



# NAB ONLINE RETAIL SALES INDEX DECEMBER 2020

NAB Group Economics

- The NAB Online Retail Sales Index contracted in December (-7.1%), from growth in November (1.3%), on a month-on-month, seasonally adjusted basis.
- In year-on-year terms, the growth in the NAB Online Retail Sales Index has slowed (33.8% y/y) from the record growth between April and November, but remains elevated relative to recent years.
- Takeaway food, and grocery and liquor, were the only categories to record growth in seasonally adjusted month-on-month terms. The biggest fall in month-on-month growth was recorded for the largest category, homewares and appliances, which contributed heavily to the headline result. This category, however, is still up 23.2% for the year. Other large categories, department stores, personal and recreational, and fashion, also contracted along with smaller categories, games and toys, and media. Grocery returned to growth in December after contracting over the past three months. For more detail, see Charts 3, 5, 7 & 8 and table 3 below.
- In month-on-month terms, SA, which recorded the strongest monthly sales growth in November, contracted heavily in December, along with TAS, and ACT. While all states contracted in the month, sales growth contraction for NSW, WA, and NT was better than the national average. In year-on-year terms, VIC still leads, along with other large sales state NSW. Online sales for Vic are now about one and a half times what they were for the same month 2019. See charts 4,6,9-14, and table 3 for more detail.
- After strong growth in November, regional areas recorded a larger contraction in December, relative to metro areas. The results were quite mixed, even within states, with metro VIC performing better than the rest, along with metro NSW, but regional VIC the worst performing. TAS was the only state where metro sales contraction was worse than regional areas. See Charts 15 and 16 for more detail.
- Sales growth for both domestic and international merchants contracted in month-on-month terms, with domestic online retailers weaker, after outperforming international in November. In line with headline categories, grocery and liquor, and takeaway, were the only categories to record growth for domestic, while sales growth was only positive for international media. See charts 13 and 14, and table 4 for category growth and share.
- We estimate that in the 12 months to December, Australians spent \$44.18 billion on online retail, a level that is around 12.6% of the total retail trade estimate (Preliminary Dec 2020, Series 8501, Australian Bureau of Statistics), and about 44.4% higher than the 12 months to December 2019.
- See comments from NAB's Chief Economist, Alan Oster, on page 2.

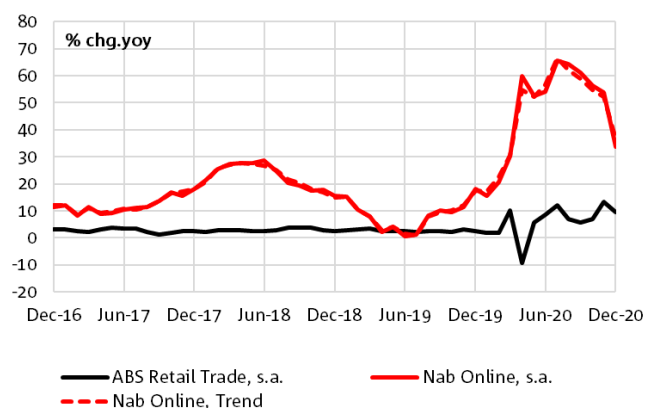
Year-on-year growth (% s.a.)			
	Oct-20	Nov-20	Dec-20
NAB Online Index	56.4	53.6	33.8
ABS Traditional Retail	7.1	13.3	9.4*p

Month-on-month growth (% s.a.)			
	Oct-20	Nov-20	Dec-20
NAB Online Index	-1.3	1.3	-7.1
ABS Traditional Retail	1.4	7.1	-4.2*p

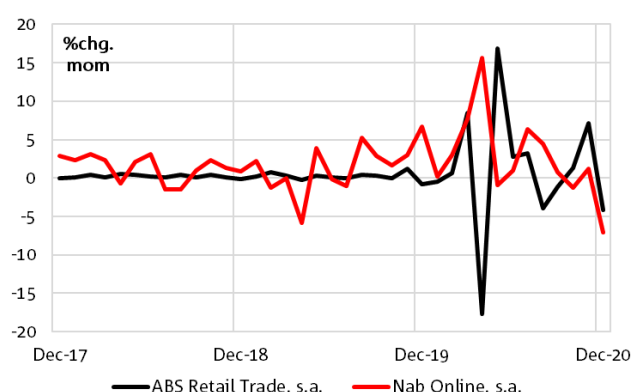
Sources: NAB, Australian Bureau of Statistics (ABS). \*Data seasonally adjusted (s.a.) using TRAMO/SEATS (incl. trading-day & Easter adjustment.)

\*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.)**



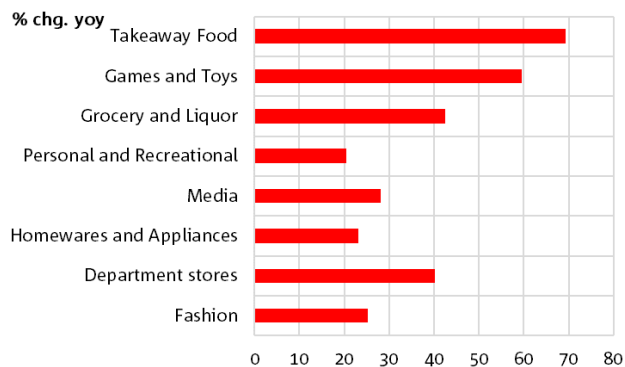
**NAB Chief Economist, Alan Oster commented:**

In month-on-month terms, our NAB Online Retail Sales Index contracted in December, after moderate growth in November. When comparing this December to 2019, i.e. in year-on-year terms, the index continues to grow strongly. However, this rate of growth has slowed from the rapid growth between April and November (50% to 60%), to around the rate last recorded in March (~30%). It is likely that a few factors contributed to the sales volatility of the past few months. October monthly online sales contracted relative to September, as lockdowns ended and sales growth returned to instore. It's also possible that some spending was postponed in anticipation of the November sales events. The rebound in November appears to be driven by the sales events, with particularly strong growth for those in regional areas. It's worth noting though, that the increase in sales in November seems to have been mostly driven by a boost to average spend per transaction, as the total volume of transactions were lower than the same monthly change period 2019. Despite the monthly growth from October to November being more moderate relative to the same period 2019, the post sales slowdown in December for online was much larger in 2020. This might partly be due to the base effect from rapid growth for most of 2020, appearing more stark when growth moderates.

Not every category contracted in December. Food still played a major role in the festive season, whether it came in the form of delivered meals in takeaway food or by online ordering of grocery and liquor. With the exception of the immediate post lockdown period between September and November, the latter category, with the second largest online sales volumes, has generally recorded rapid growth over the past 18 months. Growth for grocery and liquor was not uniform in December, with an expansion in NSW, ACT, NT and TAS partly offset by a contraction in the other states. For smallest sales category, takeaway food, such high growth has resulted in a larger share of online sales. A year ago, this category represented about 3.8% of the index, but with rapid growth over the past year, it now represents about 5.2%. After strong growth last month, the largest sales category, homewares and appliances, contracted significantly in December, across all states and territories. But it is worth putting this months number in perspective, as the category is still up 23.2% compared to the same month 2019.

Overall growth contracted across all states and territories in December, on a month-on-month basis, with TAS fairing worst. The apple isle also recorded the slowest growth over the year, but this slump appears to be Hobart based, with regional areas performing better. NT followed on from strong growth last month, to lead sales growth in October, though it remains the slowest in year-on-year terms. Of the large sales states, NSW contracted the least, with metro area growth rate on par with VIC. However, VIC regional areas recorded a much larger contraction, contributing to the headline result for that state. VIC has recorded a contraction in sales in each of the past three months, coinciding with the reopening of physical stores. But in year-on-year terms, the state's growth remains the strongest, so it is more likely that the recent contraction is a result of the large base effect from extraordinary growth mid-year.

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



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

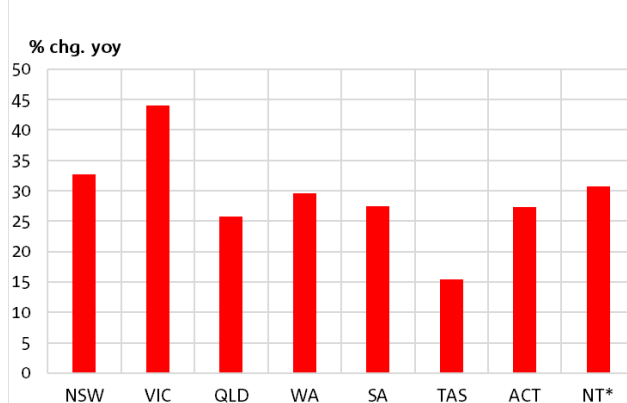


Chart 5: Online retail sales by industry, mom s.a.

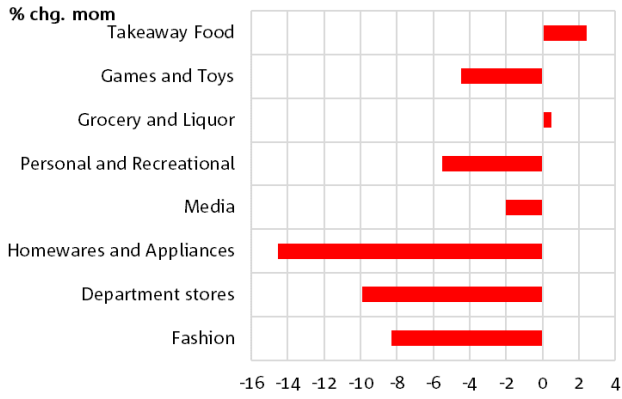
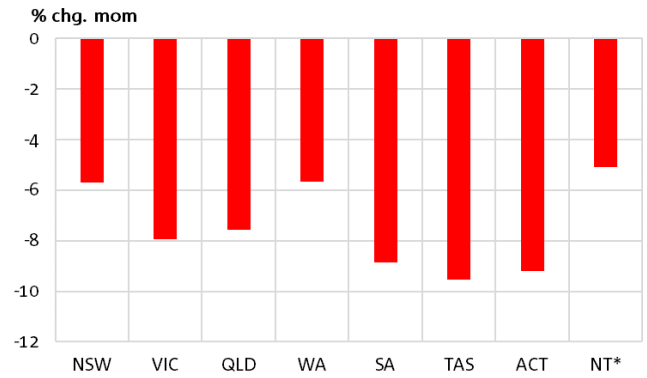
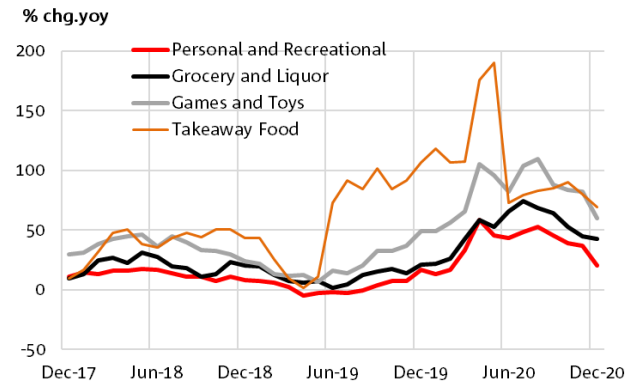
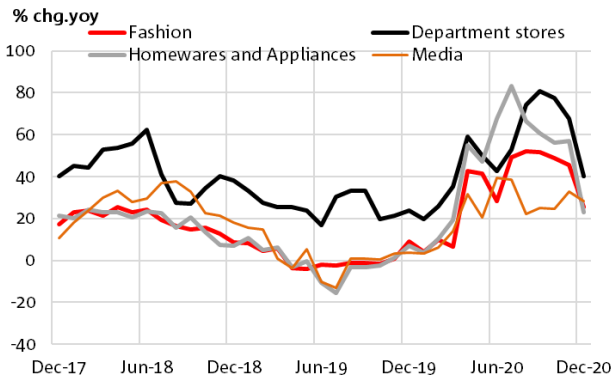


Chart 6: Online retail sales by state, mom s.a.

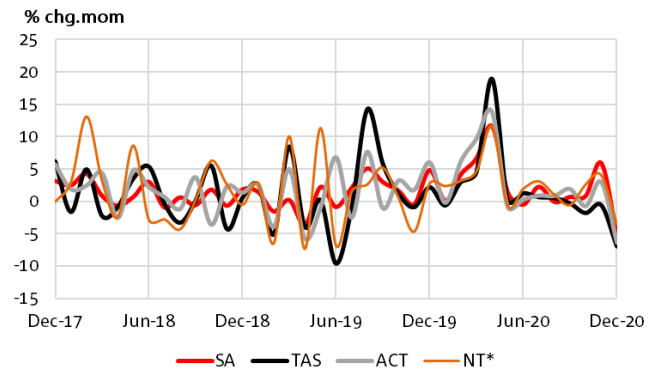
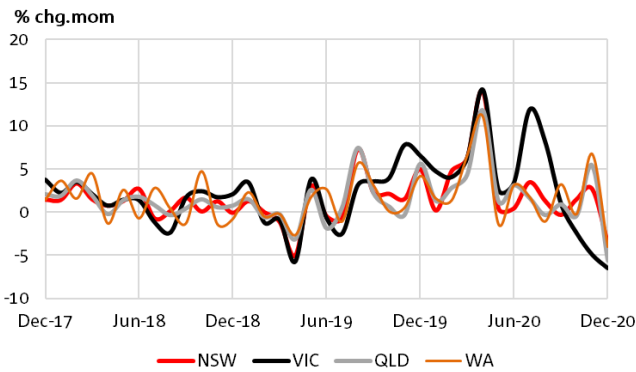


\* Note that the series representing Northern Territory is highly variable and should be used with caution.

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

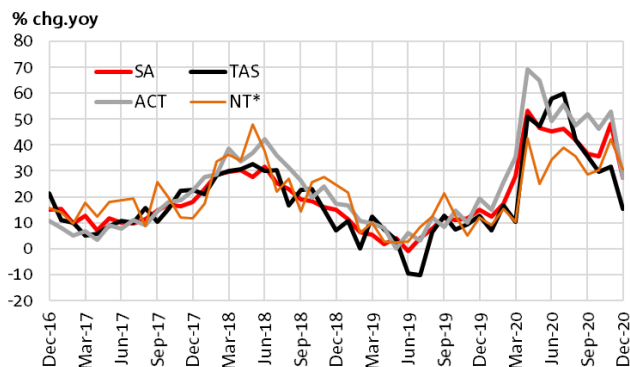
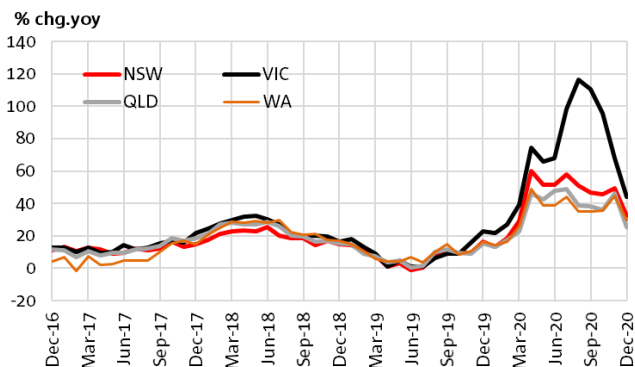


Charts 9 & 10: Online sales by state, trend



\*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

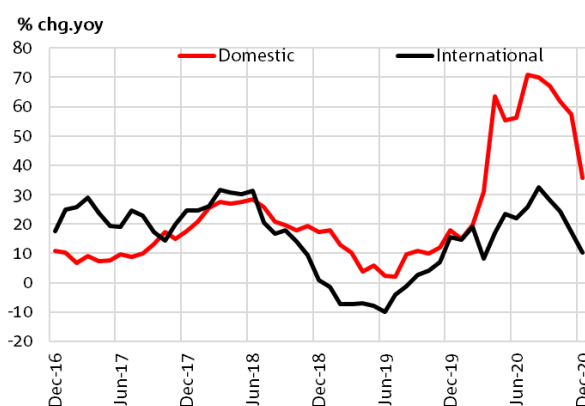
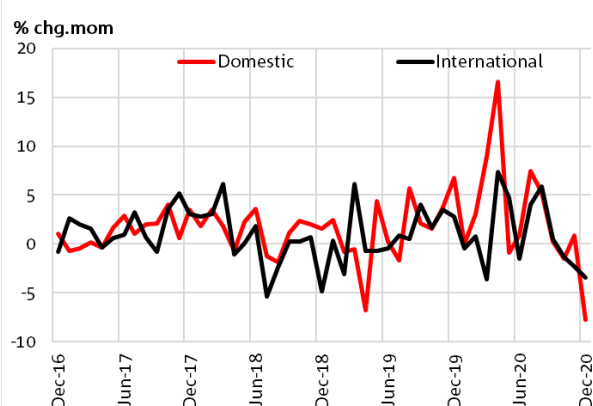


Table 3: Online sales by category and state

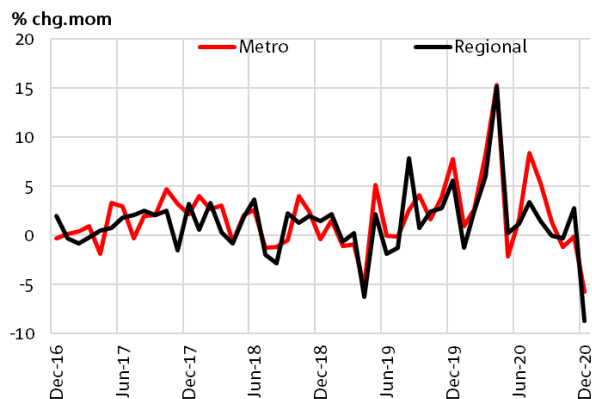
% (mom,s.a.)	Fashion	Dep't stores	Home & appliances	Media	Personal and Rec.	Grocery and Liquor	Games and Toys	T'away Food	Total
ACT	-12.7	-10.2	-19.1	-3.7	-8.2	5.7	-10.7	10.0	-9.2
NSW	-5.3	-9.1	-11.9	-4.3	-5.3	2.9	-4.4	5.5	-5.7
NT	-14.4	-3.4	-9.7	-4.6	-4.8	1.7	-2.0	4.8	-5.1
QLD	-6.1	-6.9	-18.6	-6.1	-5.5	-0.6	-2.3	5.8	-7.6
SA	-11.3	-15.8	-13.8	-1.0	-8.7	-3.5	-5.0	10.9	-8.9
TAS	-9.2	-4.8	-20.4	-7.8	-12.8	4.7	-12.5	9.5	-9.5
VIC	-10.9	-12.8	-13.6	-1.9	-4.9	-0.5	-4.9	-3.2	-7.9
WA	-10.1	-5.5	-16.6	14.7	-4.7	-0.7	-5.4	6.4	-5.7
<b>Total</b>	<b>-8.3</b>	<b>-9.9</b>	<b>-14.5</b>	<b>-2.0</b>	<b>-5.5</b>	<b>0.5</b>	<b>-4.5</b>	<b>2.4</b>	<b>-7.1</b>

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

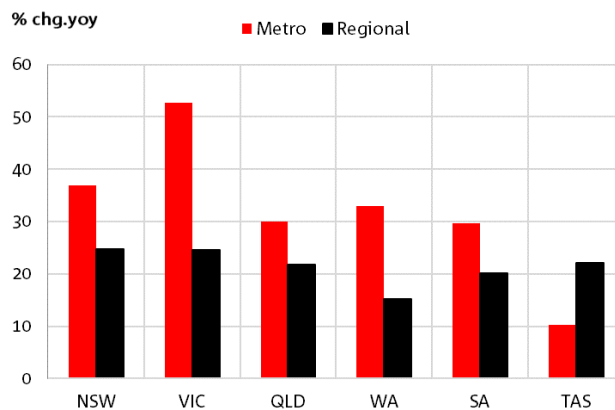
%	Monthly growth – Domestic	Monthly growth – Int'l.	Annual growth – Domestic	Annual growth – Int'l.	Domestic Share of Category Spend	Int'l Share of Category Spend	Overall Category Spend Share
Fashion	-10.5	-5.4	29.1	-3.1	83.0	17.0	11.0
Department stores	-11.2	-0.9	42.1	22.2	90.6	9.4	14.8
Homewares and appliances	-15.6	-4.5	22.6	15.9	96.0	4.0	24.9
Media	-3.3	3.1	29.3	28.1	90.9	9.1	6.7
Personal and Recreational	-5.4	-3.4	22.0	4.6	88.9	11.1	13.5
Grocery and Liquor	0.8	-0.8	43.7	16.0	96.7	3.3	15.1
Games and Toys	-2.8	-5.8	76.9	13.0	77.6	22.4	8.7
Takeaway Food	1.3	-3.0	72.3	-48.9	99.3	0.7	5.2
All categories	-7.5	-2.0	36.3	11.2	91.1	8.9	100

## METROPOLITAN AND REGIONAL SPEND

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

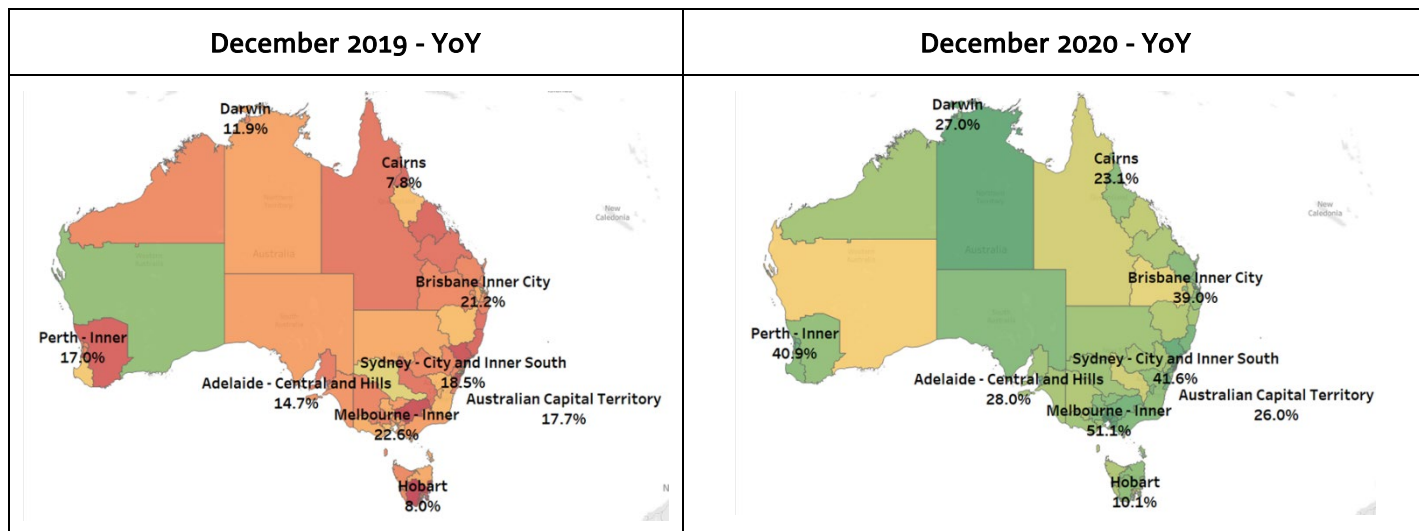


**Chart 16: Online retail sales growth by state region, yoy s.a.**



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

This month we look at the change in overall online spend by ABS statistical area (SA4), comparing December 2019 relative to the year prior, and December 2020 relative to December 2019 (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 December 2019, growth for the index (+18% yoy) was relatively rapid compared to the surrounding months. The map on the left shows many areas in orange and red, indicating where the online sales growth rate was below the national average. In contrast, by December 2020, many areas are green, indicating that they are closer to the national average, and that online growth was far more widespread at the end of 2020.



## 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).

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