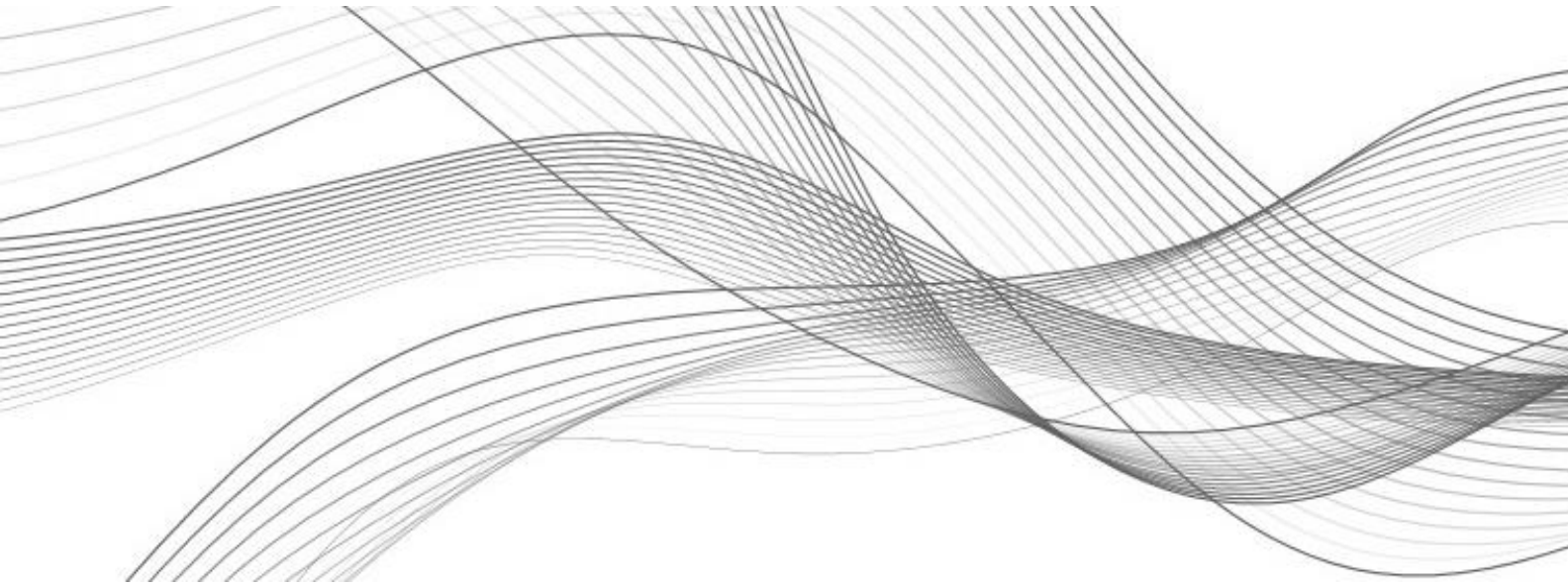
UBS

UBS Quant Research

Data, Models and Analytics

Tear Sheets



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UBS Quant Answers

Tap into the Quant Research team's innovation

Who are UBS Quant Research?

The UBS Global Quant Research team is headed by Paul Winter with 20+ researchers located in Australia, the Americas, Europe and Asia. The team leverages 20+ years of industry experience (both buy-side and sell-side) from senior members of the team to deliver to clients innovative and unique alpha ideas, using traditional and alternative data sources. Our offerings have broad appeal across both fundamental and quantitative investors whether they are looking for uncorrelated sources of alpha, sector insights, improved risk control or proprietary data. The team is always looking to be an industry leader, whether by utilizing technological advances via machine learning techniques, exploring LLMs and AI, or systematically identifying idiosyncratic insights from UBS sector analysts while retaining investment intuition.

To increase the ease with which clients can access our data, we have developed a proprietary platform, UBS Quant Answers, which delivers these insights to clients via API or Excel add-in.

What is UBS Quant Answers?

UBS Quant Answers is a powerful and broad platform that helps investors interpret and manage their exposures and risks across a wide range of market factors and influences.

UBS Quant Answers allows our clients, from quant to fundamental investors, to tap directly into the innovation that is being developed by the Quant Research team at UBS.

UBS Quant Answers delivers portfolio risk forecasting with the well-known UBS Hybrid Risk Model, portfolio style and fundamental analysis, our successful Style Guide product and several other data and analysis modules, giving a customized offering to our clients.

Data Set Delivery Methods

Check each data set's tear sheet below for the delivery methods available.

- **UBS Quant Answers documentation page**: UBS Quant Answers (individual access is required: request access)

- **API**: OpenAPI standard with token-based authentication. See the documentation page above to get started:
  A token must be generated in 'Answers Token'
  A Python client and example queries for each data set are provided

- **Excel Add-in**: Available from the Microsoft Store for easy access.
  Home menu > Add-ins button > search for 'UBS Quant Answers'

- **SFTP**: Certain data sets are only available via SFTP, others can be delivered this way on request.

Useful Links

- UBS Quant Answers marketing site
- Quant Research on UBS Neo (access required)
- UBS Quant Answers (access required)
- Get in touch: UBS-Quant-Answers@ubs.com

UBS Quant Research Analytics and Data

- **UBS Quant Answers**
- **UBS Quant Research Data Quality**

- Analyst Estimates
- Analyst Upside Rankings
- Key Calls
- Quant Research Review

- Comprehensive Crowding
- Ownership
- Stock Loan Alpha
- Hedge Fund Idiosyncratic Score
- Best Active Insights

- Carbon Score
- Default Risk
- Intangible Capital
- Machine Learning Earnings Growth
- Nowcasting Company Surprises
- Sector Fundamental Models

- Hybrid Risk Models
- Portfolio Analytics
- Capacity Analysis

- Factor Values
- Style Guide

- Industry Network Intelligence

- MacroSense
- Market Statistics
- Macro Strategy Regimes
- Commodity Forecasts
- Global Economic Forecast Database
- Global Risk Appetite Index

- China Company Visits
- China Margin Financing & Short Selling
- China News Sentiment
- China Offshore Ownership
- China Onshore Ownership HF Sectors
- China Onshore Ownership MF
- China Southbound Ownership [NEW]

- India Mutual Fund Ownership [NEW]

- Technical Indicators in Asia [NEW]

- Japan Cross-Shareholding Network
- Japan Cross-Shareholding Factors
- Japan Cross-Shareholding Unwind Prediction

Analyst Estimates

Tags	Format	Delivery Method	Publication	Investment Horizon
Estimates, Analyst Forecasts	csv	sftp or email	Intraday	< 12 months
Related Research:	UBS Neo Research			

Point-in-time and intraday UBS analyst estimate data

Description

A wide range of valuation and accounting data points per stock direct from UBS analysts across the full global universe of coverage of over 4,100 firms. Available back to 2003 or delivered live.

Analyst data stats:

UBS coverage universe	Over 4,100 global stocks
History	Point-in-time from 2003
Quality	Data quality checks and Investment Review Consultation
Frequency	30-minute intraday updates available
Analysts	Award-winning global analyst team

Historical Data

Point-in-time daily, weekly or monthly data from 2003 onward.

30-minute updates available from early 2021.

Methodology

Company analysts cover over 4,100 companies, arranged into global teams by sector (plus macro sector analysts).

We perform quality checks and have an Investment Review Consultation to review significant changes to forecasts.

Our WIRE database contains both historical and forecast accounting data maintained by UBS company analysts.

Analysts are required to input forecasts on all accounting items for at least five years forward.

Integrated financial statements (e.g. cash flow items flow through from income statement and balance sheet).

Data Shape

Standard format includes long-form data split across two files. One file contains company metadata with IDs, name, etc. The other contains the estimates. Each file contains the companies that have had an update since the file was last run. Customised feeds are available.

Analyst Upside & Downside Rankings

Tags	Format	Delivery Method	Publication	Investment Horizon
Estimates, Analyst Forecasts	csv, json, xlsx	UBS Quant Answers API or Excel	Live	< 12 months
UBS Quant Answers API:	/api/analyst_data/analyst_rankings			
Related Research:	Quantitative Monographs "What Information is in Analyst Upside Rankings?"			

Finding analysts' 'best ranked ideas' on the upside and downside

Description and Methodology

We've used a point-in-time database containing daily time-stamped UBS analysts price targets for global coverage back to 2008. We tie each stock to the lead analyst at each point in time and calculate the forecast upside or downside for each stock. We then apply a ranking to each stock under the analyst's coverage, ranking by upside from most to least. We find that this simple method yields an effective way to determine what could be each analyst's 'best ranked idea'.

With over 340 lead stock-covering analysts at UBS, this means we have the potential to uncover numerous high conviction ideas. This straightforward approach shows that analysts generally have a handful of high conviction ideas on both the upside and downside. Going down the rankings, the efficacy of the signal fades. This is a simple approach that can be used to quickly determine potential high conviction ideas.

Historical Data

Data is initially available from August 2023, with longer history available on request.

Data Shape

Data frame containing analyst coverage, ratings, price targets and rankings based on upside and downside potential.

Data example: analyst upside and downside rankings

dt	analyst_email_address	identifier	name	recommendation	close_price	price_target	upside	upside_ranking	downside_ranking
2023-11-15	joe.bloggs@ubs.com	1234567	Company A	Buy	81.25	110	1.353846	1	19
2023-11-15	joe.bloggs@ubs.com	2345678	Company B	Buy	57.2	74	1.293706	2	18
2023-11-15	joe.bloggs@ubs.com	3456789	Company C	Buy	114.6	145	1.265271	3	17
2023-11-15	joe.bloggs@ubs.com	4567890	Company D	Buy	19.94	23.5	1.178536	4	16
2023-11-15	joe.bloggs@ubs.com	5678901	Company E	Neutral	73	85	1.164384	5	15

Best Active Insights

Tags	Format	Delivery Method	Publication	Investment Horizon
Alpha, Quant, Fundamental, Positioning	csv, json, xlsx	UBS Quant Answers API or Excel	Monthly 1st calendar day 17:30 UTC	< 12 months
UBS Quant Answers API:	/api/ownership/best_active_insights			
Related Research:	Quantitative Monographs "Best Active Insights"			

A stock-level signal from proven active skill

Description and Methodology

The Best Active Insights factor is derived from the positioning of skilful equity fund managers, primarily long-only mutual funds. To systematically analyse fund positioning and performance, we map each fund to the nearest benchmark from the MSCI suite, then identify top-performing managers based on their information ratio. The Best Active Insights factor represents the average positioning of the top decile managers.

By identifying managers who have demonstrated superior skill relative to appropriate benchmarks and aggregating their active positions, the data set provides a way to observe where informed capital is most consistently allocated. The approach emphasises diversification, balanced style exposure, and dynamically evolving regional and sector positioning, making the data set relevant across market environments and investment styles.

Historical Data

Quarterly data is available from March 2012.
Monthly data is available from March 2026.
Global coverage increasing over history to ~11,000+ stock lines per month end.

Data Shape

Single floating point score per stock per date.

Data example: Best Active Insights

Date	Identifier	Country	Sector	Industry group	BAI score
2026-03-31	0123456	GB	Consumer Discretionary	Consumer Durables & Apparel	-0.0000146
2026-03-31	BYM9ZP2	US	Information Technology	Technology Hardware & Equipment	0.0008485
2026-03-31	6543792	JP	Materials	Materials	-0.0000831
2026-03-31	5465358	DE	Materials	Materials	-0.0000139
2026-03-31	BQ1L7V3	US	Industrials	Capital Goods	0.0001192

Capacity Analysis

Tags	Format	Delivery Method	Publication	Investment Horizon
Portfolio Management, Long only	csv, xlsx	Bespoke request	Monthly	> 1 month
Related Research:	Quantitative Monographs "What is your fund's capacity?"			

Determine your fund's capacity using a suite of different methods

Description

Our interactive model estimates capacity using five different methods. It allows the user to input a fund's holdings and change adjustable drivers.

Capacity analysis is important for determining how large your fund can get before hitting its capacity. It is also of interest when launching new funds to determine how large it could possibly be.

Historical Data

Historical analysis is available dependent on the particular index used.

Methodology

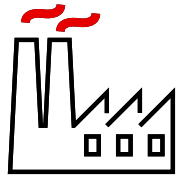
We have built an interactive model that estimates capacity using five different methods. These methods consider a variety of variables including market statistics and statistics from a fund.

Data Shape

The output is two dataframes spread across two sheets. One contains the assumptions used in the model, the other has the estimates. With a bespoke request the file is an interactive model which allows you to change your assumptions.

Input Parameter:	Capacity Estimates:
Portfolio holdings	Average capacity (m)
Benchmark index	Excess capacity
Currency	Historical alpha decay
Max ownership	Market turnover
Efficient fund ADV (%)	Fund turnover
Days to liquidate	Stock level liquidation
Trading days in period	Maximum ownership
Efficient benchmark ADV (%)	
Target excess return	

Carbon Score



Tags	Format	Delivery Method	Publication	Investment Horizon
ESG, Sustainability	csv, json, xlsx	UBS Quant Answers API or Excel	Weekly Thursdays 20:15 UTC	> 1 month

UBS Quant Answers API:	/api/proprietary_factors/carbon
Related Research:	Quantitative Monographs "Alternative carbon metrics"

What do your companies look like from a carbon perspective?

Description and Methodology

We consider three carbon metrics:

- carbon emissions to sales (aka carbon intensity)
- emissions to earnings (a crude measure of carbon risk) and
- emissions to market cap (associated with a portfolio's carbon footprint)

For each stock, we compute the percentile rank of the stock versus its region and sector by these three metrics and take the average to get an overall composite carbon score.

Companies with a low composite score:

- should be efficient in producing their goods and services from a carbon perspective
- will make only a small contribution towards your portfolio's carbon footprint
- will hopefully have a lower exposure to carbon risk

Historical Data

Data is available from 2005 for a universe of about 9,000 stocks. Latest data is updated weekly; historical data is yearly.

Data Shape

Single floating point score per security. In Portfolio Analytics the portfolio and benchmark level weighted average values are reported.

In Portfolio Analytics stock level carbon scores, and the portfolio and benchmark level weighted average carbon score, are reported.

Data example: carbon composite score time series

date	identifier	name	composite_factor
31/12/2015	BAQPCW0	Company A	0.0344827
30/12/2016	BAQPCW0	Company A	0.0333333
29/12/2017	BAQPCW0	Company A	0.0333333
31/12/2018	BAQPCW0	Company A	0.2333333
31/12/2019	BAQPCW0	Company A	0.3118279
31/12/2020	BAQPCW0	Company A	0.4408602
31/12/2021	BAQPCW0	Company A	0.4193548
31/12/2015	2B418KB	Company B	0.4367816
30/12/2016	2B418KB	Company B	0.4111111
29/12/2017	2B418KB	Company B	0.3555555
31/12/2018	2B418KB	Company B	0.1888888
31/12/2019	2B418KB	Company B	0.1720430
31/12/2020	2B418KB	Company B	0.1612903
31/12/2021	2B418KB	Company B	0.1397849

China Company Visits

Tags	Format	Delivery Method	Publication	Investment Horizon
Sentiment, China	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+1 Every day 07:15 UTC	> 1 month
UBS Quant Answers API:	/api/proprietary_factors/china_company_visit			
Related Research:	Quantitative Monographs "Can we trade on company visits in China?"			

Stocks with company visits by different types of investors

Description and Methodology

Based on the communication activities between investors and listed companies in China, from Datayes Institution Field Research Dataset, we aggregate the number of company visits, as well as the number of visitors by different investor types.

This allows users to quantify the institutional investor attention, from both onshore and offshore investors, towards their China A-share portfolios.

Please refer to our publication "Can we trade on company visits in China?" for more details.

Historical Data

Data available from 1 January 2013 to date.

Coverage of over 300 Chinese companies with visits per month.

Data example: number of visits and number of investors

Identifier	Date	Announcement Date	Survey Date	Activity Type Ref	Survey Type Code Ref	Number of all investors	Number of offshore investors	Number of onshore mutual funds
688217 CH Equity	28/10/2022	25/10/2022	07/09/2022	due_ diligence	onsite	22	0	9
688212 CH Equity	28/10/2022	25/10/2022	08/09/2022	due_ diligence	onsite	69	0	23
688700 CH Equity	28/10/2022	25/10/2022	15/09/2022	due_ diligence	onsite	26	0	4
002987 CH Equity	28/10/2022	25/10/2022	02/10/2022	due_ diligence	onsite	8	0	1
688700 CH Equity	28/10/2022	25/10/2022	02/10/2022	due_ diligence	video_ meeting	16	0	3
000338 CH Equity	28/10/2022	25/10/2022	15/10/2022	due_ diligence	onsite	4	0	0
002920 CH Equity	28/10/2022	25/10/2022	15/10/2022	due_ diligence	video_ meeting	9	0	5
300382 CH Equity	28/10/2022	25/10/2022	15/10/2022	others	video_ meeting	62	0	29
300587 CH Equity	28/10/2022	25/10/2022	15/10/2022	due_ diligence	onsite	15	0	2
300638 CH Equity	28/10/2022	25/10/2022	15/10/2022	others	online_ meeting	60	0	25

China Margin Financing & Short Selling

Tags	Format	Delivery Method	Publication	Investment Horizon
Positioning, China, Flow, Risk	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+1 01:10 UTC 09:10 Beijing	Any
UBS Quant Answers API:	/api/proprietary_factors/china_margin_financing_short_selling			
Related Research:	Quantitative Monographs "Quantifying onshore margin financing and short selling"			

Crucial insight into China onshore investors' leverage and borrowing

Description and Methodology

Since its launch in 2010, China's Margin Financing and Short Selling trading scheme has gone through periods of significant change and rapid development. For margin financing and short selling, we devised standardised proxies to capture the information in both positions (margin financing balance) and fund flows (net margin buying). Based on a combination of positions and flows, we have found leveraged investors have been generally sophisticated on the short side, while on the margin long side we have observed mixed stock selection skills across different size bands.

Since it is one of few channels for onshore investors to increase leverage and borrow cash to invest in equity markets, we have looked at two use cases where leverage is crucial: 1) around index rebalance events, margin financing flows can be a good proxy to quantify the level of crowdedness from onshore hedge funds pre-positioning for the index inclusion and exclusion names; 2) based on the balance of margin financing, we can detect investor willingness to increase leverage and take risks, and predict the style rotations when the switch between risk-on and risk-off occurs.

Historical Data

Data available from March 2010.

Coverage increases to over 3,400 Chinese equities.

Data Shape

Fifteen floating point values per stock per date.

Data example: China onshore margin financing and short selling metrics

Date	identifier	Margin Financing Composite	Short Selling Composite	% Margin Financing	Change in % Margin Financing	% Short Selling Balance	Change in % Short Selling Balance	Margin Financing Balance
30/06/2024	6003452	0.289405	0.866468	0.019904	0.000323	0.000156	1.27E-05	178531212
30/06/2024	6045911	0.088824	0.937713	0.021278	-0.00045	0.000293	9.31E-06	799861783
30/06/2024	6107878	0.816546	0.636945	0.07643	0.000837	0.000236	-6.1E-07	550641998

Change in Margin Financing Balance	Margin Buying Value	Margin Sell Return Value	Short Selling Balance	Change in Short Selling Balance	Short Selling Balance Volume	Short Selling Volume	Short Selling Buy Cover Volume
2329953	13663386	11333433	1394932	110110	452900	39800	2700
-1.4E+07	75116272	89262912	11029067	387152	478900	18800	3600
1682838	12651435	10968597	1703346	-18022	272100	0	700

China News Sentiment

Tags	Format	Delivery Method	Publication	Investment Horizon
Sentiment, China, Sector Rotation	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+0 20:30 UTC	Any

UBS Quant Answers API:	/api/proprietary_factors/china_news_sentiment /api/sector_rotation/china_news_sentiment_sector
Related Research:	Quantitative Monographs "Can we trade on news sentiment in China?" Quantitative Monographs "News Sentiment Barometer in China: which sectors..."

Domestic news sentiment in China: stock and sector

Description and Methodology

Based on DataYes News Sentiment Dataset, we apply proprietary aggregation to calculate the total news sentiment score, as the sum of all sentiment scores across all news reports, for each stock, on each day.

The new factor integrates both the level of domestic investor attention and the direction of sentiment as well. Moreover, we observe positive correlation between news sentiment and retail investor sentiment in China.

Users can use this dataset to quantify the domestic sentiment from mass media and retail investors in China across their portfolios. Please refer to our publication "Can we trade on news sentiment in China?" for more details.

News Sentiment by Sector

Implied sector positioning is also available. We calculate the sector weights within the top (highest sentiment) decile and bottom (lowest sentiment) decile within the universe and then subtract one from the other to arrive at an implied sector weight.

Please refer to our publication "News Sentiment Barometer in China: which sectors and styles does our model favour?" for more details.

Historical Data

Data available from 1 January 2016 to date.

Coverage increases over the history to over 4,000 Chinese equities.

Data example: aggregate sentiment scores

Identifier	Date	Name	News Number	Sentiment Mean	Sentiment Score Sum
000001	28/10/2022	Ping An Bank Co. Ltd.	57	0.119028	6.784618
000002	28/10/2022	China Vanke Co., Ltd	130	0.169880	2.208382
000004	28/10/2022	Shenzhen GuoHua Network Security Technology Co.Ltd.	1	-0.517900	-0.517900
000006	28/10/2022	Shenzhen Zhenye (Group) Co. Ltd.	1	0.189440	0.189440
000008	28/10/2022	China High-Speed Railway Technology Co. Ltd.	10	0.478760	0.478763
000009	28/10/2022	China Baoan Group Co., Ltd.	20	0.872310	1.744627
000012	28/10/2022	CSG Holding Co., Ltd.	8	0.251574	2.125910
000016	28/10/2022	Konka Group Co., Ltd.	10	0.543030	0.543029
000017	28/10/2022	Shenzhen China Bicycle Company (Holdings) Co., Ltd.	6	0.106287	0.637723

China Offshore Ownership

Tags	Format	Delivery Method	Publication	Investment Horizon
Positioning, China	csv, json, xlsx	UBS Quant Answers API or Excel	Stock: Quarterly 5th Northbound trading day 00:50 UTC Stock Implied: Daily T+1 02:00 UTC	Any
UBS Quant Answers API:	/api/proprietary_factors/china_offshore_ownership_factors /api/proprietary_factors/china_offshore_ownership_implied /api/sector_rotation/china_offshore_ownership_sector			
Related Research:	Quantitative Monographs "Who is the smart money in China?" Quantitative Monographs "What you need to know about quant investing in China" Quantitative Monographs "Revisiting the Stock Connect Scheme: new investment opportunities emerging"			

Idiosyncratic insights from aggregate active positions and flows of offshore investors

Description and Methodology

Skilful offshore investors deliver sizable alpha in China, and a significant portion of that is orthogonal to common factors, i.e. idiosyncratic.

Based on institutional holdings from the DataYes Stock Connect Holdings, UBS adds proprietary calculation logic to measure both mutual fund and hedge fund investors' holdings, allowing users to analyse their China A-share portfolios against these investors' aggregate active positioning. To infer investors' active positioning from their holdings, we first construct separate aggregate portfolios for hedge funds and mutual funds. Active weights are in turn computed by comparing aggregate portfolio weights against benchmark weights across all Northbound eligible stocks, cap-weighted.

Offshore Ownership by Sector

Sector weights implied by offshore ownership are also available. These are calculated quarterly on the 5th Northbound trading day at 01:35 UTC.

China Offshore Ownership Implied daily

The China Offshore Ownership Implied positioning data set uses proprietary calculation logic to estimate Northbound investors' holdings on a daily basis.

In August 2024, following the adjustment of market data delivery for Stock Connect announced by Hong Kong Exchange (HKEX), Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE), our China Offshore Ownership data set moved from daily to quarterly frequency. We have generated an alternate method to estimate our new daily data set.

Historical Data

Data available from January 2017 to date.

Implied daily data available from January 2019.

Covers 1,700 out of 2,700 Northbound eligible stocks having a total Northbound shareholding lower than 30,000,000 shares.

See https://www.hkex.com.hk/News/HKEX-Calendar?sc_lang=en for Northbound trading calendar.

Data example: active weight by institution type

Date	identifier	Company Name	Northbound All Active Weight	Northbound Hedge Fund Active Weight	Northbound Mutual Fund Active Weight	Northbound Score
30/06/2024	600519-CN	Kweichow Moutai Co., Ltd.	3.0%	4.6%	2.6%	0.995
30/06/2024	300750-CN	Contemporary Amperex Technology Co., Ltd.	2.1%	0.3%	2.4%	0.994
30/06/2024	600887-CN	Inner Mongolia Yili Industrial Group Co.	1.2%	0.3%	1.4%	0.993
30/06/2024	002475-CN	Luxshare Precision Industry Co. Ltd.	0.5%	0.4%	0.5%	0.993
30/06/2024	603501-CN	Will Semiconductor Ltd.	0.4%	0.5%	0.4%	0.992
30/06/2024	601012-CN	LONGi Green Energy Technology Co Ltd	1.2%	0.3%	1.4%	0.991

China Onshore Ownership HF Sectors

Tags	Format	Delivery Method	Publication	Investment Horizon
Positioning, China, Sector Rotation	csv, json, xlsx	UBS Quant Answers API or Excel	Monthly 1st calendar day 09:00 UTC time	> 3 months
UBS Quant Answers API:	/api/sector_rotation/china_onshore_ownership_hf_sector			
Related Research:	Quantitative Monographs "APAC Focus: Decoding China's onshore hedge funds" Quantitative Monographs "Identifying fund managers' skills using peer cohorts"			

Sector positioning from hedge funds in China

Description and Methodology

We identify the most skilful managers across China's hedge fund industry using the WIND Hedge Fund Performance Dataset. Our dynamic model evaluates hedge fund managers' skills against their peers to identify the smart money. We then derive the sector positioning of both the full hedge fund cohort and the smart money by attributing their fund performance to sector exposures, and subtract sector-level benchmark weights to get the active positions.

The benchmark used is a cap-weighted composite of all A-share listed stocks.

Data Shape

Three floating point weights per date per industry group (GICS level 2).

Historical Data

Monthly data available from March 2011.

Data example: aggregate positioning by fund group

Date	Index key	frequency	Gics description	All funds active weight	Selected funds active weight	Benchmark weight
2025-07-31	china_all_listing	BM	Energy	-3.08%	-3.43%	4.59%
2025-07-31	china_all_listing	BM	Materials	-6.18%	-8.97%	11.12%
2025-07-31	china_all_listing	BM	Capital Goods	-12.42%	-14.16%	14.16%
2025-07-31	china_all_listing	BM	Commercial & Professional Services	5.27%	11.83%	0.96%
2025-07-31	china_all_listing	BM	Transportation	-2.21%	-1.87%	3.18%
2025-07-31	china_all_listing	BM	Automobiles & Components	3.75%	4.66%	3.88%
2025-07-31	china_all_listing	BM	Consumer Durables & Apparel	11.80%	7.32%	2.93%

China Onshore Ownership MF

Tags	Format	Delivery Method	Publication	Investment Horizon
Positioning, China, Sector Rotation	csv, json, xlsx	UBS Quant Answers API or Excel	Stock: Quarterly 16th business day 05:15 UTC Sector: Monthly 1st calendar day 05:45 UTC	> 3 months
UBS Quant Answers API:	/api/proprietary_factors/china_onshore_ownership_mf_factors /api/sector_rotation/china_onshore_ownership_mf_sector			
Related Research:	Quantitative Monographs "Identifying fund managers' skills using peer cohorts"			

Positioning from a selected subset of skilful onshore mutual funds in China

Description and Methodology

Based on daily fund performance from the WIND Mutual Fund Performance Dataset, UBS uses a proprietary fund selection model to identify fund managers' skills by anchoring funds against their peer cohorts, and selects the best funds in each cohort.

Using the quarterly top equity holdings from the WIND Mutual Fund Holding Dataset, we aggregate the top equity positions of all the onshore mutual funds and selected mutual funds. This allows users to analyse their China A share portfolios against these investors' aggregate positioning.

Onshore Ownership by Sector

We provide sector weights implied by China onshore mutual fund performance. Weights are updated on the first calendar day of every month.

Historical Data

Data available from March 2005 to date.

Coverage increases over the history to over 2,000 Chinese equities. Sectors for GICS Level II.

Data example: aggregate positioning by fund group

Date	identifier	Company Name	All Mutual Funds' Holding Value (Rmb bn)	All Mutual Funds' %Hold	Selected Funds' Holding Value (Rmb bn)	Selected Funds' % Hold
31/10/2022	601677-CN	MTALCO	5.251	19%	3.470	13%
31/10/2022	002088-CN	LYEM	1.467	14%	1.084	10%
31/10/2022	601058-CN	SAILUN GROUP	6.095	17%	3.427	9%
31/10/2022	603300-CN	HUATIE	1.738	15%	0.872	8%
31/10/2022	000012-CN	CSG	1.518	9%	1.350	8%
31/10/2022	002597-CN	JHSY	2.717	12%	1.727	7%
31/10/2022	603678-CN	TORCH ELECTRON	2.467	9%	2.102	7%
31/10/2022	002884-CN	LINGXIAO	0.814	10%	0.550	7%
31/10/2022	002046-CN	BEARING-SCI&TECH	0.847	13%	0.433	6%
31/10/2022	002876-CN	SUNNYPOL	1.109	12%	0.609	6%

China Southbound Ownership

Tags	Format	Delivery Method	Publication	Investment Horizon
Positioning, China	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+1 Tue-Sat 00:40 UTC	Any
UBS Quant Answers API:	/api/proprietary_factors/china_southbound_ownership_factors			
Related Research:	Quantitative Monographs "Who is the smart money in Hong Kong?" Quantitative Monographs "Southbound and global: a quant lens on the two investor cohorts in the Hong Kong market"			

Positioning from China Southbound, global hedge funds and mutual funds in HK

Description and Methodology

Based on position information from the Stock Connect Shareholdings Dataset, UBS adds proprietary calculation logic to quantify insights of Southbound investors from onshore China, as well as hedge fund and mutual fund investors from overseas and the domestic HK market.

Our dataset allows users to analyse their HK shares portfolio against these investors' aggregate active positioning. To infer investors' active positioning from their holdings, we first construct separate portfolio weights for southbound, hedge funds and mutual funds. Active weights are in turn computed by comparing portfolio weights against benchmark weights across all Southbound eligible stocks, cap weighted.

Since Q424, the accelerated Southbound inflows into the HK market have been driven primarily by passively managed cross-border ETFs from onshore China. Therefore, we construct the proxy of ETF ownership as the number of shares (value) held by Southbound ETFs, divided by the total shares outstanding (market cap). To estimate the stock-level ETF ownership, on a daily basis, we leverage two China-specific ETF datasets including the ETF Net Redemption Dataset and the ETF Portfolio Composition Files (PCF) Dataset.

In terms of trading behavior, we further decompose Southbound into investors who trade via the Shanghai-HK versus Shenzhen-HK Stock Connect scheme. Shanghai and Shenzhen Southbound investors have exhibited distinct investment styles. The proxies of investor positions in this dataset have provided valuable insights into how the evolution of the underlying investor landscape is driving the convergence and associated changes in pricing power in the market.

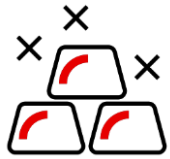
Historical Data

Daily data available from March 2017. Southbound Ownership Coverage starts at ~400 and increases to over 900 Hong Kong listed equities. Southbound ETF Ownership Coverage starts at ~80 and increases to around 600 Hong Kong listed equities.

Data example: aggregate positioning by fund group

Date	Identifier	UBS Southbound Score	Active Weight of Southbound Investors	Active Weight of Global Hedge Funds	Change in Active Weight of Southbound Investors	Change in Active Weight of Global Hedge Funds	Holding Shares of Southbound ETFs	Percentage holding of Southbound ETFs	Holding Shares of Southbound Shanghai	Holding Shares of Southbound Shenzhen
8/14/2025	1658-HK	0.99	0.32%	0.49%	0.00%	0.00%	141,094,695.99	0.71%	5,033,640,314	847,396,816
8/14/2025	1818-HK	0.98	0.15%	0.15%	0.00%	0.00%	115,397.58	0.00%	271,280,306	505,697,809
8/14/2025	136-HK	0.97	0.06%	0.21%	0.00%	0.00%	652,933,565.91	4.08%	1,485,101,400	1,893,096,350
8/14/2025	20-HK	0.97	0.12%	0.39%	0.00%	0.00%	3,225,535,607.92	8.47%	3,949,240,000	5,413,137,266
8/14/2025	2228-HK	0.97	0.15%	0.17%	0.02%	0.02%	84,625,007.74	2.11%	805,441,600	678,874,738
8/14/2025	9926-HK	0.96	0.76%	0.11%	0.03%	0.00%	62,981,955.65	7.02%	169,083,421	218,896,873
8/14/2025	354-HK	0.95	0.04%	0.08%	0.00%	0.00%	61,638,267.80	2.26%	441,837,000	352,958,213
8/14/2025	358-HK	0.95	0.03%	0.08%	0.00%	0.00%	19,370,729.96	1.40%	185,332,000	99,629,933

Commodity Forecasts



Tags	Format	Delivery Method	Publication	Investment Horizon
Macro, Commodities, Estimates	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+0 Mon-Fri 05:00 UTC	> 1 month
UBS Quant Answers API:	/api/macro_strategy/commodity_data			
Related Research:	UBS Global Commodity Price Forecasts			

Point-in-time estimates for commodities, FX, and precious metals

Description and Methodology

We maintain point-in-time records for over 50 commodities, FX, and precious metals forecasts.

Estimates are updated approximately quarterly by the UBS Research Mining team. We provide quarterly estimates up to five years forward along with long-term forecasts.

Historical Data

History from August 2024 is available via API. On request, we have data available back to 2008 for some commodity items. For other items, less history is available as collection of the data began later.

Data Shape

Data is provided in long form, with one item_value (a numeric value) per item, per forecast date.

Base Metals	Forex & Inflation Assumptions	Bulk Commodities
Aluminium	Euro	Iron ore fines
Alumina	A/US	Iron ore pellets
Copper	US/BRL	Lump Premium
Lead	Ca/US	Australia to China
Nickel	US/Rand	Manganese ore
Tin	Price Escalator	Hard coking coal - Prem Low V
Zinc	**Critical Materials**	Hard coking coal - Mid-Vol
Molybdenum	Lithium Carbonate	Low volatile PCI coal
Cobalt	Lithium Hydroxide	Semi-soft coking coal
Mineral Sands	Lithium Concentrate	**Energy**
Ilmenite	Mid End Natural Graphite	Crude Oil WTI
Rutile	Flake	Crude Oil Brent
Syn-rutile	Praseodymium-Neodymium Ox	Nat Gas (Henry Hub)
Zircon	**TC/RC and Misc.**	Uranium
Precious Metals	Zinc (TC/PP)	LNG (Asia JKM)
Gold	Lead (TC/PP)	Newcastle thermal (GC Newc)
Silver	Copper (TC/RC/PP)	Newcastle thermal (5500 NAR)
Platinum	Zinc basis	Richards Bay therm (5500 NAR)
Palladium	Lead basis	Thermal coal (Annual - JFY)
Rhodium	Copper basis	

Data example: Aluminium forecasts

dt	update_dt	item_code	period	item_name	item_unit	item_spec	item_value	period_dt	period_type
2025-11-19	2025-09-26 3:00:00 AM	aluminium	Q09_25	Aluminium	US¢/lb	LME	118.16	30/09/2025	estimate
2025-11-19	2025-09-26 3:00:00 AM	aluminium	Q12_25	Aluminium	US¢/lb	LME	117.94	31/12/2025	estimate
2025-11-19	2025-09-26 3:00:00 AM	aluminium	Q03_26	Aluminium	US¢/lb	LME	117.94	31/03/2026	estimate
2025-11-19	2025-09-26 3:00:00 AM	aluminium	Q06_26	Aluminium	US¢/lb	LME	117.94	30/06/2026	estimate
2025-11-19	2025-09-26 3:00:00 AM	aluminium	Q09_26	Aluminium	US¢/lb	LME	117.94	30/09/2026	estimate
2025-11-19	2025-09-26 3:00:00 AM	aluminium	Q12_26	Aluminium	US¢/lb	LME	117.94	31/12/2026	estimate

Comprehensive Crowding

Tags	Format	Delivery Method	Publication	Investment Horizon
Risk, Alpha, Quant, Fundamental	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+1 Mon-Fri 19:00/19:30 UTC	1 week – 3 months
UBS Quant Answers API:	/api/proprietary_factors/crowding			
Related Research:	Crowding Monograph "A Comprehensive Crowding Factor" Quantitative Monographs "The Consequences of Crowding Turning Points" Quantitative Monographs "Crowding Momentum enhanced with Quality" Crowding Monograph "A Network Crowding Factor: enhancing crowding using the network relationships"			

A proprietary and comprehensive crowding score with alpha opportunity

Description

Our composite crowding factor is based on a proprietary combination of multiple data sets. It provides a good overall lens for positioning information, and a dynamic daily score. Our approach encompasses information on both the long and short sides and is a more stable and reliable path than attempting to define crowding through incomplete data sets or secondary approaches such as price movements, factor spreads, or various correlations. More critically, it has higher informational content.

Crowding Momentum

Our 'crowding momentum' factor is defined as increases in crowding combined with negative one-month momentum in the most long crowded names, and also decreases in crowding combined with positive one-month momentum in the most short crowded names.

Crowding Aggregation by Sector

Our crowding aggregate in our Crowding Monitor publication rolls up stock level crowding scores to sector, region and style aggregates, enabling side-by-side comparison.

Historical Data

Daily history from 2017.

Data available for ~10,000 global stocks.

Data example: Comprehensive Crowding score

Identifier	Crowding Score	1m Price Mom	Crowding Factor Change	Crowding Mom
B28SLD9	-0.4166	-0.1689	0.5430	0
BDSFG98	3.2138	-0.2051	7.2487	1
B1Y1PC2	-1.7036	0.4380	0.2255	0
6109893	-4.3640	-0.1635	-1.3436	-1
2655583	0.6758	-0.1267	-0.6062	0
BMCKSV8	-2.3901	-0.2538	-0.5962	0
B607XS1	-1.6513	-0.1090	-2.2143	0
2986153	1.8496	-0.2585	8.4496	1
2478650	-4.3577	0.1476	-12.3607	-1
BG12Y04	-1.3652	-0.2288	0.5573	0

Data Shape

Single floating point scores per security.

Crowding Momentum: Pre-calculated 1, 0 or -1 values for long and short crowding momentum names.

Default Risk

Tags	Format	Delivery Method	Publication	Investment Horizon
Risk, Quant, Fundamental	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+0 Mon-Fri 23:05 UTC	Any
UBS Quant Answers API:	/api/proprietary_factors/default_risk			
Related Research:	Global Quantitative Research Monographs "How to avoid 'Torpedoes'"			

Measurement of a company's likelihood of default

Description

Our implementation of the KMV Merton distance-to-default model guides as to the relative likelihood of default of companies.

The model estimates the proximity of a corporate default event, given the company's level of gearing and equity volatility. It views a company's equity as a European call option on its assets, and can be used to calculate the probability that a company will default on its debt within a one-year time horizon.

The number of "days to default" is assessed using gearing and volatility.

Historical Data

Monthly history from 1985, depending on company reports.

Daily history from 2016.

Global coverage of ~30-40,000 equities.

Data Shape

Single floating point score per security and date.

Data example: distance to default for a selection of stocks

Date	Identifier	Distance to Default
2022-08-02	6954985	9.9723862
2022-08-03	B23XW70	9.1293487
2022-08-04	B296314	10.2394879
2022-08-05	B3R1D52	10.2349872
2022-08-06	B84GSC7	9.8347898
2022-08-09	BTPJH25	9.8234576
2022-08-10	BYVLXJ9	9.3468798
2022-08-11	6439567	9.4587945
2022-08-12	6954985	9.7023751
2022-08-13	B23XW70	10.2340980
2022-08-16	B296314	10.4509804
2022-08-17	B3R1D52	10.6098600
2022-08-18	B84GSC7	10.4098598

Factor Values

Tags	Format	Delivery Method	Publication	Investment Horizon
Factors, Quant, Fundamental	csv, json, xlsx	UBS Quant Answers API or Excel	Daily Various times per region and factor	1 – 12 months
UBS Quant Answers API:	/api/factors/factor_values			
Related Research:	Quant Research "Style Guide"			

Factor scores from across UBS Quant's extensive factor library

Description

Daily factor scores from UBS Quant's extensive generic factor and style factor library. Factors can be used for back-testing, screens or constructing quantitative portfolios. They can be produced on global, regional, country or sector universes and are available in standardised format to enable fair comparison of stocks across different items.

Underlying data is drawn from FactSet, IBES and other sources. Scores are calculated daily using the latest underlying data at the time of generation (so there is no look-ahead bias).

Methodology

Various methodologies are used for different factors. A per factor description and more details on construction are available on request.

Data example: factor data for a selection of stocks

Date	Identifier	Volatility (1m)	Revision to 12m fwd DPS FS (1m)
2022-08-02	6954985	0.2940	-0.6440
2022-08-02	B23XW70	0.5457	-0.0181
2022-08-02	B296314	0.1793	0
2022-08-02	B3R1D52	0.4055	0.6620
2022-08-02	B84GSC7	0.2210	0.1530
2022-08-02	BTPJH25	0.4596	0.2010
2022-08-02	BYVLXJ9	0.8751	null
2022-08-03	6439567	0.2642	0.9290
2022-08-03	6954985	0.2978	-0.6450
2022-08-03	B23XW70	0.5508	-0.1800
2022-08-03	B296314	0.1840	0
2022-08-03	B3R1D52	0.3968	0.6620
2022-08-03	B84GSC7	0.2236	0.1530

Historical Data

Price factors are available from 1984. Most estimates and fundamentals factors are available from at least 2000. Some factors start later depending on availability of individual data items.

Price based factors are calculated daily for previous two days, using latest available prices.

Coverage is global, number of lines varies by factor.

Data Shape

All factor values (per security, date, factor name) are floating point decimals. Most are stored as unitless ratios such as Earnings Yield, but some are converted to z-scores where it is sensible for cross-industry comparison.

In Portfolio Analytics stock level and portfolio and benchmark level factor values are reported for a wide range of Value, Growth and Quality factors.

Global Economic Forecast Database

Tags	Format	Delivery Method	Publication	Investment Horizon
Macro	csv, json, xlsx	UBS Quant Answers API or Excel	Daily ad hoc	Any

UBS Quant Answers API: /api/macro_strategy/economic_timeseries

Related Research: UBS Neo "Economic Forecast Database"

Macro indicator forecasts from UBS Economists and Strategists

Description

The UBS Global Economic Forecast Database covers 35+ economies and tracks 25+ indicators including GDP, inflation, labour market, financial and fiscal indicators, policy rates, FX, gold and oil prices.

The database compiles the forecasts from 25+ Economists and Strategists from across the world covering North America, Latin America, Eurozone, EMEA and APAC, along with a historical snapshot dating back to the late 1990s. It serves as a quantitative measure of UBS's macro views.

Historical Data

Data publication starts from 2023; historical snapshot starts late 1990s.

Typically updated daily; but this is variable and may be intraday or less frequent.

Data Shape

One row with six columns per forecast/actual value ingested.

Data set includes roughly 150k data points.

Indicators and Regions covered:

GDP	EU
Consumer prices	G7
CPI	Asia (ex Jap, inc. Aus & NZ)
Labour market	Latin America
Policy Rates	Emerging EMEA
Interest Rates	Advanced economies
Fiscal indicators	Emerging & Developing
Population	
Oil prices	
FX	

Data example: Real GDP year-on-year

Publish Date	Screen Name	Date	Category	Value	Status
11/07/2023	gdp_real_yoy	31/12/2025	US	2.53428	estimate
11/07/2023	gdp_real_yoy	31/12/2024	US	0.11028	estimate
11/07/2023	gdp_real_yoy	31/12/2023	US	1.41647	estimate
11/07/2023	gdp_real_yoy	31/12/2022	US	2.06172	actual
11/07/2023	gdp_real_yoy	31/12/2021	US	5.94680	actual
…	…	…	…	…	…
11/07/2023	gdp_real_yoy	31/12/1996	US	3.77268	actual

Global Risk Appetite Index

Tags	Format	Delivery Method	Publication	Investment Horizon
Macro	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+1 Tue-Fri 15:40 UTC Sat 19:00 UTC	Any

UBS Quant Answers API:	/api/macro_strategy/global_risk_appetite_index
Related Research:	Quantitative Monographs "Risk Appetite Indices"

Measuring global market sentiment as a macro investment strategy tool

Description

Our Risk Appetite indices provide a single aggregate measure of relative risk-adjusted performance across a range of assets (e.g., for the Global Risk Appetite index the assets are sovereign bonds and equity indices). Specifically, they measure how many units of incremental return investors have been paid for each unit of incremental risk taken across the chosen range of assets. More colloquially, they answer the question, "how have markets paid recently for taking more risk?"

The higher the indicator level, the stronger the recent relative performance of riskier assets in the basket.

The aggregated risk appetite indicator is calculated using a weighted linear regression of a six-month returns measure ("return") on a one-year risk measure of volatility ("riskiness") on a series of equity and bond indices. "Return" and "Riskiness" are calculated as the asset return and risk in excess of the aggregated 1M overnight interest rate.

The Global Risk Appetite Index includes broad country-based equity and bond indices, across a wide range of emerging and developed countries. The Equity-Only Risk Appetite Index includes only the equity indices (i.e. it excludes the bonds) from the Global Risk Appetite basket and reflects the relative performance of more volatile stock indices (emerging) versus lower-volatility, developed stock indices.

They help identify periods of overbought risky assets (when the Global Risk Appetite Index is high), which might drive profit-taking. Conversely, they can suggest periods of oversold risky assets (when the Global Risk Appetite Index is low), opening the opportunity for cheap riskier asset investing.

Data example: Daily index levels

Date	Global Risk Appetite Index	Equity Risk Appetite Index
2024-03-12	0.94406	-1.74257
2024-03-11	0.75047	-1.69228
2024-03-08	0.85612	-1.72572
2024-03-07	0.68723	-2.05021
2024-03-06	0.60797	-1.98624
2024-03-05	0.40780	-2.15261
2024-03-04	0.53867	-2.20425

Historical Data

Daily data from 2005.

Data Shape

Two index level data points per date.

Hedge Fund Idiosyncratic Score

Tags	Format	Delivery Method	Publication	Investment Horizon
Alpha, Quant, Fundamental, Positioning	csv, json, xlsx	UBS Quant Answers API or Excel	Monthly 1st calendar day 14:00 UTC	1 - 12 months
UBS Quant Answers API:	/api/proprietary_factors/hf_score			
Related Research:	Quantitative Monographs "How to extract hedge fund idiosyncratic insights"			

Generating alpha using hedge funds' best ideas

Description

Hedge fund positioning generates a significant premium that is driven by idiosyncratic insights. Their top stock picks provide attractive alpha.

We establish a systematic process to extract hedge funds' stock-specific insights from their reported holdings. The resulting idiosyncratic score is orthogonal to fundamentals and common style factors. Stocks with the highest scores, that is, the 'best' ideas of hedge funds, consistently outperform the market.

We use hedge fund holdings from the FactSet ownership database to construct an aggregate hedge fund portfolio. FactSet collects data from various sources corresponding to different regulatory requirements and reporting mechanisms applied to different institutions (for instance, US equity holdings from 13F filings). The institutional investors in the ownership database coverage are classified into different types, such as mutual funds, hedge funds, pension funds, etc.

The active weights of the aggregate hedge fund portfolio against a corresponding regional benchmark are further adjusted for exposures to region, sector, size and quant factors.

Data example: HF Idiosyncratic Scores

Investor Universe	Date	Sedol	HF Score
World (UBS Top 3000)	2025-02-28	0090498	-0.72667
World (UBS Top 3000)	2025-02-28	2117726	0.50297
World (UBS Top 3000)	2025-02-28	2577609	0.23095
World (UBS Top 3000)	2025-02-28	6097017	-0.10938
World (UBS Top 3000)	2025-02-28	6193766	0.74645
World (UBS Top 3000)	2025-02-28	B1FCQX2	-0.04050
World (UBS Top 3000)	2025-02-28	BN2RYW9	1.04845

Historical Data

Monthly data from December 2010.

Data Shape

One floating point score per date.

Hybrid Risk Models

Tags	Format	Delivery Method	Publication	Investment Horizon
Risk, Portfolio Management	csv, json, xlsx	UBS Quant Answers API or Excel	On demand Canned models run every weekend	> 1 week

UBS Quant Answers API:	/api/risk_models /api/risk_models/retrieve/{identifier}
Related Research:	Quantitative Monographs "Does your risk model forecast your risk?" Quantitative Monographs "Getting exposure to crude oil the Quant way" Quantitative Monographs "Insight into your portfolio: Risk and Performance"

Robust and flexible risk models; an essential tool for all portfolio managers

Description and Methodology

The UBS Hybrid Risk Models have an innovative structure and unique flexibility of construction. They are customisable: create your own bespoke risk model or use our pre-calculated models.

Most risk models use either a time series or cross-sectional approach. Style risk factors are well suited to a cross-sectional approach, while market, region, sector and macro risk factors are better modelled with a time series approach. The UBS Hybrid Risk Model incorporates both of these. We use the Expectation Maximisation (EM) algorithm to estimate the model and by including Bayesian priors we may reduce sampling errors and speed up the convergence of the EM algorithm.

Macro Factors

Include a variety of customisable factors in your risk model. For example: Oil and other commodity prices, bond yields, spreads, currencies, etc.

Historical Data

Risk models are stored for six months.

Bespoke risk model calculation available from 2005 or beyond, dependent on risk model specification.

The risk model universe covers over 36,000 lines of stock.

Reports

Factor volatility | Correlation matrix | Stock residual volatility | Betas | Factor returns | Residual returns | Stock returns | Factor weights | Style values | Bayesian priors | Style flags | Normalisation stats | etc.

Create and calculate your own bespoke risk model:

Custom market factor	Use our market universes or your own custom market factor.
Extend universe	Add a wider universe factor to the model, especially for concentrated market indices.
Macro factors	Choose from a wide selection of macroeconomic indicators and commodities
Thematic baskets	Use UBS custom baskets as macro factors, including stable and more transient themes in the market.
Countries/regions	Optional, selection as defined by user
Style Factors	Choose from our long list of available cross-sectional style factors
Periodicity	Daily, weekly or monthly data frequency
Data window	From 6 months to 7 years of data in your model
Forecast Horizon	Change your risk forecast horizon
Bayesian tau	Change weighting towards or away from the beta priors
Exponential half-life	Change exponential weighting in the factor calculation
Currency	Choose any base currency for the model calculation
Factor weighting	Market cap, square root market cap or equal weighting for creation of market, sector and country factors

India Mutual Fund Ownership

Tags	Format	Delivery Method	Publication	Investment Horizon
Ownership, India, Positioning, Quant, Emerging Markets	csv, json, xlsx	UBS Quant Answers API or Excel	Weekly Mondays 03:25 UTC Monthly 1st business day 03:20 UTC	> 1 month
UBS Quant Answers API:	/api/ownership/india_mf_ownership			
Related Research:	Quantitative Monographs "Harnessing the growth of India's mutual fund industry"			

Insights from positioning of domestic Indian mutual funds

Description

Indian mutual funds have gained structural importance in equity markets, driven by sustained inflows, retail disintermediation, and the rise of Systematic Investment Plans (SIPs). Stocks with high domestic mutual fund active weight benefit not only from alpha cloning but also industry flow momentum.

The data set is designed for both quantitative and fundamental investors seeking to understand institutional positioning. Active weights are computed by comparing the aggregate mutual fund industry portfolio against a free-float benchmark. By tracking active weights and changes in active weights, investors can identify stocks and sectors receiving sustained support from domestic fund managers, as well as areas being reduced. The timely nature of portfolio disclosures and the growing influence of mutual funds in India make these positioning signals a valuable lens through which to analyse market trends and investor behaviour.

Data Shape

Mutual fund active weights are calculated by comparing the aggregate mutual fund portfolio with a free-float benchmark. The output contains one record per security per date. Measures including holding value, active weight and size-neutral active weight are provided.

Historical Data

Coverage of approximately 1,000 Indian equities.
Weekly and monthly data available from 5th April 2013. Data is published with one business day lag. Weekly data as of Friday is available on the following Monday at 03:25 UTC, and monthly data is available on the first business day of the following month at 03:20 UTC.

Data example: India Mutual Fund Ownership

Identifier	Date	Proper Name	Size Group	Sector	MF Holding Value USD	MF Active Weight	MF Active Weight size neutral
BSZ2BY7	2026-08-31	ICICI Bank Limited	Large	Financials	31,761,185,544	0.007396	0.013640
BK1N461	2026-08-31	HDFC Bank Limited	Large	Financials	29,145,527,701	-0.000729	0.001201
6726816	2026-08-31	Jindal Steel Limited	Mid	Materials	1,913,219,719	0.001278	0.004603
B1XC098	2026-08-31	Fortis Healthcare Ltd.	Mid	Health Care	1,882,594,419	0.001254	0.004509
BF1THH6	2026-08-31	Bharat Electronics Limited	Large	Industrials	4,768,452,894	0.001295	0.002325

Industry Network Intelligence

Tags	Format	Delivery Method	Publication	Investment Horizon
Analyst Estimates, Macro	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+1 Every day 00:15 UTC	Any

UBS Quant Answers API: /api/network/graph/multi

Related Research:
- Quantitative Monographs "Introducing the Industry Network Intelligence"
- Quantitative Monographs "Earnings shocks and the Network"
- Quantitative Monographs "Clustering powered by the Network"
- Quantitative Monographs "Can you use the Network to enhance a momentum signal?"
- Quantitative Monographs "Pairs Trading Amongst Company Network Competitor Firms"
- Crowding Monograph "A Network Crowding Factor: enhancing crowding using the network relationships"

Understanding the relationships that drive stock prices and company growth

Description

The Industry Network Intelligence captures relationships between companies and macro drivers. We collect and connect the company and industry knowledge of our fundamental analysts to build a network, with the aim to understand the key drivers of company performance and provide a rich source of information for future quantitative research. At the core of our approach lies the unique combination of our fundamental and macro knowledge, drawn from the vast expertise of our large team of analysts, and access to powerful quant and strategy knowledge and data sets.

The Network includes connections across companies and industries allowing the user to understand, discover, and analyse events and scenarios. The most impactful Edges are identified by over 340 UBS lead analysts. All analysts can contribute, with relationships or 'Edges' assigned relative importance of High, Moderate or Low. All relationships are fully attested, with dual levels of attestation when Edges are mapped between multiple covering lead analysts.

Data Shape

Daily data covers all Edges in the Network and Edge details including Edge type and relevance, date and lead analyst.

Edge Types: Supplier, Partner, Investor, Competitor, Customer, Price, various Macro, Economics & Strategy and UBS Evidence Lab data sets.

Node Types: Company, Country, Region, Commodities, FX Pairs, Global Indicators, Agricultural Products, Food Products.

Universe: Global, including over 4,100 UBS-covered companies.

Historical Data

Daily snapshots available from 1 June 2024.

Data example: Industry Network Intelligence

Edge Type	Relevance	Date	From Node Type	From Node Key	From Node Name	From Node Analyst	To Node Type	To Node Key	To Node Name	To Node Analyst
Competitor	moderate	2024-02-19	Company Universe	0123456	Company A	Analyst.2 @ubs.com	Company Universe	1234567	Company B	Analyst.1 @ubs.com
Revenue Exposure	moderate	2024-02-19	Country	DE	Germany		Company Universe	1234567	Company B	Analyst.1 @ubs.com
Competitor	low	2024-02-19	Company Universe	2345678	Company C	Analyst.1 @ubs.com	Company Universe	1234567	Company B	Analyst.1 @ubs.com
Price	moderate	2024-02-19	Commodity	crude_oil	Crude Oil		Company Universe	1234567	Company B	Analyst.1 @ubs.com
Competitor	high	2024-02-19	Company Universe	3456789	Company D		Company Universe	4567890	Company E	Analyst.3 @ubs.com
Supplier	high	2024-02-19	Company Universe	5678901	Company F	Analyst.3 @ubs.com	Company Universe	6789012	Company G	

Intangible Capital

Tags	Format	Delivery Method	Publication	Investment Horizon
Factors, Valuation	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+0 Mon-Fri 21:40 UTC	> 1 month
UBS Quant Answers API:	/api/proprietary_factors/intangibles			
Related Research:	Quantitative Monographs "Value Rising: Can Intangibles Enhance Value?"			

Enhanced definition of book to price that capitalizes internally developed intangibles

Description

We have created an enhanced definition of book to price that capitalizes internally developed intangibles: Research & Development Expense (R&D) and Selling, General and Administrative Expenses (SG&A).

We calculate knowledge capital, amortizing 100% of R&D and 30% of SG&A each period.

We calculate intangible book to price as the sum of knowledge capital, organizational capital and common equity divided by market capitalization, where knowledge capital is the amortized R&D expense and organizational capital is the amortized SG&A expense.

Historical Data

Global coverage of 30-40,000 equities daily.

Some developed region coverage from 1991, other regions vary.

Data Shape

Fields: Intangible B/P. Single floating point score per security per date.

Data example: Book Yield including Intangible Capital

Identifier	Date	Country	Sector	Book Yield incl Intangible Capital
6092539	31/10/2022	JP	Industrials	2.294075
6010207	31/10/2022	JP	Materials	4.436708
6865560	31/10/2022	JP	Health Care	1.943616
6883807	31/10/2022	JP	Health Care	0.246134
6885074	31/10/2022	JP	Health Care	0.440824
6357733	31/10/2022	JP	Industrials	3.689270
6805469	31/10/2022	JP	Materials	1.896583
6021395	31/10/2022	JP	Industrials	1.496149
6173906	31/10/2022	JP	Real Estate	0.289110
6895448	31/10/2022	JP	Utilities	1.802278
6037734	31/10/2022	JP	Financials	2.732963
6038469	31/10/2022	JP	Materials	3.610105
B0120R1	31/10/2022	JP	Real Estate	1.504826
BD6C2P9	31/10/2022	JP	Financials	0.131256

Japan Cross-shareholding Network

Tags	Format	Delivery Method	Publication	Investment Horizon
Factors, Japan	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+0 Mon-Fri 20:10 UTC	Any
UBS Quant Answers API:	/api/cross_share/japan/network			
Related Research:	Quantitative Monographs "Quantifying change in Japan: opportunities in the cross-shareholding network" Quantitative Monographs "Identifying cross-shareholding unwind targets in Japan"			

Mapping the value of disclosed cross-holdings held by all Japanese listed companies

Description

Cross-shareholding in Japan is the practice of companies holding shares in each other, which has historically been viewed relatively negatively by investors, as it decreases capital efficiency, leads to holding company discounts and often weighs on corporate governance. That said, it also can represent a source of "hidden value" on the balance sheet of companies, and relative holding / holder price changes are not always efficiently priced in by the market. As part of efforts from Japanese regulators and the Tokyo Stock Exchange, there is a concerted effort to reduce the impact and number of cross-holdings in Japan through various measures. We believe that we are in the midst of a multi-year unwinding trend that will create various opportunities amongst companies heavily involved in the cross-holding network.

This dataset provides descriptive cross-sectional data around Japanese cross-holdings over time. This will allow for analysis of different companies' positions within the cross-shareholding network, as both holders and held stocks.

Historical Data

Covers all listed Japanese stocks; approximately ~3,500 current names and around 1,000 inactive names

Monthly data available from January 2015
Daily data available from December 2025

Data Shape

Each line of data represents a specific holder (parent) / held (child) stock pair. We provide the market value of the parent's holding in the child expressed in JPY terms, as well as the percentage that parent owns of the child stock's total common shares outstanding.

Methodology

Data is based on holdings disclosure form a variety of regulatory sources: primarily from *yuho* / *tanshin* periodic regulatory reporting, large shareholder report disclosures, registration statements and other company disclosures. We provide the value of disclosed holdings in JPY market value terms, as well as in percentage terms with respect to the held stock's total shares outstanding.

Underlying data is sourced from the FactSet Ownership database, based on various regulatory disclosures. For data prior to Jan 2025, we apply lagging logic by data source type to create point-in-time historical data. Specifically, large shareholder report and PR/newswire data is lagged by five business days, registration statement data by one month, and other sources, including periodic regulatory filings (yuho/tanshin), by two months.

Data example: Cross-shareholding network

Date	Identifier _Holder	Identifier _Held	Factor Name	Factor Value
2025-12-05	S3CZ0S-R	B028B4-R	position_ percentage	0.0373200
2025-12-05	SV06FW-R	B028B4-R	position_ percentage	0.0206224
2025-12-05	WZ59Q5-R	B028B4-R	position_ percentage	0.0089989
2025-12-05	CFBZDD-R	B028B4-R	position_ market_val	17,680,000
2025-12-05	FGY2R7-R	B028B4-R	position_ market_val	6,040,320
2025-12-05	GRQZ16-R	B028B4-R	position_ market_val	662,480,000

Japan Cross-shareholding Factors

Tags	Format	Delivery Method	Publication	Investment Horizon
Factors, Japan	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+0 Mon-Fri 21:10 UTC	1 month - 6 months
UBS Quant Answers API:	/api/cross_share/japan/factors			
Related Research:	Quantitative Monographs "Quantifying change in Japan: opportunities in the cross-shareholding network" Quantitative Monographs "Identifying cross-shareholding unwind targets in Japan"			

Using the cross-shareholding network to identify specific value and alpha factors

Description

While investors traditionally dislike high levels of cross-holdings (corporate governance, holding company discounts, distractions from core business, etc), we find that stocks that have high and increasing values of cross-holdings relative to their own market capitalizations tend to outperform. We believe that the market may not fully price in the value of cross-holdings, as well as assigning a premium to them based on the increasing trend of cross-shareholding unwinds, which can crystalize this value.

We have created three factors that take advantage of the information within the cross-holding network: 1) Holding Percentage, 2) Change in Holding Percentage, and 3) Holding Shares Change. The Holding Percentage signal ranks each stock in Japan by the ratio of the value of its cross-holding portfolio relative to its own market cap. We find that this looks to be relatively correlated with Value factors, but with more attractive risk/reward dynamics, based on our backtests. The Change in Holding Percentage factor looks at the monthly change of the Holding Percentage factor. Holding Shares Change seeks to identify which stocks have unwound the most cross-holdings over the previous month. We find that stocks that have unwound more over the previous month outperform, especially in recent years. The first two factors benefit from the market not fully discounting the value of cross-holdings, while the third seeks to capitalize from companies crystallizing value through unwinding, in our view. Data is daily and our backtesting shows that these signals are interesting in monthly rebalanced portfolios.

Data example: Cross-shareholding factors

Date	Identifier	Factor Name	Factor Value
2025-12-18	B028B4-R	holding_ Percentage	0.218075006
2025-12-18	B066VV-R	holding_ percentage	0.018950335
2025-12-18	B028B4-R	chg_in_holding_ percentage_1m	0.026936612
2025-12-18	XG9YYF-R	chg_in_holding_ percentage_1m	0.011416135
2025-12-18	HLNQH0-R	holding_shares_ change	-764000
2025-12-18	J1DWSG-R	holding_shares_ change	731500

Historical Data

Covers all listed Japanese stocks; approximately ~3,500 current names and around 1,000 inactive names

Monthly data available from January 2015
Daily data available from December 2025

Data Shape

Three floating point values per identifier per date.

Japan Cross-shareholding Unwind Prediction

Tags	Format	Delivery Method	Publication	Investment Horizon
Factors, Japan	csv, json, xlsx	UBS Quant Answers API or Excel	Monthly 1st calendar day 11:15 UTC	1 month (child), 6 months (parent)
UBS Quant Answers API:	/api/cross_share/japan/unwind_prediction			
Related Research:	Quantitative Monographs "Quantifying change in Japan: opportunities in the cross-shareholding network" Quantitative Monographs "Identifying cross-shareholding unwind targets in Japan"			

Predictions for future unwinds of Japanese inter-company cross-shareholdings

Description

We find that Japanese companies that unwind child holdings (holders) outperform over the medium term (6-months), while child companies (held stocks) that are being sold underperform in the short-term (1-month).

We leverage machine-learning techniques to predict which companies are more likely to unwind/be unwound in the coming months. Predictive factors include cross-shareholding network- and unwind-related factors, as well as fundamental factors of child and parent stocks. Stocks are scored as both held and holders and are ranked between 0 and 1 on the likelihood of an unwind. Two prediction windows are provided, 1-month (for child stocks) and 6-month (for parent stocks).

Methodology

Leveraging historical unwind event data from our cross-shareholding network dataset, we use a machine learning model to make predictions about future changes in the cross-holding network. We use 16 features, including event data from changes in the cross-holding network, information about a company's position within the cross-holding network, as well as parent and child fundamental data, to train two prediction models around the likelihood of an unwind in the coming 1- and 6-month periods. The model features were identified using a Boosted GAM model to assess interpretability of features and implemented using XGBoost. Predictions are updated monthly. Models were originally trained on data from 2019 through 2024 and are refit monthly using the same set of features.

Data Shape

Single signal value per child / parent stock. Signal ranges between 0 and 1, with higher values indicating a more likely unwind over the prediction window.

Data example: Parent / Holder signals

Date	Perspective	Identifier	Signal Window	Signal
2025-11-28	holder	6503-JP	6	0.9706
2025-11-28	holder	6178-JP	6	0.8509
2025-11-28	holder	1820-JP	6	0.7947
2025-11-28	holder	9001-JP	6	0.7386
2025-11-28	holder	8159-JP	6	0.6170

Data example: Child / Held signals

Date	Perspective	Identifier	Signal Window	Signal
2025-11-28	held	8023-JP	1	0.6834
2025-11-28	held	6503-JP	1	0.6983
2025-11-28	held	6178-JP	1	0.1586
2025-11-28	held	1820-JP	1	0.8366
2025-11-28	held	7254-JP	1	0.6388

Historical Data

Japan listed stocks: ~top 1,000 names for parent companies, ~3,300 names for child companies.

Data from February 2020 for child, July 2020 for parent.

Key Calls

Tags	Format	Delivery Method	Publication	Investment Horizon
Estimates, Analyst Forecasts	csv, json, xlsx	UBS Quant Answers API or Excel	Daily ad hoc	< 12 months
UBS Quant Answers API:	/api/analyst_data/analyst_key_calls			
Related Research:	APAC Key Calls Valuation and Performance UBS Key Calls			

Analyst high conviction ideas in APAC

Description and Methodology

Curated by stock covering analysts and product management, UBS APAC Key Calls represents a list of our highest-conviction, bottom-up ideas across the APAC region. These are stocks where UBS has a differentiated view, approach or evidence. Constituents can be Buys or Sells in any market, with a minimum ADV of $5m. They have a typical timeframe of 3-9 months. They represent the key fundamental research calls within the APAC coverage universe.

Currently only analysts within the APAC region have their stocks on this list. The stock list returned for a given date will be the Key Call list as of the prior day.

Historical Data

Data is available from July 2023.

Data Shape

Data frame containing top stock picks, analyst coverage, price targets, recommendations and date of recommendations.

Data example: APAC Key Calls

Date	Analyst Email	Identifier	Name	Country	Sector	Price Target	Price Target Date	Recommend-ation	Recommend-ation Date
2024-01-05	joe.bloggs@ubs.com	1234567	Company A	CN	Materials	110	2023-12-29	Buy	2023-03-30
2024-01-05	joe.bloggs@ubs.com	2345678	Company B	ID	Industrials	74	2023-11-30	Buy	2021-09-16
2024-01-05	joe.bloggs@ubs.com	3456789	Company C	KR	Financials	165000	2024-01-04	Buy	2022-03-04
2024-01-05	joe.bloggs@ubs.com	4567890	Company D	AU	Utilities	23.5	2023-12-11	Buy	2020-01-21
2024-01-05	joe.bloggs@ubs.com	5678901	Company E	TW	Industrials	85	2023-11-05	Buy	2023-10-19

Machine Learning Earnings Growth

Tags	Format	Delivery Method	Publication	Investment Horizon
Alpha, Quant, Fundamental	csv, json, xlsx	UBS Quant Answers API or Excel	Monthly 3rd calendar day 02:00 UTC Weekly Sunday 17:00 UTC	Any

UBS Quant Answers API:	/api/proprietary_factors/ml_earnings /api/market_stats/earnings_growth_aggregation
Related Research:	Quantitative Monographs "Humans vs Machines: Which are better at forecasting earnings growth?" Quantitative Monographs "Forecasting earnings growth in Japan using..."

Proprietary Earnings Growth model taking a Machine Learning approach

Description

Inputs include a variety of macroeconomic, sector and quantitative factors to produce forecasts of future earnings (and earnings growth). Back-testing the model shows it generally predicts earnings growth more accurately than consensus and forecasts become more accurate towards the point the earnings are realised.

Consensus forecasts tend to absorb information slowly, especially further from announcement date. Machine learning models are more likely to generate negative earnings growth forecasts and also adapt to new information more quickly than consensus.

Historical Data

Monthly data available from 2011.

Weekly data available from November 2022.

Methodology

We apply a machine learning technique that incorporates the factors driving earnings growth through time and produces earnings growth forecasts from these. Our model uses a gradient-boosting regression (GBR) process. The inputs to the model come from three distinct groups:

- Betas to macroeconomic factors - from our default Quant Answers Hybrid Risk Models in each region e.g. interest rates, currency, commodities;
- Sector (the first GICS level);
- Quantitative factors - effective point-in-time factors across the Quality, Value, Momentum and Risk spaces, guided by prior research.

Data Shape

ML Forecast EPS Growth next 12 months; floating point value per stock per date.

ML Earnings Yield next 12 months; floating point value per stock per date.

Global coverage of ~10,000 stocks.

Aggregated Earnings Growth by market

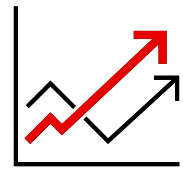
ML Earnings forecasts are also available aggregated at global, regional, country and sector level. The top 3,000 largest stocks globally are used in the aggregation, subject to having both ML and Consensus growth forecasts, excluding those with less than -100% or greater than 500% growth forecast (from either ML or consensus) in the next 12 months.

Two types of market statistics are available: Machine Learning Forecast Earnings Growth Aggregation and Consensus Forecast Earnings Growth Aggregation. Aggregate, mean and median forecasts are available.

Data example: Machine Learning Earnings Growth

Identifier	Date	ML EPS Growth ntm	ML Earnings Yield ntm
6092539	31/10/2022	-0.5346000	0.7995353
6010207	31/10/2022	-0.1498732	0.0812273
B0120R1	31/10/2022	0.1230373	0.1408366
BD6C2P9	31/10/2022	-0.4382912	0.0797218
2017327	31/10/2022	0.3902982	0.2489302
4834108	31/10/2022	-0.5192830	0.1294840
7088429	31/10/2022	-0.9493000	0.1239873
BD6G507	31/10/2022	0.3122500	0.2578371

Macro Strategy Regimes



Tags	Format	Delivery Method	Publication	Investment Horizon
Macro	csv, json, xlsx	UBS Quant Answers API or Excel	Monthly 20:10 UTC on the day new OECD data is released	> 1 month
UBS Quant Answers API:	/api/macro_strategy/economic_regimes /api/macro_strategy/economic_regimes_forecast_distribution /api/macro_strategy/economic_regimes_forecast_distribution_metrics /api/macro_strategy/economic_regimes_total_returns			
Related Research:	European Equity & Derivative Strategy "Outlook and ideas"			

Market regimes analysis from the Equity Research Strategy team

Description

Business cycle analysis drives the Equity Strategy team's macro scoring. Many strategists will look to forward-looking business cycle indicators and some will even analyse them through the lens of 'regimes', as we do – downturns, recoveries, expansions and slowdowns. The Research Strategy team takes business cycle analysis several steps further by acknowledging the uncertainty inherent in leading index signals.

Data Shape

Four endpoints are available:

- Economic Regimes: Probability of each of four regimes on a given date
- Forecast distribution: Sampled distribution of index levels per regime
- Forecast distribution metrics: Regime mode and standard deviation in index points based on input extrapolation period
- Returns: Country, sector and style returns per regime

Methodology

Leading indicators are a good place to start when assessing the trend for forward-looking equity markets. The strength and momentum of a leading index should also give us information on the strength and momentum for equity markets. Using historical patterns of strength and momentum, we can calculate the unusualness of recent data and categorise the market into four regimes:

- High and rising (expansion)
- High and falling (slowdown)
- Low and falling (downturn)
- Low and rising (recovery)

We do this because returns, volatility and skew can vary significantly through the business cycle. Understanding regimes is a window into the potential distribution of returns given business cycle conditions.

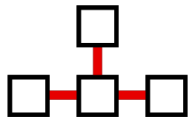
Historical Data

Monthly data from 2000.

Data example: returns to factors, sectors and countries by regime

Aggregation factor	low_and_falling	low_and_rising	high_and_rising	high_and_falling
historic_returns_by_index	-1.647%	2.908%	2.353%	0.085%
ES	-2.080%	2.818%	2.417%	-0.011%
GB	-1.702%	2.265%	2.113%	0.165%
Consumer Discretionary	-1.511%	3.938%	2.998%	-0.067%
Energy	-1.828%	1.445%	2.512%	0.676%
Industrials	-1.683%	3.955%	2.947%	0.020%
Growth_Least Preferred Rel Bmk_EPS Growth (12m trailing)	-0.113%	0.305%	0.083%	-0.080%
Growth_Most Preferred Rel Bmk_EPS Growth (12m trailing)	-0.160%	-0.168%	0.082%	-0.032%

MacroSense



Tags	Format	Delivery Method	Publication	Investment Horizon
Macro, Factors, Risk	xlsx	UBS Neo	Monthly	> 1 month
Related Research:	Quantitative Monographs "Surfing the macro wave" Quant Research "MacroSense"			

Macroeconomic Sensitivity Analysis Tool

Description

This tool estimates the sector, country and style impact of the macroeconomic scenario given as input by the user. It is built using the UBS Hybrid Risk Model.

We built an interactive tool where you can enter in changing Macro Conditions and see the sensitivities to Sector, Country, Style and individual securities.

Historical Data

Analysis is latest month only.

Methodology

Given the importance of macro risk, we built a forecast model to estimate the potential impact of changing macro conditions on share prices. The model is based on the projected beta generated by the UBS Hybrid Risk Model. Based on the model, we designed an interactive tool (Macrosense), by which users can easily set up their own assumptions on macro conditions and get the country, sector and factor views, as well as the estimated performance of individual stocks under their assumptions.

Reports

Reports show the exposed sectors, countries and styles. Most and least exposed stocks are also displayed. Another shows the macro importance over time.

Input Parameter:	Estimates:
Benchmark index	Top 10 stock performance
Macro scenarios, eg:	Bottom 10 stock performance
US 2-Year Yield	Sector impact
Crude Oil	Country impact
Gold	Style impact
EM Currency	Macro factor importance
US Industrial Production	
China market	

Market Statistics

Tags	Format	Delivery Method	Publication	Investment Horizon
Macro	csv, json, xlsx	UBS Quant Answers API or Excel	Monthly Day after last business day 09:30 UTC	> 1 month
UBS Quant Answers API:	/api/market_stats			
Related Research:	Quant Research "Style Guide"			

Broad statistics identifying breadth of market opportunities

Description

Three broad types of market statistics are available for clients: cross-sectional dispersion of returns, pairwise correlation of returns, and average index volatility.

For each market we calculate a time series of our three market statistics. Together they help identify the relative breadth of the opportunity set for stock pickers, and give an indication of the likely effectiveness of quantitative strategies.

Historical Data

Monthly data available from 2000 to date.

Methodology

Pairwise correlation of returns is calculated with 12 months of weekly returns.

Cross-sectional dispersion is measured using monthly returns.

Average volatility is measured with 12 months of daily returns, and is sector neutral.

Data Shape

Statistics are calculated for most major markets/indices including key US and Global sector indices. Three data points per market/date.

Data example: market statistics time series

Date	cs_dispersion	pairwise_correlation_12m	volatility_12m_index
2022-01-29	0.22776	0.55717	0.32150
2022-02-26	0.32366	0.54354	0.41364
2022-03-31	0.26253	0.41007	0.34530
2022-04-30	0.28908	0.37196	0.29433
2022-05-31	0.33274	0.34192	0.37436
2022-06-30	0.25455	0.30584	0.29750
2022-07-30	0.24851	0.28955	0.30045
2022-08-31	0.29285	0.30542	0.33963

Nowcasting Company Financials

Tags	Format	Delivery Method	Publication	Investment Horizon
Alpha, Quant, Fundamental	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+1 Mon-Sun 03:30 UTC	< 1 month
UBS Quant Answers API:	/api/nowcast/company/surprises			
Related Research:	Quantitative Monographs "How to nowcast earnings surprises" Quantitative Monographs "Informing Pre-Earnings Positioning with Proprietary UBS Signals" Quantitative Monographs "How to Construct and Use Nowcasts of Company Financials"			

Nowcasting framework forecasts company earnings and revenues surprises

Description

We use a state space model and point-in-time company peer groups to estimate the revenue surprise and earnings surprise (relative to prior consensus forecasts) at any company's next reporting date.

Company earnings releases are informative about the performance of related companies. The company financials surprise nowcasting model captures these informational spillovers in a multivariate time-series model of EPS and revenue surprises for each company and its peers. The peer sets for all companies are obtained from the companies with the highest historical surprise correlations as the central company within the GICS sector of the central company. Every time a peer of a given central company in a set releases earnings, we re-estimate the model for the central company and re-calculate the forecast of the earnings and revenue surprises for the central company's next fiscal period.

Data Shape

Two floating point metrics per company per surprise metric (earnings and revenues), with two fiscal period end dates. The model is recalculated when there is a change in the company neighbourhood (company membership or reported earnings).

Historical Data

Daily data available from January 2017.

US coverage of ~ 1,000 stocks.

Methodology

Our model decomposes a company's earnings and revenue surprises into: (1) an idiosyncratic component and (2) a "common shock" signal. The model updates its inference about the common shock every time a relevant peer releases information (at each earnings result) and updates surprise direction and magnitude expectations for all related companies, with a framework to express a confidence band.

Large companies' financials are more predictable, and the more peers / neighbours have released information, the better the nowcasts. Groupings of stocks need to be large enough to facilitate a regular flow of information, but homogenous enough that earnings announcements plausibly convey information to peers.

The model is run daily on day T and incorporates all earnings data reported up to and including T-1. The key parameter "last_related_report_date" marks the date of the latest earnings report from any related company. Reporting time matters: if a company reports before markets open on day t, its report date is t. If it reports after markets close on day t, its recorded report date is t+1. The API parameters "from_date" and "to_date" refer to "dt", the date on which we calculate the nowcast.

Data example: Nowcasting Company Earnings Surprises

Date	Identifier	Last Related Report Date	Last fiscal period	Next fiscal period	Forecasted SUE	Standard error mean
2025-12-02	BCDEFG4	2025-11-25	2025-09-30	2025-12-31	0.553617	3.504438
2025-12-02	BCDEFG5	2025-12-02	2025-09-30	2025-12-31	3.377939	2.783531
2025-12-02	BDEFGH2	2025-12-02	2025-09-30	2025-12-31	1.310302	3.195182
2025-12-02	BEFGHI8	2025-12-02	2025-09-30	2025-12-31	2.50235	1.806318
2025-12-02	BFGHIJ9	2025-12-02	2025-09-30	2025-12-31	7.621051	3.548596
2025-12-02	BGHIJK0	2025-11-26	2025-10-31	2026-01-31	-0.30558	6.764606

Ownership

Tags	Format	Delivery Method	Publication	Investment Horizon
Positioning, Quant, Fundamental	csv, json, xlsx	UBS Quant Answers API or Excel	Weekly Sunday	> 1 week
UBS Quant Answers API:	/api/ownership/history_aggregation /api/ownership/history_holding /api/ownership/history_split_by_type			
Related Research:	Quantitative Monographs "Follow the smart money"			

Idiosyncratic insights from aggregate positioning of hedge funds and mutual funds

Description

Skilful active investors deliver consistent and sizable alpha, and a significant portion of that is orthogonal to common factors, i.e. idiosyncratic. Based on institutional holdings from the FactSet Ownership database, UBS adds proprietary calculation logic to measure both mutual fund and hedge fund investors' holdings, allowing users to analyse their portfolios against these investors' aggregate active positioning.

Institutional holdings of onshore and offshore investors in China are also used, as discussed in 'Who is the Smart Money in China?'

Data example: stock active ownership weight

Calendar_ date	Identifier	Proper_name	Investor_ weight	Active_ weight
04/11/2022	4834108	Schneider Electric SE	2.57%	1.03%
04/11/2022	7088429	AXA SA	1.73%	0.45%
04/11/2022	4682329	Pernod Ricard SA	1.10%	0.32%
04/11/2022	BD6G507	Ferrari NV	0.90%	0.31%
04/11/2022	7309681	BNP Paribas S.A. Class A	1.47%	-0.26%

Historical Data

Monthly data available from 2000.

Weekly data available for trailing 12 months.

Methodology

Due to the nature of reporting-based data, institutional holdings from the FactSet Ownership database are sparse and not received at any particular frequency. We employ a rollover scheme to transform the data into regular time series.

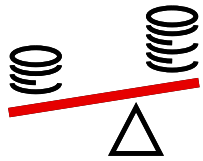
To infer investors' active positioning from their holdings, we first construct separate aggregate portfolios for hedge funds and mutual funds. Active weights are in turn computed by comparing aggregate portfolio weights against index weights within corresponding universes.

Data Shape

Ownership is delivered via three endpoints:
- Active weight time series by country and sector
- Stock-level active weights
- Holding value split by ownership type hedge fund/mutual fund

In Portfolio Analytics a subset of ownership data relevant to the investment universe is reported.

Portfolio Analytics



Tags	Format	Delivery Method	Publication	Investment Horizon
Risk, Portfolio Management	csv, json, xlsx	UBS Quant Answers API or Excel	On demand	> 1 week

UBS Quant Answers API: /api/risk_models/portfolio_analytics

Related Research:
- Quantitative Monographs "Does your risk model forecast your risk?"
- Quantitative Monographs "Getting exposure to crude oil the Quant way"
- Quantitative Monographs "How big should your portfolio be?"
- Quantitative Monographs "Insight into your portfolio: Risk and Performance"

Full analysis of your equity portfolio: Risk, Style, Fundamentals and more

Description

Full analysis of both long-only and long-short portfolios:

Risk Analysis: Portfolio risk analysis with an innovative risk model structure and unique flexibility of construction. Create your own bespoke risk model or use our pre-calculated models. Clear and concise reporting gives a view on where the portfolio is taking risk with full transparency and no black boxes.
See our customisable Hybrid Risk Models.

Aggregate Statistics: Fundamental analysis of the portfolio and benchmark, using analyst forecasts. Essential ratios such as P/E, P/B, Dividend Yield, Earnings Growth, ROE, and our Carbon Composite score, among others, are included.

Style Analysis: Style Group portfolio exposures and Style Group performance figures.

Carbon Scores and **Comprehensive Crowding:** Stock-level carbon scores using our research with carbon emissions data. Stock-level crowding quintiles from our proprietary crowding score calculation.

Ownership: Get a view of the stock institutional ownership figures for your stock universe, split by institution type.

UBS Analyst Recommendations: Analyst recommendation and contact details for each stock.

Sector, Country: Country and multi-level sector weights.

Portfolio Analytics reports:	
summary	Tracking Error or Total Risk and summary analysis of the portfolio and benchmark.
risk_summary	Tracking Error or Total Risk of portfolio and benchmark, with factor- vs stock-specific split.
risk_factors	Exposure and contribution to risk forecast from risk model factors, with Tracking Error and total risk.
countries	Portfolio and benchmark country positions.
sectors	Portfolio and benchmark sector positions. Four sector levels are available.
styles	Detailed view of style groups, with weighting and average beta.
aggregate_stats	Aggregated portfolio- and benchmark-level fundamental statistics and ratios.
fundamentals	Stock-level fundamental statistics and ratios.
ownership	Institutional ownership by type.
recommendation	UBS analyst recommendations and contact details.
proprietary_data	Carbon scores, crowding quintiles at stock level. Portfolio- and benchmark-level summaries.
statistics_check	Stock-level positions, reference data and style flags.
liquidity_summary	Liquidity reporting available in various reports using Median Daily Value Traded over various time periods.
descriptions, logs, warnings, request_details	Descriptions, execution logs, notifications and parameters.
There are 29 reports available from Portfolio Analytics.	

Sector Fundamental Models

Tags	Format	Delivery Method	Publication	Investment Horizon
Alpha, Fundamental	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+1 Tue-Sat 07:30 UTC	1 – 3 months
UBS Quant Answers API:	/api/proprietary_factors/sector_models/banks /api/proprietary_factors/sector_models/real_estate /api/proprietary_factors/sector_models/software /api/proprietary_factors/sector_models/energy /api/proprietary_factors/sector_models/hardware_semis			
Related Research:	Quant Insight: Sector Focus "What Works in the Banks Sector?" Quant Insight: Sector Focus "A Systematic Approach to Real Estate" Quant Insight: Sector Focus "Disentangling Tech: A Look at Software" Quant Insight: Sector Focus "Extracting Alpha: Global Oil & Gas" Quant Insight: Sector Focus "Tech Disruption: Hardware & Semis"			

Sector-specific quant models in collaboration with our fundamental analysts

Description

The fundamental drivers of stocks can vary from sector to sector. We take an integrative approach in building sector-specific alpha models aimed at leveraging fundamental insights through a quantitative lens. We partner with UBS sector analysts globally to determine how they think about a sector. What are the drivers of their sector? What factors are most important to investors? What macro factors influence their sector? What are potential tailwinds or headwinds that they encounter? We then develop a framework, custom built for each sector, that captures these fundamental insights in a systematic way.

Historical Data

Banks: monthly data from 2010, daily from 2015. AU, US, Asia ex Japan and Europe coverage of ~200 equities.

Real Estate: daily data from 2018. AU, US, Asia ex Japan and Europe coverage of ~300 equities.

Software: monthly data from 2004, daily from 2018. US and Europe coverage of ~200 equities.

Energy: monthly data from 2009, daily from 2015. Global coverage of ~300 equities.

Hardware & Semis: daily from 2018. US, Japan, Asia ex Japan and Europe coverage of ~400 equities.

Methodology

Models for each sector are custom built based on the insights from UBS sector analysts. We identify factors that are important in evaluating the sector and incorporate their insights into when these factors are more or less important. Models are built with sensitivity to any potential macro or cyclical drivers.

For example, in Banks, we utilize various macro factors (depending on the region) to time a Value vs Quality rotation. Meanwhile, in Real Estate, we have utilized a multi-factor approach in identifying opportunities as we move through the Property Cycle. As each model is custom built, please refer to the related research links above for details on the bespoke methodology for a specific sector.

Data Shape

Varies by sector: includes floating point scores per security per date, factor names, basket membership, regime status.

Data example: Banks stock signals and factor scores

Date	Identifier	region	current_status	basket	factor	factor_score
31/03/2023	1234567	Europe	quality	long	rotce	0.24676
31/03/2023	2345678	Europe	quality	short	rotce	-0.03177
31/03/2023	3456789	US	quality	long	rotce	0.21132
31/03/2023	4567890	Asia ex Japan	value	long	tby	0.23065
31/03/2023	B123456	AU	value	long	tby	0.22534

Style Guide

Tags	Format	Delivery Method	Publication	Investment Horizon
Factors	csv, json, xlsx	UBS Quant Answers API or Excel	Daily performance: T+1 23:00 UTC Monthly valuations: last business day +1 06:35 UTC	1 – 12 months
UBS Quant Answers API:	/api/style_guide/factor_performance /api/style_guide/factor_valuations /api/style_guide/index_valuations			
Related Research:	Quant Research "Style Guide"			

Factor performance and valuations across global markets

Description

Styles are at the core of any quantitative process. We provide a comprehensive overview of style factor returns and valuation. Style returns can be returned in USD or local currency, at a variety of frequencies, and on an absolute basis. Style basket valuations are available using a range of metrics. The "Style Guide" API returns a range of pre-calculated analytics for all our Value, Momentum, Quality, Growth, Size and Risk styles.

These style indices are also part of the Portfolio Analytics module in UBS Quant Answers.

Historical Data

Style factor returns data vary by market, generally starting from 1996-2000. Factor Performance is available daily, Factor Valuations and Index Valuations data are available monthly.

Methodology

Style factor returns are calculated size and region neutral for Momentum, Growth and Risk factors. Size factors are region neutral and Value factors are created region, size and sector neutral. Baskets are formed using cap weighted thirds, sampled monthly.

Data Shape

Single floating point score per security and date. Monthly or daily data per style, available in USD or local currency and in price or total returns.

In Portfolio Analytics portfolio and benchmark weights in a wide range of styles are reported.

Data example: style factor performance Book Value Yield in Australia

Rebalance Frequency	Currency	Return Type	Date	Cumulative Strategy Return; Neutral Weighted; Value		
				Long Short	Most Preferred Rel Bmk	Least Preferred Rel Bmk
BM	local	total	2022-01-29	104.829	102.380	97.551
BM	local	total	2022-02-26	108.264	103.209	95.145
BM	local	total	2022-03-31	112.600	106.309	94.192
BM	local	total	2022-04-30	109.703	104.305	94.839
BM	local	total	2022-05-31	109.931	105.311	95.557
BM	local	total	2022-06-30	108.154	103.886	95.809
BM	local	total	2022-07-30	104.008	102.348	98.630
BM	local	total	2022-08-31	105.160	102.459	97.830

Technical Indicators in Asia

Tags	Format	Delivery Method	Publication	Investment Horizon
Factors, China, Asia	csv, json, xlsx	UBS Quant Answers API or Excel	Daily T+1 Tue-Sat 00:55 UTC	Any
UBS Quant Answers API:	/api/factors/technical_indicators			
Related Research:	Quantitative Monographs "A deep dive into technical indicators in China" Quantitative Monographs "Technical indicators across Asian markets"			

Factor values based on daily OHLCV data in Asia

Description and Methodology

Technical indicators have long been a core component of quantitative trading and technical analysis, designed to extract trading signals from price and volume dynamics. Based on daily OHLCV (open-high-low-close-volume) data, we construct a broad set of technical indicators covering five categories: Momentum, Volatility, Intraday Pattern, Volume, and Price-Volume Interaction, reflecting different dimensions of market behaviour: price trends, risk regimes, intraday sentiment, trading activity and flow dynamics.

All indicators are structured in a consistent panel format across stocks and dates. More details on construction are available in our publication.

Historical Data

Daily values are available from 2010-01-04 across all available markets.

Coverage of China A shares, Hong Kong, India, Japan, Korea and Taiwan listed stocks.

Publication timing varies by region.

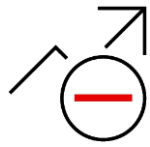
Data Shape

All factor values (per security, date, factor name) are floating point decimals.

Data example: factor values for a selection of stocks

Date	Identifier type	Identifier	Factor category	Factor full name	Factor code	Factor value
2025-12-10	sedol	6002817	Momentum	SLOPE (5d)	slope_5d	0.027282
2025-12-10	sedol	6000190	Volatility	Normalized Average True Range (5d)	natr_5d	2.908617
2025-12-10	sedol	6000286	Intraday Pattern	Candlestick Shift (1d)	ksft_1d	-0.019512
2025-12-10	sedol	6011277	Intraday Pattern	Candlestick Shift 5-day's average	ksft_5d	0.019044
2025-12-10	sedol	6003531	Volume	Moving Average Volume (5d)	vma_5d	1.374228
2025-12-10	sedol	6287465	Price-Volume Interaction	Price-Turnover Correlation (5d)	ptc_5d	0.592915
2025-12-10	sedol	6003940	Price-Volume Interaction	Return-Turnover Correlation (5d)	rtc_5d	-0.467943

Stock Loan Alpha



Tags	Format	Delivery Method	Publication	Investment Horizon
Alpha	csv, xlsx	sftp	Daily T+2 05:45 UTC	1 week – 3 months
Related Research:	Quantitative Monographs "Alpha from Stock Loan Data"			

Short-Term Insights: Alpha from proprietary Short Interest and Implied Vol data

Description and Methodology

Our composite alpha score is based on internal research combining stock loan data and proprietary UBS implied volatility data. The composite factor is strong globally and robust within each geographic subregion. Highest- and lowest-ranked names in several regions and sectors can provide a fundamental approach to implementation.

The model turns over at 80% per week.

Historical Data

Daily data across ~1,500 global lines. History from 2018.

Quantitative Research Review

Tags	Format	Delivery Method	Publication	Investment Horizon
Alpha, Analyst Survey	csv, xlsx	sftp or email	Intraday Mon-Fri every 15 mins Monthly Tues after third Fri	1 month
Related Research:	Q-Series "Collaborative Intelligence: How to combine human and machine insights to generate alpha?" Q-Series Redux "Collaborative Intelligence: Can Crowding data Enhance Alpha?"			

Unique insight into our lead analysts' views

Description and Methodology

Proprietary UBS data based on scored analyst inputs. Our lead analysts answer questions on industry and regulatory conditions, and short-term future catalysts. They answer questions on every stock they cover, building a unique time series. The data is presented as a score per company per question.

The data is captured via (a) a monthly cross-sectional review, and (b) views that are updated when analysts publish company or sector research. Delivery is available as monthly or intraday files via sftp, or as live alerts via email on publication of new responses.

Historical Data

Global monthly data is available from May 2021.
Intraday data is available from November 2022.
Australian monthly data is available from 2007 to June 2022.

UBS Quant Research Data Quality

How do we ensure our data is reliable?

Quant team methods

In the Quant Research team, we write research on techniques, proprietary content and combining idiosyncratic insight. We provide data catering to a wide range of clients and investor types, from hedge funds to pension funds, quant and fundamental. Our content and techniques have been refined over 25 years of continuous development.

We implement our models in Python code and store them in our controlled Gitlab repository. All our models are subject to peer review both at the research stage and when implemented and changed in production.

Data checks

We apply controls to check processes have run, their frequency and their resulting data shape and size.

We apply data quality checks before and after calculation. If we have all the datasets to compute a result set, we proceed; if we are missing a dataset or part of it, the calculation will not start. Additionally, we have controls that execute on the result set produced and compare its shape and structure with the one produced on the previous period. The comparison helps us determine any unusual result set, from a structural point of view. Control and monitoring algorithms, consistent with the likelihood and experience of particular issues, are used to alert us about possible data quality issues that could potentially arise. If so, remediation action is taken as soon as possible.

Data sources

In order to deliver our proprietary data sets and analytics, we use multiple raw data sources from both internal and external providers. UBS data providers are subject to UBS's policies on vendor management and onboarding, which includes due diligence checks and terms.

We are in regular contact with our data suppliers. Platform automation includes buffer time to allow for normal delays.

Data delivery and scheduling

We use delivery methods most suited to the data set and client. These methods include:

- UBS Neo
- Email
- SFTP
- Quant Answers - Excel add-in
- Quant Answers - API

We deliver data at varying frequencies, appropriate to each data set. This is often at daily frequency (Monday to Friday), but may be intraday, weekly, monthly or quarterly.

Support

The Quant Research team has a global presence, providing cover for urgent queries around the clock.

UBS Quant Answers platform support: ubs-quant-answers@ubs.com
Other technical queries: ol-res-quants-tech@ubs.com

Links

UBS Quant Answers web page:	www.ubs.com/quantanswers
UBS Quant Research:	https://neo.ubs.com/quantitative
UBS Research legal agreements:	https://neo.ubs.com/legal
UBS Business Continuity Planning:	https://www.ubs.com/global/en/investment-bank/regulatory-directory/bcp.html
UBS Privacy statement:	https://www.ubs.com/global/en/legal/privacy.html

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