

Program Cirrus Frequently Asked Questions

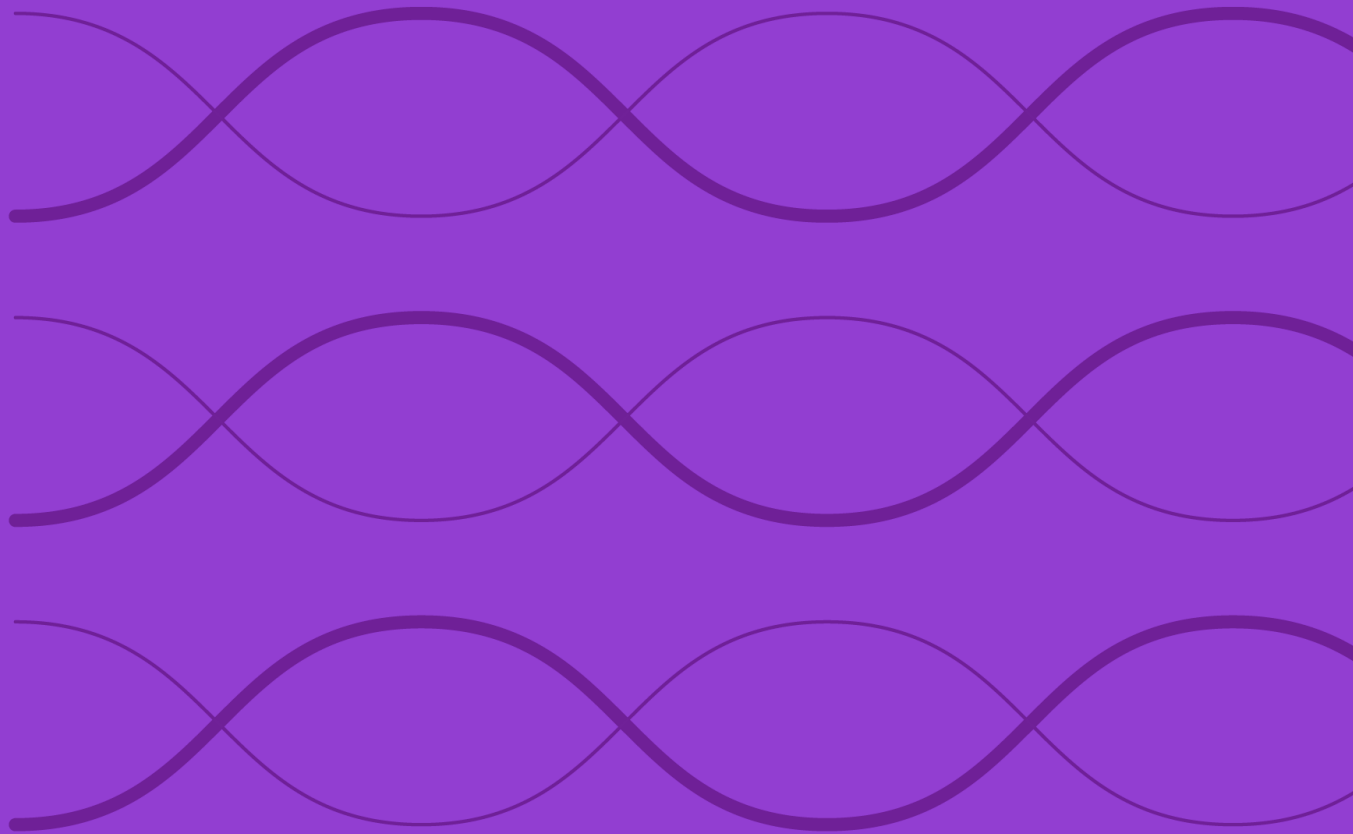


Table of Contents

Overview	4
What is Cirrus?.....	4
Why did Morningstar Indexes embark on Cirrus?	4
How does this impact me?.....	4
When is this happening?	5
Why did Morningstar Indexes change the go-live date from September 4, 2023, to September 22, 2023?	6
Changes to File Names, Formats, and Contents	6
Which test files can I receive?	6
When are the data files delivered?.....	7
Are the new file formats final? Can I propose any changes?	7
What are the differences between the legacy and new Index Levels Files?.....	7
What are the differences between the legacy and new Constituent Files?.....	7
What are the differences between the legacy and new Corporate Action Files?	8
What information is provided in the new PCON file during rebalance and reconstitution?.....	8
I see 5 instances of each ticker in the PCON file. How do I extract the correct index composition from the file?	8
I am not able find certain indexes in the files that I used receive, what should I do?.....	9
Who should I contact if I have any questions?	9
Methodology Differences	10
Are there security-level methodology differences that Morningstar Indexes has not announced?.....	10
Data Differences	11
Why are there differences in index levels, divisors, and market values between the legacy and new files?	11
Why are we observing more differences in index shares and weights in the June 2023 Cirrus files? Previously, the index shares, weights and levels were tracking more closely.	11
Why are there differences in total outstanding shares (TOS) and float between the existing and test files?	11
Will there be corporate action differences between the existing and test files?	12
Can Morningstar Indexes provide turnover analysis?	12

Why is Morningstar changing the Performance IDs of the Stock Connect securities?	12
Why are there changes to the Morningstar PID for the same security over time?	12
Why are there NULL "Size" data points in the constituent files?	12
What should I do if I have any questions about my files or data?	13
Go-Live and Rollout Plan	14
What will happen when Cirrus goes live?	14
Will there be turnover as a result of Cirrus going live?	15
What are the implications for the September 2023 reconstitution and rebalance for live production and the Cirrus test environment?	15
When will the Foreign Ownership Limit (FOL) rules be applied?	15
When will the weekly non-mandatory share change start to apply?	15
Version History.....	16
About Morningstar Indexes	17
Contact Us.....	17

Overview

To improve the client experience and reduce reliance on external calculation agents, Morningstar Indexes developed in-house calculation capabilities (program name: "Cirrus"). Cirrus launched on September 25, 2023, and we will migrate equity indexes previously calculated by S&P Dow Jones Indices ("SPDJI") to the Morningstar calculation platform. This document summarizes what you need to know about Cirrus and how it impacts you.

What is Cirrus?

Cirrus is the program name for the development and implementation of our in-house index calculation capabilities. Morningstar Indexes has traditionally utilized external calculation agents. As our business has evolved, we want to take more control over product quality and our clients' experience. The program scope includes:

- Procuring and curating multiple sources of input data (e.g., corporate actions, price, etc.).
- Applying corporate actions adjustments to generate next day T+1 open files (OCON) and pro forma files for T+2 to T+6 (PCON).
- Calculation of daily index levels and returns, and restatements when necessary.
- Upgrading our reconstitution and rebalance processes and our notification process.
- Enhancing our publishing system with customized entitlement and full monitoring capabilities.
- Integrating with our in-house real-time calculation service.
- Upgrading back-testing and product development capabilities.

Why did Morningstar Indexes embark on Cirrus?

As our collection of data and unique Intellectual Property (IP) has expanded considerably, so has its application. True to Morningstar's heritage as a trusted provider of data and research, Morningstar Indexes is committed to keeping up with the evolving needs of our clients. Implementing Cirrus enables us to:

- Modernize our infrastructure to create more reliable, cost-effective ways to serve and communicate with our clients.
- Improve speed to market so we can provide our clients and partners with products that provide timely access to emerging opportunities.
- Reduce risk, improve transparency, and provide added value and security for our clients by lessening our reliance on external service providers.
- Remedy known shortcomings with our current outsource provider, such as file delays for some non-US markets.

How does this impact me?

Updates and enhancements to equity index data sources, corporate action methodology and index maintenance procedures will be implemented during the transition. As a result, this may affect some index-level calculations. Additional information about planned data and methodology changes can be found in the "Data and Methodology Changes" section below. Changes to file names, formats, and contents vary based on current delivery methods and file types. Details can be found in the "Changes to File Names, Formats, and Contents" section below.

If you were receiving files via your SPDJI EDX account, they were transitioned to your Morningstar account as of June 23, 2023.

If you receive Morningstar equity indexes via a third-party platform or product (other than file deliveries), Morningstar Indexes worked closely with these redistributors to complete the migration. You will experience minimal direct impact.

The list of impacted indexes for each client will differ based on existing deliveries. Please reach out to CirrusMigration@morningstar.com or your migration manager for more information.

When is this happening?

Program timelines are outlined below and may be subject to change. We are closely monitoring testing results and feedback at each stage before progressing.

Timeframe	Activity
March 2023	Client Beta Testing. For client beta testers, we will start to deliver the new Cirrus files via your FTP for review. – Complete
April 3, 2023	Morningstar real-time indexes calculation goes live. – Complete
April 17, 2023	Client Parallel Production Testing. We have turned on parallel deliveries for all clients and all indexes for a period of at least 3 months in your Morningstar FTP. – Complete
June 9, 2023	The June reconstitution pro forma will be available in the PCON files. – Complete
June 23, 2023	Clients currently receiving files via SPDJI EDX will have to be fully transitioned to Morningstar FTP. All EDX deliveries for Morningstar Indexes will <i>cease in batches between June 23, 2023 to July 7, 2023</i> . – Complete
September 8, 2023	The Cirrus September reconstitution and rebalance pro forma will be available in the PCON files. – Complete
September 19, 2023	The final delivery of any Cirrus test files in the client /Test folder. Cirrus test data will cease between September 20-22, 2023, to provide a clear discontinuation of test data. – Complete
September 22, 2023	The final delivery of any SPDJI calculated index files (SDL, SDC, SDE)**. Clients will use the ADJ.SDC file delivered on Friday, September 22, 2023; as the open composition effective September 25, 2023. – Complete
	** Note that there will be 60 Global Markets carve-out indexes which will have their 20230922_*_ADJ.SDC files delivered on Sunday, September 24, 2023 night (US time), as per the current delivery schedule by SPDJI.
September 25, 2023	Program Cirrus is live, and Morningstar Indexes is the official calculator for all impacted equity indexes. – Complete

Why did Morningstar Indexes change the go-live date from September 4, 2023, to September 22, 2023?

Based on client feedback from parallel testing, we have identified a number of improvements and clarifications to our shares outstanding and float data that will be implemented in Cirrus before going live. Moving the go-live date by 2 weeks will enable clients to test these changes through another parallel reconstitution and rebalance process. Cirrus will go live after the reconstitution and rebalance in September 2023, so clients will not experience changes to the "TotalOutstandingShares" and "FloatFactor" data fields as a result of the Cirrus implementation at that time. Cirrus-related changes to "TotalOutstandingShares" and "FloatFactor" will not occur until the next (live) reconstitution and rebalance in December 2023.

Changes to File Names, Formats, and Contents

Changes to file names, formats, and contents vary based on current delivery methods and file types:

File Type	Impact
SDL, SDC, SDE	<p>If you are currently receiving Morningstar equity indexes files calculated by SPDJI (SDL, SDC, SDE), there will be modifications to the file names, file formats, and file contents. New test files and file names will be provided by your migration manager.</p> <p>The Morningstar Indexes file naming convention is "MSTAR_Index Full Name_MorningstarPortfolioID_FileType_yyyymmdd.csv"</p>
IDX, CON	<p>If you are currently receiving Morningstar equity indexes files (IDX, CON), there will be minimal impact to the file names and file formats. Morningstar Indexes will maintain your current file formats, and not transition them to the new Cirrus formats. Clients are still encouraged to review files delivered during the parallel testing phase to ensure minimal impact.</p>

Which test files can I receive?

During the testing phase, the following files were delivered to the Test folder. Please refer to the [file specifications](#) for more information:

New File Type	Description
IDX	Contains the closing index levels. Hedged index levels are delivered separately in a new HIDX file.
OIDX	Contains the next day's opening market value and divisor. This information is currently part of the SDL file.
CON	Contains the constituent-level closing information.
OCON	Contains the next day's opening constituent information.

PCON	Contains the forward-looking constituent information up to 6 days after the publish date (T), between (T+2) to (T+6) days and reflects any changes due to corporate actions, index rebalances or reconstitution.
CPACT	Contains information about corporate actions impacting the index portfolio.
CAL	Contains any exchange or holiday information impacting the index portfolio. This information is currently part of the SDE file.
HIDX	Contains the closing hedged index levels for all hedged variants of the specific index portfolio. This will only be delivered to clients entitled to receive hedged index levels.

When are the data files delivered?

Close files (IDX, HIDX and CON) are published approximately 2-3 hours after the final market close, and forward-looking files (OIDX, OCON, CPACT, PCON, CAL) are delivered approximately 1 hour after the close files.

Are the new file formats final? Can I propose any changes?

File structures and fields are final as of May 2023. Placeholder fields (e.g. "RefDataID2") have been added to in the new CON files to allow additional information to be included in the future. As always, we welcome client feedback and will consider any proposed changes for future iterations or enhancements.

What are the differences between the legacy and new Index Levels Files?

- A combination of the new IDX and OIDX files is required to fully replace the values in the legacy SDL file.
- The "IndexCode" field in the new IDX file will only be provided for indexes currently calculated by the external calculation agent. New indexes added after the go-live date will not have a value in this field. Clients should use the new "IndexId" field in the IDX file as the primary key.
- The legacy SDL file populates divisors only for price return (PR) variants. The new IDX file populates market values and divisors for total return (TR), net return (NR), excess return (ER) and decrement (DR) variants as well. Note, however, that the formula where Index Level = Market Cap / Divisor applies only to the PR variant and does not apply to the TR and NR variants in the IDX file. Please see the [Equity Indexes Calculation Methodology](#) document for more information about how the levels for TR and NR are calculated.
- When no dividends are going ex for an index on a given date, the "IndexDividendPoints" field within the IDX file reflects "0". This is different from the current SDL file, which reflects a blank field in the "IndexDividendPoints" field in cases where no dividends are going ex for a given date.
- The "Index Key", which is SPDJI's proprietary identifier, is not provided in the new index level file.

What are the differences between the legacy and new Constituent Files?

- In the new CON file, the security level primary identifier is located in the Morningstar "PerformanceID" ("PID") field. The "STOCK_KEY" field is not provided in the new file, as it is proprietary to SPDJI.
- The "GICSSubInd" field is populated in the new CON file for clients who are entitled to receive GICS classifications. The Morningstar Global Equity Classification System (GECS) is provided in the "SectorId" and "IndustryId" fields.
- The tax rate within the new CON file reflects that of the Country of Domicile, which is used for net dividend and net return (NR) calculations. Within the legacy SPDJI files, the tax rate applied reflects that of the Country of Domicile data field (which aligns with the Morningstar Country of Classification).

- The new CON file contains an “OpenIndexMarketValue” field to enable replication of the security-level return calculations within one single file.
- In the new CON file, the Morningstar PID of securities listed on the Stock Connect exchange will change effective September 25, 2023. The new PIDs are already available in the Morningstar Cirrus parallel files delivered via client test folders in the FTP. A complete list of impacted securities with current and updated Performance IDs can be found [here](#).

What are the differences between the legacy and new Corporate Action Files?

- A combination of the new CPACT and CAL files is required to fully replace the values in the legacy SDE file.
- Changes to tax rates are not announced in the CPACT file. The tax rates that are currently applied are reflected in the CON file, and email notifications will continue to be sent when tax rate changes occur.
- The gross dividend and net dividend currency and values are “as reported” by the company. The values in the “GrossDividend” and “NetDividend” fields are expressed in the currency indicated within the “DividendCurrency” field in the new CPACT files. The exchange rate used to convert the dividend currency to the base currency is documented in the “Comments” field. The legacy SDE file converts dividends to the price currency.
- For pending M&A events, the parent/acquirer information is not available for cash terms transactions in the new CPACT and CAL files.
- For certain reference and classification data changes (e.g., GICS changes), Morningstar Indexes provides an update on the effective date.

What information is provided in the new PCON file during rebalance and reconstitution?

- The new PCON file reflects the open constituent information between effective date (T) + 2 days to T+6 days. During a non-rebalance or reconstitution period, the constituents are adjusted for corporate actions that are effective within that window.
- The first preview of the rebalanced or reconstituted portfolio is provided on the second Friday of the rebalance or reconstitution month, with the T+6 effective date being the first business day following the third Friday. A new “RebalRecon” flag has been added to the file to indicate the effective date.
- Changes to constituent data within the PCON file will occur through T+6 days, as new corporate actions are accounted for during this period.

I see 5 instances of each ticker in the PCON file. How do I extract the correct index composition from the file?

The PCON file is a forward-looking T+2 to T+6 daily file that applies all corporate actions happening within that period. Therefore, there are multiple effective dates in the PCON file. The reconstituted or rebalanced portfolio is flagged in the “RebalRecon” field. Lines where this flag is set to “TRUE” indicate that this is the effective date of the newly reconstituted or rebalanced portfolio, meaning the updated holdings, shares, and weights are reflected. Please use this flag to load the new positions. Any lines with effective dates after the date in the “RebalRecon” field reflect the reconstituted or rebalanced portfolio as well.

	A	B	C	D	E	F	G	H	I
1	PortfolioName	Portfolio	MasterPortfolio	EffectiveDate	ConstituentName	CompanyId	Performance	RIC	CUSIP
71	Morningstar US Target Market Exposure	1911833	1911833	6/19/2023	3M Company	0C0000095Q	0P0000000I	MMM.N	88579Y101
159	Morningstar US Target Market Exposure	1911833	1911833	6/20/2023	3M Company	0C0000095Q	0P0000000I	MMM.N	88579Y101
135	Morningstar US Target Market Exposure	1911833	1911833	6/21/2023	3M Company	0C0000095Q	0P0000000I	MMM.N	88579Y101
174	Morningstar US Target Market Exposure	1911833	1911833	6/22/2023	3M Company	0C0000095Q	0P0000000I	MMM.N	88579Y101
159	Morningstar US Target Market Exposure	1911833	1911833	6/23/2023	3M Company	0C0000095Q	0P0000000I	MMM.N	88579Y101

AN	AO	AP	AQ	AR	AS	AT	A
FileTy	BloombergTick	TaxRa	OpenIndexMarketVal	ReconRebal	RefDataI	PublishDateTime	
PRO	MMM UN			TRUE		2023-06-16T00:03:54Z	
PRO	MMM UN					2023-06-16T00:03:54Z	
PRO	MMM UN					2023-06-16T00:03:54Z	
PRO	MMM UN					2023-06-16T00:03:54Z	

Will I be able to receive historical data in the new file formats?

Clients will be able to receive historical close index levels and constituent data in the IDX and CON files. However, the historical open constituents, corporate actions, and pro forma files are only supported in the legacy SPDJI file format.

I am not able find certain indexes in the files that I used receive, what should I do?

As part of Cirrus, Morningstar has terminated the calculation of a few indexes, and also made slight modifications to how hedged indexes and target volatility indexes are delivered –

- Hedged equity indexes are now delivered in a separate HIDX file. Please ingest the HIDX files that are posted in your FTP. If you do not see the file in your FTP, MorningstarIndexesImplementation@morningstar.com for delivery.
- Wide Moat Target Volatility 5% and Morningstar Wide Moat Target Volatility 20% indexes are now delivered in a separate IDX files. Clients who used to receive the 2 indexes as part of the MSTAR_WIDE_MOAT_FOCUS_P000000153_IDX_YYYYMMDD v2 files may reach out to MorningstarIndexesImplementation@morningstar.com for delivery.
- [Morningstar Singapore REIT Yield Focus Income Protection index](#) has been terminated.
- [Morningstar Wide Moat Focus Balanced Target Volatility 5% index](#) has been terminated.

Who should I contact if I have any questions?

If you have any questions during testing, please send your query to CirrusMigration@morningstar.com.

From September 25, 2023 onwards, all queries should be routed to Indexes@morningstar.com to reach our 24 by 5 service team.

If applicable, please clearly indicate the index, file name, data fields and values in question.

Methodology Differences

Previously announced methodology changes can be found here:

- [Morningstar Indexes Corporate Actions Methodology Update](#)
- [Morningstar Indexes Total Outstanding Shares and Float Update](#)
- [Additional Morningstar Corporate Actions and Total Float Methodology Update](#)

Final methodology documents can be found here:

- [Morningstar Indexes Corporate Actions Methodology](#)
- [Morningstar Indexes Free Float Methodology](#)
- [Morningstar Indexes Price Methodology](#)
- [Morningstar Indexes Withholding Tax Rates](#)
- [Morningstar Indexes Calculation Methodology](#)

Are there security-level methodology differences that Morningstar Indexes has not announced?

From June 2023 reconstitution onwards, the Cirrus test files have used the Morningstar Indexes [total outstanding shares and free float](#) data. There will be share-level differences between Cirrus and SPDJI for a number of securities. In general, these differences arise because we are now using different data sources, and in some cases, we have decided to change the methodology for how some data is calculated.

We are continuing to review data differences during the parallel testing phase, and in some cases, we may decide to make additional enhancements to our data calculations based on feedback from clients. If a methodology change in the parallel environment is expected to have a material impact on clients, we will follow our standard policy for methodology changes, which include issuing a formal consultation and obtaining approval from our Index Methodology Committee.

Data Differences

Why are there differences in index levels, divisors, and market values between the legacy and new files?

In addition to the share differences explained earlier, there may also be differences between the SPDJI corporate action methodology and the new Cirrus [corporate action methodology](#). As a result, data differences at the security level may have accumulated during the test period, causing the test index levels to deviate from official values.

Commonly observed differences include:

- Share changes due to voluntary corporate actions are applied at a different time between the current and new methodology, which impacts the market value and return of the security.
- Late corporate actions and restatements applied during the parallel testing phase as we have refined our processes.

Previously announced methodology changes can be found here:

- [Morningstar Indexes Corporate Actions Methodology Update](#)
- [Morningstar Indexes Total Outstanding Shares and Float Update](#)

Why are we observing more differences in index shares and weights in the June 2023 Cirrus files?

Previously, the index shares, weights and levels were tracking more closely.

Prior to the Cirrus June 2023 reconstitution, we used the March rebalance shares and float information from SPDJI for our daily corporate action adjustment and calculation. For the June 2023 reconstitution, we used Morningstar Indexes shares and float data sources, hence the increased differences observed.

While differences are expected, please reach out to CirrusMigration@morningstar.com if you would like us to investigate specific data differences you are observing.

Why are there differences in total outstanding shares (TOS) and float between the existing and test files?

Due to differences in the Morningstar Indexes [corporate action methodology](#) and practices in updating [total outstanding shares and free float](#), data differences in the two fields have accumulated during the test period.

Commonly observed differences include:

- Timing of changes to TOS and/or float data, as SPDJI may make changes to TOS and/or investable weight factor ("IWF") on a different date than Cirrus. Morningstar Indexes will apply material voluntary TOS changes on a weekly basis, and "FloatFactor" changes on a quarterly basis at the next rebalance. Differences due to this will synch up over time.
- SPDJI's TOS includes Treasury Shares that are then accounted for within IWF, while Morningstar Indexes' TOS is net of Treasury Shares. This results in a different "FloatFactor" value (that does not have to account for Treasury Shares). The net effect is that there will be no impact to index shares or index market cap.
- Morningstar Indexes is still in the process of reviewing TOS and "FloatFactor" data from our vendors. With the (original) September 4, 2023 go-live date, there were limited windows when clients can preview the post-Cirrus application of TOS and float data. To give clients a longer parallel testing period, we chose to add the Morningstar data, that is still a work-in-progress, into the test files at the June reconstitution. Given the new go-live date and plan, Morningstar Indexes will continue to improve the float data and provide clients with updated previews before applying it during the December 2023 reconstitution and rebalance. Morningstar Indexes will provide the next TOS and "FloatFactor" preview in the Cirrus September 2023 reconstitution and rebalance PCON files.
- SPDJI applies an exception to consolidate share classes for certain companies, while Morningstar Indexes uses the share class-level outstanding shares consistently. Based on feedback received in the testing

phase, we plan to re-evaluate the TOS differences and methodology with our Indexes Methodology Committee, and we will issue a consultation if significant changes to the live data experience are expected.

Will there be corporate action differences between the existing and test files?

Due to differences between SPDJI and Morningstar Indexes [corporate action methodology](#) and practices in updating [total outstanding shares and free float](#), there may be differences in corporate action events captured in the files:

- Under the new Cirrus methodology, Morningstar Indexes does not track M&A events where the targets are securities that are not included in the Morningstar Index universe and not scheduled to be added to the indexes. Share changes to the acquirer are also not captured. The holdings and shares of the acquirer are instead evaluated at the next rebalance.
- There are timing differences for when certain corporate actions (e.g., Total Outstanding Shares changes and dividend adjustments are applied).
- For certain reference and classification data changes, Morningstar Indexes provides an update on the effective date. For example – GICS changes.

Can Morningstar Indexes provide turnover analysis?

Yes, Morningstar has performed a Cirrus simulated June reconstitution with the updated Morningstar TOS and Float. Please see attached [link](#) for more information. The June 2023 reconstitution turnover analysis for select indexes can also be provided upon request. For more details, please reach out to your migration manager or CirrusMigration@morningstar.com.

Why is Morningstar changing the Performance IDs of the Stock Connect securities?

As part of Cirrus go-live, Morningstar Indexes will update the Morningstar PID of securities listed on the Stock Connect exchange effective September 25, 2023. This impacts all Morningstar clients who are using Morningstar Performance ID (“PID”) and is ingesting indexes with Chinese securities. Clients utilizing Morningstar PID to parse daily constituent files on must adjust their internal systems to process the new Performance IDs. A complete list of impacted securities with current and updated Performance IDs can be found [here](#).

The previous Morningstar PID reflects the Shenzhen or Shanghai Stock Exchange listing within the Morningstar Reference Data system, and new PIDs were created for the Stock Connect listing. The new PIDs are already available in the Morningstar Cirrus parallel files delivered via client test folders in the FTP. There are no changes the Morningstar Company ID, third party identifiers (such as ISIN, SEDOL, and ticker) or historical prices in the files.

Why are there changes to the Morningstar PID for the same security over time?

The Morningstar PID is designed to be the permanent Morningstar identifier for a given security and should ideally not change over time. However, we have observed that there have been changes on occasion over time, especially when there are Mergers & Acquisitions. This is due to dependencies on the upstream Morningstar Reference Data team. Clients may have to use a combination of the PID and third party identifiers like ISIN and CUSIP to confirm the continuity of a given security. We will continue to work with our vendors to preserve the continuity of the identifiers over time.

Why are there NULL “Size” data points in the constituent files?

In the initial roll-out, Morningstar Indexes is populating the “Size” data point in the constituent files for securities within our Morningstar Global Markets Index. As such, securities that are not part of the Morningstar Global Markets Index will not have a Size assignment. The “Size” data point in the constituent file for the Morningstar Global All Cap

Target Market Exposure Index should also not be used to perform size carve-outs. We will enhance this data point in a future release.

What should I do if I have any questions about my files or data?

If you have any questions during testing, please send your query to CirrusMigration@morningstar.com.

From September 25, 2023 onwards, all queries should be routed to Indexes@morningstar.com to reach our 24 by 5 service team.

If applicable, please clearly indicate the index, file name, data fields and values in question.

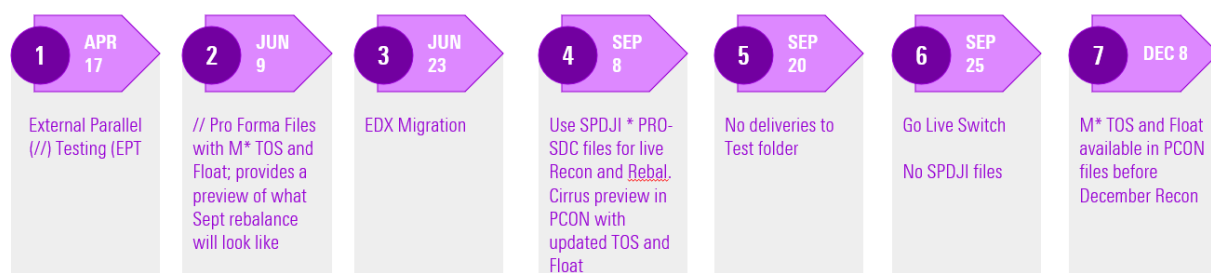
Go-Live and Rollout Plan

What will happen when Cirrus goes live?

Morningstar Indexes will go live with Cirrus after the close of September 22, 2023. At the close of business on this day, all constituent and index-level data will be synched up to the last official index value, index shares, and open basket (ADJ.SDC file) from Friday, September 22, 2023; and carried forward in the live Cirrus production environment to preserve continuity in the indexes.

On the first business day after the Cirrus go-live date, Morningstar Indexes will use the last official values and maintain the index calculation going forward. There should be no incremental turnover on this date as a result of this transition.

The below diagrams provide an overview of the project timeline so far, and upcoming events.



September							November							December						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	28	29	30	31	1	2				1	2	3	4						1	2
3	4	5	6	7	8	9	5	6	7	8	9	10	11	3	4	5	6	7	8	9
10	11	12	13	14	15	16	12	13	14	15	16	17	18	10	11	12	13	14	15	16
// Pro Forma with updated M* TOS and Float Shares														Live Pro Forma with M* Shares						
17	18	19	20	21	22	23	19	20	21	22	23	24	25	17	18	19	20	21	22	23
No // files delivered (M* Go Live Prep)																				
24	25	26	27	28	29	30	26	27	28	29	30	24	25	26	27	28	29	30		
Go Live with Sept Rebal (SPDJI) Index Shares																				

updated

Please note the following:

- File Delivery:** Morningstar Indexes has been delivering Cirrus test files in the /Test folder in the SFTP account since April 17, 2023. Production of test files will discontinue after September 19, 2023, as Morningstar Indexes prepares to go live with Cirrus after the close of September 22, 2023. From September 25, 2023, onwards, the live production Cirrus files will be delivered to the /data folder and no SPDJI files will be delivered. The data values and files delivered by Cirrus after September 22, 2023, will represent the official index levels.
For clients receiving only the Morningstar Indexes IDX and CON data files (v2 format), there will be no changes expected to your file deliveries. The Cirrus calculated values will flow through to your files, as per your current test experience.
- Portfolio Management:** Clients will act on the final open index basket from the "20230922_*_ADJ.SDC" file delivered on September 22, 2023, which will be effective the next business day. After Cirrus goes live, clients should use the OCON files as the indicative open index basket for the next business day.
- Total Outstanding and Float Shares:** Morningstar Indexes will use the last official index value and shares from Friday September 22, 2023, to maintain the index calculation from this date forward. There should be no change to TOS or float data as a result of the cutover. The next TOS and float updates will be applied at the December reconstitution and rebalance.

Will there be turnover as a result of Cirrus going live?

No, there should not be additional turnover at the cutover. Morningstar Indexes will use the last official close index levels, open index composition, shares, TOS, and float data on September 22, 2023 and carry on calculation going forward.

Because Cirrus goes live after the reconstitution and rebalance in September, clients will not experience changes to the "TotalOutstandingShares" or "FloatFactor" data fields as a result of the Cirrus implementation during this reconstitution and rebalance period. Cirrus-related changes to "TotalOutstandingShares" and "FloatFactor" data fields will not occur until the next (live) reconstitution and rebalance in December 2023.

What are the implications for the September 2023 reconstitution and rebalance for live production and the Cirrus test environment?

1. There will be no live production change for the live September 2023 reconstitution and rebalance. Clients should use the legacy PRO.SDC files provided by SPDJI. These files will be delivered as per the usual schedule (after the close of September 8, 2023, through September 15, 2023).
2. Morningstar Indexes has been delivering a daily pro forma file (PCON) as part of our enhanced Cirrus deliverable. For Cirrus, the September reconstitution and rebalance will first be reflected in the "_CPACT_20230908" and "_PCON_20230908" files.
Within the "_PCON_20230908" file, the rebalanced index composition can be identified by the "RebalRecon" flag = TRUE, with effective date September 18, 2023, unless that day is an index holiday. For indexes where 20230918 is an index holiday, the effective date will reflect the next business day. Clients are strongly encouraged to test the Cirrus files to ensure readiness for the December reconstitution and rebalance.

When will the Foreign Ownership Limit (FOL) rules be applied?

Morningstar's FOL capping methodology will be applied in a "phased" approach. The FOL capping for all impacted securities will first be applied at the December 2023 reconstitution to prevent intra-rebalance turnover. However, should there be corporate actions between September 25, 2023 (go-live date) and the December reconstitution, the Cirrus FOL capping rules will be considered, and used to calculate the security's new float.

When will the weekly non-mandatory share change start to apply?

Morningstar's weekly non-mandatory share change will first be announced to clients on the first Friday (September 29, 2023) after Cirrus is live, and be made effective on Thursday (October 5, 2023) of the following week. If Thursday is an index holiday, the change will be effective on the next business day.

Version History

Version	Date	Description
1	February 2023	First published version, Overview of program and changes.
2	March 6, 2023	Added Expected file differences section for Beta testing.
2.1	April 10, 2023	Published FAQ for parallel testing, minor updates to Expected file differences.
3	April 17, 2023	Added Expected data and methodology differences section for Parallel testing, and made minor updates to prior content as indicated.
4	May 17, 2023	Updated dates for go-live, Added EDX Migration section, and minor updates to prior content as indicated.
5	June 1, 2023	Updated dates for go-live, expected data and methodology differences, and minor updates to prior content as indicated.
6	June 29, 2023	Updated EDX migration with batch roll-off plan; Expected Methodology section with links for methodology documents; Expected Data Differences section with questions and answers for expected differences, and minor updates to prior content as indicated.
7	July 19, 2023	Updated document with new go-live date (September 22, 2023). Added new section for Go-Live and Rollout Plan. Updated and added new entries for Methodology and Data Differences sections as indicated. Removed EDX migration section, as that is now complete.
8	August 7, 2023	Updated document for changes in Performance IDs for Stock Connect securities and new FAQs for go-live and roll-out plan. New entries as indicated.
9	August 22, 2023	Updated timeline to call out the cessation of test files (pg 5), link to updated Cirrus file specification (pg 6) and clarification for clients receiving the v2 file format (pg 13). New and updated entries as indicated.
10	September 15, 2023	Added new methodology updates in the Methodology Change section. New and updated entries as indicated.
11	September 19, 2023	Added new entries to Data Differences and File Changes section, and updated contacts for questions after Cirrus is live. New and updated entries as indicated.
12	September 24, 2023	Minor updates to document to reflect launched status of Cirrus, and updated links to final methodology documents

About Morningstar Indexes

Morningstar Indexes was built to keep up with the evolving needs of investors—and to be a leading-edge advocate for them. Our rich heritage as a transparent, investor-focused leader in data and research uniquely equips us to support individuals, institutions, wealth managers and advisors in navigating investment opportunities across major asset classes, styles and strategies. From traditional benchmarks and unique IP-driven indexes, to index design, calculation and distribution services, our solutions span an investment landscape as diverse as investors themselves.

indexes.morningstar.com

Contact Us

indexes@morningstar.com