



NAB ONLINE RETAIL SALES INDEX DECEMBER 2021

NAB Group Economics

- Growth contracted for the NAB Online Retail Sales Index in December (-4.5%), following on from a contraction in November (also -4.5%), on a month-on-month, seasonally adjusted basis.
- In year-on-year terms however, the NAB Online Retail Sales Index continued to grow, albeit slowing in December (8.2% y/y).
- A contraction in growth was recorded in month-on-month terms for all categories in December, except takeaway food, grocery and liquor and media categories. The contraction in large sales category, homewares and appliances, and department stores was significantly worse than the overall index change, whereas personal and recreational goods was in-line with the overall decline. In year-on-year terms, takeaway food, grocery and liquor, department stores, and fashion recorded considerable growth in December. Given their weights in the index, for 2021, there has been a clear contribution to growth from both department stores, and grocery and liquor retailing. For more detail, see Charts 3, 5, 7 & 8 and table 3 below.
- All states except SA and NT recorded a contraction in month-on-month growth in December, with NSW, ACT and TAS fairing worse than the overall, and VIC slightly better (albeit still contracting). This is somewhat to be expected as the string of lockdowns ended in October, and in-store sales returned. See charts 4, 6, 9-14, and table 3 for more detail.
- The contraction in growth was higher in regional areas, relative to metro areas. The monthly result was heavily influenced by NSW, VIC, QLD, and SA, with a fall in regional areas much worse than metro. In contrast, the drop for TAS was more pronounced in metro areas. In year-on-year terms, growth in metro areas was considerably stronger relative to regional, except in TAS where metro contracted, and VIC where metro and regional growth rates were on par in December. See Charts 15 and 16 for more detail.
- Sales growth contraction was recorded for both domestic and international merchants this month, with international fairing slightly better in most categories, except media, and games & toys. See charts 13 and 14, and table 4 for category growth and share.
- NAB estimates that in the 12 months to December, Australians spent \$52.93 billion on online retail, a level that is around 14.4% of the total retail trade estimate (November 2021, Series 8501, Australian Bureau of Statistics), and about 19.9% higher than the 12 months to December 2020.
- See comments from NAB's Chief Economist, Alan Oster, on page 2.

Year-on-year growth (% s.a.)			
	Oct-21	Nov-21	Dec-21
NAB Online Index	18.9	9.6	8.2
ABS Traditional Retail	5.2	5.8	-

Month-on-month growth (% s.a.)			
	Oct-21	Nov-21	Dec-21
NAB Online Index	-5.7	-4.5	-4.5
ABS Traditional Retail	4.9	7.3	-

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 and ABS retail sales

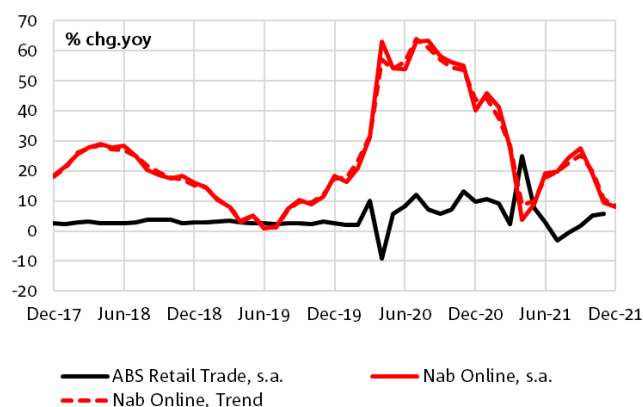
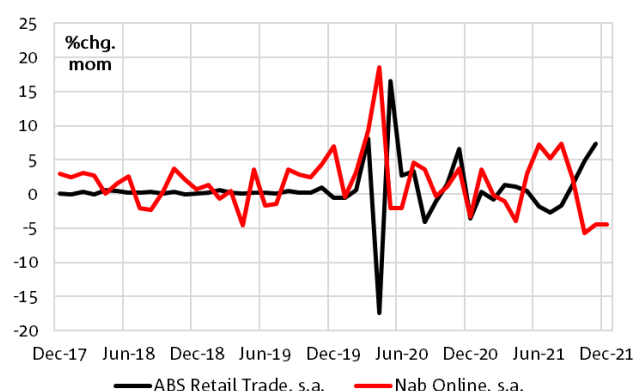


Chart 2: NAB Online retail trade data (mom, s.a.)



NAB Chief Economist, Alan Oster commented:

In month-on-month terms, our NAB Online Retail Sales Index contracted again in December. It is worth noting that these recent monthly contractions are following on from the exceptionally strong ‘lockdown enhanced’ growth in the third quarter of 2021. Heightened seasonality is also playing a role in the monthly numbers. The seasonal factors for October and November were slightly larger this year, indicating the growing importance of two key months in the online retail calendar. Even with the monthly contractions in growth, comparing this period to the same period 2020, i.e. in year-on-year terms, the index continues to grow. Given that the base of November and December 2020 had already grown 55% and 40% year-on-year terms respectively, the share of online retail sales continued to increase.

The contraction in monthly online sales in December was driven by the ACT, NSW, and TAS. The former two had recorded strong online sales growth during the lockdown periods in Q3, and the current monthly result is likely to be partially reflective of an easing in restrictions during Q4. In year-on-year terms, while all states except TAS were positive, ACT still leads (15.5%), but this is some way from its recent peak (85.6% in September). From the recent results it’s clear that, absent any key disruptions, online will continue to moderate.

By category, supermarkets returned to moderate monthly growth after three prior months of contraction. The weak period for this category in month-on-month terms can be partly attributed to the elevated period in the third quarter of the year. Given their strong year-on-year performance, grocery and liquor, and department stores have contributed beyond their share of index sales to the growth in the overall online index. In contrast, in 12-months-to terms, the biggest sales category, homewares and appliances, has contributed less than its share in the index. This is also noted in their respective share in the index compared to 12 months prior, with the former categories increasing their share of the online index, while the latter has decreased.

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



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

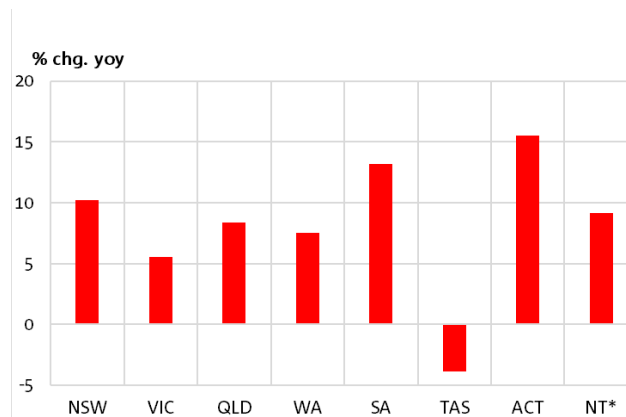
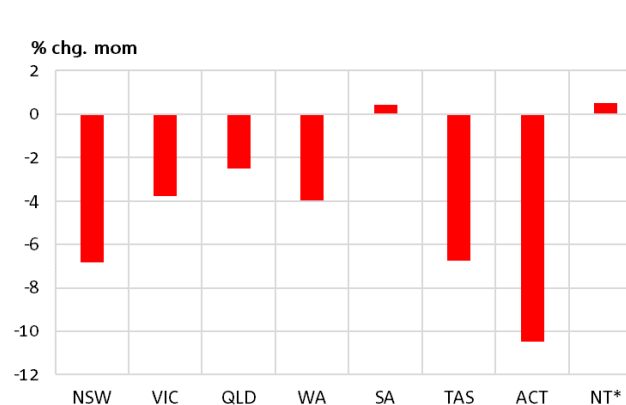


Chart 5: Online retail sales by industry, mom s.a.

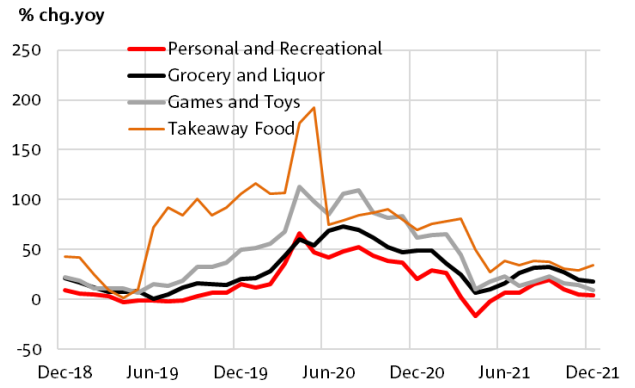
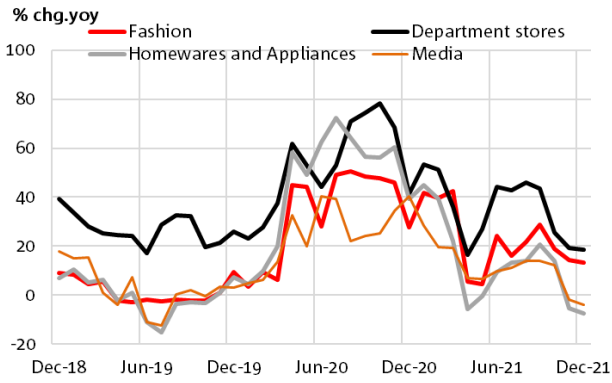


Chart 6: Online retail sales by state, mom s.a.

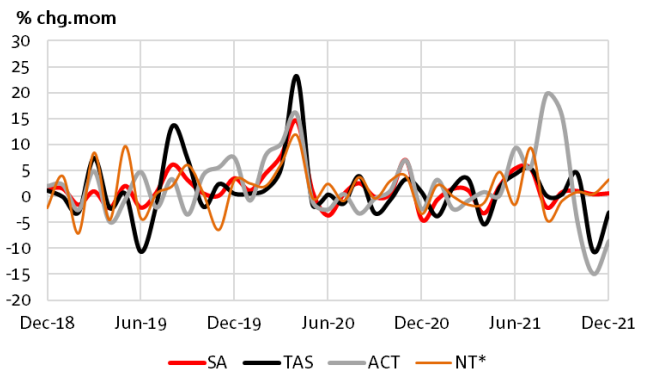
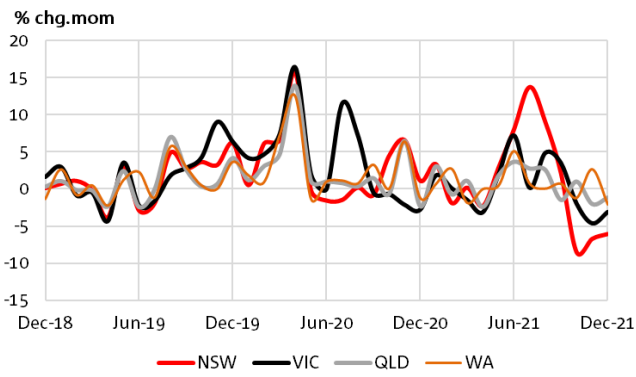


* Note that the series representing Northern Territory is highly variable and should be used with caution.

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

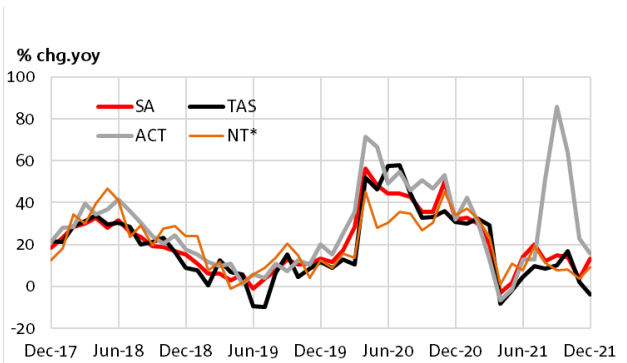
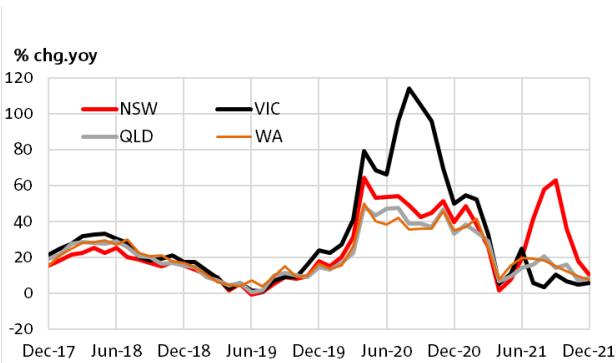


Charts 9 & 10: Online sales by state, trend



*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

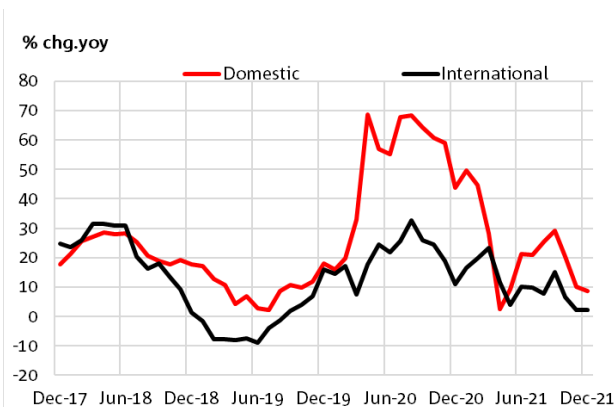
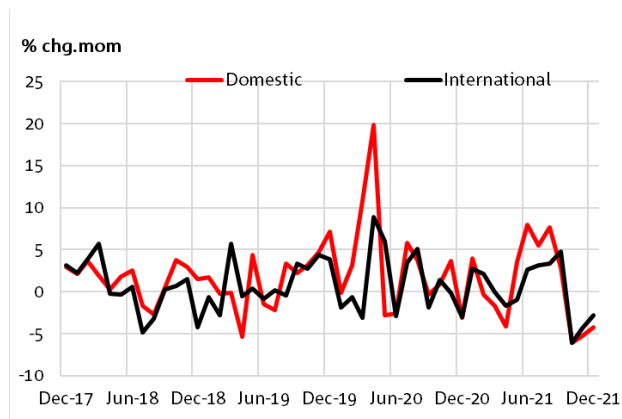


Table 3: Online sales by category and state

% (mom,s.a.)	Fashion	Dep't stores	Home & appliances	Media	Personal and Rec.	Grocery and Liquor	Games and Toys	T'away Food	Total
ACT	-12.3	-16.9	-17.7	-6.9	-11.7	-3.5	-7.3	11.1	-10.5
NSW	-7.8	-9.0	-12.9	-1.4	-6.7	-1.8	-7.1	3.9	-6.8
NT	1.9	-9.3	0.1	-2.4	-5.7	6.5	8.2	27.4	0.5
QLD	-6.4	-6.0	-5.6	1.9	-2.9	4.5	-5.5	8.3	-2.5
SA	0.8	0.9	-6.1	1.8	-0.9	8.9	-4.8	7.8	0.4
TAS	-13.0	-10.2	-12.5	-3.1	-15.5	11.1	-10.0	5.6	-6.8
VIC	-6.1	-8.1	-4.6	-0.2	-3.6	-1.5	-5.4	6.4	-3.8
WA	-4.9	-6.6	-10.6	15.9	-8.1	1.1	-6.0	3.6	-4.0
Total	-6.5	-7.6	-8.4	1.1	-5.0	0.5	-6.0	6.0	-4.5

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	-8.7	-1.8	12.9	13.9	83.7	16.3	11.1
Department stores	-8.2	-3.5	19.4	6.8	91.3	8.7	16.6
Homewares and appliances	-7.9	-5.9	-7.3	-4.2	96.3	3.7	23.1
Media	3.3	-4.7	-2.1	-15.4	90.5	9.5	6.2
Personal and Recreational	-4.9	-4.8	5.8	-6.6	89.3	10.7	12.2
Grocery and Liquor	0.8	13.8	16.4	31.2	96.9	3.1	15.7
Games and Toys	-4.2	-5.2	13.4	-5.0	82.6	17.4	8.9
Takeaway Food	5.7	9.6	34.2	68.1	99.4	0.6	6.2
All categories	-4.3	-2.8	8.7	2.3	91.9	8.1	100

METROPOLITAN AND REGIONAL SPEND

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

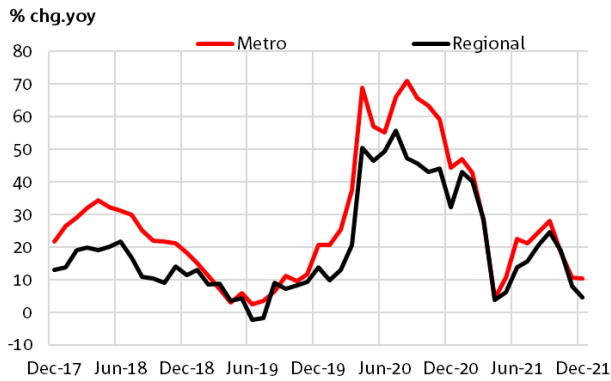
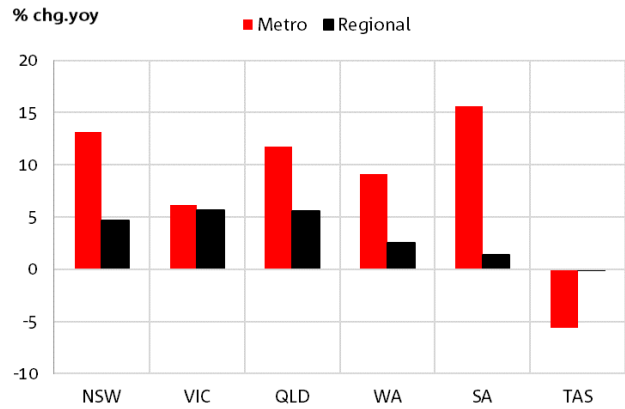


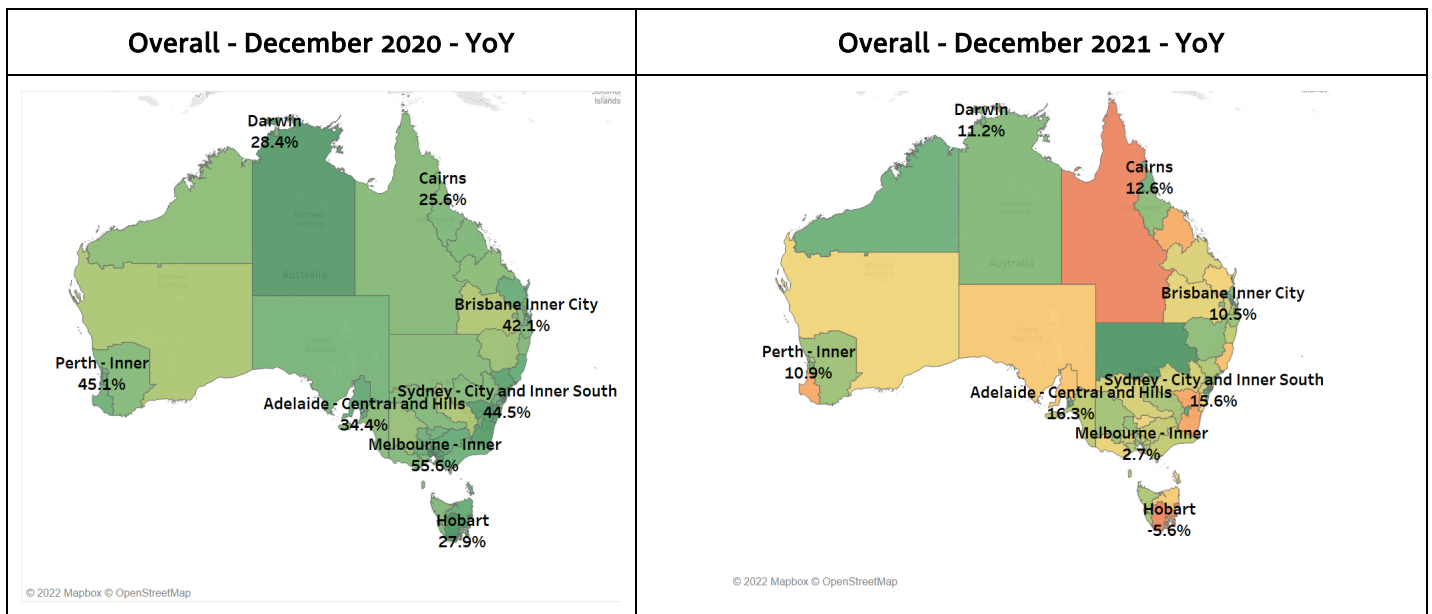
Chart 16: Online retail sales growth by state region, yoy s.a.



A HEATMAP VIEW OF SPEND GROWTH – OVERALL - YEAR ON YEAR, BY STATISTICAL AREA (SA4)

This month we look at the change in online spend for the overall NORSI series, by ABS statistical area (SA4). The growth comparison here is December 2020 relative to the year prior, and December 2021 relative to December 2020 (i.e. year-on-year comparisons).

In December 2020, growth for the overall online index (+40.2% yoy) was beginning to moderate after significant lockdown induced growth. This was still relatively rapid compared to the current rate (8.2% yoy). In 2021, from the map below, it is noticeable that growth in inner city Melbourne was the slowest of mainland inner city areas. However, it is worth noting that this is on top of the rapid growth in 2020 where inner-city Melbourne recorded the most rapid growth of comparable areas. Finally, there are a few SA4s which have lower online sales (i.e. a contraction) relative to last year, the majority of which are in regional 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. 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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