



NAB ONLINE RETAIL SALES INDEX DECEMBER 2019

NAB Group Economics

- The NAB Online Retail Sales Index continued to grow in December (+2.0%) on a month-on-month, seasonally adjusted basis. This follows on from the upwardly revised strong growth in November (2.7% mom, s.a.). The strength in December was boosted by the weekend continuation of the Black Friday sales event into the Cyber Monday period.
- In year-on-year terms, the growth in the NAB Online Retail Sales Index strengthened (+13.3% y/y s.a.) in December, and continues to outpace the broader ABS retail sales series.
- All categories, except fashion, recorded sales growth in month-on-month growth terms. The largest sales category, homewares and appliances (+1.5% mom, s.a.), continued to grow at a rate lower than the overall. Growth was again strongest in the month for the smallest spend share category, takeaway food, followed by second smallest spend share category, games and toys, and larger spend share category, department stores. Grocery and liquor sales accelerated in the month (+1.2% mom, s.a.), and is approximately 17.8% larger compared to the same period 2018. For more detail, see Charts 3, 5, 7 & 8 below.
- In month-on-month terms, all states and territories except Tas. recorded sales growth. QLD and ACT grew fastest in the month, though Vic, which had a much slower sales month, still leads in year-on-year terms.
- Sales growth in metro areas grew faster than regional areas on a month-on-month basis. In year-on-year terms, Qld was strongest for metro areas, while Vic was fastest for regional growth. See Charts 15 and 16 for more detail.
- The slightly slower growth for domestic merchants in December was in-line with the overall index. International merchant sales, while still positive, slowed far more than the total. In year-on-year terms, international merchant sales continue to recover from a sales slump in the first half of the year. In contrast to the headline result, fashion for international retailers recorded growth in the month, and personal and recreational outpaced domestic retailer growth. See charts 13 and 14, and table 3 for category growth and share.
- We estimate that in the 12 months to December, Australians spent \$30.53 billion on online retail, a level that is around 9.3% of the total retail trade estimate (November 2019, Series 8501, Australian Bureau of Statistics), and about 9.7% higher than the 12 months to December 2018.
- See comments from NAB's Chief Economist, Alan Oster, on page 2.

	Year-on-year growth (% s.a.)		
	Oct-19	Nov-19	Dec-19
NAB Online Index	8.2	10.1	13.3
ABS Traditional Retail	2.3	3.2	

	Month-on-month growth (% s.a.)		
	Oct-19	Nov-19	Dec-19
NAB Online Index	-0.9	2.7	2.0
ABS Traditional Retail	0.1	0.9	

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

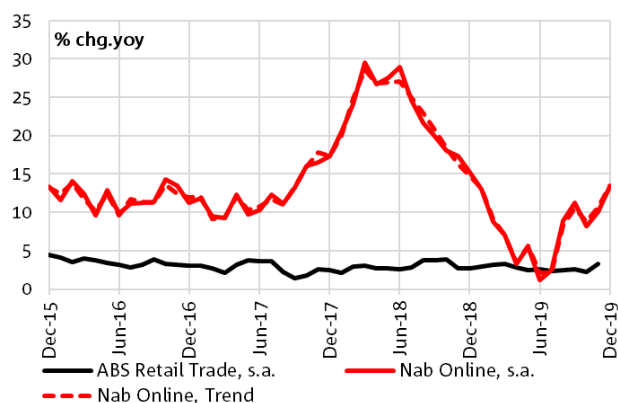
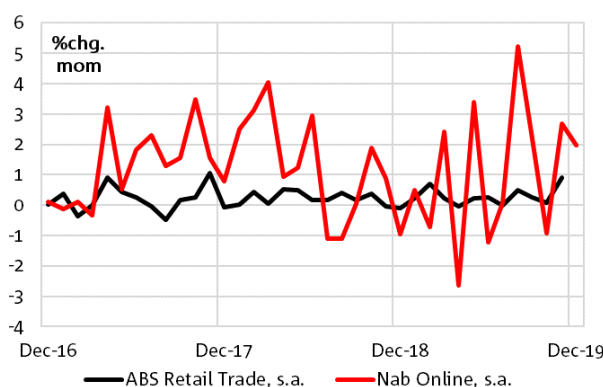


Chart 2: NAB Online retail trade data (mom, s.a.)



NAB Chief Economist, Alan Oster commented:

Our NAB Online Retail Sales Index data indicates that, while slowing slightly, growth continued in December. In contrast, our broader estimate of retail trade indicates significantly weaker overall sales. Looking through the month-to-month volatility, sales growth seems to have accelerated in year-on-year terms.

From our data, online retail sales tend to be more sensitive to sales events. In November we looked at the impact of the Black Friday sales event. We now include the surrounding days to see the effect of the 4-day sales event between Black Friday and Cyber Monday. The spike in sales for these days was large enough that it is the likely cause of shifting seasonal factors, whereby December this year increased in importance. Having said that, in our data, November remains the key month for online retail. For more detail on this sales event, we have a special in focus section below (see page 6).

The smallest sales category, takeaway food, continues to lead growth, followed by second smallest category, games and toys, with rapid growth also for larger sales category, department stores. The largest sales category, homewares and appliances, continued to grow in December, and has returned to growth, albeit moderate, in year-on-year terms. Sales growth accelerated for the second largest sales category, grocery and liquor, with this category also up strongly in year-on-year terms. Fashion was the only category to record a contraction in sales growth in the month.

The three most populous states represent just over 80% of all online sales, slightly above their share of the population. A rebound in monthly sales growth puts Queensland in the lead for the large sales states, with the ACT leading the smaller sales areas. Victoria continues to lead in year-on-year growth terms.

Representing about two-thirds of all online sales, metropolitan areas recorded growth in line with the overall result, while regional area growth was much slower. In year-on-year terms, Queensland led metro growth, while Victoria leads regional areas on the same basis.

By merchant location, international retailers grew at a much slower rate than the overall index, with domestic retailers slightly faster. While fashion growth broadly contracted, this key source of sales for international retailers continued to grow. International retailers also outpaced domestic retailers in the personal and recreational category. Growth for the largest sales category, homewares and appliances, was dominated by domestic retailers, with international slightly contracting. While a small share of spend, international retailers also seem to be in retreat in the grocery and liquor category.

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.

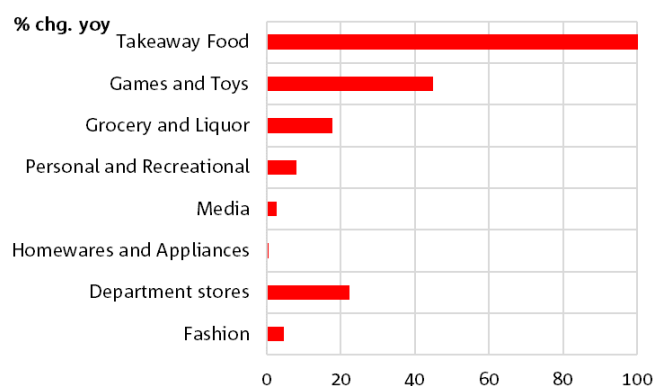


Chart 4: Online retail sales by state, yoy s.a.

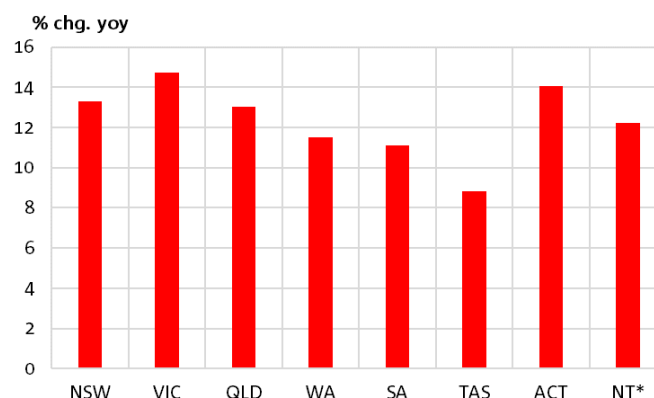
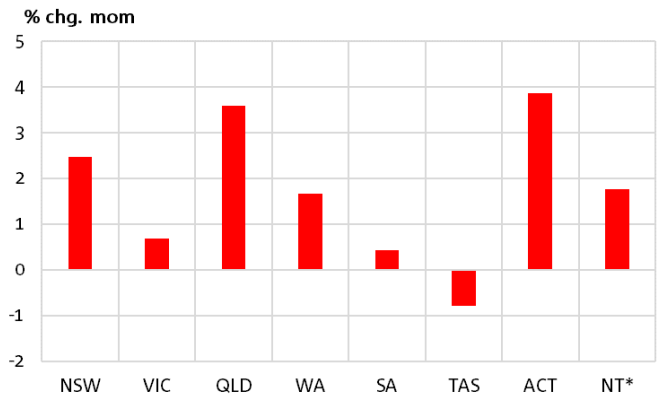


Chart 5: Online retail sales by industry, mom s.a.

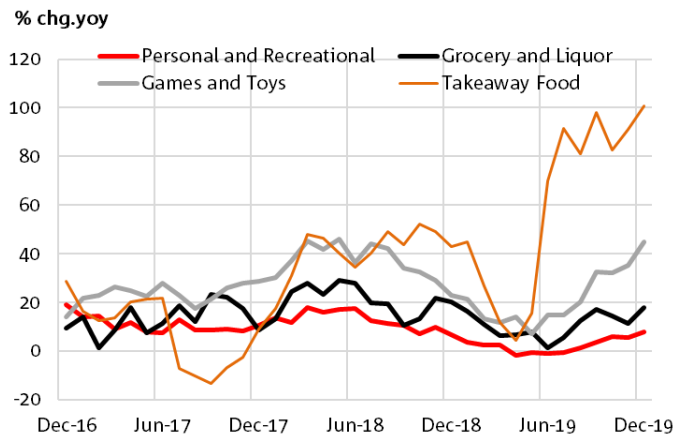
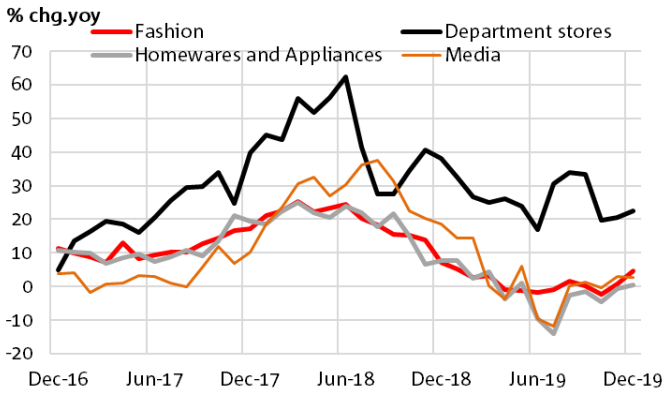


Chart 6: Online retail sales by state, mom s.a.

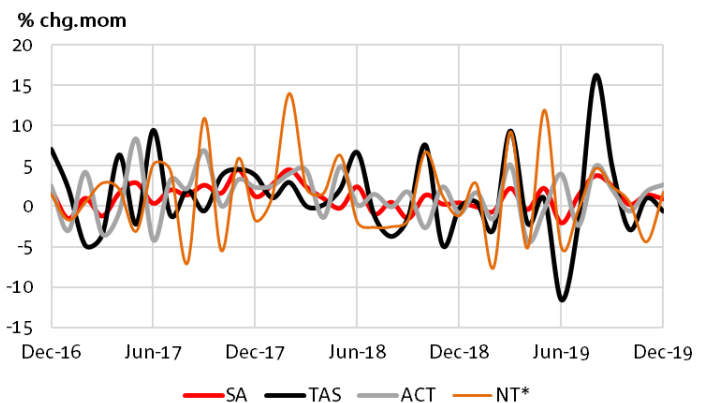
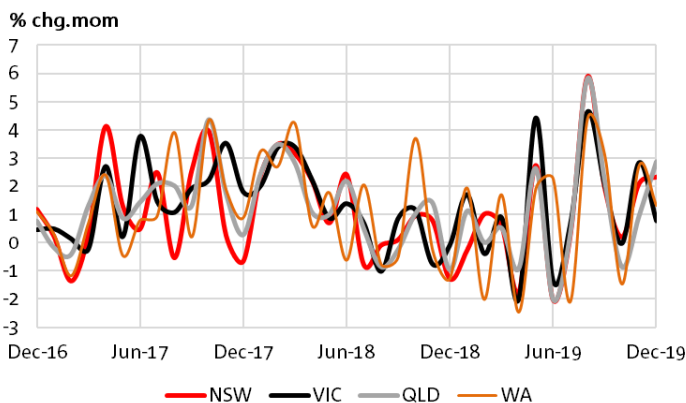


* Note that the series representing Northern Territory is highly variable and should be used with caution.

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

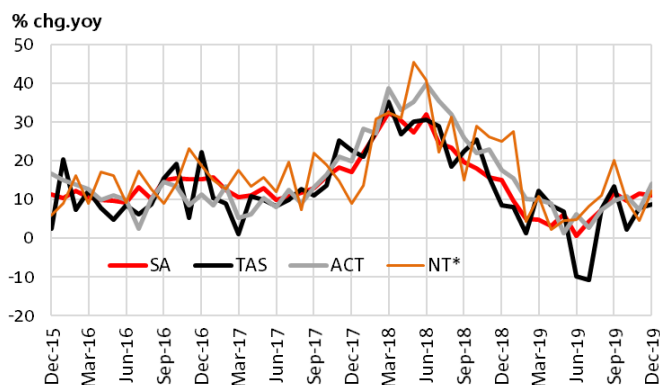
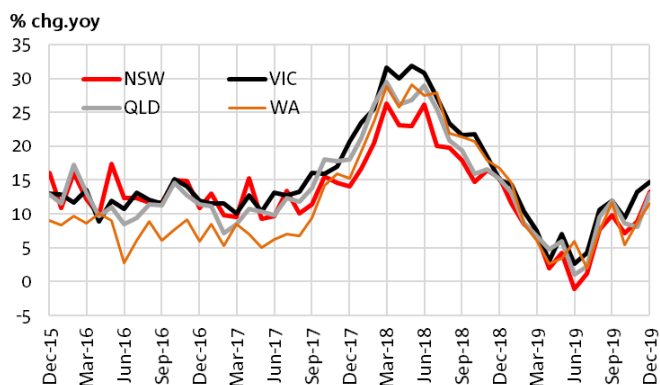


Charts 9 & 10: Online sales by state, trend



*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

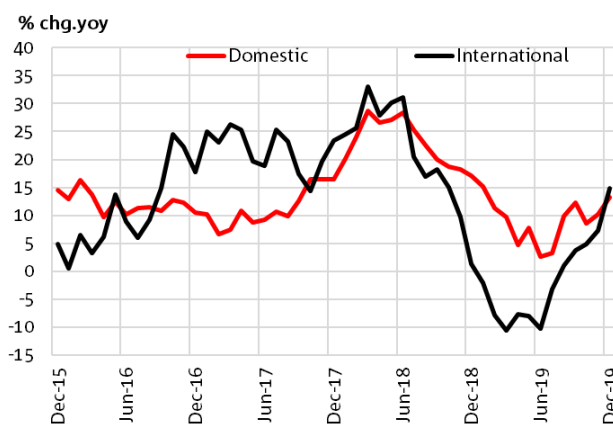
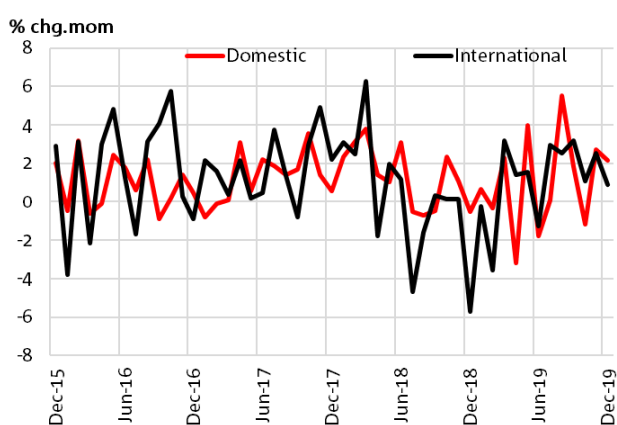


Table 3: Online sales by category and merchant location- Domestic, International (Int'l)

%	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	-0.1	1.1	5.2	3.9	78.3	21.7	12.2
Department stores	5.8	0.2	24.7	6.4	87.7	12.3	14.3
Homewares and appliances	1.5	-0.2	-0.0	22.0	95.5	4.5	25.3
Media	-0.1	-0.5	3.0	-1.1	90.3	9.7	8.0
Personal and Recreational	0.5	2.5	7.4	11.0	86.7	13.3	14.5
Grocery and Liquor	1.8	-3.2	20.0	-3.2	95.2	4.8	14.7
Games and Toys	4.0	2.5	36.1	58.8	74.4	25.6	7.1
Takeaway Food	6.8	-7.7	99.1	80.5	98.0	2.0	3.9
All categories	2.2	0.9	13.2	14.8	89.2	10.8	100

METROPOLITAN AND REGIONAL SPEND

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

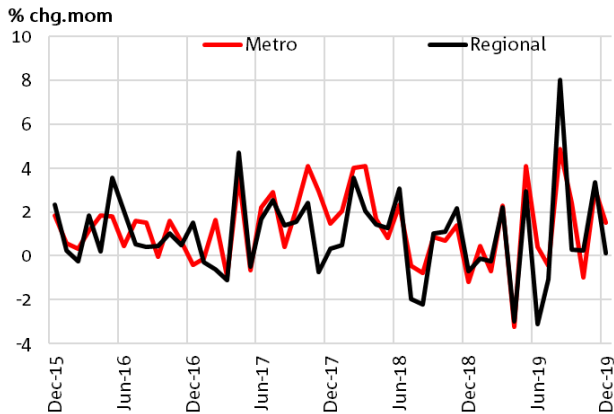
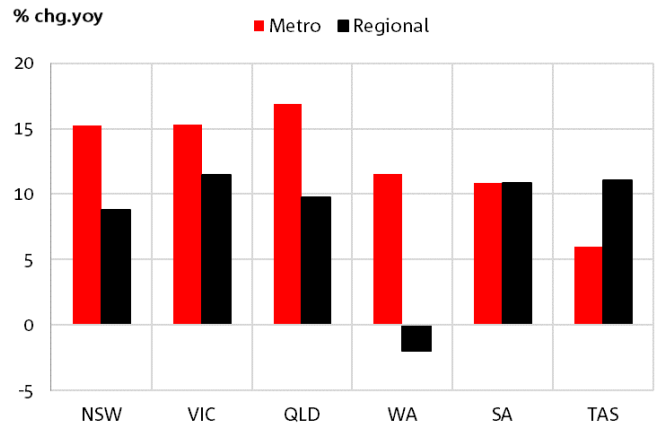
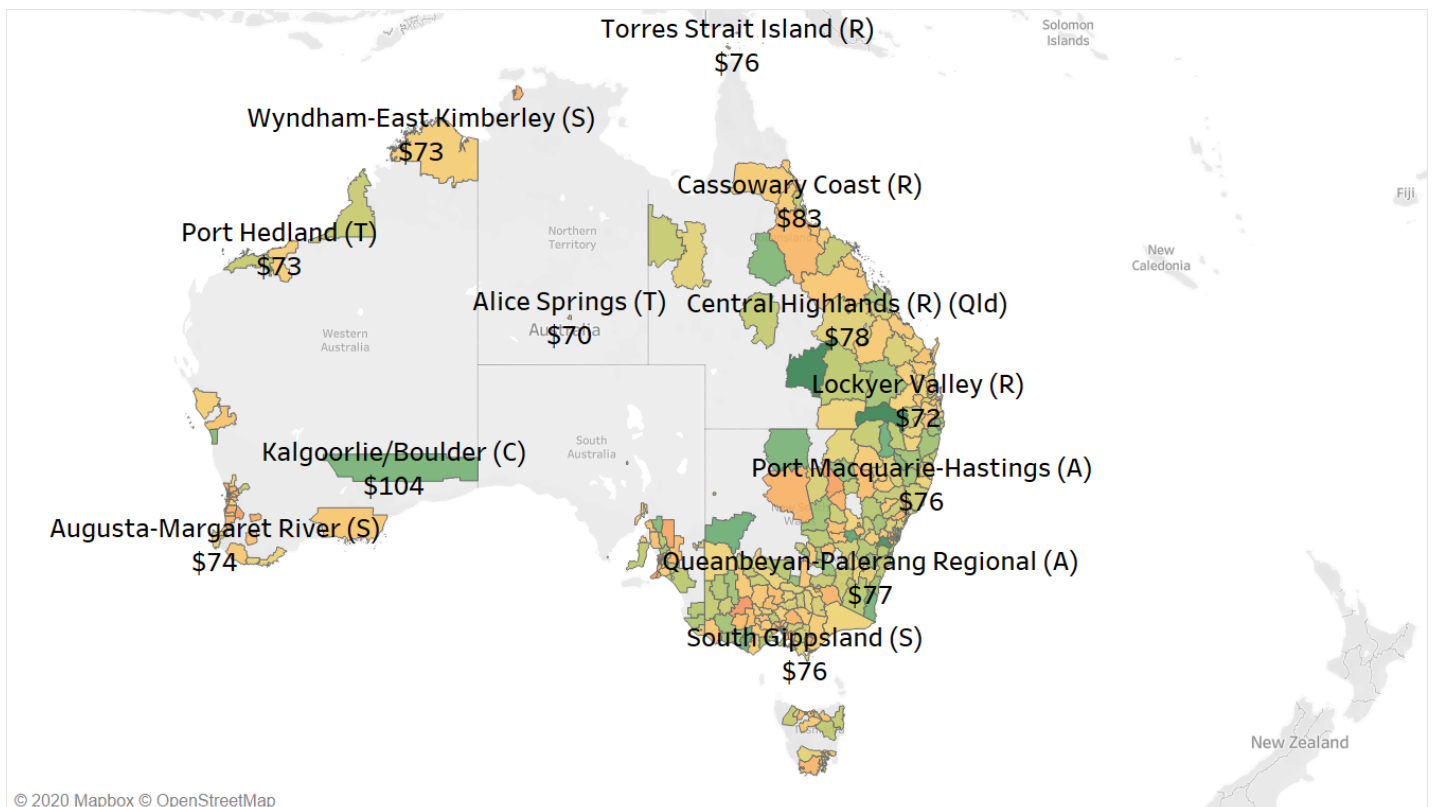


Chart 16: Online retail sales growth by state region, yoy s.a.



A HEATMAP VIEW OF AVERAGE ONLINE SPEND BY LOCAL GOVERNMENT AREA

Online spend can vary 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.



IN FOCUS: THE IMPACT OF THE COMBINED BLACK FRIDAY AND CYBER MONDAY SALES EVENT

In the November report, we looked at the effect of the first day of the Black Friday - Cyber Monday sales event. As the sales event crossed between the end of November and start of December, additional data is now included. This data may help explain the December divergence in growth rates for online relative to broader cashless.

For this analysis, we have looked at the four key days of the sales event and compared it to the same sales event day in previous years. While we don't attempt to identify each participating merchant, we look at changes in spending at the category level.

From a shaky start earlier in the decade, this sales event day appears to be growing. Chart 17 shows sales on Black Friday through to Cyber Monday for online retail categories increased about 48% on the corresponding four day sales event in 2018. As a four day block, this sales event has been gaining momentum since 2016.

Chart 18 shows that by category, compared to the event period 2018, by far the largest growth was recorded for sales in takeaway food at 146% growth. However, while the spend share for this category has grown from 2013, in our data, it still represents only about 4% of sales in the four day period. Given their share of sales, the key category drivers of the overall growth figure were homewares and appliances, department stores and personal and recreational goods. Growth in the fashion category, which represents a significant share of sales in the event period (14%), was more subdued (20% yoy, n.s.a.).

It is likely that these sales events are shifting the period when sales occur, without adding to total sales. Our data suggests that the first two days of the event, Black Friday and Saturday, represented around 17% of total November online sales. Sunday and Cyber Monday, which followed in December, represented over 15% of December sales. In the comparable period of 2013, these values were 10% and 11% respectively.

All these factors are contributing to changing patterns of spending within months, and across months. This is problematic for the seasonal adjustment process, contributing to swings in the monthly retail sales data. For online retail sales, while November remains the largest sales month, chart 19 shows that the large sales for the first two days of December have slightly increased the seasonal importance for that month.

Chart 17: Sales growth – total of selected categories **Chart 18: Black Friday and Cyber Monday sales event by category**

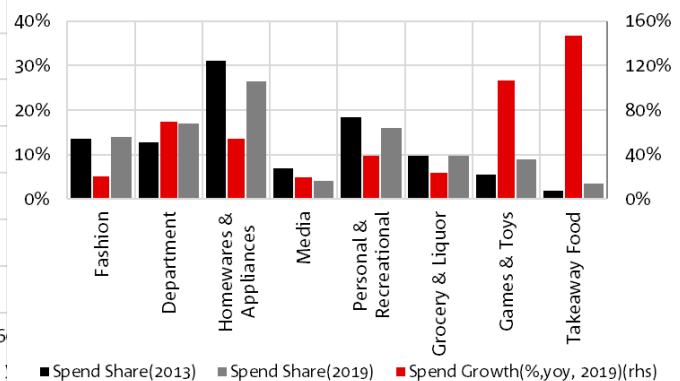
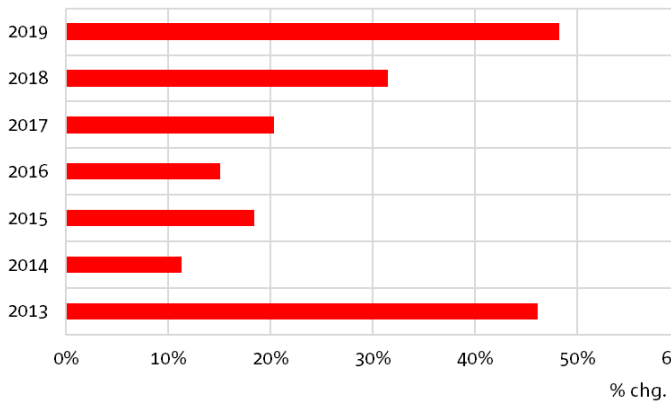


Chart 19: Nab Online - Seasonal Factors

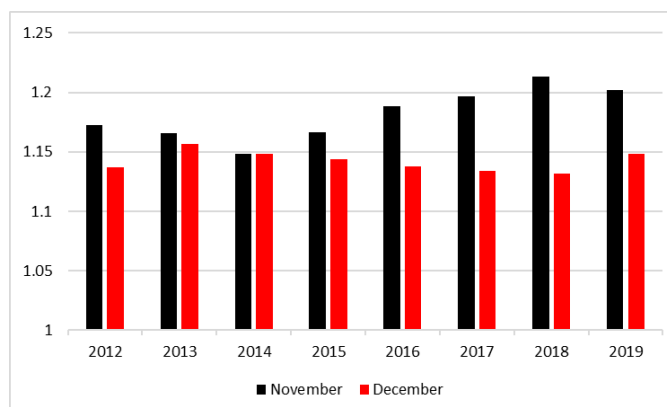
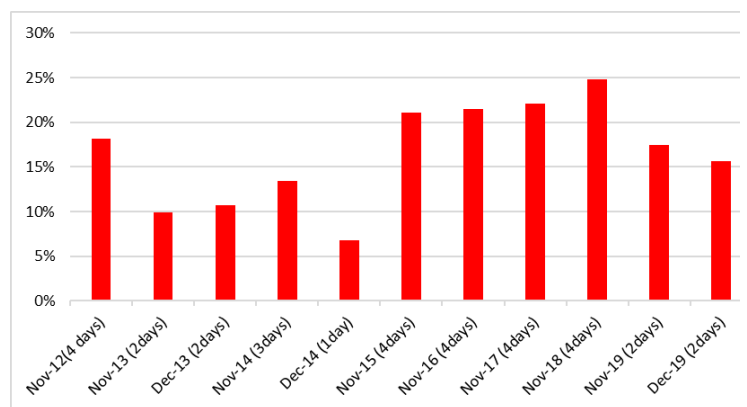


Chart 20: Share of month sales



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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