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**Merger Impacts on Investor Expectations:
An Event Study for Australia***

by

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Merger Impacts on Investor Expectations: An Event Study for Australia*

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Abstract

In previous work (Feinberg and Round, 2005), little evidence of share-price response to Australian price-fixing investigations was found. However, these investigations often involve a small part of a company's operations and antitrust penalties have tended to be relatively small; in fact, some weak support was found for a greater response by investors when penalties were expected to be more significant. Mergers, on the other hand, clearly represent a much more significant event, and we would anticipate a clearer share-price response both to announced mergers and to associated antitrust challenges. While such studies have been done in other countries (primarily for the US), we know of no prior research of this sort for Australia. In this paper we focus on a sample of about 50 mergers and acquisitions involving Australian companies from 1996-2003, examining the impact on share prices of the announcement of these mergers both on the firms involved and on rival firms. For those which were challenged by the Australian antitrust enforcers, we also consider the impact of the announcement of such a challenge.

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I. Introduction

In previous work (Feinberg and Round, 2005), little evidence of share-price response to Australian price-fixing investigations was found. However, these investigations often involve a small part of a company's operations and antitrust penalties have tended to be relatively small; in fact, some weak support was found for a greater response by investors when penalties were expected to be more significant. Mergers, on the other hand, clearly represent a much more significant event, and we would anticipate a clearer share-price response both to announced mergers and to associated antitrust challenges. While such studies have been done in other countries - primarily for the US (for recent examples, see Harris and Ravenscraft (1991), Andrade et al (2002), and Bruner (2002)) - we know of no prior research of this sort for Australia.

Feinberg and Round (2005) is the first study to statistically examine the impact of antitrust enforcement in Australia. As the authors point out, prior to 1974 firms were largely unregulated by competition law. As Australia began antitrust enforcement penalties were first relatively weak, but they have been increasing of late, showing a gradual maturation of the regulatory system. This being the case, it should be interesting to examine the impacts of merger announcements of Australian firms. There is a well-established baseline to compare our findings with U.S. and European merger impacts. Several aspects of the results should provide useful comparison.

- Comparison of Australian merger impacts (investor reactions) to those in parts of the world with more mature antitrust enforcement
- Comparison of Australian domestic versus cross-border merger impacts

- Comparison of the impacts of mergers at the time of the merger announcement versus the time of the merger is raised with the Australian Competition and Consumer Commission (ACCC) (if raised) for both domestic and cross-border mergers
- Comparison of investor reactions to mergers that end up being raised with ACCC versus those that do not
- Review of the abnormal returns of rival firms as a result of the merger announcements.

II. The Australian enforcement context

Until 1974, when the *Trade Practices Act* was introduced, Australian firms were not subject to any statutory merger regulation process. When introduced, section 50 of the *Trade Practices Act* was written to prohibit mergers based on the substantial lessening of competition (SLC) test, which was changed to the dominance test in 1977 and then back to the SLC test in 1993 (Fels 2002).¹ As a result, implementation of section 50 has taken a slow maturation process, and according to Williams and Woodbridge (2001) the first 25 years of the statutory process were not especially effective. Based on their analysis, the lack of compulsory notification of mergers has led to the development of an informal regulatory process. They also find that this informal process has been responsible for the extraction by the regulator of undertakings (modifications or conditions placed on mergers), and for the lack of formal precedent being established. While the undertakings are important to the

¹ For a discussion of the SLC and dominance tests, see the European Commission's (2001) "Green Paper on the Review of Council Regulation (EEC) No 4064/89," or Fels (2002) for summary arguments. For a discussion of the change from one to the other and back again, see Round, Tustin, and Round (2005).

efficiency of proposed merger outcomes, the lack of formal precedent could be seen to hinder the development of a clear approval process.

On the other hand, Fels (2002), who was Chairman of the ACCC from 1991 to 2003, views the informal process as helpful because it allows the ACCC to provide timely assessments of merger proposals. This is particularly true since the ACCC implemented its Merger Guidelines in 1996. Regardless of how it is viewed, the informal process does seem to prevent both litigation and formal applications for authorization (a process available under the *Act* in which mergers are approved if their anti-competitive detriment is outweighed by the resulting public benefits). Williams and Woodbridge (2001) pointed out that only four mergers had been litigated to judgment since 1974. Additionally, only eight formal applications for authorization took place in the more recent period 1995-2001. This compares to over 100 annual notifications to the ACCC through the informal process. Anecdotal evidence suggests that firms seem to prefer the informal process because it is shorter than any legislative method, and it can help the firms reduce the likelihood of disclosing their intentions to other potential bidders.²

It appears that the ACCC has developed a system utilizing both formal and informal processes that allows it to provide a timely regulatory response to merger proposals. There is however a reasonable question to be asked about the consistency of judgments based on conditions requested through an informal process and a resulting lack of legal precedent. We would expect that merging firms would choose to adhere to the informal process in order to avoid the more uncertain and lengthy formal process, and also to avoid risking any efficiency gains that may be based on the timing of the merger. At the same time, investors should be

² This same finding was made by the Dawson Committee (2003) in its recent review of the Act which described the merger authorization process as “commercially unrealistic”.

cautious not to react overly optimistically to mergers where they expect (or know) the informal process will impose conditions on the mergers, also possibly impacting on the potential gains from the merger.

The discussion leads to the question of the effectiveness of a relatively young merger regulation environment. By examining investors' reactions to the news of merger announcements, whether or not those mergers are raised with the ACCC, and the abnormal returns of rival firms, we attempt to shed some light on the subject and possibly to encourage others to examine the issue further.

III. Description of the sample of cases

In our analysis, we examine a sample of all large mergers involving companies listed on the Australian Stock Exchange (ASX) for which sufficient historical share-price data were readily available from 1996-2003. The sample consists of both domestic and cross-border mergers. For the cross-border mergers, we examine only the Australian firm. The resulting sample is made up of 26 target firms in domestic mergers, 31 acquiring firms in domestic mergers, 13 Australian target firms involved in cross-border mergers, and 20 acquiring Australian firms in cross-border mergers.

The initial transaction data for the mergers were obtained through Thomson Financial Securities Data Corporation, with dates raised with the ACCC supplemented through ACCC announcement records. Only publicly traded companies with an available share-price history were included in the sample. Appendix tables provide a complete list of the firms involved and the dates used in the event study analysis. Share price data are based on daily close prices from either Financial Times Interactive Data or Thomson Datastream.

The market return for use in estimating the market model is based on the ASX All-Ordinaries Index.

The sample includes merger announcements from a variety of industries, primarily banking, insurance, mining, real estate investment, and telecommunications. We selected larger mergers that may have been more likely to receive ACCC attention by pre-screening to include only mergers over \$1 billion in transaction value. The mergers are mostly horizontal in nature, though there are a few vertical and conglomerate mergers included as well. Those mergers used in the analysis of rival firms' abnormal returns are all horizontal mergers. The sample of domestic mergers includes several banking and insurance industry mergers, as the largest sector of the economy represented in the sample.

The sample of cross-border mergers, although smaller, covers a broader spectrum of industries with very little overlap. (The closest related mergers were a soft-drink manufacturer purchasing a foreign subsidiary, and a brewer purchasing the foreign assets of a similar company.) These mergers took place with firms in the U.S., U.K., Hong Kong, and Germany, which is representative of the overall cross-border partners of Australian firms – primarily the U.S. and U.K., with some deals involving Asian nations and larger European economies.

IV. Event Study Method

In order to estimate investors' reactions, we use an event-study method. Event studies generally analyze the wealth effects of an announcement through its effect on the stock market valuation of the company. The goal of an event study is to measure the abnormal stock market returns associated with the announcement of an exogenous shock. In

this case the shock is the announcement of a merger or acquisition, and the abnormal returns we are interested in are the average share price effects felt by the two firms' shareholders.³

The abnormal return is defined, as in MacKinlay (1997), as the actual ex post return minus the normal return.⁴ There are several choices of models to use to estimate this abnormal return. We use the market model, as it can remove the portion of the return that is related to movements in the overall stock market. This can be written as:

$$AR_{it} = R_{it} - E(R_{it} | X_t) \quad (1)$$

where AR_{it} , R_{it} , and $E(R_{it}|X_t)$ are the abnormal return, the actual return, and the expected returns for period t. The X_t is the conditioning information for the market model that is shown below to estimate normal returns.

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (2)$$

with $E(\varepsilon_{it}) = 0$; and $\text{var}(\varepsilon_{it}) = \sigma_{\varepsilon_i}^2$ where R_{it} and R_{mt} are the period-t returns on the security i and the market m. The event study method estimates the parameters of the normal returns in order to use them to approximate the abnormal returns in the following equation.

$$\hat{AR}_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mt} \quad (3)$$

$$\text{with } \text{var}(\varepsilon_{it}) = \sigma_{\varepsilon_i}^2 \frac{1}{L_1} \left[1 + \frac{(R_{m\tau} - \hat{\mu}_m)^2}{\hat{\sigma}_m^2} \right]$$

where L_1 is the length of the estimation window, and as L_1 becomes large, the second term approaches zero and the variance of the abnormal return will be the variance of the market model.

³ Cichello and Lamdin (2006) provide a comprehensive survey of the use of event studies in examining antitrust enforcement.

⁴ Much of the following discussion is drawn from MacKinlay (1997).

This estimation derives the abnormal returns (AR) for each specific firm for a specific date. In order to determine the investors' reactions to the news of a merger, the ARs are estimated at the announcement date, when it is expected that this is the first information to hit the market about the upcoming merger. The event study analysis of using abnormal returns to estimate the expected effect of a merger assumes that financial markets are rational, and therefore that news of such an event will be quickly reflected in stock prices. As corporate share prices are a rational reflection of expected returns, this reaction or abnormal return at the announcement is viewed as the investors' expectations of the success or failure of the merger. Successful (profitable) mergers are seen to create value in the eyes of investors, and we expect to see a positive abnormal return to the firms' share prices as a result. Alternatively, unsuccessful (unprofitable) mergers are seen to destroy expected value, and we expect to see a negative abnormal return in such cases.

Most event studies estimate the AR on the day of the event and a cumulative abnormal return (CAR) around the event date. This permits the estimation of abnormal returns to capture any effects of information that may be leaked prior to the official announcement and the effects of slow information distribution. The CAR can be estimated for each firm simply as the sum of the AR between two dates, τ_1 and τ_2 . For this study, the CAR is estimated for a three-day event window to capture any effects of the announcement that appear in the stock market prices from one day before the announcement to one day after. The AR and CAR can then be averaged across firms to estimate the average wealth effects. These are estimated for both the target and acquiring firms.

The event study method has also been used (initially by Eckbo (1982) and Stillman (1983)) to examine the competitive implications of announced mergers. The abnormal returns of firms involved in a merger tell us little about the competitive impacts. Positive abnormal returns to the firms involved simply tells us that investors expect the merger to reflect well on profitability, but not why. Measuring the investors' reactions to the rival firms, on the other hand, can shed light on the competitive impacts. An anti-competitive merger should lead to increased profitability for all firms in the industry and we should therefore expect positive abnormal returns to rival firms as a result of an anti-competitive merger. Although this method has been questioned by MacAfee and Williams (1998), we use this interpretation for the analysis of rival firms' abnormal returns for the set of Australian mergers.

V. Results

Presented below are the abnormal return investor reactions for the sample of Australian mergers. There are several sets of results and conclusions can be drawn from the individual results and the comparisons. The results include abnormal returns to Australian targets and acquirers (and, for some results, to rival firms):

- At the announcement of domestic Australian mergers,
- At the announcement of ACCC involvement in domestic Australian mergers,
- At the announcement of cross-border mergers; and
- At the announcement of ACCC involvement in cross-border mergers.

In all cases abnormal returns were estimated by subtracting from actual daily share-price returns the estimated returns derived from the market model; the latter was developed

through a regression of each firms' daily returns on the daily returns of the ASX All-Ordinaries Index for 150 days (stopping 20 days prior to the first "event" of interest for the firm).

Domestic mergers

The first set of results provides the share-price response to announcements of domestic Australian mergers. These serve the dual purpose of comparing Australian mergers to the results in previous studies for other countries, as well as providing a baseline to compare results for the various circumstances of Australian mergers.

Table 1 provides the investors' reactions to domestic mergers for one day prior to the event, the event date, one day after, and the cumulative effect over the three-day period. The Australian sample has similar results in general to the previous literature. That is to say, targets' CAARs are positive and significant, summing to 15.76% over the three-day event window, and acquirers' CAARs are slightly positive and not significant.

Also particularly interesting in the Australian case is the size of the abnormal returns that occurred on the day after the announcement. While it is common practice in event studies to look at both the AR and the CAR, the majority of the CAR generally occurs on the event date. In this case, for targets, the abnormal returns on the day following the announcement are almost as large as the abnormal returns on the announcement date. This implies that investors may react more slowly to merger announcements in Australia

compared to those investors in previously studied economies. It is possible that this signals investors are waiting to see if the ACCC makes an announcement of its interest in the deal.⁵

Table 1 - Abnormal Returns to Announcements of Domestic Mergers

	Targets (N=26)		Acquirers (N=31)	
	% return	t-stat (abs)	% return	t-stat (abs)
AAR (-1)	1.07%*	3.002	-0.44%	1.476
AAR (0)	8.65%*	24.283	0.26%	0.859
AAR (1)	6.04%*	16.959	0.24%	0.799
CAAR (-1,1)	15.76%*	25.544	0.05%	0.105

* Significant at 1% level.

Table 2 compares these results to samples of domestic mergers over similar time periods⁶ from the U.S., Canada, and Europe. We have only included the CAAR in the table to offer a simple comparison. The abnormal returns to targets in Australian mergers are more pronounced than previous findings in Canada and Europe, and virtually identical to those in the U.S. While it appears that Australian targets are getting paid a higher premium than Canadian or European targets, the investors' response to Australian acquirers are about the same as European mergers and less favorable than Canadian mergers. This suggests that in comparison to these other economies, Australian firms may be viewed as paying too high a premium for acquisitions (although of course the same comment would apply for US acquirers).

What could explain this? The market for corporate control and the merger regulation environment are younger in Australia than in the other economies listed in Table 2. It is possible that the results are indicative of a business community and regulatory

⁵ For several cases in our sample, the date the merger is raised with the ACCC is in fact the day after the initial merger announcement.

⁶ While it is difficult to find studies with the exact time period we use here, these studies at the very least provide recent examples from other major world economies.

environment that is still in the learning process of how to best handle mergers. While the recent U.S. target returns are also quite high, evidence from earlier decades in the U.S. shows much higher premiums to targets at the time of merger announcements.⁷ There are likely to be other factors explaining the high target returns in the U.S., but the results suggest that businesses learn over time not to overpay in the merger market.

Table 2 – Comparison to Previous Literature

	Australia	U.S. †	Canada #	Europe !
CAAR – Targets	15.76%	16.0%	7.45%	3.44%
CAAR - Acquirers	0.05%	-0.7%	1.71%	0.04%

† Andrade, et al (2001)

Eckbo and Thorburn (2000)

! Campa and Hernando (2002)

These results represent the average impacts from a sample of mergers, but they say nothing about when mergers might elicit different reactions. For example, we should expect a different impact if the investors are signaled that the merger may be blocked. Investors may change their reactions, or react a second time, if the merger is raised with the ACCC. With this in mind, we attempt to examine the abnormal returns at the time the mergers are first raised with the ACCC. Sufficient share-price data were available for only about half of the relevant mergers. The results in Table 3 represent seven targets and six acquirers.

The results in Table 3 show that the AAR and CAAR at the announcement of the mergers being raised with the ACCC are not statistically significant events. This implies that the announcement of a merger being raised with the ACCC does not impact on investors' perceptions of the value of those firms. This could be a reflection of a perception that the ACCC does not present a major hurdle for these firms, or that the market has already

⁷ Bruner (2002) provides results from dozens of previous merger event studies at different time periods. The abnormal returns to targets have steadily declined over time.

adjusted for the ACCC's response.⁸ In this sense, it could suggest that it is usually possible for the firms to come to an agreement with the ACCC that may include only relatively minor undertakings that do not greatly affect the value of the merger.

Table 3 - Abnormal Returns at ACCC Announcements of Domestic Mergers

	Targets (N=7)		Acquirers (N=6)	
	% return	t-stat (abs)	% return	t-stat (abs)
AAR (-1)	-0.21%	-0.156	0.42%	0.273
AAR (0)	1.21%	0.911	-0.96%	0.617
AAR (1)	1.80%	1.363	0.72%	0.462
CAAR (-1,1)	2.80%	1.223	0.18%	0.080

However, another approach to examining the impact of the mergers raised with the ACCC is to look at the abnormal returns at the merger announcement partitioned by whether the merger was ever raised. Assuming that rational investors have a good degree of knowledge about the deals at their original announcement, this should result in investors responding differently for mergers they believe will be raised with the ACCC. The ACCC Merger Guidelines are specific about the market concentration thresholds above which they will likely examine a merger further. As a result of these clear guidelines, investors should have a good idea of which mergers will be raised long before it officially happens, perhaps as early as the announcement of the merger. With this in mind, it could be more insightful to examine the AAR and CAAR at the announcement of the merger rather than the announcement of the ACCC for assessing the impacts of mergers raised with the ACCC.

Tables 4 and 5 compare the two sets of AAR and CAAR – for firms that were not subsequently raised with the ACCC and firms that were – at the merger announcement. The CAAR for targets in mergers not raised is not significantly different from that for mergers

⁸ The ACCC formally rejects only a very small number of the merger proposals that come before it.

eventually brought up with the ACCC, although – of this – a much larger AAR is found on the day after the announcement for mergers not raised with the ACCC (7.80% to 3.36%, respectively). This “day after” premium paid to targets not raised probably reflects the greater likelihood that the merger will consummate in a timely manner and without any concessions. Williams and Woodbridge (2001) observe that the ACCC has become notorious for extracting voluntary undertakings in order for mergers to not be opposed. However, the general pattern of results suggests little concern among target firm investors about ACCC involvement.

We do find a difference in the investors’ responses to the acquirers based on whether they are ever raised with the ACCC. The CAAR to acquirers not raised is positive, 2.39%, and statistically significant. The CAAR to acquirers that are eventually raised, on the other hand, is -3.19% and significant. This suggests that a difference exists in the perception of mergers raised and not raised, even as early as the original merger announcement, with the result that those mergers that were eventually raised with the ACCC produce a less favorable investor reaction.⁹

Table 4 - Abnormal Returns to Announcements of Domestic Mergers:

	No ACCC Involvement		With ACCC Involvement	
	Targets (N=15)		Acquirers (N=18)	
	% return	t-stat (abs)	% return	t-stat (abs)
AAR (-1)	0.34%	0.780	-0.33%	0.801
AAR (0)	6.69%*	15.238	2.23%*	5.421
AAR (1)	7.80%*	17.754	0.50%	1.209
CAAR (-1,1)	14.83%*	19.498	2.39%*	3.365

* Significant at 1% level.

⁹ As a brief aside, this could also serve as strong evidence of the efficiency of financial markets. Of course, event studies of this type rely on efficient markets, and any additional evidence of such is always welcome.

Table 5 - Abnormal Returns to Announcements of Domestic Mergers:
Some ACCC Involvement

	Targets (N=11)		Acquirers (N=13)	
	% return	t-stat (abs)	% return	t-stat (abs)
AAR (-1)	2.02%*	3.911	-0.60%	1.379
AAR (0)	10.58%*	20.522	-2.47%*	5.635
AAR (1)	3.36%*	6.512	-0.11%	0.261
CAAR (-1,1)	15.95%*	17.866	-3.19%*	4.200

* Significant at 1% level.

Rival Firms

Up to this point, we have seen that the market responds similarly to Australian mergers as those in other developed economies, and that investors react negatively to acquiring firms in cases of ACCC involvement. What we don't yet know is whether this reaction is driven by perceived inefficiencies in the ACCC process or a reaction to the competitive impacts of the merger announcements. As a result, the next area that we examine is the investors' reactions to rival firms at the time of the merger announcements. By doing so, we can observe whether the market perceives the mergers to be anticompetitive, and we can observe the extent to which the ACCC's response reflects the market's reaction. The rivals analyzed were those listed on the Australian Stock Exchange at the time the merger took place and categorized as being in the same industry (at the four digit ANZSIC level) as either of the merging firms.

The results in Table 6 show the rival firms' abnormal returns at the time of each domestic merger announcement in the same industry. The results present the CAARs for the industry, test of significance, whether the merger is perceived as anticompetitive, and whether it was raised with the ACCC. Overall – basing judgment on directionality only – approximately 41% of the mergers were perceived as anticompetitive. The t-stats for the

industry CAAR are generally low and this is primarily due to a small number of firms in each industry. As an additional test of reliability, the cumulative median abnormal returns were also calculated for the industry for each merger. The mean and median abnormal returns for rival firms have the same sign for 23 out of the 27 mergers.

Table 6 - Rival Firm Abnormal Returns at Domestic Mergers

Acquiror Name	Industry	Industry Abnormal Returns (CAAR)	t-stat (abs)	Perceived Anticompetitive	Raised with ACCC
KPN(Australia)Ltd(KPN)	Transportation	-6.38%	1.0606	N	N
St George Bank Ltd	Banking	-1.63%	2.1996	N	Y
Westpac Banking Corp	Banking	0.37%	0.4879	Y	Y
AMP Ltd	Insurance	-0.28%	0.2093	N	N
Commonwealth Bank of Australia	Banking	1.11%	1.2667	Y	Y
National Australia Bank Ltd	Banking	-0.64%	0.6501	N	Y
Rio Tinto Ltd	Mining Copper/Gold	-1.98%	0.5819	N	N
Insurance Australia Group Ltd	Insurance	-3.74%	3.4079	N	Y
Westfield Trust	Real Estate Inv	0.66%	0.5408	Y	Y
UNiTAB Ltd	Recreation & Leisure	3.04%	0.6789	Y	N
TABCORP Holdings Ltd	Recreation & Leisure	1.99%	0.4525	Y	N
Cable & Wireless Optus(C&W)	Telecom	1.95%	0.3101	Y	N
AMP Ltd	Insurance	-0.17%	0.1575	N	Y
Rio Tinto Ltd	Mining	1.91%	0.4986	Y	Y
Investa Properties Ltd	Real Estate Inv	-0.11%	0.0884	N	N
Stockland	Real Estate Inv	-0.12%	0.0937	N	N
TABCORP Holdings Ltd	Recreation & Leisure	-0.99%	0.4250	N	N
QNI Ltd	Mining	-9.75%	2.5437	N	N
Mirvac Group	Real Estate Inv	0.85%	0.7628	Y	N
Colonial Ltd	Banking/Insurance	-1.48%	1.8445	N	N
Suncorp-Metway Ltd	Banking/Insurance	-1.22%	1.5744	N	Y
St George Bank Ltd	Banking	-2.45%	3.1714	N	N
Centro Properties Group	Real Estate Inv	0.59%	0.4447	Y	N
TABCORP Holdings Ltd	Recreation & Leisure	-2.09%	0.5670	N	N
Westpac Banking Corp	Banking	0.53%	0.6861	Y	N
Colonial Ltd	Banking/Insurance	-0.22%	0.2622	N	N
Bank of Melbourne Ltd	Banking	0.70%	0.8014	Y	N

That being said, based on the abnormal returns that meet the standard levels of significance, five of the mergers were perceived as pro-competitive and none of the mergers

were perceived as anticompetitive. Of those five mergers that were deemed competitive by rival firms' investors, two were raised with the ACCC and neither was opposed. In the broader group of mergers in the sample that were perceived as being pro-competitive – simply based on sign rather than statistical significance – none were opposed by the ACCC. This certainly suggests that in the small number of cases raised with the ACCC, the judgments passed have been appropriate – at least in terms of falling in line with the market reactions.

On the opposite side of the fence where the market has perceived the merger to be anticompetitive, the ACCC has also seemed to act accordingly. Both cases that were opposed by the ACCC (and required undertakings) were also viewed by the market as anticompetitive. While neither result was statistically significant, in both cases the median abnormal returns of the industry also suggested an anticompetitive merger. Again, the observations suggest that the ACCC is passing judgment on the mergers that accords well with the sentiment of the market. While a sample of two mergers is certainly not enough to make definitive statements, this does seem to correspond well with our other observations.

One final look is at the sample of mergers that were not raised with the ACCC. This represents eighteen of the mergers in the sample. Of these eighteen mergers not raised with the ACCC, seven of them have positive abnormal returns, but none of these are statistically significant. This evidence also suggests that the ACCC is not spending its time unnecessarily formally reviewing mergers that are not perceived to be anticompetitive.

Alternatively, simply looking at direction of effects, one observes that of the eleven mergers perceived as anticompetitive, that the ACCC examined only four of them. Why would they not be concerned with the 64% of the mergers that are perceived to be

anticompetitive? There are two probable answers to this question. The first is simply that the market is, in fact, not reacting one way or the other to these mergers – after all, these seven mergers did not yield statistically significant abnormal returns. The second is related to the nature of the informal review process. As we mentioned previously, the *Trade Practices Act* does not include compulsory notification of proposed mergers, and this has led to the frequent use of the informal review process. As a result, the mergers that appear anticompetitive are quite possibly reviewed through the informal process. Unfortunately, that contributes to one of the criticisms of Williams and Woodbridge (2001), namely that the informal review process results in a lack of formal precedent.

In terms of industries represented in the sample, the ACCC seems to have given most attention to the financial sector. Of the nine mergers raised with the ACCC, seven of them involved banking and insurance businesses. It is of note that the market gave the most attention to this industry as well. Only one merger (QNI / Glencore-Nickel) outside of the banking and insurance industries garnered a statistically significant response from the market. The majority of mergers in this industry were perceived to be pro-competitive, which is consistent with analysts' views over the years that there were significant economies to be achieved in this sector. Additionally, the two mergers in the sample that the ACCC opposed were also in the banking industry and were perceived as being anticompetitive by the market, building further evidence for the effectiveness of the ACCC. Neither the market nor the ACCC reacted strongly to mergers in other industries.

Cross-border mergers

Another area that we examine is the investors' reactions to cross-border merger announcements, and how they compare to those for domestic mergers. We look at only the Australian firm involved in the cross-border deal. The results in Table 7 show that the CAAR for Australian target firms at the announcement of the mergers are 7.92% and for Australian acquirers are -1.21%. Both of these results are smaller than the investors' reaction to domestic mergers over the same time period, suggesting some apprehension to cross-border mergers.¹⁰ This is consistent with Campa and Hernando's (2002) findings that the wealth effects of European cross-border mergers are less than the abnormal returns to domestic mergers, although contrary to the findings of Harris and Ravenscraft (1991) for US cross-border mergers.¹¹

Table 7 - Abnormal Returns to Announcements of Cross-Border Mergers
(Australian Firm)

	Targets (N=13)		Acquirers (N=20)	
	% return	t-stat (abs)	% return	t-stat (abs)
AAR (-1)	0.56%	0.871	-0.05%	0.093
AAR (0)	2.68%*	4.157	-0.17%	0.318
AAR (1)	4.68%*	7.265	-1.00%	1.867
CAAR (-1,1)	7.92%*	7.097	-1.21%	1.315

* Significant at 1% level.

VI. Conclusions

While based on relatively small samples, the results presented here suggest significant target company abnormal returns to announcements of Australian mergers and

¹⁰ Given the small number of cross-border mergers in our sample raised with the ACCC (2 acquirers, 4 targets) we are unable to investigate the influence of such interventions on investor responses.

¹¹ For a more complete discussion of cross-border merger issues, see Diepold (2005).

limited impacts of ACCC involvement. The investors' reactions to domestic mergers are consistent with the findings of previous studies that examine merger samples from other nations, and are particularly consistent with a finding that would be expected for a younger enforcement environment. While no impacts on target firm investors were found, the actions, or expected actions, of the ACCC do seem to have some impact on acquiring firms' investors' responses to domestic mergers, as we found significantly lower abnormal returns to acquirers in mergers that were eventually raised with the ACCC.

Based on the evidence of rival firms' abnormal returns, the ACCC appears to be effective in its merger control judgments. This would suggest that investors do not expect to capitalize on potential market power effects of proposed mergers, but rather on efficiencies. As our results are based on a rather small sample, this could present an area for additional research, possibly in the form of case studies to analyze the root of these expectations.

Our findings present some evidence that cross-border impacts on share-price returns appear to be less favorable than domestic mergers. Furthermore, there is little evidence that the ACCC has much influence on investors' reactions to these mergers. Here, as well, there is room for additional work as more data become available.

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Appendix Tables

Appendix Table 1 - Domestic Mergers

Acquiror Name	Target Name	Merger Announcement	Raised with ACCC
Mobil Exploration & Producing†	Ampolex Ltd	14-Feb-1996	NA
KPN(Australia)Ltd(KPN) †	TNT Ltd	1-Oct-1996	NA
St George Bank Ltd	Advance Bank Australia Ltd	14-Oct-1996	25-Oct-96
Westpac Banking Corp	Bank of Melbourne Ltd	2-Apr-1997	NA
AMP Ltd†	GIO Australia Holdings Ltd	24-Aug-1998	NA
Commonwealth Bank of Australia	Colonial Ltd	9-Mar-2000	NA
National Australia Bank Ltd	MLC Ltd(Lend Lease Corp Ltd)†	10-Apr-2000	26-Jun-00
Shell Australia Ltd†	Woodside Petroleum Ltd	18-May-2000	7-Feb-01
Rio Tinto Ltd	North Ltd	23-Jun-2000	NA
Wesfarmers Ltd	Franked Income Fund	13-Feb-2001	20-Jul-01
Mayne Nickless Ltd	FH Faulding & Co Ltd	31-May-2001	NA
Wesfarmers Ltd	Howard Smith Ltd	12-Jun-2001	NA
Insurance Australia Group Ltd	CGU Ins AU Ltd,NZ Ins Co Ltd†	18-Oct-2002	28-Nov-02
Burns Philp & Co Ltd	Goodman Fielder Ltd	13-Dec-2002	5-Feb-03
Westfield Trust	AMP Shopping Centre Trust	20-May-2003	24-Jul-03
UNiTAB Ltd	TAB Ltd	16-Oct-2003	NA
TABCORP Holdings Ltd	TAB Ltd	5-Nov-2003	NA
Cable & Wireless Optus(C&W) †	AAPT Ltd	4/16/1999	NA
AMP Ltd	GIO Australia Holdings Ltd	9/24/1999	9/1/1999
Rio Tinto Ltd	Comalco Ltd(Rio Tinto Ltd)	2/25/2000	3/2/2000
Investa Properties Ltd	Principal Office Fund	5/26/2003	NA
Stockland	AMP Diversified Property Trust	5/28/2003	NA
TABCORP Holdings Ltd	Jupiters Ltd	3/5/2003	NA
QNI Ltd	Gencor-Nickel Division†	6/18/1997	NA
Mirvac Group	Colonial First State Pty†	8/27/2002	NA
Colonial Ltd	Prudential Corp PLC-AU/NZ Ops†	8/17/1998	NA
Suncorp-Metway Ltd	AMP General Insurance Ltd	6/15/2001	6/18/2001
Solution 6 Holdings Ltd	Sausage Software Ltd†	3/20/2000	NA
St George Bank Ltd	Metway Bank Ltd†	3/19/1996	NA
Smorgon Steel Group Ltd†	Australian National Industries	10/6/1998	NA
Centro Properties Group	AMP Shopping Centre Trust	3/18/2003	NA
TABCORP Holdings Ltd	Star City Holdings Ltd	4/16/1999	NA
Westpac Banking Corp	BT Financial Group-Cert Bus†	8/22/2002	NA
AWB Ltd	Landmark Operations Ltd†	8/29/2003	NA
Coal & Allied Industries Ltd†	Peabody Coal-Australian Coal†	12/26/2000	NA
Colonial Ltd	Legal & General Australia Ltd†	5/26/1998	NA
Caltex Australia Ltd	Ampol Ltd(Caltex,Pioneer) †	10/2/1997	NA
Bank of Melbourne Ltd	Challenge Bank Ltd-Victorian	5/8/1996	NA

† Indicates that the firm is not included in the event study.

Appendix Table 2 - Cross-border Mergers - Australian Acquirers

Acquiror Name	Target Name	Target Nation	Merger Announcement	Raised with ACCC
Coca-Cola Amatil Ltd†	Coca-Cola Bottlers Philippines	Philippines	4/2/1997	NA
National Australia Bank Ltd	HomeSide Inc	United States	10/27/1997	NA
Telstra Corp Ltd	Pacific Century Cyber-Wireless	Hong Kong	4/12/2000	NA
Fosters Brewing Group Ltd	Beringer Wine Estates Holdings	United States	8/28/2000	NA
Westfield America Trust†	Westfield America Inc	United States	2/15/2001	NA
BHP Ltd	Billiton PLC	United Kingdom	3/19/2001	3/20/2001
Brambles Industries Ltd	GKN PLC-Support Services	United Kingdom	4/19/2001	NA
Amcor Ltd	Schmalbach-Lubeca-PET Assets	Germany	5/8/2002	NA
Coca-Cola Amatil Ltd	Coca-Cola Co-Italian Assets	Italy	2/6/1998	NA
Westpac Banking Corp	Trust Bank New Zealand Ltd	New Zealand	4/19/1996	NA
PaperlinX Ltd	Buhrman-Paper Merchanting Div	Netherlands	6/17/2003	NA
Westfield America Trust	Richard E Jacobs-Malls(9)	United States	12/5/2001	NA
Telstra Corp Ltd	Pacific Century CyberWorks Ltd	Hong Kong	4/12/2000	NA
Macquarie Infrastructure Group	Cintra Concesiones de Infra	Spain	9/4/2001	NA
John Fairfax Holdings Ltd	Independent-NZ Publishing Bus	New Zealand	4/11/2003	11/17/2003
APN News & Media Ltd	Wilson & Horton Ltd	New Zealand	10/31/2001	NA
Telstra Corp Ltd	Regional Wireless Co	Hong Kong	6/28/2002	NA
CSL Ltd	ZLB Central Laboratory Blood	Switzerland	6/7/2000	NA
QBE Insurance Group Ltd	Limit PLC	United Kingdom	6/30/2000	NA
Westfield Holdings Ltd	Rodamco North America NV	Netherlands	8/27/2001	NA
New Tel Ltd	Xinhua Internet Co Ltd	China	11/16/2000	NA
Coca-Cola Amatil Ltd	Coca-Cola Korea Bottling Co	South Korea	2/6/1998	NA

† Indicates that the firm is not included in the event study.

Appendix Table 3 - Cross-border Mergers - Australian Targets

Acquiror Name	Target Name	Acquirer Nation	Merger Announcement	Raised with ACCC
Standard Chartered PLC	ANZ Grindlays Bank Ltd	United Kingdom	4/19/2000	NA
Anglo American PLC	North Ltd	United Kingdom	7/21/2000	NA
SingTel	Cable & Wireless Optus Lt(C&W)	Singapore	3/26/2001	2/16/2001
Anglogold Ltd	Normandy Mining Ltd	South Africa	9/5/2001	9/24/2001
Newmont Mining Corp	Normandy Mining Ltd	United States	11/13/2001	12/18/2001
Constellation Brands Inc	BRL Hardy Ltd	United States	1/14/2003	NA
Xstrata PLC	MIM Holdings Ltd	Switzerland	4/7/2003	11/22/2002
Telecom Corp of New Zealand	AAPT Ltd	New Zealand	9/15/1999	NA
HBOS PLC	Bank of Western Australia	United Kingdom	5/9/2003	NA
Homestake Mining Co	Plutonic Resources Ltd	United States	12/19/1997	NA
British American Tobacco PLC	British American Australasia	United Kingdom	1/30/2001	NA
Anglogold Ltd	Acacia Resources Ltd	South Africa	10/11/1999	NA
Kerry Group Ltd	Coca-Cola Amatil Ltd	Hong Kong	8/8/1996	NA

† Indicates that the firm is not included in the event study.