



NAB ONLINE RETAIL SALES INDEX MAY 2019

NAB Group Economics

- The NAB Online Retail Sales Index grew 3.6% in May on a month-on-month, seasonally adjusted basis. This follows a considerably weak April result (-3.3% mom, s.a).
- In year-on-year terms, the NAB Online Retail Sales Index remains positive, up 4.8% (y/y, s.a.) in May. However, this result is compared to May 2018, and it is worth noting that the period January to September 2018 was one of the strongest growth periods in the NAB online retail sales index history.
- After a weak April, sales for all eight online retail categories expanded in month-on-month growth terms in May. The largest sales category, homewares and appliances (+3.7% mom, s.a.), grew in line with the total index. One of the smaller sales categories, takeaway food, recorded the fastest growth in the month (9%). In year-on-year terms, fashion and personal and recreational goods were lower compared to May 2018. For more detail, see Charts 3, 5, 7 & 8 below.
- In month-on-month terms, all states and territories except Tasmania (-2.2% mom, s.a.) and ACT (-0.8%) recorded growth. Of the large sales states, Victoria (5.3%) and NSW (3.6%) led monthly growth.
- This month we have introduced metropolitan and regional resident spend categories to the published series. Australia wide, metropolitan residents accounted for about 68% of online spending in the past 12 months, with regional spending accounting for the remainder (~32%). In May, spend growth in metro areas was higher, at 4.1% (mom, s.a.), relative to regional (3.2%). Victorian regional areas (+6.9%) recorded the highest online retail spend growth. The abovementioned state contraction in online retail sales for Tasmania was associated with a contraction in regional area sales, which account for a larger share of online sales for that state. See Charts 15 and 16 for more detail.
- At +4.1%, domestic online retailers performed better in month-on-month terms relative to international competitors (+1.5% mom, s.a.). In year-on-year terms, from our series, considerable weakness in international online sales remains. See charts 13 and 14, and table 3 for category growth and share.
- We estimate that in the 12 months to May, Australians spent \$29.23 billion on online retail, a level that is just over 9% of the traditional bricks and mortar retail sector (April 2019, Australian Bureau of Statistics), and about 15.5% higher than the 12 months to May 2018.
- See comments from NAB's Chief Economist, Alan Oster, on page 2.

Year-on-year growth (% s.a.)			
	Mar-19	Apr-19	May-19
NAB Online Index	6.8	2.4	4.8
ABS Traditional Retail	3.5	2.8	

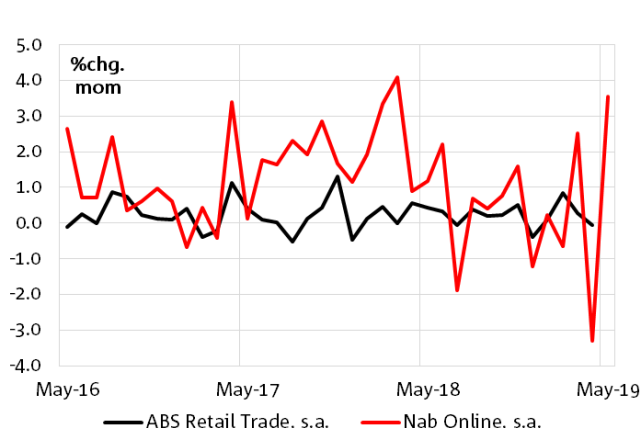
Month-on-month growth (% s.a.)			
	Mar-19	Apr-19	May-19
NAB Online Index	2.5	-3.3	3.6
ABS Traditional Retail	0.3	-0.1	

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

Chart 1: Online retail sales



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



NAB Chief Economist, Alan Oster commented:

Our NAB Online retail sales index data indicates a return to sales growth in May 2019, after considerable weakness in April. Online retail sales tend to be more volatile than broader retail, experiencing far greater monthly fluctuations. Looking through the month-to-month volatility, while sales growth through the year is still positive, and improved in May, we observe a sales pattern that is markedly slower than the same period in 2018. It is worth noting however, that year-on-year growth comparisons are made to a period of elevated sales in 2018, a period with major new online merchants to Australia, and also pre-GST exemption effects.

By category, after recording the biggest contraction in April, the small sales category of takeaway food led month-on-month growth in May. In recent months this category had recorded considerable weakness, which may indicate structural changes, especially given high profile exits and consolidation. The largest spend category, homewares and appliances, recorded growth in line with the broader index in May, but was barely up when compared to the same period 2018, where growth was considerably stronger. While department stores continue to record the strongest year-on-year growth, this category has slowed post the introduction of the GST on all goods in July 2018.

NT recorded the strongest rate of growth in online sales in May, albeit with this series considerably variable, given a relatively small representation of total online sales. Of the key sales states, Victoria recorded the strongest growth in May, along with NSW, while Tasmania was weakest in May. Victoria also led year-on-year growth.

This month we have added a series which looks at sales by metropolitan and regional areas in Australia. At the macro level, these series are strongly correlated. However, at a state level, the series can diverge considerably. For example, this month the growth rates for Metropolitan (4.1%) and Regional (3.2%) were both positive and in line with overall growth. In contrast, the result for Tasmania was negative in the month, due to a strongly negative result in regional areas for that state, where the majority of spending occurs.

By merchant location, domestic online retailers continue to outpace their offshore counterparts, with international online retailers growing at a much lower rate in month-on-month terms. Sales growth contracted for international retailers when compared to May 2018.

It is worth noting here that our definition of a domestic online retailer can include those merchants whose parent organisation might be overseas with an Australian subsidiary. Solely using GST as a key defining characteristic of domestic and international is no longer appropriate given changes made in July 2018.

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

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

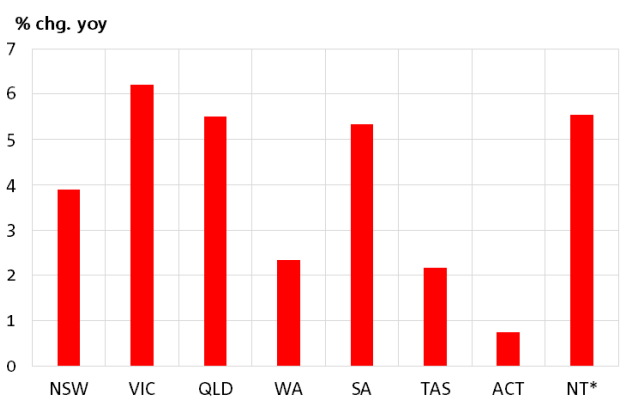
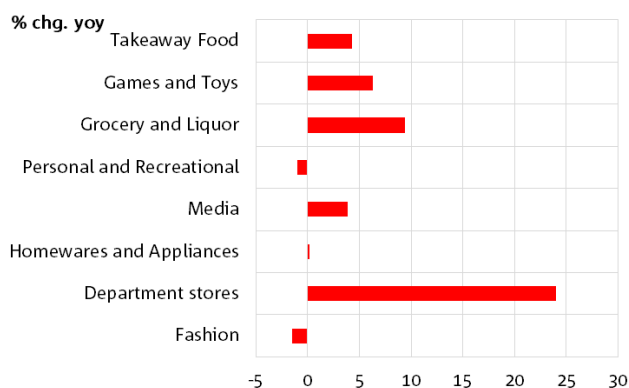


Chart 5: Online retail sales by industry, mom s.a.

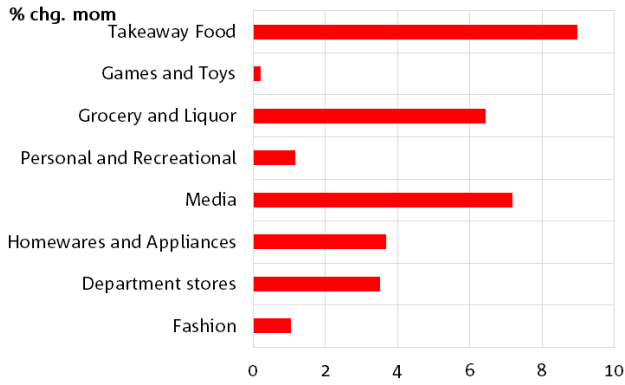
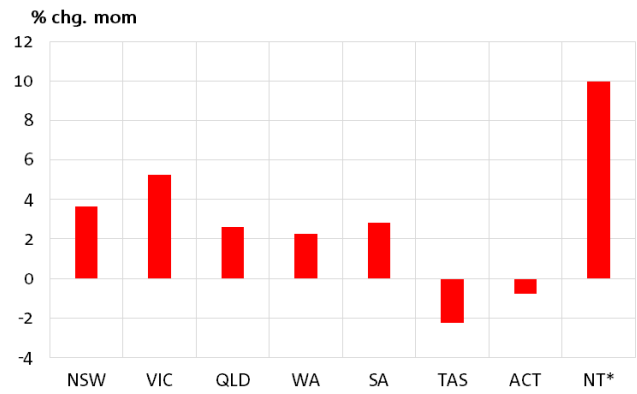
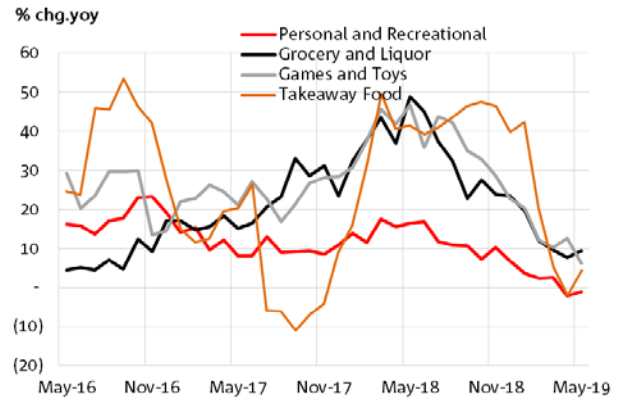
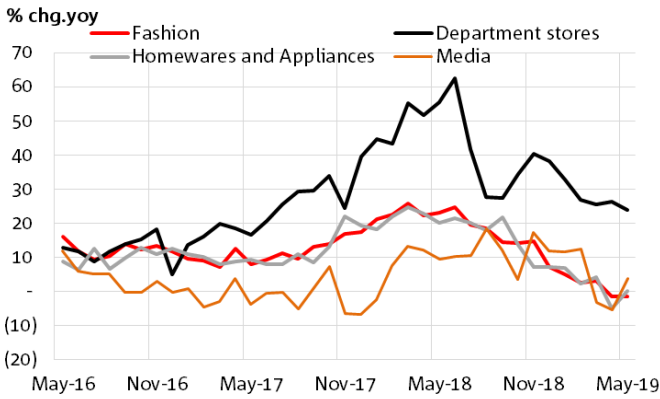


Chart 6: Online retail sales by state, mom s.a.

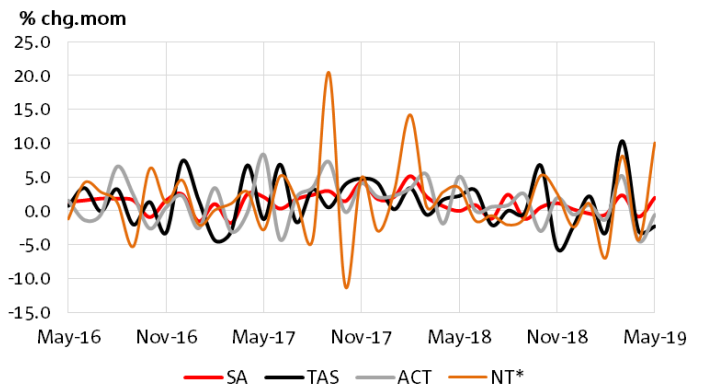
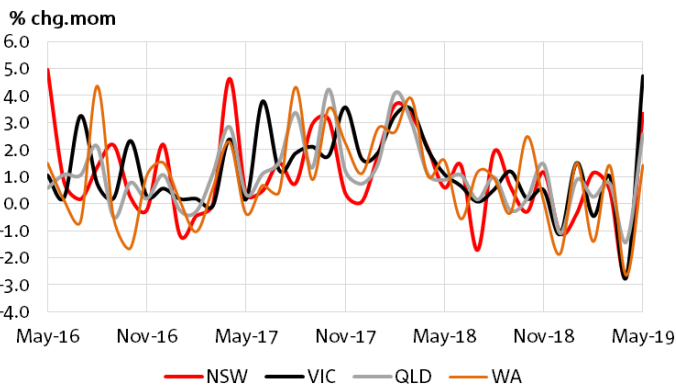


* Note Northern Territory series is highly variable, use with caution

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

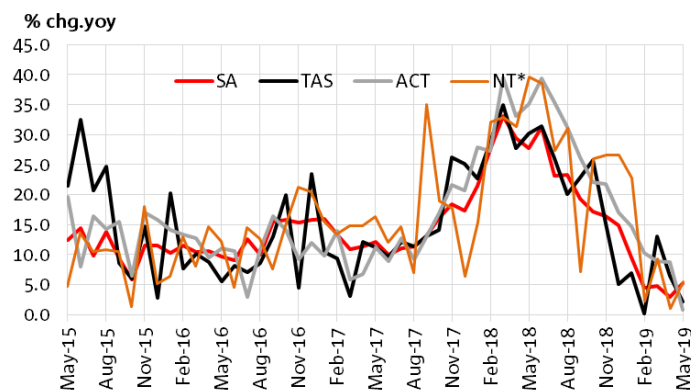
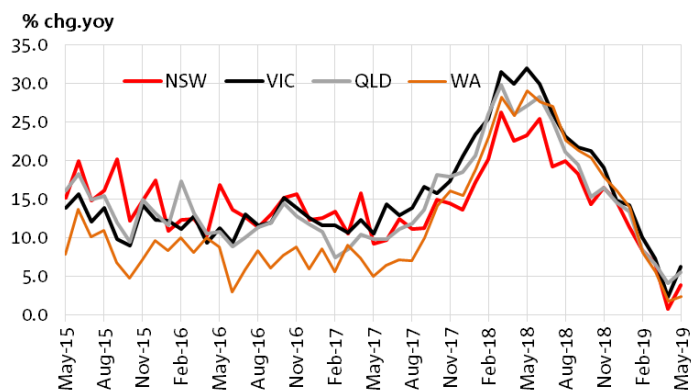


Charts 9 & 10: Online sales by state, trend



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

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



Charts 13 & 14: Online sales by merchant location

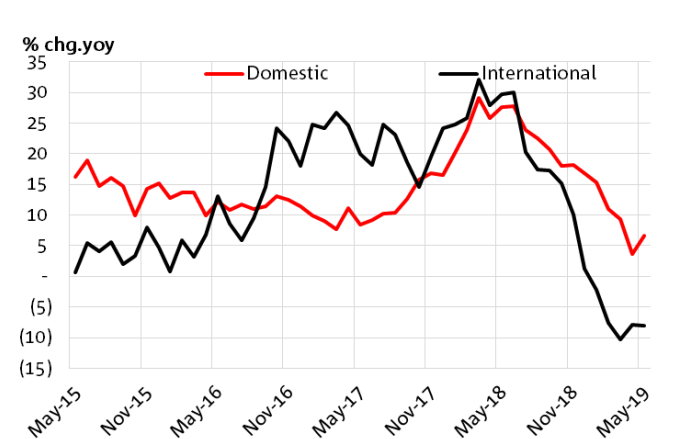
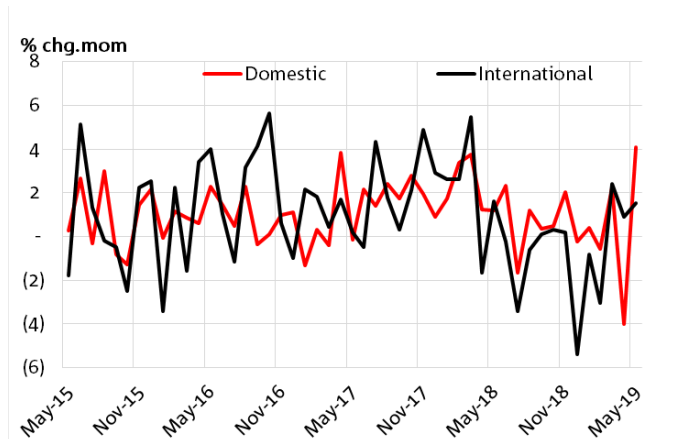


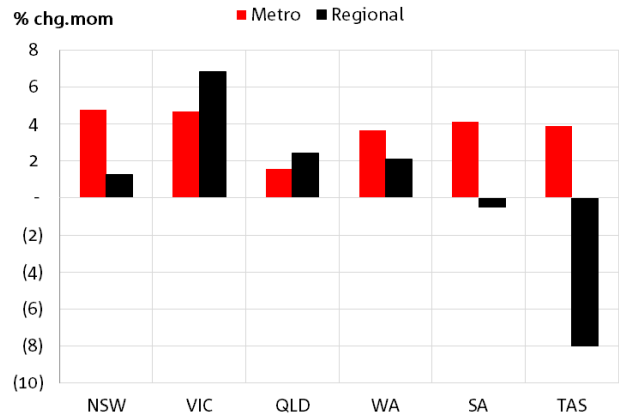
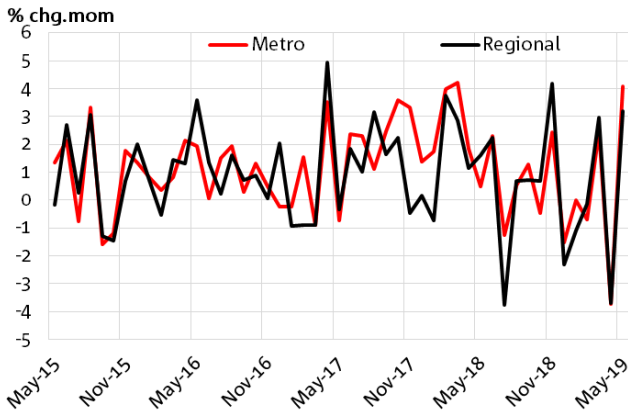
Table 3: Online sales by category and merchant location- Domestic, International(Int'l)

%	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	1.7	0.4	-1.2	-6.5	77.5	22.5	12.7
Department stores	5.2	-5.6	30.5	-7.8	85.8	14.2	13.2
Homewares and appliances	4.0	-0.6	0.8	-16.9	95.8	4.2	27.3
Media	7.9	1.9	6.4	-20.7	90.9	9.1	9.2
Personal and Recreational	1.5	2.3	0.6	-9.4	86.3	13.7	14.9
Grocery and Liquor	6.3	8.4	10.2	-9.2	94.2	5.8	13.8
Games and Toys	-1.8	9.1	10.8	4.5	75.2	24.8	6.4
Takeaway Food	10.0	1.9	7.3	14.0	97.7	2.3	2.6
All categories	4.1	1.5	6.6	-8.1	88.8	11.2	100

METROPOLITAN AND REGIONAL SPEND

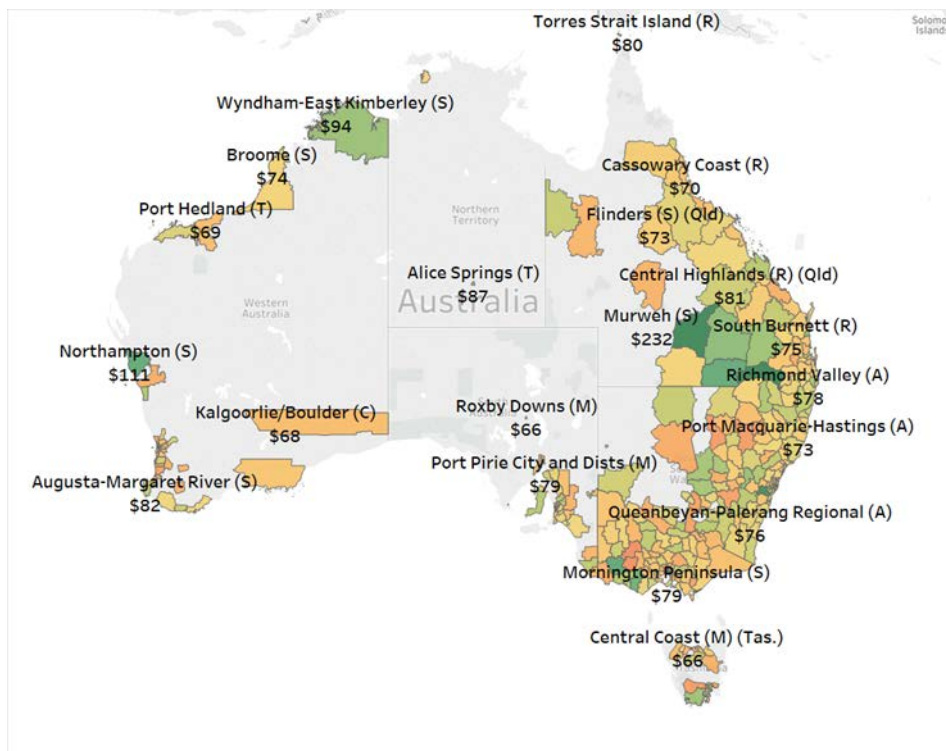
Chart 15: Online retail sales growth by region, mom s.a.

Chart 16: Online retail sales growth by State region, mom s.a.



A HEATMAP VIEW OF AVERAGE ONLINE SPEND BY LOCAL GOVERNMENT AREA

Online spend can vary dramatically depending on where people live. The map below shows average spend for each online transaction. Not all the top average spend areas are in capital cities, nor are they all in remote areas.



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 (for more details see Appendix). 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 ABS Estimated resident population, and comparing NAB transaction data to RBA payments system data.

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. Note that the NORSI series prior to December 2018 was using Census Bureau Seasonal adjustment, and a Henderson 13 was applied for trend.

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).

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