When Experts Become Liabilities: Bankers, Boards, and Bank Failures*

John Almandoz
jalmandoz@iese.edu
IESE Business School
University of Navarra
Barcelona, Spain

András Tilcsik
andras.tilcsik@rotman.utoronto.ca
Rotman School of Management
University of Toronto
Toronto, Canada

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Abstract
This study addresses two conflicting theoretical claims about the effect of experts on organizations. While both theory and common sense suggest that experts are key to organizational success and survival, some research indicates that experts might fail to benefit or may even harm the organizations in which they operate. In this paper, we argue that the latent dangers of expertise are most likely to materialize and contribute to organizational failure when the organization in which the focal experts are key decision makers engages in risk-fraught activities. We test this hypothesis in the context of local banks in the United States between 1996 and 2012. Relying on a unique longitudinal dataset on bank failures and the professional background of expert and non-expert bank directors, as well as interviews with key informants, we find support for our hypothesis. Ironically, although many regulators and bank founders favor directors who are domain experts (i.e., bankers) and see them as essential for managing high-risk endeavors, it is precisely when banks engage in such endeavors that the heavy presence of banking experts was most strongly related to bank mortality. The alternative explanation that banks with greater anticipated risk of failure select more expert directors, or that banks with many expert directors simply pursue a high-risk, high-return strategy, was not borne out by the data. We draw implications for institutional theorizing about professional experts, the economic sociology of financial risk and crises, and the value of lay oversight of organizational decisions.
Recent decades have witnessed the proliferation and growing influence of professional experts in various fields (e.g., Dobbin and Kelly, 2007; Dobbin, 2009; Fourcade, 2009; Lounsbury 2002; Scott, 2008), leading some observers to conclude that we now live “in an age of experts” (Brint, 1996). Both theory and common sense suggest that the presence of experts benefits organizations. Experts provide organizations with valuable human and social capital (e.g., McEvily, Jaffee, and Tortoriello, 2012) as well as ceremonial benefits and legitimacy (Meyer and Rowan, 1977; DiMaggio & Powell, 1991). Moreover, domain expertise is seen as playing a key role in creativity and innovation, which in turn are essential for organizational success and survival (e.g., Amabile, 1996). Thus both the academic and practitioner literatures tout experts as invaluable assets to organizations, and unsurprisingly “expertise continues to be seen as a positive quality” (Dane, 2010: 579).

Other accounts suggest that expertise does not always fulfill its promise. Institutional theory suggests that while professional experts can bring ceremonial benefits to organizations, their presence is “often difficult to justify in terms of improved productivity” and might constitute “pure costs from the point of view of efficiency” (Meyer and Rowan, 1977: 355). In other literatures, significant evidence points to the “depressing conclusion” that experts’ judgments and predictions in many situations “are no more accurate than those of lightly trained novices” (Camerer and Johnson, 1991: 203), and that “experience and even expertise does not reliably improve performance” (Thompson, 1990: 82). Indeed, the development of domain expertise likely causes “cognitive entrenchment” and a loss of “flexibility with regard to problem solving, adaptation, and creative idea generation” (Dane, 2010: 579), as well as overconfidence, which might lead to poor decisions with pernicious consequences on organizations (e.g., Angner, 2006; Lin and Bier, 2008). Thus experts sometimes fail to benefit and might even harm the organizations in which they operate.
Given these sharply divergent views about expertise, the effect of experts on organizational performance remains a puzzle. Existing research and theorizing imply both positive and negative effects, suggesting that experts likely enhance organizational performance under some conditions and detract from it under other conditions. These conditions, however, remain largely unexplored, which leaves us with an important unresolved question about the organizational consequences of experts. The present article addresses this puzzle. We develop the argument that the latent dangers of expertise are more likely to materialize when the organization in which the experts operate engages in risk-fraught activities. Under these conditions, experts’ propensity for overconfidence and cognitive entrenchment are particularly likely to push organizations toward undue risk-taking, hence increasing the likelihood of organizational failure.

We test this argument in the context of the U.S. banking sector, focusing on the survival of new and recently established local banks between 1996 and 2012. This context represents an opportune research setting because local banks’ boards of directors are not only highly active and influential in shaping strategic and organizational decisions but also exhibit significant variance in the proportion of professional domain experts, particularly bankers. A unique longitudinal dataset allows us to relate the presence of domain experts on director teams to organizational failure, and in-depth interviews with bank CEOs, directors, regulators, and consultants help illuminate the underlying mechanisms. An additional advantage of this setting is its empirical significance. Set against the historical backdrop of both recessions of the new millennium, organizational failure and survival in this context represent important phenomena with powerful consequences on organizations, communities, and the economy (Lounsbury and Hirsch, 2010; Dobbin and Jung, 2010; Marquis and Lounsbury, 2007).
Ironically, although directors with a banking background are sought-after experts in this domain and are assumed to be highly skilled at managing risk, we show that it is precisely when banks engaged in relatively risk-fraught activities (such as pursuing a high-growth strategy or entering relatively high-risk lending markets or geographic areas) that the presence of these experts was most strongly related to bank mortality. This relationship became especially apparent when the consequences of excessive risk-taking materialized in the context of the 2007-2008 financial crisis. Results did not support the alternative explanation that banks with greater anticipated risk of failure would select a higher proportion of expert directors, and there was no evidence that the heavy presence of banking experts would lead to higher returns. These findings and the underlying theoretical arguments have implications for institutional theories regarding the role of professional experts in organizations, the economic sociology of financial risk and crises, and the benefits of lay oversight of organizational decisions.

**EXPERTS, NOVICES, AND BANK FAILURES**

**Expert Overconfidence and Cognitive Entrenchment**

The role of expertise as the foundation for bureaucratic power was a central topic for Weber (1947). Building on this theme, scholars have highlighted the powerful influence of professional experts as actors that not only confer legitimacy on organizations (Meyer and Rowan, 1977) but also seek to establish authority within organizations and play a key role in shaping decisions and practices (e.g., Abbott, 1991; Dobbin and Sutton, 1998; Dobbin and Kelly, 2007; Almandoz, 2012; Tilesik, 2010). Professional experts make claims on organizations and strive to influence strategic decisions in a way that is congruent with their professional expertise and “consistent with the legitimating values of their professions” (Glynn, 2000: 285). To date, however, there has been relatively little systematic theorizing
about the conditions under which domain experts as key organizational decision makers enhance or diminish organizational performance. As noted earlier, although an intuitively appealing null hypothesis is that domain experts necessarily contribute to organizational performance, research suggests limits to this optimistic prediction.

One well-documented and potentially problematic tendency of experts is overconfidence in the accuracy of their professional judgment and predictions, which may in turn foster undue risk-taking or imprudent organizational decisions. Expert judgments pertain to domain-specific issues that involve uncertainty about a particular subject, and overconfidence “is one of the most common (and potentially severe) problems in expert judgment” (Lin and Bier, 2008: 711). Effective decision making in organizations “requires metaknowledge—an understanding of the limits of our knowledge” (Russo and Schoemaker, 1992: 7), but even influential experts often lack such an understanding. Experts are often poorly “calibrated” in the sense that they assume overly narrow confidence intervals around their judgments and predictions (e.g., Cooke, 1991; Shlyakhter et al., 1994). In fact, experts fall prey to overconfidence not just in a laboratory settings but also when they are motivated to provide accurate judgments in their own specialty domain; for example, “manifestations of systematic overconfidence have been found…among physicists, doctors, psychologists, CIA analysts, and others making expert judgments” (Angner, 2006: 3; see, e.g., Christensen-Szalanski and Bushyhead, 1981; Oskamp, 1982; Henrion and Fischhoff, 1986; cf. Camerer and Johnson, 1991). Such overconfidence, in turn, may have dramatically negative consequences on organizations given the great influence of expert judgment on organizational decisions and strategies. In particular, a decision or policy “based on overconfident estimates of the probability of success, for instance, is likely to be worse than policies based on realistic estimates” (Angner, 2006: 15). Moreover, expert overconfidence and its effects may be further reinforced by the fact that experts are often motivated “to
conceal both their individual lack of knowledge and the embedded ignorance and uncertainty in their specialty domain” because acknowledging these limitations would threaten their professional authority (Ungar, 2008: 304).

In addition to overconfidence, another tendency commonly observed among domain experts is cognitive entrenchment, defined as a high degree of stability in a person’s domain schemas (Dane, 2010). While expertise provides individuals with a well-developed and stable “cognitive architecture” (Dane, 2010: 579) that enhances decision making in many situations (e.g., Ericsson et al. 2006), this stability might prove limiting in important ways. In particular, there is substantial evidence from psychology that “as one acquires domain expertise, one loses flexibility with regard to problem solving, adaptation, and creative idea generation” (Dane, 2010: 582). This type of inflexibility is especially pronounced when experts are forced to adapt to new or changing circumstances within their specialty domain (e.g., Cañas et al., 2003; Marchant et al. 1991; Sternberg and Frensch, 1992). Sociologists suggest a similar a conclusion. For example, sociological theories of ignorance posit that “expert ignorance is among the most dangerous” types of ignorance because it is due to stable cognitive schemas that “make us unable to see the new” (Abbott, 2010: 188). Related theorizing suggests that expertise may lead to relatively narrow searches for knowledge and information as “experts pressed to use prepackaged information in their own specialty fields are less likely to engage in far-reaching knowledge seeking in other domains” (Ungar, 2008: 311). Consequently, experts’ propensity for cognitive entrenchment and narrow searchers can lead to suboptimal decisions, especially in the face of changing conditions (Dane, 2010; Ungar, 2008). To the extent that domain experts are influential in organizations, these tendencies may have negative organizational consequences.

In sum, while experts likely bring important advantages to organizations, expertise also has its costs. Thus the effect of experts as organizational decision makers is likely to be
contingent on conditions that determine whether the potential costs of expertise outweigh its benefits. We argue, in particular, that the potential negative consequences of expertise are more likely to manifest themselves prominently when the organization that employs the experts in question as strategic decision makers is pursuing risk-fraught activities. Under these conditions, expert overconfidence is especially problematic because it tends to have a particularly pernicious effect when decision makers encounter rare or poorly understood problems (Angner, 2006; Cooke 1991; Ben-David et al., 2013), which are common when organizations pursue risk-fraught, uncertain activities. Expert overconfidence might also foster undue risk-taking (Niu, 2010; Angner, 2006; Kaustia and Perttula, 2012), which will render already risky organizational activities especially dangerous. Likewise, cognitive entrenchment is most likely to foster suboptimal decisions when experts are forced to adapt to new or changing conditions within their domain (Dane, 2010), and the pursuit of risk-fraught, uncertain organizational activities often involves such conditions. It is in such cases that “the content of an expert’s scripts may be [most] incommensurate with the altered nature of the situation” (Dane, 2010: 585; Louis and Sutton, 1991). As a result, we expect the dark side of expertise—the negative organizational consequences of expert decision makers—to be most prominent when the focal organization engages in risk-laden activities.

Conversely, an organizational focus on relatively low-risk, routine activities characterized by a low degree of uncertainty should limit the potential negative effects of expert overconfidence and entrenchment. Because there are fewer opportunities to introduce excessive risks into such activities, there is a stricter upper bound on the negative consequences of overconfidence. Likewise, when an organizations pursues activities that involve relatively little uncertainty, the likelihood that conditions will dramatically change and burst on decision makers’ entrenched mental models (Dane, 2010) is lower than in cases when the organization is deeply engaged in risk-fraught endeavors. Thus, as an organization’s
engagement in risk-laden activities is reduced, the consequences of expert overconfidence and entrenchment should be less likely to materialize.

**Expert Overconfidence and Entrenchment in Local Banks’ Board**

Previous research (e.g., Almandoz, 2012) and our extensive exploratory interviews with 73 bank CEOs, employees, directors, regulators, and consultants (described in Appendix A) suggest that local banks in the United States provide an opportune context in which to consider our theoretical argument. The first advantage of this setting is that local banking ventures have boards with very active directors who play key a role in shaping banks’ strategic direction and organizational decisions. Not only do these directors provide referrals and drum up business for the banks but they also design protocols for credit approval, manage the approval process for large and high-risk credit decisions, and develop strategic plans that chart a course for the bank for several years ahead. Particularly important for our purposes, these boards show remarkable variation in the proportion of domain experts (e.g., directors from a banking background) versus inexpert directors who are from other professional backgrounds. Some regulators require at least two directors with banking experience, and while some boards barely meet this minimum, others include a very high proportion of bankers. Given that these directors are influential and active strategic decision makers in local banks, and that boards vary significantly in the proportion of domain experts, this setting allows us to examine how the representation of domain experts among key decision makers affects organizational outcomes. Moreover, while all banks operate in a somewhat uncertain environment, there is substantial variation both across banks and within banks over time in the extent to which banks are engaged in high-risk endeavors. These sources of variation in board composition and banks’ activities create an opportunity to test our hypothesis that the greater the extent to which a bank engages in risk-fraught activities,
the higher the likelihood that the latent dangers of having a high proportion of expert decision makers will materialize and contribute to organizational failure.

Both extant research and our preliminary qualitative evidence suggest that the above-described general theoretical arguments resonate in the context of local banks and boards. First, there is reason to believe that expert overconfidence, which may fuel undue risk taking, plays a role in this context. Research shows that banking experts suffer from at least as much overconfidence as novices and are, in fact, more influenced than novices by their overconfidence when making financial decisions, such as valuation and investment choices (Bessière, Lambert, and N’Goala, 2012; Ben-David et al., 2013). Thus financial experts often calibrate confidence intervals around their judgments and predictions in an overly confident manner, which fosters, for example, a poor “sense of the risks involved in different asset allocation policies and trading strategies” (Kaustia and Perttula, 2012: 46). In particular, overconfidence may lead bankers to overestimate how precisely they know the likely outcome of risky investments and, at the same time, underestimate the riskiness of future cash flows (Niu, 2010). For both these reasons, “overconfidence among finance professionals can lead to… excessive risk-taking” (Kaustia and Perttula, 2012: 46). These propensities for overconfidence and undue risk-taking, in turn, may be further reinforced by broader tendencies in the field of finance because, as a market logic became dominant in the field over recent decades (Davis, 2009; Lounsbury, 2002, 2007), conservative approaches “were eschewed in favor of professional experts… that became valorized as highly skilled actors who could effectively manage risk” (Lounsbury and Hirsch, 2010: 9). Indeed, our interviews provided significant support for these arguments as several respondents noted the relationship between expertise, overconfidence, and risk-taking. As one director summarized a common theme,
If I got a board, which has got a lot of bankers on it, they are going to tend to reach for loans a little bit more because they believe that they have got a little bit more background and experience. Whereas, you know, other people who aren’t bankers tend to be a little more cautious on loan committees.

Second, in addition to expert overconfidence, there is reason to believe that cognitive entrenchment due to expertise might play an important role in this context. Institutional theorists have noted the pervasive influence of relatively narrow technocratic expertise in the field of finance and banking (Lounsbury, 2002; 2007; Lounsbury and Hirsch, 2010), and our interviews suggest that experts’ entrenchment in a stable set of domain schemas might play a significant role in the context of local banks. For example, as one CEO noted, having many bankers on a board can be a disadvantage because bankers might bring with them entrenched scripts and habits that they cannot not easily set aside or alter even when doing so would lead to better decisions (see Dane, 2012; Dokko et al., 2009). Banking novices, by contrast, are less likely to exhibit such entrenchment:

[With regard to] banking experience, it could be though that they brought with them habits from the other institutions and perhaps those habits were not always good. They brought those to the table and replicated that. Whereas our culture was drawn from within because we have a limited amount of banking experience, you know, on the board, only 25% of the board has previous banking experience. I don’t think we brought any baggage with us or, or bad habits perhaps.

Cognitive entrenchment due to domain expertise, in turn, might foster inappropriate decisions and undue risk-taking in the face of changing conditions. As another interviewee explained,

What could happen is that I am a banker and if I have given loans to person A, B, C, D and E in the past, I am going to tend to give loans to A, B, C, D and E again. Whereas somebody with fresh eyes coming to look at it may say, wait a minute you
know, construction lending was great for the past ten years, but we shouldn’t really be giving a construction loan to person A, B and C right now.

These tendencies, of course, might be further reinforced if bankers’ entrenched domain schemas encourage limited caution and an aggressive investment and lending strategy rather than a more conservative, long-term approach (Lounsbury, 2007).

Consistent with the notion of cognitive entrenchment, other respondents emphasized that bankers’ rigid reliance on stable schemas and heuristics, at the expense of potentially more applicable and fine-grained local information, might lead to an incorrect assessment of risks. As one interviewee summarized,

Bankers tend to use models, let’s face it. They run models and they run numbers: What are you going to buy? What is your debt coverage? What is your debt income? What is your FICO score? Things like that. The truth of the matter is sometimes just a local knowledge gives you a better feeling of the risk factors associated with the loan.

Our interviews suggest that entrenchment due to expertise is not a purely cognitive phenomenon but also a deeply social one, as experts’ rigid reliance on their professional scripts and schemas is reinforced by other board members’ deference to expertise. Thus a heavy presence of domain experts on a board might suppress cautionary voices of dissent. As one CEO explained,

[In a board with many bankers] there could also be some egos involved that, you know, here is the way I have done it all my life and that’s the way we are going to do it. And everybody respects each other’s ego at that table and at the end of the day, they won’t really call each other out. Whereas here, when we see something we don’t like, no one is afraid to bring it up because we are not stepping on anybody’s toes because of their massive banking experience in the past.

Consistent with this account, several of our informants commented that bankers’ domain expertise often enabled them to enjoy a prima donna status on boards that made them
impermeable to criticism—a mechanism that would strengthen the effects of expert overconfidence and entrenchment, rather than serving as a check on them.

**Risk-Fraught Activities by Local Banks**

Although expert overconfidence and entrenchment seem to play an important role in local banking ventures, our theoretical arguments suggest that the dark side of expertise due to these mechanisms will only manifest itself in the form of negative organizational outcomes under certain conditions. In particular, the greater the degree to which an bank engages in risk-fraught activities, the higher the likelihood that the latent dangers of expertise will materialize. Drawing on prior research and our qualitative exploration, we identified three such organizational activities in our context: (1) the pursuit of rapid asset growth, (2) engagement in high-risk real estate lending, and (3) operation in saturated local markets that exhibit high levels of competitive risk.

One major risk-laden activity that local banks might pursue is rapid asset growth. In local banking ventures, as in other organizations, growth often involves increased risk and uncertainty as it might entail greater organizational and strategic complexity and an expansion into uncharted market segments. In banking, in particular, where asset growth involves new lending, each new loan entails additional client or credit risk. Aspirations to grow fast might entail serving clients who are less safe. Yet, even at a given level of growth, the amount of risk involved is likely to vary across banks: while some banks grow through a high-risk strategy, others might achieve a similar pace of growth through a more prudent expansion based on a cautious evaluation of risks. As our interviews suggest, boards in which banking experts are heavily represented might guide banks toward riskier lending decisions than novice-heavy boards. While riskier lending decisions may help fuel growth, they are also likely to increase the chances of bank failure if the risks materialize. Thus,
consistent with our general theory, we expect that fast growth is more likely to lead to bank
failure when the proportion of bankers on the board is high rather than low. In other words,
we predict:

**Hypothesis 1 (H1):** The interaction between a bank’s asset growth rate and the
proportion of its directors who are bankers is positively related to the likelihood of
bank failure.

Another major risk-fraught organizational activity among local banks is engagement
in high-risk lending practices. Banks’ loan portfolios may be inherently more risky when they
include a higher concentration of loans in the same sector or without associated personal
guarantees or collateral or when the market value of such collateral is volatile or highly
dependent on potentially changing economic conditions. Our interviews suggest that an
important category of such loans is high-risk real estate loans, which include land,
construction and development loans, farm loans, large multifamily residential loans, and
other non-residential or farming commercial real estate loans. These loans involve greater
risk than those secured by family residential properties of a smaller size. Our core theoretical
argument suggests that when a bank engages in this type of high-risk lending to a significant
degree, the potential dark side of domain experts as key decisions makers—for example, the
above-described tendency for undue risk-taking and the inappropriate replication of past
lending practices—is more likely to materialize and increase the likelihood of the focal
bank’s failure. As with Hypothesis 1, because bankers are the primary experts in the relevant
domain, we expect that engagement in high-risk real estate is more likely to lead to bank
failure when the proportion of bankers on a board is high rather than low. But, if our
argument holds, then we should also observe a similar effect for board members who are
domain experts not in the banking field in general but in the specific domain relevant to real
estate lending: directors who are real estate experts. If the dark side of domain-specific
expertise indeed materializes under the conditions we theorize, then a bank’s engagement in high-risk real estate should increase the likelihood of failure not only when the board includes a large proportion of bankers but also when it includes a large proportion of real estate experts. Thus, we hypothesize:

**Hypothesis 2a (H2a):** The interaction between a bank’s emphasis on relatively high-risk real estate lending and the proportion of directors who are bankers is positively related to the likelihood of bank failure.

**Hypothesis 2b (H2b):** The interaction between a bank’s emphasis on relatively high-risk real estate lending and the proportion of directors who are real estate experts is positively related to the likelihood of bank failure.

A third fundamental type of risk-fraught endeavor by local banks involves operating in a market that exhibits high levels of competitive risk. In local banking markets, a major source of such risk is the heavy presence of other locally oriented banks that operate in the same area. A new local banking venture typically emphasizes its uniqueness as a local organization that serves local clients, makes decisions locally, and customizes its services to meet local needs (Almandoz 2012). Geographic areas, however, vary in the extent to which they are served by locally oriented banks: a locally focused strategic emphasis is much better represented in some areas than in others, and this emphasis may also vary over time as a result of new entrants, bank failures, or mergers. Our interviews suggest that, if an area is already well served by locally oriented banks, the competitive risk for the focal bank is likely to be greater than in areas where the market for local banking services is less saturated. In the former case, the focal bank faces more significant competitive risk due to the presence of many local competitors with a similar strategic orientation.

When a bank operates in such a market (either because it was founded in a highly saturated area or because the area became more saturated with other locally based banks over
time), our core argument implies that decision makers who are domain experts will likely introduce undue risk-taking into this already risky situation. Expert overconfidence, for example, may cause an underestimation of competitive risk in such markets, and cognitive entrenchment might lead decision makers to cling to unrealistic performance expectations based on historical indicators ingrained in their domain expertise. In highly saturated local market areas, therefore, we expect the presence of bankers on the board to be positively related to bank failure. Further reinforcing this effect, an entrenched reliance on general schemas and heuristics commonly used in banking implies that boards with a heavy presence of bankers may be less focused on local information, needs, and reputation building even though these competitive factors are especially vital for banks in areas where the banking industry already has a strong local orientation (Almandoz 2012). In such markets, we expect that a high proportion of directors with a banking background will contribute to the likelihood of bank failure.

**Hypothesis 3 (H3):** The interaction between the proportion of locally based banks in the focal bank’s geographic area and the proportion of its directors who are bankers is positively related to the likelihood of bank failure.

**METHODS**

To test our hypotheses, we assembled a unique dataset linking directors’ professional biographies to local banks’ performance and survival. We obtained biographical data on directors from two sources: (1) the regulatory form “Interagency Charter and Federal Deposit Insurance Application,” a filing of prospective banks to receive required deposit insurance guarantee from the Federal Deposit Insurance Corporation (FDIC) and federal or state charter approval from such regulators as the Federal Reserve, the Office of the Comptroller of the Currency (OCC), or other state-level regulators; and (2) the “Annual Report of Bank Holding Companies” form, which includes information about the bank subsidiaries of holding
companies. These forms include sections with biographical statements of founders and board directors, stating their prior professional experience and other relevant qualifications. Because in some cases the biographical information was not publicly available, we obtained some of these data through online searches and through SNL Financial, a research organization providing news and data about banks in the United States. SNL Financial and the FDIC also provided financial and other longitudinal data on banks.

Sample

Data collection focused on banks established between 1996 and 2000. This is a five-year period when a relatively large number of commercial and savings banks were founded in the United States: a total of 844 comparable banks. A relatively recent starting year, 1996, was chosen because biographical information is more widely available for recently founded banks, allowing us to test our hypotheses linking board composition to bank failures. We chose a concentrated founding period (five years) to reduce the impact of unknown factors associated with different founding eras, and to minimize missing biographical data. We were able to carefully obtain biographical information for 457 banks, representing 54% of the entire population of banks founded during the relevant period. We conducted extensive comparisons between our sample and the remaining banks in this population based on a wide range of observable characteristics and found no significant differences.

Measures

Dependent variable. Our primary outcome of interest was bank failure, defined as the cessation of activities as a bank as a result of a deteriorated financial position, which forced the Federal Deposit Insurance Corporation to intervene both to close the bank and to satisfy the bank’s deposit guarantees.
Alternative outcomes for banks, other than failure, included survival, merger with another institution (usually a desirable outcome), or bank reorganization (when parent companies recombined their subordinate banks, leaving no trace of the original startups). Table 1 summarizes the outcomes of our sample of banks during the 1996-2012 period.

Independent variables. The key independent variables reflecting the presence of experts in the banking domain were based on the composition of the founding board of directors. The variable *banking experts* reflected the proportion of directors who had worked in the banking field before the focal bank was established. Likewise, the variable *real estate experts* reflected the proportion of directors with prior real estate experience (e.g., in real estate development and construction). Both these variables were determined through careful coding of biographical records by the authors and a trained research assistant.

Additional analyses (available on request) indicated that, during the observed period, board composition with regard to the proportion of domain experts exhibited very high stability over time. In other words, the representation of bankers and real estate experts on each board tended to remain at the same level and, at most, showed only minimal variation over time during our period of interest. Thus our variable based on founding team composition consistently captured the representation of domain experts among a bank’s board members during the observation period. For these reasons, and because post-founding biographic records tend to be somewhat less accurate than those at founding, we opted for a measure based on the composition of the founding board. Nevertheless, the stability of domain expert representation suggests that the variable based on founding records and that based on subsequent records are largely equivalent within our time frame. Moreover, further strengthening the rationale for our measure, the founding board is especially relevant to our
arguments given its early involvement in developing the culture and strategic direction of the bank and its protocols for loan approvals.

Financial data on a bank’s rate of asset growth and the proportion of higher-risk real estate loans in its loan portfolio\(^1\) (both lagged by one year) allowed us to test H1 and H2. To test H3, we constructed a measure of the proportion of all banks in the focal bank’s county that were headquartered in that county. For example, if this index equals 1, it indicates that all existing banks in a county were locally headquartered, suggesting that the banking industry in the area had a strong local orientation. This measure, which varies from year to year depending on other bank entrants, mergers, and failures, was calculated by dividing the number of locally headquartered banks in a county by the total number of banks operating in that county.

**Control variables.** To capture the involvement of board members in local civic networks and local professional networks—variables that might relate to both bank success and the domain expertise of board members (Almandoz, 2012)—we measured the proportion of directors who were involved in local civic boards (for example, the local United Way, Rotary Club, Lions Club, and other non-profit organizations, such as museums, charitable organizations, and churches) and local professional boards (e.g., the local chamber of commerce, economic development corporation, and similar organizations and associations). A trained research assistant carefully coded directors’ biographical statements to identify involvement in such boards.

Moreover, we controlled for the number of directors, a standard control in the literature on teams (e.g., Bunderson and Sutcliffe, 2002; Van Der Vegt and Bunderson,

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\(^{1}\) In loans secured by real estate assets, higher-risk lending includes land, construction, and development loans, farm loans, large multifamily residential loans, and other non-residential or farming commercial real estate loans. Relatively safer is lending secured by smaller family residential properties (with one to four units), which is therefore not categorized as higher-risk lending. This risk categorization reflects the Basel Committee on Banking Supervision report, which for capital requirement regulations, assigns a low risk weight to loans secured by family residential properties and a high risk rate to other real estate loans. This categorization of riskier and safer real estate lending is standard practice in the industry.
2005), the focal bank’s *age* (in years), number of branches, and whether the bank had a parent. *De novo bank*, a dummy variable, was coded as 1 if the bank did not have a parent when it filed for regulatory approval. Financial control variables included the proportion of *brokered bank deposits* (a measure of bank liquidity risk that may contribute to the likelihood of bank failure; lagged), *initial asset size* (logged to account for skewness), and additional indicators of asset growth. Because the rate of asset growth may have different implications on bank failure depending on whether it pertains to recent or previous growth, our last regression model also included measures of asset growth lagged by two and three years. Finally, we captured general economic conditions through domestic *GDP growth rate* (lagged).

**Statistical Approach**

We tested the hypotheses using competing-risks regression models, treating time to failure as discrete survival time data. This method allows for an estimation of the antecedents of bank failure. Since reorganization and bank merger are other mutually exclusive outcomes for banks, the competing risks-model is more appropriate in this case than a Cox model. A Cox model would inappropriately treat alternative hazards as censored data. However, unlike censoring, which merely prevents one from observing an event, a competing event prevents the event of interest (bank failure) from occurring. Thus we used maximum-likelihood estimation to fit competing-risks regression models with multiple-record-per-subject survival data according to the method of Fine and Gray (1999). Like the Cox model, the competing risk model is semiparametric in that the baseline subhazard for the risk of interest $h_{1,0}(t)$ is left unspecified, while the effects of the covariates $x_i$ are assumed to be proportional, an assumption that was confirmed in our data. The following model was specified:

$$h_{1, \{t \mid x\} = h_{1,0} (t) \times \exp (\beta_1 x_1 + \beta_2 x_2 + ... + \beta_k x_k).$$
As in other survival time models, a shorter time period elapsing between establishment and failure indicates greater likelihood of failing. To obtain robust variance estimates and to account for the existence of multiple observations per bank, we used cluster-adjusted standard errors, which allow for intragroup correlation and represent the default choice of standard errors for competing-risks models with multiple-record data. As an alternative, we also ran logistic regression models predicting simply whether a bank failed during the observed period, regardless of how much time elapsed between founding and failure. This model yielded substantively identical conclusions as those of our main models.

RESULTS

Table 2 provides descriptive statistics and bivariate correlations. A key statistic from this table concerns the large degree of variation in the representation of domain experts on boards. The proportion of bankers ranged from minimal presence on the board to full (100 percent) representation, thus creating an opportunity to compare the mortality of banks with different board compositions.

As a preliminary step, we conducted a simple descriptive exploration of how failure rates varied between different sub-samples and found patterns broadly consistent with our expectations. When simply comparing banks with a high proportion of banker directors (one standard deviation above the mean or higher) to those with a lower proportion of banker directors, we found no substantial differences in the observed rate of failure: the annual average rate of failure was .008 for both sub-populations, which reflects an approximately 8% likelihood of failure over ten years. At the same time, among banks that engaged in risk-fraught activities, failures seemed to be more frequent for banks that had a high proportion of banker directors (rather than a low proportion of such directors). For example, in the population of banks that engaged high-risk real estate lending to a substantial degree (i.e., at
one standard deviation above the mean or higher), the annual average rate of failure was substantially higher for banks with an above-average proportion of banker directors (2.4%) than for banks with a below-average proportion of banker directors (1.3%). Over ten years, these annual differences reflect a gap between a 22% rate of failure (with a higher than average proportion of bankers) versus a 12% rate of failure (with a lower than average proportion of bankers).

These descriptive comparisons, of course, do not account for other potentially important factors. Thus we turn to regression analysis. Table 3 presents tests of the hypotheses, which are labeled next to the corresponding variables. In competing-risks models, the interpretation of the coefficients is based on whether they are higher or lower than 1. If the coefficient is below 1, it means that when the variable of interest increases, the hazard rate of experiencing the outcome of interest decreases compared to the base rate (or average). If the coefficient is higher than 1, it means that when the variable of interest increases, the hazard of experiencing the outcome increases compared to the base rate.

Model 1 includes only the main independent variables together with the controls. Models 2, 3, and 4 examine bank failure as a function of the interaction between the proportion of domain experts and growth rate (H1), relatively high-risk real estate lending (H2), and the extent to which the focal bank’s geographic area had a strong preexisting local orientation (H3). Model 5 includes all the interactions together in one model, and Model 6 includes two additional controls: asset growth rates lagged by two and three years.

Model 1 indicates that asset growth rate (lagged by one year) has a negative relationship to the likelihood of bank failure, meaning that banks growing faster in the previous year are somewhat less likely to fail in the present year. This is unsurprising because banks are unlikely to exhibit rapid growth just when they are on the verge of failure.
However, in line with our expectations, Model 2 shows that the interaction between a bank’s asset growth rate and the proportion of its directors who are bankers is positively related to the likelihood of bank failure. Thus the relationship between asset growth rate and bank mortality is significantly more positive when the proportion of directors who are banking experts is high rather than low. This finding provides support for H1 and is consistent with the idea that boards in which banking experts are heavily represented might guide banks toward riskier decisions and render bank growth more dangerous than do boards with a high proportion of non-experts.

Model 3 confirms both H2a and H2b. The greater a bank’s investment in relatively high-risk real estate loans, the stronger the positive relationship between the proportion of directors who are domain experts (in banking and real estate) and the likelihood of bank failure. These results provide additional support for the argument that the potential dark side of domain experts as key decisions makers is most likely to materialize and increase the likelihood of failure when a bank engages in risk-fraught organizational activities, such as higher-risk real estate lending.

The results from Model 4 provide evidence for H3. While the proportion of locally headquartered banks in the county seems to have no direct effect on a bank’s survival chances (see Model 1), this relationship is significantly more positive when the proportion of directors with banking expertise is high rather than low. As noted earlier, a major type of risk-fraught endeavor by local banks involves operating in an area that exhibits high levels of competitive risk due to the heavy presence of other locally oriented banks. Consistent with our hypothesis, Model 4 suggests that when banks operate in such markets, the presence of directors who are domain experts might introduce excessive risk-taking into this already risky endeavor, thereby contributing to the likelihood of bank failure.
All of the hypotheses were also confirmed in Models 5 and 6, which included all three interactions simultaneously, as well as additional asset growth controls (lagged by two and three years) in Model 6. Finally, as an additional analysis, we carefully examined the timing of bank failures within the period under study. This simple analysis revealed that, unsurprisingly, most observed bank failures occurred during the 2007-2008 financial crisis. Juxtaposed with our regression analysis revealing inter-bank variation in mortality, this finding is consistent with the notion that a key element of the dark side of expertise is excessive risk-taking, which has particularly devastating consequences when unduly undertaken risks materialize as a result of macro-environmental volatility. Overall, our results provide support for the general prediction that the greater the extent to which a local bank engages in risk-fraught activities, the higher the likelihood that the latent dangers due to the heavy presence of domain experts will manifest themselves and contribute to organizational failure—especially in periods when excessive risks materialize as a result of volatility in the broader environment.

**Alternative Explanations and Robustness Checks**

We considered several threats to the validity of our conclusions. One alternative explanation may be that board composition is endogenous to the underlying strategy or risk profile of a bank. In other words, banks that anticipate engaging in inherently riskier activities might place more bankers on their board because they anticipate needing these experts’ help in navigating risky situations. However, Table 2 and a battery of additional descriptive comparisons indicate that banks with a high proportion of banker directors did not

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2 In our models, fast asset growth in the most recent year (year t-1) was associated with a lower likelihood of failure in year t. As noted earlier, this is unsurprising because banks are unlikely to exhibit rapid growth just when they are on the verge of failure. On the other hand, past bank growth in Model 6, as measured by a bank’s asset growth rate with a lag of three years, had a significant positive relationship to the likelihood of failure. We also observed similar patterns with other indicators of a bank’s history of aggressive growth (e.g., other lagged or cumulative indicators). This suggests that banks with a historically more aggressive growth strategy were more likely to fail in general—but asset growth immediately before failure tended to be relatively slow. In any case, our findings suggest that when the proportion of bankers on the board was high, fast asset growth was more likely to be a dangerous undertaking than a sign of solid, healthy expansion.
systematically exhibit a tendency for high-risk real estate lending, high asset growth, or entry into local markets with more competitive risk. That is, none of these high-risk activities were inherently associated with the presence of bankers.

As an additional safeguard, however, we also re-estimated our models using the inverse-probability-of-treatment-weights (IPTW) method, a two-stage selection-on-observables estimation technique (Hernán, Brumback, and Robins, 2000; Robins, Hernán, and Brumback, 2000; see Yue, Luo, and Ingram, 2013) that corrects for each bank’s tendency to have an expert-heavy board. IPTW is used commonly in observational research to mitigate selection bias and adjust for non-random treatment. Following this method, we estimated a probit model predicting selection of an expert-heavy board and then weighted observations in our main regression in inverse proportion to the estimated probability of the “treatment” actually observed (i.e., high or low proportion of expert directors). This weighting approach is analogous to simulating what would happen if all banks in the population experienced both high and low proportions of expert board members (Hernán, 2004), thus addressing the possibility that only certain types of banks have a high proportion of expert directors. Our results were robust to this estimation procedure.

According to another alternative account, while the proportion of expert directors is related to bank failure under some conditions, it might also be associated with higher returns. This account would suggest that our analysis tells only half of the story because the presence of expert directors might be associated with a high-risk, high-reward approach but we do not capture the higher returns that might result from the influence of expert-heavy boards. Therefore, using a series of supplementary models with a variety of specifications (available upon request), we estimated the effect of the proportion of expert directors on a bank’s return on average equity and return on average assets but found no systematic relationship. Thus the data did not bear out a positive relationship between the heavy presence of banking experts
and higher returns, calling into question a “high-risk, high-return” interpretation of our results.

**DISCUSSION**

The role of professional experts in organizations has been an important and enduring topic in organizational scholarship (e.g., Weber, 1947; Meyer and Rowan, 1977; Lounsbury, 2002; Dobbin and Kelly, 2007), and prior work has highlighted both the bright and dark sides of domain experts as organizational decision makers. To help resolve conflicting views of experts in organizations, we developed theory about a critical contingency that affects whether a heavy representation of expert decision makers is an asset or a liability: the extent to which an organization is engaged in relatively risk-fraught activities. In the context of local banks in the U.S., both qualitative and quantitative data provided considerable support for our argument.

There is a great deal of irony in this finding. On the one hand, our interviews suggest that regulators and many bank founders tend to favor directors who are domain experts, especially bankers, because they see them as essential for managing risk. Our interviewees consistently noted that regulators often “demand that we have at least two people with prior banking experience, and they are not easy to come by today,” and that “if you have people with banking experience at the board level, [regulators and investors] love to see that.” As a result, banking expertise is highly desired, and “bankers are hard to get,” enjoying privileges that other directors do not. Yet, despite the perception that the value of bankers comes from their ability to managing risk effectively (see also Lounsbury and Hirsch, 2010), it was precisely when banks engaged in relatively risk-fraught activities that the heavy presence of these experts was most likely to prove lethal.

This paradox likely extends beyond the banking sector as well. Indeed, in a wide range of fields, experts are considered to be experts for the very same reason that they are in the
banking context: because they are assumed to be high skilled actors who can successfully manage domain-specific risks (Shapira, 1995). Yet, significant research across fields suggests that domain experts’ well-documented tendency toward overconfidence and cognitive entrenchment is most likely to have pernicious effects when experts engage in decision making regarding risk-fraught, poorly understood, or potentially rapidly changing conditions (e.g., Dane, 2010; Angner, 2006; Cooke 1991; Ben-David et al., 2013). Thus the dark side of expertise may be darkest in the time of greatest need—precisely when experts are relied upon the most to control risk and uncertainty.

Put positively, our theory and findings underline the potential value of lay oversight of organizational decisions. Prior research hints at the potential of amateurs and lightly trained novices to serve as safeguards against expert overconfidence, cognitive entrenchment, and undue risk-taking. While domain-specific expert knowledge remains a critical input for many organizational decisions (Dane, 2010), inexpert decision makers may be a source important oversight and cautionary dissent, especially in the context of risk-fraught endeavors. As our qualitative data indicate, however, the mere presence of some amateurs might not be sufficient to provide lay control, as undue deference to expertise combined with the heavy presence of domain experts might suppress voices of caution.

Thus the potential for lay oversight may be most likely to be realized in cases when expert and non-expert decision makers enjoy a similar level of status. One of our informants, for example, reported the case of a bank CEO who was much more comfortable answering the questions of other bankers on the board—with whom he shared similar concerns and a common language—than the inquiries of non-bankers, which more often concerned unforeseen or less familiar issues. To raise these inconvenient but potentially important questions in a compelling way, non-experts need to have established status and credibility through factors other than expertise—a difficult challenge given the pervasive deference to
domain expertise not only in our research setting but also in organizations more generally (Weber, 1947; Vaughan, 1996, 2005).

These findings have important implications for the role of experts and laypersons in organizational decision-making and the management of risk and uncertainty, thereby complementing recent efforts toward developing a policy-oriented economic sociology of financial risks and crises. While those efforts focused primarily at the system level, highlighting “key architectural and policy issues regarding the financial system” (Lounsbury and Hirsch, 2010), we consider relevant processes at the level of organizations and the decision makers within them. Although banks are influenced by macro-processes in the broader economic system, we show that there is also substantial and theoretically predictable (albeit counterintuitive) variation in their fates that stems from relatively nuanced differences in the professional demography of a small group of organizational decision makers.

Thus, at a more general level, our theory and findings contribute to a growing institutional literature that considers how the knowledge, schemas, and associated behaviors that individuals carry with them into an organization might affect critical outcomes at the organizational level (e.g., Glynn, 2000; Zilber, 2002; Battilana, Leca, and Boxenbaum, 2009; Hallet, 2010; Tilcsik, 2010; Almandoz, 2012). Indeed, while the role of professional experts and the effects of expertise are often considered at a single level of analysis, such as the field level (e.g., Dobbin and Kelly, 2007) or the individual level (e.g., Camerer and Johnson, 1991), our theorizing points to how the consequences of expertise are contingent on factors at several different levels of analysis: organizational conditions (such as the organization’s strategies and risk profile), local geographic and industry conditions (which define the immediate competitive landscape for an organization), and broader macro conditions that might bring more or less external turbulence and thus influence the extent to which risks—and especially the devastating consequences of undue risk-taking—materialize. Moreover,
our conceptualization of expertise as an individual-level attribute with consequences that primarily manifest themselves at the level of a group (in this case, a board) further enriches the multilevel nature of our framework. Conceptually, therefore, we attempt to link the level of individuals, groups, organizations, local environments, and the broader macro context to understand the consequences of domain experts as organizational decision makers.

**Limitations and Future Research**

Our study is not without limitations. A core issue that remains to be addressed concerns the ways in which our findings and arguments are transferable to contexts beyond banking. When developing our arguments, we noted that the effects of expert overconfidence and cognitive entrenchment may be particularly strong in the banking context given the emphasis on relatively narrow technical expertise, the valorization of financial professionals as highly skilled risk managers (Lounsbury and Hirsch, 2010), and the possibility that bankers’ entrenched domain schemas might encourage aggressive investment strategies (Lounsbury, 2002), although this latter tendency by no means applies to all experts in the field of finance (Lounsbury, 2007).

Yet, although our arguments were tested in the specific context of banking, our theorizing drew on research conducted in a wide range of professions and points to important parallels to our findings in very different organizational settings as well. In fact, as noted earlier, the main building blocks of our theorizing—the mechanisms of expert overconfidence and entrenchment—were not just observed among bankers but documented among a variety of professional experts, including doctors, CIA analysts, corporate CEOs, psychologists, physicists, and economic policy advisors, to name just a few. Nor is the resulting propensity for undue risk-taking unique to bankers. Risk-taking is an important and common element of a wide variety of professional and managerial occupations (Shapira, 1995) and is intimately
tied to experts’ cognitive schemas and confidence. As Shapira (1995: 81-82) noted, when people develop expertise in an area, they also “develop a sense of skill in risk taking and a belief in postdecisional control,” and hence “professionals and managers alike are confident that, by using their skills to control the situation, they eliminate the risks. The past experience has apparently boosted their confidence (which may be erroneous, of course) in their expertise in risk taking.” Thus, in numerous professions, “experience gives [decision makers] an exaggerated confidence in the chances of success from experimentation and risk taking” (Levitt and March, 1995: 30).

Qualitative evidence in professional domains that are dramatically different from banking also suggests parallels to our argument. A case in point is the Challenger launch decision at NASA. As research on the Challenger accident has emphasized, in response to uncertainty, NASA “placed trust in professional engineering training and experience, allocating deference to professional expertise” (Vaughan, 2005: 46). And, just as our interviewees noted the dangers of undue deference to domain experts on bank boards, Vaughan (1996) has described how deference to specialized technical experts prevented NASA engineers from voicing their concerns about risky technological issues in the days leading up to the launch decision. Most important, consistent with our core argument, this potential dark side of the experts in question remained largely inconsequential in the context of relatively routine, low-risk activities (e.g., ongoing, day-to-day research in science and technology) and only manifested itself with great force when the organization was engaged in a particularly risk-fraught activity—the shuttle launch under unusual weather conditions. Exploring such parallels and their limits in other contexts should help illuminate both the broader implications and the boundary conditions of our theory.
REFERENCES


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<td>Merger</td>
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<tr>
<td>Reorganization</td>
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<td>Survival</td>
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<td>Total</td>
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TABLE 2
Descriptive Statistics and Correlations

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<td>31%</td>
<td>19%</td>
<td></td>
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<td>3 Local civic networks</td>
<td>6489</td>
<td>20%</td>
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<td>0.74</td>
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<tr>
<td>5 Number of directors</td>
<td>6489</td>
<td>9.3</td>
<td>4.1</td>
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<td>6 Age of the bank (years)</td>
<td>6489</td>
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<td>7 De novo bank</td>
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<td>8 Initial asset size (log)</td>
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<td>9.9</td>
<td>0.9</td>
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<tr>
<td>10 Asset growth</td>
<td>5426</td>
<td>30%</td>
<td>55%</td>
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<td>2042.2</td>
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<td>-0.09</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 Real estate x Higher risk real estate</td>
<td>6013</td>
<td>1679922</td>
<td>3780932</td>
<td>-0.07</td>
<td>0.41</td>
<td>0.23</td>
<td>0.20</td>
<td>0.04</td>
<td>0.26</td>
<td>0.13</td>
<td>0.11</td>
<td>0.38</td>
<td>-0.08</td>
<td>-0.05</td>
<td>-0.02</td>
<td>0.16</td>
<td>0.54</td>
<td>-0.10</td>
<td>-0.19</td>
<td>-0.08</td>
<td>0.26</td>
</tr>
<tr>
<td>20 Banking x Locally oriented banking</td>
<td>6489</td>
<td>11.6</td>
<td>10.4</td>
<td>0.78</td>
<td>-0.10</td>
<td>0.04</td>
<td>0.04</td>
<td>-0.25</td>
<td>-0.13</td>
<td>-0.22</td>
<td>0.01</td>
<td>-0.03</td>
<td>0.05</td>
<td>0.04</td>
<td>0.03</td>
<td>0.06</td>
<td>0.01</td>
<td>0.62</td>
<td>0.10</td>
<td>0.25</td>
<td>0.17</td>
</tr>
</tbody>
</table>

* Lagged 1 year

b in thousands
TABLE 3
Results of Competing-Risks Models for Rates of Failure

<table>
<thead>
<tr>
<th>Main independent variables</th>
<th>Model 1: Interaction with asset growth</th>
<th>Model 2: Interaction with riskier real estate</th>
<th>Model 3: Interaction with local industry</th>
<th>Model 4: All interactions</th>
<th>Model 5: All interactions plus historical growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main variables and controls</strong></td>
<td><strong>Banking experts</strong></td>
<td></td>
<td><strong>Real estate experts</strong></td>
<td><strong>Asset growth</strong> a</td>
<td><strong>Higher risk real estate lending ab</strong></td>
</tr>
<tr>
<td><strong>Main independent variables</strong></td>
<td><strong>0.99</strong> (0.01)</td>
<td><strong>1.00</strong> (0.01)</td>
<td><strong>0.98</strong> (0.01) plus <strong>0.96</strong> (0.02) *</td>
<td><strong>0.96</strong> (0.02) *</td>
<td><strong>0.95</strong> (0.02) *</td>
</tr>
<tr>
<td><strong>Main independent variables</strong></td>
<td><strong>Real estate experts</strong></td>
<td></td>
<td><strong>1.01</strong> (0.01) plus <strong>1.02</strong> (0.01) ***</td>
<td><strong>1.01</strong> (0.01)</td>
<td><strong>1.01</strong> (0.01)</td>
</tr>
<tr>
<td><strong>Main independent variables</strong></td>
<td><strong>Asset growth a</strong></td>
<td></td>
<td><strong>1.01</strong> (0.01) plus <strong>1.01</strong> (0.01) ***</td>
<td><strong>1.01</strong> (0.01)</td>
<td><strong>1.01</strong> (0.01)</td>
</tr>
<tr>
<td><strong>Main independent variables</strong></td>
<td><strong>Higher risk real estate lending ab</strong></td>
<td></td>
<td><strong>1.000002</strong> (0.00) plus <strong>0.999999</strong> (0.00)</td>
<td><strong>0.999999</strong> (0.00)</td>
<td><strong>0.999999</strong> (0.00)</td>
</tr>
<tr>
<td><strong>Main independent variables</strong></td>
<td><strong>Locally-oriented banking industry</strong></td>
<td></td>
<td><strong>1.01</strong> (0.01) plus <strong>1.01</strong> (0.01) *</td>
<td><strong>1.01</strong> (0.01) *</td>
<td><strong>1.01</strong> (0.01) *</td>
</tr>
<tr>
<td><strong>Hypothesized interactions</strong></td>
<td><strong>Banking exp. x Asset growth H1</strong></td>
<td><strong>1.001</strong>* (0.00)</td>
<td><strong>1.001</strong>* (0.00)</td>
<td><strong>1.001</strong>* (0.00) *</td>
<td><strong>1.001</strong>* (0.00) *</td>
</tr>
<tr>
<td><strong>Hypothesized interactions</strong></td>
<td><strong>Banking exp. x Higher risk real estate H2a</strong></td>
<td><strong>1.000001</strong>* (0.00)</td>
<td><strong>1.000001</strong>* (0.00)</td>
<td><strong>1.000001</strong>* (0.00) *</td>
<td><strong>1.000001</strong>* (0.00) *</td>
</tr>
<tr>
<td><strong>Hypothesized interactions</strong></td>
<td><strong>Real estate exp. x Higher risk real estate H2b</strong></td>
<td><strong>1.000001</strong>* (0.00)</td>
<td><strong>1.000001</strong>* (0.00)</td>
<td><strong>1.000001</strong>* (0.00) *</td>
<td><strong>1.000001</strong>* (0.00) *</td>
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<td><strong>Hypothesized interactions</strong></td>
<td><strong>Banking exp. x Locally-oriented banking H3</strong></td>
<td><strong>1.105</strong>* (0.05)</td>
<td><strong>1.097</strong>* (0.04)</td>
<td><strong>1.104</strong>* (0.05) *</td>
<td><strong>1.104</strong>* (0.05) *</td>
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## TABLE 3
### Results of Competing-Risks Models for Rates of Failure (Continued)

<table>
<thead>
<tr>
<th>Controls</th>
<th>Model 1: Main variables and controls</th>
<th>Model 2: Interaction with asset growth</th>
<th>Model 3: Interaction with riskier real estate</th>
<th>Model 4: Interaction with local industry</th>
<th>Model 5: All interactions plus historical growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local civic networks</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
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</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Local professional networks</td>
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<td>1.01</td>
<td>1.01</td>
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</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Number of directors</td>
<td>1.01</td>
<td>1.01</td>
<td>1.01</td>
<td>1.01</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.04)</td>
<td>(0.03)</td>
<td>(0.04)</td>
<td>(0.04)</td>
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<tr>
<td>Age of the bank (years)</td>
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<td>1.03</td>
<td>1.07</td>
<td>1.07</td>
<td>1.09</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td>(0.09)</td>
<td>(0.09)</td>
<td>(0.10)</td>
<td>(0.10)</td>
</tr>
<tr>
<td>De novo bank</td>
<td>18.34 ***</td>
<td>16.34 ***</td>
<td>45.61 ***</td>
<td>33.35 ***</td>
<td>41.27 ***</td>
</tr>
<tr>
<td></td>
<td>(15.83)</td>
<td>(13.32)</td>
<td>(35.05)</td>
<td>(30.33)</td>
<td>(29.53)</td>
</tr>
<tr>
<td>Initial asset size (log)</td>
<td>0.82</td>
<td>0.80</td>
<td>0.83</td>
<td>0.81</td>
<td>0.79</td>
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<tr>
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<td>(0.19)</td>
<td>(0.18)</td>
<td>(0.19)</td>
<td>(0.18)</td>
<td>(0.18)</td>
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<tr>
<td>Branches</td>
<td>0.98</td>
<td>0.98</td>
<td>0.96</td>
<td>0.97</td>
<td>0.96</td>
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<tr>
<td></td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.03)</td>
<td>(0.02)</td>
<td>(0.03)</td>
</tr>
<tr>
<td>Brokeda deposits *)</td>
<td>1.02 *</td>
<td>1.02 *</td>
<td>1.03 *</td>
<td>1.02 *</td>
<td>1.03 ***</td>
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<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Gdp growth rate *)</td>
<td>0.88 *</td>
<td>0.88 +</td>
<td>0.87 *</td>
<td>0.88 +</td>
<td>0.88 *</td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
<td>(0.06)</td>
<td>(0.05)</td>
<td>(0.06)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Asset growth lagged 2 years</td>
<td>1.00</td>
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</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asset growth lagged 3 years</td>
<td>1.01 *</td>
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<td>(0.00)</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Observations</td>
<td>5301</td>
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<td>5301</td>
<td>5301</td>
<td>5301</td>
</tr>
<tr>
<td>Number of events</td>
<td>49</td>
<td>49</td>
<td>49</td>
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<td>49</td>
</tr>
<tr>
<td>Log pseudo-likelihood</td>
<td>-255.00</td>
<td>-253.30</td>
<td>-250.61</td>
<td>-253.47</td>
<td>-248.11</td>
</tr>
<tr>
<td></td>
<td>(14)</td>
<td>(15)</td>
<td>(16)</td>
<td>(15)</td>
<td>(18)</td>
</tr>
<tr>
<td>Wald Chi square (df)</td>
<td>109.21 (14)</td>
<td>117.86 (15)</td>
<td>164.95 (16)</td>
<td>115.45 (15)</td>
<td>171.19 (18)</td>
</tr>
<tr>
<td></td>
<td>(20)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incremental Chi square test (p)</td>
<td>14.61 (*** )</td>
<td>6.85 (*)</td>
<td>5.19 (*)</td>
<td>7.76 (*)</td>
<td>4 (0.13)</td>
</tr>
<tr>
<td>Robust errors in parentheses</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.05  ** p < 0.01  *** p < 0.01  + p < 0.1
APPENDIX A

Qualitative Data

To understand the role of domain experts in the context of local U.S. banks thoroughly, we collected qualitative data from semi-structured interviews with 73 bank CEOs, prospective CEOs, bank employees, consultants, bank regulators, and board directors of banks founded between 2006 and 2008. Focusing on more recent bank establishments in these interviews was important to ensure that participants were able to recall relevant information about the decision to include directors from different professional backgrounds, such as banking and real estate. This qualitative evidence, which also served to explore other related questions in this same setting, provides greater depth to our interpretation of quantitative results from archival data. By interviewing CEOs and directors from groups in all phases of formation, from banks still in formation to already established banks, we developed a nuanced view of both the founding and the governance processes of banks.

Pilot interviews conducted by phone in 2008 and 2009 suggested the significance of the professional backgrounds of bank directors and the significance of the bank board itself, especially the founding board. In this setting, the founding team of the bank becomes its founding board and, as we noted earlier, the board is greatly involved in banks’ key strategic and organizational decisions. Building on this initial research, we designed a semi-structured interview protocol summarized in Table A1, and randomly selected additional interview targets from a list of banks founded between 2006 and 2008. These interviews were conducted by phone in 2009 and 2010 lasted between 30 and 60 minutes. We audiotaped and transcribed almost all interviews and asked follow-up questions via phone and e-mail when needed. Additional interviews were conducted in 2012 and 2013 to address questions related to the findings of the paper. Table A2 summarizes the interviews conducted.

[Insert Tables A1 and A2 around here]
Guiding Questions for Semi-Structured Interview Protocol

1. How did the idea of starting a bank first arise?
2. What motivated you to start a bank? What motivated others in the board?
3. How did the founding group and board come together?
4. What were the main challenges in starting? How was your experience with bank regulators?
5. What incentives did you envision in your business plans for directors and for the management team?
6. How well did the board perform in raising the necessary capital and in bringing business to the bank?
7. What do bankers bring to the board? What do non-bankers bring to the board?
8. How is your bank a community bank? How is your bank just a business?

Interviews Conducted*

<table>
<thead>
<tr>
<th>Initial phase</th>
<th>Second and third phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 and 2009</td>
<td>2009-2010 and 2012-2013</td>
</tr>
<tr>
<td>6 CEOs and prospective CEOs</td>
<td>36 CEOs and prospective CEOs</td>
</tr>
<tr>
<td>2 bank employees</td>
<td>2 Chairmen of the board</td>
</tr>
<tr>
<td>4 consultants</td>
<td>18 other directors</td>
</tr>
<tr>
<td>2 bank regulators or former regulators</td>
<td>8 bank employees</td>
</tr>
<tr>
<td>4 individuals contemplating starting a bank but not yet in the process</td>
<td></td>
</tr>
</tbody>
</table>

* We interviewed 73 distinct individuals in total (excluding those four individuals who were contemplating starting a bank but not yet in the process). Because some consultants and regulators were also bank directors simultaneously, they were included in this table twice, causing the total count in the table to be higher than 73.