Quarterly Letter – 2022 Q4

Q4, specifically November and December, saw a break in our YTD trend. For the first 10 months of the year, we lost money eight times, our two winning months were negligible, and we were down 21%. The last two months, however, had strong gains, and nearly cut our YTD loss in half, to 11%. Numerous positive valuation and timing signals that we have written about from September on preceded these gains. The strength of the year-end gains themselves is another, new positive signal.

Despite the recent gains, though, our concerns remain about the outlook for developed markets, especially the US, in terms of economic growth, earnings growth, valuation levels, and stock market performance, and how these factors along with currency movements might affect all global equities, including our frontier markets fund. A question entering 2023 then, is what prevails. Does our recent positive momentum continue as Frontaura valuation and timing remain favorable or will possible US weakness overwhelm this and drag us down again? We'll examine this question throughout the five sections of this quarterly letter:

I. Performance
II. Summary of Positive Signals
III. New Positive Signal: Strong Months
IV. Global Macro Discussion
V. Statistical Appendix

Our conclusion is this. We feel good about our portfolio. It trades at more-attractive-than-normal valuations and, having disposed of our riskiest countries continually for 18 months, we think we have reduced risk as much as is desirable (new risks can always develop, of course). For investors with a medium- to longer-term horizon (and this is nearly all our investors as our exit terms discourage short-term investors), the outlook is good, we think. Regarding 2023, especially the first half, we are not sure what returns to expect. The short run can be near impossible to predict, even if we've gotten it right recently, because it is hard to foresee all that may happen. In this case, our concerns are the identifiable risks from the US that we mention above. We expect more losses in US equities, probably to levels below their 2022 low. We would expect this to affect us negatively to some degree. Maybe we are wrong about the US, and it will do better than we expect. Or maybe we are right, yet it won't matter (either because the US affects us less than we expect or we later quickly more than make up any near-term losses). We highlight our US concerns because we want our investors to be aware and mentally prepared for them (especially if our worries prove correct and the impact is deeper and lasts longer than we expect). Overall, though, our positive longer-term outlook is more significant to us than any near-term worries. We have plenty of cash and if we get more selloffs in the first half 2023, we will bottom fish for opportunities, just as we did throughout 2022. Selloffs have repeatedly been a source of strong gains for us, COVID being a recent example. If your investment horizon extends beyond 2023, we believe we are at a good entry point for Frontaura. If you worry that 2022's turbulence will continue in 2023, then dollar-cost averaging over the next six to 12 months could be a good tactic.

I. Performance

Q4. We made 7.95% net of fees in Q4, consisting of a 3.30% loss in October and gains of 4.50% and 6.82% in November and December, respectively. The last two months were the 13th best and the eighth best months in our 182-month history. In the past, our strongest months have portended well for future performance, with an average gain for the following year of 27%. We'll look at this more fully in the New Positive Signal section.

Q4 had wide-ranging index results. MSCI EAFE (developed markets outside North America) rocketed up 17%, MSCI Emerging Markets (EM) rose 10%, the S&P 500 made 8%, while MSCI Frontier Markets (FM) lost 1%, and MSCI FM Small Cap (FM SC) lost 2%. All index returns in this letter are total returns including dividends, net of any withholding taxes.

2022 and COVID era. We lost 11.36% in 2022. This is a lesser loss than we suffered in 2008 (28%), 2011 (15%), and 2018 (13%). Through October, before the year-end recovery, our YTD loss was 20.60%. Over the last two years, 2021-2022, we've made 19% and over the last three, 2020-2022, we've made 23%.

From April 2020 onward, that is after the COVID low, we've made 58%. We especially shined from September 2020 onward, when our initial COVID rebound shifted from modest to powerful. We've made 46% since then, 19 to 54 percentage points ahead of the indices we cite. By comparison, the FM and EM indices were -1% and -8%, respectively, after August 2020. All our figures in this section exceed those of each index we reference for every period with the single exception that the S&P 500's three-year return of 25% was two percentage points ahead of us.

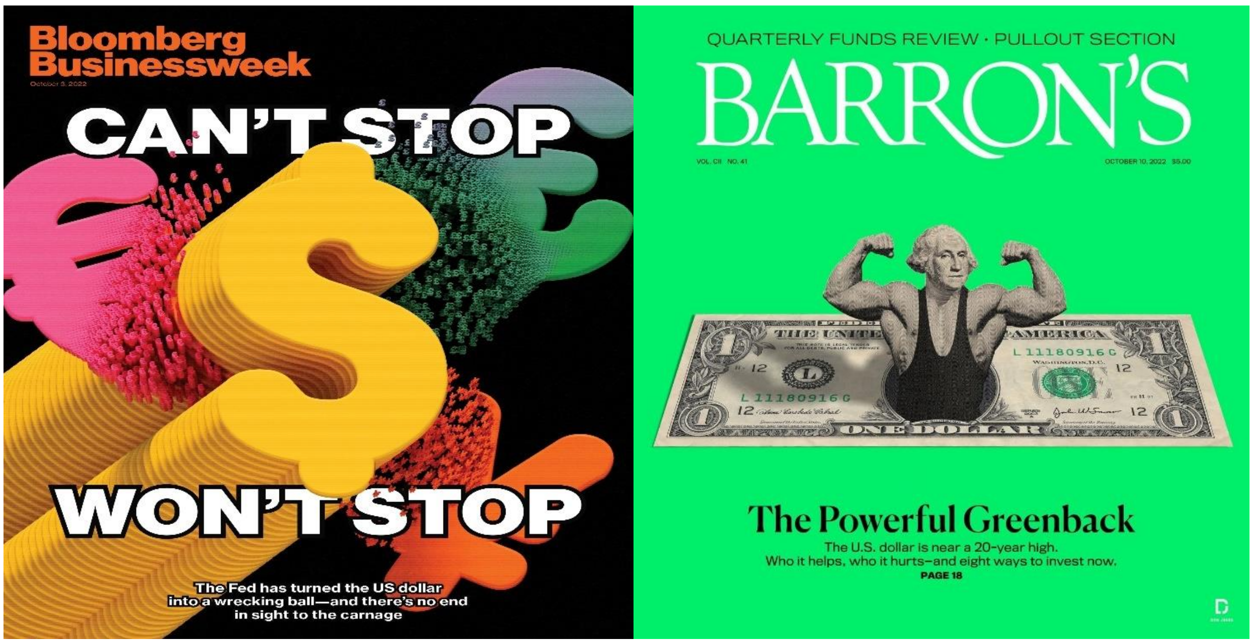
We provide this data to drive home a point that we've been making for a couple years but which we think some allocators may not recognize. The long-running frontier bear market that started in late 2014 ended for Frontaura in March 2020 with the COVID lows. COVID was the reset that led to a new market regime, at least for us.

That earlier bear market will still deflate our five-, seven-, and 10-year numbers for some time, but if everything is flat in Q1 2023, we'd be a leader for one-, two-, and three-year performance against all the indices we reference. Our portfolio PE entering 2023 is a below-average 6.0 times trailing, reported EPS with a 6.2% weighted average dividend yield.

See the Statistical Appendix for performance details. Figure A1 in our Statistical Appendix shows returns for Frontaura and the indices for all periods we discuss here: the prior one, two, three, five, seven, and 10 years and since August 2020 and March 2020. Figure A2 shows quarterly numbers for us and the indices, Figure A3 presents our monthly numbers, and Figure A4 translates our USD returns into the home currencies of our investors.

Currency. In our September comment and our Q3 letter, we wrote that the US dollar had become extremely overvalued (by one measure, the most overvalued since 1985), and its strength YTD had hurt our performance. Broad indices of the dollar peaked at the end of September and the dollar weakened throughout Q4, especially in November and December. For the quarter, just under half of our gain was due to currency. For the year, our entire loss was due to currency as we had a negligible gain in local currency.

Winners and losers. We had investments in 28 countries during 2022, making money in half and losing money in half. Our loss for the year shows that our losers were of larger size than our winners. In Q4, we made money in 11 countries and lost money in nine, with one country break-even. Q4 saw a reversal of the pattern of the first nine months, as our Q4 winners were larger in size than our losers. The change in currency direction (from dollar strength that hurt our returns to dollar weakness that helped our returns) in part explains the change from bigger losers to bigger winners that occurred in Q4. We finished the year with 31 positions in 19 countries. This is the lowest month-end country count we have had in more than a decade and our month-end position count also has not been lower in over a decade (several months in 2022 also ended with 31 positions). Figures A6 through A11 in the Statistical Appendix show quarterly and annual performance by country and region. Figures A12 and A13 show changes in country weights during the quarter and year and Figure A14 displays portfolio concentration for the quarter and year.



As these two early October magazine covers prove, by the time a market trend makes the cover the trend has ended or will soon do so.

II. Summary of Positive Signals

We have recently written about the following positive signals:

- At the end of September, our Quality Value Score (QVS), a composite of three valuation metrics and return on ending equity, was its fourth best ever, similar to where it stood after the Global Financial Crisis (GFC) and COVID selloffs. Our regression of QVS and future performance projected a 12-month gain of 25% and a 24-month gain of 49%. Entering 2023, our valuation remains more attractive than average with a 6.0 portfolio PE and a 6.2% weighted average dividend yield.
- Dollar overvaluation, which when reversed, would help our returns. This began in Q4, as we discussed above in the currency section.
- Two of our worst months ever, -7% in both June and September. This is a contrarian signal. Frontaura losses that round to 7% or more have led to an average 24% gain in the next 12 months and an average 50% gain in the next 24 months.
- The largest monthly underperformance of MSCI FM to the S&P 500 in our history in October. This also is a contrarian signal. The 10 prior worst FM monthly index

underperformances saw us gain 16% on average in the 12 months that followed and 39% on average in the 24 months that followed.

- Seasonality, which is favorable for us December through July. Historically, we've made more than all our inception-to-date gains in these eight months, with the combined performance of the other four months, August through November, being negative.
- Two strong months, November and December, a procyclical signal as explained in the following section. Historically, months with returns above that of November had an average gain of 27% in the following year.

The question is whether these signals, which preceded great returns for us in November and December 2022, mean that 2022's bear market is over for us. While the signals are powerful, we continue to have concerns about the outlook for developed markets and the knock-on effect it may have on Frontaura, as we explain in the Global Macro section further below.

These signals describe what has happened historically and there is no guarantee that past patterns of performance will recur in the future.

III. New Positive Signal: Strong Months

Recently, we've written how we do well in the future after a bad month. After our excellent December result, we wondered if the opposite was true: do good months signal bad future performance? We studied this and the results really surprised us.[1] Our top 10 months through December 2021 *all* had an above-average forward one-year return. It seems that both our worst months and our best months are positive signals for future results, something we did not expect.

Figure 1 shows one-year forward returns for all months with gains of 4.50% (November 2022) or better. The figure lists 13 months, including November and December 2022, meaning there are 11 datapoints that have one year of future performance. The top 10 of these datapoints all had positive, above-average returns, ranging from 10% to 59%, with a mean of 30%. The 11th datapoint had the only negative future performance, at -2%. The average of all 11 datapoints is 27%. The months performing just above and just below our December 2022 return had one-year gains of 18%-27%.

As we have numerous datapoints spanning 15 years of history, let's assume our results are not a fluke and try to explain the phenomenon where extreme months, regardless of sign, lead to strong future performance for Frontaura. To begin, we believe our negative months provide good future results because they reduce valuations, often to below-average levels, and lower valuations lead to better performance as valuations eventually revert upward. Why then, do strong months lead to good future performance? Looking at the individual strong months, they tend to concentrate at the beginning or in the middle of a bull run. For example,

[1] This phenomenon of a strong month predicting good one-year performance also holds in the US, at least during our history. We are well versed in momentum factor research where the prior six or 12 months of performance help to predict future returns for individual stocks, but we did not expect a single month to be predictive of US index returns. The 10 best S&P 500 months from our November 2007 start through 2021 led to a 31% S&P 500 gain over the following year, on average. While strong individual days may not be a bullish signal for US stocks because they occur in bear markets that persist, within our history, strong index months have been a positive signal that positive US momentum will likely continue. We are interested to see how well this will hold for the year after July 2022 and October 2022, which were both strong S&P 500 months.

Figure 1 shows that of the 11 strong months through December 2021, four occurred in the initial third of a bull run as measured by months of time, six occurred in the middle third, and only one occurred in the final third. As you might expect, that one datapoint toward the end of a bull run was the only one with a negative one-year future return. To summarize, by making valuations cheap, our weakest months create the conditions for positive performance while our strongest months tend to occur early enough in a bull run that positive performance occurs as the bull run continues.

Figure 1
Frontaura Global Frontier Fund LLC
Year Forward Performance after Strong Months
31 December 2022

Month	Monthly Return	ITD Monthly Return Rank	Next 12-Month Return	Month of Bull Run	Eventual Bull Run Length	Stage of Bull Run
April 2009	7.7%	5	58.6%	2	23	Early
May 2009	14.4%	1	37.0%	3	23	Early
August 2009	4.7%	11	31.6%	6	23	Early
September 2009	10.6%	2	24.6%	7	23	Early
March 2010	6.6%	9	26.5%	13	23	Middle
September 2010	4.7%	12	-1.8%	19	23	Late
January 2013	7.3%	7	18.2%	14	35	Middle
November 2020	9.5%	3	42.6%	8	21	Middle
December 2020	7.5%	6	34.4%	9	21	Middle
April 2021	8.5%	4	16.3%	13	21	Middle
May 2021	6.0%	10	9.5%	14	21	Middle
November 2022	4.5%	13		1?		
December 2022	6.8%	8		2?		
Average			27.0%			

IV. Global Macro Discussion

In our Q4 2021 letter, we said that "2022 might be the year that equity markets must address the reality of inflation and higher benchmark interest rates, two factors that could weigh on returns." We thought "the developed world appears behind the curve and may have already made a policy error." The US stock market, then sitting around an all-time high, was, in our opinion, "priced for perfection" and "a developed world equity market accident may occur due to the risks of ongoing inflation, higher than expected rates, and recession risk from a rate shock." We said that our countries and currencies were better prepared (we had sold or would sell the exceptions to this). We said that the dollar "could justifiably strengthen against some developed world currencies (e.g., the euro or Japanese yen)" and this could create a misperception risk "that a 'strong dollar' must mean EM and FM currency vulnerability" even if many EM and FM currencies had better fundamentals than the dollar. This all occurred in the first nine months of 2022.

Below are our macro views for 2023. Again, our points focus on the US because it has the world's largest equity market, the world's reserve currency, and the world's benchmark interest rate. Fed policy affects central bank policy globally and investors use US rates to price assets globally. Finally, the direction of the dollar can affect global asset performance significantly. Suffice it to say that what happens in the US matters globally. Many other factors matter for our portfolio as well, and collectively we think they are as important or more so than US events. However, the US is a single, unique driver in which all our investors are conversant, so we spend disproportionate time on it in years like last year and this year when macro turbulence threatens markets. We include a few points on China, a big, important country that investors often ask us about, even though we do not invest there because it is not in our universe.

1. **We think developed world recession risk, namely in Europe and the US, will be the dominant market issue for at least the first half of 2023.** The US economy shrank in the first half of 2022, then grew again in the second half. We expect it to weaken again. It's still possible the US could avoid recession, but we believe the Fed's 425 basis points of interest rate hikes in 2022, with more to come, make this unlikely, considering the lag with which rate hikes weigh on the economy.

2. **Earnings estimates for US companies are too high,** in our opinion, and analyst estimate cuts will pressure stocks. Per S&P's own calculations, reported S&P 500 EPS fell by double-digit percentage amounts in Q2 and Q3.[2] If a recession does occur, we think it inevitable that earnings fall further. Miraculously, analysts assume US EPS will rise in 2023. We hold the opposite view.

3. **US companies face further margin pressure,** in our opinion. US company margins spiked in 2021 to all-time highs due to the government's stimulus spending, and, while margins declined in 2022 as the stimulus wore off, we think further margin pressure looms in a contractionary economy as margins remain above their long-term trend. In contrast, our portfolio profit margins were already at below-average levels in Q2 and Q3 even as our dollar EPS grew. We do not think we face the same margin pressure as US companies.

4. **While less so than a year ago, the US market is still expensive**, in our opinion. At its year-end 2022 close of 3840, the S&P trades at 20.5 times trailing, reported EPS.[3] (Frontaura's portfolio trades at 6.0 times.) The S&P's multiple is not at a level

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[2] Operating EPS also declined in both quarters per S&P. S&P's data shows Q3 2022 reported EPS falling 10% from $49.59 to $44.41 and operating EPS falling 3% from $52.02 to $50.35. Q2 2022 reported EPS fell 12% from $48.39 to $42.74 and operating EPS fell 10% from $52.05 to $46.87. Other data services, which compile EPS data from analysts' (more liberal) reports rather than calculating results themselves against an objective standard like S&P does, show operating EPS growth in Q2 and Q3. We consider S&P's figures more honest, even as we acknowledge that most people swallow the hopium of other data services.

[3] Using $187.08 of S&P reported EPS, consisting of $53.94 in 4Q21, $45.99 in 1Q22, $42.74 in 2Q22, and $44.41 in 3Q22.

where market bottoms tend to occur, and if earnings fall in 2023 as we expect, then prices must decline just to keep the PE from rising. If recession does occur, we think the US market likely trades below its 2022 low of 3577.

5. **If a US recession occurs with its average recession market drop, the S&P 500 would drop to 3068, 20% below its 2022 ending level.** That's the decline necessary from its 3 January 2022 peak for it to match its average 36% recession slump. To match its worst recession fall, it would drop to 2073 (a 57% decline in total from peak). The best case would be that the 3577 October 2022 low holds, as the 25% decline from peak to that level already exceeds the drops from the 1980 recession (17%) and the 1990-1991 (20%) recession.[4]

6. **A significant factor in the performance of non-US assets in 2023 is whether Q4's dollar weakness trend continues or whether recession causes a safe haven return to dollar strength.** A second question is whether the dollar weakens later (or further) whenever the Fed stops raising interest rates or begins cutting rates. It's possible for the dollar to strengthen early in 2023 and weaken later. For that matter, anything is possible in 2023—the dollar could be strong throughout or weak throughout. We have no conviction on what the dollar will do from here. Most importantly, we do not see the dollar as a barrier to our portfolio making money in the medium to longer term. While the dollar may whip returns around this year (or in any year), we don't worry about this. This point is to make you aware of the dollar's impact, but we don't think you should fret about this.

7. **Assuming the market prices in a recession, at some point it will anticipate a recovery**. This could happen in the second half, but we don't really know when it will occur for real. The timing is hard to get right because there have been and will likely continue to be false rallies. In 2022, the S&P had failed rallies that peaked at 4632 on March 29 after an 11% gain in three weeks, 4305 on August 16 after a 17% gain in two months, and 4080 on November 30 after a 14% gain in seven weeks.

8. **Historically, rallies that occur when the Fed stops hiking rates and when the Fed begins cutting rates do not last.** Bottoms typically occur more than halfway through the rate-cutting cycle (closer to the end of rate cuts than the beginning).[5] The need to cut rates mean something bad is happening in the economy and markets

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[4] Unlike elsewhere in this document, we did all calculations in this bullet point using S&P 500 price returns rather than its total returns, as total return data is not available for all recessions we considered, back to 1969.

[5] We did a study on the occurrence of stock market bottoms in the last seven US recessions (there is reliable Bloomberg data on the Federal Funds benchmark interest rate from 1971 onward and seven recessions have occurred since then). We found that on average the market bottom occurs 17 months *after* the last rate hike, 11 months *after* the first rate cut, and six months before the last rate cut. In other words, the market bottoms when the rate cutting cycle is about two-thirds complete on average. In the last two recessions, 2009 and 2020, the stock market bottom occurred after the rate-cutting cycle was complete. Those thinking that a pause in hikes or a cut in rates will signal a market bottom will be disappointed if these averages hold. (Of course, such a person could wave away our analysis by saying that a recession will not occur.) We acknowledge that in the brief 1980 recession, the market did bottom on 27 March 1980, soon after the last hike on 3 March 1980 and just before the first cut on 1 April 1980. Thus, one datapoint in seven does support the pause/cut market bottom signal.

usually have not priced this in fully because too many investors believe in a soft-landing scenario or mistakenly think a shallow recession limits market downside.

9. **China's COVID reopening will strengthen its economy, although it could weaken it first for a short time.** On December 7, China ended its Zero COVID policy. A spike in COVID infections has ensued. Initial news reports suggested this spike was keeping people at home voluntarily. More recent stories suggest Chinese mobility is increasing despite the spike.[6] China's economy was weak when it ended Zero COVID, and we're not sure to the degree to which, if any, the COVID surge will weaken it further in Q4 and Q1. More importantly, at some point, its COVID wave will pass, and China's economy will recover and likely experience catch-up growth. Thus, China should have decent growth for 2023, even if it starts slow. This assumes no new COVID variant appears in China, a risk for it and the world. For us, China's reopening is positive and could boost results for several of our Asian companies.

10. **We do not know what inflationary impact China's reopening will have on the world—we intend to just watch the data with an open mind.** We hear the argument that China's reopening will be inflationary because its demand for commodities will increase and, more generally, all types of Chinese spending will rise, like occurred in much of the world in 2021. This makes sense to us in isolation, but at the same time, we see much of the developed world is heading toward recession, which is disinflationary. We do not know which pulse—inflationary China reopening or disinflationary developed world recession—will be greater. A different argument is that a fully functioning Chinese economy might ease global supply chain issues, which would be deflationary. We are skeptical about this. Companies have already solved many of their COVID-related global supply chain problems, and since the West is migrating away from China to some degree, we don't see Chinese supply chain improvements as offering much disinflationary benefit to the world at this point.

11. **While it remains big and important, we think the China we knew from the 1990s through the 2010s is over. We no longer see it as the world's growth and disinflation engine.** This is a longer-term comment, not to be confused with our two points above that pertain to 2023. For three decades, China helped lower global inflation in its role as workshop to the world. It boosted global growth, and it led the world out of the Global Financial Crisis (GFC) with massive stimulus. Now, it is highly indebted with worsening demographics due the delayed impact of the one-child policy. Its working-age population peaked in 2014, its total population likely shrank last year, and India will surpass it in population this year. Its world-beating economy that grew over 10% in the 2000s and over 7.5% in the 2010s, will slow to around 4.5% in the 2020s per the IMF. We expect 2%-3% growth may be its norm by the end of this decade.

    The quality of China's institutional decision making has degraded and while this will ebb and flow, we are not optimistic long-term given President Xi's coronation as a

[6] Chinese New Year is Sunday, January 22, 2023, and for most people Saturday, January 21 through Sunday, January 29 are non-working days. Pre-COVID, the media commonly referred to travel during the Chinese New Year holidays as the world's biggest human migration. After several years of curtailed travel, it will be interesting to observe this year and to see the degree to which this causes a further COVID surge.

leader for life, a mistake that many countries make. Relations with the West have declined, and while again there will be some periodic improvements, we are not optimistic long-term. China used to be a work assignment that expatriates coveted; after the COVID exodus, we don't see it regaining this status. We view Western companies at best neutral on Chinese FDI and quite possibly heading for a multi-decade period of disinvestment. We could say the same for foreign portfolio investors. To be clear, China's not going away and its stock market at times could be the source of great gains as it has shown with MSCI China posting a 50% total return through 9 January 2023 from its Halloween 2022 market low. Overall, though, we wonder if China today might symbolically be at a juncture similar to Japan three decades ago before its multi-decade growth miracle faded away.

12. **Disorderly market events may continue.** Interest rates that are too low cause malinvestment as speculators pour money into assets whose valuations would make no sense at higher rates. Now, after more than a dozen years of zero or low rates following the GFC, rate hikes are revealing some problem areas. In the last four months, we saw dislocations in the British bond market that deposed a prime minister and the FTX bankruptcy that evaporated billions of crypto wealth. Considering the time-lapse effect of higher rates, we expect more and bigger news like this in 2023.

We thank you for being a Frontaura investor.

Best regards,

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V. Statistical Appendix

Our Statistical Appendix follows this section. Figure A1 shows annual, cumulative, and compounded returns for us and the indices we typically cite. Figure A2 shows quarterly performance for Frontaura and these indices. Figure A3 shows our monthly returns since inception. Figure A4 shows Frontaura's returns in US dollars and seven foreign currencies that are the home currencies of our investors.

Please see Figure A5 for portfolio mix by country, region, and sector, along with our portfolio statistics. Figures A6-A9 show country attribution by dollar and percentage returns, first for Q4 and then for 2021. Figure A10 shows regional attribution, including at the country level within each region, for Q4 and Figure A11 repeats this information for 2021. Figures A12 and A13 show changes in country mix for the quarter and the last 12 months, and Figure A14 shows portfolio concentration and how it has changed in the last three and 12 months.

Statistical Appendix

Figure A1
Frontaura Global Frontier Fund LLC
Annual Frontaura and Index Performance[7]
31 December 2022

Period	Frontaura	MSCI Frontier Small Cap *	MSCI Frontier *	MSCI Emerging	MSCI EAFE	S&P 500
2008	-28%		-54%	-53%	-43%	-37%
2009	46%		12%	79%	32%	26%
2010	37%		24%	19%	8%	15%
2011	-15%	-29%	-19%	-18%	-12%	2%
2012	18%	6%	9%	18%	17%	16%
2013	26%	32%	26%	-3%	23%	32%
2014	-3%	6%	7%	-2%	-5%	14%
2015	-5%	-8%	-14%	-15%	-1%	1%
2016	7%	15%	3%	11%	1%	12%
2017	17%	23%	32%	37%	25%	22%
2018	-13%	-17%	-16%	-15%	-14%	-4%
2019	-1%	-2%	18%	18%	22%	31%
2020	3%	5%	1%	18%	8%	18%
2021	34%	42%	20%	-3%	11%	29%
2022	-11%	-23%	-26%	-20%	-14%	-18%
1 Year	-11%	-23%	-26%	-20%	-14%	-18%
2 Year	19%	9%	-12%	-22%	-5%	5%
after 2020 08	46%	27%	-1%	-8%	8%	14%
after 2020 03	58%	51%	22%	21%	33%	55%
3 Year	23%	15%	-11%	-8%	3%	25%
5 Year	6%	-7%	-12%	-7%	8%	57%
7 Year	32%	31%	19%	42%	36%	114%
10 Year	53%	68%	37%	15%	58%	227%
Inception to Date	126%		-20%	3%	24%	237%
2 Year CAGR	9.2%	4.6%	-6.1%	-11.8%	-2.4%	2.7%
3 Year CAGR	7.0%	4.6%	-3.6%	-2.7%	0.9%	7.7%
5 Year CAGR	1.2%	-1.5%	-2.5%	-1.4%	1.5%	9.4%
7 Year CAGR	4.1%	3.9%	2.6%	5.2%	4.5%	11.5%
10 Year CAGR	4.3%	5.3%	3.2%	1.4%	4.7%	12.6%
ITD CAGR	5.5%		-1.5%	0.2%	1.4%	8.3%

* We present MSCI results as it reports them, but we think it overstates returns by not marking down currencies conservatively enough in the COVID era. We estimate the overstatement at 1-2 percentage points in 2020 (Nigeria), 0-1 percentage points in 2021 (Nigeria, Sri Lanka), and 1 percentage point in 2022 (Kenya, Nigeria). See our 2020 Q4 letter, page 3, on Nigeria, our August 2021 comment on Sri Lanka, and our August 2022 comment on Kenya.

[7] Frontaura returns are net of all fees for a reference investor joining the fund at inception, making no further contributions, making no withdrawals, and converting to Series B in 2021 Q2. Investors joining on other dates, making additional contributions, making withdrawals, or not converting to Series B in 2021 Q2 may have different results. Our auditor has audited results through 2021. Index returns are in USD on a total return basis, net of any withholding tax. We discuss our returns and different series and we explain the different indices we show here.

Figure A2
Frontaura Global Frontier Fund LLC
Quarterly Frontaura and Index Performance[8]
31 December 2022

Period	Frontaura	MSCI Frontier Small Cap *	MSCI Frontier *	MSCI Emerging	MSCI EAFE	S&P 500	Period	Frontaura	MSCI Frontier Small Cap *	MSCI Frontier *	MSCI Emerging	MSCI EAFE	S&P 500
							2015 Q1	-3%	-4%	-3%	2%	5%	1%
							2015 Q2	3%	2%	0%	1%	1%	0%
							2015 Q3	-6%	-6%	-11%	-18%	-10%	-6%
2007 Q4	2%		4%	-7%	-5%	-5%	2015 Q4	1%	-1%	-1%	1%	5%	7%
2008 Q1	1%		-2%	-11%	-9%	-9%	2016 Q1	-1%	-1%	-1%	6%	-3%	1%
2008 Q2	6%		2%	-1%	-2%	-3%	2016 Q2	4%	5%	0%	1%	-1%	2%
2008 Q3	-11%		-23%	-27%	-21%	-8%	2016 Q3	2%	4%	3%	9%	6%	4%
2008 Q4	-25%		-41%	-28%	-20%	-22%	2016 Q4	1%	6%	0%	-4%	-1%	4%
2009 Q1	-2%		-17%	1%	-14%	-11%	2017 Q1	4%	12%	9%	11%	7%	6%
2009 Q2	28%		35%	35%	25%	16%	2017 Q2	7%	3%	6%	6%	6%	3%
2009 Q3	17%		11%	21%	19%	16%	2017 Q3	3%	3%	8%	8%	5%	4%
2009 Q4	-1%		-10%	9%	2%	6%	2017 Q4	3%	3%	6%	7%	4%	7%
2010 Q1	10%		11%	2%	1%	5%	2018 Q1	2%	-1%	5%	1%	-2%	-1%
2010 Q2	5%		-10%	-8%	-14%	-11%	2018 Q2	-7%	-9%	-15%	-8%	-1%	3%
2010 Q3	9%		14%	18%	16%	11%	2018 Q3	-5%	-4%	-2%	-1%	1%	8%
2010 Q4	9%		8%	7%	7%	11%	2018 Q4	-3%	-5%	-4%	-7%	-13%	-14%
2011 Q1	2%	-12%	-5%	2%	3%	6%	2019 Q1	2%	-1%	7%	10%	10%	14%
2011 Q2	-1%	-2%	0%	-1%	2%	0%	2019 Q2	3%	0%	5%	1%	4%	4%
2011 Q3	-10%	-12%	-12%	-23%	-19%	-14%	2019 Q3	-5%	-3%	-1%	-4%	-1%	2%
2011 Q4	-6%	-7%	-2%	4%	3%	12%	2019 Q4	-1%	2%	7%	12%	8%	9%
2012 Q1	6%	6%	6%	14%	11%	13%	2020 Q1	-22%	-24%	-27%	-24%	-23%	-20%
2012 Q2	-3%	-6%	-7%	-9%	-7%	-3%	2020 Q2	6%	12%	15%	18%	15%	21%
2012 Q3	5%	6%	7%	8%	7%	6%	2020 Q3	4%	8%	8%	10%	5%	9%
2012 Q4	9%	1%	3%	6%	7%	0%	2020 Q4	20%	14%	11%	20%	16%	12%
2013 Q1	10%	7%	8%	-2%	5%	11%	2021 Q1	2%	5%	1%	2%	3%	6%
2013 Q2	5%	9%	3%	-8%	-1%	3%	2021 Q2	20%	14%	14%	5%	5%	9%
2013 Q3	1%	1%	6%	6%	12%	5%	2021 Q3	4%	8%	3%	-8%	0%	1%
2013 Q4	7%	12%	7%	2%	6%	11%	2021 Q4	5%	10%	1%	-1%	3%	11%
2014 Q1	-1%	6%	7%	0%	1%	2%	2022 Q1	-5%	0%	-8%	-7%	-6%	-5%
2014 Q2	4%	7%	12%	7%	4%	5%	2022 Q2	-6%	-16%	-14%	-11%	-15%	-16%
2014 Q3	1%	4%	2%	-3%	-6%	1%	2022 Q3	-7%	-6%	-6%	-12%	-9%	-5%
2014 Q4	-7%	-11%	-12%	-5%	-4%	5%	2022 Q4	8%	-2%	-1%	10%	17%	8%

* We present MSCI results as it reports them, but we think it overstates returns by not marking down currencies conservatively enough in the COVID era. We estimate the overstatement at 1-2 percentage points in 2020 (Nigeria), 0-1 percentage points in 2021 (Nigeria, Sri Lanka), and 1 percentage point in 2022 (Kenya, Nigeria). See our 2020 Q4 letter, page 3, on Nigeria, our August 2021 comment on Sri Lanka, and our August 2022 comment on Kenya.

[8] Frontaura returns are net of all fees for a reference investor joining the fund at inception, making no further contributions, making no withdrawals, and converting to Series B in 2021 Q2. Investors joining on other dates, making additional contributions, making withdrawals, or not converting to Series B in 2021 Q2 may have different results. Our auditor has audited results through 2021. Index returns are in USD on a total return basis, net of any withholding tax. We discuss our returns and different series and we explain the different indices we show here.

Figure A3
Frontaura Global Frontier Fund LLC
Monthly Frontaura Performance
31 December 2022[9]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2007											0.4%	1.6%	2.0%
2008	0.7%	0.6%	-0.1%	3.4%	3.9%	-1.0%	-0.8%	-2.2%	-7.9%	-17.5%	-10.7%	1.4%	-28.1%
2009	-2.0%	-0.4%	0.7%	7.7%	14.4%	4.1%	1.4%	4.7%	10.6%	-1.4%	-0.2%	0.2%	46.0%
2010	-0.9%	4.2%	6.6%	4.5%	-1.2%	1.9%	3.4%	0.7%	4.7%	3.5%	1.5%	3.3%	37.1%
2011	2.8%	-3.7%	2.7%	-0.4%	1.0%	-1.7%	-2.4%	-4.0%	-3.9%	-1.6%	-4.9%	0.7%	-14.8%
2012	-0.5%	3.9%	2.6%	2.4%	-4.4%	-1.3%	2.1%	1.4%	1.9%	2.6%	2.2%	4.3%	18.1%
2013	7.3%	1.9%	1.0%	1.8%	3.8%	-0.3%	2.6%	-2.1%	0.2%	3.1%	2.6%	1.6%	25.9%
2014	0.8%	-0.4%	-1.0%	1.6%	2.0%	0.1%	-0.3%	-0.8%	2.2%	0.9%	-4.5%	-3.3%	-2.9%
2015	-4.3%	1.0%	0.4%	3.9%	0.4%	-1.6%	-1.5%	-3.7%	-0.9%	3.3%	-2.4%	0.1%	-5.5%
2016	-4.8%	-0.6%	4.2%	1.8%	2.9%	-0.3%	1.6%	-0.4%	1.1%	-0.4%	0.7%	0.8%	6.6%
2017	2.9%	-0.1%	1.0%	0.4%	4.1%	2.1%	1.3%	1.0%	0.5%	2.3%	-0.2%	0.8%	17.2%
2018	2.3%	-1.1%	0.4%	0.4%	-6.8%	-0.7%	-0.8%	-1.9%	-2.2%	-3.2%	-0.9%	1.2%	-12.8%
2019	1.2%	0.8%	0.1%	0.3%	1.2%	1.9%	0.4%	-4.0%	-1.7%	-0.9%	-0.6%	0.5%	-0.9%
2020	1.3%	-4.9%	-19.3%	3.1%	0.6%	1.9%	1.7%	0.3%	1.8%	2.4%	9.5%	7.5%	2.8%
2021	0.9%	2.7%	-1.8%	8.5%	5.9%	4.3%	0.6%	4.0%	-0.1%	4.0%	0.1%	1.3%	34.4%
2022	-2.1%	-1.9%	-1.4%	0.9%	-0.3%	-7.1%	0.0%	-0.4%	-7.0%	-3.3%	4.5%	6.8%	-11.4%

[9] Frontaura returns are net of all fees for a reference investor joining the fund at inception, making no further contributions, making no withdrawals, and converting to Series B in 2021 Q2. Investors joining on other dates, making additional contributions, making withdrawals, or not converting to Series B in 2021 Q2 may have different results. Our auditor has audited results through 2021. We discuss our returns and different series here.

Figure A4
Frontaura Global Frontier Fund LLC
Performance by Currency[10 11]
31 December 2022

Period	USD	AUD	CAD	CHF	EUR	GBP	JPY	SGD
2008	-28%	-10%	-12%	-32%	-25%	-2%	-42%	-29%
2009	46%	14%	26%	41%	42%	32%	50%	43%
2010	37%	20%	30%	24%	47%	42%	20%	25%
2011	-15%	-15%	-13%	-15%	-12%	-14%	-19%	-14%
2012	18%	16%	15%	15%	16%	13%	33%	11%
2013	26%	47%	35%	23%	21%	24%	53%	30%
2014	-3%	6%	6%	8%	10%	3%	10%	2%
2015	-5%	6%	13%	-5%	5%	0%	-5%	1%
2016	7%	8%	4%	8%	10%	27%	4%	9%
2017	17%	8%	10%	12%	3%	7%	13%	8%
2018	-13%	-3%	-5%	-12%	-9%	-8%	-15%	-11%
2019	-1%	0%	-6%	-2%	1%	-5%	-2%	-2%
2020	3%	-6%	1%	-6%	-6%	0%	-2%	1%
2021	34%	42%	34%	39%	44%	36%	50%	37%
2022	-11%	-6%	-5%	-10%	-6%	-1%	1%	-12%
2022 Q1	-5%	-8%	-6%	-4%	-3%	-2%	0%	-5%
2022 Q2	-6%	1%	-4%	-3%	-1%	1%	4%	-4%
2022 Q3	-7%	0%	0%	-4%	-1%	1%	-1%	-4%
2022 Q4	8%	1%	6%	1%	-1%	0%	-2%	1%
1 Year	-11%	-6%	-5%	-10%	-6%	-1%	1%	-12%
3 Year	23%	26%	28%	17%	28%	34%	48%	22%
5 Year	6%	21%	14%	1%	19%	18%	23%	6%
7 Year	32%	42%	30%	22%	34%	61%	44%	25%
10 Year	53%	133%	109%	54%	89%	106%	131%	68%
ITD	126%	210%	225%	80%	206%	289%	157%	109%
3 Year CAGR	7.0%	8.1%	8.5%	5.4%	8.7%	10.4%	13.9%	6.8%
5 Year CAGR	1.2%	4.0%	2.7%	0.1%	3.5%	3.4%	4.3%	1.2%
7 Year CAGR	4.1%	5.1%	3.8%	2.9%	4.3%	7.1%	5.4%	3.2%
10 Year CAGR	4.3%	8.8%	7.6%	4.4%	6.5%	7.5%	8.7%	5.3%
ITD CAGR	5.5%	7.7%	8.1%	4.0%	7.6%	9.4%	6.4%	5.0%

[10] USD = US dollar, AUD = Australian dollar, CAD = Canadian dollar, CHF = Swiss franc, EUR = euro, GBP = British pound, JPY = Japanese yen, SGD = Singapore dollar.

[11] Frontaura returns are net of all fees for a reference investor joining the fund at inception, making no further contributions, making no withdrawals, and converting to Series B in 2021 Q2. Investors joining on other dates, making additional contributions, making withdrawals, or not converting to Series B in 2021 Q2 may have different results. Our auditor has audited USD results through 2021. We discuss our returns and different series here.

Figure A5
Frontaura Global Frontier Fund LLC
Portfolio Mix and Statistics[12]
31 December 2022

Holdings Summary[2]

Country	Holding
Philippines	17%
Vietnam	10%
USA (cash & accruals)	9%
Rwanda	7%
Cambodia	7%
Chile	7%
Côte d'Ivoire	6%
Peru	5%
Senegal	5%
Namibia	4%
United Arab Emirates	4%
Nigeria	4%
Colombia	3%
Tanzania	3%
Pakistan	2%
Uganda	2%
Bangladesh	2%
Niger	1%
Bahrain	1%

Region	Holding
Southeast Asia	34%
Sub-Saharan Africa	32%
Latin America & Caribbean	16%
USA (cash & accruals)	9%
Middle East / North Africa	5%
South Asia	4%

Sector	Holding
Financials	32%
Consumer Staples	27%
Cash & accruals (all countries)	12%
Consumer Discretionary	11%
Communication Services	5%
Industrials	5%
Real Estate	4%
Health Care	2%
Energy	2%

Portfolio Statistics	
Portfolio Price to LTM Earnings	6.0
Portfolio Price to Book	1.03
Portfolio LTM Dividend Yield	6.2%
Weighted Average ROEE	21.2%
Weighted Median ROEE	20.0%
Positions	31
Countries	19
Weighted Average Market Cap	$1,482m
Weighted Median Market Cap	$602m
Portfolio Turnover (12 Months)	45%
Portfolio Turnover (ITD)	31%
Standard Deviation (36 Months)	19%
Standard Deviation (ITD)	14%
Beta to S&P 500 (36 Months)	0.48
Beta to S&P 500 (ITD)	0.45
Assets Under Management	$122m

[12]Click here for an explanation of our holdings and portfolio statistics.

Figure A6
Frontaura Global Frontier Fund LLC
5 Best and Worst Performing Countries (Dollar Return)
2022 Q4

5 Best Countries			5 Worst Countries		
Country	**Frontaura Return ($millions)**[13]	**Frontaura Return (%)**	**Country**	**Frontaura Return ($millions)**	**Frontaura Return (%)**
Philippines	3.5	20%	Vietnam	(0.9)	-5%
Chile	3.0	38%	Côte d'Ivoire	(0.6)	-7%
Cambodia	2.2	33%	Rwanda	(0.4)	-4%
Peru	1.1	19%	Bangladesh	(0.3)	-15%
Namibia	1.0	21%	Colombia	(0.3)	-8%

Figure A7
Frontaura Global Frontier Fund LLC
5 Best and Worst Performing Countries (Percentage Return)
2022 Q4

5 Best Countries			5 Worst Countries		
Country	**Frontaura Return ($millions)**	**Frontaura Return (%)**	**Country**	**Frontaura Return ($millions)**	**Frontaura Return (%)**
Chile	3.0	38%	Egypt	(0.3)	-23%
Poland	0.2	35%	Bangladesh	(0.3)	-15%
Cambodia	2.2	33%	Bahrain	(0.3)	-12%
Namibia	1.0	21%	Colombia	(0.3)	-8%
Philippines	3.5	20%	Niger	(0.1)	-8%

[13] This footnote applies to all columns labeled "Frontaura Return ($millions)" and "Frontaura Return (%)" on this page and any similar page. Frontaura individual stock, country, and regional returns are before management fees, fund expenses, and any incentive compensation, as those deductions occur at the fund level and not at the individual stock, country, or regional level. Click here for an explanation of how we calculate country returns.

Figure A8
Frontaura Global Frontier Fund LLC
10 Best and Worst Performing Countries (Dollar Return)
2022

10 Best Countries			10 Worst Countries		
Country	Frontaura Return ($millions)[14]	Frontaura Return (%)	Country	Frontaura Return ($millions)	Frontaura Return (%)
Chile	4.9	54%	Kazakhstan	(6.7)	-45%
Rwanda	2.1	25%	Egypt	(2.9)	-30%
Tanzania	1.2	48%	Vietnam	(2.8)	-15%
Peru	0.8	13%	Bangladesh	(2.7)	-58%
Senegal	0.8	11%	Philippines	(2.3)	-9%
Côte d'Ivoire	0.6	7%	Colombia	(2.3)	-37%
Cambodia	0.5	5%	Georgia	(2.2)	-35%
Botswana	0.3	9%	Kenya	(1.5)	-20%
Namibia	0.3	6%	Nigeria	(0.8)	-16%
United Arab Emirates	0.2	3%	Uganda	(0.5)	-17%

Figure A9
Frontaura Global Frontier Fund LLC
10 Best and Worst Performing Countries (Percentage Return)
2022

10 Best Countries			10 Worst Countries		
Country	Frontaura Return ($millions)[15]	Frontaura Return (%)	Country	Frontaura Return ($millions)	Frontaura Return (%)
Chile	4.9	54%	Bangladesh	(2.7)	-58%
Tanzania	1.2	48%	Kazakhstan	(6.7)	-45%
Poland	0.2	41%	Colombia	(2.3)	-37%
Rwanda	2.1	25%	Georgia	(2.2)	-35%
Niger	0.2	16%	Egypt	(2.9)	-30%
Peru	0.8	13%	Kenya	(1.5)	-20%
Senegal	0.8	11%	Uganda	(0.5)	-17%
Ecuador	0.1	10%	Nigeria	(0.8)	-16%
Botswana	0.3	9%	Bahrain	(0.4)	-16%
Côte d'Ivoire	0.6	7%	Vietnam	(2.8)	-15%

[14] This footnote applies to all columns labeled "Frontaura Return ($millions)" and "Frontaura Return (%)" on this page and any similar page. Frontaura individual stock, country, and regional returns are before management fees, fund expenses, and any incentive compensation, as those deductions occur at the fund level and not at the individual stock, country, or regional level. Click here for an explanation of how we calculate country returns.

Figure A10
Frontaura Global Frontier Fund LLC
Performance by Region and Country
2022 Q4

Region / Country	Frontaura Return ($millions)[16]	Frontaura Return (%)	MSCI Small Cap Return (%)[17]	MSCI Standard Return (%)
Southeast Asia	**4.9**	**12%**		
Philippines	3.5	20%	15%	21%
Cambodia	2.2	33%	--	--
Vietnam	(0.9)	-5%	-20%	-14%
Latin America & Caribbean	**3.8**	**21%**		
Chile	3.0	38%	30%	6%
Peru	1.1	19%	--	17%
Ecuador	0.0	0%	--	--
Colombia	(0.3)	-8%	-7%	20%
Sub-Saharan Africa	**1.6**	**4%**		
Namibia	1.0	21%	--	--
Senegal	0.8	14%	--	14%
Nigeria	0.6	18%	-5%	3%
Tanzania	0.3	8%	--	--
Uganda	0.1	4%	--	--
Niger	(0.1)	-8%	--	--
Rwanda	(0.4)	-4%	--	--
Côte d’Ivoire	(0.6)	-7%	--	--
Eastern Europe	**0.2**	**35%**		
Poland	0.2	35%	38%	48%
South Asia	**0.0**	**1%**		
Pakistan	0.4	13%	--	1%
Bangladesh	(0.3)	-15%	-6%	-2%
Middle East / North Africa	**(0.9)**	**-8%**		
Bahrain	(0.3)	-12%	1%	2%
United Arab Emirates	(0.3)	-4%	-5%	-2%
Egypt	(0.3)	-23%	8%	29%

[16] The Frontaura Return footnote on the first attribution table on a prior page applies to all Frontaura Return columns on this page.

[17] This footnote applies to all columns labeled “MSCI Small Cap Return” and “MSCI Standard Return” on this page and any page with a similar table. We state MSCI small cap and MSCI standard (large cap and mid-cap stocks) country indices on a total return basis with dividends net of any withholding tax. We show “--” if MSCI does not have a small cap or a standard index for a given country.

Figure A11
Frontaura Global Frontier Fund LLC
Performance by Region and Country
2022

Region / Country	Frontaura Return ($millions)[18]	Frontaura Return (%)	MSCI Small Cap Return (%)[19]	MSCI Standard Return (%)
Latin America & Caribbean	**3.5**	**16%**		
Chile	4.9	54%	20%	19%
Peru	0.8	13%	--	9%
Ecuador	0.1	10%	--	--
Colombia	(2.3)	-37%	-46%	-6%
Sub-Saharan Africa	**2.7**	**5%**		
Rwanda	2.1	25%	--	--
Tanzania	1.2	48%	--	--
Senegal	0.8	11%	--	11%
Côte d'Ivoire	0.6	7%	--	--
Botswana	0.3	9%	--	-10%
Namibia	0.3	6%	--	--
Niger	0.2	16%	--	--
Zambia	0.0	0%	--	--
Ghana	(0.1)	-5%	--	--
Uganda	(0.5)	-17%	--	--
Nigeria *	(0.8)	-16%	-5%	-3%
Kenya *	(1.5)	-20%	-15%	-31%
Eastern Europe	**0.2**	**41%**		
Poland	0.2	41%	-16%	-27%
South Asia	**(3.0)**	**-34%**		
Pakistan	(0.3)	-7%	--	-37%
Bangladesh	(2.7)	-58%	-22%	-23%
Middle East / North Africa	**(3.1)**	**-15%**		
United Arab Emirates	0.2	3%	-1%	-6%
Bahrain	(0.4)	-16%	-9%	20%
Egypt	(2.9)	-30%	-26%	-23%
Southeast Asia	**(4.7)**	**-8%**		
Cambodia	0.5	5%	--	--
Papua New Guinea	(0.1)	-3%	--	--
Philippines	(2.3)	-9%	-17%	-14%
Vietnam	(2.8)	-15%	-50%	-44%
Eurasia	**(8.9)**	**-42%**		
Georgia	(2.2)	-35%	--	--
Kazakhstan	(6.7)	-45%	--	-29%

* We present MSCI returns as it reports them, although we think it overstates performance by not marking down the Nigerian naira and Kenyan shilling to more conservative levels. If it marked the naira as we did at the end of 2021 and 2022, we estimate its Nigeria small cap return for 2022 would -19% instead of -5% and its Nigeria standard return would be -17% instead of -3%. If it marked the shilling as we did at the end of 2022, we estimate its Kenya small cap return for 2022 would -18% instead of -15% and its Kenya standard return would be -34% instead of -31%. See our 2020 Q4 letter, page 3, on Nigeria and our August 2022 comment on Kenya.

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[18] The Frontaura Return footnote on the first attribution table on a prior page applies to all Frontaura Return columns on this page.

[19] This footnote applies to all columns labeled "MSCI Small Cap Return" and "MSCI Standard Return" on this page and any page with a similar table. We state MSCI small cap and MSCI standard (large cap and mid-cap stocks) country indices on a total return basis with dividends net of any withholding tax. We show "--" if MSCI does not have a small cap or a standard index for a given country.

Figure A12
Frontaura Global Frontier Fund LLC
Significant Quarterly Country Mix Changes[20]
2022 Q4

Country	Percentage Point Change	Explanation
Chile	+4	Added position Q4 2022

Figure A13
Frontaura Global Frontier Fund LLC
Significant Annual Country Mix Changes
2022

Country	Percentage Point Change	Explanation
Cambodia	+7	Re-entered country Q1 2022, relative outperformance
Peru	+5	Re-entered country Q2 2022, relative outperformance
Namibia	+4	Entered country Q2 2022
Chile	+4	Added position Q4 2022
Vietnam	+3	Added positions Q2-Q4 2022
Pakistan	+2	New multinational position we classify as Pakistan Q2 2022
United Arab Emirates	-2	Trimmed existing position Q3-Q4 2022
Ghana	-2	Exited position and country Q1 2022
Botswana	-3	Exited position and country Q3 2022
Papua New Guinea	-3	Exited position and country Q1-Q2 2022
Georgia	-4	Exited position and country Q2 2022
Kenya	-5	Exited positions and country Q2-Q3 2022
Egypt	-7	Exited positions and country Q1-Q4 2022
Kazakhstan	-11	Exited positions and country Q2 2022

[20] We show countries whose weighting has changed by two percentage points or more. Total may not add to 0 due to rounding and exclusion of countries changing by less than two percentage points. Note that we do not show the United States as we only hold cash there. Click here for a discussion of how we classify cash by country.

Figure A14
Frontaura Global Frontier Fund LLC
Portfolio Concentration[21]
2022

	Companies	Countries	Change from Prior Quarter		Change from Prior Year	
			Companies	Countries	Companies	Countries
Positions	31	19	0	-2	-2	-2
Top 5	32%	48%	0	+1	0	+1
Top 10	53%	73%	-2	+2	+1	0
Top 20	76%	91%	-2	-1	-3	-6
Top 20 + USA (Cash)	86%	100%	+1	+1	+5	+1

[21] We do not include the US in our country count and most of the percentage totals as we hold only cash there. Change from the prior quarter and the year ago quarter represent the change in the number of positions and the change in percentage points for the top 5, 10, and 20 positions. The Top 20 + USA row does include the US cash percentage in the percentage totals. Click here for a discussion of how we classify cash by country.