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# Banks' Funding Costs and Lending Rates

Cameron Deans and Chris Stewart\*

Over the past year, lending rates and funding costs have both fallen in absolute terms but have risen relative to the cash rate. The rise in funding costs, relative to the cash rate, reflects strong competition for deposits, particularly term deposits, and higher spreads on wholesale debt reflecting an increase in investors' concerns about the global banking industry. While spreads have narrowed recently, they are still noticeably higher than they have been over the past couple of years. Over the past six months, lending rates have generally fallen by more than funding costs.

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## Introduction

There are a number of factors that influence the lending rates banks set. The most important is the cost of funding, which is a function of the composition of liabilities and the costs of raising the different liabilities. Beyond this, banks also consider a number of other factors including pricing for different types of risk – such as the credit risk associated with the loan and the liquidity risk involved in funding long-term assets with short-term liabilities – and choices about growth strategies in different markets.

The level of the cash rate set by the Reserve Bank is a primary determinant of the level of intermediaries' funding costs and hence the level of lending rates. It is the short-term interest rate benchmark that anchors the broader interest rate structure for the domestic financial system. However, there are other significant influences on intermediaries' funding costs, such as risk premia and competitive pressures, which are not affected by the cash rate. At various points in time, changes in these factors can result in changes in funding costs and lending rates that are not the result of movements in the cash rate. The Reserve Bank Board takes these developments into account in its setting of the cash rate to ensure that the structure of interest rates in the economy is consistent with the desired stance of monetary policy.

In this article, we update previous Reserve Bank research that has documented how changes in the composition and pricing of funding have affected the cost to banks of funding their aggregate loan books, and how banks have responded to these cost developments in setting their lending rates (Fabbro and Hack 2011).<sup>1</sup> The article notes that while deposit rates and yields on bank debt have generally declined since mid 2011, the declines have not matched the reduction in the cash rate over this period. The increase in the relative cost of term deposits and wholesale debt has led to an increase in the weighted-average cost of funds for banks, relative to the cash rate, since mid 2011. This increase is in addition to the increase that occurred between mid 2007 and 2010. The article also documents the decline in bank lending rates since mid 2011, and discusses the effect on banks' margins of the movement in funding costs and lending rates.

## Composition of Banks' Funding

Banks operating in Australia have diverse funding bases, with most funding sourced from deposits, and short-term and long-term wholesale debt. The

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\* The authors are from Domestic Markets Department.

<sup>1</sup> This article estimates, at an aggregate level, the cost to the banks of funding their aggregate loan books and, in turn, their lending rates. The funding structure of individual banks can differ quite markedly from the aggregate. The Reserve Bank uses a wide range of information to make these estimates. It supplements the analysis with detailed discussions with financial institutions.

**BANKS' FUNDING COSTS AND LENDING RATES**

relative importance of these funding sources has undergone significant change over recent years in response to a reassessment of funding risks by banks globally, as well as regulatory and market pressures (Graph 1). In particular, an increasing share of funding has been sourced from deposits. There has also been a shift away from short-term wholesale funding towards long-term wholesale funding, as banks have sought to reduce their rollover risk (that is, the risk associated with replacing maturing wholesale debt). These trends are consistent with the objectives of the Basel III global liquidity standards.

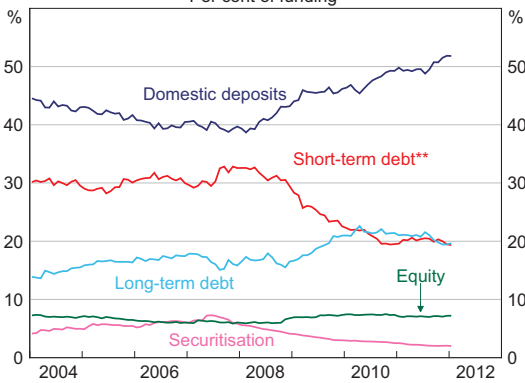
The marked changes in the composition of funding at the aggregate level are reflective of significant shifts in the composition of funding for different sectors within the banking industry. The major banks have increased their use of deposits and reduced their use of short-term debt while the regional banks have significantly decreased their use of securitisation and increased their use of deposits. There has also been a marked reduction in foreign banks' use of short-term wholesale debt. Credit unions and building societies continue to raise the vast majority of their funds via deposits.

Within banks' deposit funding, there has been a marked shift towards term deposits, which pay higher interest rates than other forms of deposits. Indeed, term deposits have accounted for most of

the growth in bank deposits since the onset of the financial crisis and now account for about 45 per cent of banks' deposits, up from 30 per cent in the middle of 2007 (Graph 2). The increase in the share of deposits, particularly term deposits, reflects a number of interrelated factors. First, banks have offered relatively attractive rates to depositors (discussed below). Second, strong business profits and business caution have resulted in larger corporate cash holdings, which have been increasingly invested in deposits rather than other financial instruments, particularly short-term bank paper. Third, households have significantly increased their term deposits placed directly with banks instead of investing in other financial assets. There has also been a rise in deposits placed via superannuation and managed funds.

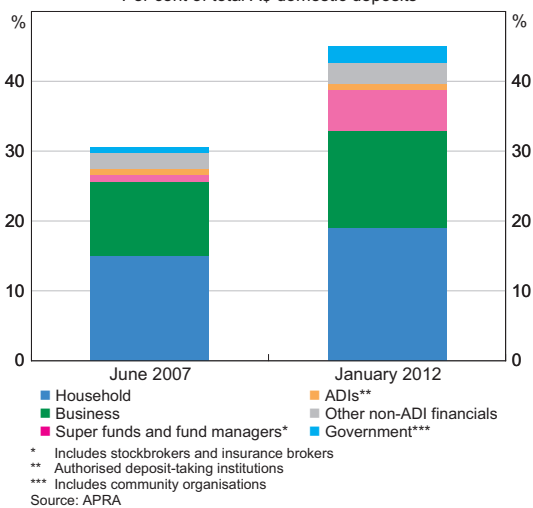
For banks, term deposits have the advantage of generally being a relatively stable funding source: while the average maturity of term deposits is fairly short, at somewhere between four and seven months, these deposits are typically rolled over a number of times. The rates on new term deposits can also be adjusted quickly to influence the growth in this source of funding.

**Graph 1**  
**Funding Composition of Banks in Australia\***  
Per cent of funding



\* Adjusted for movements in foreign exchange rates  
\*\* Includes deposits and intragroup funding from non-residents  
Sources: APRA; RBA; Standard & Poor's

**Graph 2**  
**Term Deposits with Banks in Australia**  
Per cent of total A\$ domestic deposits



\* Includes stockbrokers and insurance brokers  
\*\* Authorised deposit-taking institutions  
\*\*\* Includes community organisations  
Source: APRA

While most of the competition among banks has been for term deposits, banks have also offered more attractive transaction and savings accounts, particularly through paying higher interest rates on these accounts. The increase in the value of funds invested in these deposits has largely been placed in online saver accounts and accounts with introductory bonuses and/or bonuses for regular deposits. Banks have reported little growth in the value of low-interest transaction-style deposit accounts.

In wholesale markets, the major banks have raised a sizeable amount of funding through covered bonds in recent months. In total, the major banks have issued more than \$22 billion of covered bonds following the passage of enabling legislation in October 2011. While this has had little effect on the composition of banks' funding at this stage, given the large stock of existing funding, it has allowed the major banks to achieve funding at longer tenors than is usually available with unsecured bonds. Covered bonds have generally been issued for terms of 5 to 10 years, whereas unsecured bank bonds are generally issued with maturities of 3 to 5 years. In addition to the issuance of covered bonds, the major banks issued about \$10 billion of residential mortgage-backed securities (RMBS) during the past year. While this was their largest annual issuance since mid 2007, securitisation remains a small share of the banks' total funding. In contrast, there was a slight decline in regional banks issuance of RMBS in 2011.

## Cost of Funding

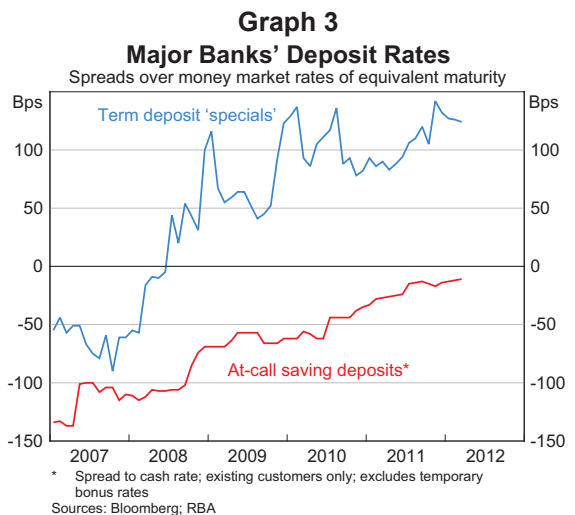
The absolute level of banks' funding costs fell over the second half of 2011, but by less than the reduction in the cash rate. There were particularly pronounced increases in the cost of term deposits and long-term wholesale debt relative to the cash rate as financial market conditions deteriorated in late 2011.

## Deposits

Competition for deposits, which had moderated somewhat in early 2011, intensified in late 2011. Consequently, while the cash rate has fallen by 50 basis points since mid 2011, the major banks' average cost of deposits is estimated to have declined by about 25 basis points.

The average spread above market rates on the major banks' advertised term deposit 'specials' – the most relevant benchmark rate for term deposit pricing – has increased by about 35 basis points over the past year (Graph 3). Furthermore, an increase in the share of deposits written at rates higher than the 'carded' rates advertised by banks has meant that the average rate on outstanding term deposits has not fallen as quickly as benchmark rates as term deposits have been rolled over.

The average advertised rate on at-call savings deposits – including bonus saver, cash management and online savings accounts – rose by around 20 basis points relative to the cash rate over 2011 (although again the interest rate declined in absolute terms). Taking into account an increase in the proportion of savings deposits earning bonus rates, the average effective rate on these deposits is estimated to have increased by between 35 and 50 basis points relative to the cash rate. Interest rates on transaction



accounts have not fallen in line with the cash rate as many only pay very low nominal interest rates.

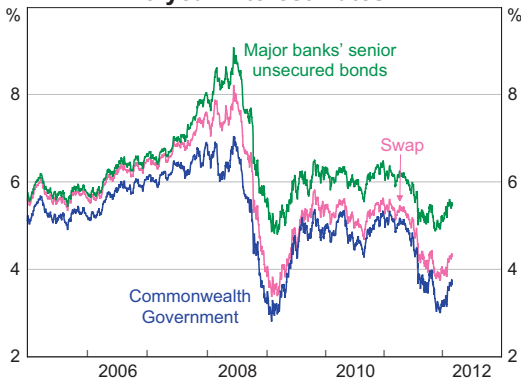
**Wholesale debt**

The absolute cost of issuing new unsecured wholesale debt fell during 2011 (Graph 4). Relative to risk-free benchmarks, however, the cost of issuing wholesale debt has increased materially since mid 2011 (Graph 5). This increase was particularly pronounced at longer maturities.<sup>2</sup> While spreads on banks' new wholesale debt have declined again

following the European Central Bank's first three-year longer-term refinancing operation at the end of 2011, they remain higher than in mid 2011. The increase in spreads on banks' wholesale funding reflects global investors demanding more compensation for taking on bank credit risk, although the rise for Australian banks has been less marked than it has been for other banks globally. The decisions by Standard & Poor's and Fitch to downgrade the Australian major banks' credit ratings by one notch, from AA to AA-, have had no discernible effect on these banks' borrowing costs. There has also been an increase in the costs associated with hedging the foreign exchange risk on new foreign-currency denominated bonds.

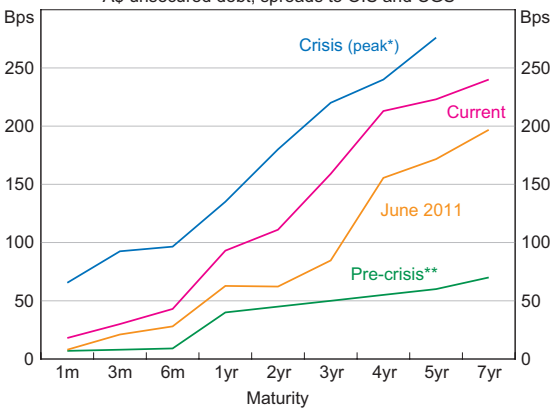
While the relative cost of new long-term wholesale funds is currently higher than that of maturing funds, this has had only a moderate effect on the major banks' average bond funding costs relative to the cash rate to date (Graph 6). This reflects the fact that it takes at least 3 to 4 years for the major banks' existing bond funding to be rolled over. Since spreads began to rise sharply in August 2011, the major banks' issuance of new bonds amounts to about 12 per cent of their outstanding bonds. As a result, the cost of the major banks' outstanding long-term wholesale debt is likely to have risen by about 25 basis points relative to the cash rate over the past year. The increase is smaller at around 10 basis

**Graph 4**  
**3-year Interest Rates**



Sources: RBA; UBS AG, Australia Branch

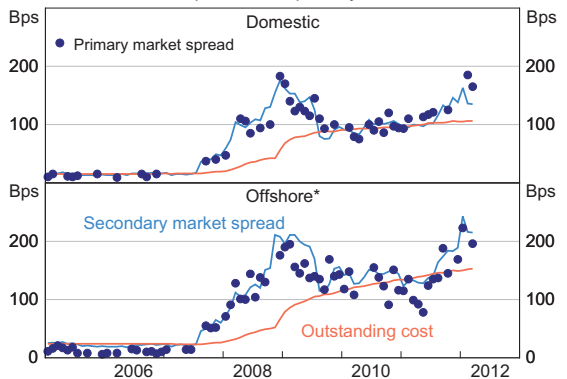
**Graph 5**  
**Major Banks' Wholesale Funding Spreads**  
A\$ unsecured debt, spreads to OIS and CGS



\* Late 2008  
\*\* Average from 2005 to 2007  
Sources: Bloomberg; RBA; Tullet Prebon (Australia) Pty Ltd; UBS AG, Australia Branch

2 There is a very small amount of credit risk in overnight index swap (OIS) rates. For more information, see Boge and Wilson (2011).

**Graph 6**  
**Major Banks' Bond Funding Costs**  
Spread to swap; 3-5 year



\* Secondary market spreads are assumed to equal domestic spreads plus an estimate of foreign exchange hedging costs  
Sources: APRA; Bloomberg; RBA; UBS AG, Australia Branch

points if fixed-rate wholesale debt is assumed to be swapped back into variable-rate obligations. The extent of the rise in relative costs for individual banks varies according to each bank's use of interest rate derivatives. If the cash rate, bond spreads and hedging costs remain at their current levels, the average cost of banks' long-term wholesale debt will increase by a further 5 to 10 basis points, relative to the cash rate, by the end of 2012 as maturing bonds and hedges are rolled over.

Short-term wholesale debt is mainly priced off 1- and 3-month bank bill rates. While these rates generally fell over the latter half of 2011 due to the sharp fall in the expected cash rate over this period, there was an increase in the cost of short-term debt relative to the expected cash rate as measured by the bank bill to OIS spread over the same period (Graph 7). The increase in this spread also contributed to a higher average cost of long-term wholesale debt, relative to the cash rate, given that most of this debt is benchmarked to short-term bank bill swap rates.<sup>3</sup> These pricing conventions ensure that changes in the cash rate, and expectations about its future level, have a direct effect on both short- and long-term wholesale funding costs. Since the beginning of 2012, the spread between bank bills and OIS has

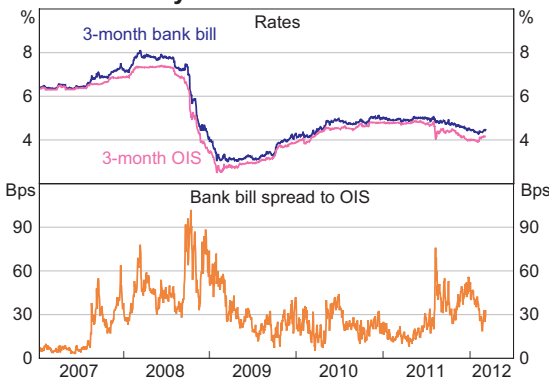
narrowed noticeably which, if maintained, should alleviate some of the upwards pressure, relative to the cash rate, on the cost of funding banks' aggregate loan books.

**Overall cost of funding**

Taking the costs of individual funding sources noted above, and weighting them by their share of total bank funding, provides an estimate of the overall change in the cost of funding banks' aggregate loan books. Compared with mid 2007, the average cost of the major banks' funding is estimated to be about 120–130 basis points higher relative to the cash rate (Graph 8). Most of the increase occurred during 2008 and early 2009 when the financial crisis was at its most intense. Since the middle of 2011, however, there has been a further increase in banks' funding costs relative to the cash rate of the order of 20–25 basis points.

The increase in funding costs, relative to the cash rate, differs across institutions given differences in their funding compositions and the pricing of different liabilities. The available evidence suggests, for example, that the overall increase in the regional banks' funding costs since the onset of the financial crisis has been larger than that experienced, on average, by the major banks. This mainly reflects

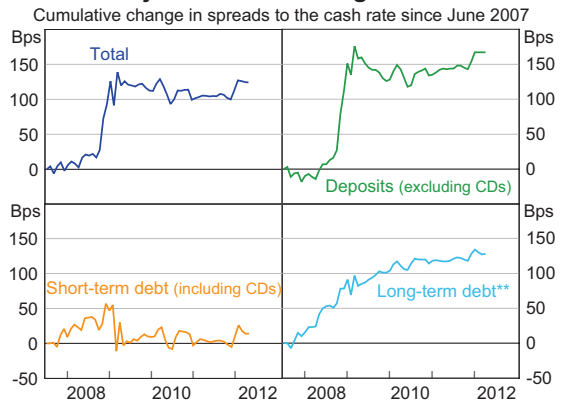
**Graph 7**  
**Money Market Interest Rates**



Sources: AFMA; RBA; Tullett Prebon (Australia) Pty Ltd

3 Variable-rate bonds are generally benchmarked to the 3-month bank bill swap rate, while fixed-rate bonds are generally swapped back into variable-rate obligations that also reference the 3-month bank bill swap rate.

**Graph 8**  
**Major Banks' Funding Costs\***



\* RBA estimates  
\*\* Weighted-average spread to cash rate and CGS for long-term variable rate and fixed-rate debt, respectively. Includes foreign currency hedging costs.  
Sources: Bloomberg; RBA; UBS AG, Australia Branch

the larger increase in the cost of the regional banks' deposits and a more significant shift in their funding mix.

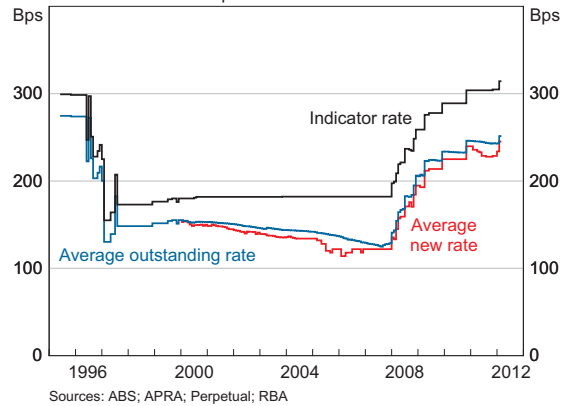
## Banks' Lending Rates

For close to a decade prior to the global financial crisis, banks' overall cost of funds followed the cash rate closely, as risk premia in markets were low and stable. There was also little change in the relative importance of equity capital that, together with debt, provides funds used to make loans and on which banks seek a return. Likewise, there was little change in the risk margins banks used to determine loan rates. Accordingly, interest rates on business and housing variable-rate loans tended to adjust in line with the cash rate. Nevertheless, over this period there was a gradual decline in the spread between average interest rates paid on housing loans and the cash rate, as the discount to the indicator rate offered to new borrowers was increased. Indeed, the spread between the average mortgage rate paid and the cash rate declined from 275 basis points in 1996 to around 125 basis points in 2007.

Since the onset of the financial crisis, banks have increased the spread between lending rates and the cash rate for all loan types. The increases have, however, varied across the different types of loans, partly reflecting differences in the reassessment of the riskiness of those loans and expectations regarding loss rates.

Over 2011, the average interest rate on new variable-rate housing loans decreased by about 10 basis points relative to the cash rate as banks increased the size of the discounts on new mortgages amidst stronger competition for mortgage lending (Graph 9). In the latter stages of 2011 and early 2012 there was, however, a small reduction in these discounts. Furthermore, in early 2012, most banks increased their standard variable rates by an average of about 10 basis points. Consequently, between early 2011 and early 2012,

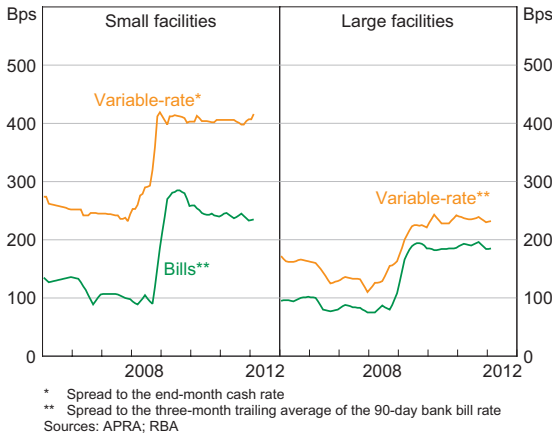
**Graph 9**  
**Variable Housing Rates**  
Spread to cash rate



the spread between new variable-rate loans and the cash rate has increased by about 5 basis points. The spread between the average interest rate on outstanding variable-rate housing loans and the cash rate has risen by a similar amount.

Around two-thirds of business loan rates are tied to the bank bill swap rate rather than the cash rate. The level of interest rates on loans to large and small businesses has fallen broadly in line with the declines in benchmark rates over the past year, although this resulted in some increase in these rates relative to the cash rate since mid 2011. Risk margins on business lending have been little changed over the past couple of years, although in the case of large business lending some of the recent stability in margins on outstanding loans is likely to reflect the gradual repricing of facilities (Graph 10). This follows a period in which there was a noticeable increase in business lending rates relative to benchmark rates, reflecting a combination of higher relative funding costs and a reassessment of risk margins (RBA 2011). Higher risk margins resulted in both an increase in average spreads as well as a noticeable increase in the range of spreads paid on the stock of business lending. As a result of the former, small business rates, even those secured against residential property, are above the interest rates on housing loans.

**Graph 10**  
**Spreads on Outstanding Business Loans**



## Net Interest Margins

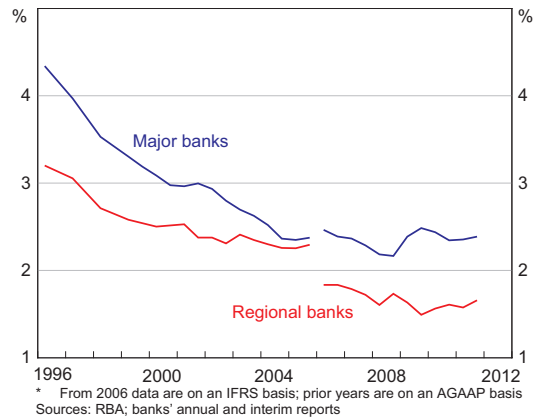
Over the past year, lending rates and funding costs have both fallen in absolute terms but have risen relative to the cash rate. Lending rates have generally fallen by more than funding costs which, all else being equal, would imply that the major banks' net interest margins have contracted a little. However, while lending rates and funding costs are important determinants, banks' net interest margins are also influenced by a number of other factors including:

- changes in the composition of banks' assets;
- changes in banks' use of equity funding (given that equity does not incur interest payments but banks seek a return on this source of funding when setting their lending rates);
- changes in the interest income lost because of impaired loans; and
- the use of derivatives to hedge the interest rate risk on their assets and liabilities.

The contribution from these other factors varies from year to year.

Recent movements in margins reported by the major banks in their statutory results – to end September 2011 for three of the banks and end December for the other – are relatively small compared with the decline in margins experienced over the

**Graph 11**  
**Banks' Net Interest Margin\***  
Domestic operations



preceding decade (Graph 11). The final observations in Graph 11 do not include the full effect of the increase in funding costs relative to the cash rate since mid 2011. December quarter trading updates provided by three of the banks report a narrowing in margins of around 5 to 10 basis points, consistent with the above analysis.

The regional banks' net interest margins continue to be lower than those of the major banks, primarily reflecting more expensive deposit and long-term wholesale debt funding costs, and a larger share of lower-margin housing lending. ❖

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