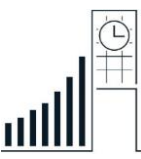


iShares JPMorgan USD Emerging Markets Bond ETF (NASDAQ: EMB)

Alternatives Division

Portfolio Manager: Daniella Smith

Analysts: Adrian Ng, Chris Hui, Torrey Jacobson-Evans, Anthony Chafik, Allison Choi, Rubeina Firdaus



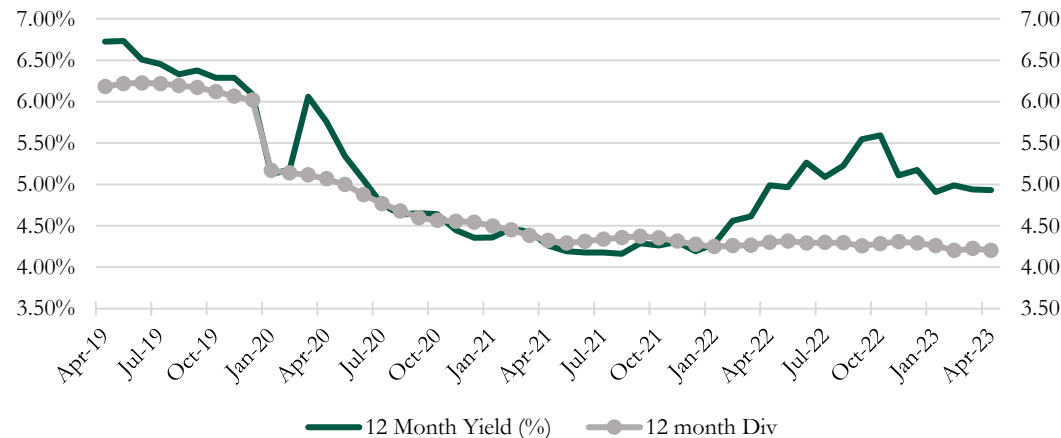
EMB Overview

BINGHAMTON INVESTMENT FUND

ETF Overview (As of 4/26)

Current price	\$85.34
NAV	\$15.01B
Expense ratio	0.39%
12M Trailing Yield	4.93%

12M Yield & Dividend History

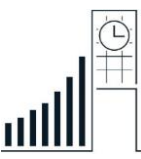


EMB Description

- Tracks J.P Morgan EMBI Global Core Index (JPEICORE) composed of US dollar-denominated emerging market government bonds
- Exposure to 30+ emerging market countries
- Dividends distributed & holdings rebalanced monthly

EMB Portfolio Characteristics

Beta	0.47
W.AVG Yield to Maturity	7.22%
W.AVG Maturity	12.39 Yrs
Eff. Duration	7.36
Convexity	0.91



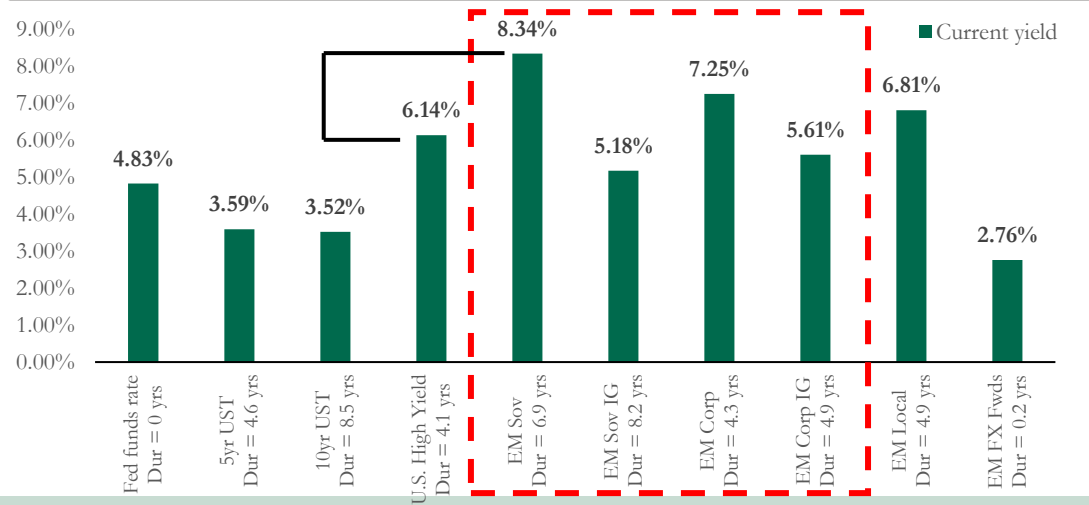
Emerging Market Sovereign Debt

BINGHAMTON INVESTMENT FUND

Overview

- 1 **Public debt issuance:** Fixed-income debt issued by countries with developing economies, representing 25% of the global bond markets valued at \$29.6 trillion
- 2 **Growing asset class:** Comprised of four distinct markets including U.S. dollar sovereign bonds (\$1.8 trillion or 9%), local currency sovereign bonds (\$8.4 trillion or 72%), corporate bonds (\$2.2 trillion or 19%), and frontier bonds⁽¹⁾
- 3 **Country weights⁽²⁾:** 15% Europe, 8% Africa, 31% Latin America, 23% Asia, and 23% Middle East
- 4 **Risks:** EM fixed income carries higher risks than domestic debt, driven by variables of the issuer's economic performance, political volatility, and currency

EM Bond Yields Remain Unreasonably High



Local Currency vs. Dollar Dominated

Main difference is **FX risk**, also known as **currency risk**, consisting of two components: exchange rate fluctuations and currency devaluations

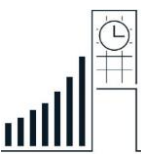
- | | |
|--|---|
| <ul style="list-style-type: none"> Bonds are issued in local currencies Need to convert dollars to foreign currency prior to buying the bond Value of the investment is affected by the rise and fall of the foreign/U.S. dollar exchange rate Local currency strong against the dollar, returns positively impacted | <ul style="list-style-type: none"> Bonds are issued in U.S. dollar No need to convert to foreign currencies when investing No impact from currency risk since bonds are dollar dominated Investors are insulated from an additional layer of volatility in times of economic/market uncertainty |
|--|---|

Return Scenarios for EM Fixed Income

	1-year Return Scenarios		
	Mild recession	Soft landing	Deep recession
10yr UST	5.4%	-4.7%	9.5%
	1-year Annual Return Scenarios		
EM Sovereign	5.4%	10.7%	-3.9%
EM Sovereign IG	7.1%	0.2%	0.9%
EM Corporate	5.4%	6.8%	0.8%
EM Corporate IG	6.2%	3.9%	2.7%
	1-year Annual Return Scenarios		
EM FX Fwds	11.1%	13.8%	3.2%

(1): Note that while the frontier markets represent a growing portion of the universe of U.S. dollar-sovereign bonds, there's no simple definition of a frontier market. As such, they are not included in the JP Morgan GBI-EM Global Diversified of local currency sovereign bonds at an index level and should be looked at separately given the particularities of these issuers.

(2): Data is sourced from the JP Morgan Emerging Market Bond Index (As of Dec 2021).



Political and Economic Overview

BINGHAMTON INVESTMENT FUND

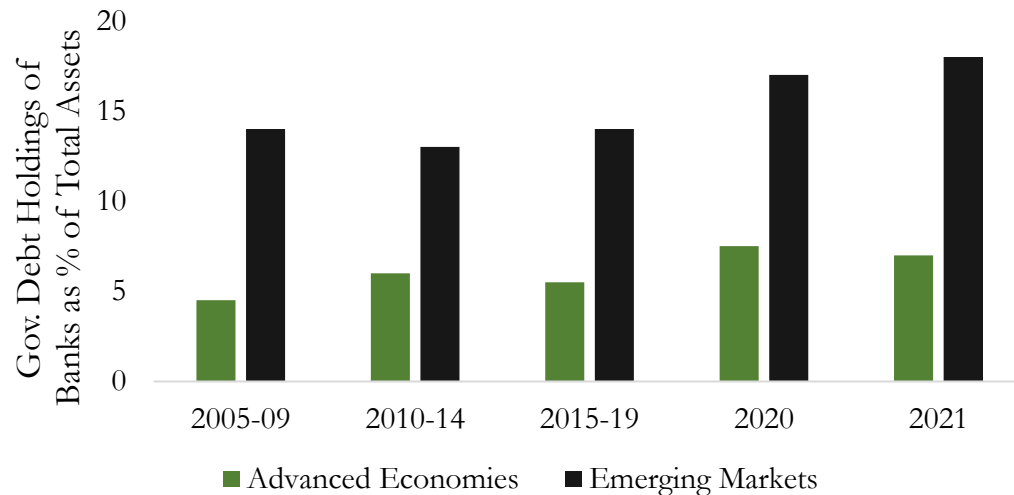
Political and EM Relationship

- Reduction in sovereign bond spreads in EM economies with strong democratic governments
- Whereas countries with more autocratic governments lead to an increase in sovereign bond spreads
- EMB has holdings in countries with differing governing styles

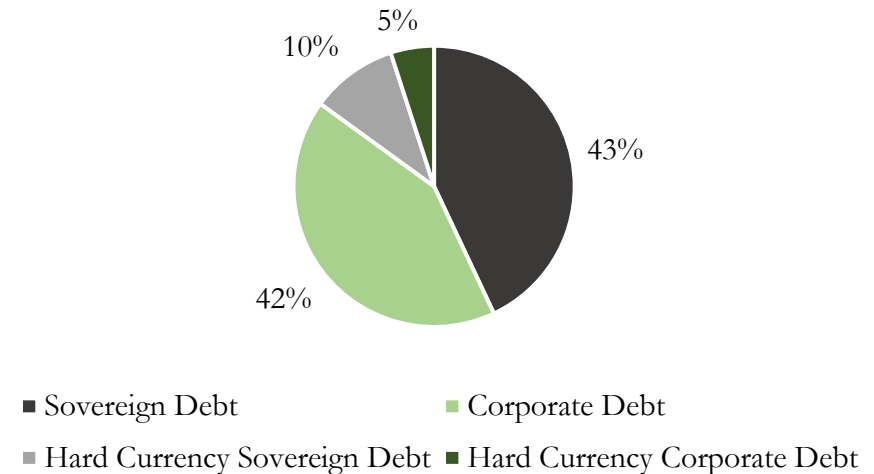
Advantage of EM Economy

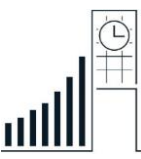
- Economies of the US and other developed countries are slowing down
- This allows for opportunities to arise in emerging markets and its bonds
- EM debt is reaching its end, giving it an advantage over other asset classes

Banks' Domestic Sovereign Debt Exposure



EM Debt Market



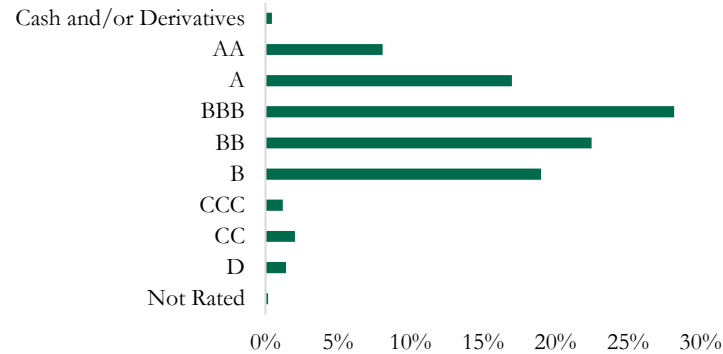


Superior Credit Quality with Low Credit Risk

BINGHAMTON INVESTMENT FUND

Credit Rating Concentrated Around IG Bonds

Credit Ratings Breakdown



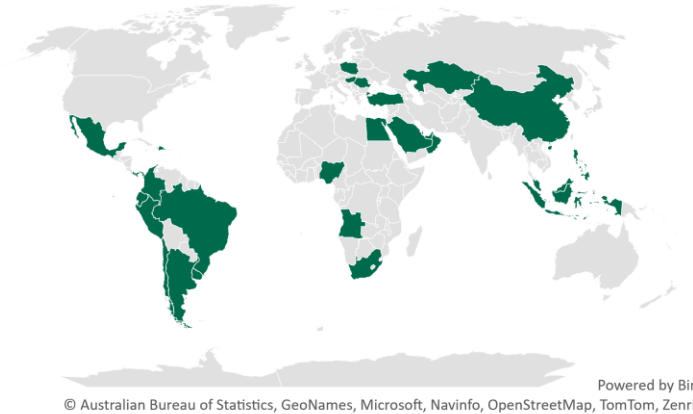
7.22% Average YTM

Emerging Markets fears are mispriced

Emphasis on Geographic Diversity

Holdings spread across 30+ countries

85% Sovereign Bonds



Secular Emerging Markets Tailwind

Asia Pacific Growth

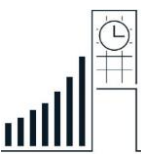
China reopening tailwind, heavily dependent on imports
East/Southeast Asia set to benefit

Emerging Markets Growth Gap

Developed Markets GDP to decline to near zero
EM and DM growth gap to widen from 1.2% to 3.6%

Global Economic Stability

Global Inflation Expected to fall to 4.3% in 2024
Resilient growth in the Middle East/South America expected



Favorable Landscape for Tightening Spreads

BINGHAMTON INVESTMENT FUND

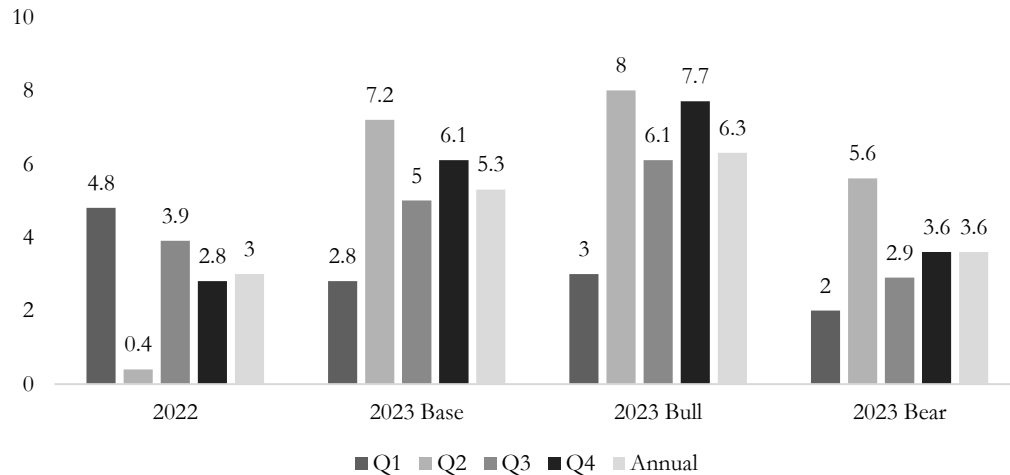
Outlook

- China reopening + better than expected global demand anchors EM growth ~4% in 2023 and alpha of +2%
- Declining inflation and lower core yield volatility favors EM debt

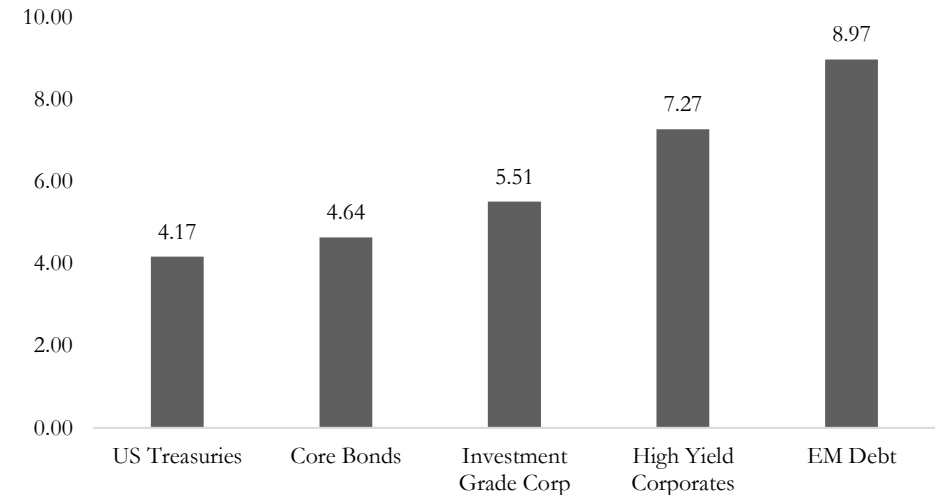
Disinflation

- Supply chains, commodities and the Chinese PPI all working to alleviate inflation pressure globally and within EM
- Higher confidence around EM disinflation, given weaker growth, tighter monetary policy and softer labor markets

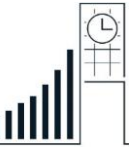
China GDP YoY (%)

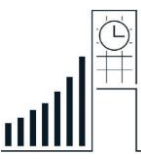


EM Debt: Attractive Yields



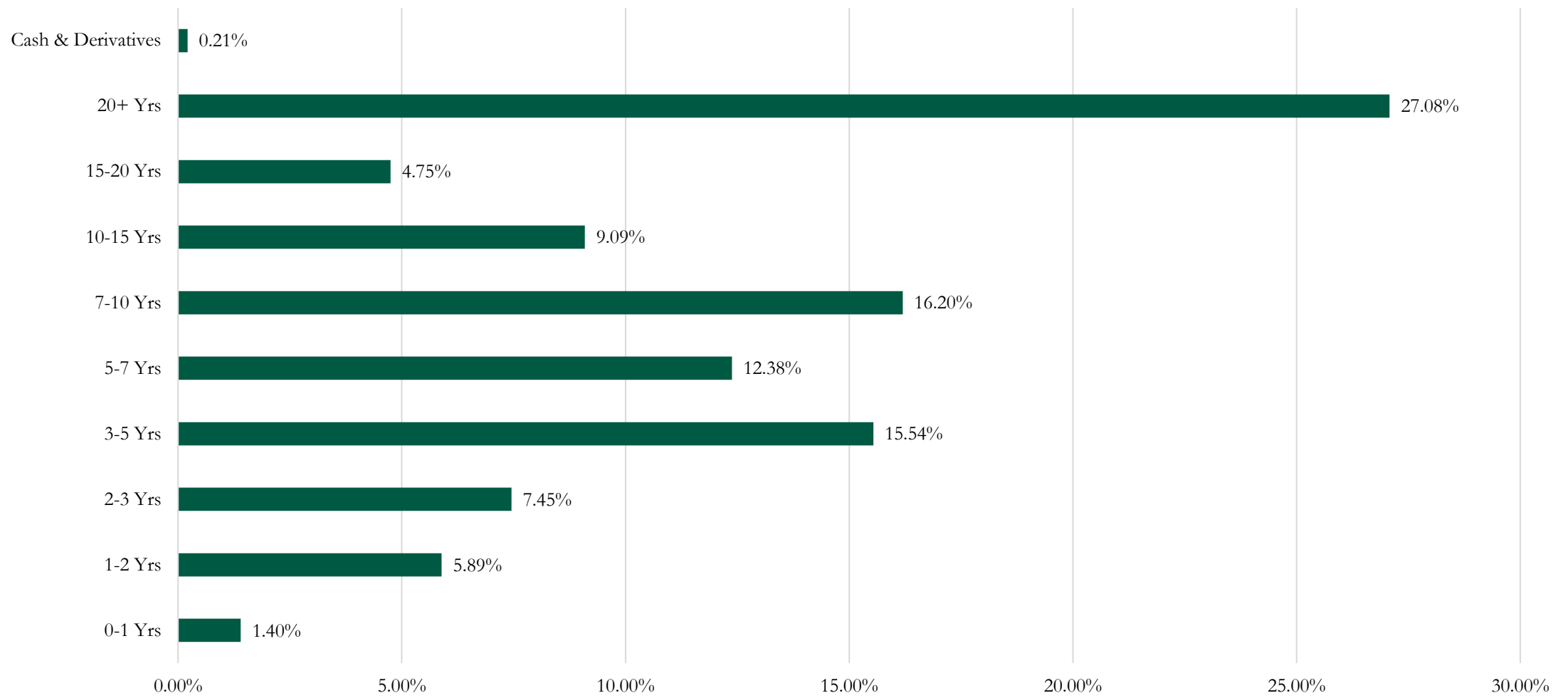
Questions?

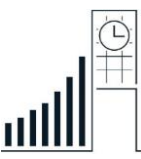




EMB Maturity Breakdown

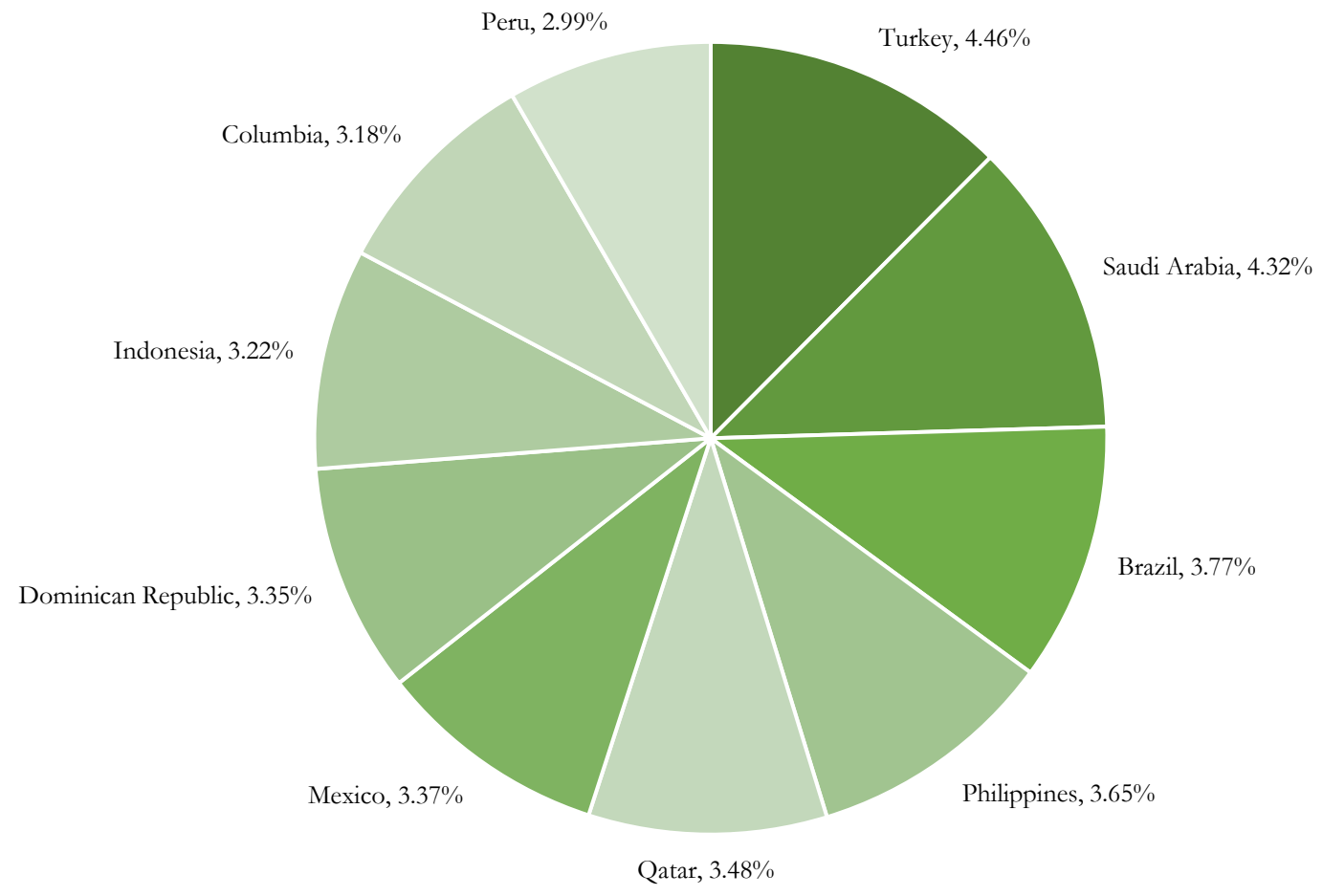
BINGHAMTON INVESTMENT FUND





EMB Holdings Top Issuers

BINGHAMTON INVESTMENT FUND



Top Holdings Represent 35% of Total Holdings