The financial conservatism of firms in emerging economies

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Abstract

Using a large sample of emerging market firms over the period 1980–2015, we document a high prevalence and persistence of financial conservatism. Specifically, 31% of the African firms have ultra-low leverage (*less* than 5%), with 42% and 11% having non-positive net-debt (total debt *less* cash) and no debt (zero-levered), respectively. In further analyses, we find that macroeconomic conditions have a muted effect on financial conservatism. Our results suggest that financial conservatism in the emerging market context is due to two main factors; (1) credit constraints, and (2) the desire to attain or enhance financial flexibility. The former highlights the need for pro-market policies that improve access to external finance. At the same time, the latter, which points to the accumulation of cash reserves at the expense of current investments, is a strategic choice aimed at preserving or enhancing financial flexibility. Our results are robust to using alternative sub-sampling approaches, model specifications, definitions of variables and estimation techniques.

Keywords: capital structure, financial conservatism, low-leverage, zero-leverage, emerging markets
JEL classification: G20, G30, G32

1 Introduction

Following on the seminal work of Modigliani and Miller (1958), several studies have explored factors that determine capital structure. Despite this growth in the literature, a comprehensive review by Graham and Leary (2011) concludes that not much is known about corporate financing decisions as the explanatory power of existing models is low, and results are mixed. In line with these sentiments, an emerging tranche of the literature explores why firms have low or zero-leverage (financial conservatism hereafter). For example, Dang (2013) reports that zero-levered firms in the UK increased from an average of 6% in the 1980s to 19% in the 2000s. Similarly, Strebulaev and Yang (2013) find a significant increase in the proportion of zero-levered firms from a minimum of 4.3% in 1980 to a peak of 19.9% in 2005. Bessler et al. (2013) also find a similar increase of 12% in zero-levered firms across 20 developed countries over the period 1988–2011. This puzzling prevalence of financial conservatism against a backdrop of advancements in capital markets and information technology has ignited debates on why firms choose to forego the net-benefits associated with debt financing, which range between 7% and 15% according to Lotfaliei (2018).

The above discussion points to an emerging consensus that some firms adopt overly conservative financing policies. However, the reasons for this puzzling phenomenon are not fully understood as some studies attribute the low or zero-leverage phenomenon to financial constraints (see Devos et al., 2012; Bessler et al., 2013), while some point in the direction of managerial and corporate governance factors (see Devos et al., 2012; Strebulaev and Yang, 2013). El Ghoul et al. (2018) single out cultural conservatism and variations in national levels of trust as the main drivers of the zero-leverage phenomenon. Contrary to this emerging consensus on the prevalence of the low- or zero-leverage phenomenon, DeAngelo and Roll (2015) find that financial conservatism and the stability in leverage are exceptions rather than the norm as they are temporary, with firms increasing or actively adjusting capital structure in the long-run. Notwithstanding the above

contributions, the mixed results on the determinants of the prevalence and persistence of financial conservatism in developed countries and lack of comprehensive studies within emerging economies highlight the need for further research.

At the same time, an emerging trance of the literature has documented several unique aspects of corporate financing decisions in emerging markets. For instance, Bae and Goyal (2009) find that banks increase loan spreads, reduce loan amounts and shorten maturities in response to poor legal enforcement of contracts. This discourages reliance on and use of debt financing, and should, consequently, result in the increased prevalence and persistence of the low- or zero-leverage phenomenon in emerging markets *vis-á-vis* that reported in developed markets.[1] Similarly, Al-Najjar (2013), Chen et al. (2015) and Lei et al. (2018) document significantly higher cash holdings for firms operating in the emerging markets. This high reliance on cash holdings, an internal form of finance, points to increased financial conservatism due to limited access to external finance. Thus, financial conservatism within emerging markets is likely to be distinct from that observed in developed capital markets where firms enjoy better access to alternative forms of finance. In developed capital markets, as alluded to by Becker and Ivashina (2014), Ferrando and Mulier (2013) and Kahle and Stulz (2013), firms can more easily substitute financing sources and optimise their financing structures. Such financing flexibility is limited in the case of firms operating in less developed capital markets, thereby making financial conservatism more prevalent and persistent.

At a macro-level, emerging economies are characterised by distinct institutional features that differ from developed ones. For instance, emerging economies are associated with high levels of opaqueness (Ojah and Pillay, 2009), strong family, cultural and religious ties (Chen et al., 2015; Nakpodia and Adegbite, 2018; Mertzanis et al., 2019), weak investor protection (Gwatidzo and Ojah, 2014; Iskandar-Datta and Jia, 2014; George et al., 2016) and high prevalence of unethical practices (Barth et al., 2009; Thakor and

[1] Sorge et al. (2017) document significant short-termism in emerging markets. They find that firms in countries such as Brazil, Chile, China, India, Peru, Russia and South Africa having 51%, 42%, 78%, 42%, 56%, 63% and 49% of borrowings as short-term debt, respectively.

Lo, 2015). When taken together, these unique institutional factors limit firm financing options and increase reliance on self-funding sources such as retained earnings, cash reserves and personal loans (from friends or family) (see Guariglia and Yang, 2018). It is, therefore, not unreasonable to expect high prevalence and persistence of financial conservatism for firms in emerging markets. Therefore, Africa represents an exemplary emerging market context with distinct institutional structures which provides an ideal setting to validate theory or competing propositions on financial conservatism.

Of particular interest are several noteworthy developments affecting financing decisions within African economies. For example, from 1980 to 2015, the GDP of African economies grew, on average, by 3.9%, considerably exceeding the 3.4% rate recorded for the rest of the world. This growth rate closely matches the 4% recorded for other emerging market economies.[2] As such, one would expect this strong growth to increase demand for credit, however bank credit to the private sector in most African economies remains at an abysmally low level of approximately 17.6% of GDP relative to 43.8% for other emerging markets and 44.7% for the rest of the world.[3] In addition, only a handful of African countries have well-functioning stock markets, with most being relatively small and shallow. The aforementioned anomalous combination of persistently high economic growth and depressed credit markets appear contradictory to the widely documented finance-growth nexus (see Levine, 2005; Beck et al., 2011). This sets Africa apart from developed economies where the literature is mostly concentrated and provides us with a strong impetus to explore the financial conservatism, a non-standard form of financing behaviour which hitherto, to the best of our knowledge, has not been fully examined in emerging markets.

Against this background, we study the prevalence and persistence of financial conservatism for a large sample of 1,343 firms (15,369 firm-year observations) from eleven African countries from 1980 to 2015. We specifically examine the following questions:

[2]To categorise economies, we have relied on Morgan Stanley Capital International (MSCI) emerging market classification criterion that is available from: https://www.msci.com/market-classification.

[3]See, Figures A.5 and A.6 of online appendices.

Do firms in emerging markets adopt conservative financial policies? If so, how prevalent and persistent is financial conservatism in the emerging markets? Do firm-specific and macroeconomic factors explain financial conservatism within the context of emerging markets? [4] Addressing these pertinent questions is important as; (1) it helps resolve the mixed results, (2) extends the literature to understudied and institutionally distinct emerging markets, and (3) provides an opportunity to assess the impact of the reported capital markets developments on corporate financing decisions.

We document several interesting insights on financial conservatism. First, we find that 31% of our African firms have ultra-low leverage (book leverage of 5 percent or less), which is significantly higher than rates reported in the US (22%) (Strebulaev and Yang, 2013) and other non-US economies (25%) (El Ghoul et al., 2018). For the other proxies of low or zero-leverage, namely; non-positive net debt (negative-debt) and zero-leverage, we find similar rates of 42% and 11%, respectively, which are in tandem with those reported in the US by Strebulaev and Yang (2013). This high prevalence of conservatism in emerging markets, as we later show, is due to a combination of firm-specific and institutional constraints that limit financing options and access to external finance.

Second, we observe that financial conservatism is not only more prevalent in Africa but also highly persistent. Compared to rates of 34.5% in the US and 21% in the UK, a much higher proportion of approximately 38% of low-levered (UL) firms in our sample do not raise debt for the next five years.[5] Our alternate measures of financial conservatism tell a similar story; we find that 41% (37%) of the firms with non-positive net-debt (zero-leverage) maintain their conservative policies for the next five years. Furthermore, we observe that 75% of zero-levered firms maintain this conservative financing policy in the following year. In addition, 10%–13% of African firms do not deviate from conservative financing policies for periods extending to approximately ten years. While this finding

[4] Korajczyk and Levy (2003), Cook and Tang (2010) and Oztekin and Flannery (2012) argue that macroeconomic factors have a significant effect on capital structure. However, the aforementioned studies, except for Dang (2013), have only focused on firm-specific factors, which may not fully explain financing decisions.

[5] For the US Strebulaev and Yang (2013) defines low-leverage as firms with book leverage of less than 5%, whereas for the UK Dang (2013) uses a slightly different definition of book leverage of 1% or less.

is surprising and in line with our central hypothesis, it differs from DeAngelo and Roll (2015) who show that financial conservatism is a short-term phenomenon in the US. On the whole, our findings suggest that financial conservatism is a long-term phenomenon in Africa, an exemplary emerging market context.

Third, we find that financial conservatism is linked to firm-specific factors; however, some factors exhibit non-standard responses *vis-á-vis* the predictions based on standard capital structure theories. In line with extant literature (Titman and Wessels, 1988; Antoniou et al., 2008; Kayo and Kimura, 2011), we note that financial conservatism increases with cash holdings, growth and dividends, while it decreases with size, profitability, capital expenditure, and research and development. However, the increase (decrease) in financial conservatism with asset-tangibility and tax (non-debt-tax shields) is not consistent with the literature. We link this puzzling result to the financial constraints proposition, as high-tangibility firms that adopt financial conservatism have lower levels of liquidity, are unprofitable and have limited growth opportunities. The anomaly on non-debt-tax shields and taxes is inconsistent with our argument that these tax shields enhance or preserve financial flexibility by maximising the after-tax cash flows available to the firm. Consistent with this finding, we note that our sample of financially conservative firms have fewer non-debt-tax shields. Consequently, there is no incentive for such firms to take advantage of the interest tax shield associated with taking-on debt financing. Likewise, the increase in financial conservatism with taxes reinforces the view that marginal corporate tax rates have decreased significantly over time.[6]

Last, we find no significant link between macroeconomic factors and financial conservatism for African firms. This finding is surprising and not in line with the literature linking macroeconomic conditions to capital structure (e.g., Korajczyk and Levy, 2003; Cook and Tang, 2010; Bhamra et al., 2010; Gorbenko and Strebulaev, 2010; Oztekin and Flannery, 2012). It is similarly not consistent with studies in the UK (Dang, 2013) and

[6]Corporate tax rates have decreased significantly since 1980 (Bunn, 2018). This progressive decrease in corporate taxes reduce the benefits of using debt, leading to the observed positive effect of taxes on financial conservatism.

US (Strebulaev and Yang, 2013), which document a significant effect of macroeconomic conditions on financial conservatism. We attribute this result to the non-conformity of conservative firms with theory and the shield provided by financial flexibility. This shield, in the form of unused debt capacity, immunises conservative firms against adverse macroeconomic shocks, hence the muted effect to changes in macroeconomic factors. The finding shows that capital structure, particularly the adoption of financial conservatism, plays a pivotal role in risk management for firms operating in markets characterised by limited access to external finance. To the best of our knowledge, no prior study has comprehensively examined the prevalence, persistence and determinants of financial conservatism within the emerging market context.

The rest of the paper is organised as follows. Section 2 discusses the related literature and testable hypotheses. Section 3 presents the methodology. Section 4 discusses the variables used. Section 5 describes the data and presents summary statistics. Section 6 discusses the empirical findings. Section 7 presents the robustness tests. Section 8 summarises and concludes.

2 Theoretical framework and hypothesis development

Financial conservatism, a form of non-standard financial behaviour, has been linked to a host of factors that can be broadly classified under the propositions, namely, the financial constraints and financial flexibility hypotheses (e.g., Bessler et al., 2013; Dang, 2013; Strebulaev and Yang, 2013).

Following the financial constraints hypothesis, we posit that firm-specific and external market constraints might explain why managers are compelled to adopt conservative financing policies. Firms with a higher proportion of intangible assets face significant hurdles in accessing the credit markets due to the low collateralisability of their assets (Barclay and Smith, 2005), more so, in emerging markets beleaguered by high agency costs and information asymmetry problems (Brown et al., 2013; Machokoto, 2020; Sorge et al., 2017). This prediction is in line with the contracting cost theory of capital struc-

ture, which posits that, in order to avoid potential financial distress problems associated with debt, firms with more intangible assets adopt financially conservative policies. This situation is likely to be more prevalent in emerging markets such as Africa where there has been a steady decline in asset tangibility (Machokoto et al., 2020). At the same time, the cost of external capital has remained prohibitively high relative to developing economies.

Furthermore, firms operating in emerging markets that are characterised by a high degree of information asymmetry are likely to face credit rationing and exclusion from the equilibrating financial markets (Stiglitz and Weiss, 1981). To counteract the limited or curtailed access to external finance, firms facing positive NPV projects tend to rely on self-financing sources such as retained earnings and cash reserves (see Guariglia and Yang, 2018). This financing behaviour is consistent with the pecking order theory (Myers, 1984). Under the pecking order theory, managers issue securities with the least informational costs, thus leading to a pecking order in which internal sources of funds are prioritised, more so, in the context of emerging markets characterised by limited access to finance and weak legal contract enforcement mechanisms. From the preceding discussion, we formulate and test the following hypothesis:

Hypothesis 1 (H1): *Financial conservatism increases with financial constraints.*

Financial flexibility is linked to a firm's expectations of future investments and represents how managers make choices about financing them (Lambrinoudakis et al., 2019). Managers proactively preserve debt capacity as a *real* option to fund future investment opportunities. On a dynamic scale, Gamba and Triantis (2008) find that firms use cash reserves (liquidity policy) as a form of hedge against shocks in credit supply. Additionally, when firms face high transaction costs of issuing debt, they avoid financial distress by preserving debt capacity and hoarding cash simultaneously. Taking this cue, Yung et al. (2015) focus on 33 emerging economies and empirically find that, like in developed economies, financial flexibility enhances investment ability as well as the capacity to absorb adverse credit supply shocks. Hence, firms that follow a conservative financing

policy are valued highly by investors, especially during contractions in credit supply or economic downturns. Building on this premise, we argue that firms in emerging markets characterised by opaqueness and limited access to external finance tend to preserve or enhance financing flexibility by; (1) hoarding cash (Almeida et al., 2011), and (2) avoiding debt financing (Strebulaev, 2007; Akhtar, 2017). From this discussion, we posit that, in order to maintain financial flexibility in the presence of external market frictions or shocks, emerging market firms tend to adopt financial conservatism. Accordingly, we formulate and test the following hypothesis:

Hypothesis 2 (H2): *Financial conservatism increases with the need to enhance or preserve financial flexibility.*

Persistence in capital structure has been extensively studied. For example, Frank and Goyal (2009) find that, over the period from 1900 to 2002, US firms' leverage has remained within narrow bounds, with leverage ratios in 1900 being remarkably similar to those in 2002. Similarly, Lemmon et al. (2008) show that high (low) leverage firms maintain their policies for over two decades. They attribute this stability in leverage to unobserved time-invariant effects (fixed effects). This persistence and stability of leverage were also confirmed by Strebulaev and Yang (2013) who find that zero-levered firms in the US maintain their conservative policies for extended periods. In particular, they find that 30% (15%) of zero-levered firms remain within this range for the next five (ten) years. However, DeAngelo and Roll (2015) have questioned the reported persistence in the capital structure and show that this only occurs at lower debt ratios and is short-lived for US firms. In a related study, Hanousek and Shamshur (2011) find evidence linking the stability in leverage to the relative stability of the economy. Specifically, they document that capital structure persistence increases with credit constraints for firms in seven Eastern European transition economies. This evidence shows that, with changing economic conditions, internal factors like managerial preferences or external credit constraints might limit capital structure adjustments; hence, the observed persistence in

leverage. Similarly, Hanousek and Shamshur (2011) observe that financial conservatism is persistent in environments characterised by market frictions and institutional fragility.

Prior studies have also shown that, due to low levels of capital market development in emerging markets, firms face limited access to external finance. For example, Gwatidzo and Ojah (2014) show that due to the limited degree of institutional openness, and low levels of capital market development, firms in emerging economies have limited access to external finance. More so, where debt finance is available, the limited collateralisability of the assets might force firms in emerging markets to adopt conservative financial policies (Bonizzi, 2017). In addition, the shallow bond markets in emerging economies limit access to debt finance (Gonzlez, 2015), which can force firms to adopt conservative financial policies. On the whole, the aforementioned factors have not changed significantly over time, which implies persistence in financing policies. Accordingly, we formulate and test the following hypothesis:

Hypothesis 3 (H3): *Financial conservatism is highly persistent over time.*

3 Methodology

To examine the determinants of the likelihood of financial conservatism, we estimate the following model:-

$$Logit(P_{ijkt}) = ln\left(\frac{P_{ijkt}}{1 - P_{ijkt}}\right) = \beta.Z_{ijkt-1} \tag{1}$$

where P_{ijkt} is the likelihood of financial conservatism for firm i in country j at time t and Z_{ijkt-1} is a vector of the lagged determinants of the likelihood of financial conservatism and is defined below. P_{ijkt} is computed as the inverse of the logistic function as follows:-

$$Logit(P_{ijkt}) = Logit^{-1}(\beta.Z_{ijkt-1}) = \frac{1}{1 - e^{-\beta.Z_{ijkt-1}}} \tag{2}$$

where Z_{ijkt-1} is a vector of firm-specific and macroeconomic variables that affect the likelihood of firm i in country j adopting a conservative financing policy (financial con-

servatism) at time t. The vector of the determinants of the likelihood of financial conservatism, Z_{ijkt-1}, consists of the following:-

$$Z_{ijkt-1} = \beta_0 + \beta_1 X_{1ijkt-1} + \beta_2 X_{2ijkt-1} + ... + \beta_k X_{kijkt-1} + \epsilon_{ijkt} \quad (3)$$

where Z_{ijkt-1} is a vector of firm-specific and macroeconomic variables that affects the likelihood of financial conservatism, and ϵ_{ijkt} is the error term. The lagged firm-specific variables included are size, property, plant and equipment (PPE), cash, profit (ROA), Tobin's q, capital expenditure (Capex), the R&D dummy (RDD), dividend, non-debt tax shields (NDTS) and tax.[7] The lagged macroeconomic variables that we include in the extended models are GDP growth, inflation, domestic credit, the rule of law and trade openness (Kaopen). We use lead-lag effects to avoid reverse causality (endogeneity) as by definition, accounting variables (ratios) are linked (see Dang et al., 2015; Roodman, 2006; Wintoki et al., 2012).[8]

4 Variable definitions

In this section, we define the variables, and present a detailed discussion linking each independent variable to our hypotheses.

4.1 Dependent variables

Our key dependent variable, ultra-low leverage (UL), is a dichotomous variable which takes the value of one if firm i has a leverage ratio less than or equal to 5% in year t, and zero otherwise. We also used two alternative proxies of financial conservatism, namely; (1) Non-Positive Net-Debt (NPND) (book value of debt *minus* cash), and (2) Zero Leverage (ZL). In this case, UL represents an arbitrary cutoff of 5%, which is conservative and allows us to accommodate various definitions and theoretical models used in the literature (e.g., Goldstein et al., 2001; Ju et al., 2005; Strebulaev and Yang, 2013). As there is an

[7] This choice is informed by the literature (e.g., Devos et al., 2012; Bessler et al., 2013; Dang, 2013; Strebulaev and Yang, 2013).

[8] In untabulated results (available upon request), we find that our results are robust using contemporaneous variables.

ongoing debate on whether cash should be treated as negative debt or zero-debt (e.g., Acharya et al., 2012; Strebulaev and Yang, 2013; Bigelli et al., 2014), including cash holdings in our analysis (*via* NPND) enables us to provide further empirical insights on this contentious issue using a unique and overlooked emerging market dataset. As a form of robustness check, we also consider other intuitive proxies of financial conservatism, namely; (1) Almost Zero Leverage (AZL) for firms with leverage that is less than or equal to %1, (2) Zero Long-term Debt (ZLTD) for firms with no long-term debt, and (3) Almost Ultra-Low Leverage (AULL) for firms ranked in the lower quartile in each year. These additional proxies enable us to draw comparisons with prior studies and to check the robustness of our findings.

PLEASE INSERT TABLE 1 HERE

4.2 Independent variables linked to financial constraints

Size has been documented in the literature as a proxy for financial constraints (Bessler et al., 2013; Dang, 2013). Large firms have stable cash flows, are more diversified and have a lower degree of information asymmetry. This allows them to access the debt markets with relative ease. Likewise, property, plant and equipment proxies for the collateral value of assets (de Jong et al., 2008; Kayo and Kimura, 2011), suggesting that firms with a higher proportion of safe tangible assets are more likely to pledge their assets as collateral for external debt. Furthermore, growth has been linked to the contracting cost theory of capital structure, which posits that to avoid potential financial distress costs, firms with intangible growth opportunities will remain financially conservative (Barclay and Smith, 2005). Such firms are constrained by the prospects of financial distress costs associated with debt. Similarly, research and development has been shown to negatively affect leverage (Harris and Raviv, 1991; O'Brien, 2003) as it reflects intangible growth opportunities that cannot be easily collateralised. As a consequence, such firms are expected to have limited access to the debt market. In terms of physical capital expenditure, firms undertaking capital investment projects are likely to be large

and by implication, less likely to be financially constrained.

There are several macroeconomic factors linked to the financial constraints hypothesis. For instance, GDP growth has been linked to variations in firm leverage (de Jong et al., 2008; Chipeta and Deressa, 2016; Halling et al., 2016). In periods of economic expansion, firms resort to external credit to facilitate growth in investments. Likewise, inflationary pressures tend to reduce the real cost of debt (DeAngelo and Masulis, 1980), thus increasing the likelihood of using debt financing. Additionally, domestic credit to the private sector, which measures the ability of the private sector to access external credit (La Porta et al., 1997), is likely to reduce financial conservatism. Furthermore, a well-developed banking sector should facilitate competition amongst alternative providers of funds, thereby reducing the cost of borrowing. Concerning the rule of law, a more developed legal system facilitates access to the debt markets (Gwatidzo and Ojah, 2014; Chipeta and Deressa, 2016); when investors are better protected, creditors or lenders are more willing to extend credit. Finally, capital account openness should facilitate access to debt as it provides avenues for firms to borrow from abroad.

4.3 Independent variables linked to financial flexibility

The precautionary motive of holding cash argues that maintaining adequate cash reserves provides firms with the necessary liquidity to achieve or enhance financial flexibility in order to take advantage of investment opportunities as they arise (Amess et al., 2015). Likewise, profit has shown to be negatively related to leverage (de Jong et al., 2008; Kayo and Kimura, 2011), suggesting that profitable firms utilise internally generated funds to finance projects. This phenomenon is more pronounced in the least developed emerging markets (Chipeta and Deressa, 2016) that are characterised by external credit constraints and high information asymmetry. In this context, profitable firms are more likely to preserve cash to enhance their financial flexibility. Regarding dividends, firms are more likely to pursue financial flexibility and pay dividends, which work as a useful disciplining and signalling mechanism (He et al., 2017), especially in emerging markets characterised by a high degree of information asymmetry and agency costs.

Firms with high non-debt tax shields have fewer incentives to use debt financing (DeAngelo and Masulis, 1980). This enhances or preserves financial flexibility by minimising or reducing debt servicing obligations, especially in emerging markets where external debt is costly. Furthermore, non-debt tax shields are a substitute to interest tax shields, which enable a firm to reduce its tax bill in a similar way as would the case with debt financing. Likewise, taxes enable profitable firms to enhance or preserve financial flexibility by taking advantage of interest tax shields associated with debt financing. All variables discussed here are linked to the hypotheses summarised in Table 3 and defined in Appendix A.

5 Data

We extract our dataset from *Datastream* over the period 1980–2015. The sample coverage and period is purely dictated by data availability. As is standard in the literature, we exclude firms in the heavily regulated sectors such as the financial and utility sectors (Standard Industrial Classification (SIC) Codes 6000–6999 and 4900–4999). We exclude firms with missing data on key variables and winsorise all firm-level variables at the upper and bottom one percentile of the distribution to minimise the effect of outliers. The final sample consists of 15,369 firm-year observations (1,343 firms) from eleven African countries (Botswana, Egypt, Ghana, Ivory Coast, Kenya, Morocco, Nigeria, South Africa, Tanzania, Tunisia and Zimbabwe). The observations vary across industries, countries and over time due to firms entering and leaving the database.

PLEASE INSERT TABLE 2 HERE

Table 2 reports summary statistics for the full sample period. Panel A shows that leverage has a mean (median) value of 15.4% (12.1%), with a lower and upper quartile of 2.9% and 23.2%, respectively. Panel B shows that, on average, 31% of the firms have ultra-low leverage (UL — our key dependent variable), while NPND and ZL, our alternate proxies for financial conservatism, are 42% and 11%, respectively. These proportions of financial conservatism are comparably higher than those reported in the US (22.6%

ultra-low-levered firms, 33.1% for NPND, and 10.6% for ZL firms (see Strebulaev and Yang, 2013)).[9] Panel B shows cross-industry variations in financial conservatism. For the case of UL, our key dependent variable, the proportion of firm-year observations ranges from 20.85% in the telecommunications sector to 43.85% in the technology sector. The low (high) prevalence of financial conservatism in the telecommunications (technology) sector is expected as these firms are generally associated with a low (high) proportion of intangible assets. Similarly, Panel C reports variations in financial conservatism across countries, ranging from 29.37% in South Africa to 69.23% in Botswana. The low prevalence of financial conservatism in South Africa relative to the other African countries is likely due to its advanced financial markets.

PLEASE INSERT TABLE 3 HERE

We next compare the differences in firm characteristics between conservative and non-conservative firms. Panels A and B of Table 3 present the differences in mean, median and standard deviation between the two firm groups. Consistent with Dang (2013), Strebulaev and Yang (2013) and Bigelli et al. (2014), conservative firms are, on average, significantly smaller, invest less and have lower non-debt tax-shields relative to non-conservative firms. However, in contrast to the extant literature on capital structure, conservative firms have significantly more tangible assets. These firm-specific characteristics are in line with Hypothesis 1 suggesting that financial conservatism is linked to binding credit constraints (Dang et al., 2014). We also find that conservative firms are, on average, significantly more profitable, have high growth, and pay higher dividends and taxation, which are characteristics theoretically linked to high leverage (the ability to secure debt financing). For these latter seemingly unconstrained firms, their adoption of financial conservatism is more in line with the financial flexibility proposition (Hypothesis 2). These mixed differences in firm characteristics conditional on financial conservatism do not make it *a priori* clear why firms in emerging markets adopt zero or low-leverage policies.

[9]The distribution of conservative firms over time, as shown in Appendix B, should be interpreted with caution as averages tend to mask considerable variation in financial conservatism irrespective of the definition used across the sample period.

PLEASE INSERT TABLE 4 HERE

Table 4 presents the pairwise correlations for the variables used. UL is positively correlated with NPND, ZL, PPE, cash, profit, Tobin's q and dividends, while it is negatively correlated with size, Capex, RDD and NDTS. The pairwise correlations for firm-specific factors with UL are in line with the literature (Bessler et al., 2013; Dang, 2013; Strebulaev and Yang, 2013). The only exceptions are PPE and NDTS. The positive correlation between PPE and UL suggests that PPE might reflect illiquidity and high operating risk associated with tangible assets. At the same time, the negative correlation between NDTS and UL suggests that NDTS are complementary rather than substitutes to debt tax shields. This is in line with the argument that tangible assets serve as collateral, thereby promoting access to debt finance (Chaplinsky and Niehaus, 1993). For the correlations with macroeconomic variables, we find that UL is positively correlated with openness (Kaopen), while it is negatively correlated with GDP growth, inflation, domestic credit and the rule of law. The correlations of the other proxies of financial conservatism are, on overall, consistent and in line with our main variable of interest (UL).

6 Results

In this section, we examine whether firm-specific and macroeconomic factors explain financial conservatism. Next, we study the factors influencing the entry and exit decision.

6.1 Do firm-specific and macroeconomic factors determine financial conservatism?

Table 5 presents the estimation results of Equation (3) that relates the likelihood of financial conservatism to firm-specific and macroeconomic/institutional factors. The dependent variables are dummies for ultra-low levered firms (UL), non-positive net-debt firms (NPND) and zero-levered firms (ZL).

PLEASE INSERT TABLE 5 HERE

Column (1) shows that financial conservatism, as proxied by ultra-low-leverage (UL),

increases with tangibility, cash holdings, growth (Tobin q), dividends and tax, however it decreases with size, profitability (ROA), capital expenditure (Capex), R&D (RDD) and NDTS. Similarly, Columns (2) and (3) show that the same firm-specific attributes have a significant effect on other proxies of financial conservatism – non-positive net-debt (NPND) and zero-leverage (ZL).

The coefficients of size and growth are as expected, consistent with Hypothesis 1 (H1) and in line with the literature (e.g., Devos et al., 2012; Bessler et al., 2013; Dang, 2013; Strebulaev and Yang, 2013). For emerging markets with firms having high levels of opacity, size plays an important role in facilitating access to external finance. Meanwhile, the coefficients of cash, a proxy for financial flexibility, are positive and consistent with Hypothesis 2 (H2). However, in contrast to our expectations, we find that the coefficients of profitability are negative but insignificant.

Column 1 of Table 5 also shows that Capex and R&D are negatively associated with financial conservatism, which, read in conjunction with their positive correlation with 'size' shown in Table 4, points that large firms are making capital expenditures and investing in R&D, a finding consistent with Machokoto et al. (2020). Since firm size is a reverse proxy for financial distress and bankruptcy costs (de Jong et al., 2008), as such, it is reasonable to assume that large firms undertaking Capex and R&D investments are financially unconstrained and enjoy better access to external debt markets.[10] Thus, the coefficients of Capex and R&D are in line with Hypothesis 1 (H1).

Consistent with Hypothesis 2 (H2), we also observe that financial conservatism increases with dividends, suggesting that dividend payers remain financially conservative to maintain financial flexibility. For the special case of emerging markets, an environment characterised by high information asymmetry and agency costs, financial flexibility enables firms to maintain dividends which are essential for signalling to investors.[11]

[10] Table4 also shows that both Capex and RDD are positively and significantly correlated with leverage, which also implies a negative association between financial conservatism and Capex- and R&D-intensive firms.

[11] In our context of emerging markets with low levels of transparency and high agency issues, He et al. (2017) argue that paying dividends limits opportunities for insiders to consume private benefits, and enhances reputation in the marketplace.

The coefficients of asset-tangibility, non-debt tax-shield (NDTS) and taxes are inconsistent with standard capital structure theories but plausible in the context of the zero-leverage phenomenon. For example, the increase in financial conservatism with asset-tangibility (PPE), which is contrary to the main-stream literature (e.g., Bessler et al., 2013; Dang, 2013; Strebulaev and Yang, 2013), appears to reflect the high degree of illiquidity, fixed operating costs and the operating risk associated with tangible assets. Our initial assessment of the correlations explains why these asset-intensive firms choose to remain financially conservative. Table 4 shows that asset-tangibility (PPE) is negatively correlated with cash, profit and growth (Tobin's Q), which highlights that asset-intensive companies are, on average, illiquid, unprofitable and have limited growth opportunities.[12] Anticipating the rise in financial distress costs, these asset-intensive firms might strategically refrain from borrowing. In this case, the relationship between asset-tangibility and financial conservatism is aligned with the (self-imposed) financial constraint hypothesis (Hypothesis 1 (H1)).

We further note that, in emerging markets, there has been a puzzling concurrent increase in corporate debt and a decrease in asset-tangibility (e.g., Machokoto et al., 2020), which implies that the debt-collateral nexus has diminished significantly over time. The changes are in line with the marked shift of the economy from predominantly an industrial-based towards a knowledge-based economy (e.g., Srivastava, 2014; Corrado and Hulten, 2010). The increase in intangible capital (i.e. R&D, information technology and human capital) provides further supporting evidence to this shift (e.g., Begenau and Palazzo, 2015; Brown and Petersen, 2009; Hall and Lerner, 2010). On the whole, these dynamics could explain the positive relationship that we document between asset-tangibility (PPE) and different measures of financial conservatism.

Our results further show that financial conservatism decreases with non-debt tax-shield (NDTS), suggesting that non-debt-tax-shields are not a substitute for debt-tax shields. This evidence is consistent with Dang (2013), but inconsistent with our notion

[12]In unreported analysis, we isolate zero-levered firms with high asset tangibility, and find that these firms have lower cash holdings, are less profitable and have limited growth opportunities.

that non-debt tax shields enhance or preserve financial flexibility by maximising the after-tax cash flows. A plausible explanation for this finding is that, our sample of conservative firms has relatively lower NDTS (See Table 3). Consequently, such firms have no further incentives for utilising NDTS to maximise after-tax cash flows. Furthermore, we show that financial conservatism increases with taxes. This result is consistent with El Ghoul et al. (2018) but is in contrast with the trade-off theory of capital structure, which predicts an increase in debt with taxes as firms seek to maximise debt tax-shields. Our narrative of a decline in the relative importance of debt-tax shields is supported by Bunn (2018) who observed significant decreases in corporate tax rates over the past decades.

Next, we examine the influence of macroeconomic factors on financial conservatism by including GDP growth and inflation as additional determinants in Equation (3). Columns (4)–(6) of Table 5 show that the coefficients of macroeconomic factors are not significant. Similarly, the marginal increase in the pseudo R^2s of the logit models in Columns (4)–(6) relative to Columns (1)–(3) (excluding the macroeconomic factors) further confirms the muted effect of macroeconomic factors on financial conservatism. This finding is contrary to Hypothesis 3 (H3) and surprising given that several studies report the importance of macroeconomic factors in corporate financing decisions (e.g., Cook and Tang, 2010; Oztekin and Flannery, 2012; Gwatidzo and Ojah, 2014). Our untabulated results from additional tests confirm that the muted effect of macroeconomic conditions on financial conservatism remains even after controlling for credit constraints. We, therefore, conclude that financial conservatism provides a shield or hedge in the form of financial flexibility (unused debt capacity) that immunises firms against changes in macroeconomic conditions.

Columns (4)–(6) show that domestic credit (supply-side factor) has a significant negative effect on AZL, NPND and ZL. This suggests that improvements in credit supply, which eases credit constraints, significantly reduces financial conservatism. The result is consistent with Hypothesis 1 (H1) and confirms the rise in corporate indebtedness driven by several progressive policy reforms in most African countries (e.g., Machokoto et al.,

2020). An interesting twist to this narrative is that despite the reforms-backed surge in corporate debt (by 112% from a low of 9% in 1980 to peak at 19.3% in 2015), there are a significant number of firms that continue to maintain conservative financing policies. In summary, our findings capture an important peculiarity of persistently conservative firms in emerging markets despite the reported improvements in information technology and access to external finance.

6.2 Is financial conservatism persistent?

In this section, we examine whether financial conservatism is persistent by studying; (1) the number of years that a firm maintains conservative policies, and (2) the entry (exit) into (from) financial conservatism. This analysis is motivated by the ongoing debate on leverage persistence. As earlier mentioned, the extant literature documents significant leverage persistence (e.g., Hanousek and Shamshur, 2011; Devos et al., 2012; Strebulaev and Yang, 2013; Dang, 2013), but a recent study by DeAngelo and Roll (2015) has challenged this emerging consensus on the relative stability in corporate leverage. Using data from the US, DeAngelo and Roll (2015) report that firms frequently change their financing policies and that the observed stability in leverage is a temporary phenomenon which occurs mostly at lower levels of debt financing. Therefore, this leaves open to debate whether or not leverage is persistent.

To explore whether financial conservatism is persistent in emerging markets, we tabulate the number of years a firm maintains financial conservatism and also report the coefficient of the lagged dependent variable from estimating a dynamic random effects probit model. The dynamic random effects probit model is a modified version of Equation (1) that includes an autoregressive term, y_{ijkt-1}, as an additional determinant of financial conservatism. Table 6 summarises the results.

PLEASE INSERT TABLE 6 HERE

Panel A of Table 6 shows significant evidence of persistence in financial conservatism conditional on surviving for the first ten years. Columns (1) and (2) show that 9.8% (467

firms) with ultra-low leverage (UL) maintain this form of financial conservatism for the next ten years. Similarly, Columns (4) and (6) show that 13.3% (867 firms) and 11.4% (192 firms) of non-positive debt (NPND) and the zero-levered (ZL) firms, respectively, maintain their conservative financing policies for the next ten years.[13] This result is consistent with Hypothesis 3 (H3) and suggests that financial conservatism, for emerging market firms, is not a short-term phenomenon as argued by DeAngelo and Roll (2015) in the case of US firms.

In Panel B of Table 6, we find that the coefficients of the auto-regressive term, y_{ijkt-1}, are highly significant, which further supports Hypothesis 3 (H3) predicting a high persistence in financial conservatism. We attribute this high persistence to the less-developed nature of capital markets in Africa. This limits access to external finance, thereby leading to prevalence and persistence of financial conservatism. Our findings corroborate Negash and Taddese Lemma (2013) who find that institutional factors significantly affect capital structure decisions, especially for firms operating in emerging economies. Our findings of high persistence in conservative financing confirm Hypothesis 3 (H3) and show that, in the case of emerging markets, financial conservatism is not a short-term phenomenon as reported in the US.

Next, we extend the analysis of persistence in financial conservatism by examining the entry (exit) decisions into (out of) conservative financing policies. By focusing on entry and exit decisions, we can more closely examine the motives for financial conservatism and assess whether this puzzling phenomenon is persistent. Table 7 summarises the results of the likelihood of adopting ("Entry Decision") and abandoning ("Exit Decision") conservative financing policies.

PLEASE INSERT TABLE 7 HERE

Column (1) of Table 7 shows that the entry decision into ultra-low leverage (UL)

[13] Appendix C shows similar levels of persistence based on alternative proxies of financial conservatism. Specifically, conditional on surviving the first ten years, 9.2%, 10.6% and 20.3% of Almost Zero Leverage (AZL), Zero Long-term Debt (ZLTD) and Almost Ultra-Low Leverage (AULL) firms maintain their conservative policies, respectively.

significantly increases with PPE, cash, growth, dividends and tax. At the same time, it decreases with size, ROA, Capex, RDD and NDTS. We find similar results for the entry decisions to non-positive net-debt (NPND) in Column (2) and zero-levered (ZL) in Column (3). Interestingly, the coefficients for the Trend×100 in Columns (2)–(3) are negative and not significant. This suggests that not many firms are abandoning their conservative financing policies. For the exit decisions, in Columns (4)–(6), we find that the signs for firm-specific factors (relative to Columns (1)–(3)) are reversed as expected. Similarly, the trend for exit decisions is negative but not statistically significant, except for the ultra-low and zero-levered firms. This finding is in line with Table 6 and suggests that the likelihood of firms abandoning financial conservatism (exit decision) is decreasing over time. Also, the pseudo R^2s for exit decisions are low and close to zero, which further confirms the persistence in financial conservatism for emerging market firms.

Our results reveal several unique patterns in the financial conservatism of firms in emerging markets. First, financial conservatism in emerging markets is more persistent than in the developed markets such as the US and UK. Second, the effect of macroeconomic conditions on financial conservatism in emerging markets is muted as conservative firms are less responsive to credit supply or macroeconomic shocks. Third, we find two main groups of conservative firms – constrained firms that are forced to adopt financial conservatism due to limited access to external finance and unconstrained firms that choose to be conservative for reasons linked to the need to maintain or enhance financial slack or flexibility. This leads us to derive two key implications; (1) when examining financing decisions in emerging markets; it is important to take into account the non-standard response of conservative firms to the micro-macro factors, and (2) for policymakers, our findings highlight the need for pro-capital market policies that improve access to external finance, especially for the case of firms that are forced to adopt financial conservatism.

7 Robustness

In this section, we conduct a battery of robustness tests. Specifically, we examine the sensitivity of our results to using alternative definitions of financial conservatism, sub-sampling and model specifications. Table 8 presents our robustness tests.

PLEASE INSERT TABLE 8 HERE

Columns (1)–(3) of Table 8 present the results for almost zero-levered firms (AZL), zero-long-term debt firms (ZLTD) and almost ultra-low leverage (AULL) firms. The results show that financial conservatism, as is consistent with our prior results (Table 5), increases with tangibility (PPE), cash, growth, dividends and taxes. At the same time, it decreases with size, ROA, Capex, RDD and NDTS. Based on these results, in Columns (1)–(3), we conclude that our main findings are robust to using alternative definitions of financial conservatism.

Next, in Columns (4)–(9), we examine the sensitivity of our results to alternative sub-sampling. To accomplish this objective, we subdivide the sample into South Africa (which has the highest proportion of the sampled firms) and other countries. This ensures that our results are not driven by the skewed distribution of firms across countries. For South Africa and other countries, in Columns (4)–(9), we find qualitatively similar and consistent results with those in previous sections. This indicates that the determinants of financial conservatism are similar across countries; hence, our results are not driven by the skewed distribution of firms across the eleven countries.

Last, we examine the sensitivity of our results to alternative model specifications. To this end, we introduce three dummies that capture the effects of "vintage year of listing" on financial conservatism. These results are presented in Columns (4)–(9) of Table 8. We find significant and heterogeneous effects of "vintage year of listing" as firms listed in the 1980s and 1990s are relatively more conservative than those listed in the latter decades (for 2000s and 2010s). This finding corroborates Machokoto et al. (2020) who attribute the marked increase in corporate debt over the period 1990–2015 in South Africa to

significant improvements in capital markets that have made it easier for firms to access external finance.

8 Conclusions

A study of the low or zero leverage phenomenon is fundamental to understanding capital structure decisions and why existing models have low explanatory power. However, empirical evidence on this stylised phenomenon is limited, mixed, and concentrated on a handful of developed countries. In this study, we advance the sparse and mixed literature by examining financial conservatism in Africa, an exemplary emerging market context, that is beleaguered by weak institutions and limited access to external finance. These contextual peculiarities are likely to increase both the prevalence and persistence of financial conservatism.

Consistent with our predictions, we find that financial conservatism is prevalent and persistent in emerging markets, with firms not deviating from their initial conservative policies for extended periods. We further note that this persistence in financial conservatism is relatively higher than those reported for firms in the US and the UK (e.g., Strebulaev and Yang, 2013; Dang, 2013), and is not in line with the mainstream capital structure theories and recent findings of active leverage adjustment by DeAngelo and Roll (2015). Our results suggest that capital market frictions, which are more pronounced in emerging markets, are significant impediments to accessing external finance.

Our multivariate analyses further show that financial conservatism is not driven by macroeconomic factors, but by supply-side constraints and demand-side motives of maintaining or enhancing financial flexibility. The first case of financial conservatism due to credit constraints can be more easily explained within the context of emerging economies with less-developed capital markets. Credit-constrained firms in this context end-up adopting conservative financing policies as they cannot access external finance. This is further reinforced by institutional constraints such as high opacity and weak investor protection that impede the development of robust capital markets. The second case of

financial conservatism arising from the need to enhance financial flexibility is puzzling as these firms are in most cases of good credit quality and can, if they so desire, access external finance. The existence of this group of conservative firms implies that the value of financial flexibility outweighs the benefits associated with debt financing (interest tax-shield, lower costs of financing and the disciplinary role of debt). This is plausible, particularly for firms operating in emerging markets characterised by limited access to external finance.

Our findings highlight two fruitful areas for future research. First, it would be interesting to explore why macroeconomic factors have a muted effect on firm financing policies in Africa, and this will help reconcile the inconsistencies in the literature. Second, given the mixed results in the literature, exploring non-linearities in factors influencing financing decisions appears to be a promising future research area. For investors and policymakers, the prevalence and persistence of financial conservatism is of concern as it indicates limited access to finance, which leads to the adoption of sub-optimal financing polices. These sub-optimal policies negatively impact firm value, significantly constrain firm growth, and reducing economic growth.

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Data Availability

The data that support the findings of this study are available from Datastream. Restrictions may apply to the availability of these data, which were used under license.

Disclosure statement

We certify that there are no potential conflicts of interest relating to the subject matter discussed in this manuscript.

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Table 1 Comparisons relative to the extant literature

The table presents the expected and actual results of the sign of the coefficients for determinants of financial conservatism.

	Hypotheses	Expected Sign	Dang (2013)	Strebulaev and Yang (2013)	Bessler et al. (2013)	Bigelli et al. (2014)	El Ghoul et al. (2018)
Sample			UK	US	20 developed countries	Italian private firms	73 countries
Period			1980−2007	1960−2009	1988−2011	1998−2006	1990−2010
Estimation methods			Logistic	Logistic	Logistic	Conditional logit	Logistic
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Trend×100		-			+		
Size	H1	-	-	-	-	-	-
PPE	H1	-	-	-	-	-	-
Cash	H2	+	+		+		+
Profit	H2	-	-	+	+	+	+
Tobin's q	H1	+	+	+	+	+	+
Capex	H1	-	-	+	-	-	+
RDD	H1	-		+	+		-
Dividend	H2	+	-	-	-	+	+
NDTS	H2	+	-		+		-
Tax	H2	-	-				+
GDPgrowth	H1	-	-				
Inflation	H1	-					
Domestic Credit	H1	-					
Rule of Law	H1	-					
Kaopen	H1	-					

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Table 2 Basic statistics

The table summary statistics of all variables used. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

Panel A: Firm-specific and macroeconomic variables

Variables	N	Firms	Mean	SD	Min	p25	Median	p75	Max
Leverage	15,369	1,343	0.154	0.147	0.000	0.029	0.121	0.232	0.660
LTD	15,369	1,343	0.085	0.107	0.000	0.003	0.046	0.124	0.530
Size	15,369	1,343	10.396	1.935	5.516	9.073	10.601	11.765	14.125
PPE	15,369	1,343	0.380	0.238	0.012	0.179	0.348	0.567	0.917
Cash	15,369	1,343	0.117	0.113	0.000	0.033	0.083	0.164	0.516
Profit	15,369	1,343	0.126	0.118	-0.191	0.060	0.112	0.174	0.585
Tobin's q	15,369	1,343	1.609	0.945	0.486	0.990	1.305	1.941	5.659
Capex	15,369	1,343	0.067	0.055	0.000	0.027	0.055	0.092	0.287
RDD	15,369	1,343	0.181	0.385	0.000	0.000	0.000	0.000	1.000
Dividend	15,369	1,343	0.042	0.055	0.000	0.007	0.024	0.052	0.298
NDTS	15,369	1,343	0.037	0.026	0.000	0.020	0.034	0.050	0.136
Tax	15,369	1,343	0.224	0.183	-0.616	0.135	0.246	0.316	0.875
GDPgrowth	15,369	0.027	0.024	-0.077	0.012	0.029	0.042	0.337	
Inflation	15,369	0.072	0.046	0.000	0.046	0.061	0.097	0.262	
Domestic Credit	15,369	0.527	0.231	0.000	0.481	0.608	0.676	0.783	
Rule of Law	15,369	-0.010	0.281	-1.480	0.000	0.000	0.124	0.696	
Kaopen	15,369	-0.902	0.921	-1.904	-1.195	-1.195	-1.195	2.374	

Panel B: Financial conservatism across industries

			Proportion of firm-year observations (%)						
Industry	N	Firms	UL	NPND	ZL	AZL	ZLTD	AULL	ZLALL
Basic Materials	4,464	373	38.46	44.62	17.92	25.04	23.43	5.15	30.80
Consumer Goods	2,499	206	27.09	37.74	7.76	14.25	21.65	0.68	22.65
Consumer Service	2,507	204	33.75	49.74	10.29	19.43	19.51	1.79	27.04
Health Care	470	56	29.79	38.09	15.53	21.49	24.47	3.62	27.87
Industrials	4,028	356	21.75	35.45	4.54	9.61	11.92	0.57	16.66
Oil & Gas	213	24	39.44	51.17	12.68	28.64	40.85	6.10	37.56
Technology	675	70	43.85	66.67	17.19	29.04	25.33	5.04	40.30
Telecommunication	307	31	20.85	33.22	2.28	11.73	7.82	0.00	20.20
Unclassified	206	23	36.41	32.52	14.56	20.87	18.93	0.00	21.84
%			0.31	0.42	0.11	0.18	0.19	0.02	0.25
Total	15,369	1,343	4,775	6,517	1,688	2,785	2,992	379	3,880

Panel C: Financial conservatism across countries

			Proportion of firm-year observations (%)						
Country	N	Firms	UL	NPND	ZL	AZL	ZLTD	AULL	ZLALL
Botswana	52	6	69.23	94.23	28.85	48.08	51.92	9.62	65.38
Egypt	1,114	119	39.68	49.91	17.86	28.10	40.39	4.67	37.97
Ghana	118	15	38.14	40.68	21.19	26.27	50.00	0.00	35.59
Ivory Coast	194	22	38.66	48.97	12.89	19.07	43.30	7.73	34.54
Kenya	310	35	34.84	37.74	13.55	21.29	27.10	2.26	32.58
Morocco	554	56	33.94	37.36	6.32	16.97	32.85	3.79	32.13
Nigeria	305	37	32.13	38.03	17.05	23.28	46.23	3.61	30.16
South Africa	12,187	991	29.37	41.61	9.90	16.28	14.82	2.04	22.54
Tanzania	36	5	52.78	58.33	27.78	47.22	47.22	25.00	55.56
Tunisia	447	51	37.14	48.32	14.32	29.31	25.73	2.24	35.12
Zimbabwe	52	6	36.54	40.38	26.92	30.77	51.92	0.00	36.54
%			31.07	42.40	10.98	18.12	19.47	2.47	25.25
Total	15,369	1,343	4,775	6,517	1,688	2,785	2,992	379	3,880

Table 3 Differences between conservative and non-conservative firms

The table summary statistics of all variables used. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

Panel A: UL, NPND & ZL

	UL			Non-UL			NPND			Non-NPND			ZL			Non-ZL		
Variables	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
Leverage	0.013	0.005	0.015	0.217***	0.186***	0.134***	0.042	0.020	0.055	0.217***	0.186***	0.134***	0.000	0.000	0.000	0.173***	0.142***	0.145***
LTD	0.007	0.000	0.011	0.120***	0.091***	0.112***	0.023	0.004	0.036	0.120***	0.091***	0.112***	0.000	0.000	0.000	0.095***	0.061***	0.109***
Size	9.929	10.131	1.857	10.605***	10.835***	1.933***	10.069	10.260	1.838	10.605***	10.835***	1.933***	9.635	9.984	1.799	10.491***	10.714***	1.931***
PPE	0.375	0.332	0.267	0.382***	0.356***	0.224***	0.344	0.289	0.244	0.382***	0.356***	0.224***	0.411	0.384	0.277	0.376***	0.344***	0.233***
Cash	0.179	0.151	0.139	0.089***	0.066***	0.086***	0.187	0.164	0.127	0.089***	0.066***	0.086***	0.213	0.193	0.145	0.105***	0.075***	0.102***
Profit	0.168	0.148	0.145	0.107***	0.101***	0.097***	0.155	0.134	0.136	0.107***	0.101***	0.097***	0.199	0.161	0.174	0.117***	0.108***	0.105***
Tobin's q	1.879	1.544	1.154	1.488***	1.244***	0.805***	1.800	1.476	1.068	1.488***	1.244***	0.805***	2.098	1.661	1.372	1.548***	1.286***	0.858***
Capex	0.058	0.047	0.050	0.070***	0.059***	0.056***	0.059	0.049	0.047	0.070***	0.059***	0.056***	0.059	0.047	0.053	0.067***	0.056	0.055***
RDD	0.096	0.000	0.295	0.219***	0.000***	0.414***	0.137	0.000	0.343	0.219***	0.000***	0.414***	0.037	0.000	0.188	0.199***	0.000***	0.399***
Dividend	0.067	0.046	0.068	0.031***	0.019***	0.043***	0.058	0.038	0.064	0.031***	0.019***	0.043***	0.085	0.062	0.080	0.036***	0.022***	0.048***
NDTS	0.028	0.025	0.026	0.041***	0.037	0.026***	0.032	0.029	0.026	0.041***	0.037	0.026***	0.023	0.016	0.027	0.039***	0.035	0.026***
Tax	0.254	0.281	0.176	0.211***	0.235***	0.184***	0.250	0.276	0.166	0.211***	0.235***	0.184***	0.269	0.286	0.182	0.218***	0.242	0.182***
N	4,775			10,594			6,517			8,852			1,688			13,681		
%	0.31			0.69			0.42			0.58			0.11			0.89		

Panel B: AZL, ZLTD & AULL

	AZL			Non-AZL			ZLTD			Non-ZLTD			AULL			Non-AULL		
Variables	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
Leverage	0.002	0.000	0.003	0.173***	0.142***	0.145***	0.038	0.000	0.088	0.182***	0.153***	0.144***	0.008	0.001	0.013	0.182***	0.153***	0.144***
LTD	0.001	0.000	0.002	0.095***	0.061***	0.109***	0.000	0.000	0.000	0.105***	0.073***	0.109***	0.004	0.000	0.008	0.105***	0.073***	0.109***
Size	9.734	9.938	1.899	10.491***	10.714***	1.931***	9.548	9.772	1.898	10.602***	10.821	1.888***	9.821	9.977	1.917	10.602***	10.821	1.888***
PPE	0.388	0.352	0.273	0.376***	0.344***	0.233***	0.377	0.338	0.262	0.381*	0.353***	0.232***	0.371	0.335	0.264	0.381*	0.353***	0.232***
Cash	0.200	0.176	0.144	0.105***	0.075***	0.102***	0.178	0.150	0.141	0.102***	0.073***	0.100***	0.191	0.164	0.141	0.102***	0.073***	0.100***
Profit	0.181	0.153	0.163	0.117***	0.108***	0.105***	0.168	0.140	0.155	0.116***	0.107***	0.104***	0.169	0.145	0.150	0.116***	0.107***	0.104***
Tobin's q	1.990	1.618	1.252	1.548***	1.286***	0.858***	1.918	1.544	1.227	1.534***	1.272***	0.845***	1.907	1.554	1.186	1.534***	1.272***	0.845***
Capex	0.058	0.045	0.052	0.067***	0.056	0.055***	0.056	0.042	0.053	0.069***	0.058**	0.055***	0.057	0.044	0.050	0.069***	0.058**	0.055***
RDD	0.074	0.000	0.262	0.199***	0.000***	0.399***	0.075	0.000	0.263	0.207***	0.000***	0.405***	0.102	0.000	0.303	0.207***	0.000***	0.405***
Dividend	0.077	0.053	0.076	0.036***	0.022***	0.048***	0.070	0.048	0.073	0.035***	0.021***	0.047***	0.069	0.048	0.070	0.035***	0.021***	0.047***
NDTS	0.025	0.021	0.026	0.039***	0.035	0.026***	0.028	0.025	0.027	0.039***	0.036***	0.026***	0.029	0.025	0.026	0.039***	0.036***	0.026***
Tax	0.258	0.283	0.180	0.218***	0.242	0.182***	0.252	0.278	0.181	0.218***	0.241	0.183***	0.250	0.279	0.178	0.218***	0.241	0.183***
LogEmp	8.482	8.848	1.585	8.845***	9.109	1.559***	8.085	8.290	1.537	8.929***	9.179	1.531***	8.471	8.820	1.590	8.929***	9.179	1.531***
SG	0.184	0.082	0.977	0.279***	0.115***	1.186***	0.150	0.082	0.866	0.290***	0.116***	1.206***	0.196	0.092	0.996	0.290***	0.116***	1.206***
INTANG	0.118	0.030	0.209	0.132***	0.082***	0.159***	0.100	0.030	0.179	0.136***	0.086***	0.160***	0.117	0.040	0.192	0.136***	0.086***	0.160***
N	2,785			12,584			2,992			12,377			3,880			11,489		
%	0.18			0.82			0.19			0.81			0.25			0.75		

Table 4 Correlations

The table presents the pairwise Spearman (Pearson) correlations in the above (below) diagonal. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

#	Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	UL	1	0.645***	0.497***	-0.780***	-0.671***	-0.168***	0.046***	0.280***	0.215***	0.146***	-0.093***	-0.167***
(2)	NPND	0.645***	1	0.379***	-0.731***	-0.608***	-0.177***	-0.115***	0.535***	0.171***	0.166***	-0.127***	-0.123***
(3)	ZL	0.497***	0.379***	1	-0.493***	-0.462***	-0.160***	0.118***	0.240***	0.139***	0.075***	-0.046***	-0.141***
(4)	Leverage	-0.635***	-0.636***	-0.347***	1	0.807***	0.182***	0.008	-0.294***	-0.236***	-0.146***	0.072***	0.159***
(5)	LTD	-0.485***	-0.501***	-0.265***	0.823***	1	0.288***	0.123***	-0.275***	-0.186***	-0.135***	0.144***	0.095***
(6)	Size	-0.153***	-0.159***	-0.151***	0.122***	0.210***	1	0.274***	-0.066***	-0.062***	0.118***	0.210***	0.247***
(7)	PPE	0.072***	-0.098***	0.136***	0.047***	0.175***	0.262***	1	-0.229***	-0.008	-0.096***	0.429***	-0.074***
(8)	Cash	0.327***	0.528***	0.295***	-0.278***	-0.246***	-0.134***	-0.247***	1	0.135***	0.253***	-0.057***	0.011
(9)	Profit	0.247***	0.188***	0.224***	-0.222***	-0.165***	0.000	0.022**	0.253***	1	0.509***	0.183***	0.002
(10)	Tobin's q	0.172***	0.166***	0.142***	-0.120***	-0.097***	0.092***	-0.060***	0.247***	0.543***	1	0.192***	0.031***
(11)	Capex	-0.097***	-0.140***	-0.041***	0.104***	0.135***	0.132***	0.359***	-0.052***	0.156***	0.161***	1	-0.023**
(12)	RDD	-0.167***	-0.123***	-0.141***	0.105***	0.034***	0.231***	-0.094***	-0.043***	-0.016	-0.024**	-0.052***	1
(13)	Dividend	0.290***	0.236***	0.278***	-0.244***	-0.191***	0.045***	0.084***	0.261***	0.672***	0.606***	0.124***	-0.059***
(14)	NDTS	-0.269***	-0.186***	-0.204***	0.212***	0.204***	0.068***	0.083***	-0.069***	-0.105***	0.026***	0.328***	0.082***
(15)	Tax	0.107***	0.107***	0.073***	-0.198***	-0.132***	0.077***	-0.094***	0.147***	0.348***	0.237***	0.047***	0.016
(16)	GDPgrowth	-0.036***	0.009	-0.012	0.059***	-0.015	-0.057***	-0.100***	0.096***	-0.001	0.165***	0.088***	0.023**
(17)	Inflation	0.156***	0.016	0.123***	-0.136***	-0.060***	0.036***	0.209***	-0.118***	0.203***	-0.050***	0.040***	-0.126***
(18)	Domestic Credit	-0.141***	-0.051***	-0.113***	0.118***	0.092***	-0.005	-0.199***	0.082***	-0.128***	-0.021**	-0.064***	0.159***
(19)	Rule of Law	-0.083***	-0.027***	-0.070***	0.023**	0.056***	-0.106***	-0.117***	0.029***	-0.090***	-0.136***	-0.083***	0.141***
(20)	Kaopen	0.022**	0.062***	0.046***	0.044***	-0.006	-0.104***	-0.028***	0.097***	-0.084***	0.072***	-0.005	-0.039***

#	Variables	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(1)	UL	0.304***	-0.281***	0.164***	-0.021**	0.148***	-0.160***	-0.159***	-0.028***
(2)	NPND	0.256***	-0.198***	0.176***	0.021**	0.023**	-0.058***	-0.057***	0.047***
(3)	ZL	0.199***	-0.224***	0.080***	-0.011	0.119***	-0.130***	-0.116***	0.000
(4)	Leverage	-0.339***	0.262***	-0.261***	0.031***	-0.144***	0.179***	0.160***	0.053***
(5)	LTD	-0.258***	0.281***	-0.184***	-0.041***	-0.063***	0.121***	0.122***	-0.041***
(6)	Size	0.088***	0.113***	0.048***	-0.042***	0.014	0.023**	-0.004	-0.025**
(7)	PPE	0.087***	0.163***	-0.081***	-0.095***	0.196***	-0.220***	-0.191***	-0.077***
(8)	Cash	0.171***	-0.023**	0.174***	0.121***	-0.183***	0.150***	0.129***	0.133***
(9)	Profit	0.585***	-0.047***	0.423***	0.026**	0.172***	-0.167***	-0.164***	-0.136***
(10)	Tobin's q	0.494***	0.066***	0.362***	0.180***	-0.109***	0.100***	0.031***	0.117***
(11)	Capex	0.138***	0.362***	0.131***	0.069***	0.050***	-0.069***	-0.076***	-0.030***
(12)	RDD	-0.022**	0.126***	0.005	0.029***	-0.107***	0.152***	0.127***	0.022**
(13)	Dividend	1	-0.067***	0.371***	-0.001	0.144***	-0.150***	-0.164***	-0.097***
(14)	NDTS	-0.055***	1	0.090***	0.110***	-0.237***	0.139***	0.151***	0.085***
(15)	Tax	0.254***	0.027***	1	0.009	0.061***	-0.037***	-0.022**	-0.117***
(16)	GDPgrowth	0.040***	0.124***	-0.019*	1	-0.357***	0.095***	0.108***	0.342***
(17)	Inflation	0.103***	-0.267***	0.072***	-0.364***	1	-0.582***	-0.579***	-0.313***
(18)	Domestic Credit	-0.099***	0.118***	-0.015	0.063***	-0.573***	1	0.572***	0.151***
(19)	Rule of Law	-0.120***	0.020**	0.002	-0.194***	-0.326***	0.597***	1	0.017*
(20)	Kaopen	0.019*	0.038***	-0.100***	0.356***	-0.170***	-0.126***	-0.344***	1

Table 5 Determinants of financial conservatism

The table presents the logit regression of Equation (1) that relates the financial conservatism dummy and firm-specific variables. ZL is a dummy variable that takes the value of one if a firm has a zero-leverage and otherwise, zero. NPND is a dummy variable that takes the value of one if a firm has leverage less than zero and otherwise, zero. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

	UL	NPND	ZL	UL	NPND	ZL	UL	NPND	ZL
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Trend×100							-3.522***	-4.257***	-1.085
							(0.711)	(0.644)	(1.077)
Size	-0.274***	-0.166***	-0.415***	-0.274***	-0.166***	-0.415***	-0.271***	-0.171***	-0.407***
	(0.037)	(0.030)	(0.049)	(0.038)	(0.030)	(0.049)	(0.037)	(0.030)	(0.048)
PPE	1.263***	0.738***	1.752***	1.278***	0.750***	1.757***	1.297***	0.773***	1.760***
	(0.263)	(0.217)	(0.369)	(0.261)	(0.216)	(0.368)	(0.261)	(0.215)	(0.374)
Cash	7.496***	16.596***	6.523***	7.518***	16.625***	6.548***	7.504***	16.542***	6.429***
	(0.421)	(0.568)	(0.583)	(0.420)	(0.569)	(0.586)	(0.418)	(0.559)	(0.578)
Profit	-0.164	-0.051	-0.946	-0.144	-0.017	-0.934	-0.160	-0.062	-1.073*
	(0.550)	(0.499)	(0.608)	(0.550)	(0.498)	(0.612)	(0.544)	(0.492)	(0.604)
Tobin's q	0.100**	0.001	0.207***	0.101**	0.005	0.207***	0.098**	0.012	0.194***
	(0.050)	(0.055)	(0.075)	(0.050)	(0.056)	(0.075)	(0.048)	(0.052)	(0.073)
Capex	-7.768***	-8.042***	-3.905***	-7.841***	-8.086***	-3.941***	-7.714***	-7.960***	-4.006***
	(0.765)	(0.825)	(1.049)	(0.766)	(0.823)	(1.054)	(0.750)	(0.800)	(1.050)
RDD	-0.499***	-0.387***	-1.190***	-0.490***	-0.381***	-1.181***	-0.481***	-0.314***	-1.191***
	(0.124)	(0.106)	(0.251)	(0.125)	(0.106)	(0.251)	(0.121)	(0.103)	(0.249)
Dividend	9.821***	9.316***	8.110***	9.772***	9.234***	8.120***	9.653***	8.962***	8.301***
	(1.105)	(1.012)	(0.993)	(1.107)	(1.007)	(1.004)	(1.083)	(0.970)	(0.971)
NDTS	-13.893***	-10.159***	-16.488***	-13.986***	-10.295***	-16.575***	-14.573***	-10.944***	-16.888***
	(2.222)	(1.771)	(3.148)	(2.216)	(1.775)	(3.163)	(2.180)	(1.732)	(3.151)
Tax	1.053***	0.893***	0.913***	1.039***	0.875***	0.914***	1.000***	0.866***	0.930***
	(0.208)	(0.179)	(0.304)	(0.209)	(0.178)	(0.306)	(0.203)	(0.172)	(0.304)
GDPgrowth				-1.018	-3.767*	-2.105	-0.545	-3.726***	-2.015
				(1.818)	(2.008)	(2.396)	(1.174)	(1.131)	(1.642)
Inflation				2.561*	1.063	0.869	0.458	-3.386***	-1.649
				(1.485)	(1.598)	(1.751)	(1.091)	(1.044)	(1.349)
Domestic Credit				-2.022***	-1.928**	-2.095*	-0.873***	-0.995***	-0.887***
				(0.773)	(0.917)	(1.155)	(0.223)	(0.226)	(0.268)
Rule of Law				1.173**	1.654***	-0.007	-0.728**	-0.329	-0.890**
				(0.459)	(0.539)	(0.602)	(0.320)	(0.323)	(0.403)
Kaopen				-0.120	-0.252**	0.261	0.300***	0.348***	0.464***
				(0.127)	(0.124)	(0.166)	(0.064)	(0.062)	(0.086)
Constant	0.289	-1.299**	1.406*	0.979	0.182	1.108	0.600	0.083	0.573
	(0.507)	(0.549)	(0.784)	(0.688)	(0.751)	(0.980)	(0.635)	(0.646)	(0.905)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	13,573	13,573	13,573	13,573	13,573	13,573	13,573	13,573	13,573
Pseudo R^2	0.26	0.35	0.32	0.27	0.35	0.32	0.26	0.34	0.31
Wald Chi^2	1,131.00	1,769.00	795.10	1,172.00	1,840.00	816.80	937.60	1,525.00	530.80
Wald Chi^2 p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table 6 Persistence in financial conservatism

The table presents distribution of firms for each the proxies of financial conservatism. UL are firms that have leverage less than 5% of total assets. NPND are firms that have net-leverage (total debt *(*less) cash) less than zero. ZL are firms that have zero-leverage. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles.

Panel A: Frequency distribution of conservative firms

	UL		NPND		ZL	
Cumulative	(1)	(2)	(3)	(4)	(5)	(6)
# of Years	N	%	N	%	N	%
1	4,764	100.00	6,499	100.00	1,688	100.00
2	3,647	76.55	5,090	78.32	1,260	74.64
3	2,873	60.31	4,076	62.72	982	58.18
4	2,284	47.94	3,287	50.58	777	46.03
5	1,812	38.04	2,655	40.85	620	36.73
6	1,417	29.74	2,138	32.90	491	29.09
7	1,109	23.28	1,713	26.36	398	23.58
8	853	17.91	1,367	21.03	314	18.60
9	643	13.50	1,094	16.83	241	14.28
10	467	9.80	867	13.34	192	11.37
11	337	7.07	689	10.60	151	8.95
12	246	5.16	553	8.51	115	6.81
13	174	3.65	429	6.60	82	4.86
14	119	2.50	333	5.12	57	3.38
15	75	1.57	255	3.92	36	2.13
16	44	0.92	182	2.80	17	1.01
17	18	0.38	123	1.89	7	0.41
18			79	1.22		
19			58	0.89		
20			51	0.78		
21			44	0.68		
22			37	0.57		
23			30	0.46		

Panel B: Dynamic random effects probit models

	UL		NPND		ZL	
	y_{ijkt-1}	SE	y_{ijkt-1}	SE	y_{ijkt-1}	SE
Estimation methods	(1)	(2)	(3)	(4)	(5)	(6)
Pooled Dynamic Probit	1.845***	(0.042)	2.642***	(0.072)	2.427***	(0.054)
Dynamic Probit	2.126***	(0.044)	1.653***	(0.046)	2.541***	(0.074)
Heckman (1981)'s Dynamic Probit	1.913***	(0.051)	1.455***	(0.049)	2.094***	(0.095)

Table 7 The changes in financial conservatism

The table presents the logit regression of Equation (1) that relates the entry and exit decisions to firm-specific variables. An entry (exit) decision into (out of) financial conservatism is defined as a firm being non-conservative (conservative) in the preceding year and conservative (non-conservative) in the current year. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

	Entry Decision			Exit Decision		
	UL	NPND	ZL	UL	NPND	ZL
Variables	(1)	(2)	(3)	(4)	(5)	(6)
Trend×100	-1.097*	-0.435	-0.645	-0.861*	0.079	-1.241**
	(0.652)	(0.547)	(1.054)	(0.470)	(0.446)	(0.595)
Size	-0.171***	-0.046**	-0.381***	0.116***	0.094***	0.039*
	(0.029)	(0.022)	(0.045)	(0.018)	(0.017)	(0.022)
PPE	0.806***	0.197	1.570***	-0.492***	-0.185	0.083
	(0.205)	(0.164)	(0.357)	(0.150)	(0.145)	(0.179)
Cash	4.858***	6.409***	5.895***	-2.831***	-8.271***	-0.884**
	(0.305)	(0.264)	(0.533)	(0.308)	(0.402)	(0.344)
Profit	-0.406	-0.016	-0.770	0.086	0.136	0.861**
	(0.440)	(0.392)	(0.588)	(0.327)	(0.320)	(0.395)
Tobin's q	0.030	-0.016	0.164**	-0.059	0.007	-0.041
	(0.041)	(0.037)	(0.068)	(0.037)	(0.039)	(0.041)
Capex	-5.133***	-4.141***	-3.091***	3.254***	3.476***	1.126*
	(0.680)	(0.601)	(0.997)	(0.489)	(0.506)	(0.637)
RDD	-0.357***	-0.285***	-1.039***	0.070	0.081	0.031
	(0.111)	(0.086)	(0.246)	(0.064)	(0.067)	(0.078)
Dividend	6.435***	3.971***	7.092***	-4.902***	-4.381***	-2.408**
	(0.762)	(0.647)	(0.925)	(0.877)	(0.830)	(0.953)
NDTS	-8.630***	-3.690***	-14.692***	2.651**	2.425**	-0.403
	(1.887)	(1.355)	(3.005)	(1.097)	(1.111)	(1.449)
Tax	0.588***	0.349**	0.812***	-0.265**	-0.409***	0.022
	(0.172)	(0.145)	(0.290)	(0.126)	(0.130)	(0.180)
GDPgrowth	0.495	-1.271	-2.105	1.563	2.577**	1.260
	(1.217)	(1.182)	(1.685)	(1.180)	(1.073)	(1.632)
Inflation	0.734	-0.160	-2.196	2.113**	0.553	2.088*
	(1.022)	(0.928)	(1.365)	(0.900)	(0.852)	(1.202)
Domestic Credit	-0.354	-0.386*	-0.970***	0.141	0.310	-0.240
	(0.248)	(0.232)	(0.280)	(0.241)	(0.244)	(0.297)
Rule of Law	-0.516*	-0.244	-0.915**	0.012	0.312	-0.355
	(0.296)	(0.281)	(0.426)	(0.286)	(0.265)	(0.378)
Kaopen	0.227***	0.088	0.431***	0.035	-0.042	0.133*
	(0.060)	(0.055)	(0.087)	(0.057)	(0.056)	(0.073)
Constant	-0.814	-2.170***	0.400	-2.430***	-1.525***	-3.641***
	(0.557)	(0.712)	(0.859)	(0.561)	(0.471)	(0.717)
Year FE	No	No	No	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
N	13,573	13,573	13,573	13,573	13,528	13,573
Pseudo R^2	0.15	0.13	0.28	0.05	0.10	0.01
Wald Chi^2	867.40	990.50	583.30	409.70	743.20	117.70
Wald Chi^2 p-value	0.000	0.000	0.000	0.000	0.000	0.000

Table 8 Alternative definitions, sub-samples and model specifications

The table presents the logit regression of Equation (1) that relates the leverage policy dummy and firm-specific variables. UL is a dummy variable that takes the value of one if a firm has low leverage (less than 5 percent) and otherwise, zero. NPND (ZL) is a dummy variable that takes the value of one if a firm has leverage less than zero (equal to zero) and otherwise, zero. Almost Zero Leverage (AZL) is a dummy variable that takes the value of one if a firm has leverage is less than or equal to %1 and otherwise, zero. Zero Long-term Debt (ZLTD) s a dummy variable that takes the value of one if a firm has zero long-term debt and otherwise, zero. Almost Ultra-Low Leverage (AULL) is a dummy variable that takes the value of one if a firm is ranked based in the lower quartile of the distribution of leverage in each year and otherwise, zero. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

	Alternative Definitions			South Africa			Other Countries			Alternative Specifications		
	AZL	ZLTD	AULL	UL	NPND	ZL	UL	NPND	ZL	UL	NPND	ZL
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Trend×100	-2.417***	-0.391	0.175	-4.347***	-4.061***	-1.082	-5.175*	-6.632**	-1.554			
	(0.707)	(0.772)	(0.619)	(0.633)	(0.539)	(1.054)	(2.809)	(2.900)	(3.134)			
D1990s										0.079	0.448***	0.327**
										(0.126)	(0.116)	(0.162)
D2000s										-0.582***	-0.374***	-0.138
										(0.151)	(0.134)	(0.232)
D2010s										-0.917***	-0.639***	-0.147
										(0.157)	(0.144)	(0.244)
Size	-0.309***	-0.472***	-0.273***	-0.286***	-0.172***	-0.436***	-0.252***	-0.232***	-0.405***	-0.268***	-0.169***	-0.406***
	(0.046)	(0.040)	(0.039)	(0.042)	(0.033)	(0.060)	(0.078)	(0.079)	(0.106)	(0.037)	(0.030)	(0.049)
PPE	1.533***	1.140***	1.396***	1.561***	0.837***	2.246***	-0.163	0.019	-0.335	1.280***	0.702***	1.733***
	(0.309)	(0.310)	(0.276)	(0.296)	(0.239)	(0.437)	(0.719)	(0.609)	(0.979)	(0.261)	(0.215)	(0.368)
Cash	6.387***	4.379***	7.118***	7.180***	16.713***	6.776***	8.093***	15.855***	5.539***	7.419***	16.527***	6.457***
	(0.438)	(0.489)	(0.413)	(0.470)	(0.624)	(0.658)	(0.999)	(1.204)	(1.032)	(0.417)	(0.560)	(0.568)
Profit	-1.512**	-0.144	-0.284	-0.752	-0.632	-1.791***	2.040*	3.256**	1.024	-0.048	-0.051	-1.104*
	(0.608)	(0.504)	(0.548)	(0.604)	(0.524)	(0.594)	(1.200)	(1.362)	(1.441)	(0.538)	(0.487)	(0.596)
Tobin's q	0.160***	0.139**	0.074	0.206***	0.103*	0.300***	-0.053	-0.151	0.067	0.070	-0.026	0.192***
	(0.056)	(0.059)	(0.050)	(0.061)	(0.061)	(0.089)	(0.082)	(0.094)	(0.114)	(0.047)	(0.050)	(0.071)
Capex	-4.969***	-4.988***	-6.468***	-8.478***	-8.297***	-6.023***	-7.329***	-8.337***	-3.070**	-7.643***	-7.924***	-3.831***
	(0.837)	(0.893)	(0.758)	(0.844)	(0.939)	(1.401)	(1.570)	(1.510)	(1.554)	(0.750)	(0.812)	(1.048)
RDD	-0.460***	-0.240	-0.184	-0.409***	-0.244**	-0.987***	-0.743	-0.816*	-2.001***	-0.520***	-0.342***	-1.176***
	(0.145)	(0.147)	(0.129)	(0.125)	(0.105)	(0.268)	(0.570)	(0.460)	(0.749)	(0.121)	(0.102)	(0.250)
Dividend	9.478***	6.773***	8.189***	8.819***	7.365***	8.415***	8.888***	9.821***	6.442***	9.848***	9.256***	8.170***
	(0.985)	(0.921)	(0.950)	(1.272)	(1.038)	(1.109)	(1.878)	(2.087)	(1.672)	(1.089)	(0.984)	(0.976)
NDTS	-	-	-	-	-	-	-2.443	-3.398	-	-	-9.493***	-
	18.954***	14.358***	15.322***	17.186***	12.297***	13.623***			17.099***	14.199***		16.370***
	(2.590)	(2.587)	(2.138)	(2.398)	(1.967)	(3.346)	(5.481)	(3.970)	(6.158)	(2.192)	(1.720)	(3.141)
Tax	0.860***	1.126***	0.627***	0.777***	0.579***	0.807***	2.616***	2.479***	1.028	1.001***	0.821***	0.884***
	(0.233)	(0.257)	(0.209)	(0.214)	(0.173)	(0.310)	(0.642)	(0.607)	(0.721)	(0.204)	(0.173)	(0.300)
Constant	1.616**	3.615***	0.714	1.869***	0.365	0.905	1.182	0.990	2.647*	1.306**	-0.377	1.458*
	(0.659)	(0.762)	(0.600)	(0.503)	(0.466)	(0.818)	(1.218)	(1.349)	(1.524)	(0.509)	(0.545)	(0.773)
Year FE	No	No	No	No	No	No	No	No	No	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	13,573	13,573	13,573	11,081	11,105	10,852	2,468	2,468	2,367	13,573	13,573	13,573
Pseudo R^2	0.27	0.25	0.24	0.26	0.33	0.35	0.29	0.43	0.24	0.26	0.34	0.31
Wald Chi^2	642.60	509.20	845.30	765.90	1,118.00	323.50	201.80	377.00	169.50	900.30	1,431.00	495.90
Wald Chi^2 p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix A Variable definitions

The table lists the definitions of all variables used. All firm-level variables are drawn from *Thomson Data-Stream* and macroeconomic variables are from The World Bank.

Variable	Definition
Leverage	Total debt-to-total assets.
LTD	Long-term debt-to-total assets.
UL	Is a dummy variable that takes the value of one if a firm has leverage less than 5% and otherwise, zero.
NPND	Is a dummy variable that takes the value of one if a firm has leverage less than and otherwise, zero.
ZL	Is a dummy variable that takes the value of one if a firm has a zero-leverage and otherwise, zero.
AZL	Is a dummy variable that takes the value of one if a firm has leverage less than 1% and otherwise, zero.
ZLTD	Is a dummy variable that takes the value of one if a firm has zero long-term debt and otherwise, zero.
AULL	Is a dummy variable that takes the value of one if a firm is ranked in the lower quartile in each year zero and otherwise, zero.
ZLALL	Is a dummy variable that takes the value of one if a firm has zero debt throughout the sample period zero and otherwise, zero.
Size	Log of total assets.
PPE	Property, plant and equipment-to-total assets.
Cash	Cash and cash equivalent-to-total assets.
ROA	Net profit-to-total assets.
Tobin's q	Market value of equity plus total debt-to-total assets.
Capex	Capital expenditure-to-total assets (Investment).
RDD	Is a dummy variable that takes the value of one if the firm reports positive R&D and otherwise, zero.
Dividends	Cash dividend-to-total assets.
NDTS	Deprecation-to-total assets.
Tax	Income tax-to-total assets.
GDP growth	GDP growth (annual %).
Inflation	Inflation, consumer prices (annual %).
Domestic credit	Domestic credit to private sector by banks (% of GDP).
Rule of Law	Rule of Law, Estimate.
Openness	Chinn-Ito index (Openness) of a country' s degree of capital account openness.

Appendix B Time-series variations in financial conservatism

The table presents the distribution of firm by year and financial leverage policy. UL are firms that have low-leverage (less than 5% of total assets). NPND are firms that have net-leverage (total debt *(*less) cash) less than zero. ZL are firms that have zero-leverage. AZL are firms that have leverage less than 1% of total assets. ZLTD are firms that have zero long-term debt. AULL are firms that are ranked in the lower quartile based on leverage in each year. ZLALL are firms that have zero debt throughout the sample period. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles.

	All firms	UL		NPND		ZL		AZL		ZLTD		AULL		ZLALL	
	N	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1980	68	14	20.59	20	29.41	10	14.71	10	14.71	10	14.71	1	1.47	18	26.47
1981	88	26	29.55	34	38.64	14	15.91	17	19.32	14	15.91	5	5.68	22	25.00
1982	114	40	35.09	48	42.11	25	21.93	26	22.81	25	21.93	12	10.53	30	26.32
1983	123	50	40.65	52	42.28	25	20.33	28	22.76	25	20.33	12	9.76	31	25.20
1984	123	53	43.09	53	43.09	25	20.33	34	27.64	25	20.33	12	9.76	31	25.20
1985	160	79	49.38	67	41.88	31	19.38	35	21.88	31	19.38	12	7.50	40	25.00
1986	176	74	42.05	67	38.07	31	17.61	34	19.32	31	17.61	12	6.82	46	26.14
1987	210	83	39.52	101	48.10	31	14.76	43	20.48	40	19.05	12	5.71	55	26.19
1988	224	102	45.54	109	48.66	40	17.86	53	23.66	49	21.88	12	5.36	59	26.34
1989	252	117	46.43	102	40.48	48	19.05	79	31.35	59	23.41	12	4.76	63	25.00
1990	267	114	42.70	117	43.82	43	16.10	76	28.46	52	19.48	12	4.49	67	25.09
1991	279	125	44.80	141	50.54	39	13.98	74	26.52	50	17.92	10	3.58	73	26.16
1992	274	121	44.16	126	45.99	41	14.96	58	21.17	59	21.53	10	3.65	69	25.18
1993	297	121	40.74	121	40.74	44	14.81	65	21.89	55	18.52	9	3.03	76	25.59
1994	298	125	41.95	156	52.35	49	16.44	72	24.16	62	20.81	11	3.69	75	25.17
1995	291	123	42.27	155	53.26	56	19.24	78	26.80	65	22.34	11	3.78	75	25.77
1996	296	128	43.24	157	53.04	49	16.55	70	23.65	63	21.28	11	3.72	75	25.34
1997	285	88	30.88	153	53.68	26	9.12	50	17.54	58	20.35	9	3.16	72	25.26
1998	340	94	27.65	147	43.24	27	7.94	45	13.24	46	13.53	9	2.65	85	25.00
1999	382	98	25.65	174	45.55	17	4.45	52	13.61	38	9.95	0	0.00	98	25.65
2000	448	145	32.37	195	43.53	27	6.03	68	15.18	54	12.05	0	0.00	112	25.00
2001	493	136	27.59	189	38.34	48	9.74	78	15.82	73	14.81	2	0.41	124	25.15
2002	513	138	26.90	218	42.50	40	7.80	91	17.74	68	13.26	2	0.39	130	25.34
2003	528	147	27.84	226	42.80	44	8.33	74	14.02	94	17.80	4	0.76	132	25.00
2004	529	137	25.90	245	46.31	41	7.75	84	15.88	87	16.45	4	0.76	134	25.33
2005	668	199	29.79	322	48.20	67	10.03	135	20.21	154	23.05	11	1.65	168	25.15
2006	690	206	29.86	313	45.36	69	10.00	129	18.70	142	20.58	14	2.03	173	25.07
2007	739	226	30.58	324	43.84	82	11.10	140	18.94	174	23.55	18	2.44	186	25.17
2008	787	236	29.99	327	41.55	80	10.17	143	18.17	181	23.00	17	2.16	199	25.29
2009	809	246	30.41	333	41.16	76	9.39	144	17.80	171	21.14	17	2.10	203	25.09
2010	846	243	28.72	374	44.21	96	11.35	155	18.32	174	20.57	20	2.36	213	25.18
2011	845	237	28.05	342	40.47	95	11.24	144	17.04	173	20.47	19	2.25	212	25.09
2012	820	231	28.17	322	39.27	81	9.88	132	16.10	172	20.98	16	1.95	205	25.00
2013	786	178	22.65	274	34.86	62	7.89	102	12.98	160	20.36	16	2.04	198	25.19
2014	735	160	21.77	227	30.88	59	8.03	91	12.38	140	19.05	15	2.04	184	25.03
2015	586	135	23.04	186	31.74	50	8.53	76	12.97	118	20.14	10	1.71	147	25.09
1980s	1,538	638	41.48	653	42.46	280	18.21	359	23.34	309	20.09	102	6.63	395	25.68
1990s	3,009	1,137	37.79	1,447	48.09	391	12.99	640	21.27	548	18.21	92	3.06	765	25.42
2000s	6,204	1,816	29.27	2,692	43.39	574	9.25	1,086	17.50	1,198	19.31	89	1.43	1,561	25.16
2010s	4,618	1,184	25.64	1,725	37.35	443	9.59	700	15.16	937	20.29	96	2.08	1,159	25.10
N	15,369	4,775	31.07	6,517	42.40	1,688	10.98	2,785	18.12	2,992	19.47	379	2.47	3,880	25.25

Appendix C Persistence based on alternative measures of financial conservatism

The table presents distribution of firms for each the proxies of financial conservatism. AZL are firms that have leverage less than 1% of total assets. ZLTD are firms that have zero long-term debt. AULL are firms that are ranked in the lower quartile based on leverage in each year. ZLALL are firms that have zero debt throughout the sample period. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles.

Panel A: Frequency distribution of conservative firms

	AZL		ZLTD		AULL		ZLALL	
Cumulative	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
# of Years	N	%	N	%	N	%	N	%
1	2,785	100.00	2,952	100.00	3,878	100.00	379	100.00
2	2,075	74.51	2,293	77.68	2,849	73.47	337	88.92
3	1,592	57.16	1,817	61.55	2,178	56.16	295	77.84
4	1,242	44.60	1,466	49.66	1,699	43.81	253	66.75
5	955	34.29	1,164	39.43	1,322	34.09	211	55.67
6	732	26.28	916	31.03	1,020	26.30	169	44.59
7	571	20.50	712	24.12	778	20.06	140	36.94
8	440	15.80	551	18.67	585	15.09	115	30.34
9	340	12.21	419	14.19	442	11.40	95	25.07
10	256	9.19	313	10.60	331	8.54	77	20.32
11	192	6.89	232	7.86	243	6.27	61	16.09
12	141	5.06	169	5.72	178	4.59	48	12.66
13	106	3.81	124	4.20	127	3.27	38	10.03
14	73	2.62	89	3.01	90	2.32	28	7.39
15	49	1.76	63	2.13	65	1.68	21	5.54
16	25	0.90	38	1.29	41	1.06	14	3.69
17	7	0.25	15	0.51	17	0.44	7	1.85
18			4	0.14	7	0.18		
19			1	0.03	4	0.10		
20					3	0.08		
21					2	0.05		
22					1	0.03		

Panel B: Dynamic random effects probit models (y_{ijkt-1})

	AZL		ZLTD		AULL	
Estimation methods	(1)	(2)	(3)	(4)	(5)	(6)
Pooled Dynamic Probit	2.685***	(0.053)	2.159***	(0.045)	2.126***	(0.044)
Dynamic Probit	2.298***	(0.056)	2.643***	(0.056)	1.940***	(0.047)
Heckman (1981)'s Dynamic Probit	2.106***	(0.067)	2.376***	(0.069)	1.783***	(0.056)

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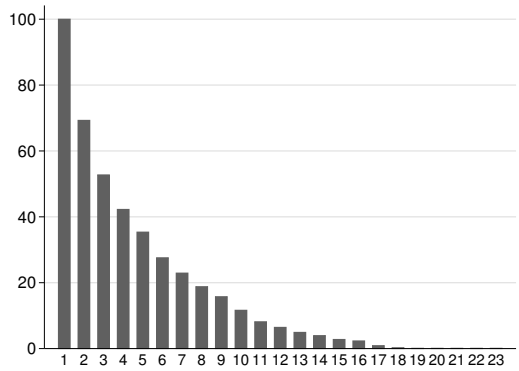
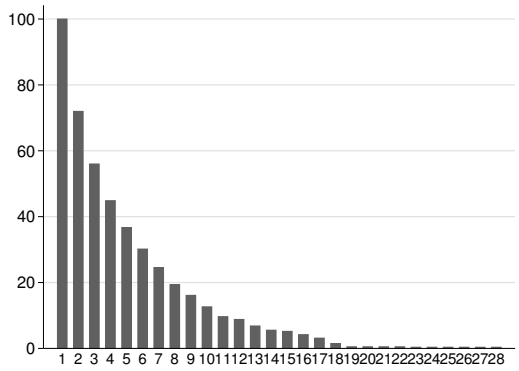
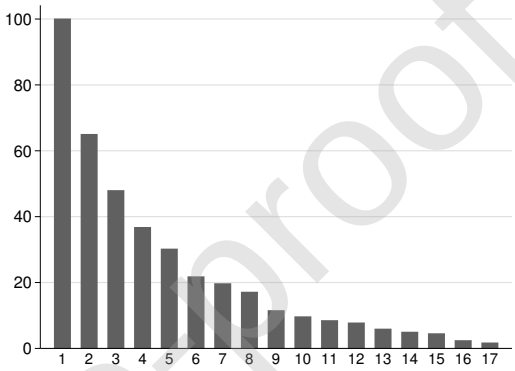


(a) UL



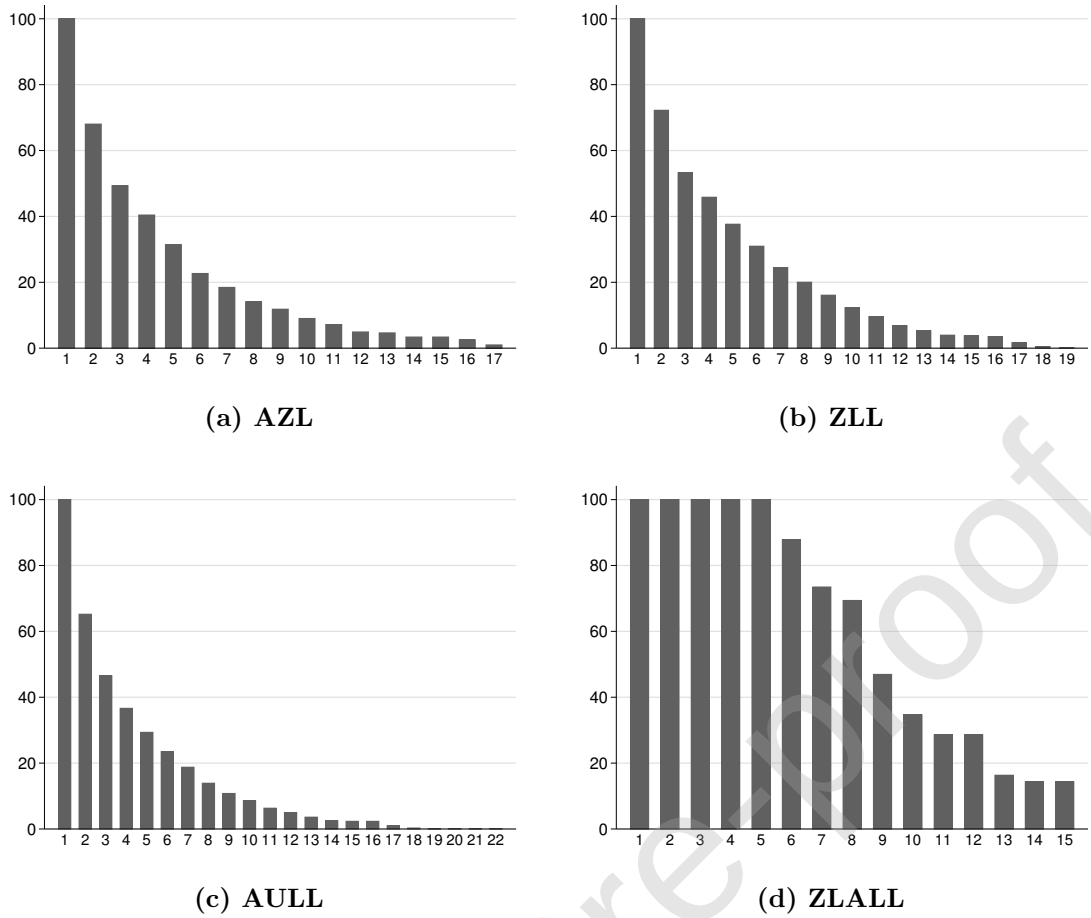
(b) NPND



(c) ZL

Figure A.1 Persistence based on initial financial conservative policies

The figure plots the proportion of firms maintaining their initial-leverage policy over time. ZL are firms that have zero-leverage. UL are firms that have leverage less than 5% of total assets. NPND are firms that have net-leverage (total debt *(*less) cash) less than zero. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles.

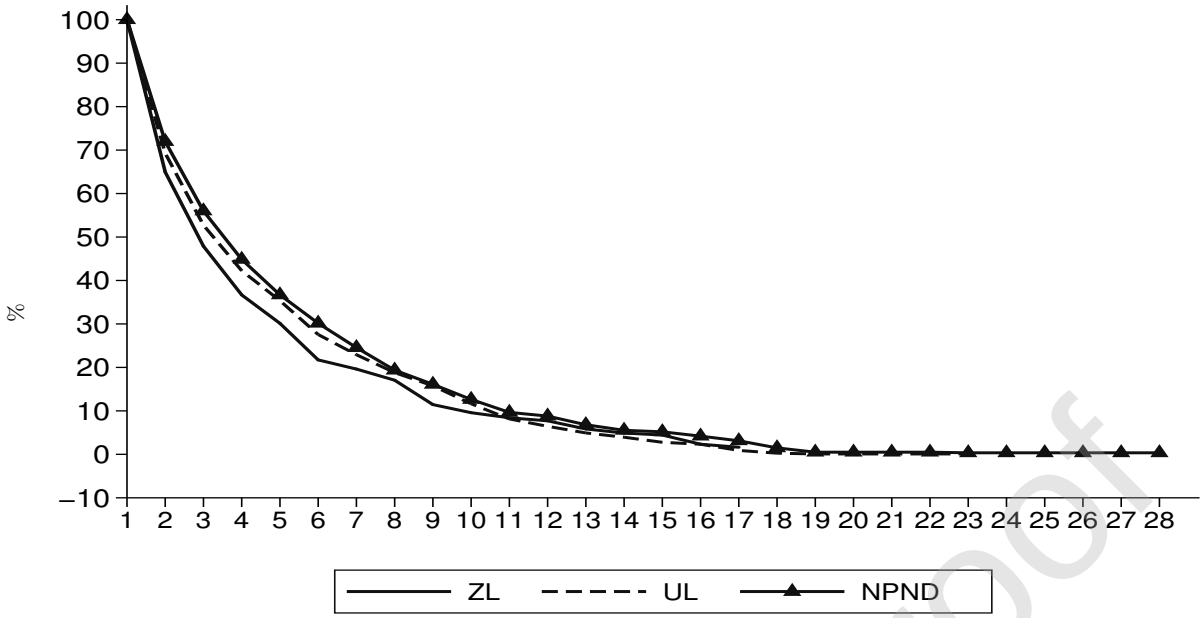


(a) AZL **(b) ZLL**

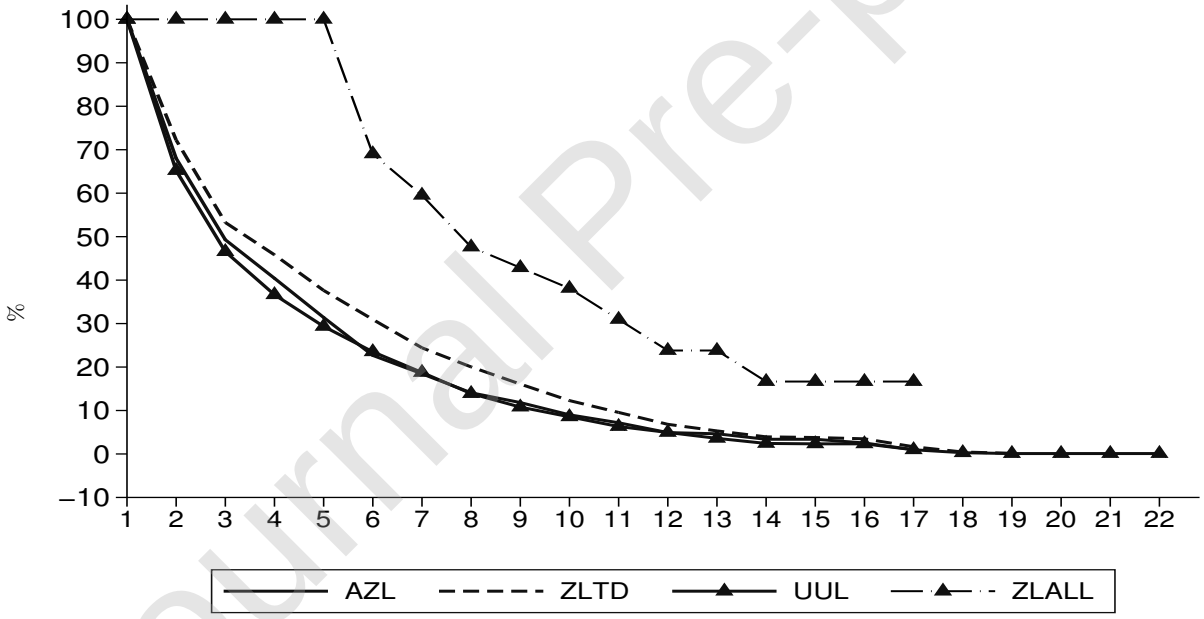
(c) AULL **(d) ZLALL**

Figure A.2 Persistence based on initial financial conservative policies: Other proxies

The figure plots the proportion of firms maintaining their initial-leverage policy over time. AZL are firms that have leverage less than 1% of total assets. ZLTD are firms that have zero long-term debt. AULL are firms that are ranked in the lower quartile based on leverage in each year. ZLALL are firms with zero leverage throughout the sample period. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles.



(a) Financial conservatism



(b) Alternative definitions

Figure A.3 Alternative measures of persistence in financial conservatism

The figure plots the proportion (%) of firms maintaining their initial-leverage policy over time. ZL are firms that have zero-leverage. UL are firms that have leverage less than 5% of total assets. NPND are firms that have net-leverage (total debt (less) cash) less than zero. AZL are firms that have leverage less than 1% of total assets. ZLTD are firms that have zero long-term debt. AULL are firms that are ranked in the lower quartile based on leverage in each year. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles.

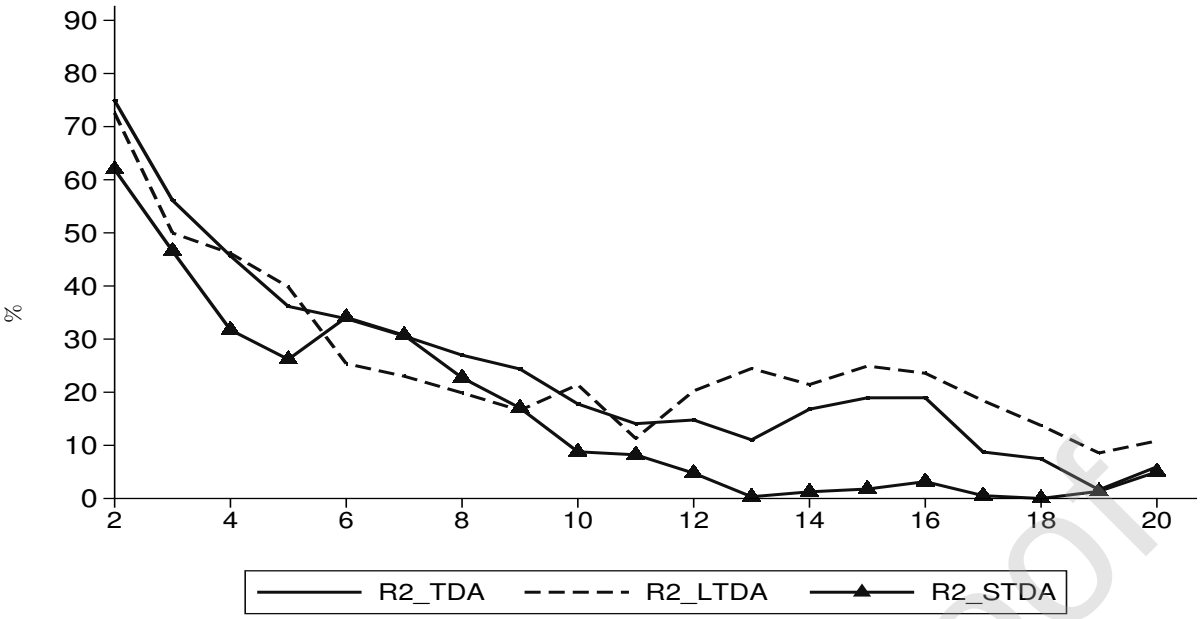


Figure A.4 R^2 **of leverage regressions**

The figure plots the R^2 of firms estimates from annual regressions of leverage on initial leverage from the 2^{nd} year to the 20^{th} year. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles.

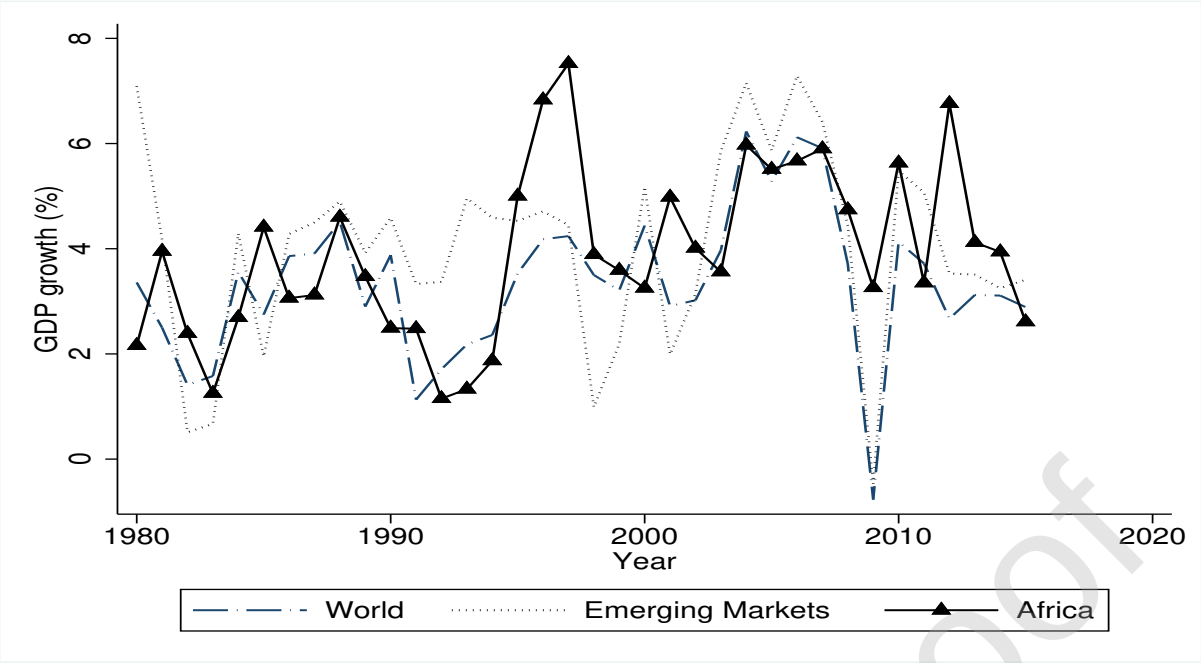


Figure A.5 GDP growth rate (% annual)

The figure presents average annual (%) GDP growth rate of African countries compared to that in the rest of the World and Emerging Markets. The data has been drawn from the World Bank open data for the period 1980 to 2015.

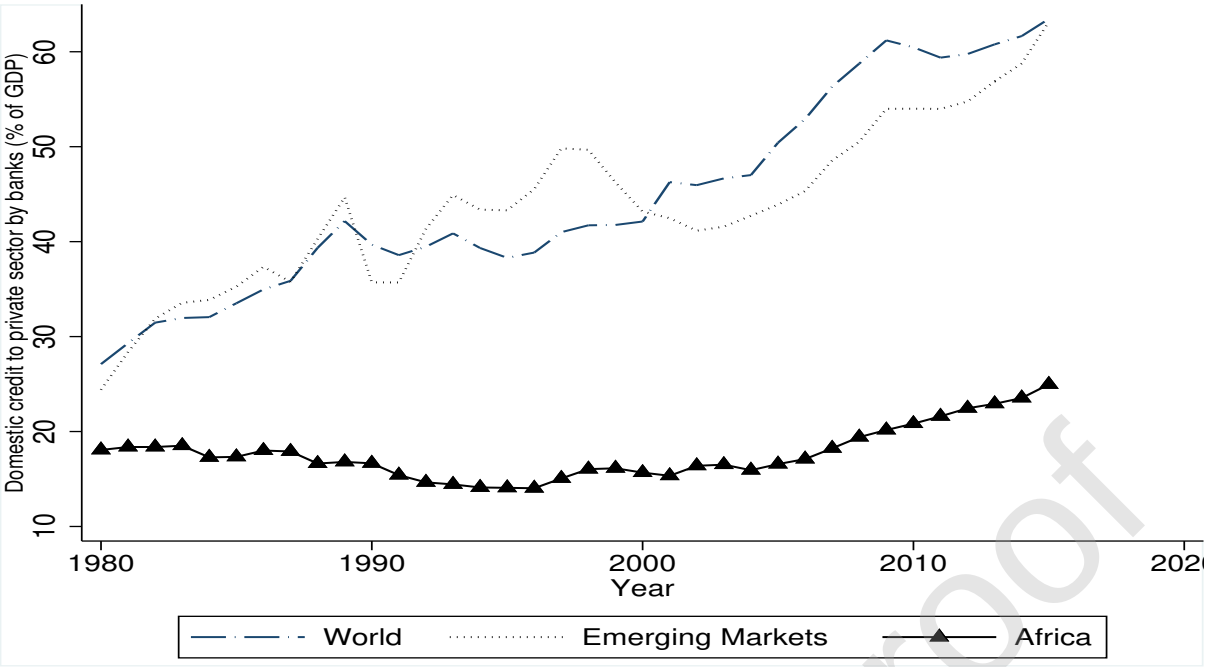


Figure A.6 Domestic Credit to the private sector by banks (% annual)

The figure presents average domestic credit to the private sector by banks (as % GDP) in African countries compared to that in the rest of the World and the Emerging Markets. The data has been drawn from the World Bank open data for the period 1980 to 2015.

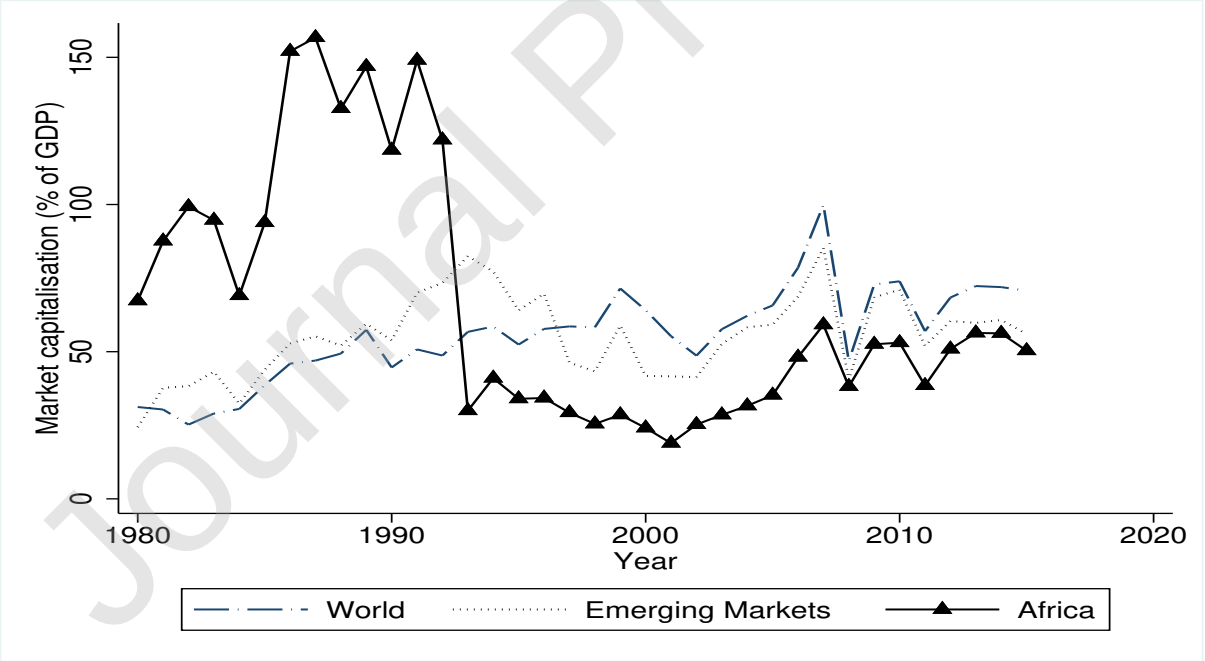


Figure A.7 Market capitalisation of listed domestic companies (% of GDP))

The figure presents market capitalisation of listed domestic firms in African countries compared to that in the rest of the World and the Emerging Markets. The data has been drawn from the World Bank open data for the period 1980 to 2015.

Appendix A.1 Determinants of financial conservatism based on contemporaneous variables

The table presents the logit regression of Equation (1) that relates the financial conservatism dummy and firm-specific variables. ZL is a dummy variable that takes the value of one if a firm has a zero-leverage and otherwise, zero. NPND is a dummy variable that takes the value of one if a firm has leverage less than zero and otherwise, zero. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

	UL	NPND	ZL	UL	NPND	ZL	UL	NPND	ZL
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Trend×100							-5.208***	-5.537***	-0.985
							(0.941)	(0.974)	(1.577)
Size	-0.280***	-0.200***	-0.441***	-0.215***	-0.142***	-0.377***	-0.210***	-0.140***	-0.369***
	(0.036)	(0.034)	(0.049)	(0.039)	(0.036)	(0.048)	(0.039)	(0.036)	(0.047)
PPE	1.189***	0.692***	1.669***	0.131	-0.279	0.684	0.183	-0.203	0.779
	(0.267)	(0.251)	(0.384)	(0.330)	(0.310)	(0.505)	(0.328)	(0.304)	(0.512)
Cash	7.153***	23.925***	6.911***	7.310***	22.291***	7.078***	7.236***	21.943***	6.994***
	(0.423)	(0.773)	(0.590)	(0.451)	(0.825)	(0.650)	(0.448)	(0.800)	(0.648)
Profit	-0.721	-0.394	-0.839	-0.353	-0.081	-0.412	-0.342	-0.028	-0.477
	(0.519)	(0.563)	(0.600)	(0.566)	(0.589)	(0.703)	(0.549)	(0.568)	(0.681)
Tobin's q	0.126**	-0.038	0.217***	0.044	-0.104	0.104	0.055	-0.099	0.128
	(0.049)	(0.062)	(0.072)	(0.053)	(0.067)	(0.090)	(0.051)	(0.064)	(0.088)
Capex	-5.334***	-3.790***	-2.042*	-3.455***	-1.068	-0.700	-3.354***	-1.163	-0.641
	(0.739)	(0.824)	(1.046)	(0.872)	(0.882)	(1.224)	(0.853)	(0.862)	(1.209)
RDD	-0.464***	-0.386***	-1.016***	-0.483***	-0.350***	-0.915***	-0.495***	-0.347***	-0.949***
	(0.121)	(0.113)	(0.220)	(0.137)	(0.125)	(0.232)	(0.135)	(0.125)	(0.231)
Dividend	10.872***	12.129***	7.497***	9.146***	11.317***	6.065***	8.855***	10.948***	5.888***
	(1.141)	(1.174)	(1.002)	(1.147)	(1.253)	(1.040)	(1.143)	(1.227)	(1.017)
NDTS	-16.265***	-19.437***	-17.388***	-10.889***	-14.316***	-10.074***	-11.813***	-15.281***	-11.577***
	(2.219)	(1.964)	(2.948)	(2.364)	(2.093)	(3.178)	(2.326)	(2.050)	(3.217)
Tax	1.504***	1.747***	1.083***	1.619***	1.690***	1.435***	1.573***	1.668***	1.385***
	(0.202)	(0.193)	(0.281)	(0.205)	(0.213)	(0.284)	(0.200)	(0.209)	(0.279)
GDPgrowth				-2.574	-0.237	0.401	-3.746***	-2.278	-1.473
				(1.575)	(2.350)	(2.062)	(1.279)	(1.521)	(1.657)
Inflation				2.705*	-0.511	0.214	1.920**	-2.151**	0.704
				(1.389)	(1.798)	(1.985)	(0.886)	(1.063)	(1.239)
Domestic Credit				-2.139***	-2.878***	-4.417***	-1.532***	-2.084***	-3.884***
				(0.694)	(0.996)	(1.191)	(0.515)	(0.589)	(0.850)
Rule of Law				0.617	0.729	-0.172	0.020	0.048	-0.565
				(0.402)	(0.558)	(0.557)	(0.332)	(0.403)	(0.472)
Kaopen				-0.042	-0.125	0.220	0.015	-0.037	0.255**
				(0.115)	(0.132)	(0.140)	(0.103)	(0.114)	(0.122)
Constant	0.454	-1.805***	1.560*	0.376	-0.799	0.482	1.807**	0.951	0.498
	(0.471)	(0.558)	(0.808)	(0.748)	(0.877)	(1.042)	(0.814)	(0.815)	(1.174)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	14,860	14,860	14,860	10,513	10,513	10,513	10,513	10,513	10,513
Pseudo R^2	0.26	0.45	0.33	0.24	0.44	0.28	0.23	0.44	0.27
Wald Chi^2	1,132.00	1,637.00	841.00	781.80	1,189.00	594.50	710.40	1,135.00	487.20
Wald Chi^2 p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix A.2 Determinants of financial conservatism based instrumental variables

The table presents the logit regression of Equation (1) that relates the financial conservatism dummy and firm-specific variables. The models are estimated *via* instrumental variables (IVProbit) regressions. ZL is a dummy variable that takes the value of one if a firm has a zero-leverage and otherwise, zero. NPND is a dummy variable that takes the value of one if a firm has leverage less than zero and otherwise, zero. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

	UL	NPND	ZL	UL	NPND	ZL	UL	NPND	ZL
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Trend×100							-3.033***	-3.315***	-0.471
							(1.082)	(1.153)	(1.533)
Size	-0.196***	-0.136***	-0.286***	-0.130***	-0.080***	-0.250***	-0.129***	-0.083***	-0.251***
	(0.012)	(0.014)	(0.018)	(0.016)	(0.017)	(0.024)	(0.016)	(0.017)	(0.024)
PPE	1.162***	0.615***	1.215***	0.363**	0.099	0.928***	0.339**	0.067	0.885***
	(0.112)	(0.123)	(0.143)	(0.173)	(0.187)	(0.239)	(0.172)	(0.186)	(0.238)
Cash	5.194***	15.200***	4.256***	5.994***	15.290***	4.734***	5.987***	15.160***	4.715***
	(0.225)	(0.346)	(0.272)	(0.303)	(0.477)	(0.381)	(0.303)	(0.473)	(0.382)
Profit	-2.672***	-3.196***	-3.124***	-1.831***	-1.760***	-3.362***	-1.787***	-1.700***	-3.401***
	(0.409)	(0.459)	(0.554)	(0.514)	(0.576)	(0.700)	(0.516)	(0.575)	(0.703)
Tobin's q	0.143***	0.003	0.187***	-0.014	-0.202***	0.050	-0.017	-0.196***	0.059
	(0.037)	(0.042)	(0.044)	(0.048)	(0.055)	(0.059)	(0.048)	(0.055)	(0.059)
Capex	-7.622***	-2.991***	-1.740*	-6.644***	-0.114	-1.259	-6.586***	-0.036	-0.892
	(0.769)	(0.814)	(1.006)	(1.057)	(1.089)	(1.441)	(1.053)	(1.084)	(1.430)
RDD	-0.363***	-0.268***	-0.590***	-0.433***	-0.226***	-0.671***	-0.437***	-0.217***	-0.664***
	(0.054)	(0.056)	(0.106)	(0.076)	(0.078)	(0.146)	(0.076)	(0.078)	(0.146)
Dividend	8.843***	11.286***	8.857***	7.245***	10.145***	8.058***	7.257***	9.887***	7.939***
	(0.870)	(1.013)	(1.054)	(1.134)	(1.325)	(1.423)	(1.137)	(1.323)	(1.427)
NDTS	-9.766***	-15.066***	-14.308***	-4.142***	-10.408***	-9.176***	-4.093***	-10.316***	-9.366***
	(1.034)	(1.192)	(1.414)	(1.458)	(1.643)	(2.046)	(1.449)	(1.632)	(2.034)
Tax	2.637***	2.464***	1.576***	2.928***	1.210**	3.770***	2.863***	1.243**	3.819***
	(0.364)	(0.395)	(0.486)	(0.543)	(0.586)	(0.798)	(0.547)	(0.586)	(0.802)
GDPgrowth				0.770	1.281	-6.195	-3.012	-1.798	-5.141*
				(3.794)	(4.329)	(4.747)	(1.959)	(2.126)	(2.722)
Inflation				2.046	5.519	-3.563	1.976	-3.765*	-5.206*
				(3.764)	(4.251)	(4.548)	(2.039)	(2.228)	(2.774)
Domestic Credit				0.246	-1.843**	0.711	0.811	-1.181	1.311
				(0.820)	(0.930)	(1.038)	(0.799)	(0.879)	(1.033)
Rule of Law				0.707	0.957	0.081	-0.029	-0.398	-0.989
				(0.592)	(0.696)	(0.726)	(0.608)	(0.679)	(0.754)
Kaopen				-0.131	-0.180	0.015	0.025	0.075	0.187
				(0.100)	(0.116)	(0.125)	(0.097)	(0.110)	(0.123)
Constant	0.449	-0.770**	0.961**	0.095	-0.646	0.323	0.657	0.210	-0.378
	(0.346)	(0.370)	(0.401)	(0.748)	(1.037)	(0.910)	(0.796)	(1.011)	(1.054)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	10,728	10,728	10,728	6,148	6,158	6,148	6,148	6,158	6,148
Wald Chi^2	2,344.00	2,923.00	1,627.00	1,223.00	1,543.00	720.00	1,213.00	1,538.00	711.20
Wald Chi^2 p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix A.3 The cross-sectional variations in financial conservatism

The table presents the cross-sectional distribution in financial conservatism conditional on several variables. The sample is partitioned in each year into quantiles (5 groups) based on the WW Index of Whited and Wu (2006), KZ Index of Kaplan and Zingales (1997), size, Tobin's q, return-on-assets (ROA), investment (Capex) and employment (LogEmp). WW Index= $-0.091 \times \frac{Cash\ Flow}{Assets} - 0.062 \times DivDummy + 0.021 \times \frac{Total\ debt}{Assets} - 0.044 \times Size + 0.102 \times IndustrySalesGrowth - 0.035 \times SalesGrowth$. KP Index= $-1.002 \times \frac{Cash\ Flow}{Assets} + 0.283 \times \frac{Total\ debt}{Assets} - 39.368 \times \frac{Dividends}{Assets} - 1.315 \times \frac{Cash}{Assets}$. LogEmp is the logarithm of employees. Firm-Age is the current year less the first year that the firm appears in the database. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A.

Quantiles	WW Index		KZ Index		Size		Tobin's q		ROA		Capex		LogEmp	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Panel A: UL														
Q_1	647	14%	1554	33%	1329	28%	926	19%	850	18%	1352	28%	972	27%
Q_2	983	21%	1291	27%	1152	24%	560	12%	627	13%	945	20%	888	24%
Q_3	1089	23%	865	18%	929	19%	797	17%	667	14%	873	18%	698	19%
Q_4	1126	24%	741	16%	822	17%	1040	22%	1084	23%	865	18%	614	17%
Q_5	930	19%	290	6%	543	11%	1452	30%	1547	32%	740	15%	464	13%
Panel B: NPND														
Q_1	1096	17%	1978	30%	1535	24%	1148	18%	1072	16%	1636	25%	1168	22%
Q_2	1397	21%	1868	29%	1530	23%	932	14%	978	15%	1393	21%	1164	22%
Q_3	1442	22%	1234	19%	1340	21%	1214	19%	1044	16%	1222	19%	1077	21%
Q_4	1397	21%	1004	15%	1291	20%	1452	22%	1509	23%	1204	18%	979	19%
Q_5	1185	18%	408	6%	821	13%	1771	27%	1914	29%	1062	16%	818	16%
Panel C: ZL														
Q_1	132	8%	575	35%	532	32%	375	22%	319	19%	535	32%	351	29%
Q_2	360	21%	453	27%	454	27%	141	8%	196	12%	261	15%	324	27%
Q_3	442	26%	250	15%	308	18%	203	12%	192	11%	293	17%	248	21%
Q_4	404	24%	270	16%	317	19%	310	18%	272	16%	303	18%	238	20%
Q_5	350	21%	115	7%	77	5%	659	39%	709	42%	296	18%	38	3%

Appendix A.4 The cross-sectional variations in financial conservatism: Alternative definitions

The table presents the cross-sectional distribution in financial conservatism conditional on several variables. The sample is partitioned in each year into quantiles (5 groups) based on the WW Index of Whited and Wu (2006), KZ Index of Kaplan and Zingales (1997), size, Tobin's q, return-on-assets (ROA), investment (Capex) and employment (LogEmp). The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A.

Quantiles	WW Index		KZ Index		Size		Tobin's q		ROA		Capex		LogEmp	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Panel A: AZL														
Q_1	347	12%	977	35%	854	31%	555	20%	501	18%	854	31%	594	28%
Q_2	552	20%	759	28%	716	26%	296	11%	346	12%	497	18%	568	27%
Q_3	661	24%	431	16%	489	18%	403	14%	355	13%	442	16%	397	19%
Q_4	684	25%	422	15%	450	16%	575	21%	532	19%	524	19%	381	18%
Q_5	541	19%	170	6%	276	10%	956	34%	1051	38%	468	17%	202	9%
Panel B: ZLTD														
Q_1	281	9%	935	32%	977	33%	638	21%	574	19%	952	32%	678	31%
Q_2	638	21%	734	25%	789	26%	363	12%	388	13%	565	19%	703	33%
Q_3	738	25%	473	16%	552	18%	454	15%	400	13%	508	17%	377	17%
Q_4	714	24%	511	17%	468	16%	568	19%	572	19%	484	16%	314	15%
Q_5	621	21%	313	11%	206	7%	969	32%	1058	35%	483	16%	89	4%
Panel C: UUL														
Q_1	523	13%	1279	33%	1109	29%	769	20%	689	18%	1128	29%	787	26%
Q_2	781	20%	1073	28%	948	24%	443	11%	504	13%	749	19%	796	26%
Q_3	899	23%	659	17%	712	18%	617	16%	494	13%	682	18%	559	18%
Q_4	921	24%	629	16%	661	17%	824	21%	798	21%	705	18%	535	18%
Q_5	756	19%	215	6%	450	12%	1227	32%	1395	36%	616	16%	371	12%

Appendix A.5 Time variations in the determinants of financial conservatism: South Africa

The table presents the logit regression of Equation (1) that relates the financial conservatism dummy and firm-specific variables. ZL is a dummy variable that takes the value of one if a firm has a zero-leverage and otherwise, zero. NPND is a dummy variable that takes the value of one if a firm has leverage less than zero and otherwise, zero. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

	UL			NPND			ZL		
	1980s	1990s	2000s	1980s	1990s	2000s	1980s	1990s	2000s
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Size	-0.668***	-0.360***	-0.299***	-0.523***	-0.182***	-0.201***	-0.334***	-0.078*	-0.134***
	(0.157)	(0.055)	(0.090)	(0.088)	(0.053)	(0.060)	(0.067)	(0.040)	(0.050)
PPE	2.633***	2.546***	1.361	2.662***	0.354	0.163	1.499***	0.418	-0.998**
	(0.740)	(0.802)	(1.005)	(0.516)	(0.508)	(0.607)	(0.353)	(0.413)	(0.488)
Cash	5.308***	7.424***	8.515***	4.378***	6.920***	9.225***	19.761***	12.490***	21.357***
	(1.346)	(0.958)	(1.236)	(0.880)	(0.660)	(0.964)	(1.265)	(0.754)	(1.268)
Profit	-3.672**	0.986	-2.647***	-5.170***	0.413	-3.088***	-4.469***	0.297	-1.336
	(1.586)	(0.886)	(0.953)	(1.474)	(0.791)	(1.087)	(1.429)	(0.649)	(0.937)
Tobin's q	0.792***	-0.135	0.154	0.428***	0.045	0.236*	0.302**	-0.014	-0.092
	(0.174)	(0.188)	(0.229)	(0.145)	(0.086)	(0.130)	(0.129)	(0.097)	(0.142)
Capex	-0.769	-10.017***	-3.564	-10.200***	-4.850***	-7.010***	-12.186***	-7.785***	-0.394
	(2.087)	(1.920)	(3.122)	(1.577)	(1.187)	(2.055)	(2.046)	(1.287)	(1.476)
RDD	-1.337	-0.567**	-1.985**	0.281	-0.217	-1.164***	0.317*	-0.343**	-0.485**
	(0.950)	(0.280)	(0.999)	(0.213)	(0.163)	(0.326)	(0.188)	(0.141)	(0.198)
Dividend	11.041***	7.275***	9.886***	28.461***	4.296***	12.224***	18.846***	5.612***	12.966***
	(2.971)	(1.452)	(3.191)	(5.094)	(1.341)	(2.475)	(3.344)	(1.157)	(2.364)
NDTS	-20.892**	6.290	-18.308**	-38.614***	-6.581**	-16.496***	-25.082***	-3.388	-8.405**
	(8.789)	(4.787)	(7.392)	(6.054)	(3.291)	(5.408)	(4.258)	(2.640)	(4.156)
Tax	-0.694	1.796***	0.409	2.612***	0.935***	-0.036	1.945***	0.807***	-0.150
	(0.622)	(0.432)	(0.360)	(0.687)	(0.266)	(0.339)	(0.491)	(0.247)	(0.309)
GDPgrowth	-6.189	-16.942*	-48.955	-1.707	-3.220	72.556**	3.688	-5.109	36.350
	(5.362)	(10.186)	(38.352)	(4.176)	(4.821)	(28.735)	(4.043)	(5.282)	(34.888)
Inflation	-9.237	-1.918	-65.444	5.429	1.640	66.366**	-3.856	-3.024**	28.178
	(8.111)	(1.967)	(45.619)	(5.678)	(1.428)	(31.484)	(6.015)	(1.338)	(40.073)
Domestic Credit	-0.202	0.527	-13.139	-0.168	-0.355	34.910***	-0.578	-1.560***	22.487*
	(0.337)	(0.844)	(13.626)	(0.269)	(0.576)	(11.150)	(0.359)	(0.574)	(12.606)
Rule of Law	-3.052	2.254**	4.516	-1.013	-0.642	12.010***	-0.108	-0.685	2.889
	(2.068)	(1.010)	(4.225)	(0.993)	(0.560)	(3.229)	(1.054)	(0.588)	(3.207)
Kaopen	0.254			0.342**			0.079		
	(0.202)			(0.141)			(0.143)		
Constant	4.530**	-1.242	10.786	3.547***	-1.391	-31.658***	2.072	0.272	-19.884*
	(2.078)	(0.979)	(12.843)	(1.317)	(1.118)	(10.336)	(1.304)	(0.799)	(11.830)
Year FE	No	No	No	No	No	No	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2,639	4,205	2,752	2,639	4,327	2,874	2,639	4,345	2,874
Pseudo R^2	0.43	0.28	0.30	0.35	0.18	0.26	0.36	0.28	0.40
Wald Chi^2	171.10	327.20	172.40	353.90	274.80	240.00	466.00	574.00	422.40
Wald Chi^2 p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix A.6 Time variations in the determinants of financial conservatism

The table presents the logit regression of Equation (1) that relates the financial conservatism dummy and firm-specific variables. UL is a dummy variable that takes the value of one if a firm has a low-leverage (less than 5% of total assets) and otherwise, zero. NPND (ZL) is a dummy variable that takes the value of one if a firm has leverage less than zero (equal to zero) and otherwise, zero. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

	UL			NPND			ZL		
	1980s	1990s	2000s	1980s	1990s	2000s	1980s	1990s	2000s
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Size	-0.523***	-0.170***	-0.223***	-0.335***	-0.094**	-0.132***	-0.668***	-0.359***	-0.311***
	(0.089)	(0.047)	(0.049)	(0.067)	(0.037)	(0.041)	(0.157)	(0.050)	(0.063)
PPE	2.662***	0.032	0.358	1.512***	0.217	-0.361	2.633***	1.560**	0.428
	(0.516)	(0.419)	(0.465)	(0.353)	(0.338)	(0.416)	(0.740)	(0.629)	(0.721)
Cash	4.384***	7.206***	8.617***	19.788***	12.798***	19.074***	5.308***	6.820***	6.710***
	(0.879)	(0.572)	(0.719)	(1.266)	(0.672)	(1.075)	(1.346)	(0.746)	(0.888)
Profit	-4.955***	0.606	-0.463	-4.364***	0.389	0.875	-3.672**	0.498	-1.558
	(1.472)	(0.700)	(0.872)	(1.420)	(0.603)	(0.827)	(1.586)	(0.901)	(0.959)
Tobin's q	0.420***	-0.013	0.053	0.299**	-0.032	-0.223**	0.792***	-0.083	0.128
	(0.144)	(0.066)	(0.086)	(0.129)	(0.073)	(0.098)	(0.174)	(0.119)	(0.128)
Capex	-10.133***	-4.362***	-8.264***	-12.277***	-7.350***	-3.936***	-0.769	-5.670***	-2.416
	(1.569)	(1.018)	(1.405)	(2.049)	(1.091)	(1.260)	(2.087)	(1.554)	(1.713)
RDD	0.278	-0.326**	-0.893***	0.317*	-0.384***	-0.482***	-1.337	-0.568**	-2.118***
	(0.212)	(0.159)	(0.253)	(0.188)	(0.141)	(0.184)	(0.950)	(0.268)	(0.637)
Dividend	28.064***	6.154***	9.648***	18.681***	7.606***	11.193***	11.041***	6.631***	7.278***
	(5.050)	(1.218)	(1.656)	(3.326)	(1.168)	(1.667)	(2.971)	(1.351)	(1.617)
NDTS	-38.743***	-5.298*	-8.723**	-24.991***	-2.473	-5.268*	-20.892**	-2.082	-11.372**
	(6.064)	(2.830)	(3.636)	(4.254)	(2.339)	(3.068)	(8.789)	(4.062)	(5.130)
Tax	2.596***	1.215***	0.640**	1.941***	1.132***	0.299	-0.694	1.951***	0.748*
	(0.687)	(0.263)	(0.316)	(0.490)	(0.247)	(0.282)	(0.622)	(0.423)	(0.424)
GDPgrowth	-3.546	-6.260***	-0.222	2.812	-7.444***	-5.962*	-6.189	-1.562	-2.852
	(4.335)	(2.394)	(2.567)	(3.952)	(2.342)	(3.224)	(5.362)	(3.428)	(3.276)
Inflation	3.414	1.817*	-0.087	-4.813	-1.600	-3.674	-9.237	1.524	-6.649**
	(5.821)	(1.102)	(2.691)	(5.938)	(1.072)	(3.443)	(8.111)	(1.386)	(3.312)
Domestic Credit	-0.198	-0.691	0.665	-0.593*	-1.889***	1.418	-0.202	-1.045	0.997
	(0.268)	(0.545)	(1.104)	(0.359)	(0.537)	(1.287)	(0.337)	(0.839)	(1.437)
Rule of Law	-1.464	0.500	0.032	-0.323	0.086	1.120	-3.052	-0.027	0.159
	(1.039)	(0.418)	(0.532)	(1.032)	(0.397)	(0.768)	(2.068)	(0.679)	(0.703)
Kaopen	0.318**	0.417	0.131	0.067	0.339	-0.052	0.254	0.191	0.296*
	(0.142)	(0.568)	(0.123)	(0.143)	(0.577)	(0.146)	(0.202)	(0.689)	(0.153)
Constant	3.796***	-2.254	-0.237	2.193*	-1.070	0.105	4.530**	-0.311	-0.247
	(1.323)	(1.840)	(0.974)	(1.298)	(1.633)	(1.065)	(2.078)	(1.961)	(1.387)
Year FE	No	No	No	No	No	No	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2,642	5,366	4,321	2,645	5,349	4,321	2,639	5,346	4,321
Pseudo R^2	0.35	0.20	0.28	0.36	0.29	0.39	0.43	0.26	0.27
Wald Chi^2	355.80	411.00	369.80	466.80	709.70	610.10	171.10	379.60	266.20
Wald Chi^2 p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix A.7 Differences between constrained and unconstrained financially conservatism firms

The table presents the differences between firm constrained (FC Con) and unconstrained financially conservative firms. The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

Panel A: UL

	WW Index			KZ Index			Size		
(A)	FC UnCon	Debt>0	Debt>0	FC UnCon	Debt>0	Debt>0	FC UnCon	Debt>0	Debt>0
	vs	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*
(B)	FC Con	FC Con	FC UnCon	FC Con	FC Con	FC UnCon	FC Con	FC Con	FC UnCon
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Leverage	0.002***	0.205***	0.203***	0.000	0.205***	0.205***	0.003***	0.207***	0.203***
LTD	0.001	0.113***	0.112***	0.000	0.114***	0.113***	0.004***	0.114***	0.111***
Size	1.933***	1.249***	-0.684***	0.117	0.763***	0.646***	3.910***	2.265***	-1.644***
PPE	-0.004	-0.005	-0.001	-0.267***	-0.164***	0.103***	0.139***	0.060***	-0.079***
Cash	-0.029***	-0.097***	-0.069***	0.123***	-0.010***	-0.133***	-0.061***	-0.118***	-0.057***
Profit	0.015**	-0.056***	-0.071***	0.134***	0.028***	-0.106***	0.028***	-0.046***	-0.074***
Tobin's q	0.317***	-0.262***	-0.579***	0.901***	0.193***	-0.708***	0.327***	-0.218***	-0.545***
Capex	0.005***	0.014***	0.009***	0.005**	0.020***	0.015***	0.023***	0.019***	-0.003*
RDD	0.020*	0.120***	0.100***	0.021	0.137***	0.117***	0.085***	0.148***	0.063***
Dividend	0.005**	-0.034***	-0.039***	0.076***	0.013***	-0.063***	0.012***	-0.030***	-0.042***
NDTS	-0.002*	0.012***	0.014***	0.001	0.016***	0.015***	-0.006***	0.011***	0.017***
Tax	0.041***	-0.025***	-0.066***	0.131***	0.050***	-0.081***	0.021***	-0.030***	-0.050***
LogEmp	0.664***	0.398***	-0.266***	-0.390***	0.077	0.467***	2.221***	1.254***	-0.967***
SG	0.312***	0.183***	-0.129***	0.329***	0.314***	-0.015	0.163***	0.139***	-0.024
INTANG	0.031***	0.015***	-0.016***	0.058***	0.042***	-0.016***	0.055***	0.024***	-0.031***
N1 (A)	1,159	10,594	10,594	2,299	10,594	10,594	936	10,594	10,594
N2 (B)	1,574	1,574	1,159	672	672	2,299	1,931	1,931	936

Panel B: NPND

	WW Index			KZ Index			Size		
(A)	FC UnCon	Debt>0	Debt>0	FC UnCon	Debt>0	Debt>0	FC UnCon	Debt>0	Debt>0
	vs	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*
(B)	FC Con	FC Con	FC UnCon	FC Con	FC Con	FC UnCon	FC Con	FC Con	FC UnCon
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Leverage	0.019***	0.201***	0.182***	-0.005**	0.193***	0.198***	0.025***	0.204***	0.179***
LTD	0.012***	0.112***	0.101***	-0.005***	0.107***	0.111***	0.016***	0.115***	0.099***
Size	1.868***	1.193***	-0.675***	0.265***	0.853***	0.588***	3.882***	2.326***	-1.556***
PPE	-0.033***	0.038***	0.071***	-0.242***	-0.092***	0.150***	0.072***	0.100***	0.028***
Cash	-0.018***	-0.126***	-0.108***	0.110***	-0.051***	-0.161***	-0.052***	-0.148***	-0.096***
Profit	0.010**	-0.045***	-0.054***	0.115***	0.023***	-0.091***	0.011**	-0.040***	-0.051***
Tobin's q	0.241***	-0.234***	-0.475***	0.752***	0.124***	-0.628***	0.232***	-0.193***	-0.424***
Capex	0.004***	0.014***	0.010***	-0.002	0.017***	0.018***	0.019***	0.020***	0.001
RDD	0.088***	0.094***	0.006	0.056***	0.119***	0.063***	0.183***	0.142***	-0.041***
Dividend	0.001	-0.028***	-0.029***	0.069***	0.015***	-0.055***	0.002	-0.025***	-0.027***
NDTS	0.001*	0.010***	0.008***	-0.004***	0.009***	0.013***	-0.001	0.009***	0.010***
Tax	0.032***	-0.029***	-0.061***	0.122***	0.044***	-0.079***	0.032***	-0.023***	-0.055***
LogEmp	0.788***	0.449***	-0.339***	-0.105	0.290***	0.396***	2.334***	1.370***	-0.964***
SG	0.356***	0.185***	-0.171***	0.359***	0.299***	-0.060**	0.107***	0.089***	-0.018
INTANG	0.026***	0.021***	-0.005	0.053***	0.043***	-0.011***	0.043***	0.028***	-0.015***
N1 (A)	1,844	8,833	8,833	3,044	8,833	8,833	1,548	8,833	8,833
N2 (B)	1,950	1,950	1,844	897	897	3,044	2,357	2,357	1,548

Appendix A.7 Differences between constrained and unconstrained financially conservatism firms (continued)

Panel C: ZL

	WW Index			KZ Index			Size		
(A)	FC UnCon	Debt>0	Debt>0	FC UnCon	Debt>0	Debt>0	FC UnCon	Debt>0	Debt>0
	vs	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*
(B)	FC Con	FC Con	FC UnCon	FC Con	FC Con	FC UnCon	FC Con	FC Con	FC UnCon
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Leverage	0.000***	0.173***	0.173***	0.000***	0.173***	0.173***	0.000***	0.173***	0.173***
LTD	0.000***	0.095***	0.095***	0.000***	0.095***	0.095***	0.000***	0.095***	0.095***
Size	2.012***	1.395***	-0.617***	-0.229*	0.541***	0.770***	3.640***	2.154***	-1.486***
PPE	0.022	-0.045***	-0.067***	-0.285***	-0.245***	0.040***	0.170***	0.020**	-0.150***
Cash	-0.017*	-0.112***	-0.095***	0.168***	0.008	-0.160***	-0.028**	-0.133***	-0.105***
Profit	0.073***	-0.070***	-0.143***	0.203***	0.054***	-0.149***	0.133***	-0.046***	-0.179***
Tobin's q	0.715***	-0.355***	-1.070***	1.284***	0.361***	-0.924***	0.686***	-0.290***	-0.976***
Capex	0.021***	0.012***	-0.009***	0.015***	0.020***	0.005**	0.028***	0.015***	-0.013***
RDD	-0.057***	0.141***	0.199***	0.016	0.180***	0.164***	0.001	0.166***	0.166***
Dividend	0.021***	-0.045***	-0.066***	0.099***	0.018***	-0.082***	0.033***	-0.037***	-0.070***
NDTS	-0.001	0.017***	0.019***	0.004**	0.022***	0.017***	-0.013***	0.012***	0.025***
Tax	0.079***	-0.022***	-0.101***	0.157***	0.055***	-0.102***	0.098***	-0.029***	-0.127***
LogEmp	0.750***	0.561***	-0.188*	-0.285**	0.092	0.377***	1.896***	1.130***	-0.766***
SG	0.295***	0.211***	-0.084	0.305***	0.375***	0.071*	0.046	0.158***	0.112
INTANG	-0.046***	0.012*	0.058***	-0.013	0.037***	0.049***	-0.039***	0.021***	0.060***
N1 (A)	317	13,681	13,681	846	13,681	13,681	244	13,681	13,681
N2 (B)	593	593	317	267	267	846	806	806	244

Panel D: AZL

	WW Index			KZ Index			Size		
(A)	FC UnCon	Debt>0	Debt>0	FC UnCon	Debt>0	Debt>0	FC UnCon	Debt>0	Debt>0
	vs	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*	*vs*
(B)	FC Con	FC Con	FC UnCon	FC Con	FC Con	FC UnCon	FC Con	FC Con	FC UnCon
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Leverage	0.001***	0.186***	0.185***	0.000**	0.186***	0.186***	0.001***	0.186***	0.185***
LTD	0.000***	0.103***	0.102***	0.000***	0.103***	0.102***	0.000***	0.103***	0.102***
Size	2.258***	1.492***	-0.766***	0.037	0.729***	0.692***	3.927***	2.246***	-1.681***
PPE	-0.031**	-0.027***	0.004	-0.274***	-0.203***	0.071***	0.112***	0.030***	-0.082***
Cash	-0.037***	-0.112***	-0.075***	0.141***	-0.005	-0.145***	-0.066***	-0.128***	-0.063***
Profit	0.021**	-0.063***	-0.084***	0.158***	0.040***	-0.118***	0.057***	-0.046***	-0.103***
Tobin's q	0.373***	-0.342***	-0.715***	0.982***	0.205***	-0.777***	0.476***	-0.267***	-0.743***
Capex	0.008***	0.010***	0.002	0.005*	0.016***	0.011***	0.025***	0.017***	-0.008***
RDD	0.019	0.133***	0.113***	0.033**	0.157***	0.124***	0.048***	0.143***	0.095***
Dividend	0.002	-0.043***	-0.045***	0.087***	0.015***	-0.071***	0.021***	-0.035***	-0.055***
NDTS	-0.001	0.015***	0.016***	0.000	0.018***	0.017***	-0.009***	0.012***	0.021***
Tax	0.057***	-0.015**	-0.072***	0.153***	0.067***	-0.085***	0.048***	-0.025***	-0.074***
LogEmp	0.668***	0.475***	-0.194***	-0.331***	0.058	0.389***	2.099***	1.163***	-0.937***
SG	0.352***	0.214***	-0.138***	0.299***	0.302***	0.003	0.213***	0.151***	-0.062
INTANG	0.045***	0.020***	-0.025***	0.040***	0.044***	0.004	0.063***	0.024***	-0.039***
N1 (A)	615	12,584	12,584	1,421	12,584	12,584	511	12,584	12,584
N2 (B)	946	946	615	403	403	1,421	1,269	1,269	511

Appendix A.7 Differences between constrained and unconstrained financially conservatism firms (continued)

Panel E: ZLL

	WW Index			KZ Index			Size		
(A) *vs* (B)	FC UnCon *vs* FC Con	Debt>0 *vs* FC Con	Debt>0 *vs* FC UnCon	FC UnCon *vs* FC Con	Debt>0 *vs* FC Con	Debt>0 *vs* FC UnCon	FC UnCon *vs* FC Con	Debt>0 *vs* FC Con	Debt>0 *vs* FC UnCon
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Leverage	-0.002	0.142***	0.144***	-0.039***	0.113***	0.153***	-0.002	0.141***	0.143***
LTD	0.000***	0.105***	0.105***	0.000***	0.105***	0.105***	0.000***	0.105***	0.105***
Size	2.376***	1.789***	-0.588***	0.078	1.025***	0.947***	4.133***	2.451***	-1.681***
PPE	0.000	-0.012	-0.012	-0.230***	-0.137***	0.093***	0.146***	0.050***	-0.096***
Cash	-0.013*	-0.075***	-0.063***	0.142***	0.019***	-0.123***	-0.028***	-0.094***	-0.067***
Profit	0.058***	-0.038***	-0.095***	0.166***	0.053***	-0.113***	0.095***	-0.025***	-0.120***
Tobin's q	0.565***	-0.206***	-0.771***	0.898***	0.191***	-0.707***	0.653***	-0.152***	-0.805***
Capex	0.014***	0.017***	0.003	0.007***	0.021***	0.014***	0.029***	0.022***	-0.008***
RDD	-0.004	0.124***	0.128***	0.052***	0.167***	0.115***	-0.015	0.145***	0.160***
Dividend	0.019***	-0.029***	-0.048***	0.089***	0.022***	-0.068***	0.025***	-0.026***	-0.051***
NDTS	-0.002	0.011***	0.012***	-0.003***	0.011***	0.014***	-0.004**	0.010***	0.014***
Tax	0.064***	-0.007	-0.071***	0.139***	0.061***	-0.078***	0.068***	-0.015***	-0.083***
LogEmp	0.492***	0.891***	0.399***	-0.088	0.696***	0.784***	1.645***	1.422***	-0.223**
SG	0.334***	0.230***	-0.105**	0.301***	0.339***	0.039	0.118**	0.162***	0.043
INTANG	-0.028***	0.028***	0.056***	0.026***	0.059***	0.033***	-0.032***	0.030***	0.062***
N1 (A)	589	12,377	12,377	1,398	12,377	12,377	407	12,377	12,377
N2 (B)	1,020	1,020	589	579	579	1,398	1,406	1,406	407

Panel F: UUL

	WW Index			KZ Index			Size		
(A) *vs* (B)	FC UnCon *vs* FC Con	Debt>0 *vs* FC Con	Debt>0 *vs* FC UnCon	FC UnCon *vs* FC Con	Debt>0 *vs* FC Con	Debt>0 *vs* FC UnCon	FC UnCon *vs* FC Con	Debt>0 *vs* FC Con	Debt>0 *vs* FC UnCon
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Leverage	0.001*	0.195***	0.194***	-0.001**	0.194***	0.195***	0.003***	0.196***	0.193***
LTD	0.000	0.108***	0.108***	0.000	0.108***	0.109***	0.002***	0.109***	0.107***
Size	2.111***	1.394***	-0.717***	0.106	0.808***	0.702***	4.049***	2.374***	-1.674***
PPE	-0.010	0.002	0.012	-0.254***	-0.156***	0.098***	0.137***	0.062***	-0.075***
Cash	-0.029***	-0.108***	-0.079***	0.140***	-0.004	-0.144***	-0.060***	-0.127***	-0.066***
Profit	0.026***	-0.050***	-0.076***	0.145***	0.040***	-0.105***	0.041***	-0.039***	-0.081***
Tobin's q	0.399***	-0.264***	-0.663***	0.905***	0.205***	-0.700***	0.363***	-0.215***	-0.578***
Capex	0.010***	0.015***	0.005***	0.005**	0.020***	0.015***	0.027***	0.021***	-0.006***
RDD	0.006	0.095***	0.089***	-0.002	0.103***	0.104***	0.105***	0.133***	0.028*
Dividend	0.009***	-0.034***	-0.043***	0.082***	0.018***	-0.064***	0.015***	-0.029***	-0.044***
NDTS	0.000	0.012***	0.012***	-0.001	0.013***	0.014***	-0.005***	0.010***	0.015***
Tax	0.060***	-0.007	-0.068***	0.142***	0.065***	-0.077***	0.035***	-0.019***	-0.053***
LogEmp	0.719***	0.551***	-0.168***	-0.298***	0.188**	0.487***	2.289***	1.405***	-0.884***
SG	0.296***	0.185***	-0.111***	0.322***	0.307***	-0.015	0.168***	0.150***	-0.018
INTANG	0.022**	0.015***	-0.007	0.037***	0.039***	0.002	0.043***	0.024***	-0.019***
N1 (A)	920	11,489	11,489	1,910	11,489	11,489	770	11,489	11,489
N2 (B)	1,266	1,266	920	554	554	1,910	1,628	1,628	770

Appendix A.7 Differences between constrained and unconstrained financially conservatism firms (continued)

Panel G: ZLALL

	WW Index			KZ Index			Size		
(A) (B)	FC UnCon *vs* FC Con	Debt>0 *vs* FC Con	Debt>0 *vs* FC UnCon	FC UnCon *vs* FC Con	Debt>0 *vs* FC Con	Debt>0 *vs* FC UnCon	FC UnCon *vs* FC Con	Debt>0 *vs* FC Con	Debt>0 *vs* FC UnCon
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Leverage	0.000***	0.173***	0.173***	0.000***	0.173***	0.173***	0.000***	0.173***	0.173***
LTD	0.000***	0.095***	0.095***	0.000***	0.095***	0.095***	0.000***	0.095***	0.095***
Size	2.591***	1.682***	-0.908***	-0.590*	-0.262	0.328**	3.773***	2.397***	-1.376***
PPE	0.171***	0.019	-0.153***	0.073	0.020	-0.053***	0.280***	0.124***	-0.155***
Cash	-0.006	-0.142***	-0.136***	0.170***	0.011	-0.158***	-0.040**	-0.185***	-0.145***
Profit	0.166***	-0.066***	-0.232***	0.194***	0.028*	-0.166***	0.188***	-0.053***	-0.241***
Tobin's q	0.899***	-0.480***	-1.380***	1.349***	0.304**	-1.045***	0.330*	-0.712***	-1.042***
Capex	0.034***	0.023***	-0.011**	0.012	0.018**	0.006*	0.044***	0.034***	-0.010*
RDD	-0.026	0.173***	0.199***	0.013	0.199***	0.186***	-0.028*	0.171***	0.199***
Dividend	0.046***	-0.049***	-0.096***	0.083***	0.003	-0.081***	0.054***	-0.046***	-0.100***
NDTS	0.000	0.028***	0.028***	-0.007**	0.022***	0.029***	-0.004*	0.024***	0.028***
Tax	0.114***	-0.060***	-0.175***	0.135***	0.006	-0.129***	0.142***	-0.044***	-0.186***
LogEmp	1.203***	0.021	-1.182***	0.646**	-0.080	-0.725***	2.689***	1.507***	-1.182***
SG	0.467***	0.295***	-0.172	0.446**	0.495***	0.048	-0.152	0.085	0.237**
INTANG	-0.113***	-0.064***	0.049***	-0.195***	-0.153***	0.042***	-0.106***	-0.078***	0.028*
N1 (A)	95	13,681	13,681	233	13,681	13,681	114	13,681	13,681
N2 (B)	116	116	95	42	42	233	145	145	114

Appendix A.8 Differences between financially conservative firms in the long-run and short-run

The table presents the differences between conservative firms for *less* than 5 years (FC SR) and conservative firms for *more than* than 5 years (FC LR). The sample consists of listed non-financial firms in selected African countries drawn from *Datastream* from 1980 to 2015. All variables used are defined in Appendix A, and are winsorised at the lower and upper one percentiles. ***, **, * indicate significance at the one, five, and ten percent levels, respectively.

	UL	NPND	ZL	AZL	ZLL	UUL
(A)	FC LD	FC LD	FC LD	FC LD	FC LD	FC LD
	vs	*vs*	*vs*	*vs*	*vs*	*vs*
(B)	FC SR	FC SR	FC SR	FC SR	FC SR	FC SR
Variables	(1)	(2)	(3)	(4)	(5)	(6)
Leverage	-0.012***	-0.031***	0.000***	-0.001***	-0.036***	-0.011***
LTD	-0.005***	-0.017***	0.000***	0.000***	0.000***	-0.005***
Size	-0.015	-0.196***	0.348***	-0.153**	-0.200**	-0.192***
PPE	0.044***	-0.022***	0.047***	0.051***	0.052***	0.060***
Cash	0.058***	0.077***	0.018**	0.040***	0.033***	0.063***
Profit	0.024***	0.015***	0.050***	0.046***	0.038***	0.015***
Tobin's q	0.120***	0.183***	0.269***	0.112**	0.181***	0.036
Capex	-0.009***	-0.008***	-0.003	-0.009***	-0.002	-0.005***
RDD	-0.096***	-0.020**	-0.075***	-0.079***	-0.053***	-0.090***
Dividend	0.024***	0.023***	0.027***	0.026***	0.025***	0.021***
NDTS	-0.015***	-0.003***	-0.016***	-0.015***	-0.009***	-0.012***
Tax	0.009	0.007	0.030***	0.019***	0.027***	0.016***
LogEmp	0.061	-0.049	1.061***	0.406***	0.479***	0.167**
SG	-0.128***	-0.101***	-0.083*	-0.129***	-0.113***	-0.131***
INTANG	0.017***	0.004	0.030***	0.006	-0.018**	-0.021***
N1 (A)	3,392	4,729	1,136	1,847	2,159	2,530
N2 (B)	1,383	1,788	552	938	833	1,350