$100 TRILLION WORLD ECONOMY

The Importance of Having Exposure to Key Markets

AN LCR WEALTH WHITE PAPER

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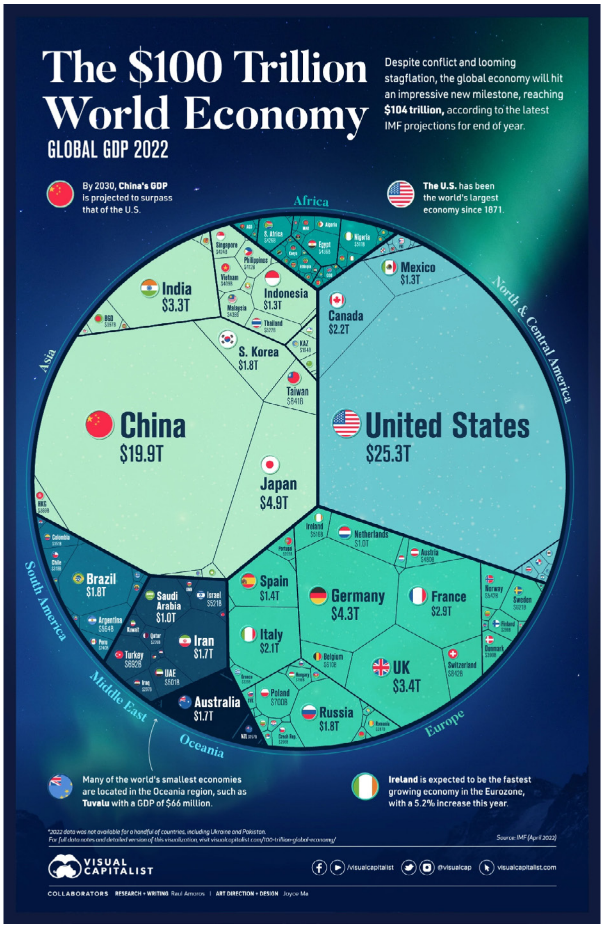

With such a large global economy and the increasing interconnectedness of capital markets, a question arises for global investors: How should I compare different countries' capital markets when making investment allocation decisions?

According to the International Monetary Fund (IMF), the global economy is forecasted to reach a record $104 trillion in GDP for 2022. As this infographic from Visual Capitalist shows, the expectation is for the United States to remain the largest economy in the world, with a 2022 GDP of $25.3 trillion. China is estimated to remain the second largest economy at $19.9 trillion, about 20% lower than the United States. Japan is expected to remain the third largest economy, with an expected 2022 GDP of $4.9 trillion.

Several major headwinds for global economic conditions have made this comparison challenging. These headwinds include the record-high inflation seen in nearly all currencies, monetary policy tightening, and continued geopolitical unrest.

With these challenges and economy size estimates in mind, LCR Wealth Management has researched factors that contribute to investors' decisions to allocate funds to different capital markets. Our research found that the main factors influencing global investors are ***liquidity, efficiency, investor protections, and currency***. These four elements differ among countries and markets. Those differences are often the catalysts driving investors to diversify a portion of their assets into one country's capital market over another.

Liquidity

Liquidity is the first of the four factors that we evaluated. Liquidity refers to the ease with which an investment can be turned into cash. For example, an investment in a common stock such as Apple (AAPL) can be sold on the stock market for cash any time the market is open. In contrast, an investment in a private equity fund, such as the KKR Fund, is often prohibited from being resold or transferred while the fund is operating. This means that stock is more liquid than the KKR Fund private equity investment, since stock can be more easily converted from an asset into cash.

In addition to comparing the liquidity of different asset classes, i.e., common stock versus private equity, the liquidity of one stock versus another can also be compared. The 30-day average daily volume for Apple (AAPL) stock is 93 million, meaning that on average 93 million AAPL shares trade hands each day. This high volume of trading suggests that if an investor were to try to sell their position, they can be assured that there are sufficient buyers to do so. In contrast, Nubia Brand International (NUBI) is a very thinly traded stock, with an average daily volume of about 3,000 shares. This low volume suggests that if an investor were to try to sell a large block of NUBI shares, they may have difficulty finding enough buyers at the current market price. In order to sell their shares, the seller would need to lower their asking price, which would put downward pressure on the market price of the stock.

High volume is often correlated to tight bid-ask spreads, which is another measurement of a stock's liquidity. The bid-ask spread is the difference between the highest bid on the market to purchase a share of a given stock and the lowest asking price on the market to sell a share of the same stock. If this spread is wide—essentially revealing that there is a big difference between the most that a buyer is willing to pay and the least amount that a seller is willing to accept—it indicates lower liquidity. If an investor attempts to sell a large block of shares of a stock with a wide bid-ask spread, they will likely need to lower the asking price to find enough buyers. But if the bid-ask spread is tight, then there is a high probability that there are plenty of potential buyers willing to purchase the shares at a price close to the current market quote; which is the mid-point between the lowest asking price and the highest bid price for the stock.

In short: higher volume and/or tighter bid-ask spreads mean that an asset has higher liquidity, and higher liquidity means an asset is easier to turn into cash at the current market price.

Liquidity plays a major role in the ability of a market to attract capital, especially during a market downturn. For example, according to a research paper written for the US Chamber of Commerce by two finance professors, Charles Jones and Erik Sirri, "[e]ven while stock values were dropping sharply in 2008, investors could still buy and sell as usual. When liquidity dried up and other markets froze, the equity markets continued to operate effectively and efficiently." Liquidity allowed for a normal trading pattern. Investors sold stocks and reallocated the funds to cash and Treasury bonds/notes. There were sufficient buyers to allow these risk-averse investors to liquidate their holdings and to cleanse their portfolios of risk. Investors in less liquid stock

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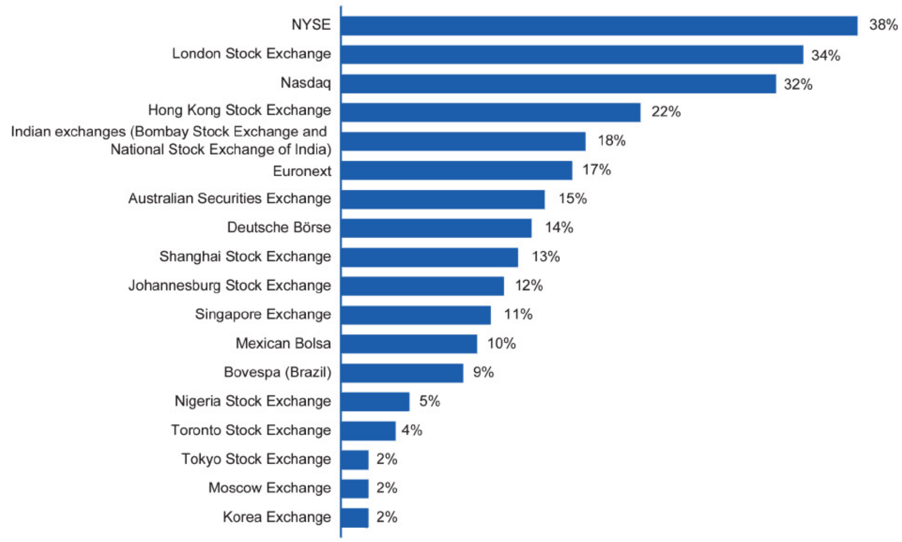
markets often found themselves in a position where it was impossible or impractical to sell, because there simply weren't enough buyers.

It became a lose-lose situation: they couldn't offload certain investment positions because there weren't enough buyers at market prices, yet the positions now presented very high risks, requiring mitigation.

Many investors maintain positions in the US stock market so that they have maneuverability in times of market downdrafts. This flexibility provided by the US markets greatly benefited international investors who had US exposure during the 2008 Global Financial Crisis. In a global downturn, investors with US allocations will have more ability to make effective adjustments to their portfolios. If investors find themselves unable to offload risky positions in foreign markets due to a lack of buyers, they can reduce their risk by offloading positions in the US and instead holding the historically strong US dollar. If investors find themselves wanting to overweight a certain area of the market that has fallen sharply, in order to profit from an eventual return to higher prices, they can rebalance their portfolio effectively in the liquid US markets.



Source: The Economist Intelligence Unit

Liquidity provides benefits not only to investors, but also to the companies issuing shares on the stock market, which is also referred to as listing. The biggest and best foreign companies seek out the largest and most liquid markets to list their shares. A PwC report cites an Economist Intelligence Unit survey of 400 executives worldwide, in which 49% of respondents chose liquidity as an important factor in choosing an exchange on which they would list their shares. In the same study, the exchange that companies most often chose for listing their shares, outside of their home country, was the New York Stock Exchange (NYSE) at 38% of respondents, followed by the London Stock Exchange (LSE) and Nasdaq, with 34% and 32% respectively. (See chart to learn how other stock exchanges fared.)

Evidence that firms recognize the United States' leadership position in liquidity can be seen in the various foreign companies that have chosen to list on the US exchanges. Top-tier Chinese tech companies, such as Huawei and Alibaba, list on US exchanges to access the deep pools of capital that the US markets provide. Private international companies that are looking to go public see the success of other firms that list on US exchanges, which further strengthens the reputational appeal of the US markets as a global leader in liquidity.

Efficiency

Efficiency, the second of the four factors that influence global investors, is often tied to liquidity. Despite their connection, it is worthwhile to evaluate efficiency separately for the purposes of this analysis. Innovations are usually the source of improvements to financial market efficiency. ECNs, or electronic communication networks, are the technology that allows investors to trade online rather than on a traditional trading floor. Another innovation, fractional shares, allows investors to purchase a portion of a stock, if they cannot afford or do not want to purchase a full share. ECNs, along with fractional shares and mobile brokerage apps, have greatly increased the efficiency and accessibility of the US capital markets to investors. These innovations have now been adopted by nearly every developed capital market in the world.

When evaluating the impact that these innovations have on financial markets, efficiency can be broken down into two characteristics: speed and cost.

ECNs allow for near-instantaneous trading. Because of this efficiency in the speed of trading, new information is immediately priced into stocks. The above-cited PwC report quotes Nikhil Rathi, CEO of the London Stock Exchange, who says, “Markets are accustomed to evaluating all sorts of risk, whether geopolitical, financial, or— increasingly—climate. Investors are very good at pricing in these risks.” What is the advantage of a market that can immediately price in new information using high-speed trading? A 1999 National Bureau of Economic Research (NBER) working paper, citing Morck, Yeung, and Yu (2000), says, “stock markets in more developed countries incorporate firm-specific information better, and so may help allocate investment more effectively.”

When trading reprices stocks to account for new information, this repricing itself can be valuable information to the other investors. The market price and corresponding yield of Treasury notes and bonds teaches businesses how to price their debt offerings. It also informs investors what returns

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they should reasonably expect from various debt offerings in relation to the returns offered by risk-free treasuries. To summarize, increased efficiency speeds up the pricing-in of information, allowing investors to see the market's reaction faster and more accurately and giving investors better insights into investment opportunities.

The other type of efficiency, in the **cost** of trading, improves returns. Investments need to return enough to pay for the trading costs before the investment becomes profitable. With a lower trading cost, the same investment would have a notably higher net profit. Before competition in 2019 caused nearly all brokerages to offer $0 trade commissions on common stocks, there was a wide disparity between the per-share price paid by retail investors versus institutional investors. Institutions trading large blocks of stock were able to negotiate lower per-share commissions because they were trading large quantities. This meant that the trading cost hurdle to profitability was lower for these institutions than for retail traders. Now that trading costs are near or at $0 in the United States, the disparity has mostly been eliminated. Retail investors today have similar, if not the same, trading costs as any institution.

The efficiencies of **speed and cost** in capital markets result directly from the innovations that have come out of the US system. US brokerages battling for market share continue to be the primary driver of expansions and improvements to the efficiencies of capital markets. We might consider the brokerage app Robinhood as a contemporary example of efficiency-improving innovation driven by US competition. This app gained massive popularity during the COVID-19 pandemic, as people confined to their homes suddenly had the time and resources to focus on investing. The app offers commission-free ($0) trading from any smartphone with internet access. It also provides low-cost options trading and other tools for today's investors. This is in no way a pitch for Robinhood over other brokerage platforms, but its very existence highlights the continued push from US brokerages to gain market share through efficiency-improving innovation.

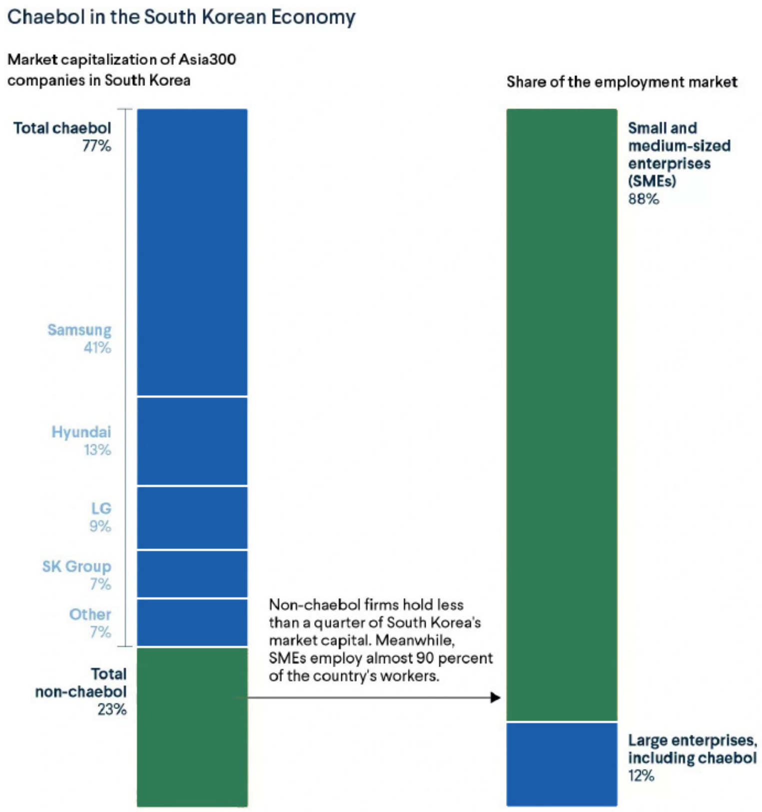
Liquidity and efficiency have the same beneficial effects on other markets as they do on the stock and bond markets: improved price stability, increased net returns, and less disparity between retail investors and institutional investors.

That said, it could easily be argued that investor protections, the third factor influencing global investors, are far more important than liquidity and efficiency in the long term.

Investor Protections

Investor protections essentially boil down to the ability of both minority shareholders and creditors, i.e., outsiders, to effectively enforce laws for the fair return of capital. These protections are sometimes referred to as strong corporate governance, in contrast to weak corporate governance in which majority shareholders and executives, i.e., insiders, can expropriate funds. Expropriation of funds refers to various methods in which insiders maneuver funds to unfairly return capital to themselves while shortchanging outsiders.

In a market with weak investor protections, there is a mix of demand from insiders and outsiders. Insiders can benefit from both expropriation as well as the traditional benefits provided to all investors, such as dividends. Outsiders try to price-in the risk of expropriation. Insiders, on the other hand, can accept a higher purchase price because of the expropriation benefits obtained from their control position. This extra demand from insiders prevents outside investors from fully pricing-in the risk associated with expropriation. As a result, these stocks are perpetually overvalued relative to their risk. This makes the expected return less than that of a comparable stock in a market with high investor protections, which is more accurately priced relative to its risk.



Sources: *Nikkei Asian Review*/Stratfor; South Korean Ministry of SMEs and Startups.

Data from studies cited in the NBER working paper shows that countries with weaker investor protections tend to have more highly concentrated corporate control structures. This can be seen empirically in the study of 3,000 Asian firms referenced in the working paper. The study showed "remarkable evidence of 'crony capitalism' in Asia: outside Japan [with its relatively strong protections], the top 10 families in each of the remaining 8 countries . . . control between 18 and 58 percent of the aggregate value of listed equities." This can still be seen today in modern financial markets such as South Korea. South Korea has several large family-owned conglomerates that have been termed "chaebols," a coinage derived from the South Korean words for "wealth" and "clan." As seen in the graphic below, which dates from 2018, these chaebols cumulatively account for upwards of 75% of South Korean equity value.

This gives controlling families in South Korea extraordinary power.

How does a concentrated corporate control structure relate to investor protections and investment allocation decisions? Concentration of corporate control is a way for outsider investors to evaluate the

risk of expropriation. If there are few or no consequences for expropriation, then insiders will try to maintain control over the corporation to continue expropriating funds. They do this because it is the most efficient way to grow their wealth. If there are major consequences for expropriation, as in the United States, with fines and potential for jail time, then the economics of expropriation may not make sense from the viewpoint of the controlling insiders. In this scenario, insiders would be more willing to seek out external funding, and give up partial control, since this becomes the most efficient way to grow their wealth in a country with strong investor protections like the United States. Strong investor protection laws and enforcement change the economics of expropriation, in that the incentive for insiders to seek external financing and abide by investor protection laws outweighs the incentive to expropriate funds. Putting it all together: heavily concentrated control suggests that a capital market has few or no consequences for expropriation, meaning there are weaker investor protections and securities in that market will have a lower expected return.

Investor protections also impact the breadth and depth of a capital market. It makes sense that investors would be more confident investing with better investor protections. More confidence when investing suggests that more people are willing to invest more money into that market, increasing its breadth and

depth. A case in point appears in a study in the *Journal of Accounting Research*, which found that US investors increased their holdings of Korean stocks when Korean firms improved their corporate governance practices. The South Korean market still has heavily concentrated control which presents increased risks of expropriation, but when this is mitigated, even marginally, there is evidence of increased investment. As the breadth and depth of a capital market increases, the demand for each stock within that market increases, too. As aggregate demand increases, while supply remains fixed, valuations rise. In short: better investor protections lead to higher valuations.

The US is widely regarded as having the best investor protections of any country in the world. The reasons include the Securities and Exchange Commission's disclosure requirements, the rights given to creditors in bankruptcy proceedings, and the historical success of shareholders in class-action lawsuits. The SEC requires that public companies report audited financial statements following the generally accepted accounting principles (GAAP) standard, in a filing called a "10-K" or "10-Q." The SEC also requires that insiders disclose their purchases and sales of company stock, so that this record can be accessible to the general public. Regulation FD, standing for "fair disclosure," requires the public disclosure of any material nonpublic information that is shared with anyone outside the company. These and myriad other rules and regulations that the SEC places on the US financial markets instill confidence in global investors that the US government will not allow insiders to expropriate funds or otherwise fail to return capital to outside investors.

Since better investor protections increase the breadth and depth of markets, the United States' leadership in investor protections is evidenced by the immense size of its capital markets relative to other countries' markets. China has long been forecasted to overtake the United States both in terms of GDP as well as capital market size. But this growth has been hampered by frequent government interventions, which have cast doubt on the Chinese government's ability to protect investors. These interventions include a six-month lockout, or forced trading stoppage, during the 2015 Chinese stock market crash. According to Reuters, on a single day in July 2015, "[m]ore than 500 China-listed companies announced trading halts on the Shanghai and Shenzhen exchanges."

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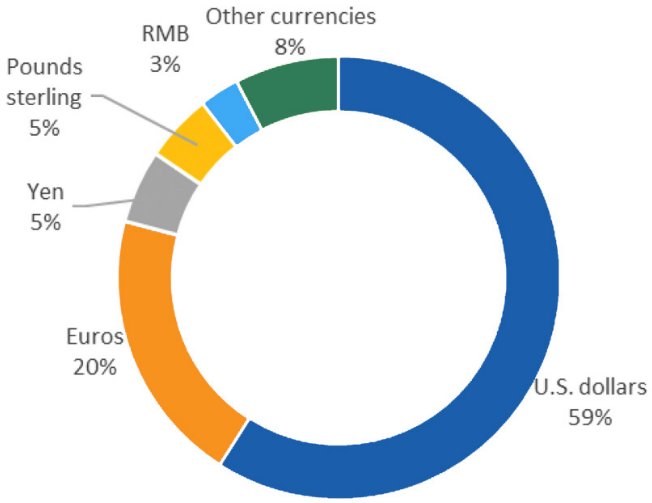
The Chinese government may have been attempting to support equity prices, but in doing so it destroyed liquidity. This contrasts with the example of US markets during the financial crisis of 2008, in that the markets remained liquid and allowed for plenty of trading. The United States did not put an artificial floor on equity prices, but instead ensured that there was ample opportunity for investors to support prices themselves with buying activity. This 2015 example from China is not unique, but rather is emblematic of the near impossibility of other countries' markets to combat the US leadership position in investor protections.

Currency

Currency is the fourth and last factor that contributes to the ability of a capital market to incentivize investment. Currency has a strong effect on the amount of foreign investment in a capital market. The reason for this effect is the risks to foreign investors that come from fluctuating exchange rates. When investors exchange their domestic currency for a foreign currency in order to invest in a foreign capital

market, they must account for the currency risk associated with the foreign currency. If the foreign currency weakens against their domestic currency, investment returns are reduced or eliminated due to exchange rate losses. Investors seek out markets denominated in strong, globally held currencies to reduce the risk of their home currency strengthening against the foreign currency. This relationship between currency and capital markets is straightforward, but it carries immense importance. In short, if a given currency is stronger and more stable than an alternative, then the capital market denominated in that stronger and more stable currency will be more likely to attract investment.



Source: International Monetary Fund. **Notes:** 149 reporting countries.

The US dollar has been the global reserve currency for over 70 years, since it replaced the British pound at the end of World War II. According to the [Congressional Research Service], "Today, central banks hold about 60% of their foreign exchange reserves in dollars." Ninety percent of foreign exchange transactions worldwide include the US dollar on one side or the other.

According to the *Washington Post*, the dollar remains the strongest global currency, "not only because of the size of the U.S. economy and historical inertia, but because of the unparalleled deep, liquid private financial markets and strong protections for property rights in the United States."

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Here we start to see the cyclical nature of the US financial markets' leadership. The depth, liquidity, and efficiency of the US markets bolster the US dollar, since, according to the IMF Blog, "the stability of the economy and political decisions matter for international acceptance." The dollar as the global reserve currency contributes to its status, as the Congressional Research Service refers to it, as "the preferred currency for investors during major economic crises, as a 'safe haven' currency." Investors seek out the US dollar for its strength, which increases the US markets' depth and liquidity, further stabilizing the US dollar. This creates a perpetual cycle. The US Treasury Department reaffirms this conclusion, saying, "As long as the United States maintains sound macroeconomic policies and deep, liquid, and open financial markets, the dollar will continue to be the major reserve currency."

This cycle is also present in the other three factors that we evaluated. Liquidity, efficiency, and investor protections incentivize US investment. More investment improves the liquidity, efficiency, and investor protections of the US markets. This is true regardless of the direction of security prices. In downturns, investors look to the US market for the maneuverability and the stability and strength of the US dollar. In upswings, investors look to the US market for depth, innovation, and growth. In all market conditions, the unmatched investor protections of the US regulators work to instill confidence in all capital market participants. This iterative cycle will allow the US to maintain its position as the gold standard for global capital markets long into the future. The question that international investors must ask themselves is, If the world's central banks choose to have exposure to the US dollar for all the reasons explored above, shouldn't I have exposure in my own portfolio?

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