NAB ONLINE RETAIL SALES INDEX MAY 2021

NAB Group Economics

- **Growth rebounded for the NAB Online Retail Sales Index in May (2.7%), following on from a revised contraction in April (-3.5%, previously -3.7%), on a month-on-month, seasonally adjusted basis.**
- **In year-on-year terms, the growth in the NAB Online Retail Sales Index accelerated in May (6.8% y/y), albeit not at the double-digit pace recorded prior to April. The base effects from the high sales growth period of 2020 are now evident in the year-on-year comparisons. The moderating influence on growth by base effects this month was tempered by the early effects of the lockdown in Victoria, which began 28th May.**
- **Growth was recorded in month-on-month terms, for five of eight categories.** Takeaway food, and media, which were the only categories to grow last month, contracted in May, along with fashion. The largest sales category, homewares and appliances, returned to growth in May, albeit slightly slower than the overall index, ending three months of contraction. Personal and recreational goods, department stores, and grocery and liquor recorded faster growth. Takeaway food still leads in year-on-year terms, although department stores is not far behind. For more detail, see Charts 3, 5, 7 & 8 and table 3 below.
- **In month-on-month terms, after a large contraction a month prior, online retail sales in VIC rebounded rapidly in May.** Strong growth was also recorded for NT, NSW and SA. Online department store sales in April were weakest in VIC, but are now strongest in May. While all states saw a contraction in media sales for the month, the contraction in growth for takeaway food was not uniform, with QLD and NT recording growth for this category. See charts 4,6,9-14, and table 3 for more detail.
- **Monthly growth in online sales was slightly higher in Metro areas, with VIC and WA key drivers.** For NSW, and SA however, regional growth was stronger than metro. In year-on-year terms, metro and regional WA, and QLD regional, now outpace other areas. See Charts 15 and 16 for more detail.
- **Sales growth as recorded for domestic merchants, while international merchants contracted in month-on-month terms.** Sales growth for international merchants was weaker in all categories except media, games and toys, and takeaway food. See charts 13 and 14, and table 4 for category growth and share.
- **We estimate that in the 12 months to May, Australians spent $48.1 billion on online retail,** a level that is around 13.2% of the total retail trade estimate (Preliminary May 2021, Series 8501, Australian Bureau of Statistics), and about 38.4% higher than the 12 months to May 2020.
- See comments from NAB's Chief Economist, Alan Oster, on page 2.

Year-on-year growth (% s.a.)	Mar-21	Apr-21	May-21
NAB Online Index	26.0	1.8	6.8
ABS Traditional Retail	2.2	25.0	7.4*p

Month-on-month growth (% s.a.)	Mar-21	Apr-21	May-21
NAB Online Index	-0.6	-3.5	2.7
ABS Traditional Retail	1.3	1.1	0.1*p

Sources: NAB, Australian Bureau of Statistics (ABS). *Data seasonally adjusted (s.a.) using TRAMO/SEATS (incl. trading-day & Easter adjustment.)

*p – Preliminary release from the ABS. These data are incorporated into charts 1&2 as **preliminary** figures.

Chart 1: Online retail sales and ABS retail sales

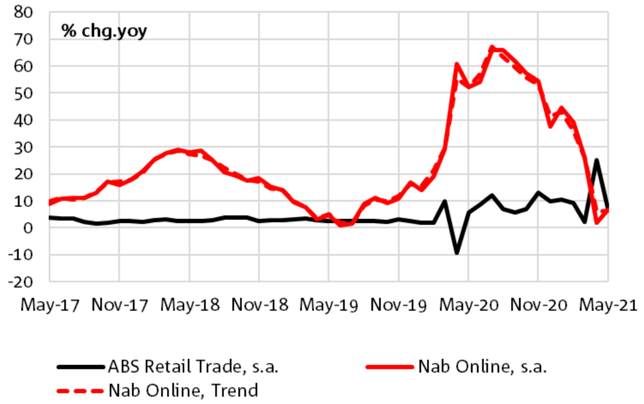
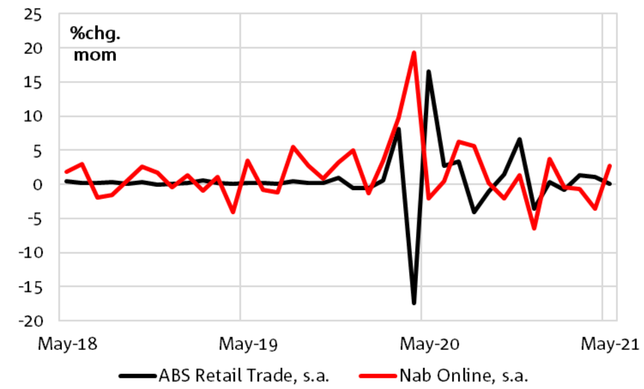


Chart 2: NAB Online retail trade data (mom, s.a.)



NAB Chief Economist, Alan Oster commented:

In month-on-month terms, our NAB Online Retail Sales Index grew in May, after a contraction in April. When comparing this May to 2020, i.e. in year-on-year terms, growth, while slower than much of the past year, accelerated in May. While year-on-year growth is still trending lower given base effects from 2020 (May 2020 was +52.4%(y/y)), growth this month partly stemmed this slowing.

Growth in monthly sales in May was driven by VIC. While VIC's growth is partly a rebound from last months contraction, it is likely that, albeit only a few days are included in the data, lockdown, and concerns pre-lockdown, contributed. VIC led sales growth in department stores, and was strong in other key segments like grocery and liquor, and games and toys. Interestingly, for a state entering lockdown, growth for takeaway food contracted along with most other states. We will have to wait until we have June data, but broadly what we observed in the early stages of the pandemic in 2020 was a reluctance for takeaway food in early periods, with a preference for grocery and liquor during periods of shutdown. In year-on-year terms, the personal and recreational goods, and homewares and appliances categories continued to contract. However, base effects are playing a part here, as this is a comparison to a period where the category recorded strong growth.

In month-on-month terms, growth retuned for both metro and regional areas, with growth slightly faster for the former. Metro VIC clearly jumped, while growth in NSW appears primarily from regional areas. In year-on-year terms however, metro growth is stronger across most states.

In month-on-month growth terms, domestic merchants recorded growth, particularly in categories like homewares and appliances, while sales at international merchants contracted. Games and Toys, and Media were the only key categories where international recorded growth above domestic. Takeaway food was also higher for international, though this is a small share of category spend.

Chart 3: Online retail sales by industry, yoy s.a.

Chart 4: Online retail sales by state, yoy s.a.

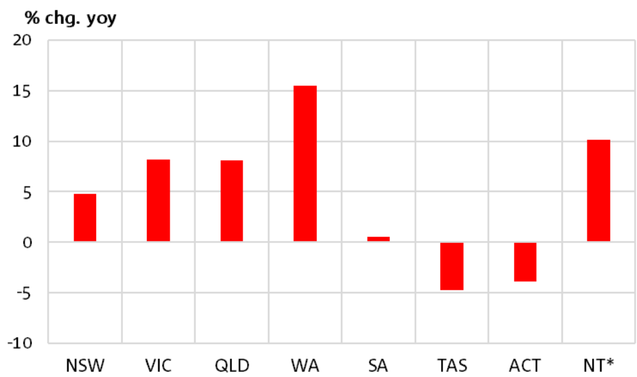
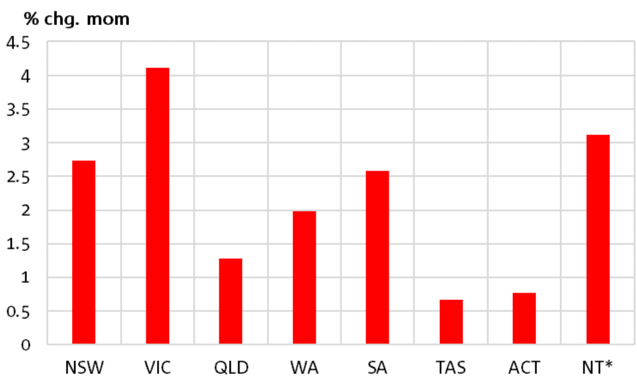


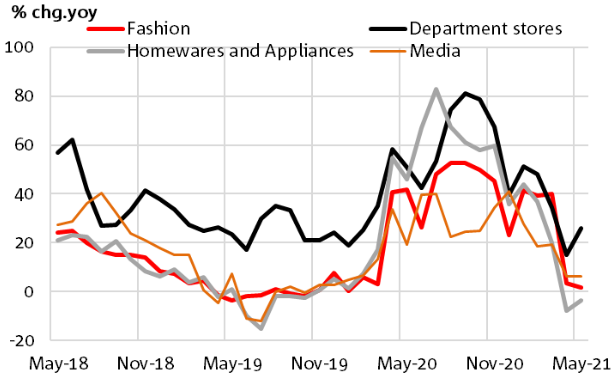
Chart 5: Online retail sales by industry, mom s.a.

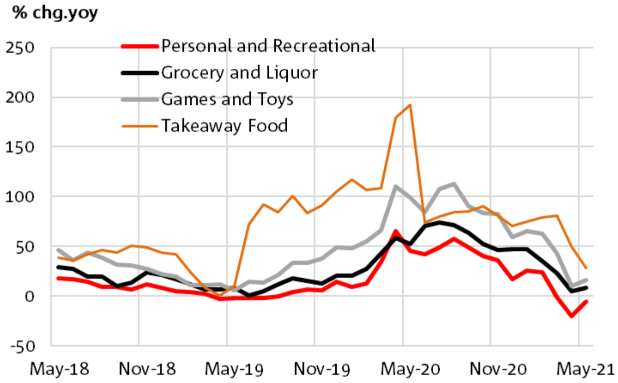
Chart 6: Online retail sales by state, mom s.a.



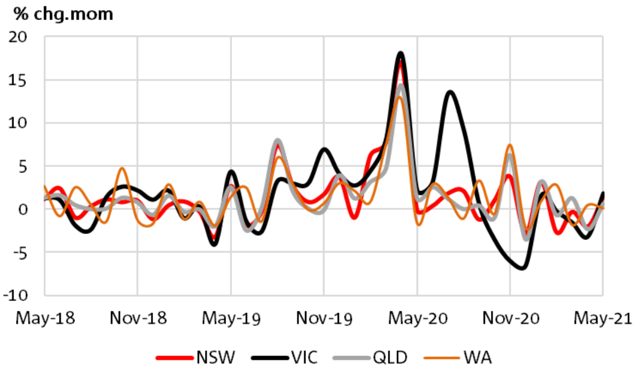
* Note that the series representing Northern Territory is highly variable and should be used with caution.

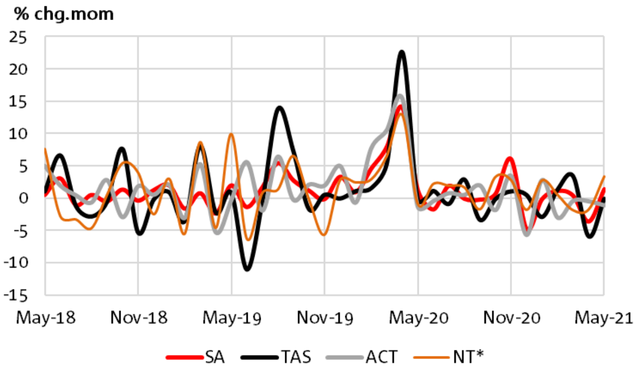
Charts 7 & 8: Online sales by category, seasonally adjusted





Charts 9 & 10: Online sales by state, trend





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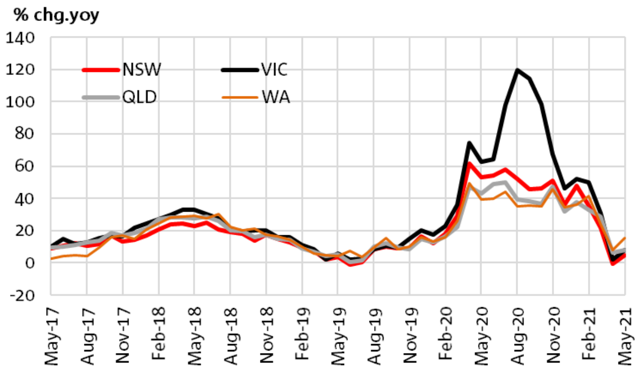
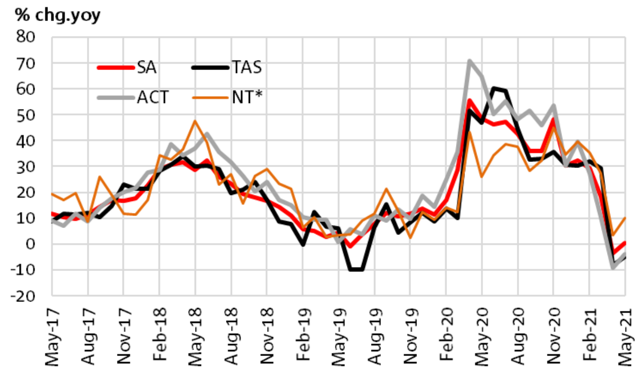
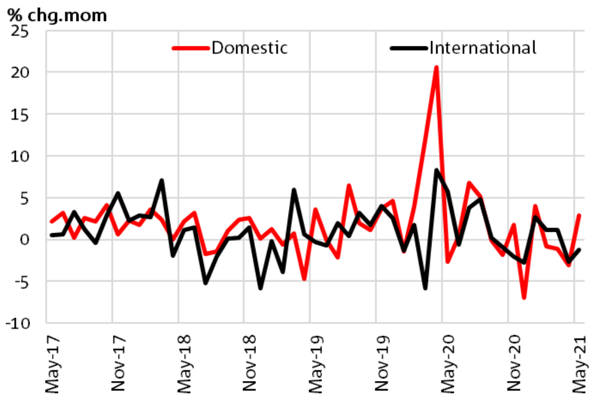
Charts 11 & 12: Online sales by state, yoy, s.a.





Charts 13 & 14: Online sales by merchant location



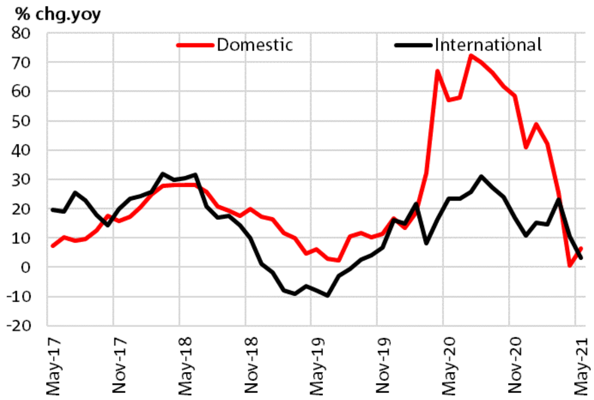


Table 3: Online sales by category and state

% (mom,s.a.)	Fashion	Dep't stores	Home & appliances	Media	Personal and Rec.	Grocery and Liquor	Games and Toys	T'away Food	Total
ACT	0.6	6.3	-3.6	-3.5	11.1	4.9	-5.3	-6.1	**0.8**
NSW	-1.7	8.4	3.0	-2.5	4.6	4.4	0.8	-3.0	**2.7**
NT	1.2	-4.9	0.0	-8.0	9.4	20.9	3.2	12.0	**3.1**
QLD	-2.6	2.8	4.1	-3.1	4.5	-0.2	-2.4	0.6	**1.3**
SA	-0.5	2.2	1.3	-1.6	11.0	5.7	4.2	-8.2	**2.6**
TAS	-6.9	2.4	-3.6	-1.3	6.8	8.4	-0.7	-0.3	**0.7**
VIC	0.9	9.3	2.0	-0.4	10.7	6.0	3.7	-3.8	**4.1**
WA	3.7	8.2	-4.0	-4.9	10.2	1.7	3.1	-3.9	**2.0**
Total	**-0.5**	**6.9**	**2.0**	**-2.2**	**7.5**	**3.8**	**1.2**	**-3.0**	**2.7**

Table 4: Online sales by category and merchant location- Domestic, International (Int'l)

%	Monthly growth – Domestic	Monthly growth – Int'l.	Annual growth – Domestic	Annual growth – Int'l.	Domestic Share of Category Spend	Int'l Share of Category Spend	Overall Category Spend Share
Fashion	-0.4	-7.9	0.2	6.0	82.9	17.1	10.9
Department stores	7.1	4.9	26.4	25.6	90.8	9.2	15.3
Homewares and appliances	2.4	-2.7	-4.0	0.4	96.1	3.9	24.4
Media	-2.8	2.9	4.7	21.6	90.8	9.2	6.6
Personal and Recreational	9.0	-1.8	-5.4	-3.0	88.5	11.5	12.6
Grocery and Liquor	3.4	3.2	7.2	11.5	96.9	3.1	15.2
Games and Toys	2.0	2.6	27.0	-15.6	80.3	19.7	9.1
Takeaway Food	-1.1	2.2	28.7	25.5	99.5	0.5	5.8
All categories	**3.1**	**-0.7**	**7.0**	**3.0**	**91.4**	**8.6**	**100**

METROPOLITAN AND REGIONAL SPEND

Chart 15: Online retail sales growth by region, yoy s.a.

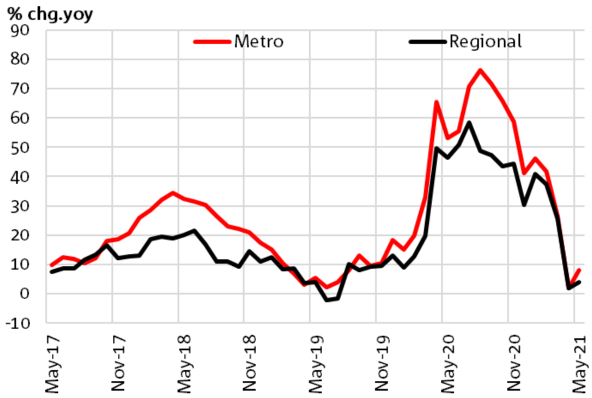
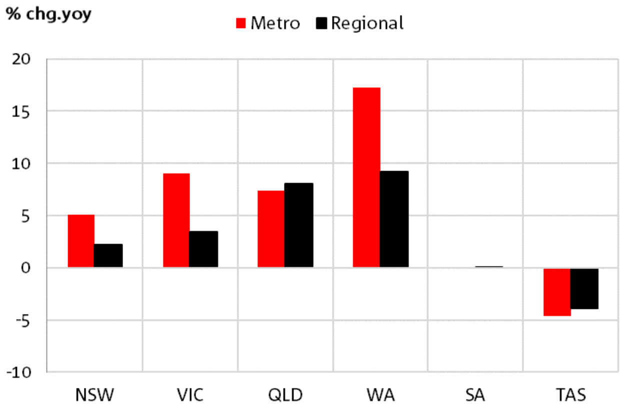
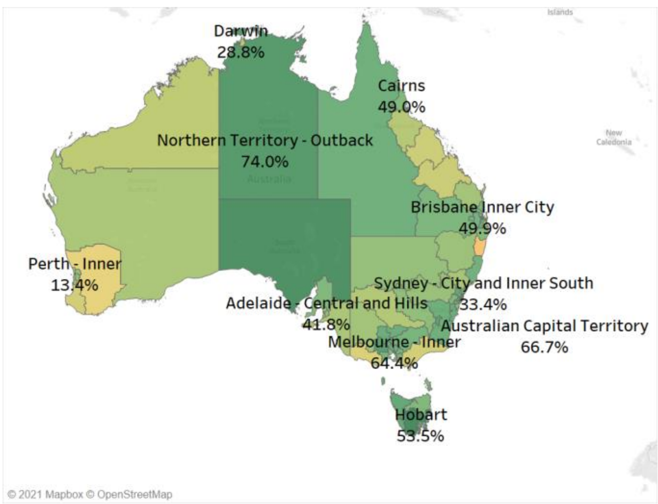
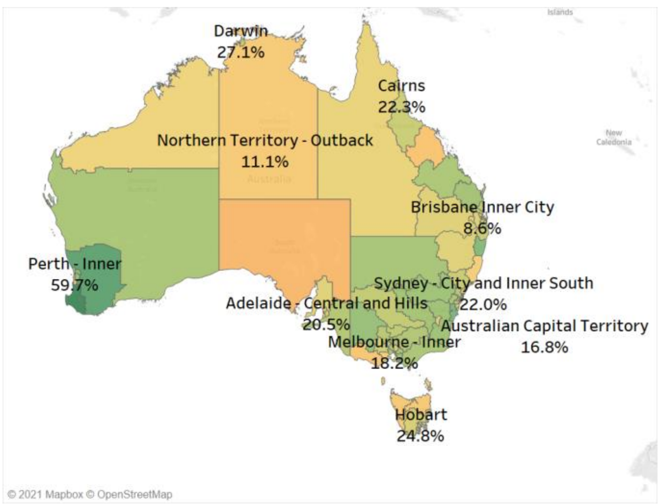


Chart 16: Online retail sales growth by state region, yoy s.a.



A HEATMAP VIEW OF SPEND GROWTH – DEPARTMENT STORES – YEAR ON YEAR – BY STATISTICAL AREA (SA4)

This month we look at the change in online spend for department stores, by ABS statistical area (SA4). The Department stores category is very much a catch all category and includes sectors like online aggregators selling a mix of categories, and general merchandise. The growth comparison here is May 2020 relative to the year prior, and May 2021 relative to May 2020 (i.e. year-on-year comparisons). The larger statistical areas, beyond local government areas, help provide a sub-national view of activity, whilst remaining relatively legible. In May 2020, growth for the index (+52.4% yoy) continued to grow strongly, with department stores (+51.0%) contributing heavily to the headline result. The maps show that growth for this category in 2020 was strong in both metro and regional areas. In 2021, while growth has broadly slowed, it is above 10% in the majority of statistical areas. One other noticeable change is that sales growth in Perth and surrounding areas is faster this year than the comparable period 2020. From the state data, department stores were the second fastest growing category in WA in the month, contributing heavily to the headline result for that state.

May 2020 - YoY	May 2021 - YoY
	

APPENDIX: METHODOLOGY

The NAB Online Retail Sales Index is now sourced in-house and is produced by Group Economics. We have made some significant changes to the NAB online series. Importantly, we have merged SME and Corporate Online into a single index, and provide more detail by region and industry on a monthly basis.

It is derived from NAB transactions data that have been assigned from particular merchant codes to retail industries by state. To keep the series reasonably consistent with past series, we have left these category descriptions broadly unchanged, albeit we now include new entrants to the Australian market. Against that, we have however removed the standalone previously reported category of 'Daily Deals', as this category was considerably volatile and caused statistical issues with indirect seasonal adjustment.

The NAB Online Retail Sales Index measures all Online Retail spending by consumers using various electronic payment methods such as credit cards, BPAY, and PayPal. We have made adjustments for where merchants appear to be wholesaling goods as opposed for final household consumption, and also incorporate new standards involving purchases using stored customer details. The index is derived from personal transaction data from NAB platforms and is scaled up to be representative of the economy by using scalars including ABS Estimated Resident Population, and RBA payments data.

NAB electronic transactions data for the compilation of this series is collected in real time at event record level, which allows significant flexibility to segment the data by age, time, location and merchant type. In future months, we plan to expand the data provided from the series as we bed-in acceptable seasonal adjustment factors for the new series. Transactions included in these data may incorporate purchases by Card, BPAY, Bank Transfers, Direct Debits and PayPal services where available, and include transactions with Australian and international merchants. Spending represented here includes transactions we have identified as online. NAB's estimate of the online retail market is larger than that of the official ABS measure of Online retail trade as it covers businesses that may not be within the remit of the ABS business register, such as overseas online retailers.

In the previously published series, we were using online retail sales by merchants with turnover greater than $2.5m ('Corporate') as a proxy for online sales growth of the whole online market. This was due to the shorter time series of the previous market estimate and associated seasonal adjustment issues. With the new extract, we now have sufficient time series, and the growth rates represented are for the total market – i.e. Corporate and SME combined in a single series.

The data captures electronic retail online transactions and is therefore subject to the changing nature and take-up rate of electronic payment methods. Hence, change in growth in the overall transaction value may be attributable to either an increased preference towards a payment type by consumers (such as buy now pay later schemes), or a change in the level of spending across the economy by consumers, i.e. a pick-up in nominal online sales. We continue to work to isolate these effects.

Customer spending is based on where the customer lives, which may or may not be where the actual spending activity occurs. Customers without an Australian residential address are excluded.

These estimates are developed from transaction micro level data are then aggregated to higher level categories based on transaction attributes. The data is made representative of national sales activity by applying both demographic attributes to customer location using the most recent ABS Estimated Resident Population, and comparing NAB transaction data to RBA payments system data. Changes in these data is reflected in the NORSI market size estimate timeseries.

The industry and state data have been seasonally adjusted using Tramo-SEATS with a trading day and Easter adjustment. Given the relatively short time frame for the data, this seasonal adjustment process should be regarded as provisional: estimates are likely to change as a longer run of data becomes available, and can be revised from month-to-month given the concurrent process. The trends have been extracted from the same process.

Our aim is to have a data series that is as reflective as possible of online retail spend. As such, each month we will revise previous data to take into account changes in payment processing such as chargebacks and delayed payments.

Given these attributes, typically, larger revisions occur to the most recent months, and diminish as the data ages, but the latter effect cannot be excluded.

Our data differs to that of the ABS series as the NAB series covers a broader spectrum of online retailers – overseas merchants selling to Australian residents for example, and categories that substitute for previously retail purchased goods. Categories such as music and book retailing, and electronic games form part of the current online estimate. These are now substitutes for what may have been purchased in-store, but are now provided by online media streaming companies. While these may not fit the strict retail trade definition, our data reveals that they are increasingly being used by customers who previously purchased media in-store. We incorporate these companies into our estimate of online retail sales.

As part of the continual improvement of the series, this month we have revised our total market estimates. We have identified and removed potential wholesale trade transactions made on personal accounts. We have also identified more transactions that are made using a 'stored credentials' technique of online purchases. This technique is increasing in popularity as consumers opt for convenience especially with purchases made using mobile apps. Finally, in March 2018 the RBA made changes to its Payments System Data which we use as an input into our estimate of online total market size. These revisions are retrofitted to the series history.

We have also added a comparison based on metropolitan and regional areas. The definition of these geographical areas is based on the ABS geographical concordance tables, specifically the Greater Capital City Statistical Areas (GCCSAs).

Group Economics

Alan Oster
Group Chief Economist
+(61 0) 414 444 652

Jacqui Brand
Executive Assistant
+(61 0) 477 716 540

Dean Pearson
Head of Behavioural & Industry Economics
+(61 0) 457 517 342

Australian Economics and Commodities

Gareth Spence
Senior Economist
+(61 0) 436 606 175

Phin Ziebell
Senior Economist
+(61 0) 475 940 662

Behavioural & Industry Economics

Robert De Iure
Senior Economist – Behavioural & Industry Economics
+(61 0) 477 723 769

Brien McDonald
Senior Economist – Behavioural & Industry Economics
+(61 0) 455 052 520

Steven Wu
Senior Economist – Behavioural & Industry Economics
+(61 0) 472 808 952

International Economics

Tony Kelly
Senior Economist
+(61 0) 477 746 237

Gerard Burg
Senior Economist – International
+(61 0) 477 723 768

Global Markets Research

Ivan Colhoun
Global Head of Research
+(61 2) 9293 7168