Capstone Project Public Summary

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Project Title: Emerging Markets Snapshot
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Project Overview and Objective

This project purpose is to provide the Global Emerging Market team with an updated Market Snapshot, that can provide a real-time market update overview with all the needed information related to Emerging markets. This automated spreadsheet aggregates and displays the primary financial markets metrics of Emerging Markets, it allows users to get a quick but comprehensive picture of global emerging markets. The Snapshot will help portfolio managers prepare for their client meetings by equipping them with daily market updates, since there is a lack in the data sources for Emerging markets, as the majority of data reports are highly focused on developed markets.

Business Background

Global Emerging Market Active Equity Team (GEM) is led by the top Portfolio Managers in the field with an average experience of 12 years, and a total product range of approximately USD 25 billion of assets under management (AuM). Furthermore, it is supported with 40 investment professionals team, who conducts more than 4000 company meetings annually, their main focus is in Asia, Eastern Europe, Latin America, the Middle East, and Africa, the team is equipped with a local on the ground knowledge, the latest technologies, proprietary risk management systems and long-standing, broad, and deep access to company management.[1]

The GEMs team is managing many funds in the BlackRock global funds range, one of many is the 4-star Morningstar rated BGF Emerging Markets Fund that seeks to maximize the total return which invests globally at least 70% of its total assets in the equity securities of companies domiciled in or exercising the predominant part of their economic activity in emerging markets.[2] The second 4-star Morningstar rated fund is BGF Emerging Markets Equity Income Fund, that seeks an above average income from its equity investments without sacrificing long term capital growth, and invests globally at least 70% of its total assets in the equity securities of companies domiciled in or exercising the predominant part of their economic activity in emerging markets.[3]

The term "Emerging Markets" broadly encapsulates regions such as Eastern Europe, Asia, South Africa, Latin America and the Middle East. Emerging Markets are usually affected by macro-economic factors and are prone to high volatility than developed countries, since the Emerging markets are smaller and vulnerable to a political transition, tensions, volatile commodity price and changes in monetary policy, not to mention the currency risk that puts investors at risk in increasing or decreasing in the security price and the actual value of the currencies compared to the US dollar.

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[1] Global emerging markets - Themes | BlackRock | Feb 2018
[2] BGF Emerging Markets Fund | A2 – BlackRock| as end of May 2020
[3] BGF Emerging Markets Equity Income Fund | A2 – BlackRock| as end of May 2020

However, Emerging Markets carry many potential benefits like 1) the opportunity to access growing economics and undervalued securities, 2) Diversification in investing in markets that do not move in sync with each other, 3) improving the overall long-term returns.

Emerging Markets is known for their higher rate of growth that is troubled by higher sociopolitical instability and volatility, which leads to eventual economic convergence that results in a higher than average return on equity compared to Developed markets.

Research Framework and Data Resources

For the purpose of building this spreadsheet, an online search was conducted in order to identify the main financial metrics and indices to be used, in order to ensure an accurate outcome, the next step was using Bloomberg to extract the data required to be showcased in the Emerging Market snapshot within the Equity asset class.

Correspondingly, Microsoft Excel was used as the vehicle to showcase the extracted data, as per the agreement with the sponsor, only publicly available information was used in this project. Geared toward assembling this project, I have divided it into five stages:

- **Stage One:** Gaining Bloomberg Technical skillset
- **Stage Two:** Identifying financial and Performance metrics
- **Stage Three:** Extracting the required data from Bloomberg.
- **Stage Four:** Designing a template for the output data that is linked to the database.
- **Stage Five:** Final Automated Excel sheet.

In order to extract the required data from Bloomberg, I mainly used Bloomberg Query Language which is the language used to perform analytics and retrieve current and historic data from the Bloomberg database, BQL was utilized to conduct a screening and a region variable setup, in which screens a list of funds that are within the fund benchmark data, matching the index ticker for each return group and then it is filtered by a specific formula for the required asset class, fund type, region and GICS sector, while each return percentage group was averaged for the matching funds.

With the aim of achieving this outcome, I have been working with Bloomberg Excel Add-in function and using the spreadsheet builder, function builder plus using Bloomberg Formulas and Calculation overrides, Tickers for all the related indices are linked in an excel file which pulls specified performance data (e.g. total returns, price-performance) and risk indicators (e.g. volatility) directly from Bloomberg as per the chosen time horizon.

Moreover, there was a use of two macros in this project, the first macro functionality is copying the output of the formulas in the cells and pasting them as values, in order to avoid losing the data after disconnecting from the terminal. After the pasting process is done it works on cleaning the data from any "not applicable" data in order to have a clean informative spreadsheet. The second macro works on generating the spreadsheet as a PDF which makes it easier to transfer it and leverage it through the platform.

Summary of Results

The project provides a single view summary for the most relevant countries in each region, therefore the users can estimate and compare the financial indicator over a specific period that

tracks the performance by region, sectors, asset class, and permutation of all, over a specific time horizon, This project is divided into:

- World indices: Which tracks the performance of the top equity indices, Cross Markets, Major FX rates, Central bank Rates, three months interbank rates and top benchmark bonds.

- MSCI Emerging Market Region indices: Which highlights the performance of the MSCI country index in Asia, Latin America, Eastern Europe, Middle East, and Africa.

- Main Benchmarks and Market Movers: that helps identify and monitor the main market movers with their (MTD, YTD) turnover, earning per share, P/E ratio and 10-day volatility, in addition to monitoring the main benchmark indices for the GEMs funds.

- EM overview: it provides a cross-market view of global emerging markets, it allows you to monitor primary stock exchange indices and currency rates daily changes in one sheet, so users can compare country performance in each region.

- Asset Class | Region TRR: This sheet is a replica of the Fund Map function in Bloomberg vs. region matrix, so as to achieve the required results a complex BQL region and variable setup screening was conducted which allows users to track the grouped averaged Return percentage for the chosen index for each asset class and region as per chosen time period

- Asset Class| Sector TRR: This sheet focuses on the Sector vs. Region metrics that allows you to track the grouped averaged Return percentage for the chosen index for the GICS Sector and asset class as per chosen time period.

Areas for Further Research

The project framework and results are focused on analyzing Emerging Markets and having a quick but big snapshot of the market, by creating consolidated database to the financial Market, and linking it to the Bloomberg terminal. Nonetheless, the foundations of this project can be used to expand the analysis which includes ESG investing, following the company CEO announcement in his letter sent to clients earlier this year, that he will now assess ESG "with the same rigor that it analyzes traditional measures such as credit and liquidity risk", a focused spreadsheet on ESG investing can help monitor ESG financial market and narrate ESG friendly investments into decision making.

Learning Outcomes

This Capstone Project required the application and understanding of many databases and tools, it gave me the opportunity to learn Bloomberg, and it's inbuilt tools and functions, it also allowed me to expand my knowledge and have a hands-on in-depth experience in both Excel and VBA. Additionally, it helped me gain a comprehensive knowledge and insight of Emerging markets. I would like to thank BlackRock and my team for giving me this opportunity, and for their ongoing guidance and support throughout the process.