



# NAB ONLINE RETAIL SALES INDEX MAY 2020

NAB Group Economics

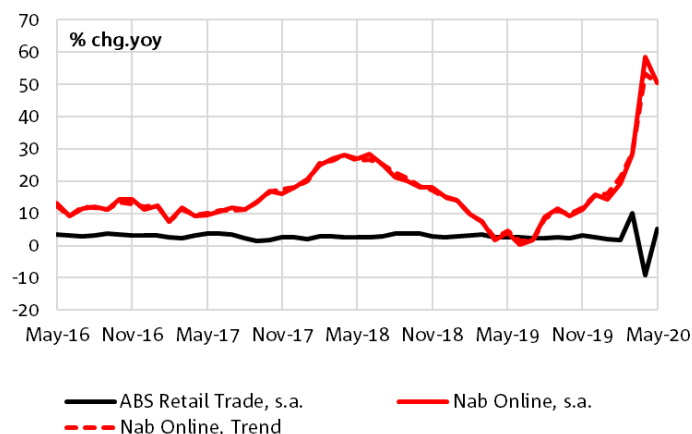
- The NAB Online Retail Sales Index contracted slightly in May (-1.0%), on a month-on-month, seasonally adjusted basis. This result comes after recording the most rapid growth in the series history in April (16.4%).
- In year-on-year terms, while the growth in the NAB Online Retail Sales Index slowed a little (+50.4% y/y s.a.), this is the second highest year-on-year growth rate comparison in the series history, after the April result.
- Five of eight categories recorded a sales contraction in month-on-month growth terms. Takeaway food, grocery and liquor, and to a lesser extent, fashion, went against the broader trend. While sales growth for grocery and liquor was much slower in May, this category has recorded continuous growth each month for the past year. Games and toys, which grew rapidly last month, recorded the largest sales contraction in May. A big contributor to the drop in the month was from the large sales category of personal and recreational goods, which had recorded strong growth in the two prior months. For more detail, see Charts 3, 5, 7 & 8 below.
- In month-on-month terms, only Qld. recorded online sales growth, with Vic. virtually flat. The largest contraction in sales growth was in WA, with Tas., ACT and NT not far behind. In year-on-year terms, all states recorded double digit growth, with ACT leading overall, and Vic. leading the larger sales states.
- Sales growth in regional areas remained positive in May, with the overall sales growth contraction due to the metro result. In year-on-year terms, only Tas. recorded faster growth for regional areas relative to metro in May. See Charts 15 and 16 for more detail.
- The fall in the month was driven by domestic online retailers, with sales at international merchants remaining positive. The largest sales share for international merchants, fashion, grew strongly in the month, along with department stores. For domestic merchants, the result by category mostly mirrored the headline, with only takeaway, and grocery and liquor recording growth in the month. See charts 13 and 14, and table 3 for category growth and share.
- We estimate that in the 12 months to May, Australians spent \$34.18 billion on online retail, a level that is around 10.3% of the total retail trade estimate (Preliminary May 2020, Series 8501, Australian Bureau of Statistics), and about 18.7% higher than the 12 months to May 2019.
- See comments from NAB's Chief Economist, Alan Oster, on page 2.

	Year-on-year growth (% s.a.)		
	Mar-20	Apr-20	May-20
NAB Online Index	28.4	58.4	50.4
ABS Traditional Retail	10.1	-9.2	5.3*p

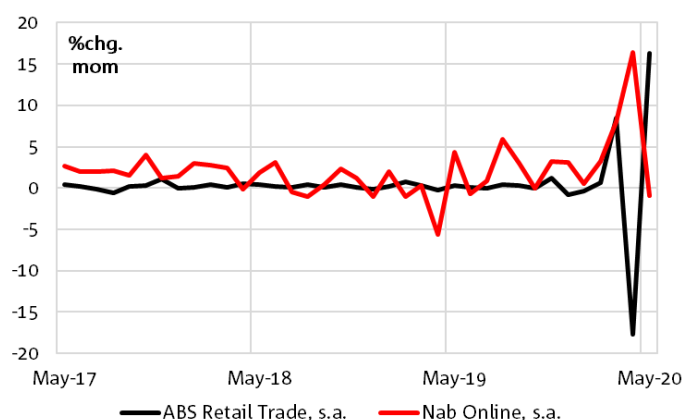
	Month-on-month growth (% s.a.)		
	Mar-20	Apr-20	May-20
NAB Online Index	8.1	16.4	-1.0
ABS Traditional Retail	8.5	-17.7	16.3*p

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:**

Our NAB Online Retail Sales Index data took a breather in May from the record growth that has been recorded over the past two months. While online retail sales growth is typically volatile month to month, the recent changes that COVID-19 has brought to the broader economy, and day to day life, has made it even more so. From our observations, the general trend for online retail is up. In this way, Australian online retail sales closely match those of other key international online retail markets. For example, the US census bureau quarterly ecommerce estimate for online retail is about 11.5% of total US retail sales, a figure not too dissimilar to our estimate for Australia. The two series have broadly followed a similar growth trajectory. When we began the NAB series nearly a decade ago, our online series was about 4% of all retail sales, again, similar to the US census bureau comparison. Over time, both series have seen high volatility, but have generally outpaced broader retail. So, while we are expecting ABS retail trade to be faster than online retail in May in month-on-month terms, the trend for online remains far stronger.

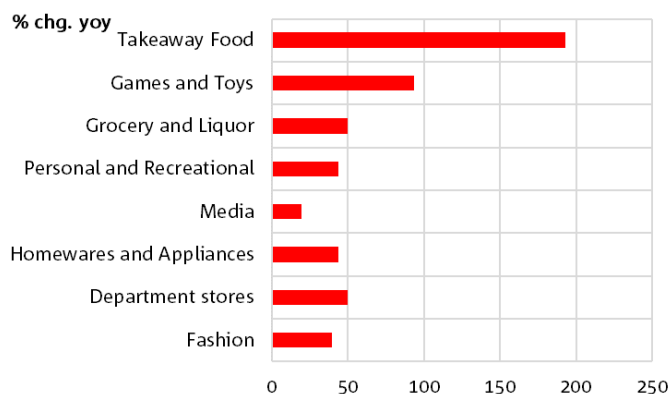
In the month, growth was strongest for the smallest sales category, takeaway food, which added to April’s strong growth, albeit at a slower pace than the previous months. The contraction in online sales for this category, which occurred during the early phase of the pandemic, has been effectively erased by the recent growth. We estimate May 2020 sales in this category to be almost three times larger than May 2019. This growth over the past year has occurred during a period where there were high profile exits and entries, and also an increased focus on platform commissions from local start-ups. While recording more moderate growth over the same period, the much larger category, grocery and liquor, has contributed more to the headline number. So despite the rapid growth of takeaway, it remains the smallest category, for now at least, given growth in other, much larger categories, over the past twelve months.

The three most populous states represent just over 80% of all online sales, slightly above their share of the population. Of these three states, only Queensland recorded growth in the month, with Victoria leading over the year. Over the past 12 months, although elevated, online sales growth on average has been more stable in Queensland relative to all other states.

Only regional areas grew in the month, but at a rate much lower than April. Metro areas, which represent the majority of online spend, contracted after two rapid months of sales growth. For regional areas, in year-on-year terms, growth has been driven by the two largest sales states, NSW and Vic., along with smaller sales state, Tasmania.

In terms of merchant location, sales at international merchants, which didn’t grow as fast last month, slowed slightly, but remained positive. In contrast, sales growth turned negative in month-on-month terms for domestic retailers, following on from two exceptionally strong months.

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



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

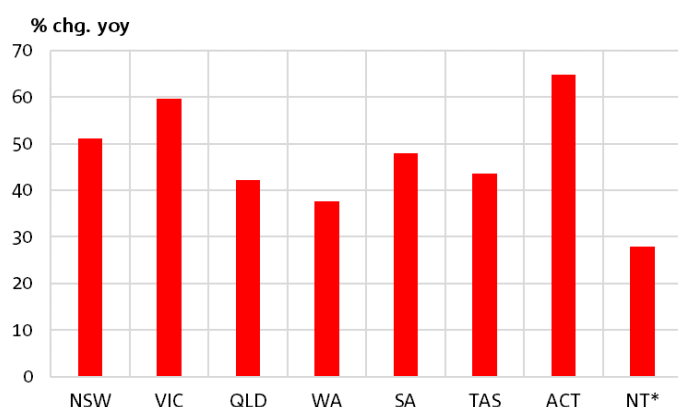


Chart 5: Online retail sales by industry, mom s.a.

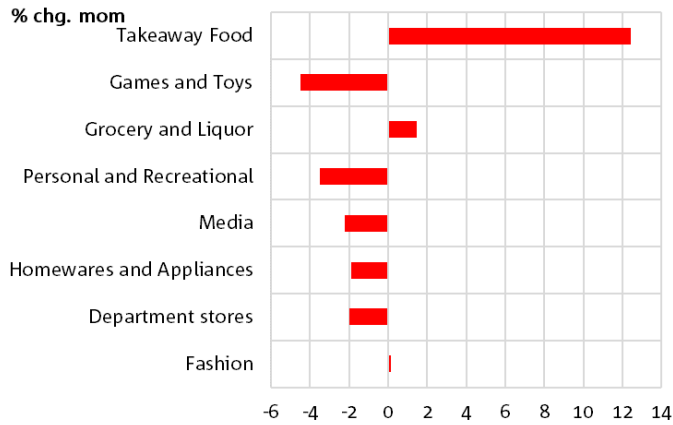
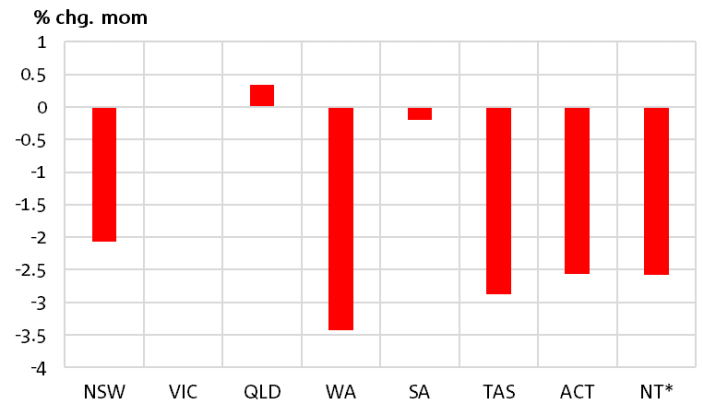
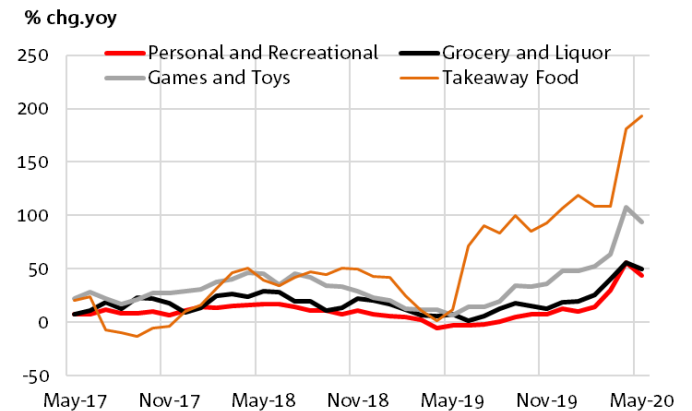
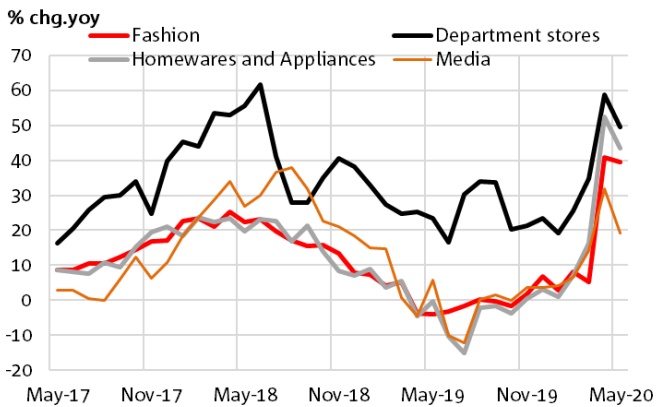


Chart 6: Online retail sales by state, mom s.a.

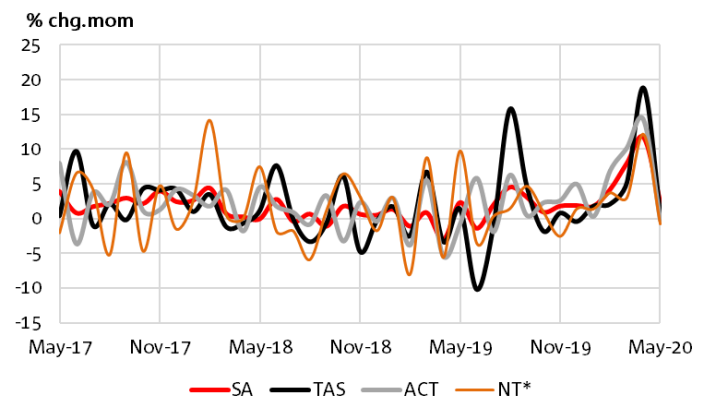
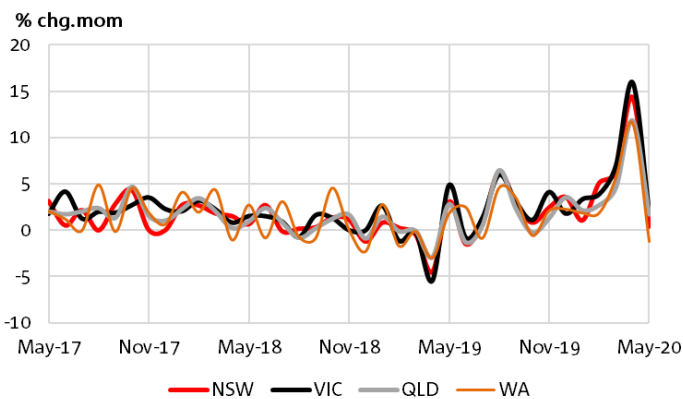


\* Note that the series representing Northern Territory is highly variable and should be used with caution.

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

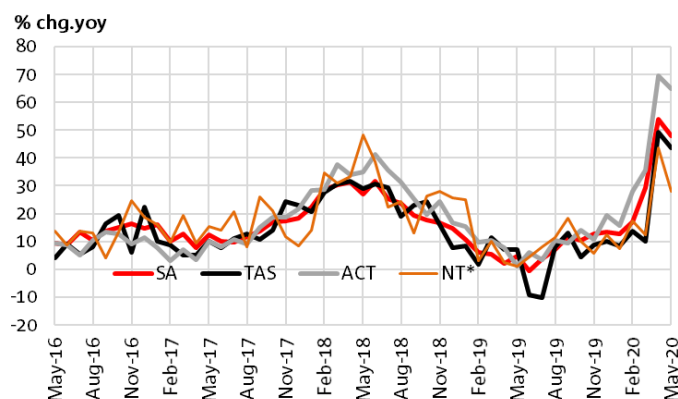
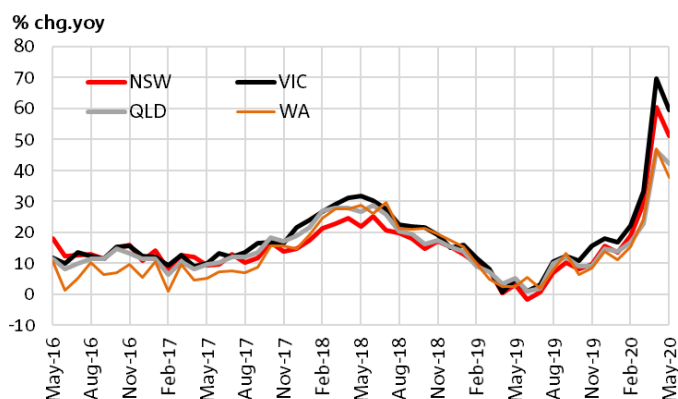


Charts 9 & 10: Online sales by state, trend



\*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

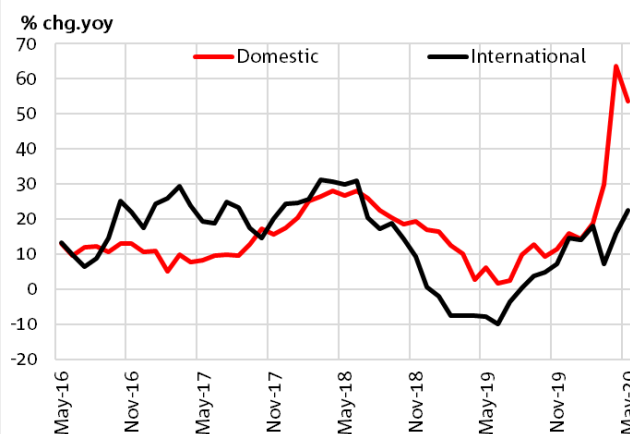
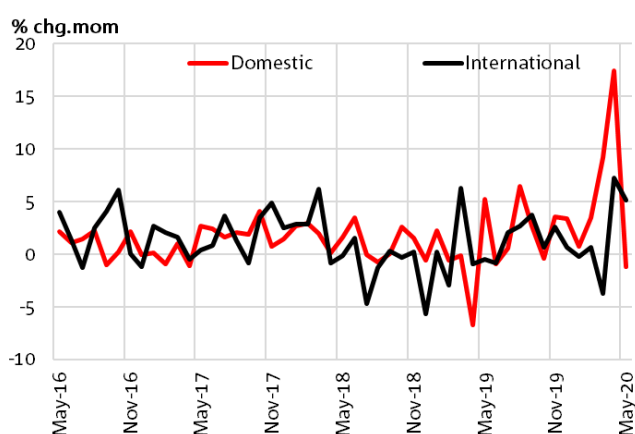


Table 3: Online sales by category and merchant location- Domestic, International (Int'l)

%	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	-2.4	11.5	51.7	2.0	80.4	19.6	11.5
Department stores	-3.2	7.7	55.2	11.0	89.1	10.9	14.5
Homewares and appliances	-1.8	4.0	44.1	32.6	95.5	4.5	24.5
Media	-3.1	1.8	18.0	20.3	90.4	9.6	7.5
Personal and Recreational	-3.2	3.5	45.3	14.3	87.6	12.4	14.4
Grocery and Liquor	1.2	-6.7	51.1	-10.8	95.7	4.3	15.0
Games and Toys	-3.1	3.7	105.0	86.7	74.2	25.8	7.9
Takeaway Food	12.6	9.3	196.2	-16.4	98.6	1.4	4.8
All categories	-1.2	5.1	53.6	22.5	89.8	10.2	100

## METROPOLITAN AND REGIONAL SPEND

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

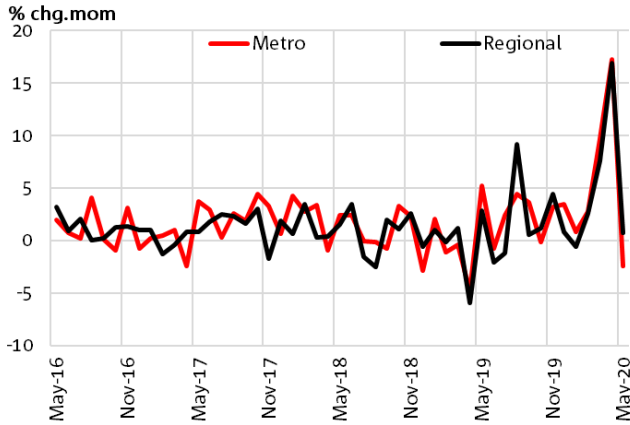
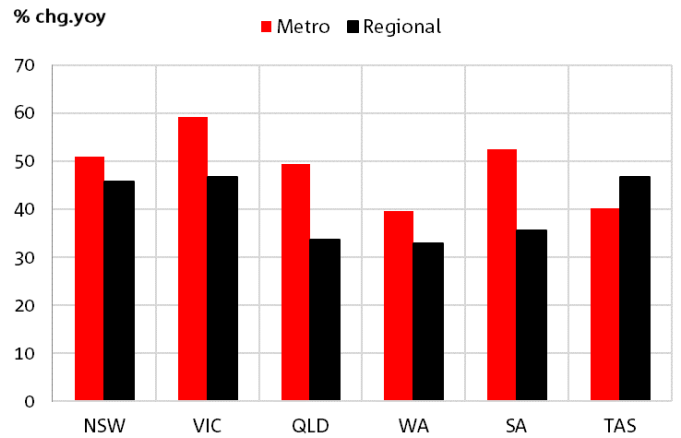
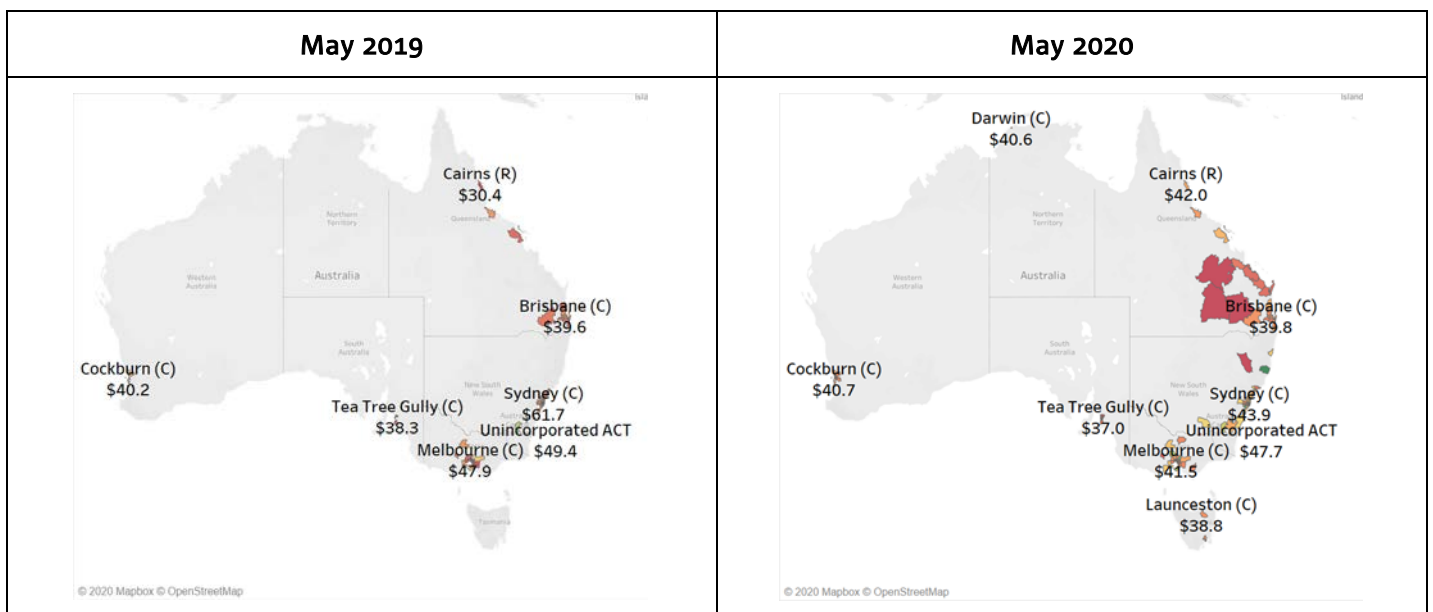


Chart 16: Online retail sales growth by state region, yoy s.a.



## A HEATMAP VIEW OF THE AVERAGE SPEND – TAKEAWAY FOOD - BY LOCAL GOVERNMENT AREA

Last month we showed the change in the number of online transactions for fashion, and how the number of areas that met our minimum criteria for display had increased. The map below shows key areas for online takeaway food purchases by average transaction spend, with red areas lower average spend and green areas higher. Notable in this map is how confined to major population centres the category was in 2019, with much of the map empty. In May 2020, there are now many more areas with sufficient volumes of transactions to display. Also notable is that average transaction size for some areas has increased. People on the Mornington Peninsular in Victoria, for example, are now ordering about \$8 more per transaction in May 2020 relative to 2019, and Cairns about \$12. In the major capitals the value per transaction is either the same or lower. For these areas, there has been a large increase in the number of transactions, lowering the average spend in each transaction.



## 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. 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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