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## Multiple directorships and the extent of loan loss provisions: Evidence from banks in South Asia

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### ABSTRACT

This paper examines whether directors with multiple directorships affect extent of banks' loan loss provisions in South Asia. Our results indicate that directors with multiple directorships tend to delay the recognition of loan loss provisions. Specifically, we find the existence of a U-shaped relationship between directors with multiple directorships and loan loss provisions, indicating that the delay is more pronounced in the case of moderately busy directors than in that of directors with fewer directorships and time-poor overboarded directors. This helps directors achieve profitability targets while maintaining their reputations and indicates their optimism about the loans' future. Our results are robust in terms of accounting for endogeneity concerns, which are addressed using a two-stage least squares regression and entropy-balancing methodology as well as some alternative definitions of 'multiple directorships' used in the literature.

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### Introduction

Boards of directors are responsible for monitoring and advising the manager and, as experts in various areas of business, they are frequently appointed by firms to achieve competitive gains. Holding multiple directorships allows a director to work within and network across various boards and governance styles, ultimately rendering the director an influential advisor on the board. This approach is based on a concept referred to as the 'reputation hypothesis', which is derived from the resource dependence theory (RDT).<sup>1</sup> Supporting the reputation effect of such directors, Elyasiani and Zhang (2015) find that directors with multiple directorships (DWMD) have a positive impact on banks' performance and reduce risk. According to Elyasiani and Zhang (2015), DWMD have knowledge, information, connections, and experience due to their extensive interactions with various sectors of the economy. Similarly, Trinh et al. (2020) also find evidence that banks with busy directors exert a positive reputation effect on banks' performance and financial stability.

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<sup>1</sup> The RDT contends that reputed directors relax environmental constraints and improve monitoring through their external networking, experience, and linkages (Hillman et al., 2009; Kor and Sundaramurthy, 2009).

However, when directors hold multiple directorships, they have less time to devote to their duties on each board; therefore, according to the agency theory, directors' fiduciary responsibilities can become compromised. This reflects the 'busyness hypothesis'. Cooper and Uzun (2012) note that a bank's risk increases when directors hold multiple directorships. Much of the existing literature shows evidence in favour of either the reputation or busyness hypothesis. A paper by Kutubi et al. (2018), however, shows that the reputation effect of DWMD dominates the busyness effect at lower levels of this phenomenon and vice-versa at higher levels. According to Kutubi et al. (2018), there is an optimal number of directorships beyond which a director holding additional ones negatively affects bank performance and risk-taking behaviours.<sup>2</sup>

In addition, several studies show that, in non-financial firms, DWMD have a significant effect on corporate governance and financial performance (Ferris et al., 2003; Fich and Shivdasani, 2006), network benefits (Ahn et al., 2010; Engelberg et al., 2012; Khwaja et al., 2011), firm value (Gray and Nowland, 2013), firm monitoring (Falato et al., 2014) and strategic advising (Brown et al., 2019). In general, most existing studies are focused on whether the decisions made by DWMD affect corporate financial performance. However, none of these studies have included an examination of the effect of DWMD on corporate accounting choices, which directly affect firms' governance, performance, value, and monitoring quality.

In this study, we examine the effect of DWMD on banks' loan loss provisions (LLP). Our research is significant because banks face distinctive governance challenges in balancing the demands of shareholders, requiring them to behave as value-maximising entities while serving the public interest (Mehran and Mollineaux, 2012; Mehran et al., 2011). As a representative of bank shareholders, the boards of directors control the board's decision-making process. However, the shareholders of banks are subject to limited liability, benefitting from upside risks while being protected from downside ones, because banks are highly leveraged with depositors' funds (Andres and Vallelado, 2008). Specifically, banks' liabilities primarily take the form of short-term deposits, which are available to depositors on demand, while banks' assets often take the form of long-term loans, which take longer to reach maturity than deposits. Hence, banks' leveraged capital structure affects shareholders' risk-taking behaviours, and shareholders benefit from greater flexibility in risk-shifting. The shareholders of banks can exploit creditors (depositors and debt holders) via the boards of directors through an opportunistic (*ex-post*) switch to riskier business strategies (Mülbart, 2009). Thus, LLP are an important component in checking directors' role and reducing the agency conflict between shareholders and other stakeholders. Considering that boards' decisions directly affect the type of information reported in banks' financial reports, we examine the effect of DWMD on recognition of LLP.

We examine LLP because it is an essential attribute of financial reporting quality, making financial statements more useful for contracting parties, including shareholders, debt holders, regulators, and potential investors. Specifically, investors' demand for recognition of LLP is examined, since timely information about LLP is a useful decision-making information for investors (Dechow et al., 2010). The amount of LLP recognised reflects bank managers' expected losses on bank loans. Nichols et al., 2009 find that, compared with private banks, public banks are timelier in terms of loan loss provisioning, as they are constantly being monitored by investors who value the recognition of expected LLP in financial reporting. When bank managers recognise the amount of LLP relative to the changes in non-performing loans (NPL), it reflects their intention to be transparent with banks' investors or market participants. Accordingly, loan loss provisioning reduces the agency conflict among the contracting parties by increasing earnings quality and financial reports' transparency. According to Bushman et al. (2013), the recognition of LLP by banks increases reporting transparency and regulators' monitoring ability vis-à-vis banks' risk-taking behaviours. Banks that recognise LLP are more prudent in managing risks in lending. Such enhanced transparency in financial reporting moderates managers' risk-taking tendencies. According to Lim et al. (2014), banks that recognise LLP exhibit more prudent and less pro-cyclical loan-pricing behaviours. By examining banks' reporting quality during the 2007 global financial crisis, Bushman and Williams (2015) find that banks that recognised LLP faced fewer financial constraints than banks that did not. The banks that recognised the expected LLP remained financially stable in an uncertain economic environment. Cho and Chung (2016) find that banks with material internal control weaknesses recognise higher LLP than banks without such weaknesses. Akins et al. (2017) find that recognising LLP increases the likelihood of uncovering problematic loans, which reduces lending-based corruption.

Despite all the benefits of recognising the expected LLP, there are some negative consequences. For example, recognising LLP increases banks' reporting transparency and regulators' monitoring ability; thus, managers' discretion in disclosing inside information declines. In some situations, it may not be appropriate to disclose inside information in the short term because withholding such information may have a long-term positive effect on a bank's loans' performance. Gallemore (2019) finds that expected loan loss recognition is positively associated with the likelihood of regulatory intervention. Therefore, it is important to examine whether DWMD influence banks' LLP considering the economic significance and decision-making role that banks' financial reporting has for users.

Further, because they are part of a regulated industry, banks must follow regulatory and accounting standards when preparing financial reports. Under the incurred loss model of the International Financial Reporting Standards (IFRS), banks can recognise loan losses only if they are 'incurred', are 'probable', and 'can be reasonably estimated' (IASB, 2006). The most

<sup>2</sup> In addition, banks appoint directors as a way of accessing external resources, and the social network created between banks and borrowing firms leads to either better information flow or better monitoring (Engelberg et al., 2012). Specifically, banks rely on the personal relationships between directors in situations in which customer screening is difficult and active monitoring is required.

significant criticism of the incurred loss method is that it is backward-looking (reflecting a delay in loan loss recognition).<sup>3</sup> Alongside adhering to accounting standards, banks must follow the loan loss provisioning regulations of the Basel Committee on Banking Supervision (BCBS, 2015). Under Basel II, a default is considered to have occurred if the borrower is unlikely to repay their loan to bank or if a payment is past due by more than 90 days. From the bank capital regulators' perspective, LLP are forward-looking (expected loan loss provisioning). Hence, it is important to understand how banks' directors' decisions affect the recognition of LLP given the existence of a backward-looking LLP policy from the perspective of accounting standard-setters and expected loan loss provisioning policies (forward-looking) from the perspective of bank capital regulators while recognising bank managers' incentives to satisfy shareholders, depositors, and creditors.

Our research is focused explicitly on banks in South Asia for several reasons. First, four countries in South Asia—Bangladesh, India, Pakistan, and Sri Lanka—are characterised by informal institutions, such as relational ties, business groups, family connections, and government contacts. All such institutional characteristics play a significant role in shaping corporate governance in these economies (Carney et al., 2011; Claessens et al., 2006). Consequently, directors' likelihood of holding multiple directorships is higher than in developed economies. Moreover, in closed societies, such as those in South Asia, directorship is viewed as a sign of prestige and a reflection of one's personal reputation, rendering it a desirable role for many reasons. For example, Helmers et al. (2017) find that when directors in India hold multiple directorships, it significantly affects both research and development and patenting efforts because of the benefits associated with information transmission via multiple directorships of the directors among the firms in a business group.

Second, research on banks in South Asia is especially noteworthy because of the diversity of types of ownership and relationships between concentrated ownership and the owner's role as a bank director. Specifically, the concentration of 'inside directors' is higher than that of independent directors in South Asian banks. Such inside directors can dominate a board's decision-making processes. In addition, when both types of directors hold multiple directorships, their roles as directors are shaped by their incentives and ability to contribute in financial reporting. The corporate governance of banks in South Asia also reflects significant variations in ownership. Such features are not as common among banks in the United Kingdom and the United States, where widely dispersed investors or institutional shareholders own most of banks' shares. Primarily, South Asian businesses are characterised by a concentrated ownership structure. Families and governments hold a significant portion of banking assets, although banks are listed firms in these economies (Klapper et al., 2012; Klapper et al., 2014; Perera et al., 2007). It is relatively common for listed banks to have controlling ownership and low investor protection in the capital markets of emerging economies. Such an institutional regime in South Asia challenges the Anglo-Saxon framework, in which investor protection is an essential criterion for the smooth operation of the corporate governance model (Ramasmwamy et al., 2000). Hence, examining the research on South Asian banks offers the opportunity to assess the effects of their unique characteristics on banks' financial reporting quality.

Third, according to the World Bank's (2018) forecast, the real GDP growth rate in South Asia was expected to increase from 6.9% in 2018 to 7.1% in 2019, rendering it the fastest-growing region globally (World Bank, 2018). Despite the contraction of the South Asian economy in 2020 due to COVID-19, growth in South Asia is forecast to rebound to 7.2% in 2021 (Asian Development Bank, 2021). Bank assets account for roughly 50% of the GDP in South Asia (Klapper et al., 2014) and contribute greatly to market capitalisation in these countries. These countries provide rich data, offering an example of a region with a highly concentrated ownership structure dominated by business groups, families, institutions, and governments alongside developed capital markets. This structure positions South Asia as a worthwhile context for studying the interaction between DWMD and loan loss recognition.

Fourth, prior research shows that financial reporting is less timely in countries with a low level of investor protection than in ones with strong investor protection (Ball et al., 2000; Bushman and Piotroski, 2006). Most countries in South Asia are characterised by high economic growth rates, high levels of dependency on bank credit, and a highly concentrated ownership structure dominated by business groups, families, institutions, and governments alongside a relatively low level of investor protection and underdeveloped capital markets.<sup>4</sup> In addition, cultural differences between countries affect the conservatism of accounting and banks' risk-taking behaviours (Kanagaretnam et al., 2014).

Given that directors have an essential role in the decision-making process that shapes banks' performance and risk-taking behaviours (Elyasiani and Zhang, 2015; Kutubi et al., 2018), we expect DWMD to be related to banks' LLP. Specifically, we argue that, because of their expertise and previous experience as directors (referred to as the 'reputation hypothesis'), DWMD tend to promote the recognition of LLP through their decisions to meet investors' and regulators' expectations. Moreover, they can use this strategy as a tool to convince small-scale investors to invest in their banks, reduce information asymmetry for the benefit of the shareholders and disclose financial information in a timely manner to achieve strategic gains. In contrast, from the agency theory perspective, holding multiple directorships reduces the time available to directors and may

<sup>3</sup> The prior research has shown that banks' LLP and loan loss reserves are often inadequate to cover the credit losses they incur (Dugan, 2009). Barth and Landsman (2010) argue that using an incurred loss model contributed to delays in the recognition of loan losses during the global financial crisis from 2007 to 2009. Following the crisis, the IFRS 9 was introduced by the International Accounting Standards Board (IASB) to recognise expected loan losses, as the expected loss impairment model is considered to allow more timely recognition of expected credit losses than is possible using the incurred loss method. The new accounting standards have a mandatory effective date for annual periods beginning on or after 1 January 2018, with earlier application permitted. It is expected that, with the implementation of expected loss recognition under the IFRS 9, banks will provide timelier loan loss recognition.

<sup>4</sup> The World Bank statistics indicate that South Asian countries expected gross domestic product (GDP) growth rate in 2019 will be 7%—the highest among the emerging markets. In addition, the amount of domestic credit extended to the private sector by banks (% of GDP) in this region is the highest among the emerging markets (WGI, 2020).

adversely affect the quality of a director's interactions and board decisions (referred to as the 'busyness effect') (Fich and Shivdasani, 2006). Therefore, DWMD will not be aware of the importance of timely recognition of LLP.

We expect the reputation effect to become stronger as the number of directorships increases until a director eventually becomes over-boarded and time poor. This implies the existence of a non-linear relationship between DWMD and LLP, which we model as a quadratic relationship. In previous studies, researchers have used linear models to study the effect of holding multiple directorships on banks performance, which has led to conclusions favouring either the reputation hypothesis, the busyness hypothesis, or neither. Our non-linear model reconciles these previous inconclusive results by showing that the reputation effect dominates the busyness effect below specific levels and vice-versa. This result holds even when we control for firm characteristics and country- and year-specific effects. Further, we examine the real activity channels through which a DWMD makes decisions related to LLP.

Following Nichols et al. (2009), we recognise changes in LLP according to changes in NPL, using the data of 96 listed commercial banks located in four countries in South Asia (Bangladesh, India, Pakistan, and Sri Lanka) from 2009 to 2019. We find that there is a U-shaped relationship between holding multiple directorships and the recognition of LLP. This finding indicates that reputable (proxied by holding multiple directorships), yet not too over-boarded, directors delay recognising LLP. There was concern that our results might be subject to endogeneity issues. To address this issue, we perform a two-stage least squares regression using an instrumental variable and entropy-balancing method. We use the travel time from a bank's headquarters to the nearest major airport as an instrumental variable. This approach corrects the observed variables' endogeneity issue (Dehejia and Wahba, 2002; Kim and Zhang, 2014). We find results consistent with our main ones. Our results are also robust to alternative measures of DWMD and to attempts to control for directors' board meeting attendance rates.

This research makes several contributions to the literature. First, it is the first research to identify and quantify the effect of DWMD on banks' recognition of LLP. We relate LLP to holding multiple directorships, where holding multiple directorships represents directors' reputation and busyness characteristics. Second, from a policy perspective, our research provides evidence that reputable, but not too over-boarded, DWMD delay loan loss provisions to signal a high-quality loan portfolio, protect their banks' reputations as profitable, and signal their optimism regarding NPL.

The remainder of this paper is structured as follows. Section 2 presents our hypotheses, while Section 3 introduces the data, research method, measures of DWMD, and estimates of loan loss reserves (LLRs) used in our analyses. In Section 4, we summarise the existing empirical results, while Section 5 presents the robustness analysis and the tests used to support our findings in Section 4. Finally, in Section 6, we summarise the research and present our conclusions from the findings.

## Theories regarding DWMD and LLP

### *The RDT, DWMD, and board monitoring*

The RDT suggests that directors bring four benefits to organisations (Pfeffer and Salancik, 1978): (i) information in the form of advice and counselling, (ii) access to channels of information between the firm and environmental contingencies, (iii) professional access to resources, and (iv) legitimacy (Pfeffer and Salancik, 2003). The RDT stresses the board's multiple roles as a provider of resources or board capital, which consists of both human and relational capital. According to Hillman and Dalziel (2003), 'human capital' refers to experience, expertise, and reputation, while 'relational capital' refers to network ties to other firms and external contingencies. The proponents of the RDT argue that resource-constrained firms gain access to external resources in various ways, including mergers/vertical integration and joint ventures, as well as through boards of directors, political action, and executive succession (Hillman et al., 2009).

Compared with non-financial firms, banks, as part of a regulated industry, have less flexibility in determining their board size according to the required resources. Hence, as a way to access external resources, the composition of banks' boards favours DWMD because the presence of resource-rich directors can meet banks' demand for external resources or environmental interdependence (Zona et al., 2018). Therefore, banks benefit in two ways from directors holding multiple directorships. First, in accordance with the RDT (reputation hypothesis), banks may be resource-constrained concerning information asymmetry or may operate in the absence of the contractual enforcement environment that exists in individual economies; thus, DWMD are a source of networking resources, and their market-related knowledge is often used to relax these constraints and enhance banks' performance. Studies supporting the relationship between the reputation hypothesis and DWMD highlight their experience, connections, and monitoring roles (Ahn et al., 2010; Elyasiani and Zhang, 2015; Ferris et al., 2003; Field et al., 2013; Larcker et al., 2013). According to this stream of research, DWMD have valuable knowledge and experience and powerful reputations. Second, holding multiple directorships allows a director to accumulate more personal contacts and stimulate increased information flow to a bank's directors, thereby providing valuable information for boards' decision-making processes and helping them identify successful strategies. In controlling ownership regimes, controlling owners (inside directors) strive to improve performance, and their interests tend to be better aligned with those of shareholders, depositors, creditors, and regulators. Better performance also legitimises their role to a bank's stakeholders. Researchers argue that the investors of public limited firms believe that the inclusion of busy directors improves firms' value (Gray and Nowland, 2013; Khwaja et al., 2005). Moreover, such directors may be motivated to be relatively timelier in recognising LLP in meeting the expectations of regulators.



### Agency theory, DWMD, and board monitoring

According to the agency theory, if individuals act with self-interest, then the separation between owners and controlling agents leads to agency conflicts. To resolve such conflicts, shareholders incur agency costs (Jensen and Meckling, 1976), including monitoring costs, bonding costs, and residual losses. From the agency theory perspective, directors become over-boarded because they hold more than the optimal number of directorships. As a result of their over-boardedness, DWMD may become less committed to monitoring or advising boards' decision-making processes. Hence, due to being time poor, DWMD might delay recognising LLP according to loan loss changes because they have less time to meet bank shareholders' demands for recognition of the expected LLP.

It becomes clear from the above discussion that two types of agency costs may arise when directors hold multiple directorships. First, as directors become over-boarded, they have less time to devote to each of the boards' decision-making processes. In addition, reputable directors do not necessarily have equal incentives to monitor management (Masulis and Mobbs, 2014). Second, due to the reputation effect, DWMD are in high demand relative to their supply in the market for directors (Knyazeva et al., 2013). Specifically, such directors represent a small group of people who have great expertise (consisting of both human and relational capital) in holding directorships. This small group of people tends to have personal contacts and relationships with banks' sponsors or controlling shareholders in external governance regimes, whereas controlling sponsors have incentives to appoint directors from within their networks or directors who are management-friendly (Levit and Malenko, 2016). In this context, according to the busyness hypothesis, as banks' profitability increases, controlling owners' interests become decoupled from those of shareholders, regulators, and creditors. In such a case, the moral hazards become magnified.

### DWMD and LLP

The amount of LLP recognised reflects bank managers' expectations regarding future loan defaults. Therefore, the amount of LLP conveys the level of expected loan losses, as estimated and recorded by accountants according to their records and experiences (Bushman and Williams, 2012; Ng and Roychowdhury, 2014). For accounting purposes, LLP are debited on the income statement as an increase in expenses for a specific period. LLP are a managerial tool to manage the amount of credit-related risks, and even auditors and regulators cannot ideally monitor a bank's credit-related risk-taking behaviours by analysing LLP (Beatty et al., 1995; Nichols et al., 2009). LLP are divided into two components: non-discretionary and discretionary. The non-discretionary component indicates the loan portfolio's expected impairment, while discretionary LLP are the portion of a bank's accrual under management's control. Thus, the amount of LLP is driven by the board of directors' incentives. Recognising a high amount of LLP shifts profitability from the present to the future, while doing the reverse shifts profitability from the future to the present. Therefore, the recognition of LLP can be an income-smoothing tool.

Arguably, recognising a high amount of LLP can convey the message that the recognition of loan losses is timely; however, this strategy has a negative effect on profitability and regulatory capital. Prior research shows that bank managers can use LLP as a discretionary accounting tool to utilise more information related to future expected losses and mitigate procyclicality in bank lending (Beatty and Liao, 2011; Beatty et al., 2002; Beck et al., 2016; Bushman and Williams, 2012). In addition, profitable banks have incentives to recognise LLP, as such banks do not tend to struggle to achieve target profitability or acquire regulatory capital (Greenawalt and Sinkey, 1988; Sood and Abou, 2012). In contrast, some argue that bank managers may delay recognising LLP as a tool for enhancing accounting discretion. Such delays in the recognition of LLP dampen the market's ability to discipline banks for risk-taking behaviours, as financial reports become less transparent (Bushman and Williams, 2012; Huizinga and Laeven, 2012). Bushman et al. (2016) argue that placing competitive pressure on profits can create incentives for managers to delay recognising the LLP related to expected loan losses. A delay in recognising LLP may create information asymmetry between banks and market participants (Kilic et al., 2013; Nichols et al., 2009). Moreover, as concentrated ownership increases, managers' incentives to hide information from minority shareholders increase (Cullinan et al., 2012). Thus, LLP recognition may signal managerial incentives to use LLP to incorporate private information, while delayed recognition of LLP reduces investors' ability to monitor bank managers.

In the context of South Asia, DWMD can reflect both the reputation and busyness effects through their recognition of LLP. DWMD may have incentives to recognise LLP when required for various reasons. First, the recognition of LLP signals a prudent attitude toward a bank's risk management on the part of a director. According to Lim et al. (2014), banks shift their lending behaviours toward more conservative bank loan loss accounting by becoming more prudent, as loan officers are driven to meet profitability targets. Second, from a regulatory perspective, the timely recognition of loan losses reduces banks' ability to take excessive risks (Jin et al., 2016). Third, as regulation in the banking industry is constantly increasing in South Asia, DWMD have incentives to recognise the expected LLP.

In contrast to the above effect, directors may also have incentives to delay LLP. First, as such directors simultaneously hold directorships in various firms and corporations, they have inside information regarding banks' loan quality, the selection of borrowers, and the demand for loans in the market. Therefore, as advisors to banks, directors may disclose such information, and banks may use it to facilitate delays in loan loss provision. This indicates that DWMD may use available information and expertise at their discretion to maintain LLP. Liu and Ryan (1995) argue that as LLP decrease, discretion regarding them increases. Second, since banks have incentives to report persistent earnings, managers have incentives to delay LLP for earnings management or to smooth fluctuations in income. Morris et al. (2016) find that, during the financial crisis of 2009, banks

used discretionary LLP to smooth income and signal good bank performance. Third, a delay in the recognition of LLP can be advantageous when managing capital, which is required to maintain capital regulation. When banks struggle to maintain the required level of capital, a delay in recognising LLP increases a bank's capital (Ahmed et al., 1999; Kanagaretnam et al., 2003). Banks' directors can perform their roles better when they hold few directorships (reputation effect), and their ability to delay LLP decreases as they become over-boarded due to holding multiple directorships.

In the context of South Asia, we expect to find a non-linear relationship between DWMD and LLP, as DWMD have incentives to recognise expected loan losses and delays in the recognition of loan losses. From the above argument, we formulate our hypotheses as follows:

Hypothesis 1: Banks in South Asia recognise the expected LLP.

Hypothesis 2: There is a non-linear relationship between DWMD and LLP.

An inverted U-shaped relationship, with an over-boarded turning point, indicates that reputable directors proxied by the prevalence of DWMD are more forthcoming in recognising LLP than less reputable or over-boarded directors, indicating that such directors are not worried about or tempted to reveal inside information about the quality of their banks' loans and profitability targets. The opposite would hold for a U-shaped relationship.

## Data description, empirical model, and methods

The financial information is obtained from the Fitch Connect database. To collect information related to the governance variables, financial statements are sourced from individual banks' websites, and then detailed information on their directors is hand-collected from annual reports. We take several steps to classify DWMD. First, we gather the names of banks' directors, CEOs, and controlling owners from banks' annual financial statements. Second, we collect biographies of directors to determine whether they hold directorships in other firms. Third, we conduct a further search on the banks' websites and other websites related to business (e.g. bloomberg.com, Yahoo.com, and Google.com) to obtain missing information about multiple directorships. Finally, we merge the resulting sample with the Fitch Connect database to obtain the accounting information. The financial data were collected from 2008 to 2019, including the lag and lead variables from the Fitch database. We select banks with a minimum of three consecutive years of data. Our final sample consists of 809 bank-year observations for 96 banks. The sample represents 92% of the total listed commercial banks in the four countries studied.<sup>5</sup> In total, there were 9,180 directorships and 37,115 director holdings due to multiple board memberships between 2009 and 2018.

### Measures of DWMD and LLP

In this study, we utilise the average number of directorships held by each of the board members as a measure of DWMD.<sup>6</sup> LLP is a measure of how often banks recognise LLP as a change in NPL (non-discretionary indicators or components of possible future credit losses). Nichols et al., 2009 argue that a bank's loan loss accounting reflects its credit risk management behaviours and can create substantial information asymmetry between management and stockholders. Theoretically, loan portfolio composition is a good proxy for LLP. However, such provisions are not always timely according to changes in loan portfolios. Therefore, in prior research, LLP are predicted using other information about loan defaults, such as prior changes in NPL (Liu and Ryan, 1995). The basic regression is exhibited below (Model 1) to test Hypothesis 1. Various versions of Model 1 are then estimated by adding more variables, as reported in Model 2. Model 3 is estimated as follows to test Hypothesis 2:

$$LLP_t = \alpha + \beta_1 \Delta NPL_t + \beta_2 \Delta NPL_{t-1} + \beta_3 \Delta NPL_{t+1} + \text{Controls} + \sum_{a=1}^4 \gamma_a \text{country dummy} + \sum_{t=1}^{2009-2018} \lambda_t \text{year dummy} + \varepsilon_t \text{ (Model 1)}$$

Where:

$LLP_t$	Loan loss provisions in year $t$ divided by lagged total loans.
$\Delta NPL_t$	Changes in the ratio of current non-performing loans (NPL) to current loans in year $t$ .
$\Delta NPL_{t-1}$	Previous year's changes in NPL to lagged total loans.
$\Delta NPL_{t+1}$	Changes in NPL over the period $t + 1$ scaled by lagged total loans, with forward-looking provisioning captured.
$LLR_{t-1}$	Previous year's loan loss reserves.
SIZE	Log of the previous year's assets.
$\Delta LOAN$	Changes in loans during the year.
REG_CAP_RATIO	Regulatory capital ratio.
ULTCONTROL	Ultimate control percentage.

<sup>5</sup> Appendix A1 provides information on the countries' populations, the sample, and the director distribution in our sample, while Appendix AII provides a collective formal definition of the variables in the empirical analysis.

<sup>6</sup> A similar measure has been used in previous research (Ferris et al., 2003; Jiraporn et al., 2009; Sarkar and Sarkar, 2009)

a (continued)

LLP <sub>t</sub>	Loan loss provisions in year <i>t</i> divided by lagged total loans.
BOARD_INDEP	Percentage of independent directors on the board.
BOARD_SIZE	Number of directors on the board.
MEET_ATTEND	Number of board meetings attended, on average, by directors.
BIG-4	Coded as '1' if a bank is audited by one of the 'big four' auditors and as '0' otherwise.
ΔGDP	Changes in the gross domestic product.

The variables ΔNPL and ΔNPL<sub>t-1</sub> capture backward loan loss provisioning, while the variable ΔNPL<sub>t+1</sub> captures forward-looking provisioning. A positive relationship between LLP and the independent variables ΔNPL<sub>t</sub> and ΔNPL<sub>t+1</sub> reflects the likelihood of banks using the forward-looking information of NPL in estimating LLP, thereby indicating that they recognise loan losses. A negative relation between LLP and ΔNPL<sub>t-1</sub> suggests that a bank is delaying loan loss recognition. We include the standard bank-specific control variables that comprise loan loss reserves (LLR<sub>t-1</sub>), bank size (SIZE), ΔLOAN, and the regulatory capital ratio (REG\_CAP\_RATIO). The rationale for including LLR is that, if a bank recognised the need for a large amount of provisions in the previous year, it should require a smaller amount of provisions in the current period. The governance variables include controlling ownership (ULTCONTROL), level of board independence (BOARD\_INDEP), board size (BOARD\_SIZE), and rate of meeting attendance (MEET\_ATTEND). Following Kanagaretnam et al. (2010), we predict that banks with higher auditing quality tend to maintain low levels of LLP. The audit quality is considered 'high' when the indicator variable BIG-4 = 1 if a bank has been audited by one of the 'big four' audit firms and is 0 if a bank has been audited by a 'non-big four' firm. The GDP growth rate (ΔGDP) is included as a control variable to capture the differences in macroeconomic conditions among the sample countries. For simplicity, these control variables are listed as 'controls' in Models 1, 2, and 3. In Models 1, 2, and 3, country dummies are included to capture any unobservable country-specific effects. In terms of the country dummies, three countries are included while omitting India from the model, as India has the largest number of observations among the four countries. Year dummies are then included to capture time-specific effects and deal with the problem of heteroscedasticity in the error term.

$$LLP = \alpha + \beta_1 \Delta NPL_t + \beta_2 \Delta NPL_{t-1} + \beta_3 \Delta NPL_{t+1} + \beta_4 DWMD + \beta_5 DWMD * \Delta NPL_t + \beta_6 DWMD * \Delta NPL_{t-1} + \beta_7 DWMD * \Delta NPL_{t+1} + \text{Controls} + \sum_{a=1}^4 \gamma_a \text{Country dummy} + \sum_{t=1}^{2009-2018} \lambda_t \text{Year dummy} + \varepsilon_t \text{ (Model 2)}$$

The interaction terms DWMD \* ΔNPL<sub>t</sub>, DWMD \* ΔNPL<sub>t-1</sub>, and DWMD \* ΔNPL<sub>t+1</sub> in Model 2 demonstrate the fact that DWMD influence the behaviour of boards, leading to changes in NPL in one direction or the other.

$$LLP = \alpha + \beta_1 \Delta NPL_t + \beta_2 \Delta NPL_{t-1} + \beta_3 \Delta NPL_{t+1} + \beta_4 DWMD + \beta_5 DWMD * \Delta NPL_t + \beta_6 DWMD * \Delta NPL_{t-1} + \beta_7 DWMD * \Delta NPL_{t+1} + \beta_8 DWMD^2 + \beta_9 DWMD^2 * \Delta NPL_t + \beta_{10} DWMD^2 * \Delta NPL_{t-1} + \beta_{11} DWMD^2 * \Delta NPL_{t+1} + \text{Controls} + \sum_{a=1}^4 \gamma_a \text{Country dummy} + \sum_{t=1}^{2009-2018} \lambda_t \text{Year dummy} + \varepsilon_t \text{ (Model 3)}$$

The quadratic interaction terms DWMD<sup>2</sup>, DWMD<sup>2</sup>\*ΔNPL, DWMD<sup>2</sup>\*ΔNPL<sub>t-1</sub>, and DWMD<sup>2</sup>\*ΔNPL in Model 3 are used to test the non-linear relation between DWMD and LLP when testing Hypothesis 2.

### Estimation method

The primary estimation method for our research is a generalised least square random-effects technique with robust standard errors to correct for heteroscedasticity. A well-specified random-effects (RE) model can be used to achieve everything that a fixed-effects (FE) model can achieve (Bell and Jones, 2015). This is one advantage of RE over FE. Using a RE estimator also assumes that any leftover, neglected heterogeneity only induces serial correlation in the composite error term. Still, it does not cause a correlation between the composite errors and explanatory variables. This technique is robust to first-order autoregressive AR (1) disturbances within unbalanced panel data and cross-sectional correlations and/or heteroscedasticity (if any) across panel data. For the cross-country panel data, using a RE method is a better estimation technique than using an FE estimator for the following reasons. First, the aim of the current research is to capture how cross-country variations in directors' levels of busyness affect cross-country variations in bank loan loss provisioning. Since bank directors tend to hold their positions for multiple years, using a FE estimation mitigates the effects. Second, governance data, such as boards' levels of busyness, sizes, and degrees of independence, as well as controlling ownership data, tend to be relatively stable over time. As Wooldridge (2013) argues, if the key explanatory variables are constant over time, we cannot use an FE method to estimate their effect on the independent variable.

We allow for country dummies to accommodate possible correlations between errors across banks within the same country. Year dummies are included to account for year-specific effects in our results. The Hausman test is employed to assess whether a RE estimation can be used or whether a FE estimation should be utilised instead. The test assesses whether the unique errors (μ<sub>i</sub>) are correlated with the regressors. The null hypothesis is that they are not; therefore, the Hausman test is not a test of FE estimation versus RE but rather a test of the similarity of the within and between effects. As Fielding (2004) argues, the Hausman test is a diagnostic test of one specific assumption behind the estimation procedure usually associated with the REs model, but it does not address the decision-making framework for a broader class of problems. However, some of the many heterogeneity biases, such as the correlation between unobserved effects and regressors,



can be solved using the RE model which makes the Hausman test redundant (Bell and Jones, 2015). Thus, in this study, instead of relying on the Hausman test, the problem of heterogeneity bias is addressed with a RE estimator.<sup>7</sup> An RE model that properly specifies the within and between effects should provide identical results to the FEs, method regardless of the Hausman test result (Bell and Jones, 2015). Therefore, the important assumption of the RE model, which is that there is no correlation between the unobserved effects and regressors, can be resolved by the RE model itself. To confirm the presence of heteroscedasticity, Breusch and Pagan (1980) conduct a Lagrange multiplier test to support the RE specification, which rejects the null hypothesis so that errors are independent across banks.

## Empirical results

### Descriptive statistics and correlation matrix

Table 1 displays the descriptive statistics for all the variables employed in the study classified into three categories – governance variables (Panel A), loan loss variables (Panel B), and control variables (Panel C). The board structure data for the total sample indicate that the mean number of directorships held is 4.04 (four directorships). The average board size is 11.35 directors. Regarding board composition, 32.02% of directors are independent, and 67.98% are inside directors. These percentages are similar to those of non-financial firms in other emerging markets, as reported by Choi et al. (2007), where levels of concentrated ownership are high. The average board meeting attendance rate is 86.90%. The mean for controlling ownership is around 0.52%. Banks maintain, on average, a ratio of 1.201% LLP to loans as a hedge against NPL. As a reserve for expected loan losses, banks hold an average of 4.10% LLR to total loans. Finally, in Panel C of Table 1, we include the descriptive statistics related to the other control variables. The average GDP growth rate was 6.00% during the study period.

### DWMD and LLP

In Table 2, we report the results for our examination of the association between DWMD and LLP. In column (1) for the test of Model 1, the coefficient of the forward-looking provisioning variable  $\Delta NPL_t$  (0.134\*\*\*) is positive and significant for LLP ( $P < 0.01$ ). This indicates that banks in South Asia follow forward-looking provisioning methods. This result is consistent with prior findings, such as those by Greenawalt and Sinkey (1988) and Sood and Abou (2012). Hence, we find that banks in South Asia recognise the expected LLP, which lends support to Hypothesis 1.

In Model 2, the DWMD variables are interacted with three variables ( $\Delta NPL_t$ ,  $\Delta NPL_{t+1}$ , and  $\Delta NPL_{t-1}$ ) that reflect the recognition of the expected LLP. Given that  $d(LLP)/d(\Delta NPL_t) = 0.228 - 0.026 * DWMD$  is positive yet declining as DWMD increases, directors with multiple directorships reduce LLP. The coefficient  $\beta_5$ , which demonstrates the effect of DWMD on LLP, is negative and significant (reported in Column 2 of Table 2). Moreover,  $\beta_6$ , which is loaded on the interaction variable  $DWMD * \Delta NPL_{t-1}$ , is negative and significant. The negative association between the previous years' LLP values indicates that banks with DWMD delay the recognition of LLP.

Model 2 ignores the higher-order interaction to model the tension between the busyness and reputation effects.<sup>8</sup> It shows that DWMD provide LLP; however, holding multiple directorships may make such directors over-boarded, which affects their ability to monitor LLP. Alternatively, DWMD may delay recognising LLP to meet profitability targets to maintain their reputations or because they are optimistic about the future of NPLs. However, the linear model cannot be used to determine which of these explanations is true. Model 3 addresses this issue by adding a squared interactive term. The explanation regarding over-boardedness is valid for high levels of directorship holding, while the reputation effect is valid at relatively low levels of directorship holding. The coefficient  $\beta_9$ , loaded on the interaction variable  $DWMD^2 * \Delta NPL_t$ , is positive and significant, indicating a U-shaped relationship between changes in LLP and DWMD. The exact relationship between LLP and changes in NPL is given by its partial derivatives, based on Model 3 (reported in Column 3 of Table 2).

The non-linear relationship between DWMD and LLP is depicted in Fig. 1. Overall, the findings indicate that boards recognise expected LLP as  $d(LLP)/d(\Delta NPL_t) > 0$  for all feasible values of DWMD. However, directors with multiple directorships tend to delay recognising LLP, as the sum of the last two terms of the partial derivative is negative for all feasible values of DWMD. Specifically, the U-shaped relationship indicates that LLP recognition decreases as banks employ more reputable directors and increases as they employ over-boarded directors. Thus, DWMD delay recognising LLP. However, the length of the delay decreases when they become over-boarded.<sup>9</sup> The turning point of the graph is at 6.67 ( $DWMD = -\beta_5/2\beta_9 = -(-0.080)/2*0.006$ ). Thus, the busyness effect begins affecting directors' level of engagement after this point. A more straightforward interpretation of the U-shaped relationship is that directors with fewer directorships (probably less busy and less reputable) and directors with more directorships (probably too busy and extremely reputable but not over-boarded) are less

<sup>7</sup> As Dyckman and Zeff (2014) argue, there is a lot of questionable methodology use in the literature. They write that 'Novice researchers should be disabused from unthinkingly relying on previous literature for guidance on sound methodology' (p. 698).

<sup>8</sup> Expertise and relative status are important determinants of each party's ability to influence outcomes (Badolato et al., 2014). Our results could be due to the reputations of the directors (proxied by multiple directorships) or their status or a combination of these factors that results in higher recognition of LLP. However, due to a lack of information on educational attainment from elite institutions for most of the directors in our sample, we could not measure 'status' to conduct additional tests to tease out the differences in the effects of reputation and status.

<sup>9</sup> The relevant aspect of the partial derivative in this case is  $-0.08 * DWMD + 0.006 * DWMD^2$ , which takes a negative value for all feasible values of DWMD.

**Table 1**  
Descriptive statistics and correlation matrix.

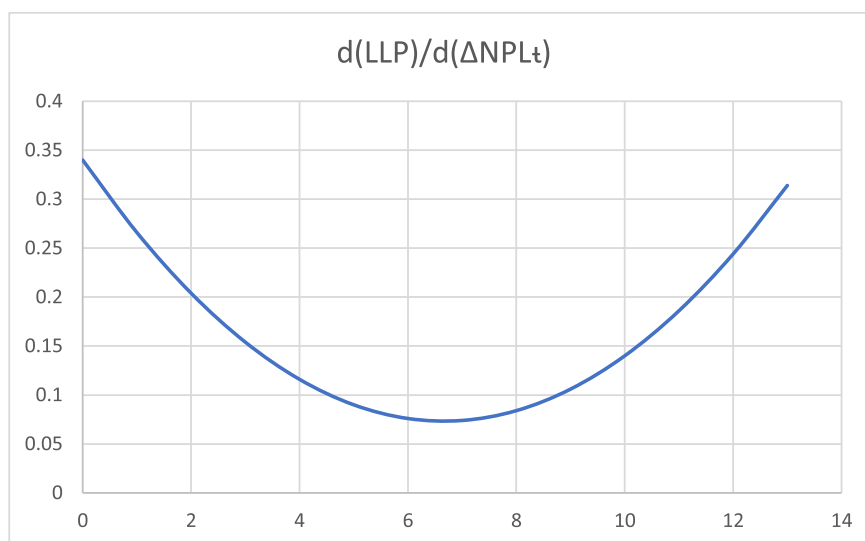
Panel A: Governance Variables	Obs.	Mean	SD	Q1	Median	Q3
DWMD	809	4.043	2.260	2.420	3.430	5.230
BOARD_SIZE	809	11.347	3.291	9.000	11.000	13.000
BOARD_INDEP	809	0.320	0.195	0.167	0.286	0.444
MEET_ATTEND	809	0.869	0.354	0.810	0.880	0.930
ULTCONTROL	809	0.518	0.212	0.343	0.510	0.682
BIG-4	809	0.216	0.412	0.000	0.000	0.000
<b>Panel B: Loan loss</b>	<b>Obs.</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Median</b>	<b>Max</b>
LLP	809	0.012	0.014	0.005	0.009	0.015
$\Delta$ NPL	809	0.003	0.025	-0.003	0.000	0.005
$LLR_{t-1}$	809	0.040	0.041	0.015	0.028	0.047
<b>Panel C: Control Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Median</b>	<b>Max</b>
SIZE	809	22.632	1.564	21.492	22.203	24.139
$\Delta$ LOAN	809	0.001	0.070	-0.025	0.000	0.018
REG_CAP_RATIO	809	13.720	3.941	11.700	12.960	14.850
$\Delta$ GDP	809	0.060	0.017	0.050	0.061	0.073

This table presents the descriptive statistics of the variables used in our analysis. The sample consists of the data of 96 banks from 2009 to 2018. Panel A displays the descriptive statistics of the governance variables. In contrast, Panel B depicts the descriptive statistics of the loan loss variables, and Panel C displays the descriptive statistics of the control variables.

**Table 2**  
Effect of DWMD on Banks' Recognition of Expected LLP.

Panel A: Coefficient Estimates	LLP (1)	LLP (2)	LLP (3)
$\Delta$ NPL <sub>t</sub>	0.134*** (9.14)	0.228*** (6.78)	0.340*** (5.50)
$\Delta$ NPL <sub>t-1</sub>	0.116*** (7.65)	0.169*** (5.42)	0.300*** (4.71)
$\Delta$ NPL <sub>t+1</sub>	-0.056*** (-4.04)	-0.051* (-1.92)	0.140*** (2.58)
DWMD		0.001 (0.02)	-0.001* (-1.79)
DWMD* $\Delta$ NPL <sub>t</sub>		-0.026*** (-2.92)	-0.080*** (-2.69)
DWMD* $\Delta$ NPL <sub>t-1</sub>		-0.014* (-1.71)	-0.080*** (-2.60)
DWMD* $\Delta$ NPL <sub>t+1</sub>		0.001 (0.15)	-0.094*** (-3.65)
DWMD <sup>2</sup>			0.001* (1.82)
DWMD <sup>2</sup> * $\Delta$ NPL <sub>t</sub>			0.006* (1.77)
DWMD <sup>2</sup> * $\Delta$ NPL <sub>t-1</sub>			0.006** (2.03)
DWMD <sup>2</sup> * $\Delta$ NPL <sub>t+1</sub>			0.009*** (3.52)
Control variables	Included	Included	Included
Country dummies	Included	Included	Included
Year dummies	Included	Included	Included
Constants	-0.007 (-0.63)	-0.011 (-1.03)	-0.010 (-0.97)
Adjusted R <sup>2</sup>	0.477	0.482	0.497
No. of observations	809	809	809
No. of countries	4	4	4

The dependent variable LLP indicates loan loss provisions to lagged total loans. The independent variables are  $\Delta$ NPL (changes in the ratio of current NPL to current loans),  $\Delta$ NPL<sub>t-1</sub> (previous year's changes in non-performing loans to lagged total loans [backward provisioning]), and  $\Delta$ NPL<sub>t+1</sub> (changes in NPL over the period t + 1, scaled by lagged total loans [forward-looking provisioning]). A positive relation between LLP and the independent variables  $\Delta$ NPL<sub>t</sub> and  $\Delta$ NPL<sub>t+1</sub> reflects the likelihood of banks using forward-looking information regarding NPL in estimating LLP, thereby indicating that banks recognise expected loan losses. A negative relation between LLP and  $\Delta$ NPL<sub>t-1</sub> indicates that a bank tends to delay loan loss recognition. The main independent variables of interest are interaction variables DWMD \*  $\Delta$ NPL<sub>t</sub>, DWMD \*  $\Delta$ NPL<sub>t-1</sub>, and DWMD \*  $\Delta$ NPL<sub>t+1</sub>. As a control for bank-specific differences in LLP, loan loss reserve (LLR), bank size (SIZE)  $\Delta$ LOAN, and the regulatory capital ratio (REG\_CAP\_RATIO) are included in all the models. The governance variables include controlling ownership (ULTCONTROL), board independence (BOARD\_INDEP), board size (BOARD\_SIZE), meeting attendance (MEET\_ATTEND) and audit auditing quality (BIG-4). As a macroeconomic control,  $\Delta$ GDP is also included in the models. The superscripts \*\*\*, \*\*, and \* represent significance at the levels of 1%, 5%, and 10%, respectively. The t-statistics are in parentheses.



$$d(LLP)/d(\Delta NPL_t) = 0.340 - 0.080 * DWMD + 0.006 * DWMD^2$$

Fig. 1. Non-linear relationship between DWMD and LLP.

inclined to delay recognising LLP than moderately busy and reputable directors. This means that reputable, but not overboarded, directors are relatively conservative in recognising the need for LLP. A variety of factors could drive this behaviour. First, reputable directors, given their experience, tend to have optimistic expectations about NPLs and make a judgement call that, on average, leads to a delay in the recognition of NPLs. Second, given that such recognition has a negative effect on profitability and regulatory capital, reputable directors tend to delay recognising LLP to ensure that they protect their reputations and that their banks continue to be viewed as profitable.

### Robustness check

To check the robustness of the results, we conduct several alternative analyses related to DWMD and LLP.

#### Tests to address endogeneity concerns

Poorly (or even well) performing banks are likely to hire reputable directors (captured by the number of directorships held), setting up a two-way causality between LLP and DWMD. To address this potential issue with endogeneity and to confirm the robustness of our results in controlling for the potentially confounding effects of observed and unobserved factors, we conduct two tests – one using a two-stage least squares regression (2SLS) and one using the entropy-balancing method (EBM). In testing the main findings, based on the 2SLS methodology, in stage one, we use the daytime travel time by car from the nearest major airport to the bank's headquarters as the instrumental variable, as it is unlikely to affect firm-level LLP but may be related to the firm-level independence of board members and their attendance at board meetings.<sup>10</sup> We expect to find a negative association between the time it takes to travel to banks' headquarters and directors with multiple directorships. The longer it takes to travel to a location, the less likely it is that directors will be able to hold multiple directorships efficiently. While the time it takes to travel from a bank's headquarter to the nearest major airport can be expected to affect the busyness of directors and their ability to attend board meetings, it is unlikely to directly affect loan loss provisioning. The instrumental variable (IV) approach involves instrumentation for the endogenous variable DWMD. As reported in Panel A of Table 3, we find a negative association between DWMD and TIME (t-value = - 2.16). The results from the 2SLS analysis are like those reported in Table 2 (Panel B, Table 3). Considering that the travel time is based on the distance between the nearest major airport and a bank's headquarters, we employ the distance between the headquarters of banks and the log of one plus the nearest major airport (Fields et al., 2012) as an alternative instrumental variable and find results consistent with the previous ones.

Additionally, to address the endogeneity concerns, we employ the entropy-balancing method (EBM) as a pre-processing technique to achieve a covariate balance with a binary treatment for DWMD. The binary measure is based on the median value of DWMD, with a value greater than the median coded as '1' and as '0' otherwise. The significant advantages of using

<sup>10</sup> We acknowledge that it is difficult to determine the travel time in the specific historical period examined. To partly address this concern, we measure travel time on various days of the week and employ the distance between a bank's headquarters and the nearest major airport as an alternative instrumental variable.

**Table 3**  
Two-stage least squares regression using instrumental variables.

Panel A: Stage 1 Coefficient Estimates	Dependent variable = DWMD
TIME	-0.0045** (-2.16)
Control variables	Included
Country dummies	Included
Year dummies	Included
Adjusted R <sup>2</sup>	0.836
No. of observations	809
No. of countries	4
Panel B: Stage 2 Coefficient Estimates	LLP
$\Delta NPL_t$	0.344*** (4.78)
$\Delta NPL_{t-1}$	0.304*** (4.37)
$\Delta NPL_{t+1}$	0.145** (2.20)
DWMD	-0.001 (-0.05)
DWMD* $\Delta NPL_t$	-0.091** (-2.43)
DWMD* $\Delta NPL_{t-1}$	-0.089** (-2.49)
DWMD* $\Delta NPL_{t+1}$	-0.106*** (-2.94)
DWMD <sup>2</sup>	-0.001 (-1.44)
DWMD <sup>2</sup> * $\Delta NPL_t$	0.009** (2.16)
DWMD <sup>2</sup> * $\Delta NPL_{t-1}$	0.008** (2.03)
DWMD <sup>2</sup> * $\Delta NPL_{t+1}$	0.010** (2.49)
Control variables	Included
Country dummies	Included
Year dummies	Included
Adjusted R <sup>2</sup>	0.505
No. of observations	809
No. of countries	4

The dependent variable DWMD is a measure of the busyness of directors due to holding multiple directorships. TIME is the instrumental variable measured as the length of time it takes to travel from a bank's headquarters to the nearest major airport by car during the day. All the other variables are as previously defined. The superscripts \*\*\*, \*\*, and \* represent significance at the levels of 1%, 5%, and 10%, respectively. The t-statistics are in parentheses.

the EBM include the ability to obtain a high degree of covariate balance and retain valuable information. Entropy balancing involves using a reweighting scheme that directly incorporates the covariate balance into the weight function applied to the sample units (Hainmueller, 2012). This method reduces the model's dependence to enable the subsequent estimation of treatment effects in pre-processed data (Ho et al., 2007). In EBM, we first estimate the unit weights with a logistic regression and then execute balance checks to ensure that the estimated weights equalise the covariate distributions. The model for the EBM includes year- and country-specific fixed effects, and we find that the results are consistent with our hypothesis.<sup>11</sup>

#### Chairpersons with multiple directorships and loan loss recognition

We examine whether the appointment of a chairperson with multiple directorships (CWMD) has any effect on LLP recognition. The prior research has yielded evidence that, in controlling the shareholding environment, the chairperson of a board normally has a strong decision-making role in the selection of independent directors and other board members and sets the agenda for board meetings and other discussions (Yeh and Woidtke, 2005). Hence, we propose that banks with CWMD on their boards will be likely to delay recognising LLP, since the chairperson can influence the decision-making process of the board members.

Table 4 reports the results for the test of the impact of CWMD on LLP. The results show that the interaction term CWMD\* $\Delta NPL_{t+1}$  is negative and significant ( $p \leq 0.10$ ). The evidence is consistent with the idea that CWMD will be less likely to

<sup>11</sup> The results are available upon request.

**Table 4**  
Effect of CWMD on Banks' Recognition of LLP.

Panel A: Coefficient Estimates	LLP
$\Delta NPL_t$	0.174*** (8.36)
$\Delta NPL_{t-1}$	0.117*** (5.55)
$\Delta NPL_{t+1}$	-0.058*** (-3.24)
CWMD	0.001 (1.06)
CWMD* $\Delta NPL_t$	-0.008** (-2.37)
CWMD* $\Delta NPL_{t-1}$	0.001 (-0.02)
CWMD* $\Delta NPL_{t+1}$	0.001 (0.30)
Control variables	Included
Country dummies	Included
Year dummies	Included
Constants	-0.011 (-1.05)
Adjusted R <sup>2</sup>	0.461
No. of observations	775
No. of countries	4

This table presents the results for the regression analysis related to the effect of CWMD on LLP. The dependent variable is LLP, while the independent variables are the interaction terms between the CWMD and NPL,  $\Delta NPL_{t-1}$ , and  $\Delta NPL_{t+1}$  coefficients. The main independent variable of interest is the interaction variable CWMD\* $\Delta NPL$ . As control variables, we include all variables from our timeline in the LLP baseline models. The subscripts \*\*\*, \*\*, and \* represent significance at the levels of 1%, 5%, and 10%, respectively. The t-statistics are in parentheses.

recognise expected LLP. This finding also confirms that, once a bank appoints a CWMD to its board, it will be less likely to be concerned about (or have time to deal with) the market demand to recognise the expected LLP.

#### Alternative definition of multiple directorships

We run our model using an alternative definition of multiple directorships, in which we define directors holding three or more directorships as DWMD (Andres et al., 2013; Elyasiani and Zhang, 2015). With this alternative measure of multiple directorships, we find a U-shaped relationship between DWMD and LLP, which is consistent with the results reported in Table 2. Second, we separate DWMD into inside and outside directors (independent directors) and examine such directors' associations with LLP. We find a consistent U-shaped relationship between inside and outside DWMD and LLP; however, the results are not significant. Although inside and outside DWMD are associated with LLP, we find that the presence of an inside DWMD has a non-linear U-shaped relationship with LLP. This finding confirms our result in Table 2 showing that DWMD have a significant non-linear association with LLP. The results are left un-tabulated for brevity.<sup>12</sup>

#### Summary and conclusion

This paper examines the influence of directors with multiple directorships (DWMD) on loan loss provision (LLP) in banks in South Asia. This is the first study of the effect of directors with multiple directorships on LLP to the best of our knowledge. According to the extant research, directors with multiple directorships provide high-quality leadership through their experiences and reputations. However, some researchers argue that holding many directorships causes directors to become over-boarded and, therefore, time poor. The latter argument has its roots in the agency theory, whereas the former is based on the resource dependence theory or the reputation hypothesis. We argue that this is a textbook case of a non-linear model—a quadratic model, specifically. Theoretically, it is reasonable to expect a U-shaped or inverted U-shaped relationship between DWMD and LLP.

We find a U-shaped relationship between directors with multiple directorships and LLP. This means that moderately busy but not too over-boarded directors delay recognising LLP. This signal either directors' optimism about NPLs or a preference for managing profitability with the aim of meeting targets and expectations. We also find evidence in favour of the existence of a negative relationship between chairperson with multiple directorships and LLP. Overall, our results indicate that directors with multiple directorships lead to a delay in the recognition of LLP. The results are robust to alternative definitions of directors' busyness, and we address the concerns related to endogeneity.

<sup>12</sup> The results are available upon request.



## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Appendix AI

Listed Commercial Banks and Number of Multiple Directorships in South Asia by Country

	Bangladesh	India	Pakistan	Sri Lanka	Total
Total banks in the sample	38	32	16	10	96
Number of directors	2,906	3,977	1,565	732	9,180
Multiple directorship average	4.22	3.82	4.04	4.57	4.04
Number of director positions	12,266	15,189	6,317	3,342	37,115

This table presents the country-wise distribution of directors according to the number of directors, multiple directorships, and director positions. This table is based on the directorship information of the sample countries.

Data Source: Hand collected from annual reports.

## Appendix AII

Descriptions and Definitions of Variables

Governance Variables	
DWMD	Average number of directorships held by a director in a specific year. Percentage of directors who hold 3 or more directorships.
Accounting Conservatism Variables	
LLP	Loan loss provisions to lagged total loans
NPL	Current NPL, previous year's NPL, predicted NPL
LLR	Previous year's loan loss reserves to lagged total loans
Control Variables (Board-specific control variables)	
BOARD_INDEP	Percentage of total directors who are independent
BOARD_SIZE	Number of directors on the board
ULTCONTROL	Ownership percentage of the largest shareholder
MEET_ATTEND	Average rate of meeting attendance by board members
Control Variables (Bank-specific control variables)	
BIG-4	Banks audited by 'big four' auditing firms equal one; all other firms equal zero
REG_CAP_RATIO	Ratio of tier I capital to total capital
SIZE	Natural logarithm of total assets in thousands of USD
Macroeconomic Control Variable	
$\Delta$ GDP	Changes in the gross domestic product (GDP) of a country
Instrumental Variables (Test of endogeneity)	
TIME	Time it takes during the day to travel by car from the nearest major airport to a bank's headquarters
DISTANCE	Distance between the headquarters of banks and the log of one plus the nearest major airport

Data Availability: The data from the public sources cited in the text are freely available.

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