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CROSS-LISTING* TE USPJEŠNOST TVRTKI: DOKAZ IZ NIGERIJE

CROSS-LISTING AND FIRMS' PERFORMANCE: EVIDENCE FROM NIGERIA

SAŽETAK: Istraživanje ispituje vezu između *cross-listinga* i financijske uspješnosti šest nigerijskih tvrtki, koje su uvrstile svoje dionice na burzama u drugim državama od 2017. Podaci su prikupljani iz revidiranih financijskih podataka tih tvrtki kroz razdoblje od deset godina (2008-2017). Uspješnost je mjerena putem prinosa na vlasnički kapital, a *cross-listing* putem zaštite ulagača i likvidnosti tržišta. Za analizu prikupljenih podataka korištena je višestruka regresijska analiza i Pearsonov koeficijent korelacije. Rezultati studije pokazali su da zaštita ulagača ima značajnu i pozitivnu vezu s prinosom na vlasnički kapital (P < 0,05), dok likvidnost tržišta ima negativnu i neznačajnu vezu s prinosom na vlasnički kapital (P > 0,05). Studija je došla do zaključka da je uloga uspješnosti *cross-listanih* tvrtki zaštita ulagača. Stoga je preporuka da nigerijske tvrtke, koje imaju potreban kapacitet, *cross-listaju* radi povećanja uspješnosti.

KLJUČNE RIJEČI: zaštita ulagača; *cross-listing*; likvidnost tržišta; uspješnost

* *Cross-listing* je uvrštavanje uobičajenih dionica tvrtke na različitim burzama od njihove primarne i izvorne burze.

ABSTRACT: The study assessed the relationship between cross-listing and financial performance of six Nigerian firms that have cross listed in other countries stock exchange as at 2017. Data were collected from the audited financial statements of those firms over a period of ten years (2008-2017). Performance was measured with return on equity while cross-listing was measured with investors' protection and market liquidity. Multiple regression analysis and Pearson's correlation co-efficient were used to analyse the data collected. The results of the study showed that investors' protection had a significant and positive relationship with return on equity (P < 0.05), while market liquidity had a negative and insignificant relationship with return on equity (P > 0.05). The study concluded that performance of cross-listed firms is a function of investors' protection. Therefore, it is recommended that Nigerian firm with required capacity should cross-list to improve performance.

KEY WORDS: investors' protection; cross-listing; market liquidity; performance

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UVOD

Cross-listing je situacija u kojoj tvrtke, povrh domaćih burzi, uvrštavaju svoje dionice i na međunarodne burze dionica. Tvrtke koje žele *cross-listati* moraju zadovoljavati određene uvjete, a to su: broj dionica, predaja financijskog izvješća, računovodstvena načela te izvještaj o prihodu. Opstanak i trajanje tvrtke zahtijeva određene resurse, kako bi se zadovoljile potrebe i klijenata i ulagača. Stoga vlasnici tvrtki moraju obavezno pronaći sredstva kako bi zadovoljili te potrebe. Zato je *cross-listing* postao izvor financiranja nigerijskim tvrtkama od svog začetka 2005. Vlasnički kapital i dugovi su malobrojne raspoložive opcije, iako se vlasnički kapital preferira jer predstavlja trajan izvor financiranja, kojeg nije lako otkupiti (Haina, Xin & Jing, 2018.). I obratno, tvrtka može podići vrijednost vlasničkog kapitala unutar svojih granica ili izvan državnih granica. Uvrštavanje dionica na burzu daje tvrtki mogućnost trgovanja dionicama na burzi dionica, nakon što se zadovolje određeni regulatorni zahtjevi, koje određuju regulatorne institucije u toj zemlji (Onyuma i Karuiya, 2012.).

Cross-listing je situacija u kojoj tvrtke stave svoje vrijednosnice na prodaju na burzi vrijednosnica koja je izvan njezine jurisdikcije, odnosno izvan ekonomske jurisdikcije države u kojoj je tvrtka registrirana (Adelegan, 2009.). To čine tvrtke koje su izdale dionice na domaće tržište te nakon toga na inozemno (Mugo, 2010.). Lana, Martins, Marcon, i Xavier (2013.) tvrde da prema hipotetskoj informaciji *cross-listing* informira tržišne aktere o financijskoj jačini tvrtke.

Cross-listing štiti ulagače u tvrtkama koje se odluče na *cross-listing*, te naročito u tvrtkama sa slabim korporativnim standardima upravljanja. Tvrtke plasiraju svoje vrijednosnice na burzu dionica uz jake mjere korporativnog upravljanja kako bi zaštitile ulagače tijekom poslovanja (Roosenboom & Dijik, 2009.). Takve cross-listane tvrtke svojevoljno se predaju visokim korporativnim upravljačkim standardima pa se ulagači osjećaju

INTRODUCTION

Cross-listing is a situation where firm lists, in addition to its domestic exchange, its equity shares on a foreign stock exchange. Any company that wishes to cross-list must meet certain requirements such as share count, submitting financial statement, accounting principles and income statement. The survival and continuity of any business require adequate resources to meet the needs of customers and investors. Therefore, it becomes necessary for business owners to source for required funds to satisfy these needs. Hence, cross-listing becomes a source of funds among Nigerian firms since its inception in Nigeria in 2005. Equity and debts are few options available to business but equity is mostly preferred as it provides a lasting source of financing not easily redeemable (Haina, Xin & Jing, 2018). Conversely, a firm may raise equity within firm's boundaries or beyond firm's national boundaries. Listing gives access for a company to trade its shares on the stock exchange market after certain regulatory requirements set by the regulatory authority of such country are met (Onyuma and Karuiya, 2012).

Cross-listing is a situation where a firm places its securities for sale on a stock exchange that is outside its jurisdiction that is, other country outside the economic jurisdiction where such firm is registered (Adelegan, 2009). This is done by a firm that has issued its shares on its local market and also same on foreign market afterward (Mugo, 2010). Lana, Martins, Marcon, and Xavier (2013) posit that information hypothesis proposes that cross-listing informs the market actors about the financial strength of a firm.

Cross-listing protects investors of cross-listed firms especially, firms within a weak domestically corporate governance standards, as such, firms list their securities on exchange market with strong corporate governance measures to reinforce investors' protection in the business (Roosenboom & Dijik, 2009). Such cross-listed firms surrender willingly to high corporate

sigurnima ulagati u njih. Doidge, Karolyi i Stalz (2016.) u posljednje su vrijeme primjetili pojavu spoznaje o takozvanom "bondingu". *Cross-listing* u SAD-u funkcionira kao instrument obveznica, koji su usvojile tvrtke u regiji sa slabom zaštitom ulagača i implementacijskom strategijom, a koje se pridržavaju visokih vrijednosti korporativnog upravljanja. Dakle, *cross-listing* pomaže tvrtkama da potaknu ulagače koji isprva nisu voljni ulagati u njih.

Valja primijetiti da je *cross-listing* na tržištu sa strogim pravilima način stvaranja dokazano transparentne tvrtke (Burns & Bill, 2006.). Znanstvenici raspravljaju kako *cross-listing* može srezati trošak kapitala te poboljšati protok informacija. *Cross-listing* ovisi o boljoj svijesti ulagača, koja onda unaprjeđuje kvalitetu izvješćivanja. Tvrtke uvrštene na burzu primjenjuju *cross-listing* pod jurisdikcijama koje imaju neumoljive zahtjeve transparentnosti koji jamče kvalitetu i odgovarajuće financijske podatke inozemnim ulagačima i potencijalnim dioničarima. Adelegan (2008.) tvrdi da *cross-listing* nudi mogućnost unaprjeđenja financijske baze tih tvrtki, štiteći ulagače i potičući likvidnost tržišta.

Ranije provedene studije poput Karolyija (2014.) te Doidgea, Karolyija i Stalza (2016.) otkrivaju postojanje neznačajne veze između *cross-listinga* i uspješnosti tvrtke. Alexander, Eun i Janakiramanan (2015.) drže da je međunarodni *cross-listing*, među mnogobrojnim korporativnim politikama, ono što utječe na uspješnost tvrtke. Amihud i Mendelson (2016.) kažu da je likvidnost tržišta faktor rizika koji dolazi uz naknadu u procesu ostvarivanja zarade. Studije poput onih koje su proveli Moel (2001.) i Jaykumar (2002.) govore o negativnom utjecaju *cross-listinga* na uspješnost *cross-listanih* tvrtki. Oni su mišljenja da tvrtke koje se ne odluče na *cross-listing* imaju veći dnevni promet od onih koje to učine. To je pokazatelj povećane uspješnosti koja potencijalno poboljšava likvidnost tržišta i zaštitu ulagača. Osim toga, Mugo (2010.) te Mugo, Onyuma i Karuitha (2011.) pišu o

governance standards hence, investors feel safe to invest in those companies. Doidge, Karolyi and Stalz (2016) observed that lately, an increased body of knowledge has argued about the so called "bonding". The view holds that, cross-listing in the United State behaves like a bonding instrument adopted by firms incorporated in a region with weak investors' protection and implementation strategy to abide by higher values of corporate governance. Hence, cross-listing assists firms to entice investors who might be reluctant to invest.

It is note worth that, cross-listing on a market with stern regulations is a way of creating a more dedicated company to full disclosure (Burns & Bill, 2006). It has been argued by scholars that cross-listing cuts the cost of capital and improve the dissemination of information. Cross-listing depends on improved investors' awareness that increases the quality of reporting. Listed firms use cross-listing on jurisdiction with stringent disclosure requirements to manifest quality and adequate financial information to foreign investors and prospective shareholders. Adelegan (2008) stated that cross-listing has possibility of improving financial base of such firms, protecting investors and galvanizing market liquidity.

Previous study such as Karolyi (2014); Doidge, Karolyi and Stalz (2016) revealed that there exists insignificant relationship between cross-listing and firms performance. Alexander, Eun, and Janakiramanan (2015) posit that international cross-listing is one, among several corporate policies, that impact on firms' performance. Amihud and Mendelson (2016) asserted that market liquidity is a priced risk factor in the return generating process. Studies like those of Moel (2001) and Jaykumar (2002) reported a negative impact of cross-listing on performance of cross-listed firms. They argued that a firm that does not cross-list do have higher daily turnover ratios than a firm that cross-list, a pointer to increased performance that possibly enhances market liquidity and investors' protection. Furthermore, Mugo (2010) and Mugo, Onyuma and Karuitha (2011) reported improved firm

poboljšanoj uspješnosti tvrtki upravo zahvaljujući *cross-listingu*. Prema tome, nedosljedni i nedovoljni dokazi ranije provedenih istraživanja koja se zalažu za *cross- listing* i ideju da on poboljšava uspješnost tvrtki su u nigerijskim tvrtkama pomiješani, prema ovom istraživanju.

Konkretno, ciljevi ove studije su sljedeći:

i. ocijeniti vezu između likvidnosti tržišta i uspješnosti *cross-listanih* tvrtki u Nigeriji te

ii. procijeniti vezu između zaštite ulagača i uspješnosti *cross-listanih* tvrtki u Nigeriji.

Istraživačka pitanja koja proizlaze iz gore navedenog su sljedeća:

i. Kakva je veza između zaštite ulagača i uspješnosti *cross-listanih* tvrtki u Nigeriji?

ii. Kakva je veza između likvidnosti tržišta i uspješnosti *cross-listanih* tvrtki u Nigeriji?

Ove su hipoteze testirane empirijski kako bi se odgovorilo na pitanja i ciljeve istraživanja:

H_{01}: Nema značajne veze između likvidnosti tržišta i uspješnosti *cross-listanih* tvrtki u Nigeriji.

H_{02}: Nema značajne veze između zaštite ulagača i uspješnosti *cross-listanih* tvrtki u Nigeriji.

PREGLED LITERATURE

Konceptualni pregled

Amihud i Mendelson (2016.) su primijetili da, budući da je američko tržište likvidno, tvrtke koje *cross-listaju* imaju jednostavan pristup sredstvima financiranja, uz niže troškove, nego tvrtke iz zemalja u razvoju, koje su uvrštene samo na domaće tržište. Predlažu da tvrtke na tržištima kapitala sa slabom likvidnošću tržišta *cross-listaju* na tržištima s jakom likvidnošću te vjeruju da će to umanjiti izloženost likvidnom riziku i očekivanom prinosu. *Cross-listing* na snažnom likvidnom tržištu kapitala rezultira povećanom likvidnošću vrijednosnica te smanjuje troškove financiranja. Foerster i Karolyi (2014.) tvrde da *cross-listing*

performance due to cross-listing. Therefore, the inconsistent and inconclusive findings of previous studies to substantiate increased performance as a result of cross-listing by Nigerian firms' remains mix hence, this study.

Specifically, the study aims at achieving the following objectives which are to:

i. assess the relationship between market liquidity and performance of cross-listed firms in Nigeria and

ii. evaluate the relationship investors' protection and performance of cross-listed firms in Nigeria.

The research questions arising from the above are:

i. What relationship exists between investors' protection and performance of cross-listed firms in Nigeria?

ii. What relationship exists between market liquidity and performance of cross-listed firms in Nigeria?

The formulate hypotheses are empirically tested to provide answers to research questions and objective of the study:

H_{01}: No significant relationship exists between market liquidity and performance of cross-listed firms in Nigeria.

H_{02}: A significant relationship does not exist between investors' protection and performance of cross-listed firms in Nigeria.

LITERATURE REVIEW

Conceptual Review

Amihud and Mendelson (2016) observed that since U.S. capital markets are liquid and firms that cross-list can easily access fund at a lesser cost than firms, specifically from developing economy, listed only in domestic market. They proposed that firms within capital markets with weak market liquidity may cross-list on a market with stronger liquidity, this they believe will decrease liquidity

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Acta Economica Et Turistica

potiče trgovinsku aktivnost i kompetitivnost tržišta te smanjuje raspon između prodajne i kupovne cijene na lokalnom tržištu tvrtke, pa samim time i povećava uspješnost tvrtke. Stulz (1999.) kaže da je lakše ako dionice dolaze s novom informacijom te ako sami dioničari trguju njima. To će poboljšati likvidnost tržišta i zaštitu ulagača, ako je tvrtka uvrštena na burzi dionica pod jakom ekonomskom jurisdikcijom. Međutim, novija istraživanja pobijaju ovu tvrdnju koju postavlja hipoteza o tržišnoj likvidnosti. Venkataram (2001.) je potvrdio da različita tržišta kapitala imaju različite osobine likvidnosti te tvrdi da likvidnost nije najvažniji element *cross-listinga*.

Zaštita ulagača stavlja naglasak na snagu zaštite manjinskih dioničara u borbi protiv pronevjere imovine tvrtke od strane njezinih direktora (Chakravarty, 2016.). Pokazatelji razlikuju tri mjerila zaštite ulagača: prvo je potvrda i transparentnost svih transakcija koje provode zainteresirane strane, drugo je postojanje odgovornosti direktora pri ostvarivanju samozarade te treće – omogućavanje dioničarima da dobiju dokumentaciju na uvid prije i poslije sudskog postupka (Moel, 2001.). Ukoliko nema zadovoljavajućih propisa, to priječi razvoj tržišta kapitala i prisiljava jedini izvor financiranja ili tvrtku da raste, generira inovaciju i diversifikaciju te bude konkurentna jedino uz pomoć banaka. Ulaganje u tvrtke je manje podložno financijskim ograničenjima, kada je u pitanju rast prihoda i uspješnosti u gospodarstvima koja imaju veću zaštitu ulagača (Chakravarty, 2016.). Upravljanje sukobima interesa je kritično za uspješno osnaživanje dioničara, u svrhu zaštite ulagača (Abdallah, 2005.). Zaštita ulagača je od velike važnosti za visoko profiliranu tvrtku koja ovisi o zadužnicama i povlaštenim dionicama kao izvorima financiranja koji joj pomažu da opstane i bude profitabilna (Gopher & Sandberg, 2014.). Ulagač će prodati dionice i ostvariti dobit ako je ulaganje likvidnije. Halling, Pagano, Randl i Zechner (2008.) kažu da će premija na kratkoročne vrijednosnice u odnosu na srednjoročne

risk exposure and expected return. Cross-listings on stronger liquid equity markets bring about an increased stock liquidity and decrease cost of fund. Foerster and Karolyi (2014) claim that cross-listing promotes trading activities and market competitiveness and reduces the bid-ask spread in a firm's local market, and thus improve firms' performance. Stulz (1999) also submits that it will be easier for the firms' stock to incorporate new information and the firms' shareholders to execute trades that improve market liquidity and investors' protection if a firm is cross-listed on a stronger jurisdiction. However, current researches have confronted this claim situated by the market liquidity hypothesis. Venkataram (2001) asserts that different capital markets have different liquidity features, claiming that liquidity is not the most central influence for considering cross-listing.

Investors' protection accentuates the power of minority shareholder protections against directors' embezzlement of business assets (Chakravarty, 2016). The indicator differentiates three proportions of investors' protection to be endorsement and transparency of related party transactions, directors' liability for self-dealing and the ability of shareholders to acquire business documents before and during lawsuit (Moel, 2001). The absence of satisfactory regulations inhibits equity markets to develop and the only source of fund or business to grow, innovate, diversify and compete will be through banks. Investment in firms will be less sensitive to financial constraints to greater growth of revenue and performance in an economy with stronger investors' protection (Chakravarty, 2016). Managing conflicts of interest is critical to successful empowerment of shareholders in order to protect investors (Abdallah, 2005). Investor protection is important for highly geared firm that depends on debentures and preference share as their sources of finance to stay afloat and be profitable (Gopher & Sandberg, 2014). An investor will be able to sell shares profitably well if the investment is more liquid. Halling, Pagano, Randl and Zechner (2008) submit

vrijednosnice biti veća od premije na srednjoročne u odnosu na dugoročne, što je rezultat kamata koje su kratkoročno nestabilnije. Foerster i Karolyi (2014.) ističu da je ista predodžba funkcionalna kod *cross-listinga* jer ulagači daju prednost vrijednosnici koju je lako prodati u odnosu na vrijednosnice koje su na tržištu dugo i imaju malenu ili nikakvu utrživu vrijednost. Drugim riječima, tržišna likvidnost do određene mjere određuje uspješnost tvrtke.

Uspješnost tvrtke ovisi o učinkovitosti i sposobnosti tvrtke da ostvari zadane ciljeve, koji mogu biti financijski ili operacijski. Motiv za poboljšavanjem uspješnosti tvrtke odnosi se na maksimizaciju dobiti kako bi se povećala dobit dioničara (Chakravarty, 2016.). Operacijska uspješnost tvrtki, što se tiče rasta i ekspanzije, paralelna je s prodajnom i tržišnom vrijednošću (Gopher & Sandberg, 2014.). Prinos na vlasnički kapital koristi se za mjerenje uspješnosti u ovoj studiji jer postoji mogućnost da ju je moguće poboljšati pomoću *cross-listinga*.

Teorija koja podupire istraživanje

Za ovo istraživanje prihvaćena je teorija o tržišnoj likvidnosti. Prema toj teoriji, tvrtkama koje su uvrštene na domaće tržište kapitala uz slabu tržišnu likvidnost preporuča se da *cross-listaju* na tržištu kapitala sa snažnom likvidnošću kako bi umanjile izloženost riziku od likvidnosti i očekivanog prinosa. Ova teorija kaže da će rizik od likvidnosti i očekivanog prinosa pasti, a cijena dionice će, u skladu s tim, porasti. *Cross-listing* na visokolikvidnim tržištima kapitala dovodi do povećane tržišne likvidnosti dionice i smanjenja troška kapitala. Foerster i Karolyi (2014.) su utvrdili da je *cross-listing* kanadskih tvrtki u SAD-u povezan s povećanim obujmom trgovanja i smanjenim stvarnim rasponom vrijednosti. Osim toga, teorija kaže da je *cross-listing* povezni instrument koji koriste tvrtke uvrštene na tržište koje ima smanjenu zaštitu ulagača. Roosenboom i Dijk (2009.) otkrivaju da su *cross-listane* tvrtke obvezne raditi u skladu s visokim standardima korporativnog upravljanja u jurisdikciji (državi)

that the premium on short-term against medium-term securities will be greater than the premium on medium-term against long-term securities as a result of interest rates that is more unstable in the short term. Foerster and Karolyi (2014) pointed out that the same notion is functional when cross-listing, as investors prefer a security that is easily sold to the security held for long periods with little or no out marketable value. Hence, market liquidity, to an extent determines the performance of a firm.

The firm performance deals with effectiveness and efficiency of a firm to be able to achieve the set goals which may be financial or operational. The financial performance motive of a firm concerns maximization of profit to improve shareholders wealth (Chakravarty, 2016). The operational performance of firms is for growth and expansion in relations to sales and market value (Gopher & Sandberg, 2014). Return on equity is used to measure performance in this study as it may be possibly enhanced by cross-listing.

Theory Underpinning the Study

Market liquidity theory is adopted for this study. The theory opines that companies that are listed on their domestic capital markets within weak market liquidity is advised to cross-list in capital market with strong market liquidity to lessen the liquidity risk exposure and expected return. The theory claims that the liquidity risk and expected returns will decrease and share price will rise accordingly. Cross-listing on a high liquid equity markets results to an increased market liquidity of stock and reduction of cost of capital. Foerster and Karolyi (2014) established that cross-listing of Canadian firms in US are linked with increased trading volume activities and a decreased effective spreads. In addition, the theory proposes that cross-listing is a linking instrument employed by the company that are incorporated in a market with reduced investor protection. Roosenboom and Dijk (2009) revealed that cross-listed firms oblige voluntarily compliance with higher standards of

u kojoj su uvrštene na burzu dionica. To štiti uspješnost tvrtke.

Afričke tvrtke uvrštene na burzu dionica u SAD-u obvezne su zadovoljavati američke standarde, a to zapravo podiže kvalitetu upravljanja praksama koje potiču tržišnu likvidnost i zaštitu ulagača (Onyuma, Mugo i Karuiya, 2012.). Teorija o tržišnoj likvidnosti, kako tvrde Coffee (1999.) i Stulz (1999.) govori o "vezi" prema kojoj će *cross-listing* štititi interes manjinskih dioničara na burzama dionica koje imaju visoke standarde korporativnog upravljanja.

Empirijski pregled

Füss, Hommel i Plagge (2016.) su ispitali faktore koji utječu na podjelu likvidnosti između domaćih i stranih dvostrukih uvrštavanja na burze u razdoblju između 2001. i 2011. Studija dokazuje da segment trgovanja prilikom uvrštavanja na strane burze u velikoj mjeri smanjuje integraciju burzi dionica mjerenu kao korelaciju cijene dionice u odnosu na svjetsko tržište. Osim toga, analiza pojedinog *cross-listinga* pokazuje da je od velikog utjecaja na trgovanje dobar gospodarski razvoj države. A gospodarski razvoj je u pozitivnom odnosu prema domaćoj i stranoj likvidnosti. I obratno, postoji negativna veza između regulatornih standarda i broja dionica u inozemnoj razmjeni. Potvrdilo se da su tržišta u nastajanju odgovorna za smanjen likvidni udio u uvrštavanju na strane burze. Razvijena tržišta imaju značajno višu domaću likvidnost od tržišta u nastajanju zbog prosječne vrijednosti prometa. Studija je potvrdila da strani ulagači zadržavaju dionice uvrštene na strane burze čak i kad domaća tržišta počnu s integriranjem na svjetsko tržište kapitala.

Lucas, Pimenta, Guasti i Eduardo (2012.) su analizirali učinke na likvidnost, profitabilnost i volatilnost brazilskih dionica uvrštenih na njujoršku burzu (NYSE) u razdoblju između 2001. i 2009. Primijenili su studiju događaja i statističke testove kako bi otkrili učinke koje uvrštavanje na

corporate governance of the jurisdiction they have cross-listed and this safeguards firm's performance.

It is obligatory for firms from Africa that cross-list on the American market to maintain the standards of American listing requirements and in essence improves corporation of governance practices that enhances market liquidity and investors' protection (Onyuma, Mugo and Karuiya, 2012). The market liquidity theory as enunciated by Coffee (1999) and Stulz (1999) proposed "bond" that the interest of minority shareholders will be protected by cross-listing on a stock exchange with higher standards of corporate governance.

Empirical Review

Füss, Hommel and Plagge (2016) examined factors that influence the distribution of liquidity between domestic and foreign twofold listings between 2001 and 2011; the study submitted that the segment of trading activities in cross-listing reduces with a greater amount of stock market integration measured as the stock price correlation with the world market. In addition, the analysis of individual cross-listing shows that sharing of trading is significantly affected when the country's stake of economic development improved. While economic development is positively related to local and foreign liquidity. Conversely, there is a negative relationship between regulatory standards and branding volumes at foreign exchange. Meanwhile emerging markets has been discovered to be responsible for decreased foreign listing liquidity share. Developed markets have significantly higher local market liquidity than emerging market due to average valued for turnover. The study revealed that foreign investors tend to keep cross-listed trading stocks even when the local market begins to integrate into the world capital market.

Lucas, Pimenta, Guasti and Eduardo (2012) analyzed the effects on liquidity, profitability and volatility of Brazilian stocks that were listed on the New York Stock Exchange (NYSE) in the period 2001 to 2009. They applied a study of events and

stranu burzu ima na ulogu prinosa, likvidnosti i volatilnosti na domaćem tržištu. Rezultati su pokazali da na prinos i volatilnost nema utjecaja, ali je utvrđen porast likvidnosti za 11 od 18 aktiva. Rezultati nisu bili u skladu s onima koje su pokazale druge studije o tržištima u nastajanju. Silva i Chávez (2008.) su utvrdili da latinoameričke tvrtke koje imaju potvrdu o depozitu ne pokazuju uvijek likvidnost na lokalnom tržištu. Halling et al. (2008.) su dokumentirali da je segment trgovanja na domaćem tržištu veći za tvrtke koje dolaze iz zemalja koje su geografski blizu SAD-u i za tvrtke iz manje razvijenih zemalja, ako govorimo o uvrštavanju na američke burze dionica. Foerster i Karolyi (2014.) tvrde da bi *cross-listing* mogao potaknuti obujam trgovanja te povećati tržišnu konkurentnost uvrštenih tvrtki.

Studija koju su proveli Burns i Bill (2006.) kaže da, u usporedbi s američkim tvrtkama, *cross-listane* tvrtke neće uzeti kapital prilikom preuzimanja ciljanih američkih tvrtki, a to ne predstavlja potpunu vezu po obveznicama. *Cross-listane* tvrtke iz država koje imaju slabiju zakonsku zaštitu neće tražiti izvore kako bi financirale tvrtke i plaćale visoke premije, za razliku od tvrtki iz država sa snažnom zakonskom zaštitom. Rezultati pokazuju da *cross-listing* uklanja prepreke na putu ulaganja, tamo gdje postoje ograničenja da tvrtka u potpunosti zanemari zakonske okvire i važnost provjere financijskih posrednika. Prema tvrdnjama Kinga i Segala (2004.), tvrtke se odlučuju na *cross-listing* jer im on omogućuje bolje korporativno upravljanje koje štiti interes ulagača. *Cross-listing* je instrument putem kojeg se tvrtka čvrsto "veže" za zakonodavni sustav koji štiti ulagače od samovolje direktora ili zlouporabe poslovne imovine u privatne svrhe (Burns i Bill, 2006.).

METODOLOGIJA

Studija primjenjuje transverzalno istraživanje koristeći sekundarne podatke. Populacija korištena u istraživanju dolazi iz šest tvrtki uvrštenih

statistical tests to detect the effects of listing on the returns, liquidity and volatility roles in the local market. The results showed that there was no effect on returns and volatility, but there was increasing liquidity for 11 of the 18 assets. The results were not in line with those of several other studies, about emerging markets. Silva and Chávez (2008) found that Latin American firms with a deposit receipt do not always exhibit a liquidity advantage in the local market. Halling et al. (2008) documented that for cross-listings on US exchange markets, the segment of trading activities that occur on the local market is greater for firms from countries that are geographically close to the US and for firms from less developed countries. Foerster and Karolyi (2014) submitted that cross-listing could promote trading volume activities and increase market competitiveness of the listed firms.

The study of Burns and Bill (2006) revealed that when compared with US firms, cross-listed firms are less likely to adopt equity in takeovers of USA target firms which does not present a whole bonding. Cross-listed firms from countries with weaker legal protections are less likely to source for funds to finance business with equity and pay higher premiums than cross-listed firms from countries with better legal protections. Results indicate that cross-listing reduces obstacles to investment; where there are limits to its ability to completely ignore both legal environment and the importance of checking for financial intermediaries. According to King and Segal (2004), firms choose to cross-list because of opportunity to improve firm's corporate governance that protects investors' interest. Cross-listing is an instrument through which a firm 'bond' to a legal system that protects investors against directors' self-interest or misappropriation of business assets for personal gains (Burns and Bill, 2006).
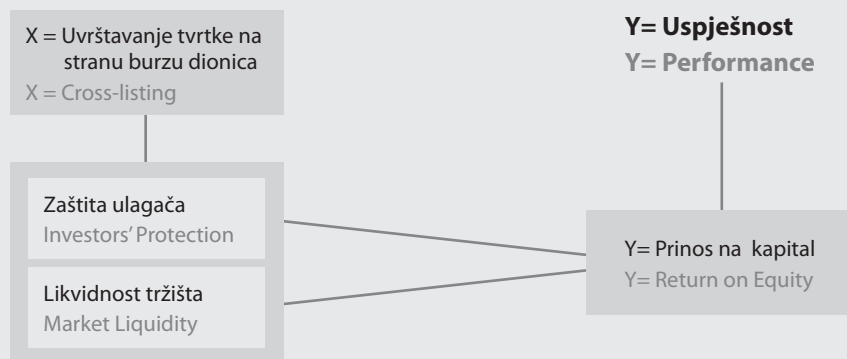
METHODOLOGY

The study employs cross sectional research using secondary data. The study population comprised

Olabisi, Oluyombo, Dada CROSS-LISTING TE USPJEŠNOST TVRTKI: DOKAZ IZ NIGERIJE
Olabisi, Oluyombo, Dada CROSS-LISTING AND FIRMS' PERFORMANCE: EVIDENCE FROM NIGERIA

Acta Economica Et Turistica

na strane burze između 2008. i 2017. Tvrtke uvrštene na strane burze su GT Bank, Zenith Bank, Diamond Bank, Oando PLC, Eco Bank i Dangote Cement. Zavisna varijabla "financijska uspješnost" mjeri se prinosom na kapital, dok je nezavisna varijabla "uvrštavanje na stranu burzu" zamijenjena zaštitom ulagača i likvidnošću tržišta. Zaštita ulagača mjeri se pomoću dividende po dionici (DPS) i dobiti po dionici (EPS), dok se likvidnost tržišta mjeri pokazateljem likvidnosti burze dionica. Studija se odnosi na razdoblje od deset godina. Podaci koji se odnose na šest tvrtki uvrštenih na strane burze prikupljeni su od nigerijske burze te iz revidiranih financijskih izvješća *cross-listanih* tvrtki. Povijesna cijena dionice za navedeno razdoblje za svaku od šest *cross-listanih* kompanija dobivena je pomoću baze podataka Nacionalnog klirinškog sustava (NKS) te burzovnog indeksa nigerijske burze. Za procjenu varijabli i testiranje formuliranih hipoteza korištena je višestruka regresijska analiza. Korelacijski koeficijent Karla Pearsona korišten je za uspoređivanje rezultata pokazatelja, a analiza varijance (ANOVA) za određivanje veze između zavisnih i nezavisnih varijabli. Korištena je i za

all the six cross-listed firms as from 2008 to 2017. The cross-listed firms are GT Bank, Zenith Bank, Diamond Bank, Oando PLC, Eco Bank and Dangote Cement. The dependent variable "financial performance" measured by Return on Equity whiles the independent variables "Cross-Listing" was proxied with Investors' Protection and Market Liquidity. Investors' protection was further measured with Dividend Per Share (DPS) and Earnings Per Share (EPS) while market liquidity was measured with stock market liquidity ratio. The study covered a period of ten years. The data concerning the six cross-listed firms were generated from the Nigerian Stock Exchange and audited financial statements of cross-listed firms. Historical share price for the periods under review for each of the six cross-listed companies were obtained from Central Securities Clearing System database and the Nigerian Stock Exchange All Share Index prices. Multiple regression analysis was used to evaluate the variables and test the formulated hypotheses. Karl Pearson's correlation co-efficient was used to compare the results of the ratios and Analysis of Variance (ANOVA) was adopted to determine the relationship that exists between the dependent and

PRIKAZ 1. OPERACIONALIZACIJA VARIJABLI
FIGURE 1. OPERATIONALIZATION OF VARIABLES

X = Uvrštavanje tvrtke na stranu burzu dionica
X = Cross-listing

Zaštita ulagača
Investors' Protection

Likvidnost tržišta
Market Liquidity

Y= Uspješnost
Y= Performance

Y= Prinos na kapital
Y= Return on Equity

Izvor: Konceptualni model istraživanja, 2018. / Source: Research Conceptual Model, 2018

određivanje odnosa između *cross-listinga* (koji se mjeri pomoću zaštite ulagača i likvidnosti tržišta) i uspješnosti (koju se mjeri pomoću prinosa na kapital). T-testom se ocjenjuje regresijski koeficijent varijabli.

Studija primjenjuje višestruku regresiju vođenu formuliranim modelom:

$$ROE_{it} = \beta_0 + \beta_1\, ML_{it} + \beta_2\, IP_{it} + et$$

ß$_1$, ß$_2$ = koeficijent nezavisne varijable

ROA = prinos na vlasnički kapital (dobit nakon oporezivanja/ukupna imovina)

IP = zaštita ulagača (posredovanje pomoću DPS & EPS)

ML = likvidnost tržišta (posredovanje pomoću pokazatelja likvidnosti burze dionica)

et = pojam pogreške

ß$_0$ = pojam konstante

U Tablici 1 nalazi se deskriptivna statistika korištenih vremenskih serija. Ideja je dati površan pregled statističkih značajki i trendova korištenih varijabli.

independent variables. Linear regression was used to estimate the relation between the cross-listing (measured with investors' protection and market liquidity) and performance (measured with Return on Equity). The t-test adopted was to estimate the regression coefficient of the variables.

The study adopted multiple regression guided by the formulated model:

$$ROE_{it} = \beta_0 + \beta_1\, ML_{it} + \beta_2\, IP_{it} + et$$

ß$_1$, ß$_2$ = coefficient of the independent variable

ROA = return on equity (profit after tax/total assets)

IP = investor protection (proxy by DPS & EPS)

ML = market liquidity (proxy by stock market liquidity ratio)

et = error term

ß$_0$ = constant term

In Table 1 is the descriptive statistics of the time series employed. The essence was to give a cursory review of the statistical properties and trends of the variables employed.

TABLICA 1. MJERENJE VARIJABLI / TABLE 1. MEASUREMENT OF VARIABLES			
S/N	**VARIJABLE** **VARIABLES**	**VRSTA VARIJABLE** **VARIABLE TYPE**	**MJERENJE** **MEASUREMENT**
1	Uspješnost tvrtke / Firm performance	Zavisna / Dependent	Prinos na vlasnički kapital = dobit nakon oprezivanja – kapital od predujma dividendi Return on Equity = = Profit after Tax – Pre Dividend Equity
2	Likvidnost tržišta / Market liquidity	Nezavisna / Independent	Koeficijent elastičnosti trgovanja = % promjene obujma trgovanja % promjene cijene dionice Coefficient of Elasticity of Trading = % change in Trading Volume % change in share price
3	Zaštita ulagača / Investors' protection	Nezavisna / Independent	EPS = dobit nakon oporezivanja – manjinski udio – povlaštene dionice Broj izdanih dionica u rangu dividendi EPS = Profit after tax – Minority Int. – Pref Dividend No of Ord Shares in Issue ranking for dividend

Izvor: Izračun istraživača, 2017. / Source: Researcher's computation 2017

TABLICA 2. DESKRIPTIVNA STATISTIKA / TABLE 2. DESCRIPTIVE STATISTICS		
VARIJABLE / VARIABLES	**SREDNJA VRIJEDNOST** MEAN	**STANDARDNO ODSTUPANJE** STD. DEVIATION
Prinos na vlasnički kapital (ROE) / Return on equity (ROE)	-.05229	.750413
Likvidnost tržišta / Market liquidity	.7789	.12161
Zaštita ulagača / Investors' protection	9.2092	22.99838

Izvor: Izračun istraživača uz pomoć SPSS, 2017. / Source: Researcher's computation with the aid of SPSS 2017

PRIKAZ PODATAKA, ANALIZA I DISKUSIJA

U ovom dijelu, prikazan je opis prikupljenih podataka. Sažetak deskriptivne statistike prikupljenih podataka nalazi se u Tablici 2.

Deskriptivna statistika pokriva sve *cross-listane* tvrtke do prosinca 2017. Tablica 2 pokazuje da je Prinos na imovinu (ROA) imao srednju vrijednost od -0,05, uz standardno odstupanje od 0,75. Likvidnost tržišta ima prosječnu vrijednost 0,78 uz standardno odstupanje od 0,12, a zaštita ulagača srednju vrijednost 9,21 uz standardno odstupanje od 23,00.

Analiza korelacije

Studija primjenjuje Pearsonov koeficijent korelacije kako bi se kvantificirala jačina veze između varijabli. Pearsonov koeficijent koristi se za provjeru postojanja ili nepostojanja linearne korelacije između *cross-listinga* i financijske uspješnosti *cross-listanih* tvrtki do 2017. Rezultati su prikazani u Tablici 3.

Kako prikazuje Tablica 3, primijećeno je da ne postoji značajna ni negativna korelacija između likvidnosti tržišta i prinosa na vlasnički kapital (P > 0,5). To znači da nema značajne veze između likvidnosti tržišta i uspješnosti. Također pokazuje i da će porast likvidnosti tržišta od 1% uzrokovati pad prinosa na vlasnički kapital (ROE) za 6,7%.

DATA PRESENTATION, ANALYSIS AND DISCUSSION

In this section, description of the data collected for the study is presented and discussed. The summary of the descriptive statistics of the data collected is presented in Table 2.

The descriptive statistics covered all the cross-listed firms as at December, 2017. The table 2 showed that Return on Asset (ROA) had a means value of -0.05 with a standard deviation of 0.75. Market liquidity had an average value of 0.78 with a standard deviation of 0.12, and Investors' protection had a mean value of 9.21 with a standard deviation of 23.00.

Correlation Analysis

The study used Karl Pearson's coefficient of correlation in order to quantify the strength of the relationship between the variables. The Pearson's coefficient was used to verify the existence or non-existence of linear correlation between cross-listing and financial performance of cross-listed firms as at 2017. The findings are presented in Table 3.

As shown in Table 3, it was observed that market liquidity is not significantly and negatively correlated with Return on Equity (P > 0.5). This implies that market liquidity does not have significant relationship with performance. It also

TABLICA 3. KORELACIJSKA MATRICA (ZAVISNA VARIJABLA: ROE)
TABLE 3. CORRELATION MATRIX (DEPENDENT VARIABLE: ROE)

		PRINOS NA VLASNIČKI KAPITAL RETURN ON EQUITY	LIKVIDNOST TRŽIŠTA MARKET LIQUIDITY	ZAŠTITA ULAGAČA INVESTORS' PROTECTION
Prinos na vlasnički kapital / Return on equity Y	Pearsonova korelacija / Pearson Correlation	1		
	Sig. (2-tailed)			
	N	60		
Likvidnost tržišta / Market liquidity	Pearsonova korelacija / Pearson Correlation	-.067	1	
	Sig. (2-tailed)	.612		
	N	60	60	
Zaštita ulagača / Investors' protection	Pearsonova korelacija / Pearson Correlation	.697**	.265*	1
	Sig. (2-tailed)	.000	.041	
	N	60	60	60

Izvor: Izračun istraživača uz pomoć SPSS, 2017. / Source: Researcher's computation with the aid of SPSS 2017

TABLICA 4. SAŽETAK MODELA / TABLE 4. MODEL SUMMARY

	R KVADRATNA VRIJEDNOST R SQUARE	PRILAGOĐENA R KVADRATNA VRIJEDNOST ADJUSTED R SQUARE	STANDARDNA PREDVIĐENA POGREŠKA STD. ERROR OF THE ESTIMATE	R KVADRATNA VRIJEDNOST PROMJENE R SQUARE CHANGE	STOPA PROMJENE CHANGE STATISTICS				DURBIN-WATSON
					F PROMJENA F CHANGE	df1	df2	Sig. F PROMJENA Sig. F CHANGE	
1 .710ᵃ	.504	.477	.542528148413666	.504	18.959	3	56	.000	1.835

a. Prediktori: (konstanta), likvidnost tržišta, zaštita ulagača / a. Predictors: (Constant), Market Liquidity, Investors' protection
b. Zavisna varijabla: prinos na imovinu / b. Dependent Variable: Return on Assets
Izvor: Izračun istraživača uz pomoć SPSS, 2017. / Source: Researcher's computation with the aid of SPSS 2017

Međutim, zaštita ulagača ima pozitivnu i značajnu vezu s prinosom na vlasnički kapital (P < 0,05). Ti rezultati pokazuju da će zaštita ulagača, koja je povećana za 1%, poboljšati uspješnost tvrtke za 69,7%. Osim toga, kalkulirana značajna vrijednost zaštite ulagača znači odbacivanje nulte hipoteze

shows that an increase in market liquidity by 1% will cause a decrease in Return on Equity (ROE) by 6.7%. However, investors' protection has a positive and significant relationship with Return on Equity (P < 0.05). This results indicate that and increased investors' protection by 1% will increase

Olabisi, Oluyombo, Dada **CROSS-LISTING TE USPJEŠNOST TVRTKI: DOKAZ IZ NIGERIJE**
Olabisi, Oluyombo, Dada CROSS-LISTING AND FIRMS' PERFORMANCE: EVIDENCE FROM NIGERIA

Acta Economica Et Turistica

prema kojoj zaštita ulagača nema značajnu vezu s prinosom na vlasnički kapital odabranih *cross-listanih* tvrtki u Nigeriji. Međutim, izračunata značajna vrijednost likvidnosti tržišta od 0,612 je veća za 5% od značajne vrijednosti (P > 0,05). Iz tog razloga treba prihvatiti nultu hipotezu koja kaže da likvidnost tržišta nema značajnog utjecaja na prinos na vlasnički kapital u *cross-listanim* tvrtkama u Nigeriji.

Kao što je vidljivo iz rezultata (Tablica 4), koeficijent determinacije (postotak varijacije u zavisnoj varijabli tumači se promjenama u nezavisnim varijablama) R2 = 0,504. To pokazuje da *cross-listing* rezultira varijacijom u financijskoj uspješnosti (ROA). Drugim riječima, *cross-listing* objašnjava 50,4% varijacije financijske uspješnosti koja je statistički značajna (p < 0,05) uz razinu pouzdanosti od 95%. Durbin-Watsonova statistika od 1,835 pokazuje odsutnost autokorelacije u modelu.

Analiza tablice varijance (Tablica 5) pokazuje da je razina značajnosti 0,000. To znači jake veze između zavisne varijable i nezavisnih varijabli. Ukupna varijanca 33,224 je razlika u varijanci koju se može objasniti nezavisnim varijablama (Model) te varijanca koju se ne može objasniti nezavisnim varijablama (Error). Iz rezultata je vidljivo da je vrijednost značajnosti F-statistike 18,959, značajne pri 0,000, što znači da su likvidnost tržišta i zaštita

performance by 69.7%. In addition, the calculated significant value of investors' protection produced the evidence of rejecting the null hypothesis of the study that investors' protection has no significant relationship with return on equity of selected cross-listed firms in Nigeria. However, the calculated significant value of market liquidity of 0.612 greater than 5% level of significant (P > 0.05) produced the evidence of accepting the null hypothesis of the study that market liquidity has no significant influence on return on equity of cross-listed firms in Nigeria.

From the findings (Table 4), the coefficient of determination (the percentage variation in the dependent variable is explained by the changes in the independent variables) R2 = 0.504. This indicates that cross-listing by cross-listed companies brought about variation in financial performance (ROA). Thus, cross-listing explains 50.4% in variation of financial performance which is statistically significant (p < 0.05) at a confidence level of 95%. The Durbin-Watson statistics of 1.835 showed the absence of autocorrelation in the model.

The analysis of Variance table (Table 5) shows that significant level is 0.000. It shows strong relations between dependent variable and independent variables. The total variance 33.224 was the difference into the variance which can be explained by the independent variables (Model) and the

TABLICA 5. ANOVA[a]

MODEL		ZBROJ KVADRATNIH VRIJEDNOSTI SUM OF SQUARES	df	SREDNJA KVADRATNA VRIJEDNOST MEAN SQUARE	f	Sig.
1	Regresijski / Regression	16.741	3	5.580	18.959	.000[b]
	Rezidualni / Residual	16.483	56	.294		
	Ukupno / Total	33.224	59			

a. Zavisna varijabla: ROA / a. Dependent Variable: ROA
b. Prediktori: (konstanta), likvidnost tržišta, zaštita ulagača / b. Predictors: (Constant), Market Liquidity, Investors' protection
Izvor: Izračun istraživača uz pomoć SPSS, 2017. / Source: Researcher's computation with the aid of SPSS 2017

TABLICA 6. REZULTATI REGRESIJSKOG KOEFICIJENTA / TABLE 6. REGRESSION COEFFICIENT RESULTS

MODEL	NESTANDARDIZIRANI KOEFICIJENTI UNSTANDARDIZED COEFFICIENTS		STANDARDIZIRANI KOEFICIJENTI STANDARDIZED COEFFICIENTS		SIG.	PODACI O KOLINEARNOSTI COLLINEARITY STATISTICS	
	B	STANDARDNA POGREŠKA STD. ERROR	BETA	T		TOLERANCIJA TOLERANCE	VIF
1 (Konstanta) / (Constant)	-.444	.467		-.950	.346		
Likvidnost tržišta / Market liquidity	-1.283	1.077	-.208	-1.191	.239	.291	3.438
Zaštita ulagača / Investors' protection	.024	.003	.745	7.395	.000	.873	1.145

Izvor: Izračun istraživača uz pomoć SPSS, 2017. / Source: Researcher's computation with the aid of SPSS 2017

ulagača značajni prediktori financijske uspješnosti *cross-listanih* tvrtki u Nigeriji.

Na temelju rezultata istraživanja (Tablica 6), postavljena je sljedeća jednadžba:

$ROA_{it} = β_0 \, 0 + β_1 \, 1.283 - β_2 \, 0.024 + 0$

Kako je vidljivo iz rezultata regresijskog modela, studija otkriva da, ako se *cross-listing* mjeri tako da su konstante likvidnosti tržišta i zaštita ulagača nula, tada će i financijska uspješnost *cross-listanih* tvrtki u Nigeriji također biti nula. Prema rezultatima regresijskog modela, jedinično povećanje likvidnosti tržišta vodi neznačajnom smanjenju prinosa na vlasnički kapital (ROE) od 0,208 (p = -0,239, t = -1,191). Međutim, jedinično povećanje zaštite ulagača povećava prinos na imovinu za 0,745 (P = 0,000, t = 7,395).

Rezultati studije (Tablica 7) sugeriraju da *cross-listing* pogoduje nigerijskim tvrtkama koje su uvrštene na inozemne burze. Kako pokazuju rezultati, postoji pozitivna značajna veza između zaštite ulagača i uspješnosti *cross-listanih* tvrtki u Nigeriji. Ovi rezultati pokazuju da tvrtke koje imaju iskustvo *cross-listinga* povećavaju svoju uspješnost, što je u skladu s tvrdnjama

variance which was not explained by the independent variables (Error). From the findings, the significance value of the F-statistic is 18.959 significant at 0.000, indicating that all the market liquidity and Investors' protection are significant predictors of financial performance of cross-listed firms in Nigeria.

From the findings of the study (Table 6) the following regression equation was established:

$ROA_{it} = β_0 \, 0 + β_1 \, 1.283 - β_2 \, 0.024 + 0$

From the findings in the regression model, the study reveals that cross-listing measured by market liquidity, investors' protection constant at zero, financial performance of cross-listed firms in Nigeria would also be at zero. From the regression results, a unit increase in market liquidity would lead to an insignificant decrease in Return on Equity (ROE) by 0.208 (p = -0.239, t = -1.191). However, a unit increase in investors' protection will increase the return on asset by a factor 0.745 (P = 0.000, t = 7.395).

The result of the study (Table 7) suggested that cross-listing is favourable for Nigerian firms that have cross-listed. From the results, there existed a positive significant relationship between investors'

Olabisi, Oluyombo, Dada CROSS-LISTING TE USPJEŠNOST TVRTKI: DOKAZ IZ NIGERIJE
Olabisi, Oluyombo, Dada CROSS-LISTING AND FIRMS' PERFORMANCE: EVIDENCE FROM NIGERIA

Acta Economica Et Turistica

Chakatarama (2016.) i Adelegana (2009.). Strane burze na koje su uvrštene nigerijske tvrtke pružaju bolje uvjete nego Nigerijska burza dionica. Međutim, Karolyi (2014.) i Haina, te Xin i Jing (2018.) došli su do suprotnog rezultata, prema kojem *cross-listing* ne poboljšava uspješnost, jer je uspješnost domaćih tvrtki veća od *cross-listanih*, a prinos na vlasnički kapital domaćih tvrtki je veći.

Premda je osnovni cilj, koji nigerijske tvrtke imaju prilikom *cross-listinga*, prepoznavanje na međunarodnoj razini, *cross-listanim* tvrtkama su zahtjevi za visokim standardima vrlo korisni, te one uživaju visoku zakonsku zaštitu ulagača, praćenje od strane medija i analitičara. Studija također otkriva da *cross-listing* pruža nebrojene ljudske i kapitalne resurse, koji znače vanjsku podršku. To znači da se *cross-listanim* tvrtkama pružaju prilike u obliku profitabilnih projekata, koji osiguravaju zaštitu ulagača. To nije ono što tvrde Amihud i Mendelson (2016.). Prema njihovim tvrdnjama, nema dokaza da je kapitalizacija tržišta *cross-listanih* tvrtki bolja od onog domaćih tvrtki. Poboljšani mehanizam uvrštavanja na burzu i financijski sustav, koji je opisan u ovoj studiji, promiče kvalitetu nigerijskih *cross-listanih* tvrtki, što potvrđuju i Füss, Hommel i Plagge (2016.). Oni tvrde da inozemni ulagači nastavljaju trgovati *cross-listanim* dionicama čak i kad se domaće tržište počne integrirati na svjetsko tržište kapitala. To motivira nigerijske *cross-listane*

protection and performance of cross-listed firms in Nigeria. This result of the study showed that firms with cross-listing experience increase performance which is line with Chakataram (2016) and Adelegan (2009). The foreign exchanges in which Nigerian firms cross-listed provide a better listing environment than Nigerian Stock Exchange. However, Karolyi (2014) and Haina, Xin and Jing (2018) established a contrary result that cross-listing does not improve performance, as domestic companies was larger than that of cross-listed, and return on equity of the domestic firms was better.

Although, the major aim for Nigerian firms listing is driven by international recognition, cross-listed firms benefit from greater requirements for high standard, difficult legal protection for investors and larger media and analyst coverage. The study also revealed that cross-listing is able to provide abundant human and capital resources, which provide external support that enable cross-listed firms avail themselves the opportunities of profitable projects thereby, ensuring investors' protection. This does not align with Amihud and Mendelson (2016) where there was no evidence that cross-listed firm's market capitalization is better than that of the domestic companies. The improved listing mechanism and financial system discovered in this study promote the quality of Nigerian cross-listed firms, which is supported in Füss, Hommel and Plagge (2016) that foreign investors tend to

TABLICA 7. SAŽETAK REZULTATA TESTIRANJA HIPOTEZA
TABLE 7. SUMMARY RESULTS OF THE HYPOTHESES TESTING

NULTE HIPOTEZE NULL HYPOTHESES	REZULTATI TESTIRANJA HIPOTEZA RESULTS OF THE HYPOTHESES TESTING	ODLUKE DECISIONS
H_{01}	Ne postoji značajna veza između zaštite ulagača i profitabilnosti / There is no significant relationship between investor protection and profitability	Odbačena / Rejected
H_{02}	Ne postoji značajna veza između likvidnosti tržišta i profitabilnosti / There is no significant relationship between market liquidity and profitability	Nije odbačena / Not rejected

Izvor: Izračun autora, 2017. / Source: Author's computation 2017

tvrtke da usvoje zahtjeve i standarde inozemnih financijskih tržišta u razvoju, što istodobno povećava uspješnost tvrtki na domaćem tržištu.

Na kraju, rezultati su pokazali da nema značajne veze između likvidnosti tržišta i profitabilnosti *cross-listanih* tvrtki. To potvrđuje i Jaykumar (2002.), čiji rezultati također nisu pokazali značajan porast likvidnosti *cross-listanih* vrijednosnica, a Silva i Chávez (2008.) su došli do zaključka da latinoameričke tvrtke s depozitarnom potvrdom nemaju uvijek veću likvidnost na domaćem tržištu.

ZAKLJUČAK I PREPORUKE

U zaključku, studija je ispitivala vezu između *cross-listinga* (uvrštavanja tvrtki na inozemne burze dionica) te uspješnosti *cross-listanih* tvrtki u Nigeriji. Rezultati studije pokazali su da *cross-listing* značajno poboljšava uspješnost tvrtki uvrštenih na strane burze. Studija je ustanovila pozitivnu i značajnu vezu između zaštite ulagača i prinosa na vlasnički kapital. Međutim, postoji neznačajna i negativna veza između likvidnosti tržišta i prinosa na vlasnički kapital. To znači da uvrštavanje na inozemnu burzu ne utječe na likvidnost dionica *cross-listanih* tvrtki u Nigeriji. Premda je *a priori* očekivano da će tvrtka, koja uvrštava svoje dionice u inozemstvo, osjetiti povećanje broja dionica jer dolazi do povećanja broja predviđenih ulagača, pa samim time i do povećanja broja dionica. Ipak, to je suprotno pretpostavci, jer je ova studija dokazala da *cross-listing* ne uključuje nužno povećanje broja dionica tvrtki uvrštenih na inozemne burze. Stoga se preporuča nigerijskim *cross-listanim* tvrtkama da obrate više pažnje na zaštitu ulagača kako bi se poboljšala njihova uspješnost. Također, ostale nigerijske tvrtke, koje imaju potreban kapacitet za *cross-listing*, trebale bi se za njega odlučiti, u svrhu poboljšavanja vlastite uspješnosti. Ono što predstavlja ograničenje u ovoj studiji je činjenica da bi zaključak trebalo uzeti s oprezom jer studija obuhvaća samo nekoliko od šest tvrtki u razdoblju

keep trading cross-listed stocks even when the local market starts to integrate into the world capital market. This makes the cross-listed Nigerian firms to have the requirements and standards of developing foreign financial markets, thus improving the firm's performance in its local market.

Finally, the results also showed that there is no significant relationship between market liquidity and profitability of cross-listed firms. This agrees with Jaykumar (2002), whose results did not show a significant increase in liquidity of the cross-listed securities, and Silva and Chávez (2008) that Latin American firms with a deposit receipt do not always manifest advantage of liquidity in the local market.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the study examined the relationship between cross-listing and performance of cross-listed firms in Nigeria. The results of the study revealed that cross-listing improves significantly the performance of the cross-listed firms as the study established a positive and significant relationship between investors' protection and return on equity. However, there is an insignificant and negative relationship between market liquidity and return on equity. This implies that listing does not affect market liquidity of shares of the cross-listed firms in Nigeria. Although, *a priori* expectation is that a firm listing its shares overseas would experience an increased volume of shares because an increased number of investors is anticipated to subscribe to it, thus increasing the volume of the shares. However, this is contrary to this assumption, this study has shown that cross-listing does not necessary increase the volume of shares of cross-listed firms. Therefore, it is recommended that cross-listed firms in Nigeria should pay more attention to investors' protection in order to enhance their performance and that other firms in Nigeria that have the required capacity for cross-listing should do so to enhance their performance. However,

Olabisi, Oluyombo, Dada CROSS-LISTING TE USPJEŠNOST TVRTKI: DOKAZ IZ NIGERIJE
Olabisi, Oluyombo, Dada CROSS-LISTING AND FIRMS' PERFORMANCE: EVIDENCE FROM NIGERIA

Acta Economica Et Turistica

od 2008. do 2017. Sve promatrane tvrtke su nigerijske pa bi budući istraživači trebali proširiti područje praćenja izvan granica Nigerije i izvan navedenog vremenskog razdoblja.

the limitation of this study is that the conclusion should be generalised with cares because the study covered only few firms of six from 2008 to 2017. All the selected firms are from Nigeria, as result, future researcher should expand the scope of the study beyond Nigeria and period of the study.

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