Gaining Exposure to Growing Economies:

A guide to an Overweight in the MSCI Emerging Markets Index

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Executive Summary

Question

Should investors overweight or underweight their Emerging Markets allocation (i.e invest more or less than 11%) in a Global Equity portfolio over the next 1-3yrs?

Global Overview

The effects of recent geopolitical events and macroeconomic changes has negatively impacted economies whilst also creating growth potential in emerging market economies

VFMC Investment Approach

EFFECTIVE
AT DELIVERING AGAINST CLIENT'S LONG-TERM RISK AND RETURN OBJECTIVES

EFFICIENT
AT PROVIDING VALUE TO CLIENTS

COMPETITIVE
AND EXCEPTION CLIENT EXPERIENCE

Our Framework

- Risk and Return
- ESG
- Momentum & Growth
- Portfolio Compatibility

Impact

An increase in Sharpe ratio by **93%**

MSCI's Emerging Markets Index is a Main Barometer of Performance Across Emerging Market Economies

Tracks the performance of 24 emerging markets

Composition adapts to reflect Emerging Market landscape

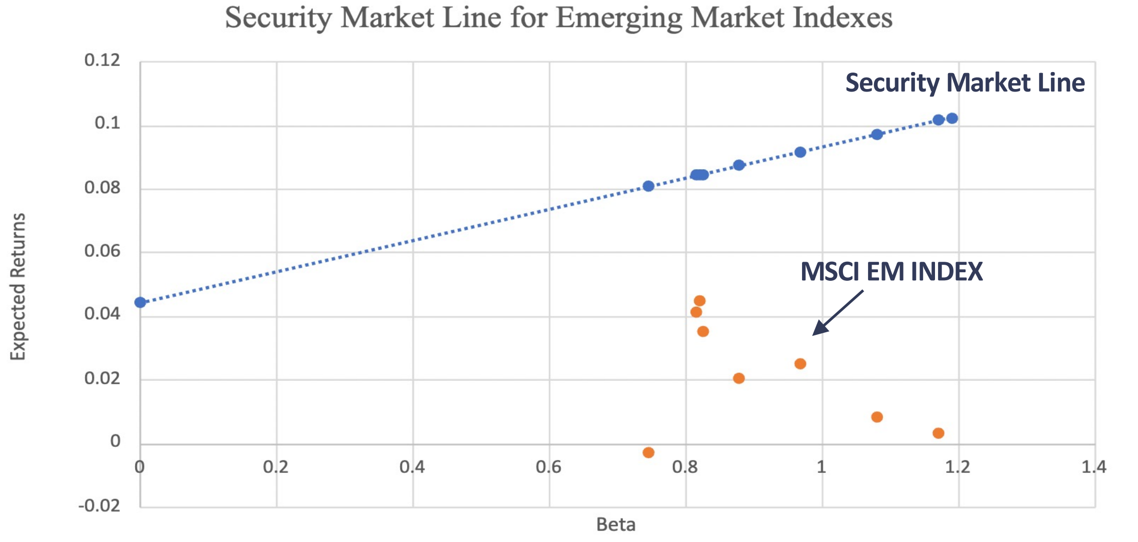
77.22 % of index in **5** countries

- **1421** Securities
- Strong variance in economies and sectors
- Focus on large and mid-cap companies

More weight has been placed on India in the last 5 years, and **less** on China

INDIA	9.2 %	**14.9 %**
CHINA	**33.0 %**	29.8 %

All Emerging Market Indexes have been underperforming



Emerging Markets' Performance in Recent Times has been Especially Underwhelming

Emerging market economies have been severely impacted by COVID-19, social issues, and other economic crises, resulting in enormous underperformance relative to projections as output declines. The impact would have been even larger had it not been for decisive and timely policy actions.

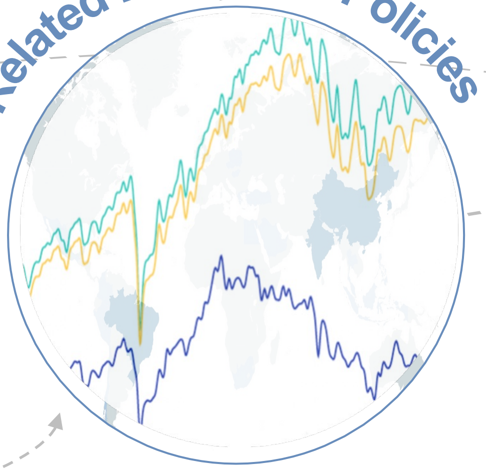
CYCLICAL FACTORS

2021 — Inflation
- Temporary effect on investment
- Central banks will adjust interest rates

2022 — Steel Price
- Shift towards 'green' steel
- Electric arc furnaces gaining popularity
- India: Steel demand bright spot.
- China, India: production growth

2023 — Decline in commodity price / Euro-US Downturn
- Exacerbating challenges for emerging markets and developing countries (EMDEs)
- Growth in the United States and the European Union slows down over a tighter monetary policy this year but rebounds in 2024.

Related Economic Policies



STRUCTURAL FACTORS

2019 — Covid 19
- Lower productivity, layoffs and output.
- Lessened in the past three years
- Need to address exacerbated structural issues like healthcare disparities
- Accelerated the adoption of technology

2022 — Russo-Ukrainian war
- The bank crises remain contained and do not have a meaningful global impact.
- A crisis does not escalate but prolongs for a long time.

Negatively impacted

Capital Accumulation	Human Capital	Forward-Looking Behavior
Accumulability, Rivalness, Excludability	Knowledge and Endogenous Growth	Trade Restrictions

Long-term economic growth

Multifactor Productivity (MFP)

Other factors

The interaction between these structural and cyclical factors is complex and uncertain

These issues can interact and exacerbate one another

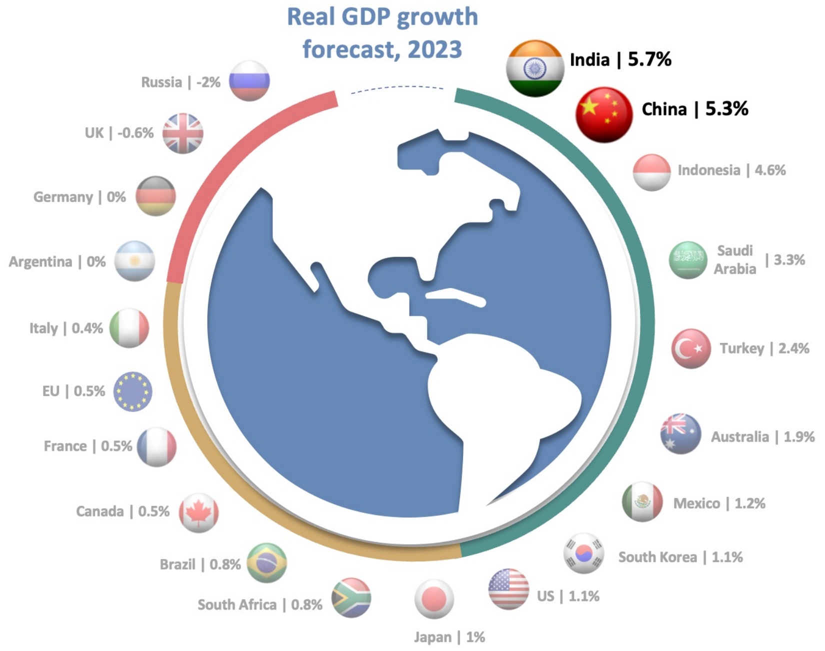
Emerging Markets Experienced a More Pronounced COVID-19 Impact than Advanced Economies, but They Exhibit Greater Growth Potential for a Rebound

Factors that caused Emerging markets to experience a more pronounced impact include:

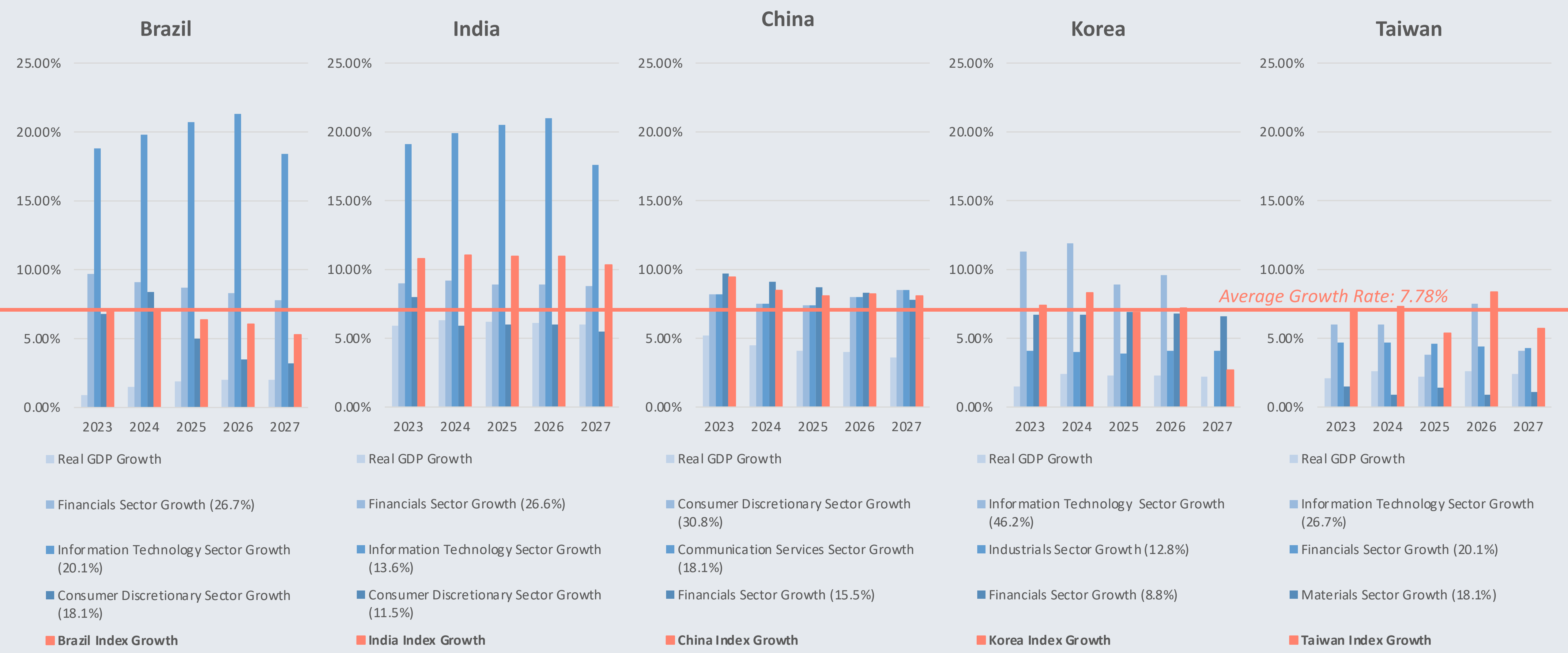
Divergent Fiscal Responses	Public Debt Challenges	Global Current Account Imbalances	Healthcare Capacity and Mobility Restrictions	Tourism and Service Sector Vulnerability

					
Strengths	Strong agricultural base Tourism potential	Emerging superpower Vast Consumer Market Dynamic Workforce	Manufacturing Dominance Shift to High-Tech Industries	Strong industrial base	Strong Infrastructure Increasing FDI inflows
Challenges	Brazilian Construction Weakness	Persistently high petrol and diesel prices	Rising debt concerns	Deteriorating macroeconomic indicators	Export dependency on China
Prospects	Investments in infrastructure projects Mining sector M&A deals grow	Discovery of Abundant Lithium Reserves Reducing Dependence on China	China is considered as World's factory Stable Supply Chains Low Inflation in China	Bilateral agreements	Semiconductor Industry Travel Revival EU Economic Ties US Cooperation
Risks	Dependence on commodity exports	Impact of El Nino	Semiconductor exports ban US-China relationships	Trade dependency on few nations	Taiwan Export Ban Chinese Sanctions

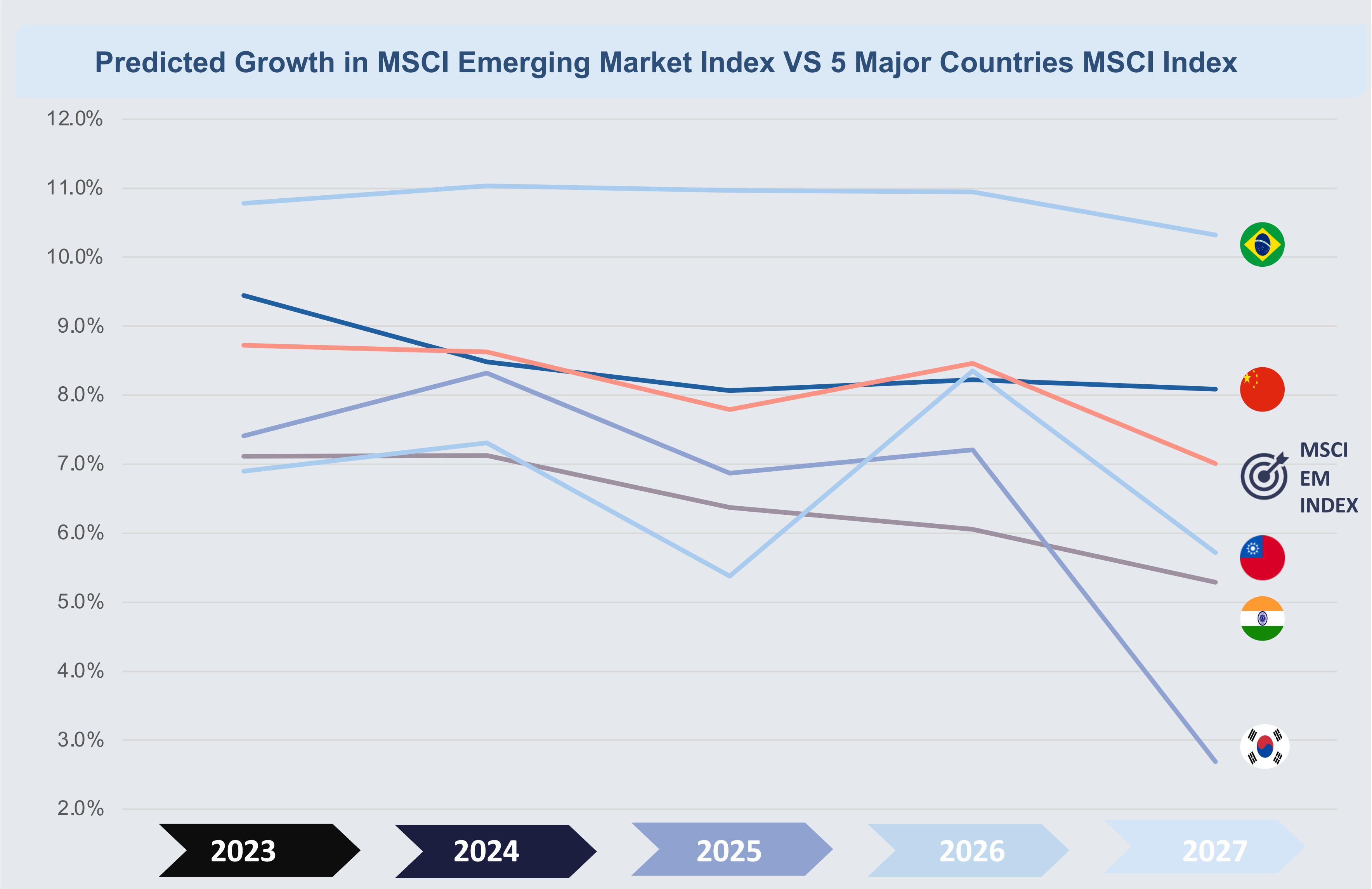
India and China are forecasted to be the fastest growing among other G20 economies in 2023, and have the lowest probability of a recession:



Our Macroeconomic and Industry Analysis Allows Us to Identify the Countries with the Most Attractive Return Growth Potential



Our Macroeconomic and Industry Analysis Allows Us to Identify the Countries with the Most Attractive Return Growth Potential Cont.



Country	Brazil Index	India Index	China Index	Korea Index	Taiwan Index	EM Index
Weighting	6.9%	19.3%	38.6%	15.8%	19.4%	
2023	7.1%	10.8%	9.4%	7.4%	6.9%	8.7%
2024	7.1%	11.0%	8.5%	8.3%	7.3%	8.6%
2025	6.4%	11.0%	8.1%	6.9%	5.4%	7.8%
2026	6.1%	10.9%	8.2%	7.2%	8.4%	8.5%
2027	5.3%	10.3%	8.1%	2.7%	5.7%	7.0%

Indian and Chinese Equities in the MSCI Emerging Markets Index offer **above** average index growth

Note: MSCI EM index growth is the weighted average growth rate of the five main countries

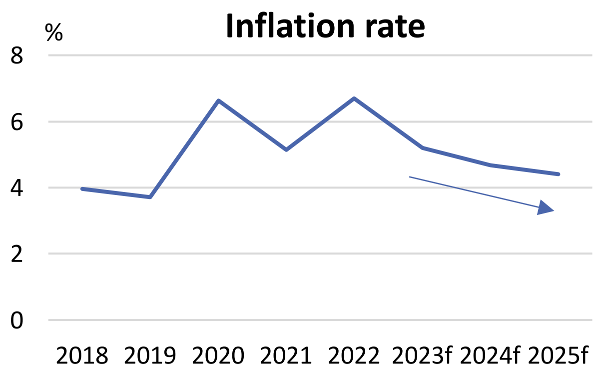
Indian Equities in MSCI EM Index Thrive Amid Global Uncertainty, Enjoying a Goldilocks Moment with Strong Growth Prospects

Highly Educated Vast Population

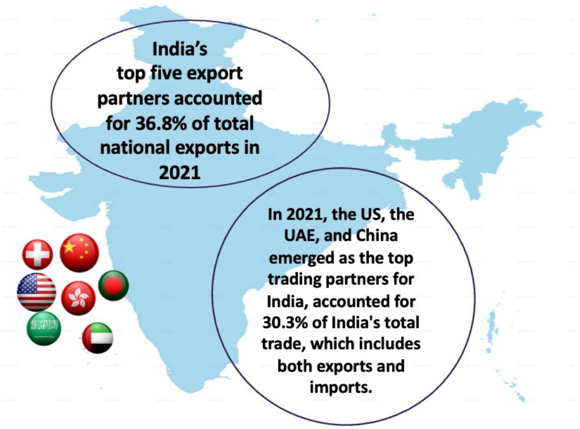
India ranks first in terms of population and fifth in terms of economy worldwide

India has seen a rapid expansion in the higher education sector since 2001

Effective Inflation Management



Major Trade Partners



Offshoring, Investment

Manufacturing Growth and Revenue Surge:

- Manufacturing GDP Share to 21%

Multinationals Favored by Investment-Friendly Environment:

- Attracted by Low Costs, Policies

Energy Transition

India's Renewable Energy Milestone:

- 169 GW Installed Capacity (2023)

Ambitious Renewable Energy Goal:

- Targeting 500 GW Capacity (2030)

Advanced Digital Infrastructure

Digital India Act for AI:

- Regulating Emerging Technologies Safely

India's Independent AI Regulation:

- Prioritizing Digital Citizen Protection

Thriving Start-up Ecosystem

India's Thriving Startup Ecosystem:

- 77,000+ Recognized Startups, 3rd Worldwide

Impressive Growth Metrics:

- 107 Unicorns, 15-Fold Funding Increase

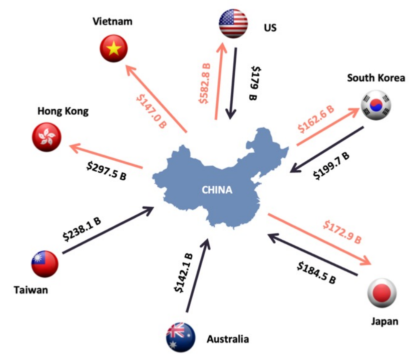
"These drivers will make India the world's third-largest economy and stock market before the end of the decade." - Morgan Stanley

Chinese Equities in the MSCI Emerging Markets Index Offer Above-Average Index Growth at All-Time Low Prices

Mishandling of Covid-19

China's self-imposed isolation from Zero Covid Policy

Decrease in Exports

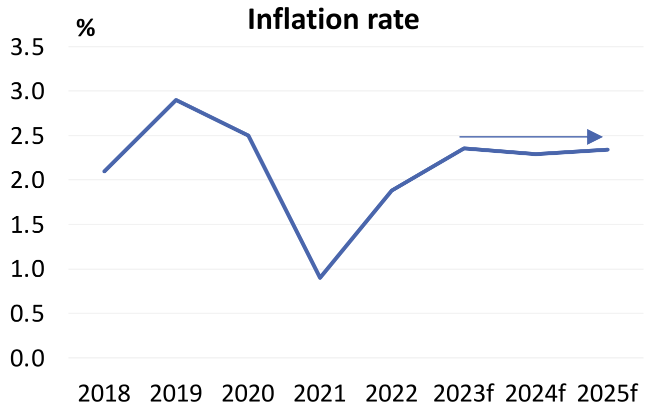


Real Estate Crisis

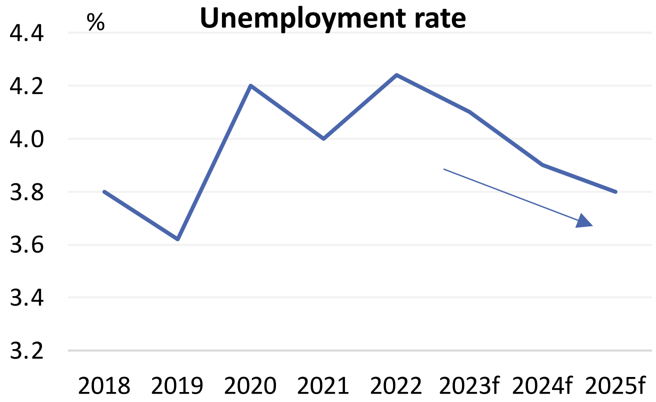
Collapse of Evergrande, the second largest property developer

VFMC can take advantage of equities trading at a near record-low valuation

Low inflation rates



Unemployment rate will decline



Domestic Consumption Increase

Domestic demand and economic activities will rebound

- Mobility pick up with loosening of COVID restrictions
- Supporting policies are expected to keep the economic activity afloat

Promotion of Clean Energy

China is one of the world's largest producers and consumers of renewable energy.

- Ambitious targets for increasing the use of renewable energy in its energy mix, pledged to achieve carbon neutrality by 2060
- Heaving investment in renewable energy

Household Wealth to Grow

China's GDP per capita remains about 6x lower that of the United States

- Highlights the huge space for economic activity and household wealth to continue to grow

There are 4 Main Facets to Consider when Evaluating an Investment - REMP

Our investment framework REMP considers a strategy that will allow VFMC to best embrace the power of capital

R isk and return

E SG implications

M omentum and growth

P ortfolio compatibility

Highlights the importance of considering social and environmental implications, growth potential, and overall portfolio compatibility of an investment

	MSCI EM	ASWI GE
R		
E		
M		
P		

Highest Rating *Lowest Rating*

Risk and Return

Tailored to client specific risk preferences

MSCI's EM index has higher return which **overcompensate**s for the higher associated risks

ESG implications

Companies that drive sustainability enjoy a tailwind of growth. Alignment with VFMC's decarbonisation goals

MSCI's EM index offers the chance to tap into high-growth companies at an early stage, and to **advance** sustainability goals in emerging markets

Momentum and Growth

Innovative investments that align with long term objectives of VFMC's clients

MSCI's EM index is composed of fast-growing economies which offer the prospect of **superior** investment returns

Portfolio Compatibility

Alignment with VFMC's whole of portfolio approach

MSCI's EM index be used to add **diversity** to a portfolio heavy on U.S. assets

VFMC's differentiated investment strategy:

will tailor to the long-term investment objectives of it's clients, and help tackle social and environmental challenges through their holdings

VFMC | AXIS CAPITAL

MSCI's Emerging Markets Index supports growth-oriented investors who are targeting to realise returns in the next 1~3 years

Emerging markets index composition by geographical regions

	EM (EMERGING MARKETS)	World	EM ASEAN	EM ASIA	EM EUROPE	EM FAR EAST	EM LATIN AMERICA	EM LATIN AMERICA ex BRAZIL
Average Return	0.74%	0.56%	0.08%	0.08%	0.47%	0.59%	1.13%	0.70%
Standard Deviation	0.064	0.043	0.075	0.075	0.092	0.071	0.087	0.064
Sharpe Ratio	-0.55	-0.85	-0.55	-0.55	-0.41	-0.52	-0.36	-0.55

All are indexes for large + mid cap

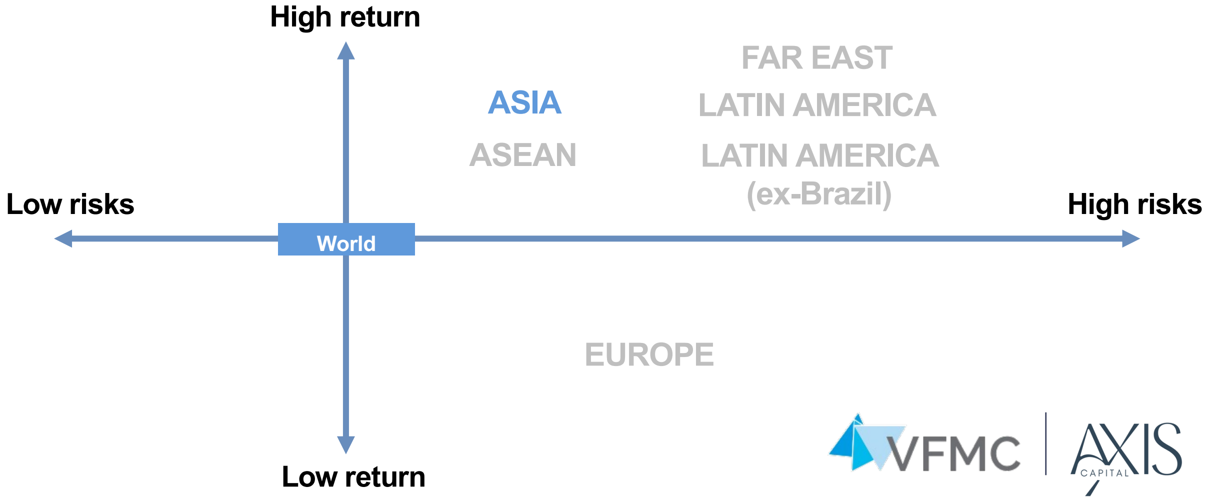
Emerging markets index has higher risks, but also higher average return relative to ACWI index

All Emerging Markets Regions

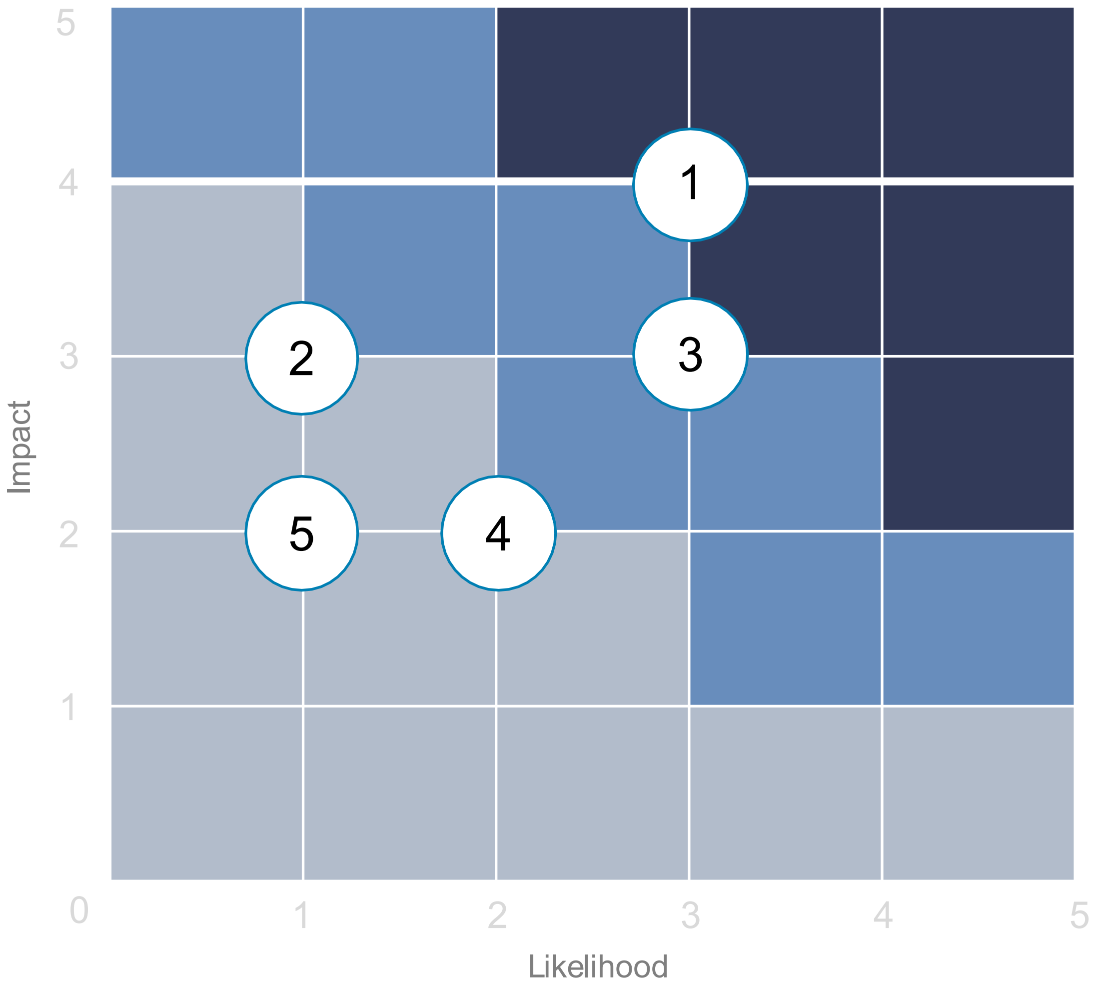
Outperform World's Sharpe ratio

Asia

Lowest volatility & 2^{nd} highest Sharpe ratio



Several Risks and Mitigation Strategies Have Been Considered



Risks

1 Political & Regulatory Instability

2 Global Economic Conditions

3 Currency Risks

4 Liquidity Risks

5 Operational Risks

Mitigation

Ensure compliance with local, national and international legal requirements

Diversified global presence

Consider political risk insurance

Financial Hedging

Monitoring Currency Risk

Medium - High REMP Scoring

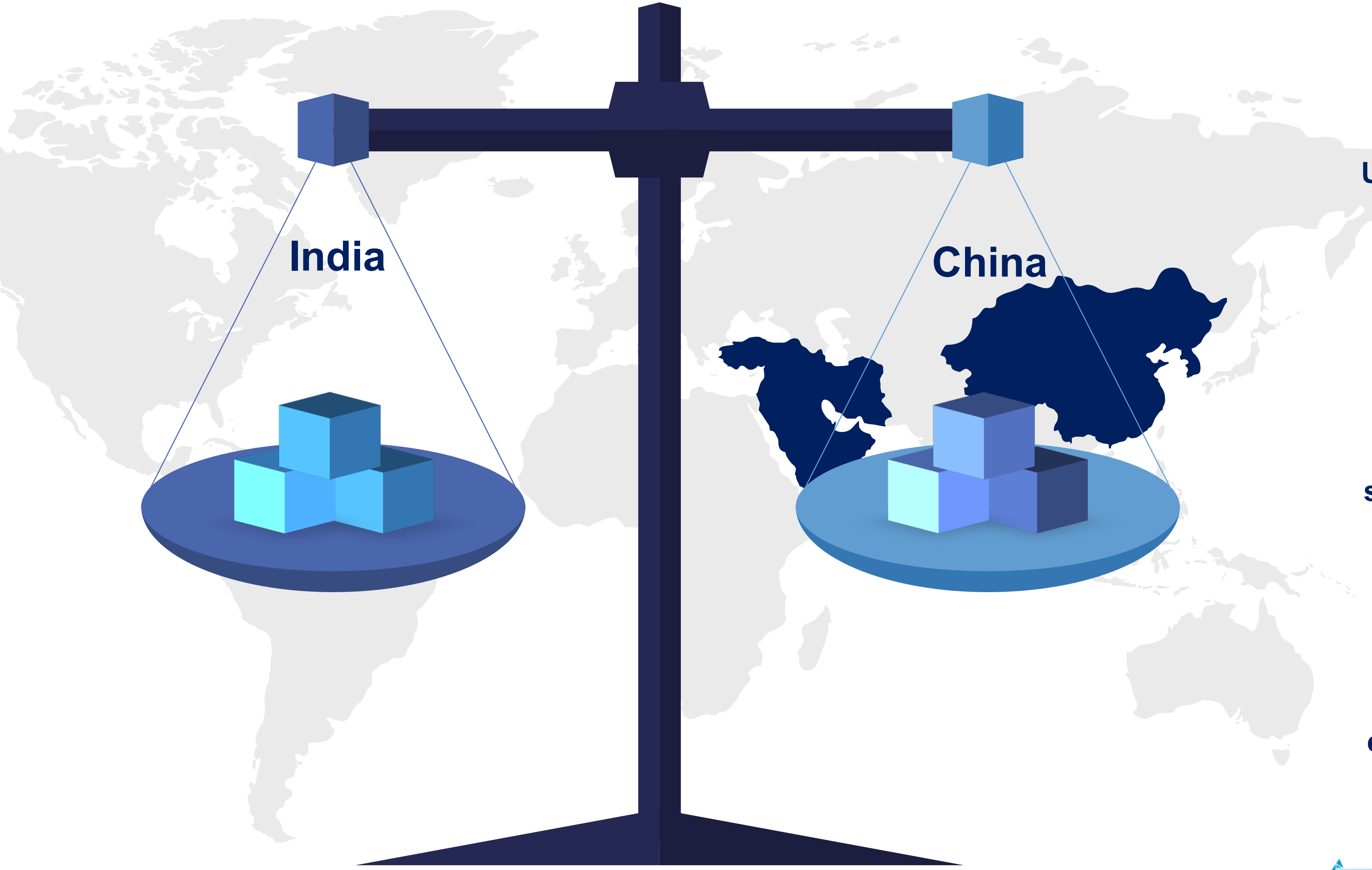
Successful risk management is possible through diversification, active due diligence and staying informed on market developments

Given Existing Risks, China and India's Economies can Function to Take Advantage of Their Hedge Relationship

+ Strong US – India political alignment

– Growing financial risk

+ Bright economic prospects



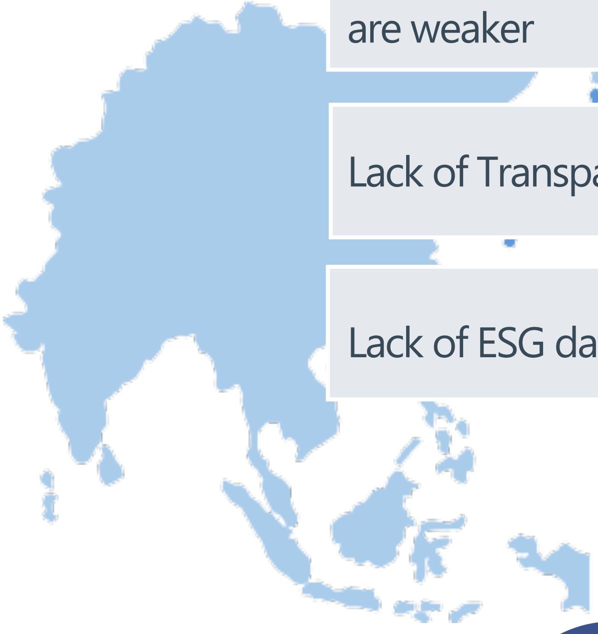
– US – China political tensions

+ Relatively stable fiscal position

+ Credible economic standing

Emerging Markets have Inherent ESG risks, but Represent an Unparalleled Opportunity for ESG Focused Investors like VFMC to Deliver Impact

Inherent ESG risks in emerging markets

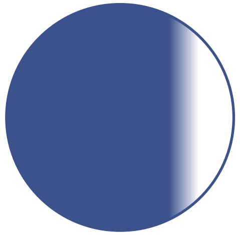


Standards of Governance are weaker

Lack of Transparency

Lack of ESG data

Medium - High REMP Scoring



ESG factors are vital for responsible investing

Investment Stewardship is a pillar of VFMC's Investment Philosophy

VFMC seeks to **align investments** with its mission of influencing positive ESG outcomes to add value to clients' portfolios

> *"ESG factor in investing has **twice the payoff** in emerging markets as it does in developed markets"*
>
> *~ Asha Mehta, founder of Global Delta Capital*

*lower development base in emerging markets provides ample opportunity to **deliver impact***

1. Help build infrastructure that raises living standards

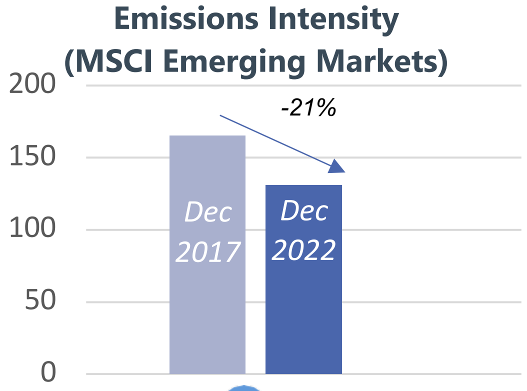
2. Reduce inequality by facilitating the expansion of firms and thus jobs

3. Help diminish climate and health vulnerabilities

VFMC can further its mission to be responsible stewards of capital by advancing emerging markets

Paths to decarbonization differ across countries

While developed countries have committed to reducing **absolute emissions**, emerging markets have committed to reducing **carbon intensity.**



Carbon intensity has been decreasing but at a **slower** pace compared to developed countries

Increased flow of investment capital into emerging markets will **accelerate** decarbonization goals

By allocating more capital to MSCI's EM index, VFMC can accelerate the decarbonization goals of emerging countries

Strong Growth is Expected For MSCI's Emerging Markets Index, with Demographic Trends, Urbanization and Fast Adoption of New Technology

A predominantly **younger demographic** coupled with the focus on **digitisation** sets India up as an emerging superpower.

Asia AI-exposed companies across Taiwan and South Korea will further the **boom** in **Information Technology** (IT), the second-largest sector in the index

Further loosening administrative restrictions on purchases, supporting policies that lower the cost of home purchases will **heighten manufacturing activity** in China

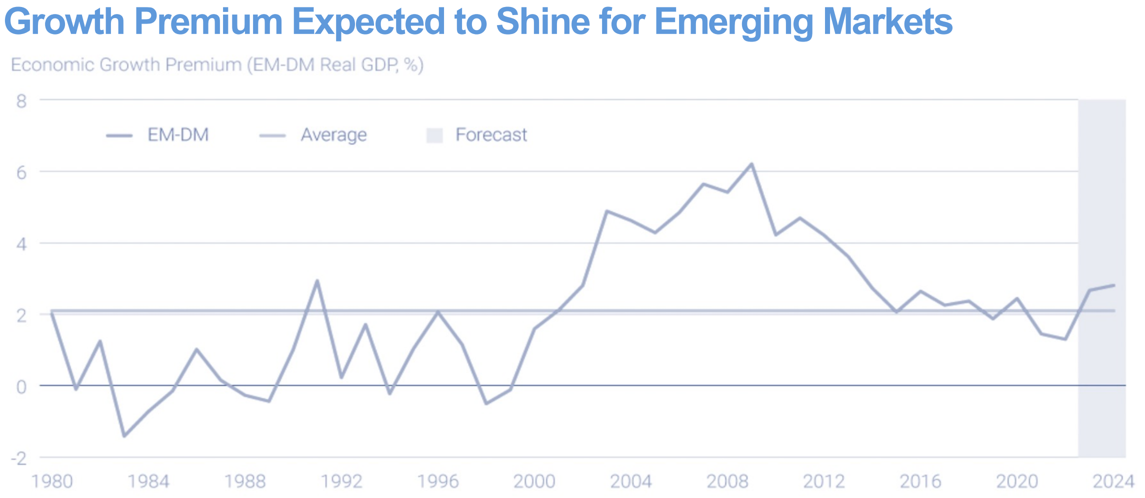
Greater government investments in **infrastructure** projects as well as **mining sector M&A deals**

South Korea's strong **industrial base** should grow with further advancements in technology. **Bilateral agreements** with other emerging markets should also boost trade.

High REMP Scoring

Expected earnings growth 2024 **19%**

EM: Emerging Markets, DM: Developed Markets



MSCI's Emerging Markets Index is Highly Compatible with VFMC's Overall Portfolio Strategy due to its Elevated Diversification Benefits

Emerging markets index composition by geographical regions

	EM (EMERGING MARKETS)	World	EM ex CHINA Standard	EM ASEAN	EM ASIA	EM ASIA ESG	EM EUROPE	EM FAR EAST	EM LATIN AMERICA	EM LATIN AMERICA ex BRAZIL
Correlation with EM	1.00	0.730	0.980	0.743	0.743	0.965	0.676	0.857	0.853	0.831
Correlation with World	0.730	1.00	0.839	0.581	0.581	0.693	0.581	0.655	0.611	0.775

For large + mid cap
Source: MSCI End of day data Regional

VFMC Investment Philosophy

Diversification
Optimise risks and return balances

Multi-Dimensional Risks
International asset exposure

Absolute Return Objectives
4.0-5.25% in excess of inflation p.a.

MSCI Emerging Markets Index Alignment

Most regions in EM index have medium correlation to the ACWI index, providing diversification benefits to the global equity portfolio by **avoiding perfectly procyclical movements** with the World

EM index involves equities from countries in regions around the globe, which **mitigate the potential risks** such as geographical, political, and exchange rate risks

EM index's high growth potentials given the return and macroeconomic trend analysis offer **forecasted high return in the next 1~3 year** that helps to achieve return target

High REMP Scoring

VFMC | AXIS CAPITAL

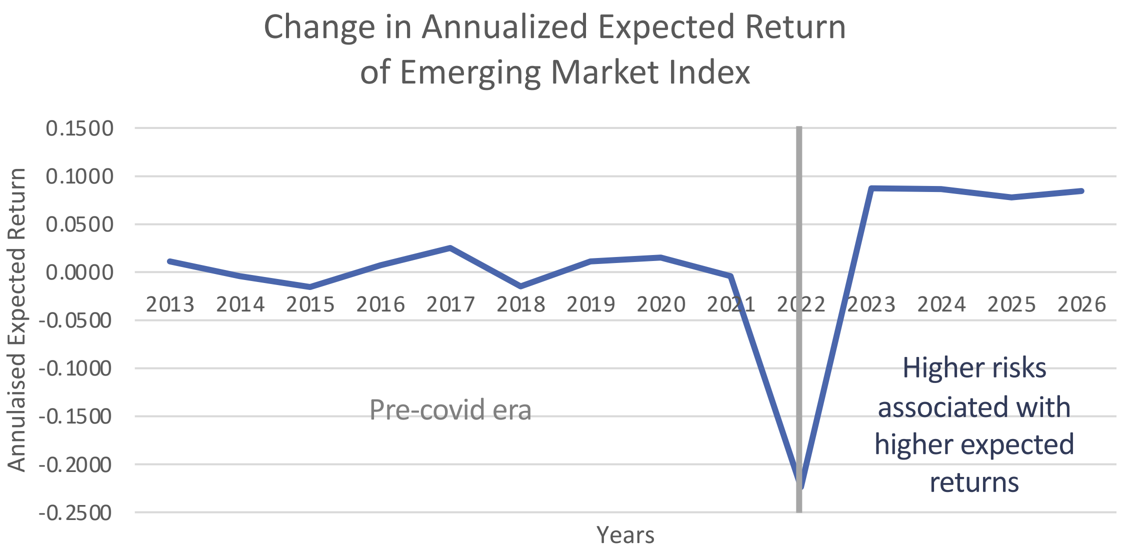
The Macroeconomic Analysis and the High Score in REMP Framework Support Emerging Market Index's Future Increase in Expected Returns

Emerging Market Index's expected return is predicted to increase by 14.2%

						EM Index
Country Index Weighting	7.1%	18.3%	39.6%	16.0%	19.1%	Weighted average of each country's returnss
2023	7.12%	10.78%	9.45%	7.41%	6.90%	8.72%
2024	7.13%	11.03%	8.48%	8.32%	7.31%	8.62%
2025	6.37%	10.96%	8.07%	6.87%	5.38%	7.79%
2026	6.06%	10.95%	8.22%	7.21%	8.35%	8.46%
2027	5.29%	10.32%	8.09%	2.69%	5.72%	7.01%

Future 3 year expected average return 8.29%

Emerging Market Index's standard deviation is predicted to increase by 2.12%



Rising factors

High REMP Scoring

+

Forecasted outperformance of GDP growth, improving economies, and supporting government policies in high weighting EM index countries

Emerging market index

Expected Return
7.76%
To
8.29%

Standard Deviation
17.01%
To
17.37%

New 11% EM portfolio mix

13.14%
Expected return

6.27%
Standard Deviation

3.20%
Improvement in Sharpe Ratio

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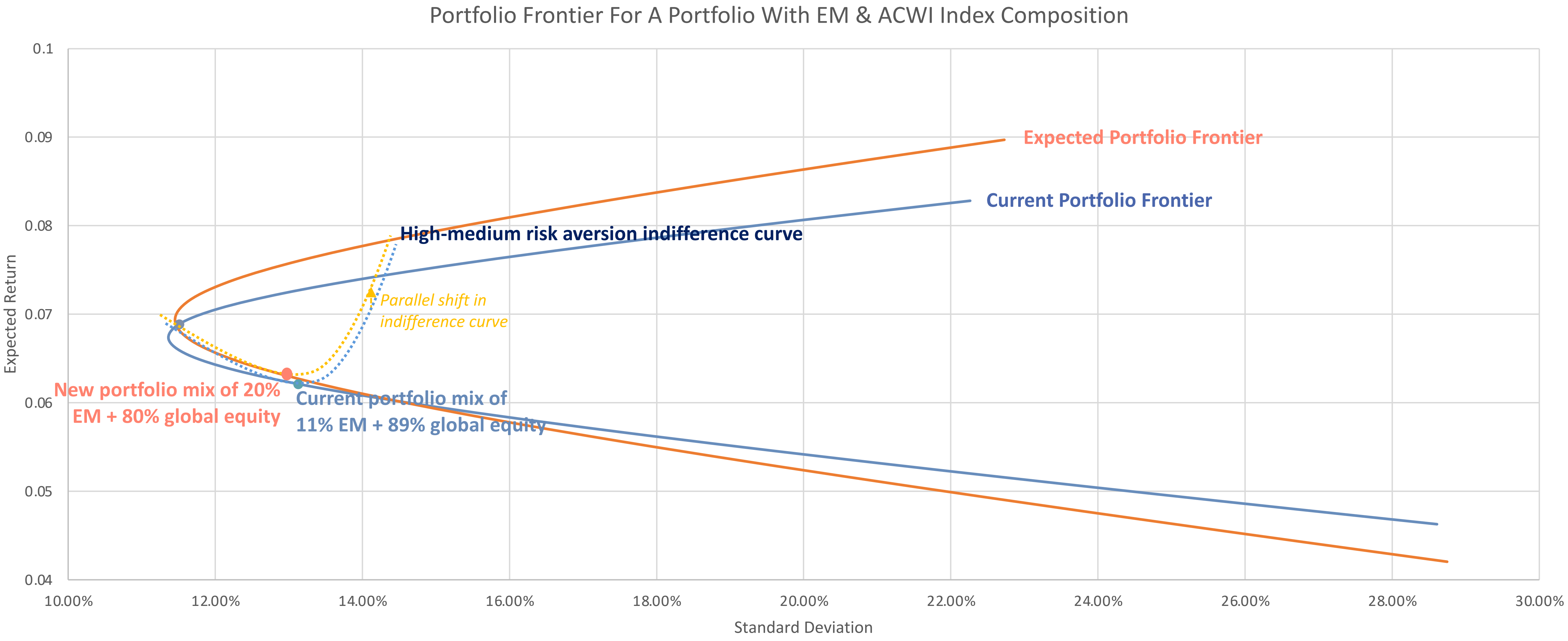
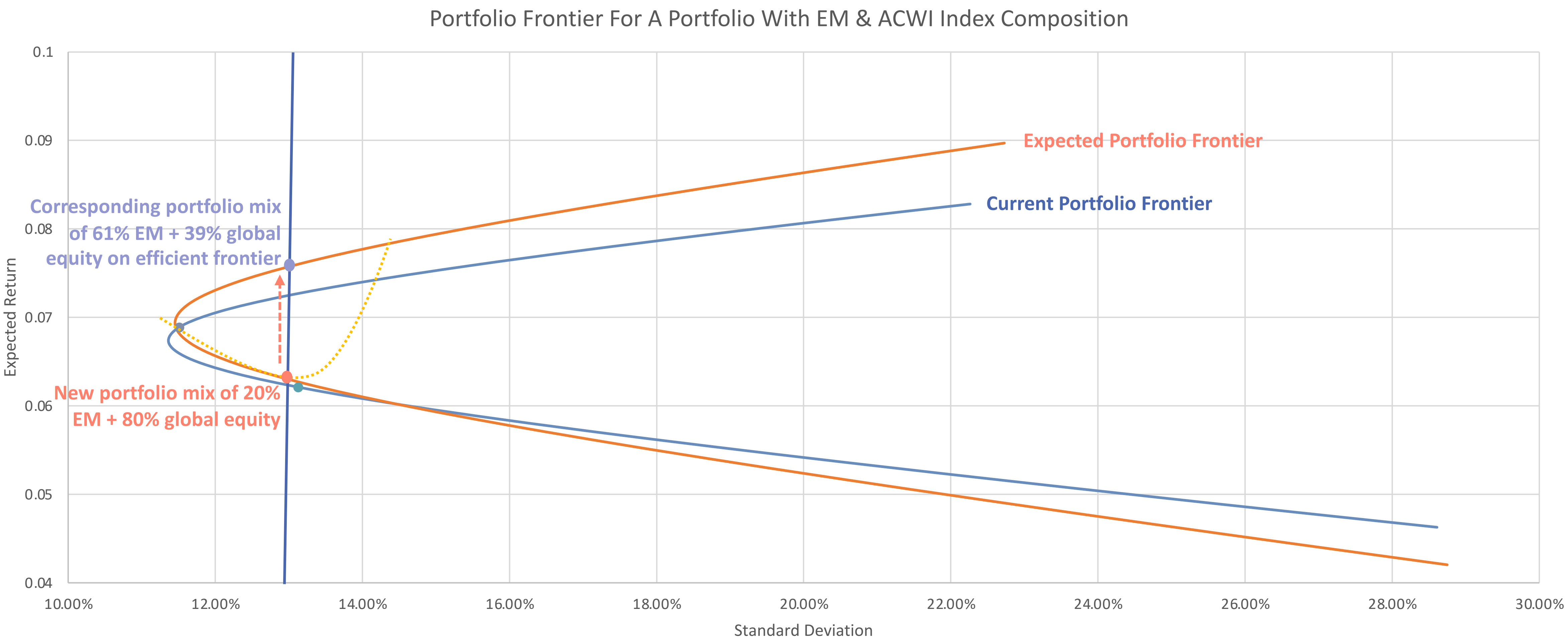
Overweighting the Emerging Market Allocation From 11% to 20% Allows Investors to Capture Better Portfolio Performance while Keeping the Same Risk Preference

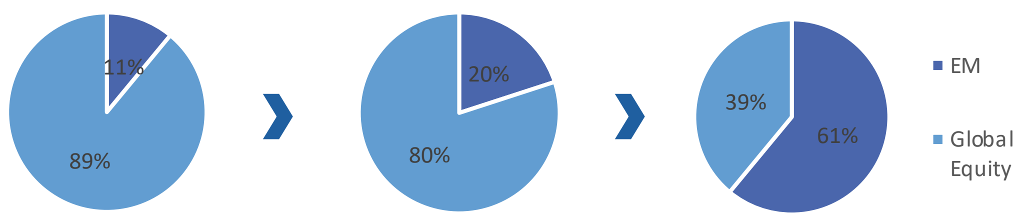


Further Overweighting the Emerging Market Allocation to 61% Helps to Capture Higher Return while the Risks Level Remains



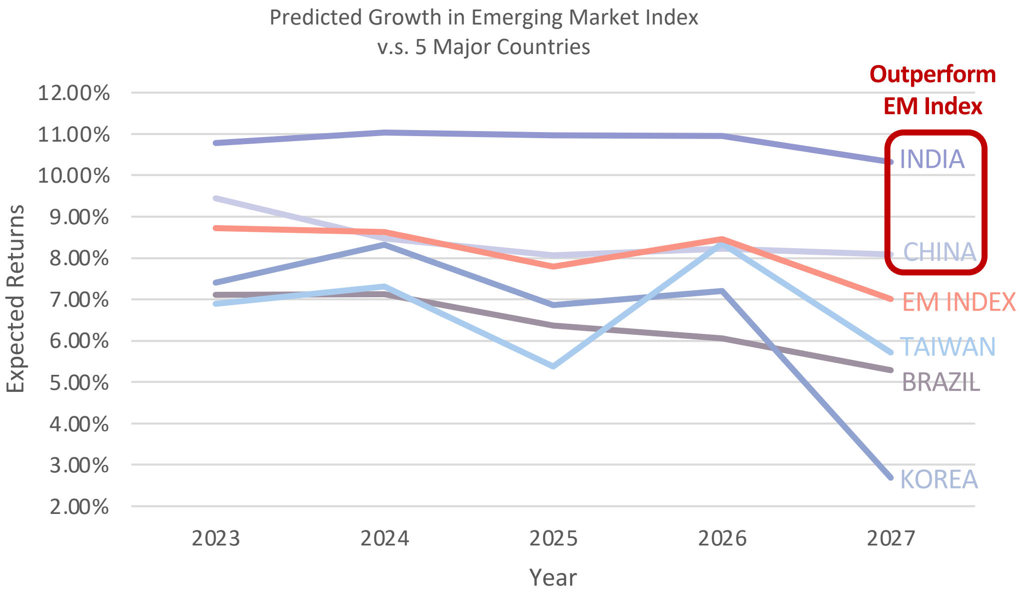
Increase in Emerging Market Index Allocation can be Optimised by Distributing Higher Weights in China and India

Suggested change in portfolio mix

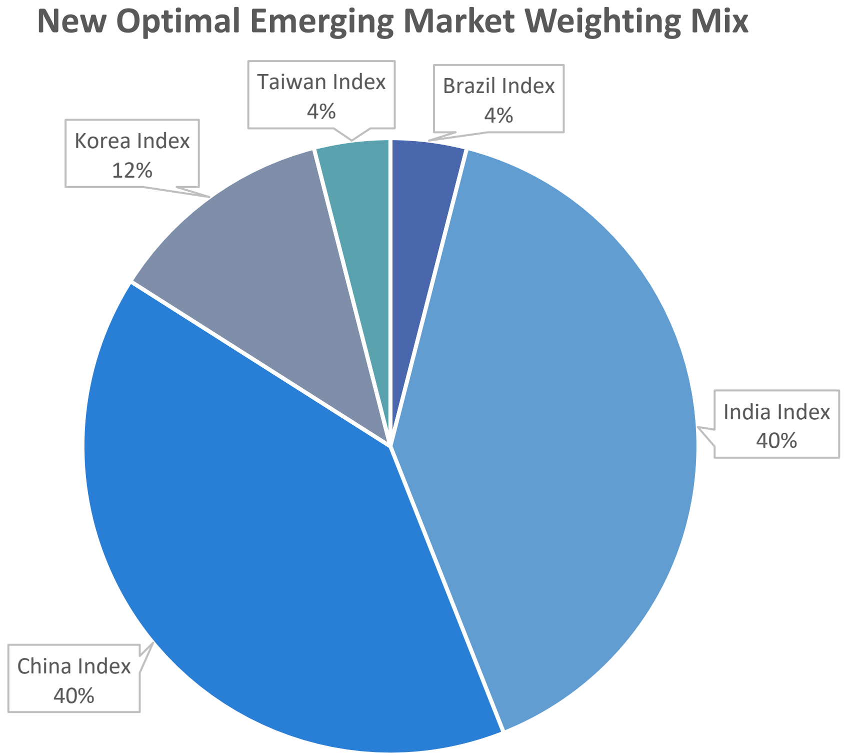


Current	New	Optimal
14% Sharpe Ratio	**17%** Sharpe Ratio	**24%** Sharpe Ratio

How to best leverage the increase in Emerging Market allocation?

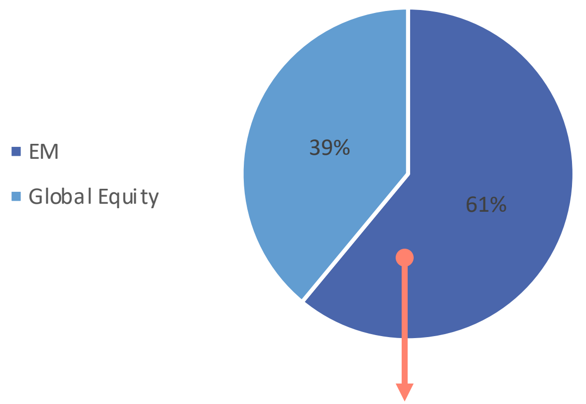


Strategic allocation in India and China in Emerging Market Index

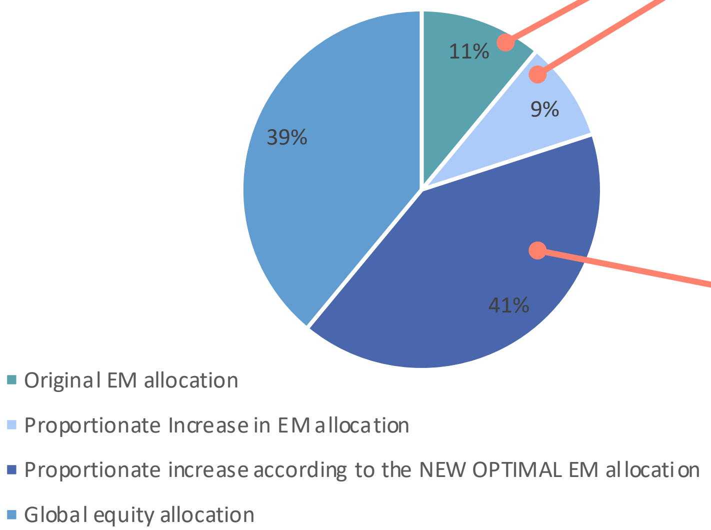


Strategic Allocation in India and China within Emerging Market Index will Achieve the Highest Sharpe Ratio Portfolio

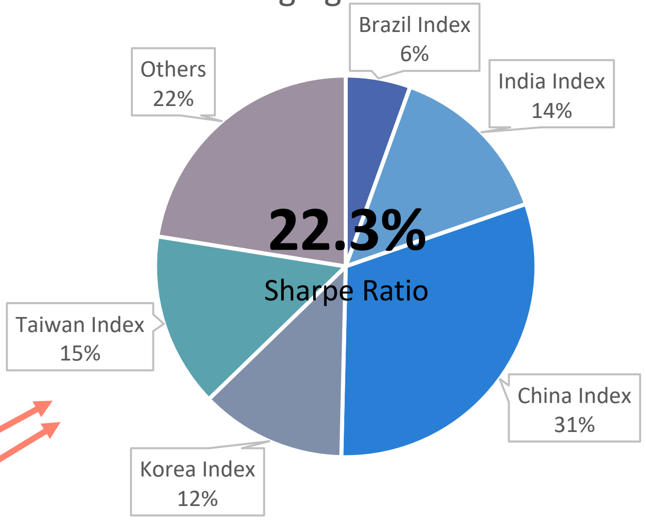
Optimal Portfolio Mix



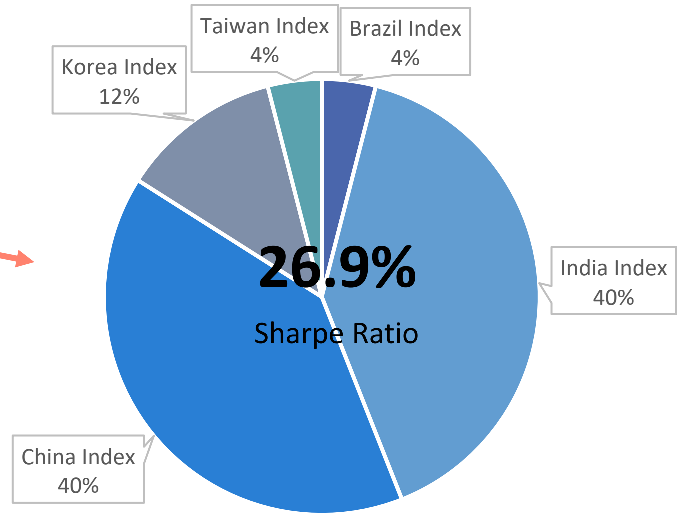
Emerging Market % Increase Allocation

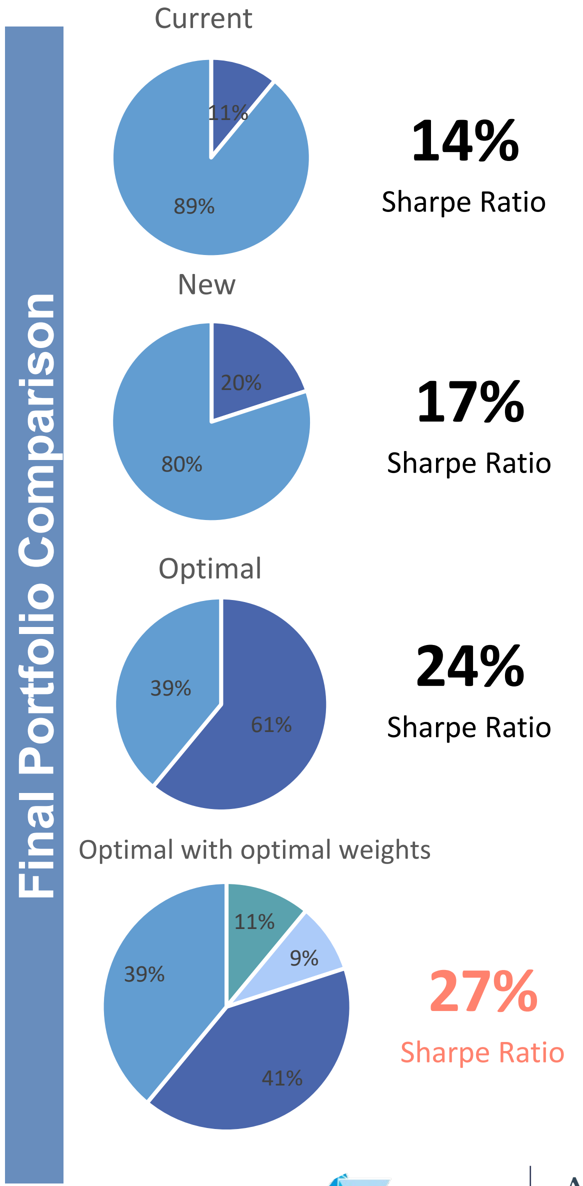


Current Emerging Market Index Mix



New Optimal Emerging Market Weighting Mix





APPENDIX

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Appendix A – Evolution of MSCI's Emerging Markets Index

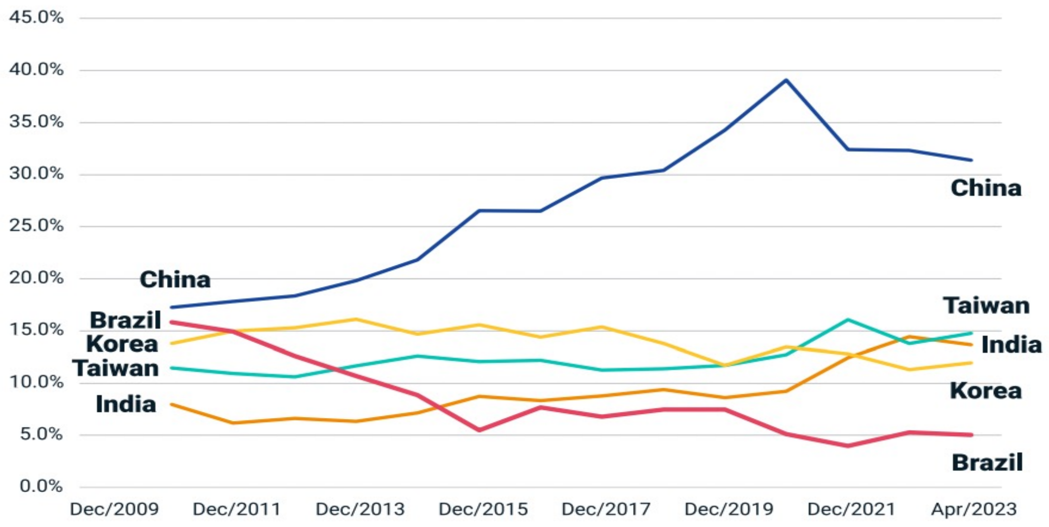
Changes to the index include:

South Africa's weight has shrunk by half over the last two decades.

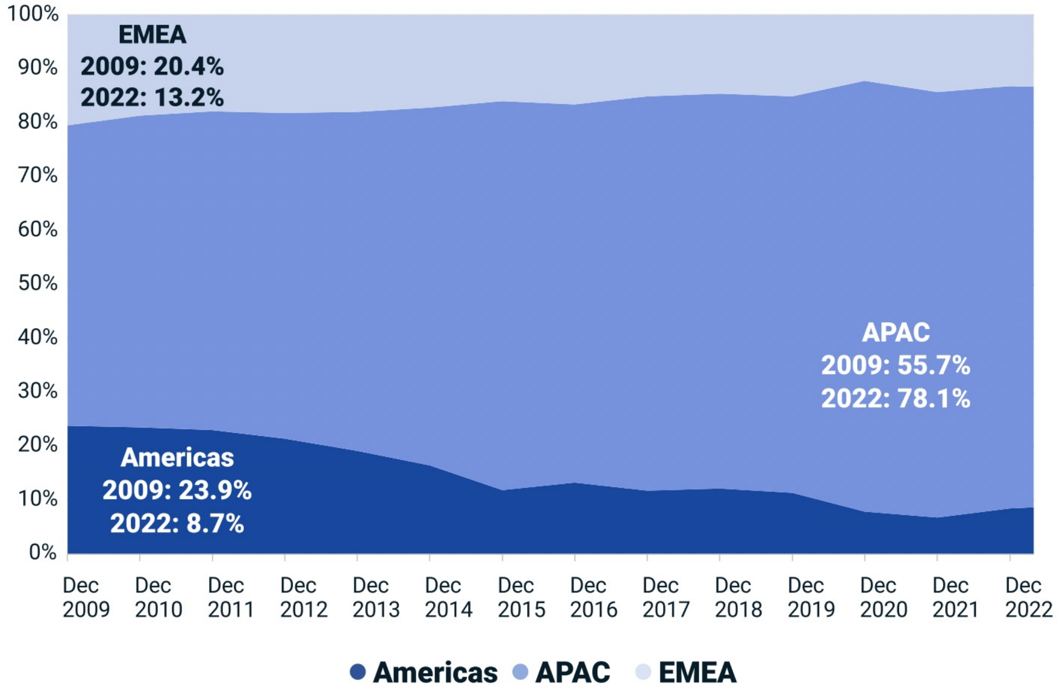
Russia was originally classified as an Emerging Market and in 2009 it represented almost 6.5% of the MSCI Emerging Markets index. In 2022, MSCI reclassified Russia as a stand-alone market.

However, the most dramatic shift has been in the weight of the Americas region, driven primarily by the reduction in Brazil's weight.

Largest countries in the MSCI Emerging Markets Index



Regional weights in MSCI Emerging Markets Index

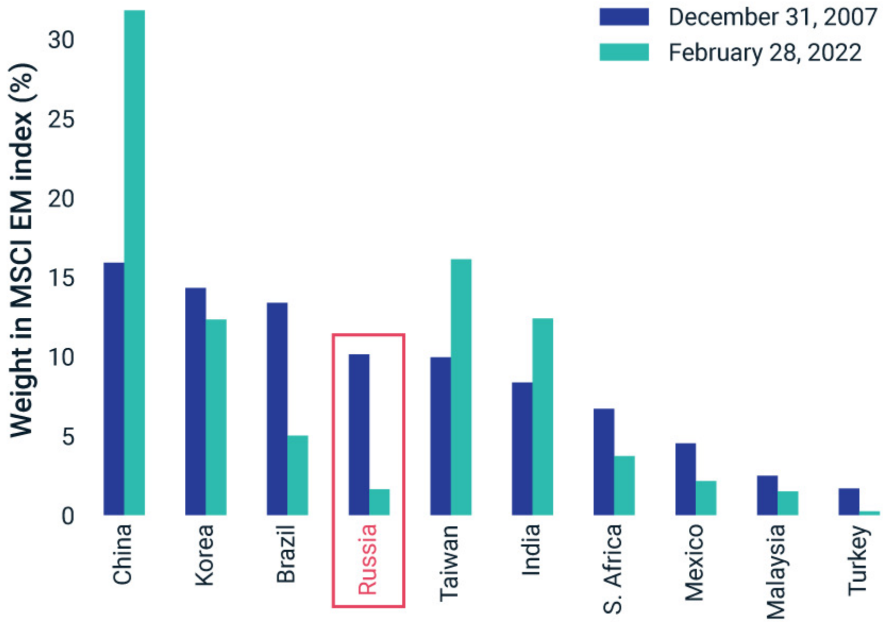


Over time, we have witnessed the economic growth of the APAC region, and a corresponding increase in the region's role in global equity markets, going from a 56% weighting in 2009 to a 78% weighting in 2023's index.

Appendix B – Russia’s Diminished Role in Emerging Markets

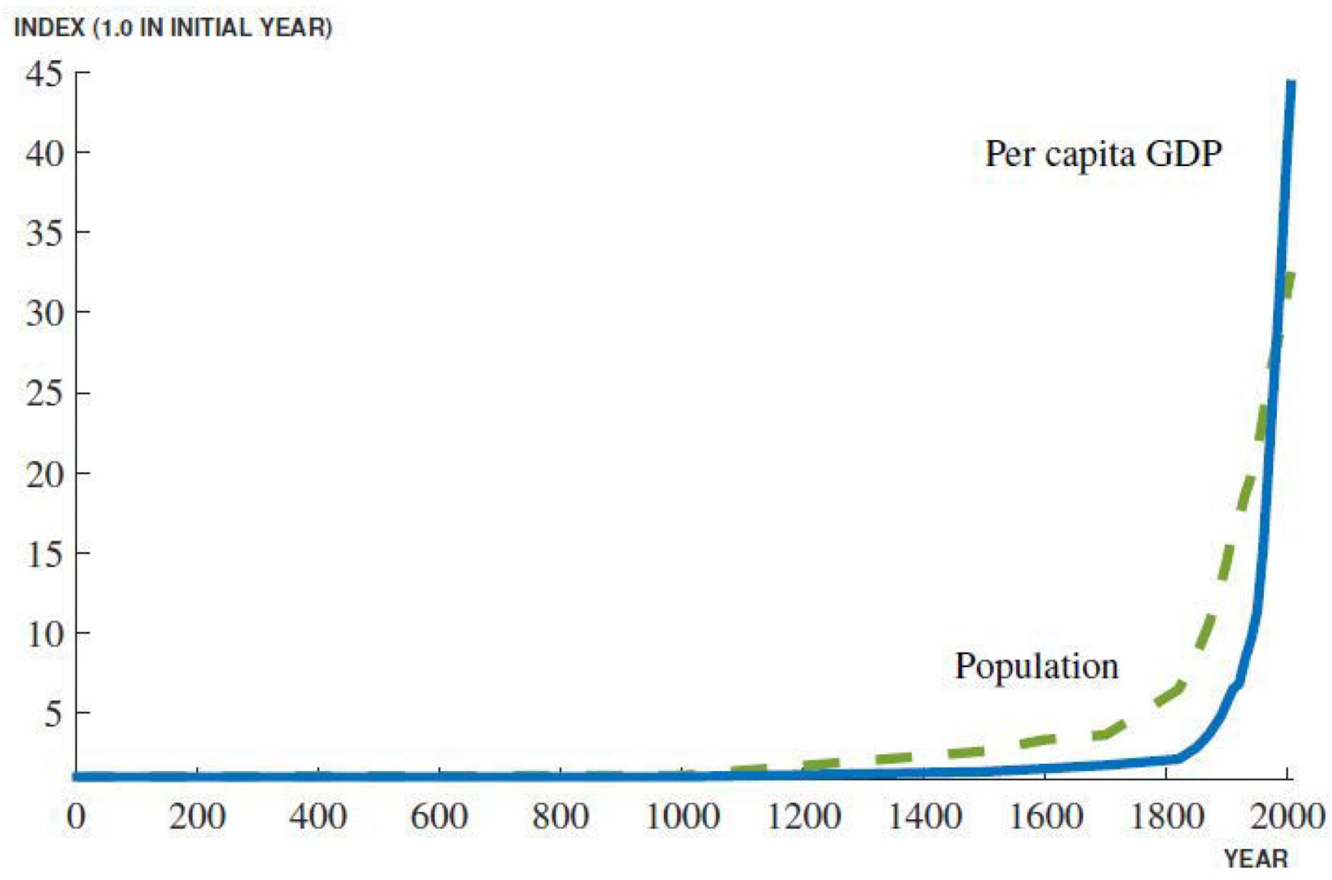
March 02, 2022: MSCI announced that its Russia indexes will be reclassified from emerging markets (EM) to standalone markets status after a majority of global-market participants confirmed that the Russian equity market is currently uninvestable.

- Russia’s weight in the MSCI Emerging Markets Index dropped sharply during February 2022. At the start of the year it accounted for just under 4% of the index.
- At the onset of the global financial crisis, Russia was the fourth-largest EM country, behind China, South Korea and Brazil. Since then, its weight has fallen due to the fallout of the 2008 recession, and a decade of economic sanctions that resulted in currency depreciation.
- Today, Chinese, Taiwanese and Indian firms have taken share, pushing Russia (and Brazil) toward the rear of the pack.

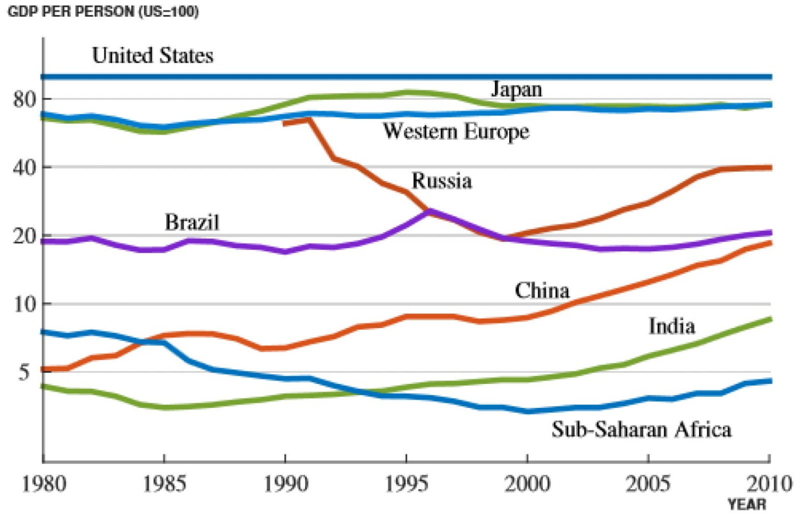


Appendix C – Economic Growth Over the Long Run

Economic growth over the very long run



Note: Data are from Maddison (2008) for the "West," i.e. Western Europe plus the United States. A similar pattern holds using the "world" numbers from Maddison.



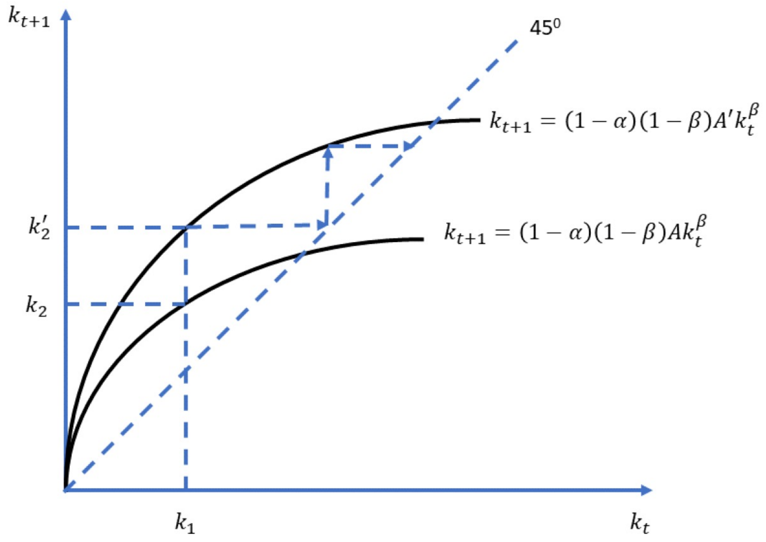
Source: The Penn World Tables 8.0.

Economists have noted several stylised facts about economic growth (also known as The Kaldor Facts – Kaldor, 1957; CSV, 2021). These are:

• Economies show positive growth in output per worker;
The capital/output ratio is broadly constant;
• Capital per worker has been growing (capital deepening);
• The rate of return on capital is constant (or perhaps declining in the long run);
• Labour and capital receive roughly constant shares of total income (or at least they have in the past); and
• Countries can grow at very different rates, even over long time periods.

Appendix D – Growth Accounting

$$Y_t = A_t K_t^{\beta} L_t^{1-\beta}$$



Here is an example of a transition equation with a one-time permanent increase in MFP from A to A'

Multifactor Productivity - At

MFP plays a crucial role in increasing the economy's capacity to produce. Improvements in MFP make it possible to produce more output without additional inputs.

Many factors can cause MFP to change:

•(unmeasured) improvements embodied in capital and labour inputs that increase the quality of capital and labour.

• disembodied MFP changes that boost productivity in a more general way.

• Disembodied MFP changes may reflect technological change as well as changes due to other productive factors not measured as capital or labour inputs.

• MFP is hard to measure directly – it's often computed as a residual.

Sources of Long-run Growth

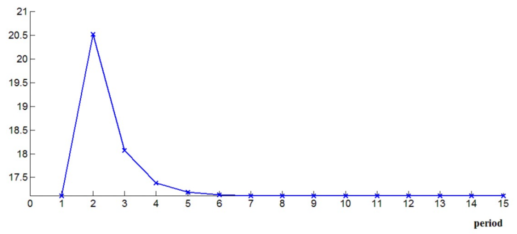
Growth will only be ongoing in our model if we have either population growth or productivity growth.

Population growth:	In this case, there are more workers and savers in each generation. Thus the actual size of the aggregate economy increases each period.	However, the per capita steady-state values do not depend on the size of the population, so they will remain constant.	Therefore, in the steady state, the output per capita remains constant.
The only mechanism for generating permanent increases in output per capita and ongoing growth is MFP:	If we have a constant population size, but continuing improvements in productivity At, the transition curve will shift up with each new generation	An increase in productivity will make capital and labour more productive, increasing saving and capital formation.	If productivity grows at a constant rate g (At+1 = (1 + g)At), the economy will converge to a steady state in which the capital-labour ratio grows at rate (1 – β)−1 g.

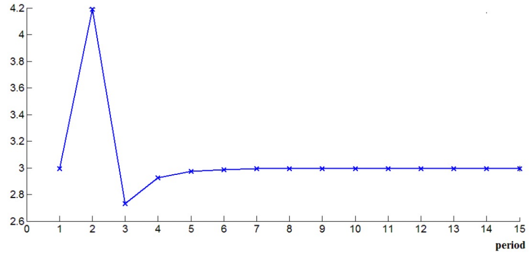
Appendix E – Fluctuations through a Life-cycle Model

- The response of output to shocks is amplified and persistent in response to a one-period transitory shock (MFP).
- Both consumption and investment respond pro-cyclically on impact (Stock and Watson facts).

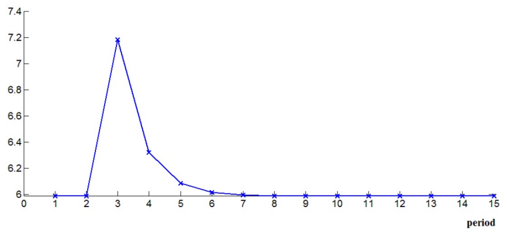
Time path of y_t following the shock



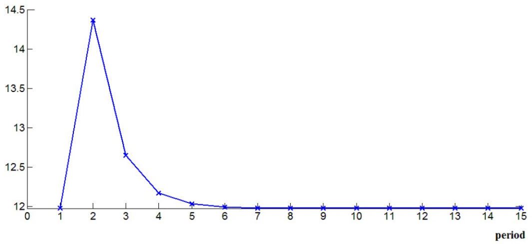
Time path of i_t following the shock



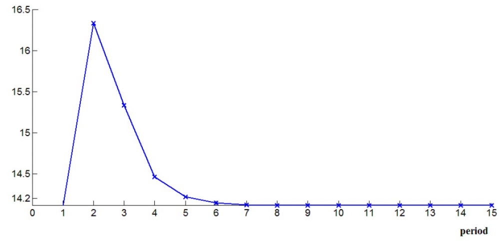
Time path of k_t following the shock



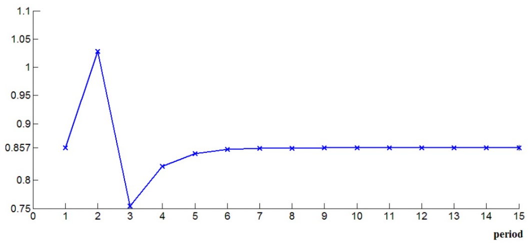
Time path of w_t following the shock

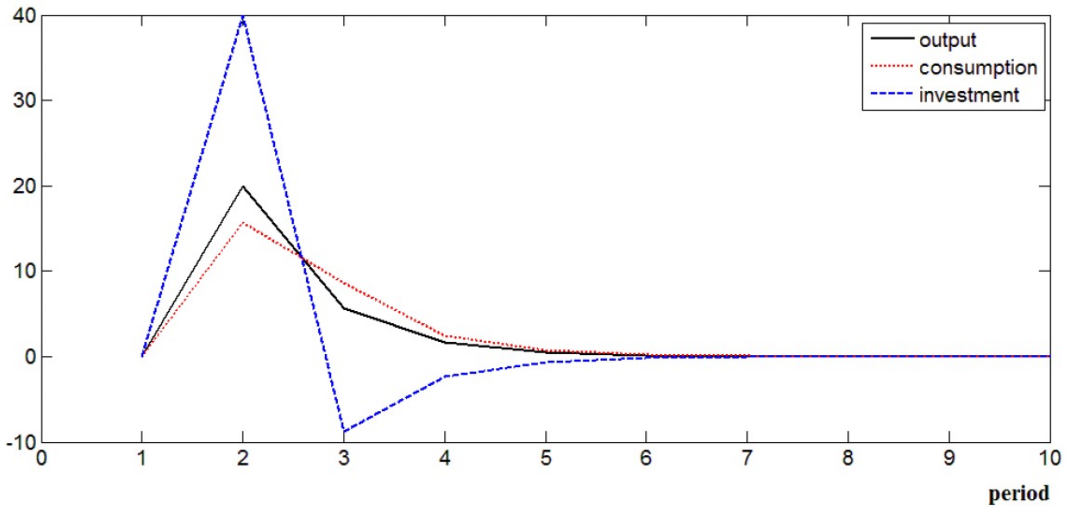


Time path of c_t following the shock

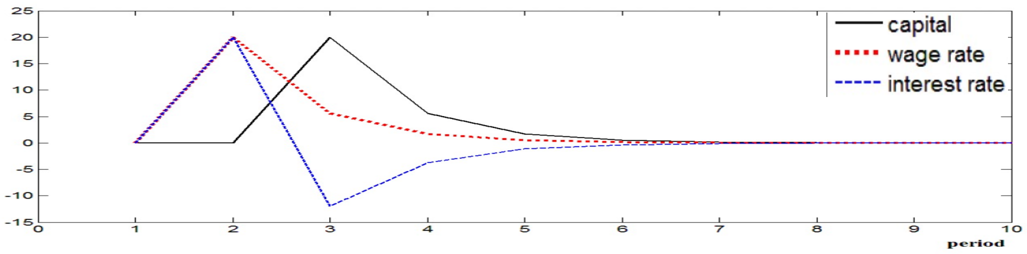


Time path of r_t following the shock





Investment is more volatile than output, and consumption is less volatile than output.



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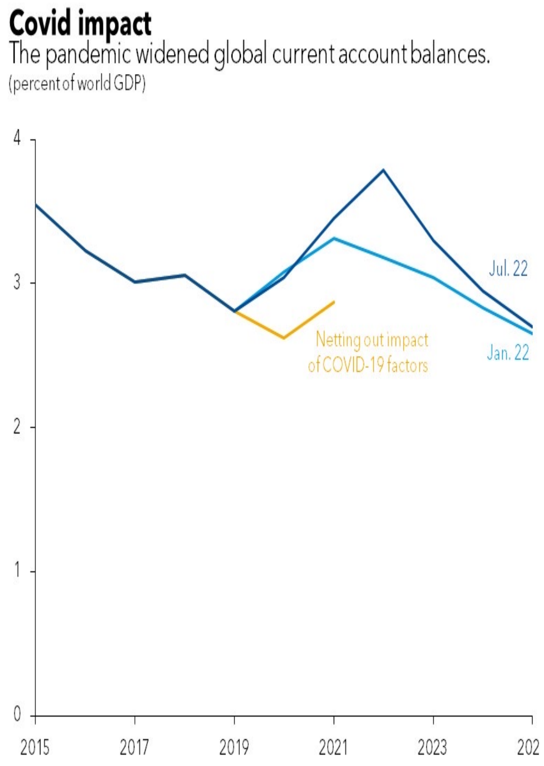
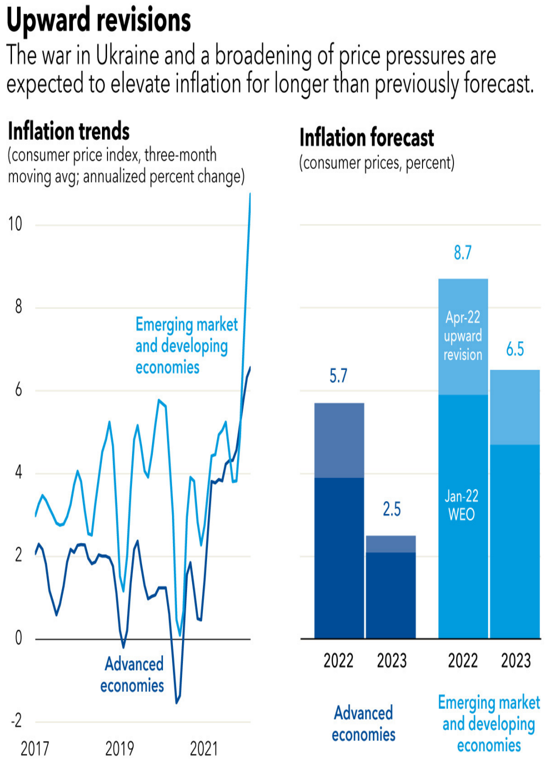
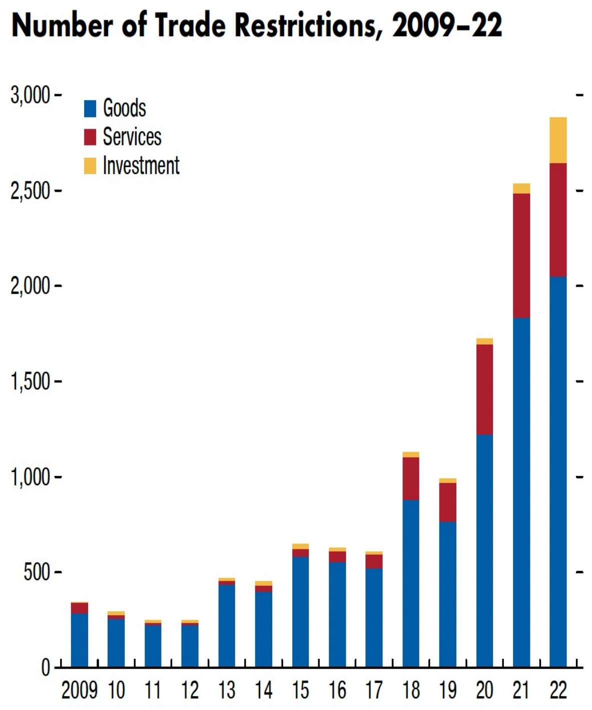
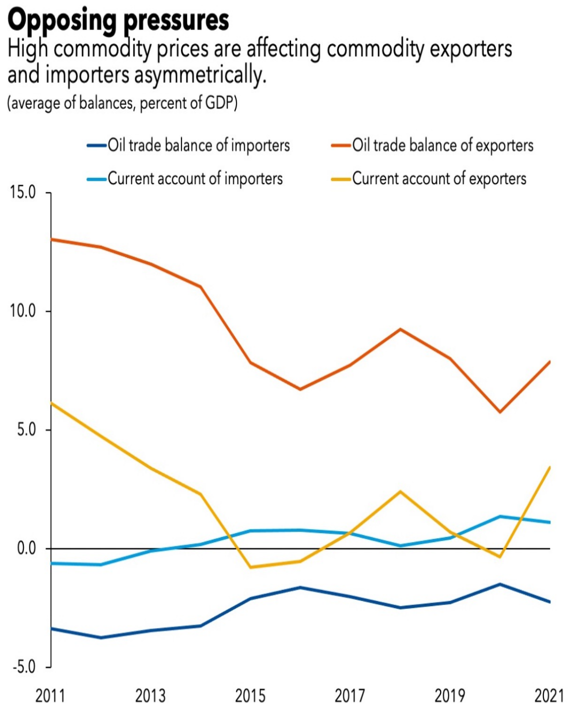
Appendix F – Economy Impact of Covid-19, social issues and economic crisis

2019	2021	2022	2023
Covid – 19 pandemic	Inflation	War in Ukraine, Steel price, Tightening of monetary policy in developed countries	Decline in commodity prices





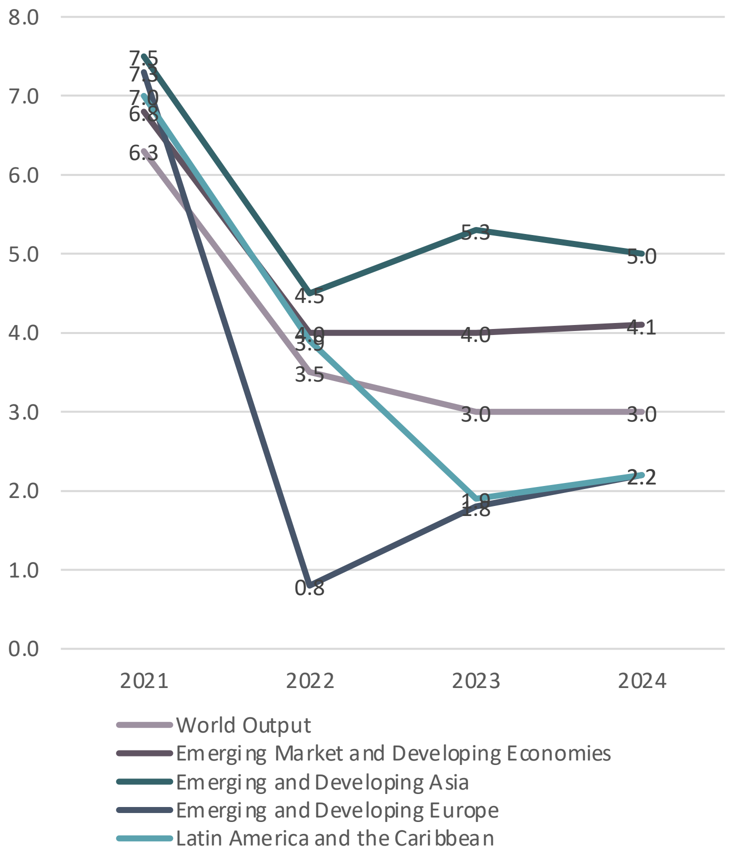


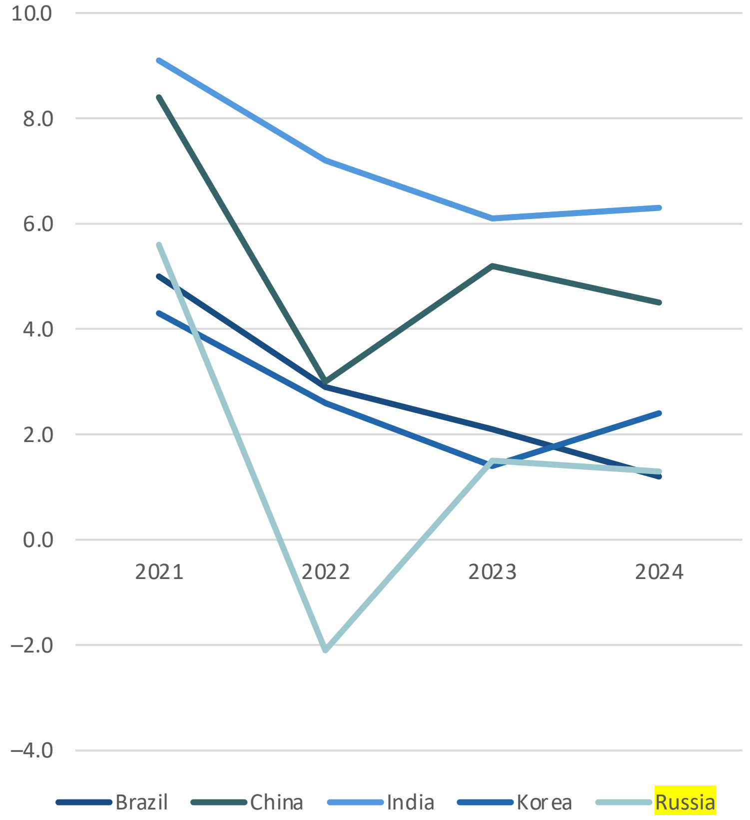


Appendix G – Additionally, with Strong Policies in Place for a Steady Recovery, There is Great Potential Upside

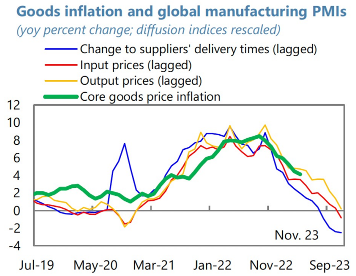
World Economics | Emerging Market | Other Factors

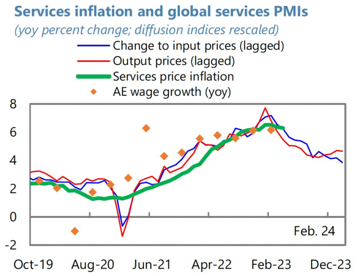
Real GDP Growth, annual percent change





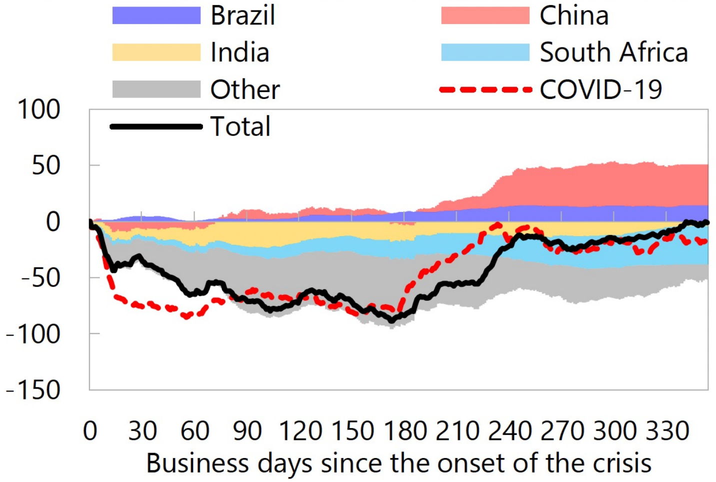
Inflation, Capital flows to EM countries





Capital flows to emerging market economies

(cumulative; US billions; from 2/24/2022 to 7/4/2023)



Labour markets remain strong

Monetary policy transmission signs are appearing, but so are financial vulnerabilities

Fiscal balances improved as the pandemic receded

Source: IMF, World Economic Outlook Update, July 2023; Haver Analytics

Appendix H – Other factors

Money and Finance

When developing countries are trading with other countries, they are confronted with financial interactions and forces that affect the way they do business and limit the possibilities and effectiveness of certain types of policies.

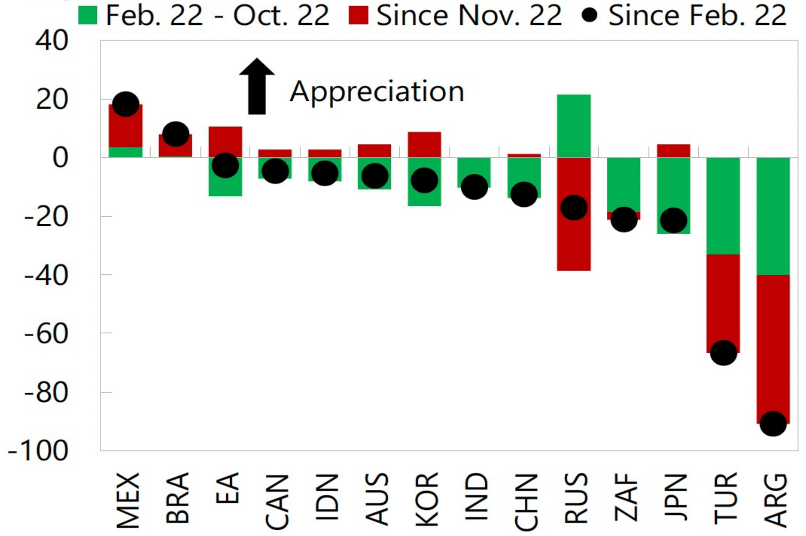
- Exchange rate
- Forward-Looking Markets
- Interest rate parity:
- The policy trilemma
- Exchange rate policy
- Trade Finance
- International Currencies
- Finance, Investment and Development
- The Miracle of Microfinance

Appreciation of the US dollar:

- The unexpected failures of two specialised regional banks in the United States in mid-March 2023 and the collapse of confidence in Credit Suisse—a globally significant bank—have roiled financial markets, with bank depositors and investors reevaluating the safety of their holdings and shifting away from institutions and investments perceived as vulnerable
- Despite strong policy actions to support the banking sector and reassure markets, some depositors and investors have become highly sensitive to any news, as they struggle to discern the breadth of vulnerabilities across banks and nonbank financial institutions and their implications for the likely near-term path of the economy.
- Financial conditions have tightened, which is likely to entail lower lending and activity if they persist.
- While the U.S. dollar's appreciation in 2022 has somewhat retrenched, several G-20 currencies remain weaker. Net capital inflows to emerging markets and developing economies have resumed in 2023, after the interruptions in 2022 coinciding with Russia's war in Ukraine and tightening monetary policy in advanced economies.

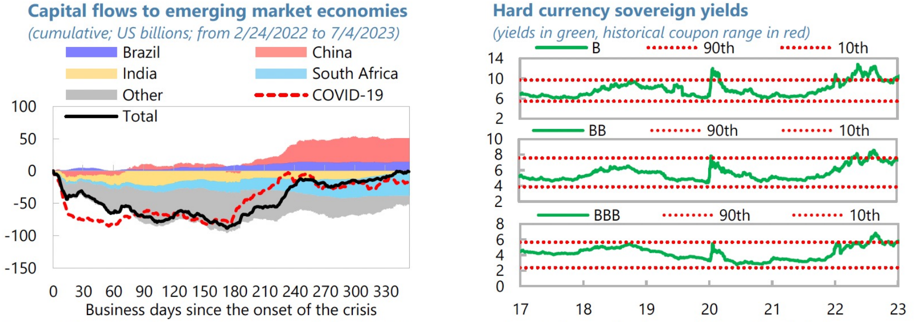
Nominal exchange rates vis-a-vis the U.S. dollar

*(log differences * 100; as of Jul. 7, 2023)*



Sources: Haver Analytics; and IMF staff calculations.

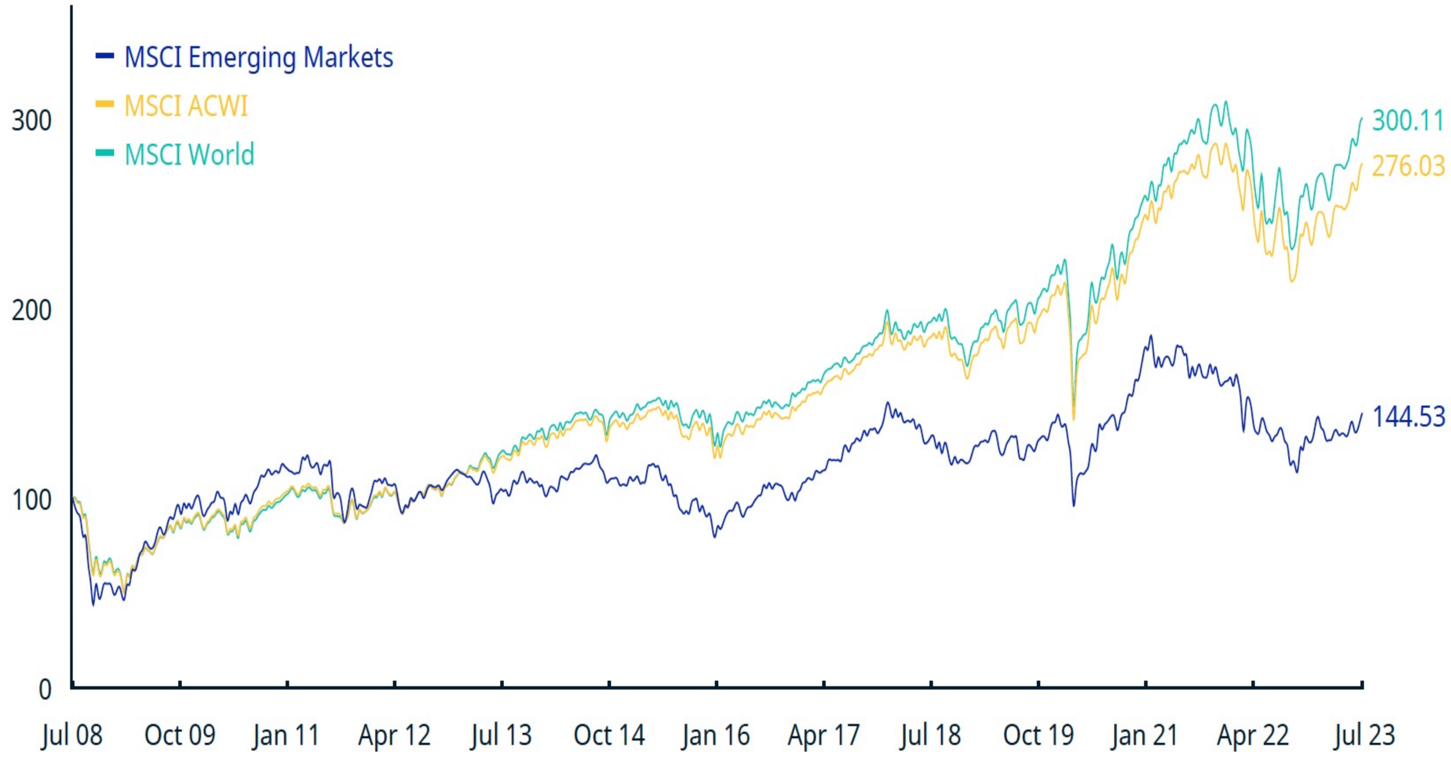
Figure 8. External Sector



Sources: Bloomberg Finance, L.P.; Haver Analytics; IIF; JPMorgan Emerging Market Bond Index; and IMF staff calculations.
Note: On the left chart, data cover economies tracked by the IIF regarding daily non-resident portfolio flows to a subset of emerging market economies (including *Brazil, China, India, South Africa* among G-20 emerging market economies) as well as *Korea* (G-20 advanced economy). Onset of the crisis dates for COVID-19: March 2, 2020 and Russia's war in Ukraine: Feb. 24, 2022. On the right chart, yields are from JPM EMBIGs and the coupons are from EM countries. The red dots correspond to percentiles.

Appendix I – Why there was a Recovery Gap: unavoidable reasons for EM's Lag Behind

CUMULATIVE INDEX PERFORMANCE – NET RETURNS (USD) (JUL 2008 – JUL 2023)



1.Divergent Fiscal Responses: Fiscal measures varied across emerging markets, shaped by borrowing access and pre-crisis debt levels, limiting support for some highly indebted economies.

2. Public Debt Challenges: Public debt-to-GDP ratios in emerging markets, as shown in Figure 4, reveal a critical aspect of the recovery challenge.

3. Global Current Account Imbalances: Global current account balances have been widening, potentially impacting the recovery dynamics in emerging markets.

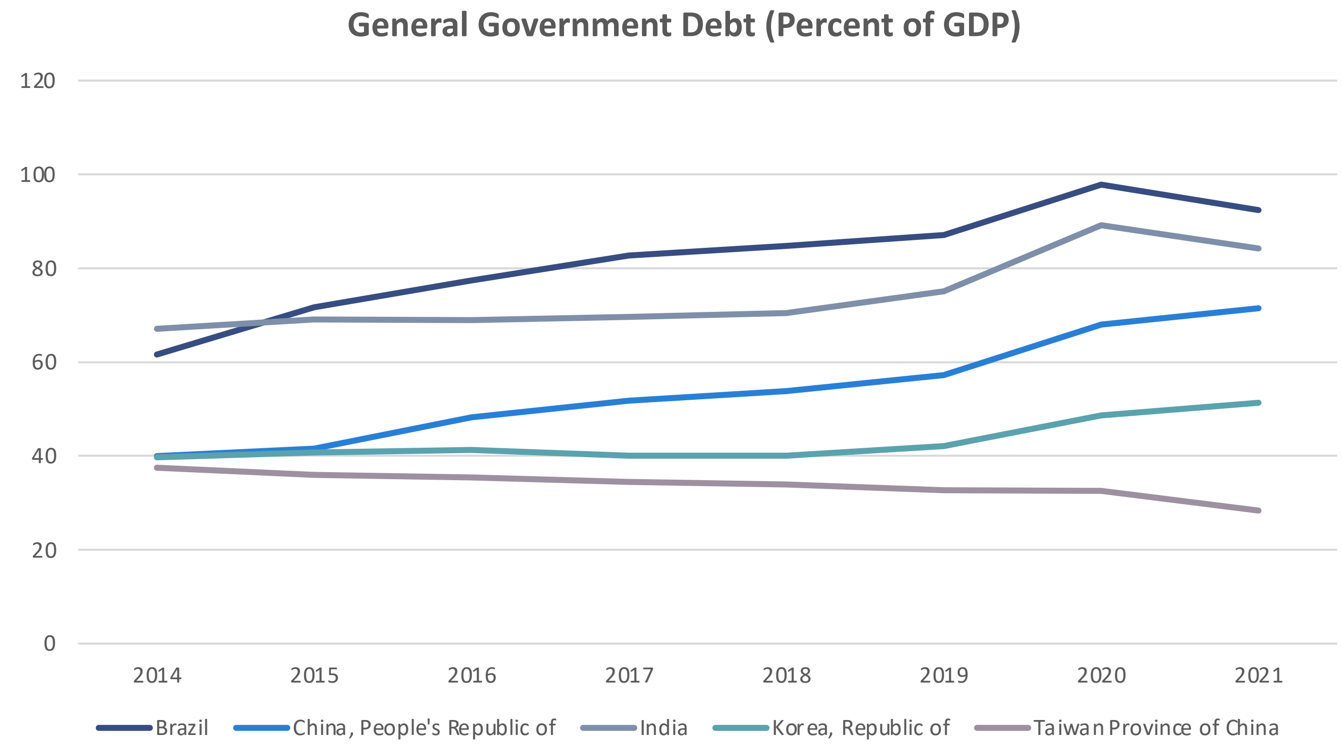
4. Healthcare Capacity and Mobility Restrictions: Limited healthcare capacity resulted in stricter mobility restrictions within emerging markets, affecting economic activities.

5. Tourism and Service Sector Vulnerability: The heavy reliance on tourism and extensive service sectors heightened the downturn, particularly in countries with substantial public debt burdens, contributing to the recovery gap.

Appendix J – Debt of 5 countries in Emerging Market

Debt crises in emerging markets have been linked to large fiscal deficits, high inflation rates, and large devaluations.

General Government Debt (Percent of GDP)	2014	2015	2016	2017	2018	2019	2020	2021
Brazil	61.61716	71.72969	77.42218	82.74495	84.77703	87.11848	97.83222	92.34279
China, People's Republic of	39.96924	41.48882	48.238	51.73278	53.8447	57.24435	68.06253	71.4801
India	67.10204	69.04859	68.94309	69.67669	70.39234	75.11562	89.1799	84.16241
Korea, Republic of	39.7075	40.78358	41.21716	40.05016	40.02228	42.12527	48.69827	51.33084
Taiwan Province of China	37.48843	35.94143	35.36392	34.51358	33.91495	32.72577	32.59788	28.35879



Fiscal responses varied by country depending on their borrowing access and their pre-crisis debt levels (Gaspar et al., 2020). Specifically, governments in many highly indebted Ems and LICs had limited space to increase borrowing, which restricted their ability to scale up fiscal support.

The change in the debt ratios reflects not only net new borrowing but also other factors affecting the *stock* of debt, including currency depreciations and the decline in real GDP.

Appendix K – World Real GDP Growth

World Economic Outlook, July 2023 Update

Selected Economies Real GDP Growth
(Percent change)

		Estimate	Projections		Difference from April 2023 WEO Projections 1/	
	2021	2022	2023	2024	2023	2024
Argentina	10.7	5.0	–2.5	2.8	–2.7	0.8
Australia	5.2	3.7	1.6	1.5	0.0	–0.2
Brazil	5.0	2.9	2.1	1.2	1.2	–0.3
Canada	5.0	3.4	1.7	1.4	0.2	–0.1
China	8.4	3.0	5.2	4.5	0.0	0.0
Egypt 2/	3.3	6.7	3.7	4.1	0.0	–0.9
France	6.4	2.5	0.8	1.3	0.1	0.0
Germany	2.6	1.8	–0.3	1.3	–0.2	0.2
India 2/	9.1	7.2	6.1	6.3	0.2	0.0
Indonesia	3.7	5.3	5.0	5.0	0.0	–0.1
Iran 2/	4.7	3.5	2.5	2.0	0.5	0.0
Italy	7.0	3.7	1.1	0.9	0.4	0.1
Japan	2.2	1.0	1.4	1.0	0.1	0.0
Kazakhstan	4.1	3.3	4.8	3.9	0.5	–1.0
Korea	4.3	2.6	1.4	2.4	–0.1	0.0
Malaysia	3.3	8.7	4.5	4.5	0.0	0.0
Mexico	4.7	3.0	2.6	1.5	0.8	–0.1
Netherlands	4.8	4.5	0.8	1.2	–0.2	0.0
Nigeria	3.6	3.3	3.2	3.0	0.0	0.0
Pakistan 2/	5.8	6.1	–0.5	2.5	–1.0	–1.0
Philippines	5.7	7.6	6.2	5.5	0.2	–0.3
Poland	6.9	5.1	1.2	2.2	0.9	–0.2
Russia	5.6	–2.1	1.5	1.3	0.8	0.0
Saudi Arabia	3.9	8.7	1.9	2.8	–1.2	–0.3
South Africa	4.7	1.9	0.3	1.7	0.2	–0.1
Spain	5.5	5.5	2.5	2.0	1.0	0.0
Thailand	1.5	2.6	3.4	3.6	0.0	0.0
Türkiye	11.4	5.6	3.0	2.8	0.3	–0.8
United Kingdom	7.6	4.1	0.4	1.0	0.7	0.0
United States	5.9	2.1	1.8	1.0	0.2	–0.1

Source: International Monetary Fund, World Economic Outlook, July 2023 Update.
Note: The selected economies account for approximately 83 percent of world output.
1/ Difference based on rounded figures for the current and April 2023 WEO forecasts.
2/ Data and forecasts are presented on a fiscal year basis.

Table 1. Overview of the World Economic Outlook Projections
(Percent change, unless noted otherwise)

	Year over Year						Q4 over Q4 2/		
		Estimate	Projections		Difference from April 2023 WEO Projections 1/		Estimate	Projections	
	2021	2022	2023	2024	2023	2024	2022	2023	2024
World Output	6.3	3.5	3.0	3.0	0.2	0.0	2.2	2.9	2.9
Advanced Economies	5.4	2.7	1.5	1.4	0.2	0.0	1.2	1.4	1.4
United States	5.9	2.1	1.8	1.0	0.2	–0.1	0.9	1.4	1.1
Euro Area	5.3	3.5	0.9	1.5	0.1	0.1	1.8	1.2	1.5
Germany	2.6	1.8	–0.3	1.3	–0.2	0.2	0.8	0.5	1.5
France	6.4	2.5	0.8	1.3	0.1	0.0	0.6	0.9	1.6
Italy	7.0	3.7	1.1	0.9	0.4	0.1	1.5	0.9	1.1
Spain	5.5	5.5	2.5	2.0	1.0	0.0	3.0	1.8	2.2
Japan	2.2	1.0	1.4	1.0	0.1	0.0	0.4	1.5	1.0
United Kingdom	7.6	4.1	0.4	1.0	0.7	0.0	0.6	0.5	1.3
Canada	5.0	3.4	1.7	1.4	0.2	–0.1	2.1	1.6	1.8
Other Advanced Economies 3/	5.5	2.7	2.0	2.3	0.2	0.1	1.0	1.8	2.1
Emerging Market and Developing Economies	6.8	4.0	4.0	4.1	0.1	–0.1	3.1	4.1	4.1
Emerging and Developing Asia	7.5	4.5	5.3	5.0	0.0	–0.1	4.2	5.3	4.9
China	8.4	3.0	5.2	4.5	0.0	0.0	3.1	5.8	4.1
India 4/	9.1	7.2	6.1	6.3	0.2	0.0	6.1	4.3	6.4
Emerging and Developing Europe	7.3	0.8	1.8	2.2	0.6	–0.3	–1.3	2.7	2.0
Russia	5.6	–2.1	1.5	1.3	0.8	0.0	–3.1	1.9	0.8
Latin America and the Caribbean	7.0	3.9	1.9	2.2	0.3	0.0	2.6	0.8	2.9
Brazil	5.0	2.9	2.1	1.2	1.2	–0.3	2.5	1.3	2.2
Mexico	4.7	3.0	2.6	1.5	0.8	–0.1	3.7	1.9	1.7
Middle East and Central Asia	4.4	5.4	2.5	3.2	–0.4	–0.3	...	...	...
Saudi Arabia	3.9	8.7	1.9	2.8	–1.2	–0.3	5.5	2.0	2.9
Sub-Saharan Africa	4.7	3.9	3.5	4.1	–0.1	–0.1	...	...	...
Nigeria	3.6	3.3	3.2	3.0	0.0	0.0	...	...	...
South Africa	4.7	1.9	0.3	1.7	0.2	–0.1	...	...	...
Memorandum									
World Growth Based on Market Exchange Rates	6.0	3.0	2.5	2.4	0.1	0.0	1.8	2.5	2.4
European Union	5.5	3.7	1.0	1.7	0.3	0.1	1.8	1.5	1.7
ASEAN-5 5/	4.0	5.5	4.6	4.5	0.1	–0.1	4.7	4.6	4.8
Middle East and North Africa	4.0	5.4	2.6	3.1	–0.5	–0.3	...	...	...
Emerging Market and Middle-Income Economies	7.1	3.9	3.9	3.9	0.0	–0.1	3.1	4.1	4.1
Low-Income Developing Countries	4.1	5.0	4.5	5.2	–0.2	–0.2	...	...	...
World Trade Volume (goods and services) 6/	10.7	5.2	2.0	3.7	–0.4	0.2	...	...	...
Advanced Economies	9.9	6.1	2.3	3.2	–0.1	0.3	...	...	...
Emerging Market and Developing Economies	12.2	3.7	1.5	4.5	–0.9	–0.2	...	...	...
Commodity Prices									
Oil 7/	65.8	39.2	–20.7	–6.2	3.4	–0.4	8.8	–13.0	–4.9
Nonfuel (average based on world commodity import weights)	26.7	7.9	–4.8	–1.4	–2.0	–0.4	–0.4	0.0	0.8
World Consumer Prices 8/	4.7	8.7	6.8	5.2	–0.2	0.3	9.2	5.5	3.9
Advanced Economies 9/	3.1	7.3	4.7	2.8	0.0	0.2	7.7	3.3	2.5
Emerging Market and Developing Economies 8/	5.9	9.8	8.3	6.8	–0.3	0.3	10.5	7.4	5.1

Appendix L : Forecasted Country Index Growth based on Beta

$$\text{Country}_{Y}\ \text{Index Growth} = \sum \text{Growth}_{i} \times \text{Beta}_{,\,Y}$$

Brazil

	Real GDP Growth	Top 3 industries: Financials	Information Technology	Consumer Discretionary	MSCI Brazil Index
Beta = Correlation	-53.3%	26.7%	20.1%	18.1%	
	Growth rate				Real Index in 2022: 14.15%; Risk premium: 9.57%
	Real GDP Growth	Financials Sector Growth (26.7%)	Information Technology Sector Growth (20.1%)	Consumer Discretionary Sector Growth (18.1%)	Brazil Index Growth
2023	0.90%	9.7%	18.8%	6.8%	7.12%
2024	1.50%	9.1%	19.8%	8.4%	7.13%
2025	1.90%	8.7%	20.7%	5.0%	6.37%
2026	2%	8.3%	21.3%	3.5%	6.06%
2027	2%	7.8%	18.4%	3.2%	5.29%
2028	2%				

India

	Real GDP Growth	Top 3 industries: Financials	Information Technology	Consumer Discretionary	MSCI India Index
Beta = Correlation	82.7%	26.6%	13.6%	11.5%	
	Growth rate				Real Index in 2022: -7.49%; Risk premium: 8.33%
	Real GDP Growth	Financials Sector Growth (26.6%)	Information Technology Sector Growth (13.6%)	Consumer Discretionary Sector Growth (11.5%)	India Index Growth
2023	5.90%	9.0%	19.1%	8.0%	10.78%
2024	6.30%	9.2%	19.9%	5.9%	11.03%
2025	6.20%	8.9%	20.5%	6.0%	10.96%
2026	6.10%	8.9%	21.0%	6.0%	10.95%
2027	6%	8.8%	17.6%	5.5%	10.32%
2028	6%				

China

	Real GDP Growth	Top 3 industries: Consumer Discretionary	Communication Services	Financials	MSCI China Index
Beta = Correlation	75.8%	30.8%	18.1%	15.5%	
	Growth rate				Real Index in 2022: -21.93%; Risk premium: 6.07%
	Real GDP Growth	Consumer Discretionary Sector Growth (30.8%)	Communication Services Sector Growth (18.1%)	Financials Sector Growth (15.5%)	China Index Growth
2023	5.20%	8.2%	8.2%	9.7%	9.45%
2024	4.50%	7.5%	7.5%	9.1%	8.48%
2025	4.10%	7.4%	7.4%	8.7%	8.07%
2026	4%	8.0%	8.0%	8.3%	8.22%
2027	3.60%	8.5%	8.5%	7.8%	8.09%
2028	3.40%				

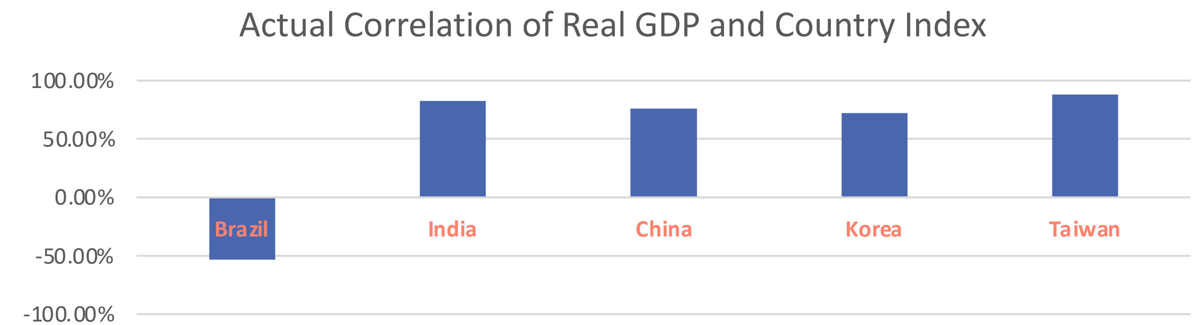
Korea

	Real GDP Growth	Top 3 industries: Information Technology	Industrials	Financials	MSCI Korea Index
Beta = Correlation	72.0%	46.2%	12.8%	8.8%	
	Growth rate				Real Index in 2022: -29.36%; Risk premium: 5.75%
	Real GDP Growth	Information Technology Sector Growth (46.2%)	Industrials Sector Growth (12.8%)	Financials Sector Growth (8.8%)	Korea Index Growth
2023	1.50%	11.3%	4.1%	6.7%	7.41%
2024	2.40%	11.9%	4.0%	6.7%	8.32%
2025	2.30%	8.9%	3.9%	6.9%	6.87%
2026	2.30%	9.6%	4.1%	6.8%	7.21%
2027	2.20%		4.1%	6.6%	2.69%
2028	2.20%				

Taiwan

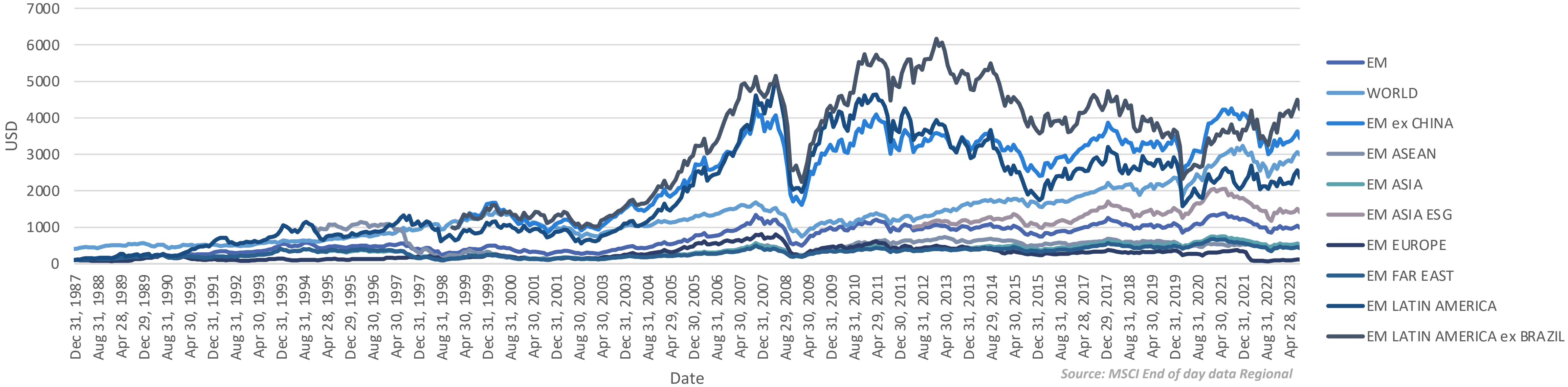
	Real GDP Growth	Top 3 industries: Information Technology	Financials	Materials	MSCI Taiwan Index
Beta = Correlation	87.9%	72.3%	13.8%	4.6%	
	Growth rate				Real Index in 2022: -29.13%; Risk premium: 29.82%
	Real GDP Growth	Information Technology Sector Growth (26.7%)	Financials Sector Growth (20.1%)	Materials Sector Growth (18.1%)	Taiwan Index Growth
2023	2.10%	6.0%	4.7%	1.5%	6.90%
2024	2.60%	6.0%	4.7%	0.9%	7.31%
2025	2.20%	3.8%	4.6%	1.4%	5.38%
2026	2.60%	7.5%	4.4%	0.9%	8.35%
2027	2.40%	4.1%	4.3%	1.1%	5.72%
2028	2.40%				

Year	MSCI Brazil Growth Rate	GDP Growth Rate	MSCI India Growth Rate	GDP Growth Rate	MSCI China Growth Rate	GDP Growth Rate	MSCI Korea Growth Rate	GDP Growth Rate	MSCI Taiwan Growth Rate	GDP Growth Rate
2009	128.06%	-0.10%	102.81%	8.50%	62.29%	9.40%	71.35%	0.80%	80.25%	-1.60%
2010	6.54%	7.50%	20.95%	10.30%	4.63%	10.60%	26.74%	6.80%	22.73%	10.20%
2011	-21.85%	4.00%	-37.17%	6.60%	-18.41%	9.60%	-12.00%	3.70%	-20.15%	3.70%
2012	0.05%	1.90%	25.97%	5.50%	22.75%	7.80%	21.18%	2.40%	17.66%	2.20%
2013	-16.04%	3.00%	-3.83%	6.40%	3.64%	7.80%	3.94%	3.20%	9.77%	2.50%
2014	-14.04%	0.50%	23.87%	7.40%	7.96%	7.40%	-11.12%	3.20%	10.05%	4.70%
2015	-41.37%	-3.50%	-6.12%	8.00%	-7.82%	7%	-6.66%	2.80%	-10.97%	1.50%
2016	66.24%	-3.30%	-1.43%	8.30%	0.90%	6.90%	8.75%	2.90%	19.59%	2.20%
2017	24.11%	1.30%	38.76%	6.80%	54.07%	6.90%	47.30%	3.20%	28.51%	3.30%
2018	-0.49%	1.80%	-7.30%	6.50%	-18.88%	6.80%	-20.94%	2.90%	-8.16%	2.80%
2019	26.30%	1.20%	7.58%	3.90%	23.46%	6%	12.50%	2.20%	37.69%	3.10%
2020	-19.02%	-3.30%	15.90%	-5.80%	29.49%	2.20%	44.64%	-0.70%	42.02%	3.40%
2021	-17.40%	5.00%	26.66%	9.10%	-21.72%	8.40%	-8.39%	4.10%	26.82%	6.50%
2022	14.15%	2.90%	-7.49%	6.80%	-21.93%	3%	-29.36%	2.60%	-29.13%	2.50%



Appendix M - Specific geographical segments in emerging markets index carry key opportunities that will support investors' investment goals

Prices as of Sep 08, 2023



Source: MSCI End of day data Regional

Key Challenges

Emerging Markets & ACWI index have been **underperforming**

-19.7%
EM growth

-17.7%
ASCI growth

Historical price trend suggests that **ACWI index** have been **outperforming index**

Key Opportunities

Latin America & Latin America ex Brazil & EM ex China outperform ACWI index

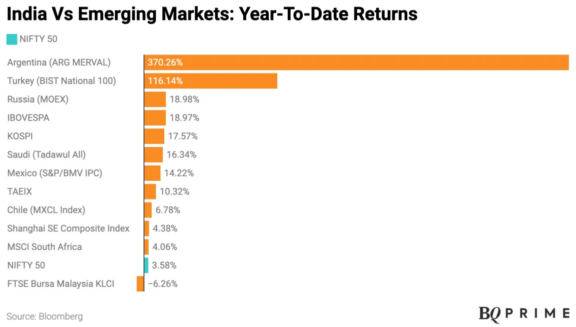
Emerging markets could possess higher return potentials than global equities after adjusting for main outlier, China and focusing on Latin America

Emerging Market Asia with ESG screening outperforms EM Asia

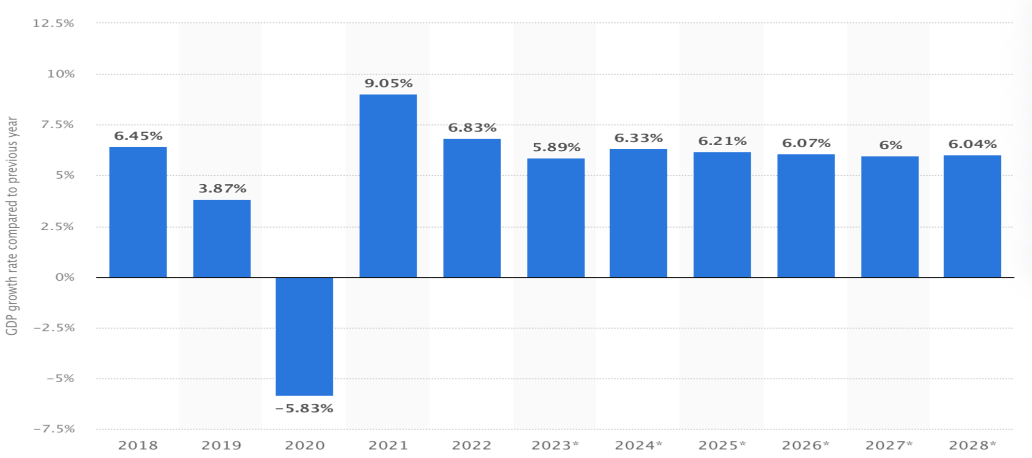
Investors can benefit from taking ESG as core consideration in term of social and financial advantages

Appendix N – India: Real gross domestic product (GDP) growth rate from 2018 to 2028

- S&P Global predicts India will be the world's third-largest economy by 2030 - India will surpass Japan in terms of economic size
- S&P projects India's GDP to increase from $US3.5 trillion in 2022 - S&P projects India's GDP to reach $US7.3 trillion by 2030
- Invesco report: India viewed positively - Improved business and political stability - Favourable demographics - Regulatory initiatives - Friendly environment for sovereign investor.



India ranks fourth among top global markets. It lagged the U.S. and Japan but beat China, Korea, Germany, and the U.K. over the last three months.



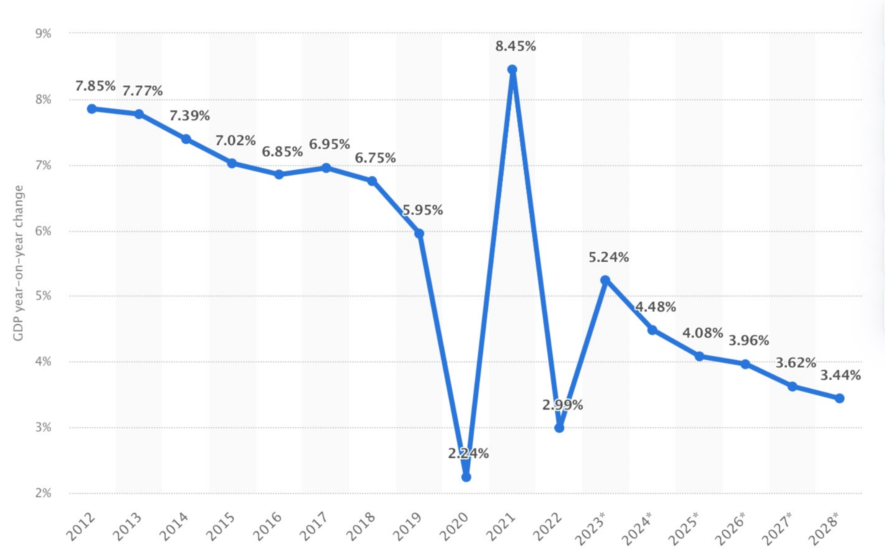
Indicators	2020	2021	2022	2023f	2024f	2025f
GDP growth rate (%)	-6.6	8.7	7.0	5.8	6.0	5.9
GDP per capita ($)	2,010.51	2,365.61	2,561.32	2,728.86	2,940.85	3,161.38
Inflation rate (%)	6.6	5.1	6.7	5.2	4.7	4.4
Unemployment rate (%)	10.4	7.8	7.6	7.3	7.1	6.8
Exports (% of GDP)	17.9	19.9	19.0	17.9	17.0	16.0
Current account balance (% GDP)	0.9	-1.2	-2.6	-2.2	-2.2	-2.2
General government lending/borrowing (% GDP)	-12.9	-9.6	-9.6	-8.9	-8.3	-7.9
General government gross debt (% GDP)	88.5	84.7	83.1	83.2	83.7	83.8
Exchange rate (INR per $)	74.10	73.92	78.60	82.04	83.90	85.71

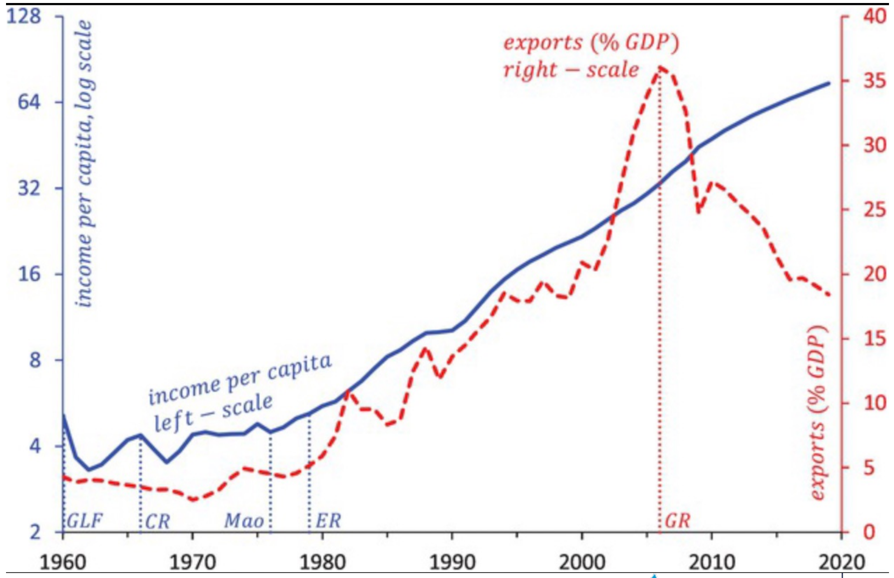
Appendix O – China: Growth rate of real gross domestic product (GDP) from 2012 to 2022 with forecasts until 2028

Relative exports declined once the Great Recession started in 2006 but it has not slowed down Chinese development.

FDI: Foreign direct investment flows relative to income, associated with these investments is an enormous transfer of knowledge by multinational firms.

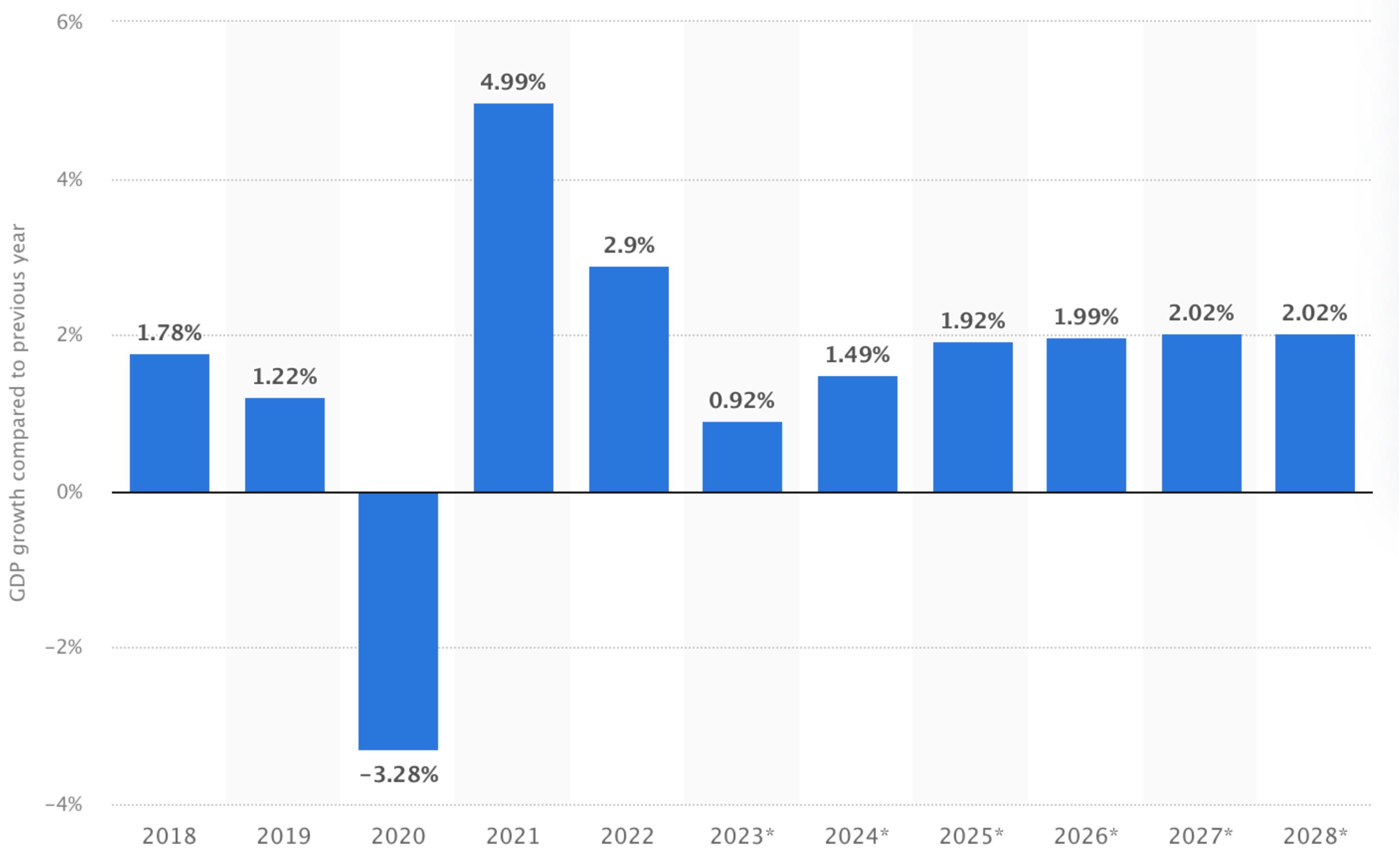
Indicators	2020	2021	2022	2023f	2024f	2025f
GDP growth rate (%)	2.2	8.1	3.0	5.3	5.1	4.9
GDP per capita ($)	10,401.2	12,554.2	12,865.9	13,522.9	14,555.9	15,767.1
Inflation rate (%)	2.5	0.9	1.9	2.4	2.3	2.3
Unemployment rate (%)	4.2	4.0	4.2	4.5	4.3	4.2
Exports (% of GDP)	19.5	21.2	19.9	19.1	18.6	18.2
Current account balance (% GDP)	1.7	1.8	2.3	1.4	1.1	0.9
General government lending/borrowing (% GDP)	-9.7	-6.0	-7.5	-6.9	-6.4	-6.3
General government gross debt (% GDP)	70.1	71.8	77.1	82.4	87.2	92.0
Exchange rate (CNY per $)	6.90	6.45	6.71	6.75	6.70	6.61





Appendix P – Brazil: Growth rate of the real gross domestic product (GDP) from 2018 to 2028

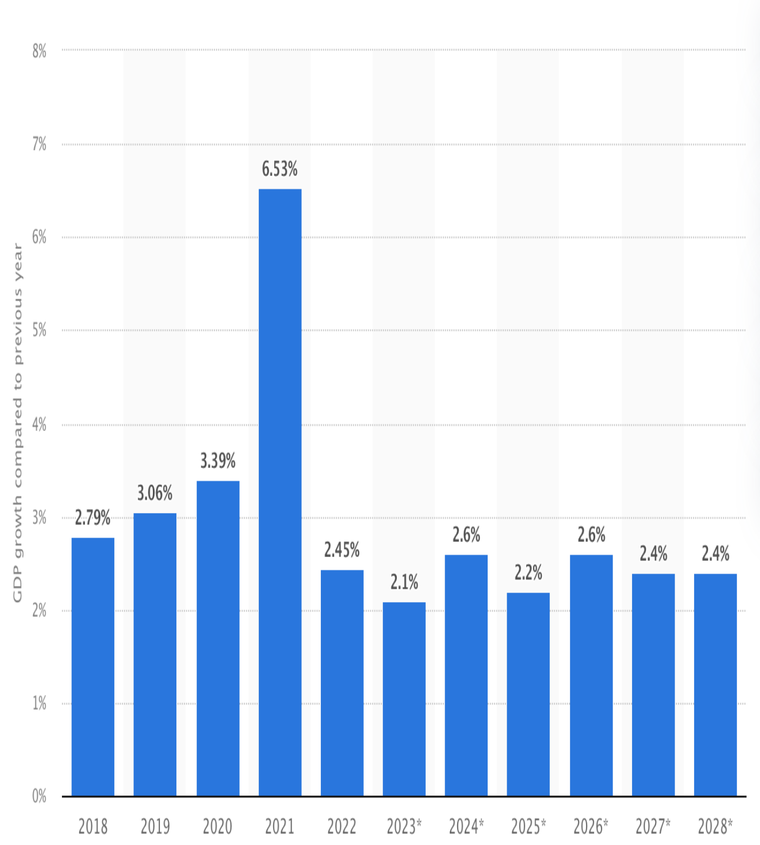
- Economic data stronger than expected
- Q123 performance exceeds expectations
- Surprising economic data in Q123
- Forecast: 1.5% growth in 2023
  - Up from 1.2% at the beginning of 2023
- Upside risks in Brazil and Mexico
- LatAm central banks to cut
- Leftist leaders face constraints
  - Limitations on leftist leaders
- Constraints faced by leftists
- Political risks driving factors



Appendix Q – Taiwan: Growth rate of the real gross domestic product (GDP) from 2018 to 2028

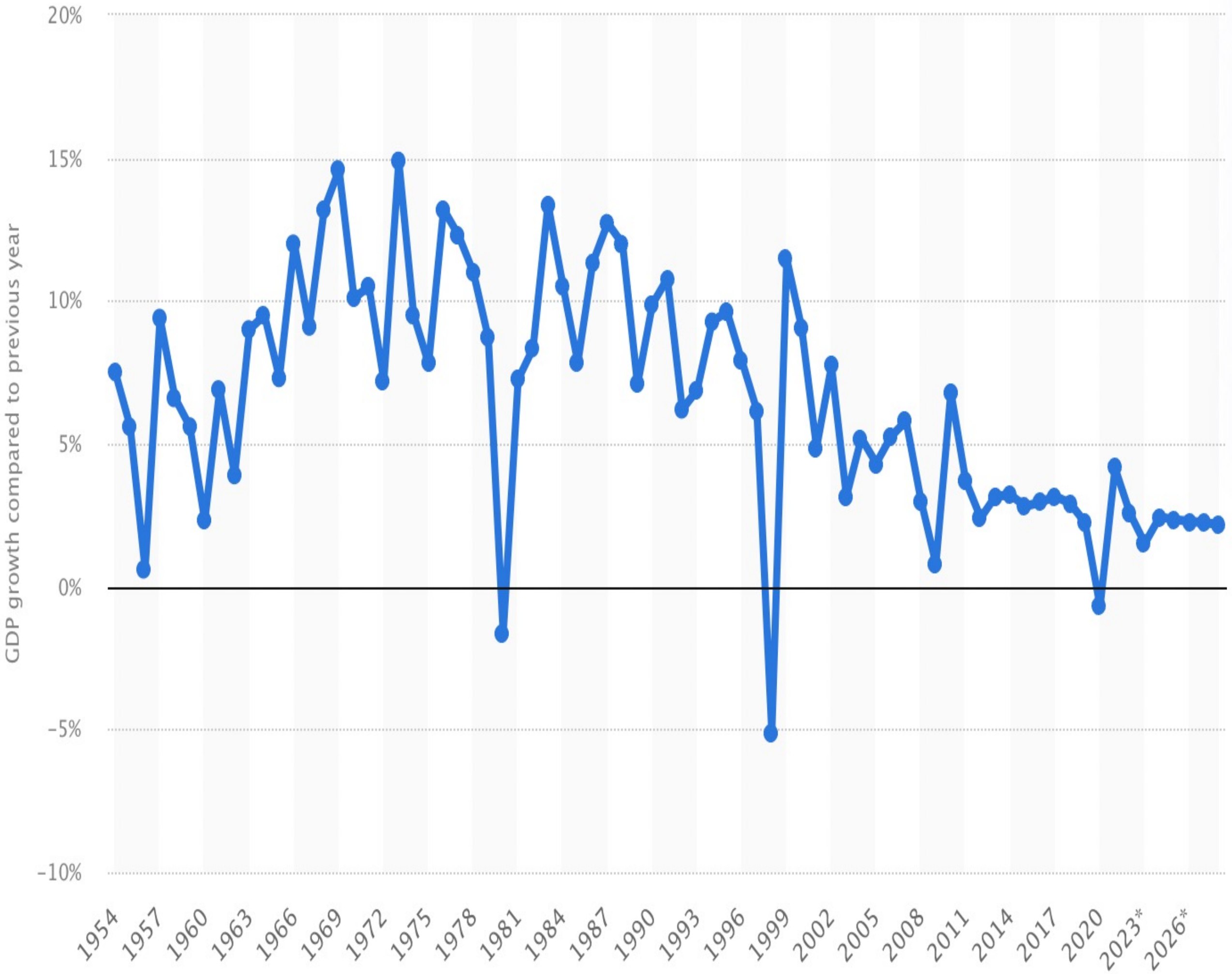
Rising tensions between Washington and Beijing will lead to greater constraints for Mainland China and raise sanctions risks for businesses. In our view, China-US relations will remain tense in 2023-2024 as Washington attempts to focus more on the Indo-Pacific region, after having focused heavily on Europe in 2022 as a result of Russia's invasion of Ukraine

Indicators	2020	2021	2022	2023f	2024f	2025f
GDP growth rate (%)	-0.7	4.1	2.6	1.1	2.2	2.5
GDP per capita ($)	31,721.3	34,998.0	32,247.0	33,369.0	34,780.5	36,328.9
Inflation rate (%)	0.5	2.5	5.1	3.3	2.1	2.0
Unemployment rate (%)	4.0	3.7	2.9	3.6	3.6	3.6
Exports (% of GDP)	36.7	42.6	45.2	43.5	42.4	41.3
Current account balance (% GDP)	4.6	4.7	1.8	2.2	2.8	3.1
General government lending/borrowing (% GDP)	-2.2	0.0	-0.9	0.0	-0.2	-0.1
General government gross debt (% GDP)	48.7	51.3	54.3	55.3	55.9	56.6
Exchange rate (KRW per $)	1,180.3	1,144.0	1,291.8	1,301.8	1,312.7	1,313.4



Appendix R – South Korea: Growth of real gross domestic product (GDP) from 1954 to 2021, with projections until 2028

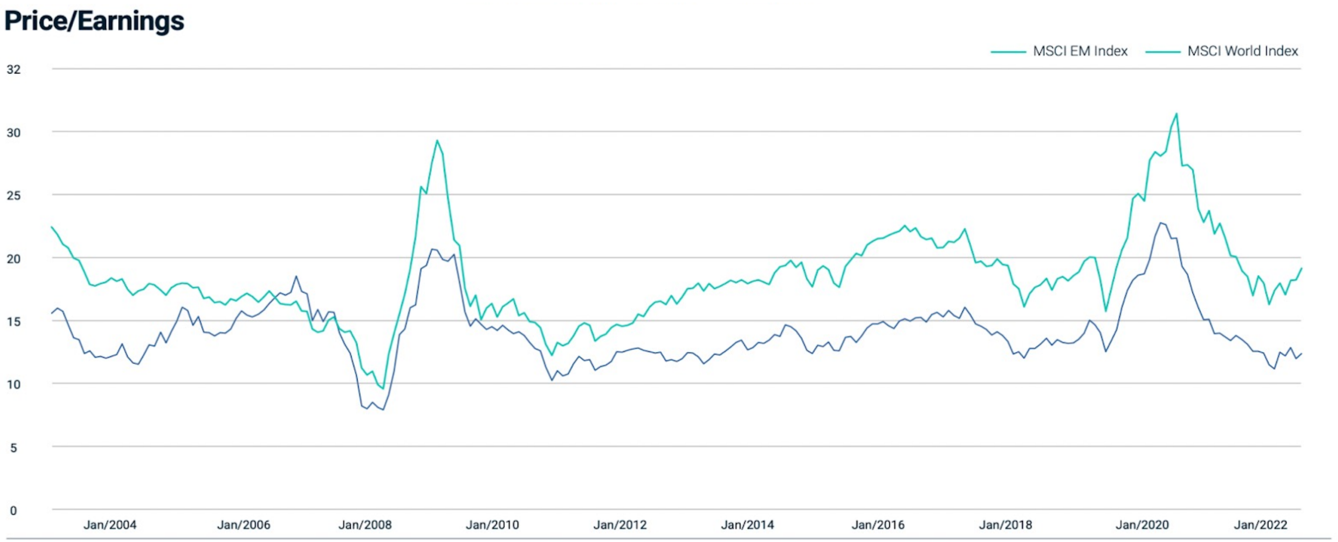
Indicators	2020	2021	2022	2023f	2024f	2025f
GDP growth rate (%)	-0.7	4.1	2.6	1.1	2.2	2.5
GDP per capita ($)	31,721.3	34,998.0	32,247.0	33,369.0	34,780.5	36,328.9
Inflation rate (%)	0.5	2.5	5.1	3.3	2.1	2.0
Unemployment rate (%)	4.0	3.7	2.9	3.6	3.6	3.6
Exports (% of GDP)	36.7	42.6	45.2	43.5	42.4	41.3
Current account balance (% GDP)	4.6	4.7	1.8	2.2	2.8	3.1
General government lending/borrowing (% GDP)	-2.2	0.0	-0.9	0.0	-0.2	-0.1
General government gross debt (% GDP)	48.7	51.3	54.3	55.3	55.9	56.6
Exchange rate (KRW per $)	1,180.3	1,144.0	1,291.8	1,301.8	1,312.7	1,313.4



Appendix S – Summary of the financial multiples

	Div Yld (%)	P/E	P/E Fwd	P/BV
MSCI EMI	3.05	14.2	11.78	1.61
MSCI ACWI	2.09	19.37	16.2	2.74
MSCI World	1.98	20.22	16.93	2.98

		Annualized stand dev			Sharpe Ratio			
	Turnover	3yr	5YR	10YR	3YR	5YR	10yr	since dec 2000
EMI	5.04	17.86	19.2	17.12	-0.08	0.06	0.19	0.37
ACWI	2.37	17.01	17.99	14.49	0.4	0.4	0.56	0.33
World	2.15	17.57	18.34	14.64	0.46	0.44	0.6	0.34



Appendix T – World Real GDP Growth

World Economic Outlook, July 2023 Update

Selected Economies Real GDP Growth
(Percent change)

		Estimate	Projections		Difference from April 2023 WEO Projections 1/	
	2021	2022	2023	2024	2023	2024
Argentina	10.7	5.0	–2.5	2.8	–2.7	0.8
Australia	5.2	3.7	1.6	1.5	0.0	–0.2
Brazil	5.0	2.9	2.1	1.2	1.2	–0.3
Canada	5.0	3.4	1.7	1.4	0.2	–0.1
China	8.4	3.0	5.2	4.5	0.0	0.0
Egypt 2/	3.3	6.7	3.7	4.1	0.0	–0.9
France	6.4	2.5	0.8	1.3	0.1	0.0
Germany	2.6	1.8	–0.3	1.3	–0.2	0.2
India 2/	9.1	7.2	6.1	6.3	0.2	0.0
Indonesia	3.7	5.3	5.0	5.0	0.0	–0.1
Iran 2/	4.7	3.5	2.5	2.0	0.5	0.0
Italy	7.0	3.7	1.1	0.9	0.4	0.1
Japan	2.2	1.0	1.4	1.0	0.1	0.0
Kazakhstan	4.1	3.3	4.8	3.9	0.5	–1.0
Korea	4.3	2.6	1.4	2.4	–0.1	0.0
Malaysia	3.3	8.7	4.5	4.5	0.0	0.0
Mexico	4.7	3.0	2.6	1.5	0.8	–0.1
Netherlands	4.8	4.5	0.8	1.2	–0.2	0.0
Nigeria	3.6	3.3	3.2	3.0	0.0	0.0
Pakistan 2/	5.8	6.1	–0.5	2.5	–1.0	–1.0
Philippines	5.7	7.6	6.2	5.5	0.2	–0.3
Poland	6.9	5.1	1.2	2.2	0.9	–0.2
Russia	5.6	–2.1	1.5	1.3	0.8	0.0
Saudi Arabia	3.9	8.7	1.9	2.8	–1.2	–0.3
South Africa	4.7	1.9	0.3	1.7	0.2	–0.1
Spain	5.5	5.5	2.5	2.0	1.0	0.0
Thailand	1.5	2.6	3.4	3.6	0.0	0.0
Türkiye	11.4	5.6	3.0	2.8	0.3	–0.8
United Kingdom	7.6	4.1	0.4	1.0	0.7	0.0
United States	5.9	2.1	1.8	1.0	0.2	–0.1

Source: International Monetary Fund, World Economic Outlook, July 2023 Update.
Note: The selected economies account for approximately 83 percent of world output.
1/ Difference based on rounded figures for the current and April 2023 WEO forecasts.
2/ Data and forecasts are presented on a fiscal year basis.

Table 1. Overview of the World Economic Outlook Projections
(Percent change, unless noted otherwise)

	Year over Year						Q4 over Q4 2/		
		Estimate	Projections		Difference from April 2023 WEO Projections 1/		Estimate	Projections	
	2021	2022	2023	2024	2023	2024	2022	2023	2024
World Output	6.3	3.5	3.0	3.0	0.2	0.0	2.2	2.9	2.9
Advanced Economies	5.4	2.7	1.5	1.4	0.2	0.0	1.2	1.4	1.4
United States	5.9	2.1	1.8	1.0	0.2	–0.1	0.9	1.4	1.1
Euro Area	5.3	3.5	0.9	1.5	0.1	0.1	1.8	1.2	1.5
Germany	2.6	1.8	–0.3	1.3	–0.2	0.2	0.8	0.5	1.5
France	6.4	2.5	0.8	1.3	0.1	0.0	0.6	0.9	1.6
Italy	7.0	3.7	1.1	0.9	0.4	0.1	1.5	0.9	1.1
Spain	5.5	5.5	2.5	2.0	1.0	0.0	3.0	1.8	2.2
Japan	2.2	1.0	1.4	1.0	0.1	0.0	0.4	1.5	1.0
United Kingdom	7.6	4.1	0.4	1.0	0.7	0.0	0.6	0.5	1.3
Canada	5.0	3.4	1.7	1.4	0.2	–0.1	2.1	1.6	1.8
Other Advanced Economies 3/	5.5	2.7	2.0	2.3	0.2	0.1	1.0	1.8	2.1
Emerging Market and Developing Economies	6.8	4.0	4.0	4.1	0.1	–0.1	3.1	4.1	4.1
Emerging and Developing Asia	7.5	4.5	5.3	5.0	0.0	–0.1	4.2	5.3	4.9
China	8.4	3.0	5.2	4.5	0.0	0.0	3.1	5.8	4.1
India 4/	9.1	7.2	6.1	6.3	0.2	0.0	6.1	4.3	6.4
Emerging and Developing Europe	7.3	0.8	1.8	2.2	0.6	–0.3	–1.3	2.7	2.0
Russia	5.6	–2.1	1.5	1.3	0.8	0.0	–3.1	1.9	0.8
Latin America and the Caribbean	7.0	3.9	1.9	2.2	0.3	0.0	2.6	0.8	2.9
Brazil	5.0	2.9	2.1	1.2	1.2	–0.3	2.5	1.3	2.2
Mexico	4.7	3.0	2.6	1.5	0.8	–0.1	3.7	1.9	1.7
Middle East and Central Asia	4.4	5.4	2.5	3.2	–0.4	–0.3	. . .	. . .	. . .
Saudi Arabia	3.9	8.7	1.9	2.8	–1.2	–0.3	5.5	2.0	2.9
Sub-Saharan Africa	4.7	3.9	3.5	4.1	–0.1	–0.1	. . .	. . .	. . .
Nigeria	3.6	3.3	3.2	3.0	0.0	0.0	. . .	. . .	. . .
South Africa	4.7	1.9	0.3	1.7	0.2	–0.1	. . .	. . .	. . .
Memorandum									
World Growth Based on Market Exchange Rates	6.0	3.0	2.5	2.4	0.1	0.0	1.8	2.5	2.4
European Union	5.5	3.7	1.0	1.7	0.3	0.1	1.8	1.5	1.7
ASEAN-5 5/	4.0	5.5	4.6	4.5	0.1	–0.1	4.7	4.6	4.8
Middle East and North Africa	4.0	5.4	2.6	3.1	–0.5	–0.3	. . .	. . .	. . .
Emerging Market and Middle-Income Economies	7.1	3.9	3.9	3.9	0.0	–0.1	3.1	4.1	4.1
Low-Income Developing Countries	4.1	5.0	4.5	5.2	–0.2	–0.2	. . .	. . .	. . .
World Trade Volume (goods and services) 6/	10.7	5.2	2.0	3.7	–0.4	0.2	. . .	. . .	. . .
Advanced Economies	9.9	6.1	2.3	3.2	–0.1	0.3	. . .	. . .	. . .
Emerging Market and Developing Economies	12.2	3.7	1.5	4.5	–0.9	–0.2	. . .	. . .	. . .
Commodity Prices									
Oil 7/	65.8	39.2	–20.7	–6.2	3.4	–0.4	8.8	–13.0	–4.9
Nonfuel (average based on world commodity import weights)	26.7	7.9	–4.8	–1.4	–2.0	–0.4	–0.4	0.0	0.8
World Consumer Prices 8/	4.7	8.7	6.8	5.2	–0.2	0.3	9.2	5.5	3.9
Advanced Economies 9/	3.1	7.3	4.7	2.8	0.0	0.2	7.7	3.3	2.5
Emerging Market and Developing Economies 8/	5.9	9.8	8.3	6.8	–0.3	0.3	10.5	7.4	5.1

Appendix U - Top 20 Constituents of The 5 Main Countries - Continued

	South Korea	
	Name	Weight (%)
1	Samsung Electronics Co Ltd	3.629
2	SK Hynix Inc	0.705
3	MediaTek Inc	0.484
4	Samsung SDI Co Ltd	0.336
5	NAVER Corp	0.317
6	LG Chem Ltd	0.283
7	Hyundai Motor Co	0.276
8	LG Energy Solution Ltd	0.254
9	Firstrand Ltd	0.247
10	KB Financial Group Inc	0.231
11	Kia Corp	0.220
12	Ecopro Co Ltd	0.188
13	Shinhan Financial Group Co Ltd	0.176
14	Celltrion Inc	0.171
15	Kakao Corp	0.160
16	Hyundai Mobis Co Ltd	0.153
17	Samsung BioLogics Co Ltd	0.137
18	Hana Financial Group Inc	0.135
19	Posco Future M	0.134
20	LG Electronics Inc	0.120

	Brazil	
	Name	Weight (%)
1	Vale SA	0.681
2	Petroleo Brasileiro SA Petrobras Participating Preferred	0.473
3	Itau Unibanco Holding SA Participating Preferred	0.384
4	Petroleo Brasileiro SA Petrobras	0.384
5	Bank Bradesco SA Participating Preferred	0.228
6	B3 SA - Brasil Bolsa Balcao	0.220
7	Ambev SA	0.182
8	Weg SA	0.174
9	Localiza Rent A Car SA	0.157
10	Itausa Investimentos ITAU SA Participating Preferred	0.138
11	Centrais Eletricas Brasileiras SA	0.125
12	Raia Drogasil SA	0.102
13	Grupo Aeroportuario del Pacifico SAB de CV Class B	0.101
14	Equatorial Energia SA	0.098
15	Rumo SA	0.088
16	Gerdau SA Participating Preferred	0.086
17	Siam Cement PCL Units Non-Voting Depository Receipt	0.085
18	Grupo Aeroportuario del Sureste SAB de CV Class B	0.070
19	Hapvida Participacoes Investimento SA Ordinary Shares	0.067
20	Companhia De Saneamento Basico Do Estado De Sao Paulo	0.057