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Financial Literacy of Managers and the Efficiency of Capital Allocation in Corporations in Mozambique

A survey of Large Firms in Mozambique

Preliminary Results – Please do not quote without authors' permission

Cláudia Custódio (NOVA SBE and CEPR)
Diogo Mendes (NOVA SBE)
Daniel Metzger (Stockholm School of Economics)

Motivation

Management practices and GDP per capita are positively correlated.

Financial practices are well documented for developed countries, **little is known for developing countries.**

These countries have different economic and financial contexts, which may hamper the application of corporate finance theory.

On the other hand **financial literacy is well studied in developing countries** at the household and entrepreneurial level but not at the managerial level and for large corporations.

> **Contingency view**: firms are adopting optimal financial practices but these differ firm by firm and across countries
>
> Or, is there a **misalignment** with developed countries?

Motivation – Policy implications

Do companies in Mozambique adopt **different financial practices** from more developed economies such as the US?

How do financial policies vary with firm and CEO characteristics in MZ?

Policy implications

Promotion of **financial literacy programs** at the executive level can contribute for the development of the private sector through optimal decision making (Investment policy, access to external markets, risk management…)

Need to adapt literacy programs and policies to local context

Guide for financial industry development strategies

Why Mozambique?

Mozambique is representative of sub-Saharan African developing countries, in terms of economic and financial contexts

(2007 World Bank Enterprise Surveys: Mozambique)

- 57% of the firms with more than 100 employees identify access/cost of finance as a major constraint, well above any other indicator such as corruption, taxation, and practices of informal sector.

- Only 11.3% of investment is financed by banks and 0.8 by equity

- An average 101% of the loan is requested as collateral

Why large corporations?

Large firms control a larger fraction of assets in the economy and any efficiency gains are more likely to be economically relevant

Companies in developing countries are expected to exhibit a large heterogeneity in financial policies (Bloom et al. (2012));

Mozambique ranks at the bottom of a management practice index (Lemos and Scur (2014))

Large firms can be better compared with their counterparts in developing countries, for instance with the US, for which similar data is available

What do we know already?

Firm policies:

Harvey and Graham(2002): How do CFOs make capital budgeting and capital structure decisions?

Lins, Servaes and Tufano (2010): in less developed credit markets, lines of credit are larger and CFOs are less likely to view credit lines and cash as substitutes

CEO characteristics and styles:

Bertrand and Schoar (2003): Manager fixed effects explain a wide range of corporate decisions

Kaplan, Klebanov and Sorensen (2008): CEO personal characteristics do play a role in firm performance

Custódio and Metzger (2013): Financial expertise affects financial policies

What do we know already?

Firm policies in developing countries:

Lemos and Scur (2014): 89% of Mozambican firms score within the range of the bottom quartile of US firms in terms of management practices.

Bloom et al. (2011): Consulting on modern practices promoted efficiency and boosted productivity (randomized control trial in India).

Bloom et al. (2012): Countries like Brazil, China and India tend to be poorly managed. Nevertheless, there is substantial variation in management practices across organizations in every country.

Data and Methodology

Initial sample: companies in "The Top 100 Companies in Mozambique" KPMG report from 2010 to 2014

- Representative list of the largest companies in Mozambique
- Used by local and foreign investors, public administration and other institutions
- Relevant general and financial data as revenues, balance sheet decomposition, new investment, number of employees and new investments

Survey with CEOs and CFOs of largest firms in Mozambique (Summer 2015)

- Invitation sent to companies that showed up at least once in any of five reports
- Personal (face-to-face) interview with CEOs and/or CFOs (approx. 30 minutes)
- The survey included managers' personal characteristics, financial decision process (capital budgeting and capital structure), and other firm indicators

Data and Methodology – Survey

Respondent characteristics

- Gender, age, nationality and educational background
- Previous work experience, position in the company and tenure

Capital budgeting and Capital structure (Graham and Harvey (1999))

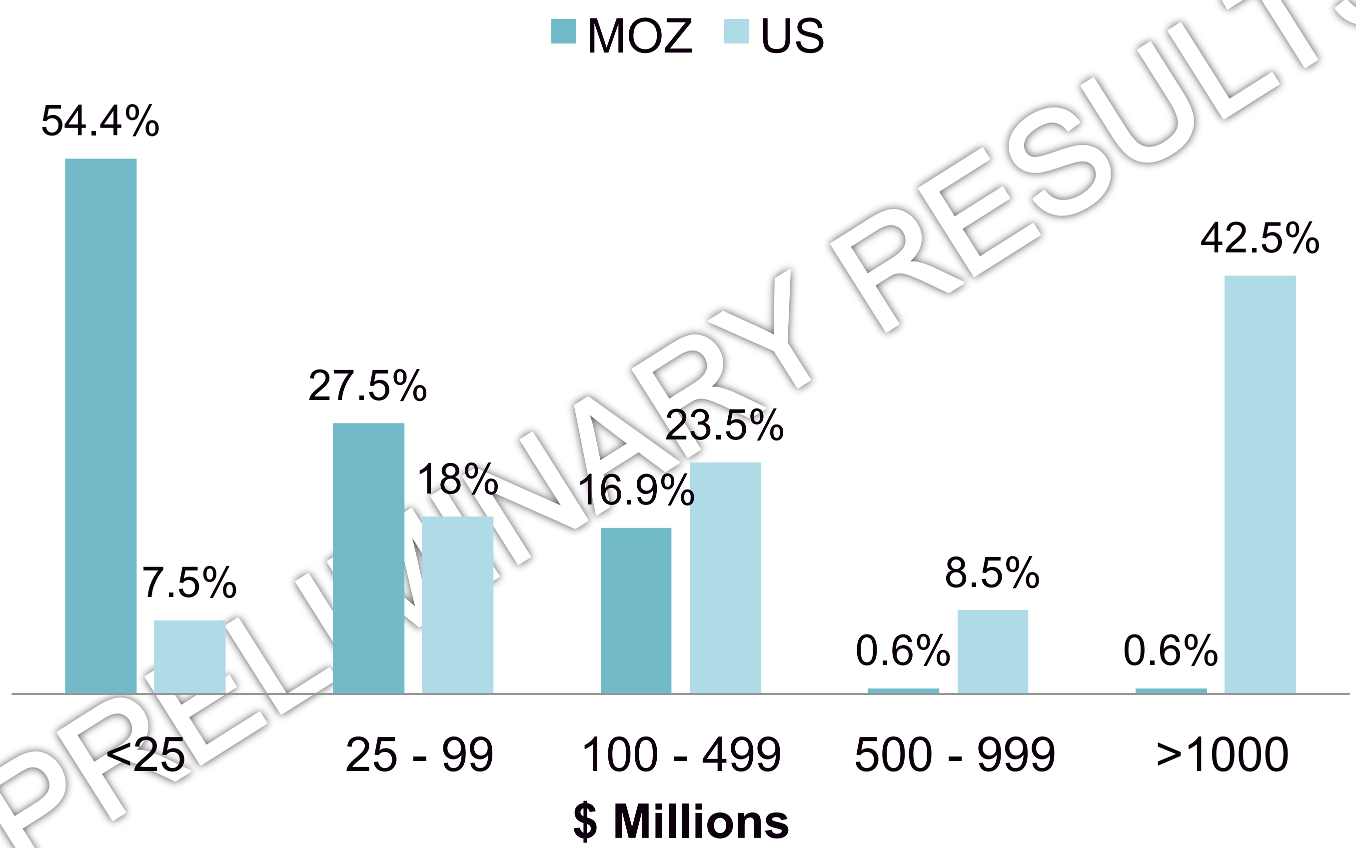
- Capital budgeting and valuation techniques, estimation of cost of capital
- Estimation and usage of discount rates, adjustment for different risks factors
- Appropriate debt level, choice between short- and long-term debt and excess cash

Other company indicators

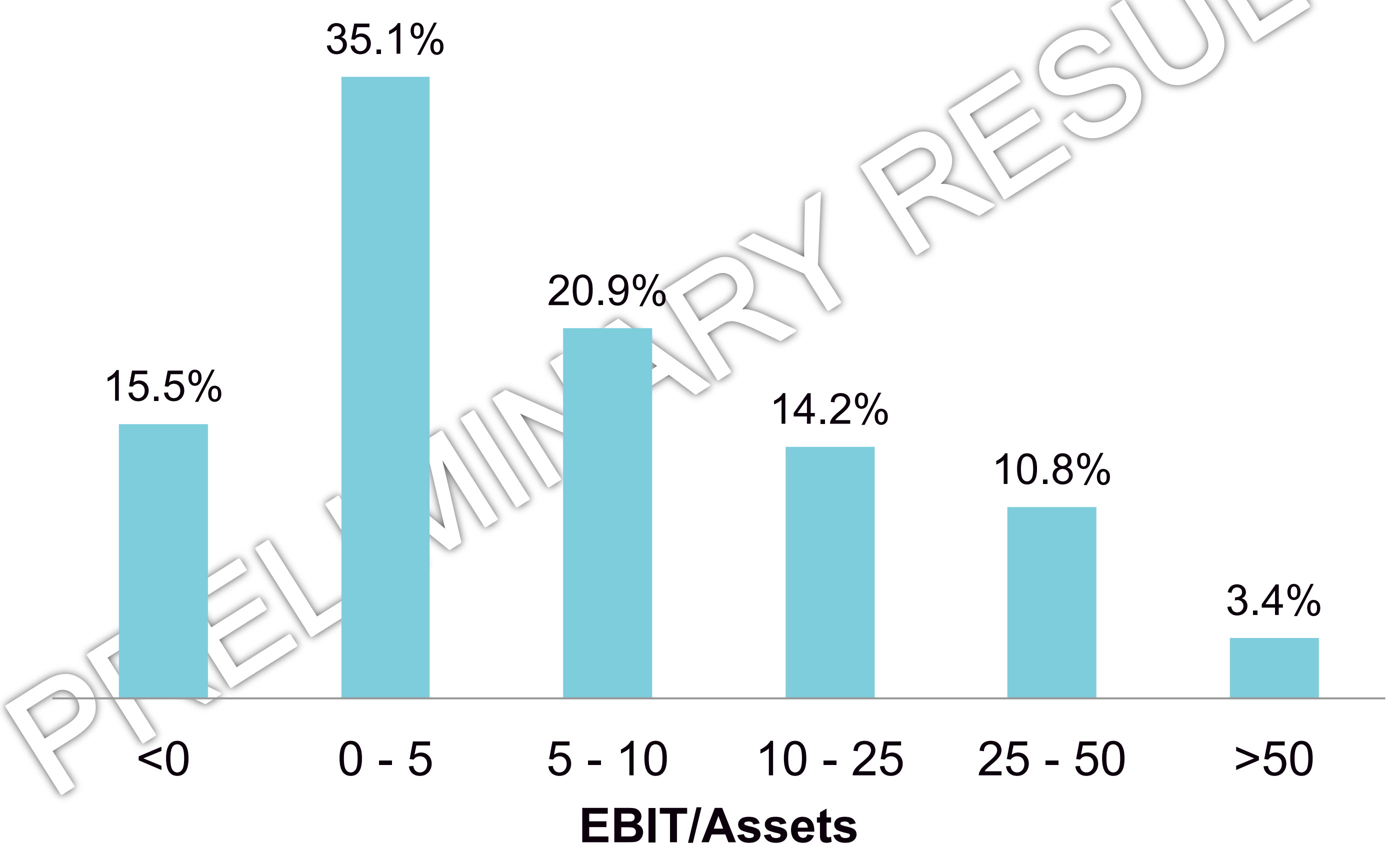
- Share of foreign investment
- Subsidiary or existence of divisions
- Perception about cost and availability of credit

Sample

Firm Characteristics – Revenue



Firm Characteristics– ROA (%)



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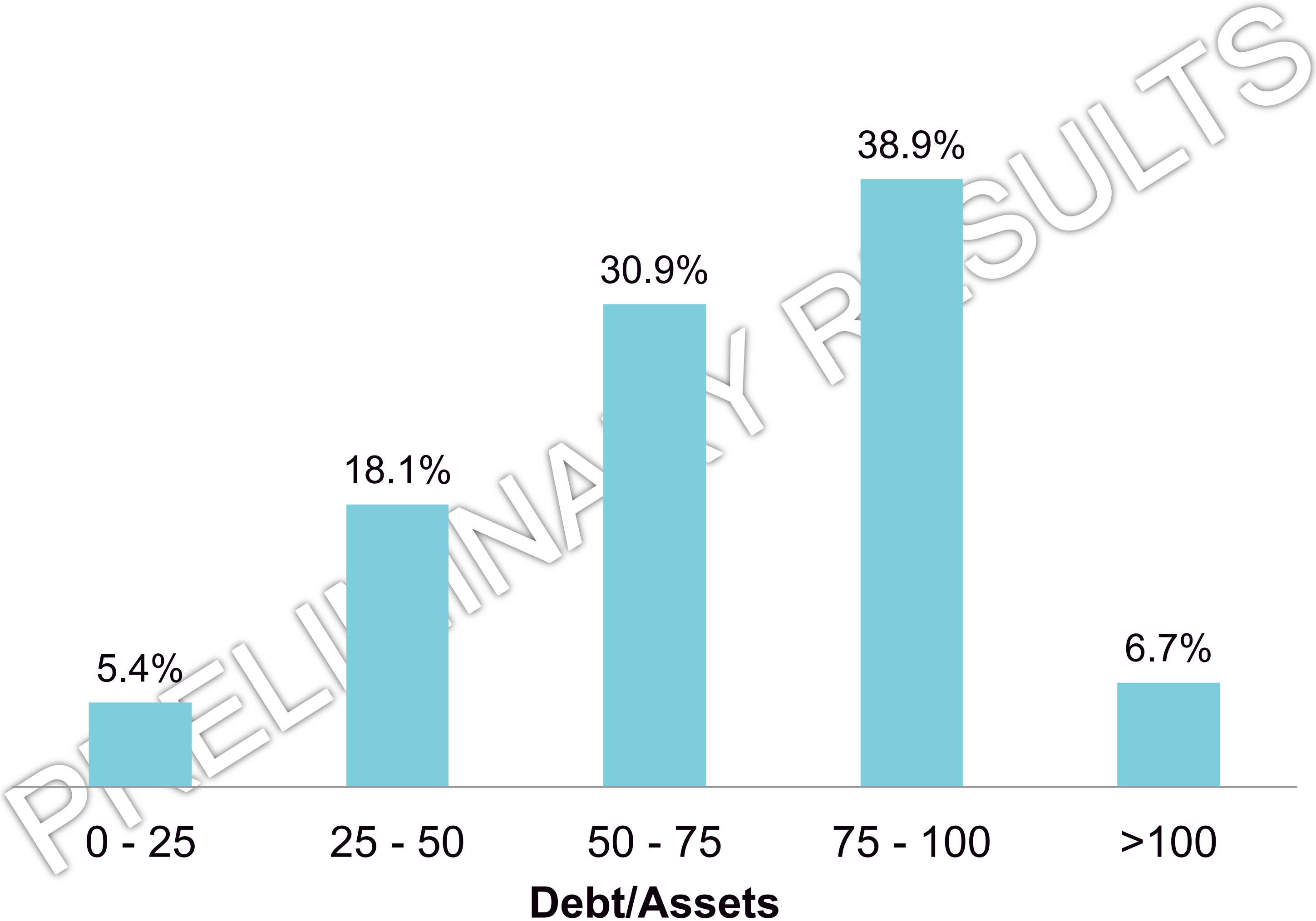
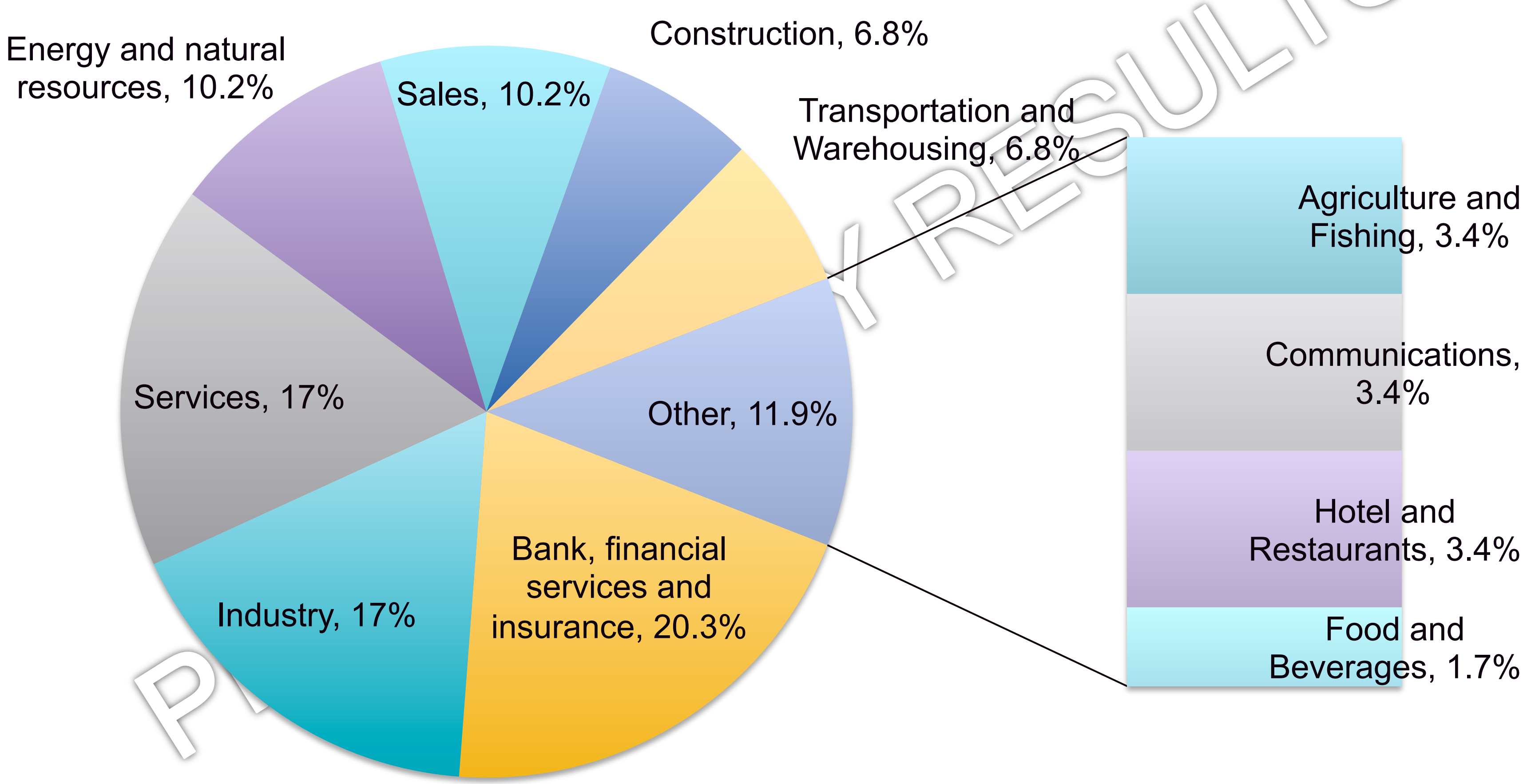
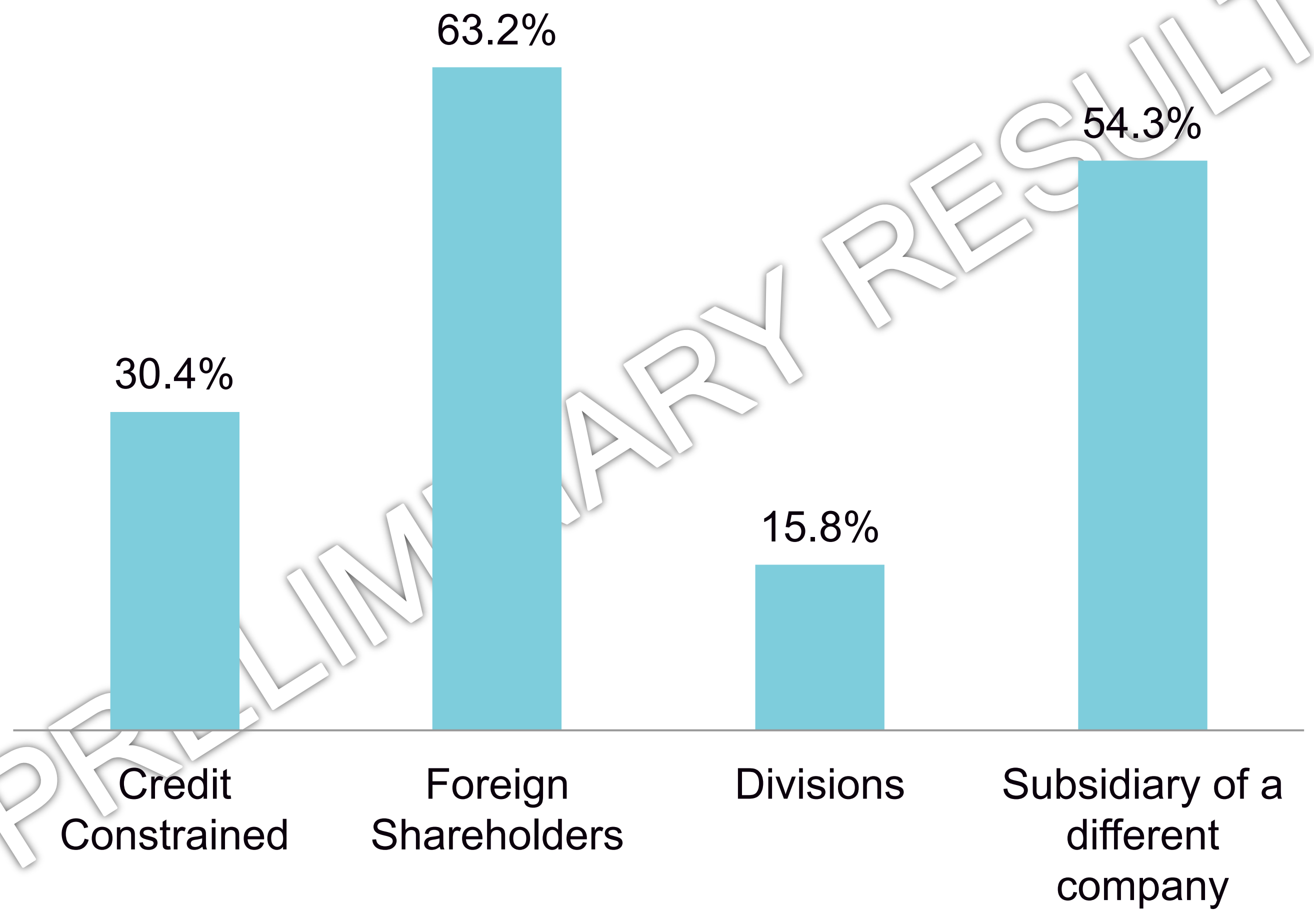
Firm Characteristics – Debt Ratio (%)



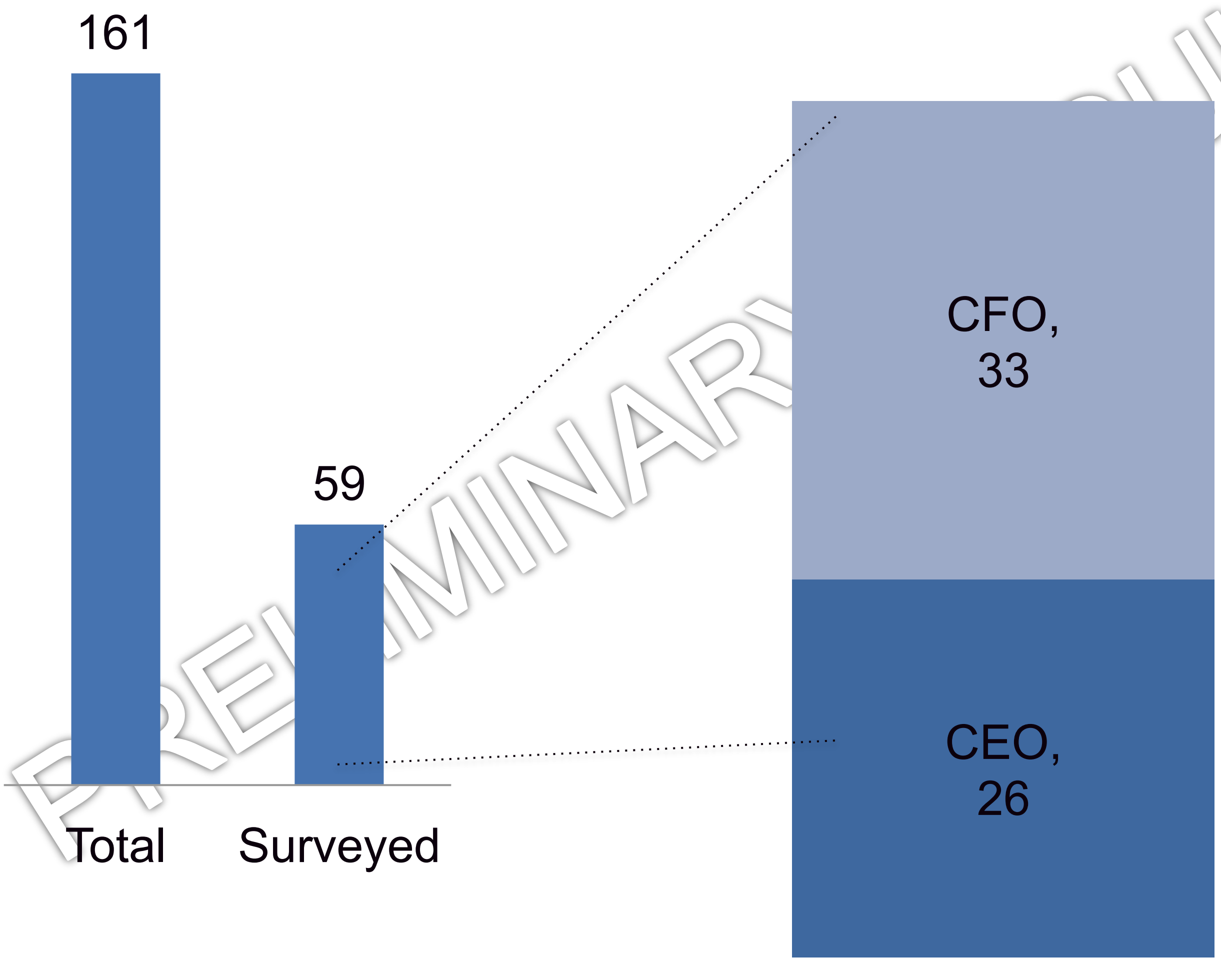
Firm Characteristics – Sectors



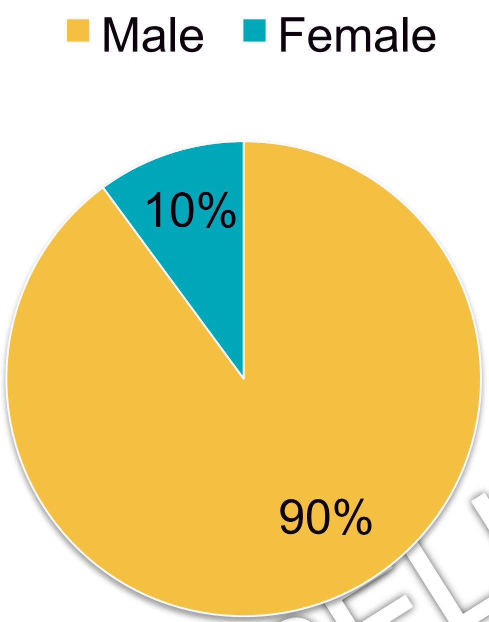
Other Firm Characteristics

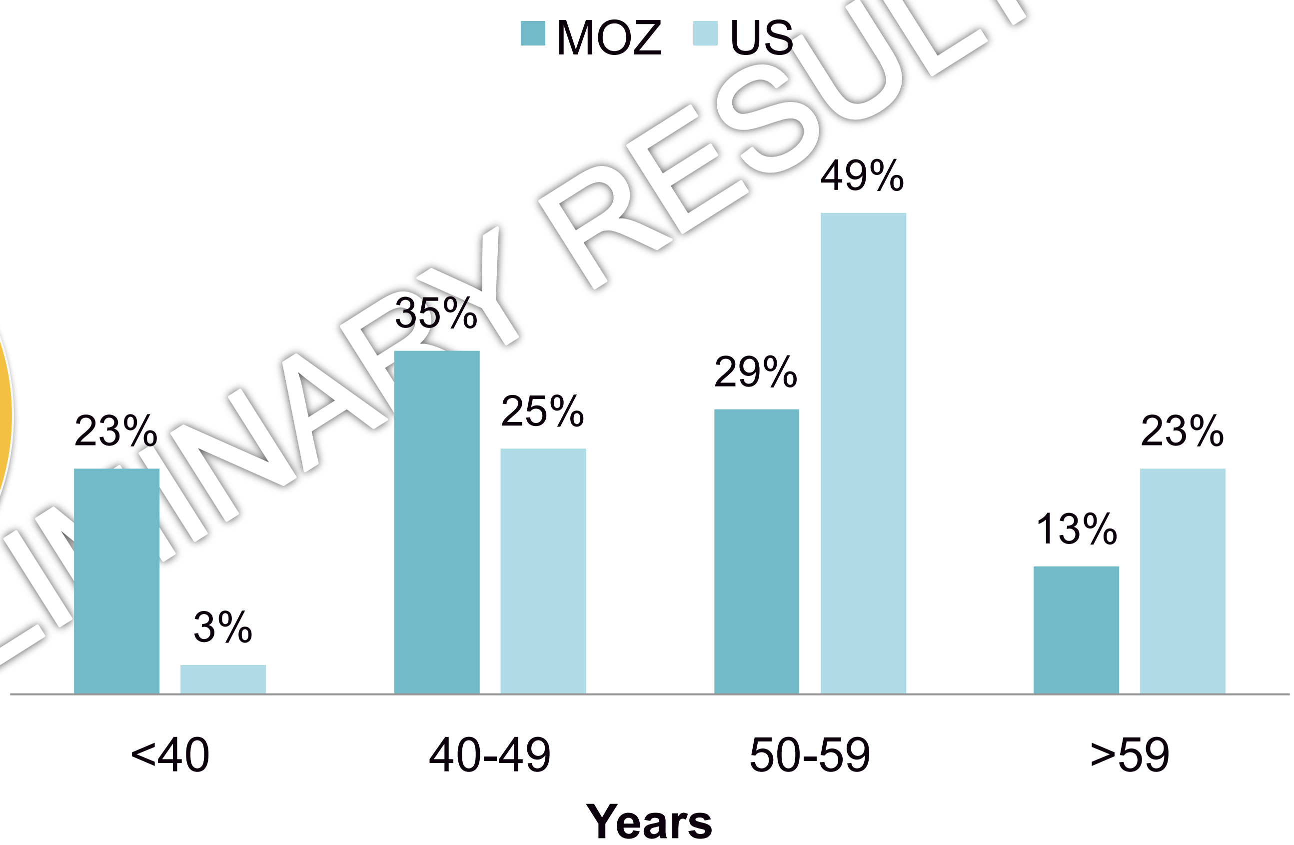


Executives – Current Position



Executives - Age and Gender





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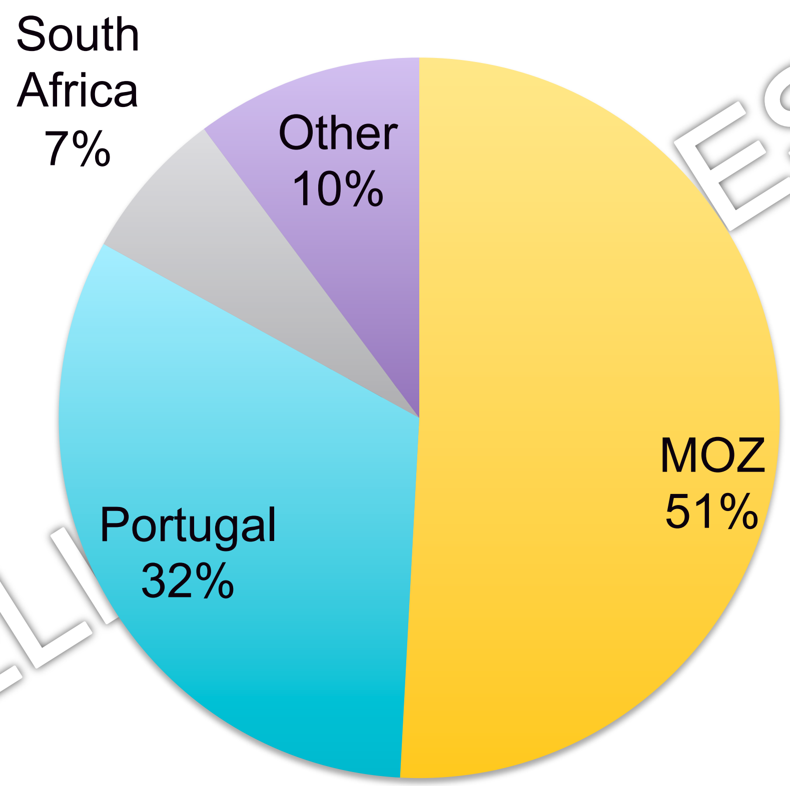
Executives - Nationality



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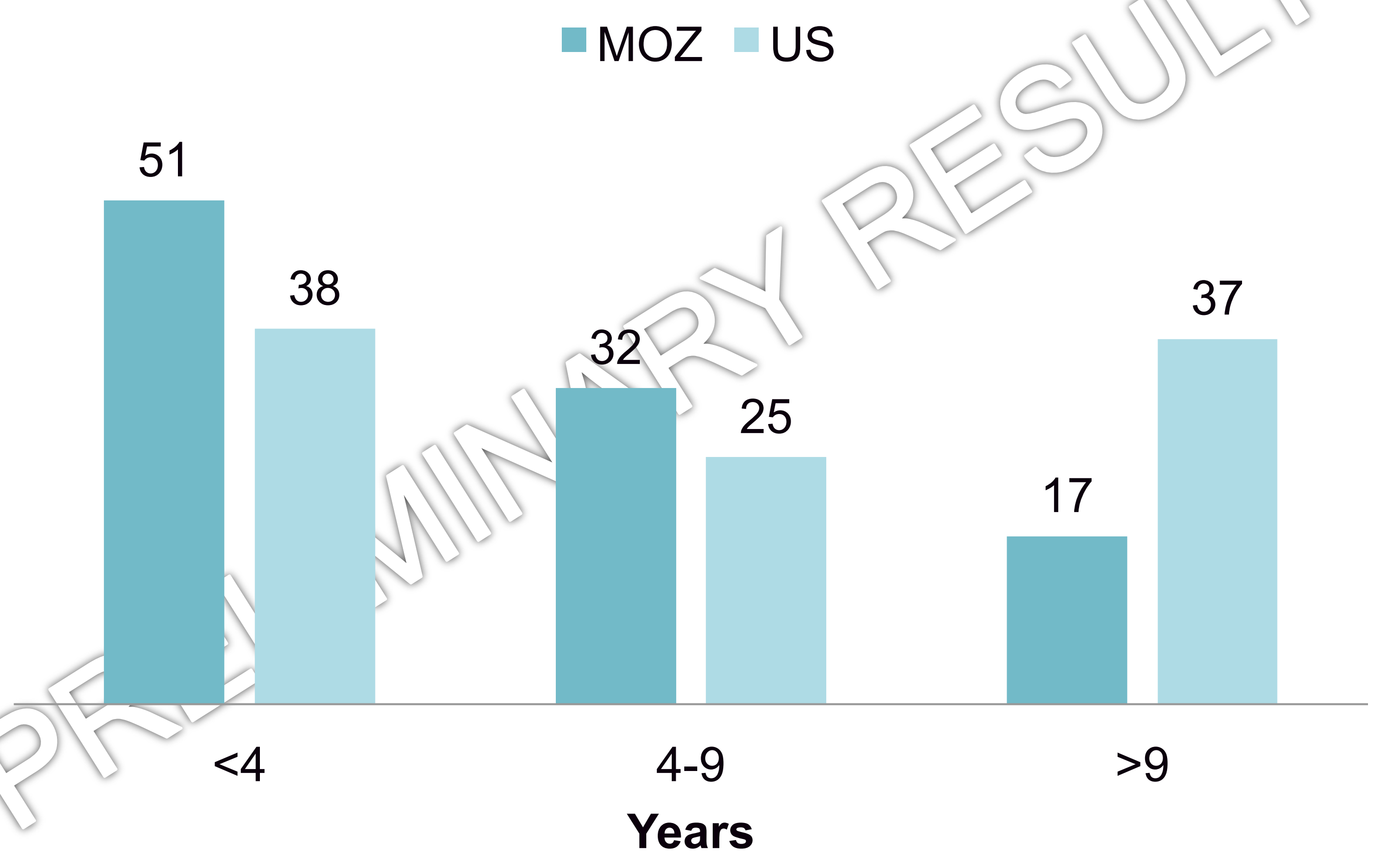
Executive Characteristics - Tenure



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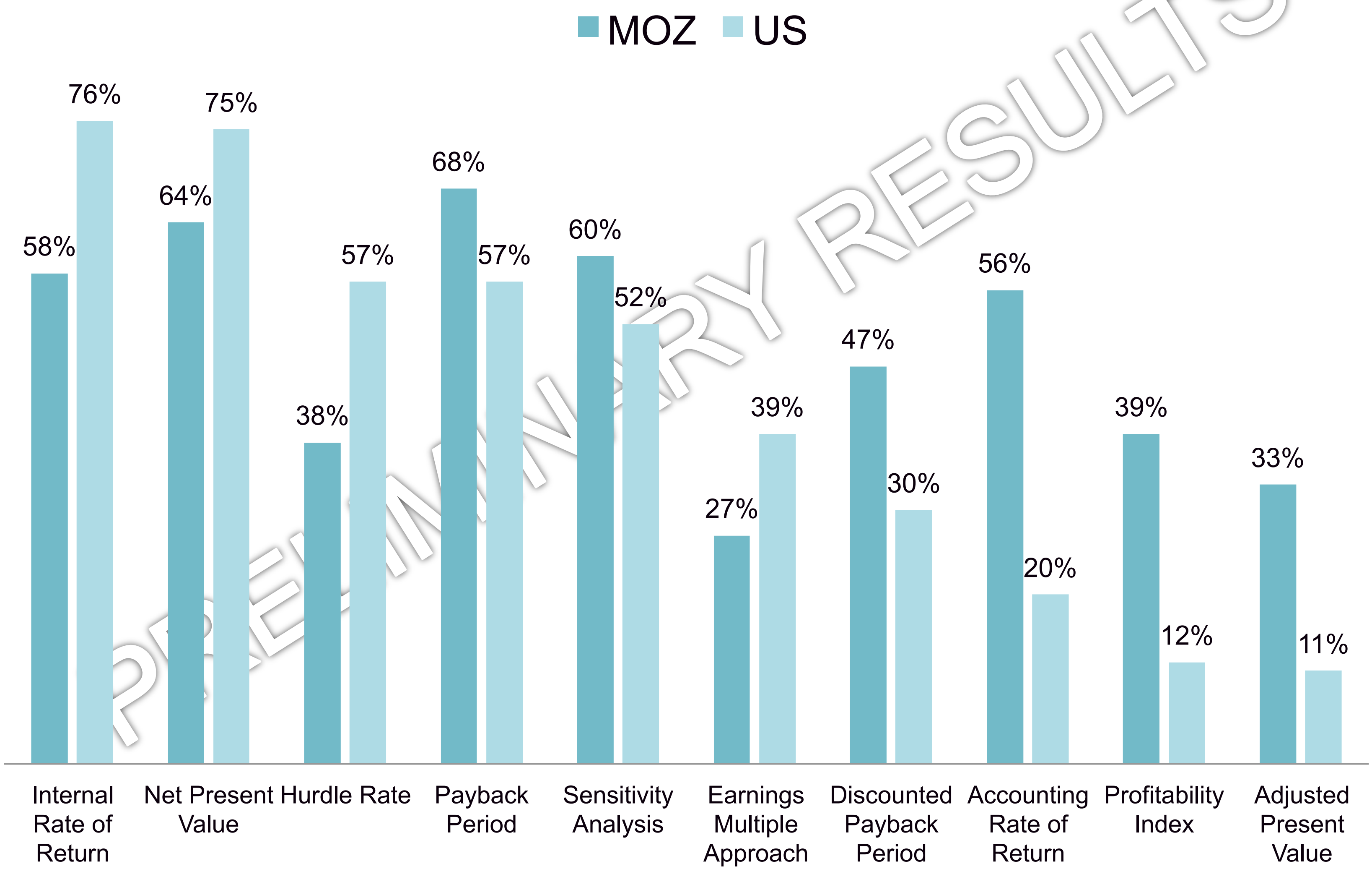
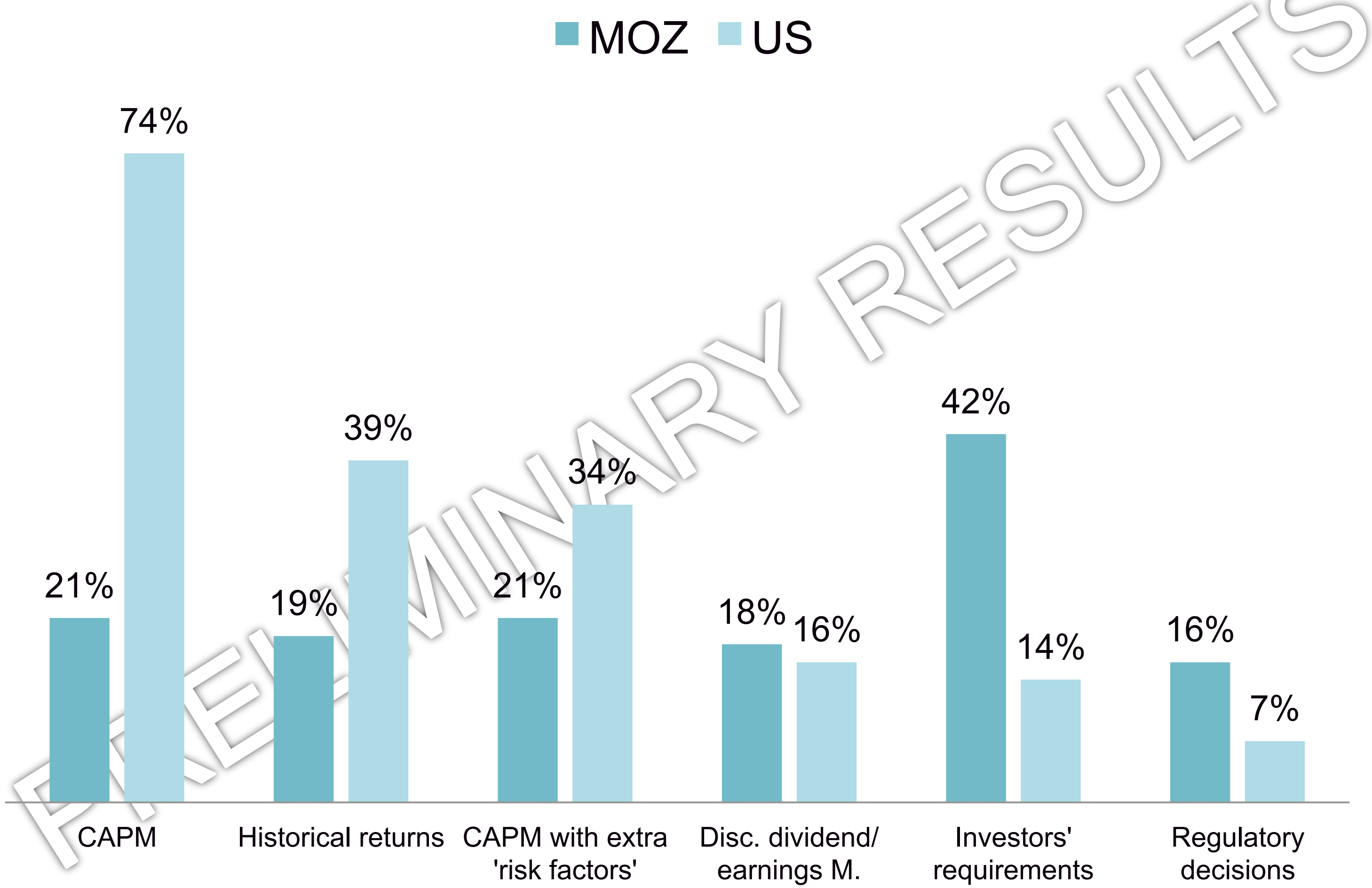
Results

Valuation Techniques



Cost of Capital Estimation



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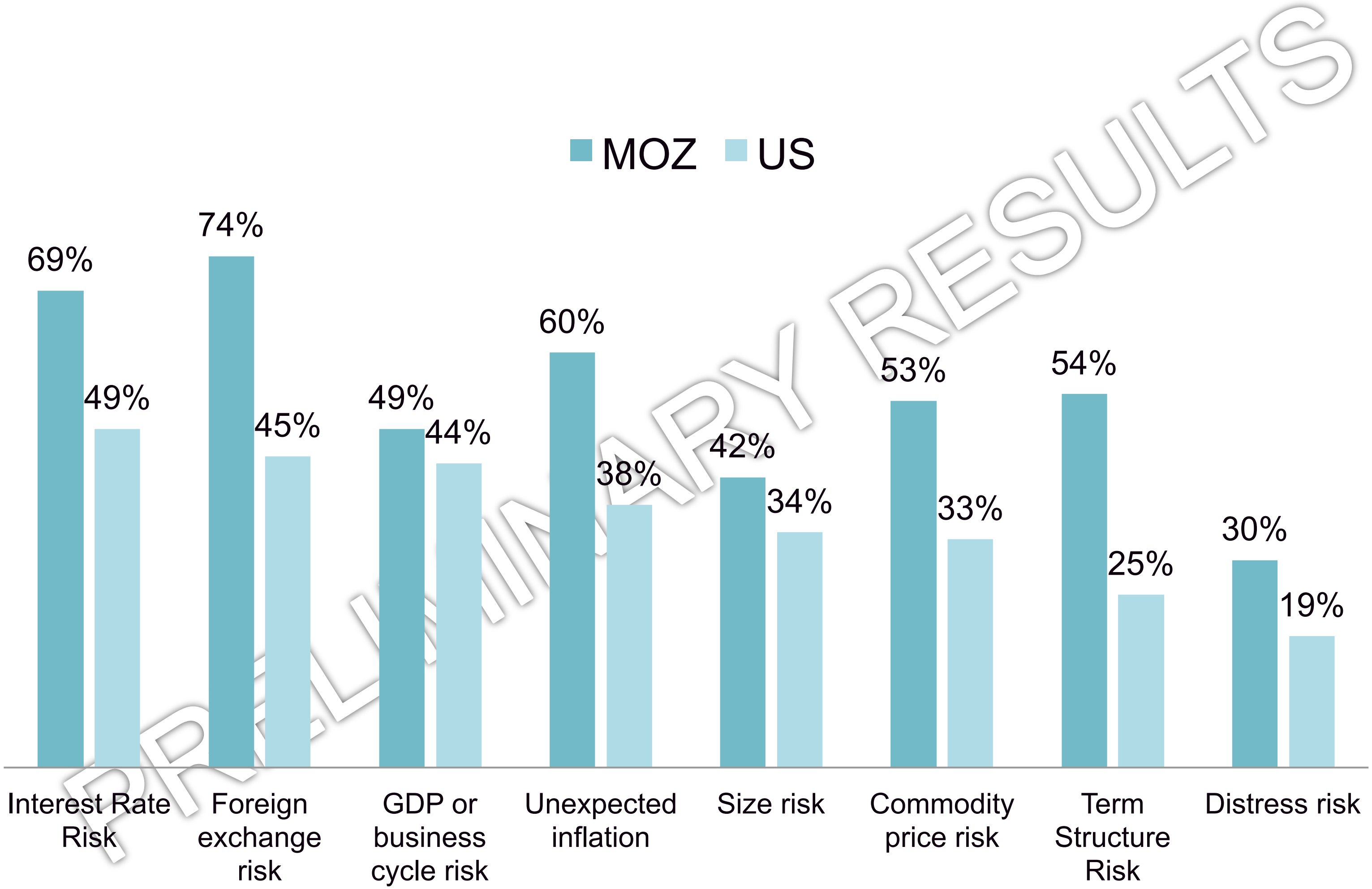
Discount Rates and Risk Factors



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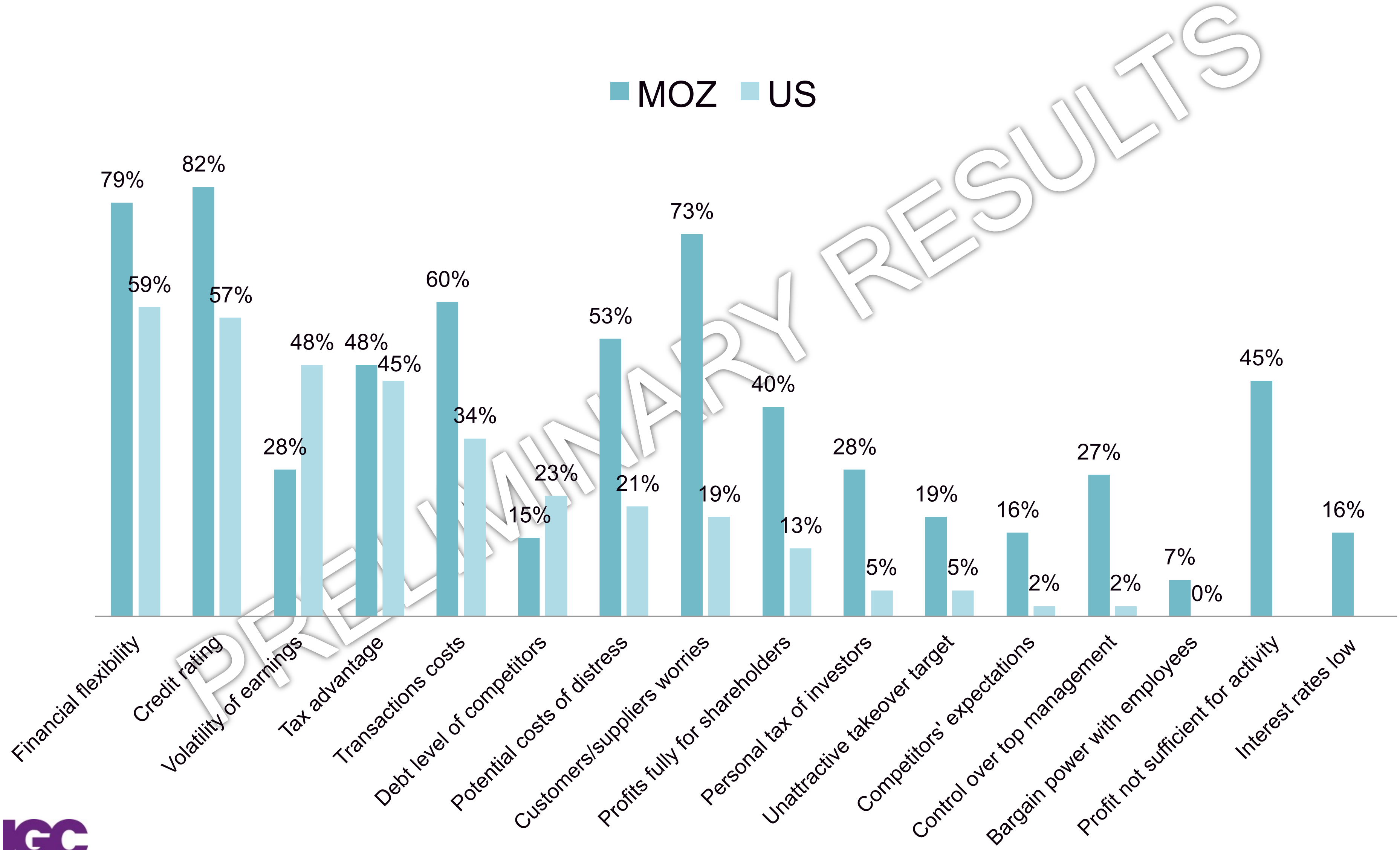
Determinants of Financial Leverage



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Summary of Main Results

Valuation techniques:

- NPV and IRR are the most used technique in the US and are also used by a majority of managers in MOZ.
- Payback and sensitivity analysis rank in the top 3 most used techniques in MOZ.
- Discounted payback is used more often in the US.
- Accounting rate of return appears also as a very important metric in MOZ.

Estimation of cost of equity:

- A much lower percentage of managers estimate the cost of equity in MOZ.
- Among those who do, many rely on investors' requirements (42%).
- Only 21% of firms estimate it through CAPM, while in US this value is much higher (74%).
- CAPM with extra risk factors is used as much as CAPM in MOZ

Summary of Main Results

Adjusting discount rates for additional risk factors:

- Foreign exchange rate dominates all other risk factors in MOZ.
- Interest rate risk and unexpected inflation are also a concern for managers in MOZ.
- Managers in MOZ adjust for more risk factors in general than managers in the US

Estimating the appropriate amount of debt:

- Credit rating, financial flexibility are both the most important factors in US and MOZ.
- In MOZ managers limit debt so that their costumers/suppliers do not concern about their firms going out of business (73% compared to 19% in US).
- Transaction costs associated to debt are more relevant in MOZ, as the potential cost of distress.
- Only 45% sees debt as alternative to internal funds.

Conclusion

- Executives of large firms in MOZ in general seem to use the same set of techniques and rationales to chose financial policies as the ones in the US

- Executives seem to adjust to local economic context by:
    - Adjusting for further risk factors
    - Choosing/combining techniques that better capture local reality

- Literacy/financial sophistication seems to play a role in these decisions as executives with previous exposure to finance seem to use more sophisticated techniques

IGC-Mozambique
Av. A. Sekou Touré 21,
5th floor, flat 55
Maputo
email:
Mozambique@theigc.org
Twitter:
@IGC_Mozambique