

# Chapter 4: Banking-sector overview

## 4.1 Introduction

The domestic banking sector's operating environment remained challenging during 2011. However, signs of improvement compared to 2010 were evidenced by the year-on-year growth in banking-sector assets of 9,0 per cent as at December 2011, which is a marked improvement compared to the year-on-year growth of 5,3 per cent reported as at December 2010. The sector's profitability also improved with operating profit increasing by 30 per cent for the 12 months ended 31 December 2011. Average return on equity (ROE) and return on assets (ROA) for the banking sector increased from 14,6 per cent and 1,0 per cent in December 2010 to 16,4 per cent and 1,2 per cent respectively in December 2011. The banking sector remained adequately capitalised with total banking-sector equity increasing by 12,1 per cent during 2011. Total capital adequacy improved from 14,9 per cent at the end of December 2010 to 15,1 per cent at the end of December 2011. The Tier 1 capital-adequacy ratio (CAR) of the banking sector increased from 11,8 per cent to 12,2 per cent during the same period.

This chapter provides an overview of the financial and risk information, compiled by means of the aggregation of data submitted during 2011 from individual South African-registered banks (including domestic branches of international banks but excluding offshore branches and subsidiaries of South African banks). Information represents aggregated bank-solo information, except where explicitly indicated that it represents consolidated banking groups (refer to sections 4.3.4 and 4.6.2 for consolidated banking group information). Section 4.2.5 focuses on the global presence of South African banks and includes the banks' offshore subsidiaries, branches and representative offices. 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<sup>72</sup> to calculate minimum capital requirements. Aggregated data in this chapter are invariably in respect of 2009, 2010 and 2011. Unless otherwise indicated, increases and decreases are measured on a year-on-year basis.

## 4.2 Structural features of the banking sector

### 4.2.1 Concentration in the South African banking system

The Herfindahl–Hirschman Index (H-index) is a widely respected barometer for measuring market concentration in a banking system. The H-index is calculated by simply squaring each bank's market share, measured in terms of total assets, and adding them together. Importantly, the H-index accounts for the number and relative size of banks in the system.

An H-index below 0,1 indicates that there is essentially no concentration in a banking system; an H-index between 0,1 and 0,18 is an indication of moderate concentration; and an H-index above 0,18 indicates a high level of concentration.

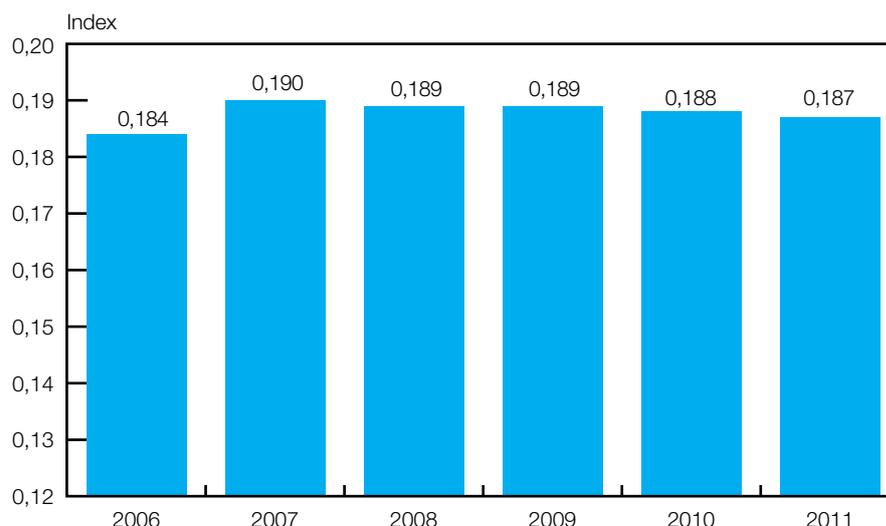
The level of concentration in the South African banking sector measured using the H-index is presented in Figure 4.1. The index decreased marginally from 0,188 at the end of December 2010 to 0,187 at the end of December 2011. The high concentration prevalent in the South African banking sector is attributable to the high concentration of banking-sector assets among the four largest banks, which accounted for 84,1 per cent of total banking-sector assets at the end of December 2011 (December 2010: 84,6 per cent). It should be noted, however, that notwithstanding the high level of concentration, the domestic banking sector remained stable during 2011. Appendix 2 provides the balance-sheet sizes of all individual banks, and Appendix 10 provides additional financial and risk information tables.

high concentration of banking-sector assets among the four largest banks

<sup>72</sup> Refer to section 2.2.1 of this Report.



Figure 4.1 Herfindahl–Hirschman Index for the South African banking system (2006–2011)



## 4.2.2 Banking entities registered in South Africa

Table 4.1 shows the number of entities that have been registered or licensed with the Department since 2002. Compared to 2010, the number of registered banks in the Republic remained unchanged at 17. The Royal Bank of Scotland NV cancelled its banking licence with effect from 31 January 2011. As a result, the number of branches of foreign banks decreased to 12 at the end of December 2011. The number of representative offices increased from 41 in December 2010 to 43 in December 2011. Detailed commentary regarding the entities registered or licensed with the Department at the end of 2011 can be obtained from appendices 2, 3, 4, 5 and 7.

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Banks*.....	30	22	20	19	19	19	19	18	17	17
Mutual banks.....	2	2	2	2	2	2	2	2	2	2
Branches of international banks in the Republic of South Africa.....	14	15	15	15	14	14	14	13	13	12
Representative offices.....	52	44	43	47	43	46	43	42	41	43
Controlling companies.....	27	19	16	15	15	15	15	15	15	15
Banks under curatorship .....	1	1	0	0	0	0	0	0	0	0
Banks in receivership.....	2	2	0	0	0	0	0	0	0	0
Banks in final liquidation .....	1	1	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

## 4.2.3 Shareholding structure

The shareholding structure of South African banks is depicted in Figure 4.2. Foreign shareholders held 43,2 per cent of the nominal value of the South African banking sector's shares in issue at the end of December 2011 compared to 42,3 per cent in December 2010. The foreign

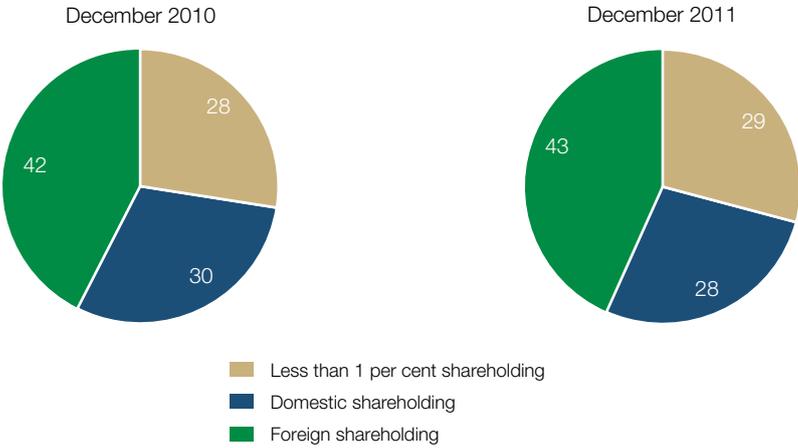
the number of representative offices increased to 43 in 2011

foreign shareholders held 43,2 per cent of the nominal value of the South African banking sector's shares in issue



shareholding of 55,5 per cent in Absa Bank Limited, the second largest bank registered in South Africa, contributes significantly to the high percentage of banking-sector shares held by foreign shareholders. Domestic shareholders accounted for 27,5 per cent and minority shareholders for 29,3 per cent of the nominal value of banking-sector shares in issue at the end of December 2011 (December 2010: 30 per cent and 27,6 per cent respectively).

**Figure 4.2 Shareholding structure of the South African banking sector (nominal value of shares) (per cent)**



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

Core Principle 5 of the Basel Committee’s Core Principles prescribes that banking supervisors should “have the power to review major acquisitions or investments by a bank or a bank controlling company, against prescribed criteria, including the establishment of cross-border operations”.<sup>73</sup> This review should confirm that “corporate affiliations or structures do not expose the bank to undue risks or hinder effective supervision”.<sup>74</sup> Section 52 of the Banks Act addresses Core Principle 5 as it requires South African-registered banking groups to obtain the prior written approval of the Registrar for the establishment or acquisition of any subsidiary, cross-border branch, representative office or any undertaking that has its registered office or principal place of business outside South Africa. The number of applications approved by the Department in terms of section 52 of the Banks Act since 2002 is shown in Table 4.2. The majority of such applications are 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**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Local .....	47	28	16	29	16	12	15	10	16	19
Foreign* .....	43	31	20	17	8	25	19	26	22	27
Total .....	90	59	36	46	24	37	34	36	38	46

\* Excludes transactions undertaken by Investec plc

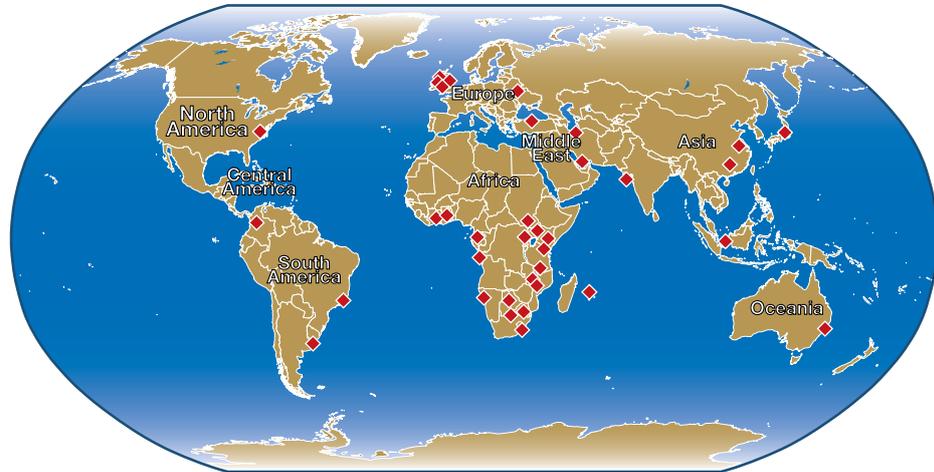
applications approved by the Department in terms of section 52 of the Banks Act

73 Basel Committee, “Core Principles for Effective Banking Supervision” (Basel: Basel Committee, October 2006), 3.  
74 Ibid.

## 4.2.5 Global presence of South African banking groups

South African banking groups' global presence (in respect of banking branches, subsidiaries and representative offices) is illustrated in Figure 4.3.

Figure 4.3 Global presence of South African banking groups

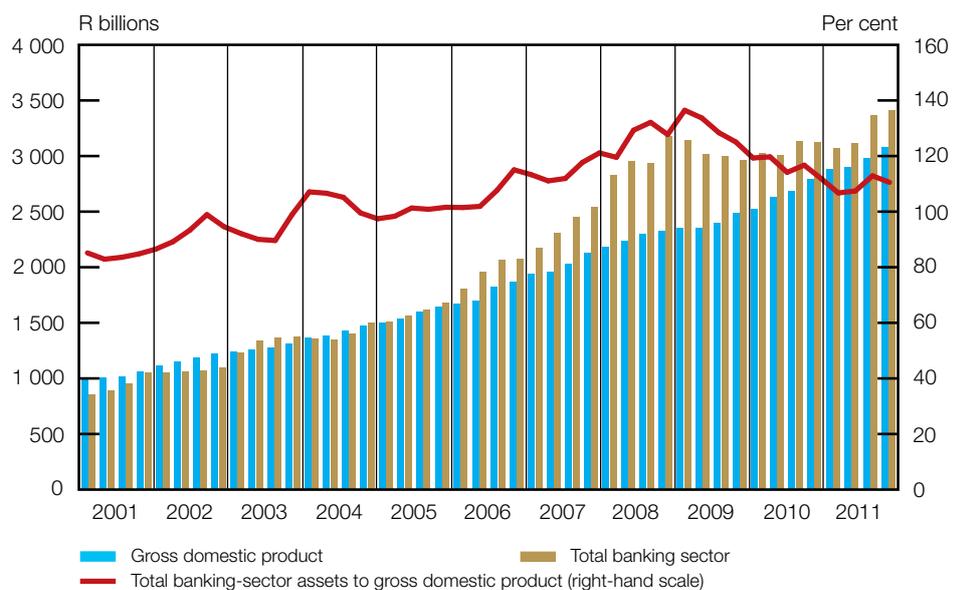


## 4.2.6 Banking-sector assets in relation to gross domestic product

banking-sector assets increased by 9,0 per cent

The total balance-sheet size of the banking sector relative to South Africa's nominal GDP<sup>75</sup> is shown in Figure 4.4. Banking-sector assets increased by 9,0 per cent and amounted to R3 409 billion or 110,5 per cent of nominal GDP at the end of December 2011 (December 2010: R3 126 billion or 111,9 per cent of nominal GDP) (refer to section 4.3 below for further information regarding the balance sheet). South Africa's nominal GDP increased by 10,3 per cent year on year to December 2011.

Figure 4.4 Total banking-sector assets in relation to gross domestic product



<sup>75</sup> 'Nominal gross domestic product' refers to the gross domestic product at market prices, as published in the South African Reserve Bank *Quarterly Bulletin*, reference code NRI 6006L, December 2011, pp. S-108.

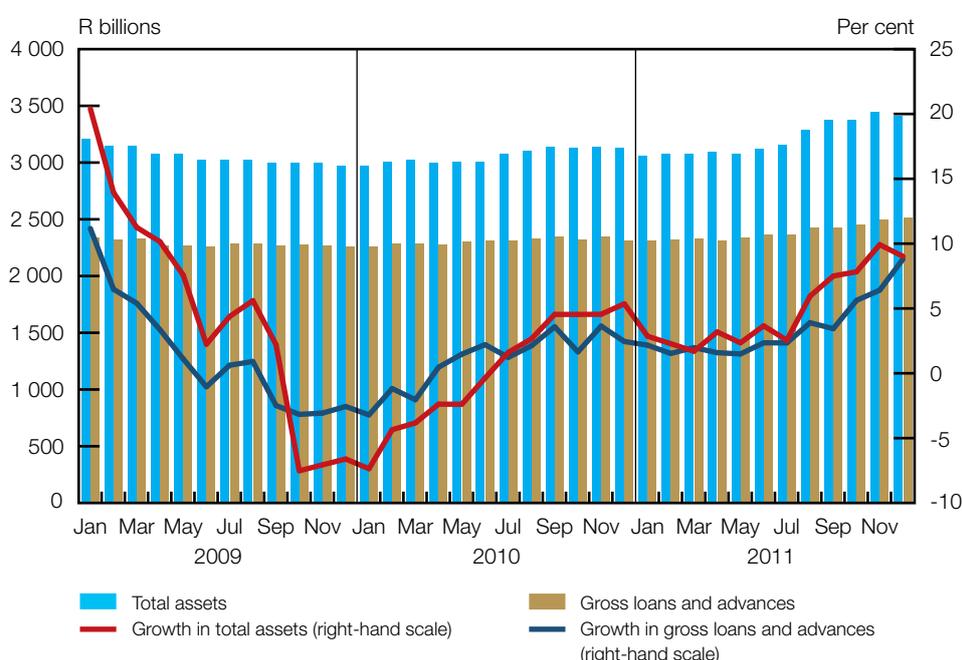


## 4.3 Balance sheet

### 4.3.1 Assets

Figure 4.5 illustrates the growth in banking-sector assets, and gross loans and advances from January 2009 to December 2011. As mentioned above, total banking-sector assets increased by 9,0 per cent to R3 409 billion at the end of December 2011 (December 2010: R3 126 billion). The growth rate in total banking-sector assets accelerated during the third and fourth quarters of 2011 mainly due to a year-on-year increase in gross loans and advances which, in turn, was caused by increases in term and other loans. Gross loans and advances increased by 8,8 per cent to R2 516 billion in December 2011 (December 2010: R2 312 billion). Apart from an increase in gross loans and advances, total banking-sector assets also increased due to increases in Treasury bills and increased investment in government securities.

Figure 4.5 Total banking-sector assets, gross loans and advances, and their respective growth rates (year on year)

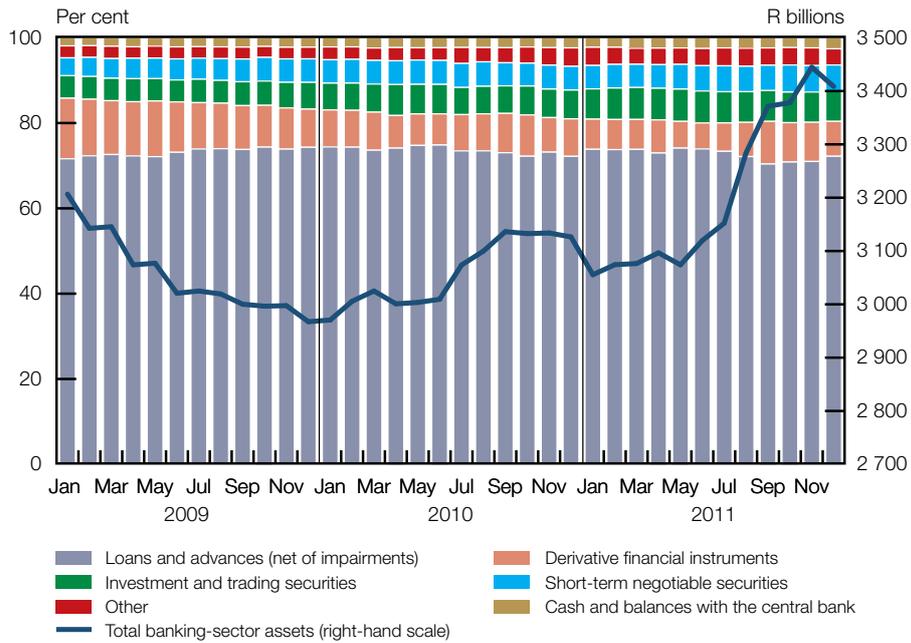


As portrayed in Figure 4.6, loans and advances constituted, on average, 72,7 per cent of total banking-sector assets during 2011 (2010: 73,6 per cent). Derivative financial instruments amounted to R279 billion at the end of December 2011 and represented, on average, 7,7 per cent of total banking-sector assets during 2011 (2010: 8,5 per cent). Derivative financial instruments increased by R74 billion in September 2011 as a result of mark-to-market adjustments on foreign-exchange derivatives.<sup>76</sup> Investment and trading securities, as a percentage of total banking-sector assets, increased from an average of 6,7 per cent during 2010 to 7,3 per cent during 2011. This increase was mainly due to an increase in the holding of government securities by banks.

loans and advances constituted, on average, 72,7 per cent of total banking-sector assets

<sup>76</sup> 'Mark-to-market' or fair value accounting adjustments of financial derivative instruments are calculated in terms of International Accounting Standard 39. The value of the derivative financial instruments is adjusted in response to changes in specified foreign exchange rates.

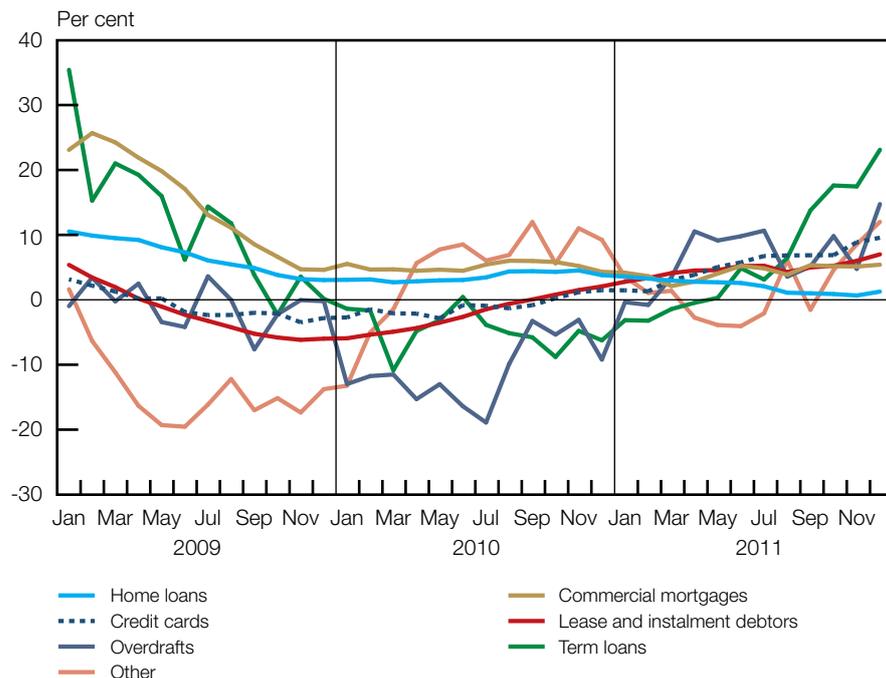
Figure 4.6 Composition of total banking-sector assets



growth in home loans remained subdued in 2011

Figure 4.7 depicts an in-depth analysis of the year-on-year growth in selected loans and advances. All loan and advance categories grew year on year. Home loans amounted to approximately R823,6 billion, on average, during 2011. The growth in home loans remained subdued in 2011 and further slowed from 3,8 per cent in December 2010 to 1,3 per cent in December 2011. However, commercial mortgages increased from 4,3 per cent in December 2010 to 5,4 per cent at the end of December 2011. The year-on-year growth in other loans was volatile during 2011 and fluctuated between negative 4,1 per cent and 12,0 per cent. Other loans (that is, redeemable preference shares, bank intra group balances, loans granted/deposits placed under resale agreements, factoring accounts, trade bills, bankers' acceptances and other) increased from R517 billion in December 2010 to R580 billion at the end of December 2011.

Figure 4.7 Growth rates of selected asset classes within gross loans and advances (year on year)

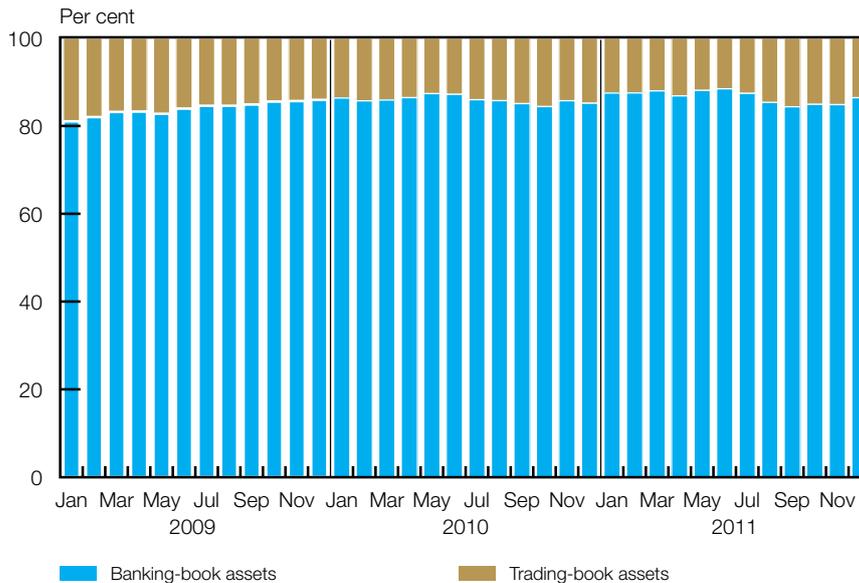


Term loans increased by 23,1 per cent to R437 billion at the end of December 2011 (December 2010: R355 billion). The growth in term loans accelerated during the second half of 2011 as a result of increased lending to banks and corporate clients. Overdrafts grew by 14,8 per cent at the end of December 2011 (December 2010: negative 9,2 per cent). The growth in credit cards, and lease and instalment debtors increased throughout 2011 and amounted to 9,6 per cent and 7,0 per cent respectively at the end of December 2011 (December 2010: 1,5 per cent and 2,1 per cent respectively).

term loans increased by 23,1 per cent

Figure 4.8 provides a breakdown of banking-sector assets in terms of banking-book and trading-book assets.<sup>77</sup> Banking-book assets comprised, on average, 86,7 per cent of total banking-sector assets during 2011, which is marginally higher than the 85,9 per cent reported during 2010.

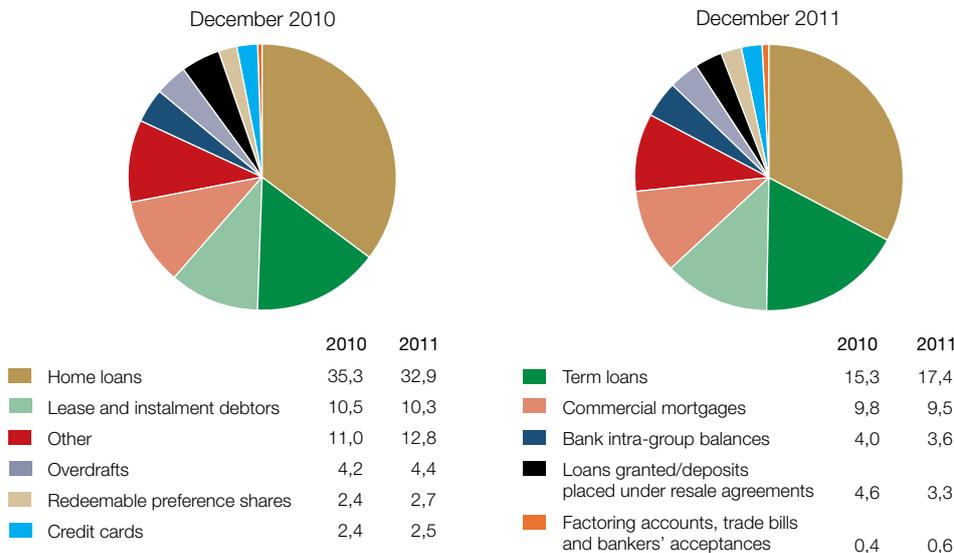
**Figure 4.8 Banking-book versus trading-book assets (as a percentage of total banking-sector assets)**



As outlined in Figure 4.9, the composition of gross loans and advances remained relatively unchanged between December 2010 and December 2011, with home loans still constituting the largest portion of gross loans and advances.

home loans again constituted the largest portion of gross loans and advances

**Figure 4.9 Composition of gross loans and advances (per cent)**

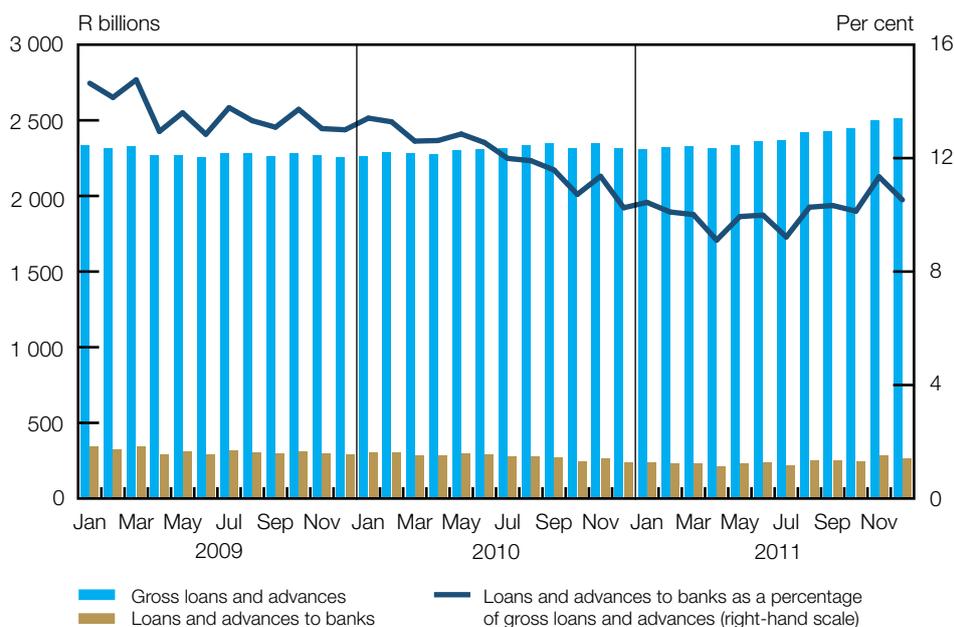


<sup>77</sup> Banking-book and trading-book assets include all asset and liability items designated as part of either a bank's banking or trading activities in terms of the bank's board-approved policy.

The percentage of home loans, as a percentage of total gross loans and advances, declined from 35,3 per cent in December 2010 to 32,9 per cent as at December 2011. Term loans, as a percentage of gross loans and advances, increased by over 200 basis points from 15,3 per cent as at December 2010 to 17,4 per cent in December 2011.

Loans and advances to banks, depicted in Figure 4.10, increased by 11,8 per cent to R265 billion at the end of December 2011 (December 2010: R237 billion). Expressed as a percentage of gross loans and advances, the ratio of loans to banks increased marginally from 10,3 per cent in December 2010 to 10,5 per cent at the end of December 2011. Loans to banks grew, on average, by 1,2 per cent per month during 2011 (2010: negative 1,6 per cent monthly average).

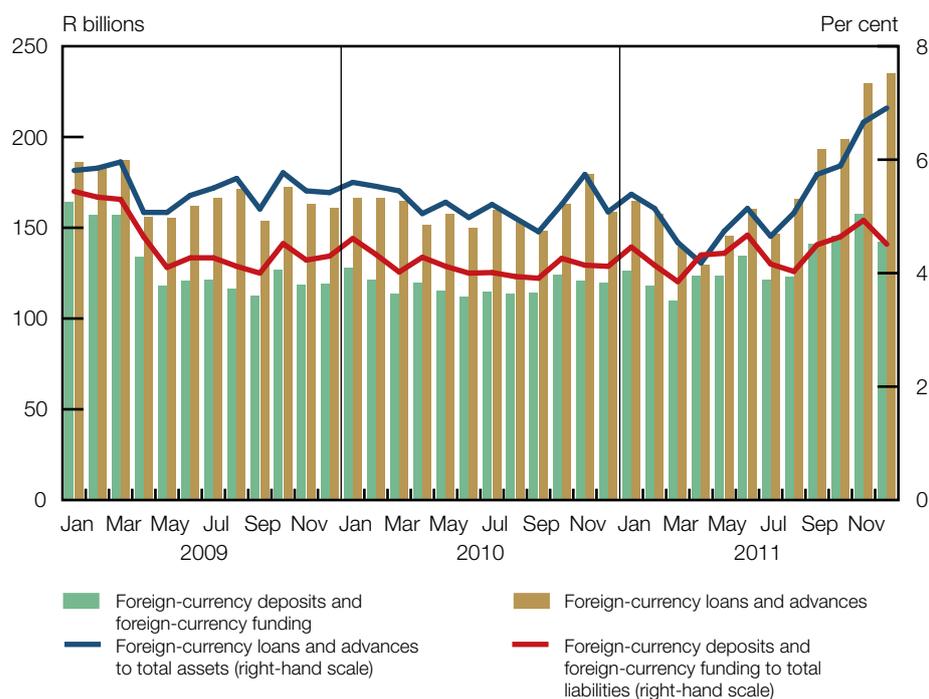
Figure 4.10 Loans and advances to banks



foreign-currency loans and advances exceeded foreign-currency deposits and funding

As depicted in Figure 4.11, foreign-currency loans and advances exceeded foreign-currency deposits and funding throughout 2011. Foreign-currency loans and advances increased significantly by 48,2 per cent from R159 billion in December 2010 to R235 billion at the end of December 2011. Expressed as a percentage of total assets, the ratio of foreign-currency loans and advances increased considerably during the third and fourth quarters of 2011. The increase can be attributed to both an increase in deposits with, and advances to, foreign banks reported by large banks, and the devaluation in the exchange rate of the South African rand to the US dollar. Foreign-currency deposits and funding increased from R119 billion at the end of 2010 to R142 billion in December 2011. The ratio of foreign-currency deposits and foreign-currency funding to total liabilities fluctuated between 3,9 per cent and 4,9 per cent during 2011. The relatively low ratio indicates that South African banks are not overly dependent on foreign funding and deposits.

Figure 4.11 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

Banking-sector liabilities, shown in Figure 4.12, primarily comprised deposits. Deposits increased by 8,9 per cent to R2 710 billion at the end of December 2011 and constituted, on average, 86,2 per cent of liabilities during 2011 (2010: 85,8 per cent). Derivative financial instruments and other trading liabilities as a percentage of liabilities increased in September 2011 due to the increase in foreign-exchange derivative financial instruments.

deposits constituted, on average, 86,2 per cent of liabilities

Figure 4.12 Composition of liabilities

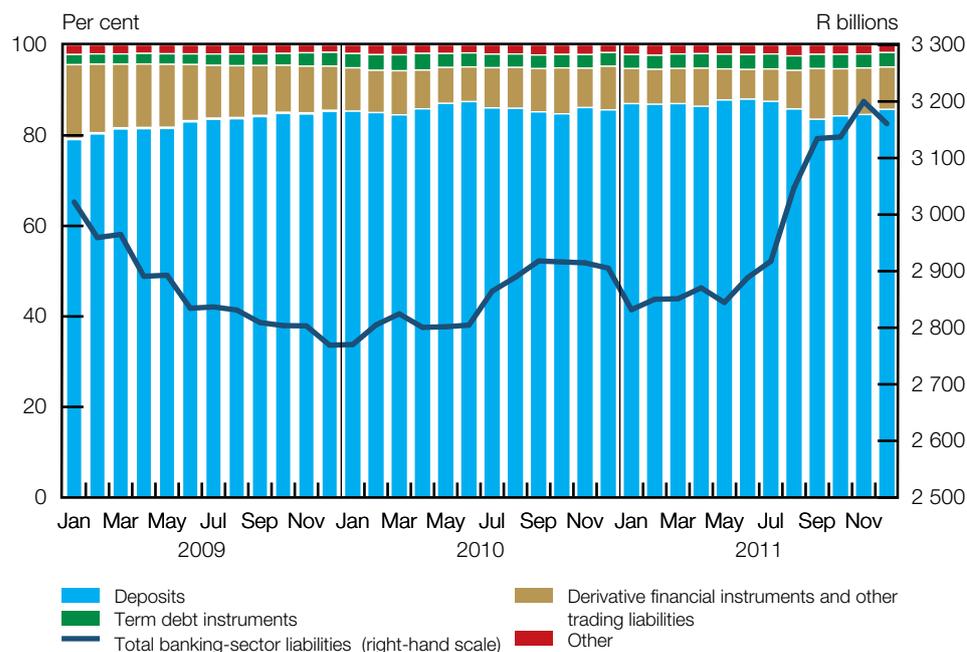
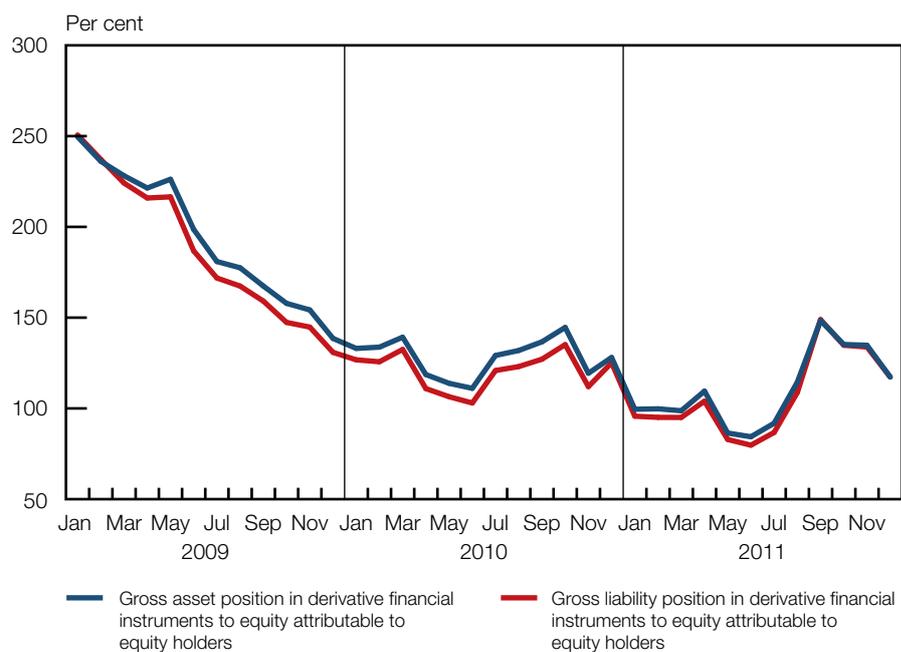


Figure 4.13 portrays the banking sector's gross asset and liability position in derivative financial instruments as a percentage of equity attributable to equity holders. The respective ratios increased considerably during the third quarter of 2011 owing to the aforesaid increase in foreign-exchange derivative financial instruments. However, the ratios declined during the fourth quarter of 2011 as a result of an increase in equity attributable to equity holders, coupled with a decrease in the value of derivative financial instruments. Nonetheless, the gross asset and liability positions were fairly matched throughout 2011 and the net mismatch between the ratios decreased to an average of 3,1 per cent during 2011 (2010: 7,6 per cent average).

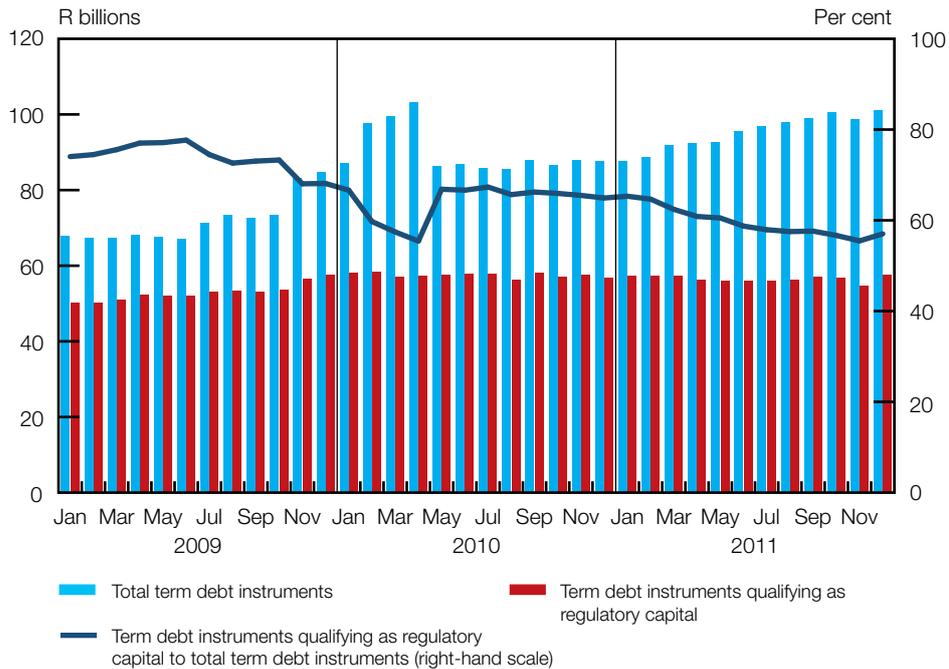
Figure 4.13 Asset and liability position in derivative financial instruments (as a percentage of equity attributable to equity holders)



in anticipation of Basel III, banks reduced their issuance of term debt instruments that qualify as regulatory capital

As illustrated in Figure 4.14, term debt instruments qualifying as regulatory capital remained relatively stable during 2011 and amounted to R58 billion at the end of December 2011 (December 2010: R57 billion). On average, 59,6 per cent of term debt instruments qualified as regulatory capital during 2011 compared to 64,0 per cent during 2010. In view of the Basel III framework's focus on loss-absorbing capital instruments, banks have reduced their issuance of term debt instruments that qualify as regulatory capital.

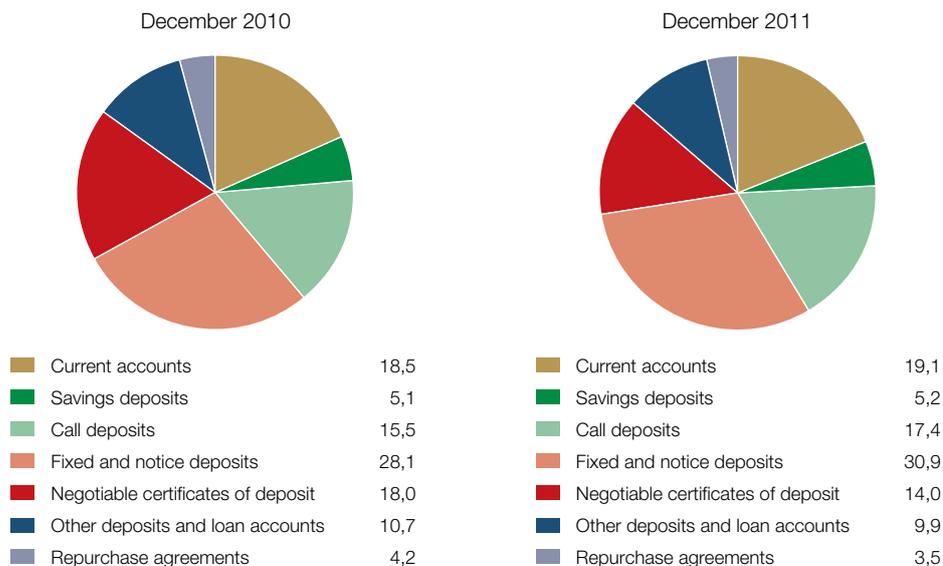
Figure 4.14 Term debt instruments qualifying as regulatory capital (as a percentage of total term debt instruments)



The composition of banking-sector deposits, depicted in Figure 4.15, remained relatively stable during the period under review. Fixed and notice deposits constituted the largest deposit class and amounted to R838 billion at the end of December 2011 (December 2010: R698 billion). The main changes in the composition of deposits included an increase in fixed and notice deposits to 30,9 per cent of total deposits at the end of December 2011 (2010: 28,1 per cent), and a decrease in negotiable certificates of deposit from 18,0 per cent of total deposits in December 2010 to 14,0 per cent in December 2011.

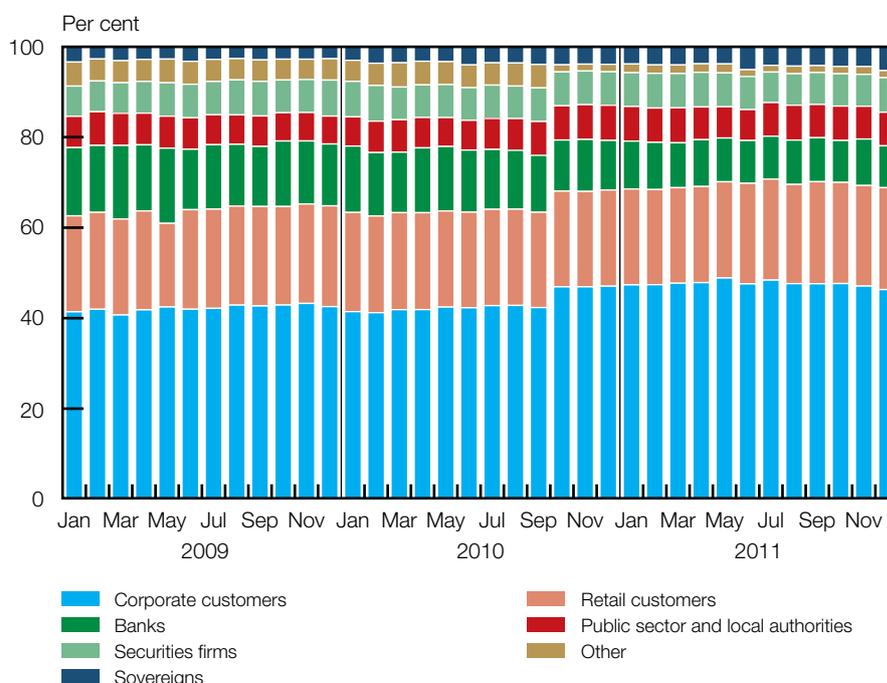
the composition of banking-sector deposits remained relatively stable

Figure 4.15 Composition of deposits (per cent)



As depicted in Figure 4.16, corporate customers continued to be the primary source of banking-sector deposits. Deposits from corporate customers, on average, amounted to approximately R1,2 trillion throughout 2011 and constituted 47,6 per cent of deposits during 2011 (2010: 43,3 per cent). Deposits from retail customers increased from R529 billion at the end of 2010 to R610 billion in December 2011 and constituted, on average, 21,8 per cent of deposits during 2011 (2010: 21,3 per cent).

Figure 4.16 Sources of total deposits (as a percentage of total deposits)



### 4.3.3 Equity

The composition of total equity is portrayed in Figure 4.17. Share capital and retained earnings constituted 92,2 per cent of total equity during 2011 (2010: 91,4 per cent). Total equity increased by 12,1 per cent to R248 billion at the end of December 2011 (December 2010: R221 billion). Retained earnings increased by R17,9 billion to R124 billion at the end of December 2011 (December 2010: R106 billion) while share capital increased by R7,8 billion to R105 billion at the end of December 2011 (December 2010: R97 billion). The movement in other reserves and preference shareholders' equity in September 2011 was due to a change in regulatory reporting by a large bank.

share capital increased by R7,8 billion

Figure 4.17 Composition of total equity

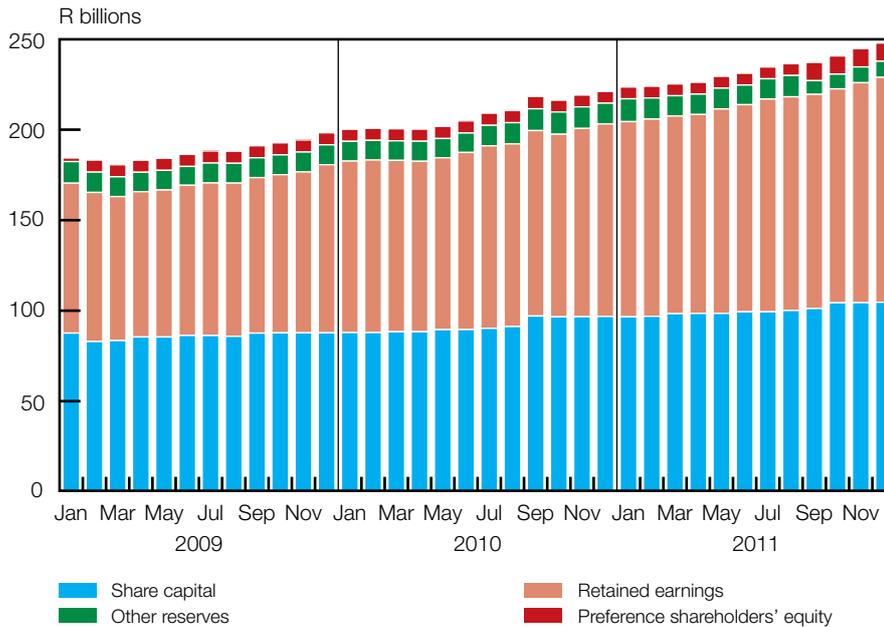
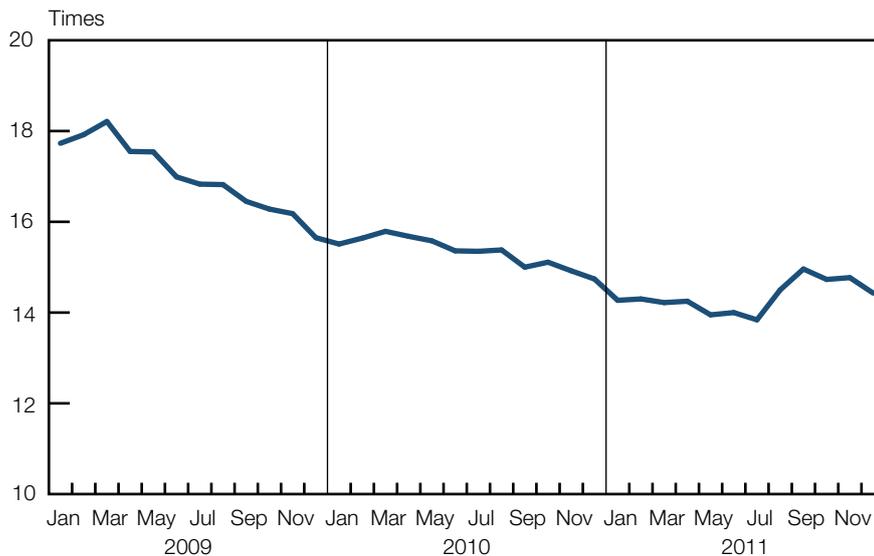


Figure 4.18 depicts the financial leverage multiple for the banking sector and is calculated by dividing total banking-sector assets by total banking-sector equity attributable to equity holders (note that this ratio does not comply with the definition of the leverage ratio referred to in the Basel III framework).<sup>78</sup> The financial leverage multiple amounted to 14,4 times at the end of December 2011 (December 2010: 14,7 times). It increased in the third quarter of 2011 mainly due to an increase in the year-on-year growth of total banking-sector assets, and slowed in the fourth quarter mainly due to an increase in total equity attributable to equity holders, as depicted in Figure 4.19.

the financial leverage multiple amounted to 14,4 times

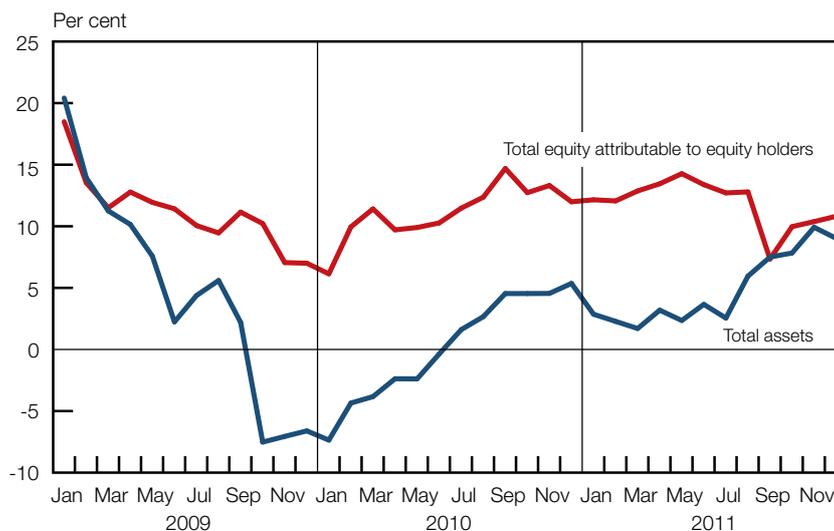
Figure 4.18 Financial leverage multiple



78 The Basel III framework presents a definition and a method of calculation for the leverage ratio. It also sets out a transitional period for the Basel Committee "to monitor banks' leverage ratio and its components on a semi-annual basis in order to assess whether the proposed design and calibration of the minimum Tier 1 leverage ratio of 3 per cent is appropriate over a full credit cycle and for different types of business models". Based on the results of this parallel run, the ratio may be adjusted and calibrated "with a view to migrating to a Pillar 1 treatment on 1 January 2018". Basel Committee, "Basel III: A Global Regulatory Framework for more Resilient Banks and Banking Systems" (Basel: Basel Committee, revised version, June 2011).



Figure 4.19 Growth rates of total banking-sector assets and equity attributable to equity holders (year on year)

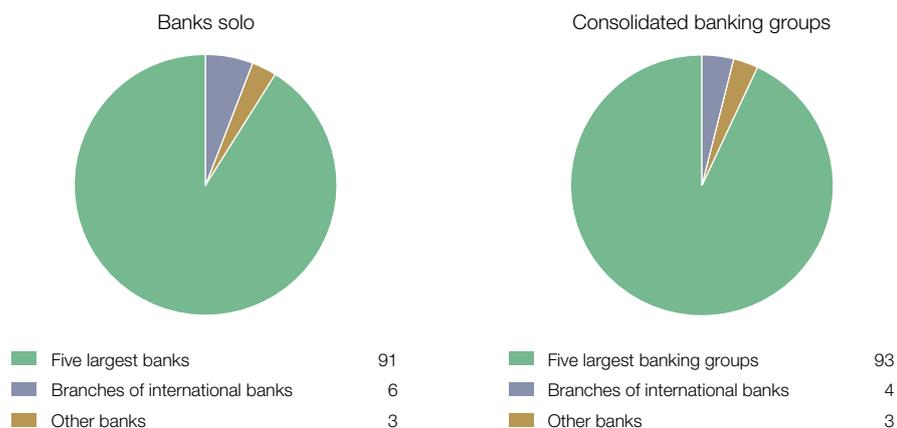


### 4.3.4 Balance-sheet information on the total consolidated banking groups

assets reported by consolidated banking groups grew by 10,4 per cent

The composition of total banking-sector assets in respect of banks solo was largely similar to that of consolidated banking groups as at December 2010, with the majority of banking-sector assets being held by the five largest banking groups (refer to Figure 4.20). Figure 4.21 reflects total banking-sector assets aggregated for banks solo<sup>79</sup> (excluding their foreign branches), banks consolidated<sup>80</sup> (including their foreign branches) and consolidated banking groups.<sup>81</sup> The assets reported by consolidated banking groups grew by 10,4 per cent to R4,3 trillion at the end of December 2011 (December 2010: R3,9 trillion). Over 90 per cent of the growth in rand value was due to an average increase of 11,7 per cent in the total assets of the largest five banking groups. The growth in total assets of banks solo was 9,2 per cent (December 2010: 5,3 per cent), largely due to an average growth of 10,1 per cent in the bank solo operations reported by the largest five banks.

Figure 4.20 Composition of total banking-sector assets in respect of the five largest banks, branches of international banks and other banks (per cent)



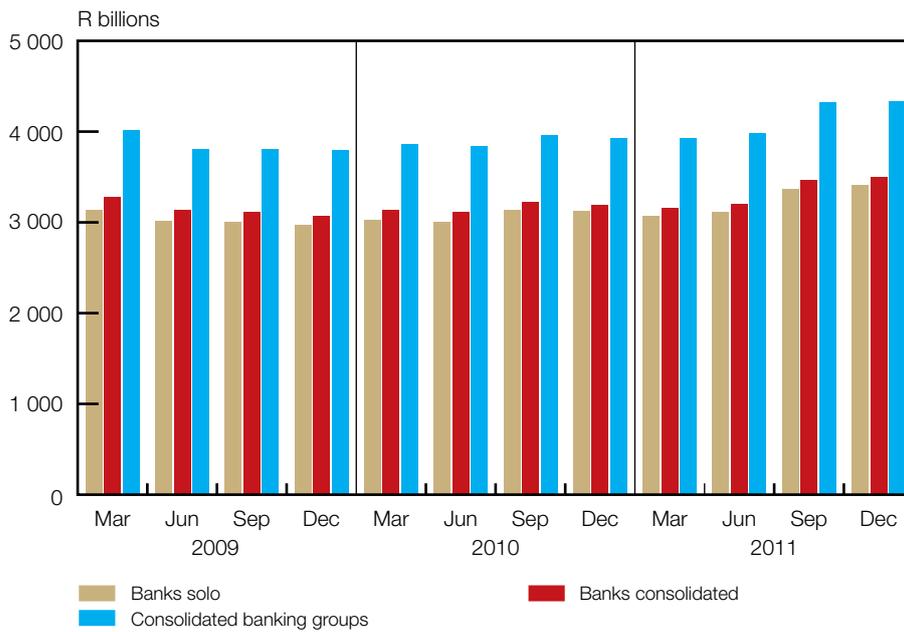
79 'Banks solo' includes the aggregate of banks incorporated in South Africa (excluding their foreign branches, subsidiaries and associates) and all local branches of international banks.

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

81 'Consolidated banking groups' includes the aggregate of registered bank-controlling companies and registered banks incorporated in South Africa (that do not have registered controlling companies).



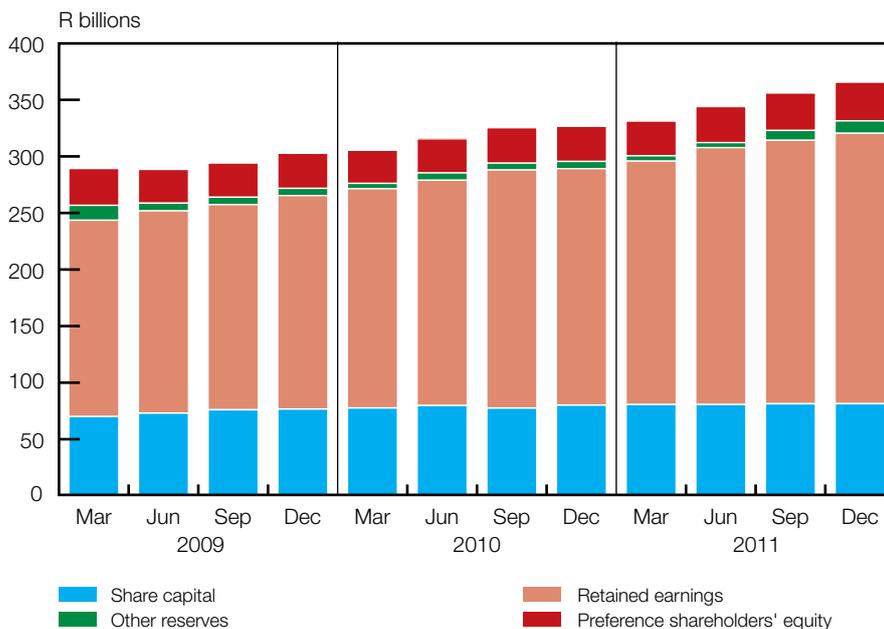
Figure 4.21 Banking-sector assets for banks solo, banks consolidated and consolidated banking groups



Total equity for consolidated banking groups mainly comprised share capital, retained earnings, other reserves and preference shareholders' capital (refer to Figure 4.22). The total equity of consolidated banking groups increased by 11,9 per cent to R366 billion at the end of December 2011 (December 2010: R327 billion), mainly due to 14,4 per cent growth in retained earnings. Other reserves increased by 71,1 per cent to R10,9 billion at the end of December 2011 (December 2010: R6,4 billion) mainly due to a rights issue and an increase in foreign currency translation reserves reported by two banking groups. Share capital and retained earnings represented 22,3 per cent and 65,4 per cent respectively of total equity at the end of December 2011 (December 2010: 24,5 per cent and 64 per cent respectively).

total equity of consolidated banking groups increased by 11,9 per cent

Figure 4.22 Composition of total equity for consolidated banking groups

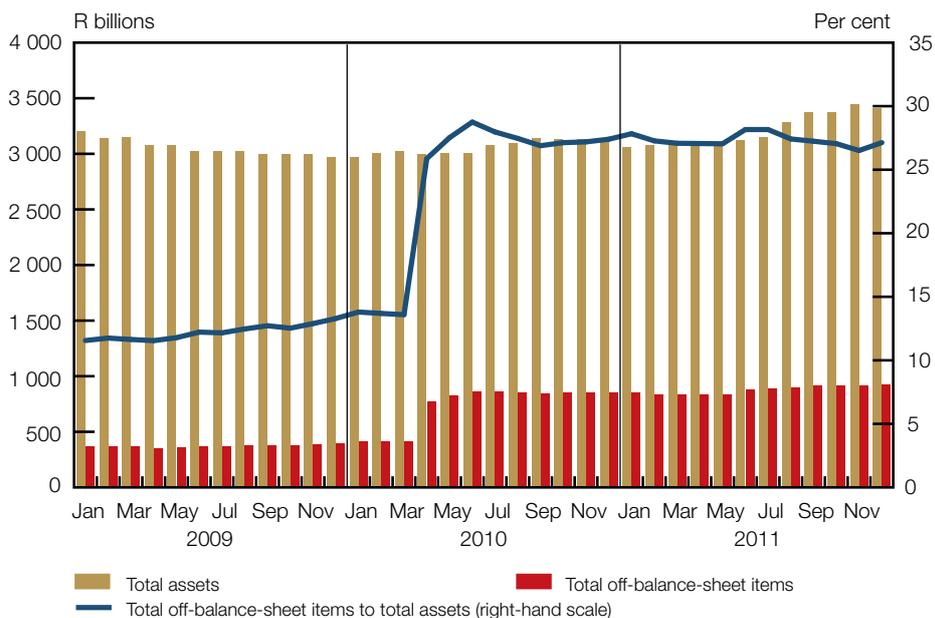


## 4.4 Off-balance-sheet activities

the ratio of off-balance-sheet items to total assets remained relatively stable

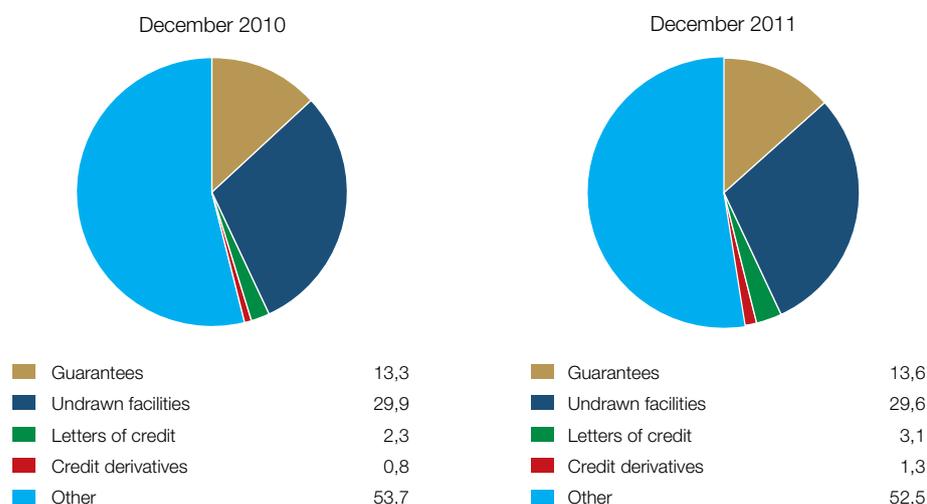
A comparison between total assets and total off-balance-sheet items is illustrated in Figure 4.23. Off-balance-sheet items increased by 88,9 per cent month on month in April 2010 owing to a change in regulatory reporting of off-balance-sheet items to include revocable facilities. The ratio of off-balance-sheet items to total assets remained relatively stable and amounted to 27,3 per cent, on average, during 2011 (2010: 23,9 per cent). Off-balance-sheet items increased by 7,9 per cent to R925 billion at the end of December 2011 (December 2010: R857 billion). All categories of off-balance-sheet items increased during the year under review, with the major growth categories being other (mainly revocable facilities) and committed undrawn facilities.

Figure 4.23 Total off-balance-sheet items in relation to total banking-sector assets



The composition of total off-balance-sheet items, portrayed in Figure 4.24, remained largely unchanged between December 2010 and December 2011. Off-balance-sheet items primarily

Figure 4.24 Composition of total off-balance-sheet items (per cent)



comprised 'other' off-balance-sheet items, which amounted to R485 billion at the end of December 2011 (December 2010: R460 billion). 'Other' off-balance-sheet items consisted mainly of revocable facilities.

## 4.5 Profitability

The banking sector's operating profit increased by 30 per cent to R49 billion for the year ending December 2011 (December 2010: R38 billion). The increase in operating profit was mainly due to a 12-month cumulative increase in net interest income (R9,6 billion) and non-interest revenue (R4,7 billion), coupled with a decrease in credit losses (R3,2 billion). Credit losses decreased by 11,7 per cent to R24 billion for the year ending December 2011 (December 2010: R27 billion), mainly due to an improved credit environment. A detailed monthly breakdown of the banking sector's income statement is illustrated in Figure 4.25.

Gross operating income (that is, the sum of net interest income and non-interest revenue) increased by 9,2 per cent to R170 billion for the year ending December 2011 (December 2010: R156 billion). Net interest income and non-interest revenue increased by 12,7 per cent and 5,8 per cent to R85,5 billion and R84,3 billion respectively during the year under review (December 2010: R75,9 billion and R79,7 billion respectively). The increase in non-interest revenue was due to a 13,0 per cent increase in net fee and commission income, while the increase in net interest income was mainly due to a year-on-year decrease in interest expense on negotiable certificates of deposit, term deposits, and other deposits and loans.

operating profit increased by 30 per cent

gross operating income increased by 9,2 per cent

Figure 4.25 Composition of the income statement (smoothed)<sup>82</sup>

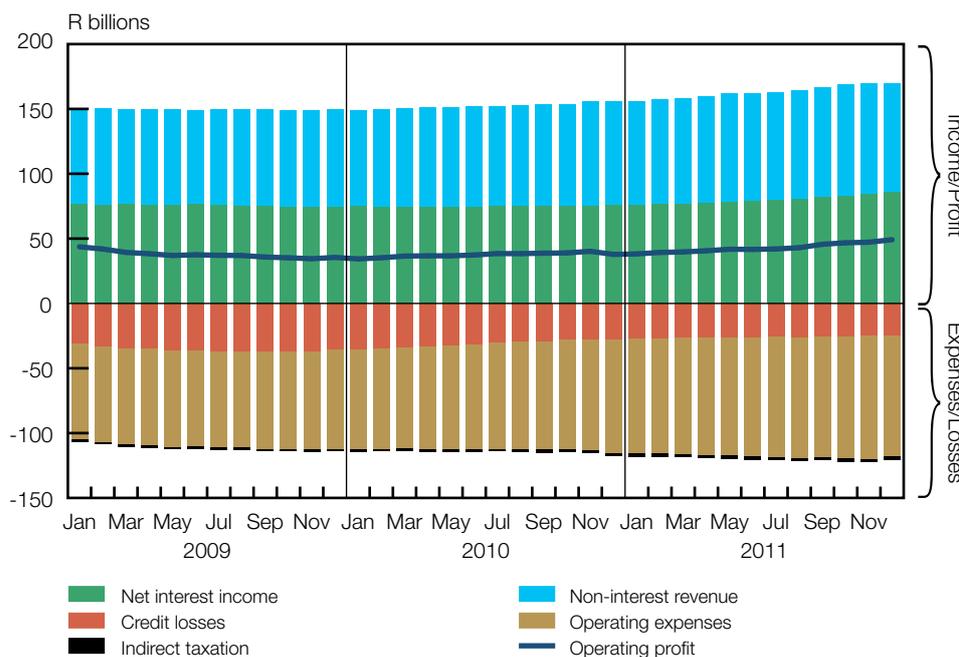
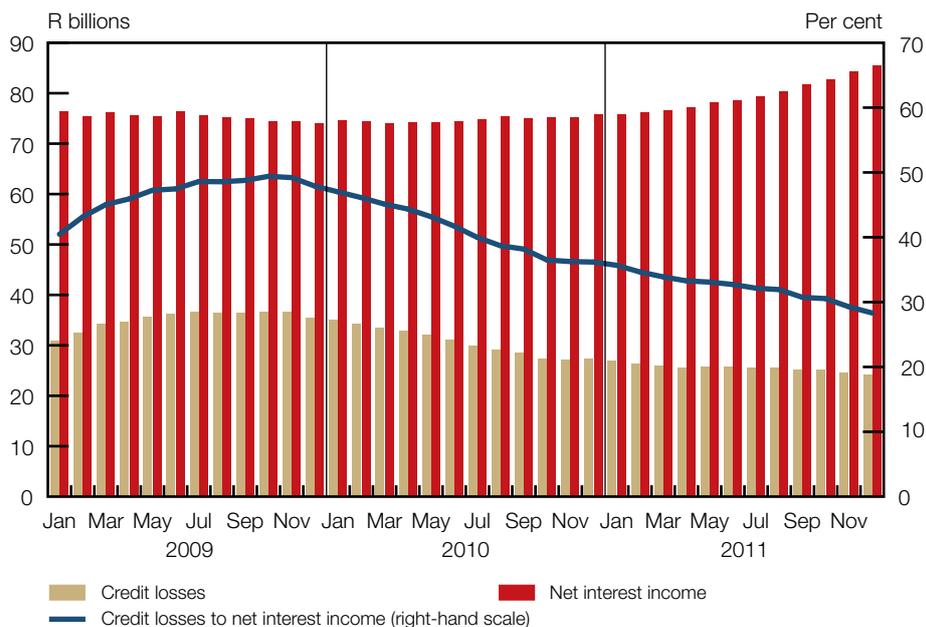


Figure 4.26 depicts credit losses as a percentage of net interest income on a month-on-month basis. The ratio continued to decline from 36,2 per cent in December 2010 to 28,3 per cent at the end of 2011 owing to the aforementioned increase in net interest income and decrease in credit losses.

<sup>82</sup> 'Smoothed' ratios are calculated using 12-month moving averages, while 'unsmoothed' ratios are calculated using monthly data.



Figure 4.26 Credit losses to net interest income (smoothed)



94,4 per cent of gross operating income was derived from banking-book transactions

Figure 4.27 shows that there were minor changes to the composition of gross operating income from 2010 to 2011. Net interest income, and net fee and commission income constituted 50,3 per cent and 35,4 per cent respectively of gross operating income during 2011 (2010: 48,8 per cent and 34,2 per cent respectively). As depicted in Figure 4.28, 94,4 per cent of gross operating income was derived from banking-book transactions during 2011 (2010: 93,7 per cent). The changes in composition are largely reflective of the volatility in the fair value of the underlying trading-book instruments.

Figure 4.27 Composition of gross operating income (smoothed) (per cent)

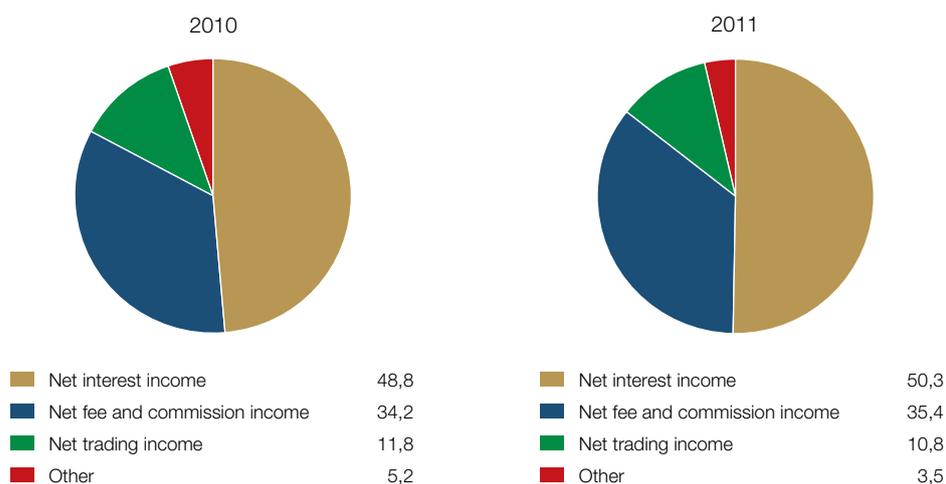
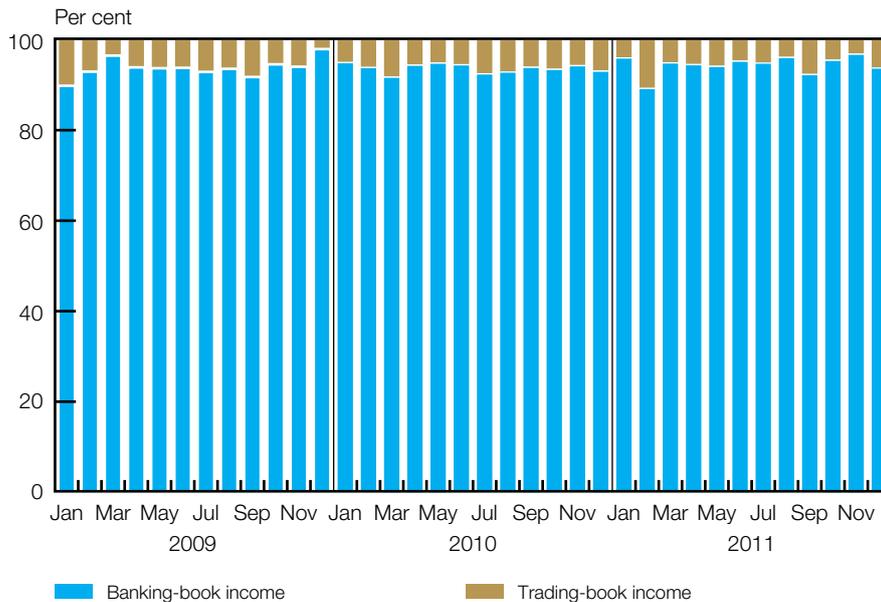


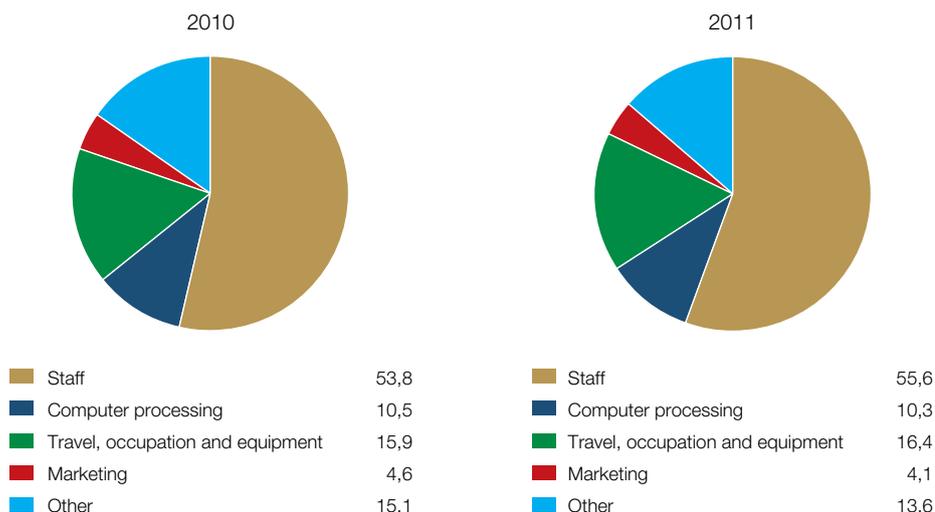
Figure 4.28 Banking-book income versus trading-book income (unsmoothed) (as a percentage of gross operating income)



The composition of operating expenses, depicted in Figure 4.29, remained largely unchanged during the year under review. Operating expenses increased by 6,8 per cent to R94 billion for the year ending December 2011 (December 2010: R88 billion). The largest component of operating expenses, namely, staff expenses (as percentage of total operating expenses) increased from 53,8 per cent in 2010 to 55,6 per cent in 2011. Other operating expenses (consisting of fees and insurance, auditors' remuneration and other expenses), expressed as a percentage of total operating expenses, decreased by 150 basis points to 13,6 per cent for the period ended December 2011.

operating expenses increased by 6,8 per cent

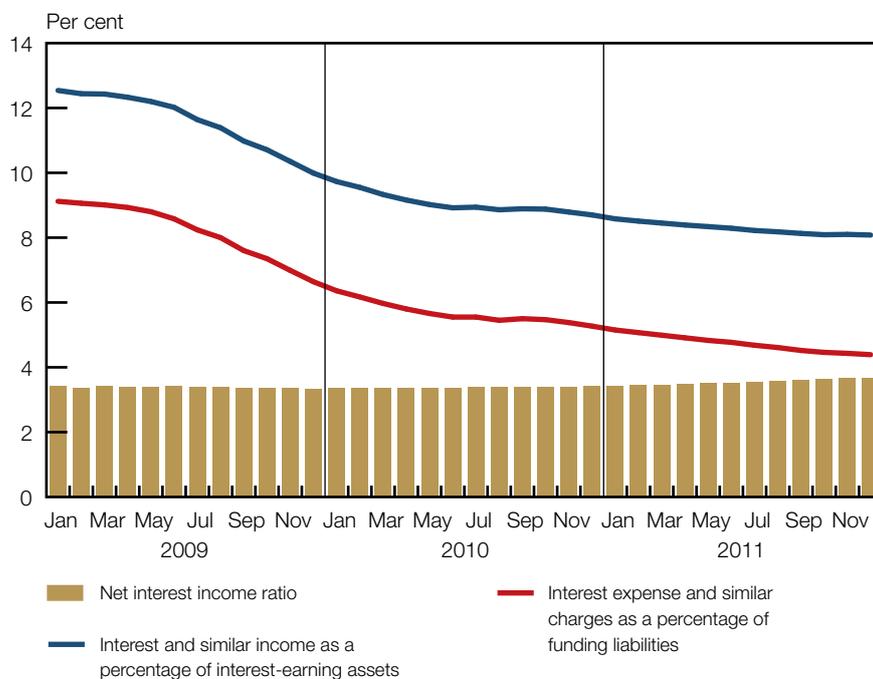
Figure 4.29 Composition of operating expenses (smoothed) (per cent)



The net interest income ratio, shown in Figure 4.30, is the difference between 'interest and similar income to interest earning assets' and 'interest expense and similar charges to funding liabilities'. The net interest income ratio increased marginally from, on average, 3,4 per cent during 2010 to, on average, 3,5 per cent during 2011, mainly due to the decrease in interest expense and similar charges exceeding the decrease in interest and similar income. The ratio

of interest and similar income to interest-earning assets declined during 2011 and amounted to 8,1 per cent at the end of December 2011 (December 2010: 8,7 per cent). The ratio of interest expenses and similar charges to funding liabilities decreased from 5,3 per cent in December 2010 to 4,4 per cent at the end of December 2011. This ratio mirrored the trend of interest and similar income to interest-earning assets ratio throughout 2011. During 2011, the repurchase rate remained unchanged.

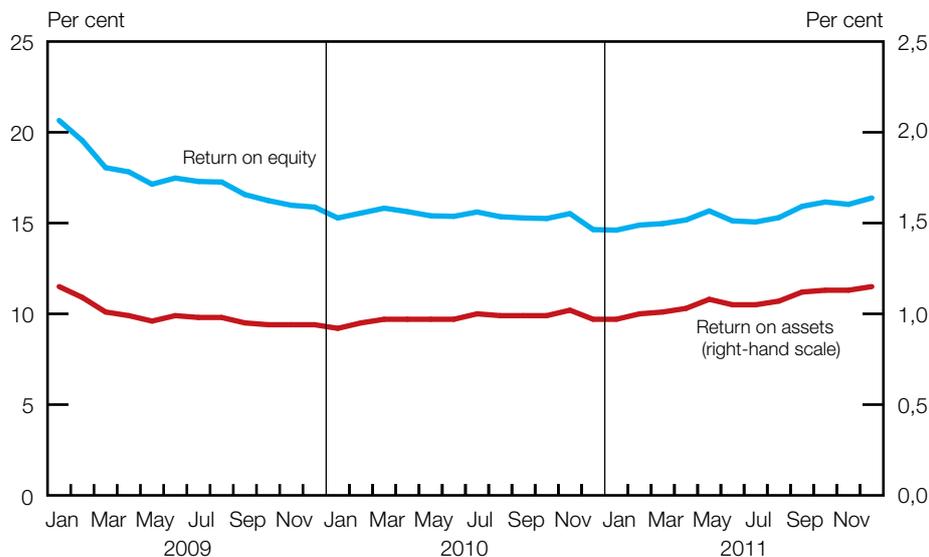
Figure 4.30 Net interest income ratio (smoothed)



ROE and ROA ratios increased

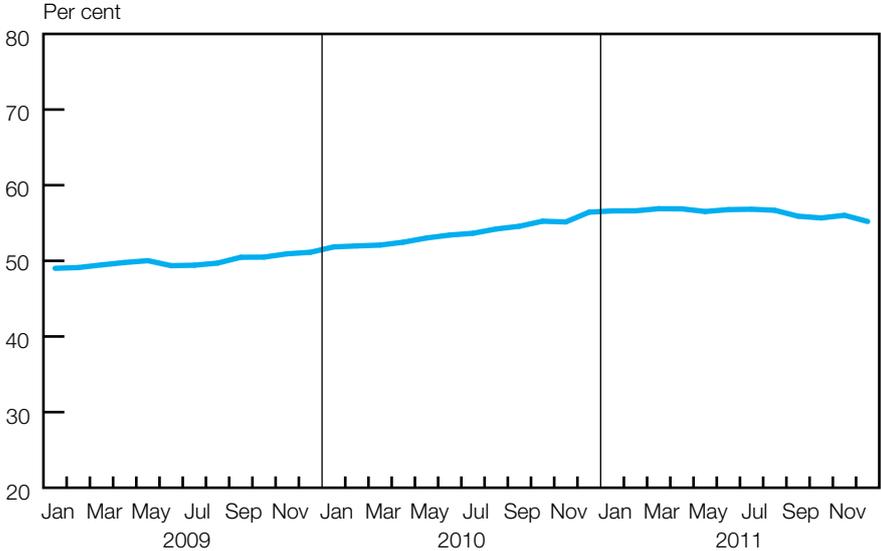
Figure 4.31 depicts the 12-month moving average ROE and ROA profitability ratios for the banking sector. The ROE and ROA ratios increased from 14,6 per cent and 1,0 per cent in December 2010 to 16,4 per cent and 1,2 per cent respectively in December 2011. The increase in the profitability ratios during 2011 was due to the aforementioned increase in banks' profitability.

Figure 4.31 Profitability ratios (smoothed)



The cost-to-income ratio, as illustrated in Figure 4.32, remained relatively stable at approximately 56,7 per cent between January and August 2011. Subsequently, the ratio decreased marginally to 55,2 per cent in December 2011, owing to a higher growth rate in gross operating income relative to that of operating expenses.

Figure 4.32 Cost-to-income ratio (smoothed)



## 4.6 Capital adequacy

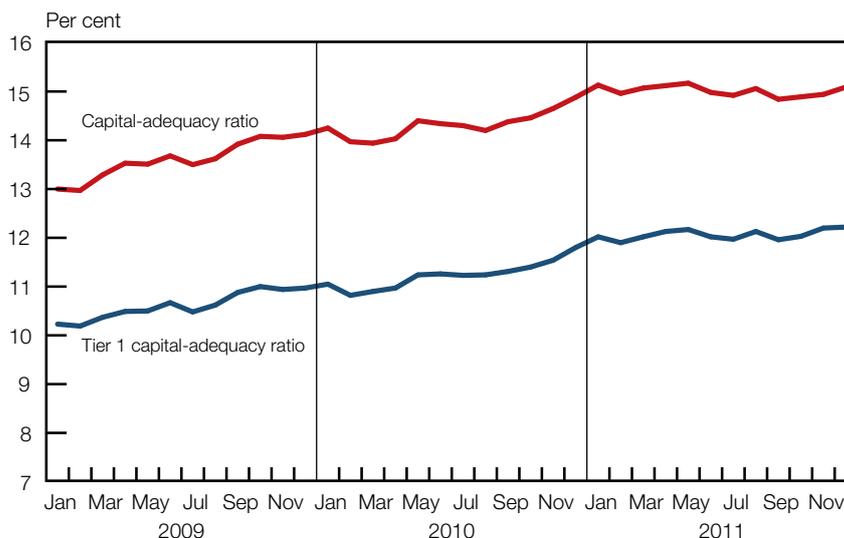
The minimum required CARs applicable to all banking operations and consolidated bank-controlling companies licensed in terms of the Banks Act are 7,0 per cent in respect of the Tier 1 CAR and 9,5 per cent for the total CAR. In addition, the Registrar may require banks and consolidated banking groups, as part of the supervisory review and evaluation process in terms of Pillar 2 of the Basel II framework, to maintain a total CAR above the minimum required level based on assessments of systemic risk and each bank's idiosyncratic risk.

### 4.6.1 Capital adequacy for banks solo

Banks' operations in South Africa (banks solo) remained adequately capitalised. The total CAR and the Tier 1 CAR for banks solo, depicted in Figure 4.33, remained relatively stable during 2011. The total CAR increased marginally from 14,9 per cent at the end of December 2010 to 15,1 per cent at the end of December 2011. The Tier 1 CAR increased from 11,8 per cent at the end of December 2010 to 12,2 per cent at the end of December 2011.

total CAR increased marginally

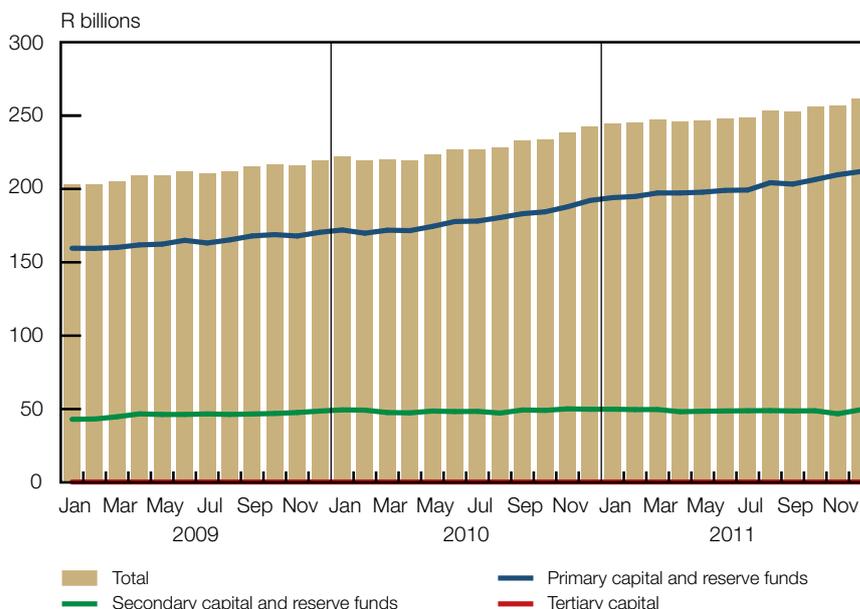
Figure 4.33 Capital-adequacy ratios (bank solo)



primary qualifying capital and reserve funds increased by 10,2 per cent

The composition of qualifying regulatory capital and reserve funds on a bank-solo basis is depicted in Figure 4.34. Total qualifying regulatory capital and reserve funds increased by 8,0 per cent from R242 billion at the end of 2010 to R262 billion at the end of December 2011, mainly due to an increase in primary qualifying capital and reserve funds. Primary qualifying capital and reserve funds increased by 10,2 per cent from R192 billion at the end of 2010 to R212 billion at the end of December 2011 and constituted approximately 80,4 per cent of total qualifying regulatory capital during 2011 (2010: 78,5 per cent). Secondary qualifying capital and reserve funds remained relatively stable during 2011 and amounted to R49,5 billion at the end of December 2011 (December 2010: R49,9 billion). As was the case in 2010, tertiary capital amounted to R0,3 billion throughout 2011.

Figure 4.34 Composition of qualifying regulatory capital and reserve funds (bank solo)



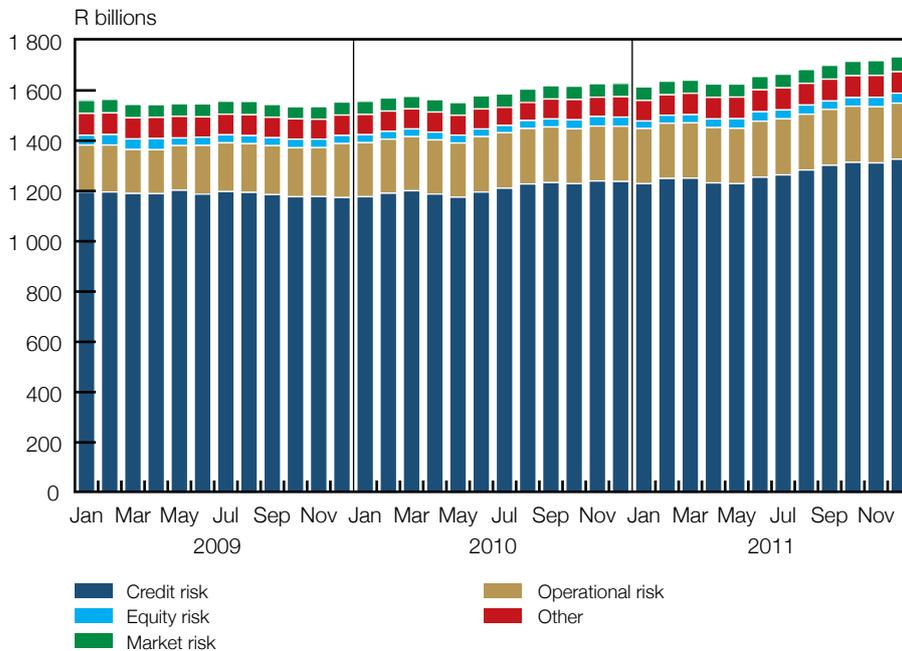
Total risk-weighted exposure (RWE),<sup>83</sup> as shown in Figure 4.35, increased by 6,5 per cent to R1 734 billion during the year under review (December 2010: R1 628 billion). Credit RWE, the

83 RWE is the amount used to calculate minimum regulatory capital (minimum regulatory capital = RWE x minimum required capital percentage).



largest component of total RWE, constituted, on average, 76,2 per cent of total RWE during 2011 (2010: 76,0 per cent). Total RWE increased by R106 billion mainly due to a R89 billion increase in credit RWE to R1 326 billion at the end of December 2011. Operational RWE amounted to R223 billion at the end of December 2011 and constituted, on average, 13,3 per cent of total RWE during 2011 (2010: 13,7 per cent). Equity risk in the banking book, market risk and other RWEs together constituted 10,5 per cent of total RWE during 2011 (2010: 10,3 per cent).

Figure 4.35 Total risk-weighted exposure (bank solo)

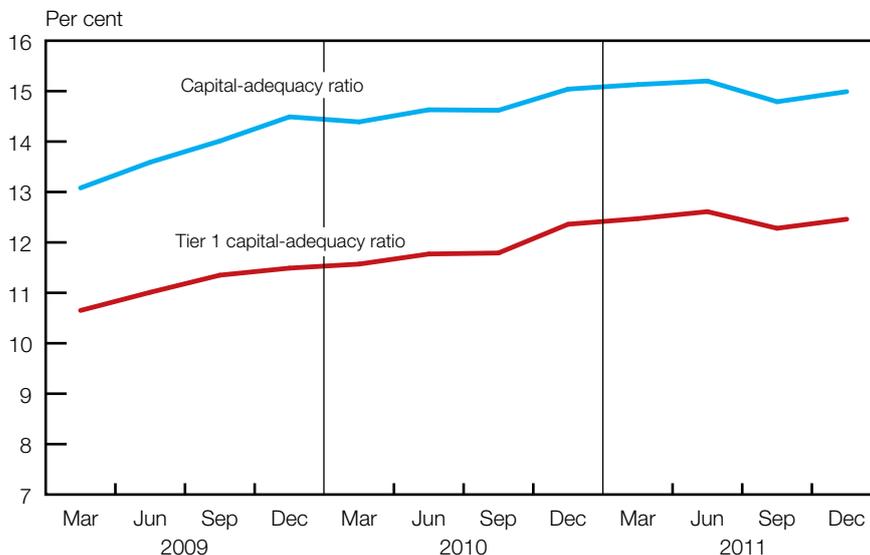


## 4.6.2 Capital adequacy for total consolidated banking groups

Figure 4.36 presents the CARs for consolidated banking groups. The total sector's CAR for consolidated banking groups remained unchanged at 15,0 per cent at the end of December 2011 (December 2010: 15,0 per cent). The consolidated Tier 1 CAR was 12,5 per cent at the end of December 2011 (December 2010: 12,4 per cent).

total banking-sector consolidated CAR remained unchanged at 15,0 per cent

Figure 4.36 Capital-adequacy ratios (consolidated banking groups)



the average liquid assets held increased

## 4.7 Liquidity risk

The average liquid assets held as a percentage of liquid assets required to be held are illustrated in Figure 4.37. In keeping with the previous year's trend, liquid assets held remained above the statutory liquid assets requirement of not less than 5 per cent of the banking sector's liabilities classified as 'reduced'<sup>84</sup> during the period under review. The average liquid assets held increased from R234 billion as at the end of December 2010 to R283 billion as at the end of December 2011. The ratio of liquid assets held to liquid assets required to be held peaked at 201,2 per cent during October 2011 before declining to 193,5 per cent as at the end of December 2011 (December 2010: 174,8 per cent). The banking sector holds liquid assets in excess of the statutory requirement as part of its liquidity risk management.

Figure 4.37 Statutory liquid assets (actual versus required)

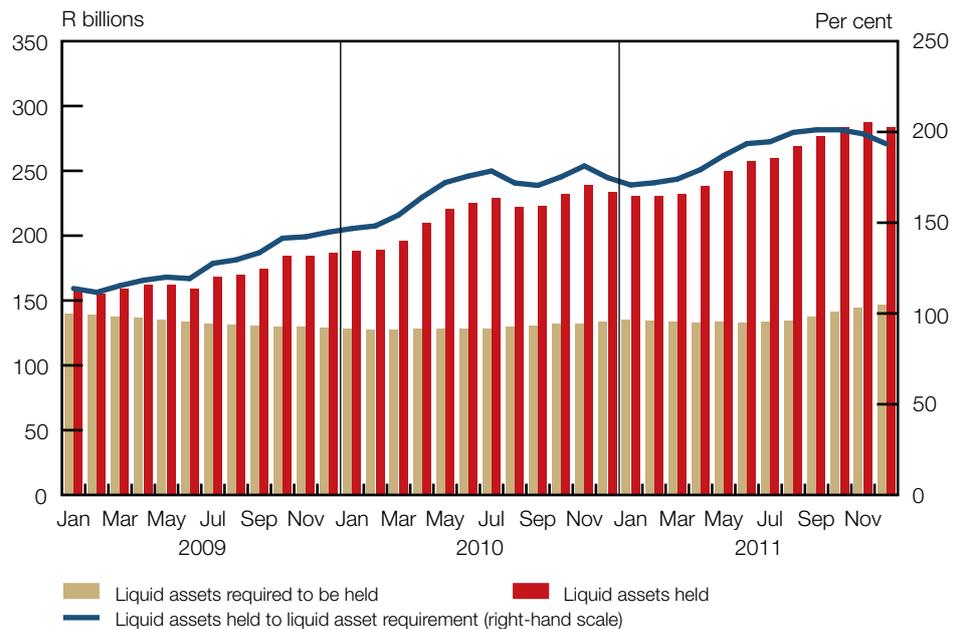


Figure 4.38 illustrates that as at the end of December 2011, 40,7 per cent of the total banking sector's contractual liabilities were classified as maturing the next day (December 2010: 38,9 per cent). This is significantly higher than the 3,2 per cent business-as-usual liabilities classified as maturing the next day (refer to Figure 4.39) as at the end of December 2011 (December 2010: 3,9 per cent). This difference between the two ratios may be attributed to the business-as-usual assumptions of banks, which take into account issues such as the retaining of funding or deposits on maturity or roll-over dates, notwithstanding the contractual arrangements pertaining to such funding or deposits. The decrease in the next-day bracket regarding the business-as-usual liabilities as at the end of December 2010 may be attributed to the contractual re-profiling by two of the major banks.

<sup>84</sup> Refer to regulation 27 of the Regulations for a more detailed explanation in this regard.



Figure 4.38 Contractual maturity of liabilities (as a percentage of total liabilities)

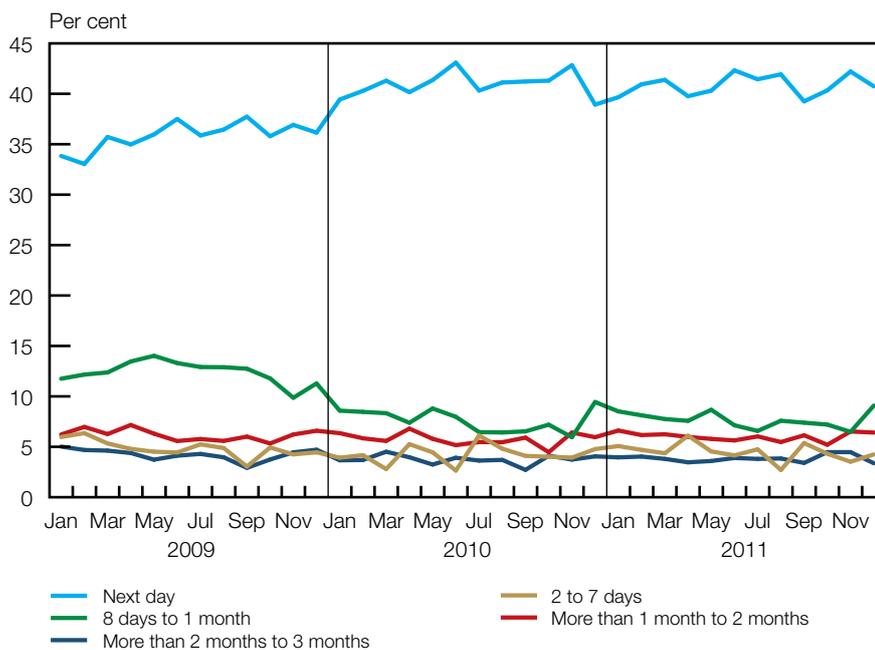


Figure 4.39 Business-as-usual maturity of liabilities (as a percentage of total liabilities)

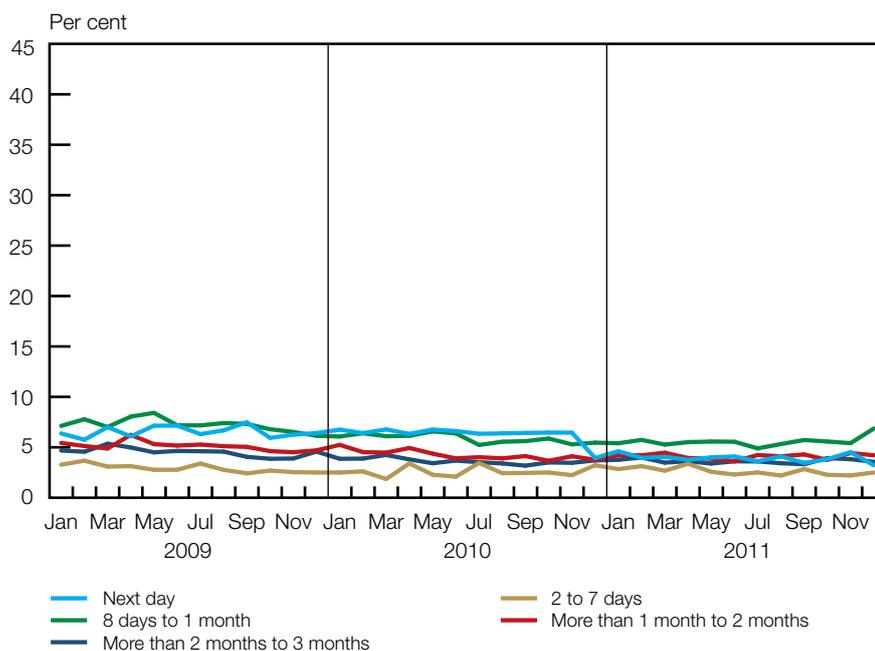
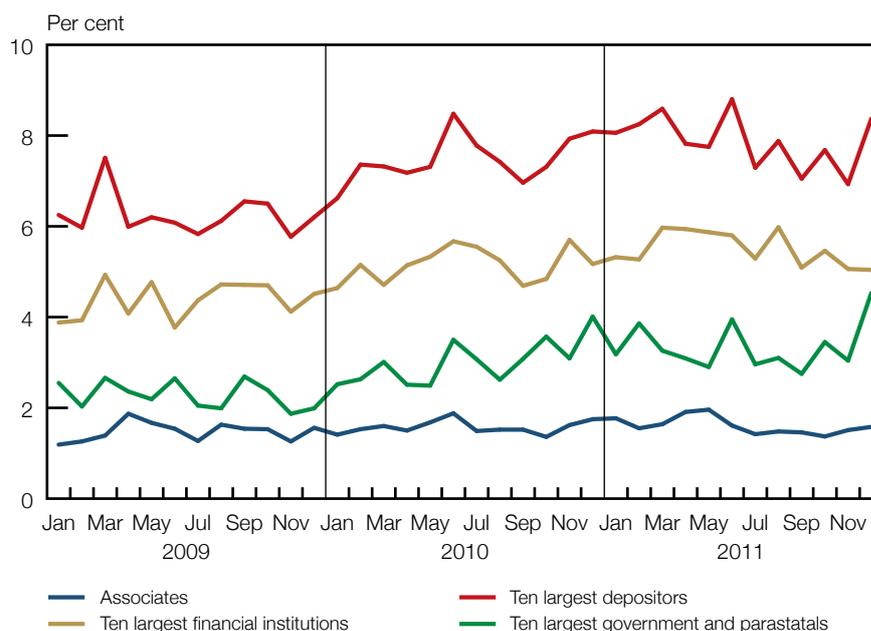


Figure 4.40 provides a summary of banks' total short-term deposit funding<sup>85</sup> (as a percentage of total liabilities) received from different categories of depositors. The banking sector's short-term funding received from the ten largest depositors and ten largest government and parastatals increased from 8,1 per cent and 4,0 per cent as at the end of December 2010 to 8,4 per cent and 4,5 per cent respectively as at the end of December 2011. Short-term funding received from the ten largest financial institutions and associates decreased marginally to 5,0 per cent and 1,6 per cent respectively as at the end of December 2011 (December 2010: 5,2 per cent and 1,8 per cent respectively).

85 Short-term funding has a duration of one month or less.

Figure 4.40 Concentration of short-term deposit funding (as a percentage of total banking-sector liabilities)



## 4.8 Credit risk

the lowest repurchase rate in more than 30 years played a role in improving the banking sector's credit environment

The Bank's repurchase rate remained unchanged at 5,5 per cent over the 12-month period to December 2011. This is the lowest repurchase rate in more than 30 years and, as a result, has played a role in improving the banking sector's credit environment. The sector accordingly experienced an increase in gross credit exposure and a decrease in credit losses during 2011.

The decrease in credit losses contributed towards increased profitability in the sector. Credit losses reduced the retail asset classes largely as a result of improved consumer financial positions resulting from the sustained low interest rate environment and improved credit collection processes. Retail mortgage on-balance-sheet exposure, the largest on-balance-sheet asset category reported by the IRB banks, increased by 0,3 per cent year on year to December 2011. This is reflective of, among other things, the sector's risk appetite and continued focus on pricing, as well as households' cautious approach to entering new long-term loans. The subdued mortgage market is affecting collateral values and lengthening the resolution process for distressed, secured portfolios. Impaired advances decreased by 11,8 per cent largely due to increased write-offs.

Moody's downgraded the senior debt and deposit ratings of the five largest South African banks

During February 2012, Moody's Investor Service (Moody's) downgraded the senior debt and deposit ratings of the five largest South African banks by one notch. The downgrades reflected "the impact of the country's increasingly constrained public finances and Moody's view that authorities would face challenging policy choices if multiple institutions were to need its financial support at the same time".<sup>86</sup> The downgrades were not a reflection of the banks' credit risk exposure or financial position.

Gross loans and advances, gross credit exposures and RWEs per asset class as at December 2011 are shown in Figure 4.41. 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.

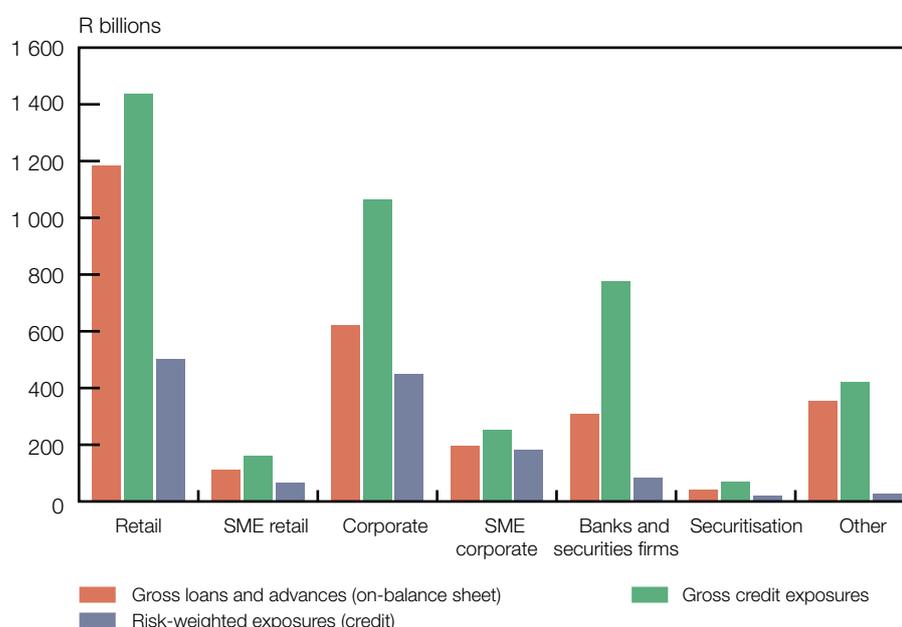
<sup>86</sup> Moody's, "Moody's Downgrades South African Banks: Concluding Review Focusing on Systemic Support Assumptions" (Limassol: Moody's, 28 February 2012), 1. The review is available at [http://www.moody.com/research/Moodys-downgrades-South-African-banks-concluding-review-focusing-on-systemic-PR\\_238562](http://www.moody.com/research/Moodys-downgrades-South-African-banks-concluding-review-focusing-on-systemic-PR_238562).



The banking sector's total gross credit exposure increased by 7,2 per cent to December 2011. The difference between gross credit exposures and RWEs reflects the application of the risk weightings applied to the banks' total credit exposures in each asset class. At the end of December 2011:

- the banks and securities firms category had the lowest ratio of gross on-balance-sheet loans and advances to gross credit risk exposure (due to the large amount of off-balance-sheet exposure);
- the other category (that is, exposure to public-sector entities, local government and municipalities, and sovereign) had the highest ratio of gross on-balance-sheet loans and advances to gross credit exposures;
- the small and medium enterprise (SME) corporate category had the highest ratio of RWE to gross credit exposures; and
- the 'other' category<sup>87</sup> had the lowest ratio of RWE to gross credit exposures as a result of the South African sovereigns being risk weighted at zero per cent.

Figure 4.41 Gross credit exposures and risk-weighted exposures per asset class



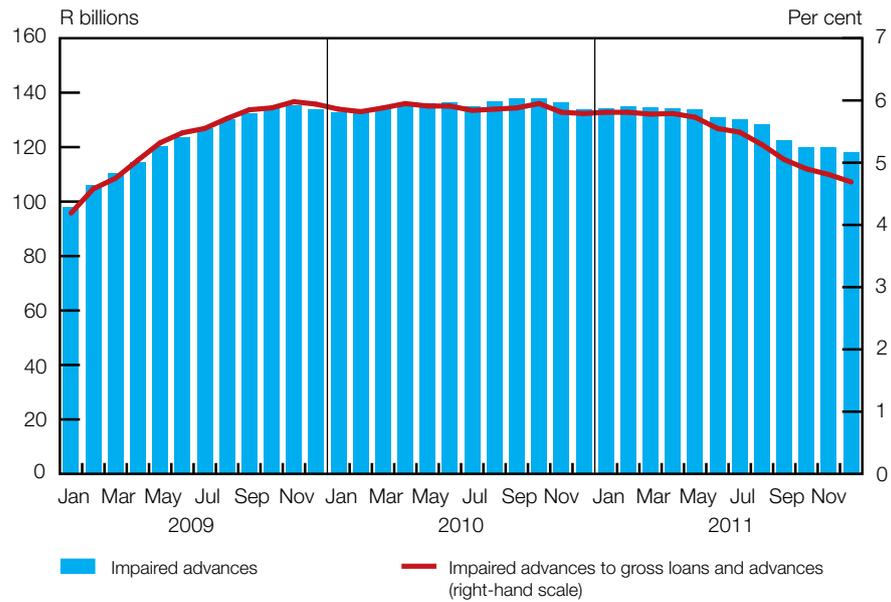
## 4.8.1 Total impaired advances

Impaired advances decreased from a peak of R138 billion in October 2010 to R118 billion in December 2011 (refer to Figure 4.42). The decrease in impaired advances is a result of increased write-offs, the impact of stricter lending criteria, and proactive credit risk management processes focusing on highly indebted consumers. A key indicator of credit risk quality in the banking sector is the ratio of impaired advances to gross loans and advances. This ratio remained largely unchanged during 2010 and the first quarter of 2011, but has subsequently shown a declining trend, amounting to 4,7 per cent as at December 2011 (December 2010: 5,8 per cent). The decline in the ratio was due to an 11,8 per cent decrease in impaired advances and an 8,8 per cent increase in gross loans and advances.

impaired advances decreased

<sup>87</sup> The 'other' category consists of public-sector entities, local governments and municipalities, and sovereign counterparties.

Figure 4.42 Impaired advances to gross loans and advances

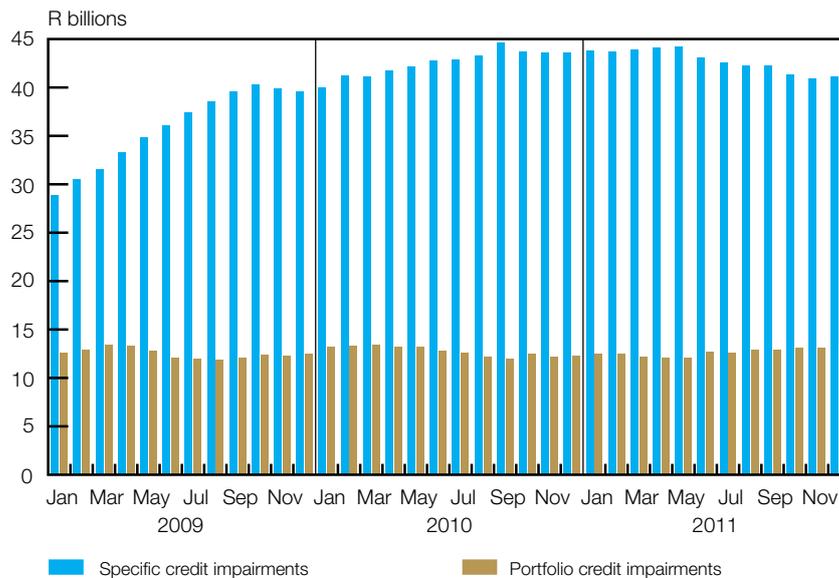


### 4.8.2 Credit impairments

specific credit impairments decreased

Figure 4.43 shows that specific credit impairments decreased from a peak of R44,6 billion in September 2010 to R41,1 billion in December 2011 (December 2010: R43,6 billion). The growth rate declined from 10,1 per cent at December 2010 to negative 5,6 per cent at December 2011. The decline in the growth rate of specific credit impairments corresponds to the decrease in impaired advances and is a result of an increasing number of write-offs. The growth in portfolio credit impairments increased from negative 1,4 per cent in December 2010 to 8,8 per cent in December 2011. The increase in portfolio impairments is reflective of the uncertainty and challenging conditions in the credit market.

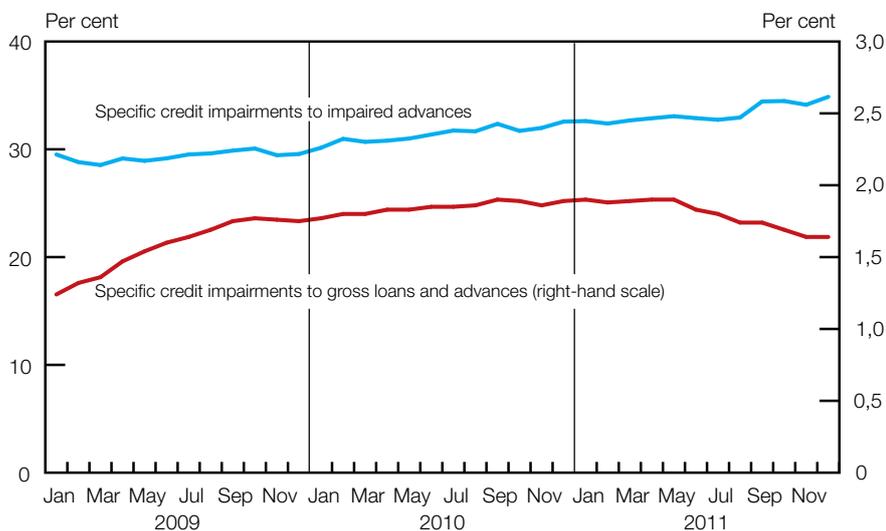
Figure 4.43 Specific and portfolio credit impairments



Specific credit impairments as a percentage of impaired advances and of gross loans and advances respectively are illustrated in Figure 4.44. The declining trend in the ratio of specific impairments to gross loans and advances since June 2011 is due to specific impairments

declining and gross loans and advances increasing. The increasing trend in the ratio of specific credit impairments as a percentage of impaired advances continued throughout the period under review, reaching 34,9 per cent at the end of December 2011 (December 2010: 32,6 per cent). This increase was due to the rate of decline in impaired advances exceeding the rate of decline in specific impairments during 2011, which indicates that banks continued to raise more specific impairments against impaired advances.

Figure 4.44 Specific credit impairment ratios

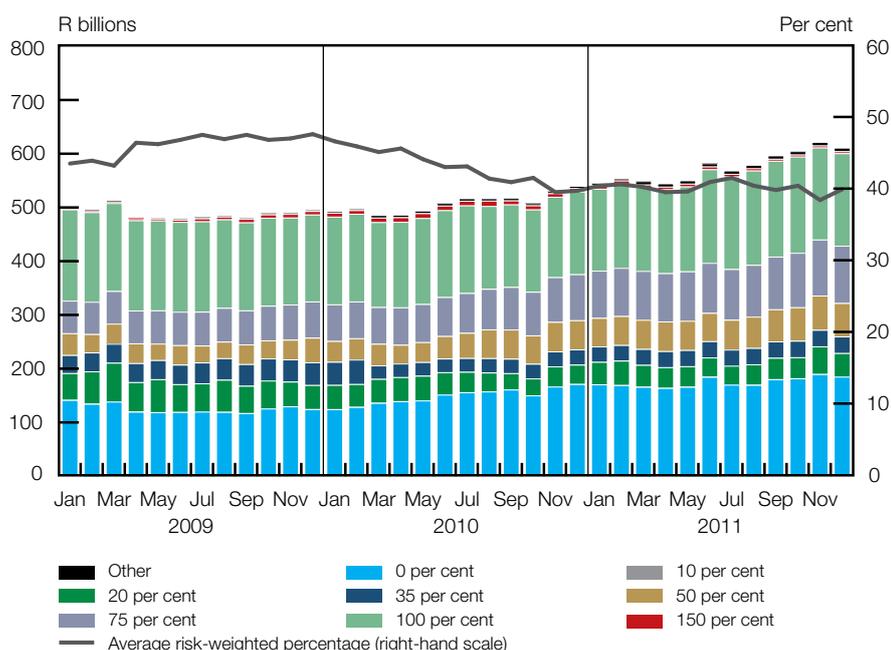


### 4.8.3 The standardised approach banks

The majority of banks use the STA to report credit risk for the purposes of calculating the minimum regulatory capital requirements. The STA banks represented 18,8 per cent of the total banking sector's total gross credit exposure at the end of December 2011 (December 2010: 17,8 per cent). Gross credit exposure increased by 13,0 per cent mainly due to an increase in on-balance-sheet exposure to retail, sovereign, bank and corporate exposure. Figure 4.45

gross credit exposure increased by 13,0 per cent

Figure 4.45 Risk-weighting distribution of credit exposures under the standardised approach



shows the gross credit exposure broken down according to the risk-weight percentage assigned. The total credit risk-weighted distribution of the STA banks increased by 13,1 per cent, which is in line with the increase in gross credit exposure. The ratio of total credit RWE to gross credit exposure (or average risk-weighted percentage) increased marginally from 39,7 per cent to 39,9 per cent as at December 2011. This was mainly due to a decrease in credit risk mitigation of counterparties risk weighted at 20 per cent.

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

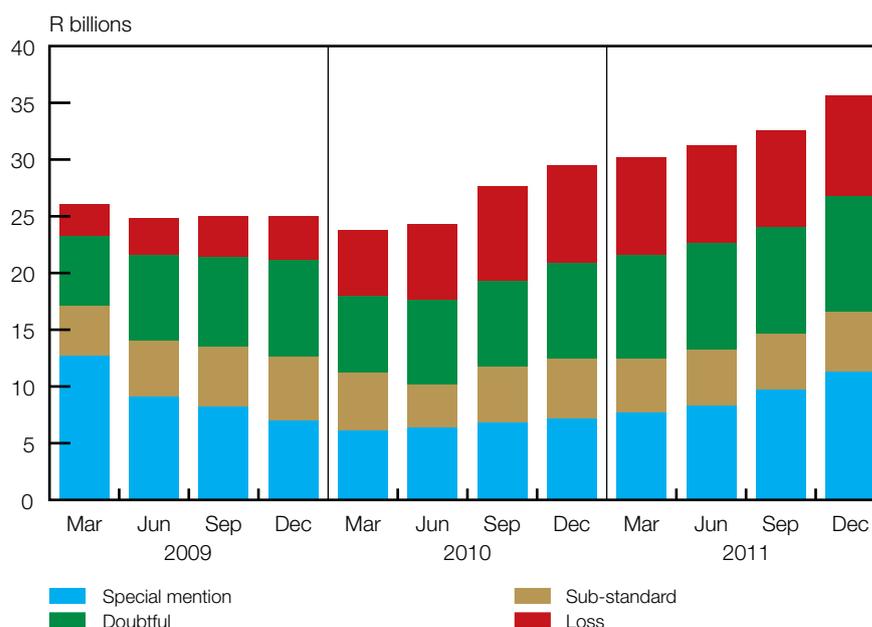
Credit risk exposures are reported quarterly and are classified as either 'standard', 'special mention', 'sub-standard', 'doubtful' or 'loss'. Table 4.3 provides only one of a number of different characteristics that credit exposures should exhibit in order to be classified under the STA credit risk category.

Table 4.3 Classification of credit risk exposures in terms of the standardised approach

Repayment of principle and/or accrued interest has been overdue for:	Regulation 24(5)(c) classification
0 to 60 days	Standard
61 to 90 days	Special mention
91 to 180 days	Sub-standard
181 to 360 days	Doubtful
More than 360 days	Loss

Amounts in all categories increased during the year under review, with the largest increase amounting to 56,8 per cent as at December 2011 in the 'special mention'<sup>88</sup> category (refer to Figure 4.46).

Figure 4.46 Classification of credit risk exposures under the standardised approach



<sup>88</sup> Credit exposures classified as 'special mention' are exposures that, if left uncorrected, could raise concerns about the timely and full repayment of the principal amount and related interest or other income, and as such require special attention.

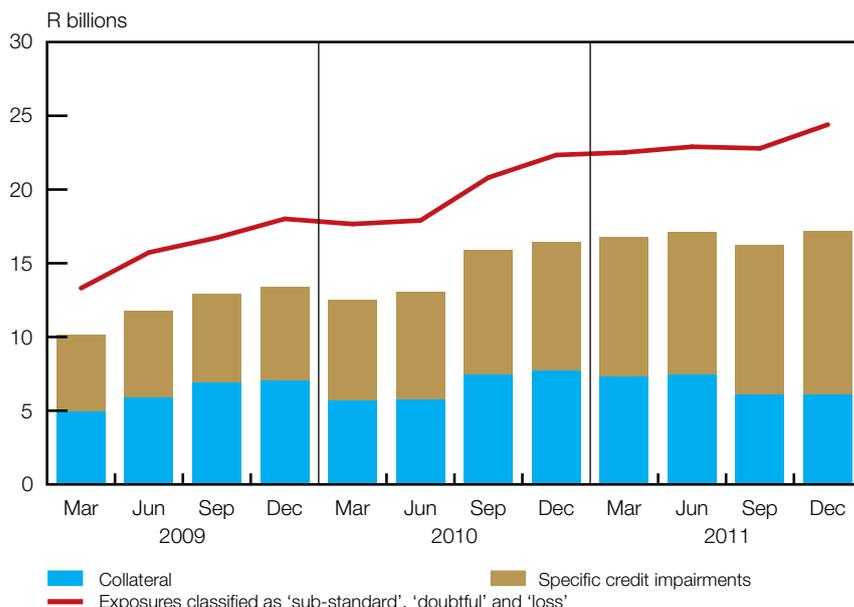


Exposures classified as 'sub-standard', 'doubtful' or 'loss' measured against specific credit impairments raised and collateral held are shown in Figure 4.47. The gap or shortfall between the classified exposures and the related collateral and specific credit impairments can be attributed to, among other things, unsecured lending. The Registrar has the authority to require banks with significant unsecured lending portfolios to adhere to higher minimum CARs.

the Registrar may require banks with significant unsecured lending portfolios to adhere to higher minimum CARs

The gap between the classified exposures and collateral, and specific credit impairments increased by 21,9 per cent in December 2011. This increase was mainly due to the growth in classified exposures (9,2 per cent) exceeding the growth in related specific credit impairments and collateral (4,6 per cent).

Figure 4.47 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, "An Explanatory Note on the Basel II IRB Risk Weight Functions",<sup>89</sup> issued in July 2005, banks can estimate expected losses (ELs) based on three key drivers:

- Probability of default (PD) per rating band,<sup>90</sup> which gives the average percentage of obligors that default in this rating band during the course of one year.
- Exposure at default (EAD), which gives an estimate of the amount outstanding (drawn amounts plus likely future draw-downs of yet undrawn lines) at the point of default.
- 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 incorporated accordingly into the Regulations.

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

90 For the purposes of analysing credit risk reported by IRB banks, the banks classify each credit risk exposure into one of 26 PD bands, ranging from performing to default. For further information, refer to lines 224 to 249 (formerly lines 193 to 219), columns 2 and 3 of the form BA 200. The form BA 200 is available at <http://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/52/03%20Chapter%20II.pdf>.

Banks that utilised the IRB approach for calculating minimum capital requirements for credit risk represented 81,2 per cent of the banking sector's total gross credit exposure at the end of December 2011 (December 2010: 82,2 per cent). Table 4.4 provides a summary of the key risk drivers of credit risk as primary inputs to the capital calculation reported by IRB banks. Total EAD comprises credit exposures reported in standard PD bands, specialised lending (which exposures were mapped into standardised rating categories) 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.

**Table 4.4 Key credit risk indicators reported by internal ratings-based banks**

	Dec 2009	Dec 2010	Dec 2011
Total exposure at default (R billions).....	2 597	2 611	2 788
Exposure at default analysed by PD band (R billions) .....	2 533	2 547	2 721
Average probability of default (per cent).....	7,4	7,0	5,8
Of which:			
Retail.....	12,4	11,3	9,8
Corporate.....	3,6	3,9	3,0
Average loss given default (per cent) .....	28,4	28,7	29,2
Of which:			
Retail.....	24,2	25,7	25,9
Corporate.....	34,4	33,6	33,7
Expected loss as a percentage of exposure at default (per cent).....	2,0	2,0	1,7
Risk-weighted exposure as a percentage of exposure at default (per cent).....	35,0	37,0	36,5
Advances in default as a percentage of exposure at default (per cent).....	4,7	4,7	3,5

banks experienced an improvement in credit demand

Banks experienced an improvement in credit demand compared to the sluggish growth observed during 2010. Total EAD increased by 6,9 per cent to R2,7 trillion at the end of December 2011 (2010: 0,5 per cent to R2,6 trillion). The average PD for all categories, excluding specialised lending (which exposures were mapped into standardised rating categories) and securitisation, decreased to 5,8 per cent at the end of December 2011 (December 2010: 7,0 per cent). The decrease was due to the recovery in corporate and retail exposures.

Banks updated their internal models with data from the year under review. As a result, banks reported a slight increase in total LGD to 29,2 per cent at the end of December 2011 (December 2009: 28,7 per cent), driven by slight increases in LGD reported for the retail and corporate portfolios.

EL as a percentage of EAD decreased to 1,7 per cent (December 2010: 2,0 per cent) due to the recovery experienced during 2011. Defaulted advances decreased to 3,5 per cent at the end of December 2011 (December 2010: 4,7 per cent).

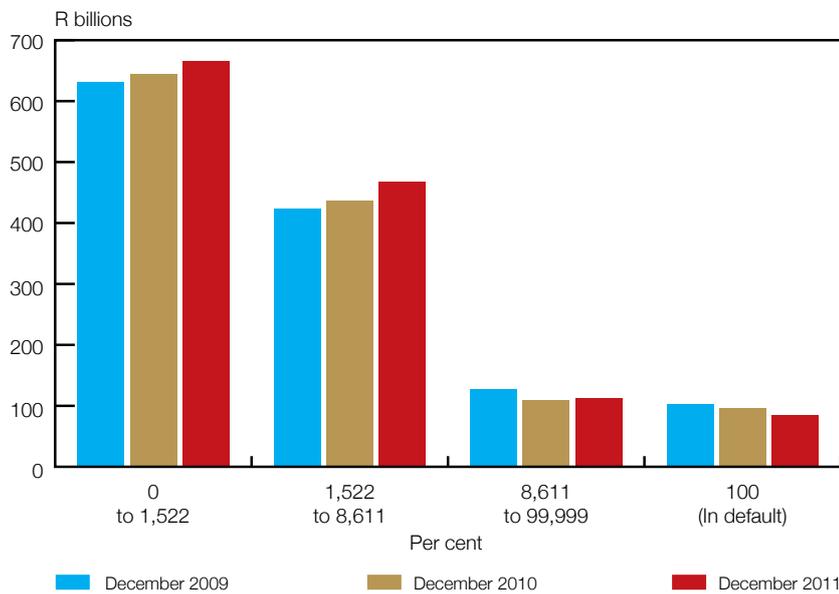
As with the STA banks, the IRB banks continued to refine credit risk frameworks, and specifically rating systems' risk estimates, which resulted in a slight decrease in the average risk-weight percentage.

Figures 4.48 and 4.49 respectively show the total retail and corporate distributions of EAD in standard PD bands, and give an indication of PD migration and credit quality from 2009. As the credit quality (or credit rating) of the exposures improved during 2011, the exposures migrated towards the lower PD bands. These lower PD bands of 0 per cent to 8,611 per cent would generally include higher-quality credit exposures. Total EAD reported within these bands

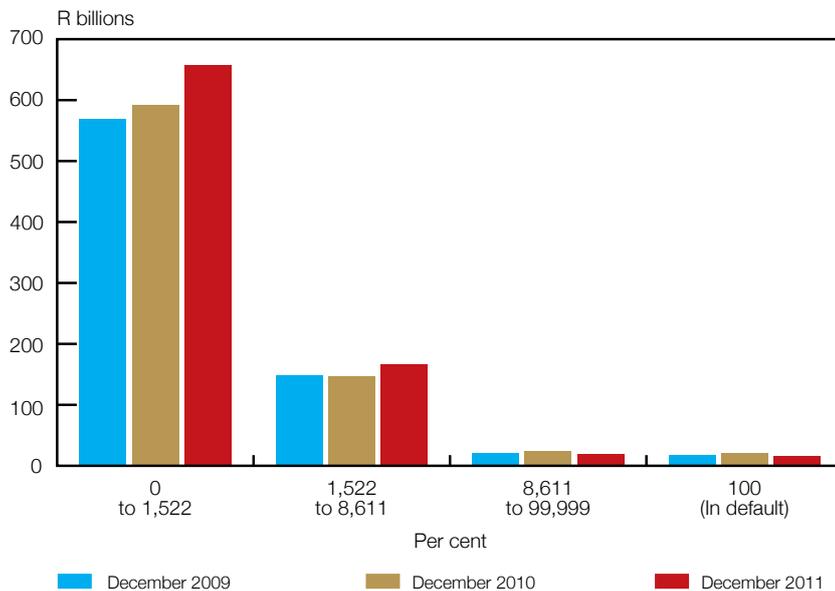


increased by 7,5 per cent at the end of December 2011 (December 2010: 2,8 per cent). For 2011, Figures 4.48 and 4.49 also indicate a decrease in EAD reported as 'in default'.<sup>91</sup>

**Figure 4.48** Distribution of retail exposures at default into standard probability of default bands



**Figure 4.49** Distribution of corporate exposures at default into standard probability of default bands



## 4.8.6 Exposure at default

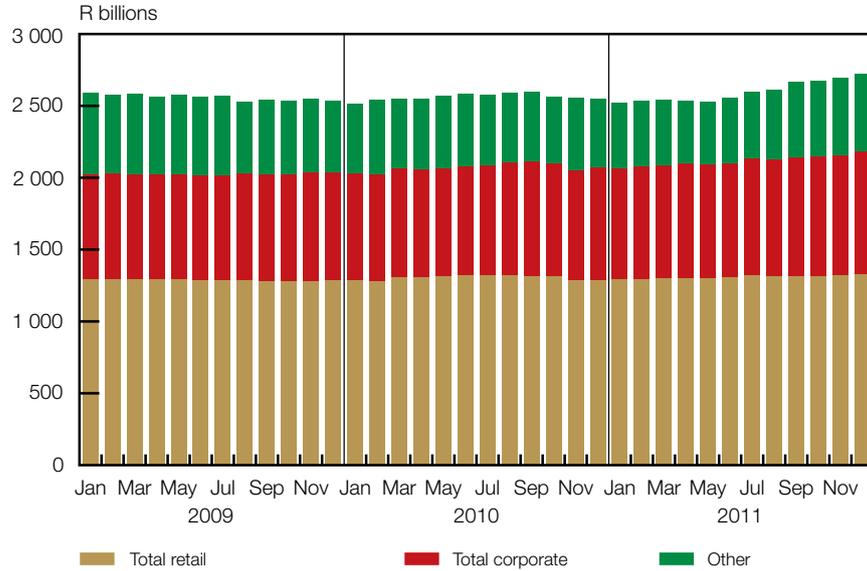
The total EAD per standard rating bands classified according to each major asset category is presented in Figure 4.50. EAD for IRB banks increased by 6,9 per cent to R2 721 billion at the end of December 2011 (December 2010: R2 547 billion). This is the highest EAD over the three-year period shown. All three asset categories increased during the year under review, with corporate EAD showing the largest increase (R74 billion) and the 'other'

total gross credit exposure for IRB banks increased

<sup>91</sup> 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 of the Regulations.

category showing the highest growth rate (13,1 per cent in December 2011). The increase was mainly due to increased exposure to banks. As was the case in 2010, the sector continued to have the largest EAD to the retail category (48,8 per cent of total EAD), although the composition of total EAD changed marginally due to a 110 basis point increase in the 'other' category and a 76 basis point increase in the corporate category.

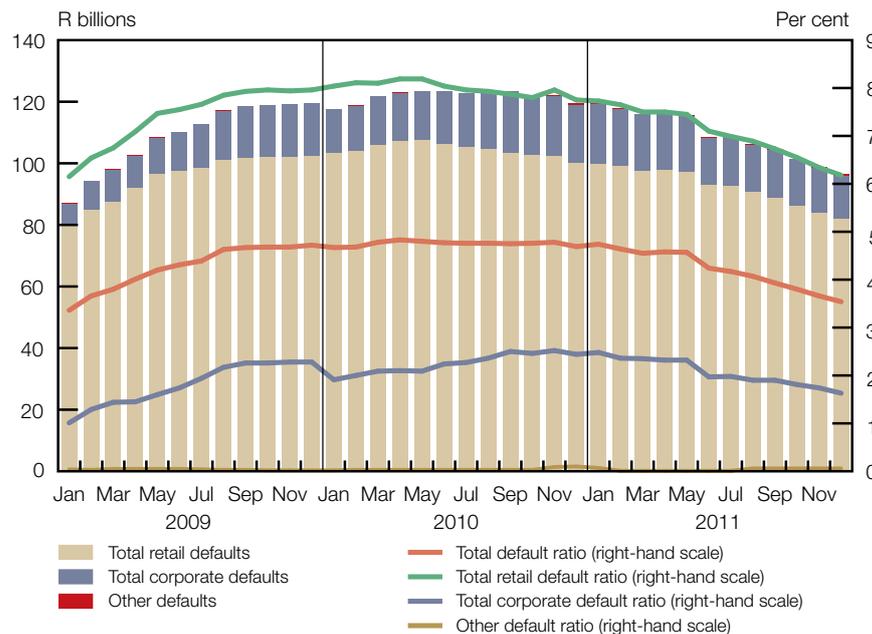
Figure 4.50 Total exposure at default



total retail default exposures declined

Total default exposures declined from a peak of R123,4 billion in May 2010 to R96,3 billion as at December 2011 (December 2010: R119,4 billion), with all asset categories reflecting a decline (refer to Figure 4.51). Total retail default exposures declined by 17,9 per cent mainly due to a 19,7 per cent decline in retail mortgage default exposures. The composition of total default exposures changed slightly, with total retail default exposures increasing by 160 basis points to 85,2 per cent in December 2011 (December 2010: 83,6 per cent).

Figure 4.51 Total default exposure and default ratio per asset class

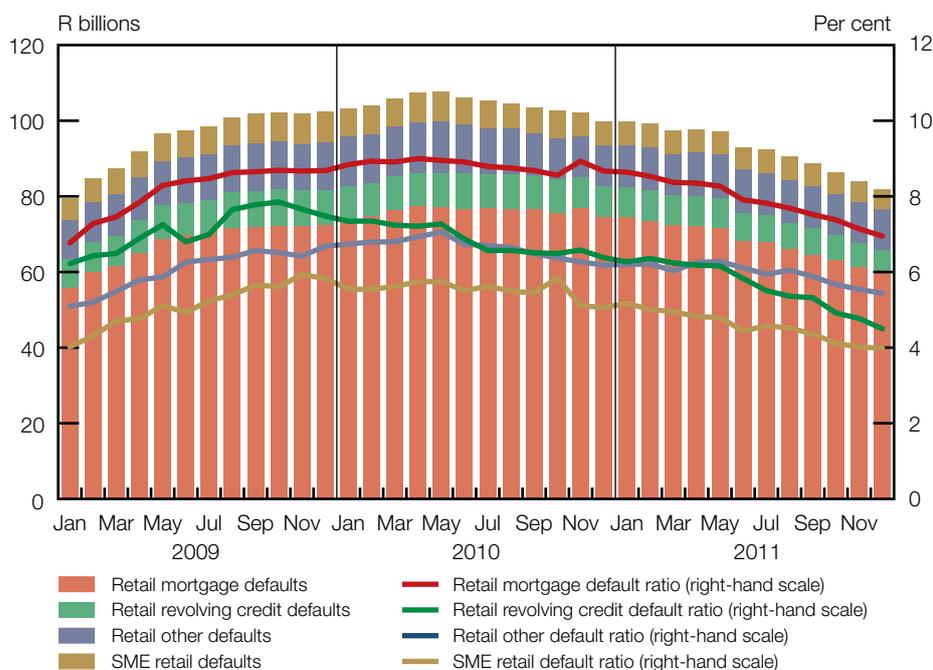


Default exposures in the corporate asset class, which includes corporate, specialised lending, SME corporate and purchased receivables from corporations, decreased by 14,5 per cent to December 2011 (December 2010: 16,0 per cent). As at December 2011, 3,5 per cent of the total EAD was reported as default (December 2010: 4,7 per cent). Both corporate and retail default ratios decreased during the year under review due to the decrease in defaulted exposures and the growth in performing exposures, indicating a general improvement in the quality of loans on banks' books.

corporate and retail default ratios decreased

Figure 4.52 shows the composition of retail default exposures and the related default ratios. Defaults in all retail asset categories declined during the year under review to December 2011. Retail mortgage defaults, the largest component of total retail defaults, peaked at R77 billion in April 2010 and subsequently declined to R60 billion in December 2011 (December 2010: R75 billion). Other significant declines in the retail default categories include a 25,8 per cent decline in retail revolving credit defaults to R6,0 billion – the lowest value over the three-year period (December 2010: R8,1 billion) – and a 14,7 per cent decline in SME retail defaults to R5,5 billion in December 2011 (December 2010: R6,5 billion). The default ratios of all retail categories also decreased during 2011, with the retail mortgage, retail revolving credit and SME retail default categories all showing declines in excess of 100 basis points.

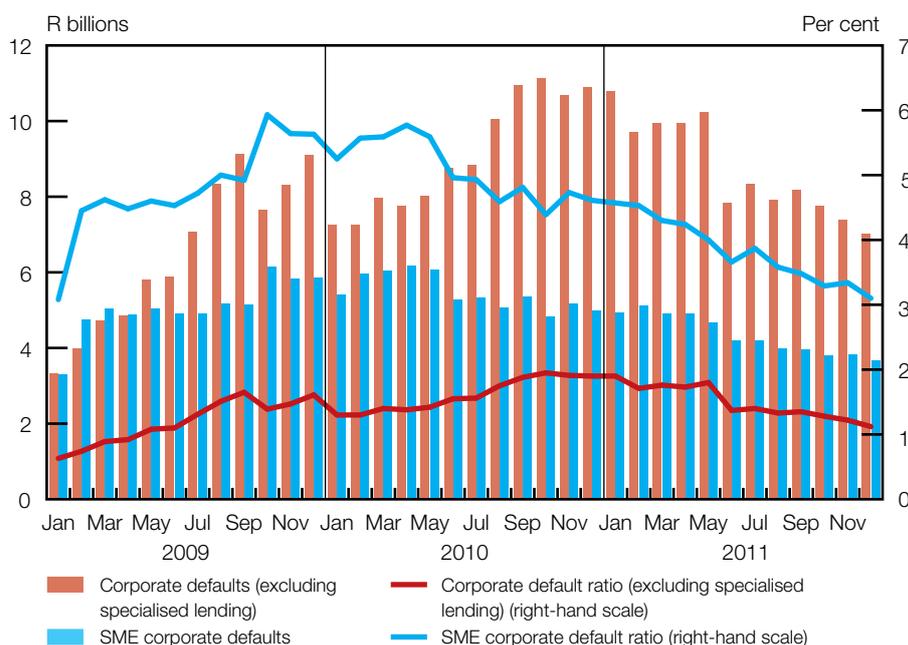
**Figure 4.52** Composition of retail default exposures and their respective default ratios



Corporate defaults (excluding specialised lending, SME corporate and purchased receivables from corporations) continued to decline from a peak of R11,1 billion in October 2010 to R7,0 billion in December 2011 (December 2010: R10,9 billion) (refer to Figure 4.53). SME corporate defaults declined by 26,6 per cent to R3,7 billion in December 2011 (December 2010: R5,0 billion). Corporate defaults (including specialised lending and purchased receivables from corporations) and SME corporate defaults constituted 14,5 per cent of total defaults as at December 2011 (December 2010: 16,0 per cent). As at December 2011, 1,1 per cent of the exposure to the corporate asset class (excluding specialised lending, SME corporate and purchased receivables from corporations) was in default (December 2010: 1,9 per cent) and 3,1 per cent of the exposure to the SME corporate asset class was in default (December 2010: 4,6 per cent). The improvement in defaults was mainly due to continued write-offs and, to a lesser extent, the curing of accounts from default to performing PD bands.

corporate defaults continued to decline

Figure 4.53 Composition of corporate default exposures (excluding specialised lending) and small and medium corporate enterprises' default exposures, and their respective default ratios



#### 4.8.7 Credit concentration risk: Sectoral and geographic distribution of credit exposures

Tables 4.5 and 4.6 provide an analysis of credit exposures as a percentage of total credit exposure according to economic sectors and geographic areas. Since December 2009, the major increases in credit risk exposure were to finance and insurance, real estate, manufacturing, and community and personal services, whereas the major decrease in credit exposure was to private households. Since December 2010, there was above-average increased exposure to the mining, business services, and finance and insurance sectors, and above-average decreased exposure to private households and other sectors. As was the case in December 2010, 60 per cent of the banking sector's credit exposure continued to be to the private households, and finance and insurance sectors as at December 2011.

Table 4.5 Sectoral distribution of credit exposures (as a percentage of total credit exposure)

	Dec 2009*	Dec 2010*	Dec 2011*
Agriculture .....	1,61	1,72	1,73
Mining .....	3,19	2,93	3,69
Manufacturing .....	3,67	4,10	4,25
Electricity .....	0,69	0,91	0,85
Construction .....	1,30	1,22	1,18
Wholesale and retail trade .....	3,83	3,86	3,92
Transport and communication .....	2,88	3,58	3,40
Finance and insurance .....	22,58	24,83	25,20
Real estate .....	5,46	6,41	6,35
Business services .....	4,65	3,35	3,69
Community and personal services .....	4,81	5,17	5,38
Private households .....	39,16	35,14	34,36
Other .....	6,17	6,79	6,02
Total .....	100,00	100,00	100,00

\* Percentages may not add up to 100 due to rounding



Although the majority of credit exposure was still to South African counterparties as at December 2011, the banking sector's credit risk concentration to South Africa has been decreasing since December 2009 (refer to Table 4.6). The banking sector has been increasing its exposure mainly to the 'other' and Asian geographic regions since December 2009. As of December 2011, 86,9 per cent of the banking sector's credit exposure was concentrated in South Africa, followed by Europe and North America, representing 7,4 per cent and 1,7 per cent respectively (December 2010: 88,4 per cent, 7,4 per cent and 1,7 per cent respectively).

**Table 4.6** Geographic distribution of credit exposures (as a percentage of total credit exposure)

	Dec 2009*	Dec 2010*	Dec 2011*
South Africa.....	90,63	88,37	86,87
Other African countries.....	0,50	0,51	1,21
Europe .....	7,06	7,38	7,38
Asia .....	0,31	0,54	1,25
North America .....	1,27	1,67	1,65
South America.....	0,11	0,19	0,16
Other.....	0,12	1,32	1,49
Total .....	100,00	100,00	100,00

\* Percentages may not add up to 100 due to rounding

## 4.9 Market risk

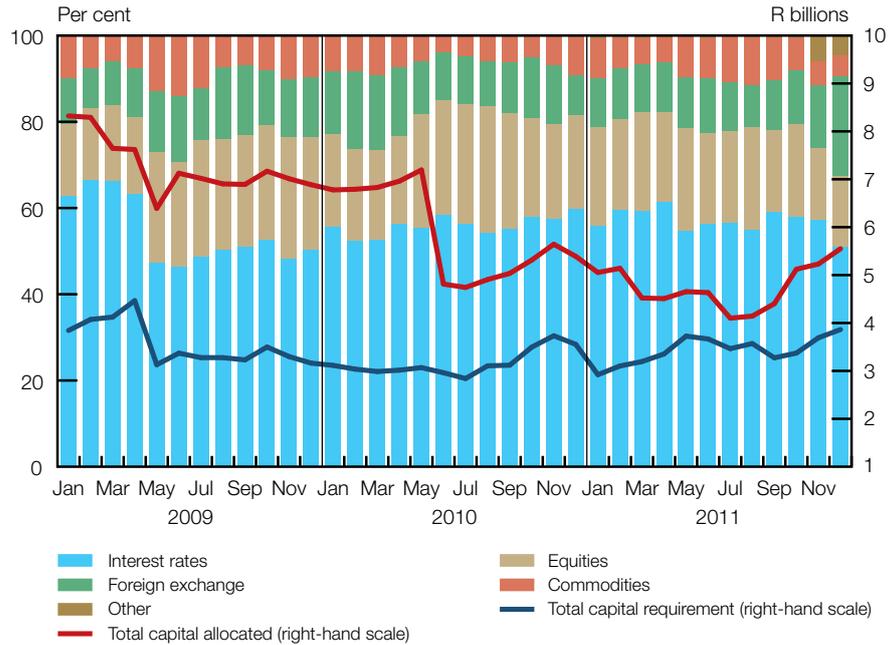
### 4.9.1 Regulatory capital requirement in respect of market risk

The composition of the market risk regulatory capital requirement is illustrated in Figure 4.54. The total regulatory capital requirement for market risk increased by 8,7 per cent from R3,6 billion at the end of December 2010 to R3,9 billion at the end of December 2011. Total capital allocated for market risk increased by 3,0 per cent to R5,6 billion at the end of December 2011 (December 2010: R5,4 billion).

The majority of the market risk regulatory capital requirement relates to interest rate exposure, which amounted to 51,0 per cent at the end of December 2011 (December 2010: 59,7 per cent). Interest rate instruments are used predominantly to manage interest rate risk in the banking book. Exposure to foreign-exchange instruments increased significantly, largely as a result of the depreciation of the South African rand to the US dollar during the last quarter of 2011. Market risk exposure to foreign-exchange instruments constituted 23,1 per cent of the total regulatory capital requirement for market risk at the end of December 2011 (December 2010: 9,2 per cent). Equity positions and commodities risk contributed 16,4 per cent (December 2010: 21,8 per cent) and 4,9 per cent (December 2010: 9,3 per cent) respectively to the total market risk capital requirement at the end of December 2011. Market risk capital requirements for other risks increased to 6,0 per cent of total market risk at the end of November 2011 and 4,6 per cent at the end of December 2011 respectively due to disclosure enhancements by one of the large banks.

exposure to foreign-exchange instruments increased significantly

Figure 4.54 Composition of regulatory capital requirement in respect of market risk



foreign exchange and interest rate contracts constituted the largest part of the turnover in derivative contracts

### 4.9.2 Derivative financial instruments

The composition of the monthly turnover in derivative contracts is depicted in Figure 4.55. The turnover is calculated by aggregating the gross notional values of all derivative purchases and sales that occurred during a specific month. The turnover in derivative instruments fluctuated between around R6 billion and R12 billion during 2011, with the peak of R12,3 billion in February 2011 being attributed to an increase in interest rate derivative contracts. Foreign exchange and interest rate contracts constituted the largest part of the turnover in derivative contracts during the period under review and amounted to R3,6 billion and R1,7 billion respectively as at the end of December 2011 (December 2010: R3,1 billion and R1,6 billion respectively).

Figure 4.55 Composition of monthly turnover in derivative contracts (gross notional value)

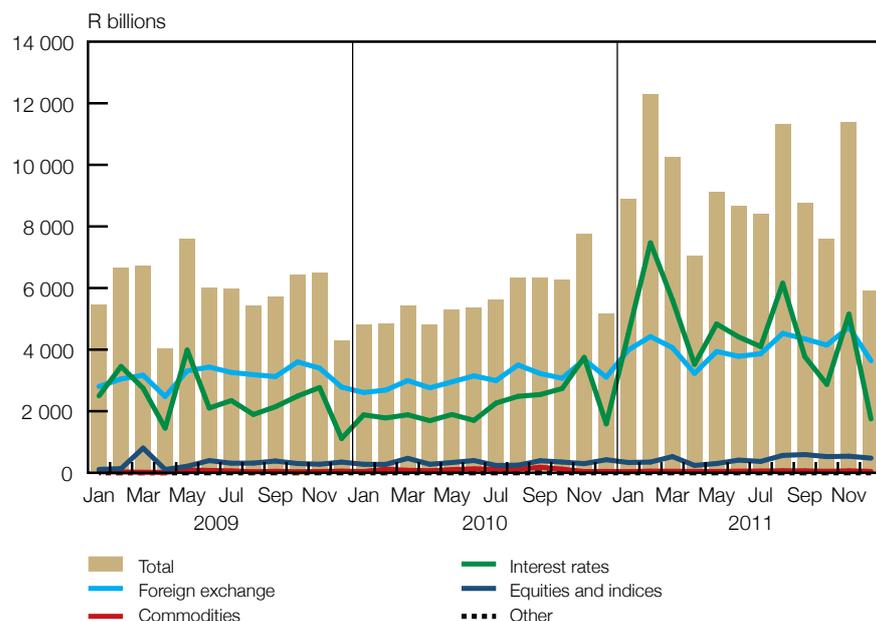
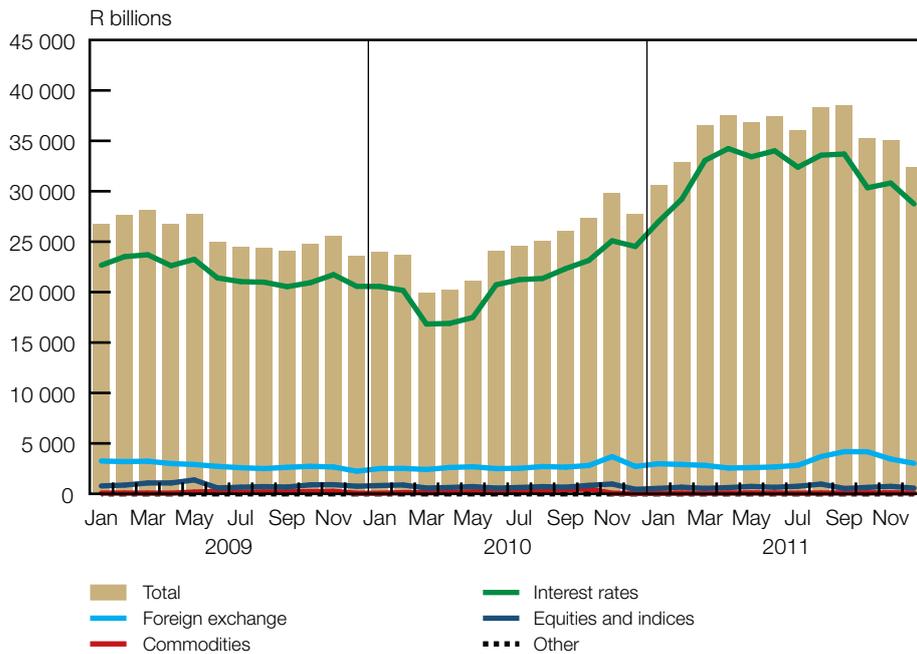


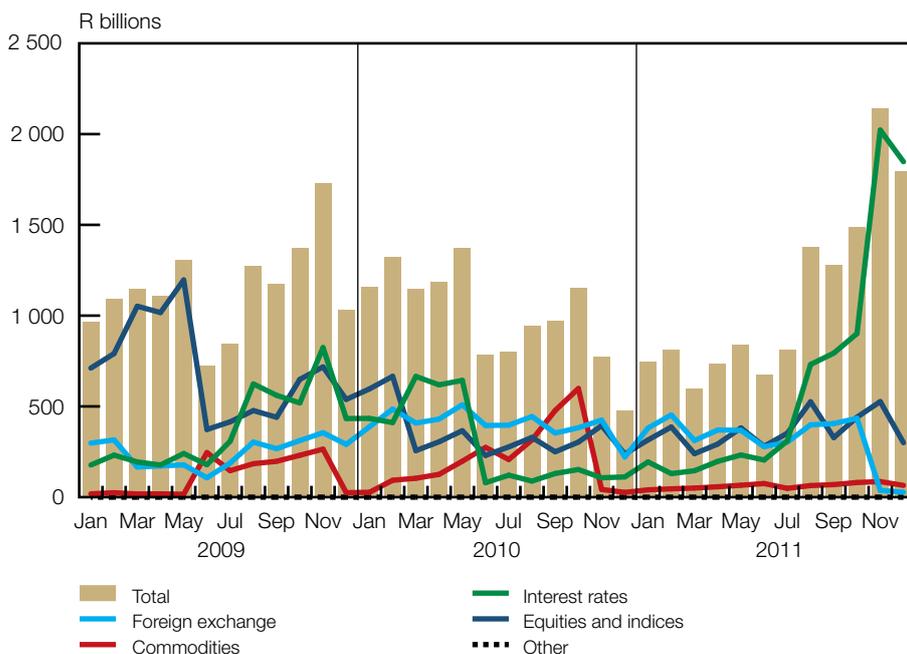
Figure 4.56 Composition of unexpired derivative contracts at month-end (gross notional value)



The gross notional value of total unexpired derivative contracts and their composition are illustrated in Figure 4.56. The gross notional value of total unexpired derivatives remained above R30 billion during 2011 and peaked at R38,5 billion at the end of September 2011. The gross notional value of total unexpired derivatives amounted to R32,4 billion at the end of December 2011 (December 2010: R27,7 billion). Unexpired interest rate derivative contracts represented 88,7 per cent of the total unexpired derivative contracts' gross notional value and amounted to R28,7 billion at the end of December 2011 (December 2010: R24,5 billion).

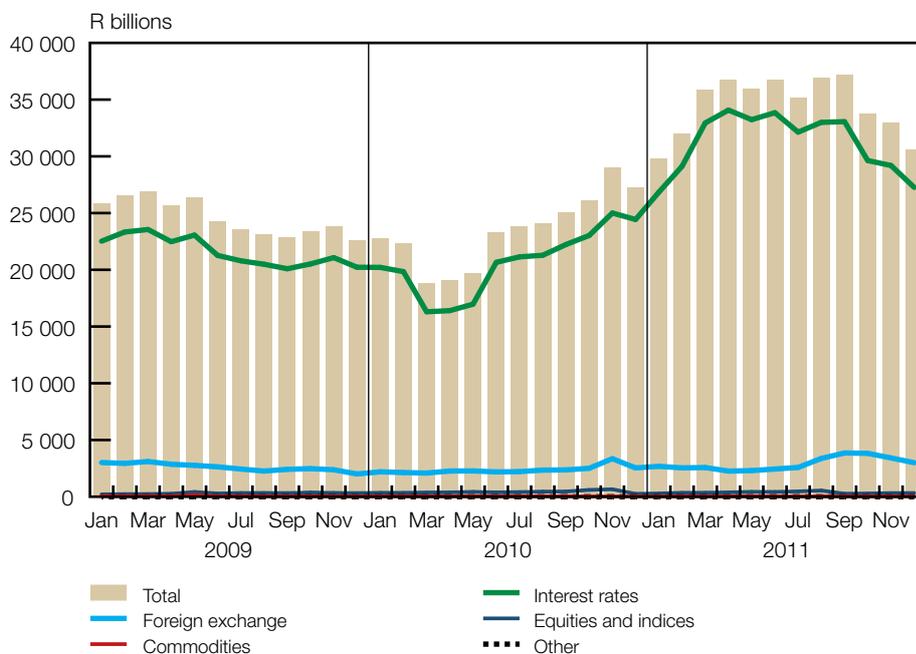
unexpired interest rate derivative contracts represented 88,7 per cent of the total unexpired derivative contracts' gross notional value

Figure 4.57 Composition of unexpired derivative contracts at month-end: Exchange traded (gross notional value)



Figures 4.57 and 4.58 present a breakdown of total unexpired derivative contracts at month-end into exchange-traded, unexpired derivative contracts and OTC-traded, unexpired derivative contracts respectively. Exchange-traded, unexpired derivative transactions amounted to, on average, R1 billion during 2011 (2010: R1 billion) and represented 2,4 per cent of the total unexpired derivative contracts at the end of December 2011 (December 2010: 1,7 per cent).

Figure 4.58 Composition of unexpired derivative contracts at month-end: Over-the-counter traded (gross notional value)



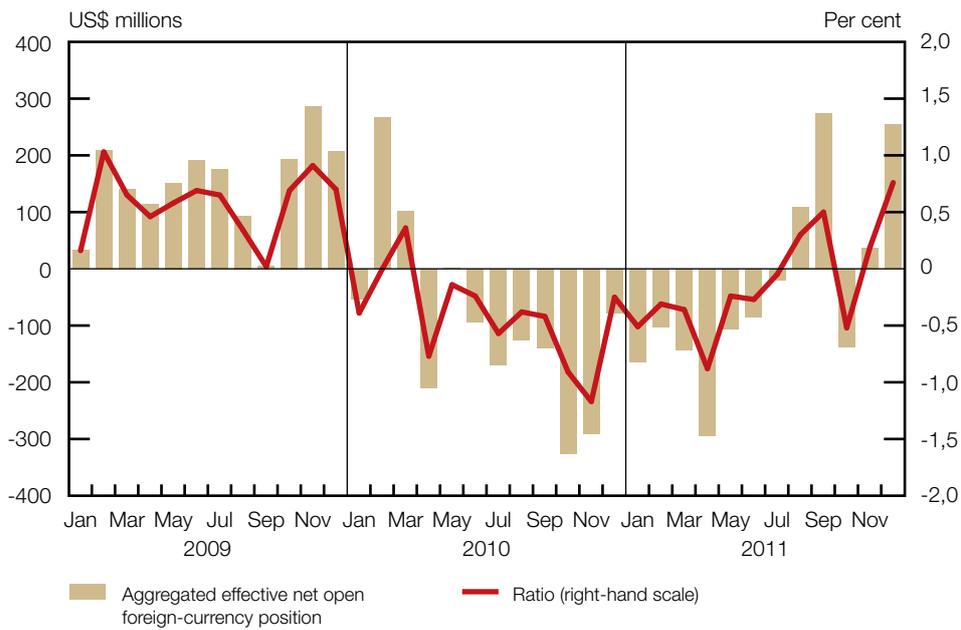
unexpired OTC-traded derivative contracts accounted for 97,6 per cent of total unexpired derivative contracts

At the end of December 2011, unexpired OTC-traded derivative contracts accounted for 97,6 per cent of total unexpired derivative contracts (December 2010: 98,3 per cent). Interest rate derivative contracts represented 89,0 per cent of the total unexpired OTC-traded derivative contracts at the end of December 2011 (December 2010: 89,7 per cent).

### 4.9.3 Currency risk

The total aggregated effective net open foreign currency position (FX NOP), which is depicted in Figure 4.59, is calculated by the netting of foreign-currency assets, foreign-currency liabilities, commitments to purchase foreign currency and commitments to sell foreign currency. The aggregated FX NOP was negative during the greater part of 2011 due to the growth in commitments to sell foreign currency exceeding the growth in commitments to purchase foreign currency. The aggregated effective FX NOP, expressed as a percentage of qualifying regulatory capital and reserve funds, remained well within the 10 per cent regulatory limit and amounted to 0,8 per cent as at the end of December 2011 (December 2010: negative 0,3 per cent).

Figure 4.59 Aggregated effective net open foreign-currency position (as a percentage of qualifying regulatory capital)



The contribution of each currency to the aggregated effective FX NOP is depicted in Figure 4.60. The 'US dollar' and 'Euro' categories were the main constituents of the fluctuations during 2011.

Figure 4.60 Aggregated effective net open foreign-currency position per currency

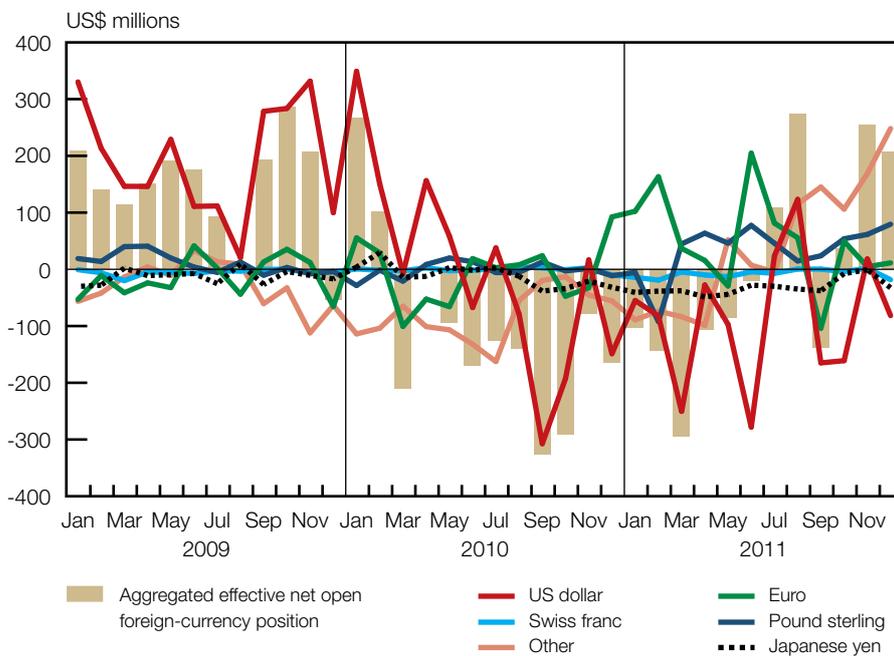
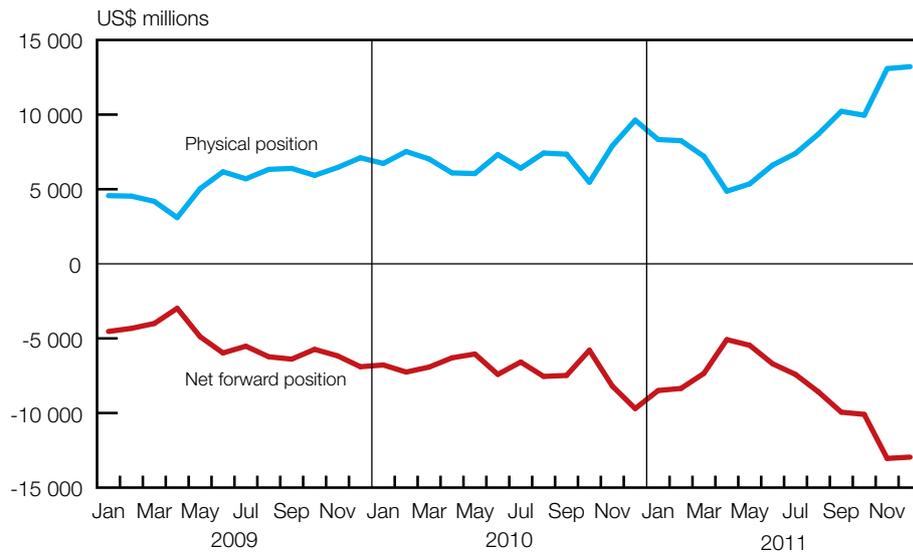


Figure 4.61 Position in foreign-currency instruments



Presented in Figure 4.61 are the physical and net forward positions in foreign-currency instruments.<sup>92</sup> The physical position increased from US\$8 billion at the end of January 2011 to US\$13 billion at the end of December 2011 (December 2010: US\$10 billion). As can be seen from Figure 4.61, the physical position and the net forward position are almost identical to one another. Therefore the net forward position also increased from a US\$8 billion shortfall at the end of January 2011 to a US\$13 billion shortfall at the end of December 2011 (December 2010: negative US\$10 billion). This is due to banks reducing their NOP by acquiring forward positions to neutralise spot currency holdings and vice versa, with the objective of obtaining a low overall NOP that is in line with regulatory limits.

<sup>92</sup> 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.

