

This document lists functional and content changes made to the MSCI Real Estate Analytics Portal and designated products.

Please note that measure definitions are described in the MSCI's Global Methodology Standards for Real Estate Investment via the MSCI Client Support Site: The [Client Support Site](#) (click here) temporarily requires separate sign in details.

(\* Date Available is based on the next index or product publication date. All future dates are subject to change.,

as at 6 January 2018

Market Impacted	Feature	Product	Date Available *	Summary of the change
All	<b>ERROR NOTIFICATION</b>	Index Fact Sheets	*next publication cycle	<p>Please note that an error has been identified in the <b>Semi Deviation (Downside Standard Deviation)</b> measure in the PDF-formatted index fact sheets for property indexes. These are accessible via the <a href="#">msci.com website</a> as well as the Analytics Portal and affect all fact sheets produced prior to 31 December 2017.</p> <p>The Semi Deviation is defined as the Total Return below the expected return. However it has been calculated as the Income Return below the expected return and is therefore an incorrect representation of this risk measure for Total Return. As this does not impact or cause a restatement of the Total Return index series, MSCI has decided not to reproduce the previously published index fact sheets but would like to inform potential users of the incorrect calculation of the risk measure.</p> <p>From January 2018 onwards the Semi Deviation will be calculated as the Total Return below the expected return and will comply with the methodology as defined in the MSCI Global Methodology Standards for real estate investment.</p>
non-UK	Product Label Change	IRIS	06-Jan-18	The "Global IRIS" link on the Analytics Portal homepage and menu has been changed to "IRIS".
All	Analytics Portal Query Functionality	Global Intel Multinational Intel	06-Jan-18	<p><b>Analysis Selection Steps</b> - introduced the ability to change previously selected options without the whole analysis resetting.</p> <p>It is now possible to change <i>Dataset</i>, <i>Filter</i>, <i>Segmentation</i> and <i>Measure</i> options once the results of a query have been run. This resolves an issue that forced users to re-specify the entire query once a dataset or filter selection was changed.</p> <p><u>Please note</u> that...</p> <ul style="list-style-type: none"> <li>...the solution is limited to only the above analysis stages, i.e. it will still be necessary to re-specify the Output Parameters.</li> <li>...it is still possible for previous selections to be removed if the latest changes invalidate them. This typically occurs when, for example, a <i>Measure</i> or <i>Segmentation</i> was previously selected that is not available for the new <i>Dataset</i> or <i>Filter</i>.</li> </ul>
All	Analytics Portal Query Functionality	Global Intel Multinational Intel	06-Jan-18	<p>Minor <b>charting</b> issues resolved:</p> <ul style="list-style-type: none"> <li>users now able to select all series at once</li> <li>chart works when query contains only one measure</li> <li>selection responsiveness improved</li> </ul>
Netherlands	New Data Series	Global Intel Multinational Intel	*next publication cycle	<b>Vacant Possession Value</b> and <b>Discount to VPV</b> added to Residential series
Australia, New Zealand, Pan-Asia, Asia Pacific	Filter Definition Change	Global Intel Multinational Intel	*next publication cycle	<b>Same Store filter</b> now excludes assets for the entire measurement period if they have held down valuations for a portion of the period. Doing so improves sample consistency in markets with asynchronous valuations and matches expectations of local investors in such markets. This does not impact other markets as this specific scenario does not arise in them.

Market Impacted	Feature	PAS (Beta) - where available	Date Available *	Summary of the change
All	NEW Data Series	PAS (Beta) Data Query	06-Jan-18	<p><b>Since Inception</b> measurement added for asset level analysis (previously only available for portfolio level analysis).</p> <p>The range of measures for 'Since Inception' measurement periods has also been increased.</p> <p><u>Please note</u> that 'Since Inception' is limited to the history available to MSCI and may not align with the actual inception date of the fund (or asset) if they predate the MSCI data.</p>
Quarterly Valued data sets (US, UK, PEPFI)	NEW Data Series	PAS (Beta) Data Query	06-Jan-18	<p><b>Year-to-Date (YTD)</b> measurement period added for quarterly and monthly valued data sets.</p> <p>(9 Month measurement period has also been made available for rolling annually valued regimes where portfolios have varying year-end months.)</p>
All	Report Design & Content Change	PAS (Beta) Executive Summary Report	*next publication cycle	Attribution results now available to 2 decimal places to assist analysis of attribution analysis of segmentations with large number of segment nodes.
All	Report Design & Content Change	PAS (Beta) Asset Fact Sheet	*next publication cycle	<b>Asset Fact Sheet file names</b> now include <b>asset name</b> to provide a more user friendly way of identifying downloaded reports.
All	Analytics Portal Functionality	All current PAS (Beta) Reports	*next publication cycle	<p>The three PAS (Beta) reports are pregenerated and are <b>now also available in the Saved Analysis</b> section of the Analytics Portal.</p> <p>These reports (listed below) are available under the "by Portfolio" and "By Report Type" tabs</p> <ul style="list-style-type: none"> <li>Executive Summary</li> <li>Asset Contribution Report</li> <li>Asset Fact Sheet</li> </ul>

All	Export File Structure change	PAS (Beta) Data Query	06-Jan-18	<p>New Column for <b>Reporting Cycle</b> added to Results Viewer and Export files:</p> <p>Reporting Cycle added to differentiate between portfolios and benchmarks that have been produced to different reporting periods. this is especially useful for users with multiple portfolios and benchmarks and also enables the latest portfolio results to be published before benchmark results are available.</p> <ul style="list-style-type: none"> <li>The date denotes the last day of the reporting period, e.g. Dec 2017 describes results that have been run <b>up to</b> 31 Dec 2017</li> <li>Export files will contain the full date whilst web applications and reports will simplify the date to month and year (mm yyyy).</li> <li>This is not to be confused with the date on which a report or calculation may have been run (often referred to as an <b>as at</b> date).</li> <li>This is also not to be confused with the <i>Analysis Period</i> (labelled <i>Period</i> in the results viewer and export files), which represents results <b>for</b> a specific period (e.g. a quarter) or group of periods (time series).</li> </ul> <p>A portfolio result can therefore be produced <b>up to</b> Dec 2017 <b>for</b> the time series Dec 2000-Dec 2017 <b>as at</b> 5th Feb 2018 (although the application currently does not show the 'as at' date).</p>
All	Analytics Portal Functionality	PAS (Beta) Data Query	06-Jan-18	<p><b>Data Set Cards and Data Set Names for exports to spreadsheet</b> - additional meta data for PAS (Beta) section only [ONLY RELEVANT FOR SOME USERS].</p> <p>Data Set card information is now richer to better deal with the more varied mix of portfolios and benchmarks available within the PAS (Beta) Analytics Portal application. This is particularly useful for users accessing multiple portfolios and benchmarks across a variety of portfolio analysis services. For such users it is important to differentiate between Reporting Cycle (see above feature enhancement) as well as benchmarks with varying year-ends and publication (reporting) frequencies.</p> <ul style="list-style-type: none"> <li>The Reporting Cycle is denoted as a simple date (mm-yyyy) and informs the user which index or benchmark reporting cycle the results have been generated to.</li> <li>The publication frequency is prefixed with the term "<b>Updated:</b>" and describes how often the result is published and to which months the measurement (or year-ends) applies. <ul style="list-style-type: none"> <li>Quarterly or Monthly implies sequentially rolling publication cycles to standard calendar months.</li> <li>'Annual to Dec' or 'Annual to Mar' is used to describe publication cycles that report every 12 months to different year-ends.</li> <li>'Biannually to Mar,Sep' can therefore also be distinguished from 'Biannual to Jun,Dec' as 6 month publication cycles but operating on calendar cycles.</li> <li>This is not to be confused with the valuation/appraisal frequency as it is possible to publish a set benchmark results 'Annually at Dec' for a data set drawn from a quarterly valued universe in the case of an 'annual' portfolio measurement service.</li> </ul> </li> <li>The MSCI-defined Portfolio or Benchmark Filter that is applied to create distinct data sets is identifiable by the prefix "<b>Included:</b>".</li> </ul>

(\* Date Available is based on the next index or product publication date. All future dates are subject to change.,

as at 9 October 2017

Market Impacted	Feature	Product	Date Available *	Summary of the change
All, but specifically Australia, New Zealand	Data set definitions	Multinational Intel Global Intel Global Intel PLUS	09-Oct-17	<p>Change to <b>All Assets</b> filter definition:</p> <p>The data set inclusion rules have been amended in order to better manage the discrepancies between results in our portfolio analytics and market information products, in particular indexes in markets where portfolios are not appraised synchronously.</p> <p>In technical terms this means that held down valuations (that is to say, assets who have not been re-appraised in the latest valuation cycle) are now included in the All Assets results based on the last known value adjusted for capital expenditures. However, whilst this is a globally applicable rule, only Australia (A) and New Zealand (A) index results are affected by this change.</p> <p><u>Please Note:</u></p> <ul style="list-style-type: none"> <li>Whilst Global Intel results have been updated with this change, changes to formal index results (published index fact sheets) will only take effect at each index's <b>next publication date</b>.</li> <li><i>Standing Investment</i> and <i>Same Store</i> results will continue to exclude held down valuations.</li> <li>To compensate for this in markets most affected by this issue, an additional filter is available for Australia and New Zealand that also shows <i>Standing Investments</i> and <i>Same Store</i> results including held down valuations. This filter will <b>only</b> be visible when selecting only Australia or only New Zealand.</li> </ul>
All unfrozen data sets, but specifically Pan Asia	Result changes	Global Intel Multinational Intel	09-Oct-17	<p>Global Intel and Multinational Intel results will be re-run over the course of 9 October 2017 to incorporate some minor data corrections made during data cleansing activities. This will result in minor changes in selected unfrozen data sets.</p> <p>As a result, and on an intended on-off basis, Global Intel will differ from Index Fact Sheets until such time that indexes are next formally republished.</p> <p>In particular, headline results will differ in the following markets:</p> <ul style="list-style-type: none"> <li>Pan Asia: as a result of standardizing the recording of property values in local currency</li> <li>Spain, Germany, CEE: less than 1bp change in Dec 2016</li> <li>Global &amp; Pan-European data sets: less than 1bp change in Dec 2016 due to change in contributing markets</li> </ul>

All	Product Re-design	Multinational Intel	09-Oct-17	<p><b>The Multinational Intel application</b> is now integrated with the new market information product re-design:</p> <p>The Multinational Intel application has been decommissioned and replaced with the same application that delivers the Global Intel product. Global Intel users, who also automatically subscribe to Multinational Intel, will now receive both sets of results from the same application. As a result, headline performance series are now available to view in the standard 8 currencies included in Multinational Intel.</p> <p><i>Please note:</i> The content of Multinational Intel has therefore undergone the following minor changes:</p> <ul style="list-style-type: none"> <li>• The default currency for the Nordic data sets has switched from USD to EUR (already the case in Global Intel)</li> </ul>
All	Homepage Navigation change		09-Oct-17	<p>The link to <b>Multinational Intel</b> and <b>Global Intel</b> products have been merged into a single button called "<b>Market Analysis</b>".</p>
All	Cross-platform support		09-Oct-17	<p>Support for <b>data exports</b> to the <b>iOS</b> operating system has been improved and will now be possible for all devices running applications that can read spreadsheets and CSV files.</p>
All	Global Intel Filter Selection View	Global Intel PAS (Beta) users	09-Oct-17	<p>The following features have been changed in the <b>Filter</b> Selection view:</p> <ul style="list-style-type: none"> <li>▶ (as mentioned above) Two additional filters that include held down valuations to Standing Investments and Same Store have been added for <b>Australia</b> and <b>New Zealand</b> data sets only. Holding down values for assets appraised on an asynchronous basis is a particular feature of these markets.</li> </ul>
All	Global Intel Segmentation Selection View	Global Intel PAS (Beta) users	09-Oct-17	<p>The following features have been changed in the <b>Segmentation</b> Selection view:</p> <ul style="list-style-type: none"> <li>▶ A <b>segmentation search</b> feature has been added which enables users to search on segmentation and segment names. This will filter the available segmentation options based on the text search criteria. e.g. you can use this to find all segments that reference, say, "shopping centres". At this stage this is limited only to the labels, not definitions.</li> <li>▶ The "All Property Types" segment node, i.e. the segmentation total, can now be selected as an option check-box at the top of the view. Users no longer need to search for it among the segmentations list. The option is selected by default.</li> <li>▶ Segmentations that have a nested structure can now be selected at the most granular 'child' node as well as the summary 'parent' nodes.</li> </ul>
All	Global Intel Measure Selection View	Global Intel PAS (Beta) users	09-Oct-17	<p>The following features have been changed in the <b>Measure</b> Selection view:</p> <ul style="list-style-type: none"> <li>▶ <b>Net Operating Income Growth (NOI Growth)</b> has been added as a standard measure to Global Intel. It is selectable if you have chosen the Same Store filter in the Filter selection view.</li> <li>▶ The design of the <b>measure selection</b> has been updated to improve its usability but is also designed for planned development in this area.</li> <li>▶ A Search feature has been introduced for measures that is based on measure name. Search criteria matches will be highlighted in yellow and automatically expand the tree.</li> </ul>
All	Global Intel Output Selection View	Global Intel PAS (Beta) users	09-Oct-17	<p>The following features have been changed in the <b>Output</b> Selection view:</p> <ul style="list-style-type: none"> <li>▶ It is now possible to select both <b>fixed and variable currency options</b> if they are available for a given data series</li> <li>▶ You can now specify the <b>Reporting Frequency</b> of the output. Use this to create a consistent output when the data sets you have selected have varying reporting frequencies. This was previously only available in Global Intel PLUS. e.g. If you select both Japan and the Germany data set, you can ensure you only view December year-end results by specifying an "years" with an Analysis Period ending in December. If you don't do this, the output would default to the highest frequency available, which in this case would have been a monthly output because Japan publishes a rolling annual result every month.</li> <li>▶ <b>Percentile</b> options are now automatically selected in the drop-down menu once a style of percentiles is chosen. This is introduced to simplify the usage of this feature.</li> </ul>
All	Export File Structure change	Global Intel	09-Oct-17	<p><b>Spreadsheet and CSV export files</b> exported directly from the Analytics Portal results views has been amended as follows:</p> <ul style="list-style-type: none"> <li>▶ The column "Percentile Banding" has been renamed to "<b>Function</b>" so as to avoid confusion of the role of the column and futureproof the format.</li> <li>▶ The <b>Since Inception output labels</b> now have the base date appended to them. This is to satisfy feedback that it is important to understand the context of the result. However, this was done in a way that will keep the label for a given data series consistent over time. e.g. Since Inception (Dec 2000). The base month corresponds to the base month of the first valid period result. For an index series this is the index base month.</li> <li>▶ <b>The naming of data sets in export files will now match the name in the Analytics Portal application.</b> Specifically, all indexes based on frozen data sets will now show the "Frozen" suffix in the data set name, e.g. <i>UK (Annual) - Frozen</i>.</li> </ul> <p>Please Note:</p> <ul style="list-style-type: none"> <li>• These structure changes do not apply to the "<b>Digest Download</b>" files in the Saved Analysis area, although we plan to apply the same structural changes in the near future.</li> </ul>

All Country data sets	New Measure	Global Intel	09-Oct-17	<p><b>Net Operating Income Growth (NOI Growth)</b> has been added as a standard measure to Global Intel. It is selectable if you have chosen the Same Store filter in the Filter selection view and will be available in the Digest Download files (found in the Saved Analysis' <i>Market Data Files</i> tab) as well as output files in our HTTPS (and sFTP) repositories.</p> <ul style="list-style-type: none"> <li>• Please refer to the measure guide for details on the measure definition.</li> <li>• Please note that the annual, quarterly and similar variants of this measure will be tied to the underlying valuation frequencies of the respective data sets</li> <li>• This measure is not available on composite data sets that have been reweighted (e.g. Global, North America, Nordic, etc.)</li> </ul>
All	Analytics Portal Functionality	Multinational Intel Global Intel	09-Oct-17	<p>► Each <b>Selection</b> panel now has a <b>default option</b> selected. This means a user can move straight to the <i>View Results</i> or <i>Export Data</i> buttons once the data set has been selected.</p> <ul style="list-style-type: none"> <li>• Default Filter = All Assets</li> <li>• Default Segmentation = All Property Types</li> <li>• Default Measure = Total Return</li> <li>• Default Output History = 3 years</li> <li>• Default Output Settings = data set's default frequency and currency</li> </ul> <p>Once a data set has been selected it is now also possible to move to any step in the analysis definition process.</p> <p>Please note that changes to selections in the <i>Dataset</i> and <i>Filter</i> views may remove selected options further below if the combinations of selected items are invalid. This occurs because the list of available measures is dependent on the selected data set and filters.</p>
All	Analytics Portal Functionality	Global Intel PLUS	09-Oct-17	<p>The workflow for <b>Create Custom Filter</b> has been simplified:</p> <ul style="list-style-type: none"> <li>► Selected criteria remain visible until the filter is saved, even when switching between filter criteria tabs (property type, geography and asset characteristics). This will enable the user to keep track of the incrementally defined filters as well as view the filter content in one view upon loading previously saved filters.</li> <li>► Users can rename the filter and edit its description directly in the custom filter list.</li> <li>► The list of available custom filters is now sorted alphabetically to facilitate easier retrieval of previously saved custom filters.</li> </ul>
All	Analytics Portal Functionality	Global Intel PLUS	09-Oct-17	<p>The workflow for <b>Create Custom Segmentation</b> has been simplified:</p> <ul style="list-style-type: none"> <li>► Selected nodes are automatically added to the custom segmentation list.</li> <li>► Nodes that should be merged can now be multi-selected and merged directly in the custom segmentation list.</li> <li>► Users can rename segmentations or segment nodes directly in the custom segmentation list.</li> </ul>
All	Analytics Portal Functionality	Global Intel PLUS	09-Oct-17	<p><b>Standard Geography selection lists</b> will now load into the view whilst the user scrolls down the respective lists. This replaces the need to sequentially click on the 'more' button to load more content.</p>

Market Impacted	Feature	Product	Date Available *	Summary of the change
PAS Beta test client portfolios	New Reports	PAS (Beta)	* upon portfolio result recreation	<p>Three new reports are now available for selection from the Dataset view once a Portfolio and Benchmark are selected:</p> <ul style="list-style-type: none"> <li>► Summary Report</li> <li>► Asset Contribution Report</li> <li>► Asset Fact Sheet</li> </ul> <p>Click on the report icon on the right hand side. This will open a report selection panel.</p>
PAS Beta test client portfolios	Asset level results viewer	PAS (Beta)	* upon portfolio result recreation	<p>The Asset Level results tab will now display the asset's respective segment for <b>each segmentation</b>, selected in the analysis definition panel, <b>in separate columns</b>. This was previously limited to only one.</p>
PAS Beta test client portfolios	New Content - Asset Fact Sheet report	PAS (Beta)	* upon portfolio result recreation	<p>The <b>Asset Fact Sheet</b> report in the PAS (Beta) application now contains the assets respective benchmark results as well as the overall benchmark results. The report now also contains more measures.</p> <p>Please note that this change does not apply to the Asset Fact Sheet report available via the "Asset Contribution" application.</p>
PAS Beta test client portfolios	New Measures	PAS (Beta)	* upon portfolio result recreation	<p>The following metrics have been added to the standard PAS (Beta) analysis:</p> <ul style="list-style-type: none"> <li>► Attribution (Allocation score and Selection score)</li> <li>► Absolute Contribution to portfolio Total Return, Capital Growth and Income Return</li> <li>► Contribution to Relative Total Return, Capital Growth and Income Return</li> <li>► Average Capital Employed Weight</li> <li>► Portfolio Total Return Rank</li> </ul>
PAS Beta test client portfolios	Analytics Portal Functionality	PAS (Beta)	* upon portfolio result recreation	<p>The Analysis Period time line will now automatically adjust to the length of the available results in the selected portfolio or benchmarks.</p>
PAS Beta test client portfolios	Analytics Portal Functionality	PAS (Beta)	* upon portfolio result recreation	<p>The <b>Since Inception</b> measurement period will now compare relative results based on the minimum overlapping history between the portfolio and benchmark. This will generally be the portfolio analysis start date.</p>
PAS Beta test client portfolios		PAS (Beta)	09-Oct-17	<p>The "Legacy Reporting" filters have been removed to avoid confusion.</p>
PAS Beta test client portfolios	Analytics Portal Functionality	PAS (Beta)	09-Oct-17	<p>Analyses saved within the PAS (Beta) application will now appear under the Portfolio Analysis section of the <b>Saved Analysis</b>. This was done to separate out portfolio analytics from market information queries.</p>

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as at 30 June 2017

Market Impacted	Feature	Product	Date Available *	Summary of the change
All	User Experience	Global Intel Global Intel PLUS	30-Jun-17	<p>The <b>Data Set</b> and <b>Filter</b> selection in Global Intel has been changed from a checkbox list to a card view. User feedback has indicated that card views are more compatible with mobile devices but also enable the provision of additional descriptive information.</p> <p>Data Set cards are organised by region and then alphabetically. We have also introduced a <b>Favourites</b> group in response to client feedback. This group will show your most commonly used data set, which will appear at the top of the page.</p> <ul style="list-style-type: none"> <li>▶ To select a data set click on its card (it will change colour), to de-select it click on it again.</li> <li>▶ Click on several cards to select multiple cards at once.</li> <li>▶ Click on the "..." to obtain more information about the data set.</li> </ul>
All	Analytics Portal Functionality	Global Intel Global Intel PLUS	30-Jun-17	<p><b>Data Set SEARCH:</b> Use the Search bar to quickly filter on data sets. The feature will search any text you can see on a card: data set name, contributing data sets (in the case of composite indexes), frequency and reporting period.</p> <p>e.g.</p> <ul style="list-style-type: none"> <li>▶ a search for "Belgium" will find the Belgium (A) data set as well as Eurozone (A), Global (A) and Pan Europe (A).</li> <li>▶ a search for "2016" will return only those data sets with an Analysis Period ending in 2016. You can also search "Dec-2016" to be more specific.</li> <li>▶ a search for "quarterly" will return all data sets with default quarterly asset valuation cycle. Note: Frequency does not denote publication frequency!</li> </ul>
All	Analytics Portal Functionality	Global Intel Global Intel PLUS	30-Jun-17	<p><b>Cross-segmented segmentations</b> (two distinct segmentations that have been combined to compute all available permutations) can now be split out into separate columns in an <b>export file</b>. This will allow you to filter on the results based on one or more individual segments across the other. This is particularly useful for <b>Global Intel PLUS</b> users, who can define their own cross-segmentations.</p> <ul style="list-style-type: none"> <li>▶ e.g. If you split Global (A)'s <b>Global Cities - Property Type Classification sectors</b> segmentation in the spreadsheet export, you will be able to filter on (say) Offices and compare all office segments across each city.</li> </ul>
All	Analytics Portal Functionality	Global Intel Global Intel PLUS	30-Jun-17	<p><b>Results Layout:</b> You can now switch from Normalized results layout to <b>Time Series</b> (reporting periods side by side) or <b>Transposed</b> (measures side by side) on-screen.</p> <ul style="list-style-type: none"> <li>▶ Click on the "Timeseries View" button above the results data and select your option from the drop-down menu.</li> </ul>
All	Analytics Portal Functionality	Global Intel	30-Jun-17	<p><b>Portfolio Analysis:</b> Global Intel users will notice a new button <b>Portfolio Analysis</b> in the top menu bar and homepage. This is temporarily inactive for most users but watch out for upcoming updates from MSCI on the introduction of interactive portfolio analytics in the portal.</p>

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as at 10 May 2017

Market Impacted	Feature	Product	Date Available *	Summary of the change
UK (Annual), (Quarterly)	Segmentation change	Global Intel	09-May-17	<p>Following client feedback the <b>UK Segment by Age</b> segmentation has been amended by splitting the latest age band "&gt; 1995" into two new segments: "1995 - 2010" and "&gt; 2010".</p> <p>The <b>Standard Retail</b> segment was also updated to ensure it explicitly contains all retail assets that are not Shopping Centres and Retail Warehouses. This is now consistent between Annual and Quarterly data sets. Previously the quarterly data set allocated a small number of Retail assets into the Other category in certain circumstances.</p>
UK (Quarterly)	Segmentation change	Global Intel	09-May-17	<p>A segment in the <b>UK Retail Type by Region</b> segmentation has been redefined. The <b>Standard Retail</b> segment definition has been changed in line with the change made for UK Segment by Age (see above). As a result the respective segment results for the quarterly data set have been recomputed.</p>
UK (Annual), (Quarterly)	Segmentation change	Global Intel	09-May-17	<p><b>UK Property Type's Standard Shops</b> segment definition has been amended to explicitly include Arcades and Unit Shops only, thereby allocating all other retail assets that are not categorized as Shopping Centres, Retail Warehouses, Department Stores or Supermarkets into "Other Retail". Whilst the previous definition matched some legacy products this was changed so that the "Standard Shops" segment is consistently defined when compared with other standard segmentations used across UK market data sets.</p>
Ireland (Q)	NEW Data Series	Global Intel	27-Apr-17	<p><b>Vacancy Rate - Financial</b> introduced for quarterly Standing Investment and Same Store series.</p>

as at 21 April 2017

Market Impacted	Feature	Product	Date Available *	Summary of the change
Non-UK	Report Content Change	IRIS	21-Apr-16	<p><b>Remaining Lease Term (incl. Breaks) Segmentation:</b> IRIS reports now show this segment including breaks. The "excl. breaks" version is still available for download from the application. Remaining Lease Term now also evaluates the headlease expiry dates for leasehold assets (previously ignored).</p>

Non-UK	Report Content Change	IRIS	21-Apr-16	<b>New segment node:</b> All Property, Sector and Sub-sector pages now include an additional line for "rent free/pre-let segment".
Non-UK	Pre-defined Data Export change	IRIS	21-Apr-16	<b>New Measures/Segmentations:</b> Tenancy-level Floorspace, Rent per m <sup>2</sup> (ft <sup>2</sup> ), Market Rental Value per m <sup>2</sup> (ft <sup>2</sup> ), Market Rental Value now available for data export. Segmentation for Remaining Lease Term & Lease Expiry added.
Non-UK	Summary Dashboard Layout Change	IRIS	21-Apr-16	<b>Remaining Lease Term (excl. Breaks)</b> segmentation replaces Income over-rented.
Italy (A), Italy (B)	Segmentation change	Global Intel	21-Mar-17	Following client feedback the <b>Property Type by Region</b> segmentation has been enhanced by splitting the two Milan segments into Milan Centre, CBD Duomo, CDB Porta Nuova, Semi-Centre, Periphery and Hinterland. This change was made to align with prevailing local market practices.
All	Analytics Portal Functionality	Global Intel	21-Apr-16	<b>Results View:</b> In addition to sorting individual columns you can now activate a context menu that provides a filter on column data (similar to spreadsheet filters).
All	Analytics Portal Functionality	Global Intel	21-Apr-16	<b>Export Data:</b> in addition to sorting individual columns you can now activate a context menu that provides a filter on column data (similar to spreadsheet filters).
All	Analytics Portal Functionality	Global Intel	21-Apr-16	<b>Data Export:</b> Users can now choose to split the labels of cross-segments (i.e. two-tiered segments) across multiple columns to facilitate better filtering and grouping in spreadsheets and analysis tools (such as pivot tables). Please note that when you use this option more columns will be added to the standard export file structure.
All	Analytics Portal Functionality	Global Intel PLUS	21-Apr-16	<b>Opening data from results notification:</b> The email notification informing users that their custom analyses have completed now include a link that directs the user straight to the data (rather than to the Saved Analysis results viewer).
All	Analytics Portal Functionality	Global Intel PLUS	21-Apr-16	<b>Standard Geography:</b> Following client feedback Standard Geography selection menus now sort alphabetically.

as at 27 January 2017

\*\* - Global Intel data sets will be regenerated starting on the morning of 27 January 2017. All data sets will be re-run by close of 30 January 2017. It may take until this time for all changes to take

Market Impacted	Feature	Product	Date Available (from...)**	Summary of the change
All	New Global Intel 'look and feel'	Global Intel	27-Jan-17	<b>User Interface Upgrade:</b> Global Intel Whilst maintaining the overall flow of the application, we have responded to client feedback requesting a better user experience and ease of use. Please refer to the user guide for more detail on changes.
All	Same Store	Global Intel	27-Jan-17	<b>Same Store definition: Measurement period aligned with analysis.</b> Following client feedback, the way the same store filter is applied has changed. Whereas Global Intel always applied a 12 Month Same Store rule before, i.e. included only those assets in the respective sample for an entire 12 month period, the period now varies according to the measurement period selected. For example, if a 3-month measurement period is selected for a return series, the same store filter will include only those assets available to the sample for all 3 of the months leading up to each respective reporting date (Period).  Previously published Same Store results have been removed in order to avoid confusion. There is no impact on 'Annual' results. <b>Please note</b> that all data sets will be re-generated by 30 Jan 2017 in order for this change to come into effect. As a result there may be some historic result changes for unfrozen data sets on other filters too.  Please refer to the Measure Guide and Global Methodology Standard documentation for detailed rules on the inclusion rules for Same Store.
All	Data Series Change	Global Intel	27-Jan-17	<b>Most recent Index series:</b> An Index series will now show the <i>most recent consistent period</i> of performance. If there is a break in a return or growth series during the most recent reporting period (due to data quality or confidentiality criteria not being met) the historic index will continue to be published until a consistent period of performance is re-established. At that point, the index series will rebase from the start of the next consistent period.  Therefore an Index series is now available for some historic periods that were previously not shown. Previously no index series was shown if the return for the most recent reporting period return was not available.
All	NEW Measure	Global Intel	(various)	<b>Net Operating Income Growth</b> will be introduced incrementally with each future Global Intel data set release. This measure is measurement period-specific and therefore exists in three variants: year on year (y-o-y), half year on half year (h-o-h) and quarter on quarter (q-o-q). Please refer the Measure Guide for further details.  <b>Please note:</b> Net Income Growth was commonly used in legacy products, which was a growth measure based on <i>Rent Passing</i> and not a receivable net income. This has now been substituted with the measure <b>Gross Rent Passing Growth</b> .
UK	Measure label change	Multinational Intel, Global Intel	27-Jan-17	<b>Net Income Receivable</b> and its variants (per ft <sup>2</sup> , per m <sup>2</sup> , Growth, Yield) have been renamed to <b>Net Operating Income</b> (per ft <sup>2</sup> , per m <sup>2</sup> , Growth, Yield).
UK	NEW Data Series	Multinational Intel, Global Intel	27-Jan-17	Introduction of annualised and indexed series for <b>Gross Rent Passing Growth, Equivalent Yield Impact, Equivalent Yield Shift</b> .
UK	Segment label change	Global Intel	27-Jan-17	Prefixed "UK " to segmentation names used in UK markets.

UK (Annual), (Quarterly)	Segmentation change	Global Intel	27-Jan-17	<b>UK Property Type</b> and <b>UK Property Type and Region</b> now includes Healthcare and Residential. This has been standardised between the Quarterly and Annual data sets to provide improved comparability and alignment with the Standard Global Property Types.
UK	Segment label change	Global Intel	27-Jan-17	Amended segment labels for: <ul style="list-style-type: none"> <li>UK PAS Segment for "PAS Office - Rest of South East" label</li> <li>UK Segment History for all "Retail Warehouses" segment labels</li> </ul>
UK (Monthly)	NEW Segmentation	Global Intel	27-Jan-17	The segmentations <b>UK PAS Segments</b> has been added.
UK (Quarterly)	NEW Segmentation	Global Intel	27-Jan-17	The legacy 'Weighted Term to Expiry' analysis is now supported with a new segmentation called <b>UK Segment by Remaining Lease Term (incl. breaks) Quartile Range</b> .
UK (Quarterly)	Segment label change	Global Intel	27-Jan-17	Segmentation name and segment <b>labels</b> have been updated for those showing <b>quartile ranges</b> : <ul style="list-style-type: none"> <li>UK Segment by MRV per m<sup>2</sup> Quartile Range</li> <li>UK Segment by Equivalent Yield Quartile Range</li> </ul> <p>This was done to remove ambiguity and improve on conflicting conventions used between legacy products.</p>
UK (Quarterly)	NEW Segmentation	Global Intel	27-Jan-17	<b>Regional Yield Quartile Analysis'</b> segmentations have been added to replace the legacy standalone spreadsheet. These are presented as three separate segmentations: <ul style="list-style-type: none"> <li>UK Sectors by Region by Equivalent Yield Quartile Range</li> <li>All England Sectors by Equivalent Yield Quartile Range</li> <li>Central &amp; Inner London Sectors by Equivalent Yield Quartile Range</li> </ul>
UK (Annual)	NEW Segmentation	Global Intel	27-Jan-17	The segmentations <b>UK Digest History</b> and <b>UK Healthcare - Property Types</b> have been added.
UK	Data Set label change	Multinational, Global Intel	27-Jan-17	Data sets that are based on frozen source data and historical composition will have the label " <b>Frozen</b> " appended in their labels.  Please note: The UK (Annual) will take on this label at it's next formal publication date (1 March 2017).
UK	NEW Measure	Global Intel	27-Jan-17	<b>Income and Occupancy</b> analysis is now supported by the following new measures: (Please note that the first two measures replace the single 'Reversionary Tenancies % Total' measure in legacy digest products. All other measures are a substitute for those used in the legacy UK digest products.)  <ul style="list-style-type: none"> <li>Number of Under-rented Leases % Total (Standard Units)</li> <li>Number of Leases Let at Market Rent % Total (Standard Units)</li> <li>Number of Over-rented Leases % Total (Standard Units)</li> <li>Number of Vacant Units % Total (Standard Units)</li> <li>Uplift from Under-Rented Leases % Rent Passing (Standard Units)</li> <li>Uplift % Rent Passing (Under- and Rack-rented Standard Units)</li> <li>Loss from Over-Rented Leases % Rent Passing (Standard Units)</li> <li>Loss % Rent Passing (Over-Rented Standard Units)</li> <li>Uplift from Vacant Units % Rent Passing (Standard Units)</li> <li>Uplift from Vacant Units % Market Rental Value (Standard Units)</li> <li>Reversionary Potential (Standard Units)</li> <li>Reversionary Potential (Let Standard Units)</li> </ul>
Japan	NEW Measure	Global Intel	30-Jan-17	<b>Gross Rent Receivable Yield</b> has been introduced.

as at 15 December 2016

Market Impacted	Feature	Product	Date Available *	Summary of the change
UK (Monthly), (Quarterly)	Segment Correction	Global Intel	15-Dec-16	<b>Segmentation Name: Digest History</b> - segment definition correction <b>Standard Shops - South East &amp; Eastern</b> and <b>Standard Shops - Rest of UK</b> were corrected. The history for these segments was been recalculated. This does not impact headline index or sector level results.
UK (Monthly)	NEW Data Series	Global Intel	15-Dec-16	<b>Market Rental Value Growth</b> on 6 month measurement period added.
France	NEW Measure	Global Intel	15-Dec-16	<b>Vacancy Rate - Financial</b> reintroduced
All	Analytics Portal Functionality	Global Intel	05-Nov-16	<b>Analytics Portal Spreadsheet Export</b> functionality: The label for "No Percentiles" in the column "Percentiles" has been changed to "-". Any pregenerated files run before this date will not be updated. Data sort order and format also improved based on user feedback.
All	Analytics Portal Functionality	Global Intel	05-Nov-16	<b>Since Inception Annualized</b> : Standard label introduced for the longest annualized period available. Each data set shares the same label instead of incrementing a period for each index release. Enables users to link to the longest annualized period in a consistently way. Previous label will be removed whenever each respective data set is refreshed.
All	Analytics Portal Functionality	Global Intel	05-Nov-16	<b>Currency Selection</b> : No longer exports non-selected currencies.

All	HTTPS / SFTP Label File	Global Intel	05-Nov-16	HTTPS / SFTP label file corrected. The CODE column no longer truncates very long labels.
Canada	NEW Segments	Global Intel	04-Nov-16	Canada Global Cities by Property Type now contains segments for Victoria, Regina and Rest of Canada. Only available for the Canada data set.
Australia, New Zealand	Segment label change	Global Intel	15-Nov-16	Amendment to Capital Investment Structures - Quality Type segmentation labels.
Australia, New Zealand, Japan	NEW Measure	Global Intel	15-Nov-16	Value Appraised (%) measure introduced. Useful for markets that do not have fully synchronized valuations. Replaces External Valuer Appraised (%) in these markets.
Japan	Measure label change	Global Intel	15-Nov-16	Capital Value (Latest Value) and Capital Value Weight (Latest Value) measure label amendment to improve consistency.

as at 28 September 2016

Market Impacted	Feature	Product	Date Available *	Summary of the change
Australia, New Zealand	NEW Index	Global Intel	NZ: 8-Sep-16 Aus: 13-Sep-16	Quarterly Indexes of income, capital and total return added
Australia	NEW Measure	Global Intel	13-Sep-16	Rent Receivable per m <sup>2</sup> reintroduced
Australia	NEW Measure	Global Intel	13-Sep-16	Total Net Operating Costs per m <sup>2</sup> reintroduced
Australia	NEW Measure	Global Intel	13-Sep-16	Vacancy Rate - Floorspace reintroduced
Japan	NEW Index	Global Intel	15-Sep-16	Monthly Indexes of income, capital and total return reintroduced. Japan data set now offers two return index series: annual and monthly.
Japan	NEW Measure	Global Intel	14-Oct-16	Latest Value measure re-labelled to Capital Value (Latest value)
Japan	NEW Measure	Global Intel	14-Oct-16	Capital Value per m <sup>2</sup> (Latest value) introduced to replace Capital Value per m <sup>2</sup>
Netherlands	NEW Index	Index Fact Sheet & Global Intel	29-Sep-16	The IPD Netherlands Annual Property Index will experience a <b>one-off historical restatement</b> of income, capital and total returns and index values. The newly restated Index series, including full history, will then be re-frozen. This is necessitated by the adoption of MSCI's new Global Methodology Standard and will impact all sub-market indexes.
South Africa	NEW Index	Index Fact Sheet & Global Intel	04-Oct-16	IPD South Africa Biannual Property Index (formerly known as an 'indicator') migrated to Global Methodology Standard (GMS), history is <b>restated</b> .
France	NEW Index	Index Fact Sheet & Global Intel	24-Oct-16	IPD France Annual Property Index will experience a <b>one-off historical restatement</b> of income, capital and total returns and index values. The newly restated Index series, including full history, will then be re-frozen. This is necessitated by the adoption of The MSCI's new Global Methodology Standard and will impact all sub-market indexes. <i>Please note that this is a revised date (formerly communicated as 29 September 2016)</i>
UK	NEW Index	Index Fact Sheet & Global Intel	01-Mar-17	IPD UK Annual Property Index will experience a <b>one-off historical restatement</b> of income, capital and total returns and index values. The newly restated Index series, including full history, will then be re-frozen. This is necessitated by the adoption of MSCI's The new Global Methodology Standard and will impact all sub-market indexes. <i>Please note that this is a revised date (formerly communicated as 29 September 2016)</i>
Canada	NEW Index	Global Intel	04-Nov-16	Quarterly Indexes of income, capital and total return added
Australia, New Zealand	NEW Measure	Global Intel	NZ: 8-Nov-16 Aus: 15-Nov-16	Development Receipts added to the suite of investment measures
Germany	NEW Measure	Global Intel	Nov-16	Market Net Yield reintroduced as the 'local market' default yield
Germany	NEW Measure	Global Intel	Nov-16	Market Net Yield Shift reintroduced to accompany the Market Net Yield addition
Germany	NEW Measure	Global Intel	Nov-16	Market Net Yield Impact reintroduced to accompany the Market Net Yield addition
Sweden, Norway, Denmark	NEW Measure	Global Intel	Jan-17	Valuation Yield reintroduced to Nordic data sets as the 'local market' default yield.
Sweden, Norway, Denmark	NEW Measure	Global Intel	Jan-17	Valuation Yield Shift reintroduced to accompany the Valuation Yield addition
Sweden, Norway, Denmark	NEW Measure	Global Intel	Jan-17	Valuation Yield Impact reintroduced to accompany the Valuation Yield addition

(\* Date Available is based on the next index or product publication date. All future dates are subject to change.)

Please refer any questions to your MSCI client service team or email us at [realestate@msci.com](mailto:realestate@msci.com).



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