



**An Phríomh-Oifig Staidrimh**  
Central Statistics Office

# information

## notice

### **The Impact of Financial Intermediation Services Indirectly Measured (FISIM) on the National Accounts**

#### **What is FISIM?**

FISIM is a concept used in national accounts to value the activity of banks as intermediaries between depositors and borrowers. The FISIM charge is the premium earned by banks when they borrow at a wholesale rate (risk-free or reference rate) from other banks or financial institutions, and then lend to, or take deposits from, consumers and business. Along with direct fees and commissions, FISIM charges are used by banks to cover their costs and return profit. Banks earn FISIM charges on loans and deposits, from personal customers and businesses, in Ireland and abroad.

#### **Update in FISIM methodology**

For the gross domestic product (GDP) estimates published in July 2016 the CSO has changed the methodology used to calculate FISIM, bringing it into line with the European System of Accounts (ESA 2010) standards. This revised methodology has been applied to estimates from 2010 onwards. Up to now, the published Euro Interbank Offered Rates (Euribor) have been used as the basis for estimating the reference rate (i.e. the rate at which banks lend to each other) in the FISIM calculations. The estimates now use survey data, which provide details of loan and deposit principal amounts and their associated interest flows, to calculate both the reference rate and the loan and deposit rates charged/offered to customers. Data is collected in a joint survey by the Central Bank of Ireland and the CSO. This change in calculation methods has generally given a higher estimate of the reference rate, as Irish banks were not obtaining the very low Euribor rate prevailing in the aftermath of the banking crisis. A higher reference rate implies a lower FISIM margin on loans. Since most of the FISIM is earned on loans, the estimate of the total domestic FISIM charge has been reduced. The revised approach has drawn on improved data for imports and exports of FISIM; there are upward revisions to both measures resulting in an overall increase in net exports. In aggregate, the revised FISIM methodology has resulted in slight increases to GDP estimates in most years since 2010.

#### **Calculation of FISIM**

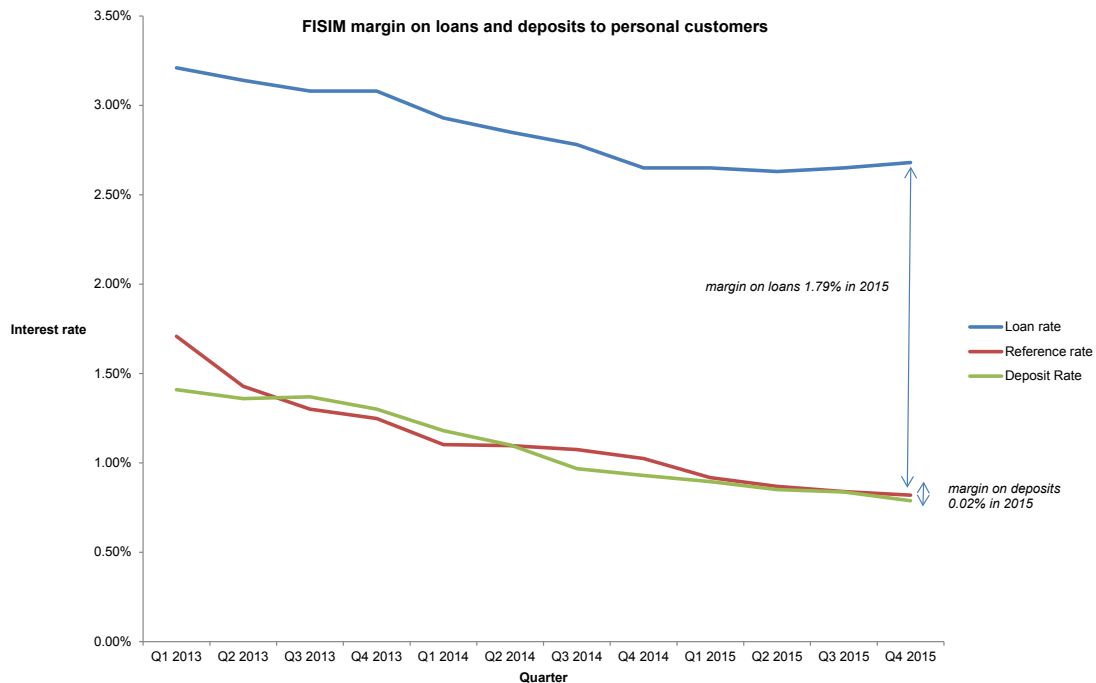
Based on the available survey data, in 2015, consumers paid on average 2.65% on their mortgages and other loans, but banks could borrow from each other at around 0.86% hence the banks' FISIM margin on loans to consumers was  $2.65\% - 0.86\% = 1.79\%$ . Between mortgages and other borrowing, Irish personal lending was €131,000m (€131 billion) in 2015, so the banks' FISIM charge on these loans, at 1.79%, was €2,345m.

Personal customers with deposits in a bank received an average return of 0.84%, and the banks could then lend this money to each other at the above-mentioned 0.86%, so the banks' FISIM margin on deposits to consumers was  $0.86\% - 0.84\% = 0.02\%$ . Personal deposits with banks were almost €89,000m, so the FISIM charge earned on deposits of households was around €17m. Hence the total FISIM charge by banks to personal customers was  $€2,345m + €17m = €2,362m$ .

As is clear from the example above, the FISIM charge of banks depends on:

- the volumes of loans and deposits;
- the rates charged to borrowers and depositors;
- the rates at which banks can borrow from each other (the reference rates).

**Figure 1: FISIM margin on loans and deposits to personal customers**



**‘Negative FISIM’**

As the criss-crossing of the green and red lines above suggests, there were times in the last three years when the rate paid to depositors was higher than the rate paid to other banks. This produces a negative FISIM charge, which might be thought of as making losses on deposits in order to shore up capital ratios. As the graph shows, banks continued to pay out less on deposits than they were receiving in interest on loans, so these losses were offset.

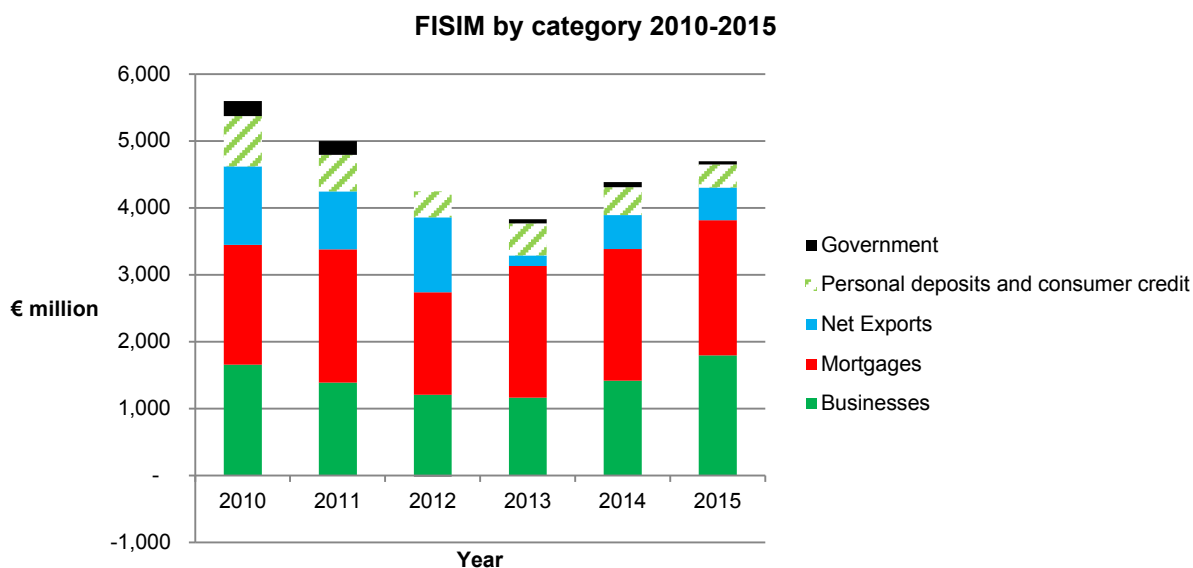
**Who earns FISIM?**

FISIM is earned by what are known as financial intermediaries; this category includes all entities that take deposits and/or give loans. In addition to the traditional banks, companies such as financial vehicle corporations (FVCs) also earn FISIM. The term ‘bank’ in this note should be taken to include all categories of financial intermediaries.

**Who pays FISIM?**

FISIM is calculated for households, businesses and public bodies that borrow from banks domestically or have deposits with them. In addition, Irish banks lend abroad and take deposits from other countries: the interest on these transactions gives rise to FISIM exports. Similarly, Irish people may put their money on deposit in foreign countries and obtain loans from abroad: the associated FISIM charges are treated as an import of a service. The values of FISIM by category in recent years are shown in Figure 2. As in the example of personal customers above, banks have generally gained a much smaller FISIM charge on the deposits they held than on loans they gave, so most of the FISIM shown below is earned on loans. Values fell between 2010 and 2013 as rates fell and the volumes of loans declined.

**Figure 2: FISIM by category 2010-2015**



**Effect of FISIM on GDP**

The effect of FISIM on GDP depends on the parties involved. Irish GDP is calculated using expenditure-based and income-based approaches and the FISIM effects are the same under both approaches. These effects are summarised in Figure 3.

**Figure 3: Net effect of FISIM on GDP by component**

Component	Net effect on GDP
Banks and other businesses	↔
Mortgages and imputed rent	↔
Personal deposits and consumer credit	↑
Government	↑
Exports	↑
Imports	↓

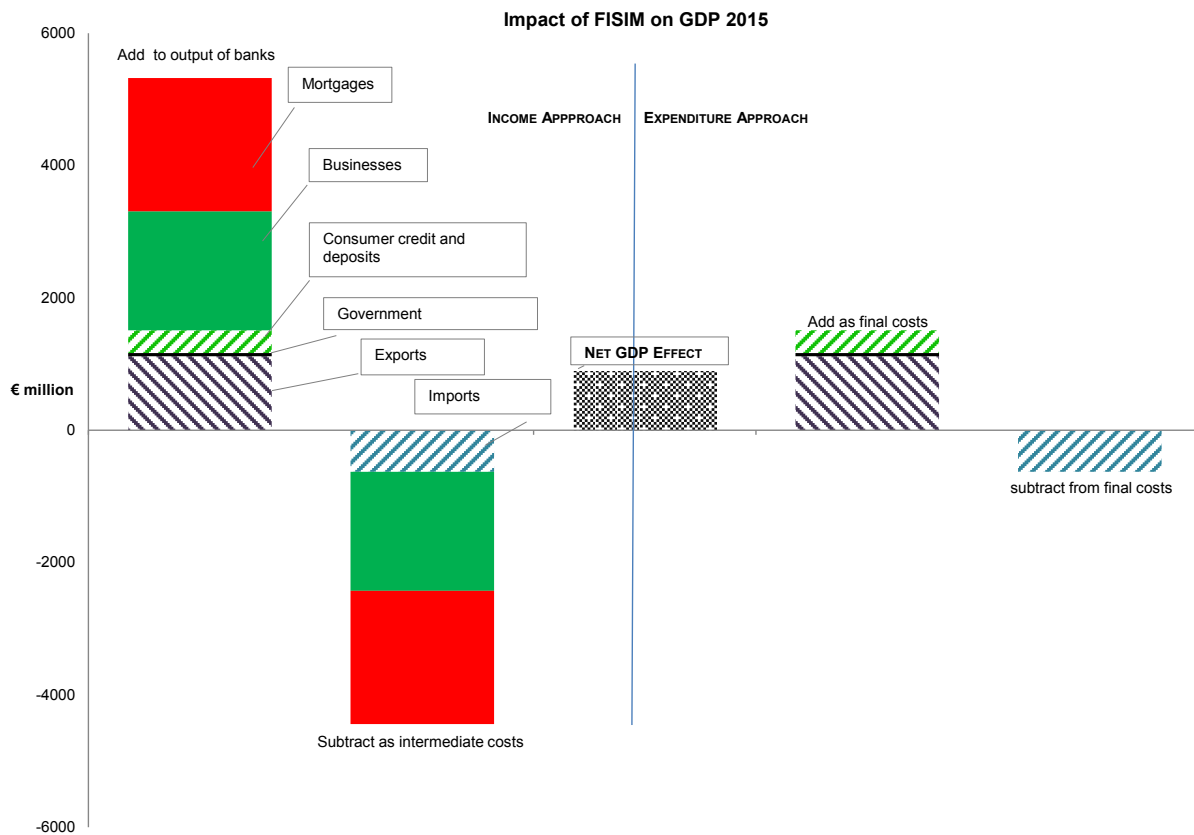
- All FISIM earned by Irish banks is added to their output, and, assuming their costs are unchanged, an increase in FISIM from any source will increase the profit counted under the income approach. For other businesses i.e. non-financial corporations (NFCs) FISIM paid to banks is an intermediate expense that reduces their profit. This FISIM paid has a neutral overall effect in the national accounts, increasing the output of banks and the intermediate costs of NFCs thus adding value in one sector and reducing it elsewhere.
- The national accounting concept of imputed rent treats all home owners as their own landlords. The FISIM charge home-owners pay on mortgages is thus considered an intermediate expense of landlords. Under the income approach, mortgage-related FISIM is treated similarly to businesses' FISIM (as above) and has a neutral overall effect, increasing the income of banks, and decreasing the income of landlords (real and imputed).
- The FISIM charge on consumer credit and personal deposits, and all the FISIM paid by government is treated as final demand expenditure. It has a symmetric impact, adding to

GDP under both approaches, as part of the income of banks and the final expenditure of the 'household' and government sectors.

- FISIM exports by Irish banks increase the GDP in both the income-based approach (by increasing output of banks) and expenditure-based approach (by increasing the net exports).
- FISIM imports reduce the expenditure-based estimate of GDP (reducing net exports) and the income based estimate (being mostly an intermediate cost to Irish NFCs).

These effects are summarised in Figure 4. In 2015, FISIM increased GDP by €881m.

**Figure 4: Effect of FISIM on GDP in 2015**



The pattern indicated for 2015 in Figure 4 above, i.e. that the FISIM effect of net exports on GDP estimates is greater than that of domestic sectors, is applicable for all years in the series. The net effect of FISIM on GDP is given in Figure 5 below.

**Figure 5: Effect of FISIM on GDP 2010–2015**

	GDP Effect of FISIM	GDP	% effect
	€m	€m	%
2010	2,148	167,124	1.3%
2011	1,617	173,070	0.9%
2012	1,494	175,754	0.8%
2013	696	180,209	0.4%
2014	1,001	193,160	0.5%
2015	881	255,809	0.3%

In all years except 2013, the effect on GDP is somewhat higher under the new methodology.

**Figure 6: Revised and old FISIM methodology 2010–2015**

	GDP Effect of FISIM	Old GDP effect	Change
	€m	€m	€m
	a	b	
2010	2,148	1,122	1,026
2011	1,617	1,388	229
2012	1,494	590	904
2013	696	724	-28
2014	1,001	935	66
2015	881	775	106

The revisions to imports and exports increased the estimate for the net export of financial services. On the other hand there was a reduced estimate for domestic FISIM which resulted from the revised calculations giving a higher computed reference rate than the Euribor rate previously used. This higher rate implies a lower margin on domestic lending for banks and a lower FISIM charge for consumer credit and government borrowing, which are additive to GDP. The convergence of FISIM estimates under the new and old methodologies in the more recent years largely reflects the more stable interest rate environment than was seen in the aftermath of the banking crisis.

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