Journal of Banking and Finance 105 (2019) 1–19

Contents lists available at ScienceDirect

Journal of Banking and Finance

journal homepage: www.elsevier.com/locate/jbf

Practice makes progress: Evidence from divestitures ☆

Mark Humphery-Jenner[a], Ronan Powell[b], Emma Jincheng Zhang[c,*]

[a] UNSW Business School, UNSW Sydney, Australia
[b] Smurfit School of Business, University College Dublin, Ireland
[c] Monash Business School, Monash University. UNSW Business School, UNSW Sydney, Office w1023, Level 10, Menzies Building, 20 Chancellor's Walk, Clayton 3168, VIC, Australia

ARTICLE INFO

Article history:
Received 25 September 2017
Accepted 26 April 2019
Available online 3 May 2019

JEL classification:
D83
G34

Keywords:
Divestitures
Organizational experience
Learning
Restructuring
Takeovers

ABSTRACT

This paper examines the role of firm-level experience in the context of divestitures. We find that divesting firms that have recent divestiture experience (hereafter, experienced divestors) are more likely to sell peripheral or underperforming units, and to divest during industry merger waves. Experienced divestors earn higher returns on divestiture announcement, have stronger operating performance post-divestiture, and tend to reinvest sale proceeds in expansion programs using acquisitions. Importantly, we show that divestiture experience at the firm level dominates other measures of experience, including divestiture experience of CEOs or boards, and experience in acquisitions. We take steps to mitigate concerns about econometric and sampling issues. These findings suggest that a strategy of restructuring through divestitures can improve firm value.

© 2019 Elsevier B.V. All rights reserved.

1. Introduction

Experienced divestors account for a significant portion of divestiture activity. In our sample of divestitures conducted by US public firms from 1990 to 2011, 68.5% of divesting firms made at least one divestiture in the prior three years. Despite the prevalence of organizational divestiture experience, little is known about the role of divestiture experience at the firm level. Several recent, high profile cases, such as those of American International Group and Royal Bank of Scotland, suggest that prolific divestors are often motivated by financial distress.[1] However, other companies, such as Philips, have instigated a program of restructuring, seemingly learning from past divestitures when deciding on future transactions,[2] and arguably presenting a strategic model for other more stagnant electronics companies.[3]

In addition, the empirical evidence on divestiture experience has been scarce. The prior literature on restructuring experience has typically focused on acquisitions: The evidence suggests that managers who have prior acquisition experience conduct better future acquisitions (e.g., Vermeulen and Barkema, 2001; Zollo and Singh, 2004; Aktas et al., 2009, 2011, 2013; Kumar et al., 2015; Trichterborn et al., 2015; Field and Mkrtchyan, 2017). However, divestitures respond to different financial, organizational, and economic drivers than do acquisitions.

☆ We are grateful to Carol Alexander (the editor) and two anonymous referees for comments and guidance. This paper benefited from comments received at Financial Research Network Annual Meeting (2013), 2nd SIRCA Young Researcher Workshop (2013), the 26th Australasian Finance and Banking Conference (2013), the FMA European Meeting (2014), the FMA Annual Meeting (2014) and Doctoral Student Consortium and from seminar participants at Kobe University, Nanyang Technological University and UNSW Australian School of Business. We are grateful for constructive comments received from Renée Adams, Suman Banerjee, Demian Berchtold, Ray da Silva Rosa, David Dennis, Ying Dou, Ran Duchin, Wei-Lin Liu, Ran Lu-Andrews, Ron Masulis, Micah Officer, Stefan Petry, Peter Pham, Laura Starks, Terry Walter and Bohui Zhang. We thank Henry Trang for research assistance. Mark Humphery-Jenner received support from the Australian Research Council (ARC) grant DP140103039.

* Corresponding author.
E-mail addresses: mlhj@unsw.edu.au (M. Humphery-Jenner), ronan.powell@ucd.ie (R. Powell), emma.zhang@monash.edu (E.J. Zhang).

https://doi.org/10.1016/j.jbankfin.2019.04.004
0378-4266/© 2019 Elsevier B.V. All rights reserved.

[1] AIG has divested over USD 50 billion in a series of divestitures since 2008: http://www.bloomberg.com/news/2010-10-29/aig-s-divestitures-pass-50-billion-with-aia-initial-share-offering-table.html. RBS has halved its assets since its bailout: http://www.bloomberg.com/news/2013-07-22/rbs-at-less-than-break-even-valuation-discredits-osborne.html.

[2] Philips has engaged in a significant number of divestitures, especially since 2006, resulting in significant changes to its product-mix and labor-composition: The Economist. 12 July 2014. *Lights Out*, The Economist, **412** (8895): 52.

[3] One suggestion is that Japanese electronics companies could engage in a similar pattern of restructuring to that of Philips in order to facilitate growth: The Economist. 12 July 2014. *Eclipsed by Apple*, The Economist, **412** (8895): 51-52.

Divestitures represent a sample of less visible transactions (relative to M&A) and are motivated by different reasons compared to M&A, and so divestiture experience may have different implications. First, M&As occur more frequently than divestitures, even though the latter may once have seemed promising (Mulherin and Boone, 2000; Villalonga and McGahan, 2005). Second, a key factor in driving successful divestitures is in making the right choice about which unit to divest, while ensuring that future capabilities are not diminished so that the firm can remain competitive and profitable. Optimal timing is also important in helping to maximize the return to shareholders. These issues beg the question of whether experience matters for divestitures, and whether divestiture experience is more important than general acquisition experience. It also raises the question of whether experience accrued at the organizational level (as opposed to that accrued by individual executives) is more important. In this study, we aim to explore the role of experience in future divestitures while taking into account all forms of restructuring experience (whether accumulated at the organizational level or managerial level, divestiture-specific experience, or general restructuring experience).

There are two alternative hypotheses that may explain the phenomenon of serial divestitures. On the one hand, serial divestitures could be forced by financial constraints and these firms use divestitures in an attempt to trade out of distress. For example, Yang (2008) theorizes that negative productivity shocks motivate selling decisions. On the other hand, serial divestitures could be strategic in nature, and firms gain valuable experience and skills from prior divestitures, which in turn benefit future divestitures. Boot (1992) predicts theoretically that managers with divestiture experience are of higher quality, as they recognize the importance of corporate reorganization in maximizing firm long-run value. To the extent that organizational memory is preserved even when key organizational members leave (Weick and Gilfillan, 1971), and persistently shapes top management decision making (Nelson and Winter, 1982), firm-level experience is also important, and can be even more important than individual managerial experience. Firm-level divestiture experience accumulates in the routine functioning of the firm overtime, and is "remembered by doing" (Weick and Gilfillan, 1971). The effective performance of divestitures is tacit knowledge of the firm, rather than a process articulated by individuals.

We test the above hypotheses by comparing divestitures conducted by divesting firms with and without prior divestiture experience. Our sample covers 6216 completed divestitures made by 2314 US public firms in 4609 firm-years from 1990 to 2011. The sample includes both asset sales (of mostly divisions and subsidiaries) and spin-offs. We count a prior divestiture within the past three years as valid experience whether it is successful or failed (in terms of market reactions), completed or uncompleted (in terms of deal status), because failed/pending attempts may also be useful in promoting learning and experience (Harford and Schonlau, 2013).[4] We control for acquisition experience, firm and other characteristics that might influence the relationship between divestiture experience and divestiture outcomes. Given the cross-sectional structure of the data, we also control for both year fixed effects and industry fixed effects, and cluster standard errors by firm.

Our findings support the view that divestiture experience at the firm level is valuable for future divestitures, even more so than individual managerial experience. While controlling for acquisition experience, we find that divestitures conducted by experienced divestors are more strategic in nature and beneficial to shareholders. This is first reflected by a greater tendency to sell non-core, geographically distant or underperforming units, which are precisely the types of units that can lead to diseconomies of scale and value-destruction in conglomerates. Experienced divestors are also more likely to divest during industry merger waves - periods that are more likely to attract higher premiums (Andrade et al., 2001; Moeller et al., 2005; Alexandridis et al., 2012). Second, experienced divestors earn statistically and economically higher divestiture announcement returns, and have significantly stronger future operating performance. In economic terms, we show that a one standard deviation increase in 3-year firm experience increases 3-day cumulative abnormal returns by approximately 0.478 percentage points.[5] Third, experienced divestors also use the proceeds from the divestiture more productively, and show a higher likelihood of conducting post-divestiture acquisitions. Last but not least, divestiture experience at the firm-level demonstrates a much higher predictive power, both economically and statistically, than that of CEOs and directors. Further, the results are stronger when we look at more recent divestiture experience. Our findings highlight the importance of organization experience in the context of divestitures.

We take steps to ensure that the results are robust. First, we ensure that our findings are driven by firm-level experience rather than director experience. We measure non-CEO turnover and argue that firm-level divestiture experience should matter more when non-CEO turnover is lower (i.e., when institutional memory is high). We show that our results are stronger when average director tenure exceeds 4 years, and when the number of director departures within the last 3 years does not exceed two. These results hold when we include CEO experience as a control. Unsurprisingly, we find consistent results when experimenting with average non-CEO tenure, average executive tenure, and average CEO tenure.

Second, we test and rule out alternative reasons for serial divestitures. The results are not an artifact of distressed companies undertaking multiple divestitures. This is because experienced divestors are less likely to be financial distressed, on average, before the divestiture, and they tend to improve both short-term and long-term performance following the divestiture. The results are also not a function of firms splitting one larger divestiture into several transactions. Experienced divestors tend to divest units that are larger (relative to the parent's size), suggesting that they are not more likely to split a transaction. Further, we observe experiential benefits with experience three years prior to the current transaction, implying that the results do not merely reflect the recording of multiple deals in the same short time period for what is essentially one transaction. The results are not driven by "asset churners" who take a portfolio approach to divisions and regularly divest units. For example, the results hold if we cut from the sample any divestor who has made more than one divestiture in each of the past three years. Last, the results cannot be explained by the correction of past acquisition mistakes or connections with advisors.

We also take steps to mitigate endogeneity concerns. In light of potential endogeneity concerns, we use both propensity score matching and a weighting method (with a similar intuition to the propensity score matching) to adjust for the systemic differences between serial and ad-hoc divestors. The results are similar to the

[4] The results also hold if we restrict experience to completed deals, if we weight experience by market reactions, if we down-weight distant experience, or if we recode experience to be indicator variables. In untabulated analysis, we also explore whether more recent experience is more relevant than distant experience. We re-estimate the baseline regressions using experience gained in the last 5 years and the last 10 years, respectively. The results support the foregoing results in that divestiture experience is still beneficial. Further, this effect concentrates in the experience gained over the most recent 5 years. This is consistent with expectations.

[5] We calculate this by multiplying the coefficient on log divestiture experience in Column 3 of Table 4 (which is 0.581) with the standard deviation of log divestiture experience in Table 2 (which is 0.822).

tabulated ones. They are also not driven by reverse causality or simultaneity.

Further, we address potential sample selection issues. In particular, we test the possibility of divesting certain units when the opportunity of divesting these units (i.e., the number of such units in the divesting firm) are the same for serial and ad-hoc divestors. We perform sub-sample analysis on firms with similar numbers of specific types of units. For example, we re-estimate non-core unit regressions using firms with the number of non-core units above the median. The results again remain qualitatively similar. Our results are also robust to additional and alternative controls of corporate governance, different time periods and accuracy of divestiture records. Last, we take steps to ensure that the results are not attributable to the presence large-loss and large-gain deals.

This paper contributes to the literature in three important ways. First, we highlight the importance of organizational experience in divestiture outcomes. The process of undertaking more divestitures creates institutional memory that remains within the firm. This channel of institutional memory is also likely to reflect and shape corporate culture, which leads to the second contribution of the paper.

Culture may serve as a channel that contributes to the better outcomes of serial divestitures. Since employees face choices that cannot be properly regulated ex ante, corporate culture is important in setting constraints (O'Reilly, 1989; Kreps et al., 1996). Most executives view culture as one of the top three factors that affect their firm's value (Graham et al., 2018). As a firm serially divest, its culture is likely to be embedded in and enhanced through these decisions. That is, a certain culture that forms as firm experience accumulates may make firm experience valuable. Thus, this paper also contributes to the literature on culture.

Third, we provide insight into the nature of experienced divestors. We show that experienced divestors benefit from the experience gained over multiple transactions, that experience accumulated at the firm-level is more important than that attributable to individuals, including the CEO and the board, and that more recent experience has incremental value of older experience. The experiential benefits of divestiture experience are not merely an artifact of distressed firms engaging in multiple divestitures (experienced divestors are less financial distressed) or of firms splitting one large transaction into multiple transactions to avoid saturating the market (as experienced divestors do larger divestitures). The finding that experienced divestors are more likely to invest the divestment proceeds on value-creative future acquisitions provides further support on their strategic nature.

Last, this paper contributes to the M&A literature and our understanding of takeovers. Researchers find mixed evidence as to whether CEOs' acquisition experience is beneficial for the next acquisition (see Kumar et al., 2015; Trichterborn et al., 2015) for an example of the "learning" effect and (Billett and Qian, 2008) for the effect of CEO hubris). Our finding that experienced divestors are more likely to conduct future acquisitions helps to reconcile the mixed evidence, by identifying a subsample in which the "learning effect" of serial acquisitions is truly dominating. That is, the subsample of firms that actively divest are more likely to benefit from learning during the process of repetitive acquisitions. Prior literature also finds that unrelated acquisitions, in particular, are usually followed by divestitures (see e.g., Bergh, 1997). We show that firms may also divest first to be better prepared for the subsequent acquisitions. This offers a new angle of understanding the phenomenon of serial M&As.

2. Hypotheses and predictions

Experienced divestors tautologically have more opportunities to learn from prior deals; and thus, could apply this knowledge to facilitate better deal execution in subsequent deals. In the context of divestitures, Boot (1992) predicts theoretically that managers with divestiture experience are of higher quality and recognize the importance of corporate reorganization in maximizing firm long-run value. In the context of takeovers, firms appear to learn from prior takeover experience when undertaking future acquisitions (Kumar et al., 2015; Trichterborn et al., 2015). Naturally, generalizing experience from prior, but different, situations can be harmful (Haleblian and Finkelstein, 1999). Further, heterogeneity in experience may impede learning as it gives managers too many disconnected experiences with too little opportunity to identify consistent trends and to build mental models (Barkema and Schijven, 2008; Aktas et al., 2013). However, the fact that managers of experienced divestors are more active suggests they are likely to apply the experience more carefully and have opportunities to apply their prior experience.

In addition, corporate culture is likely to be strengthened and cultivated as a firm accumulates more divestiture experience, which in turn guides future divestiture decisions. According to O'Reilly (1989) and Kreps et al. (1996), culture sets important constraints to employees' behavior where ex ante regulation is not in place. In addition, culture is considered as a top factor that affects firm value (Graham et al., 2018). Strengthening, and embedding, divestiture experience into corporate culture, should thus permeate into better future divestiture decisions.

More importantly, firm-level divestiture experience could matter because organizational memory is preserved even when key organizational members leave (Weick and Gilfillan, 1971), and persistently shapes top management decision making (Nelson and Winter, 1982). This largely arises due to the routinization of activity, which then becomes embedded in organization processes, controls, and procedures. In turn, this imparts routinized divestiture experience into managers throughout the firm's management hierarchy. Thus, while individual managers can leave the organization, the firm's organization structure will remain in place.

Engaging in a pattern of divestitures can also help firms to appreciate how to facilitate strategic renewal. Revitalizing assets is an important driver of corporate growth (see e.g., Bena and Li, 2014). Cash, obtained through divesting assets, can be a strategically useful resource through which to facilitate renewal (Kim and Bettis, 2014). Prior experience with which units require divestment (due to, for example, poor strategic fit) can help firms to learn which units might best facilitate future growth. The following subsections detail the ways in which divestiture experience could influence the nature of divestitures and their performance.

The alternative view is that firm-level divestiture experience may not be associated with better divestiture decisions, or may even be associated with worse divestiture decisions for three reasons. First, a firm may divest to relieve its financial burden and may have to continue divesting serial divestitures because the relief is only temporary. For example, Yang (2008) theorizes that negative productivity shocks motivate selling decisions. Second, frequent divestors could be merely correcting past inefficiencies (e.g., rent seeking, Rajan et al., 2000; or agency problems, Hanson and Song, 2006). This would be especially relevant if the firm acquired before divesting. Third, organizational experience could be merely a reflection of managerial experience. In this sense, once managerial experience has been accounted for, organizational experience should not have any predictive power in explaining divestiture decisions. We summarize these two hypotheses as follows:

H0. *Experienced divestors make better divestiture decisions.*

HA. *Experienced divestors do not make better divestiture decisions, and may even make worse divestiture decisions.*

2.1. Divested units

The above hypotheses entail several empirical predictions. Because predictions following H_A would just be the opposite of H_0, we focus our discussion on predictions of H_0. The first prediction pertains to the types of units that experienced divestors are likely to divest. Following H_0, we expect divestors with more experience to sell units of lesser importance, in terms of business-segment, geographic location and relative performance. Prior literature has shown that divesting these types of units can create value for the divestor. Divesting units of non-core business lines is beneficial because it enables refocusing and thereby reduces the diversification discount (Berger and Ofek, 1995; Dittmar and Shivdasani, 2003), improves investment efficiency (Rajan et al., 2000; Kaiser and Stouraitis, 2001b; Dittmar and Shivdasani, 2003), strengthens operating performance (John and Ofek, 1995) and deters hostile takeover attempts (Boot, 1992; Comment and Jarrell, 1995). As a result, the market reacts more positively to their announcements (see e.g., John and Ofek, 1995; Dittmar and Shivdasani, 2003). Refocusing geographically could also improve operational efficiency via better understanding and cooperation and reduced transactions costs. Divesting underperforming units is directly related to the elimination of rent seeking (Scharfstein and Stein, 2000 and therefore receives more favorable announcement returns Meyer et al., 1992; Kaiser and Stouraitis, 2001a). Overall, selection of these peripheral divisions improves divestiture performance because it increases divisional transparency and eliminates negative synergies (Eckbo and Thorburn, 2008). We expect that experienced divestors will be more able to identify the types of units whose divestiture will create the most value.

Prediction 1. Experienced divestors are more likely to divest non-core, geographically distant or underperforming units.

2.2. Market timing

We expect that experienced divestors optimally time the market by selling during industry merger waves. Experience will enable divestors to identify the best market conditions in which to sell a unit. Holding other factors constant, selling during a merger wave will deliver higher premiums (Andrade et al., 2001; Moeller et al., 2005; Alexandridis et al., 2012) than selling outside the wave. The expectation that experienced divestors are more likely to divest during a merger wave is based on two facts. First, experienced divestors might be more able to wait for favorable market conditions, to the extent that they are unlikely to be forced by financial distress. Second, asset reallocation is procyclical (Shleifer and Vishny, 2003; Rhodes–Kropf, Robinson, and Viswanathan, 2005; Eisfeldt and Rampini, 2006; Yang, 2008). Thus, prior experience of undertaking takeovers may also enable experienced divestors to better time the market. We directly examine this alternative by controlling for takeover experience to both examine the role of such experience in driving divestiture-timing, and to ensure that it does not explain the relationship between divestiture-experience and divestiture-timing.

Prediction 2. Experienced divestors are more likely to divest during industry merger waves.

2.3. Divestiture performance

The foregoing hypotheses focus on the types and timing of divestitures that experienced divestors are predicted to undertake. These divestiture-characteristics should also manifest themselves in improved performance, in terms of divestiture announcement returns and post-divestiture operating performance. While it is true that divesting value-destroying units will tautologically improve performance, we expect that experienced divestors will be more skilled at choosing which units to divest (and when to divest them) and will be more knowledgeable about how to subsequently re-deploy resources.

The reasons are three-fold. First, experienced divestitures may benefit from the value of waiting, to the extent that they are completed gradually over time and are not forced by financial distress. Following the logic of real option valuation, more accurate information reveals itself over time, leading to more informed decision making, and the probability of the divestiture earning a larger positive net present value. Second, the literature finds a positive correlation between announcement cumulative abnormal returns (CARs) and the divestment of peripheral units (e.g., Markides, 1992; Kaiser and Stouraitis, 2001a; Dittmar and Shivdasani, 2003) and market timing (Alexandridis et al., 2012). Third, such divestitures are generally associated with improved post-divestiture operating performance (Berger and Ofek, 1995; Bergh, 1995; John and Ofek, 1995; Markides, 1995; Datta et al., 2003; Hanson and Song, 2003; Denis and Shome, 2005; Bauguess et al., 2012; Feldman et al., 2016) indicating that market expectations on divestiture announcement are, on average, realized. Given that we expect experienced divestors to do more of the types of divestiture that will create more value, we make the following predictions:

Prediction 3a. Experienced divestors earn more positive announcement returns.

Prediction 3b. Experienced divestors have stronger operating performance after a divestiture.

2.4. Use of proceeds

Apart from types and performance of divestitures, the strategic nature of experienced divestitures may also be reflected on the use of proceeds from sales. Hamilton and Chow (1993) show that divesting firms grows significantly faster than non-divestors. We expect that experienced divestors will invest the proceeds in a way that both fulfills their goal of strategic repositioning/restructuring and benefits shareholders. Firms can re-deploy these assets in the form of CAPEX and R&D; however, in order to analyze the value-implications of such investments, we analyze a major event: a takeover. To the extent that the acquirer's manager's behavior in acquisitions tends to be consistent with his/her behavior in other investments (see for example the analysis of managerial entrenchment in acquisitions in Masulis et al., 2007), an analysis of takeovers is at least partially generalizable to other forms of investments. This leads to the following prediction.

Prediction 4. Experienced divestors are more likely to re-invest via acquisitions after a divestiture.

3. Data and methodology

3.1. Data sources and variable constructions

The full sample includes 6216 completed divestitures made by US public firms from 1990 to 2011. There are 2314 unique divestors in 4609 firm-years (as decomposed in Column 3 of Table 1), with some divestors making multiple divestitures in a single year. The sample size varies across regressions according to data availability for the variables used in the models. The divestiture announcements are collected from SDC Platinum's Mergers and Acquisitions database. These include both asset sales (of mostly divisions and subsidiaries) as well as spin-offs. We are careful to remove duplicate observations (identified by date announced, buyer's CUSIP,

Table 1
Time series of divestitures and divestiture experience
Column (1) denotes year. Columns (2) and (3) show the number divestitures and divestors in each year, respectively. Column (4) presents the percentages of divestors with divestiture experience in the latest 3 years.

Year (1)	Number of divestitures (2)	Number of divestors (3)	% Experienced divestors (3-Year) (4)
1990	220	160	70.00%
1991	202	154	75.32%
1992	228	168	79.76%
1993	240	180	75.00%
1994	315	229	67.25%
1995	379	277	72.56%
1996	384	280	70.00%
1997	439	304	74.34%
1998	441	310	77.74%
1999	404	297	73.06%
2000	334	244	70.08%
2001	333	235	69.79%
2002	288	230	68.70%
2003	262	203	64.53%
2004	263	198	74.75%
2005	300	231	68.40%
2006	234	180	70.00%
2007	230	178	66.85%
2008	185	143	61.54%
2009	183	135	54.81%
2010	173	144	54.86%
2011	179	129	65.89%
Total	6216	4609	
Average	283	210	69.33%

seller's CUSIP and divested unit's CUSIP) and internal restructuring activities (i.e., target and acquirer have the same CUSIP). Accounting data are from Compustat (and the Compustat Segment File for divested units' accounting information) and stock data are from CRSP.

We focus on firm-level divestiture experience (cf. CEO and board experience) for our hypotheses and most of our tests. By divestiture experience we refer to the number of divestitures that the firm has been involved in over the preceding three years. We use firm-level experience because experience can amass at the firm level. This manifests in improved internal procedures, training and education of junior executives, and staff, and increased operational efficiencies. CEO experience and board experience are also relevant. Firm-level experience will capture CEO and board experience at the firm in question (though not their experience at prior firms). We nevertheless examine CEO and board experience in Section 4.6.

We define the amount of experience earned over the past three years as the natural log of one plus the number of completed and uncompleted divestitures that the firm has done over those three years. At the organizational level, this is the experience accumulated by a firm in the past. Unlike the divestiture sample that focuses on completed deals only, the experience variables also account for uncompleted deals. This is because there is no reason to believe firms cannot learn from failed or pending attempts. Similarly, both value-creative and value-destroying deals are considered because both types can facilitate learning (see e.g., Harford and Schonlau, 2013). Log transformation ensures outliers do not drive the results. The results are robust to the construction of experience measures if we only look at experience earned over completed divestitures, if we weight experience by divestiture performance, if we down-weight distant experience (i.e., weight experience by $1/t$), or if we use binary variables to indicate if the company has done at least one divestiture over the past three years.

We construct control variables that might influence deal selection, execution or outcomes. The most commonly used controls in the divestiture literature include lagged firm size, liquidity (Kim, 1998), leverage (Jensen, 1989; Denis and Shome, 2005), CAPEX, R&D, advertising, operating performance (Denis and Shome, 2005), Tobin's Q, level of diversification[6] (Denis and Shome, 2005) and entrenchment indices[7] (Owen et al., 2010). We further control for firms' acquisition experience because acquisition experience may also help in accumulating restructuring experience. Further, the M&A literature has highlighted the importance of investment banks (Bao and Edmans, 2011; Song et al., 2013) and law firms (Krishnan et al., 2012; Krishnan and Masulis, 2013) in deal outcomes. We therefore control for the transaction experience of all financial and legal advisors that a divesting firm uses during a divestiture.[8] Table A1 provides definitions of all variables.

3.2. Summary statistics

Table 1 reports the time series of divestitures, divestors and percentages of experienced divestors. On average, more than half of the divestors in each year have done at least one divestiture.

[6] We use the number of business lines to proxy diversification (as in John and Ofek, 1995). The results are robust to using the Herfindahl focus index (as in Opler and Titman, 1993) constructed using segment data from the Compustat Segment File.

[7] In the tabulated results, we use the Bebchuk, Cohen, and Ferrell (2009) entrenchment index. We recode missing values to be state averages, because the six key anti-takeover provisions are enforced and therefore mostly determined by state laws. Doing so maintains the sample size at 5,992 instead of 4,344. However, we make sure that results are robust to using the un-recoded BCF index. It is also robust to alternative governance measures including the Gompers, Ishii, and Metrick (2003) 24 governance provisions and indicators for classified boards and poison pills (as per Bebchuk and Cohen, 2005). In addition, our results remain qualitatively the same if we add Herfindahl-Hirschman Index and institutional ownership as additional controls for corporate governance.

[8] We do not control for Relative Deal Size in the main regressions, as it would reduce the number of observations almost by half due to missing values in transaction value. However, we confirm that our regression results are robust to this additional control. We also experiment in the subsample of large deals where Relative Deal Size is at least 5%. The number of observations drops dramatically from 6,216 to 1,570 divestitures. We find that the results to be statistically less significant but consistent with the tabulated ones.

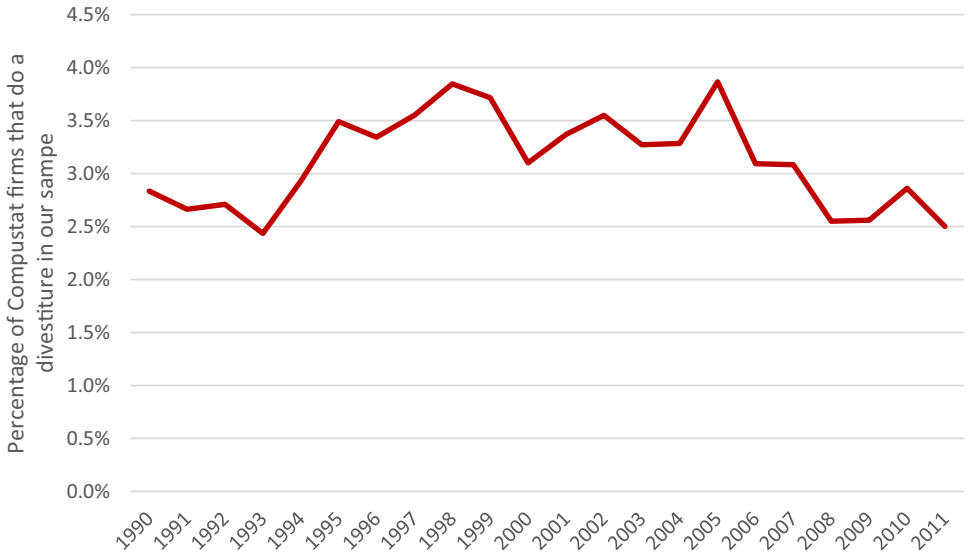


Fig. 1. Divestiture activity by year
This figure plots the divestiture activity by year. Here we look at the proportion of Compustat firms (for which assets data is available) that perform a divestiture in our sample.

And on average, a divestor has conducted 2.026 divestitures in the prior 3 years.[9] The time variations reveal some interesting facts.

First, there is some clustering in divestitures (Mulherin and Boone, 2000; Powell and Yawson, 2005, 2007), and also some evidence that divestitures occur at a similar time to M&A waves. This clustering is statistically significant at the one percent level using a chi-square test for clustering. We depict divestiture activity in Fig. 1. Here, we look at the proportion of Compustat firms (with the minimal requirement that they have assets) that undertake divestitures in our sample. The figure suggests clear spikes and troughs in divestiture activity.

Divestiture clustering is expected because macro-economic and industry factors are likely to be important in explaining M&As and divestitures, although different factors are likely to drive more or less of both restructuring events. For example, while demand/supply shocks can increase both M&As (e.g., through consolidation) and divestiture activity, technological, regulatory and energy price changes can have opposite effects on both activities (e.g., Coase, 1937; Gort, 1969; Bradley et al., 1988; Jensen, 1993; Mitchell and Mulherin, 1996; Powell and Yawson, 2005). Also, acquisitions are usually followed by divestitures (Kaplan and Weisbach, 1992). Consequently, it is not surprising that the number of divestitures tend to increase with the occurrence of merger waves over time.[10] We mitigate the concern that these experienced divestors are merely serial acquirers by controlling for the divestor's acquisition experience in our multivariate models. We also show that future divestiture experience is not simply motivated by past acquisition mistakes in robustness tests (see Sub-Section 5.1).

Second, the number of divestitures and the percentage of experienced divestors have gradually decreased in recent years. One reason could be that divestitures have become much more difficult than before due to higher levels of IT integration, shared support services and joint facilities.[11] Another reason could be the past process of reverse conglomeration has reduced the number of conglomerates that need divestment.

Table 2 Panel A contains summary statistics for the main variables. On average, all divestors have attempted 2 divestitures over the last 3 years, before conducting the next divestiture. About 65% and 59% divest non-core and distant units, respectively. This is consistent with prior findings that non-core units are more likely to be divested (Schlingemann et al., 1999) and firms tend to adopt a "pecking order" and divest out-of-state units before those in-state (Landier et al., 2009). However, only 26% of divested units are underperforming, and about 20% of divestitures are conducted during industry merger waves. These statistics suggest that divestors do not always divest strategically. This suggests that if these deal attributes have a much larger presence in the sub-sample of divestitures conducted by experienced divestors, they would likely also be associated with divestiture experience accumulated by firms.

The stock market reacts positively, on average, to divestiture announcements, which is consistent with the prior literature (Jain, 1985; Klein, 1986; Afshar et al., 1992; Sicherman and Pettway, 1992; Fluck and Lynch, 1999; Dittmar and Shivdasani, 2003; Eckbo and Thorburn, 2008; Ang et al., 2012). This is theoretically expected because raising capital by doing a divestiture (as opposed to issuing equity) can reflect a general desire to not issue equity; and thus, represents a signal that the stock price is undervalued (Nanda and Narayanan, 1998). It also reveals investors tend to interpret divestitures as positive NPV projects. Variables of acquisition experience and divestiture experience share similar distributions, based on mean, standard deviation and percentiles. Another observation is that divestors are typically larger firms, with total assets averaging at $3181 million. Finally, divestors are not necessarily bad firms according to their pre-divestiture operating performance and level of managerial entrenchment (captured by the BCF index). This suggests that divestitures may not always be motivated by financial distress.

Table 2 Panel B provides correlations of the main variables. The results are largely consistent with expectations. Experienced divestors tend to divest non-core, geographically distant and underperforming units. They use advisors with more experience, encourage more bidding competition, and are more likely to divest during an industry merger wave. They are also more experienced in conducting acquisitions, larger in size, and more diversified. Most

[9] Should we exclude firms that conduct spin-offs, the average number of prior divestitures in the last 3 years would increase from 2.026 to 2.040.

[10] The fifth merger wave started in 1992 and ended in 2000, and the sixth merger wave started in 2003 and peaked in 2006, ending in 2008 at the onset of the global financial crisis (Alexandridis, Mavrovitis, and Travlos, 2012).

[11] "Seven reasons divestitures are harder than you think" *Booz Allen Hamilton*, June 11, 2013.

Table 2
Summary statistics and correlations of variables
Ln Divest Exp (3-Year) is the natural log of one plus the number of divestitures experienced by a firm over the last 3 years before the divestiture. *Non-core Unit* is an indicator that equals one if none of the 4-digit SIC codes of the divested unit is the same as the primary 4-digit SIC code of the divesting firm. *Distant Unit* is an indicator that equals one if the divested unit's and the divesting firm's headquarters are located indifferent states. *Underperform Unit* is an indicator that equals one if the divested unit's operating performance is lower than that of the divestor prior to a divestiture. *In Merger Wave* indicator that equals one if the divestiture occurs in an industry merger wave.

Panel A: Summary statistics for the main variables
Column (1) shows the number of non-missing values for each variable. Columns (2)–(6) present the average value, standard deviation, and the 5th, 50th and 95th percentiles, respectively.

	Observations	Mean	SD	5th percentile	Median	95th percentile
	(1)	(2)	(3)	(4)	(5)	(6)
Divest Exp (3-Year)	6216	2.026	3.638	0.000	1.000	10.000
Ln Divest Exp (3-Year)	6216	0.693	0.819	0.000	0.693	2.398
Non-core Unit	6216	0.654	0.476	0.000	1.000	1.000
Distant Unit	6216	0.588	0.492	0.000	1.000	1.000
Underperform Unit	282	0.280	0.450	0.000	0.000	1.000
In Merger Wave	6216	0.197	0.398	0.000	0.000	1.000
CAR	5982	0.885	6.444	−7.366	0.251	11.227
Ln Acq Exp (3-Year)	6216	0.817	0.843	0.000	0.693	2.398
$Ln(Firm\ Size)_{t-1}$	6216	8.075	2.299	3.851	8.301	11.391
$Liquidity_{t-1}$	6216	0.062	0.086	0.003	0.032	0.224
$Leverage_{t-1}$	6216	0.218	0.177	0.000	0.188	0.558
$CAPEX_{t-1}$	6216	0.106	0.251	0.000	0.045	0.365
$R\&D_{t-1}$	6216	0.050	0.318	0.000	0.000	0.156
$Advertising_{t-1}$	6216	0.010	0.024	0.000	0.000	0.056
OP_{t-1}	6216	0.087	0.143	−0.083	0.101	0.238
Tobin's Q_{t-1}	6216	1.628	1.073	0.909	1.309	3.326
Diversification	6216	3.260	2.141	1.000	3.000	8.000
BCF	6216	2.227	1.212	0.000	2.000	4.000
Ln Inter Exp (3-Year)	6216	0.609	1.033	0.000	0.000	2.996
Familiar Buyer	5992	0.410	0.492	0.000	0.000	1.000
% Cash Payment	2227	74.086	39.090	0.000	100.000	100.000
Relative Deal Size	3575	0.229	0.612	0.000	0.035	1.093

Panel B: Correlations of the main variables
Superscripts ***, ** and * denotes significance at 1%, 5% and 10%, respectively.

		1	2	3	4	5	6	7	8	9	10	11
1	Ln Divest Exp (3-Year)	1										
2	Non-core Unit	0.121***	1									
3	Distant Unit	0.152***	0.0871***	1								
4	Underperform Unit	0.235***	0.0411	0.0366	1							
5	In Merger Wave	0.0715***	0.0223*	0.0197	−0.211***	1						
6	CAR	−0.0445***	−0.0211	−0.0317**	0.138**	−0.0279**	1					
7	Ln Acq Exp (3-Year)	0.572***	0.0917***	0.148***	0.0461	0.0808***	−0.0739***	1				
8	$Ln(Firm\ Size)_{t-1}$	0.571***	0.125***	0.167***	0.125**	0.0163	−0.109***	0.571***	1			
9	$Liquidity_{t-1}$	−0.157***	−0.0749***	−0.0940***	−0.0214	−0.0290**	0.0355***	−0.184***	−0.302***	1		
10	$Leverage_{t-1}$	0.0134	−0.0791***	0.0622***	0.0135	−0.0158	0.0213*	−0.00396	−0.00929	−0.216***	1	
11	$CAPEX_{t-1}$	−0.0405***	−0.158***	−0.0258**	−0.00474	0.0616***	−0.0262**	−0.0374***	−0.0901***	−0.00443	0.212***	1
12	$R\&D_{t-1}$	−0.0687***	−0.0531***	−0.0895***	−0.0908	0.00666	0.0246*	−0.0598***	−0.155***	0.212***	−0.0203	0.133***
13	$Advertising_{t-1}$	0.0120	−0.00255	−0.00220	0.0703	−0.0248*	0.0163	−0.0240*	0.0217*	0.0784***	−0.0436***	−0.00412
14	OP_{t-1}	0.125***	0.0834***	0.0918***	0.150**	0.00107	−0.0570***	0.0997***	0.274***	−0.209***	0.0520***	−0.0858***
15	Tobin's Q_{t-1}	−0.0357***	−0.0357***	0.00600	−0.126**	0.0731***	−0.0258**	−0.0224*	−0.125***	0.307***	−0.114***	0.0263**
16	Diversification	0.408***	0.180***	0.132***	0.0934	−0.0379***	−0.0338***	0.345***	0.390***	−0.126***	−0.0493***	−0.118***
17	BCF	−0.194***	−0.0678***	−0.0443***	−0.0592	−0.0640***	0.0272**	−0.197***	−0.0983***	−0.0208	0.0582***	0.0366***
18	Ln Inter Exp (3-Year)	0.116***	0.00240	−0.0132	−0.00480	0.0221*	0.0538***	0.0846***	0.202***	−0.0353***	0.0375***	0.00945
19	Familiar Buyer	−0.0822***	−0.313***	−0.0521***	−0.0338	−0.0420***	0.0122	−0.0505***	−0.0457***	0.0195	0.00326	0.0630***
20	% Cash Payment	0.0304	−0.00833	0.0637***	−0.173*	−0.0226	−0.0390*	−0.0541**	0.00581	−0.00686	0.00988	−0.00934
21	Relative Deal Size	−0.165***	−0.0748***	−0.0924***	0.146**	0.000925	0.225***	−0.179***	−0.285***	0.0176	0.0647***	0.0139

		12	13	14	15	16	17	18	19	20	21
12	$R\&D_{t-1}$	1									
13	$Advertising_{t-1}$	0.0281**	1								
14	OP_{t-1}	−0.401***	−0.00257	1							
15	Tobin's Q_{t-1}	0.199***	0.212***	0.0547***	1						
16	Diversification	−0.0425***	0.0554***	0.176***	−0.0129	1					
17	BCF	−0.00106	−0.0937***	−0.0131	−0.0696***	−0.143***	1				
18	Ln Inter Exp (3-Year)	−0.0378***	0.0464***	0.0218*	−0.0320**	0.0119	0.00111	1			
19	Familiar Buyer	0.0221*	0.00242	−0.0527***	0.000629	−0.159***	0.0519***	0.0551***	1		
20	% Cash Payment	−0.0345	0.00334	−0.0194	−0.118***	−0.195***	0.0694***	0.0885***	−0.00909	1	
21	Relative Deal Size	0.00816	0.00928	−0.183***	−0.0954***	−0.125***	0.00845	0.0494***	0.0497***	−0.0251	1

importantly, experienced divestors tend to have better pre-divestiture operating performance, which supports the view that experienced divestitures, on average, are unlikely to be driven by underperformance or distress. This is in line with our hypothesis that divestiture experience of firms can be beneficial and divestitures conducted by experienced divestors are more likely to be strategic in nature. Lastly, divestiture experience is significantly negatively correlated with the BCF index. This is consistent with the intuition that firms that are active in making tough decisions (i.e., divestment in this paper) are usually well-governed and managed firms (Boot, 1992).

3.3. Methods

Overall, our data is cross-sectional and structured by divestiture transaction. The regression analysis takes the general form of Eq. (1):

$$y_{it} = \alpha + \beta^{(1)}\text{Experience}_{it} + \boldsymbol{\theta X}_{it} + \lambda_t + c_{i(k)} + \varepsilon_{it} \quad (1)$$

where y_{it} includes deal-related variables motivated in Section 2, Experience_{jt} is a measure of firm divestiture experience; $\boldsymbol{X}_{jt}$ is a vector of firm-specific control variables described in Section 3.1, $\lambda_t$is a year dummy and $c_{i(k)}$ is an industry dummy for firm i being in industry k and ε_{it} is the error term clustered by firm. Inclusion of industry and year dummies are to make sure that the results do not merely reflect industry or time effects (Johnson et al., 2009; Gormley and Matsa, 2014). Besides firm-level divestiture experience, we also experiment with CEOs' divestiture experience, both as a key independent variable and as a control variable. In the robustness section, we also analyze board experience.[13]

4. Analysis

4.1. What are the characteristics of divested units selected by experienced divestors?

We first consider whether experienced divestors are more likely to divest peripheral units, such as those that are unrelated to the divestor's core line of business, geographically distant from the divestor's base-of-operations or those that underperform other units in the firm.

Table 3 reports the odds ratios of logit regressions where models 1–3 account for whether the divested unit is non-core,[14] geographically distant and underperforming, respectively. An odds ratio of greater than (less than) one indicates that a particular variable increases (decreases) the likelihood of a particular outcome. The odds ratios of divestiture experience are all greater than one and statistically significant, with larger magnitudes for more recent experience. For example, a one unit increase in 3-year divestiture experience would make a divestor 14% more likely to divest non-core units than core units, and 12% more likely to divest distant units than relatively close units. The odds ratio of divestiture experience in the underperforming unit regression (i.e., model 3) is particularly large in magnitude, and suggests that underperforming units are more than 2 times more likely to be divested than outperforming or average units.[15] This highlights the intention of improving performance of experienced divestors (Boot, 1992).[16] Also, odds ratios of diversification in models 1–6 are greater than one and statistically significant. This reveals more diversified firms are more likely to refocus operationally or geographically.

Another observation is that advisors used in transactions are relatively less influential in unit selection, which mitigates the concern that advisors push the sale of particular units. In models 1 and 3, odds ratios of advisors' experience are statistically insignificant. In model 2 it has a smaller economic effect (though statistically significant) than divestiture experience (i.e., the absolute values of their differences with one are small) and is less than one. That is, better advisors are more likely to be involved in the sale of geographically close units. Prior acquisition experience is also important, but only for divesting distant units. For non-core and underperforming units, acquisition experience odds ratios are less than one, and insignificant. This suggests that divestiture experience provides greater additional strategic benefits, particularly when it comes to the decision to divest non-core and underperforming units. Overall, divestors with more experience tend to retain core and well performing divisions and sell peripheral and underperforming ones.

4.2. Are experienced divestors more likely to time the market?

We analyze the likelihood of market timing by testing whether a divestiture occurs during an industry merger wave. We follow Harford (2005) in identifying merger waves of the 48 Fama French industry groups. There are 32 merger waves over 1990–2011, 26 of which occurred in 1990s and are identical to those in Harford (2005). Table A2 lists the 6 merger waves in 2000s. A divestiture is defined to be 'in-merger-wave' if either the seller or the buyer or both is in an industry experiencing a merger wave when the divestiture is announced. By definition, this indicator has significant collinearity with Year fixed and industry dummies (and thereby reducing the sample size to 3830 observations). So we drop these dummies in the logit regressions of the in-merger-wave indicator.

Column 4 of Table 3 contains the odds ratios from logit models that predict the likelihood that the divestiture occurs during a M&A wave. The odds ratio of divestiture experience is greater than one and statistically significant. This confirms prediction 2 that divestors with more experience tend to divest during industry merger waves, which has the benefit of divested units receiving higher premiums due to greater competition during merger waves (Alexandridis et al., 2012). That is, experienced divestors are likely to be engaged in a strategy of judiciously releasing assets when market opportunities present themselves. The fact that prior acquisition experience also helps in timing the market is not surprising, because firms with greater acquisition experience are more likely to understand the dynamics of industry merger waves. However, given that we control for prior acquisition experience, the relationship between divestiture experience and timing does not

[13] We are aware of the possibility of systematic differences between divesting firms with and without recent divestiture experience. We thus perform propensity score matching and match the 'experienced' divestors with a control set of non-experienced divestors. This is fully discussed and tabulated in Section 5.2.

[14] In the tabulated tables, we define a unit to be non-core if none of the 4-digit SIC codes of the divested unit is the same as the primary 4-digit SIC code of the divesting firm. We confirm that we obtain qualitatively similar result when we define a non-core unit based on its the primary SIC code instead of all SIC codes (i.e., a non-core unit has a 4-digit primary SIC code that is different from the divesting firm). Our results are also robust to alternative definitions based on 2-digit or 3-digit SIC codes.

[15] The sample size of model 3 is limited to 221 due to the difficulty in data matching between SDC and Compustat Segment Files. Since the latter mainly covers significant units that account for more than 10% of consolidated profits, sales, or assets, the lack of data availability for divested units suggests many of them are small segments (as in Schlingemann, Stulz, and Walkling, 2002; Chen and Guo, 2005).

[16] Admittedly, a firm may transfer costs to segments to be sold so that an improvement in performance can be observed after a divestiture. We address this problem by requiring an underperforming unit to have worse performance (measured as segment operating income before depreciation over segment total assets) than the divestor at the consolidation level for consecutively two years before a divestiture (instead of one year). The odds ratio of 3-year divestiture experience is significant at a 10% level. The reduction in significance is likely to be caused by the lack of accounting data for the divested segments two years before a divestiture because the sample size drops from 221 to 127.

Table 3
Logit regressions of the nature of divested units and market timing, coefficients reported as odds ratios Columns 1–3 model the likelihood of a divestor to divest non-core, distant and underperforming unit, respectively. Column 4 models the likelihood of a divestiture to occur during an industry merger wave. All regressions are logit models, with coefficients reported as odds ratios. Models 1–3 include year and 2-digit SIC Industry fixed effects. Ln *Divest Exp (3-Year)* is the natural log of one plus the number of divestitures experienced by a firm over the last 3 years before the divestiture. *Non-core Unit* is an indicator that equals one if none of the 4-digit SIC codes of the divested unit is the same as the primary 4-digit SIC code of the divesting firm. *Distant Unit* is an indicator that equals one if the divested unit's and the divesting firm's headquarters are located indifferent states. *Underperform Unit* is an indicator that equals one if the divested unit's operating performance is lower than that of the divestor prior to a divestiture. *In Merger Wave* indicator that equals one if the divestiture occurs in an industry merger wave. Standard errors are adjusted for both heteroskedasticity (White, 1980) and divesting firm clustering. For models 7–9, the control for prior operating performance is dropped due to potential endogeneity concerns. *P*-values are in parentheses. Superscripts ***, ** and * denotes significance at 1%, 5% and 10%, respectively.

Dependent variable:	Non-core unit (1)	Distant unit (2)	Underperform unit (3)	In merger wave (4)
Ln Divest Exp (3-Year)	1.152**	1.133**	3.245***	1.267***
	(0.018)	(0.020)	(0.005)	(0.008)
Ln Acq Exp (3-Year)	0.994	1.177***	0.472*	1.248***
	(0.921)	(0.002)	(0.081)	(0.006)
$Ln(Firm\ Size)_{t-1}$	1.073***	1.126***	1.243	0.948*
	(0.008)	(0.000)	(0.143)	(0.050)
$Liquidity_{t-1}$	0.354**	0.472*	3.792	0.149***
	(0.016)	(0.064)	(0.694)	(0.001)
$Leverage_{t-1}$	0.614**	1.487**	0.068	0.590**
	(0.021)	(0.036)	(0.181)	(0.048)
$CAPEX_{t-1}$	0.671**	0.890	0.505	1.676***
	(0.033)	(0.440)	(0.491)	(0.001)
$R\&D_{t-1}$	0.933	0.296***	0.973	0.948
	(0.561)	(0.002)	(0.991)	(0.624)
$Advertising_{t-1}$	0.214	0.750	5.053	0.011**
	(0.289)	(0.842)	(0.889)	(0.039)
OP_{t-1}	1.366	0.530**		1.012
	(0.258)	(0.021)		(0.971)
Tobin's Q_{t-1}	0.929**	1.079**	0.318**	1.206***
	(0.031)	(0.029)	(0.024)	(0.000)
Diversification	1.150***	1.041**	1.029	0.899***
	(0.000)	(0.040)	(0.902)	(0.000)
BCF	0.947*	0.991	0.850	0.896***
	(0.090)	(0.752)	(0.576)	(0.004)
Ln Inter Exp (3-Year)	0.982	0.889***	0.898	1.050
	(0.591)	(0.000)	(0.583)	(0.201)
Observations	6192	6212	238	6216
Pseudo R^2	0.110	0.0715	0.294	0.0304

merely reflect recent acquisition experience. Also, the presence of past M&A failures does not predict the level of future divestiture experience (see Sub-Section 5.1). Another observation is that more recent experience matters more.[17]

4.3. Do experienced divestors enjoy better divestiture performance?

4.3.1. Stock market based measures of performance

We initially test the divestors returns surrounding the announcement of the divestiture. We test whether the stock market responds more positively to divestors with more experience. This is one way to test the value created in the divestiture. Valuation multiples are one alternative to market returns. However, the subsidiaries are generally unlisted, making it generally impossible to obtain valuation multiples. We follow Moeller et al. (2005) in using 3-day CARs (measured from days −1 to +1) to capture the divestor's stock price reaction to the divestiture announcement. We calculate its benchmark parameters over days −210 to −11 (as per Masulis et al., 2007). Market-adjusted abnormal returns (MARs) and raw-abnormal returns (RAWs) are also used because they have the potential of minimizing biases caused by contaminated event periods (Aktas et al., 2007).

Columns 1–3 of Table 4 show the regression results. Although controlling for deal characteristics drops more than half of the observations, divestiture experience still has a positive and statistically and economically significant effect on market reactions. The samples for Columns 2 and 3 exclude spin-offs, because of the control for buyer characteristics (i.e., *Familiar Buyer*). According to Column 3, one standard deviation increase in 3-year divestiture experience increases CARs by 0.581 percentage points.[18] These support prediction 3a. There are two interpretations of the results. First, experienced divestitures are more likely to deliver long-term benefits, because the market tends to evaluate divestitures based on long-term expectations rather than short-run financial gains (Montgomery et al., 1984) Second, experienced divestitures are likely to receive higher premiums, because announcement

[17] We also test whether divestitures announced during merger waves are systematically different from those outside merger waves, regardless of divestiture experience. Using regression analysis with control variables and industry and year fixed effects, we do not find any significant difference in terms of divestiture characteristics (i.e., the likelihood of divesting non-core units, distant units, and underperforming units, respectively) and divestiture performance (i.e., *CAR*). This further highlights the value of divestiture experience. The higher quality of divestitures conducted by experienced divesting firms cannot be observed in all divestitures during merger waves. Hence, the former is not driven by the mere in-wave timing of divestment.

[18] We calculate this by multiplying the coefficient on log divestiture experience in Column 3 (0.581) with the standard deviation of log divestiture experience (0.822).

Table 4
OLS regressions of announcement returns and operating performance
Columns 1–3 present regressions of 3-day CAR around divestiture announcements. Columns 4–6 present regressions of adjusted operating performance 1, 2 and 3 years after a divestiture, respectively. Operating performance is adjusted by 2-digit SIC industry averages. Ln *Divest Exp (3-Year)* is the natural log of one plus the number of divestitures experienced by a firm over the last 3 years before the divestiture. All models include year fixed effects, and models 1–3 and 7–9 also include 2-digit SIC Industry fixed effects. Standard errors are adjusted for both heteroskedasticity (White, 1980) and divesting firm clustering. *P*-values are in parentheses. Superscripts ***, ** and * denotes significance at 1%, 5% and 10%, respectively.

Dependent variable:	CAR (1)	CAR (2)	CAR (3)	Adj OP_{t+1} (4)	Adj OP_{t+2} (5)	Adj OP_{t+3} (6)	OP_{t+1} (7)	OP_{t+2} (8)	OP_{t+3} (9)
Ln Divest Exp (3-Year)	0.340***	0.707***	0.581**	0.012**	0.012**	0.011*	−0.003	−0.003	−0.002
	(0.005)	(0.005)	(0.019)	(0.015)	(0.019)	(0.070)	(0.153)	(0.228)	(0.570)
Ln Acq Exp (3-Year)	−0.194	−0.490*	−0.416	0.008	0.006	0.006	−0.004**	−0.005**	−0.005*
	(0.164)	(0.096)	(0.144)	(0.117)	(0.284)	(0.361)	(0.046)	(0.041)	(0.060)
$Ln(Firm\ Size)_{t-1}$	−0.440***	−0.616***	−0.344**	−0.002	−0.001	−0.002	0.007***	0.009***	0.006***
	(0.000)	(0.000)	(0.026)	(0.349)	(0.763)	(0.430)	(0.000)	(0.005)	(0.000)
$Liquidity_{t-1}$	−0.138	−1.593	−0.601	0.106*	0.033	−0.017	0.027	−0.040	−0.064
	(0.940)	(0.581)	(0.833)	(0.051)	(0.624)	(0.788)	(0.517)	(0.517)	(0.143)
$Leverage_{t-1}$	0.485	0.916	−0.0715	−0.023	−0.088*	−0.023	0.014	−0.053	0.026
	(0.540)	(0.528)	(0.961)	(0.266)	(0.081)	(0.487)	(0.369)	(0.358)	(0.191)
$CAPEX_{t-1}$	−1.072**	0.190	0.578	−0.005	0.009	0.023	0.003	0.031	0.021
	(0.029)	(0.813)	(0.476)	(0.732)	(0.691)	(0.490)	(0.852)	(0.137)	(0.294)
$R\&D_{t-1}$	0.244	−0.122	0.140	0.023	0.058***	0.055*	−0.058***	−0.037*	−0.028
	(0.598)	(0.807)	(0.788)	(0.218)	(0.001)	(0.067)	(0.001)	(0.055)	(0.320)
$Advertising_{t-1}$	9.830*	21.79*	19.95	0.465*	0.623**	0.831***	0.220**	0.349***	0.363***
	(0.096)	(0.088)	(0.109)	(0.062)	(0.023)	(0.004)	(0.021)	(0.000)	(0.000)
OP_{t-1}	−1.132	0.718	1.632	0.598***	0.651***	0.527***	0.506***	0.520***	0.402***
	(0.430)	(0.749)	(0.483)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tobin's Q_{t-1}	−0.255	−0.198	−0.115	0.025***	0.020***	0.021***	0.004	0.001	0.004
	(0.115)	(0.447)	(0.634)	(0.000)	(0.004)	(0.000)	(0.369)	(0.847)	(0.274)
Diversification	0.027	−0.116	−0.116	0.007**	0.006	0.008**	0.001	−0.001	0.001
	(0.574)	(0.213)	(0.190)	(0.010)	(0.101)	(0.015)	(0.321)	(0.565)	(0.348)
BCF	0.029	−0.104	−0.0565	0.002	0.002	0.006	−0.001	−0.001	−0.000
	(0.708)	(0.530)	(0.731)	(0.527)	(0.499)	(0.128)	(0.294)	(0.692)	(0.949)
Ln Inter Exp (3-Year)	0.457***	0.558***	0.364**	−0.002	0.000	−0.002	−0.001	0.001	0.000
	(0.000)	(0.000)	(0.017)	(0.358)	(0.905)	(0.456)	(0.574)	(0.250)	(0.783)
Familiar buyer		0.364	0.254						
		(0.327)	(0.485)						
% Cash payment		−0.00242	−0.000980						
		(0.642)	(0.849)						
Relative deal size			2.582***						
			(0.000)						
Observations	5982	1956	1955	4650	4204	3795	4650	4204	3795
Adj. R^2	0.031	0.046	0.080	0.259	0.197	0.192	0.481	0.229	0.359

returns can be viewed as a proxy for premiums received (John and Ofek, 1995; Schwert, 1996; Aktas et al., 2011). Higher premiums imply an increase in the market value of the seller's equity, and therefore a positive abnormal return around the announcement date. Clubb and Stouraitis (2002) also show that sellers' CARs are positively correlated with profit on a sale, even after controlling for sell-off motivation, use of sale proceeds, and the presence of agency costs.

The coefficients on the control variables also suggest that larger divestors earn significantly lower CARs. This could suggest that larger firms are worse governed. Alternatively (as we will see below), it could alternatively be because the market already expects firms to divest assets, so there is less of a positive surprise when they announce divestitures. We also find that more experienced advisors are associated with higher CARs, which reveals the beneficial role of high-quality advisors in the context of divestitures. Prior acquisition experience is not a significant determinant of announcement returns, indicating that it is divestiture experience that matters more to the market when valuing the gains to divestitures.

4.3.2. Operating performance based measures

The next issue is whether experienced divestors also generate stronger future operating performance. We perform regressions where the dependent variable is the firm's industry-adjusted operating performance. The results are reported in Columns 4–9 of Table 4. To avoid double de-meaning the dependent variables, models 4–6 use industry-adjusted operating performance without industry dummies, and models 7–9 use unadjusted operating performance with industry dummies. De-meaning the dependent variable (ROA) by industry averages each year is necessary because it allows us to determine how experienced divestors perform compared with their relevant industry benchmark over the same period; a similar rationale to the use of abnormal returns in event studies.

The coefficients on the experience-variables are positive for all and significant for most measures of operating performance up to 3 years after a divestiture. This confirms that experienced divestors generate stronger operating performance post-divestiture. Furthermore, it suggests that the positive market reaction does not merely reflect the market's "belief" that a weak firm is selling assets in order to recapitalize itself. This provides support for prediction 3b. It is also worth noting that acquisition experience has no significant relationship with future operating performance. This again suggests that it is divestiture experience that matters more in delivering real performance improvements. This is consistent with the hypothesis that divestiture experience brings additional strategic skills that are important in securing future firm capabilities to remain competitive and profitable.

The impact of divestor size is interesting. The market reacts less positively to large divestors' divestitures. The average divestiture CAR is 0.833 (see Table 2). A one standard deviation increase

Table 5
Logit regressions of the likelihood of future acquisitions (coefficients are reported as odds ratios)
Columns 1, 2, 3 and 4 model the likelihood of a divestor to acquire within 1, 2, 3 and 4 years after a divestiture, respectively. All regressions are logit models, with coefficients reported as odds ratios. All models include year and 2-digit SIC Industry fixed effects. Ln *Divest Exp (3-Year)* is the natural log of one plus the number of divestitures experienced by a firm over the last 3 years before the divestiture. Standard errors are adjusted for both heteroskedasticity (White, 1980) and divesting firm clustering. *P*-values are in parentheses. Superscripts ***, ** and * denotes significance at 1%, 5% and 10%, respectively.

Dependent variable:	Acquisition $_{t,\ t+1}$ (1)	Acquisition $_{t,\ t+2}$ (2)	Acquisition $_{t,\ t+3}$ (3)	Acquisition $_{t,\ t+4}$ (4)
Ln Divest Exp (3-Year)	1.155**	1.227***	1.149	1.154*
	(0.045)	(0.007)	(0.102)	(0.095)
Ln Acq Exp (3-Year)	1.700***	1.625***	1.715***	1.686***
	(0.000)	(0.000)	(0.000)	(0.000)
Ln(Firm Size)$_{t-1}$	1.386***	1.433***	1.481***	1.503***
	(0.000)	(0.000)	(0.000)	(0.000)
Liquidity$_{t-1}$	0.847	1.016	1.186	0.618
	(0.820)	(0.980)	(0.780)	(0.436)
Leverage$_{t-1}$	0.972	0.919	0.797	0.734
	(0.930)	(0.784)	(0.472)	(0.341)
CAPEX$_{t-1}$	1.069	1.150	0.917	0.829
	(0.812)	(0.563)	(0.722)	(0.468)
R&D$_{t-1}$	1.170	1.066	1.075	1.080
	(0.511)	(0.755)	(0.706)	(0.665)
Advertising$_{t-1}$	0.032*	0.007**	0.052	0.013*
	(0.096)	(0.021)	(0.170)	(0.069)
OP$_{t-1}$	10.086***	7.703***	7.035***	7.021***
	(0.001)	(0.000)	(0.000)	(0.000)
Tobin's Q$_{t-1}$	1.060	1.072	1.122**	1.169***
	(0.331)	(0.218)	(0.030)	(0.004)
Diversification	1.062*	1.082**	1.071**	1.072*
	(0.062)	(0.012)	(0.049)	(0.064)
BCF	0.842***	0.870***	0.890**	0.894**
	(0.000)	(0.002)	(0.017)	(0.033)
Ln Inter Exp (3-Year)	0.934*	0.957	0.967	0.946
	(0.060)	(0.204)	(0.329)	(0.123)
Observations	5957	5815	5641	5454
Pseudo R^2	0.231	0.239	0.250	0.256

in divestor size reduces CARs by between 0.3 and 0.5 percentage points (from Columns 1–3 of Table 4).[19] However, holding all else equal, CARs can remain positive except for the largest divestors. Conversely, large divestors' divestitures yield greater operating performance gains (viz the positive coefficient on size in Columns 7–9). Together, these results suggest that while large firms gain from divestitures (in terms of operating performance), the market might already anticipate these firms' need to divest assets, leading to less of a surprise on divestiture announcement and a less positive divestiture "CAR".[20]

4.4. Are experienced divestors more likely to spend the proceeds on acquisitions?

Table 5 reports logit regressions of the likelihood of conducting acquisitions within $t \in \{1, 2, 3, 4\}$ years after a divestiture. The odds ratios of divestiture experience are all greater than one and significant. For example, a one unit increase in three-year divestiture experience would make a divestor 17% more likely to acquire within one year following the divestiture. This emphasizes the intention of experienced divestors to reinvest the proceeds from the sale on external expansion, and mitigates concerns that experienced divestors are financially-distressed firms that repetitively divest to avoid bankruptcy. Together with the findings of more positive stock market reactions (see Table 5), this result is also consistent with Kaiser and Stouraitis (2001a)'s finding that the market reacts more positively to divestitures where sale proceeds are to be reinvested for expansion via acquisitions. Not surprisingly, the odds ratios for acquisition experience are also greater than one and significant, suggesting that firms with more acquisition experience are more likely to acquire in the future.

The control variables are also interesting. The results in Table 5 are odds ratios. The BCF odds ratio is below one, which indicates that entrenched firms (in our sample) are less likely to make acquisitions after doing divestitures. Post-divestiture acquisitions create value, on average. This suggests that entrenched firms are less likely to make these value-creating acquisitions. This is consistent with the quiet life theory in Bertrand and Mullainathan (2003), under which entrenched managers might shirk and pass up value-creating investments.[21]

[19] We calculate this by multiplying the relevant coefficient on firm size with the standard deviation of the firm size variable.

[20] Admittedly, these tests could be subject to endogeneity in the form of reverse causality, which may exist for both good firms and bad firms. While good firms may simply apply their past successful divesting strategies on the next divestiture, bad firms may divest in order to generate cash to avoid distress or bankruptcy. We thus split the sample into quartiles based on pre-divestiture operating performance, cash and size, respectively, and re-estimate the baseline regressions. The results are generally consistent with those tabulated, and so mitigate the issue of reverse causality driving the results.

[21] We also examine whether these acquisitions create value for shareholders by estimating regressions of average CARs of future acquisitions as proxies on divestiture experience and control variables. Interestingly, the coefficients of divestiture experience are statistically insignificant in the full sample of divestitures including spinoffs. In the subsample where we exclude spinoffs, we find the coefficients of divestiture experience to be positive and significant at the 10% level. Considering the fact that spinoffs lead to the listing of existing shareholders with no proceeds to the parent, subsequent acquisitions following spinoffs are unlikely to be financed by proceeds from these spinoffs. Taken together, these results suggest that future acquisitions are more likely to be value-adding if they are funded by proceeds from divestitures.

Table 6
CEO divestiture experience
Models in this table follow the same regression specifications as Tables 3–7, but examine the role of CEO's divestiture experience in the past. Coefficients are reported as odds ratios for logit regressions. Standard errors are adjusted for both heteroskedasticity (White, 1980) and divesting firm clustering. *P*-values are in parentheses. Superscripts ***, ** and * denotes significance at 1%, 5% and 10%, respectively.

Panel A: Choice of divested units

	Non-core unit			Distant unit			Underperform unit		
Ln CEO Divest Exp (1-Year)	1.375***			1.074			7.103		
	(0.000)			(0.374)			(0.149)		
Ln CEO Divest Exp (2-Year)		1.264***			1.066			1.856	
		(0.004)			(0.370)			(0.348)	
Ln CEO Divest Exp (3-Year)			1.237***			1.054			4.920**
			(0.004)			(0.432)			(0.013)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2-digit SIC Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3850	3850	3761	3885	3885	3796	134	134	134
Pseudo R^2	0.107	0.106	0.106	0.0524	0.0543	0.0527	0.437	0.395	0.434

Panel B: Market timing

	In merger wave		
Ln CEO Divest Exp (1-Year)	1.469***		
	(0.001)		
Ln CEO Divest Exp (2-Year)		1.523***	
		(0.000)	
Ln CEO Divest Exp (3-Year)			1.527***
			(0.000)
Controls	Yes	Yes	Yes
Year FE	No	No	No
2-digit SIC Industry FE	No	No	No
Observations	3889	3889	3800
Pseudo R^2	0.0438	0.0473	0.0482

Panel C: CAR and future operating performance

	CAR			Adj OP_{t+1}			Adj OP_{t+2}			Adj OP_{t+3}		
Ln CEO Divest Exp (1-Year)	−0.092			0.019***			0.015***			0.009		
	(0.551)			(0.001)			(0.005)			(0.137)		
Ln CEO Divest Exp (2-Year)		−0.102			0.014***			0.012**			0.010	
		(0.394)			(0.006)			(0.016)			(0.105)	
Ln CEO Divest Exp (3-Year)			−0.025			0.014**			0.013**			0.011
			(0.848)			(0.013)			(0.026)			(0.103)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2-digit SIC Industry FE	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No
Observations	3854	3854	3765	3237	3237	3149	2953	2953	2870	2674	2674	2592
Adj. R^2	0.042	0.042	0.041	0.260	0.261	0.255	0.321	0.323	0.320	0.300	0.302	0.295

Panel D: Likelihood of the future acquisition

	Acquisition$_{t+1}$			Acquisition$_{t+2}$			Acquisition$_{t+3}$			Acquisition$_{t+4}$		
Ln CEO Divest Exp (1-Year)	1.455***			1.445***			1.323**			1.212		
	(0.001)			(0.002)			(0.033)			(0.125)		
Ln CEO Divest Exp (2-Year)		1.440***			1.466***			1.351***			1.334***	
		(0.000)			(0.000)			(0.008)			(0.010)	
Ln CEO Divest Exp (3-Year)			1.331***			1.365***			1.309**			1.306**
			(0.002)			(0.001)			(0.012)			(0.014)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2-digit SIC Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3718	3718	3629	3605	3605	3516	3475	3475	3386	3342	3342	3253
Pseudo R^2	0.229	0.232	0.228	0.232	0.239	0.232	0.234	0.240	0.235	0.240	0.247	0.242

4.5. CEO and board experience

So far, we have focused on firm-level experience. Firm experience is likely to reflect experience amassed by the firm's personnel, especially key senior management, such as the CEO. So in Table 7, we also examine CEO experience. We use Execucomp to identify CEOs, and as a result, the sample is limited to S&P1500 firms and for fiscal years from 1992 only. The number of observations drops significantly from 5992 to 3793.

The results in Table 6 confirm that CEOs' prior divestiture experience plays an important role in some divestiture outcomes, but not all. Specifically, the coefficients of CEO experience in regressions of divesting non-core units (panel A), is significant, but not distant units and underperforming units, nor the market reactions to the divestiture in question (panel C), and average market reactions to future acquisitions (panel E). CEO experience is important in driving better future operating performance (panel C), the timing (panel B) and in initiating future takeovers (panel D). Taken together, the results suggest that experience accumulated at the firm level is more important in driving better divestiture outcomes relative to the individual CEO. This is confirmed in Table 7, which includes both firm and CEO experience in the regressions. The fact that firm-level experience generally has more explanatory power than CEO experience when they are in the same regressions also implies that divestiture experience can embed itself into corporate culture, which can then impact future divestiture decisions and outcomes.

We also examine board measures of experience (these results are tabulated as Tables S7 and S8 in the Supplementary Appendix to conserve space in this paper). We construct two measures of board divestiture experience (and their analogs for acquisitions). First, we construct two board-level divestiture experience measures - the natural log of one plus the number of divestitures experienced by all directors on the board of a divestor over the last three years before a divestiture. Second, we use the natural log of one plus the number of directors with divestiture experience over the last three years before a divestiture. Data of board of directors are from IRRC/Risk Metrics. The results are much like the results for CEO experience. Directors' experience is important for some divestiture outcomes. These include the decision to divest distant units, divestiture CARs, and divestiture operating performance. This suggests that directors' experience is important, but less directly instrumental than is the firm-level accumulated experience.

Table 7
Controlling for CEO divestiture experience
Coefficients are reported as odds ratios for logit regressions. Standard errors are adjusted for both heteroskedasticity (White, 1980) and divesting firm clustering. *P*-values are in parentheses. Superscripts ***, ** and * denotes significance at 1%, 5% and 10%, respectively.

Panel A: Choice of divested units				Panel B: Market timing	Panel C: CAR and future operating performance			
	Non-core unit	Distant unit	Underperform unit	In merger wave	CAR	Adj OP_{t+1}	Adj OP_{t+2}	Adj OP_{t+3}
Ln Divest Exp (3-Year)	1.186	1.245**	4.880	0.899	0.367	0.008	0.017**	0.022**
	(0.152)	(0.038)	(0.204)	(0.543)	(0.152)	(0.331)	(0.046)	(0.019)
Ln Acquire Exp (3-Year)	0.998	1.252***	0.321	1.211*	−0.159	0.010	0.009	0.009
	(0.973)	(0.001)	(0.501)	(0.055)	(0.270)	(0.105)	(0.103)	(0.149)
Ln CEO Divest Exp (3-Year)	1.067	0.870	1.255	1.682***	−0.333	0.006	−0.002	−0.010
	(0.603)	(0.206)	(0.800)	(0.004)	(0.236)	(0.455)	(0.790)	(0.296)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
2-digit SIC Industry FE	Yes	Yes	Yes	No	Yes	No	No	No
Observations	3733	3769	133	3772	3740	3129	2851	2573
Pseudo R^2	0.109	0.0525	0.462	0.0467				
Adj. R^2					0.041	0.256	0.320	0.310

Panel D: Logit regressions of the likelihood of future acquisition

	Acquisition$_{t+1}$	Acquisition$_{t+2}$	Acquisition$_{t+3}$	Acquisition$_{t+4}$
Ln Divest Exp (3-Year)	1.046	1.343	1.370*	1.372
	(0.778)	(0.123)	(0.097)	(0.107)
Ln Acquire Exp (3-Year)	1.682***	1.548***	1.633***	1.731***
	(0.000)	(0.000)	(0.000)	(0.000)
Ln CEO Divest Exp (3-Year)	1.283	1.061	1.001	0.998
	(0.173)	(0.777)	(0.996)	(0.994)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
2-digit SIC Industry FE	Yes	Yes	Yes	Yes
Observations	3608	3495	3363	3230
Pseudo R^2	0.227	0.232	0.236	0.243

5. Robustness

Due to the large number of robustness tests, for brevity reasons, we only report the results rather than tabulate them. The key robustness tests are tabulated in a Supplementary Appendix. All tests we mention in this paper are also available upon request.

5.1. Alternative reasons for serial divestitures

5.1.1. Fire sales

The results reported provide strong support for our hypothesis that firm-level divestiture experience is beneficial. To this extent, our alternative hypothesis that abundant experience of a firm in conducting divestitures reflects its poor financial health. To fully explore this possibility, we test whether experienced divestors are less likely to be financially distressed during the year of and after a divestiture. Following the literature on bankruptcy and corporate restructuring (Altman, 1968; Ohlson, 1980; Fitzpatrick and Ogden, 2011; Powell and Yawson, 2012), we estimate distress prediction models using a sample of distressed firms and a control sample of healthy firms from the period prior to the prediction year. We roll forward the prediction models each year to ensure distress probabilities are computed based on the most recent financial data. A cutoff of 0.5 is imposed to partition divestors into distressed and healthy groups. Details on data sources and procedures are provided in Appendix B. These results are tabulated in Columns 1–3 of Table S1 of the Supplementary Appendix, where the odds ratios of firm divestitures experience are all less than one and statistically significant at the 1–5% levels. We also employ a second approach that uses negative net income as the dependent variable (see Columns 4–6 of Table S1). While the first measure focuses on extreme financial difficulty (such as bankruptcy, delisting, and ratings downgrade), negative net income can be temporary. Table S1 Columns 4–6 report these results. The odds ratios of firm divestiture experience are greater than one in all three regressions, but only statistically significant at the 10% level in the regression of negative net income in year $t+1$.

Taken together, our results suggest that experienced divesting firms are less likely to be in serious financial distress but may have temporary financial difficulty. Overall, experienced divestors are significantly less likely to be financially constrained before they divest (see Table S1 of the Supplementary Appendix). Further, experienced divestors are generally significantly less likely to be distressed after a divestiture, although negative earnings is significant for year 1, but not year 2 after divestiture. Thus, the experiential benefits of divestiture experience are not merely an artifact of severely distressed firms engaging in multiple divestitures. The lower likelihood of severe financial distress in the future is consistent with the positive CARs and superior future operating performance results.

5.1.2. Splitting transactions

Firms may deliberately span divestment over time rather than all-at-once so that the aggregate adjustment costs (assumed to be convex) of restructuring are lower (Abel and Eberly, 1994; Dixit, 1994). If more experienced divestors plan divestitures to minimise aggregate adjustment costs this may help explain our findings. However, we find that experienced divestitures tend to have larger transactions values (measured as the value of transaction from SDC scaled by the divestor's total assets from Compustat) than ad-hoc ones, which is inconsistent with the minimising transactions costs motive. Thus, experienced divestitures do not simply split one large transaction into multiple transactions to avoid saturating the market.

5.1.3. Significant restructuring (and asset churning)

It is possible that the findings just capture situations where the company engages in significant restructuring, rather than divestiture 'experience' per se. We address by removing from the sample all divestors that have done more than one divestiture each

year for the past three years to make sure that the divestitures are reasonably distantly spaced (in Table S4 of the Supplementary Appendix). The results are qualitatively the same.

5.1.4. Correction of past acquisition mistakes

We ensure that experienced divestors are not merely correcting past acquisition mistakes. We tracked down formerly acquired units to see if they are divested. We find that among the 6216 divestitures, only 99 are divestitures of previously acquired units. We define *Acquired Before* to be an indicator of one if the divested unit was previously acquired and zero otherwise. We then regress this on divestiture experience, firm controls (lagged firm size, leverage, CAPEX, R&D, advertising, operating performance, Tobin's Q, level of diversification and BCF index) and industry and year fixed effects. The results are tabulated in Table S2 of the Supplementary Appendix. The coefficients of divestiture experience are insignificant, suggesting our findings are unlikely to be driven by past acquisitions.

5.1.5. Connections with advisors

Wider and tighter connections might give the divestor better access to skilled lead-*advisors*/co-*advisors*, and thereby help deliver better divestitures outcomes. We ensure that the experience effects are not merely reflecting superior connections with advisors (i.e., investment banks and law firms). We create connections variables as the count of each type of distinct (i.e., the number of different intermediaries) and repetitive (i.e., the number of contacts with the same advisor) advisors used by a divestor over the last 3 years before a divestiture. We then re-estimate all regressions by replacing the experience variables with the connections variables. The connections coefficients are insignificant. The only exception is the choice of non-core units regressions, in which coefficients of connections tend to remain positive and significant. So we conclude that divestors better connected with advisors tend to sell non-core units, but the reported deal characteristics and their learning through divestiture experience and their strategic nature primarily drives outcomes.

5.2. Endogeneity concerns

Systemic differences between experienced and ad-hoc divestors: Experienced divestors can be systemically different from ad-hoc divestors. However, the regressions implicitly assume the two groups have the same general trend in divestiture quality and other deal-related variables.

We employ two methods to mitigate this concern. The first attempts to itemize the channels through which experience affects divestitures outcomes. We examine firm-level experience by measuring non-CEO turnover as a proxy for institutional memory. That is, firm-level experience should be greater when non-CEO turnover is lower, indicating higher institutional memory. Table S3 (panels A–D) report subsample tests and compares the results when institutional memory is high or low. We report stronger results when average director tenure exceeds 4 years, and when the number of director departures within the last 3 years does not exceed 2. The results also hold when we include CEO experience as an independent variable (see Table 7).[22]

Second, firm-level institutional experience may also matter because of firm-specific characteristics, which make experience accumulated within the firm to matter more than experience of individuals (which can be accumulated elsewhere). Table 7 supports this. It shows that firm divestiture experience remains significant (both statistically and economically) after controlling for CEO divestiture experience. CEO divestiture experience does not entail much explanatory power, suggesting that it is mainly firm experience that matters. To enhance our understanding, we also explore the impact of the CEO's experience in the prior company on the new company's divestitures. We find the coefficient of CEO experience at the prior firm to be statistically insignificant in general (see Table S3, panel E), while the coefficient of firm divestiture experience remains statistically and economically significant in most regressions. Examining CEO experience at other firms also helps to better disentangle the effects of firm experience and CEO experience, as the two measures do not have overlapping measurement windows (i.e., divestitures of the firm-in-questions are only counted by the measure of firm experience).[23]

Simultaneity: The control variables and some of the dependent variables can be simultaneously determined. Masulis et al. (2007) recognizes potential candidates, such as Tobin's Q, leverage and free cash flow being endogenous with performance measures. The regressions include other control variables that are also prone to this form of endogeneity: Acquisition experience, firm size, liquidity, capital expenditure, R&D, advertising expenses, diversification, the BCF index, and experience of advisors. The divestiture experience coefficients could be biased due to these variables. Thus, we follow Gillan et al. (2003) and Masulis et al. (2007) to address this issue by replacing firm-level control variables with their industry-median counterparts. This procedure also reduces the number of observations with missing values for control variables, and thereby increasing the sample size. The results are robust. Thus, simultaneity does not bias the results.

5.3. Sample selection issues

Opportunity to divest: experienced divestors are likely to be conglomerates with many subsidiaries and divisions, so the results could merely reflect a sub-sample effect of firms with a greater opportunity to divest. By the same token, experienced divestors may divest particular units not by intentional selection but due to the large number of those units. However, this should not be a severe issue because we have controlled for past acquisitions and the level of diversification. To address the problem more explicitly, we further control for the opportunity to divest, measured as the number of segments of each divestor. When divestors from the sample (consisting of matches from SDC, Compustat and CRSP) cannot be matched with the segments from Compustat Segment File, we recode the number of segments to be one. Because Compustat Segment Files include all segments that constitute more than 10% of consolidated profits, sales or assets, those that are unreported are likely to be negligible and thereby validating the recoding procedure.[24] The results are qualitatively the same.

We also perform sub-sample analysis on firms with similar numbers of specific types of units. We re-estimate non-core unit

[22] There are insufficient observations for regression analysis in any of the four subsamples (i.e., average director tenure exceeds 4 years, average director tenure does not exceed 4 years, the number of director departures within the last 3 years does not exceed two, and the number of director departures within the last 3 years exceeds two).

[23] We have also experimented with firm fixed effects. However, the coefficient of firm divestiture experience is only statistically significant (at the 5–10% levels) in regressions of divesting in merger waves, and future operating performance. Most regressions are statistically insignificant especially for longer-term experience (i.e., Ln *Divest Exp (3-Year)* in comparison with Ln *Divest Exp (1-Year)*). One possible reason is that the number of past divestitures (i.e., divestiture experience) is accumulated over multiple years, and in aggregate a divesting firm's level of experience may not change too much from year to year. Thus, the impacts of experience may be partially absorbed by the firm fixed effect. Another observation is that firm fixed effects may arguably capture firm-specific time-invariant culture of firms. This may suggest it is the time-varying component of culture that is cultivated and developed through divestitures that makes firm divestiture experience valuable.

[24] Results would be qualitatively the same if we do not recode the number of segments.

regressions using firms with the number of non-core units above the median, and similarly for the underperforming unit regressions. We report these models in Table S5 of the Supplementary Appendix. The results again remain qualitatively similar.[25]

Corporate governance: The most relevant dimension of corporate governance for restructuring decisions is the level of managerial entrenchment, so the main results include anti-takeover provisions (i.e., BCF) as a control in regressions. However, there are alternative dimensions of corporate governance. For example, high product market competition and/or ownership concentration might compensate the negative governance effects caused by anti-takeover provisions. We thus include HHI and institutional ownership (together with BCF) as additional controls to the regressions. The results are qualitatively unchanged.

We also consider board independence, duality and dual class shares as additional controls for corporate governance (together with BCF, HHI and institutional ownership). Requirement of these variables reduces the regression sample size by more than half and renders some regression not interpretable (e.g., the regressions of underperforming units would have 89 observations only). However, the results (in Table S7 of the Supplementary Appendix) survive through regressions with decent sample sizes (e.g., regressions of market timing, operating performance and future acquisitions).

Time periods: The financial crisis might distort divestiture characteristics and performance (Shleifer and Vishny, 1992; Ang and Mauck, 2011; Rudolph and Schwetzler), Forthcoming. To relieve the concern more explicitly (apart from controlling for year-fixed effects), we omit crisis years of 2008 onwards. The results remain mostly qualitatively unchanged and are even stronger for some regressions. This is to be expected because of the disciplinary roles of economic downturns on the investment behavior of firms.

Accuracy of divestiture records: To avoid potential errors in divestiture records on SDC, we require that firms with divestiture records on SDC also experience a reduction in number of segments simultaneously according to the Compustat Segment File. The subsample of confirmed data includes 1270 divestitures by 677 firms in 899 firm-years. Although the sample size is limited, the findings are qualitatively similar. So the results are not biased by possible errors in SDC divestiture records.

5.4. Large loss and large gain deals

We ensure that the results are robust to the presence of 'large loss' and 'large gain' deals. Large loss deals can account for a significant portion of value-destruction in acquisitions (Moeller et al., 2005); and large gain deals a significant portion of value-creation (Fich et al., 2012). We address the presence of such large-loss or large-gain deals in several ways. The CARs results are robust to using a "robust regression" or a "quantile regression" (regression through the median), both of which are less sensitive to outliers in the dependent variable (i.e. large-loss or large-gain deals). The results are also robust to omitting deals that have CARs in the top or bottom 1%, 2%, or 5% of the sample. This highlights that the results do not merely reflect the returns earned from a small number of highly value-creating or value-destroying deals.

5.5. Decomposition of divestiture experience

To enhance our understanding about the role of divestiture experience, we further decompose the divestiture experience variable into experience of divesting unrelated units and experience of divesting related units. This is premised on the idea that divestors might gain different types of experience from different types of divestitures.

The results indicate that experience from divesting unrelated units (hereafter, "unrelated-unit experience") has the greater impact on future divestitures. The results are tabulated in Table S9 of the Online Appendix. Unrelated-unit experience is significantly and positively associated with various divestiture characteristics, including divesting non-core units, underperforming units, and distant units, as well as divesting during merger waves. Unrelated-unit experience is also positively associated with divestiture CAR and the likelihood of future acquisitions. By contrast, experience divesting related units (hereafter "related-unit experience") has relatively less impact. It is only statistically significantly related to divesting non-core units and divestiture *CAR*. Its correlation with divesting unrelated units is negative (i.e., the odds ratio is less than one). One explanation for this result is that experience is more applicable when it is more relevant. Hence, experience of divesting related units is more likely to be valuable when a firm is divesting related units. Related-unit experience is also positively associated with *CAR*, albeit to a lesser degree than is unrelated-unit experience.

6. Conclusion

This paper analyzes performance of experienced divestors. We show that firm-level divestiture experience is an important driver (in comparison to CEO and board divestiture experience, and other restructuring experience) of divestiture performance. We show that this is largely due to the decision over which units to divest and when to divest them.

We show that experienced divestors tend to refocus operationally and geographically on more important divisions by divesting non-core, geographically distant and underperforming units. They are also more likely to time the market by divesting during a merger wave. Consistent with the literature that links these divestiture attributes with better divestiture performance, we next find that experienced divestors receive more positive market reactions around divestiture announcements and generate consistently stronger future operating performance. Further, experienced divestors are more likely to reinvest sale proceeds in future acquisitions. Importantly, we show that divestiture experience at the firm level dominates other measures of experience, including divestiture experience of CEOs or boards. It is also more important than experience accumulated in acquisitions suggesting that restructuring-specific experience is what matters most in delivering better outcomes. We confirm that financially distressed firms do not drive the results. We also take steps to mitigate concerns of several alternative explanations for our results, including large-loss large-gain deals, endogeneity, sample selection and alternative experience measures.

These findings provide several important contributions to the existing literature. First, the paper provides evidence on the nature of experienced divestors. Whereas recent high-profile frequent divestors create the impression that frequent divestors are financial distressed, we show that this is not the case. Many divestors have prior divestiture experience. Experienced divestors do not appear to be more financial distressed on average, and experienced divestors tend to benefit from the experience that they have accumulated.

Second, we show that the benefits of experience mostly manifest themselves in the decisions over which units to divest (i.e. geographically distant and non-core units) and when to divest them (i.e. during a merger wave). We also provide some evidence that experienced divestors are more likely to re-invest that money in future takeovers. Last, we complement research on experience in restructuring, which has mainly focused on serial acquirers.

[25] Compustat Segment Files do not provide the geographic location of each segment. So we cannot account for the number of distant units in the distant unit regressions.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.jbankfin.2019.04.004.

Appendix A

Table A1
Variable definitions.

Variable	*Definition*
Deal-related variables	
Non-core unit	An indicator that equals one if none of the 4-digit SIC codes of the divested unit is the same as the primary 4-digit SIC code of the divesting firm. These data are from SDC.
Distant unit	An indicator that equals one if the divested unit's and the divesting firm's headquarters are located indifferent states. These data are from SDC.
Underperform unit	An indicator that equals one if the divested unit's operating performance is lower than that of the divestor prior to a divestiture. Operating performance is calculated as operating income before depreciation (item13) over total assets (item6). Segment data are from the Compustat Segment File, where we identify the divested units to be those whose last reporting year is earlier than that of the firm and SDC records a divestiture of the same firm in the next year.
In merger wave	An indicator that equals one if the divestiture occurs in an industry merger wave. That is, either the seller or the buyer or both are in an industry experiencing a merger wave when the divestiture is announced. We follow Harford (2005) in identifying merger waves.
CAR	3-day cumulative abnormal returns (%), calculated using the market model benchmark method. Benchmark parameters are estimated over days (−222,−11) using an OLS model. Values are winsorized at the 1% and 99% levels.
Adj $OP_{t+1,\ t+2,\ or\ t+3}$	Operating income before depreciation (item13) on total assets (item6) 1, 2, or 3 years after a divestiture minus industry averages (i.e., averages of divestors from the same 2-digit SIC industry in each year). Values are winsorized at the 1% and 99% levels.
$Acquisition_{(t,\ t+1),\ (t,\ t+2),\ (t,\ t+3),\ or\ (t,\ t+4)}$	An indicator that equals one if the divestor acquires (i.e., being recorded as the acquirer or the ultimate parent of an acquirer of a completed acquisition) within 1, 2, 3, or 4 years after a divestiture (i.e., the time elapsed since the divestiture announcement till the acquisition announcement is no longer than 365, 730, 1095, or 1460 days).
$Distressed_{t,\ t+1,\ and\ t+2,}$	An indicator that equals one if the divestor is estimated to be distressed in years t (i.e., the year of divestiture), $t+1$, and $t+3$, respectively. Distressed probabilities are calculated using a rolling binomial logit model (e.g., Altman, 1968; Ohlson, 1980; Fitzpatrick and Ogden, 2011; Powell and Yawson, 2012).
$Neg\ NI_{t,\ t+1,\ and\ t+2}$	An indicator that equals one if the divestor's net income (item172) is negative years t (i.e., the year of divestiture), $t+1$, and $t+3$, respectively.
Acquired before	An indicator that equals one if the divested unit was previously acquired.
Divestiture experience variables	
Ln Divest Exp (3-Year)	The natural log of one plus the number of divestitures experienced by a firm over the last 3 years before the divestiture.
Ln Board Divest Exp (3-Year)	The natural log of one plus the number of divestitures experienced by all directors on the board of a divestor over the last 3 years before the divestiture.
Ln # of Exp Directors (3-Year)	The natural log of one plus the number of directors with divestiture experience over the last 3 years before a divestiture on the board.
Control variables	
Ln Acq Exp (3-Year)	The natural log of one plus the number of acquisitions experienced by a firm over the last 3 years before the divestiture.
Ln Board Acq Exp (3-Year)	The natural log of one plus the number of acquisitions experienced by all directors on the board of a divestor over the last 3 years before the divestiture.
Ln # of Acq Exp Directors (3-Year)	The natural log of one plus the number of directors with acquisition experience over the last 3 years before a divestiture on the board.
$Ln(Firm\ Size)_{t-1}$	Log of total assets (item6) before the divestiture. Values are winsorized at the 1% and 99% levels.
$Liquidity_{t-1}$	Cash (item162) over total assets (item6) before the divestiture. Values are winsorized at the 1% and 99% levels.
$Leverage_{t-1}$	Total long-term debt (item9) over total assets (item6) before the divestiture. Values are winsorized at the 1% and 99% levels.
$CAPEX_{t-1}$	Capital expenditures (item128: set missing values to 0 as in Masulis et al., 2009) over sales/turnover (net) (item12) before the divestiture. Values are winsorized at the 1% and 99% levels.
$R\&D_{t-1}$	Research and development expense (item46: set missing values to 0 as in Himmelberg et al., 1999; Masulis et al., 2009; Edmans et al., 2013) over sales/turnover (net) (item12) before the divestiture. Values are winsorized at the 1% and 99% levels.
$Advertising_{t-1}$	Advertising expense (item45: set missing values to 0 as in Masulis et al., 2009) over sales/turnover (net) (item12) before the divestiture. Values are winsorized at the 1% and 99% levels.
OP_{t-1}	Operating income before depreciation (item13) over total assets (item6) before the divestiture. Values are winsorized at the 1% and 99% levels.
Tobin's Q_{t-1}	Market value of total assets (book value of total - book value of common equity + common shares outstanding × closing share price at fiscal year-end) over book value of total assets: (item6- item60+ item25 × item199)/ item6 before the divestiture. Values are winsorized at the 1% and 99% levels.
Diversification	Number of lines of business (based on 2-digit SIC code) of a firm during the divestiture.
BCF	The Bebchuk et al. (2009) index of six key anti-takeover provisions. For the years with missing data (i.e., 1990, 1993, 1995, 1998, 2000, 2002, 2004, 2006, 2007, 2008, and 2009), we backfill from the most recent prior year (as in Masulis et al., 2007). We then set the missing values to be state averages, because the six key anti-takeover provisions are enforced and therefore mostly determined by state laws. The data are from IRRC/Risk Metrics.
Ln Inter Exp (3-Year)	The natural log of one plus the sum of experience of all investment banks and law firms involved in a divestiture, where experience is calculated as the number of divestitures an intermediary has been involved in three years before a divestiture. Data on advisors are from SDC.
Familiar buyer	An indicator that equals one if the divestor and the buyer are from the same 2-digit SIC industry. These data are from SDC.
% Cash payment	Percentage of cash payment in a divestiture.

(*continued on next page*)

Table A1 (*continued*)

Variable	*Definition*
Relative deal size	Value of transaction divided by market capitalization of the divestor at the time of divestiture. Market capitalization is share price times number of shares. SDC provides value of transaction in million dollar. CRSP provides share price and number of shares (in thousand), which are used to calculate market capitalization.
Opp to divest	The number of segments of each divestor. Segment data are from Compustat Segment File. We set missing values to 1 because segments that constitute less than 10% of all consolidated profits, sales and assets are likely to be negligible.
HHI_{t-1}	The Hirfindahal-Hirshmann Index for the divestor's 2-digit SIC industry and year before the divestiture. This is based on sales/turnover (net) (item12).
Institutional $ownership_{t-1}$	Average total institutional ownership (instown) over average end of quarter shares outstanding (shrout*1000) during the year before the divestiture. Values are winsorized at the 1% and 99% levels. The data are from the Thomson Reuters Institutional (13f) Holdings database.
Independent Board $_{t-1}$	An indicator that equals one if the proportion of independent directors on the board is at least 0.5 before the divestiture. Data on director independence are from the RiskMetrics Directors database.
Duality $_{t-1}$	An indicator that equals one if the CEO is also the chairman of a divestor before the divestiture. Data on directors' positions are from the Risk Metrics Directors database.
Dual class shares $_{t-1}$	An indicator that equals one if the firm has a dual class share structure before the divestiture. For the years with missing data (i.e., 1991, 1992, 1994, 1996, 1997, 1999, 2001, 2003 and 2005), we backfill from the most recent prior year (as in Masulis et al., 2007). The data are from IRRC/Risk Metrics.
Bankruptcy variables	
Liquidity	Cash (item162) over total assets (item6). Values are winsorized at the 1% and 99% levels.
Debt/Assets	Total debts (debt current liabilities + long-term debt) over total assets: (item34+ item9)/item6. Values are winsorize data at the 1% and 99% levels.
OCF	Operating cash flow over total assets: item308/item6. Values are winsorized at the 1% and 99% levels.
Growth	Annual growth in assets (item6). Values are winsorized at the 1% and 99% levels.
ROCE	Operating income before depreciation (item13) on capital employed (item6-item5). Values are winsorized at the 1% and 99% levels.
Firm size	Log of total assets (item6). Values are winsorized at the 1% and 99% levels.
Tobin's Q_{t-1}	Market value of total assets (book value of total - book value of common equity + common shares outstanding × closing share price at fiscal year-end) over book value of total assets: (item6- item60+ item25 × item199)/ item6 prior to divestiture. Values are winsorized at the 1% and 99% levels.
Asset turnover	Total revenue over total assets (item6). Values are winsorized at the 1% and 99% levels.

Table A2
Industry merger waves
This table denotes the industry, starting date, and reason for each 24-month merger wave in the 2000s. We follow the procedures in Harford (2005) in identifying the waves and provide reasons for these based on Factiva searches. For details of the 1990s waves, see Harford (2005).

Industry	*Starting date and reason*
Business services	Jan, 2000 Prosperity of e-commerce motivates companies to dissect the value chain and outsource more.
Communication	Jan, 2000 Consolidation of old technology companies and internet companies; reviews and changes in media ownership rules.
Computers	Jan, 2000 Industry turbulence (e.g., slowdown of sales of PCs) urges structural changes.
Electrical equipment	Jan, 2000 A number of HTS-based pieces of electrical equipment at the prototype stage with capable manufacturing entities intimately involved; integrated maintenance systems.
Trading	Aug, 2005 Accelerated capitalization requires emergence of financial supermarkets: e.g., more complex financial dealings, increased open-market transactions, and securitization.
Utilities	Jan, 2000 Deregulation beyond business policy to social policy: e.g., electric power providers up to households in half of the sates, trading of emissions permits.

Appendix B

Identification of financially distressed divestor-years: Data on actual financial health is sourced from three datasets:

(i) Mergent FSID where we collect distressed firm-years as those that defaulted or went bankrupt;
(ii) CRSP stock header information where we gather distressed firm-years as those in liquidation or dropped (i.e., delist code: 400–599). NYSE and NASDAQ have minimum listing requirements, such as sufficient equity and share price for a period of consecutive days. The firm can be forced to delist if these values fall too low. This would be a sign of bankruptcy even if the firm does not list bankruptcy as the reason for delisting.
(iii) Compustat Ratings where we obtain distressed firm-years as those that are downgraded in terms of S&P quality rating (i.e., spcsrc), S&P domestic long-term issuer credit rating (i.e., splticrm) and S&P domestic short-term issuer credit rating (i.e., spsticrm).

These records only identify 3–8% of all firms in each year (from Compustat) as distressed. Therefore, we construct financial health indicators following the bankruptcy and corporate restructuring literature (Altman, 1968; Ohlson, 1980; Fitzpatrick and Ogden, 2011; Powell and Yawson, 2012). The method uses values of major bankruptcy variables in year t-1 to estimate probabilities of financial distress in year *t*. We further required the distressed firms identified above to have non-missing values for bankruptcy variables in year $t-1$. This leads to a total of 10,200 distressed firms.

The detailed procedures of calculating distressed probabilities are as follows. We first randomly select a control group of 10,200 distressed firms by year. This control group together with the

treatment group of distressed firms makes up the full sample for the estimation of distress probabilities.

Using this full sample, we then estimate binomial logit models on bankruptcy measures (i.e., Liquidity, Debt/Assets, OCF, Growth, ROCE, Firm Size, Tobin's Q and Asset Turnover as defined in Appendix A). The estimation period is 3 years to ensure a reliable number of observations. We roll forward the estimation model one year at a time to ensure the regression coefficients reflect the most recent financial data. That is, to estimate distress coefficients in year t (β), we use the distress data in years $t-3$ to $t-1$. For each estimation period, the number of observations ranges from 1578 to 3380. We do not match by both industry and year, because it reduces the number of observations a range of 84–260 per estimation period (when identifying industries by GICS sector, which has more non-missing values than SIC industry code) due to data limitation. However, the predicted distress probabilities regression results are qualitatively the same using the two methods of matching.

Next, we apply the regression coefficients to the divestiture sample to calculate the probability of financial distress for each firm. Firm-years with distress probabilities above 0.5 are classified as distressed. Distressed firms on average account for 25% of the universe (i.e., all firms in Compustat) each year.

References

Abel, A.B., Eberly, J.C., 1994. A unified model of investment under uncertainty. Am. Econ. Rev. 84.

Afshar, K., Taffler, R., Sudarsanam, P., 1992. The effect of corporate divestments on shareholder wealth: the UK experience. J. Bank. Financ. 16, 115–135.

Aktas, N., De Bodt, E., Cousin, J.-G., 2007. Event studies with a contaminated estimation period. J. Corp. Financ. 13, 129–145.

Aktas, N., De Bodt, E., Roll, R., 2009. Learning, hubris and corporate serial acquisitions. J. Corp. Financ. 15, 543–561.

Aktas, N., De Bodt, E., Roll, R., 2011. Serial acquirer bidding: an empirical test of the learning hypothesis. J. Corp. Financ. 17, 18–32.

Aktas, N., De Bodt, E., Roll, R., 2013. Learning from repetitive acquisitions: evidence from the time between deals. J. Financ. Econ. 108, 99–117.

Alexandridis, G., Mavrovitis, C.F., Travlos, N.G., 2012. How have m&as changed? Evidence from the sixth merger wave. Eur. J. Financ. 18, 663–688.

Altman, E.I., 1968. Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. J. Financ. 23, 589–609.

Andrade, G., Mitchell, M., Stafford, E., 2001. New evidence and perspectives on mergers. J. Econ. Perspect. 15, 103–120.

Ang, J., Jong, A.D., Poel, A., 2012. Does Ceos' Familiarity With Business Segments Affect Their Divestment Decisions? Working Paper.

Ang, J., Mauck, N., 2011. Fire sale acquisitions: myth vs. reality. J. Bank. Financ. 35, 532–543.

Bao, J., Edmans, A., 2011. Do investment banks matter for m&a returns? Rev. Financ. Stud. 24, 2286–2315.

Barkema, H.G., Schijven, M., 2008. How do firms learn to make acquisitions? A review of past research and an agenda for the future. J. Manag. 34, 594–634.

Bauguess, S.W., Slovin, M.B., Sushka, M.E., 2012. Large shareholder diversification, corporate risk taking, and the benefits of changing to differential voting rights. J. Bank. Financ. 36, 1244–1253.

Bebchuk, L., Cohen, A., Ferrell, A., 2009. What matters in corporate governance? Rev. Financ. Stud. 22, 783–827.

Bebchuk, L.A., Cohen, A., 2005. The costs of entrenched boards. J. Financ. Econ. 78, 409–433.

Bena, J., Li, K., 2014. Corporate innovations and mergers and acquisitions. J. Financ. 69, 1923–1960.

Berger, P.G., Ofek, E., 1995. Diversification's effect on firm value. J. Financ. Econ. 37, 39–65.

Bergh, D.D., 1995. Size and relatedness of units sold: an agency theory and resource-based perspective. Strateg. Manag. J. 16, 221–239.

Bergh, D.D., 1997. Predicting divestiture of unrelated acquisitions: an integrative model of ex ante conditions. Strateg. Manag. J. 18, 715–731.

Billett, M.T., Qian, Y., 2008. Are overconfident ceos born or made? Evidence of self--attribution bias from frequent acquirers. Manag. Sci. 54, 1037–1051.

Boot, A.W., 1992. Why hang on to losers? Divestitures and takeovers. J. Financ. 47, 1401–1423.

Bradley, M., Desai, A., Kim, E.H., 1988. Synergistic gains from corporate acquisitions and their division between the stockholders of target and acquiring firms. J. Financ. Econ. 21, 3–40.

Chen, H.-L., Guo, R.-J., 2005. On corporate divestiture. Rev. Quant. Financ. Account. 24, 399–421.

Clubb, C., Stouraitis, A., 2002. The significance of sell-off profitability in explaining the market reaction to divestiture announcements. J. Bank. Financ. 26, 671–688.

Coase, R.H., 1937. The nature of the firm. Economica 4, 386–405.

Comment, R., Jarrell, G.A., 1995. Corporate focus and stock returns. J. Financ. Econ. 37, 67–87.

Datta, S., Iskandar-Datta, M., Raman, K., 2003. Value creation in corporate asset sales: the role of managerial performance and lender monitoring. J. Bank. Financ. 27, 351–375.

Denis, D.K., Shome, D.K., 2005. An empirical investigation of corporate asset downsizing. J. Corp. Financ. 11, 427–448.

Dittmar, A., Shivdasani, A., 2003. Divestitures and divisional investment policies. J. Financ. 58, 2711–2744.

Dixit, A.K., 1994. Investment Under Uncertainty. Princeton university press.

Eckbo, B.E., Thorburn, S.K., 2008. Corporate Restructuring: Breakups and Lbos, 2. Handbook of Corporate Finance: Empirical Finance.

Edmans, A., Fang, V.W., Lewellen, K.A., 2013. Equity Vesting and Managerial Myopia Working Paper.

Eisfeldt, A.L., Rampini, A.A., 2006. Capital reallocation and liquidity. J. Monet. Econ. 53, 369–399.

Feldman, E.R., Amit, R.R., Villalonga, B., 2016. Corporate divestitures and family control. Strateg. Manag. J 37, 429–446.

Fich, E., Nguyen, T., Officer, M., 2012. Large Wealth Creation in Mergers and Acquisitions Working Paper.

Field, L.C., Mkrtchyan, A., 2017. The effect of director experience on acquisition performance. J. Financ. Econ. 123, 488–511.

Fitzpatrick, J., Ogden, J.P., 2011. The detection and dynamics of financial distress*. Int. Rev. Financ. 11, 87–121.

Fluck, Z., Lynch, A.W., 1999. Why do firms merge and then divest? A theory of financial synergy. J. Bus. 72, 319–346.

Gillan, S., Hartzell, J., Starks, L., 2003. Explaining Corporate Governance: Boards, Bylaws, and Charter Provisions Weinberg Center for Corporate Governance Working Paper.

Gompers, P., Ishii, J., Metrick, A., 2003. Corporate governance and equity prices. Q. J. Econ. 118, 107–156.

Gormley, T.A., Matsa, D.A., 2014. Common errors: how to (and not to) control for unobserved heterogeneity. Rev. Financ. Stud. 27, 617–661.

Gort, M., 1969. An economic disturbance theory of mergers. Q. J. Econ. 83, 624–642.

Graham, J.R., Harvey, C.R., Grennan, J.P., Rajgopal, S., 2018. Corporate culture: tThe interview evidence.

Haleblian, J., Finkelstein, S., 1999. The influence of organizational acquisition experience on acquisition performance: a behavioral learning perspective. Adm. Sci. Q. 44, 29–56.

Hamilton, R.T., Chow, Y.K., 1993. Why managers divest-evidence from New Zealand's largest companies. Strateg. Manag. J. 14, 479.

Hanson, R.C., Song, M.H., 2003. Long-term performance of divesting firms and the effect of managerial ownership. J. Econ. Financ. 27, 321–336.

Hanson, R.C., Song, M.H., 2006. Corporate governance and asset sales: the effect of internal and external control mechanisms. Financ. Rev. 41, 361–386.

Harford, J., 2005. What drives merger waves? J. Financ. Econ. 77, 529–560.

Harford, J., Schonlau, R., 2013. Does the director labor market offer ex post settling-up for ceos? The case of acquisitions. J. Financ. Econ. 110, 18–36.

Himmelberg, C.P., Hubbard, R.G., Palia, D., 1999. Understanding the determinants of managerial ownership and the link between ownership and performance. J. Financ. Econ. 53, 353–384.

Jain, P.C., 1985. The effect of voluntary sell-off announcements on shareholder wealth. J. Financ. 40, 209–224.

Jensen, M.C., 1989. Active investors, lbos, and the privatization of bankruptcy. J. Appl. Corp. Financ. 2, 35–44.

Jensen, M.C., 1993. The modern industrial revolution, exit, and the failure of internal control systems. J. Financ. 48, 831–880.

John, K., Ofek, E., 1995. Asset sales and increase in focus. J. Financ. Econ. 37, 105–126.

Johnson, S.A., Moorman, T.C., Sorescu, S., 2009. A reexamination of corporate governance and equity prices. Rev. Financ. Stud. 22, 4753–4786.

Kaiser, K.M., Stouraitis, A., 2001a. Agency costs and strategic considerations behind sell-offs: the UK evidence. Eur. Financ. Manag. 7, 319–349.

Kaiser, K.M., Stouraitis, A., 2001b. Reversing corporate diversification and the use of the proceeds from asset sales: the case of thorn emi. Financ. Manag. 63–102.

Kaplan, S.N., Weisbach, M.S., 1992. The success of acquisitions: evidence from divestitures. J. Financ. 47, 107–138.

Kim, C., Bettis, R.A., 2014. Cash is surprisingly valuable as a strategic asset. Strateg. Manag. J. 35, 2053–2063.

Kim, C.E., 1998. The effects of asset liquidity: evidence from the contract drilling industry. J. Financ. Intermed. 7, 151–176.

Klein, A., 1986. The timing and substance of divestiture announcements: individual, simultaneous and cumulative effects. J. Financ. 41, 685–696.

Kreps, D.M., Alt, J.E., Shepsle, K.A., 1996. Corporate culture and economic theory. In: Firms, Organizations and Contracts. Oxford University Press, Oxford, pp. 221–275.

Krishnan, C., Masulis, R.W., 2013. Law firm expertise and mergers and acquisitions. J. Law Econ. 56, 189–226.

Krishnan, C., Masulis, R.W., Thomas, R.S., Thompson, R.B., 2012. Shareholder litigation in mergers and acquisitions. J. Corp. Financ. 18, 1248–1268.

Kumar, M., Dixit, J., Francis, B., 2015. The impact of prior stock market reactions on risk taking in acquisitions. Strateg. Manag. J.

Landier, A., Nair, V.B., Wulf, J., 2009. Trade-offs in staying close: corporate decision making and geographic dispersion. Rev. Financ. Stud. 22, 1119–1148.

Markides, C.C., 1992. Consequences of corporate refocusing: ex ante evidence. Acad. Manag. J. 35, 398–412.

Markides, C.C., 1995. Diversifegation, restructuring and economic performance. Strateg. Manag. J. 16, 101–118.
Masulis, R.W., Wang, C., Xie, F., 2007. Corporate governance and acquirer returns. J. Financ. 62, 1851–1889.
Masulis, R.W., Wang, C., Xie, F., 2009. Agency problems at dual-class companies. J. Financ. 64, 1697–1727.
Meyer, M., Milgrom, P., Roberts, J., 1992. Organizational prospects, influence costs, and ownership changes. J. Econ. Manag. Strategy 1, 9–35.
Mitchell, M.L., Mulherin, J.H., 1996. The impact of industry shocks on takeover and restructuring activity. J. Financ. Econ. 41, 193–229.
Moeller, S.B., Schlingemann, F.P., Stulz, R.M., 2005. Wealth destruction on a massive scale? A study of acquiring-firm returns in the recent merger wave. J. Financ. 60, 757–782.
Montgomery, C.A., Thomas, A.R., Kamath, R., 1984. Divestiture, market valuation, and strategy. Acad. Manag. J. 27, 830–840.
Mulherin, J.H., Boone, A.L., 2000. Comparing acquisitions and divestitures. J. Corp. Financ. 6, 117–139.
Nanda, V., Narayanan, M., 1998. Disentangling Value: Misvaluation and Divestitures Working Paper.
Nelson, R.R., Winter, S.G., 1982. An Evolutionary Theory of Economic Change. Belknap press Cambridge, MA.
O'reilly, C., 1989. Corporations, culture, and commitment: motivation and social control in organizations. Calif. Manag. Rev. 31, 9–25.
Ohlson, J.A., 1980. Financial ratios and the probabilistic prediction of bankruptcy. J. Account. Res. 18, 109–131.
Opler, T., Titman, S., 1993. The determinants of leveraged buyout activity: free cash flow vs. Financial distress costs. J. Financ. 48, 1985–1999.
Owen, S., Shi, L., Yawson, A., 2010. Divestitures, wealth effects and corporate governance. Account. Financ. 50, 389–415.
Powell, R., Yawson, A., 2005. Industry aspects of takeovers and divestitures: evidence from the UK. J. Bank. Financ. 29, 3015–3040.
Powell, R., Yawson, A., 2007. Are corporate restructuring events driven by common factors? Implications for takeover prediction. J. Bus. Financ. Account. 34, 1169–1192.
Powell, R., Yawson, A., 2012. Internal restructuring and firm survival. Int. Rev. Financ. 12, 435–467.
Rajan, R., Servaes, H., Zingales, L., 2000. The cost of diversity: the diversification discount and inefficient investment. J. Financ. 55, 35–80.
Rhodes–Kropf, M., Robinson, D.T., Viswanathan, S., 2005. Valuation waves and merger activity: the empirical evidence. J. Financ. Econ. 77, 561–603.
Rudolph, C., Schwetzler, B., Forthcoming. Conglomerates on the rise again? A cross-regional study on the impact of the 2008–2009 financial crisis on the diversification discount. Journal of. Corporate Corp. FinanceFinanc.
Scharfstein, D.S., Stein, J.C., 2000. The dark side of internal capital markets: divisional rent-seeking and inefficient investment. J. Financ. 55, 2537–2564.
Schlingemann, F.P., Stulz, R.M., Walkling, R.A., 1999. Corporate Focusing and Internal Capital Markets Working Paper.
Schlingemann, F.P., Stulz, R.M., Walkling, R.A., 2002. Divestitures and the liquidity of the market for corporate assets. J. Financ. Econ. 64, 117–144.
Schwert, G.W., 1996. Markup pricing in mergers and acquisitions. J. Financ. Econ. 41, 153–192.
Shleifer, A., Vishny, R.W., 1992. Liquidation values and debt capacity: a market equilibrium approach. J. Financ. 47, 1343–1366.
Shleifer, A., Vishny, R.W., 2003. Stock market driven acquisitions. J. Financ. Econ. 70, 295–311.
Sicherman, N.W., Pettway, R.H., 1992. Wealth effects for buyers and sellers of the same divested assets. Financ. Manag. 119–128.
Song, W., Wei, J.D., Zhou, L., 2013. The value of "boutique" financial advisors in mergers and acquisitions. J. Corp. Financ. 20, 94–114.
Trichterborn, A., Knyphausen-Aufseß, Z., Schweizer, L., 2015. How to improve acquisition performance: the role of a dedicated m&a function, m&a learning process, and m&a capability. Strateg. Manag. J.
Vermeulen, F., Barkema, H., 2001. Learning through acquisitions. Acad. Manag. J. 457–476.
Villalonga, B., Mcgahan, A.M., 2005. The choice among acquisitions, alliances, and divestitures. Strateg. Manag. J. 26, 1183–1208.
Weick, K.E., Gilfillan, D.P., 1971. Fate of arbitrary traditions in a laboratory microculture. J. Personal. Soc. Psychol. 17, 179–191.
White, H., 1980. A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. Econometrica 48, 817–838.
Yang, L., 2008. The real determinants of asset sales. J. Financ. 63, 2231–2262.
Zollo, M., Singh, H., 2004. Deliberate learning in corporate acquisitions: post-acquisition strategies and integration capability in US bank mergers. Strateg. Manag. J. 25, 1233–1256.