

# Chapter 4: Banking-sector overview

## 4.1 Introduction

This chapter provides an overview of the financial and risk information, compiled by means of the aggregation of data submitted during 2012 from individual South African-registered banks (including domestic branches of international banks but excluding offshore branches and subsidiaries of South African banks, mutual banks and co-operative banks). Information represents aggregated bank-solo information, except where explicitly indicated that it represents consolidated banking groups (refer to sections 4.3.4 and 4.6.1 for consolidated banking group information). Section 4.2.4 focuses on the global presence of South African banks and includes their offshore subsidiaries, branches and representative offices (Figure 4.2). Furthermore, it should be noted that information presented on credit risk does not necessarily represent aggregated data for total banks. Such information rather reflects the aggregated amount for clusters of banks that adopted the same approaches to calculate minimum capital requirements. Aggregated data in this chapter are invariably in respect of 2010, 2011 and 2012. Unless otherwise indicated, increases and decreases are measured on a year-on-year basis from 31 December 2011 to 31 December 2012.

## 4.2 Structural features of the banking sector

### 4.2.1 Banking entities registered in South Africa

Table 4.1 shows the number of entities that has been registered or licensed with the Department since 2003. There were 17 registered banks in South Africa in 2012 (unchanged from 2011). During 2012, BNP Paribas SA and the Bank of India applied to change their representative office licences to licences for operating branches of foreign banks. As a result, the number of branches of foreign banks increased year on year from 12 to 14, while the number of representative offices decreased from 43 to 41 over the same period. Refer to appendices 2, 3, 4, 5 and 7 for detailed commentary on the entities registered or licensed with the Department as at the end of 2012.

Table 4.1 South African banking sector: Number of entities registered or licensed

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Banks*.....	22	20	19	19	19	19	18	17	17	17
Mutual banks.....	2	2	2	2	2	2	2	2	2	3
Branches of international banks in the Republic of South Africa.....	15	15	15	14	14	14	13	13	12	14
Representative offices.....	44	43	47	43	46	43	42	41	43	41
Controlling companies.....	19	16	15	15	15	15	15	15	15	15
Banks under curatorship .....	1	0	0	0	0	0	0	0	0	0
Banks in receivership.....	2	0	0	0	0	0	0	0	0	0
Banks in final liquidation .....	1	2	2	2	2	2	2	2	2	2

\* Includes active banks and banks exempted by the Registrar of Banks (with effect from 1 July 1996) in terms of the Supervision of Financial Institutions Rationalisation Act, 1996 (Act No. 32 of 1996) and section 1(cc) of the Banks Act, 1990

### 4.2.2 Shareholding structure

Figure 4.1 depicts the shareholding structure of South African banks. As at 31 December 2012, foreign shareholders held 43,2 per cent of the nominal value of the South African banking sector's shares in issue compared to 44,9 per cent<sup>44</sup> as at 31 December 2011. A significant contributing factor for the large foreign shareholding (measured by nominal value) in the

44 Reported as 43,2 per cent in the Department's 2011 *Annual Report*. This was amended due to incorrect regulatory reporting.

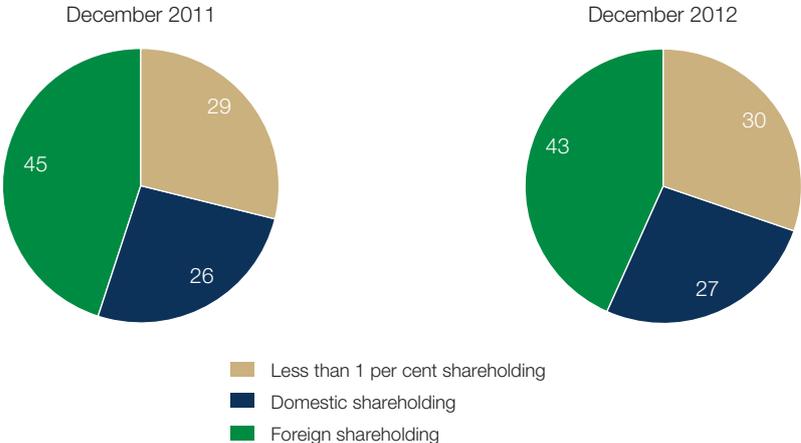


sector is the foreign shareholding in Absa Bank Limited, one of the largest banks registered in South Africa. Significant domestic shareholders<sup>45</sup> accounted for 26,5 per cent and minority shareholders<sup>46</sup> for 30,4 per cent of the nominal value of banking-sector shares in issue as at 31 December 2012 (December 2011: 26,1 per cent and 29,0 per cent respectively).

45 Significant domestic shareholders are domestic shareholders with more than 1 per cent shareholding.

46 Minority shareholders are classified as those domestic or foreign shareholders who hold less than 1 per cent of the total nominal value of shares.

**Figure 4.1 Shareholding structure of the South African banking sector (nominal value of shares) (per cent)**



### 4.2.3 Approval of local and foreign expansions by South African banking groups

Table 4.2 presents the number of applications the Department has approved in terms of section 52 of the Banks Act since 2003. All the applications received in 2012 were submitted by the five largest banking groups (refer to Appendix 8 for more information in this regard).

**Table 4.2 South African banking sector: Number of approvals for local and international expansions granted in terms of section 52 of the Banks Act, 1990**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Local .....	28	16	29	16	12	15	10	16	19	12
Foreign* .....	31	20	17	8	25	19	26	22	27	14
Total .....	59	36	46	24	37	34	36	38	46	26

\* Excludes transactions undertaken by Investec plc

### 4.2.4 Global presence of South African banking groups

Figure 4.2 shows the South African banking groups' global presence (in respect of offshore subsidiaries, branches and representative offices).

Figure 4.2 Global presence of South African banking groups



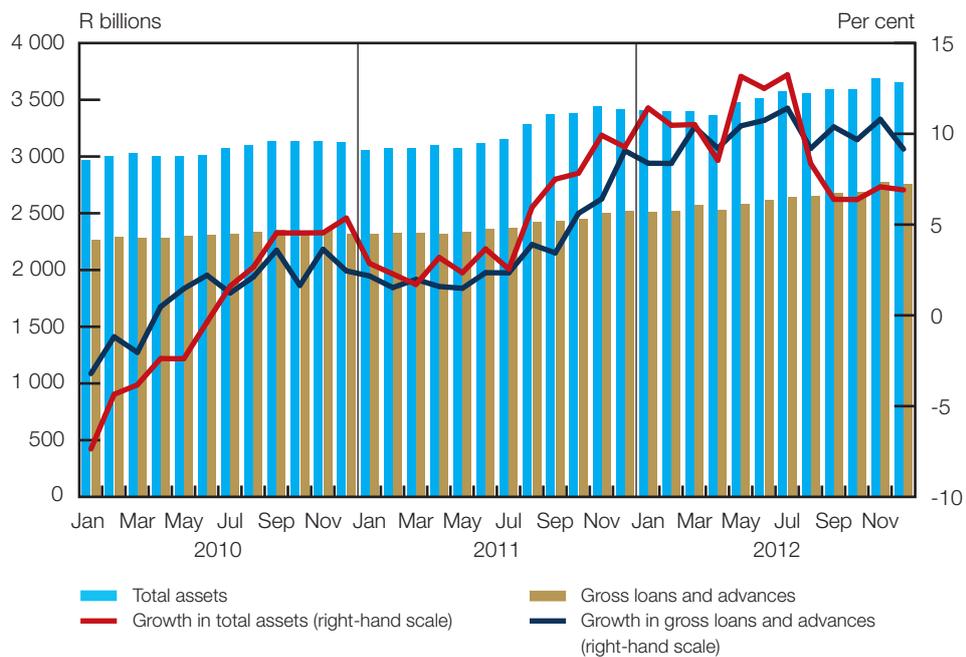
### 4.3 On- and off-balance-sheet composition

The following section analyses movements, trends and the composition of the South African banking sector’s asset, liabilities, shareholders’ equity and off-balance-sheet items.

#### 4.3.1 Assets

The year-on-year growth in banking-sector assets, and gross loans and advances (the largest component of assets) is shown in Figure 4.3. The upward trend in year-on-year growth in total assets since mid-2011 continued in 2012, peaking at 13,3 per cent in July 2012 before slowing to 6,9 per cent in December 2012 (December 2011: 9,3 per cent). The slowdown in the year-on-year growth rate in total banking-sector assets since July 2012 was mainly due to a decrease in the annual growth rate of derivative financial instruments. Growth in gross loans and advances remained strong at 9,2 per cent year on year in December 2012.

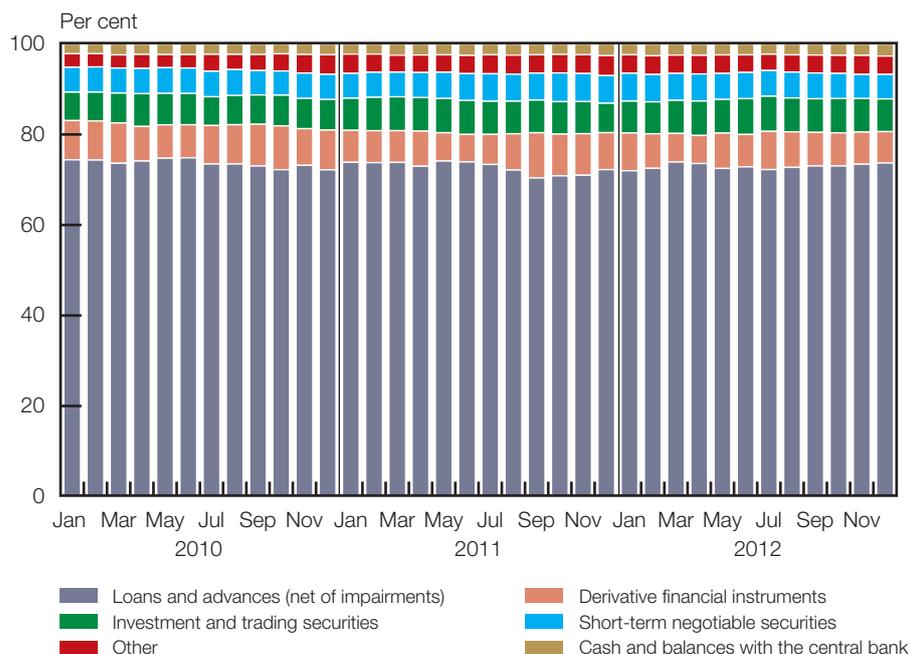
Figure 4.3 Total banking-sector assets, gross loans and advances, and their respective year-on-year growth rates



The composition of total banking-sector assets is illustrated in Figure 4.4. Loans and advances remained the largest portion of banking-sector assets in 2012 and amounted to R2 753 billion as at 31 December 2012 (December 2011: R2 522 billion). Loans and advances represented 73,7 per cent of total banking-sector assets as at 31 December 2012, followed by investment and trading securities at 7,2 per cent, and derivative financial instruments at 6,9 per cent. Short-term negotiable securities, other assets, and cash and balances with central banks constituted 5,4 per cent, 4,1 per cent and 2,7 per cent respectively of total banking-sector assets as at 31 December 2012. Changes in the composition were mainly due to mark-to-market adjustments in the value of derivative financial instruments.<sup>47</sup>

47 'Mark-to-market' or fair value accounting adjustments of financial derivatives are calculated in terms of International Accounting Standard 39.

Figure 4.4 Composition of total banking-sector assets



The growth rate of the three largest asset classes (by value) within loans and advances is shown in Figure 4.5. Term loans increased by R116 billion year on year and amounted to R553 billion as at 31 December 2012 (December 2011: R437 billion), mainly attributable to a change in regulatory reporting by one of the large banks and growth in lending to local government, corporates, banks and retail clients. Other loans to customers decreased to R392 billion as at 31 December 2012 (December 2011: R413 billion), also mainly due to a change in regulatory reporting by one of the large banks. The growth rate in home loans moderated to 0,8 per cent as at 31 December 2012 (December 2011: 1,3 per cent).

Figure 4.5 Annual growth rates of the three largest loan categories as at 31 December 2012

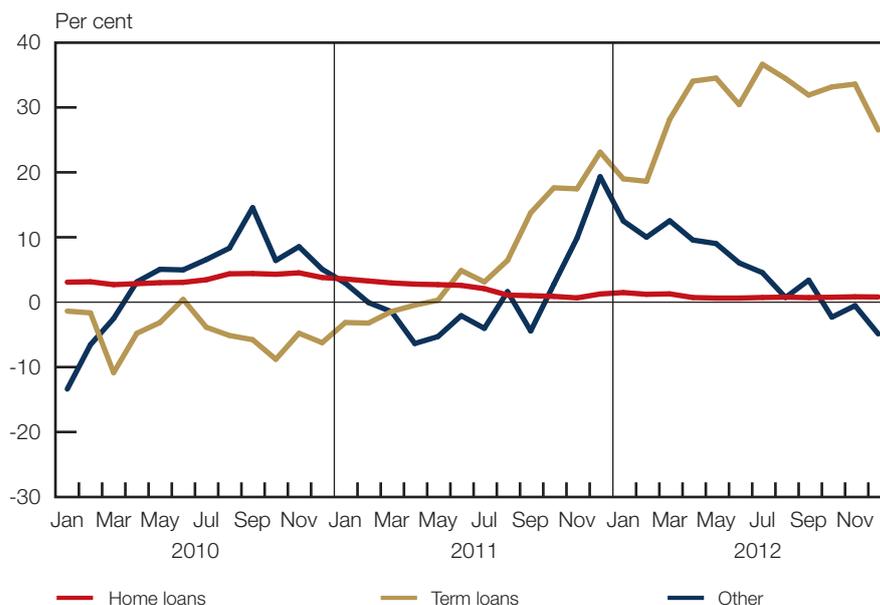
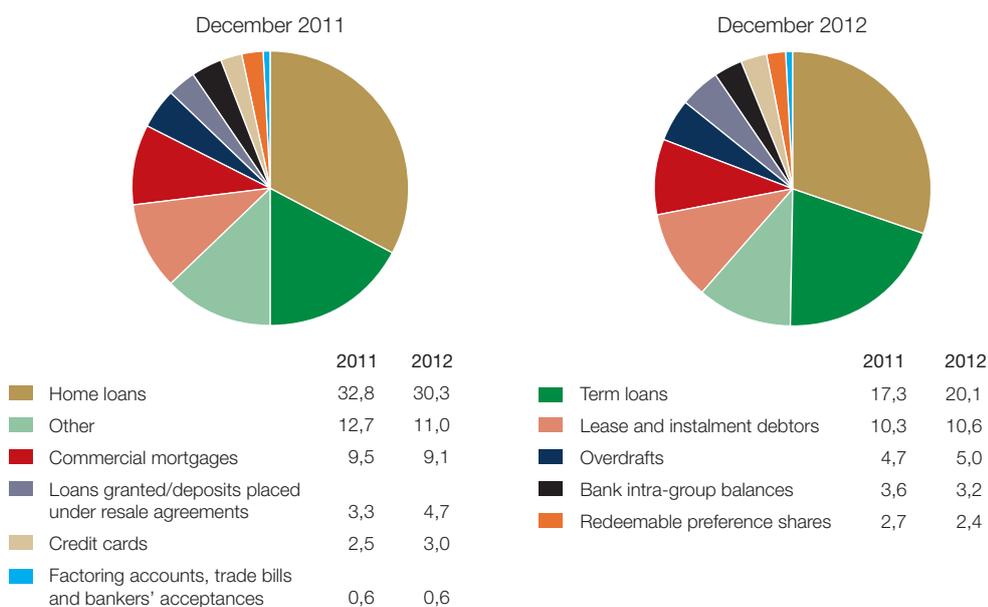


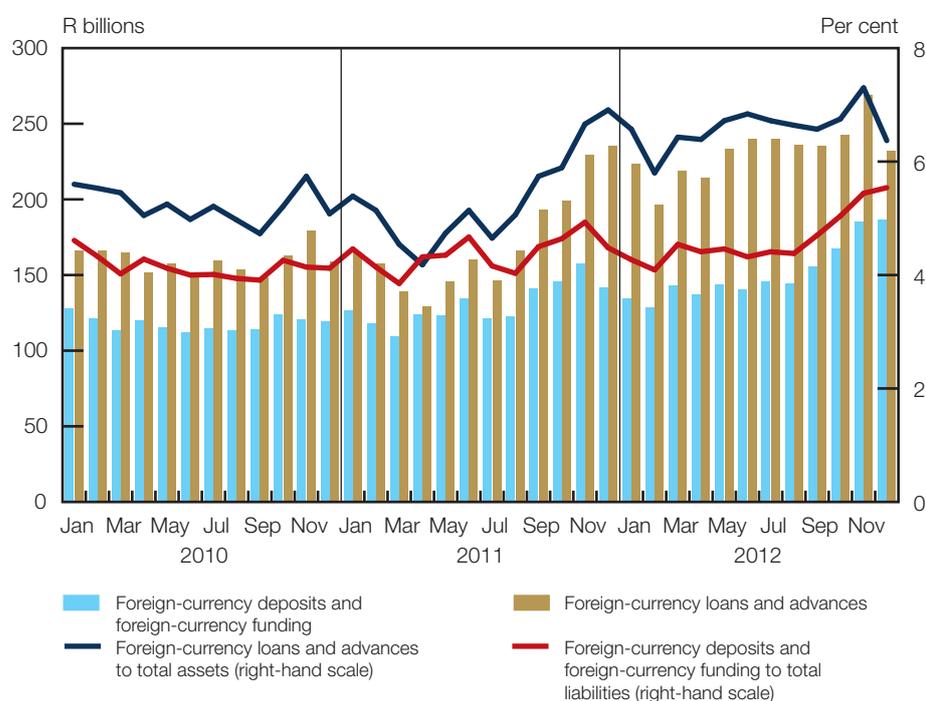
Figure 4.6 depicts the composition of loans and advances. Home loans (residential mortgages) remained the largest portion of the banking sector’s loans and advances, accounting for 30,3 per cent of loans and advances as at 31 December 2012 (December 2011: 32,8 per cent). Term loans, as a percentage of loans and advances, increased from 17,3 per cent to 20,1 per cent over the period under review. Term loans include both secured and unsecured loans to wholesale and retail clients, and are normally characterised by a fixed-term structure with a final repayment date. Other assets, and lease and instalment debtors accounted for 11,0 per cent and 10,6 per cent respectively of loans and advances as at 31 December 2012 (December 2011: 12,7 per cent and 10,3 per cent respectively).

Figure 4.6 Composition of gross loans and advances (per cent)



The banking sector's foreign-currency loans and advances, and foreign-currency deposits and funding are presented in Figure 4.7. In 2012 the value of foreign-currency loans and advances exceeded the total amount of foreign-currency funding received by banks by R81 billion on average. The gap between foreign-currency loans and advances and foreign-currency funding reduced to R46 billion over the period under review, mainly due to a decrease in foreign-currency loans and advances resulting from changes in funding of large banking group's domestic and foreign banking operations. Because of a 31,6 per cent year-on-year increase in foreign-currency funding, the ratio of foreign-currency funding to total liabilities increased to 5,5 per cent as at 31 December 2012 (December 2011: 4,5 per cent). Moreover, as a result of a 1,2 per cent year-on-year decrease in foreign-currency loans and advances, the ratio of foreign-currency loans and advances to total assets decreased to 6,4 per cent as at 31 December 2012 (December 2011: 6,9 per cent).

Figure 4.7 Foreign-currency loans and advances (as a percentage of total assets) and the total of foreign-currency deposits and foreign-currency funding (as a percentage of total liabilities)

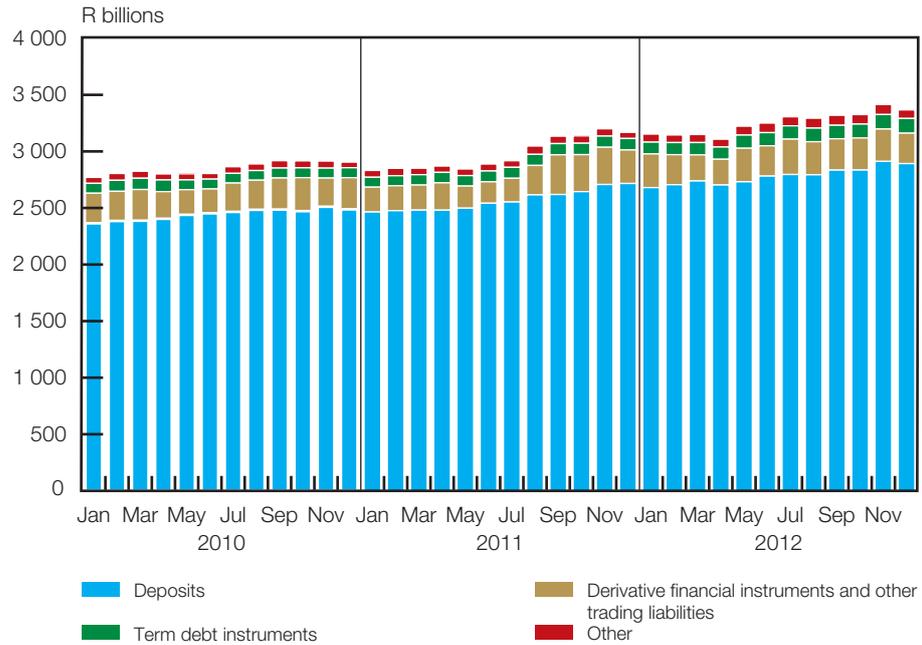


## 4.3.2 Liabilities

Figure 4.8 indicates that the majority of the banking sector's funding is from depositors. It also shows that total liabilities grew marginally by 6,3 per cent in 2012 from 9,1 per cent in 2011. Deposits amounted to R2 892 billion as at 31 December 2012 (85,9 per cent of total banking-sector liabilities), compared to R2 717 billion as at 31 December 2011 (85,7 per cent of total banking-sector liabilities). The composition of deposits is presented in Figure 4.10.

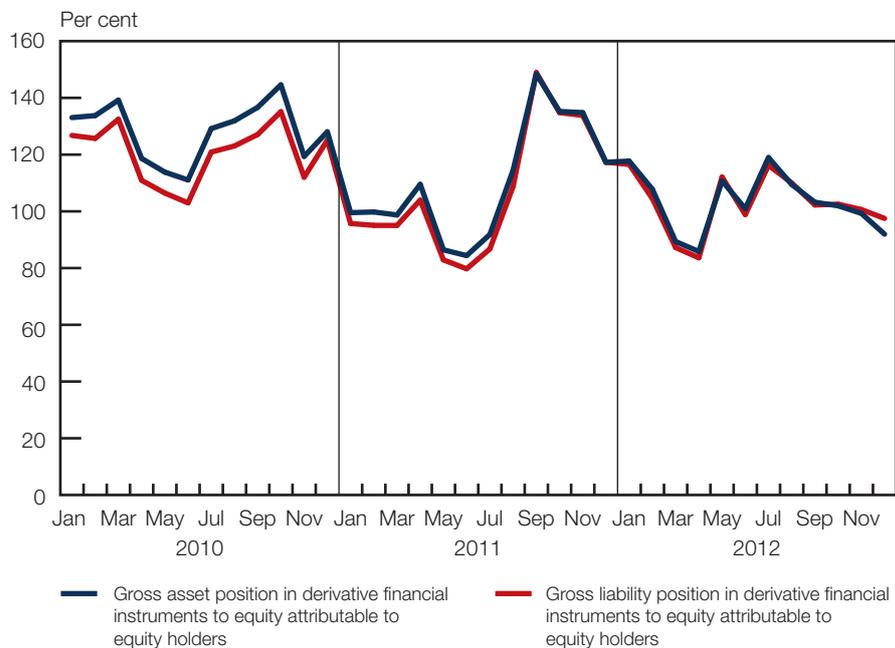
The second largest component of total banking-sector liabilities in 2012 was derivative financial instruments, which accounted for 8,0 per cent of total banking-sector liabilities as at 31 December 2012 (December 2011: 9,4 per cent). Term debt instruments and other liabilities accounted for 3,9 per cent and 2,3 per cent respectively of total banking-sector liabilities as at 31 December 2012. Other liabilities, which include current and deferred tax liabilities, retirement benefit obligations, and other, remained negligible.

Figure 4.8 Composition of liabilities



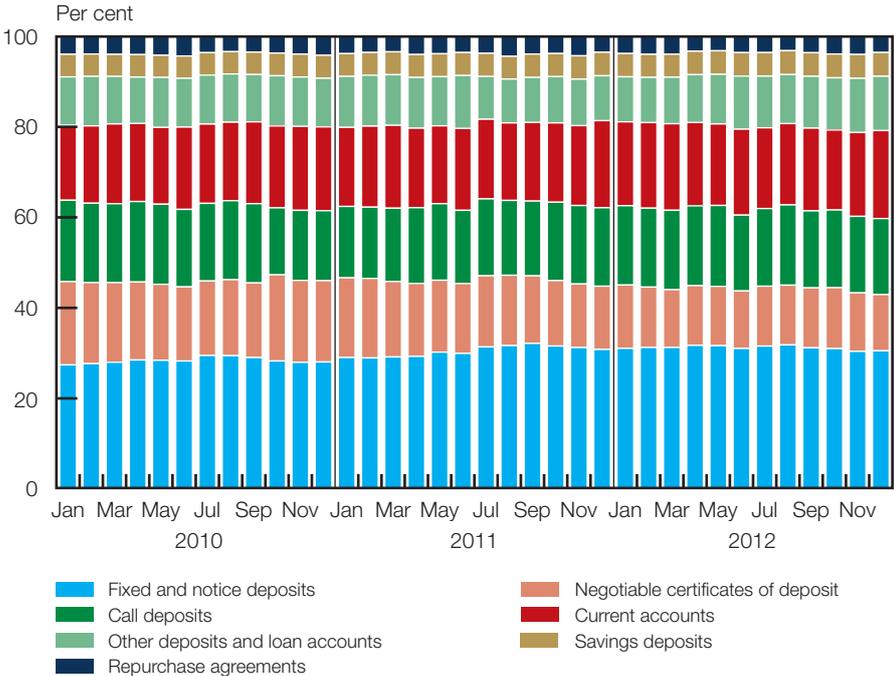
As depicted in Figure 4.9, the banking sector’s gross assets and liabilities position in financial derivatives remained fairly matched throughout 2012. More detail on the net fair value of unexpired derivative contracts can be obtained from the analysis in Figure 4.52.

Figure 4.9 Asset and liability position in derivative financial instruments (as a percentage of equity attributable to equity holders)



The composition of banking-sector deposits during 2012 remained unchanged from 2011 (refer to Figure 4.10). Expressed as a percentage of total deposits, fixed deposits increased while negotiable certificates of deposit decreased over the three-year period shown. Fixed and notice deposits – the largest component of banking-sector deposits – amounted to R883 billion as at 31 December 2012 (December 2011: R838 billion). On average, fixed and notice deposits accounted for 31,2 per cent of banking-sector deposits in 2012 (2011: 30,5 per cent). Other significant components of deposits were current accounts and call deposits, which averaged 18,5 per cent and 17,3 per cent respectively of deposits in 2012 (2011: 17,6 and 16,6 per cent respectively).

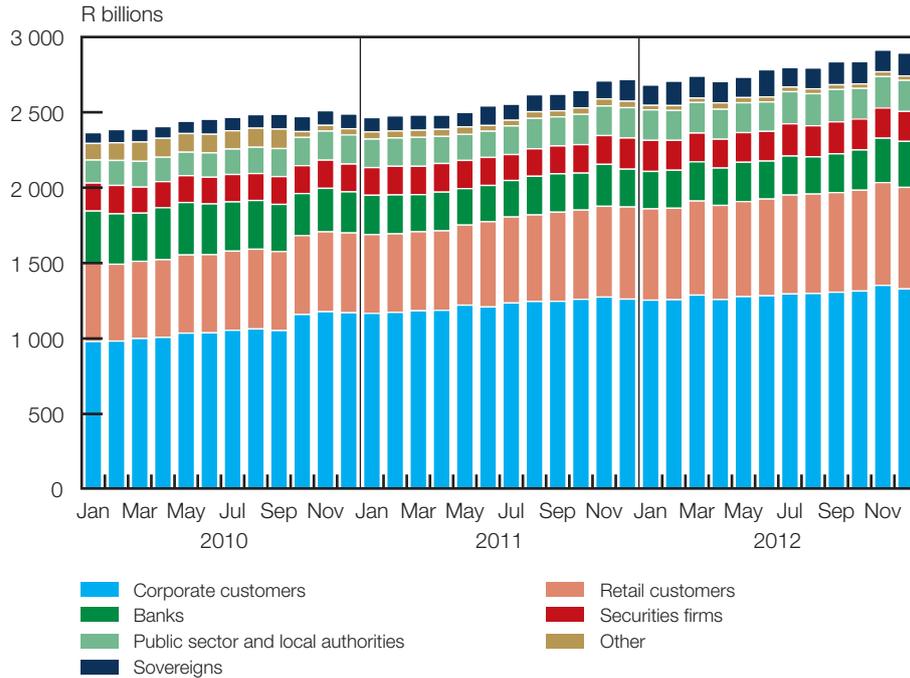
Figure 4.10 Composition of deposits



Deposits from corporate customers remained the largest component of total deposits for banks during 2012 and constituted a significant source of funding for the banking sector. However, corporate deposits (as a percentage of total deposits) decreased from 46,9 per cent as at 31 October 2010 to 45,9 per cent of total deposits as at 31 December 2012 (refer to Figure 4.11). Deposits from banks and securities firms have also decreased from December 2009 to December 2012.

The ratio of retail deposits to total deposits increased from 21,2 per cent as at 31 October 2010 to 23,3 per cent as at 31 December 2012. Deposits sourced from sovereigns, the public sector and local authorities also increased during the period under review. Other major sources of banking-sector deposits during 2012 included deposits from banks which represented 10,5 per cent of banking-sector deposits as at 31 December 2012 (December 2011: 9,2 per cent).

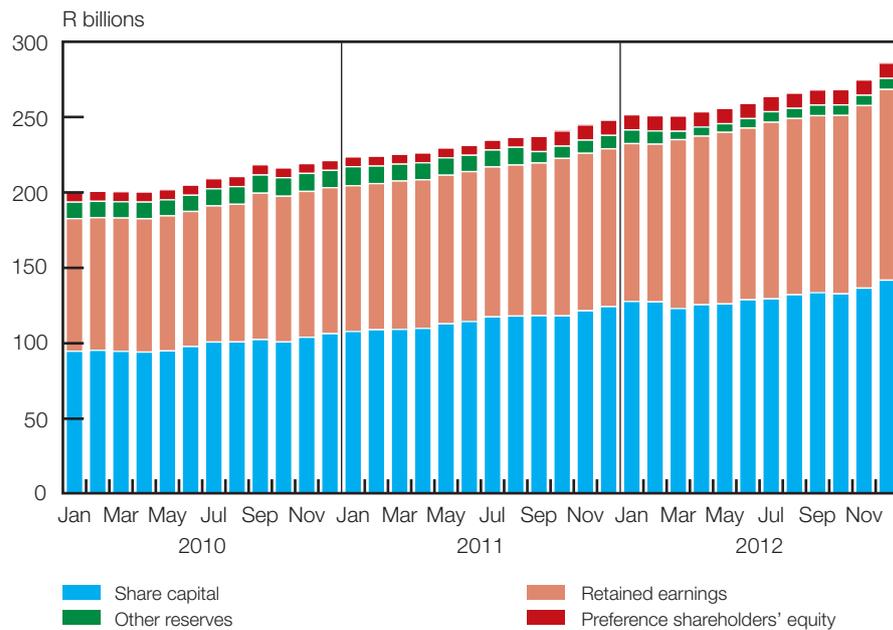
Figure 4.11 Sources of total deposits



### 4.3.3 Equity

The composition of total banking-sector equity is shown in Figure 4.12. Total equity comprised mainly share capital and retained earnings, and represented 93,9 per cent of total equity as at 31 December 2012 (December 2011: 92,4 per cent). Total equity increased by R37,9 billion mainly as a result of a 20,8 per cent increase in share capital and a 14,1 per cent increase in retained earnings.

Figure 4.12 Composition of total equity



The financial leverage multiple for the total banking sector excluding and including off-balance-sheet activities amounted to 13,3 times and 17,1 times respectively as at 31 December 2012 (December 2011: 14,5 times and 18,4 times respectively) (refer to Figure 4.13). The financial leverage multiple (excluding off-balance-sheet activities) is calculated by dividing total banking-sector assets by total banking-sector equity attributable to equity holders (this ratio is not aligned to the leverage ratio referred to in the Basel III framework). The decrease in the ratios as at 31 December 2012 is mainly due to an increase in total equity attributable to equity holders (also see Figures 4.12 and 4.14). A decreasing financial leverage multiple can be interpreted as a situation in which a decreasing proportion of liabilities (and therefore an increasing proportion of equity) is being used to fund assets. Figure 4.14 provides an indication of how much of the growth in total banking-sector assets was funded by equity holders. During 2012, the year-on-year growth in total equity of 14,6 per cent (December 2011: 10,8 per cent) was more than double the year-on-year growth in total assets at 6,9 per cent (December 2011: 9,3 per cent).

Figure 4.13 Financial leverage multiple

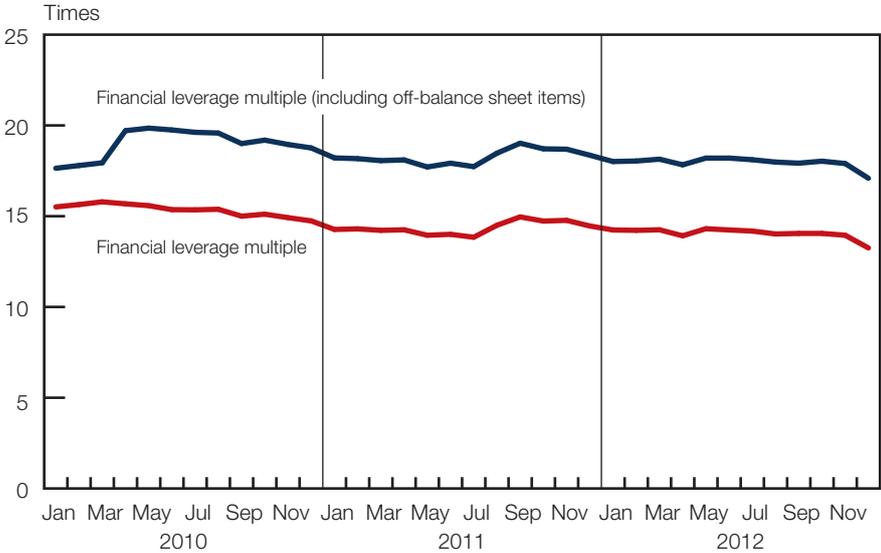
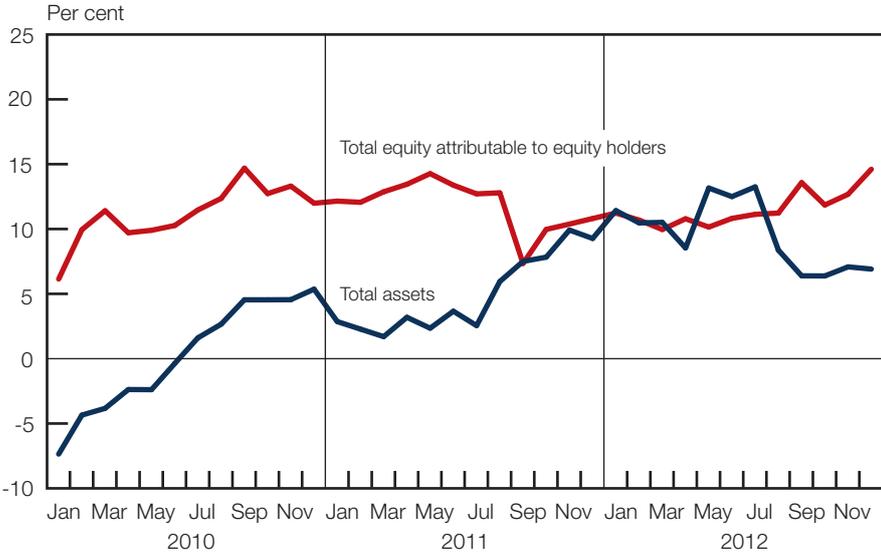


Figure 4.14 Growth rates of total banking-sector assets and equity attributable to equity holders (year on year)



### 4.3.4 Balance-sheet information on total consolidated banking groups

48 'Banks solo' includes the aggregate of banks incorporated in South Africa (excluding their foreign branches, subsidiaries and associates) and all local branches of international banks.

49 'Consolidated banking groups' includes the aggregate of registered bank controlling companies, registered banks incorporated in South Africa (that do not have registered controlling companies) and all local branches of international banks.

50 'Banks consolidated' includes the aggregate of banks incorporated in South Africa, together with their foreign branches, subsidiaries and associates, and all local branches of international banks.

The majority of banking-sector assets for banks solo<sup>48</sup> and consolidated banking groups<sup>49</sup> were held by the five largest banking groups (refer to Figure 4.15). The total banking-sector assets aggregated for banks solo (excluding their foreign branches), banks consolidated<sup>50</sup> (including their foreign branches) and consolidated banking groups are shown in Figure 4.16. The assets reported by consolidated banking groups grew by 5,5 per cent from R4,3 trillion as at 31 December 2011 to R4,6 trillion as at 31 December 2012. Consolidated banking groups' total assets reported by international banks' foreign branches decreased by almost 5 per cent year on year as at 31 December 2012.

Figure 4.15 Composition of total banking-sector assets in respect of the five largest banks, branches of international banks and other banks

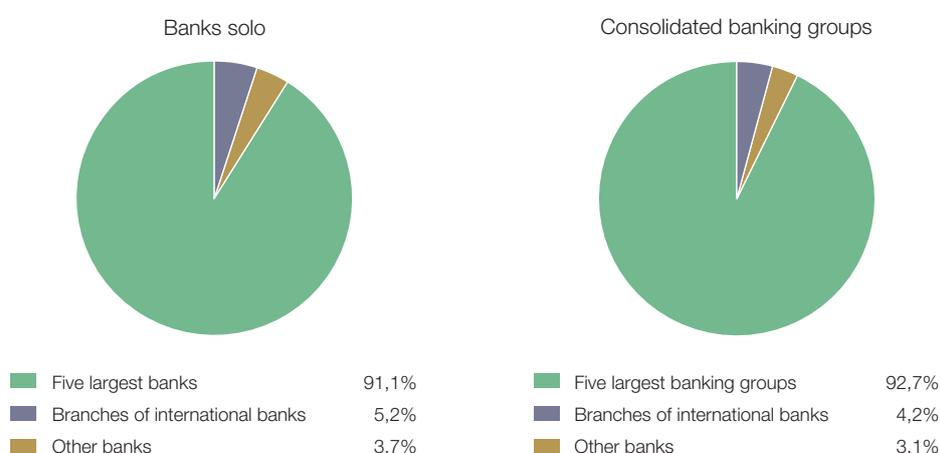


Figure 4.16 Banking-sector assets for banks solo, banks consolidated and consolidated banking groups

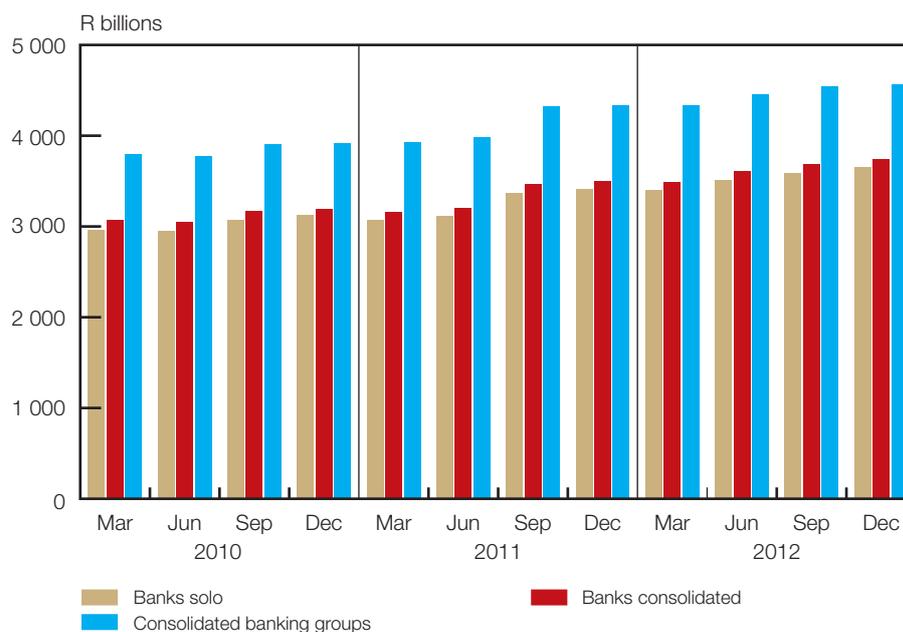
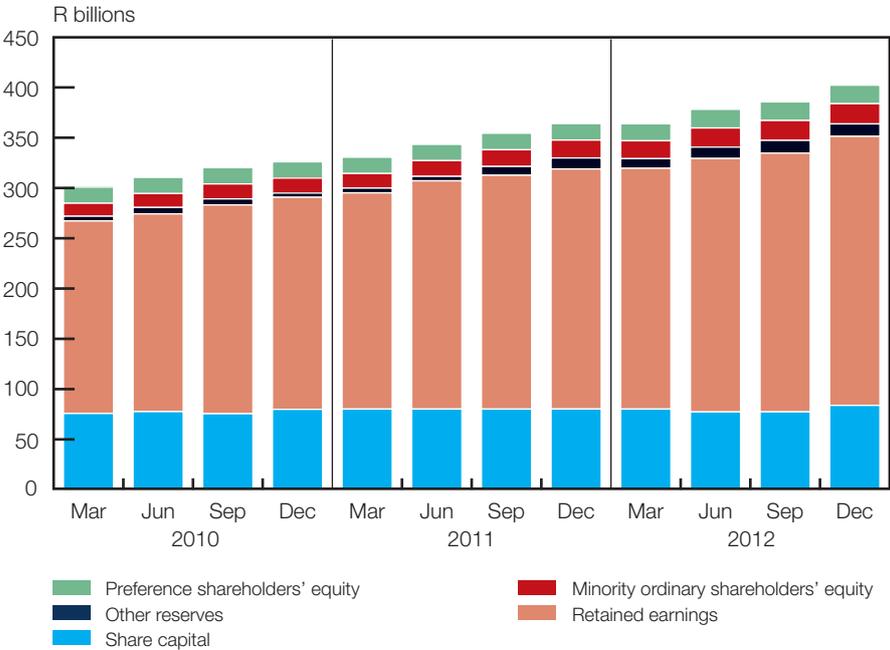


Figure 4.17 shows the composition of total equity for consolidated banking groups, which was mainly comprised of share capital and retained earnings. The total equity of consolidated banking groups increased by 10,5 per cent from R364 billion as at 31 December 2011 to R402 billion as at 31 December 2012 mainly due to 12,1 per cent growth in retained earnings. Share capital and retained earnings represented 87,4 per cent of total equity as at 31 December 2012 (December 2012: 87,6 per cent).

Figure 4.17 Composition of total equity for consolidated banking groups

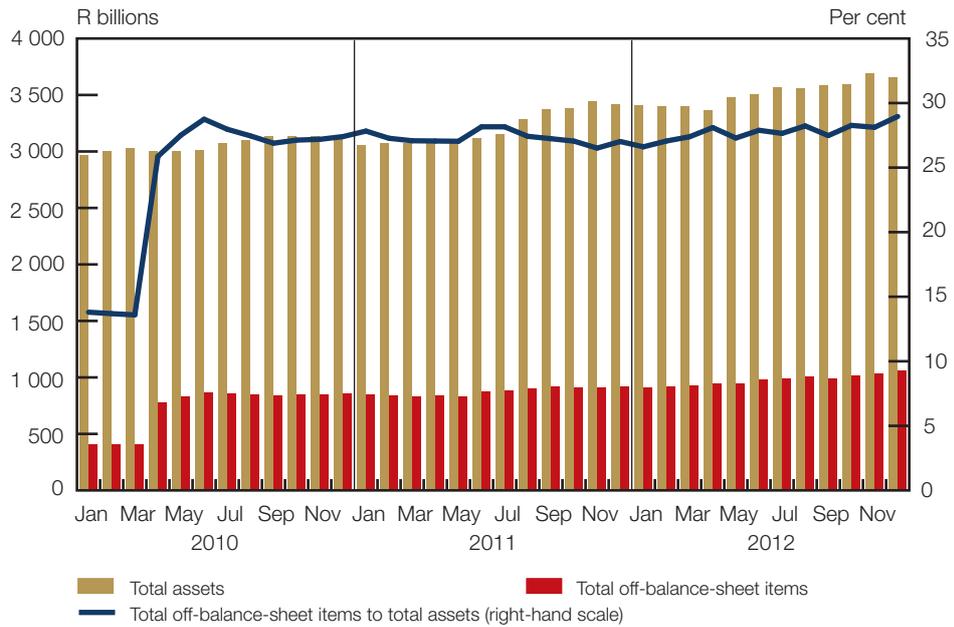


### 4.4 Off-balance-sheet activities

Figure 4.18 presents a comparison of total off-balance-sheet items to total banking-sector assets. The ratio of off-balance-sheet items to total banking-sector assets increased slightly during 2012 as a result of off-balance-sheet items growing at a faster rate than total banking-sector assets (a detailed analysis of the components and growth of off-balance-sheet items is presented in Figure 4.19). The month-on-month increase in off-balance-sheet items in April 2010 is due to a change in regulatory reporting by the majority of banks in the sector to include revocable facilities.<sup>51</sup> Off-balance-sheet items amounted to R1 058 billion as at 31 December 2012 (December 2011: R923 billion) and represented 29,0 per cent of total assets as at 31 December 2012 (December 2011: 27,0 per cent).

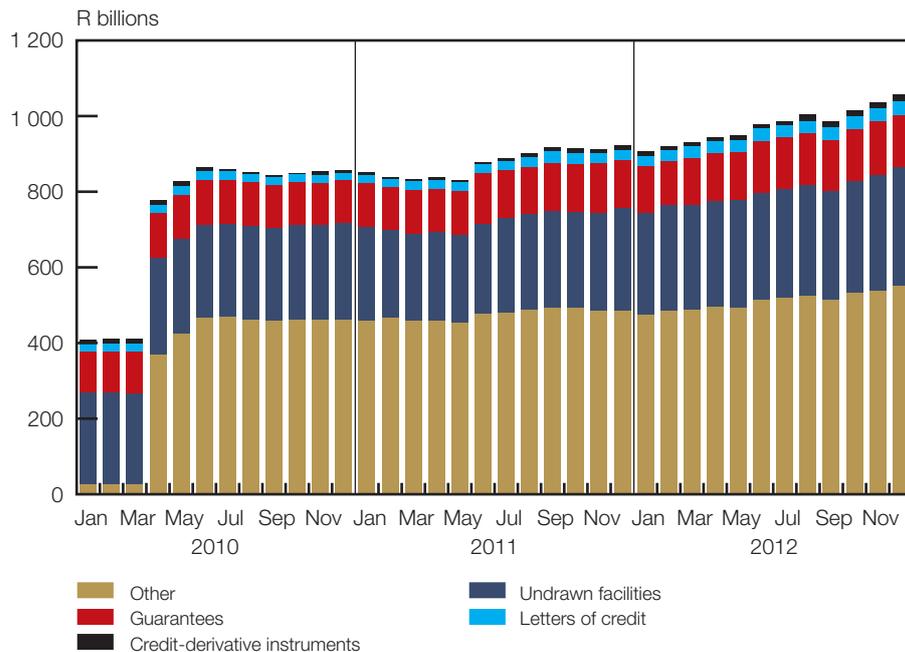
51 Refer to section 4.4 of the Department's 2010 Annual Report.

Figure 4.18 Total off-balance-sheet items in relation to total banking-sector assets



All categories of off-balance-sheet items showed year-on-year growth for the year to 31 December 2012 (refer to Figure 4.19). The largest year-on-year growth (R65 billion) was in the 'other' category, and the fastest growth rate (72,3 per cent) was in credit derivatives. Other off-balance-sheet items remained the largest component of off-balance-sheet items, representing 51,9 per cent of total off-balance sheet activities as at 31 December 2012 (December 2011: 52,5 per cent). Other off-balance-sheet items consisted mainly of uncommitted undrawn facilities, which constituted 99,7 per cent of other off-balance-sheet items as at 31 December 2012.

Figure 4.19 Composition of total off-balance-sheet items

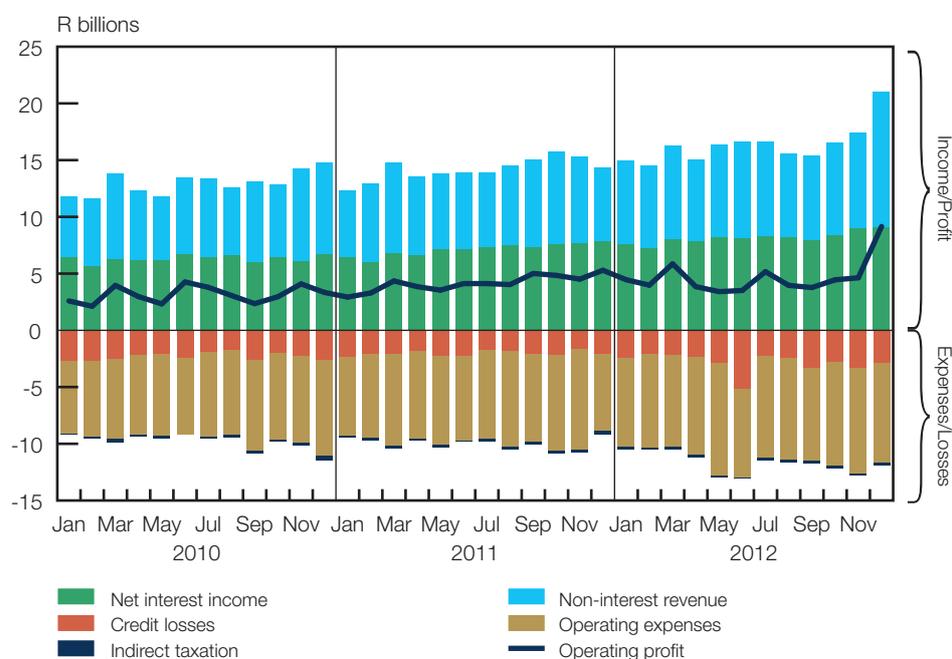


## 4.5 Profitability

Operating profit almost doubled from R4,6 billion as at 30 November 2012 to R9,2 billion as at 31 December 2012 (December 2011: R5,3 billion), mainly due to an increase in dividend income from subsidiary companies reported by one of the large banks. During the months of March, July and December 2012, there were above-average increases in operating profit. In March 2012, operating profit increased largely due to increases in profit on equities and other trading instruments, and an increase in dividends received from some subsidiary companies. In July 2012 profits increased due to a decrease in credit losses (refer to Figure 4.21).

The banking sector's 12-month cumulative operating profit for the year ended 31 December 2012 increased by 12,7 per cent year on year to R56 billion (December 2011: R50 billion). This increase is attributable to an increase in both net interest and non-interest income. Net interest income increased largely due to a 34,9 per cent year-on-year increase in interest received from term loans. Non-interest income increased largely due to a 9,2 per cent year-on-year increase in net fee and commission income, and a 29,5 per cent increase in net trading income.

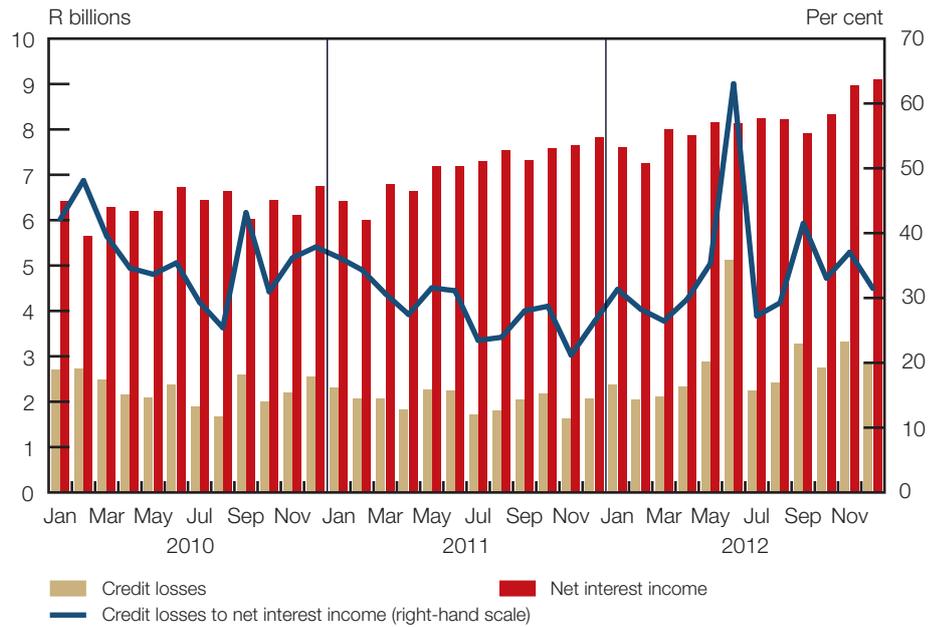
Figure 4.20 Composition of the income statement (unsmoothed)<sup>52</sup>



52 'Unsmoothed' ratios are calculated using monthly data, while 'smoothed' ratios are calculated using 12-month moving averages.

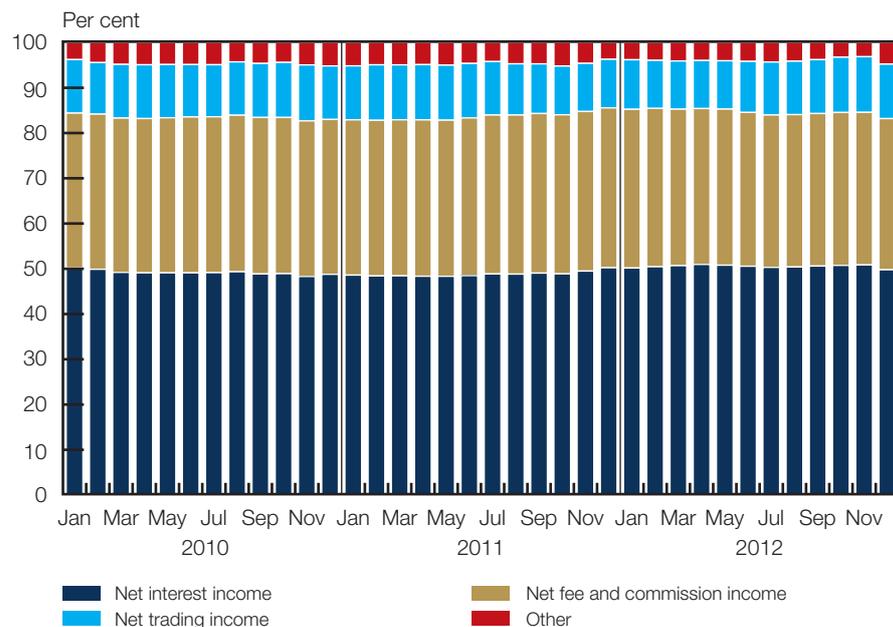
Figure 4.21 outlines the monthly credit losses as a percentage of net interest income. Credit losses as a percentage of net interest income averaged 34,5 per cent during 2012 (2011: 28,6 per cent). The monthly ratio increased from 35,3 per cent as at 31 May 2012 to 63,0 per cent as at 30 June 2012 as a result of increases in credit losses reported by a large bank. On a 12-month cumulative basis, credit losses for the banking sector increased by almost 40 per cent from R24 billion as at 31 December 2011 to R34 billion as at 31 December 2012.

Figure 4.21 Credit losses to net interest income (unsmoothed)



The composition of gross operating income remained fairly stable with net interest income, and fee and commission income together constituting 83,2 per cent of gross operating income as at 31 December 2012 (December 2011: 85,6 per cent) (refer to Figure 4.22). The 12-month average net interest income as at 31 December 2012 increased to 50,5 per cent of total gross operating income from 48,8 per cent as at 31 December 2011. There was a 74 basis-point decrease in the 12-month average net fee and commission income as a percentage of total gross income from 34,9 per cent as at 31 December 2011 to 34,1 per cent as at 31 December 2012. Net trading income and other income contributed 12,0 per cent and 4,8 per cent respectively to gross operating income as at 31 December 2012 (December 2011: 10,7 per cent and 3,7 per cent respectively).

Figure 4.22 Composition of gross operating income (smoothed)



The composition of operating expenses is shown in Figure 4.23. The composition remained fairly stable with staff expenses constituting the largest component of operating expenses, representing 55,1 per cent of operating expenses as at 31 December 2012 (December 2011: 55,8 per cent). The second largest component was travel, occupation and equipment, which represented 16,6 per cent of operating expenses as at 31 December 2012 (December 2011: 16,5 per cent). Other operating expenses, computer-processing and marketing expenses each contributed less than 15,0 per cent of operating expenses and represented 14,3 per cent, 9,8 per cent and 4,3 per cent respectively as at 31 December 2012. Total operating expenses (on a 12-month cumulative basis) increased by 11,2 per cent from R93 billion as at 31 December 2011 to almost R104 billion as at 31 December 2012 (refer to Figure 4.26), mainly due to increases in staff and other operating expenses. The 12-month average of operating expenses indicates that the ratio of staff expenses to total operating expenses increased from 53,8 per cent as at 31 December 2011 to 56,2 per cent as at 31 December 2012.

Figure 4.23 Composition of operating expenses (smoothed)

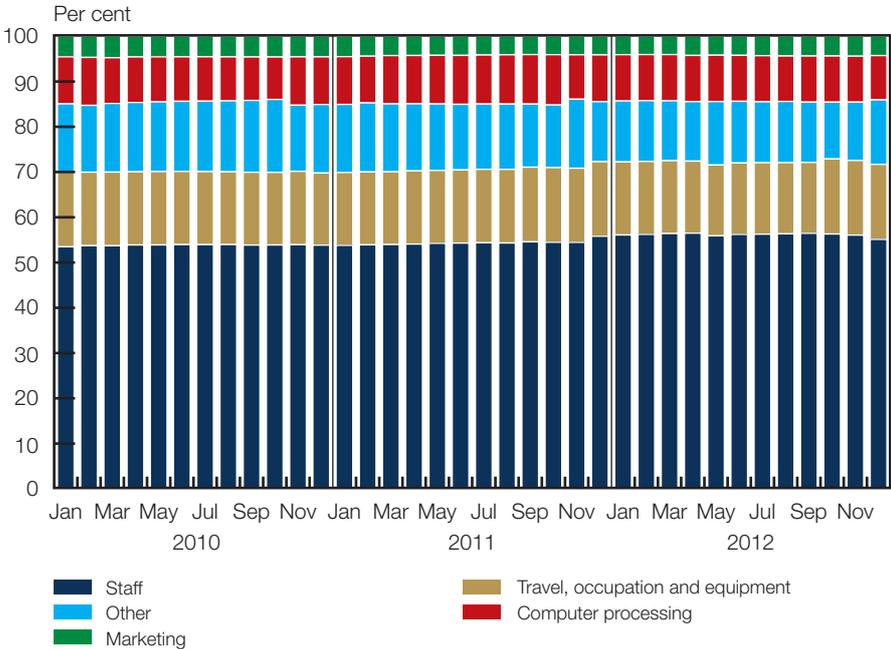
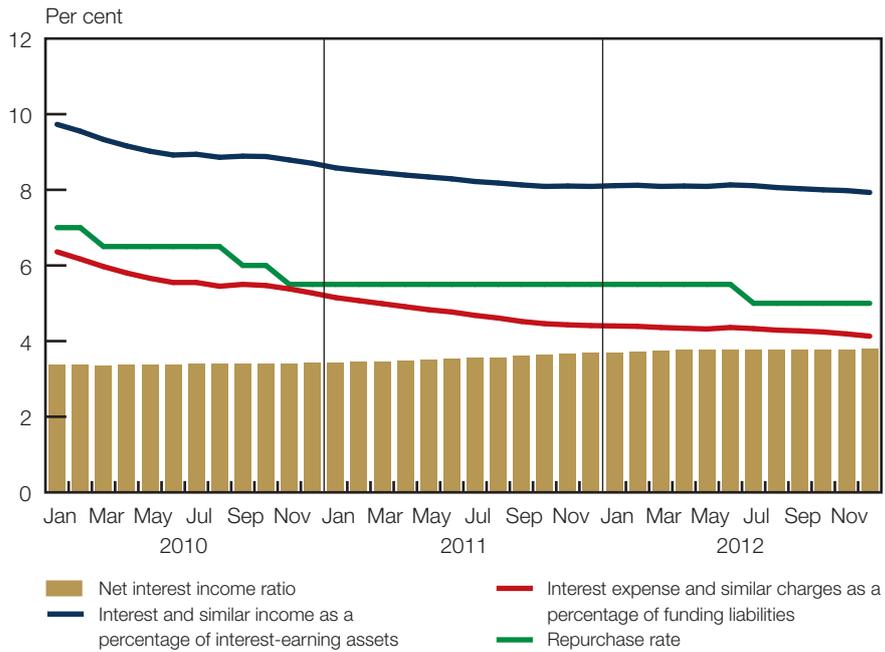


Figure 4.24 shows the smoothed net interest income ratio, which is the difference between interest and similar income to interest-earning assets, and interest expense and similar charges to funding liabilities. The smoothed net interest income ratio increased by 12 basis points from 3,7 per cent as at 31 December 2011 to 3,8 per cent as at 31 December 2012. The repurchase (repo) rate decreased from 5,5 per cent in June 2012 to 5,0 per cent in July 2012 following the Bank’s Monetary Policy Committee’s (MPC) decision to reduce interest rates. The year-on-year increase in the net interest income ratio as at 31 December 2012 was largely due to a 28 basis-point decrease in the ratio of interest expense and similar charges as a percentage of funding liabilities, which was offset by a 16 basis-point decrease in the ratio of interest and similar income as a percentage of interest-earning assets.

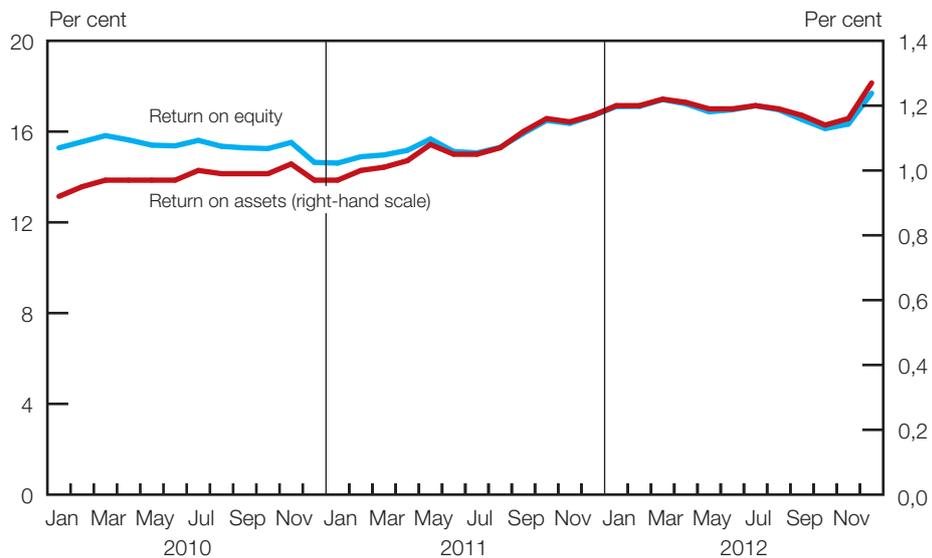
The actual ratio of interest and similar income to interest-earning assets, and the ratio of interest expense and similar charges to funding liabilities amounted to 7,9 per cent and 4,1 per cent respectively as at 31 December 2012 (December 2011: 8,1 per cent and 4,4 per cent respectively).

Figure 4.24 Net interest income ratio (smoothed)



The 12-month moving average return-on-equity (ROE) and return-on-assets (ROA) ratios for the banking sector are illustrated in Figure 4.25. The ROE and the ROA increased during 2012, and amounted to 17,7 per cent and 1,3 per cent respectively as at 31 December 2012 (December 2011: 16,7 per cent and 1,2 per cent respectively). The increase in the ROE and ROA ratios as at 31 December 2012 is mainly due to the increase in operating profit, as discussed previously.

Figure 4.25 Profitability ratios (smoothed)



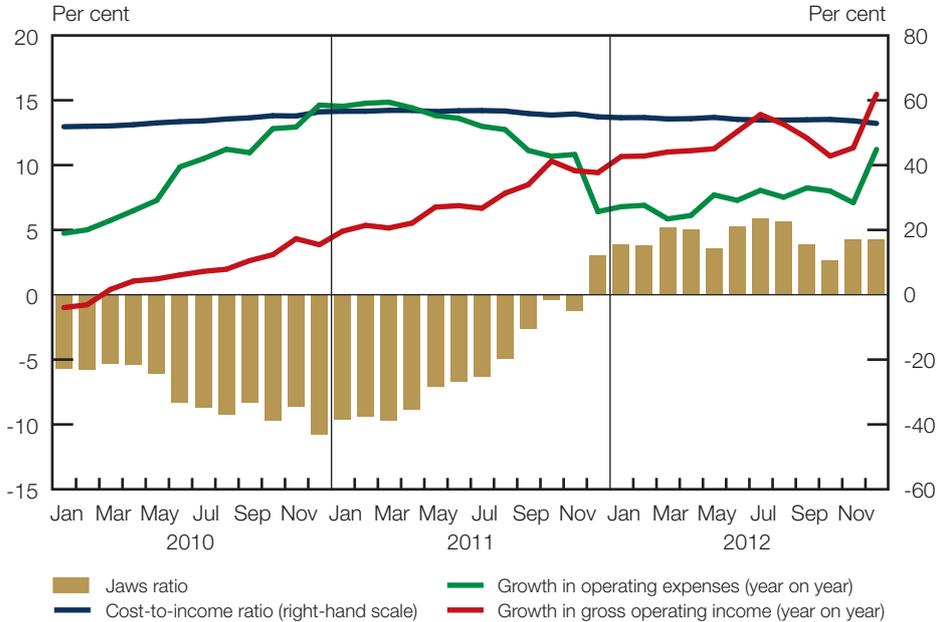
53 The jaws ratio demonstrates the extent to which the growth in the banking sector's gross operating income exceeds the growth in its operating expenses.

The cost-to-income ratio (also known as the 'efficiency ratio') is depicted in Figure 4.26. The jaws ratio<sup>53</sup> is also depicted in the aforementioned graph. The jaws ratio for the banking sector was below zero from January 2010 to November 2011, as a result of the growth rate in banking-sector operating expenses exceeding the growth rate in banking-sector operating income.

The jaws ratio was above zero from December 2011 and amounted to 4,3 per cent as at 31 December 2012 (December 2011: 3,0 per cent). The improvement in the ratio during this period was as a result of banking-sector gross operating income growing at a faster pace than banking-sector operating expenses. The significant decline in the growth of operating expenses as at 31 December 2011 was a result of a large bank reallocating expenses from operating expenses to fee and commission expenses. The increase in the growth of operating expenses as at 31 December 2012 was due to a 12-month, cumulative increase in other operating expenses, resulting from a large bank booking cost recoveries from other operating companies in the other operating expenses category during the year ended 31 December 2011. The increase in the growth of gross operating income was mainly due to the increase in operating profit detailed in the commentary to Figure 4.20.

The 12-month moving average cost-to-income ratio improved during 2012 and amounted to 52,9 per cent as at 31 December 2012 (December 2011: 54,9 per cent). The decrease in the ratio is attributable to higher growth in operating income relative to that of operating expenses, suggesting that banking operations had become more efficient during the year under review.

Figure 4.26 Jaws ratio and cost-to-income ratio (smoothed)



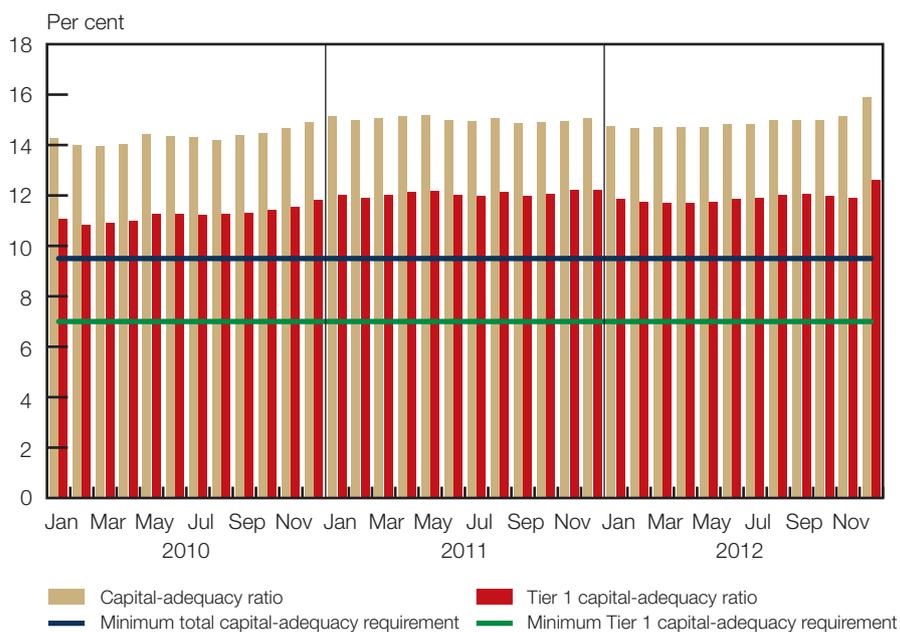
## 4.6 Capital adequacy

The minimum required capital-adequacy ratio (CAR) applicable to all banks and consolidated bank-controlling companies licensed in terms of section 70 of the Banks Act is 9,5 per cent. In addition, the Registrar may require banks and consolidated bank-controlling companies, as part of the supervisory review and evaluation process (which includes the ICAAP), to maintain a CAR above the respective minimum required ratio based on assessments of banks' idiosyncratic risk.

54 RWE, a fundamental component of the CAR, is the sum of the banking sector's assets weighted according to risk.

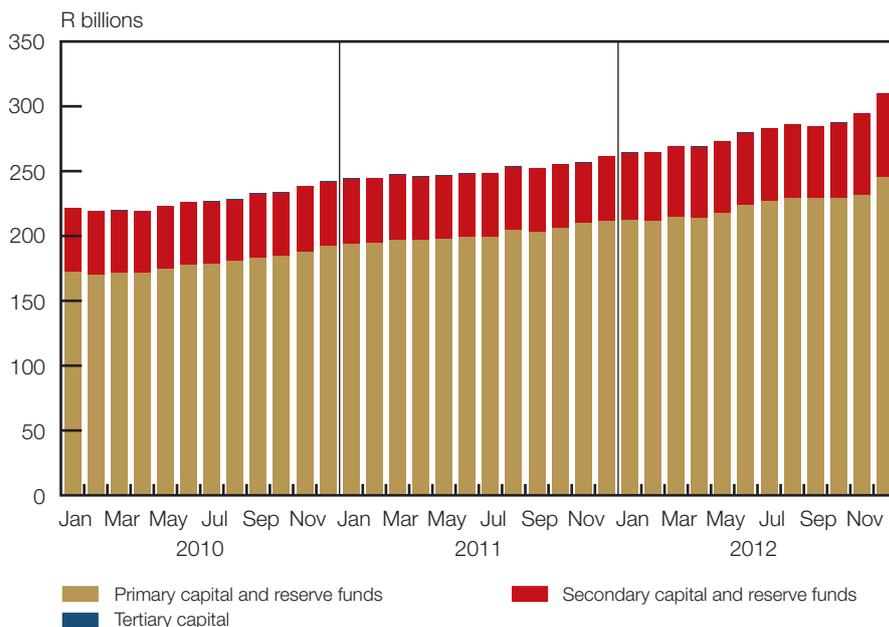
The banking sector's CAR, the Tier 1 CAR for banks' solo operations and the minimum required CAR are shown in Figure 4.27. The banking sector remained adequately capitalised throughout 2012. Total CAR and Tier 1 CAR increased from 15,1 per cent and 12,2 per cent respectively as at 31 December 2011 to 15,9 per cent and 12,6 per cent respectively as at 31 December 2012, mainly due to an increase in primary and secondary share capital and reserve funds. The amended Regulations, which included the Basel 2.5 framework, were implemented with effect from 1 January 2012. An effect of the aforementioned implementation was an increase in the total banking-sector risk-weighted exposure (RWE),<sup>54</sup> which resulted in the Total CAR and Tier 1 CAR decreasing marginally to 14,8 per cent and 11,8 per cent as at 31 January 2012. Further detail on the increase in RWE is presented in the commentary to Figure 4.30.

Figure 4.27 Capital-adequacy ratios (banks solo)



The composition of qualifying capital and reserve funds on a banks-solo basis is portrayed in Figure 4.28. During 2012 the majority of the sector's regulatory capital consisted of primary capital and reserve funds; the highest level of loss-absorbing capital (December 2012: 79,2 per cent; December 2011: 81,0 per cent). Total qualifying capital and reserve funds increased by 18,5 per cent from R261,5 billion as at 31 December 2011 to R309,8 billion as at 31 December 2012. The increase in total qualifying capital and reserve funds was mainly due to a 15,9 per cent increase in primary share capital and reserve funds from R211,8 billion as at 31 December 2011 to R245,4 billion as at 31 December 2012, and a 30,2 per cent increase in secondary capital and reserve funds from R49,4 billion as at 31 December 2011 to R64,3 billion as at 31 December 2012. In October 2012 R300 million of tertiary capital was redeemed.

Figure 4.28 Composition of qualifying regulatory capital and reserve funds (banks solo)



The ratio of term debt instruments qualifying as regulatory capital to total term debt instruments is depicted in Figure 4.29. Although there was a 28,7 per cent year-on-year increase in term debt instruments qualifying as regulatory capital, the ratio of term debt instruments qualifying as regulatory capital to total term debt instruments remained unchanged at 57,1 per cent as at 31 December 2012. Total term debt funding increased but term debt remained a small portion of total banking-sector liabilities, representing 3,9 per cent thereof as at 31 December 2012 (December 2011: 3,2 per cent). Refer to Figure 4.8 for further information in this regard. Term debt qualifying as regulatory capital amounted to R74,4 billion as at 31 December 2012 (December 2011: R57,7 billion). The notable decrease in the aforementioned ratio in May 2012 was largely a result of an increase in the issuance of non-qualifying term debt by two large banks.

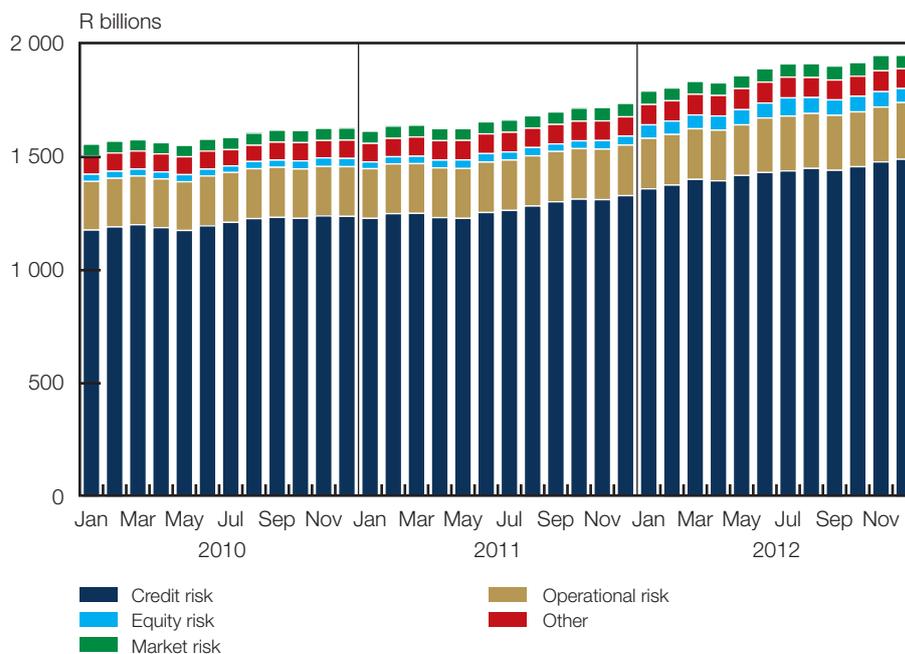
Figure 4.29 Term debt instruments qualifying as regulatory capital (as a percentage of total term debt instruments)



Figure 4.30 shows that the banking sector's RWE (on a banks-solo basis) increased by 12,2 per cent year on year to R1 949,5 billion as at 31 December 2012 (December 2011: R1 737,2 billion). The increase in RWE, which is almost double the year-on-year growth rate as at 31 December 2011, is mainly attributable to increases in credit RWE (December 2012: 12,1 per cent year on year), operational RWE (December 2012: 12,2 per cent year on year) and market RWE (December 2012: 56,7 per cent year on year). The increase in market and credit RWE was largely due to the effect of the implementation of the Basel 2.5 framework. This resulted in market RWE increasing for banks applying the advanced approaches for market risk that were required to stress their value at risk (also refer to Figure 4.50). The credit RWE increased due to the application of a 6,0 per cent scaling factor to credit RWEs reported by banks using the advanced approaches for calculating minimum capital requirements for credit risk.

Operational RWE increased mainly due to a large AMA bank's adjustment in capital as a result of updated internal loss data and due to increases in capital from growth in gross income. The composition of RWE remained constant from 2011, with credit RWE at 76,4 per cent as at 31 December 2012 constituting the majority of total RWE (December 2011: 76,5 per cent). Operational risk remained unchanged at 12,9 per cent of total RWE as at 31 December 2012. Equity risk in the banking book, market risk and other RWEs together constituted 10,7 per cent of total RWE as at 31 December 2012 (December 2011: 10,6 per cent).

Figure 4.30 Total risk-weighted exposure (banks solo)

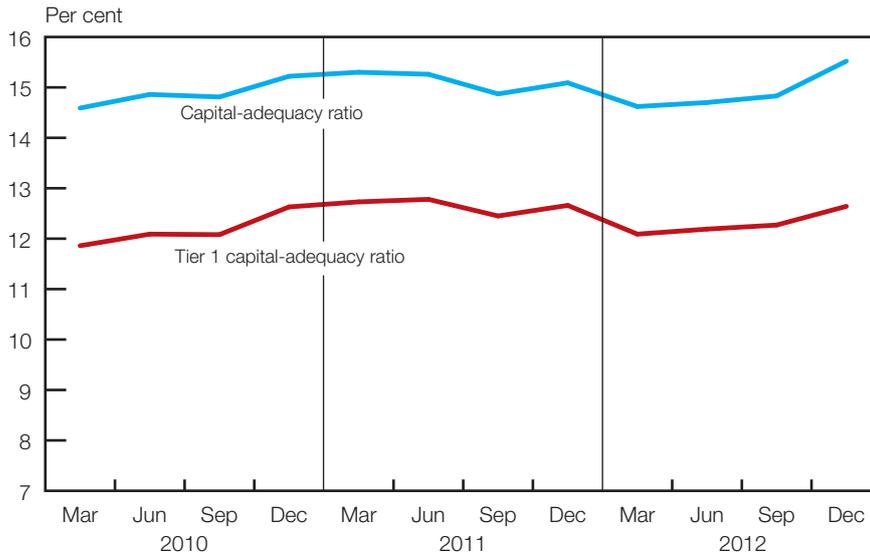


## 4.6.1 Capital adequacy for total consolidated banking groups

The CARs for the banking sector on a consolidated basis are shown in Figure 4.31. The total banking sector's consolidated CAR increased to 15,5 per cent as at 31 December 2012 (December 2011: 15,1 per cent), mainly due to an increase in retained earnings (refer to Figure 4.17). The consolidated Tier 1 CAR decreased from 12,7 per cent as at 31 December 2011 to 12,6 per cent as at 31 December 2012.



Figure 4.31 Capital-adequacy ratios (consolidated banking groups)



## 4.7 Liquidity risk

The Basel Committee document on “Principles of Sound Liquidity Risk Management and Supervision” defines ‘liquidity risk’ as “the ability of a bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses”.<sup>55</sup> One of the fundamental roles fulfilled by banks is that of maturity transformation, taking short-term liabilities and transforming them into long-term assets. This maturity transformation role exposes banks to liquidity risk. Therefore, it is important for supervisors to assess the liquidity risk management framework and practices of banks to ensure that they are adequate for, and relevant to, the liquidity risk appetite of the bank.

Traditionally, banking supervisors have used a number of monitoring tools or measures to help assess liquidity risk at banks. One of the measures used is the average liquid assets held as a percentage of liquid assets required to be held, as illustrated in Figure 4.32. In keeping with the previous year’s trend, liquid assets held remained above the liquid assets requirement of not less than 5 per cent of the banking sector’s reduced liabilities<sup>56</sup> during the period under review. The average liquid assets held grew by 10,5 per cent from R283,3 billion as at 31 December 2011 to R313,0 billion as at 31 December 2012. The ratio of liquid assets held to liquid assets required to be held increased from 193,5 per cent in December 2011 to 198,7 per cent as at 31 December 2012.

55 Basel Committee, “Principles for Sound Liquidity Risk Management and Supervision” (Basel: Basel Committee, September 2008), 1.

56 Refer to regulation 27(2).

Figure 4.32 Statutory liquid assets (actual versus required)

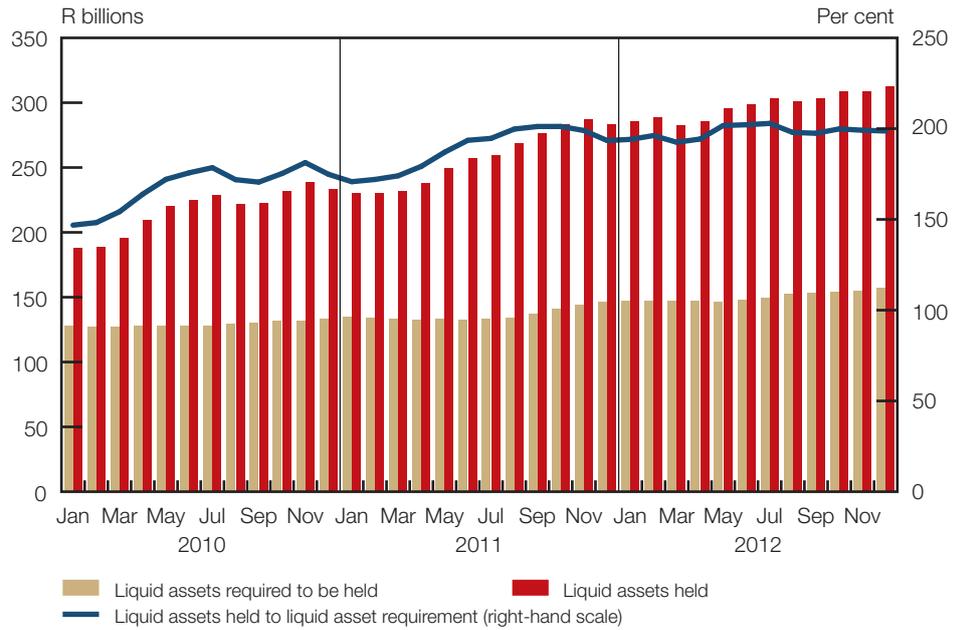
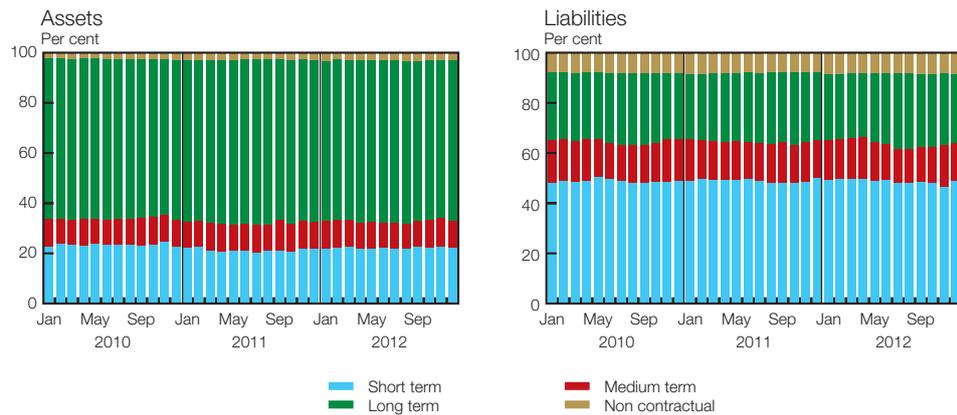


Figure 4.33 Composition of on-balance-sheet contractual terms for total banking-sector assets and liabilities



57 'Short term' refers to a maturity between 1 and 30 days, 'medium term' refers to a maturity between 1 and 6 months and 'long term' refers to a maturity of more than 6 months. Non-contractual refers to indeterminate maturity.

Figure 4.33 depicts a maturity mismatch of the banking sector's on-balance-sheet contractual terms. The majority of the banking sector's assets have a long-term contractual maturity and are funded mainly by liabilities with a short-term<sup>57</sup> contractual maturity structure. As at 31 December 2012, 49,2 per cent of banking sector's liabilities were classified as maturing in the short term (December 2011: 50,3 per cent), while 63,8 per cent of the banking sector's assets were classified as maturing in long term (December 2011: 64,2 per cent). This asset-liability mismatch is a risk inherent in banking which needs to be managed consistently.

Figure 4.34 illustrates that as at 31 December 2012, 40,9 per cent of the banking sector's contractual liabilities were classified as maturing the next day (December 2011: 41,0 per cent). This is significantly higher than the 3,0 per cent business-as-usual liabilities classified as maturing the next day as at 31 December 2012 (December 2011: 3,4 per cent). This difference between the two ratios may be attributed to the business-as-usual assumptions of banks, which take into account the actual behaviour of depositors, such as the retaining of funding or deposits on maturity or roll-over dates, notwithstanding the contractual arrangements pertaining to such funding or deposits (refer to Figure 4.35).

Figure 4.34 Contractual maturity of liabilities (as a percentage of total banking-sector liabilities)

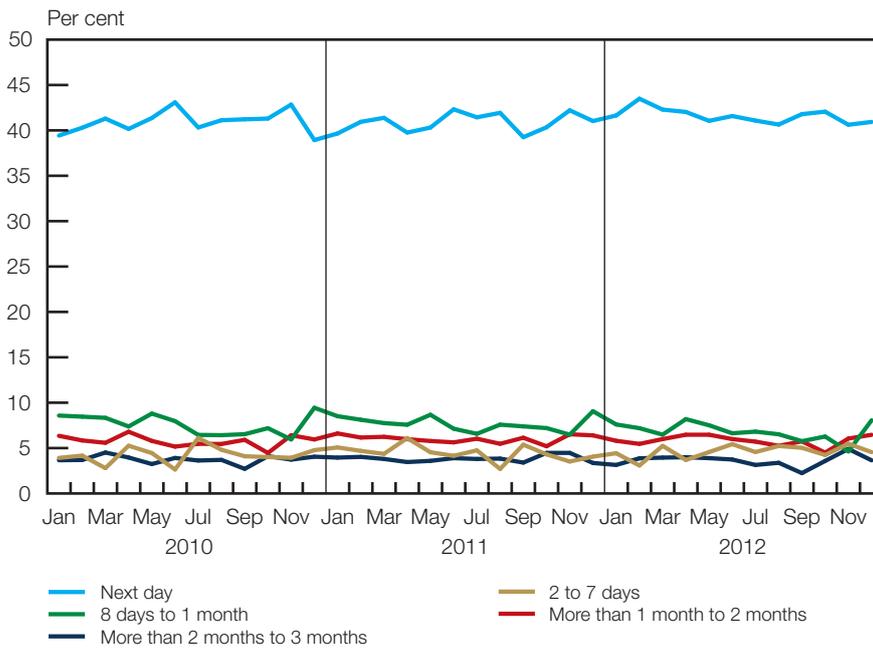


Figure 4.35 Business-as-usual maturity of liabilities (as a percentage of total banking-sector liabilities)

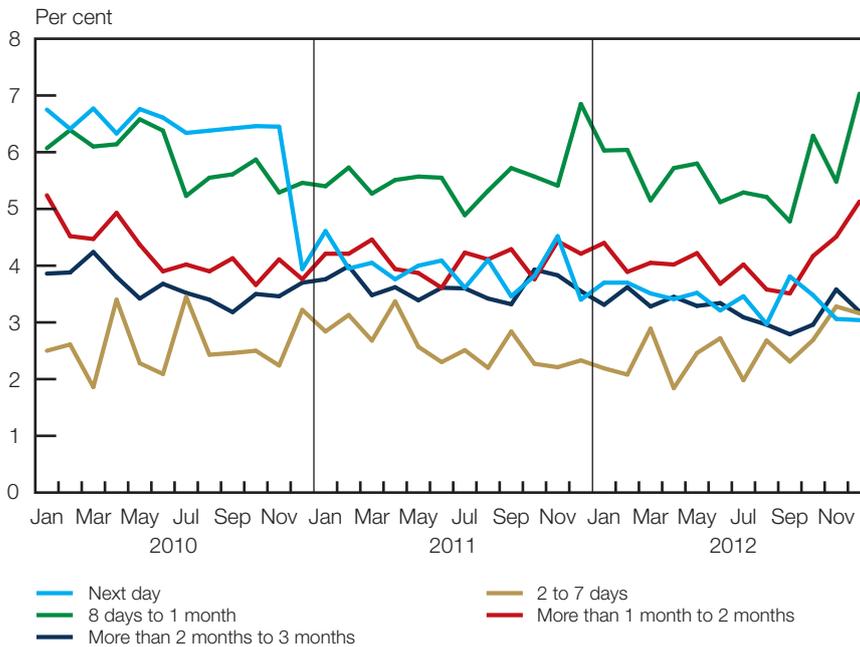
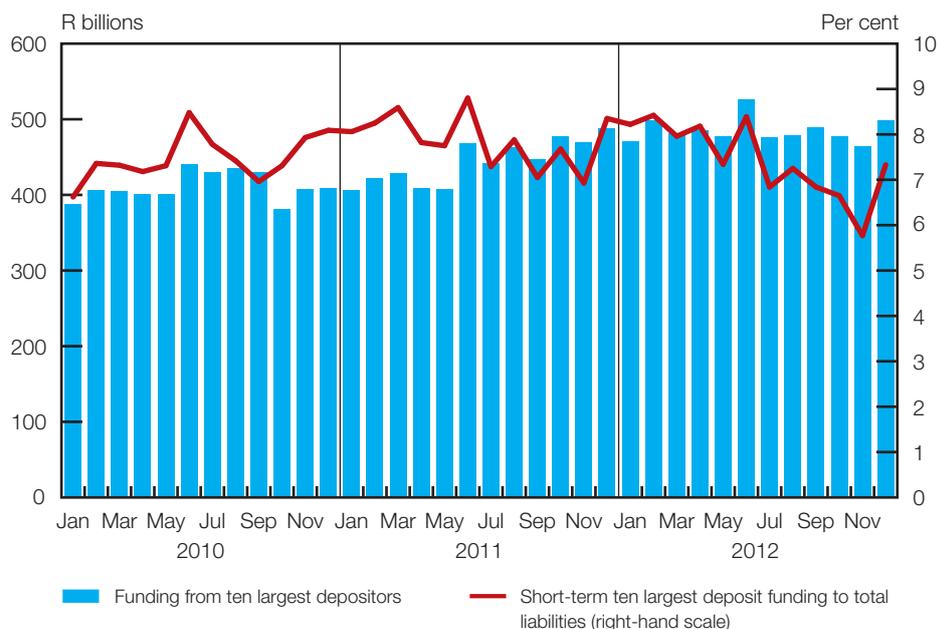


Figure 4.36 shows the banking sector's short-term funding received from the ten largest depositors as a percentage of total liabilities, accordingly providing an indication of funding concentration. This ratio decreased from 8,4 per cent as at 31 December 2011 to 7,3 per cent as at 31 December 2012. Total funding received from the banking sector's ten largest depositors increased from R488,5 billion as at 31 December 2011 to R498,2 billion as at 31 December 2012. However, as a percentage of total liabilities, the funding received from the ten largest depositors (as a percentage of total liabilities) decreased from 15,4 per cent as at 31 December 2011 to 14,8 per cent as at 31 December 2012.

Figure 4.36 Concentration of short-term deposit funding (as a percentage of total banking-sector liabilities)



## 4.8 Credit risk

The Bank's repo rate remained at 5,5 per cent from November 2010 to July 2012, when it was decreased to 5,0 per cent due to the Bank's MPC's concern about the increased downside risks posed to the domestic economy by global developments and, the fragile domestic private-sector investment and consumption trends.<sup>58</sup> As during the previous year, the strategy of some banks was to focus on the supply of loans to their existing client base (where the banks are familiar with the client's credit histories).

Residential mortgage lending, the largest on-balance-sheet asset category reported by banks using the IRB approach for calculating and reporting minimum regulatory credit risk requirements, increased by 1,1 per cent year on year to December 2012 (December 2011: 0,3 per cent). This reflects a slight increase in the banking sector's risk appetite and households' willingness to enter into new long-term loan contracts. Impaired advances decreased by 5,1 per cent mainly due to an increase in write-offs.

During September 2012 Moody's Investor Service (Moody's) downgraded South Africa's government bond rating by one notch to Baa1 with the outlook remaining negative. Moody's rating action announcement stated that "the main driver for the downgrade of South Africa's ratings is Moody's lowered assessment of institutional strength to 'moderate' from 'high'" which

58 South African Reserve Bank, "Statement of the Monetary Policy Committee", published 19 July 2012. Available at [www.resbank.co.za/Publications/Statements/Pages/MonetaryPolicyStatements.aspx](http://www.resbank.co.za/Publications/Statements/Pages/MonetaryPolicyStatements.aspx).



was considered to be “an important factor in the rating agency’s judgment of a sovereign’s economic resiliency”.<sup>59</sup> Following this downgrade, Moody’s “downgraded by one notch the foreign-currency deposit ratings of the five largest South African banks” in October 2012.<sup>60</sup> Furthermore, during December 2012 Moody’s announced that its outlook for the South African banking system had changed from stable to negative.<sup>61</sup>

During the last quarter of 2012, Standard & Poor’s Rating Services changed its outlook for the Government of the Republic of South Africa and the majority of the South African banks it rates to negative.<sup>62</sup>

Gross loans and advances, gross credit exposures and RWEs per asset class as at 31 December 2012 are shown in Figure 4.37. The difference between gross credit exposures and gross loans and advances (on-balance sheet) reflects off-balance-sheet credit exposures, repurchase or resale agreements and derivative financial instruments in the various asset classes. The banking sector’s total gross credit exposures increased by 8,5 per cent as at 31 December 2012. The difference between gross credit exposures and RWEs reflects the application of the risk weightings applied to banks’ total credit exposures in each asset class. As at 31 December 2012

- the banks and securities firms category had the lowest ratio of gross on-balance-sheet loans and advances to gross credit exposures (due to the large amount of off-balance sheet exposure);
- the ‘other’ category (i.e., exposure to public-sector entities, local government and municipalities, and sovereigns) had the highest ratio of gross on-balance-sheet loans and advances to gross credit exposures;
- the SME corporate category had the highest ratio of RWEs to gross credit exposures; and
- the ‘other’ category had the lowest ratio of RWEs to gross credit exposures as a result of South African sovereigns being risk weighted at zero per cent.

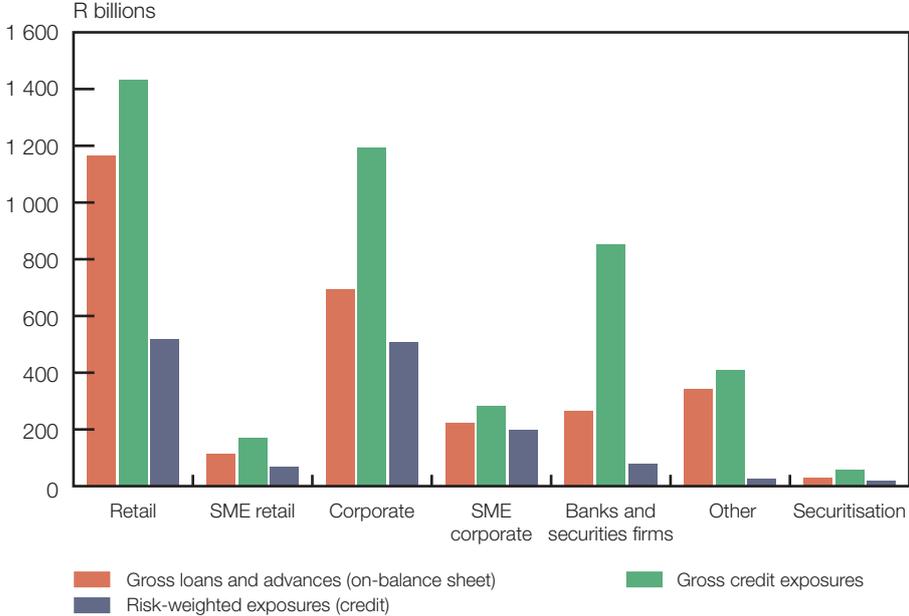
59 Moody’s, “Moody’s Downgrades South Africa’s Government Bond Rating to Baa1; Outlook Remains Negative”, (Limassol: Moody’s, 27 September 2012). Available at <http://www.moody.com>.

60 Moody’s, “Moody’s Downgrades Five South African Banks’ Foreign-Currency Deposit Ratings to Baa1; Outlooks Negative”, (Limassol: Moody’s 4 October 2012). Available at <http://www.moody.com>.

61 Moody’s “Moody’s: South Africa’s Banking System Outlook Changed to Negative”, (Limassol: Moody’s 5 December 2012). Available at <http://www.moody.com>.

62 S&P, “South African Corporates”, (Johannesburg: S&P, November 2012). Available at <http://www.standardandpoors.com>.

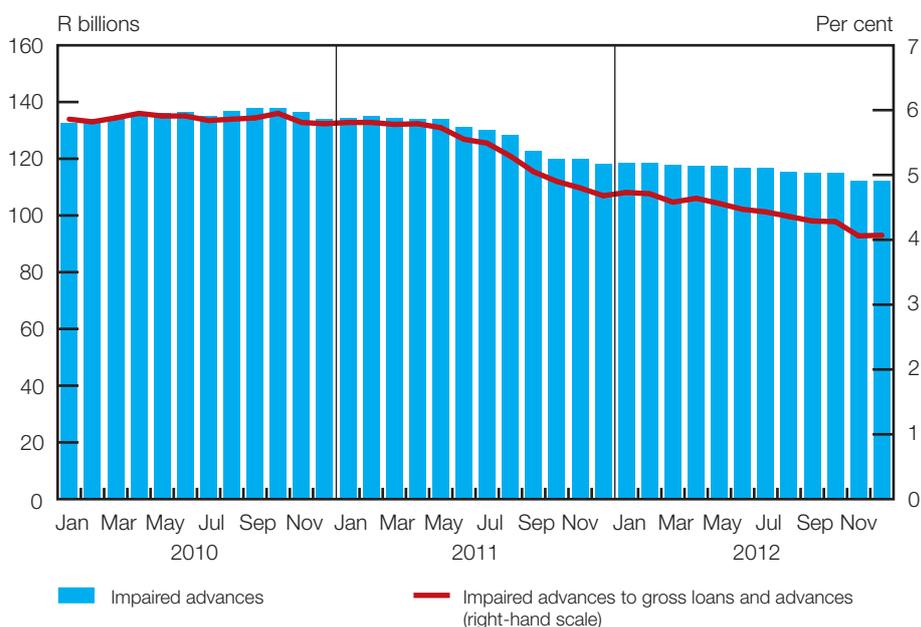
Figure 4.37 Gross credit exposures and risk-weighted exposures per asset class



## 4.8.1 Total impaired advances

Impaired advances are advances in respect of which a bank has raised a specific impairment (in other words, when a bank raises a specific credit impairment or allowance for a doubtful loan, it will classify the doubtful loan as an impaired advance). As depicted by Figure 4.38, impaired advances declined by 5,1 per cent from R118,1 billion as at 31 December 2011 to R112,1 billion as at 31 December 2012. The decrease in impaired advances was as a result of increased write-offs, the impact of stricter lending criteria and proactive credit risk management processes. A key indicator of credit risk quality in the banking sector is the ratio of impaired advances to gross loans and advances. This ratio decreased from 4,7 per cent as at 31 December 2011 to 4,1 per cent as at 31 December 2012 due to the aforementioned decline in impaired advances and 9,2 per cent year-on-year growth in gross loans and advances, implying an overall improvement in credit quality of banks during the period.

Figure 4.38 Impaired advances to gross loans and advances

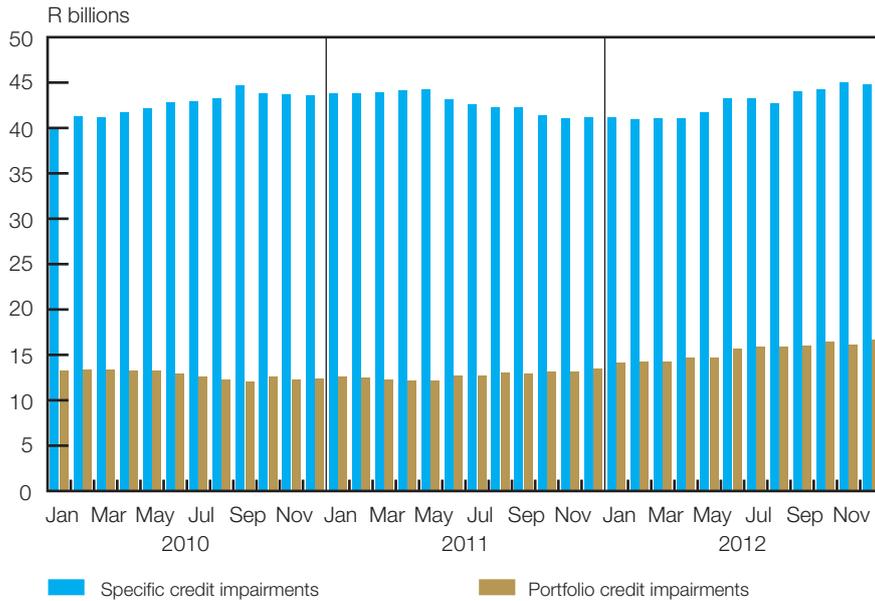


63 Regulation 65 defines 'specific impairment or allowance for doubtful debt' as "any impairment, allowance or provision made against losses on a debt that has been specifically identified as bad or doubtful, and any impairment, allowance or provision made against groups of debt on the basis of their age".

## 4.8.2 Credit impairments

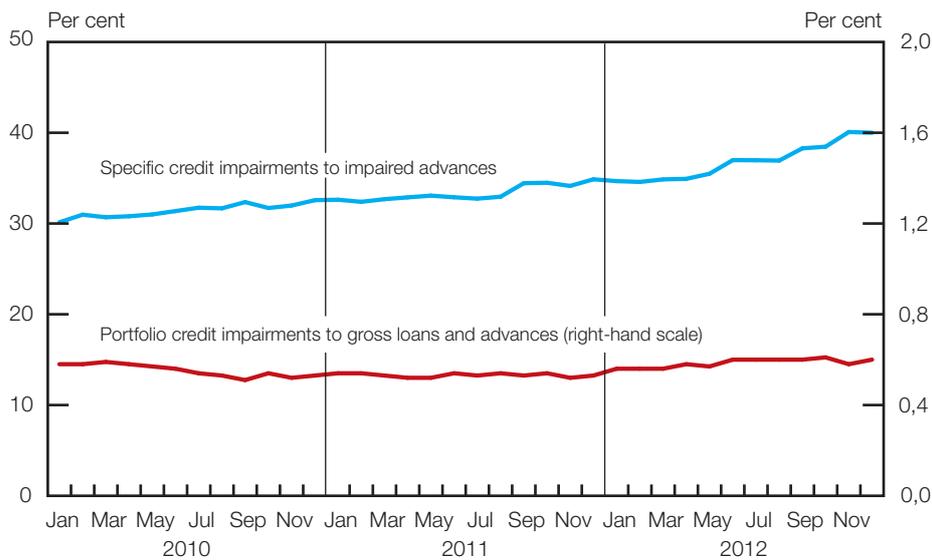
Specific credit impairments<sup>63</sup> and portfolio credit impairments are depicted in Figure 4.39. Specific credit impairments grew by 8,9 per cent from R41,2 billion as at 31 December 2011 to R44,8 billion as at 31 December 2012. The increase in specific credit impairments is an indication that the banking sector continued to raise more specific credit impairments against impaired advances. Portfolio credit impairments increased by 24,1 per cent from R13,4 billion as at 31 December 2011 to R16,6 billion as at 31 December 2012. The increase in portfolio impairments is related to the growth in gross on-balance-sheet credit exposures during 2012 and reflects the uncertainty and challenging conditions in the credit market.

Figure 4.39 Specific and portfolio credit impairments



Specific and portfolio credit impairment ratios are illustrated in Figure 4.40. Specific credit impairments as a percentage of impaired advances increased from 34,9 per cent as at 31 December 2011 to 40,0 per cent as at 31 December 2012. The increasing trend in this ratio during the period under review was due to a decline in impaired advances and an increase in specific credit impairments. This means the banking sector raised more specific impairments against impaired advances as at 31 December 2012 when compared with the amount raised as at 31 December 2011. Portfolio credit impairments as a percentage of gross loans and advances increased marginally to 0,6 per cent as at 31 December 2012 (December 2011: 0,5 per cent).

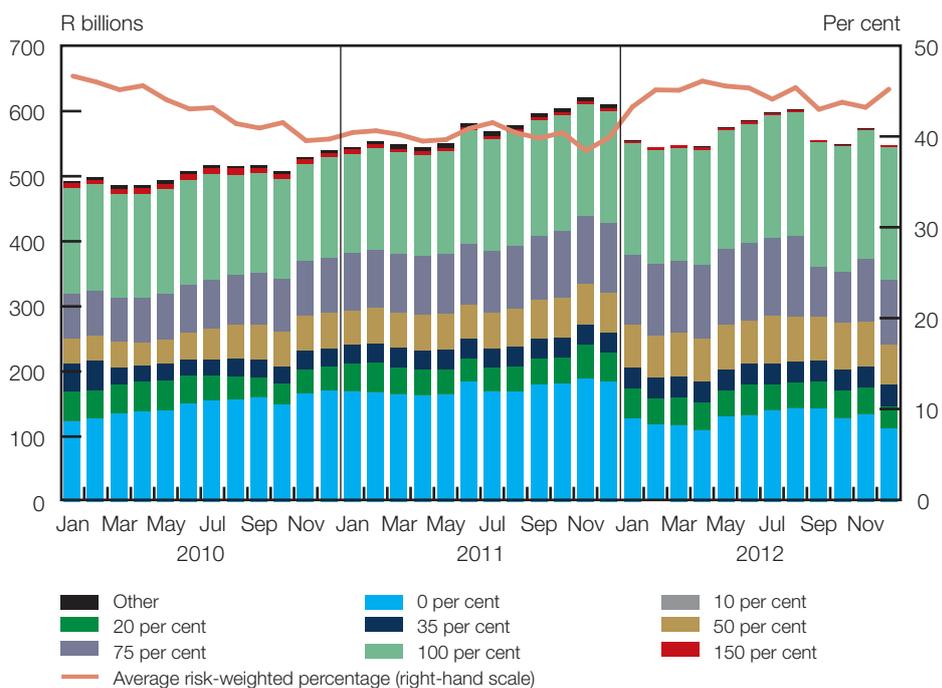
Figure 4.40 Specific and portfolio credit impairment ratios



### 4.8.3 Banks applying the standardised approach to credit risk

There are, broadly speaking, two categories of credit risk approaches available to banks licensed in South Africa to calculate the minimum regulatory capital requirements for credit risk, namely (i) the standardised approaches, and (ii) the advanced approaches. These categories are aligned to international standards for the calculation of credit risk. The majority of banks licensed in South Africa use the STA to report credit risk for regulatory capital purposes. As at 31 December 2012 16,4 per cent of the total banking sector's gross credit exposure (December 2011: 18,7 per cent) was reported using the STA. Gross credit exposure declined by 4,8 per cent from R783,3 billion as at 31 December 2011 to R745,4 billion as at 31 December 2012, mainly due to portfolio migration from the STA to the IRB approaches and a decline in on- and off-balance-sheet exposure to banks. Figure 4.41 shows the gross credit exposure analysed by the risk-weighted percentage for STA banks. Total credit RWE of STA banks decreased by 10,3 per cent to R547,6 billion as at 31 December 2012 (December 2011: R610,4 billion) mainly due to a 39,7 per cent decrease in exposures risk-weighted at zero per cent. The ratio of RWE to gross credit exposure (or average risk-weighted percentage) increased from 39,9 per cent as at 31 December 2011 to 45,2 per cent as at 31 December 2012, reflecting the STA banks' increasingly concentrated exposure to higher risk-weighted counterparties.

Figure 4.41 Risk-weighted distribution of credit exposures under the standardised approach



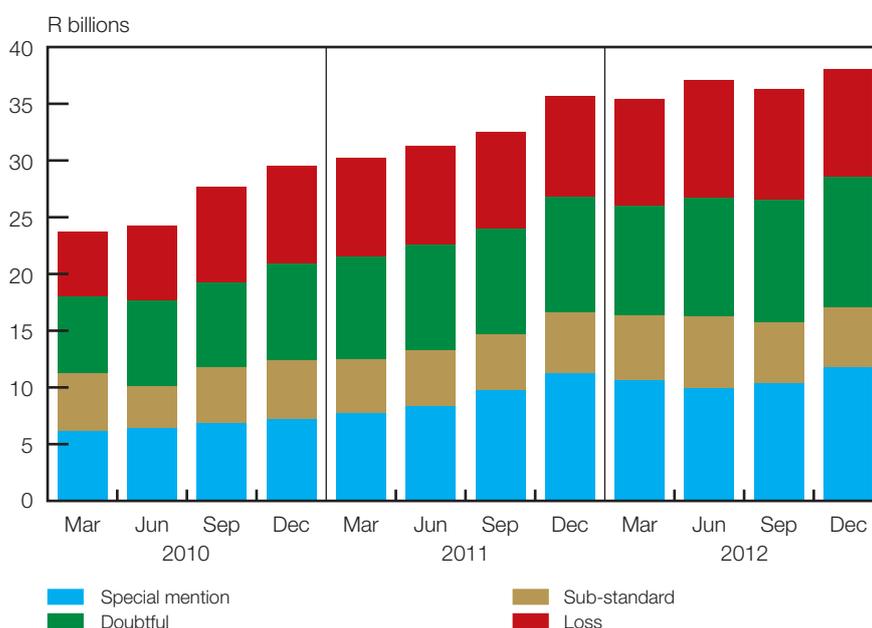
## 4.8.4 Classification of credit risk exposures under the standardised approach

Credit risk exposures are reported quarterly and are classified as either 'standard', 'special mention', 'sub-standard', 'doubtful' or 'loss'.<sup>64</sup> Exposures classified in this format provide an indication of potential weaknesses in the credit quality of exposures. As shown in Figure 4.42, all categories other than the 'sub-standard' category increased during the year under review. The largest year-on-year increase of 13,2 per cent was reported in the 'doubtful' category. Credit exposure in the 'doubtful' category is regarded as impaired but not yet a final loss due to pending factors, such as mergers, new financing or capital injections, which factors may strengthen the quality of the relevant exposure.<sup>65</sup> Therefore, an increase in the doubtful category may be indicative of the worsening credit quality of the underlying exposures.

64 Refer to regulation 24(5)(c) for further detail on the classification of credit risk exposures by banks that adopted the STA to measure their exposure to credit risk.

65 Refer to regulation 24(5)(c)(iii).

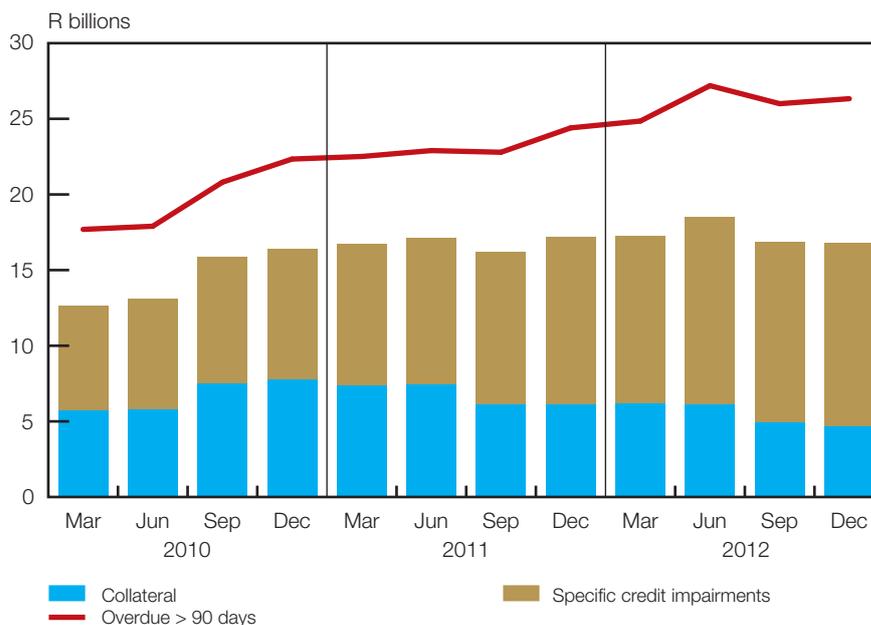
Figure 4.42 Classification of credit risk exposures under the standardised approach



Exposures classified as 'sub-standard', 'doubtful' or 'loss' measured against specific credit impairments raised and collateral held are shown in Figure 4.43. The gap or shortfall between the 'sub-standard', 'doubtful' or 'loss' categories, and the related collateral and specific credit impairments can be attributed to, among other things, unsecured lending. The Registrar has the authority to require banks with significant unsecured lending portfolios to adhere to higher minimum CARs.

The gap between the collateral and specific credit impairments, and the 'sub-standard', 'doubtful' or 'loss' categories increased by 31,8 year on year as at 31 December 2012 due to 7,9 per cent increase in classified exposures as well as 24,3 per cent decrease in collateral. This fluctuation portrays the increased exposure to unsecured loans by the STA banks.

Figure 4.43 Exposures classified as 'sub-standard', 'doubtful' and 'loss' measured against specific credit impairments and collateral



## 4.8.5 Internal ratings-based banks

### Box 4.1 Calculation of expected loss for internal ratings-based banks

As set out in the Basel Committee document entitled "An Explanatory Note on the Basel II IRB Risk Weight Functions",<sup>66</sup> issued in July 2005, banks can estimate expected losses (ELs) based on the following three key drivers:

- Probability of default (PD) per rating grade,<sup>67</sup> which gives the average percentage of obligors that default in this rating grade in the course of one year.
- Exposure at default (EAD), which gives an estimate of the amount outstanding (drawn amounts plus likely future drawdowns of yet undrawn lines) in case the borrower defaults.
- Loss given default (LGD), which gives the percentage of exposure the bank might lose should the borrower default.

The EL is calculated as follows:

$$EL = PD \times EAD \times LGD$$

These risk drivers are converted into risk weights and regulatory capital requirements by means of risk-weight formulas specified by the Basel Committee and have accordingly been incorporated into the Regulations.

Banks that adopted the IRB approach for calculating minimum regulatory capital requirements for credit risk represented 83,6 per cent of the banking sector's total gross credit exposure as at 31 December 2012 (December 2011: 81,3 per cent). Table 4.3 provides a summary of the key risk drivers of credit risk as primary input to the capital calculation reported by IRB banks. Total EAD comprises credit exposures reported in standard PD bands, specialised lending and securitisation exposures. The majority of IRB credit exposures are reported in standard PD bands, with total retail and total corporate exposures forming the main components of these bands.

66 Basel Committee, "An Explanatory Note on Basel II IRB Risk Weight Functions" (Basel: Basel Committee, July 2005), 5–6.

67 For the purposes of analysing credit risk reported by IRB banks, the banks classify each credit risk EAD into one of 26 PD bands, ranging from performing to non-performing.

**Table 4.3 Key credit risk indicators reported by internal ratings-based banks**

	Dec 2010	Dec 2011	Dec 2012
Total exposure at default (R billions).....	2 610	2 792	3 031
Exposure at default analysed by PD band (R billions) .....	2 546	2 725	2 977
Average probability of default (per cent).....	7,0	5,7	5,3
Of which:			
Retail.....	11,3	9,8	8,8
Corporate.....	3,9	3,0	3,1
Average loss given default (per cent) .....	28,7	29,2	28,4
Of which:			
Retail.....	25,7	25,9	26,7
Corporate.....	33,6	33,7	32,2
Expected loss as a percentage of exposure at default (per cent) .....	2,0	1,7	1,8
Risk-weighted exposure as a percentage of exposure at default (per cent).....	37,0	36,5	38,1
Advances in default as a percentage of exposure at default (per cent).....	4,7	3,5	3,0

Total EAD increased by 8,6 per cent to R 3 031 billion as at 31 December 2012 (December 2011: R2 792 billion). The average PD for all categories, excluding specialised lending and securitisation exposures, decreased to 5,3 per cent as at 31 December 2012 (December 2011: 5,7 per cent). The decrease was due to lower defaults experienced in terms of retail exposures.

Banks updated their internal models with data from the year under review. As a result, banks reported a slight decrease in total LGD to 28,4 per cent as at 31 December 2012 (December 2011: 29,2 per cent), driven by a decrease in the LGD reported for the corporate portfolios. The decrease in total LGD was offset by the increase in the LGD reported for the retail portfolio. As a percentage of EAD, EL increased to 1,8 per cent as at 31 December 2012 (December 2011: 1,7 per cent) due to higher-than-expected losses estimated on defaulted exposures. Defaulted advances decreased to 3,0 per cent as at 31 December 2012 (December 2011: 3,5 per cent).

Owing to the increase in RWE for corporate exposures, the average risk-weighted percentage increased to 38,1 per cent as at 31 December 2012 (December 2011: 36,5 per cent).

Figures 4.44 and 4.45 show the total retail and corporate distributions of EAD in standard PD bands, and give an indication of PD migration and credit quality from December 2010 to December 2012 respectively. Lower PD bands of zero per cent to 8,611 per cent would generally include higher-quality credit exposures. Figure 4.44 indicates that as the credit quality (or credit rating) of total retail exposures changed during 2012, the exposures migrated towards the mid-PD bands of 1,522 to 8,611. Furthermore, there was a 12,3 per cent decrease to R71,9 billion in total retail EAD reported as 'in default'<sup>68</sup> as at 31 December 2012 (December 2011: R82,0 billion). Figure 4.45 shows that for total non-defaulted corporate exposures, the credit quality improved during the period under review, with more performing exposures migrating towards the lower PD bands. Total corporate exposures reported as 'in default' increased by 24,3 per cent to R17,3 billion as at 31 December 2012 (December 2011: R14,0 billion). Total EAD reported within the lower PD bands increased by 9,7 per cent as at 31 December 2012 (December 2011: 5,6 per cent).

68 The 'in default' category generally comprises credit exposures that are overdue for more than 90 days or which display certain weaknesses, as defined in regulation 65.

Figure 4.44 Distribution of retail exposures at default classified into standard probability of default bands

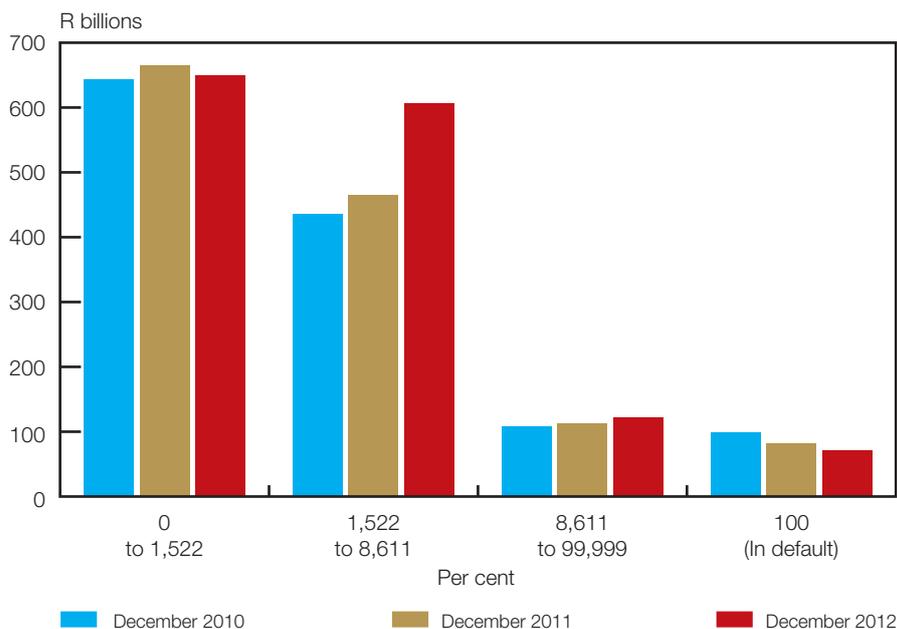
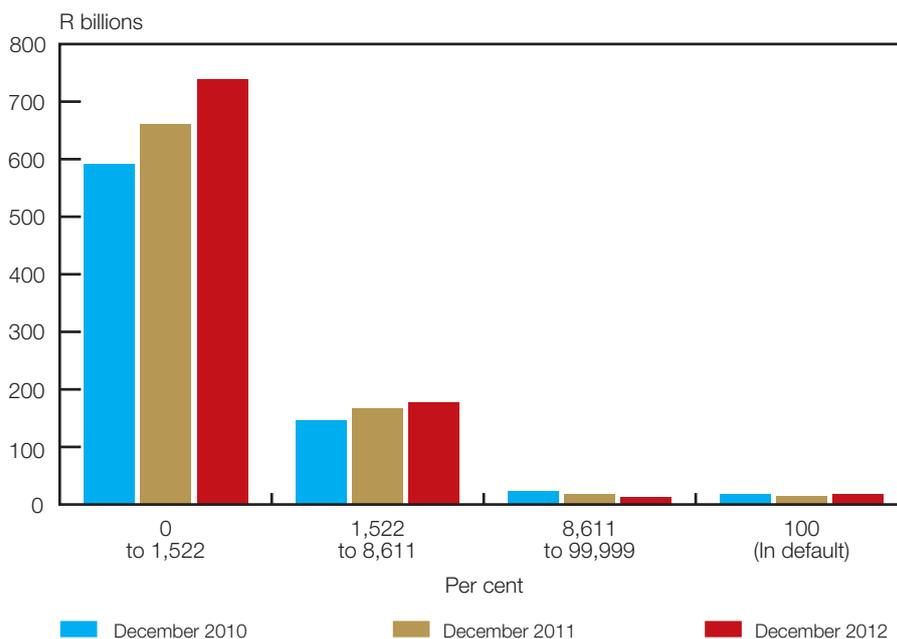


Figure 4.45 Distribution of corporate exposures at default classified into standard probability of default bands



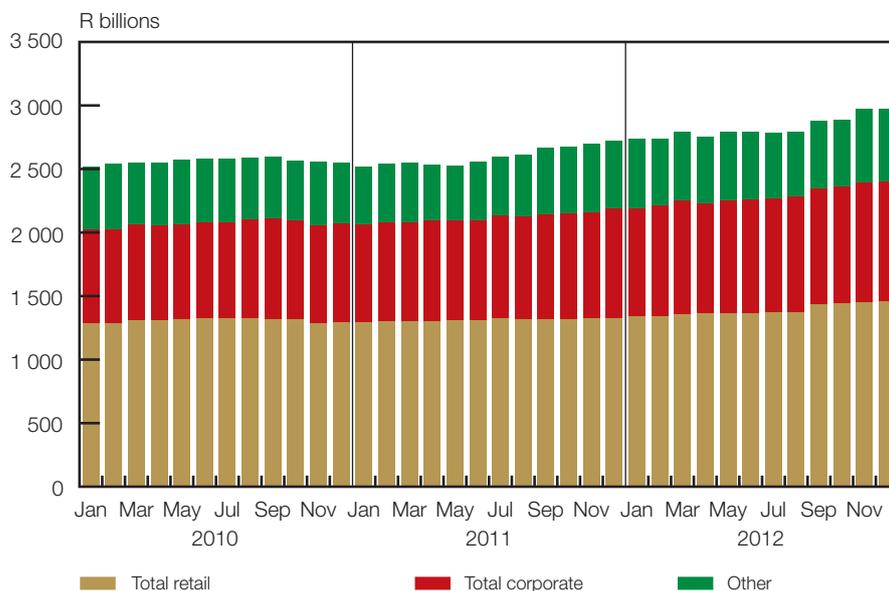
## 4.8.6 Exposure at default

The EAD per standard PD bands classified according to each major asset category is presented in Figure 4.46. EAD for IRB banks grew by 9,2 per cent from R2 725 billion as at 31 December 2011 to R2 977 billion as at 31 December 2012 (refer to Table 4.3). All three asset categories increased during the year under review. Both corporate EAD and retail EAD grew at almost 10 per cent year on year as at 31 December 2012. The 'other' category<sup>69</sup> grew by 7,4 per cent to R578,5 billion as at 31 December 2012. This increase was mainly due to increased exposure to sovereigns. As can be seen from the graph, since 2010 the banking

69 The 'other' category consists of the banking sector's EAD to counterparties classified as public-sector entities, government and local municipalities, sovereigns, banks and securities firms.

sector's total EAD has consisted largely of retail EAD, although retail EAD as a percentage of total EAD decreased from 50,6 per cent as at 31 December 2010 to 48,8 per cent as at 31 December 2012 (December 2011: 48,7 per cent), with corporate EAD as a percentage of total EAD increasing by over 100 basis points over the same period.

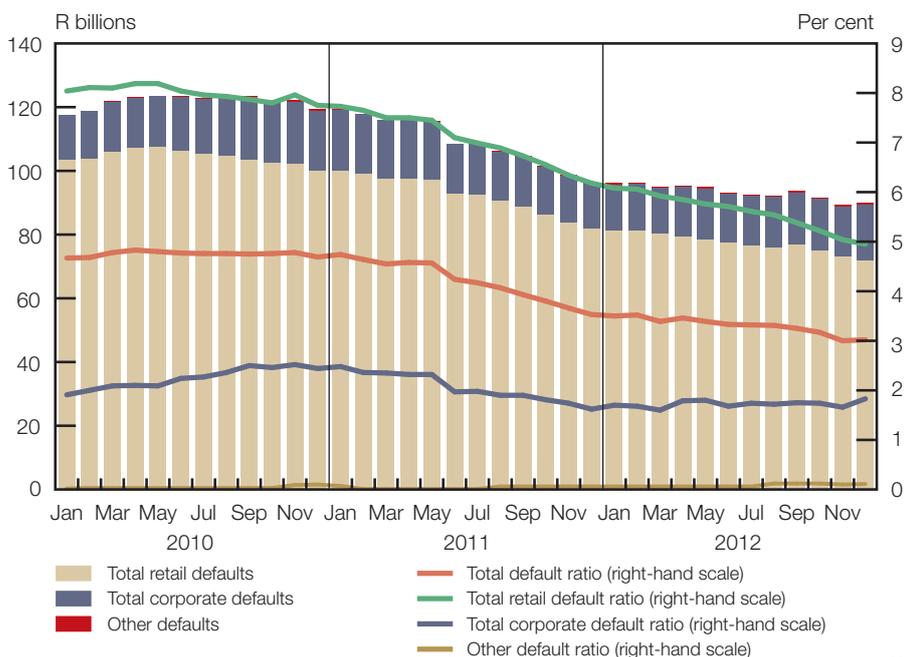
Figure 4.46 Total exposure at default



As shown in Figure 4.47, total default<sup>70</sup> exposures decreased by 6,6 per cent from R96,3 billion as at 31 December 2011 to R89,9 billion as at 31 December 2012. The decrease in total default exposures was due to a 12,3 per cent decrease in total retail default exposures from R82,0 billion as at 31 December 2011 to R71,9 billion as at 31 December 2012. Retail default exposures decreased mainly due to a 19,6 per cent decrease in residential mortgage default exposures to R48,1 billion as at 31 December 2012 (December 2011: R59,9 billion). The decrease in residential mortgage default exposures is mainly attributable to an increase in write-offs and stricter lending criteria. Retail default exposures are analysed in more detail in Figure 4.48.

70 Default exposures generally comprise credit exposures that are overdue for more than 90 days or which display certain weaknesses as defined in regulation 65.

Figure 4.47 Total default exposure and default ratio per asset class



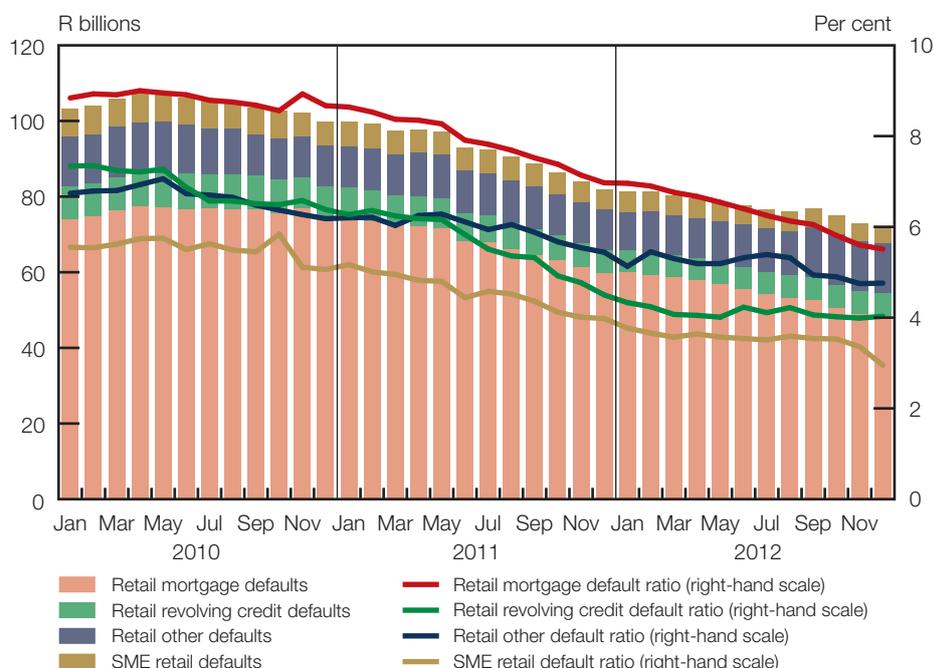
Total retail default exposures as a percentage of total default exposures decreased from 85,2 per cent as at 31 December 2011 to 80,0 per cent as at 31 December 2012 due to the aforementioned decrease in residential mortgage default exposures and a 24,3 per cent year-on-year increase in total corporate defaults. Default exposures in the corporate asset class (which includes corporate, specialised lending, SME corporate and purchased receivables from corporations) constituted 19,3 per cent of total default exposures as at 31 December 2012 (December 2011: 14,5 per cent). Corporate default exposures (excluding specialised lending) are analysed in more detail in Figure 4.49.

As at 31 December 2012, 3,0 per cent of the total EAD was reported as default exposures compared to 3,5 per cent as at 31 December 2011. The retail default ratio<sup>71</sup> declined to 5,0 per cent as at 31 December 2012 (December 2011: 6,2 per cent). The corporate default ratio increased by 20 basis points to 1,8 per cent as at 31 December 2012 (December 2011: 1,6 per cent).

Figure 4.48 shows the composition of retail default exposures and the related default ratios. Default ratios in all retail asset categories decreased year on year to December 2012. However, in terms of absolute rand value, two of the retail default exposure categories (retail mortgages and SME retail) decreased while two categories (retail other and retail revolving credit) showed year-on-year increases.

Retail mortgage defaults – the largest component of total retail defaults – decreased by R11,7 billion year on year to 31 December 2012. SME retail defaults decreased by 20,7 per cent from R5,5 billion as at 31 December 2011 to R4,4 billion as at 31 December 2012. Default exposures in the ‘retail other’ asset class, which includes unsecured term loans and vehicle and asset finance, grew by 25,0 per cent year on year to R13,3 billion as at 31 December 2012 (December 2011: R10,6 billion). Retail revolving credit increased by 3,0 per cent from R6,0 billion to R6,2 billion during the period under review.

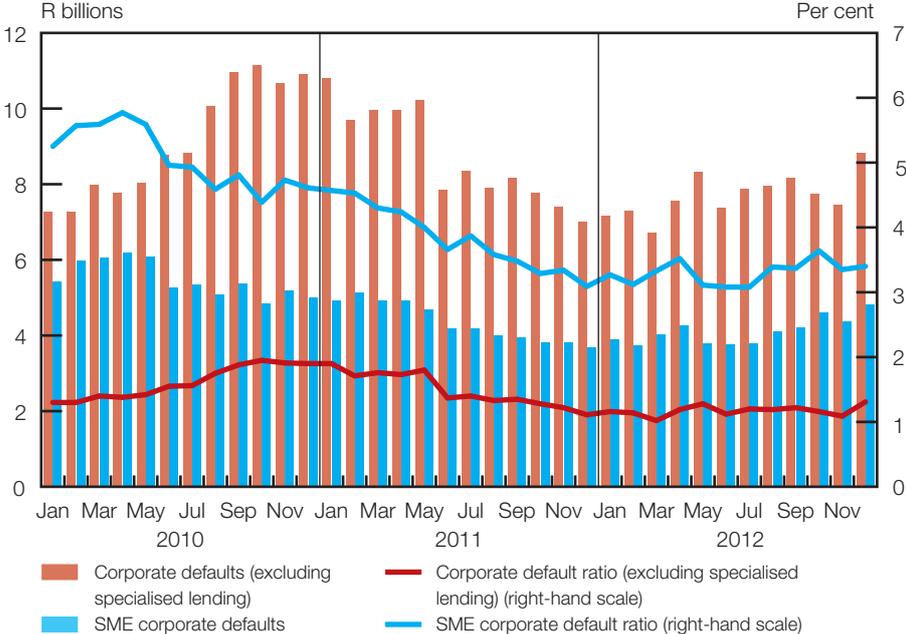
Figure 4.48 Composition of retail default exposures and their respective default ratios



71 The default ratio is calculated as total defaulted exposures as a percentage of total EAD. It gives an indication of the percentage of the loan portfolio that was in default.

As shown in Figure 4.49, corporate default exposures (excluding specialised lending and SME corporate default exposures) grew by 26,0 per cent to R8,8 billion as at 31 December 2012 (December 2011: R7,0 billion). SME corporate default exposures increased by 31,1 per cent from R3,7 billion as at 31 December 2011 to R4,8 billion as at 31 December 2012. Corporate default exposures (excluding specialised lending) and SME corporate default exposures constituted 15,2 per cent of total default exposures as at 31 December 2012 (December 2011: 11,1 per cent). As at 31 December 2012, 1,3 per cent of the exposure to the corporate asset class (excluding specialised lending and SME corporate default exposures) was in default (December 2011: 1,1 per cent) and 3,4 per cent of the exposure to the SME corporate asset class was in default (December 2011: 3,1 per cent).

**Figure 4.49** Composition of corporate default exposures (excluding specialised lending) and small and medium corporate enterprises' default exposures, and their respective default ratios



### 4.9 Market risk

Market risk is the risk of loss in on- or off-balance-sheet positions arising from movements in market prices.

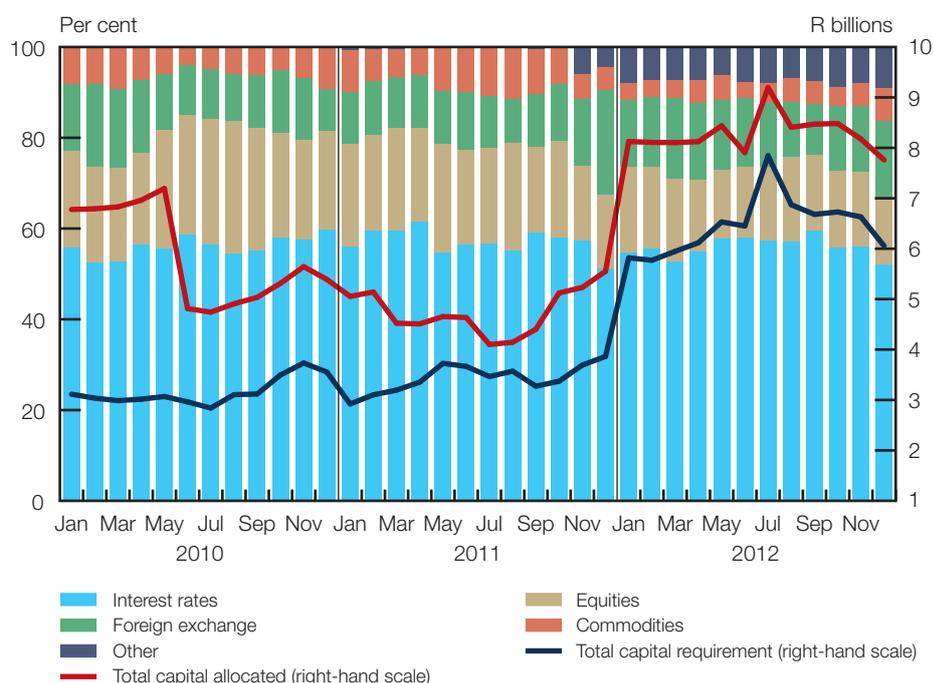
During the period under review both regulatory and economic developments in the global sphere affected the way banks conducted business. These economic events included developments in the euro area, political events and South Africa's inclusion in the Citi World Government Bond Index.

One of the regulatory changes was the inclusion of sVaR in banks' capital base. In essence, sVaR replicates a value-at-risk calculation that would be generated on a bank's current portfolio if the relevant market factors were subject to a period of significant stress. Despite no significant changes in the market risk space as a result of the introduction of Basel III, there is still significant work being done in this regard.

## 4.9.1 Regulatory capital requirement in respect of market risk

The composition of the market risk regulatory capital requirement is illustrated in Figure 4.50. The total regulatory capital requirement for market risk grew by 56,7 per cent from R3,9 billion as at 31 December 2011 to R6,1 billion as at 31 December 2012. The increase in the total regulatory capital requirement was due to the implementation of the Basel 2.5 framework's sVaR, which effectively required banks using the IMA for calculating minimum capital requirements for market risk to hold more capital (also refer to Figure 4.30). Total capital allocated for market risk increased by 39,8 per cent to R7,8 billion as at 31 December 2012 (December 2011: R5,6 billion).

Figure 4.50 Composition of regulatory capital requirement in respect of market risk



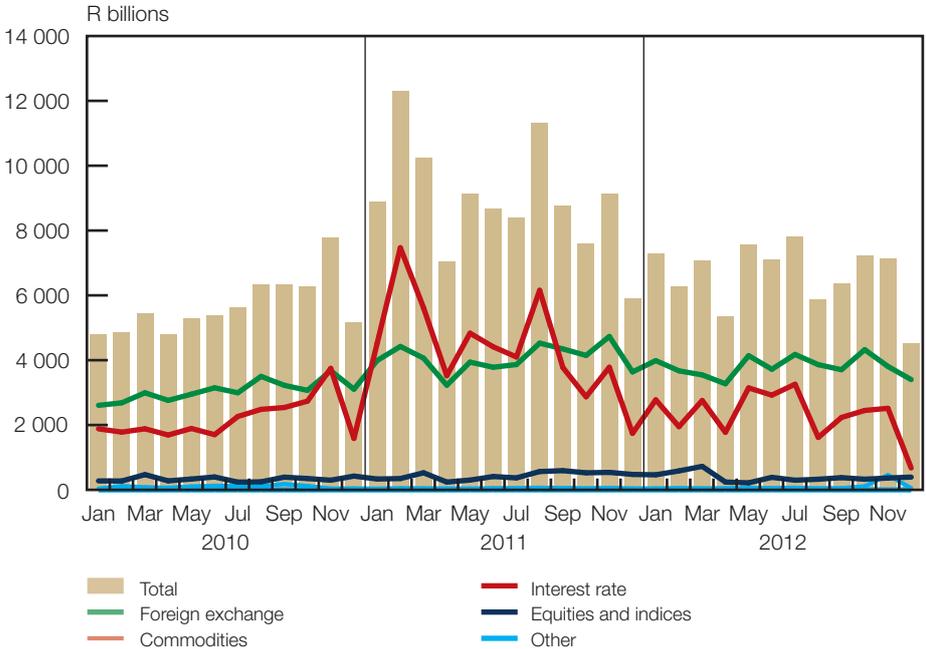
## 4.9.2 Derivative financial instruments

The majority of the market risk regulatory capital requirement relates to interest rate exposure, which constituted 51,9 per cent as at 31 December 2012 (December 2011: 51 per cent). Interest rate instruments are used predominantly to manage interest rate risk in the banking book. Market risk exposure to foreign-exchange instruments declined to 17,1 per cent of the total regulatory capital requirement for market risk as at 31 December 2012 (December 2011: 23,1 per cent). Equity positions and commodities risk constituted 14,7 per cent and 7,1 per cent respectively of the total market risk capital requirement as at 31 December 2012 (December 2011: 16,4 per cent and 4,9 per cent respectively). Market risk capital requirements in respect of other risks increased from 4,6 per cent as at 31 December 2011 to 9,2 per cent as at 31 December 2012 due to enhancements in respect of the reporting of market risk by certain banks.



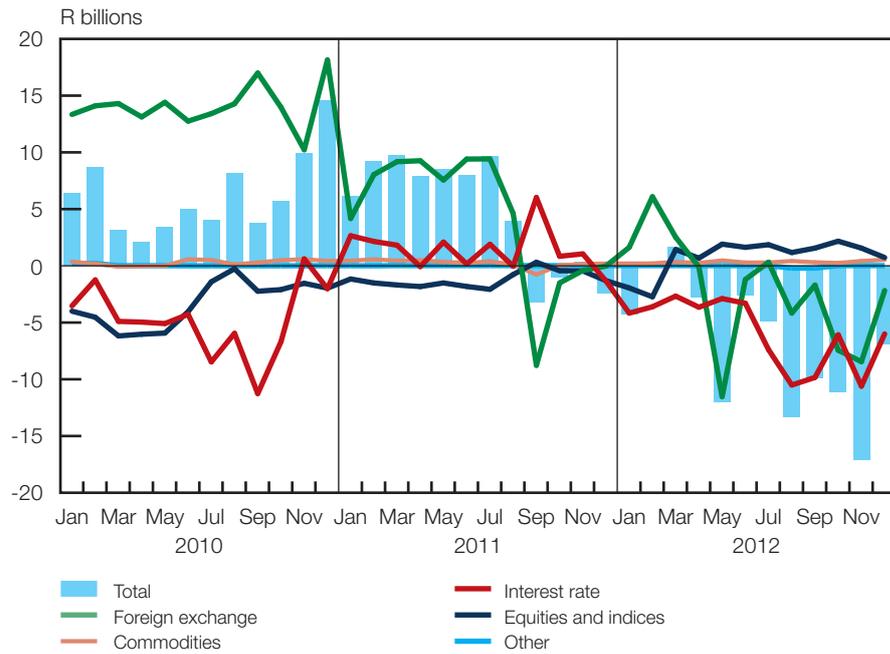
The composition of the monthly turnover in derivative contracts is depicted in Figure 4.51. The turnover is calculated by aggregating the gross notional values of all derivatives purchases and sales that occurred during a specific month. The graph gives an indication of the level of activity in derivative contracts at the end of each month. The turnover in derivative financial instruments declined by 23,4 per cent from R5 901 billion as at 31 December 2011 to R4 523 billion as at 31 December 2012. The turnover of all categories of derivative financial instruments decreased year on year to 31 December 2012, with interest rate derivative contracts showing the largest decrease in turnover to R674,4 billion as at 31 December 2012 (December 2011: R1 742 billion). The decrease in interest rate derivative contracts is attributable to a decrease in over-the-counter forward contracts. Foreign-exchange derivative contracts amounted to R3 401 billion as at 31 December 2012 (December 2011: R3 638 billion) and were the largest constituent of the turnover in derivative contracts accounting for 75,2 per cent as at 31 December 2012 (December 2011: 61,7 per cent).

**Figure 4.51** Composition of monthly turnover in derivative contracts (gross notional value)



The net value of total unexpired derivative contracts and underlying asset classes are depicted in Figure 4.52. The net fair values of total unexpired derivative contracts were negative throughout 2012, mainly due to the banking sector reporting negative mark-to-market positions in interest rate and foreign-exchange unexpired derivative contracts. The net derivative contracts position as of December 2012 amounted to a liability of R6,9 billion (December 2011: R4,9 billion). However, as shown in Figure 4.9, the asset and liability position in derivative financial instruments was closely matched during 2012.

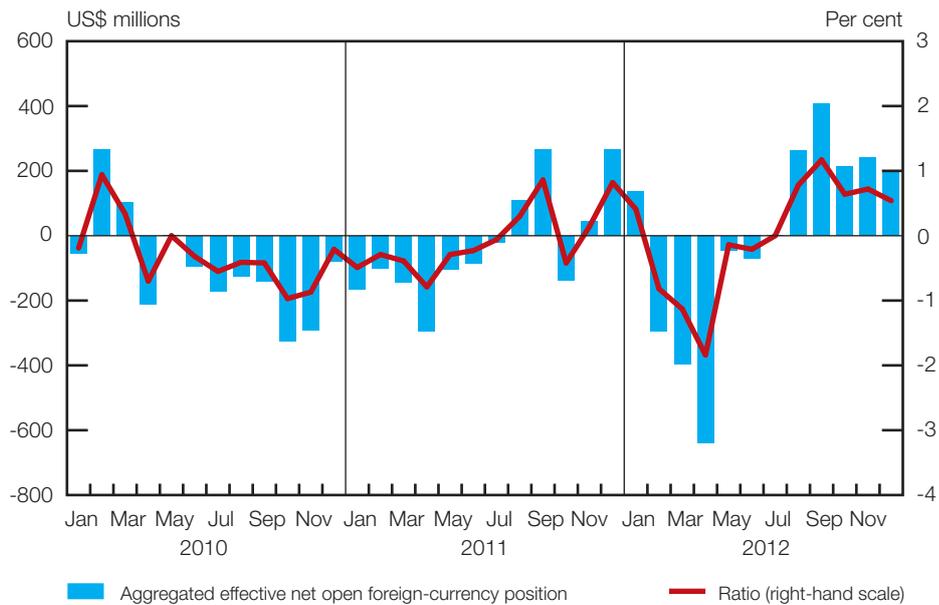
Figure 4.52 Composition of unexpired derivative contracts at month-end (net fair value)



### 4.9.3 Currency risk

The total aggregated effective net open foreign-currency position (FX NOP), which is shown in Figure 4.53, is calculated by the netting of foreign-currency assets, foreign-currency liabilities, commitments to purchase foreign currency and commitments to sell foreign currency.

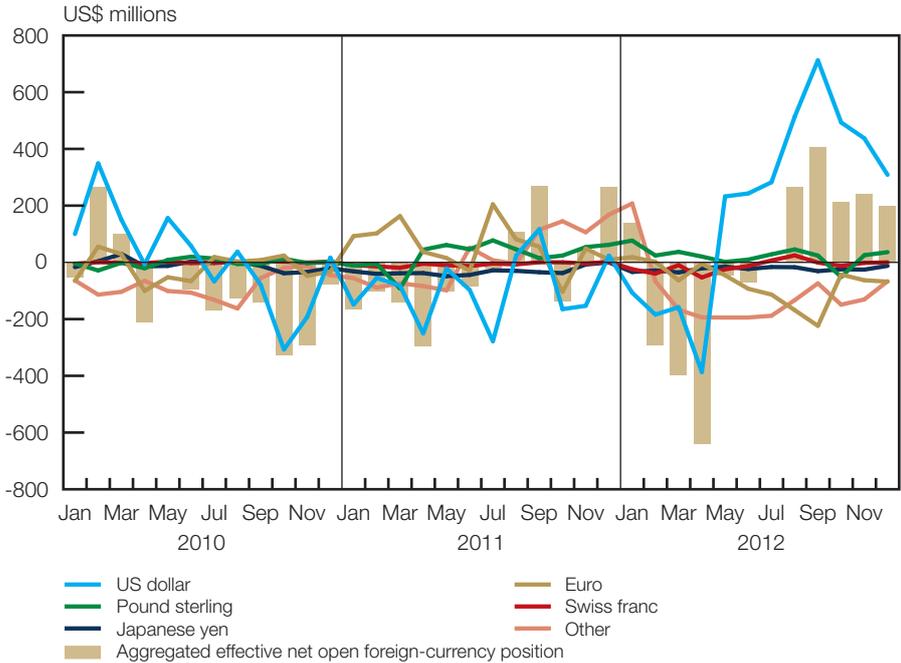
Figure 4.53 Aggregated effective net open foreign-currency position (as a percentage of qualifying regulatory capital)



The aggregated FX NOP was negative for most of the first half of 2012 due to the mismatched forward position (i.e., the net commitments to purchase foreign currency) exceeding the net spot position (i.e., the amount of net foreign-currency assets). The aggregated effective FX NOP, expressed as a percentage of qualifying regulatory capital and reserve funds, remained within the 10 per cent regulatory limit and amounted to 0,5 per cent as at 31 December 2012 (December 2011: 0,8 per cent).

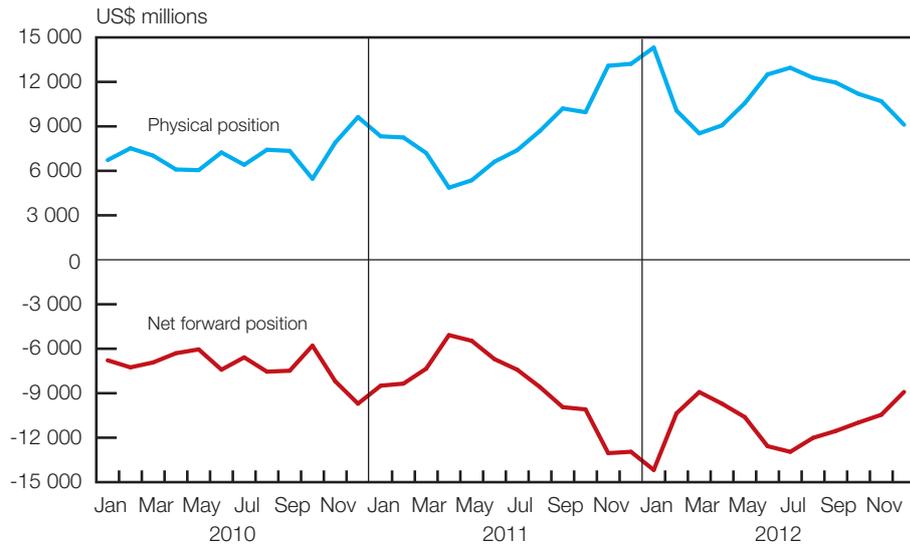
The contribution of each currency to the aggregated effective FX NOP is depicted in Figure 4.54. The 'US dollar' and 'euro' categories were the main constituents of the fluctuations during 2012.

Figure 4.54 Aggregated effective net open foreign-currency position per currency



Presented in Figure 4.55 are the banking sector's physical and net forward positions in foreign-currency instruments. The physical position is the difference between foreign-currency assets and foreign-currency liabilities, while the net forward position is the difference between commitments to sell foreign currency and commitments to purchase foreign currency. The physical position decreased from a US\$13,2 billion shortfall as at 31 December 2011 to a US\$9,1 billion shortfall as at 31 December 2012. The net forward position decreased from a US\$13 billion shortfall as at 31 December 2011 to a US\$8,9 billion shortfall as at 31 December 2012. As can be seen from Figure 4.55, the physical position and the net forward position are mirror images of each other. This is due to banks reducing their net open position by acquiring forward positions to neutralise spot currency holdings, and vice versa, with the objective of obtaining a low overall net open position that is in line with regulatory limits.

Figure 4.55 Position in foreign-currency instruments



## 4.10 Equity risk in the banking book

With regard to banks' exposures to equity risk in the banking book, it should be noted that these exposures are generally held for investment purposes and are included in the banking book for accounting purposes. From a regulatory perspective, equity risk in the banking book receives a capital treatment that is independent of the market risk charge, and is more punitive. For supervisory purposes, equity risk is regulated together with market risk.

The composition of the regulatory capital requirement for equity risk in the banking book is illustrated in Figure 4.56. The total capital requirement for equity risk in the banking book grew by 2,5 per cent from R6,8 billion to R7,0 billion during the period under review. Banks using the IRB approach to calculate capital required for equity risk accounted for 89,1 per cent (December 2011: 88,7 per cent) of the total capital requirement for equity risk as at 31 December 2012.

Figure 4.56 Composition of capital requirement for equity risk in the banking book

