<b>69,380</b>	<b>30,433</b>	<b>31,246</b>	<b>6,550</b>
<b>Foreign exchange</b>	<b>41,972</b>	<b>15,376</b>	<b>19,151</b>	<b>7,445</b>	<b>11,153</b>	<b>4,544</b>	<b>4,323</b>	<b>2,286</b>
US dollar	36,504	14,142	16,711	5,650	8,835	3,555	3,454	1,826
Euro	16,085	5,515	7,058	3,512	3,909	1,501	1,399	1,008
Japanese yen	7,763	3,490	3,085	1,189	4,080	1,963	1,458	659
Pound sterling	5,706	1,737	2,782	1,186	887	332	344	211
Other	17,886	5,868	8,666	3,352	4,596	1,736	1,992	868
Up to one year	25,955	9,874	10,777	5,304	7,678	3,061	2,904	1,714
Over one year	16,017	5,502	8,374	2,141	3,475	1,483	1,420	572
<i>Memo: Exchange-traded<sup>3</sup></i>	196	.	.	.	190	.	.	.
<b>Interest rate</b>	<b>403,750</b>	<b>109,945</b>	<b>259,518</b>	<b>34,286</b>	<b>48,081</b>	<b>22,183</b>	<b>22,508</b>	<b>3,391</b>
US dollar	148,367	42,834	94,329	11,203	15,752	6,561	7,789	1,402
Euro	138,951	31,678	96,211	11,063	22,564	11,100	10,237	1,228
Japanese yen	51,176	17,615	27,542	6,019	4,218	2,573	1,477	168
Pound sterling	32,892	7,060	22,383	3,449	3,327	1,150	1,973	203
Other	32,364	10,758	19,053	2,553	2,219	799	1,031	389
Up to one year	183,905	56,137	105,085	22,683	12,135	5,896	5,188	1,051
Over one year	219,845	53,808	154,433	11,604	35,947	16,287	17,320	2,340
<i>Memo: Exchange-traded<sup>3</sup></i>	21,630	.	.	.	47,921	.	.	.
<b>Equity</b>	<b>1,754</b>	<b>479</b>	<b>932</b>	<b>343</b>	<b>4,506</b>	<b>1,704</b>	<b>2,359</b>	<b>442</b>
<i>Memo: Exchange-traded<sup>3</sup></i>	926	.	.	.	4,598	.	.	.
<b>Commodities</b>	<b>1,776</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>1,076</b>	<b>...</b>	<b>...</b>	<b>...</b>
<b>Credit default swaps</b>	<b>30,261</b>	<b>15,774</b>	<b>13,643</b>	<b>844</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
<b>Unallocated</b>	<b>33,763</b>	<b>9,968</b>	<b>20,648</b>	<b>3,022</b>	<b>4,564</b>	<b>2,002</b>	<b>2,055</b>	<b>431</b>
<b>Gross market values</b>								
<b>All contracts</b>	<b>21,562</b>	<b>5,830</b>	<b>14,230</b>	<b>1,502</b>	<b>2,620</b>	<b>1,282</b>	<b>1,087</b>	<b>250</b>
<b>Foreign exchange</b>	<b>2,112</b>	<b>711</b>	<b>946</b>	<b>455</b>	<b>411</b>	<b>187</b>	<b>138</b>	<b>86</b>
US dollar	1,717	626	769	322	308	146	93	68
Euro	969	292	432	246	152	60	55	37
Japanese yen	470	200	181	90	187	107	44	36
Pound sterling	269	68	123	79	18	7	6	5
Other	798	237	388	174	159	53	80	26
<b>Interest rate</b>	<b>16,032</b>	<b>3,788</b>	<b>11,404</b>	<b>840</b>	<b>1,501</b>	<b>760</b>	<b>663</b>	<b>77</b>
US dollar	6,984	1,579	5,091	314	589	280	275	33
Euro	6,316	1,459	4,519	338	727	386	312	29
Japanese yen	907	323	536	48	73	47	23	3
Pound sterling	1,065	202	771	92	81	34	39	8
Other	760	224	488	47	30	13	13	4
<b>Equity</b>	<b>189</b>	<b>38</b>	<b>108</b>	<b>42</b>	<b>518</b>	<b>242</b>	<b>207</b>	<b>69</b>
<b>Credit default swaps</b>	<b>1,666</b>	<b>870</b>	<b>740</b>	<b>56</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
<b>Unallocated</b>	<b>1,562</b>	<b>422</b>	<b>1,031</b>	<b>109</b>	<b>190</b>	<b>93</b>	<b>79</b>	<b>18</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, 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 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. Locational by nationality data of Bahamas relate to 2009Q4. 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. In table 2B, German banks' foreign claims vis-à-vis developed countries are on an immediate borrower basis. 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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<b>A</b> Cross-border claims	<b>B</b> Local claims of foreign affiliates in foreign currency	<b>C</b> Local claims of foreign affiliates in local currency	<b>D</b> Domestic claims in the reporting country
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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 Chile, Finland and Luxembourg have been rolled forward from the first quarter of 2010.

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

September 2010	Debt reduction after crises	G Tang & C Upper
September 2010	The collapse of international bank finance during the crisis: evidence from syndicated loan markets	M Chui, D Domanski, P Kugler & J Shek
September 2010	Options for meeting the demand for international liquidity during financial crises	R Moessner & WA Allen
September 2010	Bank structure, funding risk and the transmission of shocks across countries: concepts and measurement	I Fender & P McGuire
June 2010	Policy responses to dislocations in the FX swap market: the experience of Korea	N Baba & I Shim
June 2010	Currency collapses and output dynamics: a long-run perspective	CE Tovar
June 2010	Was it credit supply? Cross-border bank lending to emerging market economies during financial crisis	E Takats
June 2010	European banks' US dollar funding pressures	I Fender & P McGuire
March 2010	The architecture of global banking: from international to multinational	R McCauley, P McGuire & G von Peter
March 2010	Exchange rates during financial crises	M Kohler
March 2010	The dependence of the financial system on central bank and government support	P Gerlach
March 2010	The term "macroprudential": origins and evolution	P Clement
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
June 2009	The global crisis and Latin America: financial impact and policy responses	A Jara, r Moreno & C Tovar

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

## BIS Papers

### **Financial system and macroeconomic resilience: revisited** September 2010

<http://www.bis.org/publ/bppdf/bispap53.htm>

On 25–26 June 2009, the BIS held its Eighth Annual Conference on "Financial system and macroeconomic resilience: revisited" in Basel, Switzerland. The event brought together senior representatives of central banks and academic institutions who exchanged views on this topic. This volume contains the opening address of Stephen Cecchetti (Economic Adviser, BIS) and the contributions of the policy panel on "Lessons learned from the financial crisis". The participants in the policy panel discussion, chaired by Jaime Caruana (General Manager, BIS), were William Dudley (Federal Reserve Bank of New York), Masaaki Shirakawa (Bank of Japan) and Nout Wellink (The Netherlands Bank). The papers presented at the conference and the discussants' comments are released as BIS Working Papers 301 to 306.

## Working Papers

### **Banking crises and the international monetary system in the Great Depression and now** Richhild Moessner and William A Allen

<http://www.bis.org/publ/work333.htm>

We compare the banking crises in 2008-09 and in the Great Depression, and analyse differences in the policy response to the two crises in light of the prevailing international monetary systems. The scale of the 2008-09 banking crisis, as measured by falls in international short-term indebtedness and total bank deposits, was smaller than that of 1931. However, central bank liquidity provision was larger in 2008-09 than in 1931, when it had been constrained in many countries by the gold standard. Liquidity shortages destroyed the international monetary system in 1931. By contrast, central bank liquidity could be, and was, provided much more freely in the flexible exchange rate environment of 2008-9. The amount of liquidity provided was 5 ½ - 7 ½ times as much as in 1931. This forestalled a general loss of confidence in the banking system. Drawing on historical experience, central banks, led by the Federal Reserve, established swap facilities quickly and flexibly to provide international liquidity, in some cases setting no upper limit to the amount that could be borrowed.

### **The impact of CDS trading on the bond market: evidence from Asia** Ilhyock Shim and Haibin Zhu

<http://www.bis.org/publ/work332.htm>

This paper investigates the impact of CDS trading on the development of the bond market in Asia. In general, CDS trading has lowered the cost of issuing bonds and enhanced the liquidity in the bond market. The positive impact is stronger for smaller firms, non-financial firms and those firms with higher liquidity in the CDS market. These empirical findings support the diversification and information hypotheses in the literature. Nevertheless, CDS trading has also introduced a new source of risk. There is strong evidence that, at the peak of the recent global financial crisis, those firms included in CDS indices faced higher bond yield spreads than those not included.

### **Central banks and competition authorities: institutional comparisons and new concerns** John Vickers

<http://www.bis.org/publ/work331.htm>

The establishment of independent authorities for monetary policy and for competition policy was part of the institutional consensus of the Great Moderation. The paper contrasts how policy has operated in the two spheres, especially as regards the role of law. It then discusses the application of competition policy to banks before and during the crisis, and relationships between competition and financial stability. Finally, the paper considers whether the financial crisis - which has led, at least temporarily, to unorthodox and less independent monetary and competition policies - has undermined the long-term case for independence. The conclusion is that it has not. While regulation of the financial system clearly requires fundamental reform, sound money and markets free from threats to competition remain fundamental to long-run prosperity; those ends are best pursued by focused and independent monetary and competition policies.

### **Minimising monetary policy** Peter Stella

<http://www.bis.org/publ/work330.htm>

The response of leading central banks to the current financial crisis has raised the magnitude of the financial and governance risks they face. An evaluation of the financial strength of a number of those banks suggests that they are in little danger of being forced by financial losses to alter their policies. Governance risks cannot be dismissed so lightly. In engaging extensively in unorthodox policies - bearing similarities to fiscal policy - a number of central banks have risked a critical examination of their governance structures and thereby potentially jeopardised their monetary policy independence. In order to forestall this risk to monetary policy, it is argued that unconventional policies be placed under a separate governance structure that would allow them to be brought under greater political control and accountability while preserving the operational independence of monetary policy.

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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)).

## **The governance of financial regulation: reform lessons from the recent crisis** Ross Levine

<http://www.bis.org/publ/work329.htm>

There was a systemic failure of financial regulation: senior policymakers repeatedly enacted and implemented policies that destabilised the global financial system. They maintained these policies even as they learned of the consequences of their policies during the decade before the crisis. The crisis does not primarily reflect an absence of regulatory power, unclear lines of regulatory authority, capital account imbalances, or a lack of information by regulators. Rather, it represents the unwillingness of the policy apparatus to adapt to a dynamic, innovating financial system. A new institution is proposed to improve the design, implementation and modification of financial regulations.

## **The Federal Reserve, the Bank of England and the rise of the dollar as an international currency, 1914-39** Barry Eichengreen and Marc Flandreau

<http://www.bis.org/publ/work328.htm>

We This paper provides new evidence on the rise of the dollar as an international currency, focusing on its role in the conduct of trade and the provision of trade credit. We show that the shift to the dollar occurred much earlier than conventionally supposed: during and immediately after World War I. Not just market forces but also policy support - the Fed in its role as market maker - was important for the dollar's overtaking of sterling as the leading international currency. On balance, this experience challenges the popular notion of international currency status as being determined mainly by market size.

It suggests that the popular image of strongly increasing returns and pervasive network externalities leaving room for only one monetary technology is misleading.

## **Central banks: between internationalisation and domestic political control** Harold James

<http://www.bis.org/publ/work327.htm>

The paper examines the exercise, the efficiency, and the legitimacy of the monetary policy-making process. The goal of central bank autonomy in recent times is the outcome of a demand for price stability. The realisation of autonomy is also a consequence of the fragmentation of national decision making, in federal systems but also in regional and international monetary arrangements. Economic and financial crisis changes the political economy, and produces a transition from seeing the central bank as producing a general or universalisable good (price stability) to interpreting monetary policy as fundamentally a tool for redistributive or factional policies. The latter will only work in the framework of national policy.

## **The changing role of central banks** Charles Goodhart

<http://www.bis.org/publ/work326.htm>

We Although Central Banks have pursued the same objectives throughout their existence, primarily price and financial stability, the interpretation of their role in doing so has varied. We identify three stable epochs, when such interpretations had stabilised, ie

1. The Victorian era, 1840s to 1914;
2. The decades of government control, 1930s to 1960s;
3. The triumph of the markets, 1980s to 2007.

Each epoch was followed by a confused inter-regnum, searching for a new consensual blueprint. The final such epoch concluded with a crisis, when it became apparent that macro-economic stability, the Great Moderation, plus (efficient) markets could not guarantee financial stability. So the search is now on for additional macro-prudential (counter-cyclical) instruments. The use of such instruments will need to be associated with controlled variations in systemic liquidity, and in the balance sheet of the Central Bank. Such control over its own balance sheet is the core, central function of any Central Bank, even more so than its role in setting short-term interest rates, which latter could be delegated. We end by surveying how relationships between Central Banks and governments may change over the next period.

## **Inflation risk premia in the US and the euro area** Peter Hördahl and Oreste Tristani

<http://www.bis.org/publ/work325.htm>

We use a joint model of macroeconomic and term structure dynamics to estimate inflation risk premia in the United States and the euro area. To sharpen our estimation, we include in the information set macro data and survey data on inflation and interest rate expectations at various future horizons, as well as term structure data from both nominal and index-linked bonds. Our results show that, in both currency areas, inflation risk premia are relatively small, positive, and increasing in maturity. The cyclical dynamics of long-term inflation risk premia are mostly associated with changes in output gaps, while their high-frequency fluctuations seem to be aligned with variations in inflation. However, the cyclical dynamics of inflation premia differs between the US and the euro area. Long term inflation premia are countercyclical in the euro area, while they are procyclical in the US.

## **Mapping capital and liquidity requirements to bank lending spreads** Michael R King

<http://www.bis.org/publ/work324.htm>

This study outlines a methodology for mapping the increases in capital and liquidity requirements proposed under Basel III to bank lending spreads. The higher cost associated with a one percentage point increase in the capital ratio can be recovered by increasing lending spreads by 15 basis points for a representative bank. This calculation assumes the return on equity (ROE) and the cost of debt are unchanged, with no change in other sources of income and no reduction in operating expenses.

If ROE and the cost of debt are assumed to decline, the impact on lending spreads is reduced. To recover the additional cost of meeting the December 2009 proposal for the Net Stable Funding Ratio (NSFR), a representative bank would need to increase lending spreads by 24 basis points. Taking into account the fall in risk-weighted assets from holding more government bonds reduces this cost to 12 basis points or less.

### **Stochastic volatility, long run risks and aggregate stock market fluctuations**

**Stefan Avdjiev and Nathan S Balke**

<http://www.bis.org/publ/work323.htm>

What are the main drivers of fluctuations in the aggregate US stock market? In this paper, we attempt to resolve the long-lasting debate surrounding this question by designing and solving a consumption-based asset pricing model which incorporates stochastic volatility, long-run risks in consumption and dividends, and Epstein-Zin preferences. Utilizing Bayesian MCMC techniques, we estimate the model by fitting it to US data on the level of the aggregate US stock market, the short-term real risk-free interest rate, real consumption growth, and real dividend growth. Our results indicate that, over short and medium horizons, fluctuations in the level of the aggregate US stock market are mainly driven by changes in expected excess returns. Conversely, low frequency movements in the aggregate stock market are primarily driven by changes in the expected long-run growth rate of real dividends.

### **Interbank tiering and money center banks**

**Ben Craig and Goetz von Peter**

<http://www.bis.org/publ/work322.htm>

This paper provides evidence that interbank markets are tiered rather than flat, in the sense that most banks do not lend to each other directly but through money center banks acting as intermediaries. We capture the concept of tiering by developing a core-periphery model, and devise a procedure for fitting the model to real-world networks. Using Bundesbank data on bilateral interbank exposures among 1800 banks, we find strong evidence of tiering in the German banking system. Econometrically, bank-specific features, such as balance sheet size, predict how banks position themselves in the interbank market. This link provides a promising avenue for understanding the formation of financial networks.

### **The evolving renminbi regime and implications for Asian currency stability**

**Guonan Ma and Robert McCauley**

<http://www.bis.org/publ/work321.htm>

The Chinese authorities described the management of the renminbi after its 2005 unpegging from the US dollar as involving a basket of trading partner currencies. Outside analysts have detected few signs of such management. We find that, in the two years from mid-2006 to mid-2008, the renminbi strengthened gradually against trading partners' currencies within a narrow band. In mid-2008, the financial crisis interrupted this experiment and the bilateral renminbi/dollar exchange rate stabilised at 6.8. The 2006-08 experience suggests that a shared policy of gradual nominal effective appreciation renders East Asian currencies quite stable against one another. Such a shared policy would create favourable conditions for regional monetary cooperation.

### **Offshore markets for the domestic currency: monetary and financial stability issues**

**Dong He and Robert McCauley**

<http://www.bis.org/publ/work320.htm>

We show in this paper that offshore markets intermediate a large chunk of financial transactions in major reserve currencies such as the US dollar. We argue that, for emerging market economies that are interested in seeing some international use of their currencies, offshore markets can help to increase the recognition and acceptance of the currency while still allowing the authorities to retain a measure of control over the pace of capital account liberalisation. The development of offshore markets could pose risks to monetary and financial stability in the home economy which need to be prudently managed. The experience of the Federal Reserve and of the authorities of the other major reserve currency economies in dealing with the euromarkets shows that policy options are available for managing such risks.

### **Macroeconomic and interest rate volatility under alternative monetary operating procedures**

**Petra Gerlach-Kristen and Barbara Rudolf**

<http://www.bis.org/publ/work319.htm>

During the financial crisis of 2007/08 the level and volatility of interest rate spreads increased dramatically. This paper examines how the choice of the target interest rate for monetary policy affects the volatility of inflation, the output gap and the yield curve. We consider three monetary policy operating procedures with different target interest rates: a one-month market rate, a three-month market rate and an essentially riskless one-month repo rate. The implementation tool is the one-month repo rate for all three operating procedures. In a highly stylised model, we find that using a money market rate as a target rate generally yields lower variability of the macroeconomic variables. This holds under discretion as well as under commitment both in times of financial calm or turmoil. Whether the one month or three month rate procedure performs best depends on the maturity of the specific rate that enters the IS curve.

## **Basel Committee on Banking Supervision**

### **Core Principles for Effective Deposit Insurance Systems - A proposed methodology for compliance assessment - consultative document**

**November 2010**

<http://www.bis.org/publ/bcbs182.htm>

In June 2009, the International Association of Deposit Insurers (IADI) and the Basel Committee on Banking Supervision (BCBS) issued Core Principles for Effective Deposit Insurance Systems. Since December 2009, IADI has been collaborating



with the BCBS, the European Forum of Deposit Insurers (EFDI), the International Monetary Fund (IMF), the World Bank, and the European Commission (EC) to develop a robust methodology to assess compliance with the Core Principles. A Steering Committee is coordinating this effort and has prepared a draft Methodology.

### **Recognising the risk-mitigating impact of insurance in operational risk modelling** October 2010

<http://www.bis.org/publ/bcbs181.htm>

The Basel Committee on Banking Supervision today issued Recognising the risk-mitigating impact of insurance in operational risk modelling. The paper discusses potential benefits and shortcomings of banks' use of insurance to mitigate operational risk.

The regulatory capital framework permits banks, subject to certain criteria and limitations, to use insurance to mitigate the operational risk capital charge under the advanced measurement approach (AMA). The implementation of this provision has raised some challenges and technical questions. In response, the report clarifies supervisory expectations on the range of industry AMA practices while promoting increased convergence in operational risk management.

### **Calibrating regulatory minimum capital requirements and capital buffers: a top-down approach** October 2010

<http://www.bis.org/publ/bcbs180.htm>

As part of its work to strengthen global capital requirements, the Basel Committee on Banking Supervision established a working group to conduct a "top-down" assessment of the overall level of capital requirements that should be held within the banking system. The working group was tasked with undertaking empirical analysis to inform the calibration of the common equity and Tier 1 risk-based ratios and the Tier 1 leverage ratio, as well as the regulatory buffers above the common equity and Tier 1 risk-based ratios. This top-down exercise was one of the inputs to the Committee's calibration of the new capital framework, and complements the cost-benefit analysis conducted by the Long-Term Economic Impact (LEI) group and detailed "bottom up" Quantitative Impact Study (QIS) of the effects of the proposed regulatory reforms on individual banks.

This note summarises the findings of the top-down calibration work. In particular, it provides a conceptual framework for the calibration work, describes the various empirical exercises that were performed, and summarises the results.

### **Developments in modelling risk aggregation** October 2010

<http://www.bis.org/publ/joint25.htm>

The report suggests improvements to the current modelling techniques used by complex firms to aggregate risks. It also examines supervisory approaches to firms' use of risk aggregation models, particularly in light of the global financial crisis. Mr Tony D'Aloisio, Chairman of the Joint Forum and Chairman of the Australian Securities and Investments Commission, said "This report is essential reading for firms considering ways to make more effective use of risk aggregation methods, and for supervisors wanting to understand firms' use of risk aggregation models to help identify shortcomings in a firm's approach."

#### Key Findings

- Despite recent advances, models currently in use have not adapted to support all the functions and decisions for which they are now used. Firms using these models may not fully understand the risks they face, including tail events.
- While some firms are addressing these issues - particularly the treatment of tail events - others are not.
- Firms face a range of practical challenges when modelling risk aggregation. These include managing the volume and quality of data and communicating results in a meaningful way. Despite these challenges, the Joint Forum found that firms have little or no appetite for fundamentally reassessing or reviewing how risk aggregation processes are managed.
- In carrying out their responsibilities, supervisors generally do not rely on aggregation models currently used by firms as they are generally considered a "work in progress" with best practices yet to be established. Substantial improvements and refinements in methods - particularly in aggregating across risk classes - are needed before supervisors are likely to be comfortable in placing reliance on these models for supervisory purposes.

#### Key Recommendations

- Firms should improve their risk aggregation techniques, for example by reassessing and reorienting models according to their purpose and function. Such improvements will assist firms to better comprehend the risks they face.
- Firms using models for risk identification and monitoring purposes should ensure they are sufficiently sensitive, granular, flexible and clear. Models used for capital adequacy and solvency purposes should be improved to better reflect tail events.
- Supervisors should recognise the risks posed by continued use of current aggregation processes and methods. Supervisors are urged to communicate their concerns to firms while highlighting the benefits of appropriately calibrated and well-functioning aggregation models for improved decision making and risk management. Supervisors should work with firms to implement these improvements.

### **The Basel Committee's response to the financial crisis: report to the G20** October 2010

<http://www.bis.org/publ/bcbs179.htm>

The Basel Committee's response to the financial crisis: report to the G20 describes the measures taken by the Committee and its governing body of Central Bank Governors and Heads of Supervision to strengthen the resilience of banks and the global banking system. The Basel Committee reforms address the identified weaknesses of the pre-crisis banking sector, thus delivering on the G20 mandate given at the Pittsburgh summit to develop a more resilient banking sector.

The new global standards to address both firm-specific and broader, systemic risks have been referred to as "Basel III". Basel III is comprised of the following building blocks, which were agreed and issued by the Committee and its governing body between July 2009 and September 2010:

- higher quality of capital, with a focus on common equity, and higher levels of capital to ensure banks can better absorb the types of losses like those associated with this past crisis;
- better coverage of risk, especially for capital market activities;
- an internationally harmonised leverage ratio to constrain excessive risk taking and to serve as a backstop to the risk-based capital measure, with a view to migrating to a Pillar 1 treatment based on appropriate review and calibration;
- capital buffers, which should be built up in good times so that they can be drawn down in periods of stress;
- minimum global liquidity standards to improve banks' resilience to acute short term stress and to improve longer term funding; and
- stronger standards for supervision, public disclosures and risk management.

The Basel Committee is also contributing to the Financial Stability Board initiative to address the risks of globally systemic banking institutions by developing approaches to identify them and ways to raise their loss absorbing capacity, including work on capital surcharges, contingent capital, and bail-in-able debt.

### **Range of methodologies for risk and performance alignment of remuneration - consultative paper October 2010**

<http://www.bis.org/publ/bcbs178.htm>

Ensuring that remuneration is effectively aligned with risk and performance is an essential element for reducing incentives that may arise from the design of remuneration schemes and that can lead to excessive risk taking. In practice, the idea that an employee's compensation should take account of the risks that employees take on behalf of their organisation has proven to be challenging to implement. As of October 2010, effective implementation of these principles by banks has not been achieved.

The Basel Committee's report on the Range of Methodologies for Risk and Performance Alignment of Remuneration issued for consultation analyses the methods used by banks for incorporating risk into bonus pools and individual compensation schemes. Banks use various methods to adjust remuneration to take account of risk and performance. Depending on the remuneration scheme's design and detailed features, the effectiveness of such methods in creating incentives for prudent risk taking varies significantly.

The report focuses on the practical and technical issues that might reduce the effectiveness of these methods. It also covers more general questions, including proportionality in the application of rules. The report, which contains a number of examples of banks' practices reflecting the supervisory experience to date, helps provide a representative, though perhaps still incomplete, picture of current remuneration practices in the industry. By providing clarification on the design of risk-adjusted remuneration schemes and by highlighting issues that may affect the effectiveness of the risk adjustment methodologies, the Committee expects the report will help support and facilitate the broader adoption of sound compensation practices in the banking sector.

The Committee welcomes comments on all aspects of this document by 31 December 2010. Comments should be submitted by post (Secretariat of the Basel Committee on Banking Supervision, Bank for International Settlements, CH-4002 Basel, Switzerland) or email ([baselcommittee@bis.org](mailto:baselcommittee@bis.org)). All comments will be published on the Bank for International Settlements' website unless a commenter specifically requests anonymity or confidential treatment.

### **Good Practice Principles on Supervisory Colleges - final document October 2010**

<http://www.bis.org/publ/bcbs177.htm>

The Basel Committee on Banking Supervision has issued a set of principles which aims to promote and strengthen the operation of supervisory colleges. Supervisory colleges are an important component of effective supervisory oversight of an international banking group. The paper Good Practice Principles on Supervisory Colleges supplements broader guidance issued by the Basel Committee on cross-border cooperation and information-sharing by outlining expectations for both home and host supervisors in relation to college objectives, governance, communication and information, as well as potential areas for collaborative work. Following a principle-based approach, the good practice principles are designed to allow adequate flexibility in the way that they are implemented for a wide range of banks across different jurisdictions. They are not intended to represent a definitive or exhaustive set of guidance regarding college functioning.

The financial crisis highlighted the importance of supervisory colleges in supporting the effective supervision of international banking groups. The Basel Committee intends to build upon its ongoing efforts to assist supervisors in running colleges as effectively as possible and continue to take stock of the evolving role and operation of colleges after the issuance of these principles.

A consultative version of this paper was released for public comment in March 2010.

### **Principles for enhancing corporate governance - final document October 2010**

<http://www.bis.org/publ/bcbs176.htm>

To address fundamental deficiencies in bank corporate governance that became apparent during the financial crisis, the Basel Committee on Banking Supervision has issued a final set of principles for enhancing sound corporate governance practices at banking organisations. Given the important financial intermediation role of banks in an economy, the public and the market have a high degree of sensitivity to any difficulties potentially arising from corporate governance shortcomings in banks. Corporate governance is thus of great relevance both to individual banking organisations and to the international financial system as a whole, and merits targeted supervisory guidance. The Committee's guidance assists banking supervisors and provides a reference point for promoting the adoption of sound corporate governance practices by banking organisations in their countries. The principles also serve as a reference point for the banks' own corporate governance efforts.

Drawing on the lessons learned during the crisis, the principles, which were first published for public comment in March 2010, set out best practices for banking organisations. Key areas of particular focus include: (1) the role of the board; (2) the qualifications and composition of the board; (3) the importance of an independent risk management function, including a chief risk officer or equivalent; (4) the importance of monitoring risks on an ongoing firm-wide and individual entity basis, (5) the board's oversight of the compensation systems; and (6) the board and senior management's

understanding of the bank's operational structure and risks. The principles also emphasise the importance of supervisors regularly evaluating the bank's corporate governance policies and practices as well as its implementation of the Committee's principles.

### **Microfinance activities and the core principles for effective banking supervision - final document October 2010**

<http://www.bis.org/pub/bcbs175.htm>

The Basel Committee on Banking Supervision has issued the final version of its paper entitled Microfinance activities and the Core Principles for Effective Banking Supervision that contains supervisory 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 Basel Committee's guidance is intended to point out areas whereby some degree of flexibility in implementing the BCP to the supervision of microfinance activities is appropriate, in light of the unique characteristics of microfinance vis-à-vis conventional retail banking. With specific references to the need of balancing regulation and supervision with ensuring financial inclusion, the report will assist countries to develop a coherent approach to microfinance supervision that takes account of the need for:

- specialised knowledge of supervisors to effectively identify and measure risks that are specific to microfinance, particularly to microlending;
- conscious effort to allocate supervisory resources efficiently, especially where depository microfinance does not represent a large portion of the financial system; and
- balanced regulatory and supervisory framework that does not add significant costs to microfinance activities across different institutional types.

A consultative version of this paper was released in February 2010.

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

### **Statistics on payment and settlement systems in the CPSS countries - Figures for 2009 - Preliminary release December 2010**

<http://www.bis.org/pub/cpss93.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 2009 and earlier years. There are detailed tables for each individual country as well as a number of comparative tables.

Please note that this publication contains some provisional data for 2009 while some others are not yet available.

### **Market structure developments in the clearing industry: implications for financial stability November 2010**

<http://www.bis.org/pub/cpss92.htm>

During the last decade, the central clearing industry has experienced a large number of changes, which have profoundly affected both its role in the broader financial infrastructure and its own market structure. In June 2009, the Committee on Payment and Settlement Systems (CPSS) therefore commissioned a working group to investigate the developments in the clearing industry's market structure, their drivers and the implications for financial stability. The Working Group was also asked to assess whether different market structures give rise to new risks that may affect the robustness of central counterparties (CCPs) and to outline some practical issues for central banks, regulators and overseers with an interest in the stability of CCPs.

This report first provides a broad overview of the clearing industry in CPSS countries, covering both traditional markets and OTC derivatives markets. In particular, it describes developments in market structure between 2000 and 2010. Second, the report assesses how far these developments have given rise to new risks. It further outlines practical issues that central banks, regulators and overseers may wish to consider, either as part of their oversight role or in the context of their broader financial stability remit. Furthermore, the report examines to what extent changes in market structure or ownership might affect the expansion of central clearing services. Finally, the effect of ownership on CCPs' incentives to manage their counterparty risk is considered.

The report shows that different types of market structure have developed over the last decade. However, there is no evidence that the industry is settling on one particular structure. Specific market structures may create specific risks and amplify interdependencies between systems and markets. These warrant careful consideration by both market participants and the authorities. However, there is no evidence to suggest that one market structure is superior to another, either in terms of CCP risk management or in terms of wider systemic risk. In fact, many risks occur in several types of structures.

Nevertheless, central banks, regulators and overseers may usefully pay attention to specific risks that are more likely to occur in some market structures than in others. These include incentives to weaken the robustness of CCP risk controls that may in turn reduce in the CCP's ability to manage a member default. Although some of the risks considered in the report have yet to materialise, CCPs and their regulators or overseers face significant future challenges, in particular as market structures in many countries continue to evolve. Hence, public authorities will need to continue applying rigorous and consistent oversight.

The clearing industry's structure also has a bearing on how far central clearing will be used in different market segments, and hence on the resilience of the financial system as a whole. In fact, the broader risk-mitigation benefits of central clearing may be diluted if changes in market structure affect access to CCPs, raise the cost of central clearing or hamper the process of creating new CCP services.

### **Strengthening repo clearing and settlement arrangements September 2010**

<http://www.bis.org/pub/cpss91.htm>

During the recent financial crisis, some repo markets proved to be a less reliable source of funding liquidity than expected. In June 2009, the Committee on Payment and Settlement Systems (CPSS) therefore commissioned the Working Group on Repo Market Infrastructure to investigate the extent to which the clearing and settlement infrastructure for repos contributed to the instability evident in some repo markets. The Working Group was also asked to identify potential ways in which the repo clearing and settlement infrastructure could be improved. This report first presents a comprehensive survey of the clearing and settlement arrangements for repos in selected CPSS member countries. In particular, it sheds light on the experience with these arrangements during the financial crisis. The analysis shows that repo clearing and settlement arrangements vary considerably across countries and markets. Second, the report identifies several issues related to clearing and settlement arrangements for repos that have the potential to affect the resilience of repo markets (eg the risks related to the extension of significant amounts of intraday credits within some repo settlement arrangements; the lack of transparency of some repo infrastructure roles, responsibilities, practices and procedures; concerns regarding the protection against counterparty credit risk in repo transactions; and inadequate capabilities for liquidating repo collateral in the event of a cash borrower's default). Due to the substantial variety in repo clearing and settlement arrangements, the identified issues are not relevant to the same extent in each market. Finally, the report outlines options and measures through which these issues can be addressed. The report concludes that it is worthwhile for the stakeholders in each market to review how the clearing and settlement arrangements for repos could be further strengthened. As a first step, the report suggests that the providers of such arrangements in each country should, jointly with market participants, regulators and the central bank, attempt to develop a common view on the relevance of the identified issues for their market. As a second step, each provider could then evaluate which measure or combination of measures would be best suited to address the relevant issues in its specific circumstances.

## Speeches

### **Monetary policy and financial stability: what's ahead for central and eastern Europe**

Remarks by Mr Stephen G Cecchetti, Economic Adviser and Head of Monetary and Economic Department of the BIS, prepared for the Oesterreichische Nationalbank Conference on European Economic Integration, Vienna, 15 November 2010.

<http://www.bis.org/speeches/sp101201.htm>

As Monetary policy in central and eastern Europe stands at a transition point. Existing monetary policy frameworks served countries in the region well during the crisis, and do not seem to require significant modification to incorporate required financial stability objectives. And, since central banks in this region in fact have considerable experience with the use of macroprudential tools, incorporating them into a new inflation targeting framework should be more or less straightforward. At the same time, central banks need to be prepared to confront the challenges created by capital inflows, asset price inflation and catching-up issues. In doing so, it will be essential to retain focus on traditional monetary policy and financial stability objectives, resisting spillovers from policies pursued by other EMEs. Maintaining exchange rate flexibility - or, in countries with fixed exchange rates, labour market flexibility - will be of key importance. Furthermore, CEE countries need to be encouraged to maintain free capital flows and to continue to pursue domestic financial liberalisation.

### **Why Basel III matters for Latin American and Caribbean financial markets**

Speech by Mr Jaime Caruana, General Manager of the BIS, at the ASBA-FSI High-Level Meeting on "The emerging framework to strengthen financial stability and regulatory priorities in the Americas", Antigua, 19 November 2010.

<http://www.bis.org/speeches/sp101125.htm>

The efforts to enhance the quality of banking regulation and supervision in Latin America and the Caribbean contributed substantially to their resiliency during the recent financial crisis. The Basel III regulatory response to this crisis provides a good opportunity to further improve the regional banking sector's ability to absorb shocks due to the new rules' focus on improving risk management, disclosure and supervisory approaches; strengthening the quality and level of capital and liquidity practices; adopting an effective macroprudential overlay; and reducing opportunities for regulatory arbitrage. However, the success of Basel III in improving financial stability requires the active engagement of national supervisors in implementing and enforcing the new regulatory standards. This implementation and oversight process will require a clear and well structured Basel III strategy; a reinforced on- and offsite supervisory framework; strengthened domestic arrangements for financial stability; and a renewed commitment to regional and international cooperation among financial sector authorities.

### **The Basel III Capital Framework: a decisive breakthrough**

Speech by Mr Hervé Hannoun, Deputy General Manager of the Bank for International Settlements, at the BoJ-BIS high Level Seminar on "Financial Regulatory Reform: Implications for Asia and the Pacific", Hong Kong SAR, 22 November 2010.

<http://www.bis.org/speeches/sp101125a.htm>

Ten days ago, the Basel III framework was endorsed by the G20 leaders in South Korea. Basel III is the centrepiece of the financial reform programme coordinated by the Financial Stability Board.<sup>2</sup> This endorsement represents a critical step in the process to strengthen the capital rules by which banks are required to operate. When the international rule-making process is completed and Basel III has been implemented domestically, we will have considerably reduced the probability and severity of a crisis in the banking sector, and by extension enhanced global financial stability.

The title of my intervention, "The Basel III Capital Framework: a decisive breakthrough", sounds like a military metaphor, which may be surprising in the context of a speech on banking regulation. But indeed, the supervisory community had to fight a fierce battle to require more capital and less leverage in the financial system in the face of significant resistance from some quarters of the banking industry.

I will highlight nine key breakthroughs in Basel III, from a focus on tangible equity capital to a reduced reliance on banks' internal models and a greater focus on stress testing, that will increase the safety and soundness of banks individually and the banking system more broadly.

### **Re-establishing the resilience of the financial sector: aspects of risk management and supervision**

Opening address by Mr Jaime Caruana, General Manager of the BIS, at the Fifth Biennial Conference on Risk Management and Supervision, Basel, 3 November 2010.

<http://www.bis.org/speeches/sp101109.htm>

As standard setters roll out a massive reform package, we must be careful to also focus on the quality of the implementation of these reforms. This will ensure more effective supervision and hopefully prevent firms from taking on excessive risk and employing too high leverage in the future. A proper implementation of standards will need to be complemented by vigilance and courage on the part of supervisors and risk managers alike. Both should take a more proactive approach when necessary.

### **Macroprudential policy: could it have been different this time?**

Speech by Mr Jaime Caruana, General Manager of the BIS, at the People's Bank of China seminar on macroprudential policy, in cooperation with the International Monetary Fund, Shanghai, 18 October 2010.

<http://www.bis.org/speeches/sp101019.htm>

The Basel III provides a solid foundation for a macroprudential framework. Could the new standards have made a difference in the course of the recent financial crisis? A counterfactual empirical analysis suggests that this would indeed have been the case. Banks would have faced the crisis with much stronger capital bases, and would have been better able to draw on them. The financial system would have been much better prepared to withstand the shock of falling housing prices and losses on securitised assets. As a result, the negative feedback from losses to credit supply would have been milder, and governments would have had to provide less support. The aggravation of the business cycle due to the financial system distress would have been significantly reduced. While Basel III brings macroprudential policy into the mainstream of financial supervision, it remains the responsibility of national authorities to put it into practice.

### **Remarks on "Enhancing financial stability and resilience: macroprudential policy, tools and systems for the future"**

Remarks by Mr Jaime Caruana, General Manager of the BIS, at the press launch of a report "Enhancing financial stability and resilience: macroprudential policy, tools and systems for the future" by the G30 Working Group on Macroprudential Policy, Washington DC, 10 October 2010.

<http://www.bis.org/speeches/sp101011.htm>

Let me start by saying that I am grateful for the invitation to join this Working Group, and for being given the opportunity to discuss macroprudential policy with such a distinguished group of policymakers and market practitioners. As you all know, the BIS has a long history of advocating a macroprudential approach to economic policy - something that is apparent from some of the early work on the issue cited in the report<sup>1</sup>. It is therefore good to see this idea gaining some traction, and I believe that this report will make a forceful contribution in this context.

In this spirit, there are two issues that are covered at length in the report and that I would like to single out for particular attention:

First, as apparent from the recommendations made, the report provides strong support for ongoing initiatives in the area of regulatory reform. This applies, in particular, to the recently agreed Basel III standards for bank capital and liquidity, which are going to provide a strong anchor for macroprudential policy frameworks going forward. In a nutshell, these new standards will embed in regulation the macroprudential principle of, in good times, increasing capital buffers that can be drawn down during periods of stress. This is an important step forward.

Yet, at the same time, it is also important to note that more action is needed in other areas of macroprudential policy. This includes the development of tools that are explicitly aimed at leaning against excessive credit growth. It is in this area that our knowledge is least advanced, with much of the experience to date based on measures focused on particular sectors and countries. Sectoral policies, such as higher mandated loss reserves or maximum loan-to-value ratios, can be very helpful complementary tools in a macroprudential toolkit. In using them, however, we need to be careful to avoid unintended side effects or drifting inadvertently towards credit allocation. That is, some caution is required in further developing and using these tools.

The second issue that I would like to single out is governance. The Working Group rightly emphasises the importance of strong governance arrangements for macroprudential policy. This requires ex ante clarity about the roles, responsibilities and powers of those charged with macroprudential supervision - based on mandates that safeguard operational autonomy and drawing on international cooperation. In this context, central banks have a key role to play: because of their expertise in macroeconomic analysis, their intimate knowledge of financial markets, their role as lenders (and, possibly, market-makers) of last resort, and their oversight of payment and settlement systems - but also because of the extensive hands-on experience gained with mechanisms fostering independence and accountability.

It is on this basis that I strongly recommend this report be carefully read by all those who are concerned with the topic of macroprudential policy - not only in the policymaking community, but also among market practitioners.

### **Financial reform: a progress report**

Remarks by Mr Stephen G Cecchetti, Economic Adviser and Head of Monetary and Economic Department of the BIS, prepared for the Westminster Economic Forum, National Institute of Economic and Social Research (NIESR), London, 4 October 2010.

<http://www.bis.org/speeches/sp101004.htm>

Examination of the various proposals for strengthening regulatory standards for banks has focused, with good reason, on weighing their benefits and costs. The short-term costs of the new Basel III capital standards are likely to be small and largely transient, while the benefits of a stronger and healthier financial system will be there for years to come. The new framework has three parts - a minimum, a conservation buffer and a countercyclical buffer - and is macroprudential in nature. That is, it reduces both the likelihood of excessive credit creation when times are good and the possibility of a credit crunch when times turn bad, reducing systemic risks that precipitate crises like the one we have just lived through. And the reforms are being introduced in a way that will not impede economic recovery, while providing necessary time for implementation in individual jurisdictions. In order to make sure the new framework is effective, we will need to make certain that it provides benefits to the system from day one, ensure that banks and the public sector are able to respond appropriately to shocks when they inevitably occur, and do more to address systemic risks contained outside traditional banks.

### **The challenge of taking macroprudential decisions: who will press which button(s)?**

Speech by Mr Jaime Caruana, General Manager of the BIS, at the 13th Annual International Banking Conference, Federal Reserve Bank of Chicago, in cooperation with the International Monetary Fund, Chicago, 24 September 2010.

<http://www.bis.org/speeches/sp100928.htm>

The Macroprudential policy has moved into the mainstream of policymaking with the recent agreement on Basel III. Fresh work in support of this agreement has advanced our analytic capacity in assessing the effects of altered capital and liquidity norms on the real economy, though much still needs to be done. Basel III itself takes a big step forward in putting a macroprudential overlay on regulation, relying on rules where possible but necessarily leaving scope for discretionary policy. There should be no illusion, however, that it is easy to decide when and how to exercise that discretion. At the same time, the toolkit of macroprudential policy is being enlarged. Finally, the governance of macroprudential policy should build on the strengths of central banks.

### **Basel III: towards a safer financial system**

Speech by Mr Jaime Caruana, General Manager of the BIS, at the 3rd Santander International Banking Conference, Madrid, 15 September 2010.

<http://www.bis.org/speeches/sp100921.htm>

Basel III represents a fundamental strengthening - in some cases, a radical overhaul - of global capital standards. Together with the introduction of global liquidity standards, the new capital standards deliver on the core of the global financial reform agenda, and will be presented to the Seoul G20 Leaders Summit in November.

The implementation of Basel III will considerably increase the quality of banks' capital and significantly raise the required level of their capital. In addition, it will provide a "macroprudential overlay" to better deal with systemic risk. Lastly, the new package will allow sufficient time for a smooth transition to the new regime.

### **Strengthening the financial system: comparing costs and benefits**

Remarks by Mr Stephen G Cecchetti, Economic Adviser and Head of Monetary and Economic Department of the BIS, prepared for the Korea-FSB Financial Reform Conference, 3 September 2010.

<http://www.bis.org/speeches/sp100903.htm>

The best way to prevent instability from spilling from one country to another is by preventing instability in the first place, which in turn calls for strong regulatory standards. Financial regulation is necessary because, left to their own devices, banks hold too little capital and liquidity. Stronger standards for both should provide benefits from the day they are announced. These benefits, and the associated costs, have recently been estimated by the BCBS long-term economic impact (LEI) working group and by the FSB/BCBS Macroeconomic Assessment Group. The LEI found that raising the capital ratio by one percentage point from its average pre-crisis level, while also strengthening liquidity standards, should cut the probability of financial crises roughly in half, producing an estimated benefit of 1.6% of GDP. As for the costs of such a measure, the MAG estimates that, for each percentage point increase in the target capital ratio implemented over a four-year horizon, the level of GDP relative to the baseline path declines by a maximum of about 0.19%. The associated rise in banks' lending rates would amount to about 15 basis points for each percentage point increase in capital. These costs will slowly dissipate during and after the phase-in, returning GDP to the path it would have followed in the absence of the changes. The impact of the new regulatory framework on specific national financial systems will depend on current levels of capital and liquidity in those systems, and on the consequences of changes to the definitions used in calculating the relevant regulatory ratios. Spillovers from the transitional impact of tighter standards should be modest, though they are likely to be higher for emerging economies than for advanced ones. These results imply that the reforms proposed by the Basel Committee are likely to have, at most, a modest impact on aggregate output, especially if the new standards are phased in over an appropriate transition period.