

Downunder Digest

Show me the money

- ▶ The RBA's next move largely depends on the outlook for wages
- ▶ Measurement issues and the changing relationship between the labour market and wages are complicating the outlook
- ▶ We expect the rise in commodity prices and national incomes to support a modest rise in wages growth

It's all about wages

For an inflation-targeting central bank, wages growth matters. Indeed, the two key empirical models that the RBA uses for forecasting inflation both have wages and the labour market as key inputs. The first is a 'Phillips' curve' model, which suggests that as the unemployment rate falls, and spare capacity in the labour market is reduced, wages and inflation rise, as workers are able to demand greater pay. Second is the 'mark-up' model which suggests that prices are set as a mark-up over costs. In this model, unit labour costs (productivity-adjusted wages growth) are a key input.

However, structural change in the labour market and measurement issues are making these relationships more complicated. In particular, the measures of wages growth, which are at their lowest levels in multiple decades, are much lower than the historical relationship with the unemployment rate would imply.

There are many possible explanations. It could reflect underemployment, with the broader measures of spare capacity less positive than the headline unemployment rate. This could reflect a shift to more part-time jobs, reducing the bargaining power of workers. It could be the result of technology, globalisation and structural factors, which are making it harder for workers to demand wage rises. Another factor may be that the very large cycle in commodity prices and national income in recent years has affected wage settings. Importantly, measurement issues in the official labour market statistics have been further complicating any assessment. Job vacancy, job advertisements and business surveys all show stronger labour market conditions than the official statistics.

We see the RBA as unlikely to cut interest rates any further, given concerns about the housing price and credit boom in Sydney and Melbourne. With no cuts likely, the key question is: When might the RBA start to lift the cash rate? For this to happen we believe the central bank would need to be convinced that wages growth is picking up. There is considerable uncertainty about when this will happen. However, our view is that the recent lift in commodity prices, and the boost it has delivered to national income, should deliver some support for wages growth. History shows a strong positive correlation between Australia's wages growth and commodity prices.

ECONOMICS AUSTRALIA



This video is available as a podcast
[Subscribe via research.hsbc.com](https://research.hsbc.com)

Paul Bloxham
 Chief Economist (Australia, New Zealand and Global Commodities)
 HSBC Bank Australia Limited
 paulbloxham@hsbc.com.au
 +61 2 9255 2635

Daniel Smith
 Economist (Australia and New Zealand)
 HSBC Bank Australia Limited
 daniel.john.smith@hsbc.com.au
 +61 2 9255 2635

MiFID II – Research Is your access agreed?

CONTACT us today

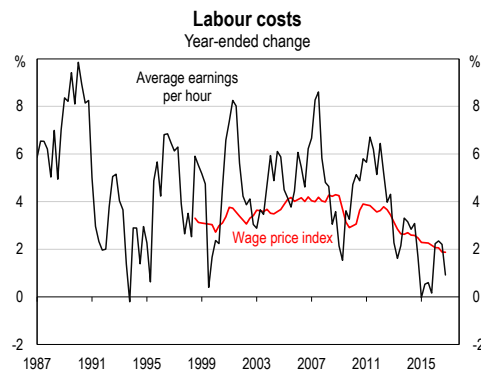
Disclosures & Disclaimer

This report must be read with the disclosures and the analyst certifications in the Disclosure appendix, and with the Disclaimer, which forms part of it.

Issuer of report: HSBC Bank Australia Limited

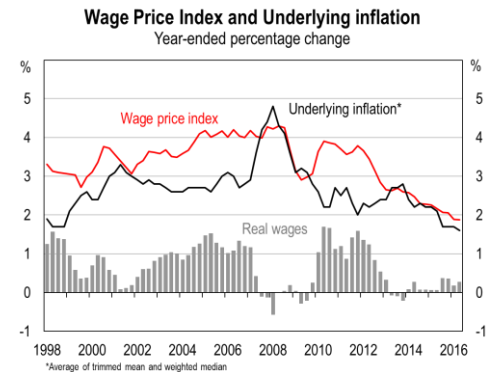
View HSBC Global Research at:
<https://www.research.hsbc.com>

1. Wages growth is weak on all measures



Source: ABS

2. Core inflation is below the 2-3% target



Source: ABS, HSBC estimates

Wages growth and underlying inflation are low

All of the available measures of wages growth have slowed in recent years, with the key ones suggesting that pay is growing at its slowest pace in multiple decades. The wage price index and average earnings in the national accounts measures are both showing sluggish growth (Chart 1). The wage price index is growing only a little faster than underlying inflation, leaving real wages growth weak (Chart 2).

Without a pick-up in real wages growth to support consumer demand, it is hard to see domestic inflation picking up. As underlying inflation is below the RBA's 2-3% target band, running at around 1.5% y-o-y, judging whether and when the central bank might decide to lift its cash rate is very much about determining when wages growth will pick up, or if it could slow further.

The relationship with unemployment is changing

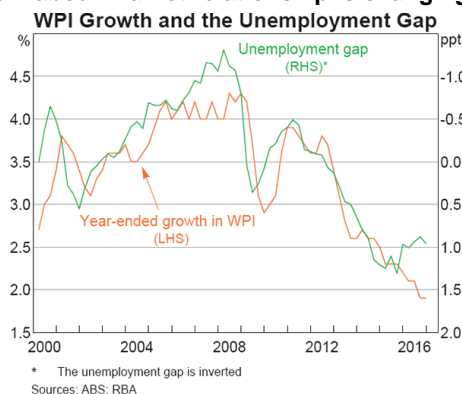
What makes the outlook complicated is that the relationship between wages growth and the labour market appears to have changed. In the past, a closing of the gap between the unemployment rate and the estimate of full employment (currently around 5-5.25%) of the magnitude seen recently, has typically seen a pick-up in wages growth (Chart 3). On this occasion, wages growth has continued to fall, despite the tightening of the labour market.

This historical relationship suggests that a fall in the unemployment rate typically drives higher wages growth (and, in turn, inflation). As Chart 4 shows, wages growth has been unusually low in the past three years, given the level of the unemployment rate.

All measures show that wages growth is sluggish

The Phillip's curve relationship is changing

3. Labour market relationship is changing



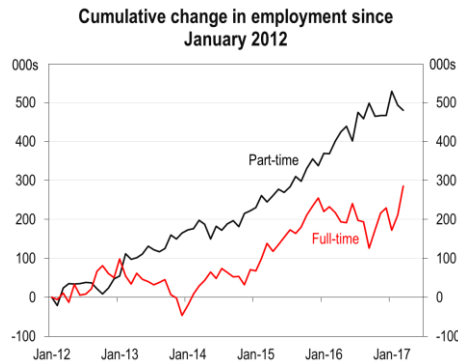
Source: ABS, RBA

4. Wage growth surprisingly low



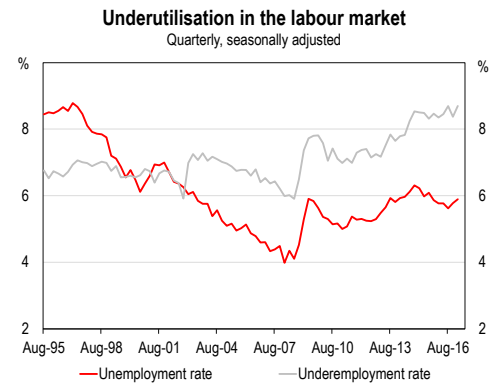
Source: ABS, HSBC estimates

5. Jobs growth has been mostly part-time



Source: ABS

6. Underemployment is still high



Source: ABS

More part-time and less full-time jobs could be reducing bargaining power

Structural, cyclical or measurement problems?

The apparent disconnect between labour market developments and wages growth could reflect a range of possible factors and there is considerable uncertainty about which is playing the largest role.

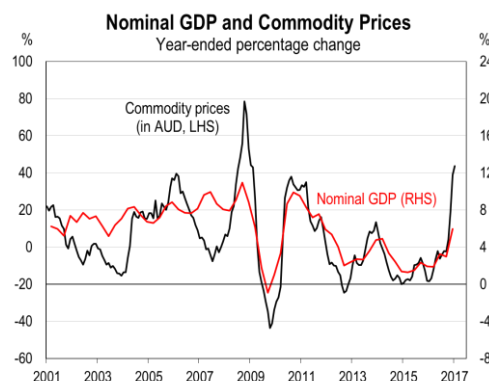
First, it could be structural. One of the clear trends to emerge over the past couple of years has been strong growth in part-time employment and weak growth in full-time jobs (Chart 5). This has meant that, while more people are finding jobs and the unemployment rate remains below the peak seen in late 2014, some of those people want to work longer hours and the underemployment rate remains elevated (Chart 6). In short, the unemployment rate is overstating the degree of tightness in the labour market, which may explain why wage growth has slowed, rather than picked up.

Commodity price-driven national income cycle is important

Second, it could be cyclical. In Australia's case, recent nominal growth in the economy has been mostly driven by the very large cycle in commodity prices in recent years. Although Australia's exports do not make up a significantly larger proportion of GDP than in other developed economies, Australia's exports do experience more significant price swings, which drives significant movements in nominal growth (Chart 7). Historically, these swings in commodity prices and the terms of trade have had an impact on wage growth, and may explain part of the recent weakness in wages.

Third, there are considerable measurement issues in the official labour force numbers at present, which makes it more difficult to assess trends, particularly on a timely basis. In

7. Higher commodity prices lift incomes



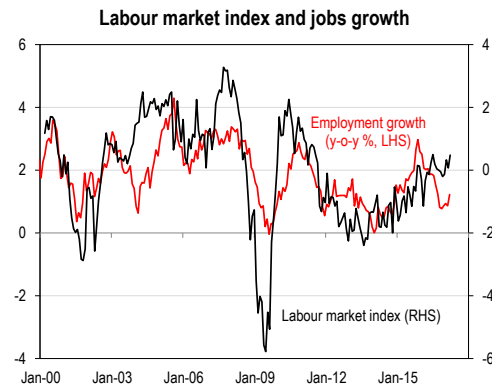
Source: ABS, RBA

8. Commodity prices correlate with wages



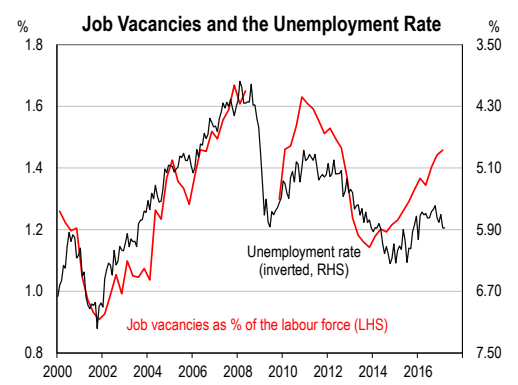
Source: ABS, HSBC estimates

9. Official measures out of line with others



Source: ABS, HSBC estimates

10. Official survey is the odd one out



Source: ABS

particular, the seasonal pattern in employment has changed substantially over the past couple of years (possibly due to survey changes implemented by the Bureau of Statistics in 2014). This has rendered the monthly seasonally-adjusted change in employment largely meaningless.

Measurement issues complicate the analysis

The annual rate of employment growth should be more reliable, as one does not have to use any seasonal adjustment. However, even here there have been some puzzling trends, with jobs growth looking unusually strong over 2015 – touching 3% y-o-y – before falling back to below 1% more recently (Chart 9). This seems at odds with other labour market indicators (such as job advertisements and the business and consumer sentiment surveys), which we collect into an index and have shown a steadier, gradual improvement. The recent rise in the unemployment rate has also been out of line with the continued lift in surveyed job vacancies (Chart 10).

State and industry developments shed a little light, but not a lot

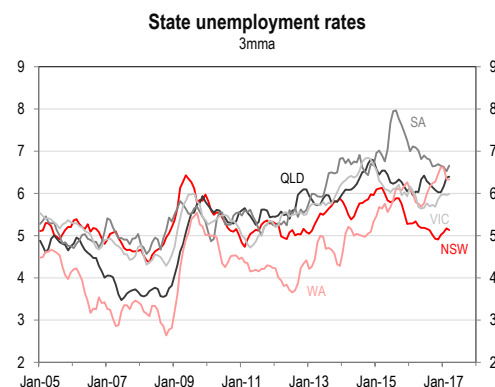
Clearly, the national trends in the labour market are challenging to interpret. In an effort to better understand them, we can also look at trends across states and industries.

Net migration has helped counter differences in state-level labour demand

The first thing that stands out is that, regardless of how state labour markets have performed, they have all experienced a noticeable slowdown in wages growth. In particular, the large non-mining states, New South Wales and Victoria, have had quite healthy labour markets with fairly low unemployment and record levels of job vacancies but have still seen wages growth slow significantly (Charts 11, 12 and 13).

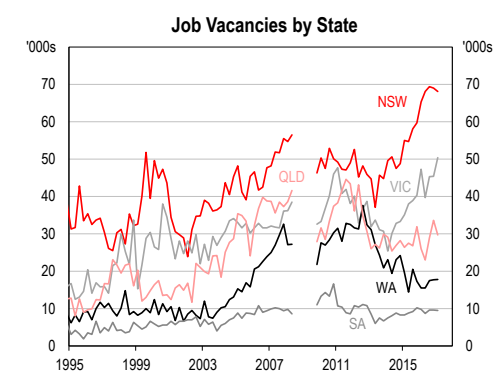
Of course, labour is highly mobile in Australia and so wages in one state can be influenced by what is happening elsewhere. The end of the mining boom has seen a fall in inter-state

11. Tighter labour markets in NSW/Victoria



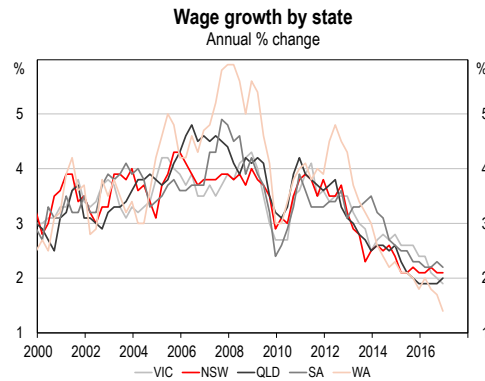
Source: ABS

12. NSW/Victoria have higher vacancies too



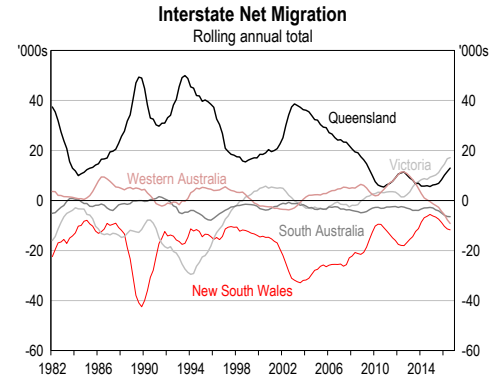
Source: ABS

13. Wages growth has slowed everywhere



Source: ABS

14. Net migration to Victoria in particular



Source: ABS

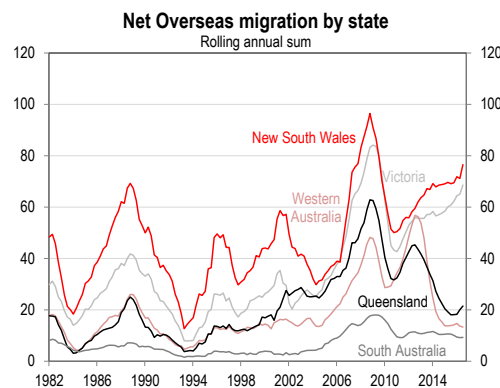
migration to Western Australia, with an offsetting rise in inward migration to Victoria (Chart 14). New South Wales and Victoria have also been the main recipients of international migrants in the past couple of years (Chart 15). In short, solid growth in labour demand appears to have been adequately met by labour supply, due to inward migration, in the two large non-mining states, which has helped to keep wages growth suppressed.

State-level data can also shed some light on another interesting recent labour market trend: the strong pick-up in full-time employment in 2015 and the subsequent slowdown seen since then. It appears that this phenomenon has almost entirely been driven by New South Wales – and, moreover, within just a handful of industries within New South Wales. However, when labour force numbers are broken down so far, the sample sizes involved become very small and so the results need to be treated with scepticism. That suggests the national trends that these numbers are driving also need to be questioned.

Industry divergence helps explain some of the slowdown in wages growth

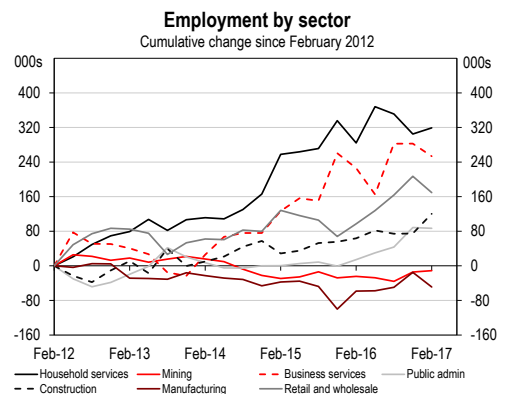
Industry-level numbers also show that much of the job creation in recent years has been in the services sectors, led by healthcare and household services, while many of the job losses have been the in the mining industry. This shift from higher paid mining jobs to lower paid services jobs has contributed to an overall slowdown in wages growth. However, the compositional shift cannot fully explain the slowdown as wages growth appears to have slowed in all of the industries.

15. NSW/Victoria have high offshore migration



Source: ABS

16. High-pay jobs lost; low-pay jobs gained



Source: ABS

The RBA is highly uncertain about the wages outlook too

How the RBA is reading all of this

The labour market has become an increasing focus for the RBA recently. We see this as largely a result of the fact that the official unemployment rate has risen in recent months.

Like us, the RBA has been noting that the other measures of labour market conditions have been stronger than the official labour force statistics. In the recent board minutes, the RBA noted that ‘although forward-looking indicators of labour demand continued to suggest an increase in employment growth over the period ahead, this had been true for some time without leading to an improvement in labour market conditions’ (18 April 2017). A key question is whether the other indicators will weaken or the official labour market numbers will strengthen, to close the gap. Our view is that the multiple surveys involved in the other measures are providing a clearer reading than the official labour force survey, which has been suffering from small sample issues, amongst other problems.

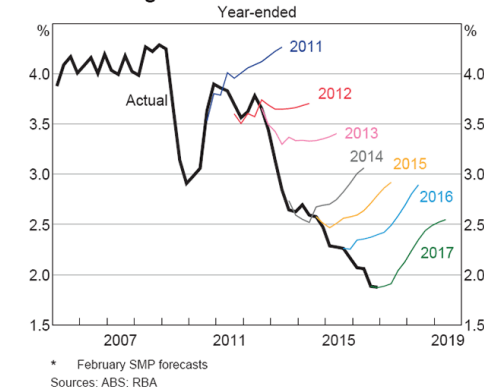
However, even if the labour market is a bit tighter than the official labour market numbers suggest, the weak wages growth is hard to explain. A recent RBA Bulletin article suggested that the relationship between wages growth and the labour market had changed but made it clear that the central bank is uncertain as to why (see Bishop, J., and Cassidy, T. (2017) ‘Insights into low wage growth in Australia’, RBA Bulletin, 16 March). The RBA Bulletin article also included a chart of the RBA’s own forecasts for wages growth (Chart 17 below), which suggests that the central bank has had considerable difficulty forecasting wages growth recently.

As we have discussed above, our preferred explanation for the low wages growth has been the long and drawn out cycle in commodity prices (a point we have been making for some time now, see [Australia’s low inflation: It’s part of the rebalancing act](#), 13 July 2016). A look at the RBA’s own forecasts for the terms of trade, which is driven by commodity prices, may help to explain why the wages forecasts have differed so significantly from the outcomes (Chart 18 shows the RBA’s own forecasts of the terms of trade, as at November 2015). We expect the recent lift in commodity prices and national income to support a modest pick-up in wages growth.

Wages growth needs to rise before the RBA would consider lifting the cash rate

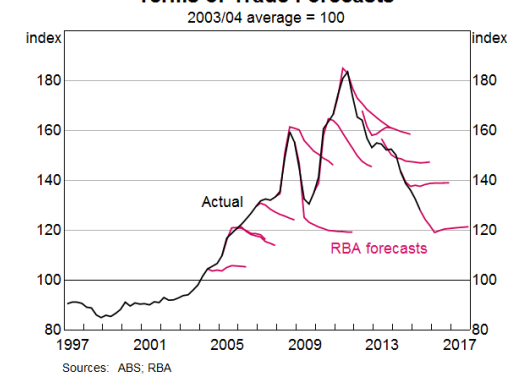
We remain of the view that the RBA has no appetite to cut its cash rate further, largely because further cuts would boost the already booming Sydney and Melbourne housing markets (see [The RBA Observer: On hold, with no appetite for further easing](#), 3 March 2017). However, wages growth needs to rise before the central bank would consider lifting the cash rate, as faster wages growth is needed to lift underlying inflation. Although there is considerable uncertainty about the outlook for wages growth, we see the balance of risks as tilted to the upside and expect a modest lift in wages growth in H2 2017, with the RBA lifting its cash rate in 2018.

17. The RBA is uncertain about wages
Wage Price Index Forecasts*



Source: RBA (16 March 2017)

18. Commodity prices have also surprised
Terms of Trade Forecasts



Source: RBA (20 November 2015)

Table 19. HSBC's forecasts for Australia and New Zealand

	Year-average			Year-ended						
	2016e	2017e	2018e	Q416	Q117e	Q217e	Q317e	Q417e	Q118e	Q218e
%*										
AUSTRALIA										
GDP	2.5	2.8	3.2	2.4	2.2	2.2	3.6	3.3	3.2	3.2
Consumption	2.7	2.6	2.8	2.6	2.5	2.6	2.8	2.5	2.5	2.6
Public consumption	3.9	1.9	2.0	3.2	2.7	1.2	1.5	2.0	2.0	2.0
Investment	-2.4	3.0	3.0	0.1	1.3	1.6	5.5	3.9	4.1	3.5
- Dwelling	7.9	5.1	-3.0	5.6	3.8	3.9	6.7	5.8	2.6	-1.8
- Business	-8.8	-1.6	3.4	-5.5	-4.1	-3.2	0.7	0.1	1.8	3.5
- Public	7.7	15.5	9.9	12.5	16.6	14.0	18.9	12.7	13.0	10.6
Final domestic demand	1.6	2.6	2.7	2.1	2.1	2.0	3.2	2.8	2.8	2.7
Domestic demand	1.7	2.5	2.7	2.2	2.4	2.0	3.1	2.8	2.8	2.7
Exports	7.6	8.7	9.0	8.9	8.2	8.0	9.3	9.3	8.9	9.1
Imports	0.4	6.8	6.9	3.3	7.3	6.1	6.8	7.2	7.2	7.0
GDP (% quarter)	--	--	--	1.1	0.9	0.7	0.8	0.8	0.8	0.7
CPI	1.3	2.3	2.6	1.5	2.2	2.4	2.3	2.3	2.5	2.5
Trimmed mean	1.7	1.8	2.2	1.6	1.7	1.7	1.9	1.9	2.1	2.1
Unemployment rate	5.7	5.6	5.3	5.7	5.7	5.6	5.5	5.4	5.3	5.3
Labour price index	2.0	2.1	2.8	1.9	1.9	2.0	2.2	2.4	2.6	2.7
Current A/C (%GDP)	-2.6	-0.6	-0.5	-0.9	0.0	-0.8	-1.1	-0.6	-0.5	-0.6
Terms of trade	-0.4	6.3	-2.8	15.6	19.1	11.6	2.6	-5.9	-7.4	-3.3
Budget balance (%GDP)	-2.4	-2.2	-1.4							
Capital city house prices	4.9	4.3	1.7	5.4	6.2	4.8	3.8	2.4	2.3	2.0
Private sector credit	6.1	5.3	4.1	5.7	5.7	5.6	5.3	4.6	4.1	4.1
USD/AUD (end period)	0.72	0.75	0.75	0.72	0.75	0.72	0.75	0.75	0.75	0.75
Cash rate (end period)	1.50	1.50	2.00	1.50	1.50	1.50	1.50	1.50	1.75	1.75
%*										
NEW ZEALAND										
GDP	3.1	3.2	3.3	2.7	2.8	3.1	3.2	3.6	3.5	3.3
Consumption	4.2	3.5	3.2	4.3	4.7	3.4	2.8	3.2	3.2	3.2
Govt consumption	2.3	3.8	3.4	3.6	3.4	4.2	3.9	3.8	3.5	3.4
Investment	5.7	4.7	4.4	6.9	5.3	4.5	4.3	4.7	4.8	4.3
Final domestic demand	4.2	3.9	3.6	4.8	4.6	3.8	3.4	3.7	3.7	3.5
Domestic demand	4.4	4.2	3.5	5.8	4.5	5.0	4.4	2.8	3.6	3.5
Exports	1.6	2.2	3.3	-2.1	1.9	-0.6	1.3	6.2	3.4	3.2
Imports	4.0	5.0	4.0	7.4	7.2	5.2	4.3	3.3	3.9	3.9
GDP (% quarter sa)	na	na	na	0.4	0.9	1.0	0.9	0.8	0.8	0.8
CPI	0.6	1.9	1.9	1.3	2.1	1.9	1.9	1.6	1.5	1.8
Unemployment rate	5.1	5.2	4.9	5.2	5.2	5.3	5.2	5.1	5.1	5.0
Labour price index	1.7	1.9	2.2	1.6	1.7	1.8	2.0	2.0	2.1	2.1
Current A/C (%GDP)	-2.7	-1.1	-1.4	-2.4	-1.2	-0.9	-1.1	-1.1	-1.2	-1.4
Budget balance (%GDP)	0.7	0.7	1.2							
NZD/USD (end period)	0.69	0.70	0.70	0.70	0.67	0.70	0.70	0.70	0.70	0.70
Cash rate (end period)	1.75	1.75	2.25	1.75	1.75	1.75	1.75	1.75	2.00	2.00

Source: ABS, RBA, HSBC forecasts. *unless otherwise specified.

Disclosure appendix

Analyst Certification

The following analyst(s), economist(s), and/or strategist(s) who is(are) primarily responsible for this report, certifies(y) that the opinion(s) on the subject security(ies) or issuer(s) and/or any other views or forecasts expressed herein accurately reflect their personal view(s) and that no part of their compensation was, is or will be directly or indirectly related to the specific recommendation(s) or views contained in this research report: Paul Bloxham and Daniel Smith

Important disclosures

This document has been prepared and is being distributed by the Research Department of HSBC and is intended solely for the clients of HSBC and is not for publication to other persons, whether through the press or by other means.

This document is for information purposes only and it should not be regarded as an offer to sell or as a solicitation of an offer to buy the securities or other investment products mentioned in it and/or to participate in any trading strategy. Advice in this document is general and should not be construed as personal advice, given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. If necessary, seek professional investment and tax advice.

Certain investment products mentioned in this document may not be eligible for sale in some states or countries, and they may not be suitable for all types of investors. Investors should consult with their HSBC representative regarding the suitability of the investment products mentioned in this document and take into account their specific investment objectives, financial situation or particular needs before making a commitment to purchase investment products.

The value of and the income produced by the investment products mentioned in this document may fluctuate, so that an investor may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Value and income from investment products may be adversely affected by exchange rates, interest rates, or other factors. Past performance of a particular investment product is not indicative of future results.

HSBC and its affiliates will from time to time sell to and buy from customers the securities/instruments, both equity and debt (including derivatives) of companies covered in HSBC Research on a principal or agency basis.

Analysts, economists, and strategists are paid in part by reference to the profitability of HSBC which includes investment banking, sales & trading, and principal trading revenues.

Whether, or in what time frame, an update of this analysis will be published is not determined in advance.

For disclosures in respect of any company mentioned in this report, please see the most recently published report on that company available at www.hsbcnet.com/research. HSBC Private Banking clients should contact their Relationship Manager for queries regarding other research reports. In order to find out more about the proprietary models used to produce this report, please contact the authoring analyst.

Additional disclosures

1. This report is dated as at 20 April 2017.
2. All market data included in this report are dated as at close 19 April 2017, unless a different date and/or a specific time of day is indicated in the report.
3. HSBC has procedures in place to identify and manage any potential conflicts of interest that arise in connection with its Research business. HSBC's analysts and its other staff who are involved in the preparation and dissemination of Research operate and have a management reporting line independent of HSBC's Investment Banking business. Information Barrier procedures are in place between the Investment Banking, Principal Trading, and Research businesses to ensure that any confidential and/or price sensitive information is handled in an appropriate manner.
4. You are not permitted to use, for reference, any data in this document for the purpose of (i) determining the interest payable, or other sums due, under loan agreements or under other financial contracts or instruments, (ii) determining the price at which a financial instrument may be bought or sold or traded or redeemed, or the value of a financial instrument, and/or (iii) measuring the performance of a financial instrument.

Disclaimer

Legal entities as at 1 July 2016

'UAE' HSBC Bank Middle East Limited, Dubai; 'HK' The Hongkong and Shanghai Banking Corporation Limited, Hong Kong; 'TW' HSBC Securities (Taiwan) Corporation Limited; 'CA' HSBC Securities (Canada) Inc.; HSBC Bank, Paris Branch; HSBC France; 'DE' HSBC Trinkaus & Burkhardt AG, Düsseldorf; 000 HSBC Bank (RR), Moscow; 'IN' HSBC Securities and Capital Markets (India) Private Limited, Mumbai; 'JP' HSBC Securities (Japan) Limited, Tokyo; 'EG' HSBC Securities Egypt SAE, Cairo; 'CN' HSBC Investment Bank Asia Limited, Beijing Representative Office; The Hongkong and Shanghai Banking Corporation Limited, Singapore Branch; The Hongkong and Shanghai Banking Corporation Limited, Seoul Securities Branch; The Hongkong and Shanghai Banking Corporation Limited, Seoul Branch; HSBC Securities (South Africa) (Pty) Ltd, Johannesburg; HSBC Bank plc, London, Madrid, Milan, Stockholm, Tel Aviv; 'US' HSBC Securities (USA) Inc, New York; HSBC Yatirim Menkul Degerler AS, Istanbul; HSBC México, SA, Institución de Banca Múltiple, Grupo Financiero HSBC; HSBC Bank Australia Limited; HSBC Bank Argentina SA; HSBC Saudi Arabia Limited; The Hongkong and Shanghai Banking Corporation Limited, New Zealand Branch incorporated in Hong Kong SAR; The Hongkong and Shanghai Banking Corporation Limited, Bangkok Branch

Issuer of report

HSBC Bank Australia Limited
 Level 38
 Tower 1, International Towers Sydney
 100 Barangaroo Avenue
 Sydney NSW 2000
 Australia
 Telephone: +61 2 9006 5888
 Fax: +61 2 9255 2205
 Website: www.research.hsbc.com

In Australia, this publication has been distributed by The Hongkong and Shanghai Banking Corporation Limited (ABN 65 117 925 970, AFSL 301737) for the general information of its "wholesale" customers (as defined in the Corporations Act 2001). Where distributed to retail customers, this research is distributed by HSBC Bank Australia Limited (AFSL No. 232595). These respective entities make no representations that the products or services mentioned in this document are available to persons in Australia or are necessarily suitable for any particular person or appropriate in accordance with local law. No consideration has been given to the particular investment objectives, financial situation or particular needs of any recipient. This material is distributed in the United Kingdom by HSBC Bank plc. In the UK this material may only be distributed to institutional and professional customers and is not intended for private customers. Any recommendations contained in it are intended for the professional investors to whom it is distributed. This publication is distributed in New Zealand by The Hongkong and Shanghai Banking Corporation Limited, New Zealand Branch incorporated in Hong Kong SAR. This material is distributed in Japan by HSBC Securities (Japan) Limited. This material may be distributed in the United States solely to "major US institutional investors" (as defined in Rule 15a-6 of the US Securities Exchange Act of 1934); such recipients should note that any transactions effected on their behalf will be undertaken through HSBC Securities (USA) Inc. in the United States. Note, however, that HSBC Securities (USA) Inc. is not distributing this report, has not contributed to or participated in its preparation, and does not take responsibility for its contents. In Singapore, this publication is distributed by The Hongkong and Shanghai Banking Corporation Limited, Singapore Branch for the general information of institutional investors or other persons specified in Sections 274 and 304 of the Securities and Futures Act (Chapter 289) ("SFA") and accredited investors and other persons in accordance with the conditions specified in Sections 275 and 305 of the SFA. This publication is not a prospectus as defined in the SFA. It may not be further distributed in whole or in part for any purpose. In Korea, this publication is distributed by either The Hongkong and Shanghai Banking Corporation Limited, Seoul Securities Branch ("HBAP SLS") or The Hongkong and Shanghai Banking Corporation Limited, Seoul Branch ("HBAP SEL") for the general information of professional investors specified in Article 9 of the Financial Investment Services and Capital Markets Act ("FSCMA"). This publication is not a prospectus as defined in the FSCMA. It may not be further distributed in whole or in part for any purpose. Both HBAP SLS and HBAP SEL are regulated by the Financial Services Commission and the Financial Supervisory Service of Korea. The Hongkong and Shanghai Banking Corporation Limited Singapore Branch is regulated by the Monetary Authority of Singapore. Recipients in Singapore should contact a "Hongkong and Shanghai Banking Corporation Limited, Singapore Branch" representative in respect of any matters arising from, or in connection with this report. HSBC México, S.A., Institución de Banca Múltiple, Grupo Financiero HSBC is authorized and regulated by Secretaría de Hacienda y Crédito Público and Comisión Nacional Bancaria y de Valores (CNBV).

This material is not and should not be construed as an offer to sell or the solicitation of an offer to purchase or subscribe for any investment. This document has been prepared without taking account of the objectives, financial situation or needs of any specific person who may receive this document. Any such person should, before acting on the information in this document, consider the appropriateness of the information, having regard to the personal objectives, financial situation and needs. In all cases, anyone proposing to rely on or use the information in this document should independently verify and check its accuracy, completeness, reliability and suitability and should obtain independent and specific advice from appropriate professionals or experts. HSBC has based this document on information obtained from sources it believes to be reliable but which it has not independently verified; HSBC makes no guarantee, representation or warranty and accepts no responsibility or liability as to its accuracy or completeness. Expressions of opinion are those of HSBC only and are subject to change without notice. From time to time research analysts conduct site visits of covered issuers. HSBC policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits. HSBC and its affiliates and/or their officers, directors and employees may have positions in any securities mentioned in this document (or in any related investment) and may from time to time add to or dispose of any such securities (or investment). HSBC and its affiliates may act as market maker or have assumed an underwriting commitment in the securities of any companies discussed in this document (or in related investments), may sell them to or buy them from customers on a principal basis and may also perform or seek to perform banking or underwriting services for or relating to those companies. This material may not be further distributed in whole or in part for any purpose. No consideration has been given to the particular investment objectives, financial situation or particular needs of any recipient. (070905)

In Canada, this document has been distributed by HSBC Securities (Canada) Inc. (member IIROC), and/or its affiliates. The information contained herein is under no circumstances to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed judgment upon these materials, the information contained herein or the merits of the securities described herein, and any representation to the contrary is an offense.

If you are an HSBC Private Banking ("PB") customer with approval for receipt of relevant research publications by an applicable HSBC legal entity, you are eligible to receive this publication. To be eligible to receive such publications, you must have agreed to the applicable HSBC entity's terms and conditions ("KRC Terms") for access to the KRC, and the terms and conditions of any other internet banking service offered by that HSBC entity through which you will access research publications using the KRC. Distribution of this publication is the sole responsibility of the HSBC entity with whom you have agreed the KRC Terms.

If you do not meet the aforementioned eligibility requirements please disregard this publication and, if you are a customer of PB, please notify your Relationship Manager. Receipt of research publications is strictly subject to the KRC Terms, which can be found at <https://research.privatebank.hsbc.com/> – we draw your attention also to the provisions contained in the Important Notes section therein.

© Copyright 2017, HSBC Bank Australia Ltd, ALL RIGHTS RESERVED. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, on any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of HSBC Bank Australia Limited. MCI (P) 094/06/2016, MCI (P) 085/06/2016, MCI (P) 126/02/2017

[631173]

Global Economics Research Team

Global

Global Chief Economist
Janet Henry +44 20 7991 6711
 janet.henry@hsbcib.com

Global Economist
James Pomeroy +44 20 7991 6714
 james.pomeroy@hsbc.com

Senior Trade Economist
Douglas Lippoldt +44 20 7992 0375
 douglas.lippoldt@hsbcib.com

Trade Economist
George House +44 20 3359 3776
 george.a.house@hsbc.com

Europe

Chief European Economist
Simon Wells +44 20 7991 6718
 simon.wells@hsbcib.com

European Economist
Fabio Balboni +44 20 7992 0374
 fabio.balboni@hsbc.com

United Kingdom

Economist
Elizabeth Martins +44 20 7991 2170
 liz.martins@hsbc.com

Germany

Stefan Schilbe +49 211910 3137
 stefan.schilbe@hsbc.de

Rainer Sartoris +49 211910 2470
 rainer.sartoris@hsbc.de

France

Olivier Vigna +33 1 4070 3266
 olivier.vigna@hsbc.fr

Chantana Sam +33 1 4070 7795
 chantana.sam@hsbc.fr

North America

US

Chief US Economist
Kevin Logan +1 212 525 3195
 kevin.r.logan@us.hsbc.com

Ryan Wang +1 212 525 3181
 ryan.wang@us.hsbc.com

Canada

David G Watt +1 416 868 8130
 david.g.watt@hsbc.ca

Asia Pacific

Managing Director, Co-head Asian Economics
 Research and Chief Economist Greater China
Qu Hongbin +852 2822 2025
 hongbinqu@hsbc.com.hk

Managing Director, Co-head Asian Economics
 Research
Frederic Neumann +852 2822 4556
 fredericneumann@hsbc.com.hk

Chief Economist, Australia, New Zealand and
 Global Commodities
Paul Bloxham +612 9255 2635
 paulbloxham@hsbc.com.au

Chief Economist, India
Pranjul Bhandari +91 22 2268 1841
 pranjul.bhandari@hsbc.co.in

Su Sian Lim +65 6658 8783
 susianlim@hsbc.com.sg

Sophia Ma +86 10 5999 8232
 xiaopingma@hsbc.com.cn

Joseph Incalcaterra +852 2822 4687
 joseph.f.incalcaterra@hsbc.com.hk

Julia Wang +852 3604 3663
 juliarwang@hsbc.com.hk

Nalin Chutchothitham +662 614 4887
 nalin.chutchothitham@hsbc.co.th

Daniel John Smith +612 9006 5729
 daniel.john.smith@hsbc.com.au

James Lee +852 2822 1647
 james.dh.lee@hsbc.com.hk

CEEMEA

Chief Economist, CEEMEA
Simon Williams +44 20 7718 9563
 simon.williams@hsbc.com

Economist, Russia and CIS
Artem Biryukov +7 495 721 1515
 artem.biryukov@hsbc.com

Economist, CEE
Agata Urbanska-Giner +44 20 7992 2774
 agata.urbanska@hsbcib.com

Chief Economist, Turkey
Melis Metiner +44 20 3359 2636
 melismetiner@hsbcib.com

Economist, South Africa
David Faulkner +27 11 676 4569
 david.faulkner@za.hsbc.com

Economist, Middle East and North Africa
Razan Nasser +971 4 423 6925
 razan.nasser@hsbc.com

Latin America

Chief Economist, Latin America
John Welch +1 212 525 4109
 john.h.welch@us.hsbc.com

Argentina

Chief Economist, South America
Javier Finkman +54 11 4344 8144
 javier.finkman@hsbc.com.ar

Senior Economist
Ramiro D Blazquez +54 11 4348 2616
 ramiro.blazquez@hsbc.com.ar

Senior Economist
Jorge Morgenstern +54 11 4130 9229
 jorge.morgenstern@hsbc.com.ar

Mexico

Chief Economist, Mexico
Alexis Milo +52 55 5721 2172
 alexis.milo@hsbc.com.mx

Marina Valentini +52 55 5721 6046
 marina.valentini@hsbc.com.mx