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Cash holdings and earnings quality: evidence from the Main and Alternative UK markets[☆]

Jorge Farinha[a,*], Cesario Mateus[b], Nuno Soares[c]

[a] CEF.UP, Faculdade de Economia, Universidade do Porto, Portugal
[b] University of Greenwich, Faculty of Business, Department of Accounting and Finance, United Kingdom
[c] CEF.UP, Faculdade de Engenharia, Universidade do Porto, Portugal

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ABSTRACT

In this paper we investigate the importance of earnings quality as a determinant of cash holdings by companies, exploring among other factors the nature of earnings (positive or negative) and the level of financial disclosure, proxied by the market where firms are listed (Main or AIM-Alternative Investment Markets in the United Kingdom). Based on a sample covering the period of 1998–2015, we provide evidence that as earnings quality decreases, firms tend to hold more cash except when firms are facing losses in both Main and AIM markets. In addition, we document that information conveyed by earnings quality is a more important determinant of cash reserve levels for Main Market than for AIM firms (where the level of financial disclosure and oversight is lower). Overall, our evidence suggests that cash balances are positively influenced by the presence of greater information asymmetries arising from poor earnings quality but also from the existence of lower levels of regulatory oversight and the occurrence of losses, both of which reduce the importance of earnings quality as a determinant of cash levels. Our results also imply that companies with higher levels of earnings opaqueness seem to benefit from having higher cash holdings so as to avoid dependence from costly external funding.

1. Introduction and motivation

Prior research has shown that companies may set their levels of cash holdings by trading off the costs and benefits of larger liquidity reserves (Miller & Orr, 1966). Costs that have been analysed typically include low returns and possible tax disadvantages of cash reserves (Bigelli & Sánchez-Vidal, 2012) while usual benefits that have been identified are the reduction in transaction costs that would exist in the case of new capital raising or the liquidation of assets, the reduced likelihood of default, the avoidance of possibly expensive funding or even the shortage of financing alternatives (Kim, Mauer, & Sherman, 1998; Opler, Pinkowitz, Stulz, & Williamson, 1999).

Reasons for a costly external financing relate in general to the presence of information asymmetries between firms and investors (Myers & Majluf, 1984) or to the existence of agency problems associated with underinvestment and asset substitution (Jensen & Meckling, 1976). Additionally, managers may pursue their own interests by maintaining large amounts of cash on companies' balance sheets so as to keep sub-optimal levels of net debt, risk and/or dividends in comparison to those desired by shareholders (Easterbrook, 1984).

With the exception of García-Teruel, Martínez-Solano, and Sánchez-Ballesta (2009) who focused on Spanish firms prior to the adoption of IFRS by listed business groups, there has been, however, little research on the relation between cash reserves and earnings quality in an European setting. In the US context, Sun, Yung, and Rahman (2012) show a negative impact of earnings quality on corporate cash holdings. Chung, Kim, Kim, and Zhang (2015) document that companies in industries with greater levels of information asymmetry hold lower amounts of cash balances, consistent with a shareholders monitoring hypothesis where managers are restrained from holding large cash reserves that could be misused when their environment is more opaque. The UK is a particularly interesting setting to test the relationship between earnings quality and cash-holdings. This is not just due to earnings quality being usually perceived to be higher in Anglo-Saxon (common-law) accounting systems than in continental Europe (code-law) ones but also because, as Ball, Kothari, and Robin (2000) observe, "*within the common-law group, there is less asymmetric conservatism in accounting income in the United Kingdom, a country we characterize in terms of lower political involvement in accounting, lower litigation costs and less issuance of public debt*" (p. 4). Finally, we are able also to test whether different

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* Corresponding author at: Faculdade de Economia da Universidade do Porto, Rua Roberto Frias, 4200-464 Porto, Portugal.
E-mail addresses: jfarinha@fep.up.pt (J. Farinha), c.mateus@greenwich.ac.uk (C. Mateus), ndsoares@fe.up.pt (N. Soares).

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levels of financial disclosure for UK companies according to the particular requirements of their listing market (the AIM-Alternative Investment Market or the Main Market) have an impact on the corporate need for cash balances. As Nielsson (2013) and Jenkinson and Ramadorai (2013), among others, observe, companies in the AIM market face fewer reporting obligations in comparison with their Main Market counterparts.

We posit that as firms' earnings quality decrease, managers may need to counter a possible negative perception from investors by holding larger amounts of cash reserves. This may be caused by the fact that in the presence of lower quality earnings, information asymmetries are perceived to be stronger (as suggested by Sun et al., 2012) and external financing can become more costly or even unavailable. This in turn will lead managers to rely more on internal funds and create a cash buffer to prevent any eventual shortage of funding needed for future investments.

Given the less stringent supervision, as well as the less demanding listing and financial disclosure requirements prevailing for firms listed in the AIM market, access to external funding may be more difficult to obtain for these companies and so we explore the relation between cash holdings and earnings quality separately for firms listed in the AIM and Main Markets. Finally, we also look at companies experiencing losses, as well as those engaging in substantial R&D activities or undergoing periods of robust growth to analyse whether in these cases a negative relation between earnings quality and cash earnings can also occur along the same or different terms as for other companies.

Our results reveal that earnings quality indeed has a negative impact on the level of cash holdings, consistent with an expected substitution effect, either for firms in the UK's AIM or Main Markets. However, when we split our sample between profitable and loss-making firms, we observed that for the latter earnings quality does not influence the amount of cash reserves held by a company, except when such firms are listed in the AIM market. We interpret this finding as meaning that for loss-making companies in the Main Market managers refrain from having prohibitively high opportunity costs associated with large cash holdings as a means to compensate for a low quality earnings perception. This could be because new capital will be generally available for companies in this market even though at a substantially increased cost. However, if loss-making firms are in the AIM market, the high level of information asymmetry and/or lack of official supervision will make it almost compulsory for managers to hold larger cash reserves when their firms present negative earnings on top of a perceived low quality of its published results. A possible reason for this is that fears could be greater among investors that loss-making, low quality earnings firms coupled with the low level of financial disclosure and supervision in this market will be more prone to default or bankruptcy risk and therefore companies will not want to become dependent on external funding which may become unavailable.

We also find that the negative impact of earnings quality on cash holdings is more strongly felt in low-growth companies and, in the case of AIM firms, is restricted to these kinds of companies. Finally, we document that earnings quality is an important factor in the determination of cash holdings only for companies that do not engage in substantial, informational-relevant, R&D activities.

Overall, our evidence suggests that R&D intensive and AIM-listed firms have specificities in the way earnings quality impacts on cash holdings. In particular, our results are consistent with the importance of specific information asymmetries prevailing in companies listed in the AIM that are relevant determining factors for cash holdings. These asymmetries arise either as the result of both the nature of their activities and the level of financial disclosure which depends on the particular requirements of the market where these firms are listed.

Our contribution to the literature on the determinants of cash holdings is threefold. First, we extend previous research by García-Teruel et al. (2009) in several directions. We use data from UK-listed firms including firms from both the Main and AIM markets that have different regulatory environments and distinct listing and financial disclosure requirements. Because there is more regulatory oversight and financial disclosure requirements, firm listed in the Main Market the information available to external parties is typically more detailed and access to external funding is more accessible than for AIM firms. Accordingly, we posit and test whether the expected relationship between earnings quality and cash holdings could be different for these two sets of firms. In addition, the García-Teruel et al. (2009) paper covers a period (1995–2001) prior to the issuance of EU's Regulation 1606/2002, which required the mandatory adoption of International Financial Reporting Standards by Spanish-listed firms. Before this, the Spanish accounting system was considered as being in an "opposite group" (Gastón, García, Jarne, & Gadea, 2010) as that of the UK, i.e. the former belonging to the European continental accounting model and the latter to the Anglo-Saxon one. As the IFRS is usually seen as being closer to the Anglo Saxon model (Gastón et al., 2010), analyzing the issue of the relation between earnings quality and cash holdings in the UK would provide relevant additional evidence to test whether García-Teruel et al. (2009) conclusions would still hold in an accounting environment where, in general, earnings quality is seen as having a higher standard and accordingly being more informative. For instance, Zeghal, Chtourou, and Fourati (2012) document that following the adoption of IFRS standards earnings quality improves in a sample of firms from 15 EU countries. Similarly, Van Tendeloo and Vanstraelen (2005) show that earnings management levels are lower after the adoption of IFRS in Germany. However, even when countries adopt the same IFRS standards, Nobes (2006) observes that significant differences in international financial reporting quality remain.

Second, we explore the impact of earnings losses on cash holdings. For firms with negative profits, earnings quality may be a less important determinant of cash holdings. As pointed out by Darrough and Ye (2007), when firms incur losses, "*the link between current and future abnormal earnings is weakened*" (p. 62). In addition, cash reserves for these firms may also have a particularly high opportunity cost due to the perceived risk of financial distress and related funding shortage. In such a setting, low earnings quality may not imply that the firm will seek to maintain high levels of expensive cash holdings. We also test for the joint effect of losses and type of listing (AIM or Main) to see whether the impact of losses is the same for firms listed in each of these markets.

Finally, our paper also addresses the relevance of R&D and growth for the relation between earnings quality and cash holdings. As documented by Franzen and Radhakrishnan (2009), R&D expenses can have an especially important informational role from the standpoint of firm valuation by the market for both firms with losses and with positive profits. Using UK data, Green, Stark, and Thomas (1996) also reach similar conclusions. As also observed by Franzen and Radhakrishnan (2009), growth can additionally have a similar value-relevant informational role as R&D. In line with this literature, it is therefore possible that for firms where R&D is important or that are experiencing high growth, a different relation may also exist between earnings quality and cash holdings. We test for this and also provide an analysis that combines these factors with the existence of a listing in the AIM market.

Our paper proceeds as follows. In the next section we provide a literature review and present our major research hypotheses. We then proceed in Section 3 to describe the sample and the methodology used. In Section 4 we analyse the empirical results while the final part of the paper provides the main conclusions.

2. Literature review and research questions

(i) General determinants of cash holdings

Several papers have analysed the determinants of cash holdings by companies. Opler et al. (1999) show evidence consistent with firms choosing an optimal level of cash holdings according to a static trade-