

## TOBAM's new Core Strategy Seeding Roadshow Q3 2023

Our mission: "Provide rational and professional solutions to long term investors in the context of efficient markets"

October 2023

AF, TXP

## MIGRATING TOBAM FROM A MONO-CORE ...

**TOBAM<sup>\*</sup>**  
CORE INVESTMENTS

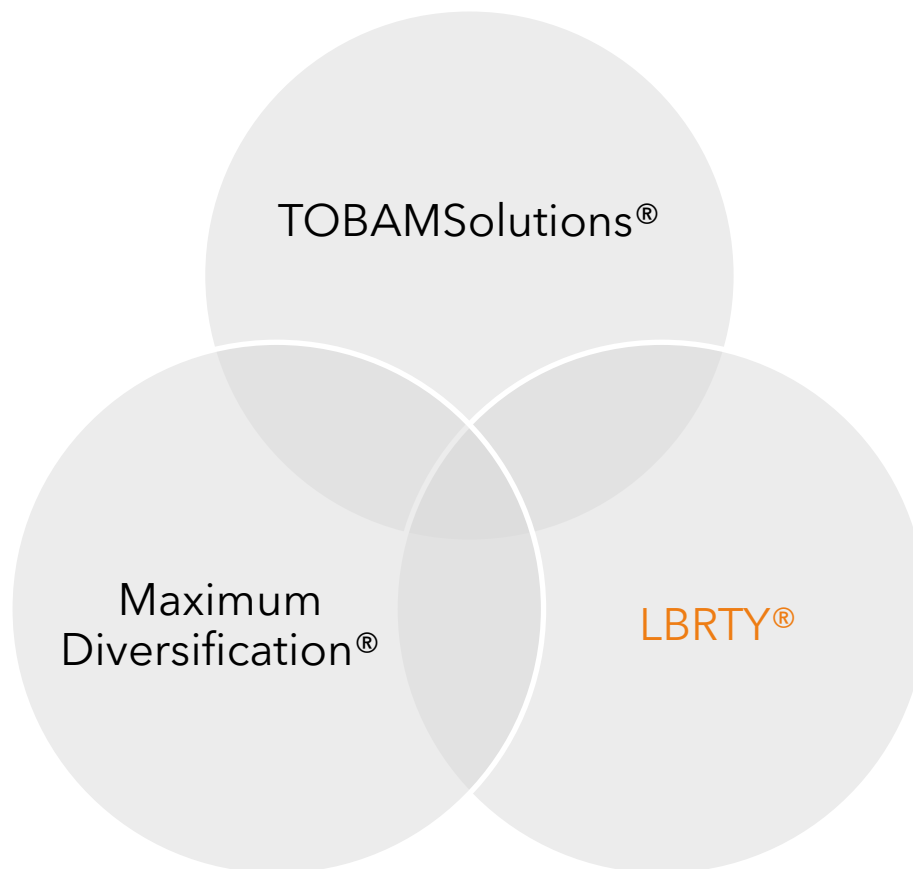


tobam<sup>\*</sup>  
unbiased.

.... To Multi-Core



CryptTOBAM®



## WARNING

The presentation herein is not an offer nor a solicitation to invest and is for discussion only.

Its purpose is to present work in progress to get feedback and commentary for further discussion on the subject and research topic.

Moreover, it is being provided as a means to discuss research and thoughts conducted to date at TOBAM.

1 ● Introduction to TOBAM and Anti-Benchmark

2 ● Investment Philosophy - The case for Civil and Democratic Rights

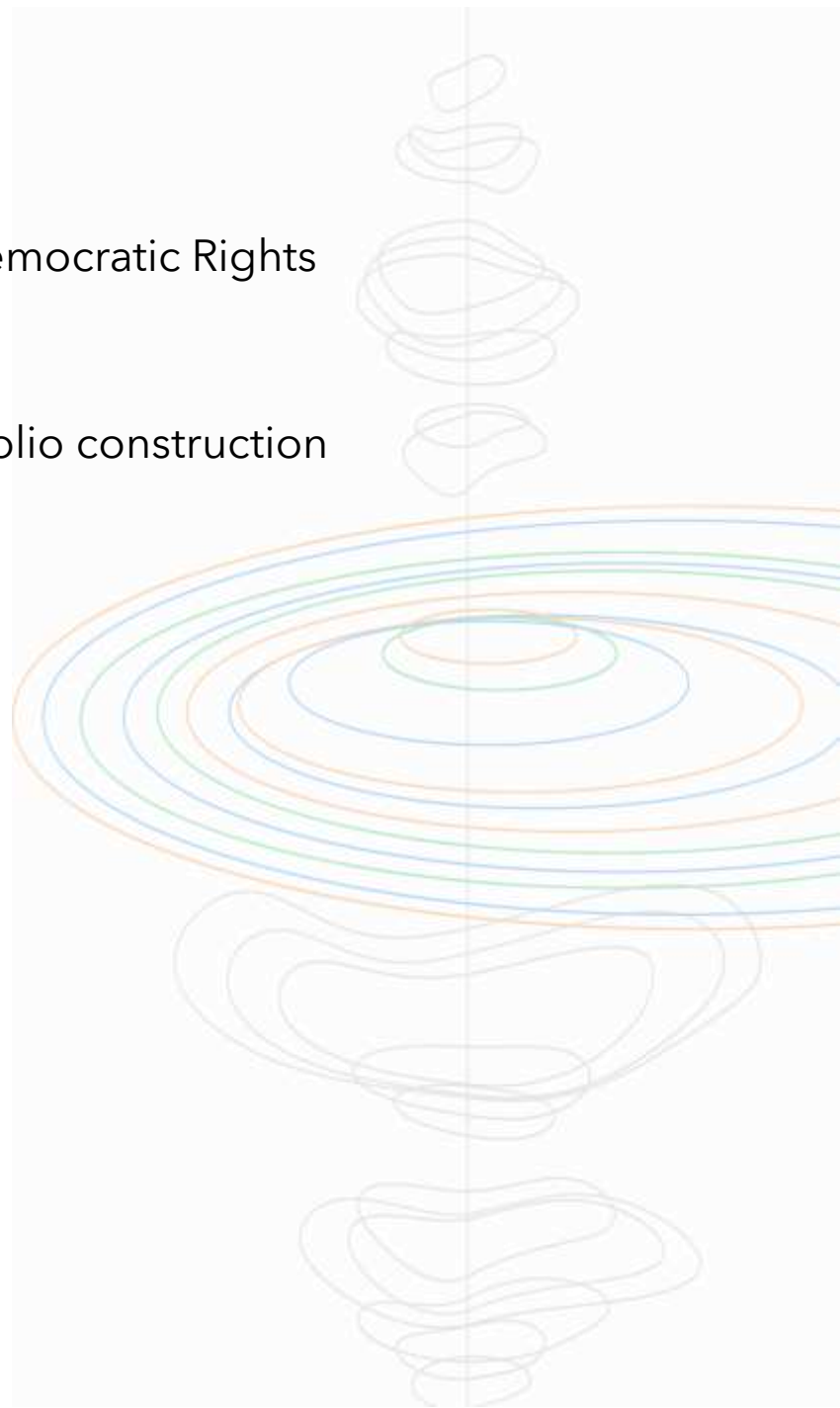
3 ● Measuring Civil and Democratic Rights and portfolio construction

4 ● Empirical results

5 ● Seeding Proposal & Products

6 ● Conclusion

7 ● Appendix



## THE COMPANY

Independent and employee-owned

- Created in 2005
- Part of CalPERS' EMD program (2011 - 2021)
- Approx. USD\$ 6 billion under management
- 46 financial professionals, 16 nationalities
- Regulated in France and SEC-registered

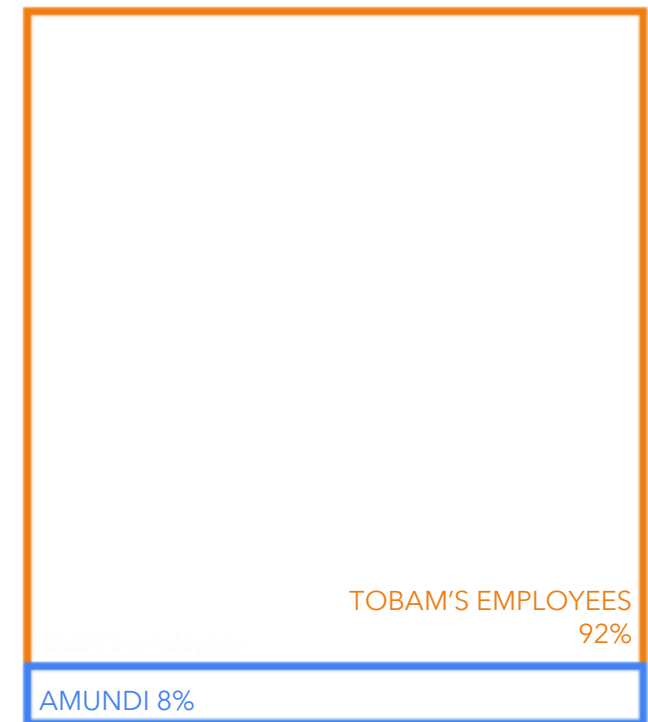
The Maximum Diversification<sup>®</sup> approach, supported by original research and a mathematical definition of diversification, provides investors with diversified core exposure, both in equity and fixed income markets.

## THE FOUNDER

Yves Choueifaty, President & CIO  
(30 years investment experience), previously:

- CEO of Credit Lyonnais Asset Management (AuM €70bn)
- Graduated in 1992 from ENSAE in Statistics, Actuarial Studies Finance and Artificial Intelligence

## SHAREHOLDERS STRUCTURE



Source: TOBAM. Figures as of June 30, 2023.

## RESEARCH DRIVEN ASSET MANAGEMENT

48% of the team involved in portfolio management & research (21 people)

- Identify issues, create solutions, and guarantee the rationality of solutions
- Product research & development
- Implementation innovation

“

*The team is encouraged to think out of the box in its approach to 'conventional wisdom' to the greatest extent possible. As such, the team's diversity is a critical part of how well it functions.*

*We have a large range of expertise, from mathematicians to engineers, economists and traders, all of which feeds in to the team's ability to look at problems or assumptions from a very broad spectrum of viewpoints.*

Tristan Froidure, Head of Research

”

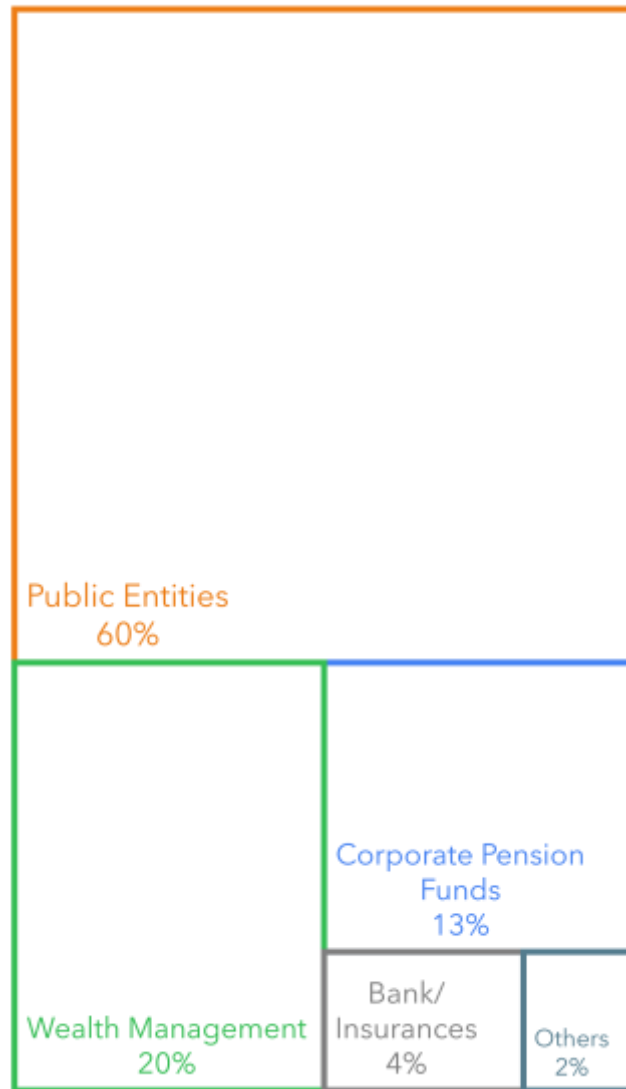


- Paris
- Dublin
- New York
- Luxembourg

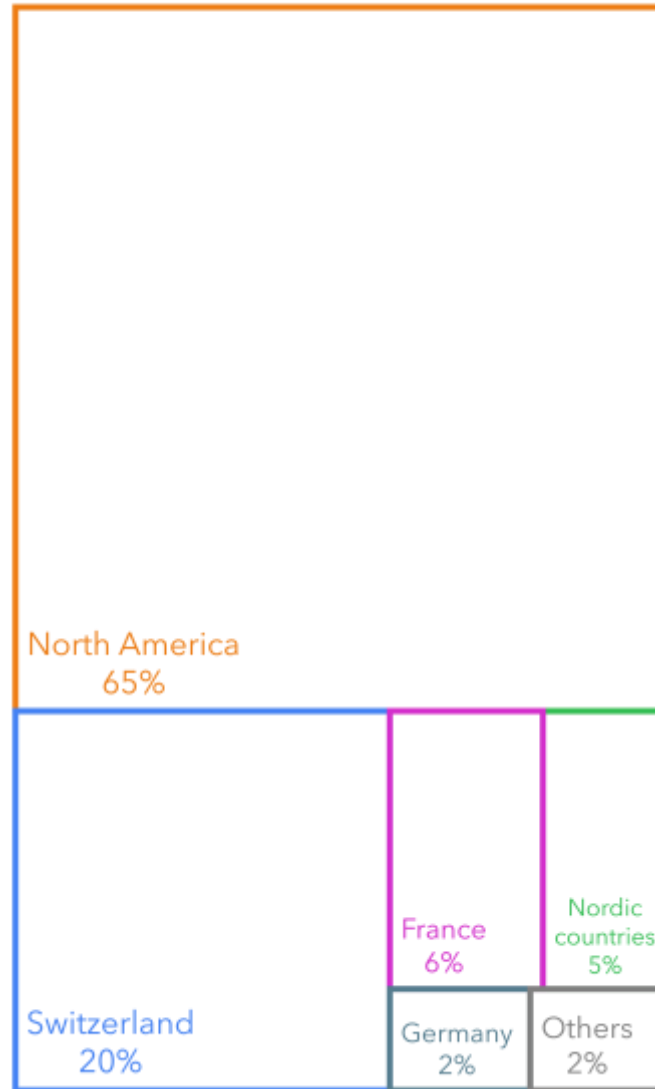


## ASSETS UNDER MANAGEMENT

AuM by **Clients Type**



AuM By **Clients Geography**



Strategies	AUM in \$ million
<b>US Equities</b>	<b>1 598</b>
of which open-ended funds	807
<b>Global Developed Equities</b>	<b>1 062</b>
of which open-ended funds	339
<b>Global EM Equities</b>	<b>798</b>
of which open-ended funds	748
<b>Canada Equities</b>	<b>493</b>
of which open-ended funds	148
<b>Global Developed ex US Equities</b>	<b>376</b>
of which open-ended funds	175
<b>ACWI Equities</b>	<b>318</b>
of which open-ended funds	0.5
<b>World ex Swiss Equities</b>	<b>103</b>
of which open-ended funds	103
<b>Swiss Equities</b>	<b>65</b>
of which open-ended funds	65
<b>Euro Equities</b>	<b>38</b>
of which open-ended funds	33
<b>EAFE Equities</b>	<b>24</b>
of which open-ended funds	-
<b>Japan Equities</b>	<b>23</b>
of which open-ended funds	23
<b>Other Equities</b>	<b>16</b>
of which open-ended funds	16
<b>Total Equities</b>	<b>4 912</b>
<b>Global HY Credit</b>	<b>193</b>
of which open-ended funds	193
<b>Global IG Credit</b>	<b>188</b>
of which open-ended funds	188
<b>Total Fixed Income</b>	<b>381</b>
<b>Multi-Asset</b>	<b>140</b>
of which open-ended funds	140
<b>Total Multi Asset</b>	<b>140</b>
<b>Crypto Assets</b>	<b>20</b>
of which open-ended funds	13
<b>Total Crypto Assets</b>	<b>20</b>
<b>Total AUM</b>	<b>\$5.5B</b>

**Key Risks:** The value of your investment and the income from it will vary and your initial investment amount is not guaranteed. Allocations are subject to change.  
Data as of June 30, 2023

## GRANTED PATENTS



US  
PATENT



AUSTRALIAN  
PATENT



JAPANESE  
PATENT



CANADIAN  
PATENT



## AWARDS

### 2022

- Multi Strategy investing Awards  
CIO Industry Innovation Awards, Dec 2022, NYC
- "Grand Prix de la Finance" US Equity  
"Best funds to choose in the next 12 months"  
H24 Finance, July 2022, Paris
- "Sustainability Provider of the Year"  
Asset Management Awards 2022  
MoneyAge, May 2022, London



### 2021

- "Multi Asset Manager of the Year"  
European Pensions Awards 2021  
October 2021, London
- "Smart Beta Manager of the year"  
Pension and Investment provider Awards 2021  
June 2021, London
- "Multi Asset Manager of the Year"  
Asset Management Awards 2021  
MoneyAge, May 2021, London



### 2020

- European Asset Management Firm of the Year"  
(assets under €20bn)  
Funds Europe Awards 2020, London
- TOBAM's Anti-Benchmark® Multi Asset:  
"Best Flexible Fund"  
Grands Prix de la Gestion d'Actifs 2020, Paris
- "Emerging Equity Manager of the Year"  
Pension Age Awards 2020, London
- TOBAM's Deputy CIO elected in the Top 25  
Rising Stars of Asset Management  
Financial News, September 2020

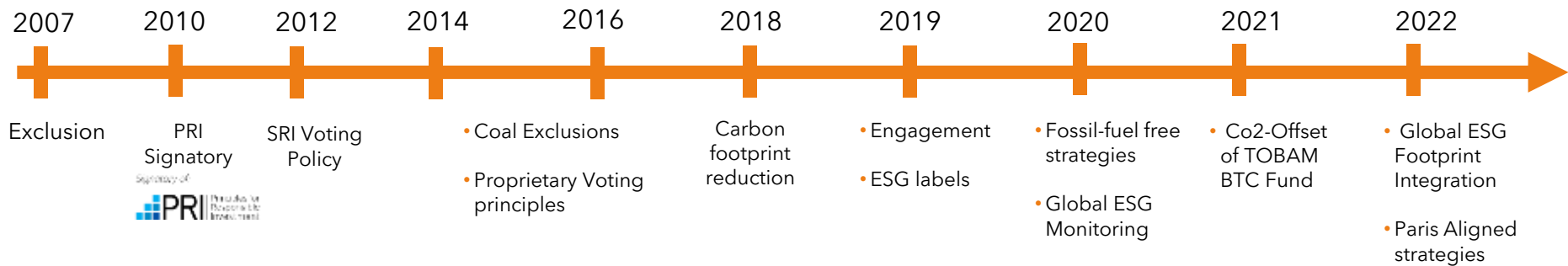


### Other Awards

- "Most Sustainable Company in the Investment Industry"  
World Finance Sustainability Awards, 2019
- "Emerging Equity Manager of the Year"  
UK Pensions Awards 2019, London
- "European Smart Beta Manager of the Year"  
Funds Europe Awards 2018, London
- "European Asset Management Firm of the Year"  
Funds Europe Awards 2017, London
- "AM Leader of the Year"  
Grands Prix de la Gestion d'Actifs 2016, Paris
- "European Asset Manager of the Year"  
Funds Europe Awards 2016, London
- "Equities Manager of the Year"  
CIO Industry Innovation Awards 2015  
New York
- "CIO of the Year"  
Funds Europe Awards 2015
- "Profit for Non-Profit Special Award, TOBAM  
Anti-Benchmark Emerging Markets Equity Fund"  
Profit for Non-Profit Awards 2014, Paris



## TOBAM'S SUSTAINABLE APPROACH (1) RESPONSIBLE INVESTMENT



### 01. EXCLUSION POLICY

Proprietary exclusion list (controversial products and behaviours)

**100%** of Anti-Benchmark strategies are **SFDR Article 8**

### 02. ACTIVE OWNERSHIP & ENGAGEMENT

Proprietary SRI Voting Policy & Direct & Collaborative Engagement

**44%** of TOBAM'S AuM are **Paris Agreement Aligned**

### 03. SYSTEMATIC CARBON FOOTPRINT REDUCTION

Average 52% reduction across flagship Anti-Benchmark strategies\*



**PRI Score 5 stars**



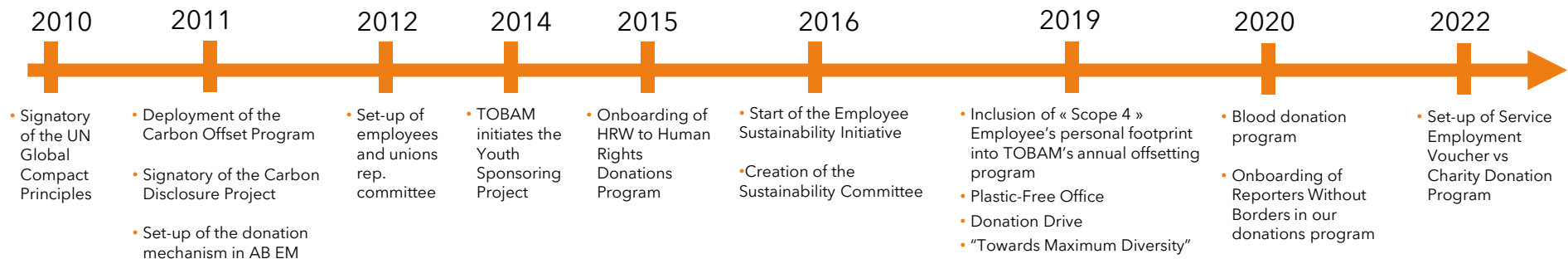
### 04. GLOBAL ESG FOOTPRINT INTEGRATION

Using officially published data, monitoring of the E, S and G criteria for all listed companies of our universe, systematic matching of benchmark's ESG footprint

\*Weighted average carbon footprint reduction of 52% across our Anti-Benchmark® strategies versus their respective reference index. Strategies' realised reduction ranges between 26% and 90%.  
Source: TOBAM, Data as of December 2022.

Full PRI assessment Report available online: <https://www.tobam.fr/wp-content/uploads/2023/01/2021-Assessment-Report-for-TOBAM.pdf>  
Investment & Stewardship: \*\*\*\*\*, Listed Equity Active Quantitative Incorporation: \*\*\*\*\*, Listed Equity Active Quantitative Voting: \*\*\*\*\*, Direct Fixed Income Corporate: \*\*\*\*\*

## TOBAM'S SUSTAINABLE APPROACH (2) RESPONSIBLE COMPANY



### E. Managing TOBAM's Environmental Impact

- Measure / Mitigate / Offset
- In 2021, 390% of TOBAM's carbon footprint Scope 1/2/3 is offset via reforestation projects
- Pioneering by including "Scope 4" employees' personal emissions in TOBAM's total calculations

### S. Promotion of Social Progress

- Human Rights NGOs donation mechanism in our EM equity fund



### G. Responsible & Collaborative Governance

- Employee shareholding program & alignment of interest
- Sustainability committee

# TOBAM'S COMMITMENT TO HUMAN RIGHTS ADRESSING THE AUTOCRACY RISK

## TOBAM's journey into Human Rights

2009

TOBAM Choses Human Rights as its philanthropy field.



2010

First donation to **Amnesty International**

TOBAM becomes signatory of the **United Nations Global Compact**



2011

Systematic Revenue-Linked Donation Program set up AB EM



2015

Onboarding of **Human Rights Watch** In TOBAM's Donation Process  
Ukraine project

2016

Promotion and Education around Human Rights Key Challenges

2018

*Conferences, Interviews, Webinar, Internal presentation*

2019

Onboarding of **Reporters without Borders**  
Fundraising Campaign after the Blast in Beirut



2020

2021

Fundraising Campaign for Ukraine in coordination with HRW



2023

**Launching LBRTY®, first fund focused on Civil Rights & Democracy**

## TOBAM'S COMMITMENT TO ESG AND CIVIL RIGHTS & DEMOCRACY *ADDRESSING THE AUTOCRACY RISK DRIVER ...BECAUSE IT WORKS*

Our convictions:

Not “Good” “vs” “evil”  
But “what works” vs “what doesn't work”

- ESG is about creating value on the long run
- ESG is not about doing philanthropy with investors' money
- ESG is about integrating what contributes to value creation and removing what contributes to value destruction
- ESG is not about discriminating between evil and good, it is about promoting what works, what lasts and will survive on the long run and what will create value

**Democracy, Respect of Human Rights, Freedom of Speech, Promotion of Diversity and Pluralism are key to innovation, creativity and economic growth**

1 • Introduction to TOBAM and **Anti-Benchmark**

2 • **Investment Philosophy - The case for Civil and Democratic Rights**

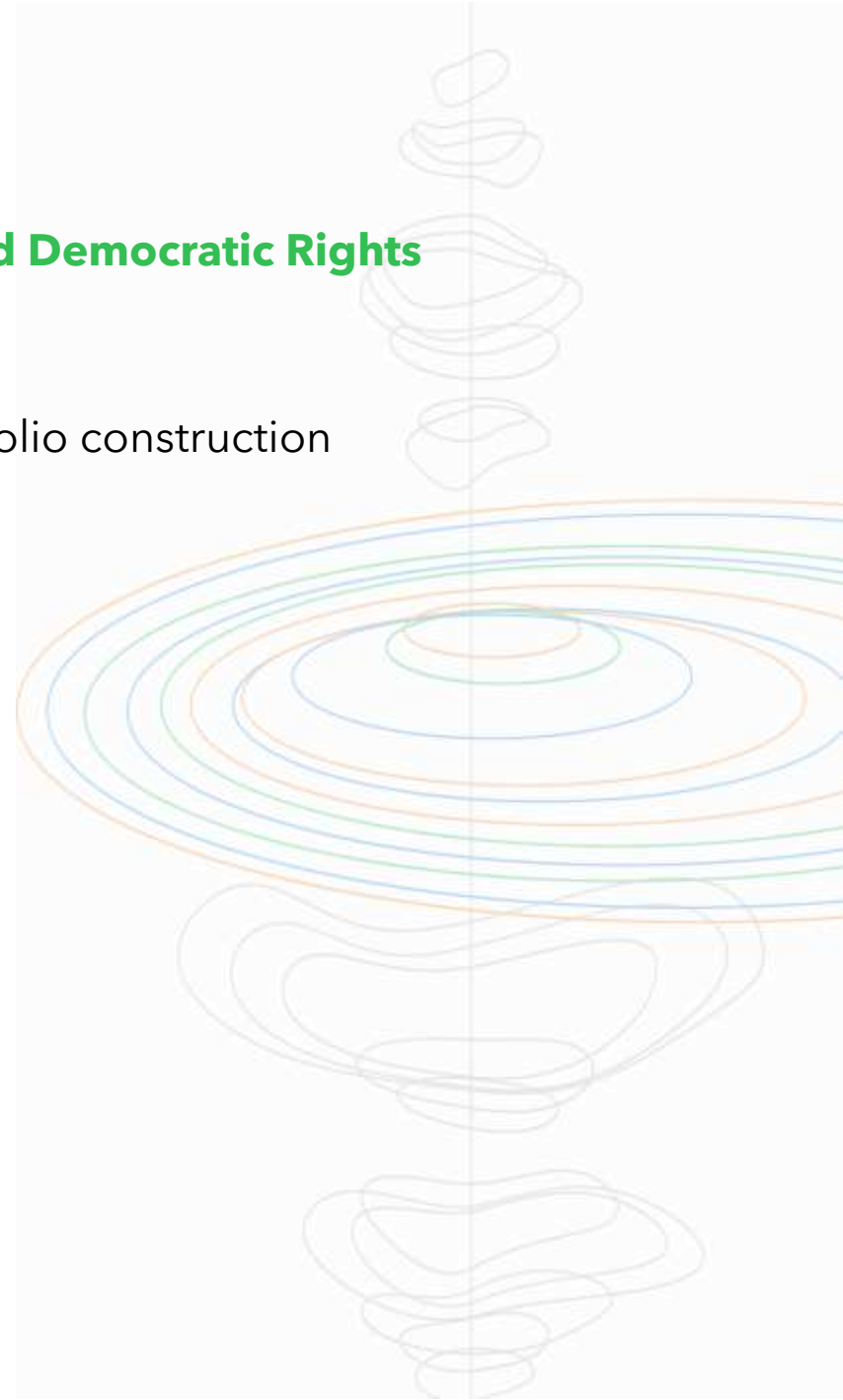
3 • Measuring Civil and Democratic Rights and portfolio construction

4 • Empirical results

5 • Seeding Proposal & Products

6 • Conclusion

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## INVESTMENT PHILOSOPHY

- In the long-run investors in countries with oppressive regimes and arbitrary rules are exposed to unrewarded risks.
- **Notably due to arbitrary state behaviour, uncompensated expropriations, social unrest, corruption, war....** In the long run they will underperform others.

Numerous research have demonstrated the cost of dictatorship and lack of civil liberties

### 2 The Economic Effects of Dictatorships JOSE MARIA MARAVALL

JOURNAL ARTICLE  
Dictatorial Institutions and their Impact on Economic Growth  
JENNIFER GANDHI

The Dictator Effect: How Long Years in Office Affects Economic Development in Africa and the Near East  
May 2012 - *Journal of Institutional Economics*  
Authors:  
 Kostas Papaioannou  
The London School of Economics and Political Science  
 Jan Luiten van Zanden  
Utrecht University

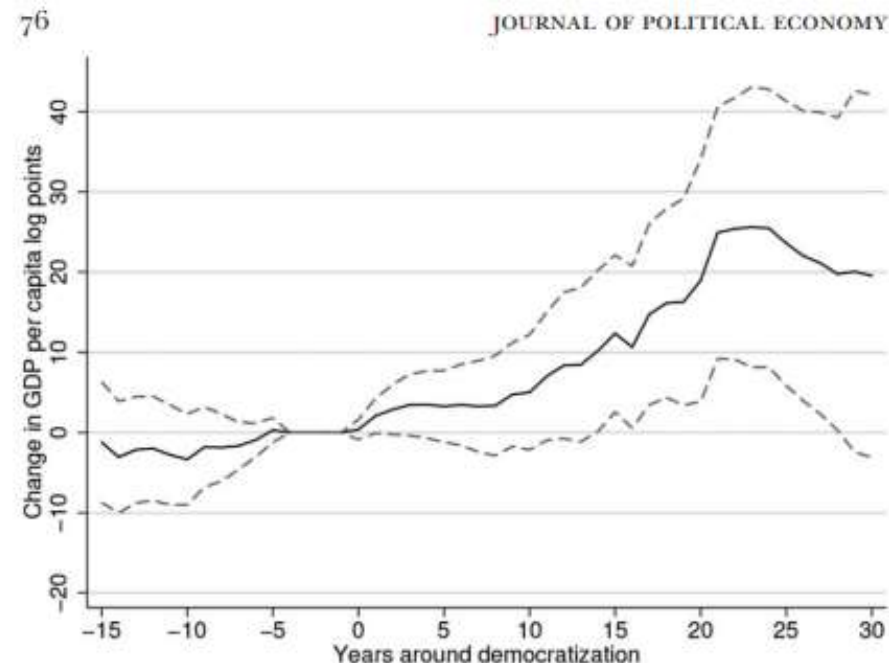
The Economic Effects of Human Rights  
*Kyklos*, Vol. 60, No. 4  
30 Pages  
Posted: 26 Oct 2007  
Lorenz Blume  
Philippe University Marburg  
Stefan Voigt  
University of Hamburg - Institute of Law & Economics; CESifo (Center for Economic Studies and ifo Institute)

**The economic costs of a discriminatory ideology**  
Kilian Huber, Volker Lindenthal, Fabian Waldinger / 8 Oct 2018

## ILLUSTRATION: DEMOCRACY DOES CAUSE GROWTH (ACEMOGLU &amp; AL. 2019)

Acemoglu & al (2019) identify 122 democratizations and 71 reversals from democracy based on data from 1960 until 2010 and show that:

- There is a positive causal effect of democracy on economic growth.
- A country that transitions from nondemocracy to democracy achieves about 20 percent higher GDP growth per capita in the next 25 years than a country that remains a nondemocracy.
- It drives greater investments in capital, schooling, and health.
- The effect of democracy does not depend on the initial level of economic development/level of income.



The solid line plots the estimated average effect on GDP per capita on countries that democratized (in log points), with a 95 percent confidence interval in dashed lines



## LAUNCHING FIRST FUND FOCUSED ON CIVIL RIGHTS & DEMOCRACY *ADDRESSING THE AUTOCRACY RISK*

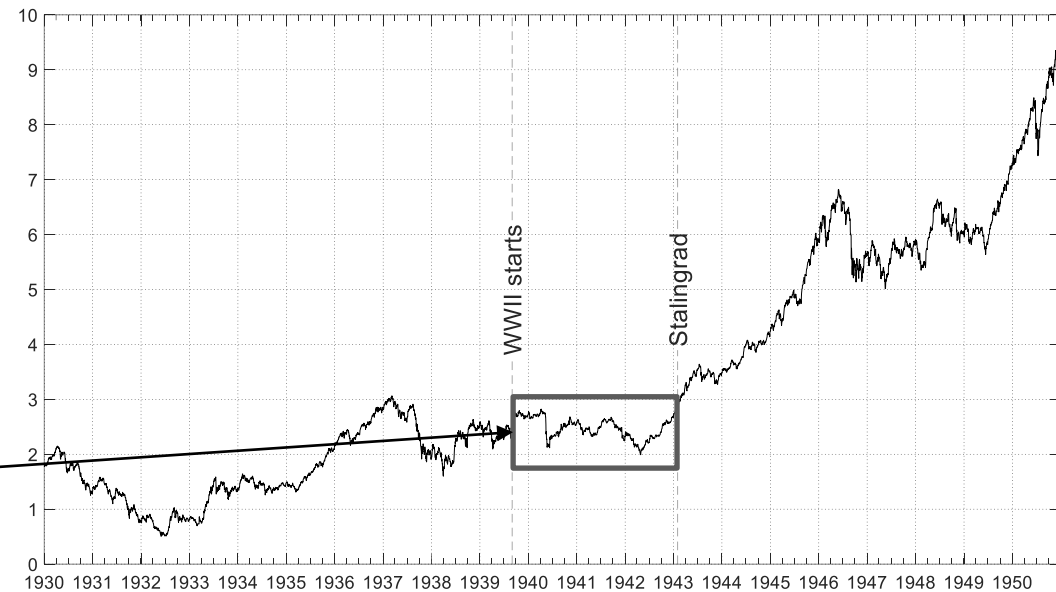
- Identifying the “autocracy risk driver”
- Building a portfolio under exposed to the autocracy risk

1. There is an autocracy risk driver
2. This risk driver is negatively rewarded
3. Most of the exposure to the autocracy risk driver is indirect
4. The autocracy risk driver is independent from other risk drivers

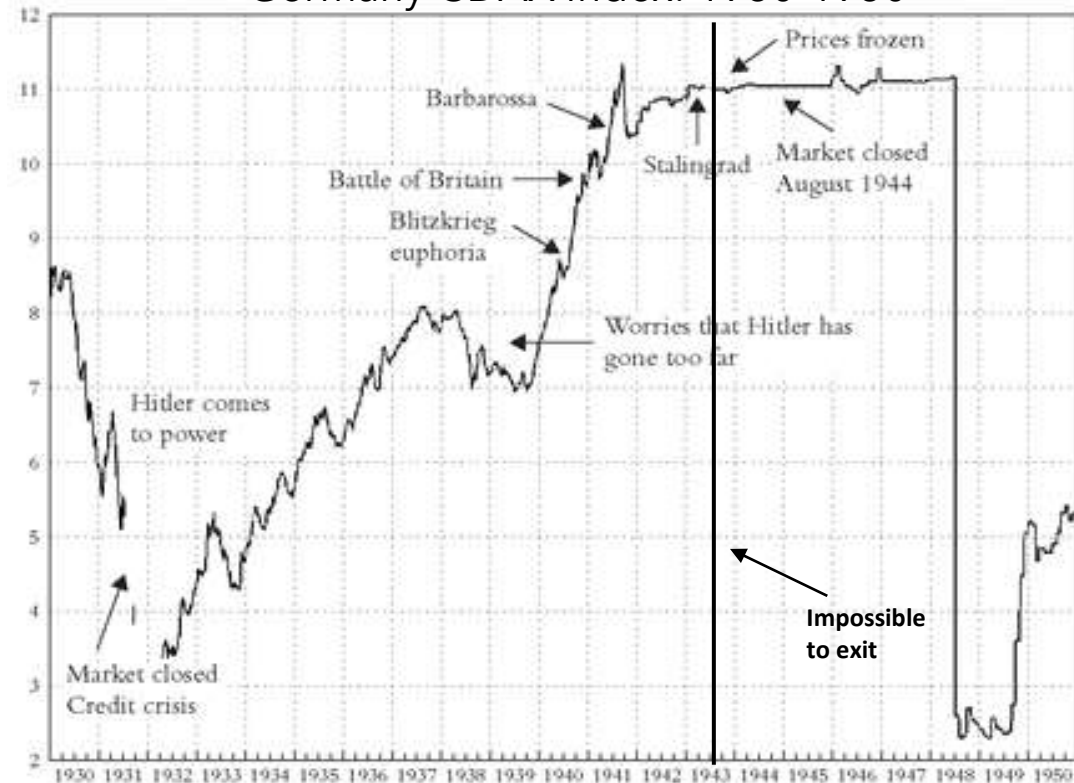
## US Stock market: 1930-1950

GERMANY 1930-1950  
REVERSE J-CURVE

- Germany's stock market knew a sharp rise from 1939 to 1943.
- This rise is not present in the US market.
- From 1944, prices were frozen, and it was impossible to get out from the German's stocks market.
- The German's stocks market opened back in mid-1948 with a fall of ~80% (+inflation).



## Germany CDAX Index: 1930-1950

Source: *Wealth, war and wisdom*, by Biggs, Barton, John Wiley & Sons, 2009.

## ILLUSTRATION ON FINANCIAL MARKETS: THE CASE OF RUSSIA

- The potential instability of non-democratic countries makes them more susceptible to black swan events.
- One of the most recent example being Russia where direct investments in stocks/bonds of companies in Russia or in companies located elsewhere but with significant economic ties to Russia have been a very painful experience for investors.
- Russia is a country classified as authoritarian since 2011.

**CUMULATIVE INDEX PERFORMANCE – NET RETURNS (USD)  
(SEP 2007 – SEP 2022)**



Source: TOBAM, MSCI

## DEMOCRACIES AND WARS IN THE 20TH CENTURY ACCORDING TO... CHATGPT

YV

number of wars in the 20th century



It is difficult to give an exact number of wars that occurred in the 20th century, as there is some debate over what constitutes a "war." However, some estimates suggest that there were around 180 armed conflicts that took place during the 20th century. This includes both major international wars and smaller, less well-known conflicts.

The number of wars also depend on how they are defined or categorized. Some sources might include civil war and other internal conflicts, while others might only consider conflicts between nation-states to be "wars."

However, it is important to highlight again that the number may vary depending on how conflicts are defined and categorized, giving a exact number is hard.

YV

how many wars opposed 2 independant democratic countries during the 20th century?



There were very few instances of two independent, democratic countries engaging in war with each other during the 20th century.

One notable example is the War of the Pacific (1879-1883) fought between Chile, Bolivia and Peru. Chile was considered a democratic country during this time and all the three countries were independent

Another notable example was the the Football War (1969) between Honduras and El Salvador, which was a 100 hour-long conflict, the cause of the war were not just the Football but also caused by disputes over land, economic issues and immigration. Both countries were democratic but not fully consolidated democracies.

Those are the main examples that comes to mind when it comes to fully independent democratic countries fighting each other, however this is a very rare ocurrence in history.

## WEAR YOUR CORRELATION GLASSES !!!



### Over 1,000 Companies Have Curtailed Operations in Russia—But Some Remain

November 28, 2022



Source: Yale University, as of Nov 28<sup>th</sup>, 2022

### \$240 billion: The cost of abandoning Russia for global corporations



by Ansh Pandey — October 9, 2022 in Europe, Geopolitics Reading Time: 4 mins read



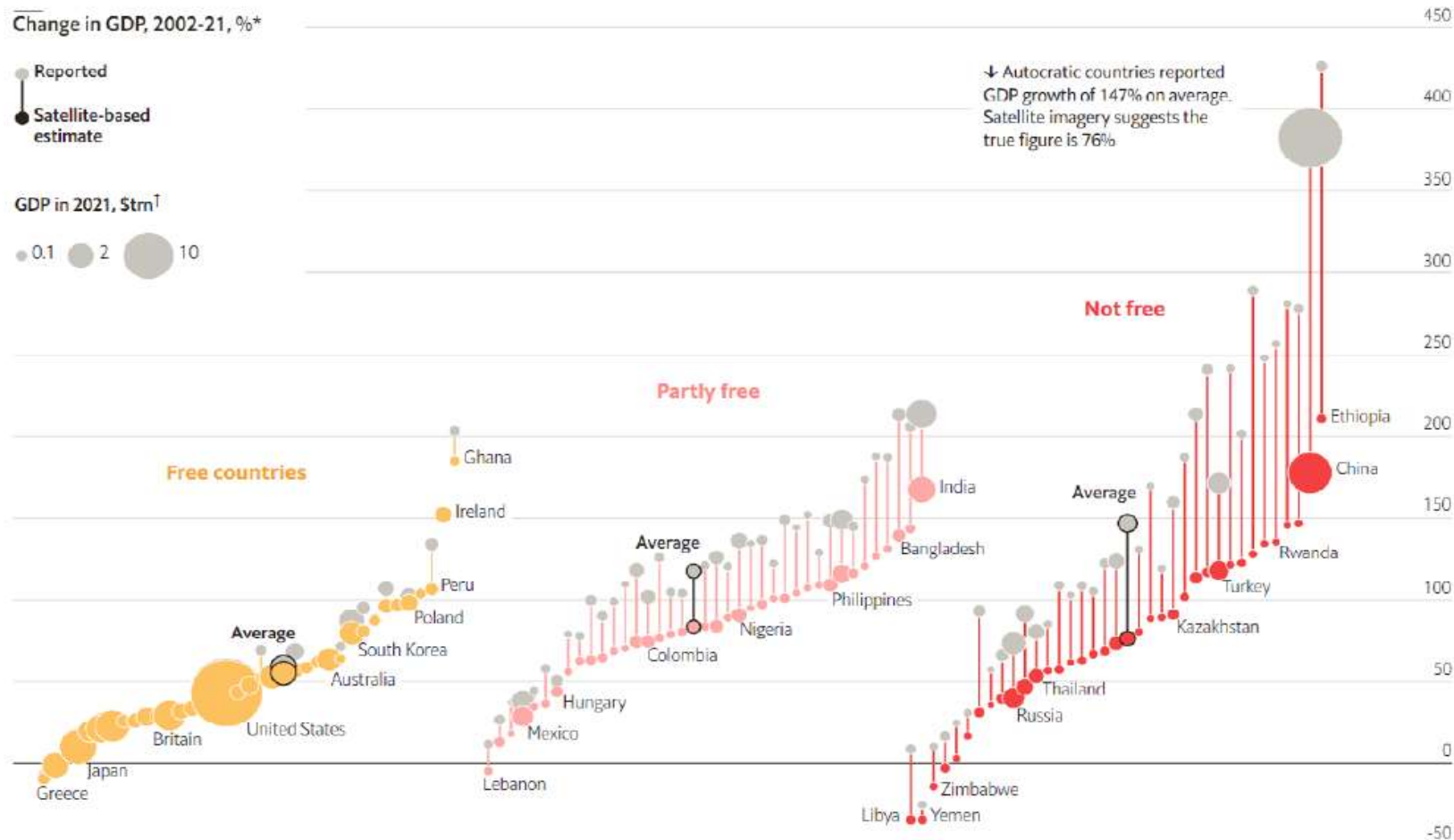
Source: <https://tfiglobalnews.com/>



## We should not trust the dictators' GDP growth estimates (L.R. Martinez, 2022)

- GDP growth reported by autocracies are **inflated by up to 35%** per annum on average.
- In the long run, the **reported GDP growth** numbers nearly **doubled** the autocracies' **actual** economic **growth**.

Change in GDP, 2002–2021

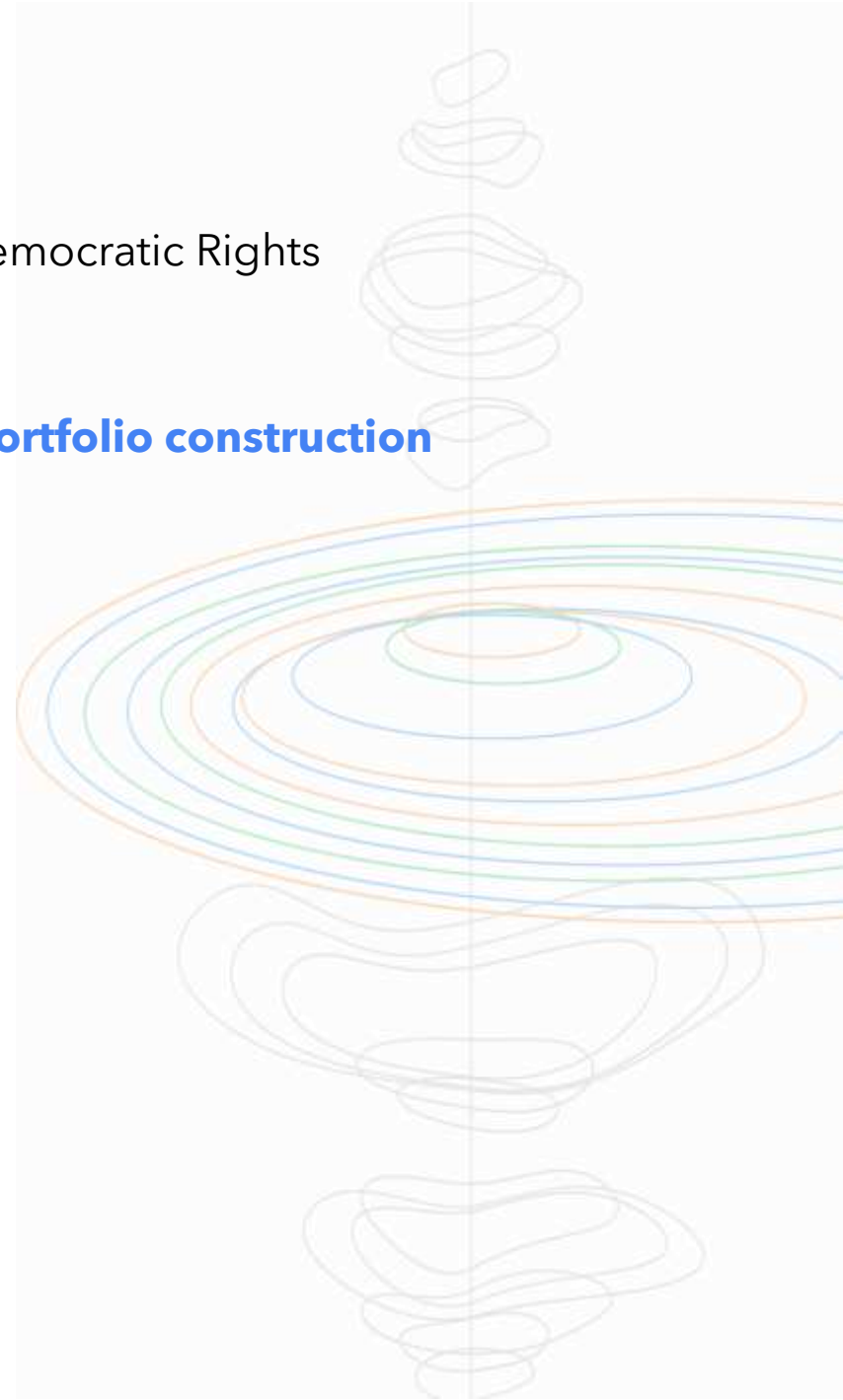


Source: *The Economist*, 1–7 October 2022, p.77; “How much should we trust the dictators’ GDP growth estimates?”, L.R. Martinez, 2022; Freedom House; World Bank.

\*In 2021 USD at market exchange rates, assuming reported 1992 GDP figures are accurate.

†Countries with over 5 million people, freedom status in 2021.

1. Introduction to TOBAM and **Anti-Benchmark**
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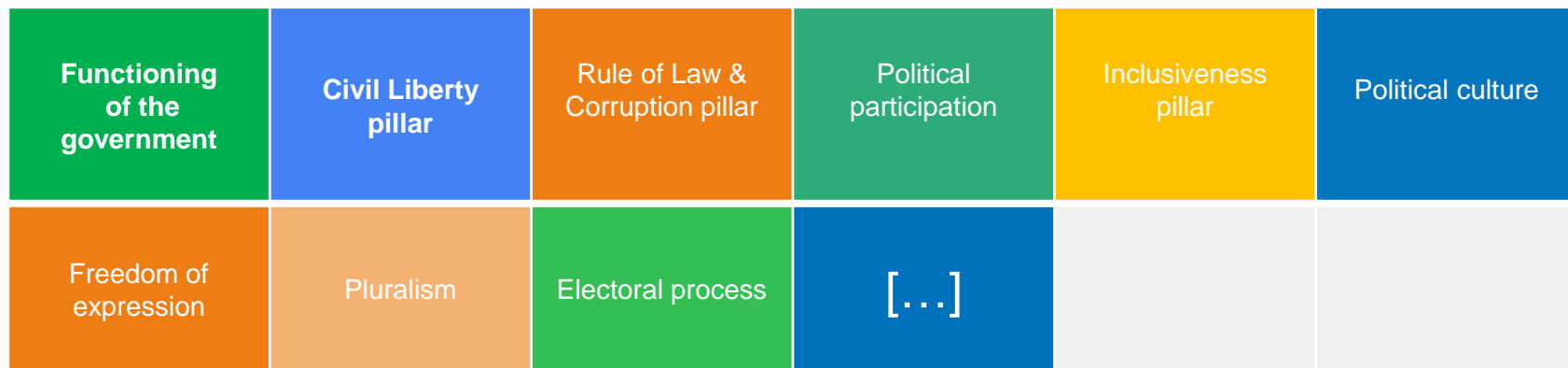


## INVESTMENT PROCESS: LBRTY PORTFOLIO CONSTRUCTION

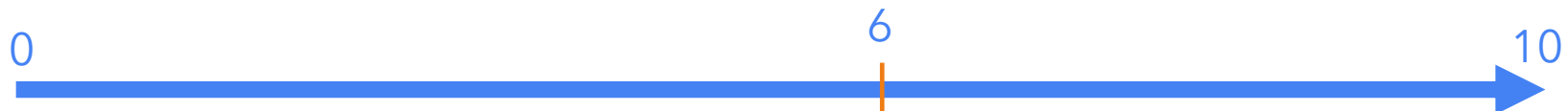
### Measuring Countries Civil Liberty and The State of Democracy

There is plenty of data sources, reliable, independent, neutral.  
Good example of that is VDEM (see illustration next slide).

Datasets include typical pillars:



01. The TOBAM “Country CD rating” synthesizes the information. Country CD ratings are between 0 and 10. The threshold is set at 6.



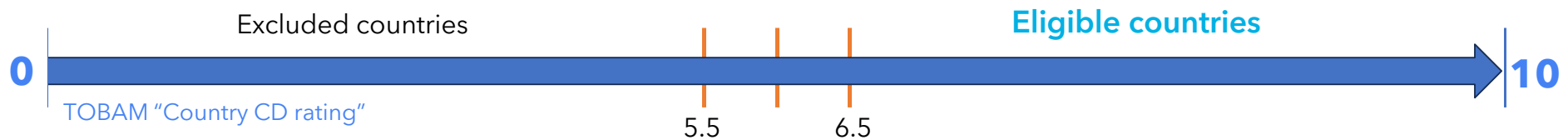


- Founded in 2011, Varieties of Democracy (V-Dem) is a unique approach to conceptualizing and measuring democracy. It provides a multidimensional and disaggregated dataset **dating back to before 1789** that reflects the complexity of the concept of democracy as a system of rule that goes beyond the simple presence of elections.
- The V-Dem project distinguishes between five high-level principles of democracy: electoral, liberal, participatory, deliberative, and egalitarian, and collects data to measure these principles.
- The dataset is governed by Principal Investigators (the highest decision making body), a Steering Committee (body for the overall guidance and decision making connected to the various V-Dem programs and projects) and a large number of Project Managers (they identify reliable and relevant data sources, develop surveys and assure cross-country equivalence for the indicators) that are all Professors from institutions with an excellent academic reputation mainly in the Nordics, USA, and some also from other European Countries. Moreover, the V-Dem institute relies on a wide set of Regional Managers who are Professors at Universities in the respective geographic regions for which data is collected (e.g., Africa, Asia etc.). Overall, the headcounts are 5 Principal Investigators, 18 Personnel at V-Dem Institute, 22 Project Managers, 33 Regional Managers, 134 Country Coordinators and **3700 Country Experts**.
- The Host Institution is the **University of Gothenburg**. The **University of Notre Dame** played an instrumental part in building and establishing V-Dem
- Funders of the data collection and research infrastructure are:
- We deem the V-Dem institute as a high-quality academic source.
- More information can be found here:  
<https://www.v-dem.net/about/v-dem-project/>

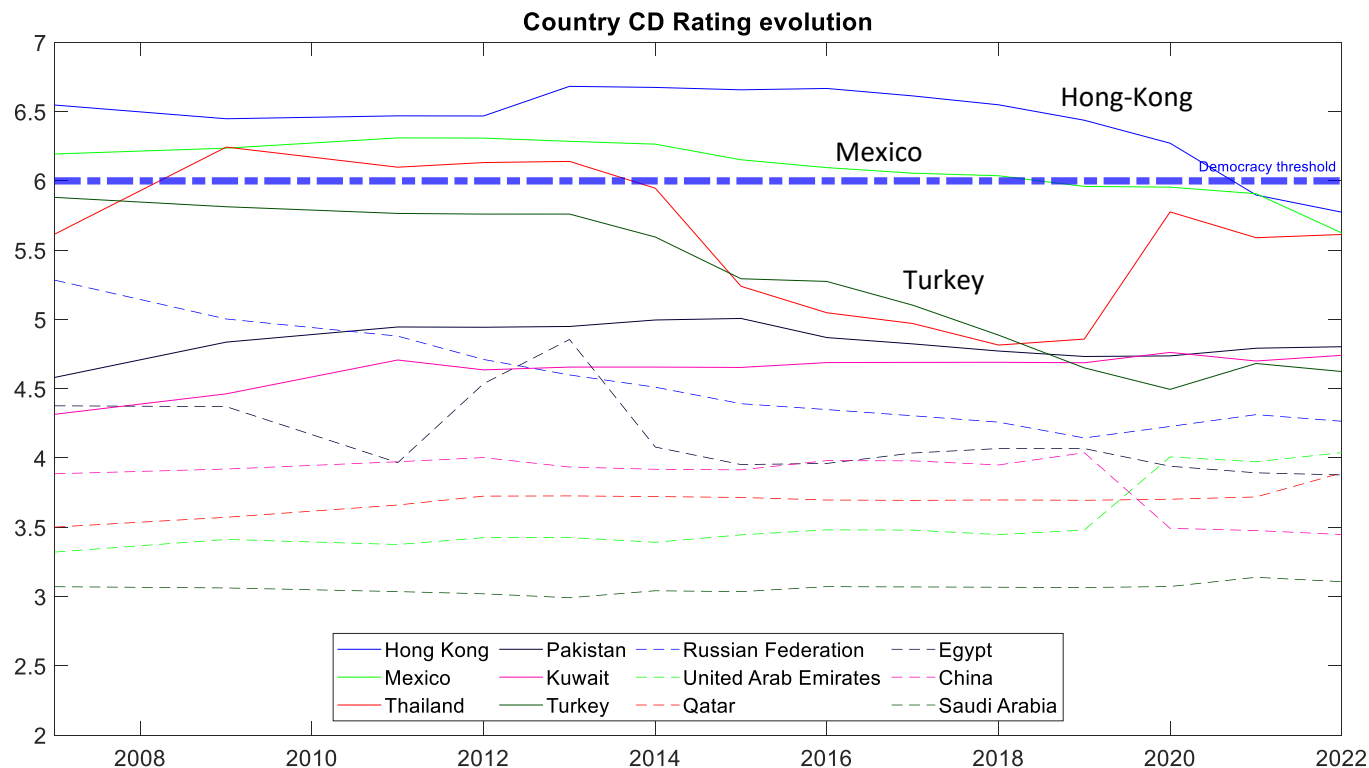


# INVESTMENT PROCESS: LBRTY PORTFOLIO CONSTRUCTION

## 2. Define Eligible countries:



The **CD Governance Committee** comprising external experts decides, based on granular information, whether countries are improving or not.



12 countries, classified as nondemocratic, are part of the index as of Dec-22.

Country CD ratings are relatively stable over time.

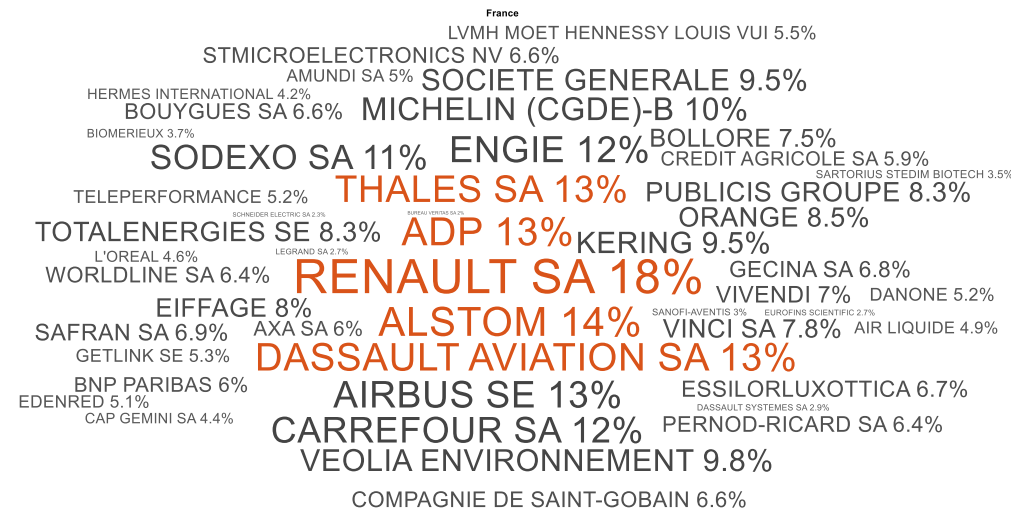
# INVESTMENT PROCESS: LBRTY PORTFOLIO CONSTRUCTION

## 03. Additional exclusion lists (tobacco,...). The stocks of this Benchmark constitute the **Investment Universe**

Compute **Whitelisted Benchmark**: Mkt-Cap weighted portfolio of Investment Universe

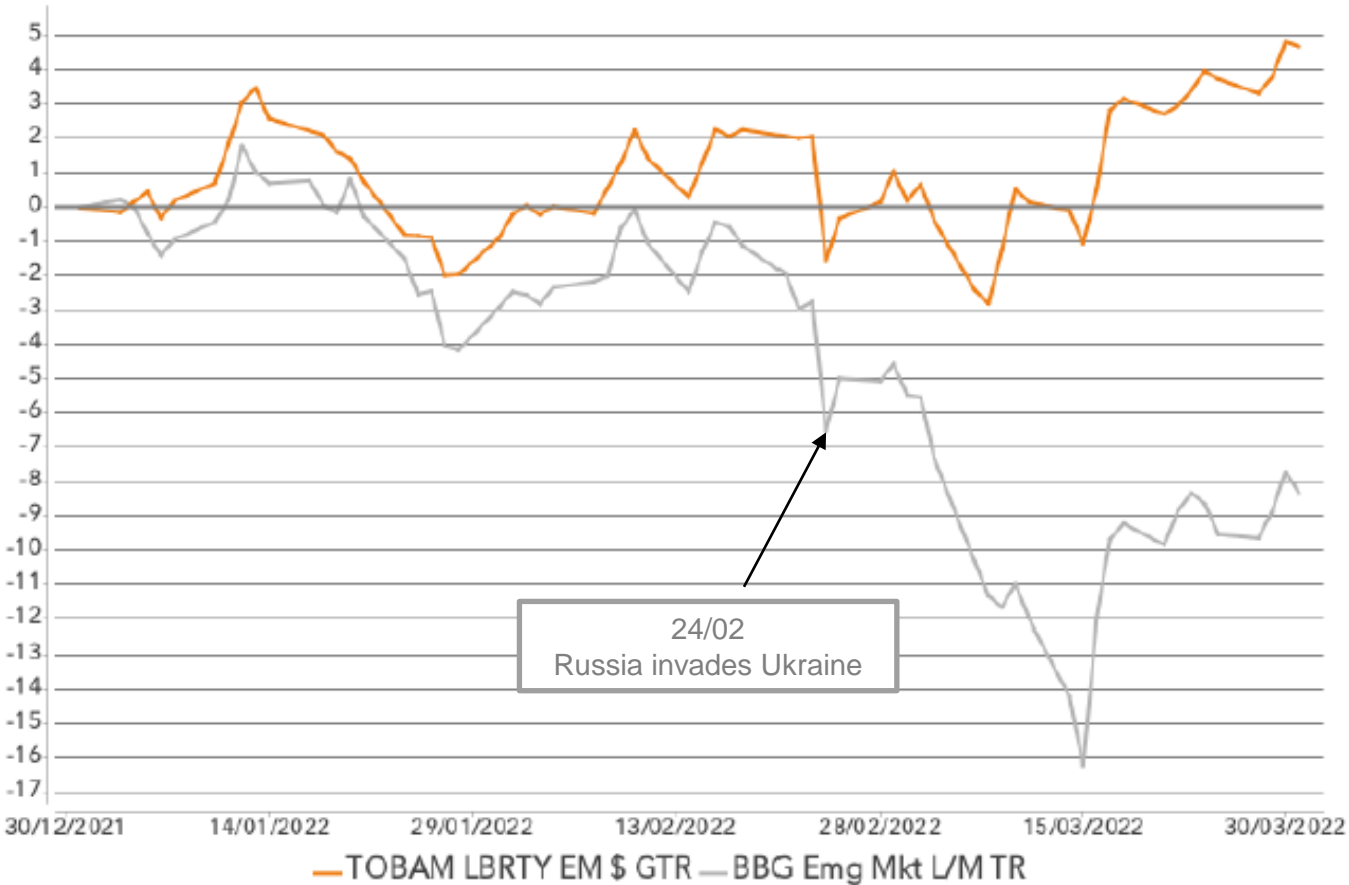
## 04. Wearing the "correlation glasses": Estimate the **Authoritarian Exposure** of each stock of the investment universe, homogeneous to a (partial) volatility

- Capture each company's overall economic exposure to authoritarian countries de-biased for market and sectors effects.
- Define the **authoritarian exposure** (AE) of a company as the sum of its exposure to each authoritarian country.



## 05. Construct **LBRTY Portfolio** : Minimization of overall authoritarian exposure subject to a defined long term tracking error

## TOBAM LBRTY EM PERFORMANCE IN Q1 2022: IMPACT OF THE RUSSIAN CRISIS



### TOBAM LBRTY EM \$ GTR

**Return:** **4.70%**

**Hist volatility:** **15.37%**

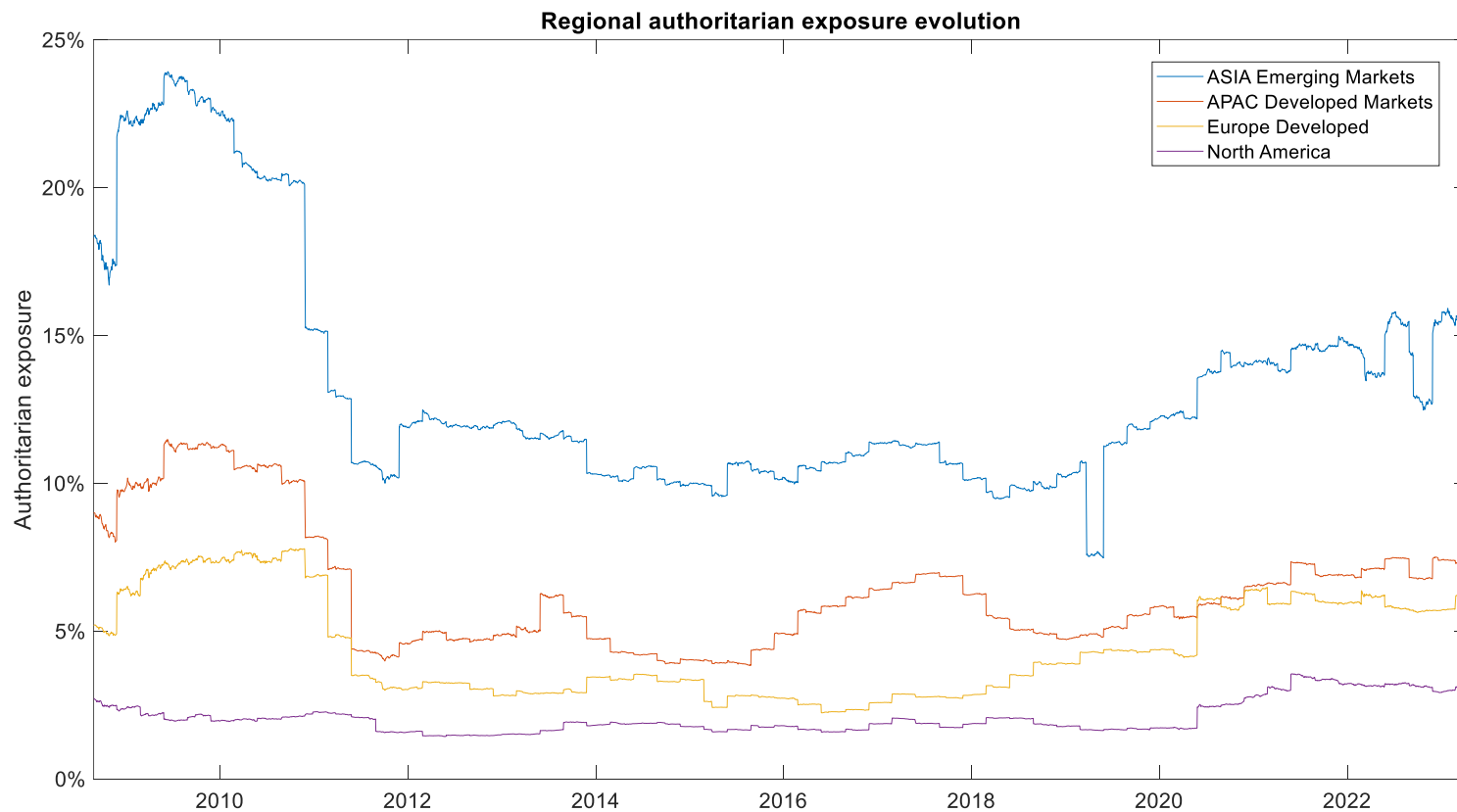
### BBG Emg Mkt L/M TR

**Return:** **-8.32%**

**Hist volatility:** **21.92%**

**Excess Return:** **13.02%**

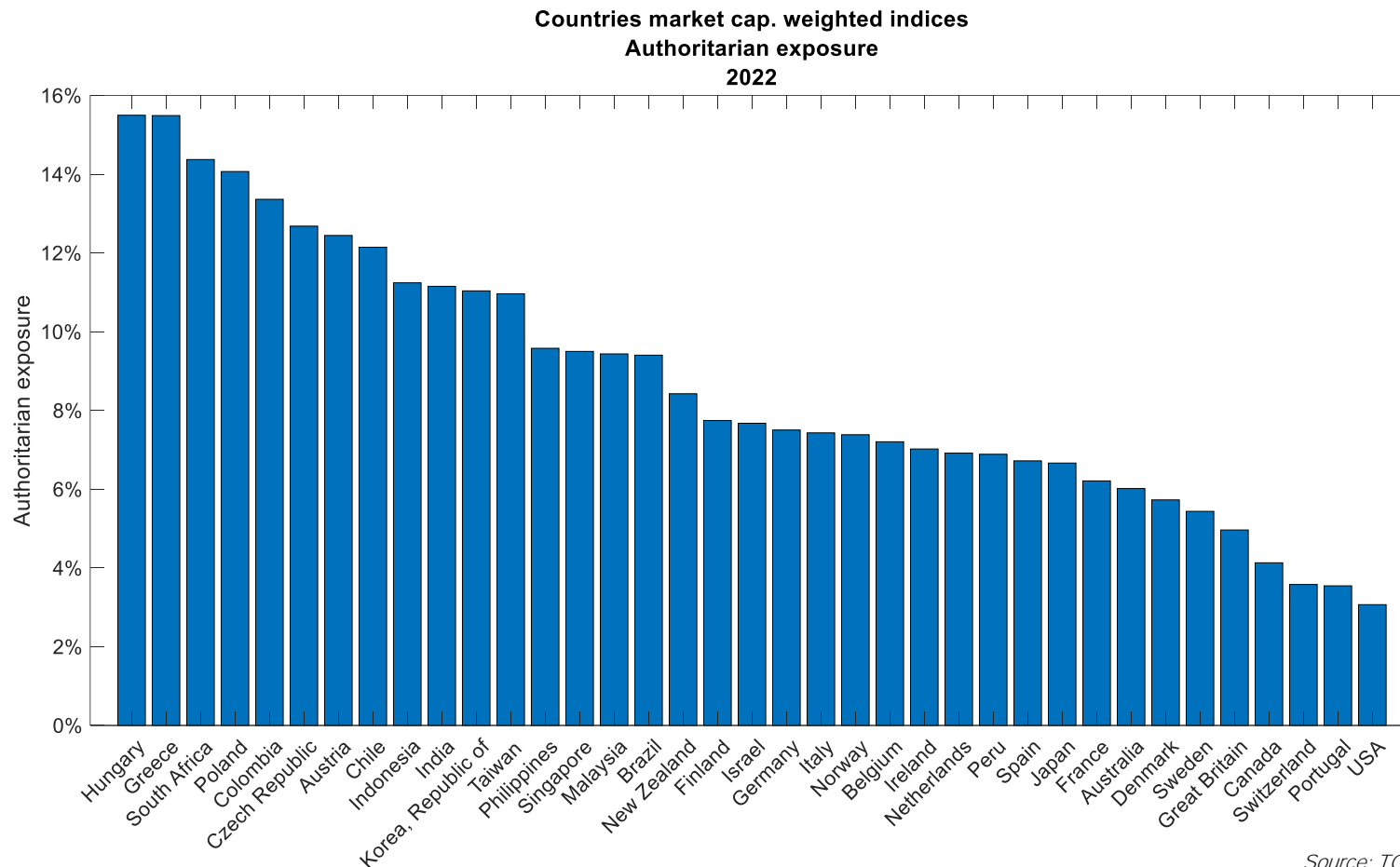
# DEVELOPED REGIONAL BENCHMARKS AUTHORITARIAN EXPOSURE



Source: TOBAM

Democratic Asian benchmarks have recently been two to five times more exposed to authoritarian countries compared to their North-American / European counterparts

# ELIGIBLE **COUNTRY BENCHMARKS** AUTHORITARIAN EXPOSURE AVERAGE 2022



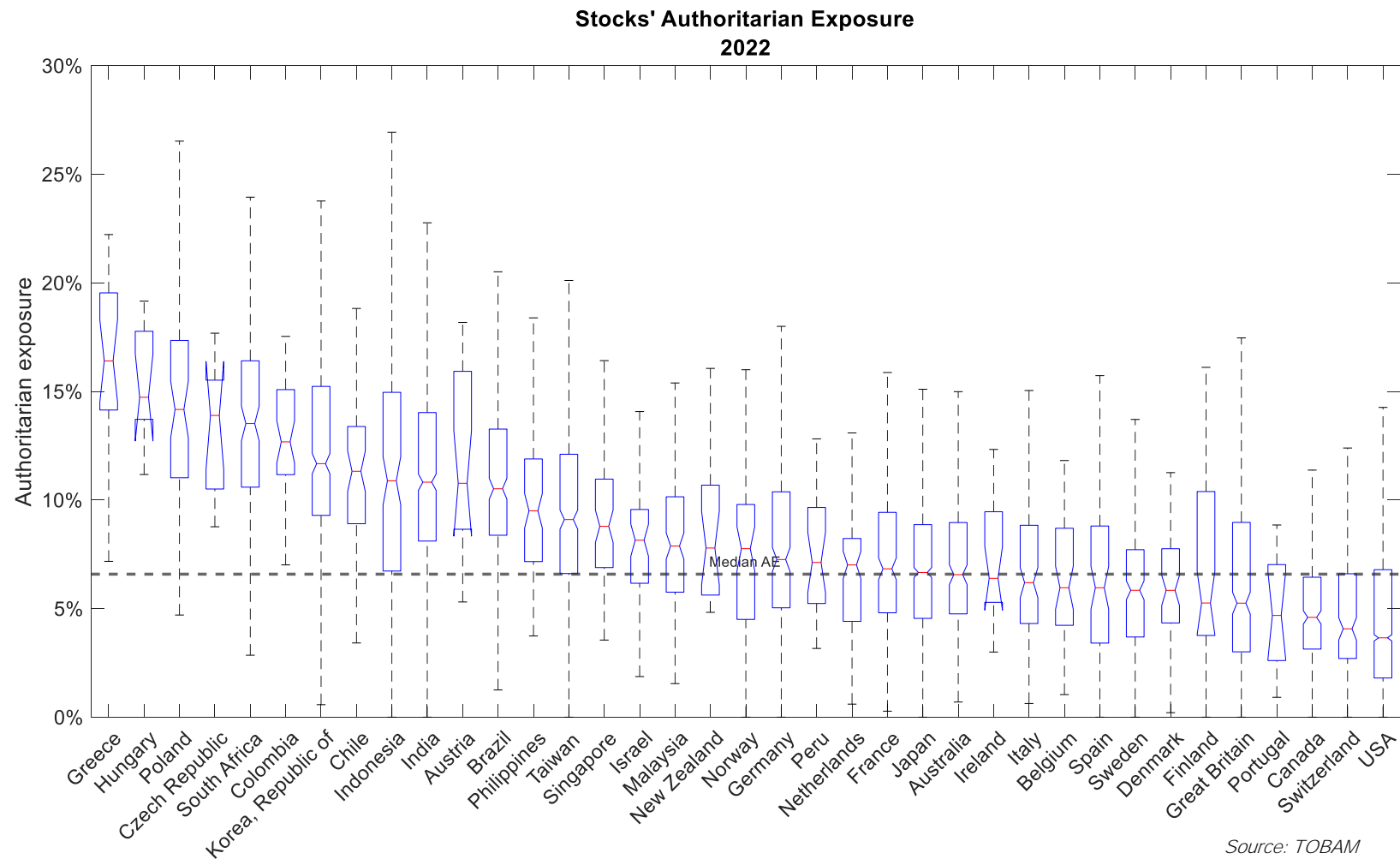
Source: TOBAM

At the country level, democratic benchmarks exhibit a large spectrum of exposures to authoritarian countries, with the South-African and Hungarian benchmarks for example being 4 to 5 times more exposed to authoritarian countries compared to benchmarks of Sweden, USA, Switzerland and Portugal.

# ELIGIBLE **COMPANIES'** AUTHORITARIAN EXPOSURES BY COUNTRY

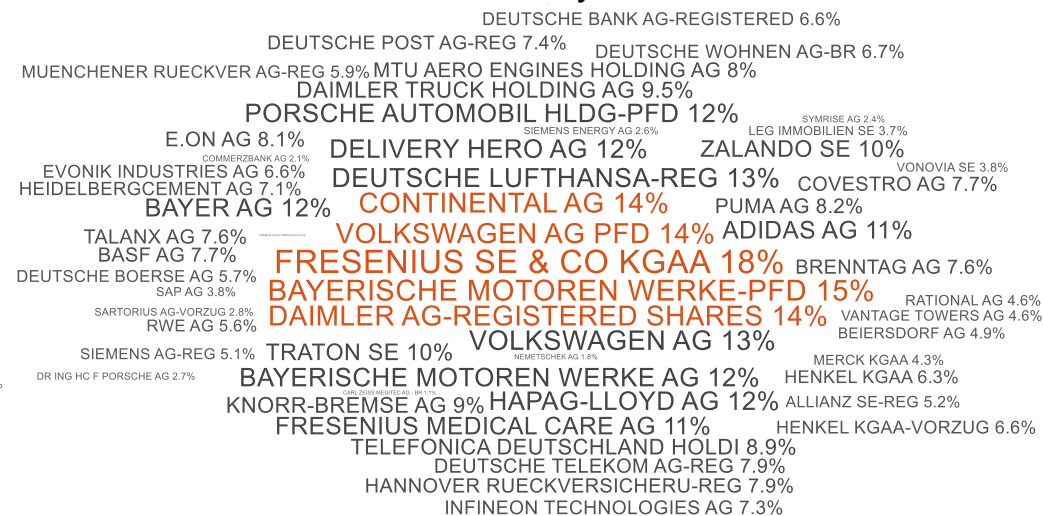
## 2022

Within a given country, companies exhibit a large spectrum of authoritarian exposures.

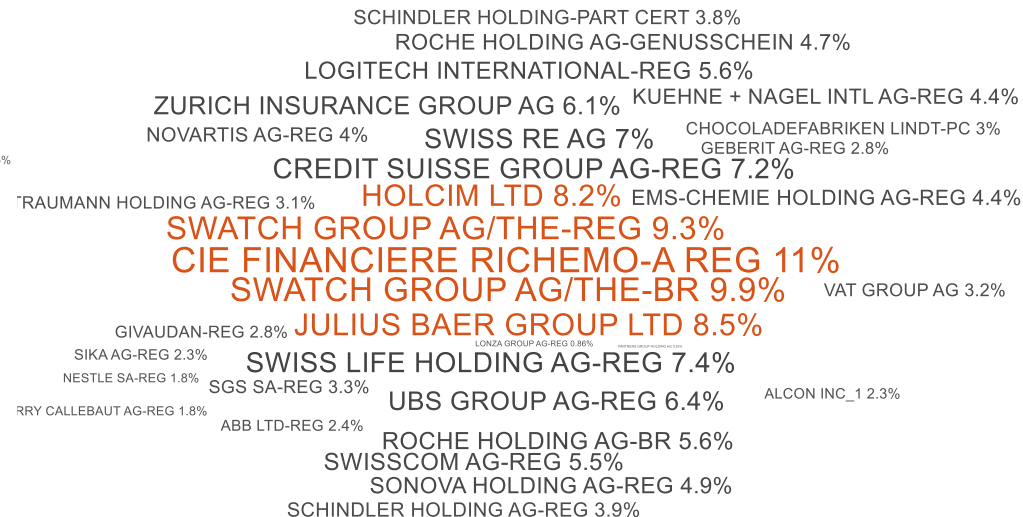


NORDIC COUNTRIES, GERMANY, FRANCE AND SWITZERLAND AS OF MARCH 23

## Germany



## Switzerland





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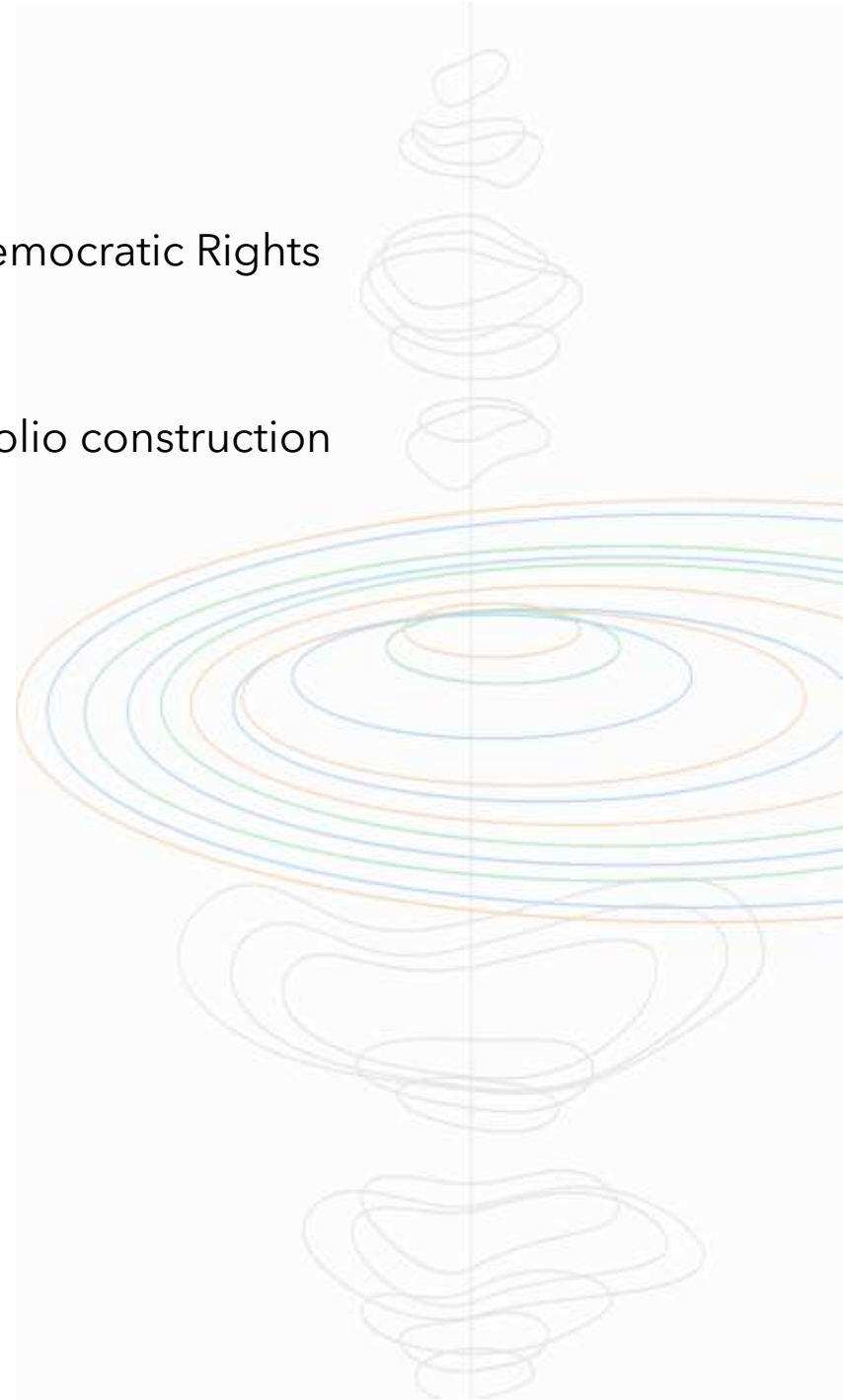
3 • Measuring Civil and Democratic Rights and portfolio construction

4 • **Empirical results: World (Including EM)**

5 • Seeding Proposal & Products

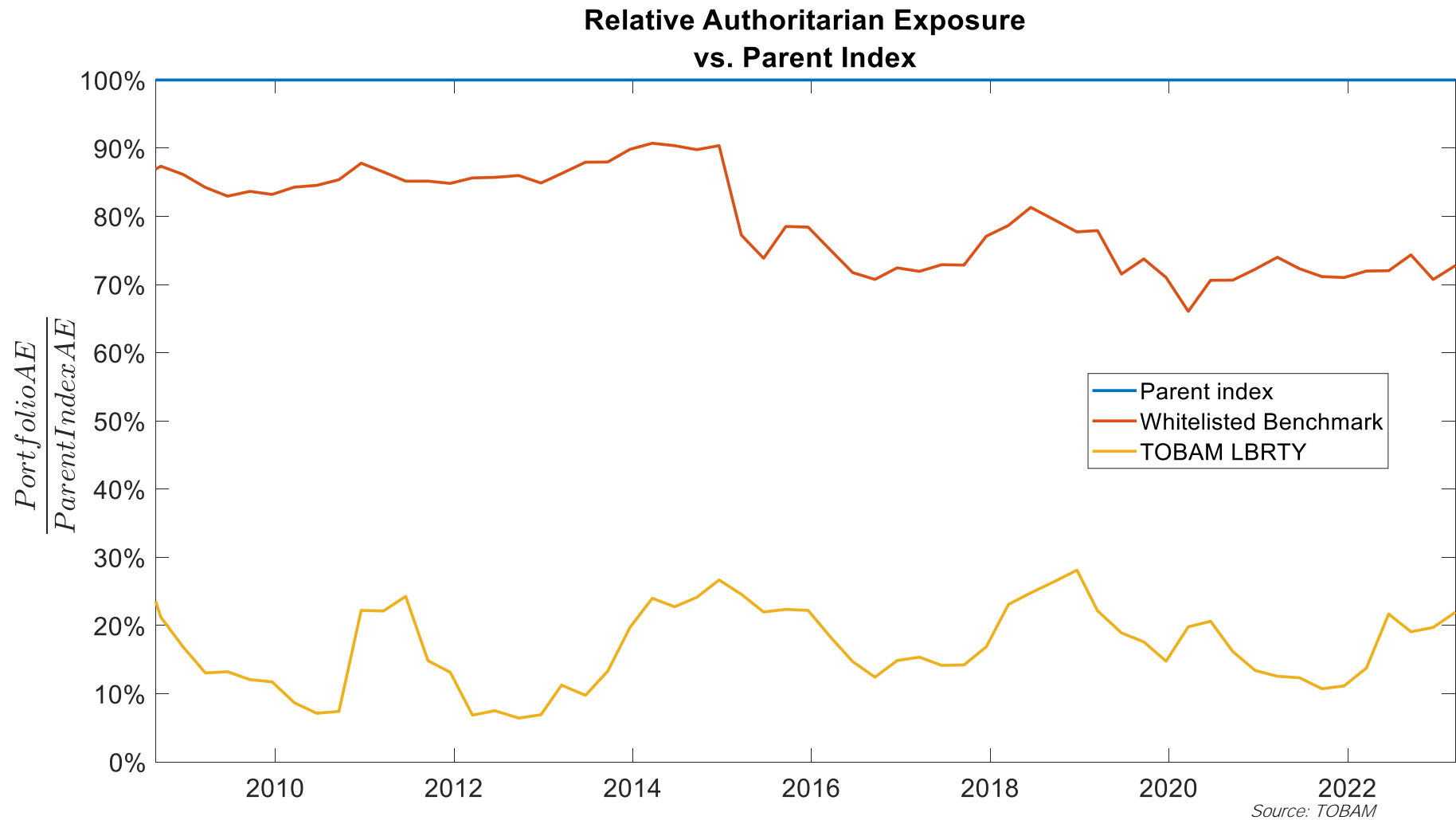
6 • Conclusion

7 • Appendix



# PORTFOLIOS RELATIVE AUTHORITARIAN EXPOSURE

WORLD INCL. EM



Within a given country companies exhibit a large spectrum of authoritarian exposures allowing TOBAM LBRTY to exhibit an authoritarian exposure 70 to 90% lower compared to their parent index.

## BACKTEST SUMMARY

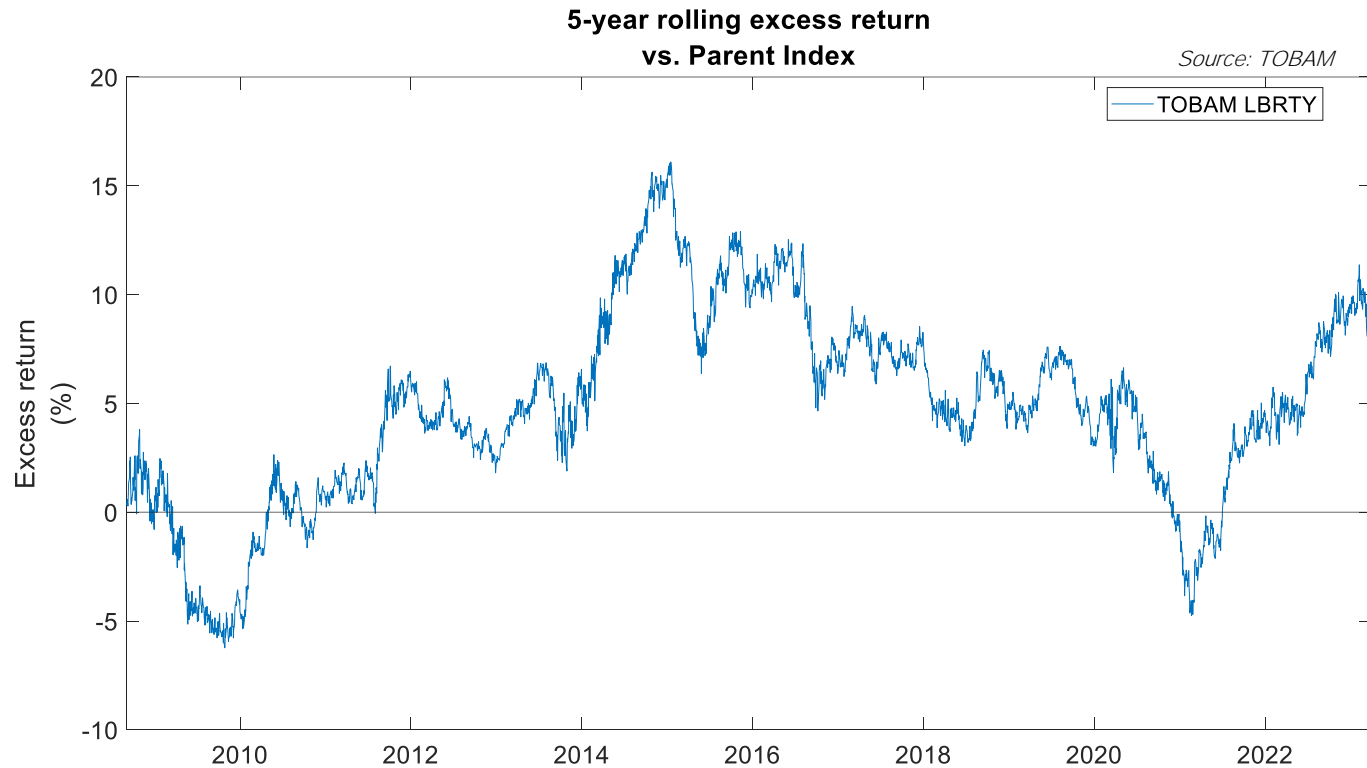
### WORLD INCLUDING EM

Statistics	BBG World (Including EM)	Whitelisted Benchmark	TOBAM LBRTY
Annualized Gross return	7.2%	8.0%	<b>8.3%</b>
Annualized Net return	7.2%	7.6%	<b>7.8%</b>
Vol	18.0%	18.3%	<b>19.5%</b>
Sharpe Ratio	0.36	0.37	<b>0.37</b>
Beta to Mkt	1.00	1.00	<b>0.98</b>
Average Number of stocks	2749	1711	<b>268</b>
Average Eff. Number of stocks	396.3	279.9	<b>150.4</b>
Authoritarian Exposure (2022)	5.3%	3.8%	<b>1.0%</b>
Relative Authoritarian Exposure (2022)	100.0%	72.2%	<b>18.6%</b>
TE(Parent index)	0.0%	2.0%	<b>5.4%</b>
TE(Whitelisted index)	2.0%	0.0%	<b>4.7%</b>

The period covered is from August 2008 to March 2023. Returns reflect back tested data for the entire time provided. Back tested results are for information purposes only. They are intended to illustrate how the Strategy may have behaved had it been launched. Back tested performance returns and/or charts illustrating performance provided on this page are gross of management fees, sales charges and other commissions, other taxes and relevant costs to be paid by an investor are not included in the calculations. The net performance, are computed assuming a hypothetical fee of 45bps. Warning: Past performance is not an indicator or a guarantee of future performance. The value of your investment and income received from it can go down as well as up and you may not get back the full amount invested. Performance details provided are in reference index specific local currency

## 5-YEAR ROLLING EXCESS RETURNS

WORLD INCLUDING EM



5 Years Statistics	BBG World (Including EM)	Whitelisted Benchmark	TOBAM LBRTY
Annualized Gross return	7.1%	9.0%	8.5%
Annualized Net return	7.1%	8.6%	8.0%
Vol	17.5%	18.7%	20.5%
Sharpe ratio	0.33	0.39	0.33
Beta to Mkt	1.0	1.1	1.1

The period covered is from February 2008 to March 2023. The graph shrinks the 5-year window near the start of the period to include only existing elements. Returns reflect back tested data for the entire time provided. Back tested results are for information purposes only. They are intended to illustrate how the Strategy may have behaved had it been launched. Warning: Past performance is not an indicator or a guarantee of future performance. The value of your investment and income received from it can go down as well as up and you may not get back the full amount invested. Performance details provided are in reference index specific local currency

## AQR AND FAMA FRENCH FACTOR EXPOSURES

### WORLD INCLUDING EM

- Traditional AQR and Fama French factors explain poorly TOBAM LBRTY's excess returns

XR regression	Whitelisted Benchmark	TOBAM LBRTY
Market	1.7%***	3.7%***
SMB	-0.7%	2.4%
HML	-7.1%***	0%
UMD	-0.6%	-1.5%
QMJ	6.5%***	22.1%***
BAB	-1%	-3.1%*
Alpha	0.4%	-0.3%
<b>R<sup>2</sup></b>	21%	10%

Factors are on AQR Global universe. Value (HML), momentum (UMD), size (SMB), Quality(QMJ) and Betting against Beta (BAB)

\*indicates that the estimated coefficient is different from zero with a probability of 90%, \*\* with a probability of 95% and \*\*\* with a probability of 99%.

Fama-French XR regression	Whitelisted Benchmark	TOBAM LBRTY
Market	0.2%	-1.1%
SMB	-8.1%***	-16.2%***
HML	-6.8%***	-1.5%
RMW	4.9%***	18%***
CMA	3.3%**	7.2%*
WML	-0.8%*	-1.3%
Alpha	0.4%	0.2%
<b>R<sup>2</sup></b>	25%	14%

Factors are on Developed universe. Value (HML), momentum (WML), size (SMB), Quality(CMA & RMW)

\*indicates that the estimated coefficient is different from zero with a probability of 90%, \*\* with a probability of 95% and \*\*\* with a probability of 99%.

## TOBAM LBRTY TRACKING ERROR DECOMPOSITION

WORLD INCLUDING EM

Majority of the TE vs. parent index and 50% of the TE vs. Whitelisted Benchmark is due to the reduction of exposure to authoritarian countries

World (Including EM) Nov 2009 - Mar 2023	Tracking error attribution vs. <b><u>Parent Index</u></b>		Tracking error attribution vs. <b><u>Whitelisted Benchmark</u></b>	
<b><i>Risk factor</i></b>	<b>TCR</b>	<b>PCR</b>	<b>TCR</b>	<b>PCR</b>
Market	0.4%	6.5%	0.3%	6.7%
Authoritarian countries	-0.1%	<b>-1.9%</b>	0.0%	<b>0.0%</b>
Indirect exposure	3.6%	<b>66.3%</b>	2.3%	<b>49.6%</b>
Sector	0.6%	11.2%	0.7%	14.8%
Residuals	1.0%	18.0%	1.4%	28.8%
<i>Total</i>	5.4%	100.0%	4.7%	100.0%

TCR = Total contribution to tracking error

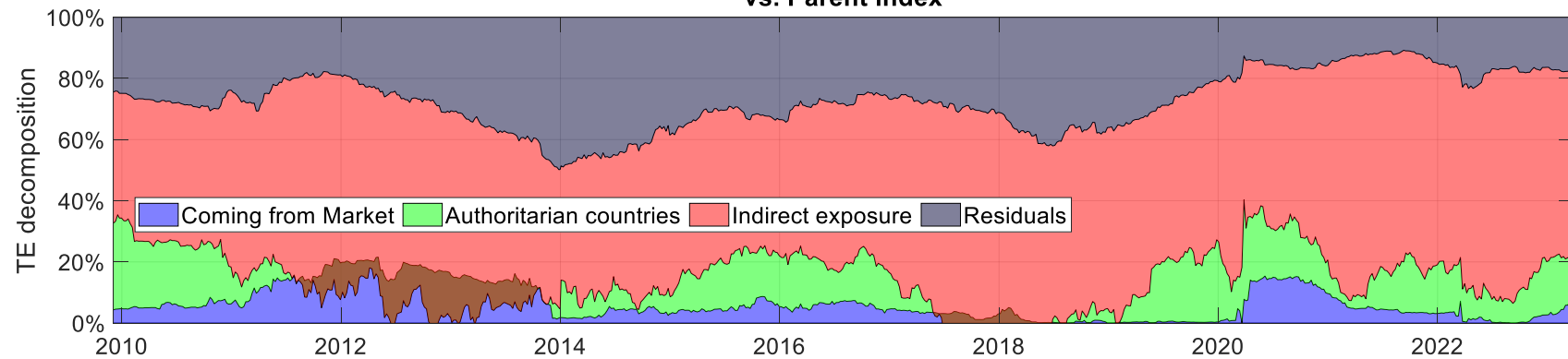
Source: TOBAM

PCR = Percentage contributions to tracking error

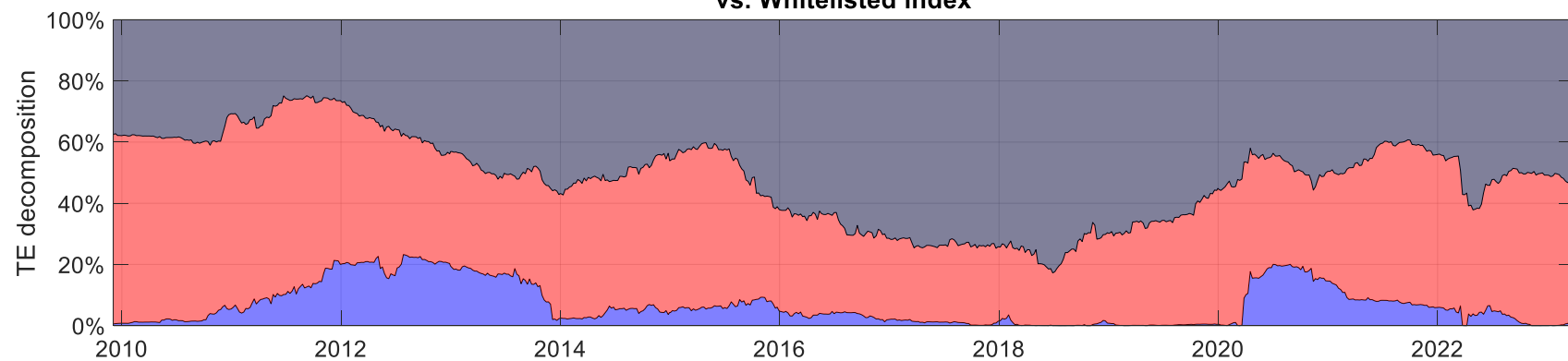
# TOBAM LBRTY TRACKING ERROR DECOMPOSITION

WORLD INCLUDING EM

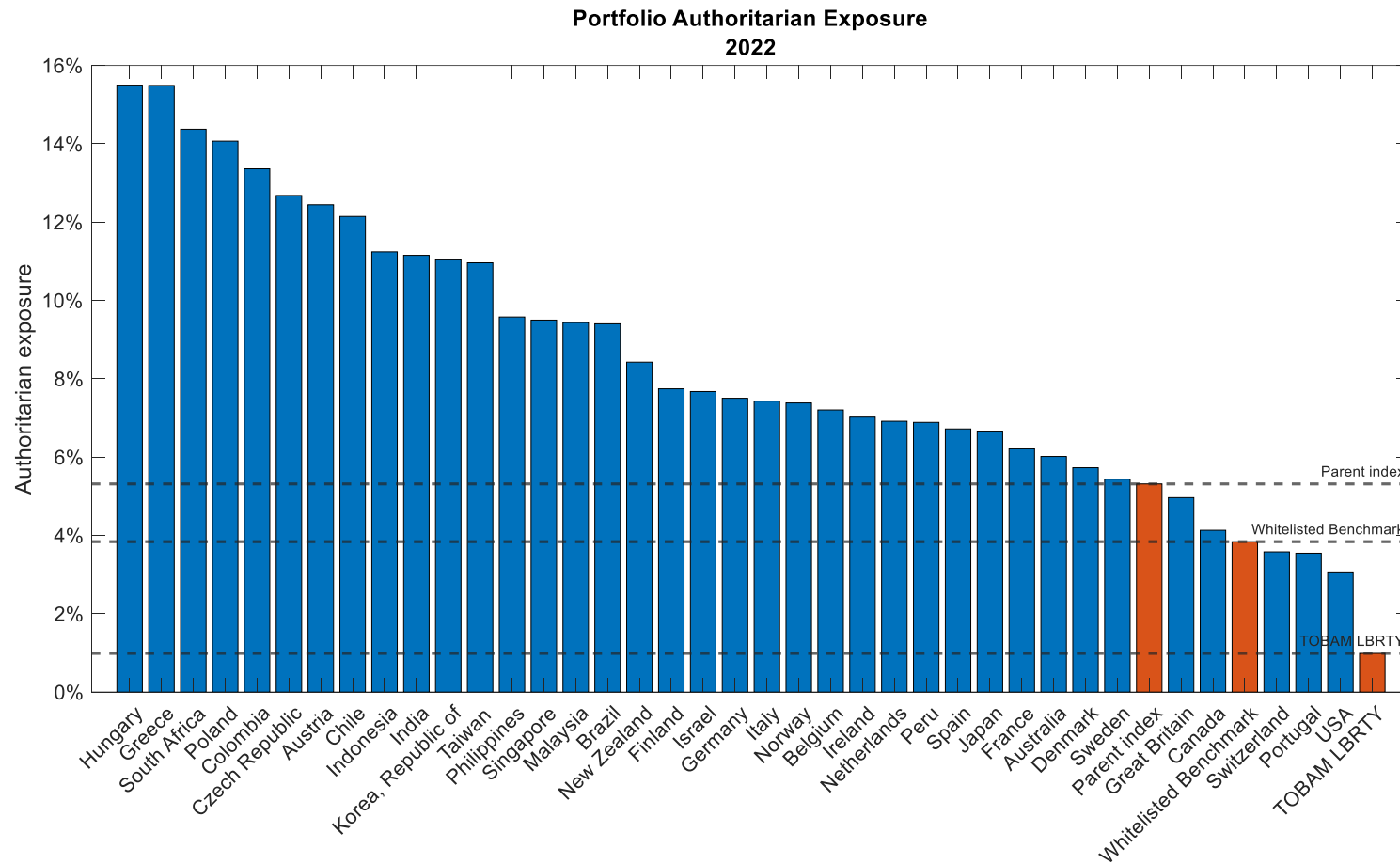
**TOBAM LBRTY**  
Excess return volatility decomposition  
vs. Parent index



**TOBAM LBRTY**  
Excess return volatility decomposition  
vs. Whitelisted index



## ELIGIBLE COUNTRY BENCHMARKS AUTHORITARIAN EXPOSURE WORLD (INCLUDING EM) - AVERAGE 2022



Source: TOBAM

TOBAM WORLD LBRTY portfolios has an authoritarian exposure in 2022 lower than the Market Cap Weighted Benchmark of any eligible country.



# EXCESS RETURN PERFORMANCE ATTRIBUTION BY COUNTRY

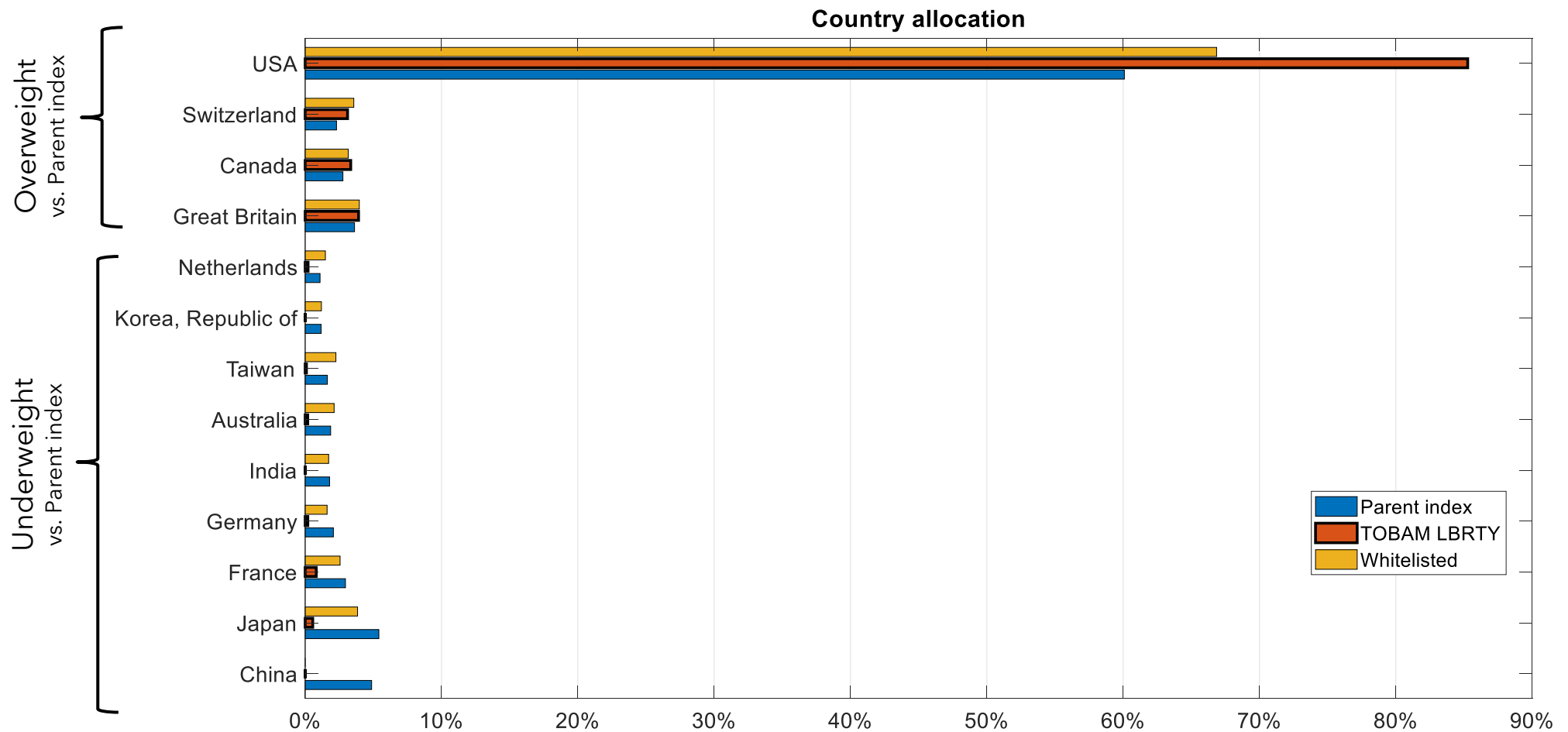
## WORLD INCLUDING EM



The period covered is from September 2009 to March 2023. Source Bloomberg and TOBAM. Returns reflect back tested data for the entire time provided. Back tested results are for information purposes only. They are intended to illustrate how the Strategy may have behaved had it been launched. Warning: Past performance is not an indicator or a guarantee of future performance. The value of your investment and income received from it can go down as well as up and you may not get back the full amount invested. Performance details provided are in reference index specific local currency

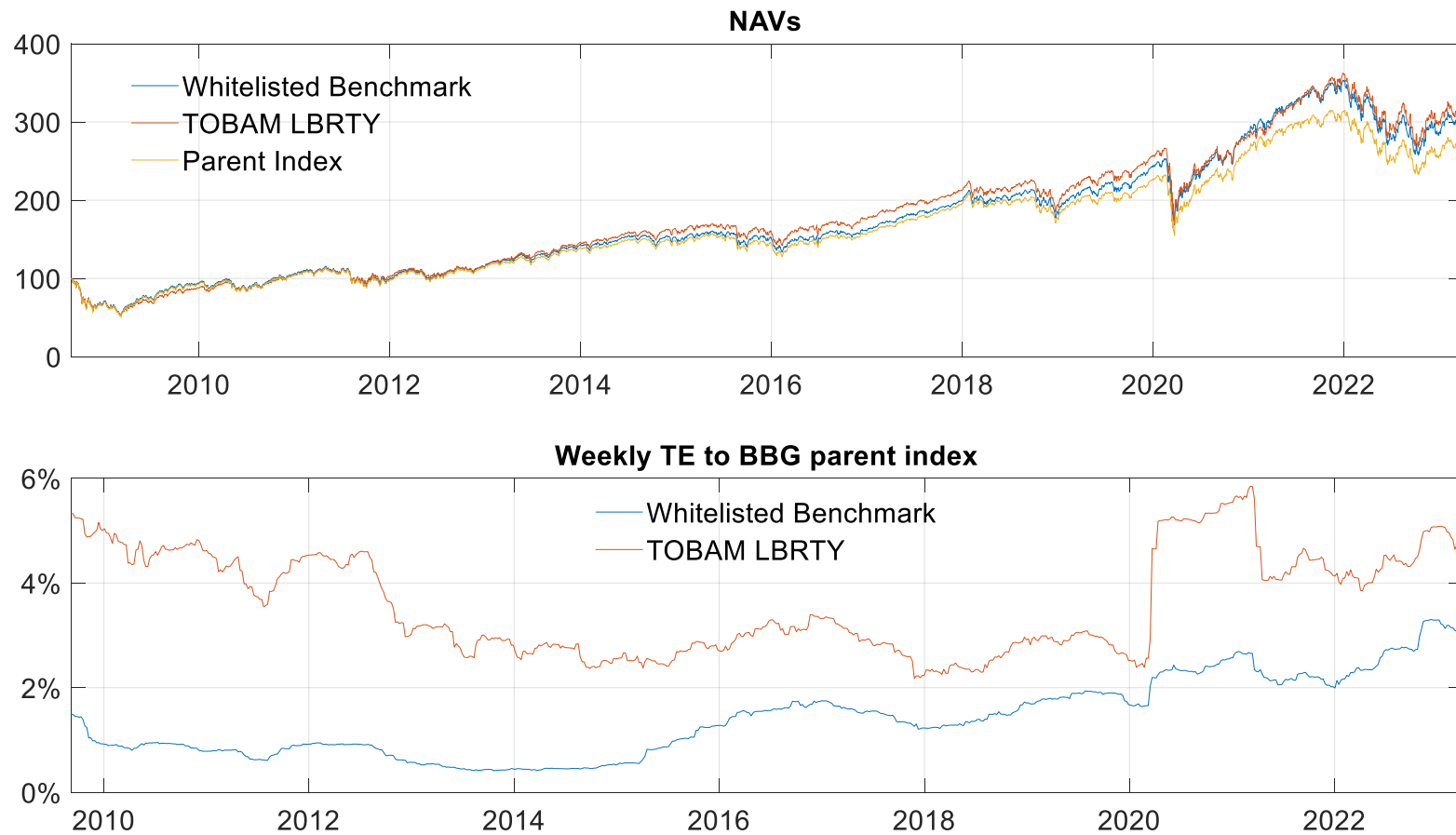
# WORLD (INCLUDING EM) PORTFOLIOS COUNTRY WEIGHTS

## AVERAGE 2023



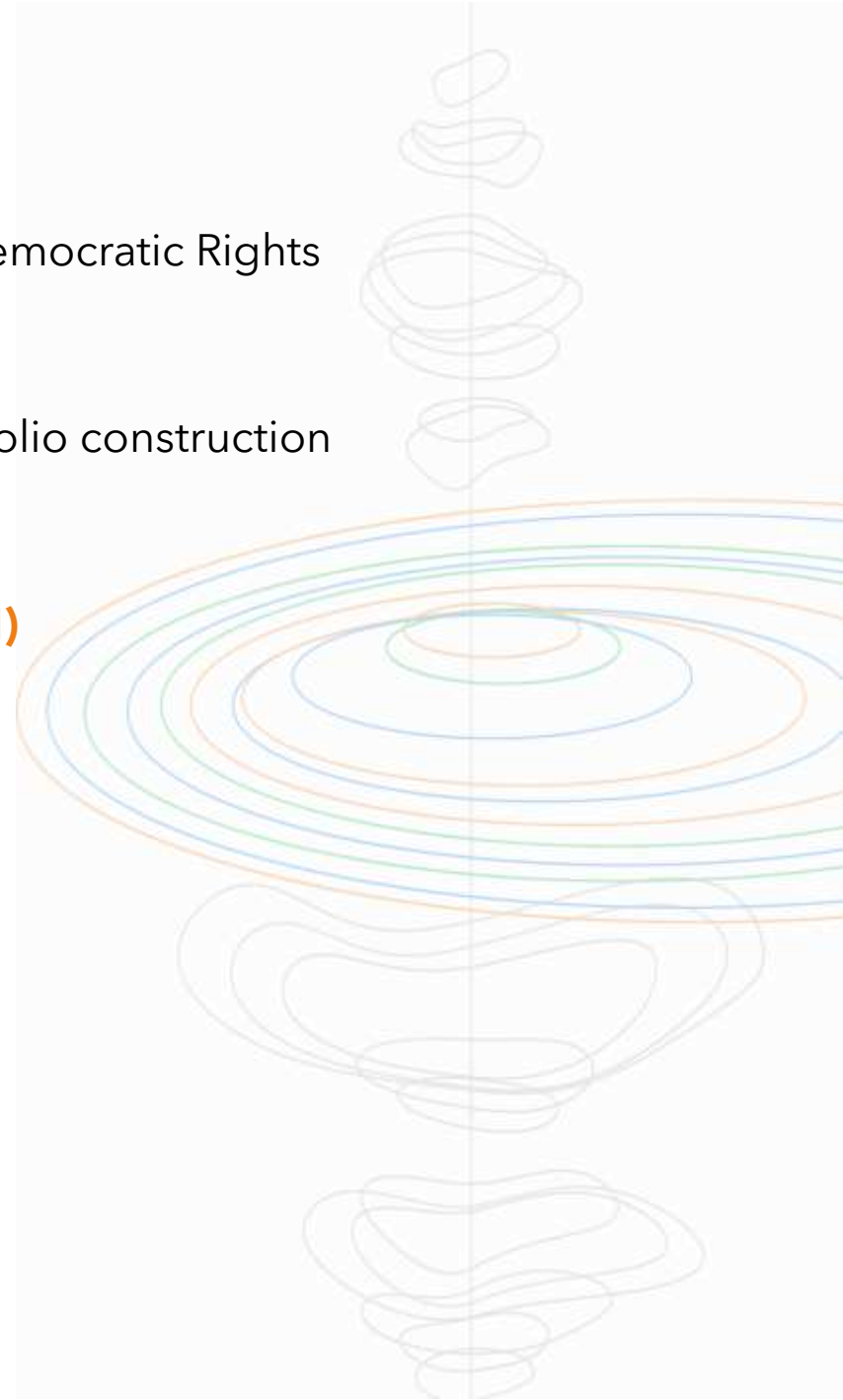
## NAVS AND TRACKING ERRORS

WORLD INCLUDING EM



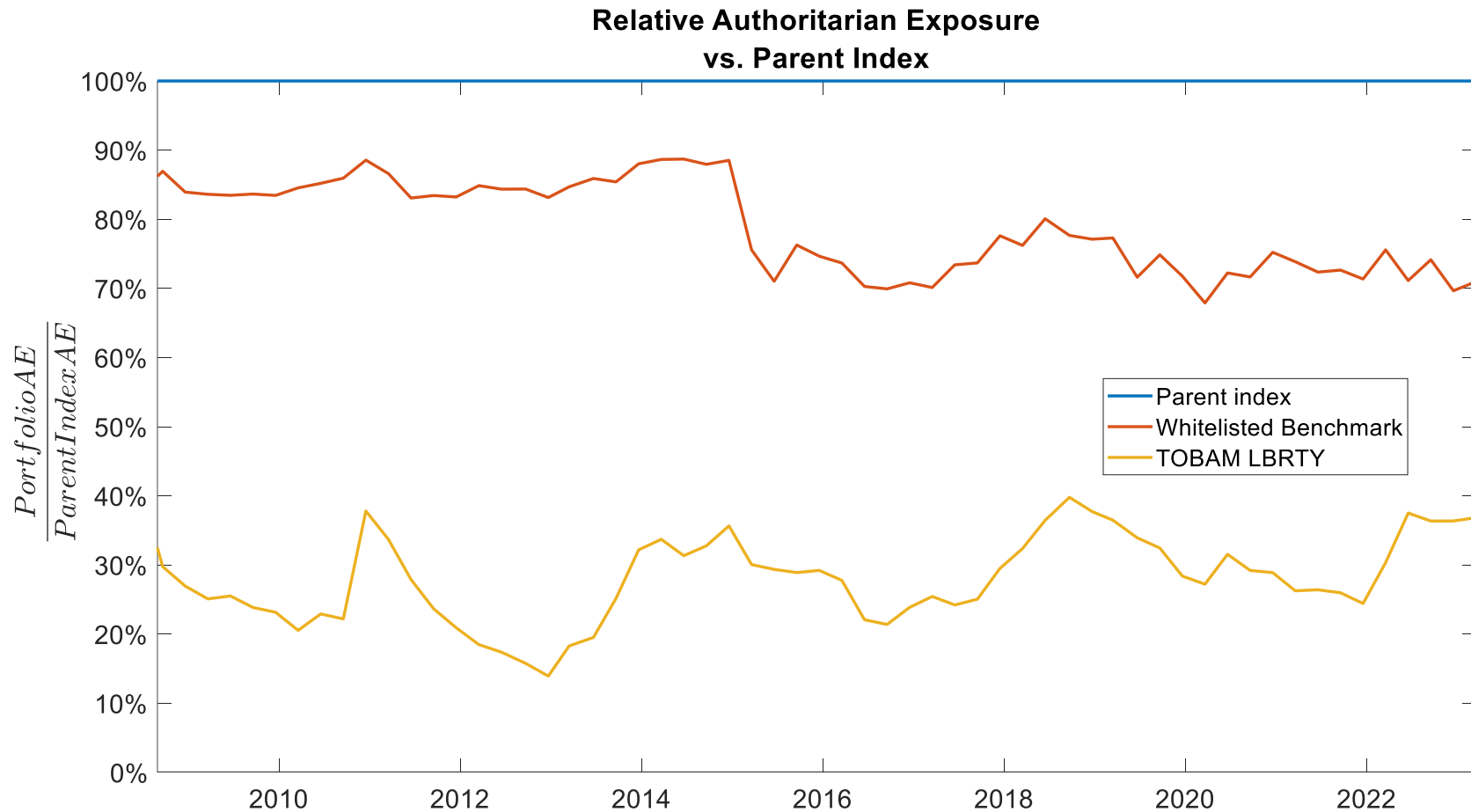
Source: TOBAM

1. Introduction to TOBAM and **Anti-Benchmark**
2. Investment Philosophy - The case for **C**ivil and **D**emocratic Rights
3. Measuring Civil and Democratic Rights and portfolio construction
4. **Empirical results: World Ex USA (Including EM)**
5. Seeding Proposal & Products
6. Conclusion
7. Appendix



## PORTFOLIOS RELATIVE AUTHORITARIAN EXPOSURE

WORLD EX USA (INCLUDING EM)



Source: TOBAM

Within a given country companies exhibit a large spectrum of authoritarian exposures. TOBAM LBRTY portfolio exhibits an authoritarian exposure 60 to 80% lower compared to its parent index.

## BACKTEST SUMMARY

WORLD EX USA INCLUDING EM

Statistics	BBG World ex USA (Including EM)	Whitelisted Benchmark	TOBAM LBRTY
Annualized Gross return	4.0%	4.2%	<b>4.7%</b>
Annualized Net return	4.0%	3.8%	<b>4.3%</b>
Vol	18.6%	18.5%	<b>18.9%</b>
Sharpe Ratio	0.18	0.17	<b>0.19</b>
Beta to Mkt	1.0	1.0	<b>1.0</b>
Average Number of stocks	2085	1215	<b>246</b>
Average Eff. Number of stocks	406.1	258.8	<b>140.0</b>
Authoritarian Exposure (2022)	8.8%	6.4%	<b>3.1%</b>
Relative Authoritarian Exposure (2022)	100.0%	72.6%	<b>35.1%</b>
TE(Parent index)	0.0%	2.8%	<b>5.4%</b>
TE(Whitelisted index)	2.8%	0.0%	<b>4.6%</b>

The period covered is from August 2008 to March 2023. Returns reflect back tested data for the entire time provided. Back tested results are for information purposes only. They are intended to illustrate how the Strategy may have behaved had it been launched. Back tested performance returns and/or charts illustrating performance provided on this page are gross of management fees, sales charges and other commissions, other taxes and relevant costs to be paid by an investor are not included in the calculations. The net performance, are computed assuming a hypothetical fee of 40bps. Warning: Past performance is not an indicator or a guarantee of future performance. The value of your investment and income received from it can go down as well as up and you may not get back the full amount invested. Performance details provided are in reference index specific local currency.

## AQR AND FAMA-FRENCH FACTOR EXPOSURE

WORLD EX USA INCLUDING EM

- Traditional AQR factors and Fama-French explain poorly TOBAM LBRTY's excess returns

XR regression	Whitelisted Benchmark	TOBAM LBRTY
Market	-0.8%	-5.2%***
SMB	-0.3%	-5.5%*
HML	-3.3%***	0.8%
UMD	-2.7%***	-6.2%***
QMJ	2.7%	1.5%
BAB	2.1%*	6.2%***
Alpha	-0.1%	0.7%
<b>R<sup>2</sup></b>	4%	7%

Factors are on AQR Global ex USA universe. Value (HML), momentum (UMD), size (SMB), quality(QMJ) and Betting against Beta (BAB)

\*indicates that the estimated coefficient is different from zero with a probability of 90%, \*\* with a probability of 95% and \*\*\* with a probability of 99%.

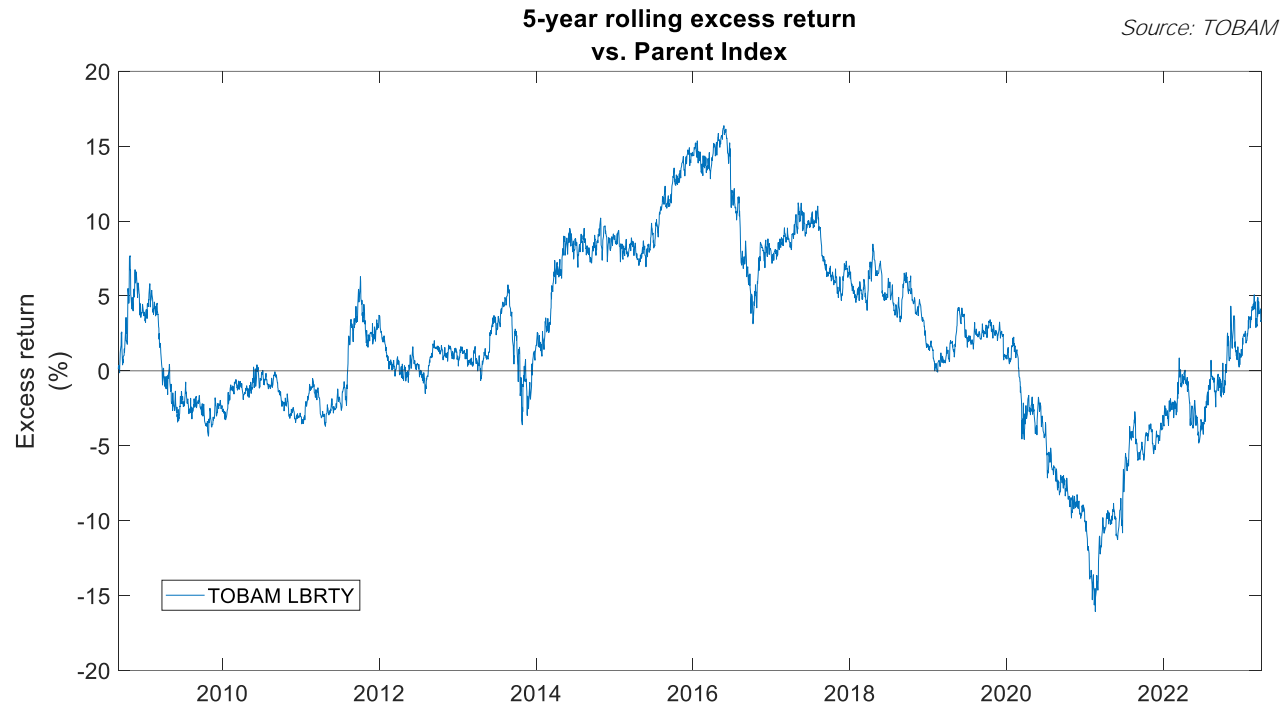
Fama-French XR regression	Whitelisted Benchmark	TOBAM LBRTY
Market	-1%*	-4.7%***
SMB	-2.9%**	-5.4%**
HML	-4.3%**	0.5%
RMW	4.9%**	9.2%**
CMA	5.2%**	5.2%
WML	-3.1%***	-4.3%***
Alpha	-0.1%	0.6%
<b>R<sup>2</sup></b>	6%	7%

Factors are on Developed ex US universe. Value (HML), momentum (WML), size (SMB), Quality(CMA & RMW)

\*indicates that the estimated coefficient is different from zero with a probability of 90%, \*\* with a probability of 95% and \*\*\* with a probability of 99%.

## 5-YEAR ROLLING EXCESS RETURNS

WORLD EX USA (INCLUDING EM)



	BBG World ex USA (Including EM)	Whitelisted Benchmark	TOBAM LBRTY
5 Years Statistics			
Annualized Gross return	3.1%	3.8%	3.6%
Annualized Net return	3.1%	3.4%	3.2%
Vol	15.6%	16.0%	16.9%
Sharpe ratio	0.11	0.13	0.11
Beta to Mkt	1.00	1.00	1.02

The period covered is from February 2018 to March 2023. The graph shrinks the 5-year window near the start of the period to include only existing elements. Returns reflect back tested data for the entire time provided. Back tested results are for information purposes only. They are intended to illustrate how the Strategy may have behaved had it been launched. Warning: Past performance is not an indicator or a guarantee of future performance. The value of your investment and income received from it can go down as well as up and you may not get back the full amount invested. Performance details provided are in reference index specific local currency.



## TOBAM LBRTY TRACKING ERROR DECOMPOSITION

WORLD EX USA INCLUDING EM

Most of the TE vs. parent index and about 40% of the TE vs. Whitelisted Benchmark is due to the reduction exposure to authoritarian countries

World ex USA(Including EM) Nov 2009 - Mar 2023	Tracking error attribution vs. <b><u>Parent Index</u></b>		Tracking error attribution vs. <b><u>Whitelisted Benchmark</u></b>	
<b><i>Risk factor</i></b>	<b>TCR</b>	<b>PCR</b>	<b>TCR</b>	<b>PCR</b>
Market	0.4%	8.3%	0.3%	6.6%
Authoritarian countries	0.1%	<b>1.7%</b>	0.0%	<b>0.0%</b>
Indirect exposure	3.5%	<b>64.4%</b>	1.9%	<b>41.3%</b>
Sector	0.5%	9.2%	0.8%	18.2%
Residuals	0.9%	16.4%	1.5%	33.9%
<i>Total</i>	5.4%	100.0%	4.6%	100.0%

TCR = Total contribution to tracking error

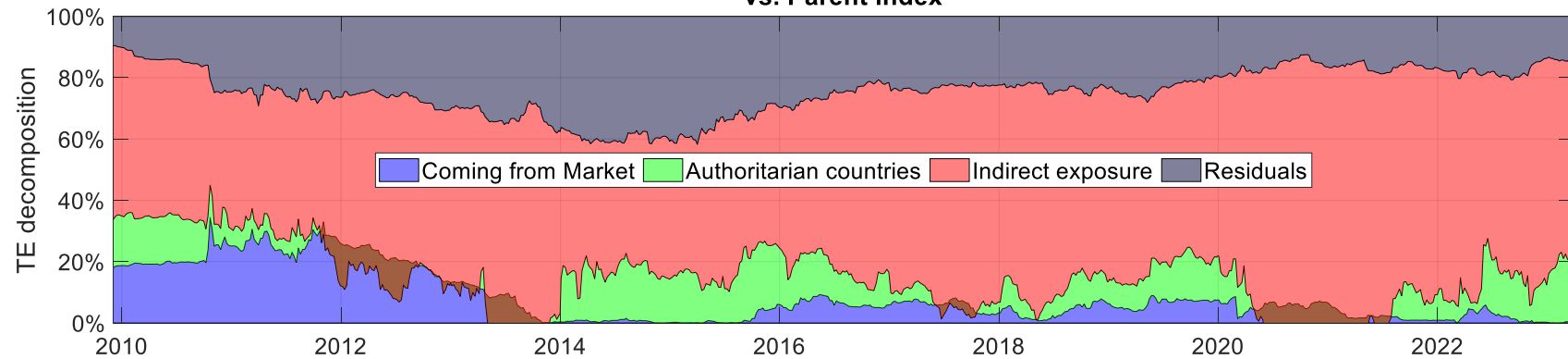
Source: TOBAM

PCR = Percentage contributions to tracking error

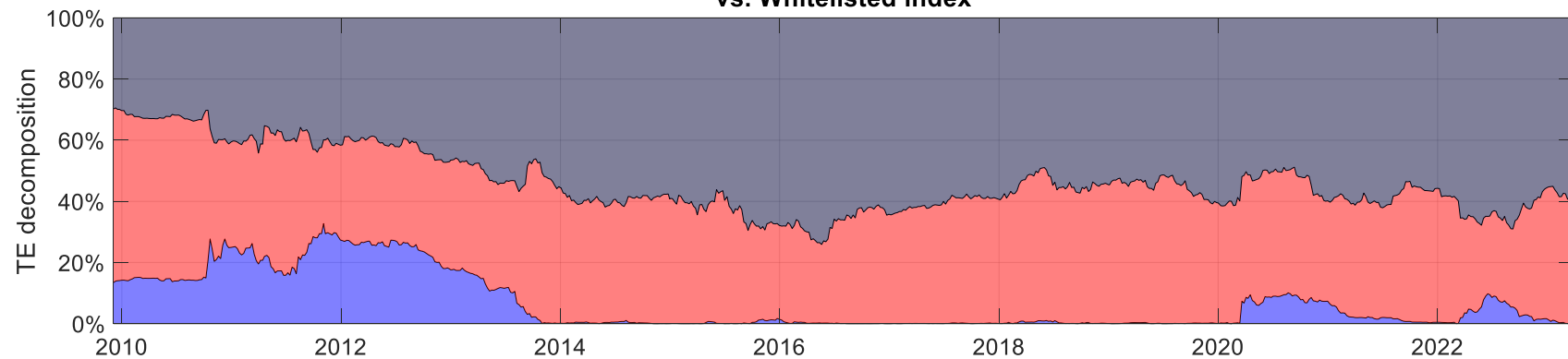
# TOBAM LBRTY TRACKING ERROR DECOMPOSITION

WORLD EX USA INCLUDING EM

**TOBAM LBRTY**  
Excess return volatility decomposition  
vs. Parent index



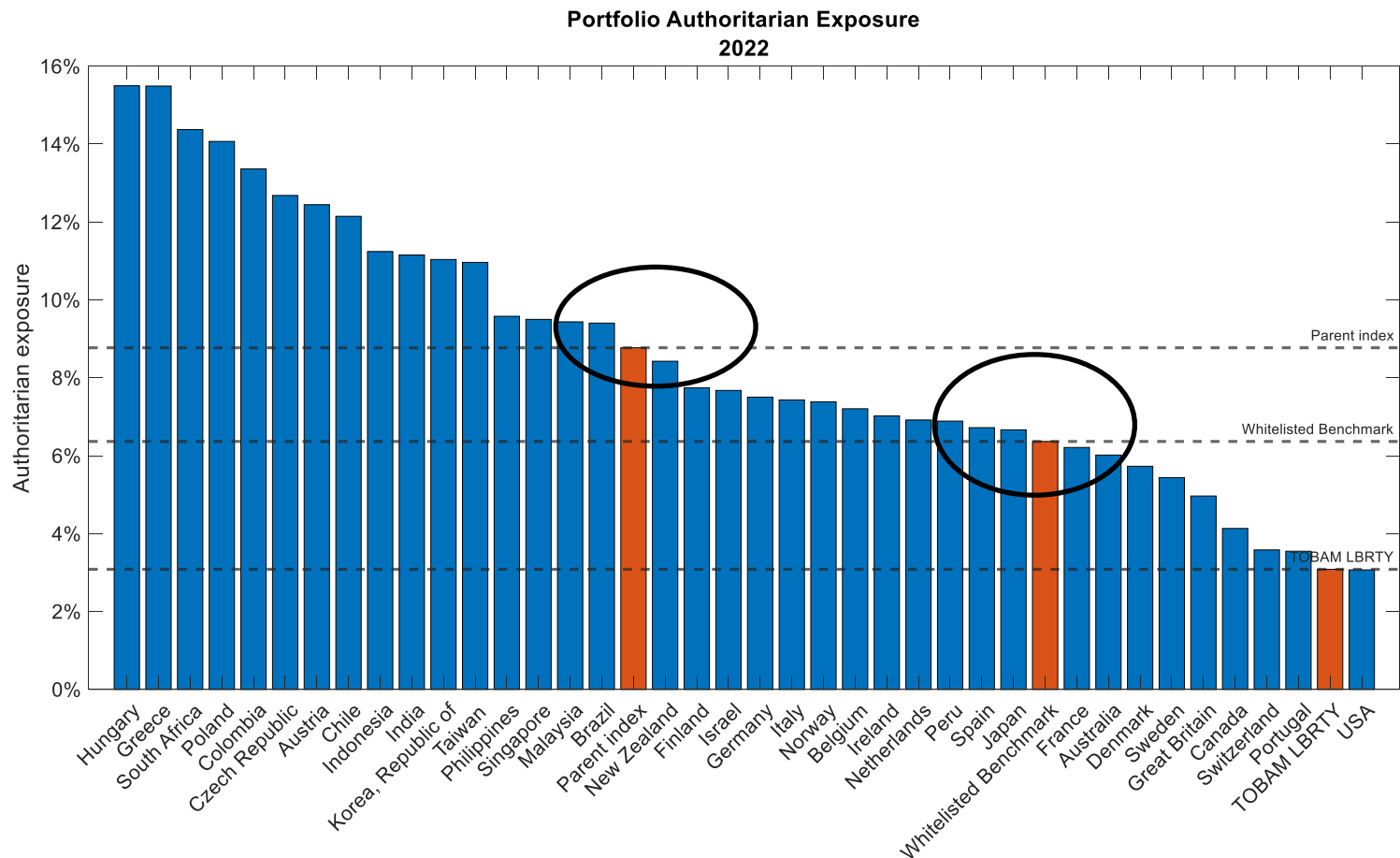
**TOBAM LBRTY**  
Excess return volatility decomposition  
vs. Whitelisted index



Source: TOBAM

# ELIGIBLE COUNTRY BENCHMARKS AUTHORITARIAN EXPOSURE

WORLD EX USA (INCLUDING EM) - AVERAGE 2022

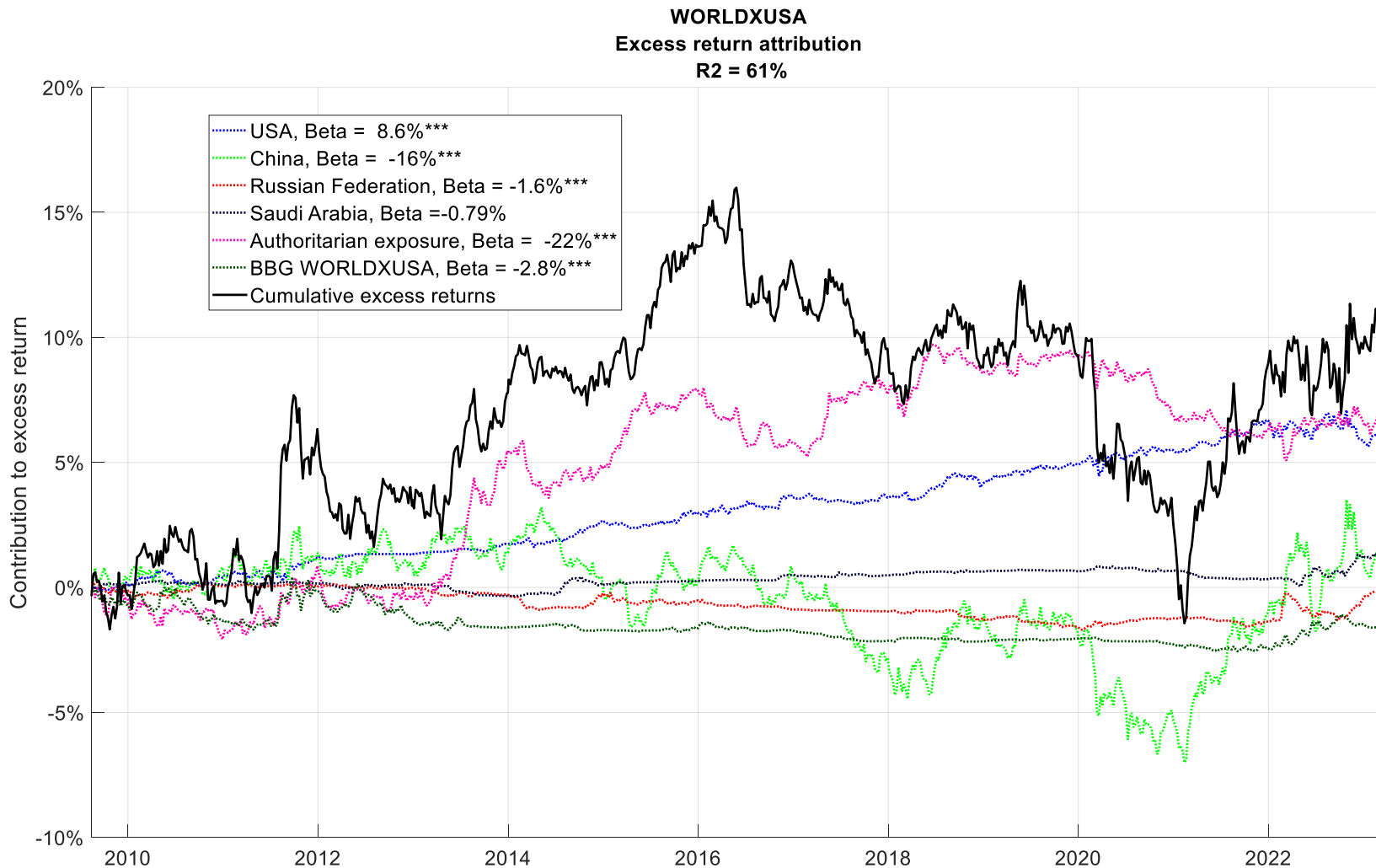


Source: TOBAM

TOBAM WORLD ex USA LBRTY portfolios has an authoritarian exposure in 2022 lower than the Market Cap Weighted Benchmark of any eligible country.

# EXCESS RETURN PERFORMANCE ATTRIBUTION BY COUNTRY

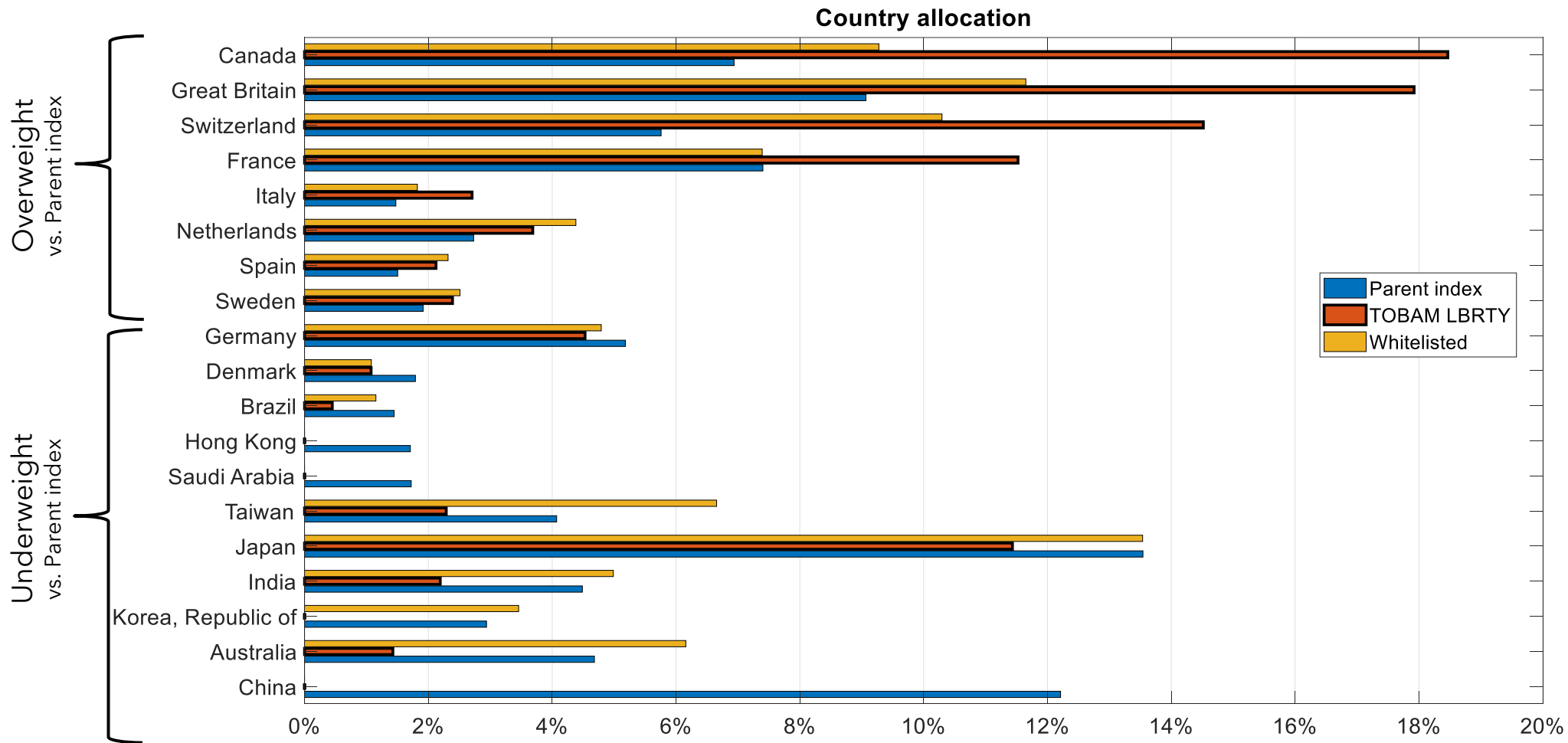
WORLD EX USA INCLUDING EM



The period covered is from September 2009 to March 2023. Source Bloomberg and TOBAM. Returns reflect back tested data for the entire time provided. Back tested results are for information purposes only. They are intended to illustrate how the Strategy may have behaved had it been launched. Warning: Past performance is not an indicator or a guarantee of future performance. The value of your investment and income received from it can go down as well as up and you may not get back the full amount invested. Performance details provided are in reference index specific local currency

# WORLD EX USA (INCLUDING EM) PORTFOLIOS COUNTRY WEIGHTS

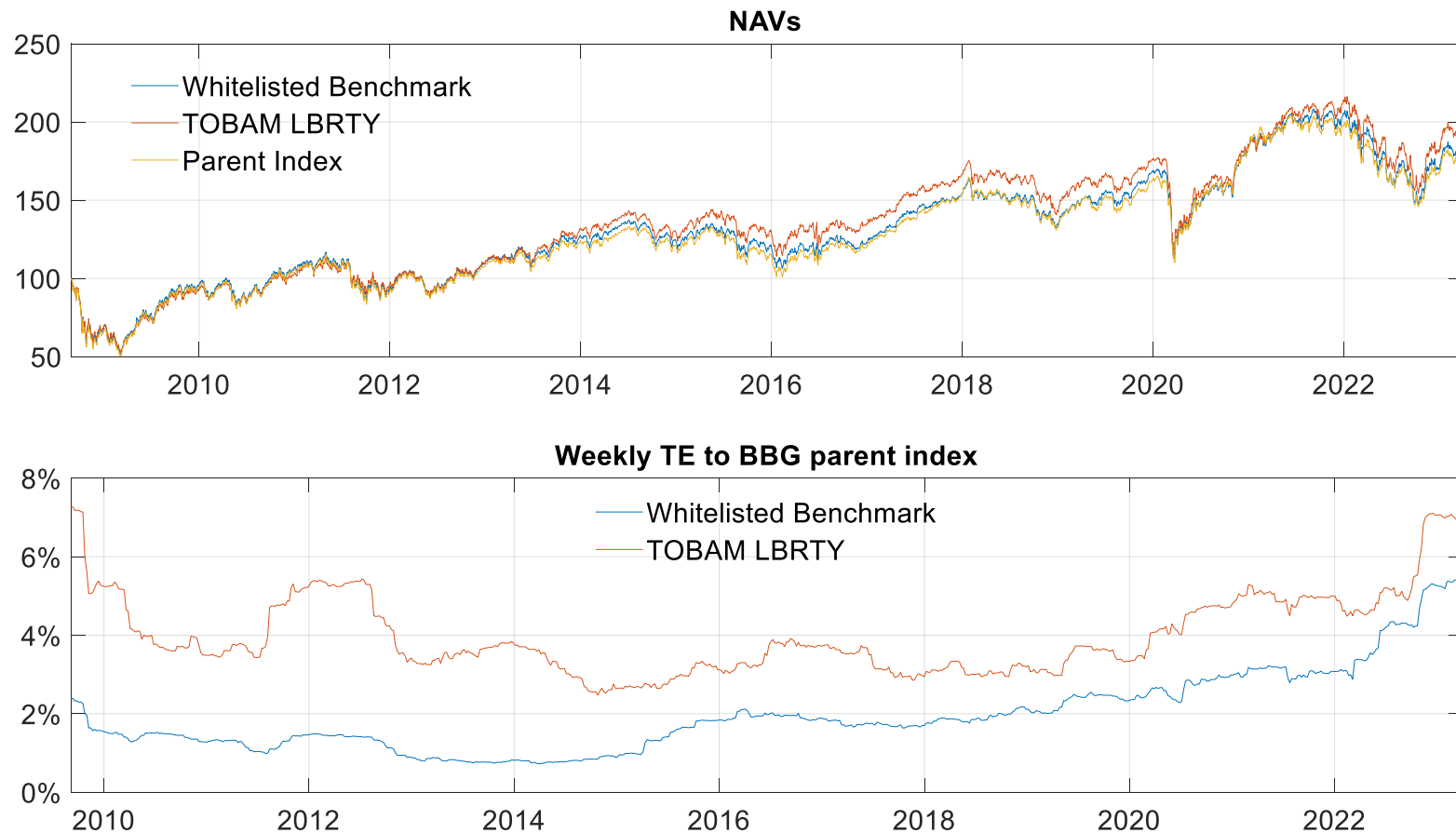
## AVERAGE 2023



Source: TOBAM, Bloomberg

# NAVS AND TRACKING ERRORS

WORLD EX USA (INCLUDING EM)



Source: TOBAM

1 • Introduction to TOBAM and **Anti-Benchmark**

2 • Investment Philosophy - The case for **C**ivil and **D**emocratic Rights

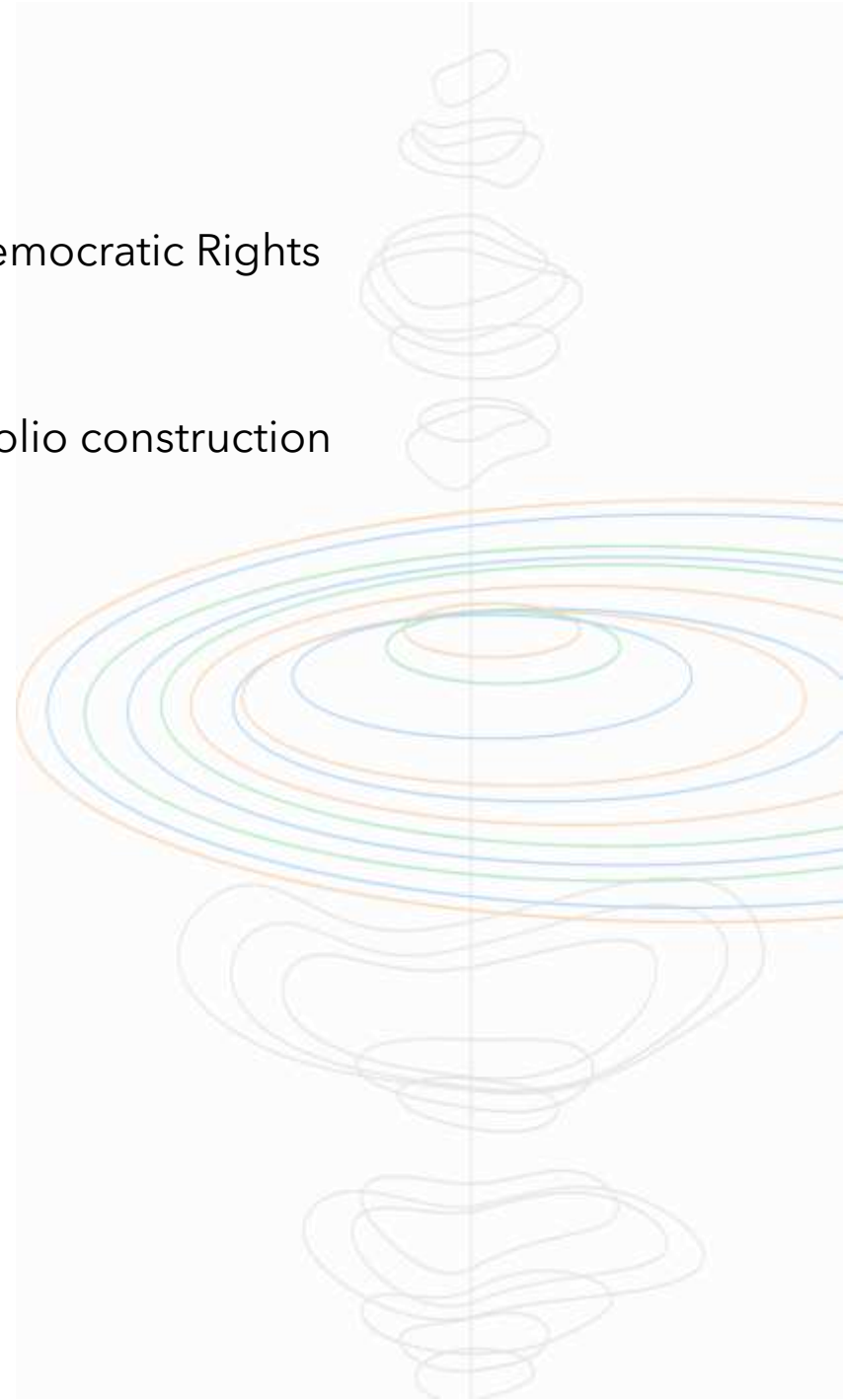
3 • Measuring Civil and Democratic Rights and portfolio construction

4 • **Empirical results: EM**

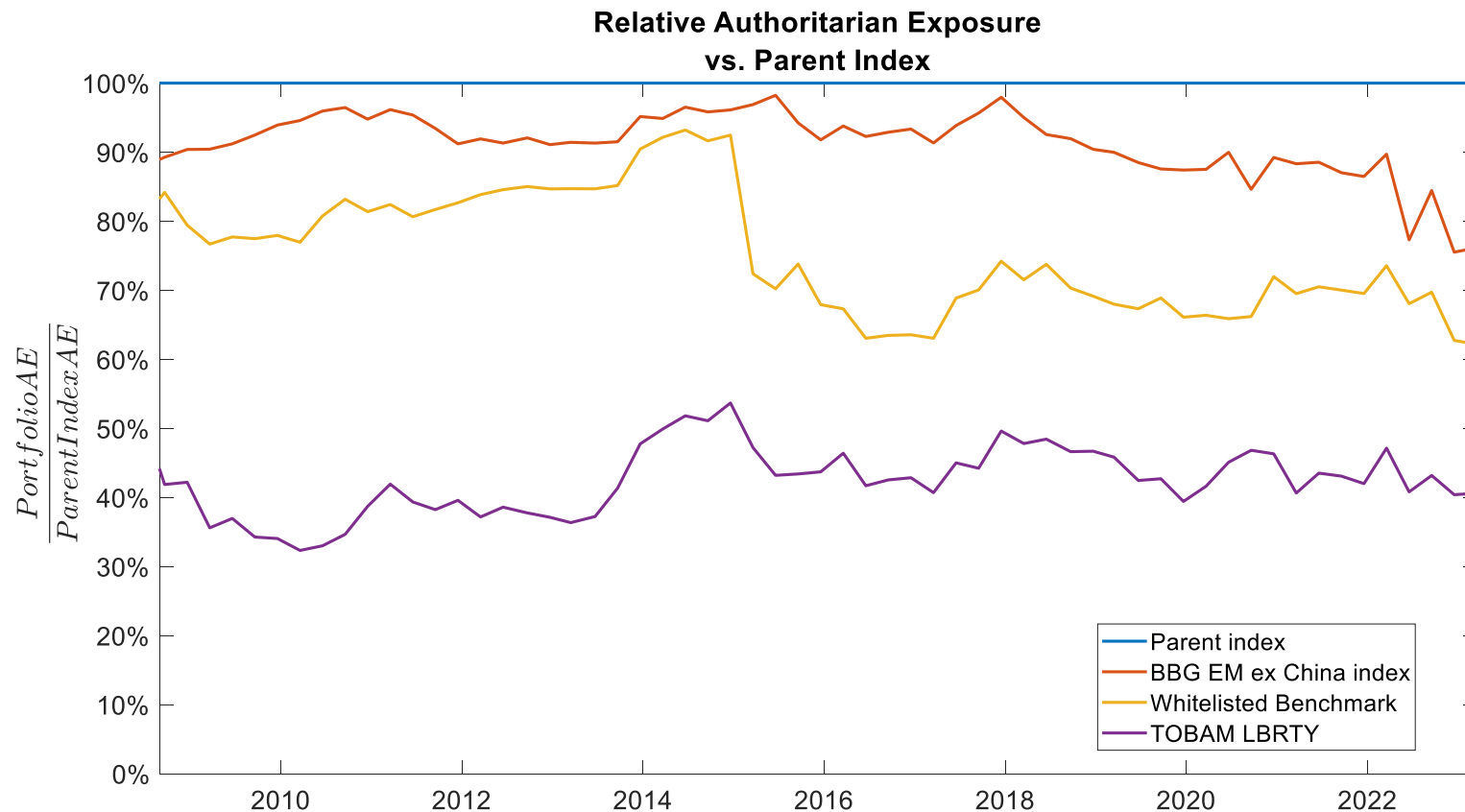
5 • Seeding Proposal & Products

6 • Conclusion

7 • Appendix



## PORTFOLIOS RELATIVE AUTHORITARIAN EXPOSURE EM



Source: TOBAM

Within a given country companies exhibit a large spectrum of authoritarian exposures. TOBAM LBRTY portfolio exhibits an authoritarian exposure 50 to 70% lower compared to its parent index.



## BACKTEST SUMMARY

EM

Statistics	BBG EM	BBG EM ex China	Whitelisted Benchmark	TOBAM LBRTY
Annualized Gross return	3.7%	3.5%	3.8%	<b>6.1%</b>
Annualized Net return	3.7%	3.5%	3.3%	<b>5.6%</b>
Vol	20.3%	20.3%	19.5%	<b>18.7%</b>
Sharpe Ratio	0.15	0.14	0.13	<b>0.26</b>
Beta to Mkt	1.0	1.0	0.9	<b>0.9</b>
Average Number of stocks	1099	842	460	<b>135</b>
Average Eff. Number of stocks	161.4	138.7	113.7	<b>61.6</b>
Authoritarian Exposure (2022)	14.0%	11.4%	9.5%	<b>6.0%</b>
Relative Authoritarian Exposure (2022)	100.0%	81.5%	68.4%	<b>42.8%</b>
TE(Parent index)	0.0%	5.3%	6.7%	<b>8.8%</b>
TE(Whitelisted index)	6.7%	4.6%	0.0%	<b>6.3%</b>
TE(BBG EM ex China index)	5.3%	0.0%	4.6%	<b>7.1%</b>

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## AQR AND FAMA-FRENCH FACTOR EXPOSURE

EM

- Traditional AQR and Fama French factors explain poorly TOBAM LBRTY's excess returns

XR regression	Whitelisted Benchmark	TOBAM LBRTY
Market	-2.4%*	-10.1%***
SMB	6.8%	11.4%**
HML	17.1%***	18.8%***
UMD	-4.3%*	-4.5%*
QMJ	10.2%**	14.3%**
BAB	6.9%**	4.8%
Alpha	-1.6%	0.6%
<b>R<sup>2</sup></b>	8%	19%

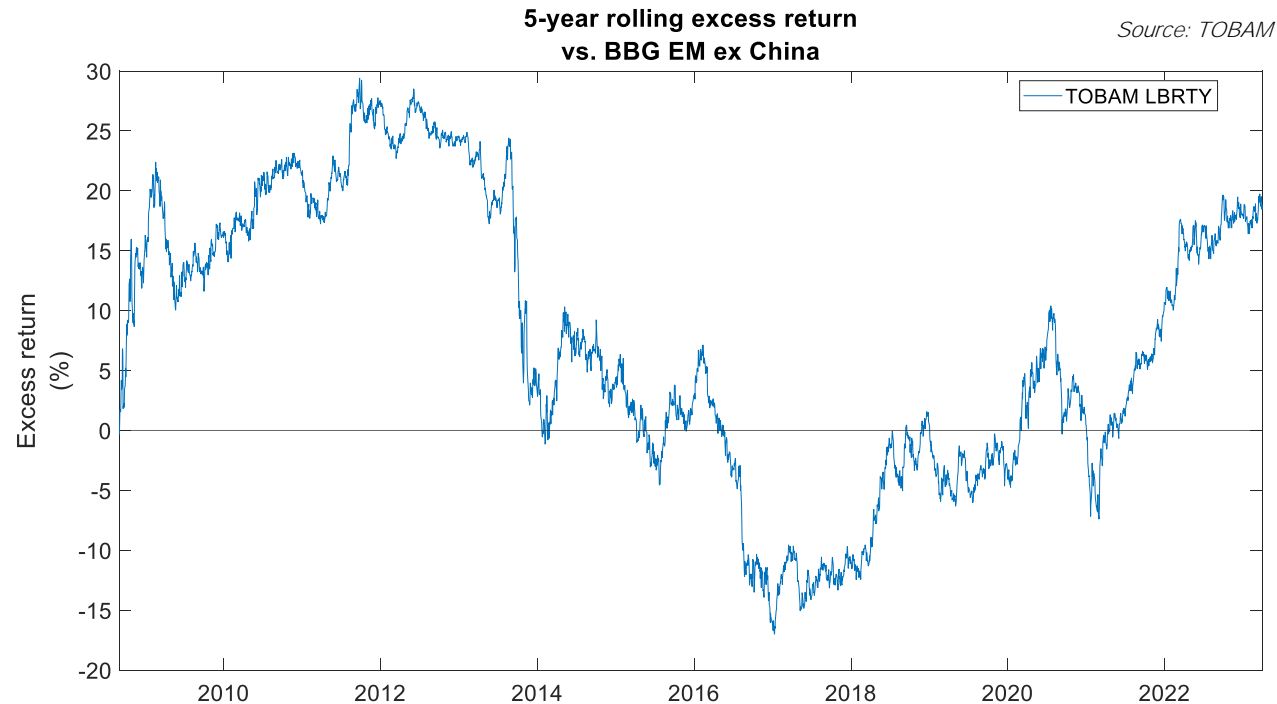
Factors are on AQR Pacific universe. Value (HML), momentum (UMD), size (SMB) and Betting against Beta (BAB)  
 \*indicates that the estimated coefficient is different from zero with a probability of 90%, \*\* with a probability of 95% and \*\*\* with a probability of 99%.

Fama-French XR regression	Whitelisted Benchmark	TOBAM LBRTY
Market	1.4%	-11.9%***
SMB	18.8%**	25.5%**
HML	14.4%*	14.7%
RMW	2.3%	2.7%
CMA	28.5%***	30.7%***
WML	3.7%	3%
Alpha	-2.1%	0.2%
<b>R<sup>2</sup></b>	17%	31%

Factors are on Emerging market universe. Value (HML), momentum (WML), size (SMB), Quality(CMA & RMW)  
 \*indicates that the estimated coefficient is different from zero with a probability of 90%, \*\* with a probability of 95% and \*\*\* with a probability of 99%.

## 5-YEAR ROLLING EXCESS RETURNS

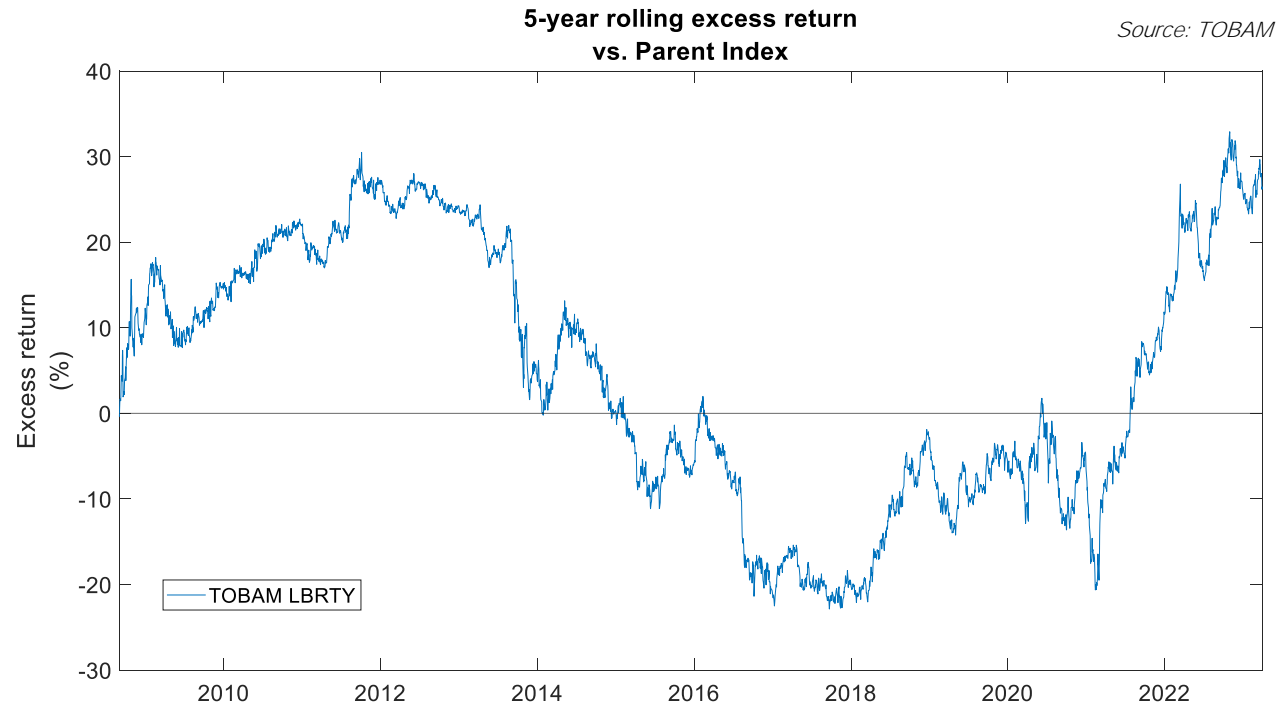
### VS BBG EM EX CHINA - EM



5 Years Statistics	BBG EM	BBG EM ex China	Whitelisted Benchmark	TOBAM LBRTY
Annualized Gross return	0.6%	2.2%	1.6%	6.3%
Annualized Net return	0.6%	2.2%	1.1%	5.9%
Vol	17.1%	16.9%	17.1%	15.8%
Sharpe ratio	-0.04	0.05	-0.01	0.29
Beta to Mkt	1.00	0.89	0.86	0.77

The period covered is from February 2008 to March 2023. The graph shrinks the 5-year window near the start of the period to include only existing elements. Returns reflect back tested data for the entire time provided. Back tested results are for information purposes only. They are intended to illustrate how the Strategy may have behaved had it been launched. Warning: Past performance is not an indicator or a guarantee of future performance. The value of your investment and income received from it can go down as well as up and you may not get back the full amount invested. Performance details provided are in reference index specific local currency

## 5-YEAR ROLLING EXCESS RETURNS VS PARENT INDEX -EM



5 Years Statistics	BBG EM	BBG EM ex China	Whitelisted Benchmark	TOBAM LBRTY
Annualized Gross return	0.6%	2.2%	1.6%	6.3%
Annualized Net return	0.6%	2.2%	1.1%	5.9%
Vol	17.1%	16.9%	17.1%	15.8%
Sharpe ratio	-0.04	0.05	-0.01	0.29
Beta to Mkt	1.00	0.89	0.86	0.77

The period covered is from February 2008 to March 2023. The graph shrinks the 5-year window near the start of the period to include only existing elements. Returns reflect back tested data for the entire time provided. Back tested results are for information purposes only. They are intended to illustrate how the Strategy may have behaved had it been launched. Warning: Past performance is not an indicator or a guarantee of future performance. The value of your investment and income received from it can go down as well as up and you may not get back the full amount invested. Performance details provided are in reference index specific local currency

## TOBAM LBRTY TRACKING ERROR DECOMPOSITION

EM

The majority of the TE vs. parent index and about 25% of the TE vs. Whitelisted Benchmark is due to the reduction of exposure to authoritarian countries

Emerging markets Nov 2009 - Mar 2023	Tracking error attribution vs. <b><u>Parent Index</u></b>		Tracking error attribution vs. <b><u>Whitelisted Benchmark</u></b>	
<b><i>Risk factor</i></b>	<b>TCR</b>	<b>PCR</b>	<b>TCR</b>	<b>PCR</b>
Market	1.6%	17.9%	0.7%	11.7%
Authoritarian countries	0.7%	<b>7.8%</b>	0.0%	<b>0.0%</b>
Indirect exposure	4.2%	<b>47.9%</b>	1.5%	<b>23.3%</b>
Sector	0.8%	8.9%	1.1%	17.5%
Residuals	1.5%	17.5%	3.0%	47.5%
<i>Total</i>	8.8%	100.0%	6.3%	100.0%

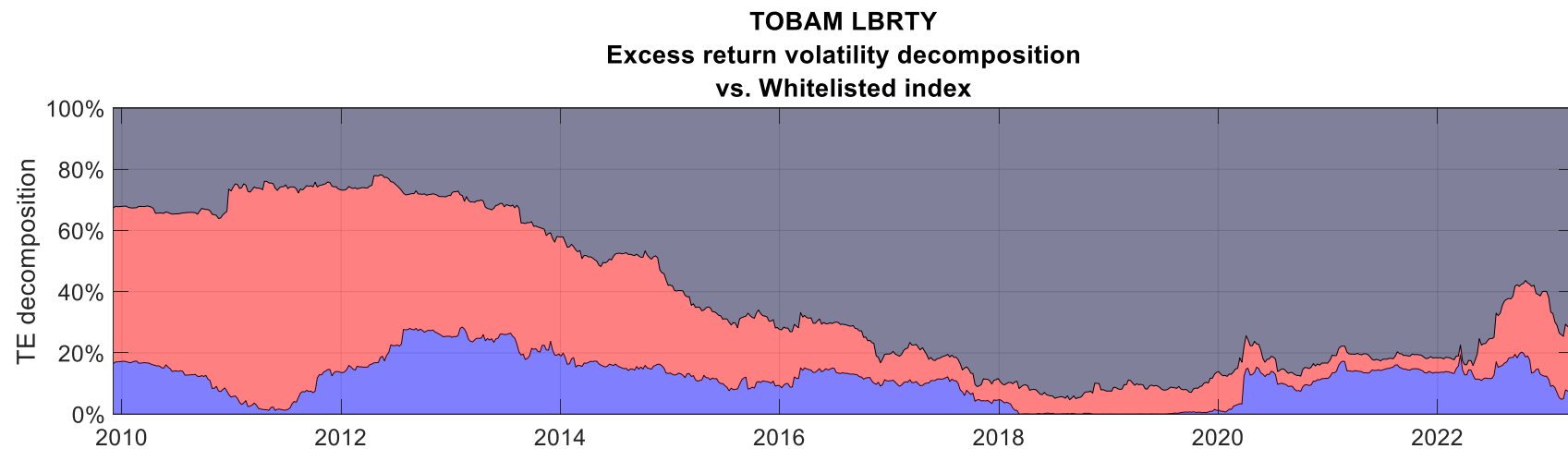
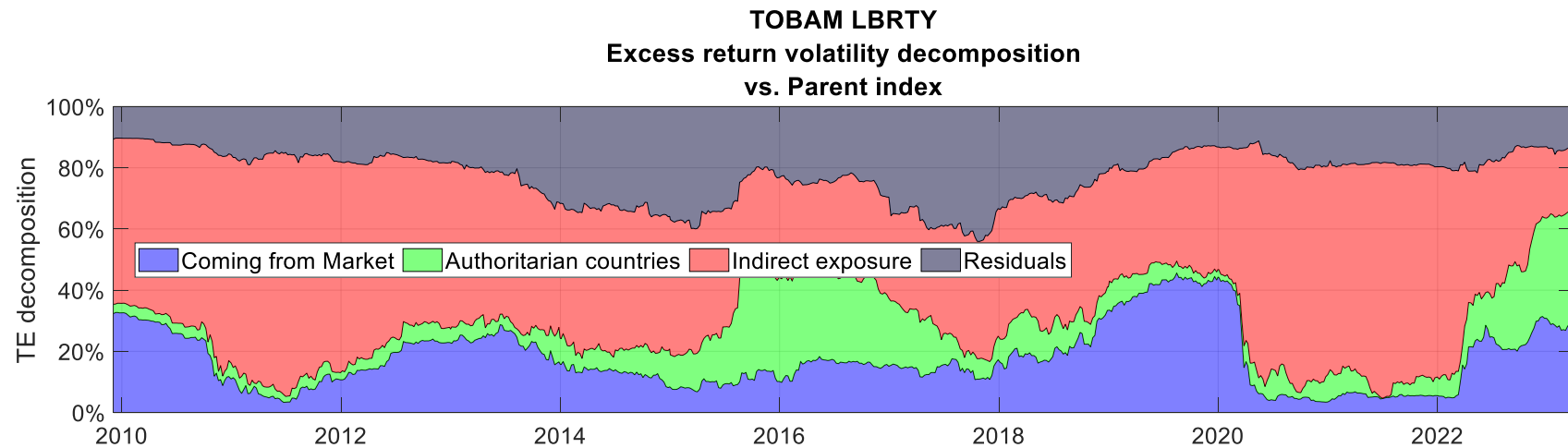
TCR = Total contribution to tracking error

Source: TOBAM

PCR = Percentage contributions to tracking error

# TOBAM LBRTY TRACKING ERROR DECOMPOSITION

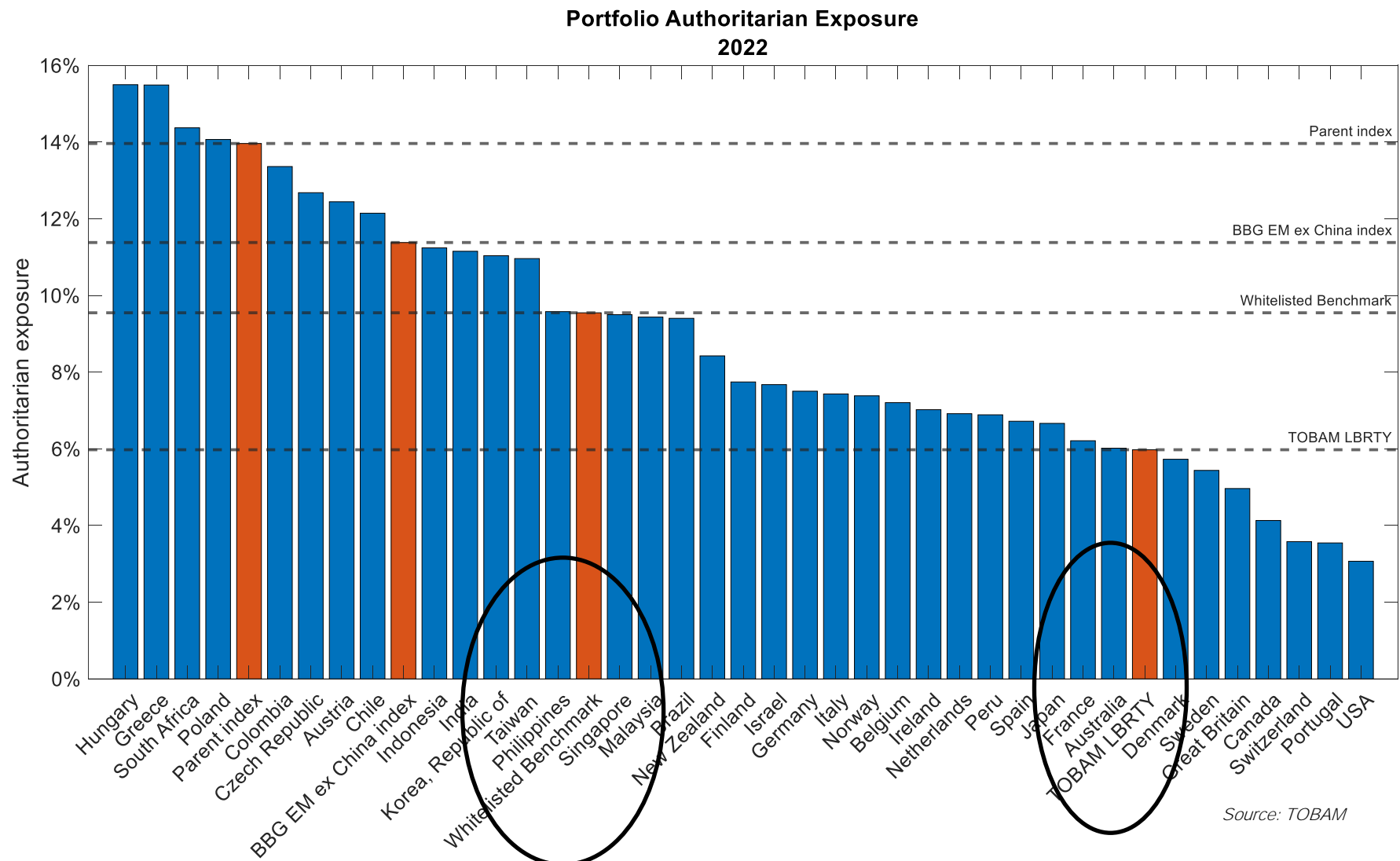
EM



Source: TOBAM

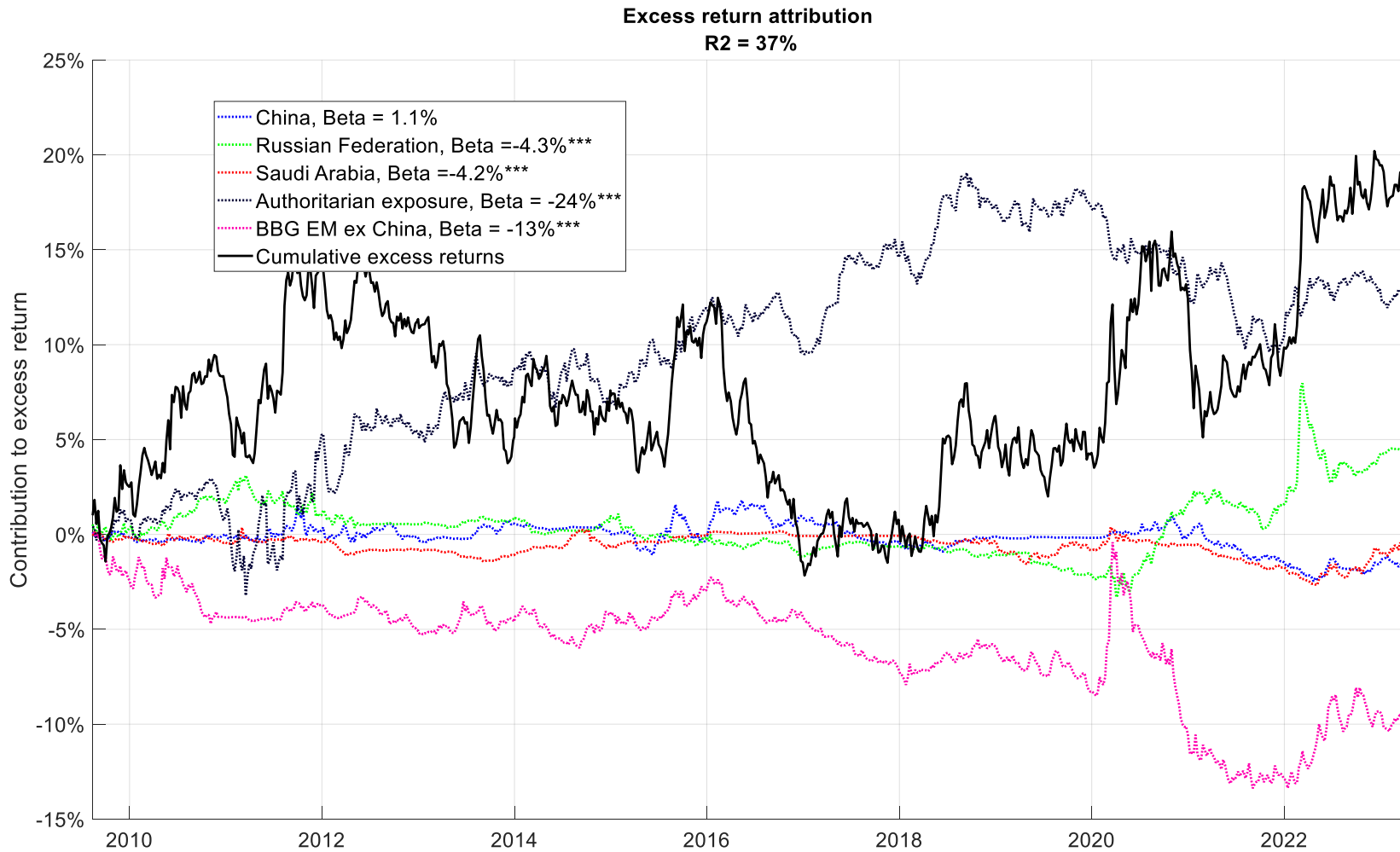
## ELIGIBLE COUNTRY BENCHMARKS AUTHORITARIAN EXPOSURE AVERAGE 2022

TOBAM EM LBRTY portfolio has an authoritarian exposure in 2022 comparable to the Denmark Market Cap Weighted Benchmark.



# EXCESS RETURN VS BBG EM EX CHINA

## PERFORMANCE ATTRIBUTION BY COUNTRY - EM



The period covered is from September 2009 to March 2023. Source Bloomberg and TOBAM. Returns reflect back tested data for the entire time provided. Back tested results are for information purposes only. They are intended to illustrate how the Strategy may have behaved had it been launched. Warning: Past performance is not an indicator or a guarantee of future performance. The value of your investment and income received from it can go down as well as up and you may not get back the full amount invested. Performance details provided are in reference index specific local currency



# EXCESS RETURN VS PARENT INDEX

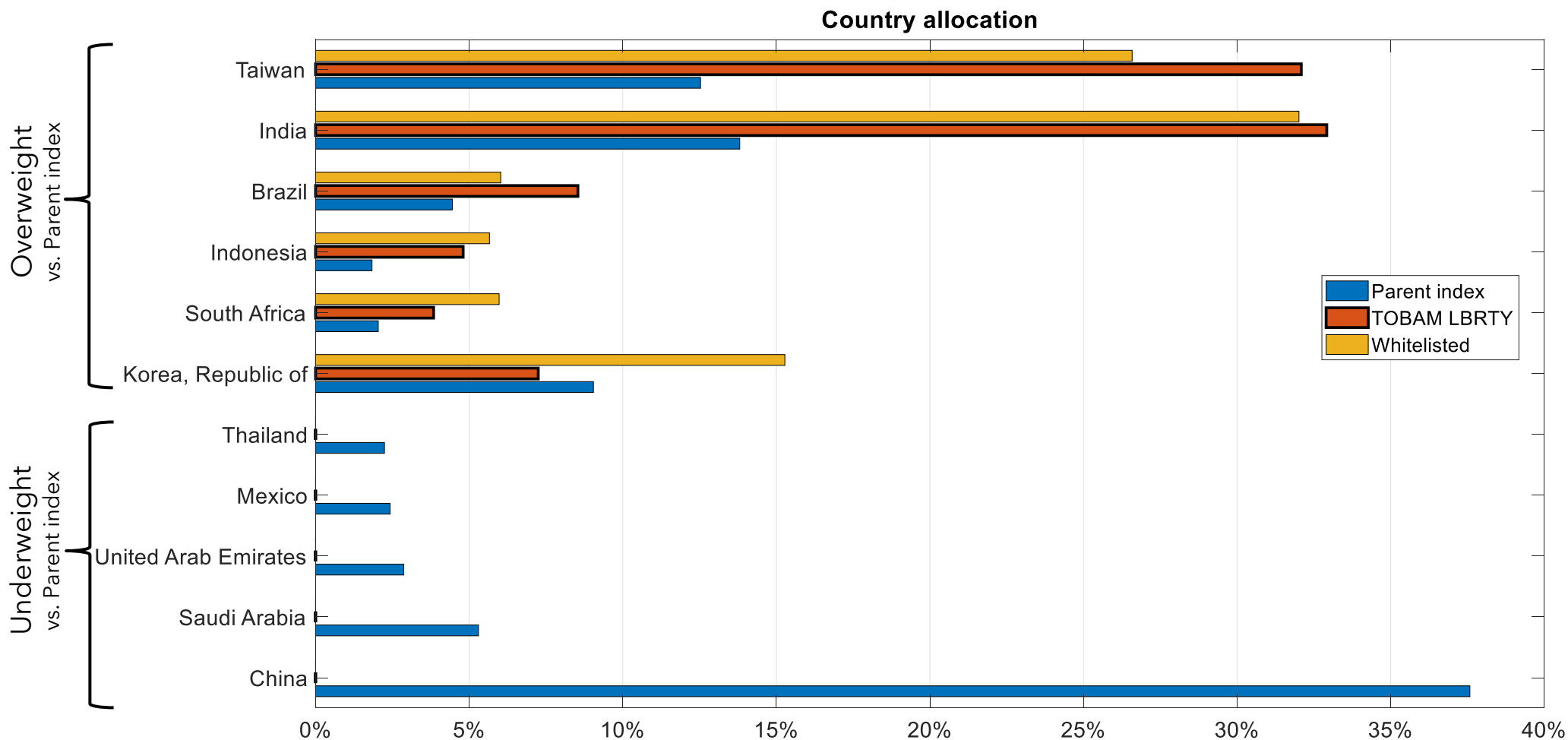
## PERFORMANCE ATTRIBUTION BY COUNTRY - EM



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## EM PORTFOLIOS COUNTRY WEIGHTS

### AVERAGE 2023

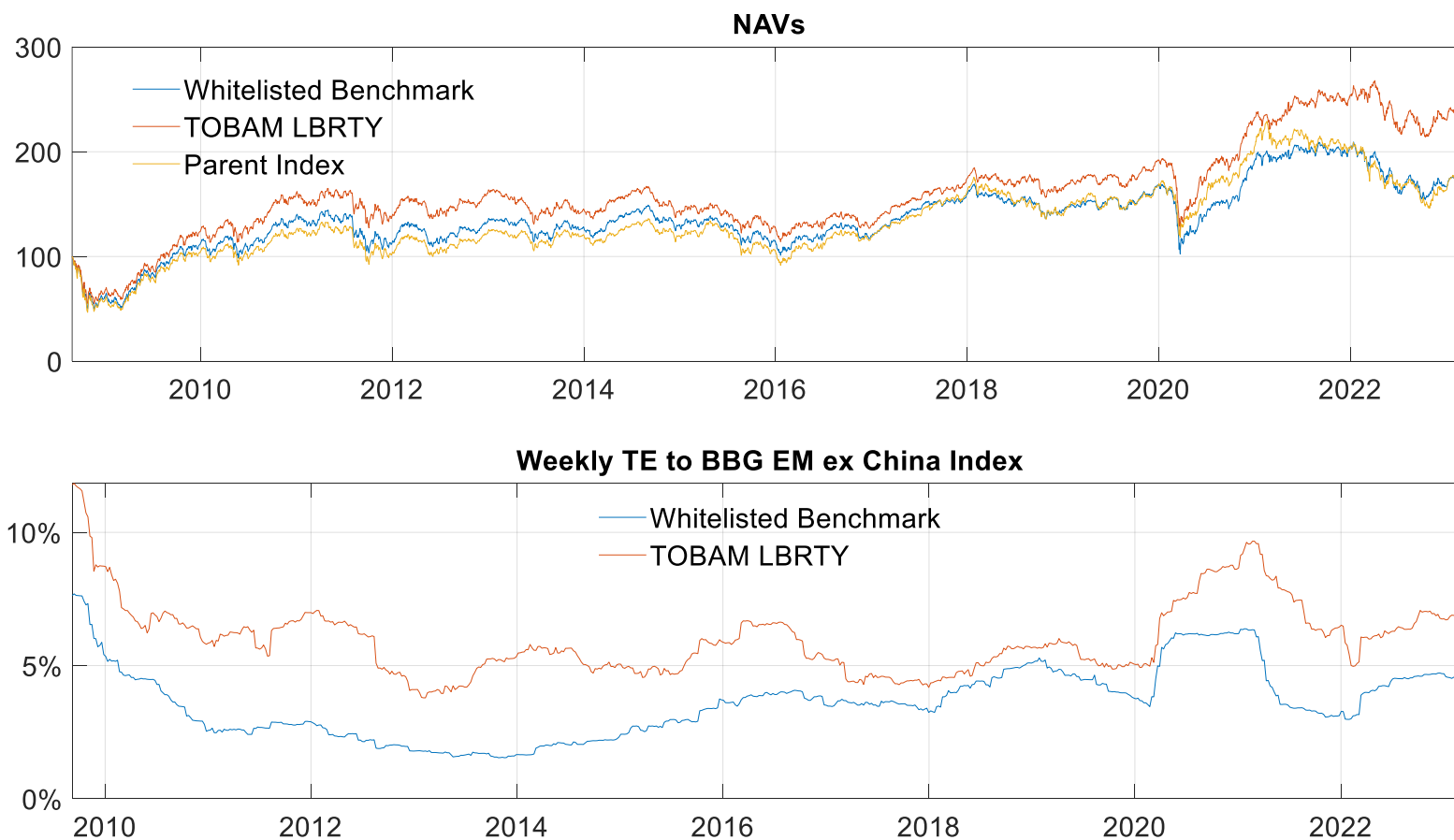


Source: TOBAM, Bloomberg

Excluding Hong-Kong, China, other autocracies, taking authoritarian exposures into account, leads TOBAM LBRTY portfolio to overweight Taiwan, India and Brazil

# NAVS AND TRACKING ERRORS

EM



Source: TOBAM

1 • Introduction to TOBAM and **Anti-Benchmark**

2 • Investment Philosophy - The case for **C**ivil and **D**emocratic Rights

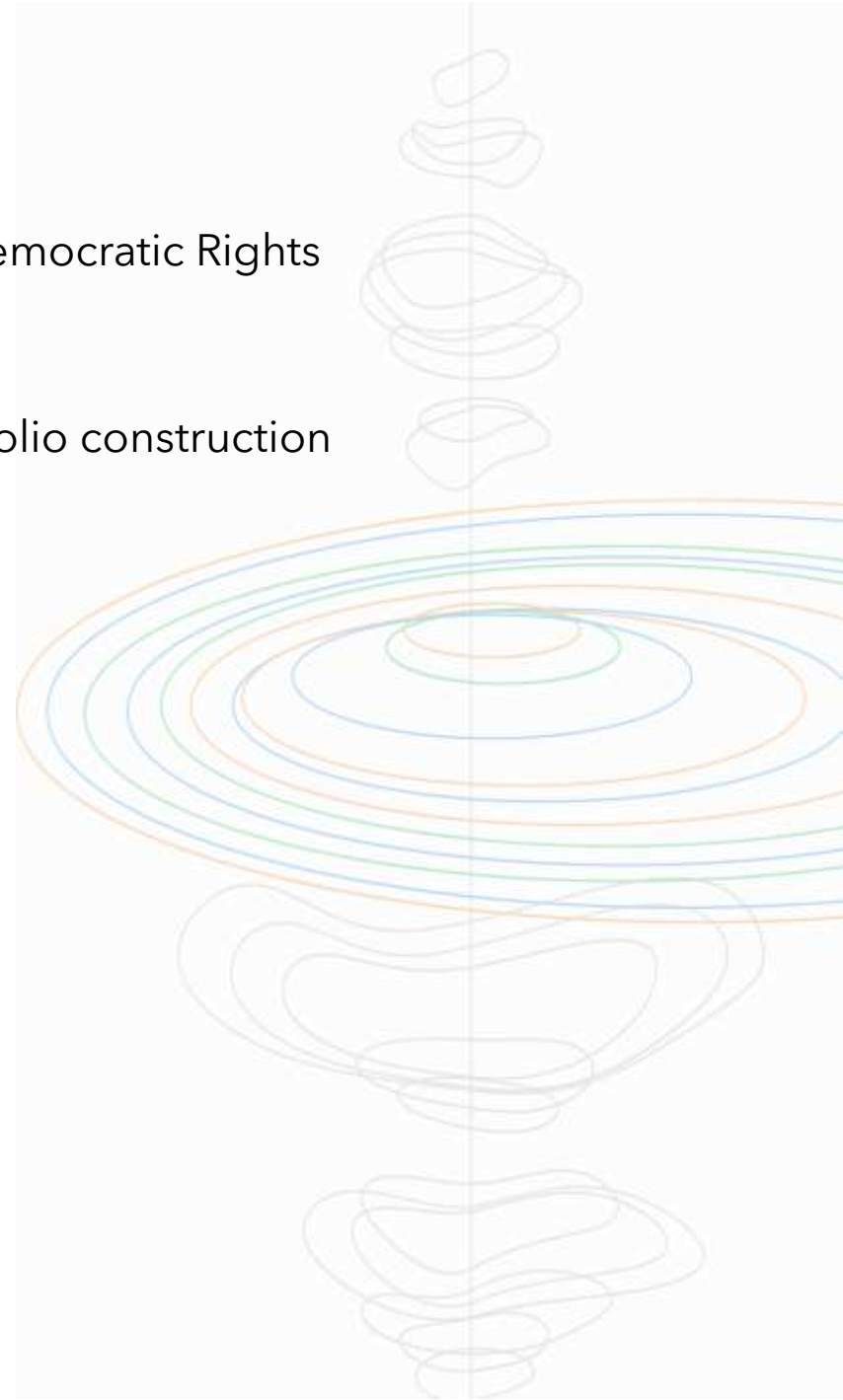
3 • Measuring Civil and Democratic Rights and portfolio construction

4 • Empirical results

5 • **Seeding Proposal & Products**

6 • Conclusion

7 • Appendix

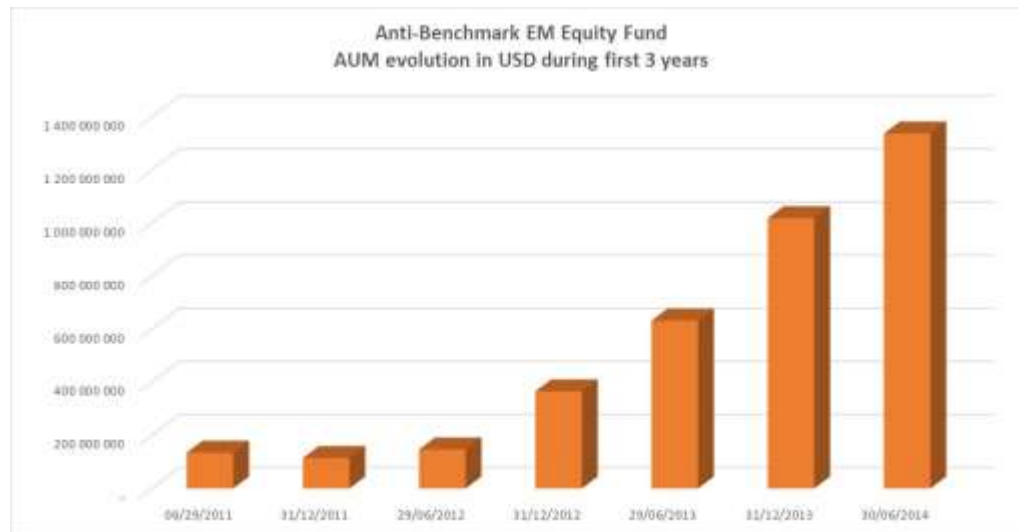


## TOBAM TRACK-RECORD IN SEEDING (EXAMPLE 1/2)

### ANTI-BENCHMARK EM EQUITY

#### Seeding rationale: long-term strategic investment in a strategy in order to outperform the benchmark

- Initial seeding of \$135m by leading Nordic pension Structure in June 2011
- Structure AUM > \$1.3Bn in 3 years
- Strong relative performance and risk-adjusted performance vs. Benchmark
- Seeder still invested in the strategy 10-year after launch



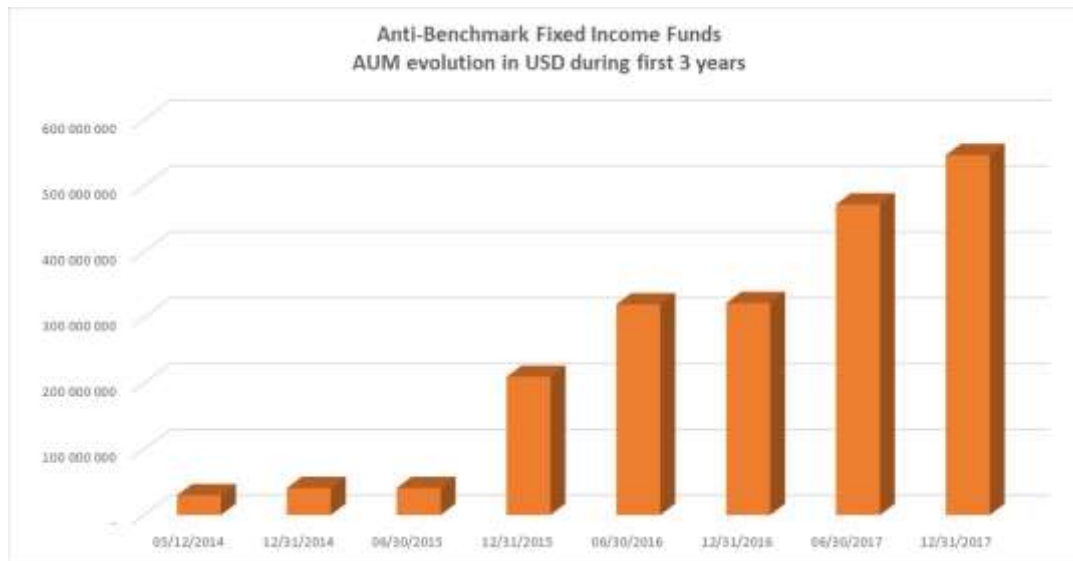
Sources: TOBAM, Bloomberg.  
Returns reflect live data from 29/06/2011 to 30/06/2016.

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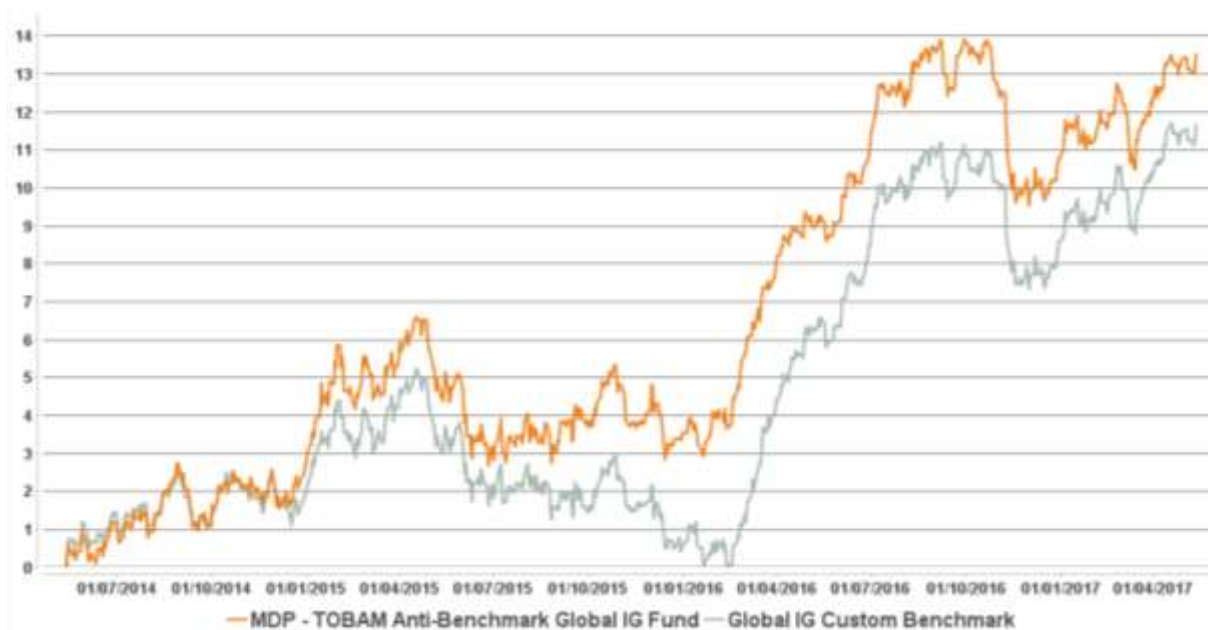
## TOBAM TRACK-RECORD IN SEEDING (EXAMPLE 2/2)

### ANTI-BENCHMARK FIXED INCOME



Sources: TOBAM, Bloomberg.  
Returns reflect live data from 16/05/2014 to 12/05/2017.

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MDP - TOBAM Anti-Benchmark Global IG Fund	
Return:	12.53%
Annualized return:	4.32%
Max vol:	3.59%
Sharpe ratio:	1.10
Sortino ratio:	1.83
Downside volatility:	2.15%
Global IG Custom Benchmark	
Return:	11.67%
Annualized return:	3.75%
Max vol:	3.48%
Sharpe ratio:	0.97
Sortino ratio:	1.57
Downside volatility:	2.14%
Excess return:	1.85%
Vol reduction:	3.02%
Excess annual return:	0.57%
Tracking error:	1.64%
Info ratio:	0.35
Beta:	0.92
Correlation:	89.31%
Jensen's alpha:	2.70%
Treynor ratio:	0.84

### Seeding rationale: short-term allocation to facilitate the launch of TOBAM's first steps in fixed income

- Initial seeding of \$30m by the largest European asset manager, also shareholder of TOBAM
- Structures AUM > \$500m in 3.5 years
- Seeder exited after 18 months with 35% absolute performance in EUR terms.
- Strategy delivered a solid absolute and relative track-record vs. Benchmark

## SEEDING PROPOSAL OBJECTIVE AND CHARACTERISTICS

### **Objective:**

**Accelerate the development of TOBAM's strategies via the seeding of open-ended structures.**

### **Benefits for the seeder:**

- Early exposure to innovative strategies at a discounted cost (50%)
- Participation in the Structure's revenues

### **Economics:**

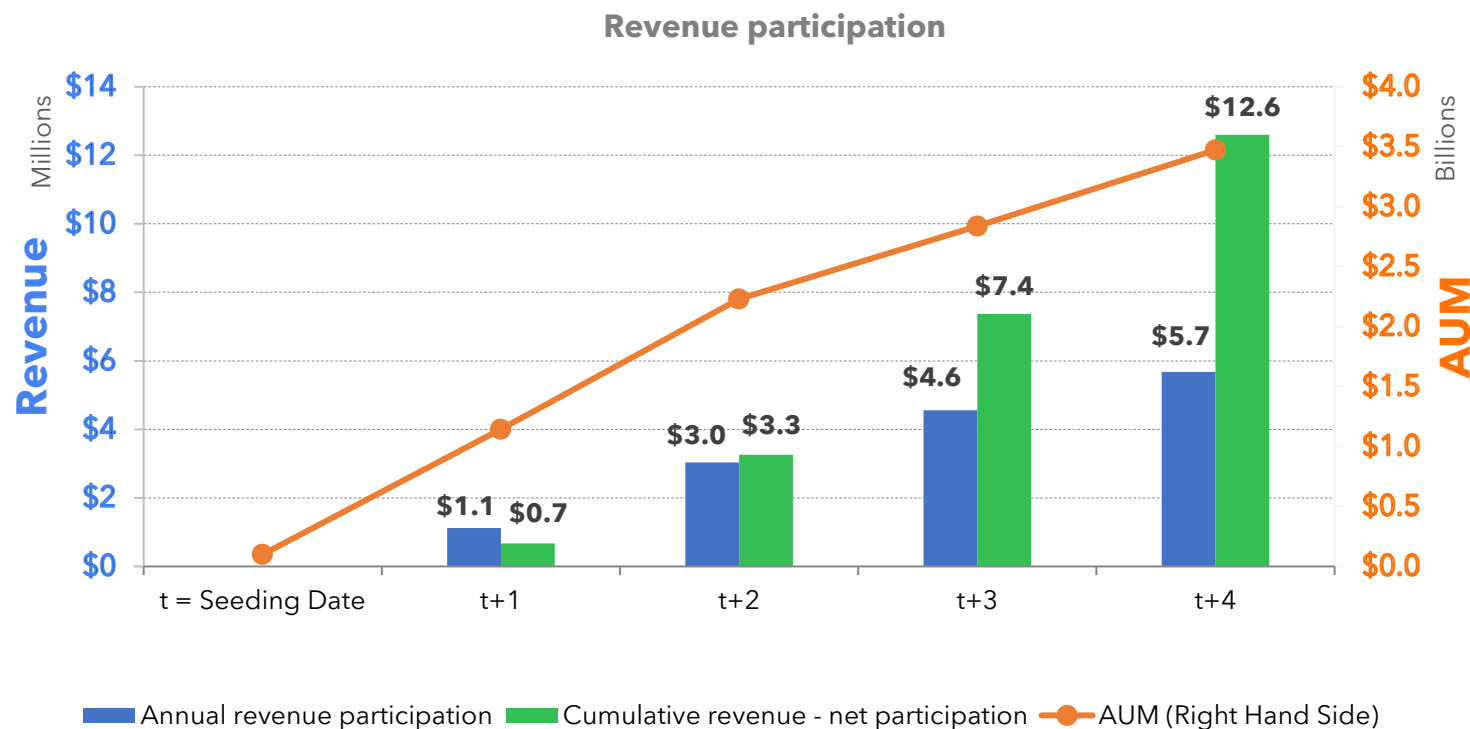
- Seed target: \$100m/Structure
- Revenue participation: 20% of the Structure's total net fees over 3 years
- Seeder participation rate = (seeding amount in USD m) / 100 x 20%
- Conditions to the revenue sharing:
  - Subscription within the first \$100m
  - No redemption in the first 24 months

### **Indicative fees for non seeders:**

0.50%

## SEEDING PROPOSAL SIMULATION OF "ALPHA" GENERATED

Date	Annualised "Alpha" Generated from Seeding
<i>t = Seeding Date</i>	
<b>t+1</b>	<b>0.7%</b>
<b>t+2</b>	<b>1.6%</b>
<b>t+3</b>	<b>2.4%</b>
<b>t+4</b>	<b>3.0%</b>



Inflow hypothesis: Initial seeding of \$100m. \$1bn annual inflows for the first 2 years / \$500m annual inflows for the 2 following years.



## PRODUCTS

On 03 July 2023, the TOBAM LBRTY **indices** were launched:

- All World (Bloomberg ticker: LBRTY)
- All World ex USA (Bloomberg ticker: LBRTYXU)
- Emerging Markets (Bloomberg ticker: LBRTM)

On 22 August 2023, the TOBAM LBRTY **funds** were approved by CSSF:

- All World (Ticker: MDPALWA LX Equity)
- All World ex USA (Ticker: MDTALCA LX Equity)
- Emerging Markets (Ticker: MTABEMA LX Equity)

The tracking error constraint defined vs. whitelisted index is set at:

- 10% of the parent index volatility for the **index** TOBAM LBRTY All World and All World ex USA
- 20% of the parent index volatility for the **fund** TOBAM LBRTY All World and All World ex USA
- 30% of the parent index volatility for the TOBAM LBRTY EM

The capacity\* of the TOBAM LBRTY as of 28 February 2023 is at:

- 17.2%/17.3% for the TOBAM LBRTY All World index/fund respectively
- 16.1%/15.6% for the TOBAM LBRTY All World ex USA index/fund respectively
- 7.3% for the TOBAM LBRTY EM

\*Following the 40-act SEC guidance, the capacity of a portfolio is defined as the maximum size such that a proportion 85% of it can be purchased - or sold - in less than 5 days, at a maximum 20% participation rate. The capacity is expressed as a percentage of the Parent index capacity

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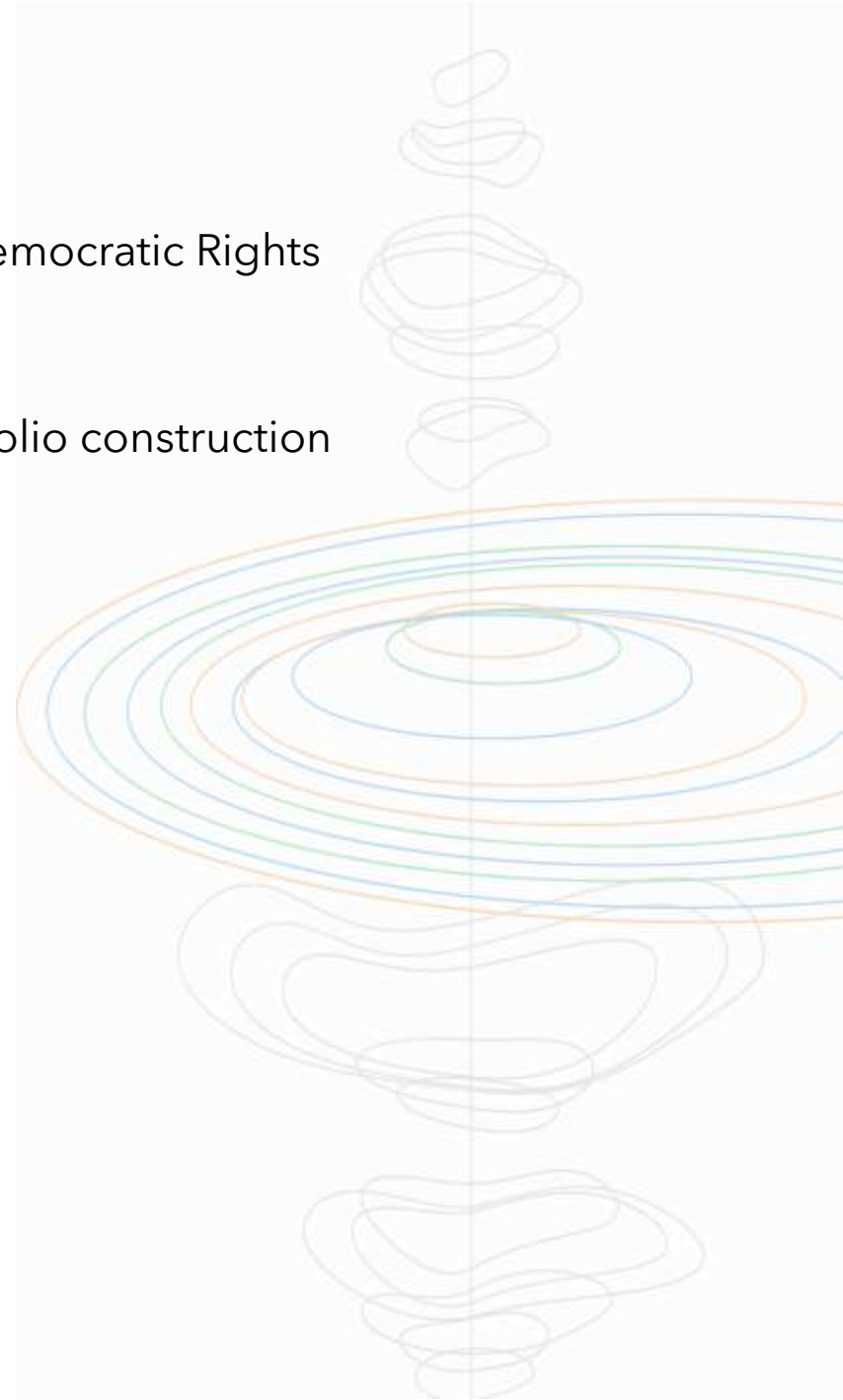
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7 • Appendix



## CONCLUSION

- Since its inception, TOBAM's ONLY focus is the long-term risk reward of its clients
- We believe that, apart from diversification, each of Democracy, Respect of Human Rights and civil rights in general are the Keys to innovations and economic growth
- Therefore, since its beginnings TOBAM had sustainable development and human rights at the core of its values. Our clients take a long-term approach to investing and our sustainable approach responds to investors' need to manage their investment with the same long-term view
- TOBAM LBRTY

Tracking error managed portfolio with exposure to Civil and Democratic Rights handled at the

- country level, via exclusion of authoritarian & hybrid regimes
- stock level, via minimization of exposures to authoritarian regimes

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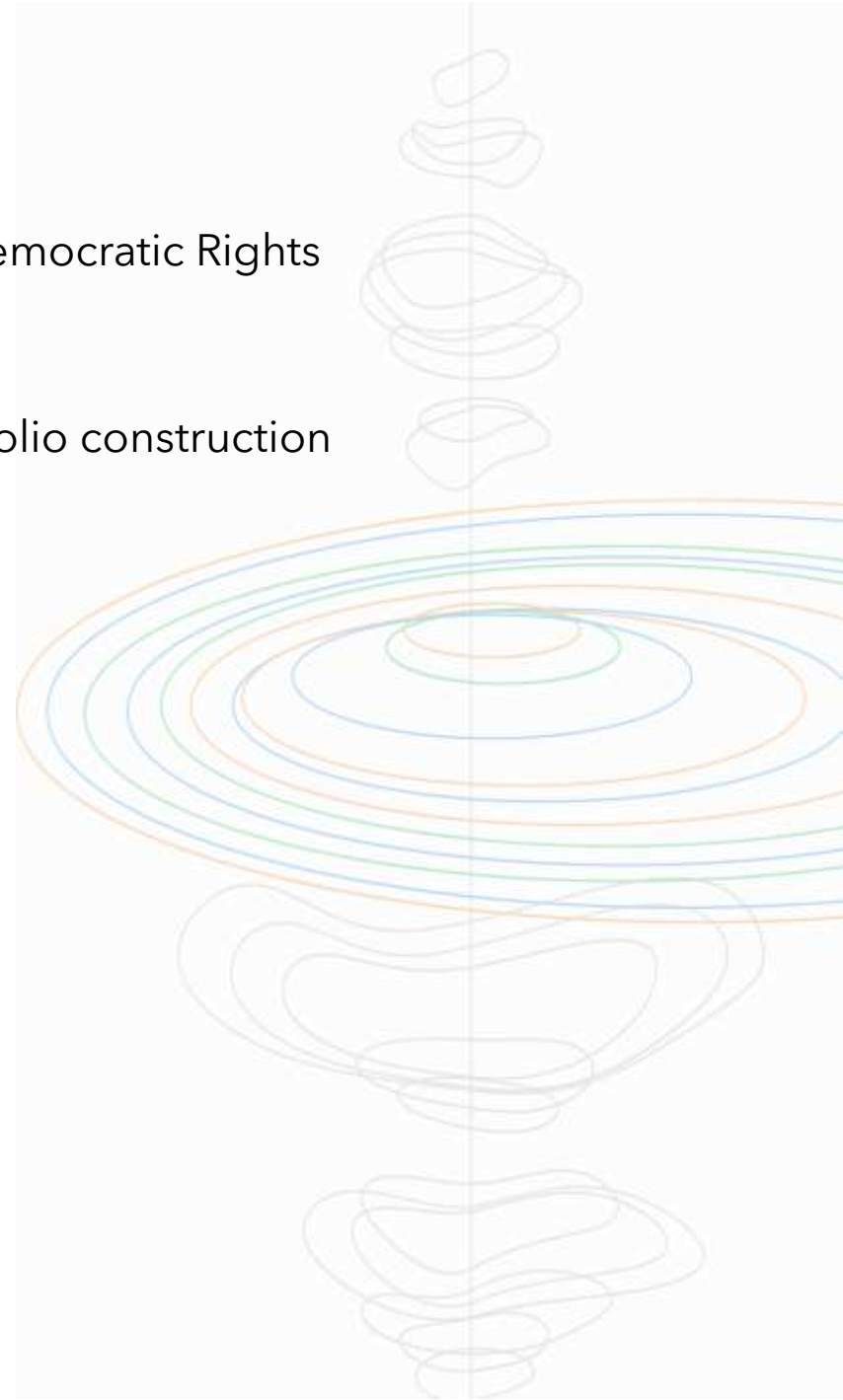
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# TOBAM LBRTY EMERGING MARKETS EQUITY INDEX PERFORMANCE

Sources: TOBAM, Bloomberg. Indexes are unmanaged and do not incur management fees, costs and expenses. One cannot invest directly in an index.

Warning: Past performance is not an indicator or a guarantee of future performance. The value of your investment and income received from it can go down as well as up and you may not get back the full amount invested.

Performance details provided are in USD and include reinvested dividends. Returns reflect back tested data from Aug 29, 2008 to Jul 03, 2023, plus live data for the TOBAM LBRTY Emerging Markets Equity Index (AB) from Jul 03, 2023 to date. Back tested results are for information purposes only.

They are intended to illustrate how the Strategy may have behaved had it been launched prior to Jul 03, 2023. The back tests are gross of tax and exclude costs of transaction and fee assumptions.

## Monthly Returns(%)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	
													Index	Bench
2023	2.82	-2.68	2.66	2.12	2.27	3.20	5.58	-4.49					11.65	3.86
2022	-0.87	1.04	4.54	-7.20	0.70	-11.06	4.18	1.23	-6.81	0.52	9.11	-3.32	-9.32	-20.54
2021	-3.41	-1.46	4.15	3.11	4.72	-0.70	-0.20	4.40	-2.27	-1.61	0.07	2.58	9.31	0.21
2020	-3.04	-6.11	-20.99	12.34	4.52	6.97	9.76	0.96	-2.90	2.83	12.05	8.46	21.47	22.03
2019	4.16	-0.66	2.74	0.78	-3.57	3.61	-1.32	-3.31	4.28	3.73	-0.91	5.35	15.34	18.81
2018	4.93	-3.52	-1.26	1.24	-4.02	0.32	3.92	0.12	-1.59	-8.22	4.51	-0.15	-4.45	-12.01
2017	5.10	4.33	3.96	0.93	2.51	0.83	4.38	1.65	-2.05	2.59	0.55	5.03	33.90	35.95
2016	-4.27	-0.10	8.06	0.13	-0.99	0.85	4.44	-0.25	0.87	-0.54	-5.49	-0.75	1.30	11.61
2015	0.47	2.24	-3.07	3.80	-1.80	-2.16	-5.03	-3.86	-0.48	4.69	-4.29	-1.62	-11.06	-11.75
2014	-4.91	4.37	4.47	1.83	1.18	3.75	0.45	2.69	-7.34	-1.06	-0.68	-4.82	-0.93	-0.94
2013	0.81	-2.38	-0.70	-1.55	-4.86	-5.59	1.81	-1.35	4.19	5.03	-4.91	0.20	-9.50	-1.20
2012	9.48	4.69	-2.16	-1.01	-9.24	3.81	0.52	0.23	5.32	-1.07	0.91	5.53	16.94	20.36
2011	-5.88	0.68	4.29	4.20	-0.82	-1.66	-0.31	-3.26	-14.29	11.02	-5.15	-1.92	-14.26	-18.97
2010	-5.34	2.55	8.00	1.00	-7.52	0.52	9.21	-0.14	10.70	3.91	-2.59	7.22	28.95	19.91
2009	-3.13	-3.83	12.05	11.76	17.00	-0.94	9.93	3.11	9.30	0.33	7.12	4.08	87.36	82.60

## Statistics

	TOBAM LBRTY Emerging Markets Equity Index	BBG Emg Mkt L/M TR
Return (Aug '08 - Aug '23)	157.38 %	69.25 %
Annualized return	6.50 %	3.57 %
Volatility	18.49 %	20.07 %
Sharpe ratio	0.31	0.14
Tracking error	8.82 %	
Downside deviation	11.88 %	12.84 %
Sortino ratio	0.48	0.21
Information ratio	0.33	
Correlation to index	0.90	
Beta to index	0.83	

# TOBAM LBRTY ALL WORLD EQUITY INDEX PERFORMANCE

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Back tested results are for information purposes only. They are intended to illustrate how the Strategy may have behaved had it been launched prior to Jul 03, 2023. The back tests are gross of tax and exclude costs of transaction and fee assumptions.

## Monthly Returns(%)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	
													Index	Bench
2023	6.43	-3.09	3.47	2.56	-0.11	5.42	3.99	-2.41					16.97	14.79
2022	-4.83	-2.49	2.12	-7.90	0.55	-7.95	7.57	-4.37	-8.82	7.75	8.02	-3.80	-15.16	-18.24
2021	-1.69	2.29	3.88	5.49	1.75	1.52	3.13	2.85	-4.37	6.06	-1.48	4.53	26.12	18.50
2020	-0.19	-8.41	-13.17	10.74	4.93	3.10	4.83	6.34	-4.06	-2.91	11.56	3.81	14.36	17.10
2019	8.10	3.49	1.71	3.53	-5.24	6.57	0.81	-2.09	2.41	2.12	3.32	3.34	31.14	27.10
2018	4.18	-4.11	-0.94	0.54	0.41	-0.07	3.23	1.87	0.08	-7.39	1.80	-8.18	-9.05	-8.76
2017	1.84	3.16	0.94	1.66	2.83	0.13	2.58	-0.51	1.63	1.85	2.70	1.22	21.90	24.54
2016	-5.47	-0.28	7.11	0.90	0.94	-1.33	4.11	-0.04	0.58	-1.95	1.79	2.77	8.93	8.54
2015	-2.07	6.06	-1.27	1.67	0.39	-2.12	2.20	-6.31	-2.96	8.11	-0.08	-2.53	0.24	-1.67
2014	-3.09	4.77	0.32	1.41	1.66	2.16	-1.68	2.77	-2.56	0.90	1.86	-1.38	7.05	4.89
2013	5.32	0.31	2.41	2.58	0.10	-2.21	5.21	-2.66	4.39	4.33	1.52	2.34	25.89	23.16
2012	4.92	4.10	0.79	-1.24	-8.32	4.09	1.03	3.07	2.74	-0.65	1.53	1.87	14.05	17.16
2011	2.22	3.49	-0.48	3.60	-1.92	-1.06	-2.71	-5.93	-8.18	9.98	-2.26	-0.09	-4.47	-7.21
2010	-4.16	2.93	6.49	0.74	-8.56	-3.47	8.19	-2.79	8.62	3.92	-1.70	6.92	16.55	13.30
2009	-8.23	-9.94	6.21	11.17	9.62	-0.63	8.84	4.05	4.36	-1.56	5.35	2.27	33.26	36.15

## Statistics

	TOBAM LBRTY All World Equity Index	BBG World Lrg/Mid Cap TR
Return (Aug '08 - Aug '23)	253.25 %	194.28 %
Annualized return	8.77 %	7.46 %
Volatility	18.89 %	17.81 %
Sharpe ratio	0.42	0.37
Tracking error	3.61 %	
Downside deviation	12.32 %	11.70 %
Sortino ratio	0.65	0.57
Information ratio	0.36	
Correlation to index	0.98	
Beta to index	1.04	



# TOBAM LBRTY ALL WORLD EX USA EQUITY INDEX PERFORMANCE

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## Monthly Returns(%)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	
													Index	Bench
2023	8.52	-2.02	2.13	3.17	-2.54	4.57	4.07	-4.60					13.37	8.63
2022	-4.47	-2.15	0.65	-6.72	0.85	-10.05	5.71	-5.16	-8.21	4.19	10.63	-0.59	-16.06	-15.97
2021	-1.55	2.11	2.84	4.18	3.93	-0.71	1.34	1.49	-3.70	3.34	-3.19	5.50	16.17	8.45
2020	-2.23	-8.62	-15.31	6.68	4.28	4.21	4.23	4.75	-2.66	-2.48	13.87	4.84	8.52	12.45
2019	6.80	3.01	0.81	3.05	-4.04	5.29	-1.48	-2.59	3.31	3.35	1.58	3.65	24.59	21.95
2018	4.15	-4.90	-0.93	2.00	-1.89	-1.13	2.61	-1.82	-0.04	-8.00	0.55	-5.06	-14.14	-13.20
2017	2.60	0.94	2.37	2.29	4.09	0.08	3.29	-0.67	1.89	0.88	1.41	2.29	23.58	27.51
2016	-6.50	-0.23	6.96	3.00	-0.57	-3.18	4.63	0.04	1.37	-1.74	-1.55	3.33	4.93	5.12
2015	-0.21	5.82	-1.68	3.81	-1.16	-2.14	1.10	-6.87	-3.60	7.28	-1.48	-2.30	-2.29	-4.71
2014	-3.78	5.10	-0.27	1.91	1.57	1.63	-1.33	0.74	-4.05	-1.54	1.38	-3.38	-2.42	-3.03
2013	4.24	-1.29	0.86	3.91	-1.68	-3.74	5.60	-1.61	6.54	3.85	0.23	2.25	20.26	15.54
2012	5.35	5.17	-0.91	-1.64	-11.04	5.61	0.71	3.63	3.66	0.44	2.16	3.31	16.35	18.11
2011	2.17	3.53	-1.39	4.53	-2.40	-0.97	-1.79	-6.89	-9.89	9.41	-4.82	-0.87	-10.36	-13.63
2010	-4.77	0.47	6.98	-0.97	-10.85	-1.94	10.29	-2.77	9.30	3.79	-5.06	7.98	10.48	12.05
2009	-8.50	-9.13	5.59	13.22	13.42	-1.63	9.60	5.46	5.03	-2.06	4.32	2.02	40.35	44.07

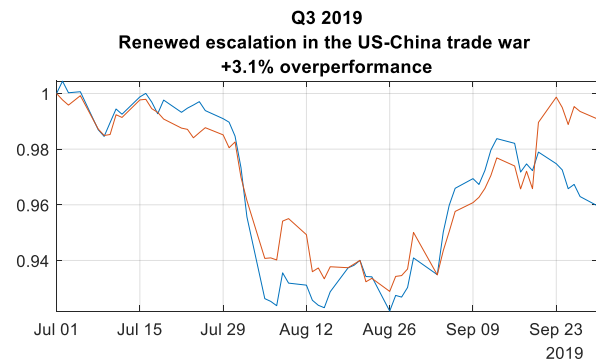
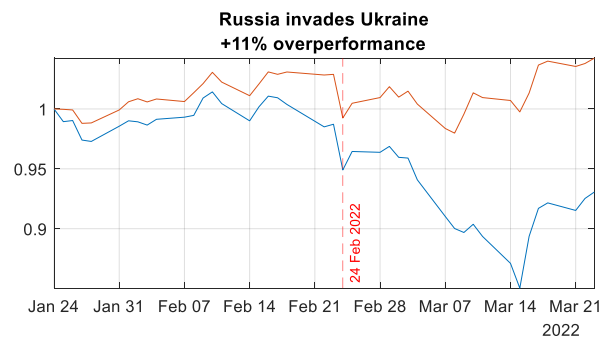
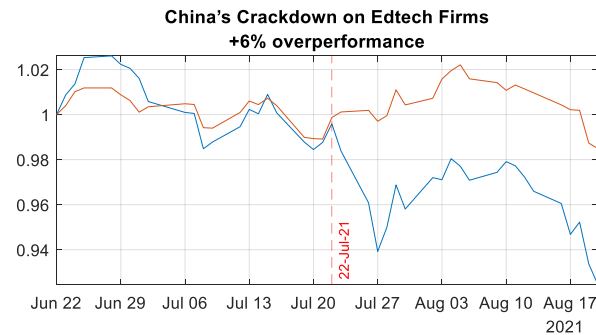
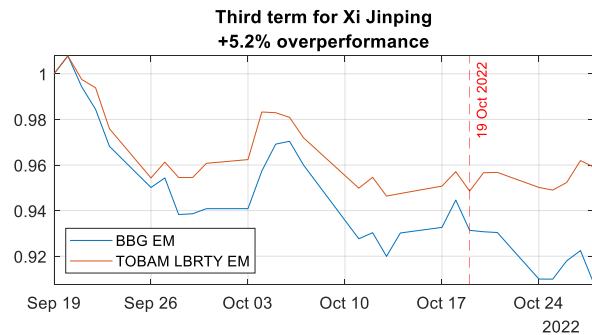
## Statistics

	TOBAM LBRTY All World ex USA Equity Index		BBG World Ex-US L/M TR
Return (Aug '08 - Aug '23)	109.97 %		81.30 %
Annualized return	5.07 %		4.04 %
Volatility	19.02 %		18.41 %
Sharpe ratio	0.22		0.18
Tracking error	4.34 %		
Downside deviation	12.19 %		11.91 %
Sortino ratio	0.35		0.27
Information ratio	0.24		
Correlation to index	0.97		
Beta to index	1.01		

## EM PERFORMANCE CASE STUDY: PORTFOLIO PERFORMANCE VS PARENT INDEX DURING GEOPOLITICAL EARTHQUAKES

- LBRTY is less exposed to autocratic regimes geopolitical crises .
- Relative performance of TOBAM LBRTY EM vs parent index around 4 material events involving the two biggest autocratic countries over the last few years:

Major events



Sources: TOBAM,  
Bloomberg

**Despite a beta ~ 1, LBRTY portfolio delivered a relative outperformance of ~ 6% around the event.**



## EM PERFORMANCE CASE STUDY: HOW INCORPORATING CD IMPACTED PORTFOLIO PERFORMANCE

We look at the ten best months of TOBAM LBRTY EM's excess return versus BBG EM over the last 5 years:

8 of these 10 months have seen a geopolitical event or an increase in geopolitical risk.

Dates	BBG EM	TOBAM LBRTY	TOBAM LBRTY excess return	Events	Geopolitical event
Jun-18	-3.8%	0.3%	4.2%	China-US trade tensions ratcheted up	x
May-19	-6.6%	-3.6%	3.0%	The US raised tariffs on US\$200 billion worth of Chinese imports to 25%, from 10%	x
Mar-21	-2.2%	4.2%	6.4%	China underperformed	
Jul-21	-6.1%	-0.2%	5.9%	Crackdown by Chinese authorities on education technology companies	x
Nov-21	-3.1%	0.1%	3.2%	fears over the new "Omicron" variant of Covid-19 weighing on sentiment	x
Mar-22	-3.4%	4.5%	8.0%	Russia invades Ukraine	x
Jul-22	-0.2%	4.2%	4.4%	China was the worst index performer (bad economic release)	x
Sep-22	-10.6%	-6.8%	3.8%	China underperformed	
Oct-22	-3.4%	0.5%	3.9%	The election of Xi Jinping for his third term	x
Feb-23	-5.9%	-2.7%	3.2%	A re-escalation in US-China tensions weighed on sentiment	x

**TOBAM's strategy has mitigated the risk of drawdown vs the benchmark.**

## TOBAM'S COMMITMENT TO HUMAN RIGHTS

### Achievements

**Since starting this initiative over 10 years ago, TOBAM has donated over 2 million EUR to NGOs and about 3.5 million EUR to sustainability and non-profits' expenses.**



First project funded was with Amnesty International.



TOBAM has sponsored "Human Rights Watch" since 2014 and is one of the largest corporate donator in France. TOBAM's initiative with Human Rights Watch has helped finance a mission in Ukraine, covering a wide range of issues: use of explosive weapons, landmines, monitoring of the humanitarian situation, illegal detentions and torture, freedom of speech, disappearances in Crimea.



Also, TOBAM believes in the freedom of expression & information as a fundamental right and takes pride in associating itself with Reporters without Borders (RSF). Based in Paris, Reporters Without Borders (RSF) is a leading international non-profit and non-governmental organization that safeguards the right to freedom of information. To fight the issues of impunity related to press reporters, RSF set up a Justice for Journalists Task Force through which it will implement a strategic litigation strategy. TOBAM supported the launch of the project in 2020 with initial funding round.

This solidarity-based mechanism - that directly connects investment and philanthropy - was rewarded in 2014 by Axylia, which awarded the "Profit for Non-Profit Special Award" to TOBAM's Anti-Benchmark Emerging Markets Equity Fund.



## NOT ELIGIBLE COUNTRIES 2022

Blacklisted Countries	TOBAM Civil Liberty and Democracy Index
Saudi Arabia	3.11
China	3.45
Bahrain	3.51
Egypt	3.88
Qatar	3.89
United Arab Emirates	4.04
Turkey	4.62
Kuwait	4.74
Pakistan	4.80

Source: TOBAM

In 2022, 9 Countries would not be eligible in our investible universe for a total of 51 covered countries.

# COUNTRIES UNDER THE GOVERNANCE COMMITTEE WATCHLIST 2022

<b>Whitelisted Countries but subject to governance committee</b>	<b>TOBAM Civil Liberty and Democracy Index</b>
Hungary	6.46
Brazil	6.43
India	6.33
Indonesia	6.15
Peru	6.13
Colombia	6.09
Philippines	6.07

In 2022, 10 countries would have been studied by our governance committee:

- 3 would have been a priori blacklisted\*
- 9 a priori eligible for our investment universe but under the approval of the governance committee.

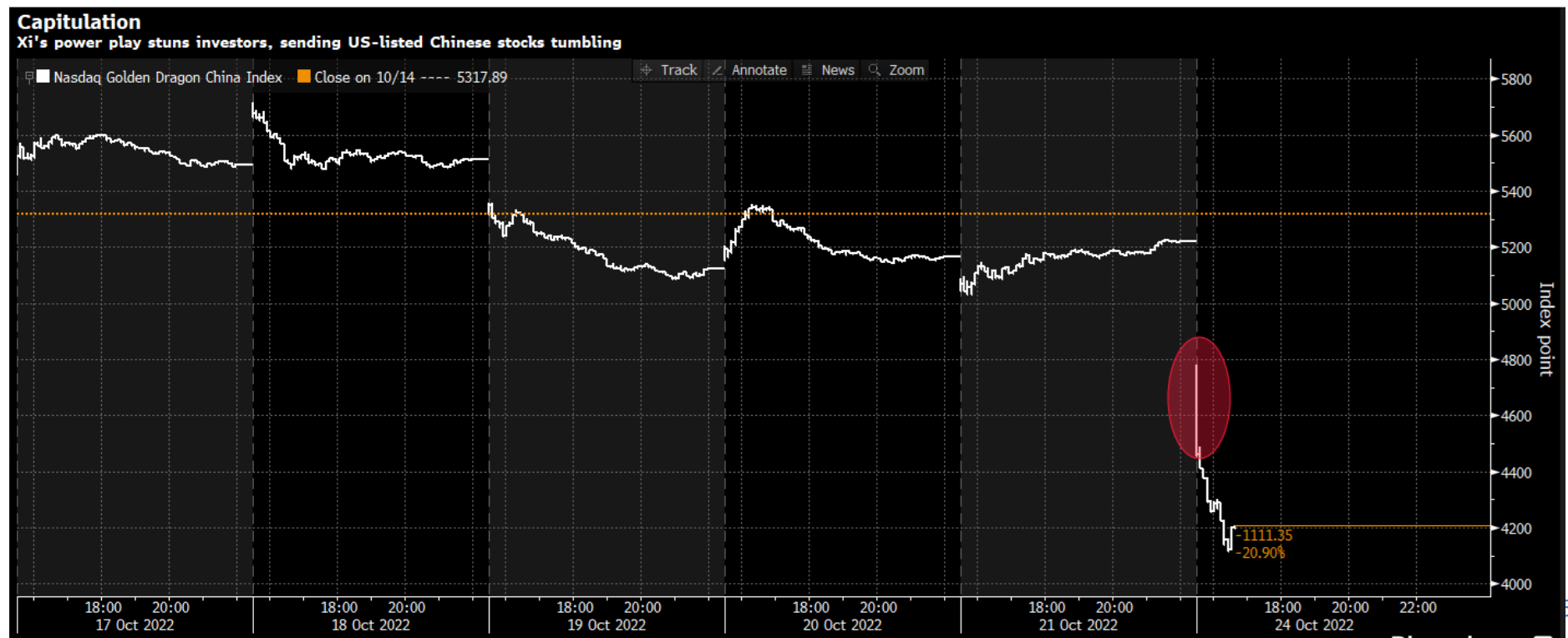
<b>Blacklisted Countries but subject to governance committee</b>	<b>TOBAM Civil Liberty and Democracy Index</b>
Hong Kong	5.77
Mexico	5.62
Thailand	5.61

Source: TOBAM

\*In the BTs, the discretionary dimension is not represented. Thus, only countries below the threshold of 6 are systematically blacklisted

## ILLUSTRATION ON FINANCIAL MARKETS: CHINA Oct. 2022

- The Chinese Tech crack down had already highlighted, how risky it can be for entrepreneurs and investors to be exposed to authoritarian regimes.
- With the confirmation of the third term for Xi, his “common prosperity” rhetoric and zero Covid policy, represent clearly a major risk to investors, which is also visible in direct market reaction, wiping out significant amounts of market values in just a few hours.
- To a lesser extent, on opening of the 24<sup>th</sup> November ,the US-listed Chinese stocks dropped by almost 13%to a new 13-year low.
- During the Chinese Communist Party, reporters captured video of former Chinese President Hu Jintao getting escorted out of the closing ceremony.



## ILLUSTRATION ON FINANCIAL MARKETS: THE CASE OF CHINA (2)

- According to WIND and JP Morgan QDS data, foreign investors held \$530bn of Chinese onshore equities in mid-2022, and around \$540bn of Chinese onshore bonds as of Q2.
- Adjusted for market effects and outflows since the end of June, these holdings fall to \$370bn, if one takes into account the price changes since the end of June. This corresponds to roughly 11% of the free-float market cap of the Chinese stock market.
- These stock estimates can serve as proxy of the potential selling that could happen in the extreme scenario where, similar to the Russian case, foreign investors decide or are forced to exit their Chinese portfolio investments.

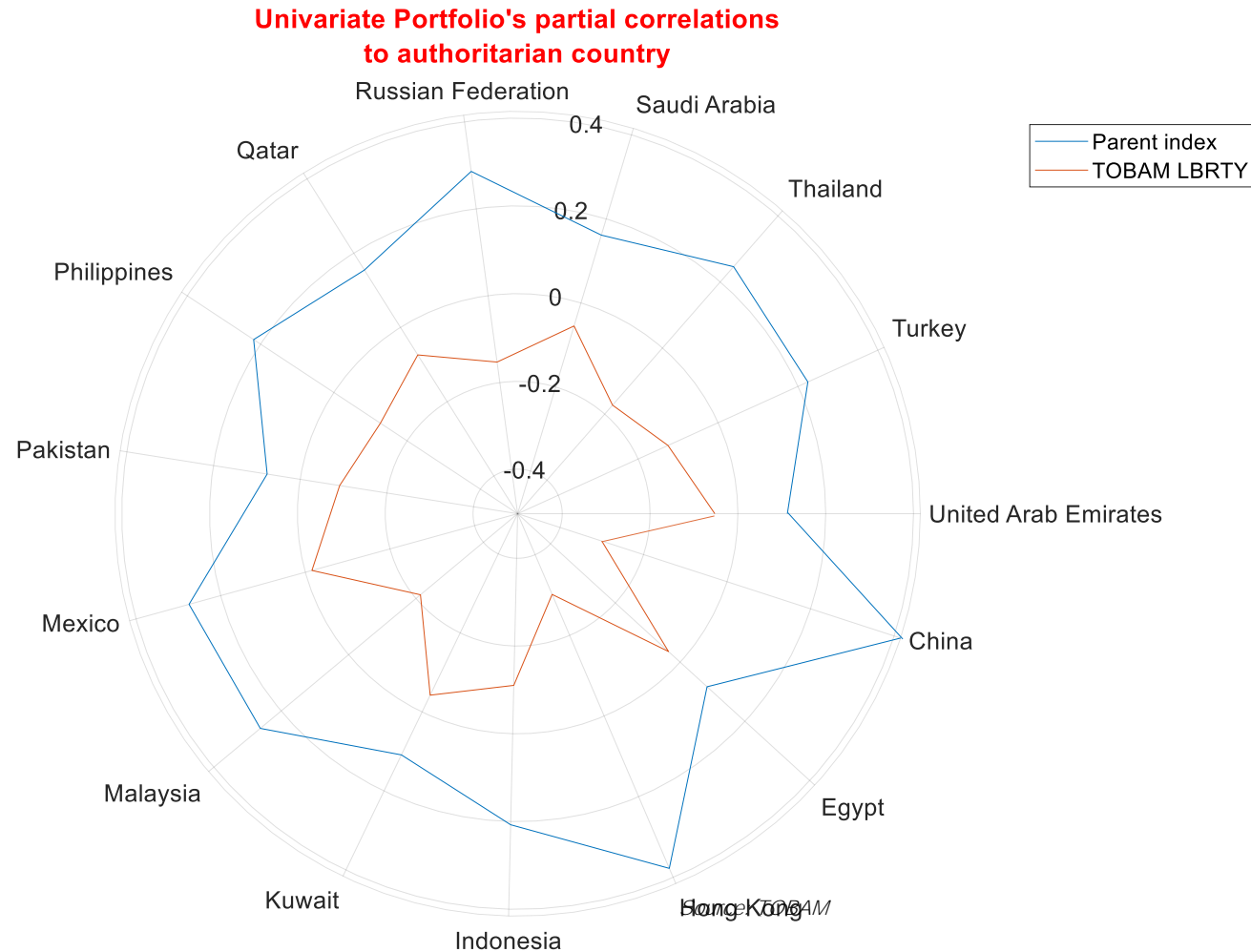
**Figure 2: Foreign holdings of Chinese domestic equities**  
In \$bn and as % of total market cap and free float market cap.



Source: WIND, J.P. Morgan QDS

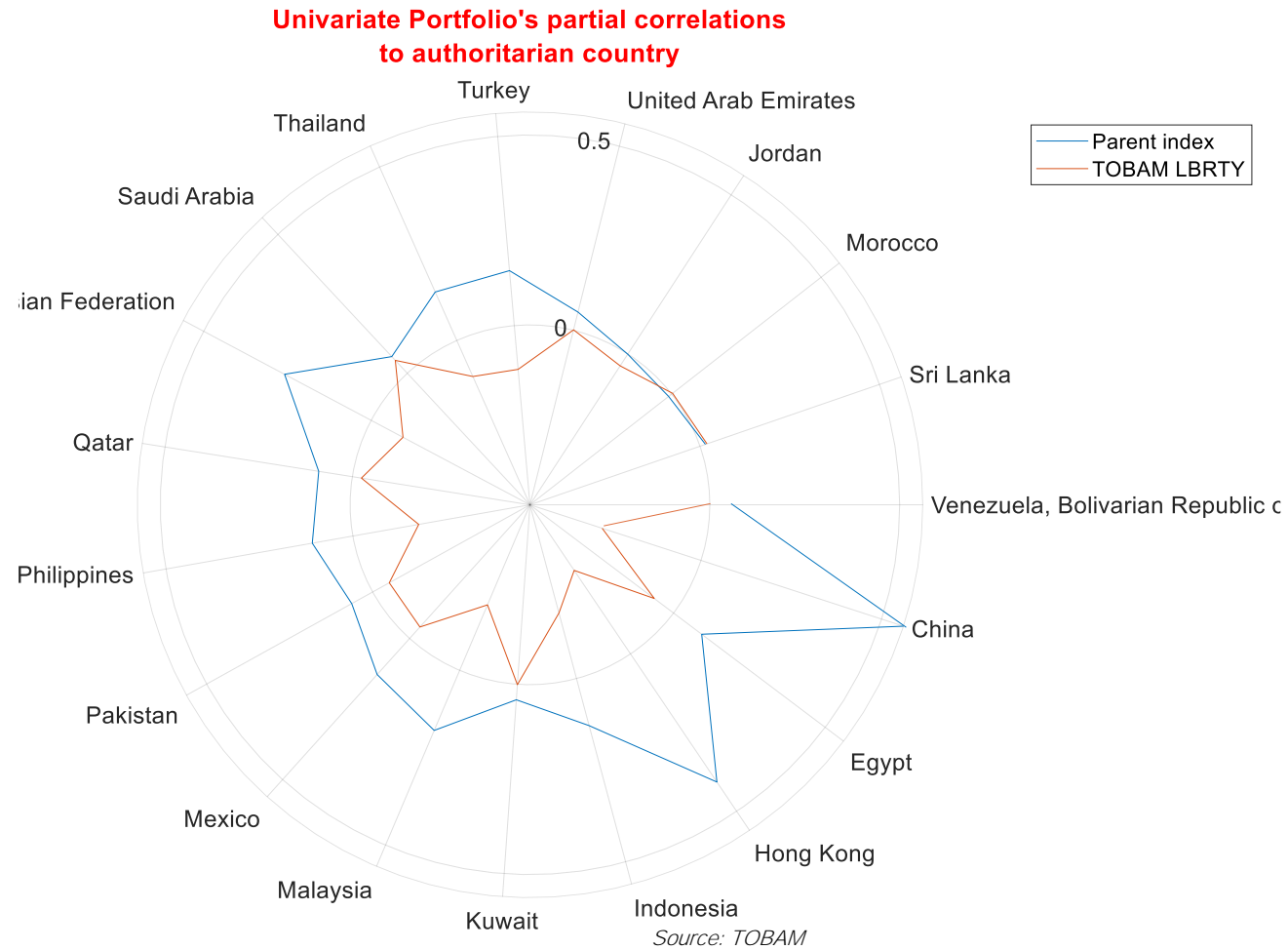
## PORTFOLIOS UNIVARIATE CORRELATIONS (DEMOCRATIC WORLD BETA ADJUSTED 2008-2023)

Beyond weights, TOBAM LBRTY portfolio exhibits negative univariate exposures to all autocratic countries, when considering their existing democratic exposures.



## PORTFOLIOS UNIVARIATE CORRELATIONS (DEMOCRATIC WORLD EX USA BETA ADJUSTED 2008-2023)

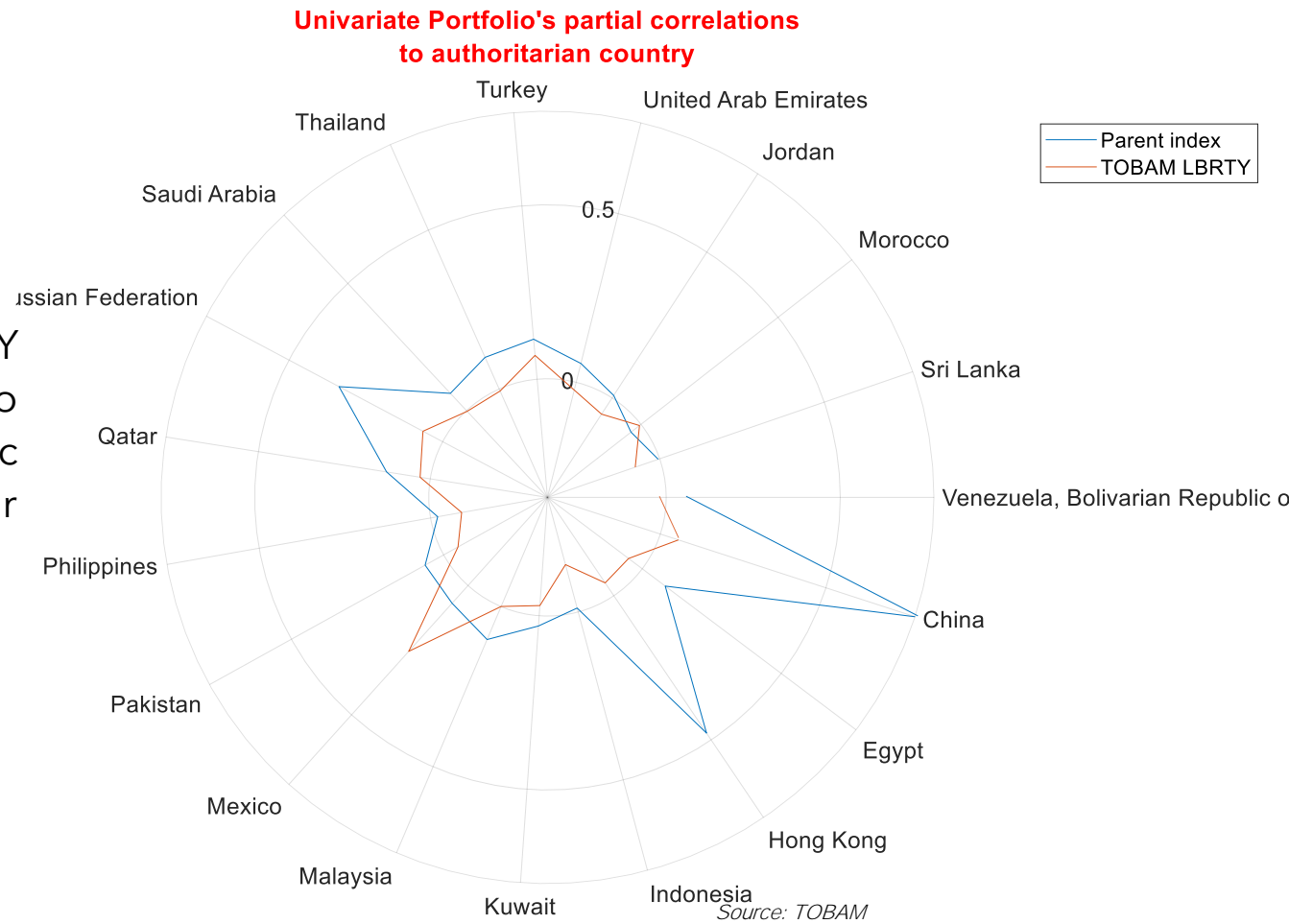
Beyond weights, TOBAM LBRTY portfolio exhibits negative univariate exposures to all autocratic countries, when considering their existing democratic exposures.





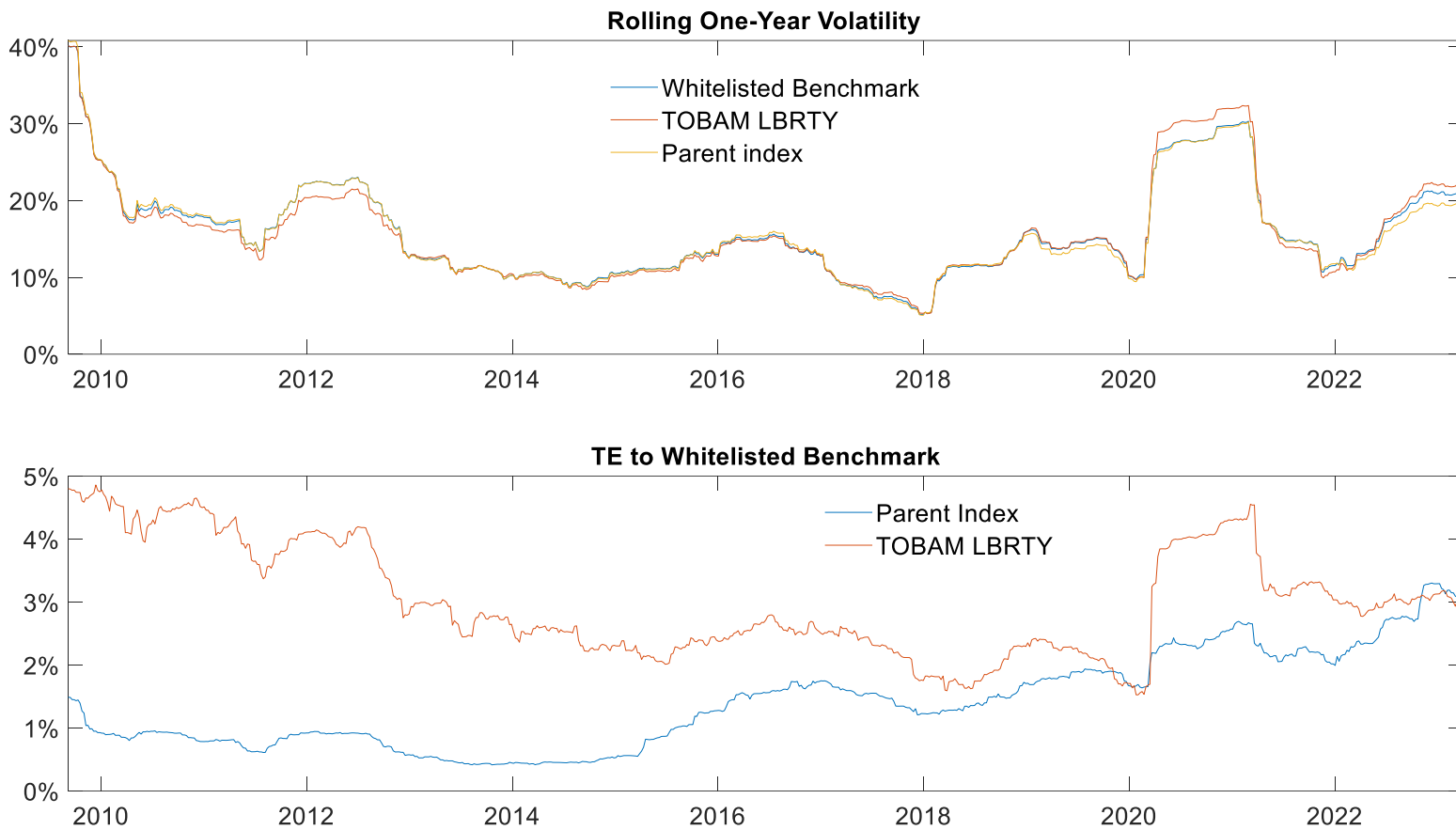
## PORTFOLIOS UNIVARIATE CORRELATIONS (DEMOCRATIC EM BETA ADJUSTED 2008-2023)

Beyond weights, TOBAM LBRTY portfolio exhibits close to zero univariate exposures to autocratic countries, when considering their existing democratic exposures.



# VOLATILITIES AND TRACKING ERRORS

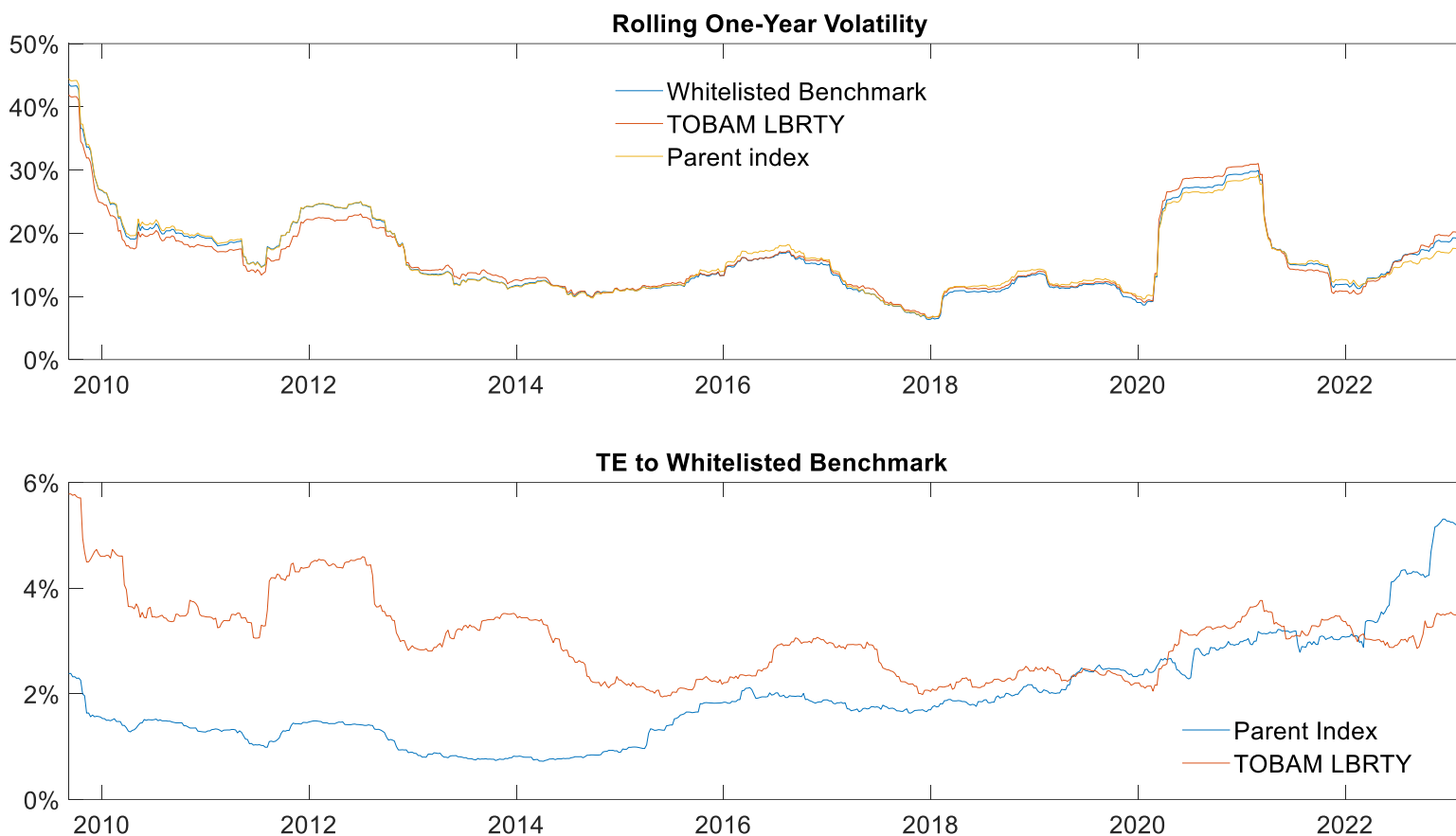
WORLD INCLUDING EM



Source: TOBAM

# VOLATILITIES AND TRACKING ERRORS

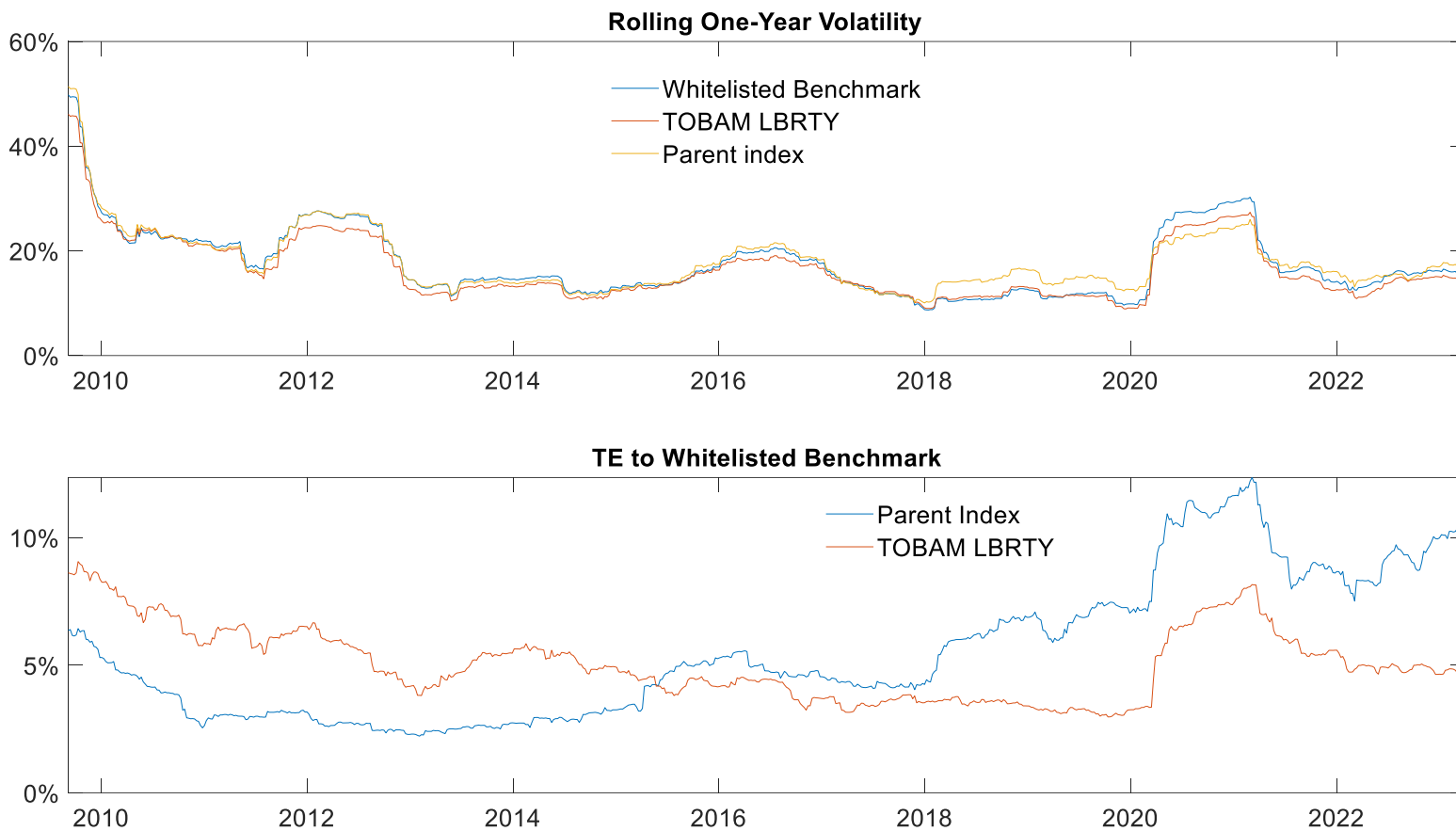
WORLD EX USA (INCLUDING EM)



Source: TOBAM

# VOLATILITIES AND TRACKING ERRORS

EM



Source: TOBAM

## ABOUT TOBAM

TOBAM is an asset management company offering innovative investment capabilities designed to increase diversification. Its mission is to provide rational and professional solutions to long term investors in the context of efficient markets.

The Maximum Diversification<sup>®</sup> approach, TOBAM's flagship investment process founded in 2006, is supported by original, patented research and a mathematical definition of diversification and provides clients with diversified core exposure, in both the equity and fixed income markets.

In line with its mission statement and commitment to diversification, TOBAM also launched a separate activity on cryptocurrencies in 2017.

TOBAM manages approx. US\$6 billion (at December 30, 2022). TOBAM's team is composed of 47 professionals.

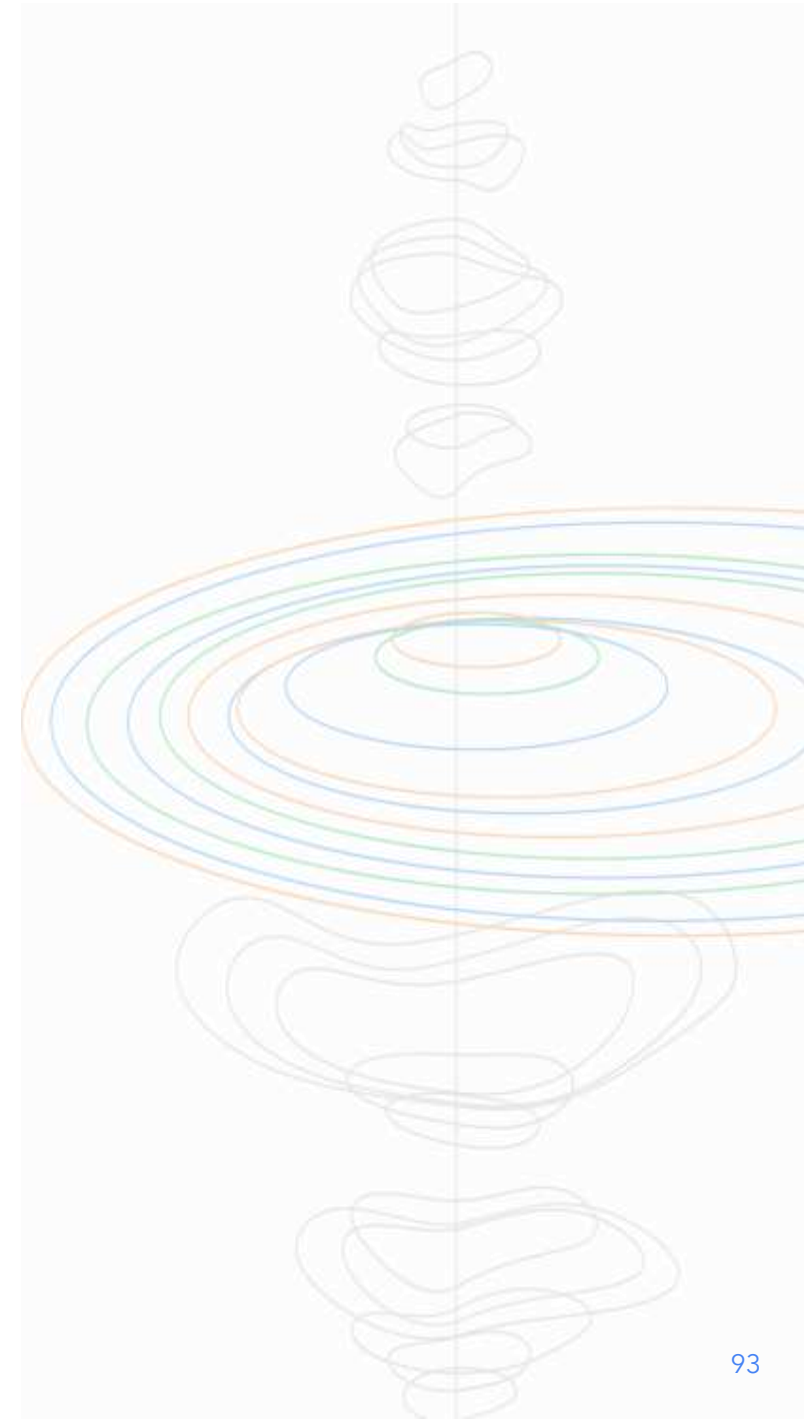
For more information, visit [www.tobam.fr](http://www.tobam.fr)

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