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The audit market for listed Australian companies from 2012 to 2018: A state of play

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journals.sagepub.com/home/aum**Elizabeth Carson**

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Abstract

Motivated by recent regulatory scrutiny of auditing in Australia, we provide an overview of the audit market for Australian listed companies from 2012 to 2018. Using descriptive analyses, we explore audit market competition, the provision of non-audit services (NAS), and audit firm tenure. We find that the Australian audit market is highly segmented. Big 4 firms increasingly dominate the larger client segment, while Non-Big 4 firms focus on medium and smaller clients. Auditor-provided NAS fees represent a relatively small fraction of audit fees for smaller clients, but a relatively high fraction for larger clients. We further observe that the share of total revenue from NAS of Big 4 firms increases over time. Finally, a relatively small percentage of clients has long audit firm tenure, and that long tenure is more common in the larger client segments. We discuss the implications of these findings and research opportunities that emerge.

JEL Classification: D40, L11, M42, L84

Keywords

Audit firm tenure, audit market competition, audit market concentration, non-audit services

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I. Introduction

In recent years, audit quality has received regulatory and public attention in Australia, as highlighted by negative findings in audit inspections of the Australian Securities and Investments Commission (ASIC) as well as a range of high-profile international audit failures (Neate and Davies, 2020; Parliamentary Joint Committee on Corporations and Financial Services, 2020a; Poltz and Schuetze, 2020). This on-going discussion about audit quality culminated in the 2019 Australian parliamentary inquiry on regulation of auditing in Australia (Parliamentary Joint Committee on Corporations and Financial Services, 2020a, 2020b; Tadros, 2020; Wootton, 2019). Among other issues, the parliamentary inquiry probed the lack of competition in the audit market, and particularly the Big 4 firms' 'absolute and peerless' dominance in the global audit market, especially for the largest listed clients (Parliamentary Joint Committee on Corporations and Financial Services, 2020b: 9). The parliamentary inquiry also discussed audit quality concerns related to the provision of non-audit services (NAS), and long audit firm tenure, as threats to auditor independence. The inquiry concluded with several recommendations on the provision, disclosure and ethics rules related to NAS (recommendations 3, 4 and 5) and audit firm tenure (recommendations 6 and 7) (Parliamentary Joint Committee on Corporations and Financial Services, 2020a).¹

These recommendations on the regulation of auditing can profoundly affect the Australian audit market. Yet, as pointed out by many submissions to the parliamentary inquiry, there is little understanding of the current state of the Australian listed company audit market (Parliamentary Joint Committee on Corporations and Financial Services, 2020a, 2020b).² This study (1) provides descriptive evidence on audit market competition, the provision of NAS and audit firm tenure of Australian listed companies from 2012 to 2018; and (2) discusses implications of these findings and research opportunities.³ In doing so, this study also provides a timely update to a previous survey of similar nature, which covers the period from 2000 to 2011 (Carson et al., 2014).

Using a comprehensive dataset of Australian listed clients over the period 2012–2018, we show that the audit market is highly segmented. The Big 4 firms dominate audit services for the largest 200 clients (largest clients by market capitalisation) and play a significant role in the next largest 300 clients (large clients by market capitalisation). However, the Big 4 firms audit a relatively smaller percentage of the medium and small clients, compared to non-Big 4 firms. Hence, market concentration is high in the larger client segments, but less concerning in the smaller client segments. These results indicate that the Australian audit market is complex and imply that a uniform set of audit regulations would affect each market segment differently (i.e. one size does not fit all).

From Australian accounting firm transparency report disclosures, we show that revenue from the non-audit service lines (from both audit and non-audit clients) represents approximately three-quarters of the total revenue of the Big 4 accounting firms.⁴ The rapid growth in revenue from consulting, tax and other NAS raises potential concerns about the decreased importance of auditing in large accounting firms. Regarding the source of NAS fees, on average, only 11.6% of all NAS fees are from all audit clients (listed and non-listed), indicating lower economic significance of NAS from audit clients compared to non-audit clients.⁵ We further explore whether listed audit clients purchase a significant amount of NAS from their auditors. We find that the average NAS fee to audit fee ratio is about 30% for the largest clients (top 200 companies by market capitalisation), and around 50% for the second-largest clients (companies ranked between 201 and 500 by market capitalisation). This suggests that the second-largest clients could be affected most significantly if regulators introduce additional restrictions on auditor-provided NAS.

Finally, we show that audit firm tenure varies across different client segments. While long audit firm tenure is uncommon for the small and medium clients, it is relatively common for larger and economically significant clients. These clients could be affected more if regulation on mandatory

audit firm rotation is introduced. We further examine patterns of audit firm switches and find that switches between Non-Big 4 firms are the most common type, except for the top 200 clients where the vast majority of audit firm switches occur between Big 4 firms.

Overall, this study contributes to an understanding of the current state of the audit market in Australia and its recent trends. It also responds to policy makers' and regulators' concerns over audit market dominance, the provision of NAS, and long audit firm tenure by providing empirical evidence on the status quo in Australia. Finally, we discuss some research opportunities based on our observations.

2. Sample selection

Table 1 shows our sample selection method. We first identify all entities listed on the Australian Securities Exchange (ASX) from SIRCA's Share Price and Price Relative (SPPR) database from 2012 to 2018. We then exclude listed entities that do not issue general-purpose financial reports.⁶ From the companies with public financial reports, we identify those that meet the following criteria: (1) they are listed on the ASX, (2) their headquarters are in Australia, (3) the audit opinions are signed in Australia and (4) they report audit fees in Australian dollars in their annual reports. As a result, our sample includes 12,357 observations, representing 81.8% of all companies listed on the ASX. For the analyses of audit firm tenure and audit firm changes, we further exclude 331 observations of newly listed companies from the sample due to unavailable audit firm information, which results in a sample of 12,026 observations.

Table 1. Sample description.

Criteria	Number of observations	2012	2013	2014	2015	2016	2017	2018
Total number of listed companies during the year (Source: SPPR)	15,113	2060	2068	2096	2168	2175	2251	2295
Companies without financial reports (companies do not issue annual reports because they are newly listed; they are delisted during the year; they are suspended during the year; other reasons)	-1817	-148	-163	-175	-167	-357	-437	-370
Total number of listed companies with financial reports	13,296	1912	1905	1921	2001	1818	1814	1925
Foreign companies	-539	-55	-55	-74	-87	-87	-82	-99
Not A\$ currency	-330	-49	-41	-67	-73	-10	-8	-82
Not Australian auditor	-70	-5	-17	-2	-26	-3	0	-17
Number of observations in the final sample	12,357	1803	1792	1778	1815	1718	1724	1727

SPPR: Share Price and Price Relative.

For the audit firm tenure and switch analysis, we exclude 331 newly listed observations from the sample.

3. Audit market competition

In this section, we analyse the overall audit market concentration using the Herfindahl–Hirschman Index (HHI). We then break down the market by audit firm size to identify the key players, followed by further splitting the market by client size to investigate the concentration level for each client segment. We then discuss research opportunities.

3.1. Herfindahl–Hirschman Indices

To gain insights into the competitiveness of a market, regulators often focus on metrics such as the HHI.⁷ The HHI is the sum of the squares of the audit activities (e.g. audit fees) of each firm in the market and is calculated as $HHI = \sum_{i=1}^n (\text{audit firm market share} \times 100)^2$.

The HHI assesses the level of competition of a market considering the relative size of the players. A higher HHI indicates a less competitive market due to relative unevenness of the market shares of large versus small players in the market, indicating a less competitive market. For example, a market with four large providers with 25% of the market each will result in an HHI of $(25)^2 + (25)^2 + (25)^2 + (25)^2 = 2500$, whereas a market with 25 small providers with 4% of market share each will result in an HHI of $25 \times 4^2 = 400$. In the Australian context, a threshold of 2000 or an increase of more than 100 raises regulatory concerns (Australian Competition and Consumer Commission (ACCC), 2008).

Table 2 shows the HHI of the entire Australian audit market for listed firms and for each client segment over the period 2012–2018. The HHI is calculated based on audit fees and the number of clients. Using audit fees, the HHI indicates that the Australian audit market is highly concentrated, increasing from 2162 in 2012 to a maximum of 2218 in 2014 and declining to 1967 in 2018. This points to a slight reduction in concentration in the audit market over this period: the HHI in 2018 is just under 2000, the regulatory threshold of concern (ACCC, 2008). Based on the number of clients, the HHI shows a maximum of 779 in 2013 and declines steadily to 722 in 2018, indicating a considerably less concentrated market.

Table 2 further shows HHIs for four client segments by market capitalisation: the largest 200 clients ('very large clients'), the next largest 300 clients (201–500 by market capitalisation, 'large clients'), the smallest 500 clients ('small clients') and the remaining clients ('medium clients').⁸ The audit market for the very large clients has an HHI consistently above 2000 with an average HHI based on audit fees (number of clients) of 2890 (2223). For the large clients, while both HHIs are below the threshold of 2000, the HHI based on audit fees (number of clients) is on average 1780 (1280) and relatively close (distant) to the threshold of 2000. In the medium client segment, the HHI based on audit fees (number of clients) is on average 1,019 (775) and shows a decreasing trend over time. For the small client segment, the HHI is consistently below 900 for both measures, but increases slightly over the sample period.

Overall, the descriptive evidence in this section suggests that (1) the overall audit market concentration based on audit fees (number of clients) is above (below) the ACCC threshold for a highly concentrated market and (2) the audit market concentration differs across various client market segments, and is especially high in the very large client segment.

3.2. Audit market share

To understand the level of market concentration better, this section identifies key players in the audit market for listed firms. Table 3 shows the market share, based on number of clients and audit fees, for four types of audit firms: Big 4, Large Non-Big 4 (BDO and Grant Thornton), Medium Non-Big 4 and Small Non-Big 4.⁹ The average total audit fees paid by Australian listed companies are \$531.8 million which is an average of 0.65% of clients' total assets.¹⁰ On average, Big 4 audit firms audit just under 40% of all listed companies in Australia but receive 87.3% of total audit fees, which is an average of 0.35% of their client's assets.¹¹ While the proportion of listed clients audited by Big 4 firms is lower than that in the United States (70%) and in the United Kingdom (84%; Competition and Markets Authority (CMA), 2019), the market share by audit fees remains substantial.¹² In contrast, Non-Big 4 firms audit an average of 60.1% of listed clients, but only receive 13.7% of audit fees on average, and earn a higher fraction of total assets as audit fees (0.75% or higher). Overall, Big 4 firms tend to audit larger clients, and their audit fees represent a lower proportion of clients' total assets compared to Non-Big 4 firms.

Table 2. Herfindahl–Hirschman Indices.

Year	Total		Very large clients (top 200 by market capitalisation)		Large clients (201–500 by market capitalisation)		Medium clients (others)		Small clients (bottom 500 by market capitalisation)	
	HHI (fees)	HHI (clients)	HHI (fees)	HHI (clients)	HHI (fees)	HHI (clients)	HHI (fees)	HHI (clients)	HHI (fees)	HHI (clients)
2012	2162	767	2896	2277	1821	1301	1072	790	716	653
2013	2161	779	2880	2228	1868	1364	1094	826	698	665
2014	2218	768	2893	2188	1727	1246	1107	834	695	675
2015	2183	772	2892	2233	1699	1282	1024	823	736	682
2016	2150	751	2893	2230	1789	1305	991	745	793	728
2017	2142	733	2927	2177	1844	1229	947	717	866	740
2018	1967	722	2848	2231	1713	1231	899	693	842	767
Average	2141	756	2890	2223	1780	1280	1019	775	764	701

The Herfindahl–Hirschman Index (HHI) is calculated as the sum of the squares of the audit activities (e.g. audit fees) of each firm in the market ($HHI = \sum_{i=1}^n$ (audit firm market share $\times 100$)²). In this table, we calculate the HHI for the overall market and for four categories of clients: the very large clients, large clients, medium clients and small clients.

Table 3. Audit market share by audit firm type.

Year	Total	Big 4				Large Non-Big 4				Medium Non-Big 4				Small Non-Big 4			
		No. of clients in the market	Audit fees in the market	Average ratio of audit fees to total assets	Market share by no. of clients	Market share by no. of clients	Market share by no. of clients	Average ratio of audit fees to total assets	Market share by no. of clients	Market share by no. of clients	Market share by no. of clients	Average ratio of audit fees to total assets	Market share by no. of clients	Market share by no. of clients	Market share by no. of clients	Average ratio of audit fees to total assets	
		\$ million	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
2012	1803	488.2	0.57	0.39	22.3	5.5	0.67	29.2	6.0	0.74	7.8	1.5	0.64%				
2013	1792	492.6	0.64	0.38	22.6	5.6	0.76	29.6	5.9	0.90	6.8	1.3	0.79%				
2014	1778	538.3	0.70	0.40	22.4	5.1	0.85	30.5	5.6	0.95	6.8	1.0	0.90%				
2015	1815	534.6	0.70	0.37	21.7	5.2	0.79	31.1	5.7	1.08	6.3	1.1	0.77%				
2016	1718	542.6	0.67	0.34	21.7	5.4	0.87	32.7	6.2	0.94	6.2	1.1	0.71%				
2017	1724	579.6	0.69	0.35	21.4	5.4	0.94	34.1	6.7	0.92	5.7	0.9	0.72%				
2018	1727	547.0	0.61	0.25	20.6	5.2	0.87	35.7	7.4	0.82	6.0	1.0	0.73%				
Average	1765	531.8	0.65	0.35	21.8	5.3	0.82	31.8	6.2	0.91	6.5	1.1	0.75%				

We split audit firms into four categories: The Big 4, Large Non-Big 4 firms (Grant Thornton and BDO), Medium Non-Big 4 firms (those auditors issued transparency reports) and Small Non-Big 4 firms. The market share is calculated as is the percentage of total activity in a market that is accounted for by the type of audit firms

$$\text{Market share} = \frac{\text{Total audit fees or total number of clients of audit firm types}}{\text{Total audit fees or number of clients of all firms}}$$

We also observe that market shares by number of clients and audit fees, are relatively stable over this period. Of the four types of audit firms, only the Medium Non-Big 4 firms increased their market share slightly over this period in terms of number of clients and audit fees. The average ratio of audit fees to total assets has varied over the sample period for all types of audit firms, but without following a clear trend.

3.3. Audit market share by client segment and audit firm type

In Section 3.1, we find the audit market is highly concentrated in the largest client segment, but less concentrated in other client market segments. To identify the key players in each client segment and their role in market concentration, we report the audit market by client segments and audit firm type. We report the market shares based on number of clients in Table 4 Panel A, and the market shares based on audit fees in Table 4 Panel B.

Table 4 Panels A and B shows Big 4 firms' market share in each of the four client segments. The Big 4 firms clearly dominate the very large client segment, where they audit just over 90% of clients and collect just over 98% of the audit fees. This is unsurprising as the largest clients tend to have complex organisational structures, overseas operations, and therefore require auditors with sufficient resources and a global network (Carson et al., 2022). In addition, the Big 4 firms audit about two-thirds of the next largest group of clients and receive 82.2% of total audit fees in this market segment, with the remainder shared equally between the Large and Medium Non-Big 4 firms. The Big 4 firms audit only 32.0% of medium clients (15.1% of small clients) but earn an average of 54.1% of audit fees (30.2% of audit fees of the small client segment), suggesting a focus on the larger end of the medium/small client segments. In addition, the Big 4 firms lose a substantial market share in the small client segment over the period (8.9% in terms of clients, and 21.0% in terms of audit fees), suggesting a decreasing focus of the Big 4 firms in this segment.¹³

In contrast, the Non-Big 4 firms receive most of their audit fee revenues from the medium and small clients: 73.7% of the total audit fees of the Large Non-Big 4 firms, 72.4% of the total audit fees of the Medium Non-Big 4 firms and 74.3% of the total audit fees of the Small Non-Big 4 firms are from the medium and small clients. To summarise, the audit market is segmented by client size, with the Big 4 firms serving most of the large clients and the non-Big 4 firms servicing mainly the small and medium-sized clients.

In conclusion, the analyses in Section 3 indicate that while the Australian audit market for listed clients may not appear concentrated based on number of clients, it appears highly concentrated if measured based on audit fees. Further analyses show that the audit market is highly segmented. The Big 4 firms dominate the largest client segment, where they audit more than 90% of the largest clients, collect over 98% of total audit fees, reflecting high market concentration, which may attract regulatory concerns. In addition, Big 4 firms have a higher market share than Non-Big 4 firms in the large client segment (both based on audit fees and the number of clients), and audit the larger end of the medium and small client segments. In contrast, Non-Big 4 auditors concentrate on small and medium clients, with over 70% of their total audit fees from the small and medium client segments.

3.4. Opportunities for research on the Australian audit market

Based on the observations in the prior sections, one research opportunity is related to better understanding the impact of audit market concentration on audit pricing and quality, considering the

Table 4. Audit market share by client size and audit firm type.
Panel A: Audit firm market share based on number of listed companies.

Year	Very large clients (top 200 by market capitalisation)						Large clients (201–500 by market capitalisation)						Medium clients (others)						Small clients (bottom 500 by market capitalisation)					
	Big 4		Large Non-Big 4		Medium Non-Big 4		Small Non-Big 4		Big 4		Large Non-Big 4		Medium Non-Big 4		Small Non-Big 4		Big 4		Large Non-Big 4		Medium Non-Big 4		Small Non-Big 4	
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
2012	1803	91.5	3.0	4.5	1.0	67.7	15.0	12.3	5.0	31.6	27.5	32.0	8.8	18.8	26.0	44.6	10.6							
2013	1792	90.0	4.0	5.0	1.0	70.7	13.3	11.3	4.7	33.0	28.9	30.7	7.5	16.4	25.6	48.6	9.4							
2014	1778	90.5	3.5	5.5	0.5	66.3	14.7	15.3	3.7	33.7	27.6	30.9	7.8	15.0	26.6	49.0	9.4							
2015	1815	92.0	2.5	5.0	0.5	68.3	12.7	15.0	4.0	32.4	28.0	32.3	7.4	18.0	24.4	49.2	8.4							
2016	1718	91.0	3.0	5.0	1.0	67.0	15.0	15.0	3.0	31.1	25.8	36.1	7.1	14.2	27.2	49.6	9.0							
2017	1724	90.5	3.0	5.5	1.0	65.7	15.0	17.0	2.3	31.1	24.5	38.3	6.2	13.2	28.0	49.8	9.0							
2018	1727	92.0	2.0	5.5	0.5	64.7	14.0	20.0	1.3	30.8	23.3	39.5	6.3	9.9	28.2	51.6	10.4							
Average	1765	91.1	3.0	5.1	0.8	67.2	14.2	15.1	3.4	32.0	26.6	34.1	7.4	15.1	26.6	48.9	9.5							

Panel B: Audit firm market share based on audit fees.

Year	Very large clients (top 200 by market capitalisation)						Large clients (201–500 by market capitalisation)						Medium clients (others)						Small clients (bottom 500 by market capitalisation)					
	Big 4		Large Non-Big 4		Medium Non-Big 4		Small Non-Big 4		Big 4		Large Non-Big 4		Medium Non-Big 4		Small Non-Big 4		Big 4		Large Non-Big 4		Medium Non-Big 4		Small Non-Big 4	
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
2012	330.7	98.7	0.5	0.7	0.1	63.9	82.3	7.5	7.4	2.9	54.5	20.5	20.0	5.0	24.6	34.6	24.1	34.0	7.4					
2013	332.3	98.4	0.6	0.9	0.1	67.3	84.5	6.9	6.2	2.5	55.5	21.8	18.3	4.4	23.9	31.3	23.9	38.8	6.0					
2014	381.2	98.6	0.5	0.9	0.0	67.9	81.5	7.8	8.7	2.0	55.8	22.5	17.8	3.9	22.8	30.5	23.6	39.2	6.7					
2015	375.3	98.7	0.5	0.9	0.0	68.4	81.3	7.4	8.7	2.6	50.9	24.2	20.2	4.6	25.0	44.3	19.3	31.7	4.8					
2016	374.0	98.6	0.6	0.8	0.0	76.6	82.3	7.6	8.4	1.6	67.3	21.6	22.1	4.6	24.6	27.8	27.5	39.3	5.5					
2017	405.7	98.1	0.7	1.2	0.0	76.5	83.3	8.3	7.2	1.2	68.9	20.7	25.3	3.5	28.5	28.0	28.1	38.6	5.3					
2018	369.2	98.5	0.2	1.3	0.0	73.0	79.8	9.4	9.6	1.2	58.4	16.5	22.0	3.1	22.1	13.6	31.2	47.2	8.0					
Average	366.9	98.5	0.5	0.9	0.0	70.5	82.2	7.9	8.1	2.0	54.1	21.0	20.9	4.1	24.5	30.2	25.4	38.2	6.2					

differences across client segments and audit firm types as discussed in the prior sections. First, we observe that Big 4 auditors have lower market share in the small client segment. This opens up a unique research opportunity on whether audit quality changes when client firms switch from Big 4 firms to Non-Big 4 firms in this client segment. Second, the change in market shares of the different types of firms in the medium and small client segment raises questions on whether audit firms compete on lower audit fees rather than higher audit quality (Pearson and Trompeter, 1994; van Raak et al., 2020). Competitive pricing could encourage the supplier of a credence good to under-audit their clients compared to a situation in which market players cannot compete on price, resulting in lower audit quality (Mimra et al., 2016).

The second research opportunity relates to understanding how the regulatory activities have and will affect the Australian audit market in the future. Since the audit market is segmented, it is important to consider how regulation could affect different market segments, and whether regulation targeted at a specific market segment can have unintended consequences for other segments. From our analyses, it emerges that the smallest audit firms experienced an overall decline in their market share. One specific research question is whether more regulation, such as ASIC's audit inspection programme or mandatory partner rotation, affects smaller auditors disproportionately resulting in their exit from the audit market of listed clients (DeFond and Lennox, 2011).

Moreover, research on local geographic markets in Australia is warranted. While this article focuses on the national audit market for listed companies, there is an opportunity to understand local geographic markets (e.g. in Sydney, Melbourne and Perth), given the concentration of economic activities in certain capital cities (Ferguson et al., 2014). Prior research has investigated the impact of auditor industry specialisation on Australian local geographic markets (Ferguson et al., 2003, 2014). Future research can explore the effect of audit market shares and concentration at the local level.

Finally, while this article exclusively focuses on the listed client market, it is also important to understand the dynamics of the audit market for other types of clients, including private companies and not-for-profit organisations, which represent most entities audited in Australia (Carey et al., 2014; Potter et al., 2019; Yang and Simnett, 2020).

4. Provision of NAS

Since the high-profile corporate collapses in the early 2000s, including Enron and WorldCom in the United States and HIH in Australia, provision of NAS to audit clients and its potential effect on auditor independence have become an ongoing concern for regulators worldwide (Accounting Professional and Ethical Standards Board (APESB), 2018; European Parliament, 2014). In Australia, the provision of certain NAS has been prohibited for listed audit clients.¹⁴ The inquiry into regulation of auditing in Australia resulted in additional recommendations related to prohibiting and disclosing NAS (recommendation 3); related to the auditor providing a confirmation in their independence declaration that no prohibited NAS was provided (recommendations 4); and related to revising APES 110 Code of Ethics to ensure that auditors are not incentivised for selling non-audited services (recommendation 5) to ensure that auditor independence is not compromised by selling NAS (Parliamentary Joint Committee on Corporations and Financial Services, 2020a, 2020b). In this section, we provide a comprehensive survey of the Australian NAS market from 2012 to 2018, including the market share of auditor-provided NAS for listed companies, the importance of auditor-provided NAS relative to audit fees for listed companies, and finally the importance of NAS fees in Big 4 accounting firms' total revenue. This is followed by a discussion of future research opportunities related to NAS in Australia.

4.1. Market share of auditor-provided NAS

This section analyses the market of NAS provided by auditors to their audit clients.¹⁵ Table 5 Panel A shows that the total NAS purchased by Australian listed companies from their current auditor is \$183 million in 2012, declines to \$162 million in 2014 and grows to \$172 million by 2018. The table further shows the amount and percentage of auditor-provided NAS by firm type, and the average ratio of NAS fees to total client assets.¹⁶ Over the period 2012–2018, the total NAS fees paid to Big 4 firms are on average \$158.4 million, which represents 90.6% of the total NAS market of audit clients. For clients of the Big 4 firms, the NAS fees paid to their auditors are 0.12% of total assets, which is relatively high compared to the average ratio of audit fees to total assets (0.35%) reported in Table 3. The Large Non-Big 4 firms receive average total NAS fees of \$8.5 million per year, representing 4.8% of the total NAS market from audit clients. The average NAS fees to Large Non-Big 4 firms represent an average of 0.27% of clients' total assets. The Medium Non-Big 4 firms receive an average of \$7 million in total NAS fees per year, representing around 4.0% of the audit NAS market. They also report an average of 0.37% of NAS fees to clients' total assets. Small Non-Big 4 firms have a negligible share of this market and receive an average of \$0.6 million per year, representing an average of 0.21% of clients' total assets.¹⁷ Overall, the Big 4 firms dominate the market of auditor-provided NAS, with 90.6% of NAS being provided by this group of auditors.

In Table 5 Panel B, we analyse auditor-provided NAS fees by client segment. On average, 90.5% of the largest clients purchase NAS from their auditors, increasing from 85.5% in 2014 to 94.0% in 2018. However, the average amount spent on NAS (around \$619,000) has declined over the time period, while the average NAS fees to clients' total assets has been stable at around 0.03% on average. For the next largest group of clients, approximately three-quarters purchase NAS from their auditors with an average spend of around \$160,000, which increased slightly over time and represents 0.10% of total assets on average. For medium clients, just over half purchase other services from their auditors averaging around \$50,000, which increased over time and represents 0.22% of total assets on average. Two-thirds of the smallest clients do not purchase NAS from their auditors. For those clients that do, NAS fees are around \$25,000 per year on average, which decreased steadily over time and represents 0.55% of total assets. This indicates that the purchase of other services from auditors is associated with client size, suggesting a higher demand for NAS from larger and more complex firms. However, on average, smaller firms that demand NAS pay a higher fee relative to their total assets.

4.2. Fees from audit clients: ratio of auditor-provided NAS fees to audit fees

An area of concern for regulators and investors is economically significant NAS relative to audit fees provided by auditors to their clients. Auditors could use audit service to 'get in the door' of key clients to sell additional NAS. This could make auditors economically dependent on a client's NAS fees and impair auditor independence (DeFond et al., 2002).

Table 6 Panel A analyses the relative importance of auditor-provided NAS fees to audit fees for listed audit clients by audit firm type. We find that the ratio of NAS fees to audit fees is highest for clients of Big 4 firms (an average of 34.4% relative to 29.9% for Large Non-Big 4, 20.9% for Medium Non-Big 4 and 17.0% for small Non-Big 4 firms). This is probably because Big 4 clients are large and complex and are more likely to demand complex NAS services from their auditors. We also show that Big 4 clients' ratio of NAS fees to audit fees has declined slightly over the sample period from almost 39.9% in 2012 to 33.3% in 2018. This is lower than the levels

Table 5. Market share of NAS fees from audit clients.
Panel A: Market share of NAS fees from audit clients by audit firm type.

Year	Big 4			Large Non-Big 4			Medium Non-Big 4			Small Non-Big 4					
	\$ million	Average ratio of NAS to total assets (%)	%	\$ million	Average ratio of NAS to total assets (%)	%	\$ million	Average ratio of NAS to total assets (%)	%	\$ million	Average ratio of NAS to total assets (%)	%	\$ million	Average ratio of NAS to total assets (%)	%
2012	183.4	0.19	92.6	169.8	0.14	3.7	6.7	0.17	3.0	5.5	0.38	0.8	1.4	0.18	0.8
2013	186.4	0.18	91.9	171.2	0.13	5.1	9.5	0.27	2.4	4.4	0.22	0.7	1.2	0.17	0.7
2014	162.6	0.21	90.9	147.8	0.13	5.0	8.2	0.27	3.5	5.6	0.33	0.6	1.0	0.34	0.6
2015	172.3	0.28	89.8	154.8	0.17	5.6	9.6	0.28	4.0	6.9	0.56	0.6	1.1	0.26	0.6
2016	175.7	0.22	90.3	158.6	0.11	5.1	9.0	0.28	4.0	7.0	0.41	0.6	1.1	0.20	0.6
2017	171.5	0.25	89.7	153.9	0.09	5.3	9.1	0.41	4.6	7.9	0.42	0.4	0.6	0.16	0.4
2018	172.3	0.17	88.6	152.6	0.10	4.2	7.3	0.23	6.8	11.6	0.27	0.4	0.8	0.13	0.4
Average	174.9	0.21	90.6	158.4	0.12	4.8	8.5	0.27	4.0	7.0	0.37	0.6	1.0	0.21	0.6

NAS: non-audit services.

This table provides a summary of NAS fee market share based on NAS fees received from listed clients, based on disclosure in annual reports of clients (NAS fees received from non-listed clients are not publicly available). We provide more detailed analyses for NAS fees received from both listed and non-listed clients in Table 7 using transparency report data.

(Continued)

Table 5. (Continued)
Panel B: Market share of NAS fees from audit clients by client size.

Year	Very large clients (top 200 by market capitalisation)				Large clients (201–500 by market capitalisation)				Medium clients (others)				Small clients (bottom 500 by market capitalisation)			
	Total NAS fees	No. NAS	Mean NAS fees	Average ratio of NAS to total assets	Total NAS fees	No. NAS	Mean NAS fees	Average ratio of NAS to total assets	Total NAS fees	No. NAS	Mean NAS fees	Average ratio of NAS to total assets	Total NAS fees	No. NAS	Mean NAS fees	Average ratio of NAS to total assets
	(\$ million)	%	(\$ thousand)	%	(\$ million)	%	(\$ thousand)	%	(\$ million)	%	(\$ thousand)	%	(\$ million)	%	(\$ thousand)	%
2012	125.7	200 89.5	702.4	0.02	32.9	300 75.7	144.8	0.07	18.5	803 54.5	42.3	0.20	6.2	500 36.2	34.4	0.49
2013	122.9	200 93.0	660.9	0.04	36.8	300 75.3	162.9	0.09	20.8	792 54.4	48.1	0.20	5.9	500 34.8	33.7	0.41
2014	101.2	200 85.5	591.7	0.03	37.2	300 73.3	169.0	0.10	20.2	778 52.1	50.0	0.24	4.0	500 31.8	25.4	0.48
2015	97.6	200 88.0	554.5	0.03	37.0	300 73.0	169.1	0.10	18.3	815 50.4	44.5	0.29	19.4	500 33.0	24.6	0.79
2016	114.3	200 92.0	621.0	0.03	36.5	300 78.3	155.3	0.12	21.3	718 52.8	56.1	0.23	3.7	500 34.8	21.2	0.54
2017	111.5	200 91.5	609.2	0.03	35.3	300 73.3	160.6	0.11	20.6	724 51.7	55.0	0.19	4.1	500 39.2	20.8	0.70
2018	110.6	200 94.0	588.4	0.03	38.4	300 75.7	169.3	0.09	20.2	727 50.6	54.9	0.17	3.1	500 37.0	16.5	0.44
Average	112.0	200 90.5	618.6	0.03	36.3	300 74.9	161.5	0.10	20.0	765 52.4	49.8	0.22	6.6	500 35.3	25.1	0.55

NAS: non-audit services.
 We exclude firms reporting no NAS from the sample when calculating the mean NAS fees.

Table 6. NAS fees to audit fees from audit clients.

Panel A: NAS fees to audit fees by auditor type.

Year	Big 4	Large Non-Big 4	Medium Non-Big 4	Small Non-Big 4
	%	%	%	%
2012	39.9	25.1	19.0	18.7
2013	39.8	34.5	15.3	19.4
2014	31.1	29.7	18.8	17.7
2015	32.9	34.8	22.4	17.8
2016	33.5	30.6	20.6	18.2
2017	30.5	29.1	21.1	12.9
2018	33.3	25.7	28.9	14.5
Average	34.4	29.9	20.9	17.0

Panel B: NAS fees to audit fees by client size.

Year	Very large clients (top 200 by market capitalisation)	Large clients (201–500 by market capitalisation)	Medium clients (others)	Small clients (bottom 500 by market capitalisation)
	%	%	%	%
2012	38.0	51.4	26.9	25.4
2013	37.0	54.7	30.0	24.6
2014	26.5	54.8	30.4	17.7
2015	26.0	54.2	27.7	17.7
2016	30.6	47.6	31.6	15.0
2017	27.5	46.2	30.5	14.3
2018	30.0	52.7	29.8	13.8
Average	30.8	51.7	29.6	23.9

documented in the United Kingdom, where this ratio has declined from 55% in 2011 to 38% in 2018 for Big 4 clients (CMA, 2019). This might be of interest to regulators given the constant scrutiny of auditor-provided NAS over the sample period.¹⁸ This also demonstrates that the Australian NAS market is unique in this regard, and regulatory initiatives should be informed by local evidence.

Table 6 Panel B analyses the ratio of auditor-provided NAS fees to audit fees by client segment. The auditor-provided NAS purchased by very large clients equals 30.8% of audit fees on average, declining from 38.0% to 30.0% over the period. Large clients have the highest ratio of the four client segments with an average ratio of 51.7%. Medium-sized clients have an average ratio of 29.6% and the smallest clients have low and declining ratios from 25.4% to 13.8% over the period. This suggests that the large clients, rather than the largest clients are purchasing high amounts of NAS relative to audit fees. If additional regulation is imposed by regulators, these large clients and their auditors would be most affected.

4.3. Total revenue composition in Big 4 accounting firms (transparency report data)

Since 2013, Australian accounting firms have been required to prepare transparency reports if they audit 10 or more ‘significant entities’.¹⁹ Among other information, transparency reports provide

information on total firm revenue and its composition, including audit fees, NAS fees from audit clients and NAS fees from non-audit clients (e.g. revenue from services such as consulting and tax).²⁰ This allows us to investigate (1) the importance of total NAS fees from both audit and non-audit clients, relative to total firm revenue from all sources and (2) the importance of auditor-provided NAS fees to total NAS fees from both audit and non-audit clients.²¹

Table 7 Panel A examines the relative importance of NAS to total firm revenue in Big 4 firms.²² It is evident that both audit and NAS fees grow over the period 2012–2018, but the growth in NAS fees far exceeds that of audit fees. Among the Big 4 firms, the ratio of NAS to total revenue has substantially increased from 73.6% in 2013 to 82.2% in 2018, where total revenue is calculated as the sum of audit and NAS fees. This increase can be observed for all Big 4 firms but is especially pronounced for (KPMG; a 15.0% increase from 2013 to 2018). Hence, revenue from NAS is increasingly important for Big 4 firms. This also points to the diminished financial importance of the audit practice.

Table 7 Panel B further disaggregates NAS revenue into NAS revenue from audit clients and non-audit clients and reports the ratio of auditor-provided NAS revenue to total NAS revenue. These data are only available for three of the Big 4 firms, with EY not separately disclosing this information. In 2013, NAS revenue from audit clients was a mere 13.5% of total NAS revenue of these three Big 4 firms and this has declined to 9.3% in 2018. Hence, auditor-provided NAS are currently at a relatively low level and become less important to these firms over the sample period.

In summary, the largest clients and the Big 4 firms are the main players in the auditor provided NAS market of listed companies: on average, 64.0% of NAS fees paid by Australian listed companies are from the largest clients and around 90.6% of all NAS fees paid by all listed companies are to Big 4 firms.²³ In addition, the relative importance of NAS fees to audit fees varies across different client market segments, with the highest ratio observed for large clients, rather than the largest clients. The analyses on transparency report data for three of the Big 4 firms reveal that NAS fees represent more than three-quarters of the total firm revenue from all sources and is growing over the sample period. The high level of NAS fees is mainly contributed by non-audit clients, rather than audit clients. This indicates a growing emphasis on income streams from NAS in Big 4 firms.

4.4. Opportunities for research on non-audit services in Australia

The finding that Big 4 firms have experienced large growth in their non-audit service lines creates interesting research opportunities. First, it is important to understand the effect of the high level of non-audit to total revenue and its rapid growth in recent years, on the (perceived) quality of audits in Australia. On one hand, this can result in prioritisation of NAS when allocating resources within the accounting firm, at the detriment of professionalism (Lisic et al., 2019). On the other hand, the knowledge transfer between audit services and expertise from providing NAS can be beneficial for audit quality (Donelson et al., 2020). In addition, investors' perceptions of audit quality might be negatively affected by the high proportion of firm revenues from NAS.

The decline in the purchase of NAS by audit clients from their auditors in combination with increased proportion of firm revenue from NAS is an interesting phenomenon warranting investigation. This has the potential to affect the Australian audit market and subsequently audit quality since NAS are typically more lucrative than audit services. Specifically, accounting firms might forgo audit services to clients and instead target them for more lucrative NAS. In addition, clients might prefer to purchase NAS from a specific accounting firm which restricts these accounting firms from providing audit services to these clients (Cowle et al., 2022). If audit services are differentiated and certain auditors can better meet the needs of certain audit clients (Gerakos and

Table 7. Transparency report data: revenue composition of Big 4 firms.
Panel A: Audit and NAS revenue by Big 4.

Year	Deloitte			EY			KPMG			PwC		
	Audit	NAS ^a	Ratio of NAS to total revenue	Audit	NAS ^b	Ratio of NAS to total revenue	Audit	NAS ^b	Ratio of NAS to total revenue	Audit	NAS ^b	Ratio of NAS to total revenue
	(\$ million)	(\$ million)	%	(\$ million)	(\$ million)	%	(\$ million)	(\$ million)	%	(\$ million)	(\$ million)	%
2013	203	882	81.3	310	810	72.3	389	724	65.0	353	1086	75.5
2014	225	949	80.8	318	815	71.9	392	728	65.0	354	1219	77.5
2015	236	1119	82.6	338	948	73.7	411	799	66.0	364	1367	79.0
2016	251	1290	83.7	353	1134	76.3	438	932	68.0	369	1551	80.8
2017	261	1510	85.3	353	1272	78.3	315	1185	79.0	396	1724	81.3
2018	278	1752	86.3	375	1410	79.0	328	1312	80.0	409	1941	82.6
Average	242	1250	83.8	341	1065	75.7	379	947	71.4	374	1481	79.8

NAS: non-audit services.

Total revenue is calculated as the sum of Audit and NAS fees. NAS fees in this table are fees generated from the non-audit service lines of the respective accounting firm.

^aIncludes audit-related assurance fees.

^bExcludes fees from audit-related assurance services (included in audit fees).

(Continued)

Table 7. (Continued)
Panel B: NAS revenue from audit clients versus non-audit clients by Big 4.

Year	Deloitte				KPMG				PwC				Average NAS revenue from audit clients/total NAS
	NAS revenue from audit clients	NAS revenue from others	NAS revenue from audit clients/total NAS	%	NAS revenue from audit clients	NAS revenue from others	NAS revenue from audit clients/total NAS	%	NAS revenue from audit clients	NAS revenue from others	NAS revenue from audit clients/total NAS	%	
2013	88	794	10.0		122	712	14.6		168	918	15.5		13.5
2014	91	858	9.6		134	717	15.7		189	1030	15.5		13.7
2015	105	1014	9.4		133	799	14.3		194	1173	14.2		12.6
2016	116	1174	9.0		151	918	14.1		200	1351	12.9		11.9
2017	122	1388	8.1		135	1050	11.4		208	1516	12.1		10.5
2018	117	1635	6.7		131	1181	10.0		218	1723	11.2		9.3
Average	107	1143	8.6		134	896	13.0		196	1285	13.2		11.6

NAS: non-audit services.
 EY did not disclose detailed NAS information and is, therefore, excluded from this panel.

Syverson, 2015), prioritising NAS can result in a mismatch between client and accounting firm and consequently affect audit quality.

The analysis also shows that the amount of auditor-provided NAS as a percentage of audit fees is highest for the second-largest group of clients, but not for the largest clients. It is unclear why such variation between client segments exists and it would be worthwhile to explore the reasons.

Finally, the results show that NAS fees provided by Australian accounting firms are noticeably lower than those in the United Kingdom with a 5% to 15% difference in NAS fee to audit fee ratios, despite similar regulations in the two jurisdictions (CMA, 2019). A cross-country comparison that explores reasons why the Australian market for NAS fees differs from other NAS markets is warranted. Potential explanations could be the unique composition of Australian listed companies, differences in client corporate governance, varied compliance with NAS-related regulations and different partner incentives embedded in compensation structures.

5. Audit firm tenure

Some corporations engage the same audit firm for decades, which has raised regulatory concerns about audit-client familiarity and lack of independence of auditors, which can affect audit quality (Murphy, 2015; Parliamentary Joint Committee on Corporations and Financial Services, 2020b). Despite these concerns, empirical evidence on whether long audit firm tenure affects audit quality of public companies is mixed (Bell et al., 2015; Carcello and Nagy, 2004; Chen et al., 2008; Davis et al., 2009; Deis and Giroux, 1992; Johnson et al., 2002). Some jurisdictions introduced regulations to cap audit firm tenure and required audit firm rotation for certain clients (e.g. in Europe in 2014) (European Parliament, 2014). In Australia, a ‘tender or explain’ approach has been recommended by the Parliamentary Joint Committee on Corporations and Financial Services (2020a). Proponents of mandatory firm rotation argue that it reinforces auditor independence, while opponents argue that client-specific knowledge only develops over time (Myers et al., 2003). In this section, we analyse audit firm tenure and audit firm switches of listed Australian companies from 2012 to 2018.

5.1. Audit firm tenure

Table 8 Panel A outlines the audit firm tenure for listed clients.²⁴ Over the period 2012 to 2018, around half (46.6%) of all listed companies engage the same audit firm for less than 5 years, 26.6% engage the same audit firm for 5–8 years, 14.1% engage the same audit firm for 9–12 years, and finally, 12.7% engage the same audit firm for more than 12 years. Furthermore, 85 companies (5.0%) have the same audit firm for at least 19 years in 2018 (un-tabulated). Overall, this shows that very long audit tenure is relatively rare among Australian listed clients despite regulatory concerns.

Table 8 Panel B shows that audit firm tenure varies by audit firm type. Big 4 firms retain more clients in the long-term, with 23.2% of clients engaging the same Big 4 firm for more than 12 years and another 17.0% for 9 to 12 years. In comparison, non-Big 4 firms retain only between 5.0% and 6.5% of their clients for more than 12 years, and 8.5% and 13.8% of clients for 9 to 12 years. Over the sample period, the proportion of Big 4 clients with longer audit tenure (more than 12 years) is increasing in recent years, from 17.8% to 27.8%.

Table 8 Panel C analyses the audit firm tenure data by client market segment, where important differences emerge between the various client segments.²⁵ In general, we observe that the proportion of clients with longer audit firm tenure is positively correlated with client size. This can reflect that (1) auditors are inclined to keep larger clients and/or (2) larger clients value the incumbent

audit firm’s client-specific knowledge more than smaller clients and prefer to avoid costs related to audit-firm switching (Bell et al., 2015; Carcello and Nagy, 2004; Chen et al., 2008; Johnson et al., 2002; Murphy, 2015). It further reveals differences in tenure over the sample period among different client segments. For the largest and the second-largest clients, a higher proportion remain with the same audit firm for more than 12 years in 2018 than in 2012, indicating long audit firm tenure could be a concern for this group. Like large clients, a higher percentage of medium and small clients engage with their audit firms for more than 9 years in 2018 than in 2012, pointing to possible concerns about long tenure.

In summary, while our analysis shows long audit firm tenure is not very widespread among Australian-listed companies – from 2012 to 2018, only 12.7% of all listed companies engage the same audit firm for more than 12 years. It is evident, and might reflect regulatory concern, that

Table 8. Audit firm tenure.

Panel A: Summary of audit firm tenure.

Year	Total	1–4 Years	5–8 Years	9–12 Years	> 12 Years	Median tenure
		%	%	%	%	Years
2012	1764	46.6	31.7	11.6	10.1	5
2013	1738	47.4	29.1	12.1	11.4	5
2014	1727	46.0	28.5	12.7	12.7	5
2015	1756	44.7	27.0	15.4	12.9	5
2016	1680	45.8	23.6	17.3	13.4	5
2017	1674	47.5	23.6	15.4	13.6	5
2018	1687	48.1	22.5	14.4	15.1	5
Average	1718	46.6	26.6	14.1	12.7	5

We excluded 331 observations who were newly listed in ASX. The earliest observation from the audit firm dataset is from year 2000. Hence, the longest tenure we can observe in 2012 is 13 years. As a result, we set 12 years as the threshold to define the longest tenure category. This also means that the average audit firm tenure cannot be accurately calculated. However, median audit firm tenure is not affected by data truncation, which is consistently 5 years from 2012 to 2018. We remove 331 observations pertaining to newly listed clients from the sample to remove the bias in audit firm tenure statistics that would result if newly listed clients with short tenure was included.

Panel B: Audit firm tenure by audit firm type.

Year	Big 4				Large Non-Big 4				Medium Non-Big 4				Small Non-Big 4			
	1–4	5–8	9–12	> 12	1–4	5–8	9–12	> 12	1–4	5–8	9–12	> 12	1–4	5–8	9–12	> 12
	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years	Years
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
2012	33.9	30.6	17.8	17.8	53.8	37.7	5.4	3.1	56.4	29.5	9.2	4.9	56.9	28.5	5.8	8.8
2013	34.4	27.2	18.0	20.5	56.9	32.5	6.9	3.8	56.9	28.4	9.5	5.2	52.1	32.8	5.9	9.2
2014	32.4	25.3	18.8	23.5	56.1	31.8	7.8	4.4	53.2	31.0	9.5	6.3	60.5	25.4	7.9	6.1
2015	36.6	21.8	18.2	23.5	52.6	26.6	15.9	4.9	46.3	35.3	12.1	6.3	61.6	21.4	11.6	5.4
2016	39.3	17.7	17.7	25.3	40.5	31.8	23.0	4.7	53.5	25.6	14.4	6.5	64.4	21.2	9.6	4.8
2017	41.7	18.5	15.3	24.6	39.5	33.1	21.0	6.4	55.5	25.3	12.4	6.9	69.8	13.5	12.5	4.2
2018	40.8	18.3	13.1	27.8	40.6	32.5	18.8	8.1	56.7	22.0	14.3	7.0	68.6	17.6	7.8	5.9
Average	36.9	22.9	17.0	23.2	48.9	32.3	13.8	5.0	54.1	28.0	11.7	6.2	61.5	23.5	8.5	6.5

(Continued)

Table 8. (Continued)

Panel C: Audit firm tenure by client size.

Year	Very large clients (top 200 by market capitalisation)				Large clients (201–500 by market capitalisation)				Medium clients (others)				Small clients (bottom 500 by market capitalisation)			
	1–4 Years	5–8 Years	9–12 Years	>12 Years	1–4 Years	5–8 Years	9–12 Years	>12 Years	1–4 Years	5–8 Years	9–12 Years	>12 Years	1–4 Years	5–8 Years	9–12 Years	>12 Years
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
2012	20.6	29.1	22.1	28.1	33.9	31.9	19.1	15.1	51.9	33.0	8.8	6.4	56.5	30.6	7.3	5.6
2013	18.8	25.5	25.0	30.7	34.2	32.0	15.1	18.7	52.7	29.0	10.2	8.1	57.9	28.9	8.3	4.9
2014	17.4	20.5	24.2	37.9	37.7	28.1	16.0	18.1	50.5	29.9	10.4	9.1	54.8	29.7	9.8	5.6
2015	23.5	17.0	22.5	37.0	42.7	20.3	18.7	18.3	48.2	29.1	13.9	8.8	49.2	32.2	12.7	5.9
2016	27.4	14.7	22.8	35.0	49.1	21.5	10.9	18.4	47.7	24.8	17.8	9.7	48.4	26.6	18.1	6.9
2017	32.0	14.7	17.8	35.5	46.1	19.3	18.0	16.6	49.1	27.7	14.0	9.1	52.3	23.9	14.7	9.1
2018	28.8	17.2	14.6	39.4	47.5	20.9	12.5	19.2	50.7	23.1	15.9	10.3	52.5	24.7	13.3	9.5
Average	24.1	19.8	21.3	34.8	41.7	24.8	15.8	17.8	50.2	28.2	12.9	8.7	53.1	28.0	12.0	6.8

cases of long audit firm tenure are over-represented among (1) clients of Big 4 firms and (2) larger clients.

5.2. Audit firm switches

We analyse audit firm switches from 2012 to 2018 to understand clients' propensity to switch audit firms and incumbent versus new audit firm types. In Table 9 Panel A, we calculate the proportion of clients switching audit firms and then analyse the type of switches (i.e. switches between Non-Big 4 firms, between Big 4 firms, from Non-Big 4 to Big 4 and from Big 4 to Non-Big 4). On average, 9.0% of companies change their audit firms over the period but the proportion of switches decrease over time. Over 55% (5.4% of the total sample) of all audit firm switches are between Non-Big 4 firms, which might be related to audit firm mergers and rebranding activities.²⁶ It might also be related to the requirement to rotate audit partners every 5 years, with audit firm switches between Non-Big 4 firms peaking in 2012 and 2016. In contrast, switches between Big 4 firms represent around 10% (0.9% of the total sample) of all audit firm switches over the period, suggesting little competition between Big 4 auditors and Big 4 clients' preference to retain their auditors. Finally, around 16% (1.4% of the total sample) of auditor switches are from Big 4 to Non-Big 4 firms, compared to around 13% (1.2% of the total sample) of switches between Non-Big 4 to Big 4 firms.

In Table 9 Panel B, we analyse audit firm switches by client segment. An average of 2.6% of the largest clients and 6.7% of large clients switch audit firms over the sample period. This is compared to 9.8% of the medium clients and 11.7% of the small clients switching audit firms. This shows that larger clients seem to be more likely to retain their incumbent auditors, which is consistent with our findings in Section 5.1.

To summarise, over half of all audit firm switches occur between Non-Big 4 firms over the period 2012–2018, possibly because of audit firm mergers and rebranding between Non-Big 4 firms and mandatory partner rotation requirements. Moreover, larger clients change their auditors less frequently than smaller clients, which may be due to stronger preference for and benefit from client-specific knowledge, or the preference of small clients to save costs.

Table 9. Change of auditors.

Panel A: Change of auditors for the full market.

Year	Total no.	Auditor change		Auditor change		
		Total	Non-Big 4 to Non-Big 4	Non-Big 4 to Big 4	Big 4 to Non-Big 4	Big 4 to Big 4
		%	%	%	%	%
2012	1764	12.5	9.0	1.0	1.6	0.9
2013	1738	9.0	5.0	1.7	1.3	0.9
2014	1727	9.7	5.8	1.0	1.3	1.6
2015	1756	6.5	3.3	0.9	1.5	0.8
2016	1680	11.8	7.7	1.3	2.2	0.7
2017	1674	7.5	4.2	1.3	1.1	1.0
2018	1687	5.9	2.9	1.3	0.9	0.7
Average	1718	9.0	5.4	1.2	1.4	0.9

We excluded 331 observations, where the companies are newly listed on the ASX.

Panel B: Change of auditors by client size.

Year	Very large clients (top 200 by market capitalisation; %)	Large clients (201–500 by market capitalisation; %)	Medium clients (others; %)	Small clients (bottom 500 by market capitalisation; %)
2012	4.0	6.0	14.7	16.4
2013	1.0	5.7	11.4	10.6
2014	3.0	8.7	10.6	11.8
2015	3.0	6.0	5.7	9.4
2016	3.5	8.7	12.4	16.4
2017	1.0	5.0	7.7	11.4
2018	3.0	6.7	6.1	6.2
Average	2.6	6.7	9.8	11.7

The percentage change of auditor is calculated as the number of clients who change auditor divided by the number of clients in the relevant client segment.

5.3. Opportunities for research on audit firm tenure in Australia

Based on the above observations, we propose the following research opportunities related to audit firm tenure and audit firm switches in Australia. First, it is worthwhile to understand why certain clients switch audit firms and others retain the same audit firm longer. Academic research has pointed out the importance of an auditor–client match (Gerakos and Syverson, 2015). Changes in client firm needs and characteristics or audit firm characteristics could affect this auditor–client match. For example, an increased focus on consulting, rather than auditing, within an audit firm, or client demand for certain NAS could result in audit firm switches. This could be investigated by comparing the purchase of NAS from audit firms prior to and after the audit firm switch.

Another area for research is understanding the effect of audit firm tenure on audit quality, where results from prior research is mixed (Bell et al., 2015; Carcello and Nagy, 2004; Chen et al., 2008; Johnson et al., 2002). It remains unclear whether it is worthwhile to trade client-specific knowledge with enhanced auditor independence through mandatory audit firm rotation. The relatively

even distribution of audit firm tenure in the large client segments provides an opportunity to explore the effect of tenure on audit quality (endogeneity issues notwithstanding). In addition, it is unclear why clients switch relatively frequently between Non-Big 4 firms. It is possible that this is driven by mandatory partner rotation, mergers and acquisitions between Non-Big 4 firms, or opinion shopping by clients. Future studies can investigate these possible explanations.

6. Conclusion

Regulators have voiced their concerns regarding the market dominance of the largest audit firms in the Australian audit market, and the threat to auditor independence arising from the provision of NAS by auditors to their clients and long audit firm tenure. However, there is little understanding about the recent status quo in the Australian market. Therefore, this study provides a descriptive analysis of the Australian audit market for listed firms over the period 2012 to 2018, focusing on market concentration, provision of NAS and audit firm tenure. We also identify specific areas where researchers can assist regulators to better understand the Australian audit market and suggest a range of research opportunities.

In summary, we find that the audit market is highly segmented. While the Big 4 firms audit less than 40% of all companies, they audit most of the largest clients, and collect a very high proportion of market-wide audit fees. Smaller clients are mainly serviced by a range of Non-Big 4 firms. In addition, we also observe differing levels of concentration across client size segments. The two largest segments are highly concentrated, but concentration levels have not increased over the sample period; for medium-sized clients, the market is slightly less concentrated with significant participation from Big 4 and Non-Big 4 firms; and for the smallest clients, the market concentration is low and increases at a modest level over time. All these results indicate a relatively competitive but complex audit market.

We further find that the auditor-provided NAS market is dominated by the Big 4 firms, and in absolute terms, most NAS are purchased by the largest client segment. The average NAS fee to audit fee ratio is around 30% for the total market with the highest ratio (around 50%) observed for the second-largest group of clients. Revenue data from transparency reports of Big 4 firms provide additional insights into the total NAS market serviced by large accounting firms. These data reveal that average revenue from audit services declined from 26.4% in 2012 to 17.8% in 2018 and points to increased reliance on non-audit service lines to generate revenue in Big 4 firms. This growth is concentrated in non-audit rather than audit clients.

Regarding audit firm tenure, we find that only 12.7% of companies engage the same audit firm for more than 12 years, indicating that very long audit firm tenure is relatively rare overall. However, this proportion is higher in the two largest client segments (34.8% for the very large clients and around 17.8% for the large clients). Analyses on audit firm switches show that (1) larger clients report fewer auditor switches than smaller clients, suggesting larger clients may value client specific-knowledge and smaller clients may have lower demands for NAS or seek cost savings; and (2) switches between Non-Big 4 firms are the most common, except for large clients that mostly switch between Big 4 firms.

This article is not without limitations. First, this article is purely descriptive in nature and only provides potential explanations for observed variability and trends. We do not explore associations or claim causality. Second, the analyses are confined to listed companies for which audit and NAS data are publicly available. Accordingly, our conclusions can only be generalised to the Australian listed company market. While it would be useful to extend the analysis to the private company or other markets, the cost of accessing the data is costly, due to search fees charged by ASIC to access annual filings of companies, and the cost for manual data collection and entry (ASIC, 2022).

However, with search fees likely to be removed from September 2023, accessing these data will become easier (Vickovich, 2022).

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Notes

1. The Parliamentary Joint Committee on Corporations and Financial Services (2020a) recommended that auditors should (1) be explicitly prohibited from providing certain NAS to their audit clients and disclose NAS based on specific categories (recommendation 3), and (2) declare they have not provided any prohibited services in their independence declaration (recommendation 4). In addition, the Committee recommended that APES110 should be revised to ensure that audit partners are not incentivised to sell non-audit services to their audit clients (recommendation 5). Furthermore, it is also recommended that client companies shall disclose auditor tenure in the annual report (recommendation 6), and that client companies shall undertake a public tender process for their external audits every 10 years or explain why not (recommendation 7).
2. For example, ASIC's (2019) submission only considered the top 200 listed companies.
3. We focus on the audit market of listed clients due to the lack of data for other market segments, including private companies, governmental organisations, not-for-profits and so on. We can infer certain information about the non-listed client market from hand collected data from transparency reports. However, the information is not always complete and lacks consistency in reporting of numbers across audit firms, years and offices.
4. This calculation is based on transparency report data and refers to the portion of total firm revenue disclosed by each of the Big 4 accounting firms (including revenue from non-audit service lines). In this specific instance, we refer to accounting firm, since we analyse the revenue of the whole accounting firm, rather than focusing on the audit service line alone.
5. This ratio is calculated based on the data collected from transparency reports of three Big 4 firms (EY did not provide detailed disclosure and is, therefore, excluded). We acknowledge this ratio can be biased due to the exclusion of data from one Big 4 firm.
6. We exclude exchange traded funds, trusts and companies that did not release financial reports.
7. The ACCC (2018) defines a market as 'the product and geographic space in which rivalry and competition takes place' (p. 15).
8. As client segments are created based on year-end changes in market capitalisation, the composition of clients included in each segment can change slightly from year to year. In addition, the number of medium clients can change from year to year, depending on the total number of listed clients in the market.

9. Medium Non-Big 4 firms are those that issued at least one transparency report over the period 2012–2018 but are not defined as Big 4 or Large Non-Big 4 firms, including Bentleys, Crowe Horwath, Hall Chadwick, HLB Mann Judd, KS Black, Lawler Hacketts, Moore Stephens, Nexia, Pitcher Partners, PKF Hacketts, PKF Mack & Co, Rothsay, RSM Bird Cameron, ShineWing, Somes Cooke, Stantons International and William Buck.
10. The total audit fee analysed includes all audit and audit-related services fees paid to the principal (signing) auditor, and members of the principal auditor's network. To calculate the average audit fee to total asset number, we first divide the total fees by total assets, and then take the average across observations.
11. The mining industry represents a significant sector of the Australian economy. The results (un-tabulated) for the analysis on this sector show that Big 4 firms collect 75% of the audit fees paid by the mining sector, with Large and Medium Non-Big 4 firms collecting 24%. This indicates that Big 4 firms are relatively underrepresented in the mining sector compared to other industries.
12. Many Australian listed companies are small mining companies, which makes a direct comparison difficult. However, 77% of Australian Top 500 companies are audited by Big 4 firms, which is more comparable to US and UK figures.
13. Further analysis (un-tabulated) shows that the trend in market share during the period is not driven by the mining industry with both Big 4 and Medium Non-Big 4 firms seeing smaller changes in market share in the mining industry than in other industries. During the period, we observe a 3% decrease in market share of the Big 4 firms in the mining industry from its maximum of 29% in 2012 to 26% in 2018, but a 9% decrease in other industries, from 53% of the other industries market in 2012 to 44% in 2018. Similarly, we observe a 6% reduction in market share of Medium Non-Big 4 firms in the mining industry from 2012 to 2018.
14. The Australian Corporate Law Economic Reform Program of 2003 (CLERP 9) does not prohibit the provision of non-audit services by auditors. However, under section 600, APES 110, some non-audit services cannot be provided by auditors to listed clients, such as assuming managerial responsibilities; certain accounting and bookkeeping services; certain valuation services; certain tax-related services, including assisting the clients in the resolution of tax dispute under certain circumstances; certain internal control and IT services; and certain legal and corporate finance services (APESB, 2018).
15. For Sections 4.1 and 4.2, the total NAS fees include fees paid to the principal auditor and fees paid to members of the principal auditor's network. Note that this is not the aggregate size of the NAS market but is the portion of the market that comprises NAS provided by auditors to their audit clients only. The numbers in this section do not account for NAS provided by auditors to non-audit clients. The categorisation of NAS fees is 'as disclosed' in the notes to the published financial statements.
16. For 20% of all observations, the types of NAS fees purchased from auditors are not specified. This accounts for 27% of all NAS fees. For the remaining observations, the largest amounts of NAS fees are paid for taxation services (40% on average) followed by consulting and advisory services (9% on average), and other assurance services (9% on average).
17. In un-tabulated analyses, we separate the mining industry from other industries. Total NAS fees from mining companies are \$20 million (compared to \$155 million for clients in other industries) and show a decline over the sample period. This contrasts with other industries, which had relatively stable NAS fees over the same period. This suggests that the general decline in NAS fees observed in Table 5 Panel A is largely attributable to mining companies.
18. The EU has capped NAS fees at 70% of average audit fees of the past 3 years (European Parliament, 2014). The Australian average is far below this, which suggests that auditor independence concerns due to NAS fees, while present, might be less severe than expected. However, around one-third of Australian listed companies are in the mining industry, which contributes to the low NAS to audit fees ratio (see Footnote 17).
19. 'Significant entities' include listed companies, listed registered schemes, authorised deposit-taking institutions and insurance companies. We refer to accounting firms, rather than audit firms, in this section, since we analyse the revenue of the whole firm, rather than focusing on the audit service line alone.
20. While certain accounting firms are required to issue transparency reports, the content of the transparency reports is not strictly regulated, resulting in some disclosure inconsistencies across different accounting

firms (Fu et al., 2015). For example, certain medium Non-Big 4 firms exclude audit offices that do not audit significant entities from the transparency reports, resulting in under-reporting of total audit fees paid to the firm. Most small Non-Big 4 firms do not have to prepare transparency reports. We, therefore, perform this analysis on data from the Big 4 firms only.

21. Another benefit is that transparency reports disclose audit fees and NAS fees for all audit clients and do not only focus on listed clients. The data thus cover the entire market.
22. We calculate the ratios in this table based on the data collected from transparency reports of Australian accounting firms. Accounting firms usually structure themselves as networks, and these networks may consist of separate independent firms that individually provide audit and non-audit services. For example, PwC stated in their transparency reports that 'PwC is the brand under which the member firms of PricewaterhouseCoopers International Limited (PwCIL) operate and provide professional services. Together, these firms form the PwC network. "PwC" is often used to refer either to individual firms within the PwC network or to several or all of them collectively' (PwC Australia, 2018). ASIC requirement (ASIC Information Sheet 184; ASIC, 2013) requires auditors to disclose financial information that relates to the relevant reporting year in their transparency reports, including: 'total revenue, and revenue relating to audits of financial statements conducted by the auditor and other services provided by the auditor' (p. 2). From transparency report disclosures, we therefore collect (1) audit fees, (2) fees for other assurance and non-audit services provided to audit clients and (3) fees from non-audit services provided to non-audit clients within each audit network (e.g. revenue for all firms within the PwC network). As disclosed in the note in Table 7, the Big 4 differ in their treatment of fees for audit-related assurance services provided to audit clients. Deloitte counts this as part of the second category, the other firms count this as part of the first category. Regardless of this, revenue in the third category is generated by the non-audit service lines of each network, which is likely largely from consulting and tax services. We acknowledge, however, that we cannot rule out the possibility that some accounting firm networks do not disclose their full revenue in their transparency reports.
23. In Table 5 Panel A, we show that the average NAS fees paid to Big 4 auditors is \$158.4 million, and the total average fees to all types of accounting firms is \$174.9 million. Hence, just over 90% of all NAS fees are paid to Big 4 firms, on average. In Table 5 Panel B, we show that NAS fees for very large, large, medium and small clients over the sample period are, respectively, \$112, \$36.3, \$20.0 and \$6.6 million on average. Thus, 64% (i.e. $112 / (112 + 36.3 + 20.0 + 6.6)$) of NAS fees are from the very large clients.
24. We utilise data from 2000 to 2018 for the analysis, which means the longest tenure we can track in 2012 is 13 years. Data truncation means that the average of firm tenure cannot be accurately calculated, but the median is not affected. The latter is consistently 5 years from 2012 to 2018. We remove 331 observations pertaining to newly listed clients as these would affect inferences in these analyses.
25. As discussed in footnote 8, we assign clients to segments based on year-end market capitalisation, which can result in changes to client segment composition. Our analysis (un-tabulated) shows that most client firms remain in the same market segment over time, including 92% of the very large clients, 79% of the large clients, 81% of medium clients and 77% of small clients. While we do not track the same group of companies over time, this approach provides useful client segments without introducing survivorship bias.
26. For example, Moore Stephens sold its Sydney and Western Sydney offices to Deloitte in 2014 (King, 2014); sold its Melbourne office to ShineWing in 2015 (Walsh, 2015); but took over Nexia Melbourne and Pitcher Partners Sydney in 2015 (King, 2015). While these changes are classified as audit firm switches in our auditor tenure and switch analysis, they reflect the firm merger and office rebranding activities.

References

- Accounting Professional and Ethical Standards Board (APESB) (2018) APES 110 Code of Ethics for Professional Accountants (including Independence Standards). Available at: https://apesb.org.au/uploads/home/02112018000152_APES_110_Restructured_Code_Nov_2018.pdf (accessed 20 June 2022).
- Australian Competition and Consumer Commission (ACCC) (2008) Merger guidelines, Commonwealth Government, Canberra, ACT. Available at: www.accc.gov.au (accessed 20 June 2022).

- Australian Securities and Investments Commission (ASIC) (2013) Information sheet 184. Available at: <https://download.asic.gov.au/media/1338902/info184-published-19-August-2013.pdf> (accessed 20 June 2022).
- Australian Securities and Investments Commission (ASIC) (2019) PJC inquiry into the regulation of auditing. Available at: https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Corporations_and_Financial_Services/RegulationofAuditing/Submissions (accessed 20 June 2022).
- Australian Securities and Investments Commission (ASIC) (2022) Search fees. Available at: <https://asic.gov.au/online-services/search-asic-s-registers/search-fees/> (accessed 13 July 2022).
- Bell TB, Causholli M and Knechel WR (2015) Audit firm tenure, non-audit services, and internal assessments of audit quality. *Journal of Accounting Research* 53: 461–509.
- Carcello JV and Nagy AL (2004) Audit firm tenure and fraudulent financial reporting. *Auditing: A Journal of Practice & Theory* 23: 55–69.
- Carey P, Potter B and Tanewski G (2014) Application of the reporting entity concept in Australia. *Abacus* 50: 460–489.
- Carson E, Redmayne NB and Liao L (2014) Audit market structure and competition in Australia. *Australian Accounting Review* 24: 298–312.
- Carson E, Simnett R, Thürheimer U, et al. (2022) Involvement of component auditors in multinational group audits: Determinants, audit quality and audit fees. *Journal of Accounting Research* 60: 1419–1462.
- Chen C-Y, Lin C-J and Lin Y-C (2008) Audit partner tenure, audit firm tenure, and discretionary accruals: Does long auditor tenure impair earnings quality? *Contemporary Accounting Research* 25: 415–445.
- Competition and Markets Authority (CMA) (2019) Statutory audit services market study 2019. Available at: https://assets.publishing.service.gov.uk/media/5d03667d40f0b609ad3158c3/audit_final_report_02.pdf (accessed 20 June 2022).
- Cowle EN, Kleppe TJ, Moon J, et al. (2022) Client consulting opportunities and the reemergence of Big 4 consulting practices: Implications for the audit market. Working Paper. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3452244
- Davis LR, Soo BS and Trompeter GM (2009) Auditor tenure and the ability to meet or beat earnings forecasts. *Contemporary Accounting Research* 26: 517–548.
- DeFond ML and Lennox CS (2011) The effect of SOX on small auditor exits and audit quality. *Journal of Accounting & Economics* 52: 21–40.
- DeFond ML, Raghunandan K and Subramanyam KR (2002) Do non-audit service fees impair auditor independence? Evidence from going concern audit opinions. *Journal of Accounting Research* 40: 1247–1274.
- Deis DR and Giroux GA (1992) Determinants of audit quality in the public sector. *The Accounting Review* 67: 462–479.
- Donelson DC, Ege M, Imdieke AJ and Maksymov E (2020) The revival of large consulting practices at the Big 4 and audit quality. *Accounting, Organizations and Society* 87: 101–157. <https://doi.org/10.1016/j.aos.2020.101157>
- European Parliament (2014) Regulation (EU) No 537/2014 of the European Parliament and of the Council of 16 April 2014 on specific requirements regarding statutory audit of public-interest entities and repealing Commission Decision 2005/909/EC. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R0537>
- Ferguson A, Francis JR and Stokes DJ (2003) The effects of firm-wide and office-level industry expertise on audit pricing. *The Accounting Review* 78: 429–448.
- Ferguson A, Pündrich G and Raftery A (2014) Auditor industry specialization, service bundling, and partner effects in a mining-dominated city. *Auditing: A Journal of Practice & Theory* 33: 153–180.
- Fu Y, Carson E and Simnett R (2015) Transparency report disclosure by Australian audit firms and opportunities for research. *Managerial Auditing Journal* 30: 870–910.
- Gerakos J and Syverson C (2015) Competition in the audit market: Policy implications. *Journal of Accounting Research* 53: 725–775.
- Johnson E, Khurana IK and Reynolds JK (2002) Audit-firm tenure and the quality of financial reports. *Contemporary Accounting Research* 19: 637–660.
- King A (2014) Deloitte loss is a one-off: Moore Stephens. *The Australian Financial Review*, 5 March. Available at: <https://www.afr.com/companies/deloitte-loss-is-a-one-off-moore-stephens-20140219-ixrbi> (accessed 13 July 2022).

- King A (2015) \$20m Nexia office defects to Moore Stephens. *The Australian Financial Review*, 16 June. Available at: <https://www.afr.com/companies/professional-services/20m-nexia-office-defects-to-moore-stephens-20150616-ghosvh> (accessed 13 July 2022).
- Lisic LL, Myers LA, Pawlewicz R, et al. (2019) Do accounting firm consulting revenues affect audit quality? Evidence from the pre- and post-SOX eras. *Contemporary Accounting Research* 36: 1028–1054.
- Mimra W, Rasch A and Waibel C (2016) Price competition and reputation in credence goods markets: Experimental evidence. *Games and Economic Behavior* 100: 337–352.
- Murphy M (2015) Most companies have same auditor for over a decade. *The Wall Street Journal*, 10 August. Available at: <https://www.wsj.com/articles/BL-CFOB-8833> (accessed 20 June 2022).
- Myers JN, Myers LA and Omer TC (2003) Exploring the term of the auditor–client relationship and the quality of earnings: A case for mandatory auditor rotation? *The Accounting Review* 78: 779–799.
- Neate R and Davies R (2020) Carillion collapse: Two years on, ‘government has learned nothing’. Available at: <https://www.theguardian.com/business/2020/jan/15/carillion-collapse-two-years-on-government-has-learned-nothing> (accessed 21 April 2021).
- Parliamentary Joint Committee on Corporations and Financial Services (2020a) Regulation of auditing in Australia: Final report. Available at: https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Corporations_and_Financial_Services/RegulationofAuditing/Report (accessed 20 June 2022).
- Parliamentary Joint Committee on Corporations and Financial Services (2020b) Regulation of auditing in Australia: Interim report. Available at: https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Corporations_and_Financial_Services/RegulationofAuditing/Interim_Report (accessed 20 June 2022).
- Pearson T and Trompeter G (1994) Competition in the market for audit services: The effect of supplier concentration on audit fees. *Contemporary Accounting Research* 11: 115–135.
- Poltz J and Schuetze A (2020) ‘The money’s gone’: Wirecard collapses owing \$5.8 billion 2020. Available at: <https://www.afr.com/companies/financial-services/the-money-s-gone-wirecard-collapses-owing-5-8-billion-20200625-p556bs> (accessed 21 April 2021).
- Potter B, Pinnuck M, Tanewski G, et al. (2019) Keeping it private: financial reporting by large proprietary companies in Australia. *Accounting & Finance* 59: 87–113.
- PwC Australia (2018) Transparency report. Year ended 30 June 2018. Available at: <https://www.pwc.com.au/assurance/transparency-report/pwc-australia-transparency-report-2018-1.pdf> (accessed 20 June 2022).
- Tadros E (2020) What the inquiry into audit quality recommended. *The Australian Financial Review*, 11 November. Available at: <https://www.afr.com/companies/professional-services/what-the-inquiry-into-audit-quality-recommended-20201111-p56dr2#:~:text=The%20final%20report%20by%20the,of%20auditing%20and%20company%20reporting>
- van Raak J, Peek E, Meuwissen R, et al. (2020) The effect of audit market structure on audit quality and audit pricing in the private-client market. *Journal of Business Finance & Accounting* 47: 456–488.
- Vickovich A (2022) ASIC fees for company searches scrapped. *The Australian Financial Review*, 29 March. Available at: <https://www.afr.com/policy/economy/asic-fees-for-company-searches-scrapped-in-deregulation-push-20220329-p5a8zv> (accessed 20 June 2022).
- Walsh K (2015) Moore Stephens merger aims to rival accounting’s Big Four. *The Australian Financial Review*, 3 February. Available at: <https://www.afr.com/politics/moore-stephens-merger-aims-to-rival-accounting-s-big-four-20150203-134yyt> (accessed 13 July 2022).
- Wootton H (2019) ASIC wants to give audit quality feedback straight to companies. *The Australian Financial Review*, 23 October. Available at: <https://www.afr.com/companies/professional-services/asic-wants-to-give-audit-quality-feedback-straight-to-firms-20191021-p532ms> (accessed 20 June 2022).
- Yang Y and Simnett R (2020) Financial reporting by charities: Why do some choose to report under a more extensive reporting framework? *Abacus* 56: 320–347.