Article

On the inefficiency of GDRs/ADRs and portfolio management risks: Some legal/compliance and IPE issues



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KEYWORDS:

Law and politics; GDRs/ADRs; Economic sanctions; IPE; Mechanism design; Regulation and compliance; Cross-border spillovers; Cross-border market integration.

ABSTRACT:

Global Depository Receipts (GDRs) and American Depository Receipts (ADRs) have remained mainstays of international finance, and enable foreign companies (and especially Emerging Markets companies) to access larger or more liquid capital markets mainly in larger and more developed countries (e.g., the United States and Europe). This article: i) critiques US-style GDRs/ADRs; ii) explains Financial Stability and Systemic Risk implications; iii) introduces recommendations to improve the efficiency and global acceptance of ADRs/GDRs around the world. As currently structured, regulated and used, ADRs/GDRs are inefficient, and can transmit various risks (ie. currency risk, sovereign credit risk, and geopolitical risks). The discussion here is part of the larger debate about the legal and political implications of the "proliferation", constitutionality and effects of economic sanctions in emerging-market countries during the last two decades and the extremely damaging effects on Emerging Markets economies.

PALABRAS CLAVES:

Derecho y política; GDR/ADR; Sanciones económicas; IPE; Diseño de mecanismos; Regulación y cumplimiento; Efectos transfronterizos; Integración transfronteriza de mercados.

RESUMEN:

Los certificados de depósito globales (GDR) y estadounidenses (ADR) siguen siendo pilares de las finanzas internacionales y permiten a las empresas extranjeras, especialmente a las de mercados emergentes, acceder a mercados de capitales más grandes o más líquidos, principalmente en países de mayor tamaño y desarrollo, como Estados Unidos y los de Europa. Este artículo: i) examina críticamente los GDR/ADR del modelo estadounidense; ii) explica sus implicaciones para la estabilidad financiera y el riesgo sistémico; y iii) formula recomendaciones para mejorar su eficiencia y aceptación mundial. Tal como están estructurados, regulados y utilizados actualmente, los ADR/GDR son ineficientes y pueden transmitir diversos riesgos, como el cambiario, el de crédito soberano y el geopolítico. El análisis se inscribe en el debate más amplio sobre las implicaciones jurídicas y políticas de la proliferación, la constitucionalidad y los efectos de las sanciones económicas en los países de mercados emergentes durante las dos últimas décadas, así como sobre sus efectos extremadamente perjudiciales para esas economías.

MOTS CLES :

Droit et politique ; GDR/ADR ; Sanctions économiques ; IPE ; Conception de mécanismes ; Réglementation et conformité ; Effets transfrontaliers ; Intégration transfrontalière des marchés.

RESUME :

Les certificats de dépôt internationaux (GDR) et américains (ADR) demeurent des piliers de la finance internationale et permettent aux entreprises étrangères, en particulier à celles des marchés émergents, d'accéder à des marchés de capitaux plus vastes ou plus liquides, principalement dans des pays de plus grande taille et plus développés, notamment aux États-Unis et en Europe. Cet article : i) examine de manière critique les GDR/ADR de type américain ; ii) explique leurs implications pour la stabilité financière et le risque systémique ; et iii) formule des recommandations pour améliorer leur efficacité et leur acceptation dans le monde. Dans leur structure, leur réglementation et leur utilisation actuelles, les ADR/GDR sont inefficaces et peuvent transmettre divers risques, notamment le risque de change, le risque de crédit souverain et les risques géopolitiques. L'analyse s'inscrit dans le débat plus large sur les implications juridiques et politiques de la prolifération, de la constitutionnalité et des effets des sanctions économiques dans les pays à marchés émergents au cours des deux dernières décennies, ainsi que sur leurs effets extrêmement préjudiciables à ces économies.

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1. INTRODUCTION

The motivation for this article and some of the gaps in the existing literature are as follows. *First*, there are growing volumes of cross-border investments, some of which are in ADRs/GDRs. *Second*, ADRs/GDRs transmit or can transmit currency shocks, credit shocks, geopolitical risks and Inflation across countries (and this is particularly important given the global concerns about Inflation during 2020 to the present). *Third*, some emerging-market countries and their domestic capital markets have grown significantly in size, depth, and liquidity during 2010-2022 (e.g., Thailand, Singapore, Brazil, Saudi Arabia, Mexico, India,

China, South Africa, etc.), and their exchanges and domestic trusts and trustees may begin to list GDRs from other countries (and especially other Emerging Markets countries) and will likely adopt some or all elements of U.S.-style GDRs/ADRs, which can inadvertently cause and amplify global financial instability and systemic risk. *Fourth*, some researchers have alleged that ADRs/GDRs are used for money laundering and other crimes. *Fifth,* GDRs/ADRs are important because they expand potential markets for shares and other assets (bonds, commodities, digital assets, derivatives, IP, etc.) of emerging-market countries, and also eliminate or reduce the effects of some of the operational problems (substantial clearing/settlement costs and red tape in developed countries), statutory, regulatory, and contractual requirements that limit institutional investors' ability to invest in foreign companies, foreign assets or foreign-currency-denominated assets. Karolyi (2004) and Chugh et al. (2014) explained the role of GDRs/ADRs and cross-listings in developing Emerging Markets capital markets (also see Cavaglia et al., 2004; Fisher et al., 2017). *Sixth*, GDRs/ADRs can now be used for a much broader group of assets other than stocks (including bonds, commodities, digital assets, IP and derivatives). *Seventh*, the global "*ESG Movement*" and "*Corporate Governance Wave*" are persistent and affect how investors allocate capital and trade, and GDRs/ADRs can amplify/extend these issues.

The methodological approach used in this article combines *Capital Dynamics Theory*, *Qualitative Reasoning*, *Critical Theory* and *Complex Systems Theory*, as in Nwogugu (2020).

This article uses ADRs/GDRs issued by three Pan-African banks (Zenith Bank, GT Bank and Diamond Bank) during 2010-2018 as examples (the "Pan-African GDRs") (and especially data from FY2011, FY2012, FY2013 and HY2014). Comparable GDRs issued by non-Nigerian African banks include Commercial International Bank (Egypt) SAE GDR; and NMBZ Holding Ltd.. Each GDR represents ordinary shares of the issuer. Zenith, GT Bank and Diamond are among 58 emerging-market banks whose shares/GDRs are now listed on the LSE, and as of December 2013, their combined market capitalization was about $75 billion. Approximately 97 Sub-Saharan African-focused companies are listed on LSE markets ("……23 equity listings on Main Market, two GDR listings on Main Market, seventy equity admissions on AIM and two GDR listings on PSM……."). Between 2008 and 2013, companies that have major operations in Africa and were listed in the LSE raised at least £4.2 billion in IPOs and secondary offerings of equity– this is small compared to more than $1.8 trillion that is currently invested in international equity assets around the world.

The case banks' GDRs are denominated in U.S. dollars and traded on the London Stock Exchange (LSE), but have been highly illiquid since 2011 (Diamond Bank GDR and Zenith Bank GDR were issued after 2011). See Nwogugu (2004) and note that a similar trend of illiquidity of the listed shares of Encompass Services, Inc., occurred between 2001 and 2004 when Encompass Services became financially distressed and eventually filed for bankruptcy in the United States. Also see Nwogugu (2003) and note that a similar trend of illiquidity of listed shares of Jack in the Box, Inc., occurred between 2001 and 2003 when Jack-In-The-Box had operational problems and was perceived as being financially distressed.

The analysis in the article was done without direct access to the order books of LSE's (London Stock Exchange's) market makers and the LSE itself, and thus the conclusions are somewhat limited. This is because there may be substantial buy and sell orders but few or no matches, indicating low liquidity."HY" means half-year."FY" means fiscal year. Zenith, Diamond Bank and GT Bank are collectively referred to as the "*Case-Banks*".

The following are the four types of sponsored ADRs (Christy, n.d.; U.S. Securities and Exchange Commission [SEC], 2014):

i) Level I (unlisted) - traded over the counter. Does not allow foreign firms to raise equity capital on U.S. markets. Does not require full and partial disclosure under the U.S. generally accepted accounting principles (only home-market disclosure).

ii) Level II - can be traded on the New York Stock Exchange (NYSE), the National Association of Securities Dealers Automated Quotation System (NASDAQ), or the American Stock Exchange (AMEX). Does not allow foreign firms to raise equity capital on U.S. markets. Requires full and partial disclosure under the U.S. generally accepted accounting principles; and is required to file a Form 20-F.

iii) Level III - can be traded on the New York Stock Exchange (NYSE), the National Association of Securities Dealers Automated Quotation System (NASDAQ), or the American Stock Exchange (AMEX). Allows foreign firms to raise equity capital on U.S. markets. Requires full and partial disclosure under the U.S. Generally Accepted Accounting principles; and is required to file a form 20-F.

iv) Rule 144A (unlisted) - sold as a private placement and traded through Automated Linkages (PORTAL) among Qualified Institutional Buyers (QIBs), and allows foreign firms to raise equity capital on U.S. markets. Does not require full and partial disclosure under the U.S. Generally Accepted Accounting principles (only home-market disclosure).

1.1. CONTRIBUTIONS OF THIS ARTICLE.

The main contributions/findings of this article are as follows:

1) Explains how differences in trading/listing rules can cause conflicts of interest and price distortions.

2) Explains how the use of the GDR/ADR Trust structure can distort investors' cognition (the "*GDR/ADR Cognition Hypothesis*").

3) This article is the first to:

i) Introduce the "*Adverse Super-Additive Multiplier Effect*", the *Governance-Dampening Effect*, the "*Investor-Prioritization Effect*", the "*Governance/ESG Standards Shadow Effect*", the *GDR/ADR Crash-Risk Effect*, the "*GDR/ADR Classification Multiplier-Effect Risk*", the "*Risk-Numbing Effect*", the "*GDR/ADR Cognition Hypothesis*", the "*Tax-Avoidance Effect*", and the "*Investor-Prioritization Effect*".

ii) Introduce several alternative cross-listing structures for ADR/GDR issuers in emerging markets.

iii) Explain why the *Dominant Currency Phenomenon* (and specifically, *US Dollar Dominance*) can transmit Inflation and/or Currency Risk to Emerging Markets countries through GDRs/ADRs (many or most GDRs/ADRs are denominated in US Dollars).

iv) Develop the recommendations mentioned herein for improving the efficiency of GDRs/ADRs.

4) Explains the *GDR/ADR Classification Problem* – ie. why GDRs/ADRs can be characterized as Units (that contain Forward Contracts), or as Trust "Units" (that contain both a Trust-Right and forward contracts) or as Forward-Contracts bundles or as foreign currency convertible bonds. The *GDR/ADR Classification Problem* can have negative/harmful *Multiplier Effects* on investors, government regulators and the subject-company.

5) Explains why GDRs/ADRs are financial stability risks and systemic risks.

6) Explains some of the legal and corporate governance problems inherent in GDRs/ADRs (and those issues can have Portfolio Management and Public Policy implications).

2. EXISTING LITERATURE[1].

Gupta et al. (2021), Asmar and Trimbath (2022), Rustamov (2013), Dobbs and Goedhart (2008) and O. Kim (2019) critiqued[2] various elements of GDRs/ADRs. Khandelwal and Rathi (2009) and BNY Mellon (2013a, 2013b) critiqued Indian Depository Receipts.

J.-B. Kim and Zhang (2014), J.-B. Kim and Zhang (2013), J.-B. Kim et al. (2011a), J.-B. Kim et al. (2011b), Ascioglu et al. (2012) and Francis et al. (2014), analyzed the relationships among opaque financial statements, earnings management and the trading patterns of stock prices on one hand, and the risk of stock market crashes. Roychowdhury (2006), Wu and Robin (2014), Ge and Kim (2013a), Ge and Kim (2013b) and Cecchini et al. (2010). Lei et al. (2013), Bar-Yosef and Prencipe (2013) analyzed the relationship between corporate governance and market liquidity.

On the effects of Sustainability/ESG disclosures on "ESG-Premiums", "Reputation Effects" and Financial Stability (ie. stock-price crash-risk), see: Goicoechea et al. (2019), Alessi et al. (2021), Dai et al. (2019), Francis et al. (2014), J.-B. Kim and Zhang (2014), Wardle and Mills (2018) and Thomä et al. (2018).

Like most unhedged GDRs, the Pan-African GDRs contain or are perceived to have substantial currency/political/inflation risk – see Nwogugu (2015). For market data, see LSE (2019).

The following *Behavioral-Effects* and *Valuation-Effects* have been noted in the existing literature:

1) Limited *Investor Recognition Effect* - King and Segal (2005) and Mittoo (2003) noted that the touted increased "investor recognition" created by an ADR/GDR listings appears to disappear within two years after such cross-listing.

2) GDRs/ADRs promote "*Herding*" behavior by investors - Some researchers such as Demirer et al. (2014) found that ADRs promote herding behavior by investors.

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[1] Pinegar and Ravichandran (2010) note:

> Despite serious governance concerns revealed in Rule 144A and/or Regulation S Global Depositary Receipt (GDR) circulars, institutional investors voluntarily purchase these illiquid securities. Like issuers of Level III American Depositary Receipts (ADRs), GDR issuers exhibit strong pre-offer performance, with higher average Tobin's q ratios, sales growth rates, sales levels, returns on equity, and dividend payout ratios than their home-market counterparts. However, GDRs are issued predominantly by firms in emerging markets, while ADRs are issued mostly by firms in developed markets. After controlling for country and industry effects, we find that ADR issuers are larger and that they employ more reputable underwriters than GDR issuers do, but no other significant differences emerge. Notwithstanding their similarities, GDRs have larger discounts than ADRs, suggesting that legal bonding provides benefits that reputational bonding cannot fully replicate. However, within the sample of GDRs, pre-offer performance attributes also influence pricing. Specifically, discounts vary inversely with issue size but directly with firm size, suggesting that economies of scale exist in the GDR issue process and that potential agency costs are higher in larger firms

Additional sources: ("Crooks Using Global Depository Receipts," 2015; LSE, 2019; Srivats, 2014).

[2] The sources include "Russian Central Bank Puts Brakes" (2022) and Semenenko (2000), who states:

> But even though American Depositary Receipts are used by nations all around the world to tap Wall Street pockets, in Russia they have an unclear legal status. About fifty of the nation's leading corporations have sold ADRs on Wall Street - every one of them, as it happens, through the Bank of New York - but while an ADR may be attractive to foreign investors, under Russian law it is not crisply recognized as an ownership stake in a corporation. Now this potentially weak legislative link is being hammered at by a cohort of critics. They include Alexander Shokhin, a former finance minister now in the State Duma's banking committee, and Natalya Gurfinkel-Kargalovskaya, a Bank of New York senior vice president who has quit and is now suing the bank in a Moscow court. So far, Shokhin and Gurfinkel-Kargalovskaya are not being taken terribly seriously as a threat to the ADR program. The stock market in fact has risen this week, in imitation of the Dow Jones, with the RTS Index up 4.02 percent Tuesday and another 4.2 percent Wednesday. But what's at stake is mind-boggling. Were critics to derail Russia's ADR programs, it would affect the ownership structures and investment plans of almost every major Russian corporation. Moreover, trouble with Russian ADRs might translate into trouble with the entire ADR concept. If so, Wall Street would not be happy. Russia's ADRs represent companies that have a total market capitalization of about $50 billion, yet they are a mere three percent of all depositary receipt programs. All ADRs taken together represent companies with a market capitalization of $6 trillion, according to data placed on the Bank of New York's web site - and that is about one-fifth of the U.S. stock market."

3) Valuation Losses - Gozzi et al. (2008), Cetorelli and Peristiani (2010), and Sarkissian and Schill (2012b) correctly noted that cross-listed firms experience valuation losses in the years after cross-listing. Also see: Sarkissian and Schill (2009).

4) Low Correlation with home stock markets; price distortions and arbitrage opportunities (GDRs/ADRs can create inefficiencies and arbitrage opportunites in markets) - GDRs can create inefficiencies in markets – in terms of bid-ask spreads, changes in volatility; etc. Using two-year intraday data for 16 Argentine and Egyptian depositary receipts and their underlying stocks, Ansotegui et al. (2013) found that large intraday deviations from parity and thus arbitrage opportunities existed. Ansotegui et al. (2013) extended the standard arbitrage identification procedure to account for volumes and precise dynamic measures of trading costs, resulting in 9.81% and 15.32% of Argentinean and Egyptian matched trades identified as arbitrage opportunities, that represented profitable arbitrage trades. GDRs/ADRs can create substantial price distortions (differences between the actual share price of the underlying stock in the home market, and the ADR/GDR prices) which can have significant psychological effects and may also require additional disclosures. These price distortions are or can be magnified by transactions by the foreign issuer, such as stock-dividends, stock-splits, spinoffs, etc. During the last fifteen years, GDRs issued by Indian and Russian companies have traded at discounts of up to 25% and at premiums of up to 25% (price differences between the GDR and the local/domestic market equivalent). These inefficiencies create arbitrage opportunities. The trading prices of many GDRs are often disconnected from (not correlated with) those of the underlying shares that are traded in the company's home-market. Kadiyala (2004) analyzed the pricing of Argentine ADRs during and after the transition of the Argentine economy from a pegged exchange rate to a freely floating exchange rate regime, and found that there was a discount of 30% between the dollar-denominated price of the ADR and the peso-denominated price of its local counterpart (price ratio) during the transition period; and ii) that the discount reflected the market's expectation of the 'true' exchange rate between the dollar and peso; iii) that the relative prices of the most heavily traded ADR and of its local counterpart continued to provide information about the exchange rate after the peso was allowed to float freely against the dollar; iv) the robustness of the Argentine evidence is confirmed by finding that prices of Thai ADRs have similar predictive power for exchange rates during a period when the Thai market underwent a similar change in exchange rate policy as Argentina; v) evidence from Malaysia (which switched from a managed float to a fixed exchange rate policy) confirmed that the Argentine and Thai ADRs derived their informational advantage from greater liquidity in the ADR market.

5) Validity of the *market segmentation* and the *bonding* hypotheses for a cross-listing - O. Kim (2017) found that for cross-listings: i) legal bonding and reduced segmentation have positive effects on changes in firm value upon cross-listing, and both frameworks have a joint, complementary impact on changes in firm value upon cross-listing, based on the country-level Rule of Law metric; ii) the positive relationship between capital raising activity and changes in firm value is less significant for countries from the most segmented markets; iii) research analysts' following (accuracy) is an effective reputational bonding mechanism for companies from the most (least) segmented markets after cross-listing.

6) Liquidity of ADRs/GDRs and the underlying shares - Hales and Mollick (2014) and Bhattacharjee et al. (2014) documented that ADRs/GDRs react to and affect both their own lagged-prices and the lagged-prices of their underlying shares.

7) ADRs as exchange-rate indicators - Kadiyala (2004) confirmed that ADRs were leading indicators of exchange rates. The same may apply to GDRs.

8) GDRs/ADRs can transmit Shocks, Geo-Political Risk and Currency Risk - Jaiswal-Dale and Jithendranathan (2009) confirmed that GDRs/ADRs transmit shocks from markets where

they are traded (mostly in developed countries) to the home-markets of the underlying company (typically Emerging Markets countries). Schaub (2017) confirmed that ADRs/GDRs can transmit shocks from the home-country of the subject company. Pinegar and Ravichandran (2002), Bhattacharjee et al. (2014), Pinegar and Ravichandran (2010) and O'Connor (2014) analyzed GDR listings and cross-listings.

9) Dobbs and Goedhart (2008) explained why ordinary cross-listings don't create any value.

10) Momentum, contrarian strategies and ADRs as an asset-class - Parhizgari and Nguyen (2008) noted that ADRs behave as a distinct group of stocks within the framework of momentum and contrarian strategies, and that momentum and contrarian strategies exist in the ADRs market (which runs counter to the efficient market hypothesis). These results may be applicable to GDRs.

11) Effects of market-timing and issue-type - see Schaub (2011).

12) Arbitrage opportunities - Ansotegui et al. (2013) documented the existence of arbitrage opportunities in the *Depository Receipts* markets. Also see O. Kim (2016).

13) Crosslistings and the Global Financial Crisis and Volatility Spillovers – see Lien et al. (2018) and Ghadhab (2021).

14) Cross-listings, Bonding, signaling theory and dividend policy – Ghadhab (2023) noted that during 1990-2019, cross-listed firms were less likely to distribute dividends.

15) Information environment in crosslistings (including analysts' coverage and disclosure compliance) - see Lee and Valero (2010) and Lang et al. (2003).

16) International Trade ties and the GDR/ADR issuance decision - Chugh et al. (2014) found that trade ties and higher US regulation and governance requirements influence the decision of emerging markets companies to issue GDRs rather than ADRs on a US exchange; and that the cost of US GAAP reconciliation is an important consideration in the decision to list as a GDR or an ADR.

17) Nwogugu (2015) explained the many different factors (operational, financial, political, regulatory, marketing, etc.) that can affect the prices and trading-patterns of GDRs/ADRs.

18) Taxation - Blouin et al. (2009) and J.-B. Kim et al. (2011b) analyzed tax issues that pertain to GDRs/ADRs.

19) Return-Commonality in Cross Listings – see: Dey and Wang (2020).

20) ADR characteristics and their performance in indexes - Bandopadhyaya et al. (2009) found that ADRs in Australasia, Europe and the Far-East Asia are tilted toward large-cap, dividend-yield and UK stocks, and that portfolio combinations of ADRs and US equities provide inefficient diversification opportunities compared to an efficient frontier analysis of the S&P500 and Global 700.

21) "*Cross-listing Waves*" – see Sarkissian and Schill (2012a).

22) *economic sanctions* - Hufbauer et al. (1997) and O. Kim (2019a, 2019b) analyzed the impact of US *Economic Sanctions*. By their nature and regulatory-regimes, GDR/ADR prices and trading-patterns can be very sensitive to *Economic Sanctions*.

3. PROBLEMS INHERENT IN ADRS/GDRS.

3.1. CONFLICTS OF TRADING RULES; AND INEFFICIENT GDR/ADR LISTING RULES.

The GDR prospectuses/agreements don't account for differences in trading rules and exchange rules in the foreign trading market/venue and the issuer's home stock market.

Such differences create arbitrage opportunities and distort prices; and can also cause conflicts of interest. See the discussion about conflicts of interest in Nwogugu (2019b). The trading venue may not accept the issuer's domestic currency. Most GDRs must use the home currency of the GDR sponsor or trustee (typically the US Dollar).

The stock exchange rules for listing GDRs (LSE, 2014) are sometimes inefficient.

3.2. GDRs/ADRs Can Distort Investors' Cognition.

That can occur in any of the following ways (collectively, the "*GDR/ADR Cognition Hypothesis*"):

1) The various Behavioral Biases and effects introduced in this article.

2) The various behavioral effects in the existing literature (some of which are listed in this article).

3) The *Dominant Currency Phenomenon* (and especially *US Dollar Dominance*) which was explained in Nwogugu (2021) (many or most GDRs/ADRs are denominated in US Dollars).

4) The use of the GDR/ADR Trust structure to either aggregate the issuer's shares (usually for emerging markets companies) or to divide the subject-company/issuer's shares into smaller units (usually for companies based in developed countries) can result in loss of investor cognition and distortion of market-metrics and valuation-metrics (which are often based on share-volume) and market-trends. See the comments in Nwogugu (2019a).

5) The Cognition (including Risk-Perception) distortions explained in Nwogugu (2014, 2019a) also apply to GDRs/ADRs.

3.3. Not Hedged For Currency Risk, Political-Risk, Sovereign-Credit Risk And Inflation Risk.

Most GDRs/ADRs are not implicitly hedged for Currency-Risk, Sovereign-credit-risk, Political-Risk and Inflation risk, each of which is a substantial risk. Nwogugu (2021) explained the many disadvantages of the *Dominant Currency Phenomenon* (and specifically *US Dollar Dominance*) and the theories in Nwogugu (2021) explain how Inflation and Currency Risk can be transmitted to Emerging Markets countries through GDRs/ADRs (many or most GDRs/ADRs are denominated in US Dollars). Separately, several empirical studies have noted that sovereign credit risks affect the prices of domestic bonds and stocks (thus by implication, they may also affect trading patterns of their GDRs/ADRs) - see Gendreau and Heckman (2003).

See pages 185 & 189 of Zenith's *GDR Prospectus*- the Zenith GDR Trustee/Depository has substantial discretion as to the exchange rates to be used for declared dividends and sales of the underlying shares of Zenith's stock. Similarly, see Diamond Bank's GDR Prospectus and GT Bank's GDR Prospectus. The three Pan-African GDRs' "home market" currency was the Naira, and the three GDRs were trading in the euro area which, during 2005–2020, was an environment in which the Naira (the Nigerian currency) was categorically not accepted, and where the key traders, market-makers and decision-makers were domestic actors (from and based in the Euro-Zone). The concerns about exchange rate risk were confirmed by the trading patterns of Zenith's, GT Bank's and Diamond Bank's shares on the Nigerian Stock Exchange (NSE) during 2010–2015 (MoneyHub, n.d.; "Volume Spikes," 2014).

3.4. *Corporate Governance Contagion.*

The sources of such contagion are as follows:

1) Many or most foreign-company GDRs/ADRs are listed in US stock markets (and are denominated in US Dollars), and those foreign subject-companies are compelled to comply with US corporate governance standards, which are sometimes not efficient.

2) Many US companies list their GDRs in foreign markets.

3) Significant *Standardization* in GDR/ADR documentation, IPO processes and operations processes.

4) US companies (especially Bank Of New York) are dominant in the global GDR/ADR market – as Trustees, investment banks or as Settlement-Agents. Bank Of New York (BNY Mellon) is Trustee to many GDR/ADR programs.

5) Some individuals serve as Trustees to various GDR/ADR Trusts.

All of the foregoing results or can result in sub-optimal *Corporate Governance Contagion*. Nwogugu (2019a) compared the corporate governance standards in seven countries, and explained the ramifications for corporate risk management, Public Policy and Portfolio Management.

3.5. THE "*ADVERSE SUPER-ADDITIVE MULTIPLIER EFFECT*".

It is conjectured that the greater the number of GDRs from one country that are listed in one market, the greater the probability of currency distortions and arbitrage opportunities (e.g., GDRs of India and Russia that are listed in the LSE). The opposite should be the case. GDRs can transmit currency risk, inflation risk and political risk – particularly in the case of countries whose companies issue substantial GDRs (such as Russia, Brazil and India). Most GDRs/ADRs are not implicitly hedged for currency risk or political risk or inflation risk or sovereign-credit risk – the GDR/ADR prospectuses/agreements don't contain any provisions for such hedging. GDR/ADR trustees and agents have substantial discretion over the exchange rate used to determine dividend payments and proceeds from sales of underlying shares, as well as the interest rate applied to accrued payments.

3.6. AS CURRENTLY STRUCTURED, USED AND REGULATED (2022), GDRS/ADRS AND THEIR PRICES ARE MORE LIKELY TO BE MORE SENSITIVE TO TRADE-SETTLEMENT FAILURES THAN ORDINARY STOCKS.

That is because:

1) GDRs/ADRs connect the capital markets and enforcement/regulatory systems in at least two countries,

2) GDRs/ADRs transmit and can amplify political risks, Inflation, sovereign-credit-risk and currency risk within countries and across national borders.

3) Such trade-settlement failures are likely to have (or will be perceived to have) substantial information content by investors and regulators. The marketed advantages of GDR/ADR programs include the efficiency of their trade-settlement systems/processes.

See: Asmar and Trimbath (2022).

3.7. GDRS/ADRS ARE MUCH LESS LIKELY TO RESPOND TO CHANGES IN CORPORATE GOVERNANCE AND INVESTOR ACTIVISM THAN CROSS-LISTED SHARES AND ORDINARY SHARES.

This hypothesis is henceforth referred to as the *Governance-Dampening Effect*. That is because:

i) GDRs/ADRs can transmit and often contain currency risks, Inflation risks and sovereign credit risk that can dampen investors' concerns about Corporate Governance.

ii) A substantial percentage of international investors perceive, evaluate and value ADRs/GDRs as a separate asset class (different from Stocks and warrants);

iii) Its conjectured that:

1) International investors prioritize their allocation of time and efforts to managing various types of risks (typically based on invested amounts, expected losses and time frame); and WTAL and Regret-Minimization are or can be major elements of such prioritization (see Nwogugu, 2006); and in the context of GDRs/ADRs, corporate governance issues and domestic investor activism often rank lowest in international the priority lists of international investors (henceforth, the "*Investor-Prioritization Effect*").

2) In international investors' minds and decision-processes, their home-country ESG and corporate governance standards often dominate and overshadow those of the investee-company's home-country, and these investors are often judged/evaluated based on their home-country's ESG standards (the "*Governance/ESG Standards Shadow Effect*"). The net effect is that the subject-company's (quasi-issuers') home-country ESG standards become less relevant in the short-run and long-run.

iv) The ADR/GDR Trust/Trustee structure gives ADR/GDR holders far fewer opportunities for corporate shareholder activism (which effectively blocks one channel of badly needed activism from more-developed countries). The ADR/GDR Trustee holds and votes the underlying shares on behalf of the GDR/ADR holders, and the trust indentures don't provide rights/opportunities that enable GDR/ADR holders to fully participate in corporate voting and investor activism.

3.8. AS CURRENTLY STRUCTURED, USED AND REGULATED (2022), GDRS/ADRS ARE MUCH MORE LIKELY TO INCREASE *MARKET-CRASH RISK* IN THE SUBJECT-COMPANY'S HOME-MARKET/HOME-COUNTRY, THAN CROSS-LISTED SHARES AND HOME-LISTED SHARES.

This hypothesis is henceforth referred to as the *GDR/ADR Crash-Risk Effect*. That is because:

i) GDR/ADR prices can transmit and often contain currency risks, geopolitical risks, Inflation risks and sovereign credit risk that can increase market-volatility and crash-risk in the issuers' home-country.

ii) A substantial percentage of international investors perceive, evaluate and value ADRs/GDRs as a separate asset class (different from Stocks and warrants), and the arbitrage opportunities (between ADRs/GDRs and stocks and warrants)

iii) A substantial percentage of international investors also view GDRs/ADRs as "forward indicators" of perceived and actual currency risk, sovereign-credit-risk and inflation risk. That creates or can create uncertainties and perceived risks that increase market volatility and crash-risk.

iv) GDRs/ADRs have been empirically proven to cause Herding among institutional investors. That creates or can create uncertainties that increase market volatility and crash-risk.

v) It is conjectured that:

1) International investors prioritize their allocation of time and efforts to managing various types of risks (typically based on invested amounts,expected losses and time frame); and WTAL and Regret-Minimization are or can be major elements of such prioritization (see Nwogugu, 2006); and in the context of GDRs/ADRs, corporate governance issues and domestic investor activism often rank lowest in international investors Priority-Lists (henceforth, the "*Investor-Prioritization Effect*").

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company's home-country, and these investors are often judged/evaluated based on their home-country's ESG standards (the "*Governance/ESG Standards Shadow Effect*"). The net effect is that the subject-company's (quasi-issuers') home-country ESG standards become less relevant in the short-run and long-run.

vi) The ADR/GDR Trust/Trustee structure gives ADR/GDR holders far fewer opportunities for corporate shareholder activism (which effectively blocks one channel of badly needed activism from more-developed countries). The ADR/GDR Trustee holds and votes the underlying issuers' shares on behalf of the GDR/ADR holders. The GDR/ADR Trust Indentures typically don't provide rights/opportunities that enable GDR/ADR holders to fully participate in corporate voting and investor activism. That creates or can create uncertainties that increase market volatility and crash-risk.

3.9. As Currently Structured, Used And Regulated (2022), GDRs/ADRs Can Increase Money Laundering.

GDRs/ADRs can increase money laundering. When the foreign currency denominated GDRs can be purchased with local currency, GDRs provide wealthy investors with a way to move money outside the domestic market (money laundering).

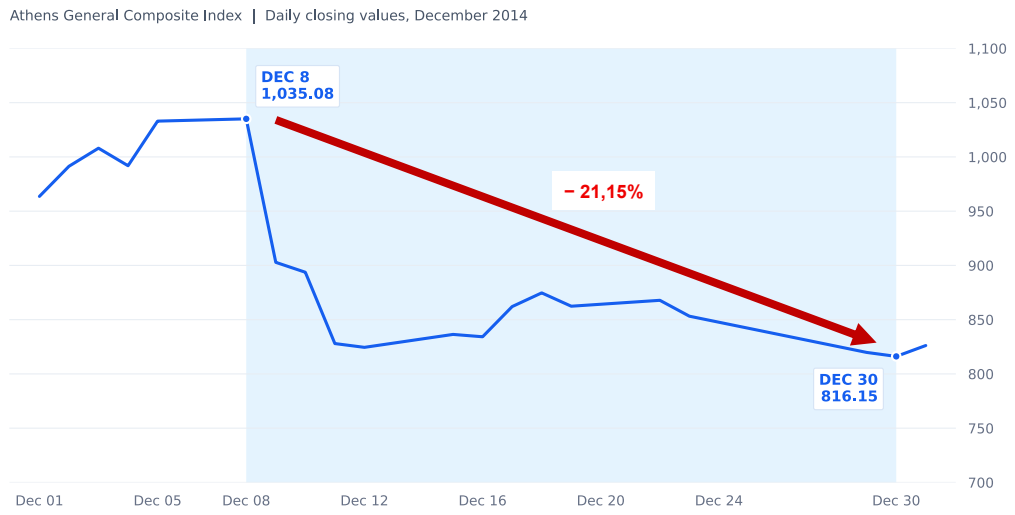
3.10. Illiquidity (Relative To Ordinary Shares) Of Many GDRs/ADRs.

During 2000-2022, many (if not most) US-style GDRs/ADRs were relatively illiquid (e.g., those that were listed in NYSE, NASDAQ, London Stock Exchange, Singapore Exchange, etc.). Nwogugu (2015) provided some reasons (operational, financial, regulatory, political marketing, etc.) why the Pan-African ADRs/GDRs were illiquid during 2012-2015.

3.11. Politics And Political Capital Can Affect Trading Patterns And Risk Perceptions Of GDRs/ADRs And Their Underlying Shares.

A prime example of the effect of politics on the trading patterns of stocks and GDRs/ADRs occurred in December 2014, when the *Athens General Composite Stock Index* (Athens Stock Exchange) declined by more than 20% between December 8 and December 27, 2014, following the Greek Parliament's failure to elect a president after three rounds of unsuccessful voting; another election was scheduled for January 25, 2015.

Figure 1. Changes In The Athens General-Composite Index In December 2014.



RIEEL.com – Based on Athens General Composite Historical Data

Table 1. Greek ADRs and GDRs (as of December 31, 2014). Panel A: Listing characteristics

Company	Type	Ticker symbol	Exchange	Industry	Sponsored/ Unsponsored
National Bank of Greece	GDR	NBG	NYSE	Banks	S
Alpha Bank	ADR	ALBKY	OTC	Banks	S
Cyprus Popular Bank	ADR	MYPSY	OTC	Banks	U
EFG Eurobank Ergasias S.A. (1)	ADR	EGFEY	OTC	Banks	U
Ellaktor (1)	ADR	ELLKY	OTC	Real Estate Inv&Serv	U
Folli Follie	ADR	FLLIY	OTC	General Retailers	U
Frigoglass S.A.I.C.	ADR	FRGGY	OTC	Industrials	U
Greek Organisation of Football Prognostics	ADR	GOFPY	OTC	Travel & Leisure	U
Hellenic Exchanges S.A. Holding	ADR	HEXEY	OTC	Equity Invest Instrument	U
Hellenic Telecom	ADR	HLTOY	OTC	Fixed Line Telecom.	S
Intralot	ADR	IRLTY	OTC	Travel & Leisure	U
Jumbo	ADR	JUMSY	OTC	General Retailers	U
Marfin Investment	ADR	MRFGY	OTC	Equity Invest Instrument	U
Makita Corporation	ADR	MKTAY	OTC	Industrial Eng.	U
Motor Oil (Hellas)	ADR	MOHCY	OTC	Oil Equip., Serv. & Dist	U
Mytilineos Holdings	ADR	MYTHY	OTC	General Industrials	U
Piraeus Bank	ADR	BPIRY	OTC	Financial Services	U
Titan Cement	ADR	TITCY	OTC	Construct. & Materials	U
Piraeus Port Authority	ADR	PIAEY	OTC	Support Services	U
Terna Energy	ADR	TREAY	OTC	Electricity	U
ALPHA BANK A.E.	GDR	ALBQY	Portal	Banks (Major Regional)	N/A
ALPHA BANK A.E.	GDR	ALBXF	London	Banks (Major Regional)	N/A
HELLENIC PETROLEUM SA	GDR	HLPTY	Portal	Oil & Gas	N/A
HELLENIC PETROLEUM SA	GDR	HLPXF	London	Oil & Gas	N/A
PUBLIC POWER CORP	GDR	PUPGF	London	Electric Companies	N/A

Table 1. Greek ADRs and GDRs (as of December 31, 2014). Panel B: Price changes and trading volume

Company	Ticker symbol	% Price Change In December 2014	Trading Volume During December 2014	% Price Change In 2014
National Bank of Greece	NBG	-23.5%	4,200,000	-26.94%
Alpha Bank	ALBKY	-23.3%	1,100,000	-44.00%
Cyprus Popular Bank	MYPSY	N/A	N/A	N/A
EFG Eurobank Ergasias S.A. (1)	EGFEY	-28.4%	1,100,000	-52.00%
Ellaktor (1)	ELLKY	6.5%	0	-45.00%
Folli Follie	FLLIY	N/A	N/A	N/A
Frigoglass S.A.I.C.	FRGGY	N/A	N/A	N/A
Greek Organisation of Football Prognostics	GOFPY	-21.0%	4,500	-20.00%
Hellenic Exchanges S.A. Holding	HEXEY	N/A	N/A	N/A
Hellenic Telecom	HLTOY	-12.3%	3,000	-17.54%
Intralot	IRLTY	-38.5%	0	-59.67%
Jumbo	JUMSY	N/A	N/A	N/A
Marfin Investment	MRFGY	N/A	N/A	N/A
Makita Corporation	MKTAY	-9.3%	15,800	-15.00%
Motor Oil (Hellas)	MOHCY	N/A	N/A	N/A
Mytilineos Holdings	MYTHY	N/A	N/A	N/A
Piraeus Bank	BPIRY	-28.3%	158,500	-46.96%
Titan Cement	TITCY	N/A	N/A	N/A
Piraeus Port Authority	PIAEY	N/A	N/A	N/A
Terna Energy	TREAY	N/A	N/A	N/A
ALPHA BANK A.E.	ALBQY	N/A	N/A	N/A
ALPHA BANK A.E.	ALBXF	N/A	N/A	N/A
HELLENIC PETROLEUM SA	HLPTY	N/A	N/A	N/A
HELLENIC PETROLEUM SA	HLPXF	N/A	N/A	N/A
PUBLIC POWER CORP	PUPGF	N/A	N/A	N/A

Source: TopForeignStocks.com.

Notes:

1) 2014 performance was measured from June 2014 to December 31, 2014.

The Greek political party "Syriza" held a majority in the three voting processes but probably would not be able to form a government on its own. Syriza suggested rolling back many of the reforms in recent years and scrapping bailout agreements with Greece's international lenders (renegotiating two bailouts worth US$290 Billion), and nationalizing Greek banks. The shares of Greek banks have been affected the most and shares of Piraeus Bank and Alpha Bank declined by more than 14%. As of December 2014, the unemployment rate in

Greece was 25% (youth unemployment rate was about 50%), and Greece's GDP declined by 25% between 2010 and 2014.

In a second example, some of the highly-publicized political upheavals in Nigeria during 2012-2016 may have also contributed to the illiquidity of the Pan-African GDRs during that period – these controversial political changes included but were not limited to the following:

i) The merger of several Nigerian political parties (CPC, ANPP and CAN) to form APC; and defections of many senior PDP members (governors, senators; etc.) to the APC (the main opposition party).

ii) PDP won the elections in a southwestern state in 2014 – that state was controlled by the APC. Nigerian government officials barred some APC officials from campaigning in the state during 2014.

iii) General Buhari's decision to run again for Presidency of Nigeria in the 2015 elections – that was the fourth time that he contested in the national presidency elections since 1999.

iv) Continuing personality conflicts between Governor Amaechi of Rivers State and the office of the President of Nigeria, which culminated in the grounding of Governor Amaechi's plane, and his being barred from entering the Rivers State Governor's House. There have been allegations that Governor Amaechi was a major funder of the APC.

v) The politics surrounding the then-pending *Petroleum Industry Bill* (enacted by the National Assembly).

vi) The activities of AMCON and the EFCC – some of which may have been politically motivated (some Nigerian researchers claimed that AMCON, EFCC and other federal government agencies were being used for political purposes, and that those agencies overlap the functions of, and should have been merged into existing government agencies).

vii) Many politically motivated court cases that were filed in various courts in Nigeria, some of which had reached appellate courts – including cases about the eligibility of political candidates; cancellation of some elections; the validity of rules of political parties; violation of the Nigerian Constitution; etc.

viii) Politically motivated conflicts of interest some of which were explained in Nwogugu (2015).

ix) The hotly debated issue of renewal by the National Assembly, of the federal emergency rule in Yobe, Adamawa and Borno State in Nigeria (which eliminates many of the powers of the governors of those states).

x) Nigeria's participation in the Africa Summit which was hosted by the US Government in June 2014.

xi) The permitted dominance of key Nigerian industries by foreign companies – which some people believe has been and remains politically motivated.

In a third example, GDRs/ADRs can be used to enforce and are subject to *economic sanctions* (Steer & Stafford, 2022; Sweney, 2022), as illustrated by the London Stock Exchange's (LSE) suspension of trading in 27 Russia-linked ADRs/GDRs in 2022. Negative consequences included the dissolution of the iShares MSCI Russia *ADR/GDR UCITS ETF USD* (Acc) listed on the LSE (LSE, 2022); other GDR/ADR prices were also affected. Such de-listings and dissolutions of GDRs/ADRs can have significant negative *Multiplier Effects* including but not limited to any of the following:

1) Investors' loss of confidence and trust in the global GDR/ADR markets.

2) Distortion of investors' risk-perception and beliefs.

3) Increased market-volatility, International Contagion and crash-risks in both the GDR/ADR markets and ordinary stock markets.

4) Foreign institutional investors violating/breaching the statutes or contracts that govern their operations and investment processes, which in turn can result in Costly Litigation and losses (of revenues, Reputation, Social Capital and Political Capital).

5) Increased illegal/legal capital-flight from Emerging Markets countries (usually to developed countries) and the resultant negative Multiplier Effects.

6) Devaluation of Emerging Markets currencies.

Also see Figure 2 below.

In a fourth example, many Russian GDRs listed in the LSE (London Stock Exchange) have been illiquid since significant and recent *Economic Sanctions* were imposed on Russia beginning in 2014.

The fifth example is the events analyzed in Schaub (2017) wherein a US Presidential election affected prices and trading patterns of Mexican ADRs that were listed in the US.

Each of the five types of political ramifications alone justifies a major re-design/restructuring of GDRs/ADRs to better manage political risk and Shock-Transmission.

Figure 2. MSCI Russian GDR/ADR Index (2012-2022).



RIEEL.com - Based on MSCI Russia ADR/GDR Index Historical Data.

3.12. As Currently Structured, Used And Regulated (2022), ADRs/GDRs Can Facilitate Tax Evasion (Which Can Increase Stock-Price Or Bond-Price Crash-Risk).

GDRs/ADRs (The Economist, 2015) enable some domestic investors to avoid local transfer taxes and capital gains taxes that would have otherwise been applied to domestic trading of the underlying shares.

Separately, GDRs/ADRs can also enable the subject-company/quasi-issuer to avoid or hide the following (the "*Tax-Avoidance Effect*"):

1) Taxes on foreign currency gains for issuance or trading of GDRs/ADRs.

2) Capital gains taxes for conversion of GDRs/ADRs into the underlying shares.

Several empirical studies have shown that corporate tax-avoidance can cause or increase stock-price crash-risk (and the same may also apply to bond-price crash-risks). See: J.-B. Kim et al. (2011a, 2011b).

3.13. As Currently Structured And Used (2022), ADRs/GDRs Can Be Characterized As Either Forward Contracts[3], Or As "Units" That Contain Both Stock And Forward Contracts, Or As A Trust-Unit Or As A Foreign Currency Convertible Bond.

As currently structured (ie. during 1990-2022), an ADR/GDR can be deemed to be one of the following:

1) A "Unit" that contains an Equity-Forward-Contract and a Currency Forward Contract – i) the Equity Forward Contract is a contractual "right" that promises to deliver a "multiple" (from zero to infinity) of the underlying stock (together with all associated dividends) to the buyer within a specific time frame (typically the standard clearing period); and ii) the Currency Forward Contract(s) is for delivery of the assets/stocks in the local-currency of the subject company (conversion from foreign currency into local currency).

2) A Trust "Unit" that contains a Currency Forward Contract and a Trust-Right – i) the Trust Right represents a right to a pro-rata share of the assets/stocks held by the Trust; ii) the Currency Forward Contract(s) is for delivery of the assets/stocks in the local-currency of the subject company (conversion from foreign currency into local currency).

3) A "Unit" that contains an American Equity Warrant and an American Currency Warrant (where each Warrant has a negligible Strike-Price) – i) the Equity Warrant is a contractual "right" that confers the right (but not the obligation) to purchase a "multiple" (from zero to infinity) of the underlying stock (together with all associated dividends) within a specific time frame (typically until liquidation of the Trust; and ii) the Currency Warrant is a contractual "right" that confers the right (but not the obligation) to purchase the local-currency, and is for delivery of the assets/stocks in the local-currency of the subject company (conversion from foreign currency into local currency).

4) A Foreign Currency Convertible bond – that is issued in a foreign currency, but is convertible into the underlying shares at the local-currency exchange rate. Thus, each such bond has an embedded Equity Warrant and Currency Warrant (similar to the foregoing Warrants).

This legal and corporate governance uncertainty (the "GDR/ADR Classification Problem") has not been fully resolved by courts, securities regulatory agencies and government tax agencies in most countries. See Jayakar (2015). Such uncertainty can be costly and increases the actual/perceived risks of ADRs/GDRs in terms of monitoring/administrative costs, trading/clearing risks, litigation risks, hedging risks, currency and arbitrage risks, most of which can have harmful Multiplier Effects on investors and the subject-company (the "*GDR/ADR Classification Multiplier-Effect Risk*"). The classification issue can also have harmful Multiplier Effects on government regulators in terms of monitoring costs, enforcement costs, tax revenues, Monetary Policy, political capital, etc.

Such legal and Corporate Governance Uncertainty can numb/dampen investors' risk perception and reactions to different risks because of: i) the frequency of transactions in the

[3] Semenenko (2000), in the section "Are ADRs Like Forwards?", states:

> Are ADRs Like Forwards? ..... And if it is still in the realm of the absurd to think the tag-team of Shokhin and Gurfinkel-Kargalovskaya might bring down the ADR market, it is worth noting it was also considered ridiculous to think Russian financial-market players and regulators would simply shrug off ruble-forward-contract obligations - another derivative instrument. And yet they did, stiffing their erstwhile Western partners to the tune of $10 billion. Sympathetic Russian courts ruled that forward contracts - a kind of insurance policy bought and sold commonly among financial-market participants - were actually "gambling instruments." The courts could do so because there was little legislative underpinning for the concept of a currency-forward contract - and ADRs are arguably in this same legal no-man's land."

underlying stocks of GDRs/ADRs (but not the GDRs/ADRs), and ii) the large size of, and transaction-frequency in the global currency markets; iii) misconceptions about the timing and permanence of arbitrage opportunities in the GDR/ADR markets, iv) misconceptions about the legal/accounting classification of (and thus hedging methods for) GDRs/ADRs (collectively, the "*Risk-Numbing Effect*").

3.14. The Underwriting Investment Bank And The Custodian And The Clearing/Settlement Agent (For GDRs/ADRs) Have Significant Incentives To Engage In Arbitrage That Can Harm Investors, Government-Regulators And The Subject-Company.

GDR/ADR offerings/IPOs are typically underwritten by third-party investment banks and the Trust is maintained by a third-party Custodian. The past and current structures of GDRs/ADRs (as of 2022) provide significant incentives:

1) For the investment bank to execute arbitrage during the IPO and or secondary offerings of the GDRs/ADRs (e.g., currency arbitrage; price differentials between ADR/GDR and the underlying stock; dividend arbitrage; etc.).

2) For the Custodian or Settlement-Agent to execute arbitrage trades when investors want to redeem their ADRs/GDRs (e.g., currency arbitrage; price differentials between ADR/GDR and the underlying stock; dividend arbitrage; etc.).

Such Arbitrage can create Costly Uncertainty and can numb/dampen investors Risk-Perception and reactions to different risks because of: i) the frequency of transactions in the underlying stocks of GDRs/ADRs (but not the GDRs/ADRs), and ii) the large size of, and transaction-frequency in the global currency markets; iii) misconceptions about the timing and permanence of arbitrage opportunities in the GDR/ADR markets, iv) misconceptions about the legal/accounting classification of (and thus hedging methods for) GDRs/ADRs (collectively, the "*Risk-Numbing Effect*").

Such Arbitrage can increase the actual/perceived risks of ADRs/GDRs in terms of monitoring/administrative costs, trading/clearing risks, litigation risks, hedging risks, currency risks, arbitrage risks and currency risks, most of which can have harmful Multiplier Effects on investors and the subject-company (the "*GDR/ADR Classification Multiplier-Effect Risk*"). The Arbitrage can also have harmful Multiplier Effects on government regulators in terms of monitoring costs, enforcement costs, tax revenues, Monetary Policy, Political Capital, etc..

3.15. As Currently Structured, Used And Regulated (2022), GDRs/ADRs Can Blunt/Reduce Sustainability/ESG Disclosures Or Activism, Which In Turn Can Cause Financial Stability Risks And Or Systemic Risks.

For most subject companies, outstanding ADRs/GDRs cover less than twenty percent of their outstanding shares of stock. Most GDRs/ADRs don't confer voting rights on their holders, and don't facilitate or contractually arrange for them to meet or vote on specific issues. Thus, the current (as of 2022) GDR/ADR structures can dampen/reduce ESG/Sustainability activism at the subject-company.

Several empirical and theoretical studies have confirmed that the types/amount of Corporate Social Respo*nsibility (CSR) and ESG disclosures can cause or increase Stock Price Crash Risk and or* bond-price crash-risk. See the comments in Dai et al. (2019), Wardle and Mills (2018), Alessi et al. (2021) and J.-H. Kim et al. (2021).

3.16. GDRs/ADRs IPOs Can Be Relatively Expensive, And The Trusts/Sponsors Typically Don't Use Shelf-Registration Programs.

The high costs of GDR/ADR IPOs include investment banking fees (fixed fees, underwriters' commissions, roadshows), filing fees, Trustee/Custodian fees, settlement/clearing agent fees, lawyers' fees, accountants' fees, etc.. Most of these fees are usually paid in a *Dominant Currency* (e.g., US dollar or the Euro) which can be expensive in many Emerging Markets countries. Due to these costs and bureaucratic delays, many Emerging Markets sponsors/issuers may find GDRs/ADRs to be expensive (financially, socially and politically).

Secondly, most GDR/ADR programs don't use Shelf-Registration programs (which were first created in the USA to simplify multiple securities offerings by one issuer). Thus theoretically, one GDR/ADR Trust can use one shelf-registration to issue multiple GDRs/ADRs for forty or more issuers/companies from one country (a "*Multi-issuer Trust*"). Such Multi-issuer Trust: i) must contractually isolate/segregate the assets of each such issuer/sponsor within the Trust; ii) must make each issuer and its underlying assets legally litigation-proof with regards to litigation against or by other issuers, iii) can negotiate with service providers (bankers, custodians/trustees, accountants, etc.) for reduced fees.

Third, such Multi-issuer Trusts make it much easier to create "mixed-asset" GDRs/ADRs that are backed by the assets of multiple sponsors/issuers, and thus can provide diversification, reduced risk and or required styles and asset-allocations to investors.

3.17. Some Additional Legal And Corporate Governance Problems That Are Inherent In GDRs/ADRs (And That Have Portfolio Management Implications).

The legal problems noted in Rustamov (2013) focused on the following (in both the subject-company's home-country and in the foreign country where the GDR/ADR is listed): i) jurisdiction; ii) validity of the Trust, iii) Choice-of-law and Conflict-of-Laws; iv) a few rights of the GDR/ADR holders.

Some additional Corporate Governance and legal problems (other than the legal problems noted in Rustamov (2013)) are as follows (and these problems may need to be resolved in both the subject-company's home-country and in the foreign country where the GDR/ADR is listed):

1) Whether GDRs/ADRs can be statutorily or contractually classified as derivatives, and if so what regulatory regimes are applicable. See Nwogugu (2014).

2) Whether large GDRs/ADR Trusts (by dollar volume) or GDR/ADR Trusts of large multinational companies should be classified as non-financial or financial SIFIs (systemically important financial institutions) under current US regulations/statutes. This applies to US subject-companies and GDRs/ADRs that are listed in the USA. See: Nwogugu (2014).

3) The contractual/contracted choice-of-Forum for resolving disputes (Semenenko, 2000) (and the regulatory agencies that have jurisdiction over GDRs/ADRs in both the subject company's home-country and the foreign country where the GDRs/ADRs are listed).

4) Whether the transactions between the subject-company and the Trust on one hand, and the transactions between the Trust and investors are one series of "*Integrated Transactions*".

5) The rights of GDR/ADR holders in bankruptcy or statutory-restructuring or financial distress of the subject-company; and the "priority" of GDRs/ADRs in any liquidation of the subject company; and whether the GDR/ADR Trust is bankruptcy-remote. The timing and amount of the GDR/ADR holders' rights, and the existence of voting rights or mandatory-proxies for holders of GDRs/ADRs (and definition of the GDR/ADR Trustee's proxy voting rights and associated conditions, if any) ? The rights of holders of unsponsored GDRs/ADRs

and GDRs/ADRs issued by private or unlisted companies upon dissolution of the trust remain unresolved (in some cases such investors are left with illiquid un-registered shares).

6) Whether, how and when the Trust Indenture can be changed? What constitutes a "change/modification" of the Trust Indenture.

7) How does the Trust/Trustee handle multiple redemption-runs (wherein many GDR/ADR holders simultaneously request for conversion of their GDRs/ADRs into the underlying stocks/assets? Does that constitute a partial or whole Liquidation, and if so, does that trigger any statutes and or regulations ?

8) The legal distinctions/differences between "Sponsored" and "Un-Sponsored GDRs/ADRs"; and the minimum required involvement of the subject-company in the GDR/ADR IPO processes for classification purposes.

9) International Coordination among national regulatory agencies for supervision of GDR/ADR programs and their IPOs.

10) When a government agency is making/evaluating the decision to prosecute misconduct involving GDRs/ADRs, what factors can be considered to be "Public Interest" (typically, such prosecutors can prosecute only if there is sufficient Public Interest in the matter)?

11) The *Classification Problems* and the tax loopholes that are explained herein and above.

12) The legal distinction between the Custodian/Trustee and the Settlement/Clearing Agent and whether there are or can be Conflicts-of-interest.

13) The legal distinction between the GDR/ADR IPO investment-bank as the underwriter and as an independent Arbitrageur, and existence of any conflicts-of-interest.

14) Whether the GDR/ADR Trustee is an investment manager (e.g., under the *1940 Act* in the USA), and what exemptions/clarifications are required; and whether any of the Conflicts-of-Interest introduced in Nwogugu (2019b) are applicable?

15) How are trustees appointed and removed? Do GDR/ADR holders participate in the appointment or removal of any Trustees ?

16) The legal distinctions between the GDR/ADR Trust on one hand and an ETF and a Mutual Fund and a REIT. See: Nwogugu (2020).

17) Whether GDRs/ADRs can be used in mergers/acquisitions of the subject-company.

18) How are clearing/settlement disputes resolved? What level of customer service is the trustee or trust contractually or statutorily required to provide to GDR/ADR holders ?

19) Must the trustee be bonded or obtain insurance to cover potential negligence or fraud? Should the trust be required to procure D&O insurance?

20) Fiduciary duties - what standards of care apply to trustees, managers, and boards of mutual funds, REITs, ETFs, and GDR/ADR trusts?

21) Fiduciary duties – in the case of all types of GDRs/ADRs, what Standards-of-Care are applicable to the Trustee, the Clearing/Settlement Agent and the underwriting investment bank? Fiduciary duties – in the case of Un-Sponsored GDRs/ADRs, does the subject-company owe any fiduciary duties to GDR/ADR holders, and if so, what Standard-of-Care is applicable to the subject-company ?

22) How to prove the elements of *Mens-Rea* for criminal-law causes-of-action in the context of GDRs/ADRs.

23) Is the trustee required by statute or contract to withhold and remit taxes payable by GDR/ADR holders?

24) What types of liabilities can the Trust/Trustee incur and how will those be paid? Who pays for fines/liability that is imposed on the Trustee ? Should that be covered by insurance policies and or by the creation of a special-reserve within the Trust's assets ?

25) GDR/ADR holders don't get as much dividends and don't have as much shareholder rights as ordinary shareholders in the subject company (the Depository Agreement reduces/eliminates some rights, and the servicing fees reduces the dividends payable to GDR/ADR holders). Do these facts sufficiently differentiate GDRs/ADRs from ordinary stocks ?

26) What happens if a *Force Majeure* event occurs ? (ie. with regards to trading, settlement, payments, compliance, etc.).

27) Given the different collaborations, agreements and Strategic Alliances that are required to create, trade and service GDRs/ADRs, can the RICO (US civil or criminal) statutes be applied to any aspects of misconduct pertaining to GDRs/ADRs? How best to establish the elements of both common-law and statutory Conspiracy claims in the context of GDRs/ADRs ?

28) Actual Insider-Trading or front-running and or conspiracy to commit either offence/misconduct by the Trustee or Clearing/Settlement agent. The Trustee and the Clearing/Settlement Agent typically have early access to information about: i) prospective GDR/ADR issuers and ii) GDR/ADR holders who want to convert their GDRs/ADRs into the underlying stock/asset; iii) contemplated or actual dissolution of the Trust.

29) What Standard-Of-Care applies to the Trustee's conduct/decisions and those of the Clearing/Settlement Agent ?.

30) Lee (2008) found that GDRs usually have lower accounting quality than many classes of ADRs (American Depository Receipts). The US GDR sponsor/trustee does not bear any liability for earnings management, incentive-effects-management and asset- quality management by the issuing company (all three phenomena are defined in Nwogugu, 2020). Note that it's the GDR Trust that issues the GDRs and not the underlying company. The GDR governance model does not require or ensure mandatory compliance with either international disclosure standards or the disclosure standards of the Trading Venue (foreign stock market). The typical GDR governance model doesn't impose specific or sufficient penalties on the GDR Trustee/sponsor for the subject-company's non-compliance with either international disclosure standards or the disclosure standards of the Trading Venue (foreign stock market); or for deficiencies in corporate governance. To the extent that the governance model of the GDR Trust conflicts with or differs substantially from the governance model of the subject-company, there can be loss of shareholder's rights and other sub-optimal outcomes.

31) In many instances (both sponsored and un-sponsored GDR/ADRs), the Trustee does not have any formal say in corporate governance and BOD matters of the subject-company (even in an advisory role).

32) The use of the trust structure creates fiduciary duty problems, and an added layer of complexity. GDRs/ADRs appear to be "complicated" and are thought to be something to do with the 'back office'. GDRs/ADRs are not popular among retail investors; and Investor perceptions of GDRs and ADRs are often of a security that is inferior compared to the underlying foreign stock.

3.18. THE RELATIVELY SMALL VOLUMES OF GDRS/ADRS: AS CURRENTLY STRUCTURED, USED AND REGULATED (2022), GDRS/ADRS ARE FINANCIAL STABILITY RISKS AND SYSTEMIC RISKS.

Given the foregoing problems and risks, GDRs/ADRs are significant Financial Stability Risks and Systemic Risks, and some additional factors are as follows:

1) The number of companies that had issued ADRs/GDRs represented more than 25% of global stock market volume as of 2021 – thus while the volume of GDRs/ADRs may be relatively small, they can indirectly/directly affect a substantial percentage of global stock market value.

2) In many developed and developing countries around the world, many of the largest companies (MNCs that account for a substantial share of total stock market capitalization in their home-countries), have issued GDRs/ADRs.

3) There is substantial empirical evidence that Inflation, currency risk, interest rate risks and political risks are caused by or transmitted through GDRs/ADRs (both to and from the subject-company's home-country). GDRs/ADRs can also transmit sovereign-credit risks.

4) Most of the foregoing problems (in Section-3 in this article) are or can quickly evolve into Financial Stability Risks and Systemic Risks. However, most Central Banks don't focus on, or sufficiently address GDRs/ADRs.

ADRs and GDRs constitute a very small percentage of total publicly traded equities globally, even though the number of companies that have issued ADRs/GDRs represented more than 25% of global stock market volume as of 2021. This may imply that ADRs/GDRs have been relegated to a small universe of sophisticated investors and have not served the purpose of expanding markets.

As of 2012-2016, the volume of outstanding Zenith, GT Bank and Diamond Bank GDRs were small both in absolute terms, and on a relative basis (compared to banks, companies and other GDRs) and as a percentage of the total outstanding/issued shares of each bank's Common Stock. Thus, persons that wanted to buy the Pan African GDRs may not have been able to have a meaningful price impact on their underlying shares; and they couldn't buy a controlling interest, and they couldn't buy twenty-percent of the subject-company's shares (which would permit either consolidation of the subject-company in some circumstances, or the use of the "Equity Method" for accounting for their investment).

4. ALTERNATIVE STRUCTURES AND LISTINGS FOR EMERGING MARKETS ISSUERS OF GDRS.

ADR/GDR issuers in Emerging Markets should also consider the following alternatives:

i) Registering the existing shares on a major Emerging Markets stock exchange (e.g., the Hong Kong, Singapore, Brazil and or Johannesburg Stock exchanges) and simultaneously implementing an *exchange-rate floor* overlay (the overlay can be implemented using Forward Contracts and or currency options or currency swaps). Its very likely that the core market-makers, traders and investors in these markets will have a more positive view of the Emerging Markets currencies and their associated currency/inflation/political risks.

ii) Listing shares denominated and traded in the "most popular" Emerging Markets foreign currencies (e.g., West African CFA, South African Rands, Nigerian Nairas, Brazilian Reals and or Chinese Reminbi).

iii) Launching a new currency-hedged GDR that is listed/registered in other major Emerging Markets financial centers (such as Hong Kong, Brazil and or Johannesburg and or Singapore); and allow current shareholders to exchange their GDRs for the new GDRs. The proposed currency-hedged GDRs will require that either each GDR-issuer or the GDR

Trustee/Depositary or a third-party (e.g., IMF, IFC, IBRD or other bank) guarantee and provide a built-in *Exchange-Rate Floor* for GDR-holders. However, the *exchange-rate floor* may be adjustable, but the adjustment formula must be stated upfront and complied with. Also, the *exchange-rate floor* can be an add-on/overlay floor provided by any of the above-mentioned third parties.

5. RECOMMENDED IMPROVEMENTS FOR THE US GDR/ADR MODEL; AND CREATION OR ENHANCEMENT OF MECHANISMS BY WHICH GDR-ISSUERS AND CROSS-LISTED FIRMS CAN IMPROVE THEIR CORPORATE BEHAVIOR AND ACCOUNTING DISCLOSURES.

In these circumstances, "*efficiency*" can be defined in terms of the following:

1) Elimination/reduction of Harmful Arbitrage.

2) Accurate and timely disclosure.

3) Effective and compliant Corporate Governance.

4) Low/no transmission of political, inflation, currency and sovereign-credit risks.

5) More accurate, secure and faster trade-settlement.

The specific measures that can improve the efficiency of US GDR/ADR Models are as follows:

1) Domestic securities regulators should provide additional oversight and adopt rules requiring companies to comply with the disclosure standards of foreign stock markets where they are listed. Non-compliance should result in fines and disciplinary action by the domestic regulatory agencies.

2) Provide some statutory mechanism to give the GDR/ADR trustee some input on corporate governance matters of the issuing company.

3) Imposing fines and criminal sanctions on GDR/ADR Trustees; and make GDR Trustees legally responsible for ensuring that GDR/ADR issuers comply with the accounting/disclosure standards of foreign stock markets.

4) Enactment of corporate law statutes by the issuer's home-country that regulate the use of foreign GDRs; and also delineate statutes for domestic GDRs.

5) Enact statutes that unify the corporate governance structure of the issuing company and the GDR Trust/trustee, such that any conflicts are reduced.

6) Grant GDR/ADR holders specific voting rights (limited or unlimited), and specific dividend rights (limited or unlimited) and specific proxy rights and Information Rights (same rights as traditional shareholders).

7) Create regulations/statutes for a new class of GDRs/ADRs that provide exchange rate floors as explained above.

8) Bridge the Litigation and Corporate Governance gaps between the Trust and the subject-company – so that the subject-company and the Trust are each more liable for the other's misconduct. The other alternative is to classify the transactions between the subject-company and the Trust on one hand, and the Trust and investors, as one single "*Integrated Transaction*".

9) Provide tax benefits to institutional investors that invest in GDRs/ADRs such as dividends-received deductions and or tax credits.

10) There should be a pre-determined method for calculating the exchange rate at which investors can redeem their ADRs/GDRs, and such exchange rate should be a weighted

average or Index, and should be published daily or preferably, weekly or bi-weekly in order to reduce harmful and un-necessary Arbitrage.

11) Create a "mandatory minimum holding period" during which an ADR/GDR holder cannot swap his/her GDRs/ADRs into the underlying shares.

12) GDR/ADR Trust Indentures must contain "Emergency Measures" that must be implemented when GDRs/ADRs are subjected to Economic Sanctions or Force Majeure issues. Such Emergency Measures can include: i) automatic re-listing of the GDRs/ADRs in a "neutral" or friendly country and or changing the GDR/ADR Trustee/Custodian and Settlement-Agent, if the GDR/ADR is de-listed (especially as part of Economic Sanctions), ii) making the GDR/ADR trust bankruptcy-remote, and or giving the GDR/ADR holders the same rights as ordinary shareholders in bankruptcy or statutory restructuring processes; iii) insuring the values of the GDRs/ADRs against force Majeure issues (providing an implicit price-floor).

13) GDR/ADR programs should be decentralized – this means that the Custodians/trustees and the listing-exchanges should be more evenly distributed among various countries. During 2000-2022, US banks and custody companies (and especially the Bank of New York) controlled a significant percentage of worldwide GDR/ADR programs either as custodians/Trustees or as underwriting investment banks or as settlement-agents. This concentration amplifies the often severe negative effects of *Dominant Currencies* (and especially, *US Dollar Dominance* which was explained in Nwogugu, 2021).

14) Additional oversight and rules by domestic securities regulatory agencies – which will ensure that such companies comply with the disclosure standards of foreign stock markets where they are listed. Non-compliance should result in fines and disciplinary action by the domestic regulatory agencies.

15) Market discipline – wherein informed investors will refuse to buy the non-compliant issuer's shares.

16) Imposing fines and criminal sanctions on GDR/ADR Trustees; and or making GDR/ADR Trustees legally responsible for ensuring that GDR/ADR issuers comply with the accounting/disclosure standards of foreign stock markets.

17) Enacting statutes that empower the foreign securities regulatory agencies and foreign stock markets to stop the trading of the GDRs and cross-listed shares if it is determined that the issuer did not comply with the accounting regulations of the foreign stock market.

18) Enacting statutes that permit levying fines on market makers who trade GDRs/ADRs and cross-listed shares of issuers that do not comply with the foreign stock market's accounting regulations.

19) Enact corporate law statutes in the issuer's home country.

6. ADRS/GDRS ARE A SEPARATE ASSET CLASS, AND GDR/ADR ETFS COMBINE THE RISKS OF BOTH ETFS AND GDRS/ADRS.

GDR/ADR ETFs combine the risks of both ETFs and GDRs/ADRs in ways that can cause additional and "Emergent" harmful *Multiplier Effects*. Some of the risks of GDRs/ADRs were mentioned herein and above, and in Nwogugu (2015). The risks and Public Policy issues inherent in ETFs were analyzed in Nwogugu (2019b).

Given the foregoing risks of GDRs/ADRs, and their *Classification Problem*, they are a separate asset-class that is substantially different from ordinary shares and bonds.

7. CONCLUSION.

As currently structured, regulated and used (and given their legal/Regulation and IPE implications), ADRs/GDRs are global financial stability and systemic risks, and can increase portfolio management risks (e.g., geopolitical risks, currency risks, Inflation risks, sovereign credit risks, *regulatory compliance risks* and international contagion risks) and costs (e.g., hedging costs, monitoring costs, transaction costs). As explained herein, GDRs/ADRs also adversely affect government regulators. Thus there is a significant need for both new regulations for, and new/re-designed ADR/GDR structures.

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