

# **How international orientation of top managerial teams may (not) moderate the performance of serial acquirers?**

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## Abstract

Extant literature has mostly studied serial acquirers with one-time acquirers. Looking at value creation exclusively by these frequently acquiring firms from the UK, engaging in cross-border acquisitions, we attempt to demystify the potential role of previously identified factors affecting their short-run returns against the backdrop of ‘international orientation’ of their top managerial teams (TMTs). Taking a more comprehensive view of earlier research, in this study we focus upon which of the forecasted effects, i.e. learning or post-acquisition integration issues, predominate, when TMTs of such firms have either international experience or host country familiarity or mix of diverse nationalities. In other words, we analyse whether the investors perceive the acquisition announcements by such multiple acquirer firms with such internationally oriented TMTs, favourably. Testing for the non-linear moderating influence of TMT orientation with 1777 firm-year observations by 278 serial acquirers over a period of 1999 until 2008, we documented the negative influence of ‘indigestion’, as an outcome of both frequent acquisitions and higher transaction values, cumulated over a prior three-year event window. Nevertheless, this detrimental impact was likely to be mitigated at higher levels of international experience of acquirer executives. However, our findings failed to substantiate either the postulated benefits of ‘organizational learning’ or any moderating impact of TMT orientation thereon. These empirical results highlighted that when the hypothesized notion of indigestion effects outweighed that of learning for these serial bidders, moderating benefit of their internationally oriented TMTs is non-linear. Our study in this respect brings together the contradictory theories and evidences from extensively different streams of behavioural corporate finance, international business, upper echelons, etc., revealing new insight on frequently acquiring firms understudied until now.

**Keywords:** serial acquirers; cross-border acquisitions; top management teams; international orientation; international experience; national diversity; target country experience; overconfidence; competence

## Introduction

Undoubtedly corporate takeover decisions involve substantial investments, therefore warrant considerable attention, especially when there are frequent acquisitions. The same issue is perhaps more relevant to the firms undertaking recurrent acquisition decisions abroad, being associated with inherent uncertainties and risks. Given its growing importance, the voluminous literature for cross-border mergers and acquisitions (M&As) has looked at different factors affecting shareholder value such as; environmental uncertainties, firm and deal features and personal attributes of managers such as experience, personality, etc. (Haleblian Devers, McNamara, Carpenter & Davison, 2009). Yet, the examination of value creation by these serial acquirers<sup>1</sup> in isolation from the single acquirers, is relatively scarce, particularly as far as their international expansions are concerned. We therefore, try to fill this gap by exclusively concentrating in this paper on what are the key factors which might have a bearing on the announcement returns to these sequential acquiring firms, transcending domestic borders.

Hietala, Kaplan & Robinson (2000) argued that stock price reactions to acquiring firms' takeover announcements, may signal a mass of relevant information including synergies involved, apparent valuation of targets as well as the acquirer firms, etc. Therefore, it could also be difficult to attempt to segregate the market responses in respect of cross-border acquisition announcements. We follow Fuller, Netter & Stegemoller (2002) in choosing to focus on the stock returns of a sample solely comprising of repeated acquirers in order to examine other characteristics influencing the returns, holding their specific features constant. We distinguish a firm as 'serial acquirer', if it engaged in more than one cross-country acquisition within our entire sample period and analyse the three-day cumulative abnormal returns around each announcement of cross-border acquisition by the same bidding firm. Prior research (e.g., Stegemoller, 2001; Conn, Cosh, Guest & Hughes, 2004; Kengelbach, Klemmer, Schwetzler & Sperling, 2012; etc.) had mostly investigated the performances of serial acquirers together with the one-time acquirers, opining that the latter group lagged behind the former in generating shareholder wealth. In this paper, instead of looking at a similar comparison, we delve deeper into performance of only the multiple bidding firms, exploring the possible explanations behind such outcomes.

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<sup>1</sup> All the terms 'multiple acquirers', 'repeated acquirers', 'frequent acquirers' 'sequential acquiring firms', etc. have been used in this paper interchangeably to denote 'serial acquirers'.

However, the above view seems to be only partly substantiated by extant studies, specifically while analysing each consequent deals by serial acquirers. The previous researches (e.g. Schipper & Thompson, 1983; Loderer & Martin, 1990; etc.) looked into whether merger programmes generated higher returns in later deals. Their findings at best, indicated that in such programmes, successive returns were more likely to diminish. However, the later researches (e.g. Halebian & Finkelstein 1999; Fuller *et al.*, 2002; Billet & Qian, 2008; Aktas, de Bodt, & Roll, 2011; 2013; etc.) documented mixed results with divergent interpretations. These explanations put forward, underscoring different theories primarily pertaining to organizational learning (Hayward, 2002), managerial empire-building tendencies (Jensen, 1986), overconfidence or hubris (Roll, 1986), overvaluation (Shleifer & Vishny, 2003), and indigestion (Conn *et al.*, 2004). Building upon these diverse postulates, in this paper we explore two of the popularly focused upon theories in corporate finance, i.e. organisational learning (e.g. Aktas *et al.*, 2013) and indigestion (e.g. Conn *et al.*, 2004). Essentially we attempt to demystify which of the predicted effects either of learning or that of indigestion, predominantly influences the cross-border announcement abnormal returns to these multiple bidder firms.

Prior research in international business (IB) has recognized that the individual qualities of top executives on the boards of bidding companies including, international career experiences or host country knowledge, may shape their personalities, thereby get reflected in their decisions and outcomes. These executive characteristics as well as a diverse mix of nationalities are conjectured to shape ‘international orientation’ and thereby influence the decision-making process of the entire team. Such views on TMTs are, however, scarce in corporate finance literature, which primarily studies CEO roles in strategic decisions in offering a rather restricted approach of behavioural biases of managers (Roll, 1986, Billet & Qian, 2008; etc.). While CEOs are perhaps the most visible decision-makers in companies, it is unlikely that they determine major strategic decisions such as international acquisitions entirely on their own. In this paper therefore, we investigate whether this postulated global-orientation of the TMTs of these serial acquirers, has any moderating effect on either learning or indigestion. In other words, we look into the following additional questions in regard to consequent market reactions to the announcements of cross-country acquisitions by frequent bidders, from the perspective of their TMT ‘international orientation’: (1) how does the TMT ‘international orientation’ of these firms affect either of these postulated effects? (2) if

indigestion issues from frequent cross-border acquisition announcements are dominant, can such orientation alleviate it? (3) if experiential learning is prevalent, does the so-called learning from prior TMT orientation provide a stimulus to augment this learning effect further? Therefore, in this paper we extend the notion of ‘organizational learning’ (e.g. Barkema & Vermeulen, 1998) to experiential learning, if any, by the TMTs of these serial bidders pursuing international acquisition strategies.

Our univariate analysis of three-day cumulative abnormal returns suggested ‘acquisition indigestion’ issues to be predominant. Our multivariate tests with 1777 cross-border announcements by 278 frequent bidder firms on the one hand, partly supported the univariate results of ‘indigestion effect’. On the other hand, we failed to detect any learning effect for these firms. In this respect, our results represented a departure from Aktas *et al.*, (2011; 2013). Further, our analyses generally espoused a non-linear positive moderating effect of an optimally high number of internationally experienced TMT executives. This effect seemed to mitigate the adverse influences of indigestion arising from both the number of past foreign acquisitions and the earlier cumulative transaction values by an acquirer. Our results mostly implied that it is only after a certain cut-off level of TMT orientation that a frequent bidder may benefit from this positive moderating impact.

Although still a work in progress, this paper makes the following contributions: Firstly, we extend and add to the relatively scant empirical evidence of studies focusing only on the overall performances of these firms. By revisiting the plausible factors which have been identified by prior literature (e.g. Hayward, 2002; Conn *et al.*, 2004; Billett & Qian, 2008; Aktas *et al.*, 2013, etc.), we interpret their relative strengths affecting the cross-border announcement returns to the frequently acquiring firms. Secondly, this paper also tries to link these factors with the incidence of a globally-oriented TMT to investigate whether the latter moderates the relationship between which of those factors and the successive returns of these bidders. Moreover, it further examines the nature of these moderating effects, delineating under what circumstances these observed effects may differ. Thirdly, contending about an optimal combination of so-called globally oriented top executive team, we highlight a practical but essential aspect of TMT orientation, suggesting a novel explanation combining the beneficial as well as detrimental aspects of international orientation. This had hitherto been under-researched in the different fields of ‘upper echelons’, IB and the emergent stream of behavioral corporate finance. The second and third points are what we consider our prime

contribution to the extant literature on serial acquirers. Fourthly, our research setting of cross-border acquisitions helps us to distinguish the conditions under which different facets of TMT ‘international orientation’ could have different effects on acquisition performances. For instance, the results here mostly supported our notion of the initial negative effect of the number of internationally experienced managers in contrast to that of a positive influence of the number of years of host country familiarity. Therefore, in this respect, our study not only offers a more nuanced picture of TMT proxies in comparison to composite measure of TMT employed in earlier papers (cf Nielsen, 2010). Last but not the least, we extend the conception of ‘organisational learning’ from frequent acquisitions, complementing it with TMT-level orientation and learning.

The remainder of the paper is as follows. Beginning with the theories explaining serial acquirers’ performances, we briefly review the background extant literature. The subsequent sections develop the research hypotheses built upon the motivating theories discussed in the first section, followed by the research design used and description of sample construction. Finally we discuss the empirical results of our testable hypotheses. The concluding section discusses the implications and limitations of this paper, whilst making some suggestions for future research.

## **Theoretical motivation**

The following prevailing postulates, envisaging value creation from M&A deals typically provide explanations of the empirical findings for the firms engaging in multiple acquisitions (see for example, Conn *et al.*, 2004). All but the first of these premises affecting outcomes for these organizations, predict deteriorating performances from an acquiring firm’s perspective, summarised in the following paragraphs:

(a) *Organizational learning* hypothesis: It postulates that subsequent acquisitions pursued by a firm to depend on the learning from its prior acquisition experience (e.g., Barkema & Vermeulen, 1998), gathered either from the number or the sequence of previous deals. This presumed learning is likely to be manifested in the better outcomes of the subsequent acquisitions. Such adaptive learning is gained particularly by the ‘quality’ of past experience in terms of their nature, performance and timing (e.g. Hayward, 2002).

While this hypothesis posits that experiential learning can impart the requisites for garnering shareholder wealth from subsequent acquisitions of a firm; yet there has been little support for the predicted beneficial impact of such experiential learning on the performances of later M&A transactions (e.g. Haleblan & Finkelstein, 1999). The probable defences cited are: inadequacy of enough time between deals (i.e. temporal interval between the focal and its previous acquisitions) and/or possibilities of drawing incorrect inferences or misapplications of learning from prior acquisitions (Hayward, 2002).

(b) *Indigestion* hypothesis: The capacity of an organization to successful consolidation and assimilation of its previous acquisitions tend to be limited, not only with respect to the time allowed between a prior transaction and the focal one; but also due to the size of past transactions (Conn *et al.*, 2004). For instance, a costlier acquisition in terms of its transaction value would entail more complex post-deal integration in addition to requiring a longer time. (Aktas *et al.*, 2013) Similarly, deals undertaken by a firm in quick successions would restrict its capability to consolidate each one effectively creating a so-called ‘indigestion’ effect. These post-merger integration problems for a firm engaging in such multiple acquisitions are likely to be reflected by a deteriorating performance in each subsequent deal in comparison to that of the one immediately before.

(c) The following two theories being somewhat related, are grouped together:

(i) *Merger Programme Announcement* theory may predict a generally favourable market reactions to a ‘merger/acquisition programme’ announcement by a firm, which is anticipated to reduce successively with each subsequent deal. This could be due to the fact that since the event announcement is already recognized by the market; the impact gets absorbed into the market value of the firm (as envisaged by Fama (1970) in his contention of efficiency in capital markets), erasing any abnormal gains in the later acquisition announcements. However, this does not necessarily hypothesize a fall in profitability of later acquisitions.

(ii) *Diminishing Returns* (also called *Opportunity Set*) hypothesis tries to provide an alternative explanation to an acquisition programme, when consecutive returns may show a declining trend. Based on the economic principle of diminishing returns, this theory forecasts a gradual reduction in the efficiency of successive investments in relation to a merger programme announcement. The rationale behind such an assumption is that the best

opportunities in the form of valuable targets, are acquired earlier than the weaker ones (Klasa & Stegemoller, 2007). It further assumes that a dynamic creation of the prospective investments need not correspond to the speed of such an acquisition programme. Two related predictions result from these contentions: (I) a greater time interval between consecutive deals would tend to moderate the declining outcomes of the later acquisitions; (II) firms with greater acquisition intensity are likely to experience lower returns in each subsequent transaction.

(d) Shleifer and Vishny (2003) contended that the principle of '*overvaluation*' might be equally applicable to firms engaged in multiple acquisitions as they are to the single acquirers. They postulated that a bidder firm may be initially overvalued, but as it continues to be active in the corporate control market, any discrepancy in its share price tends to wane eventually. Furthermore, the possibilities of a firm taking advantage (e.g. choosing its overvalued stock to pay for the host) of any market misperception about its true value tends to be limited. This would be visible in the long-term performance effects of such a firm (e.g. Dong *et al.* (2003), Ang & Cheng, 2003).

(e) Finally, the following three hypotheses present alternative explanations for outcomes experienced by serially acquiring firms from the perspective of their managerial motives:

(i) Agency theory: Multiple acquisitions undertaken by the top executives of a firm may manifest signs of conflicts of interests with the firm's owners, i.e. shareholders; such deals being solely motivated by self-interest objectives such as empire building (Jensen, 1986) etc. In these situations, subsequent deals are likely to show evidence of shareholder wealth destructions (e.g., Moeller, Schlingemann & Stulz, 2004).

(ii) *Hubris* hypothesis: This theory originally developed by Roll (1986) and later extended by Billett & Qian, (2008), posits that the success of prior acquisitions may impart on a misguided notion of over optimism and bring about unwarranted confidence to the managers of an organization. This could have several manifestations including, greater likelihood of subsequent deals or, overbidding for them (Aktas, de Bodt & Roll, 2009); or, lack of due diligence whilst selection of prospective targets in misevaluation of envisaged synergies, non-optimal choice of payment method, and/or high leverage taken to finance the deal, etc.



Hence, we would expect to observe acute value destruction leading to worsening performance in later deals.

(iii) *Accounting Manipulations Hypothesis* (Conn et al., 2005): postulates that if accounting manipulations are resorted to by multiple acquirer firms, the investors are more likely to discover such mismanagement. Therefore, price corrections are incorporated during later acquisition announcements which tend to eliminate the previously observed price gains. For instance, the price earning (PE) ratio of a serial bidder may explain its sequentially worsening acquisition returns. Such a firm would seek to takeover targets with lower PE ratios than it. In this way, the bidder tends to accumulate a larger earning price for own share, although at the cost of unsustainability of this strategy. This becomes more prominent as subsequent deals are transacted.

## **Empirical evidence**

Commonly, studies in corporate finance as well as in organizational behaviour (e.g. Stegemoller, 2001 for US-based sample; Baker & Limmack, 2001; and Conn *et al.*, 2004 for UK-based samples; etc.) have compared wealth impact of the one-time acquirers with the multiple ones. The general consensus of this research was that those firms undertaking more acquisitions garnered more favourable outcomes; although, there has been less focus on repeated bidders alone. However, extant studies indicate a somewhat different story when the performance differential is specifically estimated based on each subsequent acquisition conducted by a serial bidder. The earlier works (e.g. Schipper & Thompson, 1983; Asquith, Bruner & Mullins, 1983, etc.) examined firms engaged in acquisition programmes. The other related branch of research (e.g. Fuller, Netter & Stegemoller, 2002; Aktas, de Bodt, & Roll, 2009; 2011; 2013; etc.) looking at multiple bidders only, studied how these acquirers generally fare in the market for corporate control with respect to wealth creation in their subsequent transactions.

The paper by Schipper & Thompson (1983) espoused the predictions of both merger/acquisition programmes, in relation to the diminishing returns hypotheses. While, documenting positive stock market reactions for firms throughout a one-year period from such an announcement, it also showed that subsequent deals undertaken as part of that

programme, generated lower announcement abnormal returns in succession. Asquith *et al.* (1983) however, found that forty-five (45%) of their sample bidders exhibited positive returns up to and including the fourth bid. Thus, this latter paper presented somewhat contradictory evidence compared to the former, in that they evidenced that the perceived benefits of any such programme may not essentially capitalize on its announcement effect. Hence, investors' perception of each individual acquisition could also be distinguished in the bids following the very first one in a merger programme, as demonstrated by Asquith *et al.* (1983). The paper by Loderer & Martin (1990) found that the first of a series of corporate acquisitions were likely to earn significantly higher announcement abnormal returns. But, controlling for relative size of deals and 'partial anticipation effect' as postulated by *merger programmes*, the authors showed that despite the fact that the shareholders of acquiring firms are likely to gain, such returns tend to decrease over time. While, results of the former two studies were limited by their small samples, the latter examined the sequential performance effects in a relatively larger sample of US acquirers. All these studies generally substantiated the *acquisition programme announcement* theory.

The cross-sectional analysis by Fuller *et al.* (2002) looked at how the public status of targets would affect the returns to US firms undertaking at least five acquisitions in a span of a five year period. They found acquisitions pertaining to unlisted and subsidiary targets proved more beneficial to this type of bidder firms. However, their empirical evidence failed to uphold the predictions relating to deteriorating wealth effects, experienced by a serial bidder with its deals of a higher order. Moeller, Schlingemann & Stulz (2005) while investigating whether acquisitive strategies during the 1990's merger waves were value generating, observed that large loss-making deals were typical of a serial acquirer after a series of profitable acquisitions. They further found that value-destructive deals typically followed unsuccessful deals. Moeller *et al.* (2005) justified their findings as evidence of either excessive managerial discretion (Jensen, 2003) leading to sub-optimal growth strategies, causing a reduction of shareholder wealth or that pursuing growth through acquisition choices had become unsustainable. Nevertheless, Moeller *et al.*'s (2005) results indicated that repeat acquirers were likely to destroy more value than they could potentially generate.

While the papers discussed in the previous paragraph differ in their reported findings, quite a few studies indicate detrimental subsequent performances of frequent bidders (e.g. Malmendier & Tate, 2008; Billet & Qian, 2008). The negative outcomes of the higher order

deals even though the first of these had been profitable, usually tend to underpin particularly the hubris hypothesis. For instance, Billett & Qian (2008) highlighted the progressively deteriorating returns after an initial success as likely manifestations in both greater propensities for own-company stock purchase by top executives such as CEOs, as well as the undertaking of subsequent acquisitions. The empirical works of others (e.g. Rosen, 2006; Antonio, Guo & Petmezas, 2008) documented a persistency in stock performances of later acquisitions for multiple bidders. In other words, both these papers documented (the former with US acquirers whilst, the latter with UK ones) that announcement returns to a bidding firm for a focal acquisition, has a positive relationship with that of its immediately preceding acquisition. Also, a paper by Zhu (2011) provides similar results to these two studies but in respect of cross-border transactions, where the persistent impacts observable either as positive or negative tended to be more prominent in cases of shorter time intervals between two such consecutive acquisitions.

Notwithstanding the above explanation of ‘self-attribution bias’ (Billet & Qian, 2008) of top-ranked managers/CEOs as to why consecutive abnormal returns to an acquiring firm may decline, few studies (e.g. Ahern, 2008; Aktas *et al.*, 2009; 2011) attempt alternative justifications. For instance, Aktas *et al.* (2009; & 2011) posit that such decreasing trends in cumulative abnormal returns (CARs) of the later deals, was not necessarily a result of just CEO hubris. Rather, it seemed to be attributable to learning to value potential targets better by rational CEOs, reflected in more aggressive bidding, thereby involving more expensive targets and shortening interval between successive acquisitions. In their sub-sample of reportedly ‘hubris-infected’ CEOs, the observations were contradictory though: CARs tended to increase in higher order of deals. Further, they found that during acquisition programmes market perceptions on bidding by CEOs, seemed to affect their subsequent bidding behaviour (Aktas *et al.*, 2011). Whereas, Billett & Qian (2008) reported CEOs to develop overconfidence over time ascribable to the success from their prior acquisitions; Aktas *et al.* (2009) investigated behaviour of CEOs initially induced by over-optimism and/or overconfidence. The latter authors sub-categorised CEOs based on twofold proxies of insider trading before deal announcements and negative CARs of the first acquisition of the declared merger programme.

Some studies (e.g. Moeller *et al.*, 2005) have drawn attention to the issue of the relative size of the M&A transaction, particularly with regard to the target size. This problem is also

highlighted by the theory on ‘acquisition-indigestion’. Ahern (2010) however, offered a different interpretation of diminishing CARs observed through an acquisition programme. A bidding firm grows larger while pursuing such a merger programme, opting for optimum sized hosts which would maximize its return. Hence, the relative profitability of consecutive acquisitions might show a decline.

As mentioned before, the frequent bidders seem to outperform both in respect of operating performance and stock return indicators (Conn *et al.*, 2004) their comparable peers, irrespective of the acquired listing status of target firms as well as the payment mode adopted. But, the probable inference of learning from experience *per se* is not straightforward, as suggested from the mixed empirical evidence in extant management, strategy and organizational behaviour studies (Barkema & Schijven, 2008). For instance, as suggested by Halebian & Finkelstein (1999) based on the behavioural learning theory in psychology research, a U-shaped (curvilinear) relationship existed between the previous acquisition experience of a firm with its current return from a takeover. That is, the greater the exposure, the more would be the ability to suitably apply such learning to subsequent acquisitions and garner benefits. The study by Halebian & Finkelstein (1999) also indicated that the similarity of previously acquired targets with the proposed one, would be likely to generate a superior outcome for a bidding firm. However, Hayward (2002) puts forward rather conflicting observations that learning from prior acquisitions only seems to matter for a focal deal if and only if: (a) the former incurred minor losses; (b) the focal target was to a certain extent comparable to the former target; and finally (c) the time intervals for the previous deals with respect to the present one was neither too short nor too long. So, the precondition of target similarity as conjectured earlier (e.g. Halebian & Finkelstein, 1999) was arguably not a potential facilitator of acquirer profitability in Hayward’s (2002) findings. His rationale was that identical targets might not add value to learning, whilst a totally diverse one in relation to that previously acquired, disrupts the process of knowledge transfer. Also, the time elapsed from the earlier deal or ‘time between deals’ (TBDs) seemed to play a key contributing part in gaining knowledge from previous acquisitions; although, Hayward’s (2002) findings were limited by a smaller sample.

Nonetheless, the role of TBD in experiential learning by acquiring firms has further been advanced by Aktas *et al.* (2013). Their empirical findings substantiated the fact that for those firms engaging in multiple acquisitions, TBDs shared a significant negative relationship with

the order of their deals. They reasoned this observed declining trend in TBDs for higher deal sequences, as being indicative of a process of learning by these frequent acquirers.

The above review of existing research strongly suggests that bidding firms, undertaking multiple acquisitions tend to destroy value as hypothesized in most theories discussed in the foregoing paragraphs. Presumably every such firm is faced with a conspicuous challenge since with each successive deal it grows in diversity and size. It is the potential balance struck between gathering the requisite skills to suitably value targets through repeated deals on the one hand, whilst competently managing the associated multiplying integration costs on the other. On top of this, heterogeneity of such frequent acquisitions exacerbates manifold their complexity due to the involvement of foreign hosts. In the international context, the presence of multifarious uncertainties and risks both at the host country-level (e.g. socio-economic and business environments) and/or at the target firm-level (e.g., asset intangibility, etc.), may complicate such trade-off further. Moreover, what has been coined as ‘organizational experience’ in management and strategy research is also synonymous with the experiential learning of a bidder TMT while pursuing multiple acquisitions. For instance, Kroll, Walters and Wright (2008) suggest that such knowledge gained by bidder directors is likely to produce better acquisition outcomes for these firms. Therefore, it becomes necessary to delve into the role played by TMTs in these sequentially bidding firms as strategic decision-makers. In particular, we are interested in studying how internationally-oriented TMTs fare, when deciding upon frequent acquisitions strategy of their firms.

### **Does TMT international orientation have a moderating impact?**

The postulations on ‘upper echelons’ contend as to how the cognitions and perceptions of individual managers translate into ‘orientations’ and how these ‘orientations may interact in the executive group to influence major strategies (Finkelstein, Hambrick, & Canella, 2008). The IB studies conjecture how among other things, international experiences from education, previous careers, etc. are likely to facilitate superior decision-making at the top executive-level, while expanding globally. Furthermore, specific host country familiarity in a TMT may put the team in an advantageous position while negotiating terms of the transaction with target management, since the team would have superior knowledge of alternatives available to both their own firm and to the proposed target (Stroup, 2012). Also, values and ideas

ingrained in national cultures are likely to have a deep and lasting effect on TMT international orientations, independent of their cognitions and wisdom from any other foreign experience, the latter tending to be limited in time and scope (Nielsen & Nielsen, 2011). We loosely categorize these three facets of a serial bidder TMT, i.e., its international experience, host country familiarity and national diversity as its international orientation.

Therefore, internationally-oriented managers are likely to be capable of making better choices with respect to foreign hosts (Nielsen & Nielsen, 2011; Piaskowska & Trojanowski, 2014) by virtue of their superior knowledge about diverse cultural and institutional environments, business practices, in addition to market-specific expertise and connections (Hermann & Datta, 2006). Such insight could play a significant role in augmenting overall cognitive diversity in their teams, thereby increasing the range and innovation of strategic alternatives (e.g., Nielsen & Nielsen, 2011). Therefore, internationally-oriented TMTs can be projected to be better-equipped to deal with information asymmetries arising in cross-border M&As.

In retrospect, the idiosyncratic personalities of top executives could also be latently responsible for overoptimistic assessments and associated judgements, which might impair shareholder value. Moreover, the ambiguous information environment in the cross-country acquisitions coupled with the wealth of discretion available (Crossland & Hambrick, 2005) to the overall TMT in such a global scenario makes decision-making exceedingly difficult as well as taxing. So, potential misuse or misapplication of prior international exposure may not be unlikely. The extant studies documenting hubris and self-attributive bias of top managers, such as CEOs (Roll, 1986; Hiller & Hambrick, 2005; Billett & Qian, 2008), have specifically championed these apparent discrepancies in managerial behavior. Also, as argued earlier, the present team of managers might develop a predisposition to accredit earlier positive performances to their collective 'international orientation'. Consequentially, the team would tend to be more overconfident and this would be manifested in future acquisitions of cross-country hosts. If these behavioral patterns obfuscate the decision-making process for TMTs of bidding firms when these firms choose to internationalize over and over again, its globally orientated TMT would no longer benefit its shareholders. Rather, such a TMT would expedite shareholder wealth destruction in deals following the previously successful ones.

The upper echelon studies have underscored that not a single manager, but rather it is the entire team of managerial personnel (Cyert & March, 1963) which is likely to be accountable

for strategies pertaining to cross-border diversification. The last two paragraphs stated advantages as well as disadvantages of the international and target country experience gained earlier and nationality mix, if present in an acquiring firm's top managerial team. In the following section, we will build our hypotheses on how these observable personal traits shaping the 'international orientation' of the entire TMT would moderate the relationship of learning or indigestion with the returns of an acquiring firm undertaking sequential cross-border deals.

## **Research hypotheses**

As evident from the review of existing literature concerning sequentially bidding firms mainly doing domestic deals, emphasis had been on probing as to whether such firms in aggregate create value for their shareholders or destroy shareholders' wealth. The preferences to venture in the global market for corporate control are further obfuscated by the critical interplay of various risks and uncertainties. These could be categorised to include information ambiguities nested at the different levels of the target-country as well as acquirer industry and firm, to mention a few. Our fundamental premise is that sequential cross-border acquisitions are considerably complicated events which tend to impede easy extrapolation of standardised knowledge transferable to those following. In the following paragraphs therefore, building on the theory, intuitions and empirical findings of the studies discussed, we will investigate how some of the above-specified drivers affect the announcement abnormal returns to a frequent acquirer. Hence, our principal aim is to investigate each of these particular determinants to look at their influence on the focal announcement return of a firm engaging in sequential cross-border acquisitions. Our further objective is to examine the catalysing effect of bidder TMT's 'international orientation' on the association of each of these factors with the announcement CARs of this type of bidder. Therefore, we basically explore whether and under what circumstances such an internationally-oriented TMT strives to act effectively as a catalyst and/or mediator in order to induce and enhance 'organizational learning' and/or alleviator of 'integration-indigestion' as this firm acquires multiple foreign hosts.

The key indicators identified in earlier research to impact on the creation of value by a serially acquiring firm which we focus upon are – the number of deals, the aggregate value of acquisitions conducted in a previous short-period window, and TBDs. While number of deals

and TBDs by a frequent bidder have been endorsed as drivers of experiential learning by Aktas *et al.* (2011, 2013), they could potentially disrupt value creation for later deals, as suggested by the indigestion theory. However, the cumulative sum of transaction values is a factor which suggests a limited capability to integrate past acquisitions by a repeating bidder. Prior literature on firms engaging in multiple acquisitions (e.g., Conn *et al.*, 2004, Billet & Qian, 2008; Aktas *et al.*, 2009; 2013, etc.) has suggested that the ‘sequences of deals’ are one of the likely determinants of profitability. Furthermore, these studies choose various ways of defining these repeated bidders depending on the ‘number’ or ‘counts’ of previous deals conducted by such a firm within a specific time during the overall sample period. More explicitly, all the above-mentioned papers have estimated the return differential for each subsequent transaction in comparison to its previous one to infer how sequential bidder firms fare. For instance, Conn *et al.* (2004) found that the bid order showed a significantly negative effect on the acquisition announcement returns. Further this documented persistent decline in performances seemed more glaring in the case of the first-time unsuccessful acquirer. Billet & Qian (2008) however, rationalised this deteriorating trend as arising from ‘self-attributive’ behavioural disorder. Top managers could be more inclined to impute past acquisition successes to their own expertise, which would more likely to inflate their ego whilst taking a toll in the deals that follow. Further, the favourable impact of theorized skills and insight brought on from previously conducted transactions might wane over time as pointed out by Hayward (2002). However, Aktas *et al.* (2009; & 2011) rationalised this declining trend across the later deals as evidence of CEO learning, rather than hubris. As mentioned before that all these findings and explanations although mostly forwarded for samples with domestic M&A deals, they could be equally applicable to the cross-border transactions.

Rather, we would anticipate that when firms engage in sequential cross-border acquisitions, given their complexity and riskiness, the above predictions too are likely to strengthen. If a bidder engages in too many of these deals within a short interval, it might face integration issues. Fewer foreign deals on the other hand, would help it to build upon from these experiences of encountering the multitude of uncertainties of acquiring foreign targets. Therefore, broadly speaking, we could expect that an improvement in announcement returns would signify the beneficial impact of experiential learning by bidder firms as they perform repeated acquisitions involving foreign hosts. A decline would however provide support for the theories positing the drawbacks of frequent acquisitions. Hence, depending on the relative



incidence of either beneficial or detrimental impact of preceding acquisitions, we propose the following hypotheses as alternatives to each other:

***Hypothesis 1(a):*** *There is a positive relationship between the number of cross-country deals in a previous shorter window and the abnormal returns at the announcement of the current deal.*

***Hypothesis 1(b):*** *There is a negative relationship between the number of cross-country deals in a previous shorter window and the abnormal returns at the announcement of the current deal.*

As put forward by Hayward (2002) and Haleblan & Finkelstein (1999) acquisition strategies being pursued for multifarious objectives, it could be extremely complicated to apply and transfer appropriate inferences to the subsequent acquisitions. So, it might not be straightforward to apply experience learning to the later cross-border acquisitions, in which environmental risks and uncertainties play a significant role. However, Aktas *et al.*, (2013) chose a research design to infer learning effects from the past acquisitions as discussed in the later paragraphs.

The studies by Hayward (2002) and Aktas *et al.* (2009; 2013) draw our attention to another key factor, viz., ‘TBDs’. The duration between two deals could hypothetically indicate the gaining of requisite expertise as well as capability to efficiently manage repetitive deals so that post-deal integration does not impede the envisaged value creation. The underlying principle is that balancing integration costs becomes a serious challenge as the size of the bidder grows by virtue of frequent acquisitions. For instance, Hayward (2002) conjectures that a smaller time interval between consecutive deals could impair the process of taking root of the experience thus, hindering learning. Moreover, experience from acquisition *per se* does not ensure superior subsequent performance (Hayward 2002, p. 2). The contradictory effect of ‘memory lapse’ or ‘memory loss’ or ‘forgetfulness’ (Hayward, 2002) could occur in the opposite case, if such acquisitions were spaced too far apart in time, when learning cannot be gained. This notion was also supported by Aktas *et al.*, (2013).

Aktas *et al.*, (2013) theoretically modelled the selection of TBDs by firms, in order to maximise their expected profits from acquisitions net of integration costs. Aktas *et al.*, (2013) posited that below a certain threshold or limiting value for TBDs, learning was likely to

increase as TBD increased. Contrarily, beyond that limiting TBD, prior acquisitive exposure seemed to be insufficient for experience building, termed by them as ‘memory loss’ effect. Using this framework the authors theorised that during the process of ‘experience building’, an inverse relationship between TBDs and deal order would imply learning to be increasing. But in the ‘memory loss’ situation, a positive correlation between the TBDs and deal sequences would also indicate gains from learning experience. Therefore, they inferred that in either case a bidder firm is positioned to reap gains from net learning from repetitive acquisitions, regardless of post-deal integration costs.

While we anticipate cross-country acquisitions to be riskier than domestic ones, both the opposite rationales explained above could be equally applicable for them. So, the returns of subsequent international acquisitions could be affected, depending upon the time duration between two consecutive ones. Therefore, combining the insight from both Hayward (2002) and Aktas *et al.* (2013), we could postulate the following: (a) if the elapsed time from the immediately previous cross-country acquisition to the focal one, showed a positive correlation with the announcement returns of the focal deal, a likely ‘experience-building’ effect is in play; (b) the contrary case of a negative correlation between these variables would indicate a ‘memory-loss’ situation.

The literature on M&As unanimously underscores that inadequacies of post-merger integration (PMI) period is one of the primary causes why such transactions fail to garner desired benefits (see for example, Shrivastava, 1986). This is especially the case for larger M&A transactions, where more time and resources are necessary for PMI (Aktas *et al.*, 2013). So, if a firm engages in multiple acquisitions simultaneously or within a short time interval, the capability for PMI may become saturated, leading to more acute effects on its overall profitability. Based on the above discussions and arguments, we put forward two alternate hypotheses:

***Hypothesis 2(a):*** *There is a positive relationship between the time elapsed since the previous cross-country acquisition and the announcement abnormal returns of the current deal.*

***Hypothesis 2(b):*** *There is a negative relationship between the time elapsed since the previous cross-country acquisition and the announcement abnormal returns of the current deal.*

The theory on *indigestion* suggests that for those firms which acquire frequently, returns from successive deals may show a declining trend. This could be due to the fact that firms are likely to have limited internal resources. As contended in the preceding paragraph, for all acquirers, integration takes time and also requires a post-integration recovery phase (Kengelback *et al.*, 2012), which is particularly accentuated for serially bidding firms. Further, after undertaking a costly acquisition or one having a greater relative deal size, if a frequently bidding firm does not allow sufficient time for PMI, performances in later deals could deteriorate.

In the international context, ‘acquisition-indigestion’ could intensify further if higher cumulative values of deals are undertaken, assuming the post-merger integration issues to be more complicated in view of the environmental uncertainties. Assuming a shorter time period prior to a focal foreign deal, we could therefore, anticipate that the greater the aggregate value of the earlier international deals undertaken in that duration, the greater resources would have to be devoted towards PMI; hence, the more severe would be the foreign-acquisition-indigestion issue. On the other hand, a smaller cumulative value of the number of cross-border acquisitions in this shorter interval before a similar focal deal *ceteris paribus*, may generate a favourable outcome for a bidding firm. This is under the twin assumptions that: firstly, a lower value would not exacerbate a resource bottleneck that may arise as a result of deals undertaken in quick succession, accentuating the PMI problems; and secondly, deal managing experience would build through those smaller deals executed earlier, thereby learning to assess the underlying risks and information ambiguities in the global context better. Thus, we propose two alternate hypotheses replicating scenarios where indigestion problem could be low and where it could be severe:

***Hypothesis 3(a):*** *The aggregate deal value of all the previous cross-border acquisitions undertaken in a shorter time interval has a positive relationship with the announcement abnormal returns of the focal deal.*

***Hypothesis 3(b):*** *The aggregate deal value of all the previous cross-border acquisitions undertaken in a shorter time interval has a negative relationship with the announcement abnormal returns of the focal deal.*

In the preceding section we have made a case both for apparent merits and demerits of ‘international orientation’ for the bidder TMTs. In what follows we base our contentions on

whether and how the role played by globally-minded TMTs, may harmonise host choices while deciding upon repeated cross-country acquisitions. Particularly, we invoke here observable and quantifiable elements of managerial ‘international orientation’ i.e. prior international experience and target country familiarity and national diversity, expressed in terms of Blau index. In other words, we test empirically whether such traits could be valuable for serially bidding firms, embarking on cross-country acquisitions.

The international exposure of one or more members of the TMT may enhance the team’s deal negotiating and executing capabilities by virtue of better understanding of cross-cultural risks and cultural differences as well as of having developed superior local networks in the host country. Concurrently, such a TMT may *prima facie* be susceptible to exploiting this purported knowledge (e.g., due to their hubris as suggested by Roll, 1986 or misperceiving risks involving foreign hosts or adopting more overenthusiastically adventurous strategies) to bring about destruction of shareholders wealth. For instance, the TMT of a firm might prefer to decide upon greater number of cross-country acquisitions with the misconceived notion of such strategy being the best alternative for its firm. Therefore, only presence of executives with international experience in the TMTs of bidders, may not by itself be a pre-requisite in ensuring a promising outcome where serial acquirers are concerned. It can be contended that with sufficiently high number of such knowledgeable executives on the team, it may be necessary to balance unfounded confidence against the required skill to undertake repeated cross-border deals.

Our second benchmark to classify the TMT of a bidder as internationally oriented is the ‘Blau diversity index’, which is the yardstick determining the mix of nationalities on the team of managers of a firm. The research on national cultural psychology (e.g., Hofstede & Hofstede, 2005) suggests that different inherent values and thinking patterns, guiding individual behavior and actions, tend to be so deep-rooted so as to surmount later experiences in life. Thus, foreign executives on TMTs contribute to a heterogeneous mix of cross-cultural cognitions and perceptions on the team, thereby improving the team’s comprehension of cross-country issues and providing access to enhanced home-country networks. Hence, the overall team’s uncertainty perceptions may be moderated (Nielsen & Nielsen, 2011). However, heterogeneous TMT may suffer from suboptimal decision making (Tihanyi *et al.*, 2000). For instance, more foreigners in TMT expend larger resources of the acquiring firm in hiring greater number of consultants, additional discussions due to lower consensus, etc.

(Nielsen & Nielsen, 2011). Hence, the acquisition process is more likely to become costlier. Further, more heterogeneous mix in the TMT may lead to inefficient communication (Priem, 1990) and conflicts. Thus, the benefits of TMT diversity may taper off with greater TMT heterogeneity generating overconfidence (Malmendier & Tate, 2005; 2008).

The final aspect of TMT ‘international orientation’ we adopted, is, familiarity of the host country. Like the other two TMT determinants, this one also can be considered to be both an advantage as well as a disadvantage (e.g., excess information leading to needless risk-taking, etc.) for the overall TMT of an acquirer. Such experience can facilitate the development of insights regarding regulatory environment, governance, market structures, disclosure practices, culture, economy, and institutions (Barney, 1988). Therefore, such TMTs would be in a better position to (1) identify attractive acquisition targets due to superior insight into the host market and (2) effectively negotiate the deal with its foreign target. Nevertheless, such an experience could substantially tone down a TMT’s perceived uncertainty pertaining to the host country, arguably more so than general international experience or presence of foreigners in the TMT would. Consequently, the TMT may pursue the acquisition transaction in a familiar host country with greater aggressiveness or over-optimism, thereby obfuscating the possible advantages of familiarity. Moreover, the collective source of similar knowledge might bring about a ‘groupthink’ phenomenon (cf. Benabou, 2013), leading to failure to consider alternatives, selective processing of information, under-appreciation of risks and illusion of invulnerability (Janis & Mann, 1977).

Weighing up the pros and cons of these two proxies, we expect in such scenarios that higher levels of both these indicators of TMT ‘international orientation’ (cf. Nielsen & Nielsen, 2011; Benabou, 2013) could lead to unwarranted complacency in choices of targets, when embarking upon multiple cross-country acquisitions. Hence, a probable balance of both the aforementioned indicators could seem to be optimal from the strategic standpoint of such a sequential acquiring firm.

Therefore, with respect to a serial bidder intending to generate a sustainable favourable performance from its repeated cross-border acquisitions, such a firm would deem it essential to develop some sort of competitive advantage. This could occur if its ‘internationally-oriented TMT has the capability to make value-added strategic decisions. In other words, we propose that a non-linear association between the internationally oriented managers on TMTs

of repeatedly acquiring firms with their announcement returns looking at from three angles: as discussed above: (i) number of these internationally experienced executives; (ii) mix of nationalities amongst them indicated by Blau diversity index; and (iii) amount of target country familiarity of managers in years, on average.

Following our arguments in the preceding paragraphs, we would conjecture: (1) a curvilinear (U-shaped) association of the number of internationally knowledgeable TMTs and the abnormal returns on a cross-country acquisition announcement by a serial acquirer. (2) an opposite curvilinear (inverted U-shape) relationship of the announcement returns to a multiple bidder with either its TMT national diversity or average years of TMT experience of foreign targets. If the beneficial effects of learning are reflected in acquisition announcement performance of these frequent bidders, we conjecture that optimal levels of bidder TMT ‘international orientation’ beyond/below respective threshold(s), would further enrich experiential learning. This in turn would generate persistently profitable outcomes for multiple international acquisitions. In contrast, depending upon whether the negative effects of higher deal numbers or ‘memory-lapse’ or ‘indigestion’, are in play, a suitably balanced internationally-orientated TMT after/before appropriate cut-off point(s) as hypothesized above, is likely to moderate their negative effects. Thereby the unfavorable sequential performances would be toned down while still learning through repeated cross-border acquisitions could be facilitated.

The discussions of the foregoing premises lead us to the following hypotheses:

***Hypothesis 4:*** *The relationship between number of the previous cross-border acquisitions and the announcement returns of the focal deal is moderated by the presence of (i) a higher number of internationally-experienced executives in acquiring firms’ TMTs in a curvilinear (U-shaped) manner; but in an opposite curvilinear manner (inverted U-shaped) by (ii) greater national diversity, and (iii) a higher average number of years familiarity with the target country.*

***Hypothesis 5:*** *The relationship between time elapsed between two cross-border acquisitions and the announcement returns of the focal deal is moderated by the presence of (i) a higher number of internationally-experienced executives in acquiring firms’ TMTs in a curvilinear (U-shaped) manner; but in an opposite curvilinear manner (inverted U-shaped) by (ii)*

greater national diversity, and (iii) a higher average number of years familiarity with the target country.

**Hypothesis 6:** *The relationship between aggregate deal value of all cross-border acquisitions within the previous three years and announcement returns of the focal deal is moderated by the presence of (i) a higher number of internationally-experienced executives in acquiring firms' TMTs in a curvilinear (U-shaped) manner; but in an opposite curvilinear manner (inverted U-shaped) by (ii) greater national diversity, and (iii) a higher average number of years familiarity with the target country.*

### **Sample, research design and variable construction**

To test our hypotheses as discussed in the last section, we collected a sample of the listed UK acquirers listed on the London Stock Exchange which conduct more than one cross-border acquisitions at any time between 1999 and 2008. The initial sample was obtained by merging data from SDC Platinum, BoardEx, and Thomson One Banker/DataStream. The data from the SDC Platinum database yielded 1,995 completed foreign acquisitions by 630 UK public companies for the chosen sample period. All other relevant information on these acquisition announcements like, transaction value, method of payments (i.e., cash payment, stock payment, or mixed payment), foreign target status (i.e. whether public or private or subsidiary) were also collected. The study focused on the universe of listed firms and did not exclude any specific industry types, like financial firms. The cross-country deals in the sample were only filtered to include those with value of at least £ one million. This data was then merged with the data on financials of acquiring firms obtained from DataStream. The combined dataset was then matched with the information on acquiring firms' TMTs from BoardEx UK universe (as in Piaskowska & Trojanowski, 2014). Target country-level data were collected from World Bank, Transparency International, Geert Hofstede's research (Hofstede, 2001), and Euromoney magazine. The merging processes of different data sets and limited availability of data on some of the variables required for analysis restricted the final sample size to 1777 cross-border acquisitions by 278 firms. This research design focusing solely on the sequential acquiring firms is also consistent with that used by Fuller *et al.* (2002) in order to reduce firm-specific variation in the overall sample. Prior research has classified serial acquirers in different ways. For instance, Fuller *et al.* (2002) defined a serial acquirer if a firm conducted at least five acquisitions in a window of three years; whereas

Kengelbach *et al.* (2012) and Billett & Qian (2005) did so if more than one acquisition was conducted within the same time period and if at least two public targets were acquired within the duration of five years, respectively. Again Conn *et al.* (2004) adopted a different classification based on the intensity of acquisitiveness. We study the impact of number of previous cross-country deals, sum of the values paid for them (within a timeframe of three years) and TBDs on the present foreign acquisition. Hence, we employ our own criteria for classification of serially acquiring firms.

Moreover, due to our three-year rolling window specification for two of our explanatory variables (explained in detail in the paragraphs on ‘variables construction’), we were required to use the first three years of our sample to generate deal-history (cf. Billett & Qian, 2008). Therefore, we added the completed cross-border announcements of the frequently bidding firms in our sample from the year 1996 onwards, although the final sample starts from the year 1999 onwards.

Our key questions are: which of the effects is more dominant on the short-term performance of serial acquirers, viz., learning (experience-building) or memory loss and/or indigestion? The first step in the empirical analyses involved obtaining a measure of acquirer performance, i.e. the cumulative abnormal return (CAR) on announcement of a cross-border M&A transaction, which we generated using a standard event study procedure. In the second step we use pooled OLS regression models detailed below to explain abnormal returns upon the announcement of an international acquisition. Before presenting detailed model specifications, we explain the operationalization of key variables of interest. All the variables were used in winsorized forms at the one percentage level, except the indicator variables.

### ***Dependent variable(s)***

We used short-run (a three-day period) cumulative abnormal returns (CARs) for the UK acquiring firms as dependent variable in our regression analyses. The CARs using daily stock returns were estimated using the widely-accepted event study method (cf. Brown & Warner, 1985). This method relies on Fama’s (1970) contention that all important events are accurately and promptly incorporated in the share prices of firms. A three-day event window (from one day before to one day after cross-country acquisition announcements) is in line



with the recent studies (e.g., Chari *et al.*, 2010; Ahern *et al.*, 2012). Similar tests were later repeated with eleven-day CARs as a robustness check.

The announcement stock returns were calculated using the market model (MM)<sup>2</sup>. For MM, the expected return ( $R_{it}$ ) was computed for each acquirer's stock  $i$  on day  $t$ , the implicit assumption being that stock returns can be explained by a single factor, i.e. market return. The parameters of the market model were estimated separately for each deal announced by each acquirer on separate dates over the 10-year sample period.

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}, \quad (1)$$

where  $R_{Mt}$  is FTSE all-share market index return for the same day  $t$  as  $R_{it}$  and  $\varepsilon_{it}$  is the error term. The acquirer firm's stock-specific parameters  $\alpha_i$  and  $\beta_i$  were estimated using a 190 trading-day non-event window period from 250 to 60 trading days before the acquisition announcement for each security  $i$ . The daily abnormal returns ( $AR_{it}$ ) for each security  $i$  were calculated as the difference between observed returns for day  $t$  and the expected return computed from Equation 1 above, i.e.:

$$AR_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt}) \quad (2)$$

where  $\hat{\alpha}_i$  and  $\hat{\beta}_i$  are the OLS estimates of the regression parameters  $\alpha_i$  and  $\beta_i$ .

The cumulative average abnormal returns of the announcement effect over a three-day window around the announcement date i.e.  $CAAR^3(-1, +1)$  were obtained by aggregating the sample  $AR_{it}$ s on the event dates and one day before and one day after the same, given as:

$$CAAR(-1, +1) = \frac{1}{N} \sum_{i=1}^N \sum_{t=-1}^{+1} AR_{it} \quad (3)$$

The statistical significance of the CARs was tested using t-test and Wilcoxon test. Since event samples tend to have stocks with varied trading status, stock returns tend to be thick-tailed where approximation by the normal distribution would be poor (Fama, 1976). Hence, t-

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<sup>2</sup> We also estimated CARs using the market adjusted returns (MAR) model (here no such non-event estimation period is required), where the daily abnormal returns ( $AR_{it}$ ) for each company stock  $i$  are given as the difference between the observed stock returns on day  $t$  and the corresponding market return on the same day:

$$AR_{it} = R_{it} - R_{mt}$$

<sup>3</sup> The CAARs have been termed as CARs throughout this paper.

test might not be reliable and non-parametric tests (e.g., generalized sign test) tend to perform better under relatively general distributional assumptions regarding ARs (Cowan, 1992).

### ***Independent variables***

In accordance with the studies on serial bidders reviewed in the earlier sections, the following variables were chosen to explore their plausible influence on the short-run performance of such firms. Their operationalization is detailed below:

(1) Classifying each acquirer using its unique identifier, we sorted the respective cross-country deals by their announcement dates. Thereby a deal count (*DC*) was computed for each firm for each of its transaction in the ascending order of the event announcement dates (see for example Aktas *et al.*, 2013). This *DC* variable was generated on the basis of a rolling three-year window. (cf. Billett & Qian, 2008 where a rolling window of five-years was used). This selection of a timeframe of three years was to reduce noise as might be the case if a five-year window was chosen.

For each bidder, we also computed a ranking to ascertain the order) of deals in the ascending order of the event announcement dates throughout the whole sample period. These sequences of cross-border acquisitions by a firm termed as ‘deal order’ (*DO*), was used to check the robustness of our results using the *DC* regressor.

(2) We chose the *TBDs* as time elapsed between a focal international acquisition and the one immediately before it, counted as the number of days between those two deal announcements. This was because there being quite a few acquirers in our sample which announced more than one such transaction on the same date, although they had different completion dates.

(3) In order to compute the aggregate value of cross-country acquisitions (termed as aggregate deal value and abbreviated as *ADV*) undertaken by a frequently acquiring firm, we also used a three-year window prior to a focal foreign deal (to be consistent with our computation of *DC*). For each such firm, we summed the cumulative values paid for the international acquisitions undertaken (based on their dates of announcement) within the

three-year time interval. The reason for this way of computation of ADV has already been explained in our ‘Hypotheses’ section.

Information on acquirer managers’ demographic characteristics like education and employment history gathered from the data sources aforementioned was used to determine the international orientation of TMT members. This data was then used to operationalize the following two moderating control variables:

- a) TMT international experience (*Num TMT Int’l experience*): The number of TMT members who obtained educational qualification or ever been employed outside their country of domicile or nationality until one year prior to the acquisition under consideration.
- b) TMT host-country specific experience (*Average years TMT host country experience*): The average number of years of familiarity with country of the proposed target of one or more TMT members by virtue of living and / or working therein up to one year before the announcement of the focal acquisition deal.

We also created two additional proxies for TMT international experience, represented by the average number of years and the average number (range) of countries of international experience for each acquiring firm TMT. These proxies were utilized for further analyses of the effect of bidder TMT orientation.

- c) TMT national diversity (*National diversity*) was measured using the Blau index of national diversity of the acquiring firm, one year prior to the deal announcement.

These explanatory variables namely, DC, TBD and ADV along with the TMT variables utilized for our analyses were mean-centered to alleviate potential collinearity problems and to make the interpretation of the results easier (Aiken and West, 1991; Dawson, 2014).

### ***Control variables***

Prior studies found a range of acquirer and deal characteristics which influence abnormal returns to acquisition announcements (e.g., Fuller, Netter & Stegemoller, 2002; Shleifer & Vishny, 2003; Moeller, Schlingemann & Stulz, 2004). The control variables included in the analysis can be classified into three categories: deal-specific, acquirer-specific, and target country-specific variables.

### *Deal-specific controls*

Prior research (e.g. Travlos, 1987) has indicated that acquisitions financed solely with stocks of bidding firms are likely to generate lower returns for their shareholders. Thus, we distinguish three different methods of payment, i.e. cash, stock, and a combination of both along with debt, etc. To code this information, two binary variables were constructed: the first one (i.e. *Cash*) takes the value of one for pure cash payments and zero otherwise, the second one (i.e. *Stock*) takes the value of one for pure stock payments and zero otherwise. *Full acquisition* denotes transactions where upon completion of the acquisition, the acquirer gains full control of the target, i.e. at least 95% stake (cf. Piaskowska & Trojanowski, 2014). *Transaction value* (in £ millions) is expressed in logarithmic form.

### *Acquirer-specific controls*

Acquiring firm characteristics such as size and profitability have also been shown to influence M&A announcement returns. *Acquirer's size* is measured as the logarithm of total market capitalization expressed in £ millions at the end of the financial year preceding the focal cross-border transaction. *Acquirer's profitability* is operationalized as the ratio of return on assets (ROA) and also measured at the end of the financial year preceding the focal cross-border transaction. Finally, a binary variable was constructed to control for diversifying acquisitions by a bidding firm. This indicator variable is equal to one when an acquisition involved any industry other than the acquirer core macro industry (based on Fama-French industry classification), and zero otherwise. We also included *TMT Size* as an additional control in line with Carpenter Geletkanycz & Sanders (2004) to take into account the range of opinions that may arise in the process of decision-making amongst the TMTs, for reasons other than their international orientation.

### *Host-specific controls*

*Cultural differences* between the acquirer and the host counties have also been the subject of previous research showing that environmental risk and uncertainty perceptions regarding target markets rise with greater cultural differences (Kogut & Singh, 1988) and impact acquisition decisions (Piaskowska & Trojanowski, 2014). Since the frequency of acquisitions between pairs of countries reduces with increasing cultural disparities (Ahern *et al.*, 2012), this factor is also likely to increase the costs to the acquiring firms (Erel, Liao & Weisbach, 2012) and may lead to diminished value to the bidders' shareholders. We quantify cultural

differences as the distance between the target country and the country of the acquiring firm (i.e. the UK) using Kogut & Singh's (1988) index on the basis of four cultural dimensions by Hofstede (2001). These dimensions were power distance, avoidance of uncertainty, individualism vs. collectivism and masculinity vs. femininity.

Information on both objective and subjective factors relating to a country like its political risk, economic performance, and access to finance both in the long and short terms, debt indicators, etc. was incorporated into Euromoney magazine index (Euromoney, 2009). This time-varying index of riskiness of the host country termed as *country risk*, was quantified in such a way that higher values meant higher risk. Finally, development of the target country was measured by one-year lagged *GDP per capita* in USD thousands with the data provided by World Bank.

Previous studies (e.g. Moeller & Schlingemann, 2005; Ellis *et al.*, 2011) show that bidder shareholder returns are affected by the status of the target firm, i.e. whether it is a public company, private company, or a partly-owned subsidiary of the bidding firm. We therefore, introduce two dummy variables as to whether the target is *private target* represented as one and zero otherwise, and whether it is *listed target* coded as one and zero otherwise, as target-specific controls.

[ Insert Table 1 about here ]

Table 1 reports descriptive statistics and pairwise correlations of variables used in our analyses. With regard to the deal characteristics, it can be seen that 60.7% of the cross-border transactions undertaken by UK acquirers are paid fully in cash, whilst only 3.3% are wholly stock-financed deals. Moreover, considering the status of the acquired foreign targets, it can be seen that about 51.7% of the deals involve private targets, public targets being a mere 10.5%. These findings are consistent with the features of UK equity market as reported by Faccio & Masulis (2005) and Doukas & Petmezas (2007). In more than three quarters of the sample acquisitions the bidder gains full control over the target as a result of the deal.

## Results

### *Univariate tests*

[ Insert Table 2 about here ]

Table 2 reports both MM and MAR model based CARs of the acquiring firms over a three-day event window surrounding the cross-border acquisitions announcements, grouped as a function of the key explanatory variables, DC, TBD and ADV respectively. In particular, the table shows how the CARs of the serially bidding firms behave when the said predictors are low (or high), based on the respective median-based values of these predictors.

Looking at the DCs by each multiple bidder in a window of previous three years, we find that the ones which perform more than the median number of deals (which is at least three cross-border transactions in the sample), show slightly lower mean CARs (0.0051 in MM) than their counterparts (0.0080), which conducts less than the median count. However, the two-tailed p-value for the t-test reveals that the average CARs between these two groups are not significantly different than zero. Wilcoxon rank-sum test<sup>4</sup> also for either MM or MAR model fail to show statistical significance between these two groups.

The average CARs for the serial acquirers categorized by the higher and lower median of the natural logarithm of the TBDs, also fail to corroborate any significant difference. This is the case either for t-test or for Wilcoxon rank-sum test for both MM and MAR model.

Finally, the difference in mean CARs for frequent acquirers, based on higher and lower than the median of the prior three-year ADVs (expressed in natural logarithm of the sum of such deal values), reveals that the former has significantly lower CARs than the latter group. Specifically, for those repeated bidders which engage in previous acquisitions with greater aggregate deal values, indeed suffer from PMI problems or ‘acquisition-indigestion’, compared to the firms with lesser ADV. The difference between the average CARs between these two groups is significant at 5% level for the MM and at 1% level for MAR model

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<sup>4</sup> The Wilcoxon-Mann-Whitney test used here is a non-parametric analogue (based on the assumption that our dependent variable CARs are not normally distributed) to the independent samples t-test that we have used for our above purpose to ascertain whether statistically significant different in average CARs exist between the stated categorisations of our key predictors.

respectively. The Wilcoxon rank-sum test for both models also corroborates that there is a statistically significant difference between the mean CARs of these two categories of serial bidders.

Therefore, our univariate results for the serial acquirers fail to indicate that CARs on average, in respect of higher counts of deals as well as the TBDs, significantly differ from zero. Notwithstanding these results, our Hypothesis 3(b) proposing indigestion due to PMI problems, is supported since the CARs of multiple acquirers with higher ADV are significantly lower than the opposite group. In the following sub-section, we analyze the findings of the multivariate models to see how they support these univariate results.

### ***Multivariate analysis***

[ Insert Tables 3, 4 and 5 about here ]

The main body of results tabulated in Tables 3, 4 and 5 respectively, presents the three-day CARs<sup>5</sup> for the sequentially acquiring firms using computed using MM. Basically the models marked with letter ‘A’ in each of these tables show the multivariate regression estimates corresponding the main regressors (1) DC, (2) TBD and (3) ADV respectively, with the control variables, as detailed in the last section. Thus, these serve as our base models. The models marked with letter ‘B’ in each of these tables show the additional impact due to the introduction of the TMT ‘international orientation’ proxies in the base models. Finally, the models marked with letter ‘C’ extends the previous models marked ‘B’ adding the interaction between the key independent variables, with these TMT indicators. These models marked ‘C’ therefore, denote the curvilinear interactions of each of the key predictors with the respective international orientation variable, proposed by Hypotheses (4), (5) and (6) respectively, in the ‘Research hypotheses’ Section. We opted to report the plausible impact of interaction separately in models marked ‘C’ so as to investigate the difference, if any, in association of these primary explanatory variables as well as the TMT proxies with CARs, with and without the respective interactions.

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<sup>5</sup> CARs have been multiplied by 100 for ease of reporting estimated regression coefficients.

In effect, Model 1A in Table 3 explores the impact of the predictor, namely prior DCs over a three-year period before a focal cross-country acquisition by a serial bidder on its abnormal returns on the announcement of such a focal transaction. Similarly, Models 1B and 1C respectively, relate to both DCs as well as internationally experienced executives in TMT, with the latter model showing the interaction effect as posited in Hypothesis 4(i). Similarly, Models 2B and 2C respectively, trace plausible impacts of these DCs in addition to the Blau diversity index, Model 2C being proposed by Hypothesis 4(ii). Finally Models 3B and 3C respectively, depict the same for the exposure to the target country expressed in years on average, Model 3C reflecting the conjecture by Hypothesis 4(iii). The results in Table 3 demonstrate that, the sign of the coefficient estimate for the DCs in all these models is positive, except in Model 1C. But since none are significantly different from zero, the theorized benefits of prior international deals by Hypothesis 1(a), cannot be implicitly inferred.

The same is also true when ‘international orientation’ variables mentioned above, are introduced in Models 1B, 2B and 3B respectively. The quadratic interaction term between DCs and TMT indicator (i) in Model 1C (the number of internationally-experienced managers in TMT), is significant at 5% level. Therefore, it appears that the supposed disadvantages, postulated for frequent foreign acquisitions by the alternate Hypothesis 1(b), seem to be mitigated by a sufficiently high number of these managers in TMTs. In particular, the cut-off point shown by Model 1C indicates that at least about 2 (two) of such knowledgeable managers on the TMT of a serial acquirer can possibly positively moderate the apparent negative effect (although statistically not significant) of three-year prior DCs. Just a median of the said TMTs in our sample belonged to this category. However, by themselves, even a greater number of these executives (in Model 1C, the estimated coefficient of the quadratic term is negative and significant at 10% level) tend to misapply their previous wisdom, everything else held constant. This apparent adverse impact of presumably greater number of top managers on the boards of frequent bidding firms is inconsistent with our proposed impacts of this determinant, discussed in the section on ‘Research hypotheses’; and seems to be ascribable to our sample. It is also possible that the earlier exposure to cross-country deals by a frequent bidder coupled with the presence of internationally experienced managers, tend to make its entire TMT rather overoptimistic and/or complacent. So, the team’s competence in managing subsequent deals is likely to be impaired. Moreover, it is conceivable that in cross-country deals due to multifarious



prevailing uncertainties and risks, the likely behavioral bias of bidder TMTs may be amplified.

However, neither proxies of the mix of nationalities on TMTs, nor years of acquaintance with foreign host(s) on average (denoted as TMT indicators (ii) and (iii) respectively), seems to moderate the effect of earlier DCs over the pre-specified window (as evident for Models 2C and 3C, respectively). Although generally the predicted impacts for the TMT indicator (iii), were upheld for Model 3C, the postulated non-linear impact is not sustained (the linear coefficient estimate being positive and significant at 5% level, while that of the quadratic is negative but not significant). But, the national diversity indicator of TMT orientation failed to show any consistent results in either of the Models 2B or 2C.

In view of the above discussion, it appears that neither of our Hypotheses 1(a) nor 1(b) is corroborated since past DCs over the three-year period, does not by itself appear to have any statistically significant influence on the announcement returns of a frequently acquiring firm. However, only if a higher (2 as above) number of internationally experienced executives exists in the TMT of a multiple bidder, the relationship between the DC-predictor and CARs of such a firm are likely to get benefitted, thereby corroborating Hypothesis 4(i).

The three-day CARs based on MM in Table 4 (Models 4A; 4B, 4C; 5B, 5C; and 6B, 6C respectively) examines the impact of the time elapsed from the previous cross-country acquisition on that of the current announcement outcome of a multiple bidding firm, as conjectured under Hypotheses 2(a) and 2(b). In all these models, we found a persistently negative influence of the 'TBDs' regressor on the abnormal announcement returns, indicating 'forgetfulness' as theorised by Hypothesis 2(b). In other words, it seems that greater time elapsed between two sequential deals undertaken, affects the process of development of such deal experience, as claimed by Hayward (2002) and Aktas *et al.*, (2013). Therefore, frequent acquirers of international targets seem less likely to benefit from their earlier deals. Economically, this implies everything else constant, when the TBD predictor increases (decreases) by one standard deviation, the magnitude of average frequent acquirer CARs decreases (increases) by 11 basis points (b.p.) in Model 4A and by 15 b.p. in Model 4C respectively.

Further, the coefficient of TMT indicator (i) is negative for the linear term in both Models 4B and 4C and significant at 5%, while that of the quadratic term is positive as well as significant at 10% level only for Model 4C. This suggests that the initial detrimental effect of having internationally experienced executives in TMT, ultimately reverses when there are 4 of such managers in TMT. This result upholds our postulations on the influence of this TMT variable on the CARs of the frequent bidder, being in contrast to the negative non-linear impact that is documented for this TMT determinant in Table 3. Also in Model 6C, the linear term coefficient of TMT orientation determinant (iii) is positively significant at 10% level, implying the benefits of having host country acquainted managers in TMT. Finally, we fail to find any statistically significant moderating impact of the determinants of TMT ‘international orientation’ (in any of the Models 4C, 5C and 6C) on the negative relationship between the key explanatory variable, TBDs and the CARs of a repetitive acquirer. Therefore, we can infer that the estimated coefficients of the TMT proxies generally conform to their predicted signs in all these models, although Hypothesis 5 on the possible moderating impacts of these TMT variables is rejected.

The third and last key explanatory variable employed in our analysis to predict the three-day abnormal returns to announcement of cross-country acquisitions by multiple bidders, is the transacted worth of the prior deals aggregated over a window of three years (also ADV) by each serial bidder. Models 7A; 7B, 7C; 8B, 8C and 9B, 9C respectively, in Table 5 present the key findings. Only for Model 7C in Table 5, the likely impact of PMI problems, *ceteris paribus*, is at play (depicted by the negative sign of the ‘ADV’ predictor, significant at 10% level), while all other models showed non-significant relationship of this regressor with CARs, albeit negative. *Ceteris paribus*, serial bidders conducting higher aggregate value of deals within a shorter time interval experience lower CARs by about 25 b.p. as implied by Model 7C, attributable to an ‘indigestion effect’. It indicates that whilst pursuing frequent international acquisitions, if a firm consistently pays larger transaction-values, cumulatively such high-cost deals may take a toll on its resources obtainability to integrate the subsequent transactions. Moreover, since such a firm also may undertake these deals within such small time period (three years by virtue of our research design), its integrating ability presumably becomes restricted, as suggested by Kengelbach *et al.* (2012). Finally, this result upholds the disadvantageous impact of ADV on the CARs of a serial bidder as predicted by Hypothesis 3(b), as identified in our univariate analysis too.

Likewise Table 3, TMT orientation determinant (i), is the only proxy (Model 7C in Table 5) that documents a positive moderating effect on the negative relationship between ADV and a multiple bidder's announcement CARs. Specifically, the coefficient of quadratic interaction term of this TMT variable is positively significant in Model 7C at 5% level. It indicates that the apparent 'integration-indigestion' could be avoided by virtue of better decision-making by the specially endowed managers on the board, thus supporting Hypothesis 6(i). Economically, it entails having a similar number (two) of internationally experienced executives in a multiple acquirer TMT, as also evident in Model 1C in Table 3. Figure 1 (in Appendix) depicts a flatter slope for the quadratic term interaction effect of this TMT determinant when the value of ADV predictor is high. This slope implies that presence of an optimum number of internationally knowledgeable managers in bidder TMTs would reduce the adverse influence of the ADV predictor on CARs. However, the incidence of these top executives in the managerial team by itself, tends to impede this expected positive catalytic effect (as seen from the negative linear coefficients in Model 7C, significant at 1% level; and Model (7B)<sup>6</sup>, significant at 5% level respectively). But, we cannot be meaningfully conclude whether this disadvantage persists if a bidder TMT has more of such managers, since the quadratic term has a coefficient estimate which is not statistically significant. This is in contrast to what is depicted in Model 1C in Table 3. This unfavourable linear influence implies that either initial presence of managers with international knowledge or more of them in an acquirer TMT would lead to inferior outcomes, possibly because of unwarranted confidence or optimism bias in the team. TMT national diversity, represented by proxy (ii) solely by itself (neither in Model 8B nor Model 8C), failed to show either any significant impact on an acquirer CARs or a moderating effect predicted by Hypothesis 6(ii). Finally, the average years of target country familiarity by itself, denoted by TMT determinant (iii), defends its favourable influence (positive significant linear term only in Model 9B), although no significant non-linear effect is detected. But no significant interaction effect of this proxy is detected; so, Hypothesis 6(iii) is also rejected.

In respect of the control variables employed in our analysis, just a few, namely, diversifying cross-border acquisition and full control indicators, lagged bidder size and listed foreign target(s) are statistically significant in the models with the DCs predictor. While public host is not significant in any of the models with the TBD regressor; for ADV, neither size of

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<sup>6</sup> In Table 3 a similar result for Model 1B were noticed, although significant at 10% level.

bidding firm nor full control indicator, is significant. Only diversifying dummy is consistently significant across all model specifications. Each of the said variables affects the frequent acquirer CARs negatively, implying less favorable market perception, *ceteris paribus*. There is some indication that TMT size control is negatively significant, especially in the case of ADV as the main independent variable. All other controls failed to show statistical significance, even at 10% level in all our regression specifications.

The discussions on our findings from the multivariate analysis so far, portray a significantly detrimental impact of TBDs on the three-day CARs of multiple acquirers, upholding Hypothesis 2(b). Prior three-year DCs are not significantly different from zero, while three-year earlier ADVs show a significant negative effect on the CARs only in Model 7C, supporting Hypothesis 3(b), albeit not very strongly. Nevertheless, the multivariate result of ADV implied by Model 7C substantiates our univariate results. As far as the determinants of TMT ‘international orientation’ are concerned, only the predicted U-shaped positive moderating effect of an optimal number of internationally knowledgeable managers in TMT (2 in both Model 1C in Table 3 and Model 7C in Table 5 respectively), proposed by Hypotheses 4(i) and 6(i), are upheld. These results indicate a favourable influence of this TMT proxy (i) on the relationships of DCs and ADVs respectively, with the acquirer CARs on average. However, by themselves, the TMT proxies generally do not corroborate our predictions of non-linear impact on CARs, as discussed in the section on ‘Research hypotheses’.

### **Additional analyses for robustness**

A number of supplementary tests were carried on to conform to our results to Hypotheses 1 to 6, discussed in the previous sub-section on ‘Multivariate analyses’<sup>7</sup> as well as to rule out alternative explanations for our results.

#### ***Three-day CARs based on MAR model***

The MAR model three-day CARs echo what we observed in the case with the MM-based CAR models described in the ‘Multivariate analysis’ sub-section, except that the significance of the predictors as well as moderation impacts of TMT determinant of the number of

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<sup>7</sup> The results for robustness tests have not been reported here for the sake of brevity and will be available upon request.

internationally experienced managers is stronger than their complement MM-based CARs. Also, we evidenced a significant inverted U-shaped association of the TMT determinant of average years of target country familiarity with the three-day CARs of multiple bidders, upholding the proposed influence of this variable argued in the ‘Research hypotheses’ section. Economically, this finding implied that about 7 (seven) years of host country exposure on average may bring about a detrimental impact from TMT decision-making in cross-country acquisitions. This would be likely to get reflected on serially acquiring firm’s stock performance as announcement effect. This finding lends some credibility to our contention that greater amount of host-country experience on the board of a frequent bidder may contribute to irrational decision-making, which could have adverse outcome.

### ***Additional predictor ‘deal orders’***

We also checked the robustness of the findings with the three-year period DCs, by using another variant, the deal order (DO) predictor (as explained in the sub-section on ‘Independent variables’). While the DCs regressor predicts the impact of the number of its prior cross-country acquisitions within a three-year period on the current announcement return of a multiple bidder; the DOs ascertain a similar effect using the sequence (or rank) of prior deals throughout the entire sample period. The limitation of this computation is that if an acquirer conducts infrequent deals (e.g. its first deal is in the year 1999, while its next deal is after 6 years, i.e. in 2004), the interpretation of learning cannot be done since the acquisitions are too far-spaced in time (Hayward, 2002).

Interestingly, DOs predictor shows a consistently negative (unlike the DC predictor in Table 3) but, statistically non-significant relationship with the three-day announcement CARs for all models, except one. This result provides some support to our Hypothesis 1(b), albeit not robust across the model specifications. Moreover, the observed non-linear impact of the TMT variable (i), supporting Hypothesis 4(i) in our basic findings, is also substantiated.

### ***Eleven-day CARs***

The overall results from the longer event window of eleven-day announcement CAR models uphold our core findings from the three-day CAR models with respect to the key predictors (we also found a significant negative impact of the DC predictor in two of the models, which

was not observed in our main results with three-day CARs) and the TMT indicators. Further, we detected stronger indigestion effect of the ADV predictor, upholding ‘indigestion’ under Hypothesis 3(b). Our findings for the eleven-day CARs therefore, showed that Hypotheses 1(b), 2(b), 3(b), 4(i) and 6(i) were supported partially at best.

### ***One-year post-acquisition BHARs***

To check the robustness of our core findings as well as to see whether the above results hold in a further longer term, we employ a greater length period: post-acquisition one-year buy-and-hold-abnormal returns<sup>8</sup> (BHARs). This is also on the lines of Billett & Qian (2008). The results for both DC and ADV regressors strongly suggest that PMI issues adversely affect multiple bidder returns in the longer term. However, a somewhat different result was found with the TBD predictor, i.e. a positively significant relationship of the time elapsed (between the preceding cross-country acquisition and the focal deal) with these BHARs. While this impact could indicate a positive learning from the experience of such previous acquisitions as argued by Aktas *et al.* (2013); it could also signify the postulated negative impact of PMI issues on the returns envisaged from a transaction (Kengellbach *et al.*, 2012). The latter effect may override any benefits, if the TBDs are lower. In our model specifications, the multiple deals within a short period of three-years presumably without sufficient time for each acquisition to be integrated, are likely to take a toll on the subsequent returns. Notwithstanding these two probable interpretations for the observed relationship between TBDs and BHARs, since both the ADV and the DC predictors strongly indicate an ‘acquisition-indigestion’ effect, a similar explanation seems the most plausible rationalisation of this observed impact of TBDs. Hence, our findings for BHAR models seemed to suggest this diminishing profitability problem.

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<sup>8</sup> Using a standard long-run event study procedure (see for example, Lyon *et al.*, 1999; Rosen, 2006), We employed a benchmark portfolio approach using FTSE all-share index as the benchmark returns index for the estimation of BHARs. Thus, BHARs for each acquiring firm’s stock  $i$  for the time period  $\tau_1$  to  $\tau_2$  (i.e. for months 0 to 12 in relation to an acquisition announcement) were computed as:

$$BHAR_{i\tau} = \prod_{\tau_1}^{\tau_2} (1 + R_{i\tau}) - \prod_{\tau_1}^{\tau_2} (1 + R_{b\tau})$$

where  $R_{i\tau}$  is the return for each such firm for month  $\tau$  and  $R_{b\tau}$  is the benchmark return for the same period captured by FTSE all-share market index return.

Therefore, the one-year post-acquisition announcement BHAR models underpin the adverse influence of undertaking frequent cross-country deals as well as resultant ‘indigestion’, supporting both Hypotheses 1(b) and 3(b). Moreover, the findings also suggest Hypothesis 2(b) is upheld. However, we failed to observe any meaningful moderating impact of the TMT ‘international orientation’ variables on the relationship(s) of the key predictors with the post-acquisition BHARs in any of the models, neither were the TMT variables by themselves significant.

### *Year-fixed effects*

Two major crises took place during our sample period: the post-2000 dot-com bubble burst and the financial crisis beginning in late 2007. Hence, year dummy variables were introduced to control for fixed time effects for both MM and MAR models pertaining to the three-day CARs. Although the corresponding results are not presented here for the sake of brevity however, they are largely consistent with those reported earlier. Nevertheless, the originally significant variables weaken somewhat as well as the overall model significance suffer.

### *Other TMT proxies: variants of TMT international experience*

We re-run our tests of the hypotheses pertaining to our key regressors with two variants of our TMT proxy (i) (the number of internationally knowledgeable executives), i.e. amount of international experience in average number of years (henceforth referred to as depth) and also, (v) range of such exposure (henceforth referred to as breadth).

The key explanatory variables: DC, TBD and ADV generally show similar results in the presence of the TMT proxies of (iv) depth and (v) breadth of international experiences of TMT members for a frequent acquirer, as evident from our key analyses in the ‘Multivariate analysis’ sub-section.

Out of these two variants of TMT orientation determinant of international experience, the breadth proxy positively moderated the relationship between prior DCs and these CARs beyond a threshold, thereby upholding Hypothesis 4(i); while the moderating impact of depth (as evidenced by a negative non-linear moderation impact) proxy seemed to be offset by the strength of the negative relationship between TBDs and CARs.

## Discussion and conclusion

In this paper, we primarily look at the how the UK stock market perceives those firms engaging in multiple cross-border acquisitions from the perspectives of three different crucial aspects. They are: the number of the previous foreign transactions undertaken as well as their aggregate values during a period of three years prior to the focal transaction; and finally, the time elapsed between these sequential transactions. Our study has been motivated by a combination of different branches of research. First, both extant corporate finance and IB literatures (e.g. Hayward, 2002, Billett & Qian, 2008; Aktas *et al.*, 2013, etc.), presents rather inconsistent empirical evidence on the performance of these repeatedly acquiring firms. Second, it remains unclear as to whether such firms learn from frequent acquisition experiences to deal better with the information asymmetry pertaining to foreign hosts; or PMI issues disrupt this learning process and manifest as inferior outcomes. Third, ‘upper echelons’ theory as well as IB studies had underpinned the role of ‘international orientation’ of the TMT of acquiring firms, in making strategic decisions, like international acquisitions amid multifarious uncertainties and risks. Based upon these numerous predictions and findings from all of these strata of research, we have focused here to explore whether these factors in combination with TMT ‘international orientation’ variables affect the abnormal returns to these firms and if so how.

We relook in this paper at the various explanations in respect of short-term wealth creation by these sequential bidders, proposed by prior research in the context of the collective effect of managerial orientation. Basically, our research design seeks to ascertain which of the posited effects between experiential learning and ‘acquisition-indigestion’ is predominant as far as profitability of these serially bidding firms is concerned. Both the number of similar acquisitions undertaken before a focal cross-country acquisition (DCs) within a three-year window and also, the temporal interval between the present acquisition and its immediately preceding one (TBDs), aimed to assess whether the impact of learning produced superior stock reaction to these firms. Finally, our conjecture was that the higher collective value of these acquisitions (ADV) in the three-year period prior to the current deal would be more likely to cause indigestion, manifested in worsening announcement returns of the later foreign acquisitions. Also, depending on the relative dominance of the aforesaid impacts, we



further looked into whether and how the claims on TMT ‘international orientation’ moderated those impacts and in turn affected the short-run returns to these firms. Since the extant studies contended both positive influences (e.g., Nielsen & Nielsen, 2011; Piaskowska & Trojanowski, 2014) as well as damaging impacts (e.g., Hiller & Hambrick, 2005; Billett & Qian, 2008) of such executive orientation, we posited the following non-linear impact of globally-oriented top managers: (i) U-shaped effect of number of managers with international experience; and inverted U-shaped influences for either (ii) mix of nationalities in bidder TMTs; or (iii) number of years of knowledge about host country. Accordingly, our premise was that if TMTs of these firms possessed all or any of the said facets in optimal amounts (i.e. above or below the respective thresholds), better profitability to such firms can be ensured, no matter whether either learning or indigestion is prevalent.

Looking at the stock market reactions to announcements of cross-border acquisitions for these multiple bidder firms, our findings failed to corroborate any ‘learning effect’ from past similar acquisitions (Aktas *et al.*, 2013). Instead, we found a significant detrimental impact of TBDs which underscores that earlier transaction(s) cannot benefit these serial acquirers in garnering higher values for the similar subsequent acquisitions. This result indicates the hypothesized ‘forgetfulness’ effect (Hayward, 2002; Aktas *et al.*, 2013). Further, PMI problems leading to the predicted ‘indigestion’ effect of recurrent acquisitions strongly confirmed by the univariate tests, was also upheld in our multivariate results. Further, the additional post-acquisition performance analysis with one-year BHARs, strongly evidenced this indigestion effect. Also, the positive association observed between TBDs and the consequent BHARs seemed to imply the PMI problems, as highlighted in case of the other predictors.

In respect of TMT orientation factors, we encountered mixed results with respect to our prediction of opposite non-linear impacts of these factors on the announcement returns to the serial acquirers. In any case the fact that insufficient number of managers with international experience is not beneficial, has been consistently upheld in our findings.

With respect to our arguments regarding the curvilinear moderating impact of these TMT variables, our main findings upheld a U-shaped interaction effect(s) only in the case of an optimum number of internationally knowledgeable executives. This was documented for the DCs as well as the ADV regressors with respect to their association with the frequent bidder

abnormal returns. In other words, we documented that at least two of such managers in the TMT of a serial acquirer would likely to mitigate the adverse impact of indigestion effect. Thus, this result upheld our Hypotheses 4(i) and 6(i) and, also sustained the robustness tests. E.g., when we substituted the number of such managers with the breadth of international experience of TMT, the latter also documented a positive non-linear moderating influence on the association between prior DCs and the announcement returns of the current cross-border acquisition. Thus, our key result for this TMT variable was defended. In this vein our study on serial bidders in respect of cross-country acquisition decisions and their outcomes, substantiates the empirical findings of the existing researches (e.g., Carpenter, Sanders & Gregersen, 2001; Piaskowska & Trojanowski, 2014) depicting the favorable impact of internationally orientated top managers.

This study is not without limitations. First, it focuses on acquirers from a single country: the UK. Two unique features make the UK an interesting setting for our research. These are the prevalence of financing deals with cash and the predominance of private targets (both of which have been highlighted as potential reflection of managerial hubris, e.g., Malmendier & Tate, 2005; 2008). Furthermore, most of the TMT members in the sample have a common nationality, which could have influenced the acquisition decisions, and consequently, the outcomes. Thus, a comparative study using different home countries to explore the effect of international orientation of TMTs on acquisition performance of firms may be useful to investigate how country-specific governance structure types interact with TMT international orientations and other TMT characteristics to the benefit or detriment of shareholder value.

Second, although the explanatory variables used for this study were analogous to the ones in the prior research (e.g. Piaskowska & Trojanowski, 2014), their operationalization requires further work. For instance, there was insufficient information in certain cases as to when an executive worked or studied abroad or about foreign assignments of such executive during the time of employment with the acquiring firms. Also, limited data on international career experience of executives might have affected the proxy used for number of internationally experienced managers to estimate its potential influence on acquirer returns. Also, controls such as, industry exposure of managers and acquiring firms' prior operations in host countries might have had some impact for the results discussed here.

Third, the moderation effects of TMT variables detected in our findings, are perhaps not strong enough to be economically viable. However, ours is in line with empirical studies attempting to document such impacts, which tend to be smaller (Dawson, 2014).

In summary, this paper is an addition to the relatively fewer studies investigating how plausible factors such as, prior number of deals and their sum of values as well as their time intervals affect the performances of the multiple bidding firms in the short-term. It is also a departure from the extant research concerning such frequent acquirers in that their announcement abnormal returns are evaluated here from the perspective of the so-called global orientation of the TMTs of such firms. Specifically, the central premise is how those factors are shaped by such TMT orientation. Our key contribution in this paper is to establish a link between how these factors might interplay to affect expansion decisions abroad and consequently their outcomes, when an internationally oriented TMT exists on the board of such an acquirer. Our study thus paves the way for future research by suggesting a balance in TMT orientation, which can also be considered as our practical contribution. Not only this, but our result on positive curvilinear moderating impact of TMT international orientation on the factor(s) adversely affecting serial acquirer announcement returns, gives rise to the following interesting questions which can be explored in future work: How can TMTs be designed so that multiple acquisitions can bring about positive outcomes? How is it possible to induce a balance between learning and PMI problems while considering multiple international acquisitions? How can the conflicting impacts of the number of internationally knowledgeable managers and amount of host country familiarity be optimally combined? These are questions which future research can look into. Also, given the persistent increase of mixed ethnic background individuals globally, we would need to relook the relationships we have explored here. It would be an interesting extension to study how mixed ethnicity and biculturalism shape individual manager's cognitions and behaviors and thereby are reflected in frequent acquisition decisions and the consequences thereof.

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Table 1: Descriptive statistics

					Correlations																		
	Variable	Mean	Median	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	CAR - MM	0.673	0.283	4.72																			
2	TBD	4.43	4.88	2.04	-0.04 (0.14)																		
3	DC - 3 years prior	4.86	3.00	5.25	-0.02 (0.38)	-0.31 (0.00)																	
4	ADV - 3 years prior	4.88	4.81	2.53	-0.08 (0.00)	-0.22 (0.00)	0.55 (0.00)																
5	Num TMT int'l experience	2.13	2.00	1.65	-0.06 (0.02)	-0.08 (0.00)	0.30 (0.00)	0.52 (0.00)															
6	National diversity	0.23	0.20	0.25	-0.003 (0.90)	-0.06 (0.03)	0.26 (0.00)	0.35 (0.00)	0.52 (0.00)														
7	Avg years host country experience	1.27	0.00	2.89	0.02 (0.48)	0.01 (0.66)	0.06 (0.01)	0.11 (0.00)	0.17 (0.00)	0.12 (0.00)													
8	Cash	0.62	1.00	0.49	0.02 (0.35)	0.09 (0.00)	-0.05 (0.03)	-0.04 (0.17)	-0.02 (0.31)	0.00 (1.00)	0.04 (0.07)												
9	Stock	0.03	0.00	0.16	-0.01 (0.74)	0.02 (0.39)	-0.07 (0.01)	-0.10 (0.00)	-0.02 (0.42)	-0.03 (0.27)	0.03 (0.17)	-0.21 (0.00)											
10	Full acquisition	0.79	1.00	0.41	-0.05 (0.02)	0.01 (0.78)	0.02 (0.39)	-0.06 (0.02)	-0.08 (0.00)	-0.06 (0.01)	0.08 (0.00)	-0.04 (0.07)	-0.03 (0.16)										
11	Transaction value	2.02	1.61	2.00	0.00 (0.91)	0.12 (0.00)	-0.03 (0.18)	0.24 (0.00)	0.11 (0.00)	0.06 (0.02)	0.11 (0.00)	0.37 (0.00)	0.05 (0.03)	0.01 (0.70)									
12	Diversifying acquisition	0.34	0.00	0.47	-0.07 (0.01)	-0.03 (0.19)	0.05 (0.04)	-0.08 (0.00)	-0.06 (0.01)	-0.08 (0.00)	0.02 (0.36)	-0.06 (0.01)	-0.08 (0.00)	0.06 (0.02)	-0.17 (0.00)								
13	Acquirer size	6.75	6.78	2.27	-0.08 (0.00)	-0.13 (0.00)	0.41 (0.00)	0.83 (0.00)	0.52 (0.00)	0.37 (0.00)	0.13 (0.00)	0.04 (0.09)	-0.10 (0.00)	-0.03 (0.23)	0.29 (0.00)	-0.12 (0.00)							
14	Acquirer profitability	6.10	6.97	13.3	-0.02 (0.31)	-0.07 (0.01)	0.05 (0.04)	0.08 (0.00)	-0.05 (0.04)	0.01 (0.76)	0.02 (0.53)	0.06 (0.01)	-0.17 (0.00)	0.04 (0.07)	-0.001 (0.95)	0.05 (0.04)	0.23 (0.00)						
15	Cultural differences	1.46	0.69	1.57	-0.01 (0.85)	-0.07 (0.01)	0.16 (0.00)	0.20 (0.00)	0.15 (0.00)	0.15 (0.00)	-0.29 (0.00)	-0.04 (0.09)	0.01 (0.75)	-0.26 (0.00)	-0.11 (0.11)	-0.11 (0.00)	0.15 (0.00)	-0.07 (0.01)					
16	Country risk	0.15	0.08	0.16	0.02 (0.34)	-0.04 (0.14)	0.11 (0.00)	0.15 (0.00)	0.16 (0.00)	0.16 (0.00)	-0.21 (0.00)	-0.01 (0.66)	0.05 (0.05)	-0.34 (0.00)	-0.06 (0.02)	-0.13 (0.00)	0.12 (0.00)	-0.04 (0.05)	0.58 (0.00)				
17	GDP per capita	27.5	31.5	14.1	-0.01 (0.72)	0.07 (0.01)	-0.14 (0.00)	-0.17 (0.00)	-0.17 (0.00)	-0.15 (0.00)	0.23 (0.00)	0.01 (0.78)	-0.05 (0.04)	0.30 (0.00)	0.04 (0.05)	0.13 (0.00)	-0.11 (0.00)	0.07 (0.00)	-0.53 (0.00)	-0.84 (0.00)			
18	Private target	0.52	1.00	0.50	0.01 (0.71)	-0.02 (0.35)	0.00 (0.89)	-0.24 (0.00)	-0.19 (0.00)	-0.13 (0.00)	-0.06 (0.01)	-0.11 (0.00)	-0.02 (0.38)	0.05 (0.03)	-0.21 (0.00)	0.13 (0.00)	-0.27 (0.00)	0.03 (0.30)	-0.11 (0.00)	-0.08 (0.00)	0.12 (0.00)		
19	Listed target	0.10	0.00	0.30	-0.04 (0.07)	0.03 (0.21)	0.06 (0.01)	0.26 (0.00)	0.19 (0.00)	0.16 (0.00)	0.11 (0.00)	0.10 (0.00)	0.09 (0.00)	-0.22 (0.00)	0.31 (0.00)	-0.09 (0.00)	0.24 (0.00)	0.01 (0.57)	0.02 (0.51)	0.07 (0.00)	-0.09 (0.00)	-0.35 (0.00)	
20	TMT size	4.09	4.00	1.72	-0.05 (0.04)	-0.09 (0.00)	0.19 (0.00)	0.31 (0.00)	0.57 (0.00)	0.25 (0.00)	0.01 (0.65)	-0.04 (0.10)	-0.10 (0.00)	0.03 (0.28)	0.03 (0.19)	0.01 (0.83)	0.34 (0.00)	0.07 (0.00)	0.04 (0.08)	0.01 (0.71)	-0.12 (0.00)	-0.08 (0.00)	0.05 (0.04)

Note to Table 1: CAR is the cumulative abnormal return for the serial bidder firms announcing a cross-border acquisition computed over a 3-day event window (i.e. from day -1 to day +1 following the announcement) using market model. TBD is the measure of time elapsed between each two successive acquisitions by the same firm. DC -3 years prior represents the number of previous deals in a three-year period by each firm before the focal one. ADV - 3 years prior shows the aggregate transacted value of the deals within an earlier period of three years before the current deal. Number TMT international experience is the number of top managers of acquiring firms' international career experience. National Diversity is the Blau index of national diversity of the acquiring firm TMT. Average years of host country experience is the average number of years of target country experiences of the acquiring firms' TMT members. All experience and diversity measures are measured at the end of the financial year preceding the focal cross-border transaction. Cash and Stock are indicator variables for transactions paid purely in cash and stock, respectively. Full acquisition is an indicator variable denoting transactions where upon completion of the acquisition the acquirer gains full control of the target, i.e. at least 95% stake. Transaction value is expressed in GBP millions in logarithmic form. Diversifying acquisition is the indicator variable equal to one when an acquisition involved any industry other than the acquirer core macro industry, and zero otherwise. Firm size is the logarithm of market capitalisation value of the acquiring firm (expressed in £ millions). ROA is the ratio of return on assets of acquirer firms. Both Acquirer size and ROA are lagged by one-year. Cultural differences variable is the distance between the target country and the country of the acquiring firm (i.e. the UK) using Kogut and Singh's (1988) index on the basis of four cultural dimensions by Hofstede (2001). Country risk and GDP per capita are the *Euromoney* country risk index and one-year lagged GDP per capita (in USD thousands) of the host country. Private and listed targets are binary variables for host firm status for privately held and public firms, respectively. TMT size is the number of executive directors on the board of directors of the acquiring firm. All the variables (except indicator binary variables) are winsorized at 1% level. The key explanatory variables TBD, DC and ADV as well as the TMT determinants are centered values. The correlation table reports pairwise correlation coefficients and the p-values for the corresponding significance tests (in parentheses).



Table 2: The effects of the explanatory variables on CARs surrounding the announcement of a cross-country acquisition by serial acquirers: univariate analysis.

Explanatory variables	Abnormal return measure (3-day CAR)	Explanatory variable < = median		Explanatory variable > median		Tests for the significance of the difference	
		Mean	Std. dev.	Mean	Std. dev.	t-test statistic	Wilcoxon test statistic
Prior 3-year window deal counts (DCs)	MM	0.00797	0.05150	0.00513	0.04495	1.190	0.577
	MAR	0.00909	0.05140	0.00579	0.04467	1.387	0.798
		N = 716		N = 921			
Time between consequent deals (TBDs)	MM	0.00596	0.04311	0.00571	0.04998	0.112	0.243
	MAR	0.00750	0.04291	0.00617	0.05016	0.587	0.889
		N = 746		N = 1031			
Prior 3-year window aggregate deal value (ADV)	MM	0.00950	0.05087	0.00410	0.04567	2.245*	2.082*
	MAR	0.01096	0.05015	0.00445	0.04578	2.722**	2.503*
		N = 699		N = 923			

Note to Table 2: +, \*, \*\*, and \*\*\* denote significance at 10%, 5%, 1%, and 0.1%, respectively. The explanatory variables are defined the same way as in Table 1. Three-day CARs here are grouped according to each of the three main independent variables which are expressed in higher and lower than their respective sample-based median values.

Table 3: CARs based on Market model for DC regressor.

	Model 1A	Model 1B	Model 1C	Model 2B	Model 2C	Model 3B	Model 3C
Prior 3-year window deal count	0.0163 (0.63)	0.0194 (0.73)	-0.0253 (-0.75)	0.0142 (0.53)	0.044 (0.83)	0.0131 (0.50)	0.00645 (0.18)
Cash	0.138 (0.45)	0.128 (0.42)	0.149 (0.49)	0.146 (0.48)	0.137 (0.45)	0.129 (0.42)	0.144 (0.47)
Stock	-1.279 (-1.11)	-1.173 (-1.01)	-1.212 (-1.05)	-1.268 (-1.10)	-1.273 (-1.11)	-1.319 (-1.15)	-1.325 (-1.16)
Full acquisition	-0.657* (-2.01)	-0.693* (-2.11)	-0.700* (-2.12)	-0.649* (-1.99)	-0.649* (-1.99)	-0.673* (-2.06)	-0.678* (-2.08)
Transaction value	0.0111 (0.13)	0.0141 (0.17)	0.00396 (0.05)	0.0111 (0.13)	0.0138 (0.16)	-0.0049 (-0.06)	-0.00665 (-0.08)
Diversifying acquisition	-0.635* (-2.46)	-0.637* (-2.46)	-0.629* (-2.43)	-0.630* (-2.43)	-0.629* (-2.42)	-0.701** (-2.67)	-0.691** (-2.63)
Cultural differences	-0.0422 (-0.46)	-0.0445 (-0.48)	-0.0578 (-0.62)	-0.043 (-0.47)	-0.0418 (-0.45)	0.00354 (0.04)	0.00306 (0.03)
Country risk	0.963 (0.62)	1.444 (0.91)	1.456 (0.92)	0.906 (0.59)	0.839 (0.54)	0.873 (0.57)	0.862 (0.56)
GDP per capita	0.0161 (0.96)	0.0194 (1.13)	0.0189 (1.09)	0.0158 (0.94)	0.0151 (0.89)	0.0112 (0.67)	0.0117 (0.69)
Acquirer size	-0.145* (-2.05)	-0.0925 (-1.20)	-0.0936 (-1.22)	-0.154* (-2.14)	-0.149* (-2.07)	-0.150* (-2.12)	-0.153* (-2.15)
Acquirer ROA	-0.0165 (-1.22)	-0.0206 (-1.48)	-0.0191 (-1.37)	-0.0161 (-1.20)	-0.0164 (-1.21)	-0.0149 (-1.10)	-0.0142 (-1.05)
Private target	-0.326 (-1.22)	-0.333 (-1.25)	-0.311 (-1.17)	-0.327 (-1.22)	-0.33 (-1.23)	-0.323 (-1.21)	-0.332 (-1.24)
Listed target	-0.955* (-1.99)	-0.882+ (-1.84)	-0.920+ (-1.93)	-0.974* (-2.01)	-0.987* (-2.02)	-1.001* (-2.09)	-1.030* (-2.16)
TMT size	-0.0959 (-1.21)	-0.0155 (-0.15)	-0.0235 (-0.24)	-0.103 (-1.30)	-0.104 (-1.31)	-0.112 (-1.42)	-0.114 (-1.45)
Num TMT int'l experience (i)(a)		-0.216+ (-1.84)	-0.185 (-1.26)				
Num TMT int'l experience <sup>2</sup> (i)(b)		0.0154 (0.50)	-0.0997+ (-1.78)				
3-year deal count * (i)(a)			-0.0127 (-0.74)				
3-year deal count * (i)(b)			0.0168* (2.51)				
National diversity (ii)(a)				0.385 (0.59)	-0.0379 (-0.04)		
National diversity <sup>2</sup> (ii)(b)				-0.527 (-0.19)	2.412 (0.50)		
3-year deal count * (ii)(a)					0.0932 (0.67)		
3-year deal count * (ii)(b)					-0.555 (-0.80)		
Average years host country experience (iii)(a)						0.241* (2.19)	0.326+ (1.91)
Average years host country experience <sup>2</sup> (iii)(b)						-0.0194 (-1.58)	-0.0222 (-1.04)
3-year deal count * (iii)(a)							-0.016 (-0.72)
3-year deal count * (iii)(b)							0.000504 (0.15)
Constant	2.485** (2.78)	1.629 (1.57)	1.744+ (1.66)	2.614** (2.86)	2.591** (2.83)	2.897** (3.17)	2.921** (3.21)
Observations	1567	1567	1567	1567	1567	1567	1567
R-squared	0.021	0.023	0.027	0.021	0.022	0.025	0.026
F	2.12**	2.256**	2.319**	1.873*	1.67*	2.041**	1.875*

Note to Table 3: Multiple linear regressions models explaining the effects of the 3-year prior deal counts on the cumulative abnormal returns (calculated using Market model) over a three-day period for serial acquirer firms announcing international acquisitions. The key explanatory variables DC across 3-year period as well as the TMT determinants are mean-centered values. Model 1A shows the base model with the main explanatory variable DC along with the controls as proposed by either Hypothesis 1(a) or (b). Models 1B and 1C has the TMT proxy (i) of number of executives with international experience: B without and C with interaction between DC and the said proxy (i) respectively; similarly, Models 2B and 2C

has the TMT proxy (ii) of mix of TMT nationalities: B without and C with interaction between DC and the said proxy (ii) respectively; last, 3B and 3C has the TMT proxy (iii) of average number of years of target country experience: B without and C with interaction between DC and the said proxy (iii) respectively. The Models 1C, 2C and 3C respectively are based on Hypothesis 4(i), (ii) and (iii). All the other variables are defined the same way as in Table 1. The second line in each row are the t-statistic using robust standard errors in parentheses and <sup>+</sup>, \*, \*\*, and \*\*\* denote significance at 10%, 5%, 1%, and 0.1%, respectively.

Table 4: CARs based on Market model for TBD regressor.

	Model 4A	Model 4B	Model 4C	Model 5B	Model 5C	Model 6B	Model 6C
Time between consequent deals (TBDs)	-0.121+ (-1.90)	-0.120+ (-1.88)	-0.166* (-1.97)	-0.127* (-1.97)	-0.298* (-2.28)	-0.121+ (-1.90)	-0.203* (-2.29)
Cash	0.301 (1.03)	0.293 (1.01)	0.302 (1.04)	0.314 (1.07)	0.33 (1.13)	0.292 (1.00)	0.287 (0.99)
Stock	-0.322 (-0.24)	-0.195 (-0.15)	-0.213 (-0.16)	-0.308 (-0.23)	-0.271 (-0.20)	-0.300 (-0.23)	-0.301 (-0.23)
Full acquisition	-0.580+ (-1.77)	-0.604+ (-1.84)	-0.600+ (-1.83)	-0.567+ (-1.73)	-0.559+ (-1.70)	-0.591+ (-1.80)	-0.604+ (-1.85)
Transaction value	0.021 (0.26)	0.0283 (0.35)	0.039 (0.48)	0.0258 (0.32)	0.0253 (0.31)	0.0114 (0.14)	0.0113 (0.14)
Diversifying acquisition	-0.793** (-3.08)	-0.800** (-3.12)	-0.811** (-3.16)	-0.791** (-3.07)	-0.782** (-3.05)	-0.840** (-3.19)	-0.849** (-3.22)
Cultural differences	-0.106 (-1.16)	-0.105 (-1.15)	-0.107 (-1.17)	-0.102 (-1.11)	-0.107 (-1.17)	-0.0772 (-0.84)	-0.0839 (-0.91)
Country risk	1.187 (0.73)	1.54 (0.93)	1.483 (0.90)	1.286 (0.78)	1.313 (0.80)	1.161 (0.71)	1.28 (0.78)
GDP per capita	0.0188 (1.10)	0.0217 (1.26)	0.0214 (1.24)	0.0192 (1.13)	0.0182 (1.07)	0.0159 (0.93)	0.0165 (0.96)
Acquirer size	-0.107 (-1.62)	-0.0533 (-0.70)	-0.0532 (-0.70)	-0.116+ (-1.71)	-0.121+ (-1.77)	-0.112+ (-1.66)	-0.112+ (-1.67)
Acquirer ROA	-0.00996 (-0.69)	-0.0142 (-0.95)	-0.0154 (-1.03)	-0.00927 (-0.64)	-0.00916 (-0.63)	-0.00805 (-0.55)	-0.00842 (-0.59)
Private target	-0.135 (-0.52)	-0.12 (-0.46)	-0.113 (-0.44)	-0.13 (-0.50)	-0.159 (-0.61)	-0.144 (-0.56)	-0.146 (-0.56)
Listed target	-0.441 (-0.89)	-0.367 (-0.73)	-0.396 (-0.79)	-0.434 (-0.86)	-0.421 (-0.83)	-0.473 (-0.95)	-0.499 (-1.02)
TMT size	-0.0715 (-0.90)	-0.0148 (-0.14)	-0.0197 (-0.19)	-0.0803 (-1.01)	-0.081 (-1.03)	-0.0832 (-1.04)	-0.0818 (-1.03)
Num TMT int'l experience (i)(a)		-0.242* (-2.11)	-0.236* (-2.05)				
Num TMT int'l experience <sup>2</sup> (i)(b)		0.0501 (1.62)	0.0578+ (1.84)				
TBD * (i)(a)			0.0239 (0.58)				
TBD * (i)(b)			0.021 (1.12)				
National diversity (ii)(a)				0.504 (0.79)	0.599 (0.94)		
National diversity <sup>2</sup> (ii)(b)				-3.135 (-1.17)	-3.406 (-1.27)		
TBD * (ii)(a)					-0.479 (-1.50)		
TBD* (ii)(b)					2.593 (1.53)		
Average years host country experience (iii)(a)						0.170 (1.56)	0.190+ (1.72)
Average years host country experience <sup>2</sup> (iii)(b)						-0.0154 (-1.24)	-0.0183 (-1.44)
TBD * (iii)(a)							-0.0918 (-1.57)
TBD * (iii)(b)							0.00846 (1.29)
Constant	1.717+ -1.84	0.86 -0.78	0.872 -0.79	1.938* -2.03	2.024* -2.13	2.010* -2.1	2.038* -2.13
Observations	1380	1380	1380	1380	1380	1380	1380
R-squared	0.019	0.023	0.024	0.019	0.022	0.021	0.023
F	2.01**	2.238**	2.111**	1.832*	1.755*	1.824*	1.701*

Note to Table 4: Multiple linear regressions models explaining the effects of the time interval between the immediately previous deal and the current one on the cumulative abnormal returns (using Market model) over a three-day period for the multiple bidder firms announcing international acquisitions. The key explanatory variable, TBD as well as the TMT determinants are mean-centered values. The model specifications are similar as explained in case of Table 3, except that base Model 2A has the main independent variable TBD with controls in line with Hypothesis 2(a) or (b), whilst the Models 4C,

5C and 6C are based on Hypotheses 5(i), (ii) and (iii) respectively and Models marked ‘B’ report the TMT variables in addition to model specification ‘A’. Bidder-specific control variables are lagged one year. All the other variables are defined the same way as in Table 1. The second line in each row are the t-statistic using robust standard errors in parenthesis and <sup>+</sup>, \*, \*\*, and \*\*\* denote significance at 10%, 5%, 1%, and 0.1%, respectively.

Table 5: CARs based on Market model for ADV regressor.

	Model 7A	Model 7B	Model 7C	Model 8B	Model 8C	Model 9B	Model 9C
Prior 3-year window aggregate deal value (ADV)	-0.114 (-1.21)	-0.0936 (-0.98)	-0.181+ (-1.68)	-0.118 (-1.25)	-0.173 (-1.52)	-0.137 (-1.45)	-0.0807 (-0.70)
Cash	0.141 (0.44)	0.128 (0.40)	0.166 (0.51)	0.161 (0.49)	0.179 (0.55)	0.122 (0.38)	0.112 (0.35)
Stock	-0.847 (-0.64)	-0.65 (-0.49)	-0.73 (-0.55)	-0.831 (-0.63)	-0.765 (-0.58)	-0.886 (-0.68)	-1.009 (-0.77)
Full acquisition	-0.562 (-1.60)	-0.605+ (-1.72)	-0.649+ (-1.85)	-0.545 (-1.56)	-0.527 (-1.52)	-0.568 (-1.63)	-0.578+ (-1.66)
Transaction value	0.0132 (0.15)	0.0145 (0.16)	0.000639 (0.01)	0.0156 (0.18)	0.00617 (0.07)	-0.00118 (-0.01)	0.000474 (0.01)
Diversifying acquisition	-0.600* (-2.19)	-0.600* (-2.19)	-0.599* (-2.19)	-0.589* (-2.15)	-0.593* (-2.15)	-0.675* (-2.40)	-0.665* (-2.36)
Cultural differences	-0.0902 (-0.93)	-0.0936 (-0.96)	-0.114 (-1.18)	-0.0916 (-0.94)	-0.0937 (-0.97)	-0.0427 (-0.44)	-0.0528 (-0.54)
Country risk	-0.357 (-0.21)	0.294 (0.17)	0.087 (0.05)	-0.412 (-0.25)	-0.337 (-0.20)	-0.433 (-0.26)	-0.284 (-0.17)
GDP per capita	-0.00461 (-0.26)	0.000308 (-0.02)	-0.00157 (-0.09)	-0.00489 (-0.27)	-0.00406 (-0.23)	-0.0097 (-0.54)	-0.00904 (-0.50)
Acquirer size	0.0157 (0.15)	0.0754 (0.68)	0.088 (0.78)	-0.00575 (-0.05)	-0.0117 (-0.11)	0.0277 (0.26)	0.0186 (0.17)
Acquirer ROA	-0.0257+ (-1.71)	-0.0321* (-2.07)	-0.0303* (-1.97)	-0.0244+ (-1.65)	-0.0236 (-1.59)	-0.0243 (-1.62)	-0.0239 (-1.59)
Private target	-0.283 (-1.02)	-0.281 (-1.01)	-0.314 (-1.13)	-0.297 (-1.06)	-0.305 (-1.10)	-0.29 (-1.04)	-0.284 (-1.02)
Listed target	-0.758 (-1.46)	-0.662 (-1.27)	-0.676 (-1.31)	-0.803 (-1.52)	-0.79 (-1.49)	-0.791 (-1.52)	-0.769 (-1.45)
TMT size	-0.121 (-1.44)	-0.00998 (-0.09)	-0.00554 (-0.05)	-0.139+ (-1.66)	-0.143+ (-1.70)	-0.137 (-1.64)	-0.135 (-1.61)
Num TMT int'l experience (i)(a)		-0.299* (-2.40)	-0.357** (-2.89)				
Num TMT int'l experience <sup>2</sup> (i)(b)		0.0254 (0.79)	-0.0502 (-0.92)				
ADV * (i)(a)			-0.00174 (-0.04)				
ADV * (i)(b)			0.0298* (2.10)				
National diversity (ii)(a)				0.886 (1.29)	0.968 (1.41)		
National diversity <sup>2</sup> (ii)(b)				-1.858 (-0.63)	-3.144 (-1.00)		
ADV * (ii)(a)					0.101 (0.36)		
ADV * (ii)(b)					0.800 (0.68)		
Average years host country experience (iii)(a)						0.247* (2.12)	0.211 (1.61)
Average years host country experience <sup>2</sup> (iii)(b)						-0.0206 (-1.60)	-0.0125 (-0.68)
ADV * (iii)(a)							0.0352 (0.61)
ADV * (iii)(b)							-0.00661 (-0.89)
Constant	2.250* (2.14)	1.143 (0.97)	1.325 (1.11)	2.569* (2.42)	2.628* (2.45)	2.555* (2.41)	2.537* (2.38)
Observations	1343	1343	1343	1343	1343	1343	1343
R-squared	0.021	0.025	0.029	0.022	0.023	0.025	0.026
F	1.747*	2.222**	2.083**	1.634*	1.531+	1.686*	1.569+

Note to Table 5: Multiple linear regressions models explaining the impact of the aggregate deal value (ADV) in the previous three-year period of the current acquisition on the cumulative abnormal returns (using Market model) over a three-day period

for the multiple bidder firms announcing international acquisitions. The key explanatory variable, ADV as well as the TMT determinants are mean-centered. The model specifications are similar as explained in case of Table 3, except that base Model 3A has the main independent variable ADV with controls in line with Hypothesis 3(a) or (b), whilst the remaining Models marked 'C' are based on Hypotheses 6(i), (ii) and (iii) respectively, whereas the Models marked 'B' have the TMT proxies in addition to base model 'A'. Bidder-specific control variables are lagged one year. All the other variables are defined the same way as in Table 1. The second line in each row are the t-statistic using robust standard errors in parenthesis and +, \*, \*\*, and \*\*\* denote significance at 10%, 5%, 1%, and 0.1%, respectively.

Appendix

Figure 1: The graph below illustrates the positive quadratic interaction effect of the Num of TMT int'l experience on the negative relationship of ADV predictor on the 3-day announcement CARs using MM.

