

"Donuts Are Good For You"

Q&A with Portfolio Manager Joe Gubler

August 2025

Risk Lens – our free, cloud-based investment analysis tool – helps advisers and asset managers unlock portfolio risk and manager skill.

In this Q&A, Causeway portfolio manager Joe Gubler joins Turner Swan, chief operating officer of Risk Lens, to discuss why our ***Risk Donut*** is good for you.

Key insights

- Assessing risk is critical to building quality investment portfolios for clients. Key metrics include:
 - Overall risk allocation
 - Top risk exposures
 - Top stocks by contribution to risk
- These metrics are in our ***Risk Donut*** in Causeway Risk Lens.

Turner Swan: Joe, let's start at the beginning with the obvious question. What is the ***Risk Donut***?

Joe Gubler: The best way to answer that is with a picture. Figure 1 below is a Single Fund Summary from Risk Lens. The circular graph labelled "Risk Allocation: Active" is what we call the ***Risk Donut*** because, well, it looks like a donut.

FIGURE 1: RISK ALLOCATION: ACTIVE



TS: I'll give you that, it does look like a donut. But donuts are usually unhealthy. Why do you claim the Risk Donut is "good for you?"

JG: This is a healthy donut for investment advisers because it graphs the percentages of a fund's six risk categories. This way, an adviser can quickly see the main risks that are contributing to predicted tracking error. For a Risk Allocation: Active report, like this one, the fund's Active risk is defined as its Predicted Tracking Error. We then show the percentage each risk category contributes to Predicted Tracking Error.

For example, in Figure 1, Predicted Tracking Error is 3.82% and Style Factors contribute 47.23%. That means Style exposures contribute just over 1.80 percentage points of the Predicted Tracking Error ($47.23\% \times 3.82\% = 1.80\%$). The six risk categories will always sum to 100%.

So a user can readily see from the **Risk Donut** that the largest source of active risk for this fund is exposure to Style Factors. And we don't look backwards at prior performance and prior risk exposures. The Risk Lens proprietary risk model, which is "holdings based," forecasts risk exposures based on a fund's latest publicly available holdings.

TS: Risk donuts are "good for you" then because they educate advisers on a fund's key risk exposures?

JG: Exactly. It's like a microscope into the risk posture of a fund based on its holdings.

TS: Under the Risk Donut, we have Top Risk Policies: Active. Can you describe that table?

JG: Sure. Let's take the Taiwan exposure as an example. The 4.25% "Active Exp." means Taiwan's weight in the fund exceeds the benchmark weight by 4.25 percentage points. These top risks are listed by "TCAR," which stands for total contribution to active risk, with active risk defined as Predicted Tracking Error, which you remember from Figure 1 is 3.82%. The

TOP RISK POLICIES: ACTIVE ⓘ

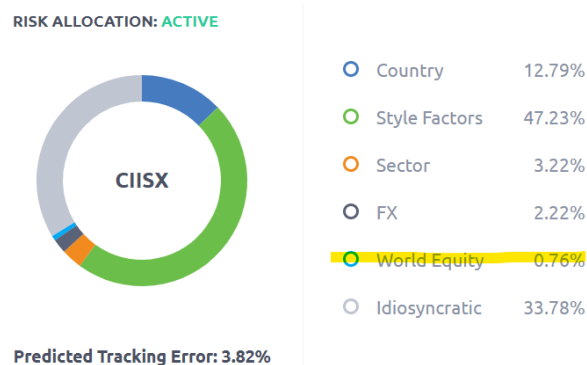
| Policy | Active Exp. | TCAR | % of Tot |
|----------------|-------------|-------|----------|
| STYLE-Value | 0.69 | 0.95% | 24.7 |
| STYLE-Momentum | 0.29 | 0.67% | 17.5 |
| Taiwan | 4.25% | 0.17% | 4.4 |
| STYLE-Size | 0.27 | 0.14% | 3.7 |
| Japan | 2.98% | 0.13% | 3.4 |

[View Top 25 Risk Policies](#)

Taiwan TCAR is 0.17 percentage points of the 3.82% tracking error or 4.46% of the total tracking error. If we wrote out the calculation it would look like this: $0.17 \div 3.82 = 4.45$ (or actually 4.46 after decimal point rounding).

“Top Stocks: Active” works the same way, but instead of risk exposures, we look at each stock and rank it by TCAR. Again, TCAR is percentage points of predicted tracking error and “% of Total” is the particular stock’s percentage of total tracking error.

TS: Users sometimes ask about the “World Equity” risk category. Can you help us with that metric?



JG: The World Equity factor measures the exposure of a fund to global equity markets. Every stock is assigned an exposure of 1.0 to the World Equity factor. Cash and any other non-equity asset are each assigned an exposure of 0.0. Funds that aren’t fully invested – like funds with high cash weights – will have lower absolute World Equity percentages. And their active

(benchmark relative) World Equity percentages will actually be negative. For example, if you’re looking at an Active Risk Donut, a positive World Equity percentage would mean the fund is not fully invested in equities and has market timing risk that’s increasing predicted tracking error.

TS: Here’s another question we’ve had from users. Why aren’t the active exposures of style risks expressed as percentages?

JG: That is a good question because the answer isn’t intuitive. Style active exposures are not expressed as percentages, but instead are “z-scores” from -3.0 (least representative of style) to +3.0 (most representative of style). Basically, these are standard deviation measurements. For example, a Growth style z-score of +1.0 would indicate a value that is positive one standard deviation from the mean.

TS: Right, so in that example we would expect that 68% of funds mapping to the same benchmark would have active Growth exposure within 1 standard deviation of the average or, that is, within a z-score range from -1 to +1.

JG: Yes. And then our risk model converts the style z-score into TCAR.

TS: We've been looking at active risk, which is relative to the benchmark. What if a user wants to look at absolute risk?

JG: Then you would select the "Absolute On" button like this:

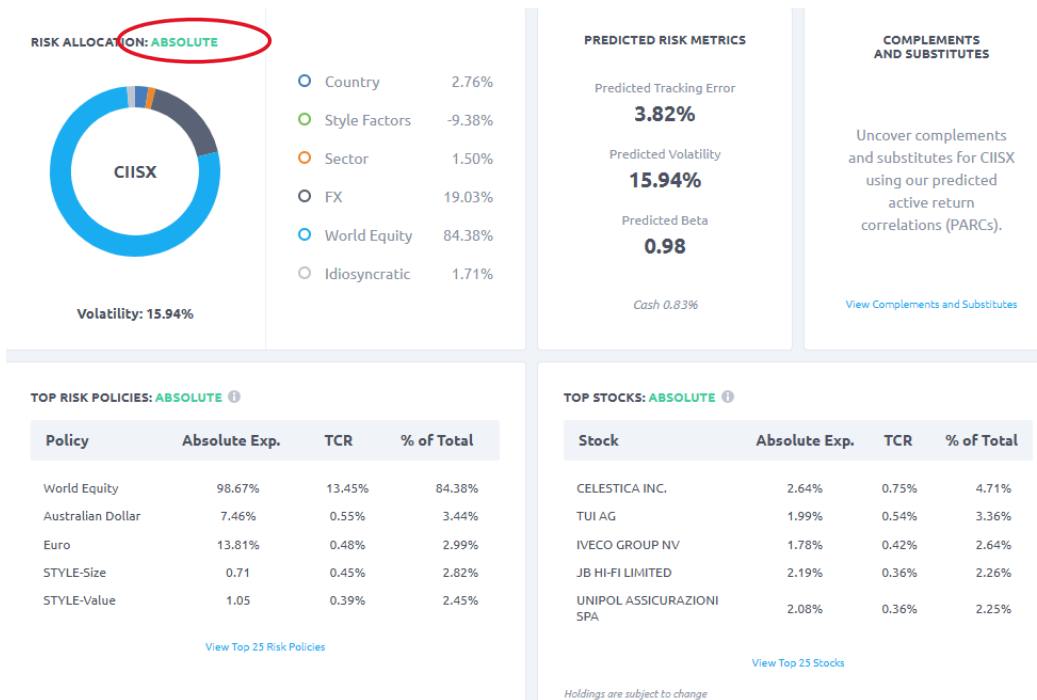


The ***Risk Donut*** in Figure 2 shows absolute exposures to the six risk categories, and the same for Top Risk Policies and Top Stocks. The absolute exposures are listed by "TCR" or total contribution to risk, with risk defined as predicted volatility. The volatility percentage represents one standard deviation from the fund's mean return. The "TCR" values are percentage points, and the total TCRs of all risk exposures (or all stock exposures) will equal the volatility percentage.

TS: So when you're running an "absolute" ***Risk Donut*** report, like in Figure 2, it's important to remember that the risk contributions are portions of predicted volatility, rather than predicted tracking error.

"Risk Donut" showing absolute risk allocation by category.

FIGURE 2: RISK ALLOCATION: ABSOLUTE



For illustrative purposes only. Source: Causeway Risk Lens. See Important Disclosures at end of presentation.

JG: Yep. There is one other cool feature I wanted to mention. The screen only shows top 5 risk policies and stocks – whether by TCAR for active or TCR for absolute – but users can click on “View Top 25 Risk Policies” or “View Top 25 Stocks” to drill down to see top 25 risk exposures or stocks. Using this enhanced “X-Ray” feature, you can look even further into a portfolio.

Click these links to drill down to top 25 risk exposures and stocks.

FIGURE 3: TOP 25 RISK POLICIES AND TOP 25 STOCKS

| TOP RISK POLICIES: ABSOLUTE | | | |
|---|---------------|--------|------------|
| Policy | Absolute Exp. | TCR | % of Total |
| World Equity | 98.67% | 13.45% | 84.38% |
| Australian Dollar | 7.46% | 0.55% | 3.44% |
| Euro | 13.81% | 0.48% | 2.99% |
| STYLE-Size | 0.71 | 0.45% | 2.82% |
| STYLE-Value | 1.05 | 0.39% | 2.45% |
| View Top 25 Risk Policies | | | |

| TOP STOCKS: ABSOLUTE | | | |
|------------------------------------|---------------|-------|------------|
| Stock | Absolute Exp. | TCR | % of Total |
| CELESTICA INC. | 2.64% | 0.75% | 4.71% |
| TUI AG | 1.99% | 0.54% | 3.36% |
| IVECO GROUP NV | 1.78% | 0.42% | 2.64% |
| JB HI-FI LIMITED | 2.19% | 0.36% | 2.26% |
| UNIPOL ASSICURAZIONI SPA | 2.08% | 0.36% | 2.25% |
| View Top 25 Stocks | | | |

Holdings are subject to change

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| STYLE-Size | 0.71 | 0.45% | 2.82% |
| STYLE-Value | 1.05 | 0.39% | 2.45% |
| Japan | 25.34% | 0.36% | 2.24% |
| British Pound | 6.63% | 0.33% | 2.04% |
| Japanese Yen | 25.34% | 0.32% | 2.03% |
| Canadian Dollar | 8.13% | 0.32% | 1.98% |
| South Korean Won | 5.66% | 0.25% | 1.59% |
| Taiwan Dollar | 9.86% | 0.21% | 1.31% |
| Industrials | 23.25% | 0.16% | 1.02% |
| Financials | 16.34% | 0.11% | 0.72% |
| Italy | 6.48% | 0.10% | 0.63% |
| Indian Rupee | 5.33% | 0.09% | 0.59% |
| Materials | 7.30% | 0.07% | 0.47% |
| Norwegian Krone | 0.82% | 0.07% | 0.42% |
| Brazilian Real | 1.23% | 0.07% | 0.42% |
| United Kingdom | 6.63% | 0.07% | 0.42% |
| Canada | 8.13% | 0.06% | 0.40% |
| Information Technology | 15.16% | 0.06% | 0.39% |
| Swedish Krona | 1.06% | 0.06% | 0.39% |
| Germany | 2.79% | 0.06% | 0.36% |
| Singapore Dollar | 1.99% | 0.06% | 0.35% |
| China Renminbi | 3.91% | 0.06% | 0.35% |

TS: Joe, thank you for explaining our Risk Donut and some of Risk Lens' other key risk features.

To sign up for Risk Lens, go to analytics.causewaycap.com.

Important Disclosures

About Risk Lens: Causeway manages global equities, fusing fundamental and quantitative analysis since 2001 and manages \$61.7 billion (at 6/30/25). In 2013, Causeway launched Risk Lens to bring the power of its risk model to clients, introducing the easy-to-use web application in 2019. Risk Lens covers approximately 3,700 U.S.-registered equity mutual funds and ETFs, approximately 9,500 share classes, and 37 benchmarks across all major geographies.

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