Infront Professional Terminal

User manual Version 8.6.600

Real-time global market data, news, analytics and electronic trading in one intuitive platform

Exported from the Help Center on 04/25/2022

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2 Release Notes

Here, you can find the Release Notes for the individual Service Packs and Fix Packs of the Infront Professional Terminal.

Release Notes for older program versions can be found in the Archive.

2.1 Release Notes 8.6.700

See also:

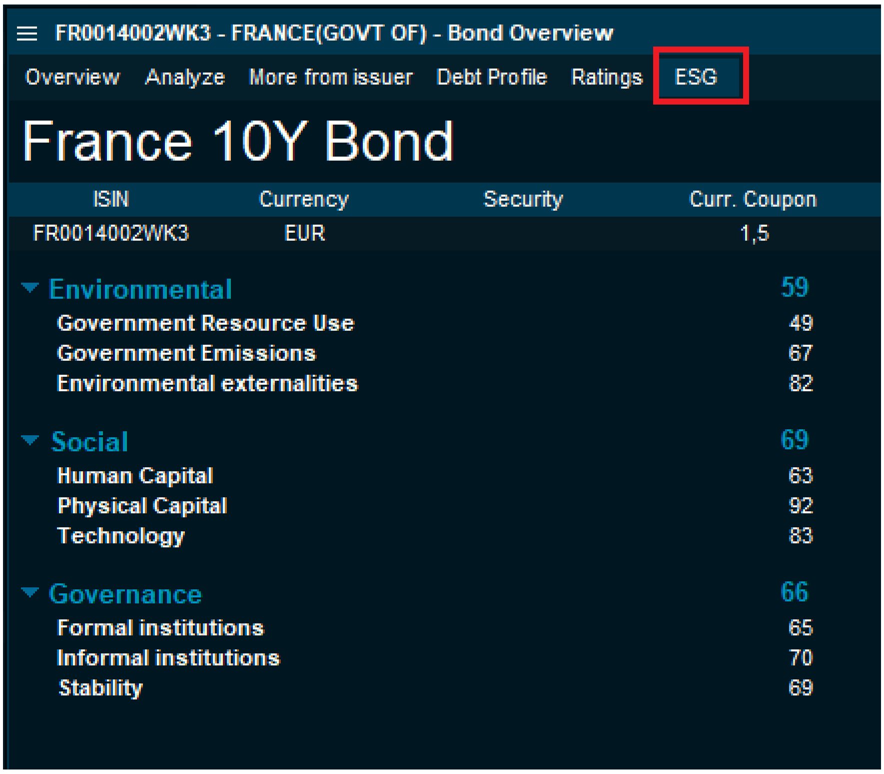
2.1.1 ESG risk scores in Bond and Fund Overview

Our ESG dataset is now further integrated into the "Fund Overview" and "Bond Overview".

ESG tab in Bond Overview

For corporate bonds, the risk scores of the respective issuer is applied to the bond similar as to how the issuer scores are applied to equities on the familiar 3 level granularity:

Government specific risk scores and parameters for the issuing state are applied for treasury notes and bills. In contrast to the company scores, these measure the business environment of the nation, political stability, technological innovation, taxation policies, corruption and so on.

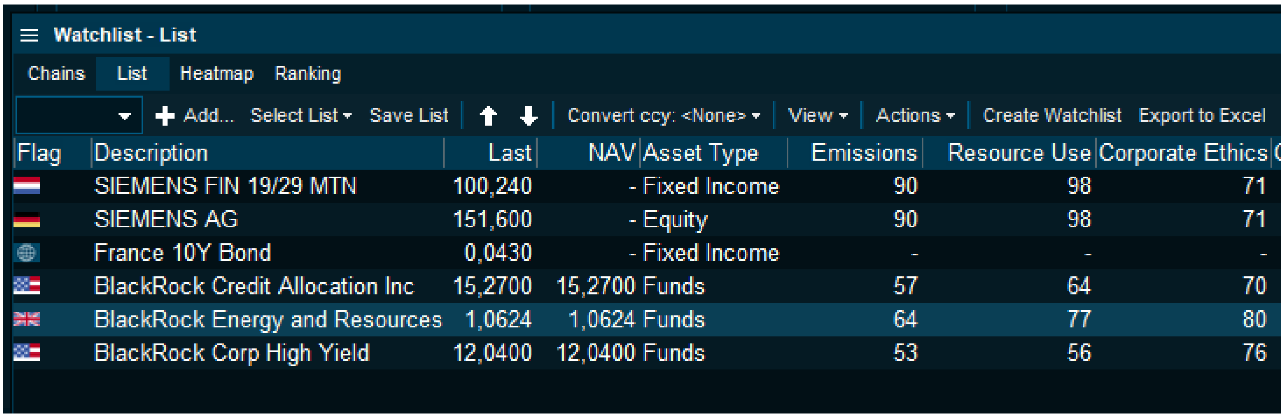


ESG tab in Fund Overview

Fund specific scores are presented in the new "ESG" tab of the "Fund Overview" and reflect the specific funds risks based on the fund holdings and diversification.

For example, Blackrock's different funds will have different scores based on their exposure and diversification:

These can be easily compared in a watchlist or with asset specific columns:



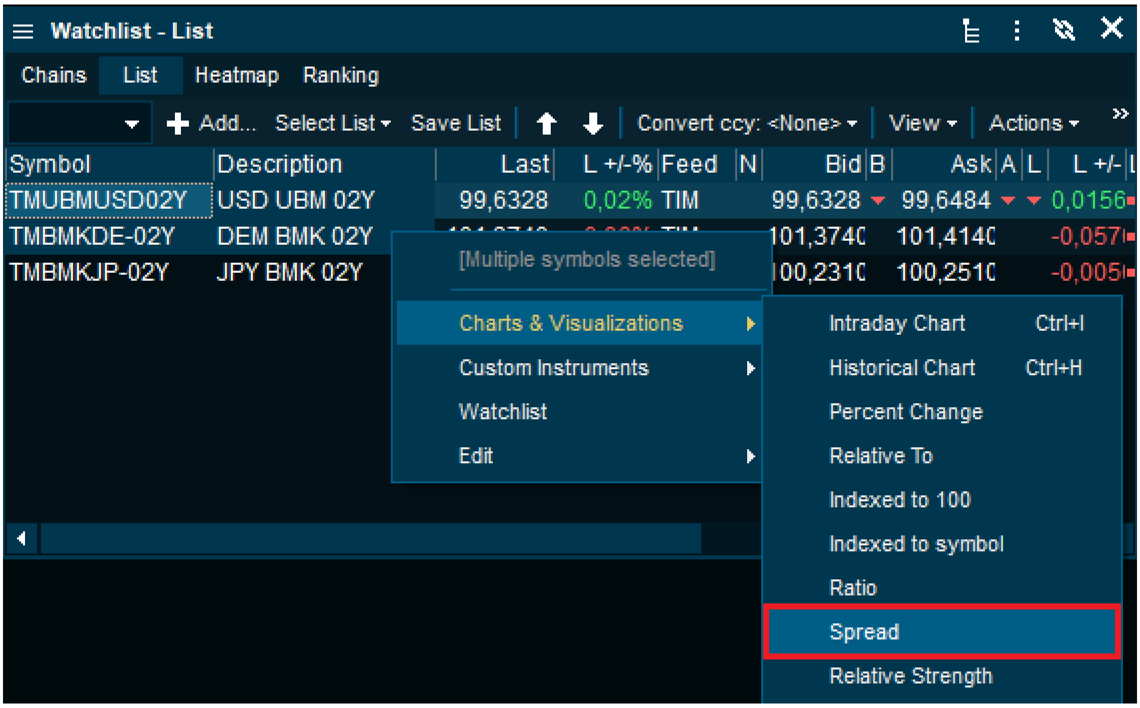
Flag	Description	Last	NAV	Asset Type	Emissions	Resource Use	Corporate Ethics
	SIEMENS FIN 19/29 MTN	100,240	-	Fixed Income	90	98	71
	SIEMENS AG	151,600	-	Equity	90	98	71
	France 10Y Bond	0,0430	-	Fixed Income	-	-	-
	BlackRock Credit Allocation Inc	15,2700	15,2700	Funds	57	64	70
	BlackRock Energy and Resources	1,0624	1,0624	Funds	64	77	80
	BlackRock Corp High Yield	12,0400	12,0400	Funds	53	56	76

2.1.2 Spreads in curve chart

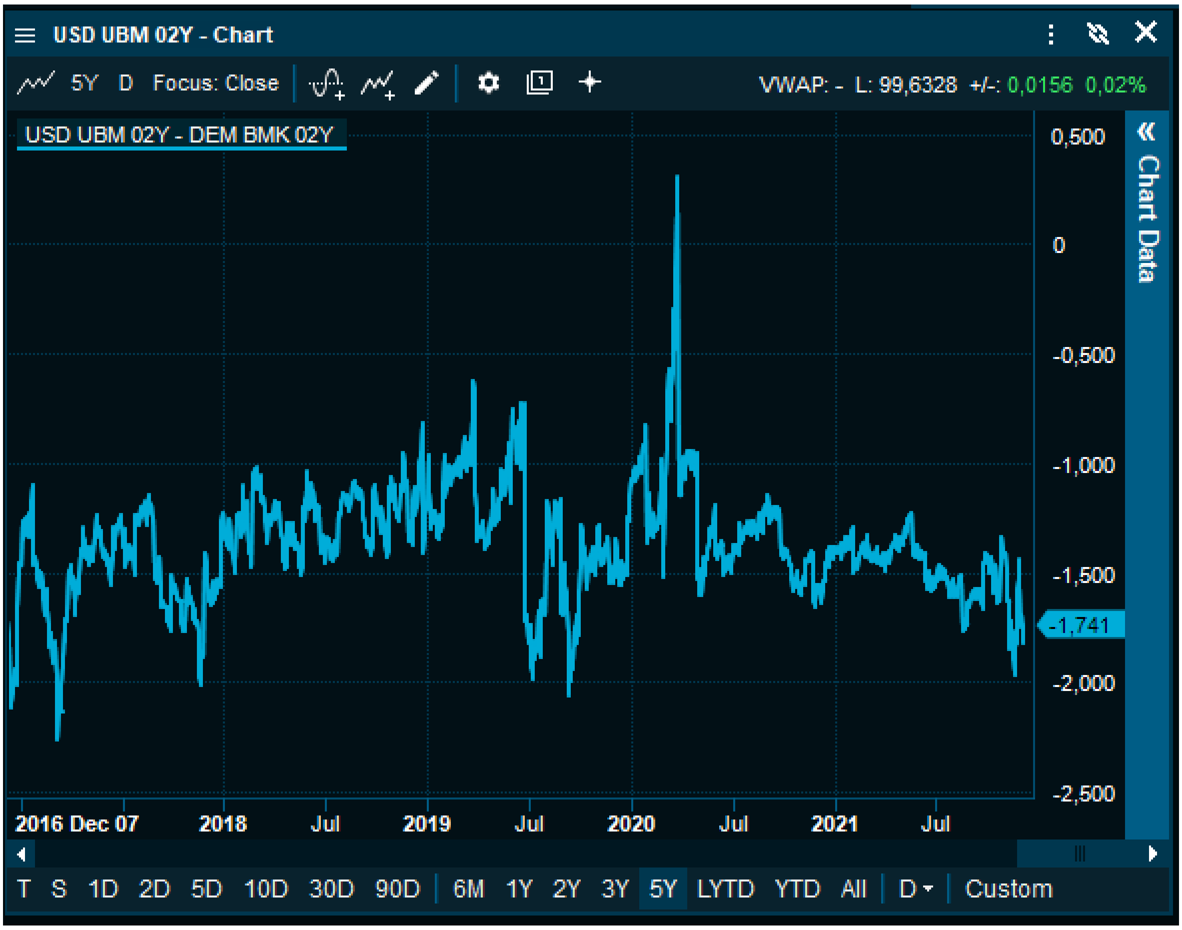
The curve chart now offers the ability to chart spreads directly. This allows for spread studies on the yield curves and visual comparison across several curves.

In the top right corner, the constituents of the spread may be selected based on the existing curve chart. The chart below shows the German (TMBMKDE) vs. the US (TMUBMUSD) yield curve in blue and orange, respectively. The yellow line graphs the spread between the two. Additional curves may be added for further spread charting.

Historical spreads can always be charted directly by selecting two instruments, right-clicking and selecting spread:



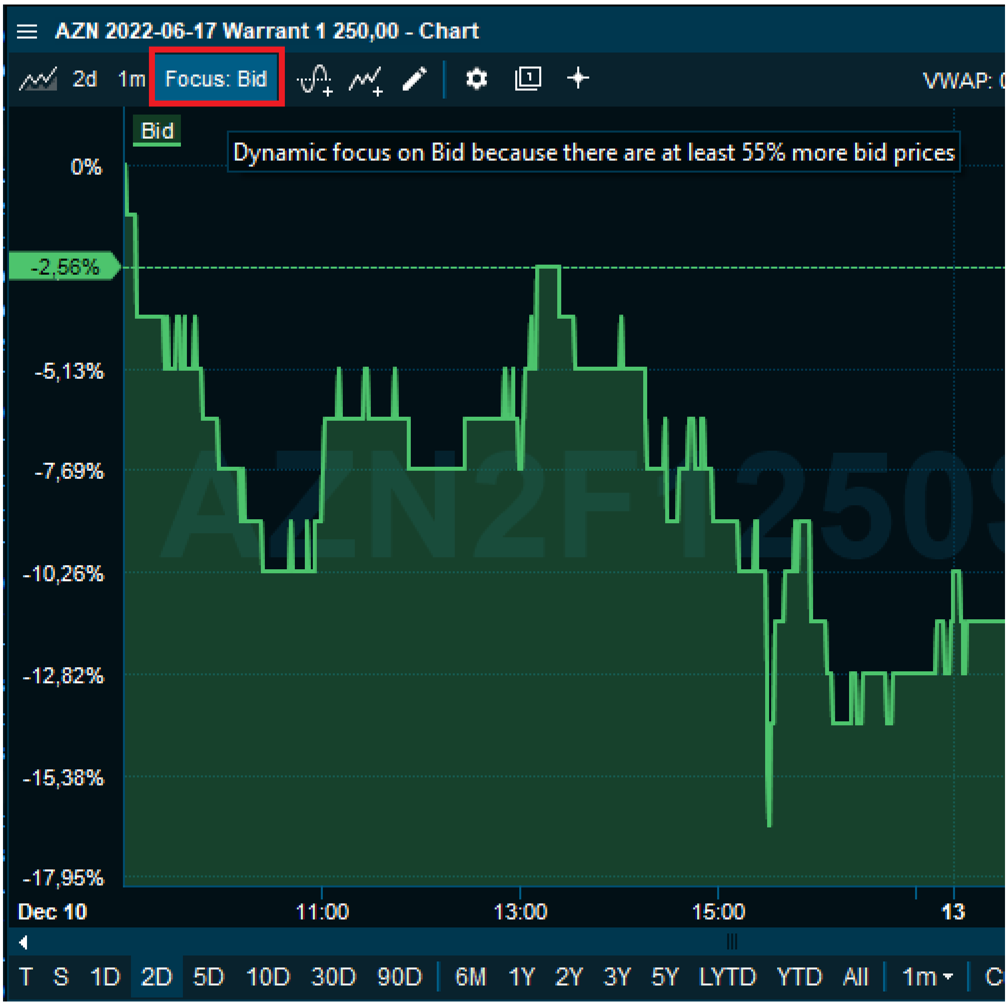
Historical spread charting:



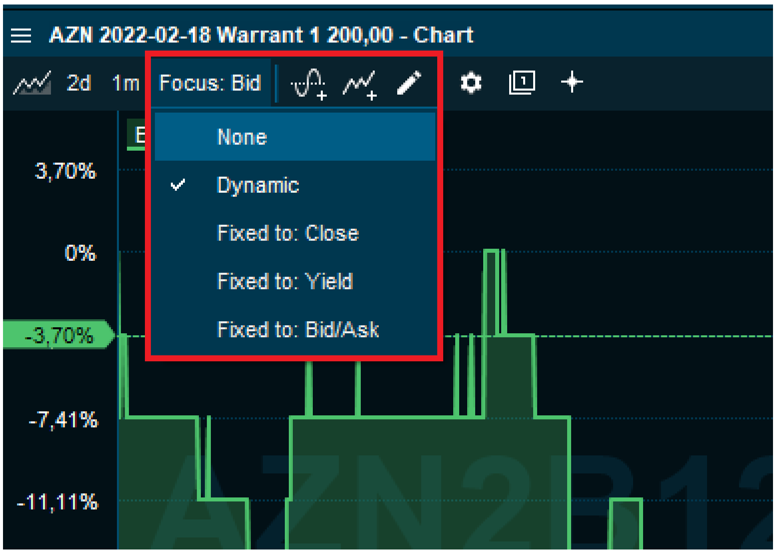
2.1.3 Dynamic focus line in chart

For instruments with low liquidity, bid/ask prices provide the next best thing in absence of actual trades data. These instances are now detected and the chart dynamically selects the best chart parameter fit for purpose given the instruments liquidity and price availability.

Below, you see a typical illiquid warrant with few trades and hence last prices. The chart automatically detects this and actively selects Bid rather than Last prices, thus providing a better visualisation of the pricing development given the liquidity and availability of price points.

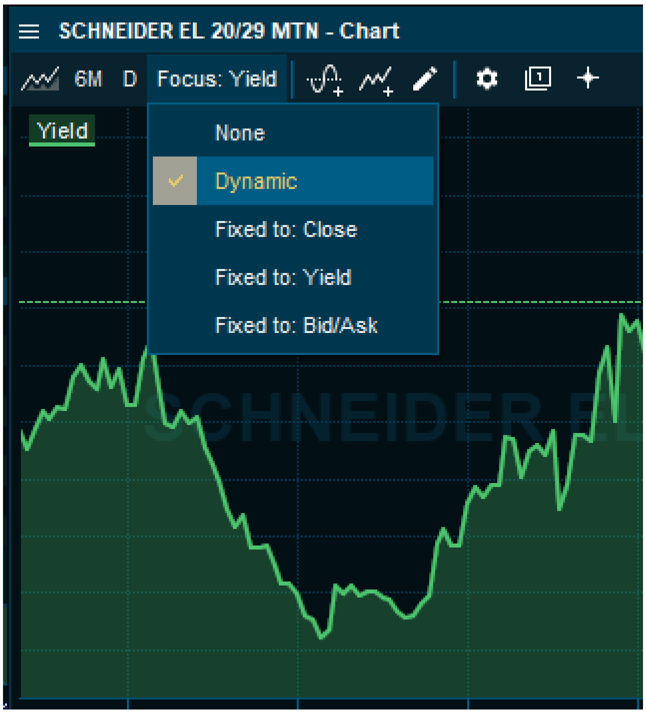


When the feature is enabled, this is clearly shown in the toolbar and may be switched off at your preference:



The same logic applies to fixed income securities where yield is favoured if sufficient pricing is available.

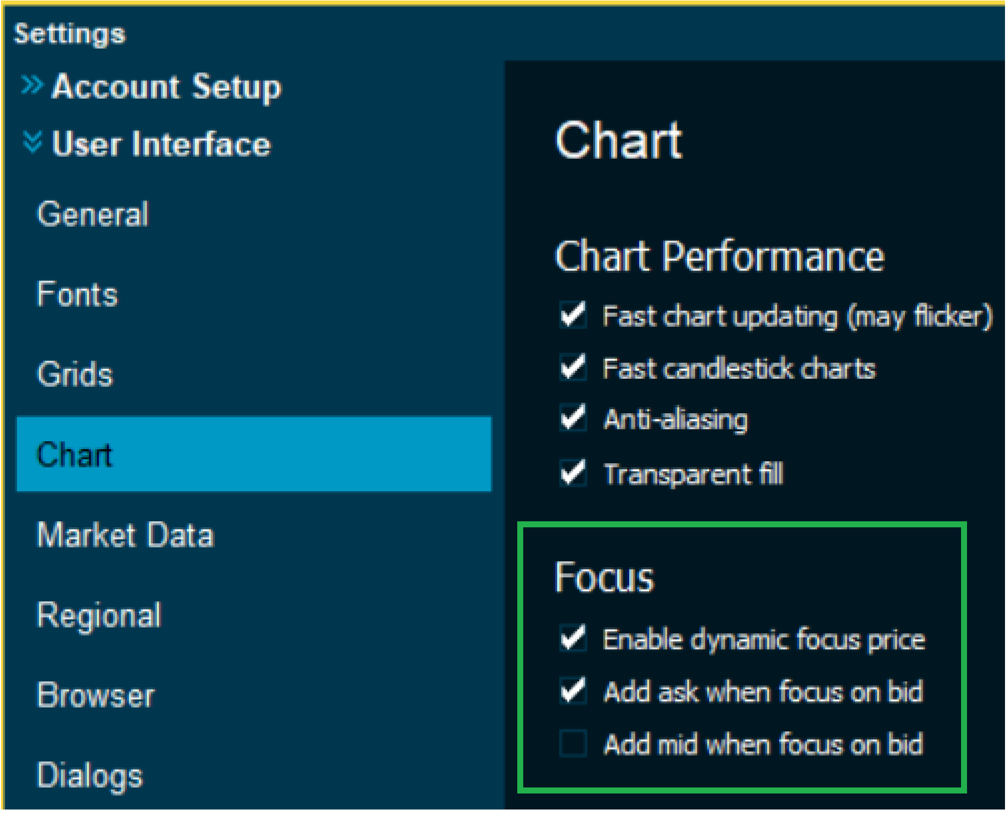
Illustrated with Schneider bond maturing in 2029 where price development in yield is now automatically presented.



This may of course be switched off in single instances or permanently.

The new functionality can be viewed as a "Focus Line" in the toolbar of the charts and will appear with a message to inform you about the selection done on your behalf, and why, given the liquidity and price availability of the selected instrument.

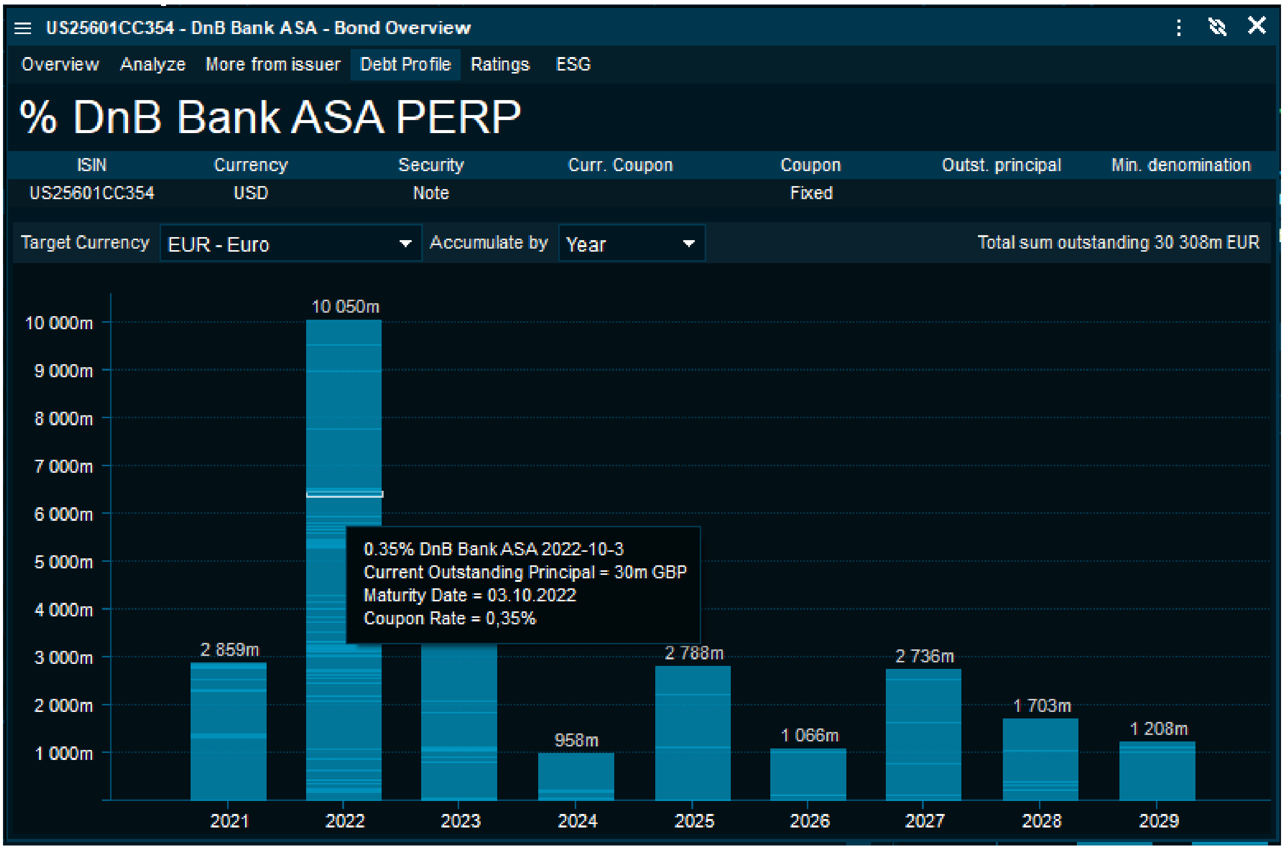
This functionality can be adjusted or disabled completely to your preference in advanced settings:



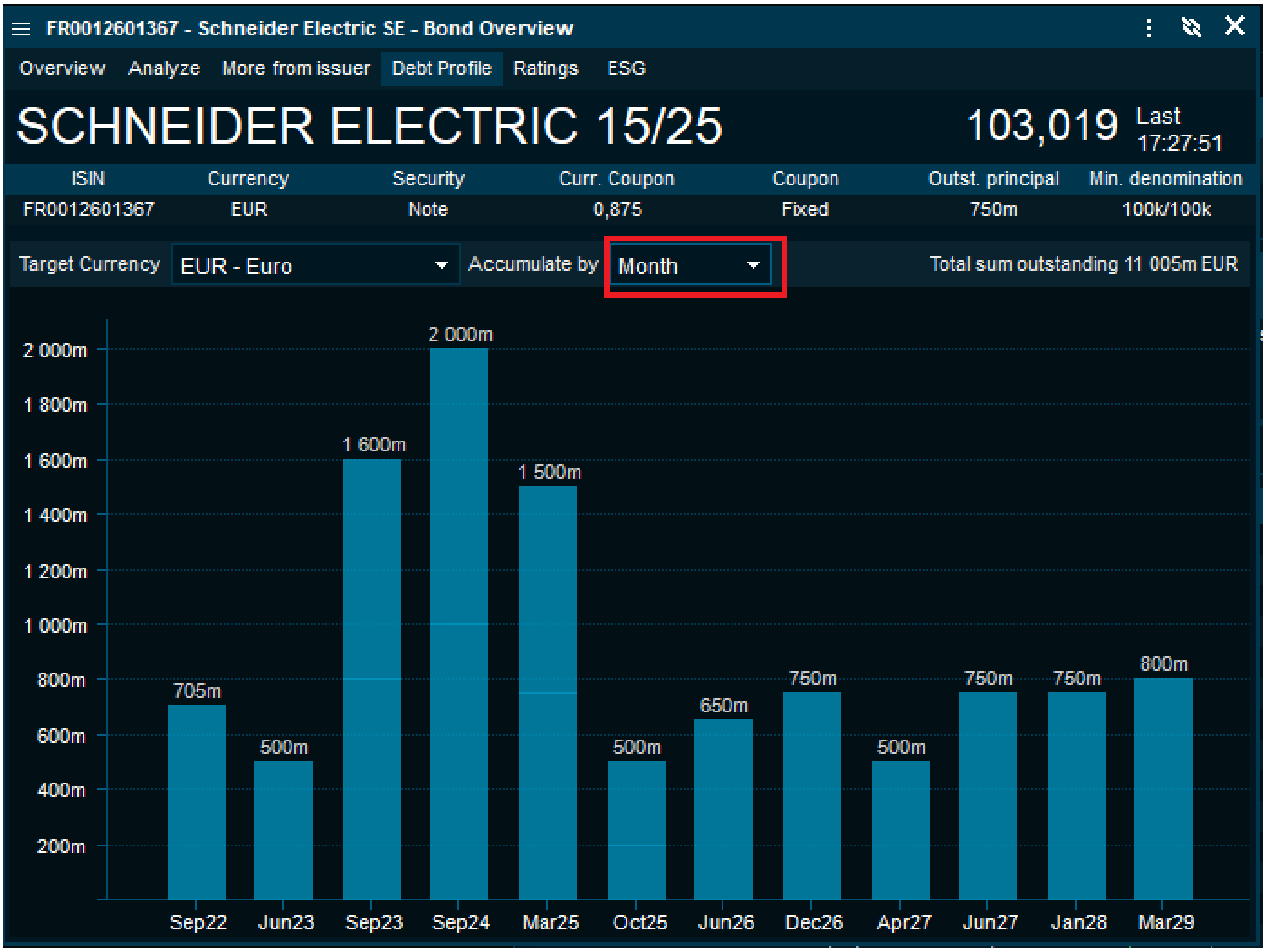
2.1.4 Debt Maturity profile 2.0

The "Debt Maturity" profile now detects the number of outstanding bonds from the issuer and dynamically optimises the presentation of the bar chart. Thus, a bank with several hundred mortgage bonds will be summarised to single columns on an annual basis for a view that is easier to read.

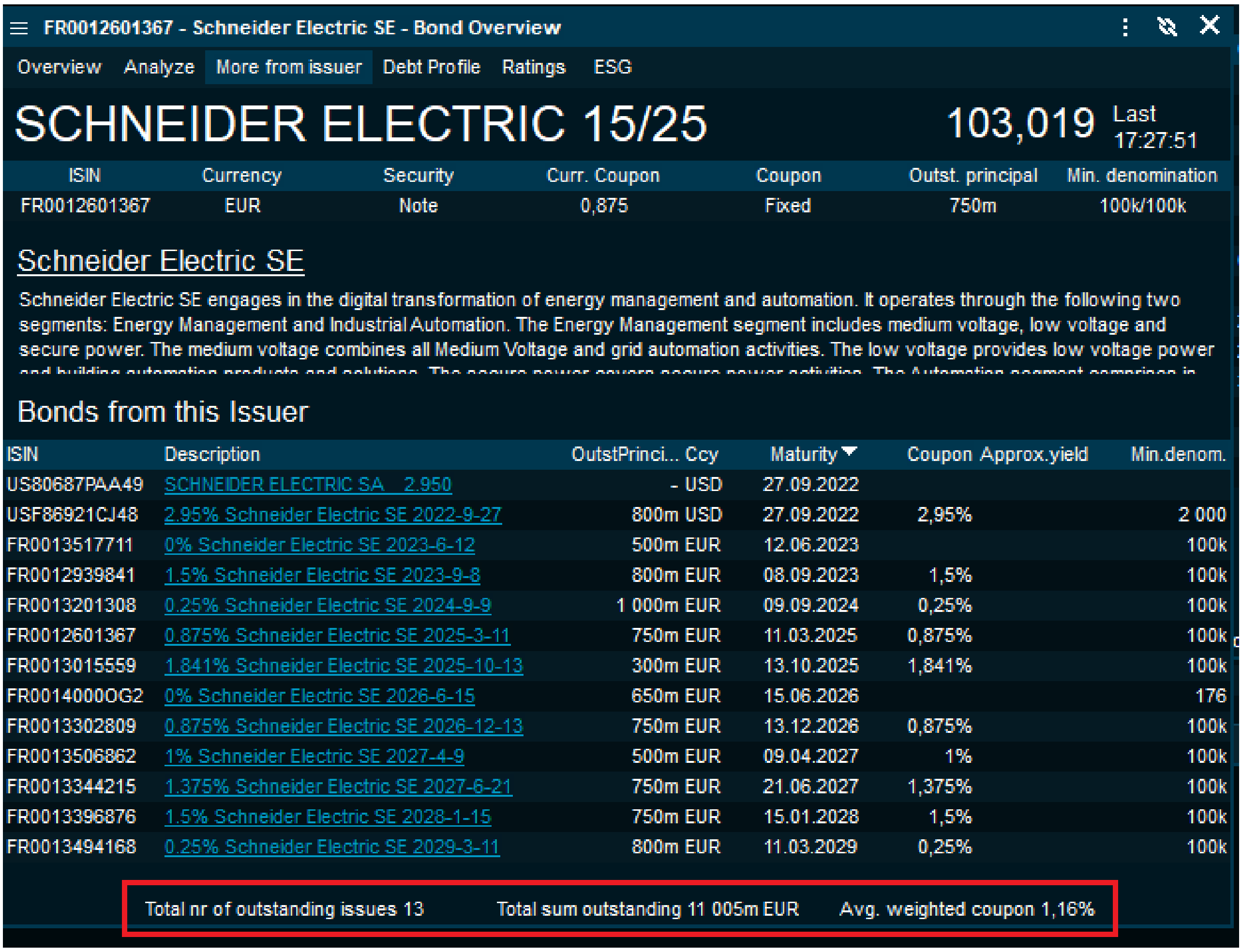
Every single bond can be viewed as its constituent within the bar and individually viewed for further details:



A more typical corporate structure with 13 Issues will automatically be selected and displayed on a monthly basis:



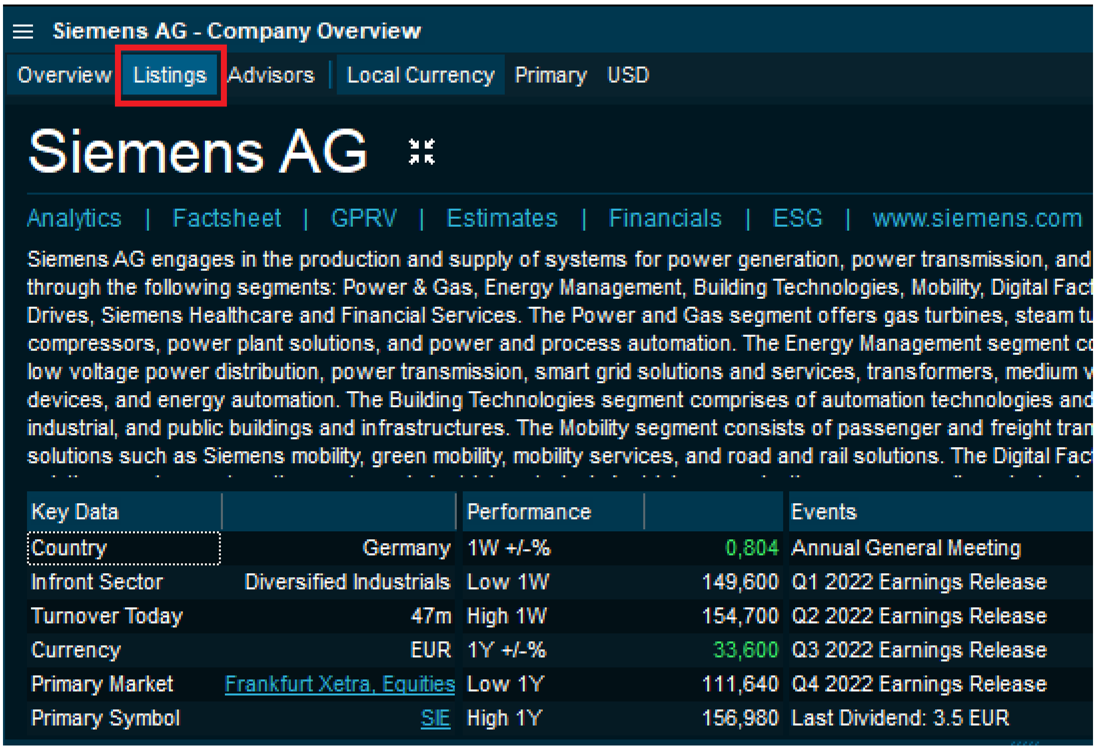
The number of issues, total sum outstanding and weighted coupon is summarised for this issuer:

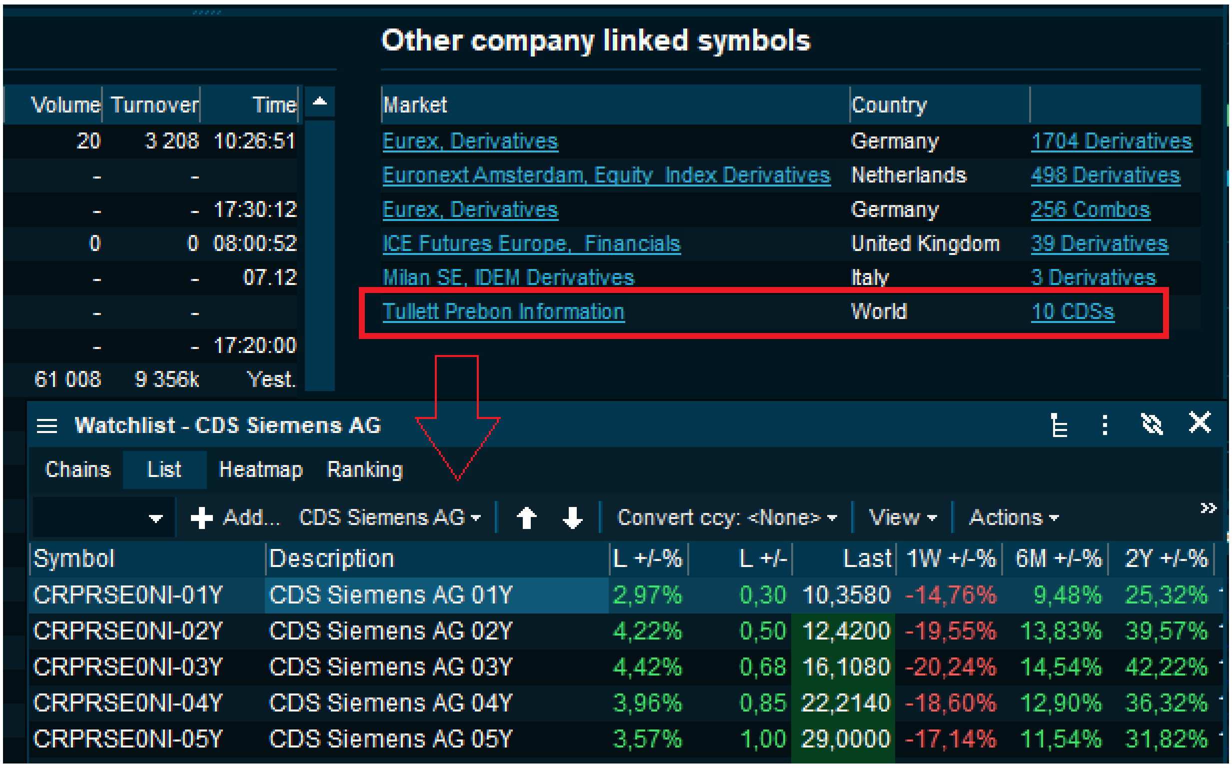


ISIN	Description	OutstPrinci...	Ccy	Maturity	Coupon	Approx.yield	Min.denom.
US80687PAA49	SCHNEIDER ELECTRIC SA 2.950	-	USD	27.09.2022			
USF86921CJ48	2.95% Schneider Electric SE 2022-9-27	800m	USD	27.09.2022	2,95%		2 000
FR0013517711	0% Schneider Electric SE 2023-6-12	500m	EUR	12.06.2023			100k
FR0012939841	1.5% Schneider Electric SE 2023-9-8	800m	EUR	08.09.2023	1,5%		100k
FR0013201308	0.25% Schneider Electric SE 2024-9-9	1 000m	EUR	09.09.2024	0,25%		100k
FR0012601367	0.875% Schneider Electric SE 2025-3-11	750m	EUR	11.03.2025	0,875%		100k
FR0013015559	1.841% Schneider Electric SE 2025-10-13	300m	EUR	13.10.2025	1,841%		100k
FR0014000OG2	0% Schneider Electric SE 2026-6-15	650m	EUR	15.06.2026			176
FR0013302809	0.875% Schneider Electric SE 2026-12-13	750m	EUR	13.12.2026	0,875%		100k
FR0013506862	1% Schneider Electric SE 2027-4-9	500m	EUR	09.04.2027	1%		100k
FR0013344215	1.375% Schneider Electric SE 2027-6-21	750m	EUR	21.06.2027	1,375%		100k
FR0013396876	1.5% Schneider Electric SE 2028-1-15	750m	EUR	15.01.2028	1,5%		100k
FR0013494168	0.25% Schneider Electric SE 2029-3-11	800m	EUR	11.03.2029	0,25%		100k

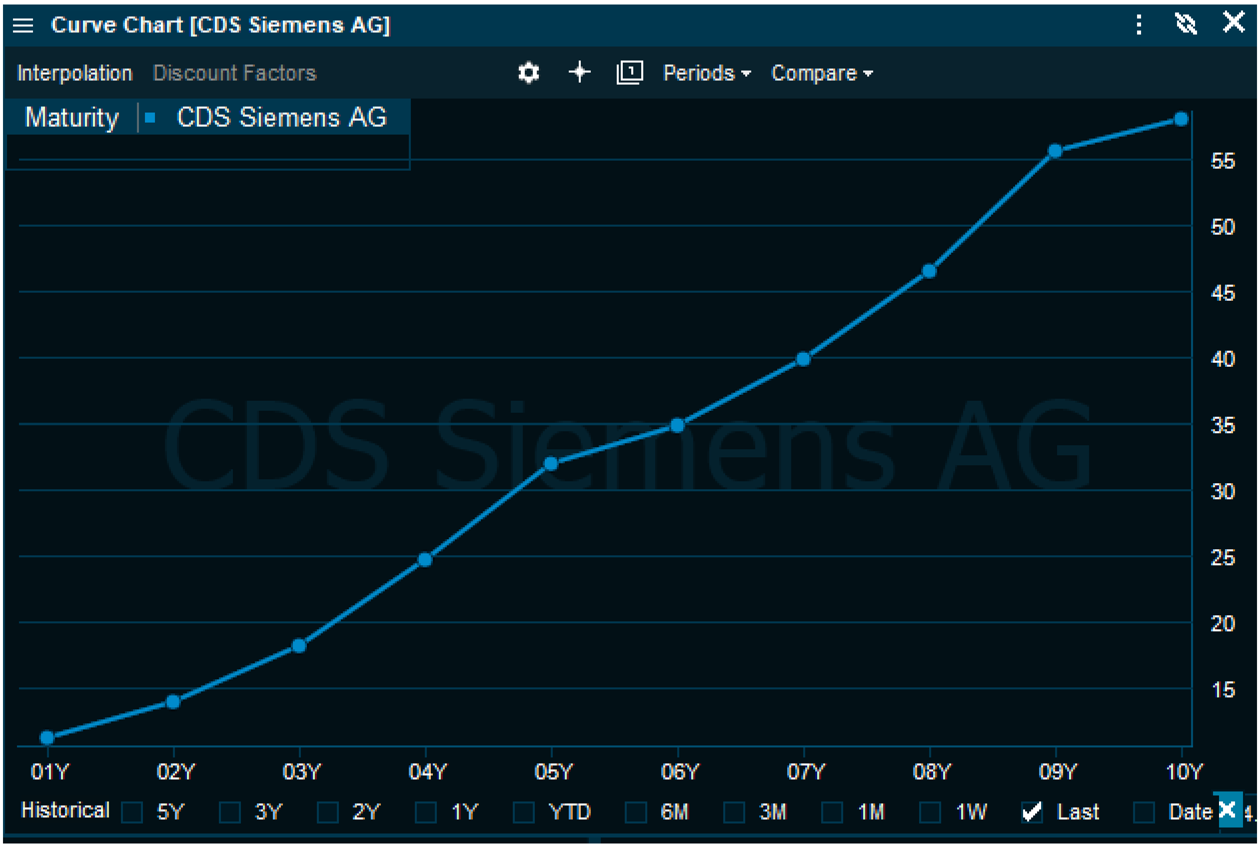
2.1.5 CDS search navigation from Company overview

Credit Default Swaps from Tullet Prebon Information can now be found under linked symbols in the "Company Overview". This makes navigation easier and displays availability of CDS data directly within the "Company Overview":



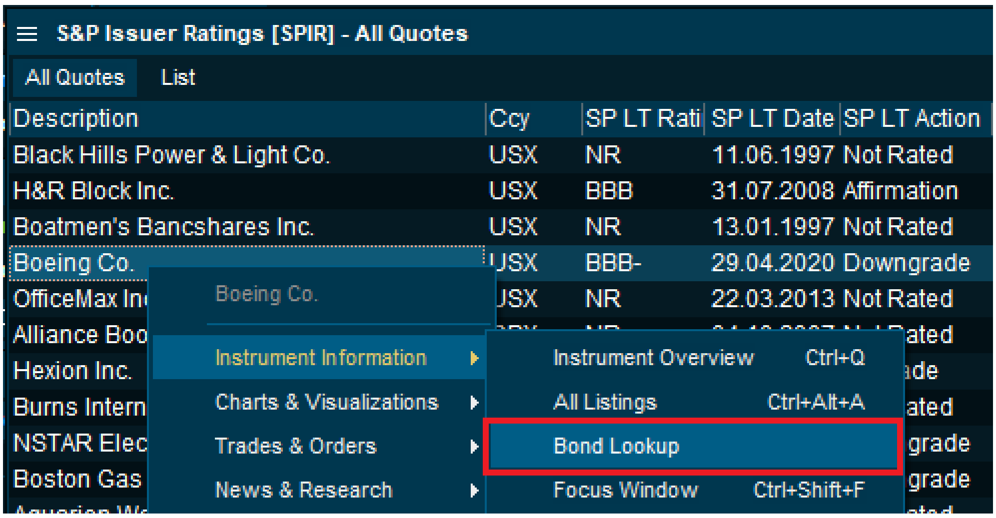


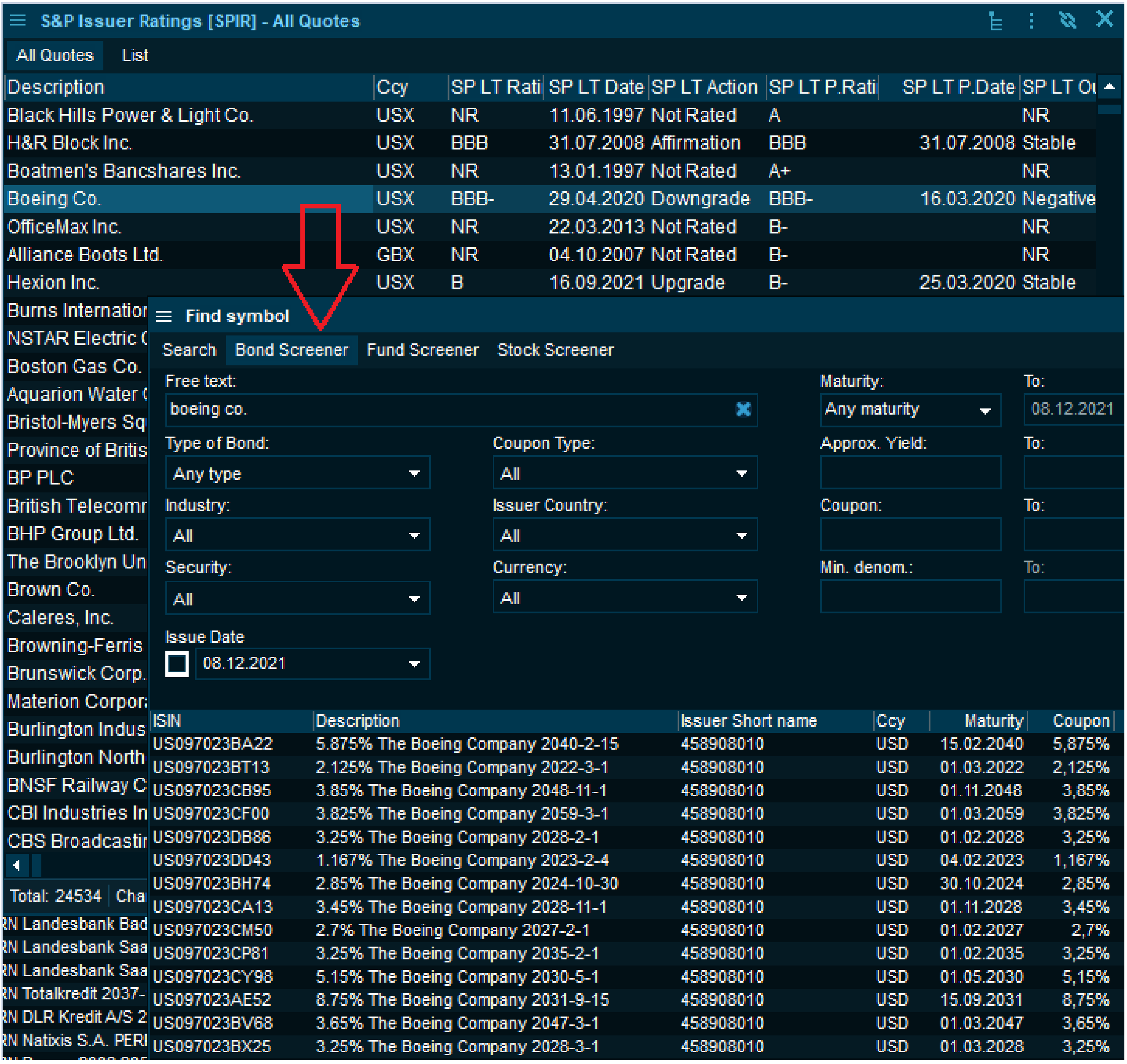
Clicking the CDS will populate a watchlist with the respective CDS series. From here, a curve chart can be opened by marking all instruments and opening "Curve Chart" for preferred selection.



2.1.6 Bond Lookup from credit ratings

The new "Bond Lookup" function allows you to move directly from a selected credit rating to the underlying rated issuer's bonds. This link enables the connection between issuer and their respective issues and can be reached from "Credit Ratings" regardless if it is found in a market overview, watchlist or "The Credit Ratings Issuer" feeds, (Moody's, Fitch or S&P).





2.2 Release Notes 8.6.600

See also:

- ESG data launched in Infront Professional Terminal
- ESG features, methodology and use cases
- ATR-based day-trading signals

2.2.1 ESG data launched in Infront Professional Terminal

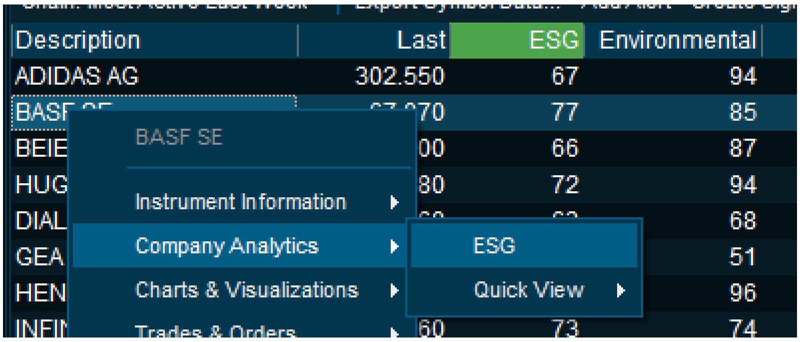
We are pleased to introduce a comprehensive ESG dataset in the latest version of our Professional Terminal - 8.6.600.

Adding to the Infront Professional Terminal's extensive data universe, ESG data and framework is seamlessly integrated through new and familiar functionality to effortlessly incorporate ESG in your daily workflow.

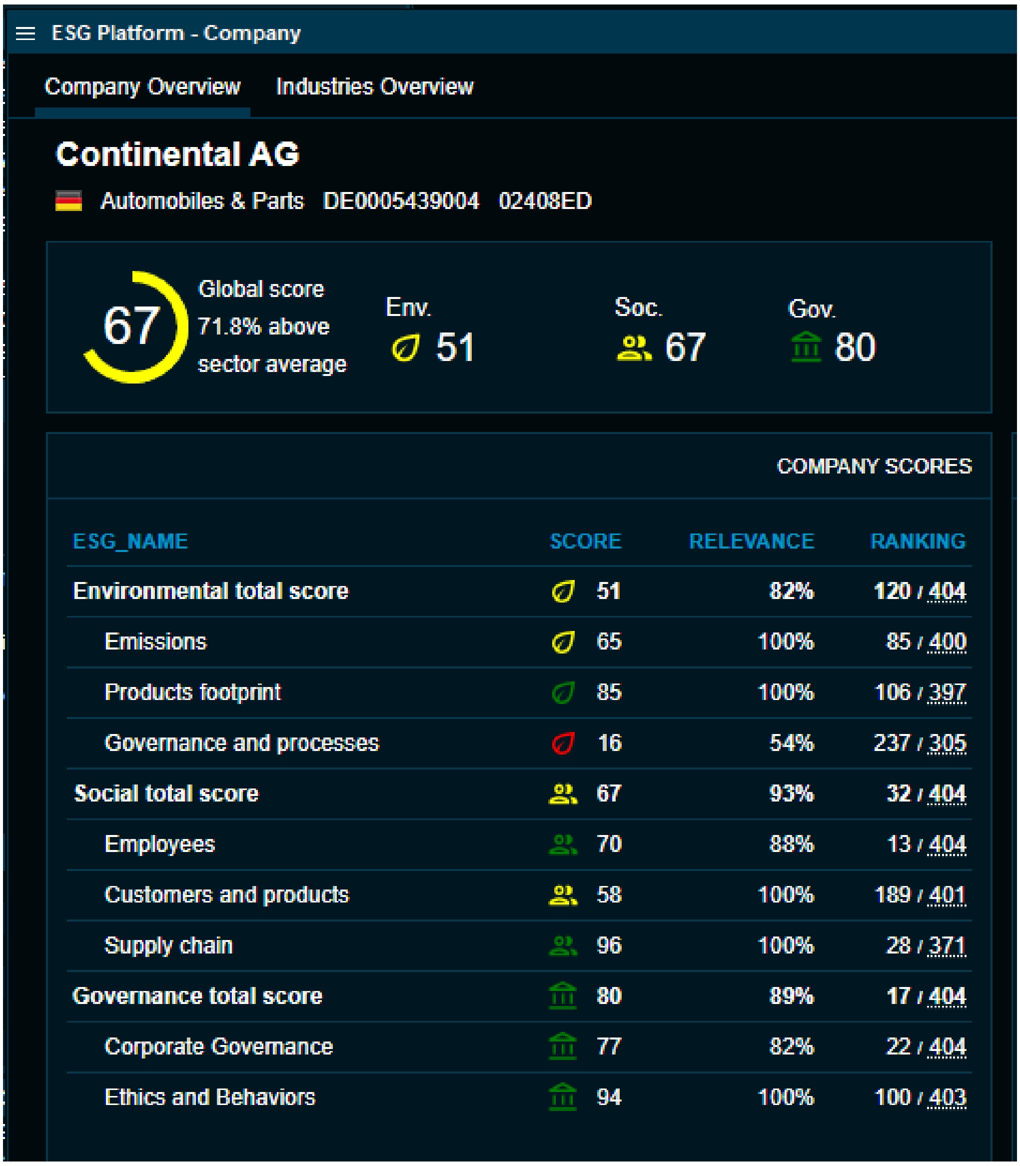
The dataset is powered by Clarity AI and covers equities, bonds and funds on three levels, allowing a detailed analysis down to specific metrics. The insight from this data is carried forward by a completely new ESG platform in addition to new columns and fields to be integrated in existing layouts and desktops.

2.2.2 ESG features, methodology and use cases

- A new ESG Platform to visualise and contextualise three levels of data on a company level, easily accessed from the right-click menu of a company (or you can double-click any ESG column):



- Scores are colour-coded based on performance in addition to visual elements for their respective category within Environmental, Social or Governance:



The ESG dataset is based on scores ranging from 0-100 (with 100 as the best) and covers companies, funds and governments. The scores express the risk and opportunities the company holds against key exposure points within the respective specific sector.

ESG Risk scores aim to assess the financial materiality of environmental, social and governance issues related to how companies and governments operate. Hence, scores assess how ESG issues potentially affect future financial performance.

Companies in the same industry generally face the same major risks and opportunities, though individual exposure can vary.

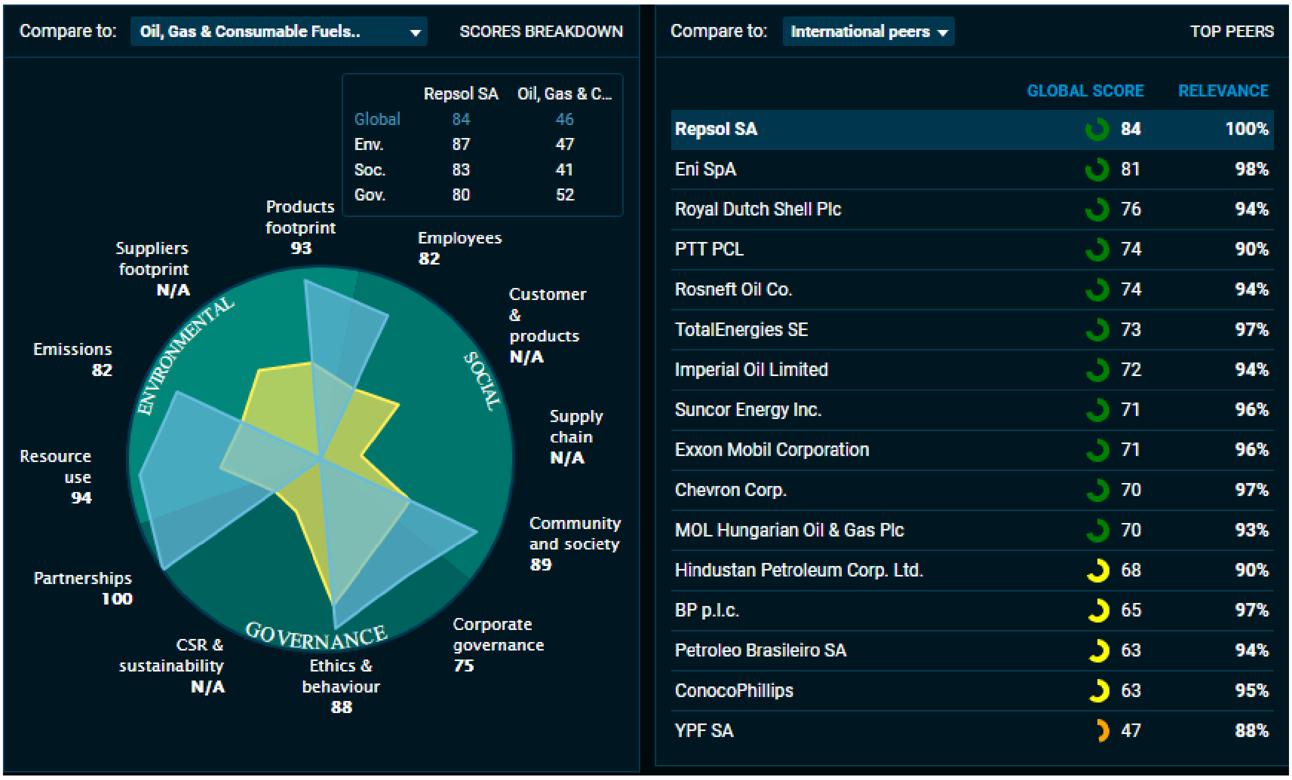
ESG Risk scores allow investors to assess how well the companies and countries in a given portfolio are managing their Environmental, Social and Governance related risks and opportunities.

A risk is material to an industry when it is likely that companies in a given industry will incur substantial costs in connection with it (for example, a regulatory ban on a key chemical input requiring reformulation).

Furthermore, a new regulation coming into place can correspondingly shift the scores of an entire sector and in turn develop depending on how the companies individually address this regulation.

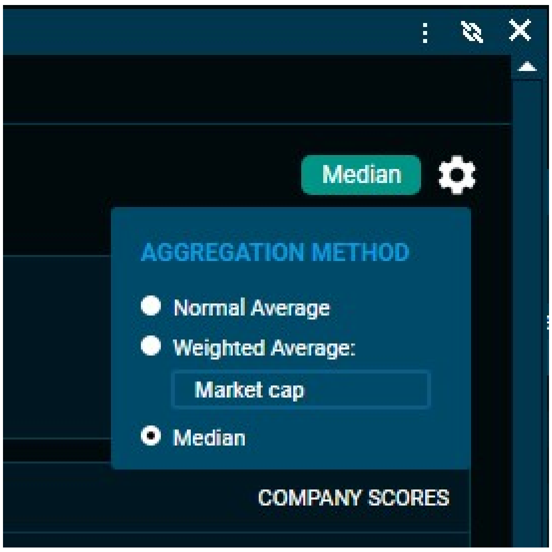
As such, the risk score can be interpreted as to what extent the company has mitigated risk or holds exposure towards ESG factors faced in the respective sector. Both the exposure and the potential impact on financial materiality is weighted into a risk score.

As an example, this is why Repsol as an oil and energy company can hold a higher environmental score at 87 than Vestas Wind at 59. This tells us that Repsol have mitigated their exposure to a larger extent or holds a more robust and diversified business model, better positioned for the opportunities within the oil and energy sector, which again may lead to strong future financial performance.

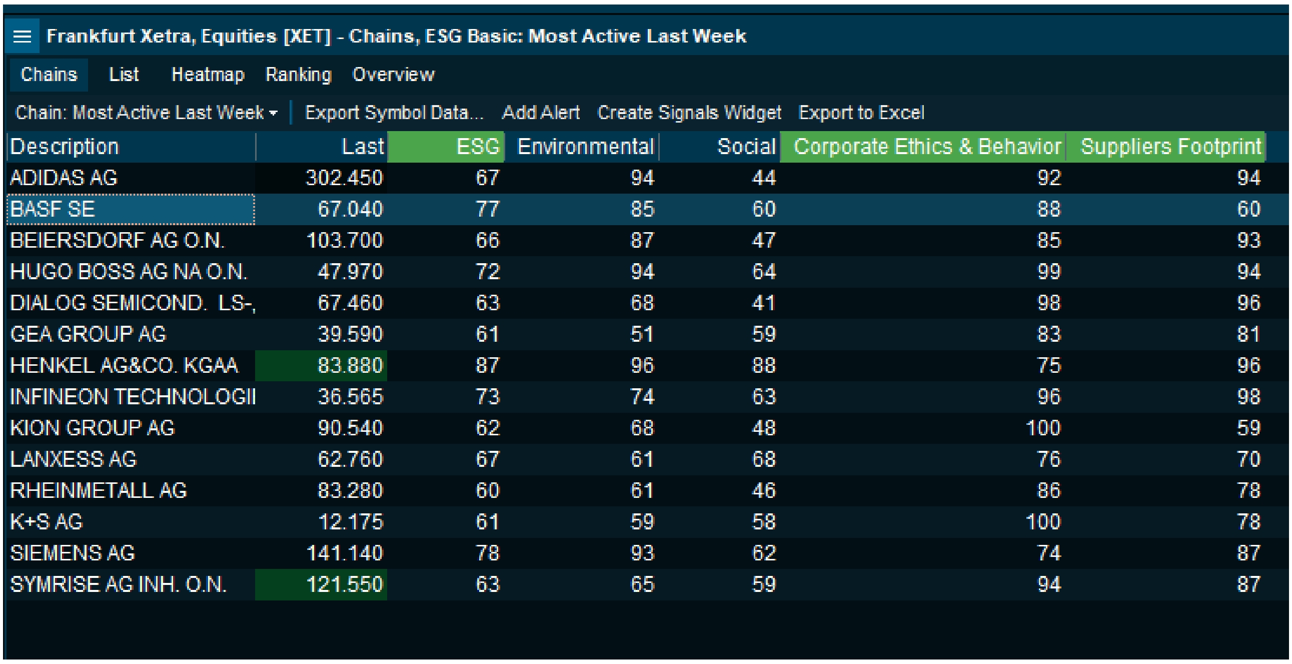


Detailed documentation on methodology and framework is available through our sales, support and client success team.

- The platform includes an "Industries" tab for deeper insight within a sector as well as configurable peer group analysis and graphics. The calculation method can be adjusted to your preference and the platform can also be linked to other windows:

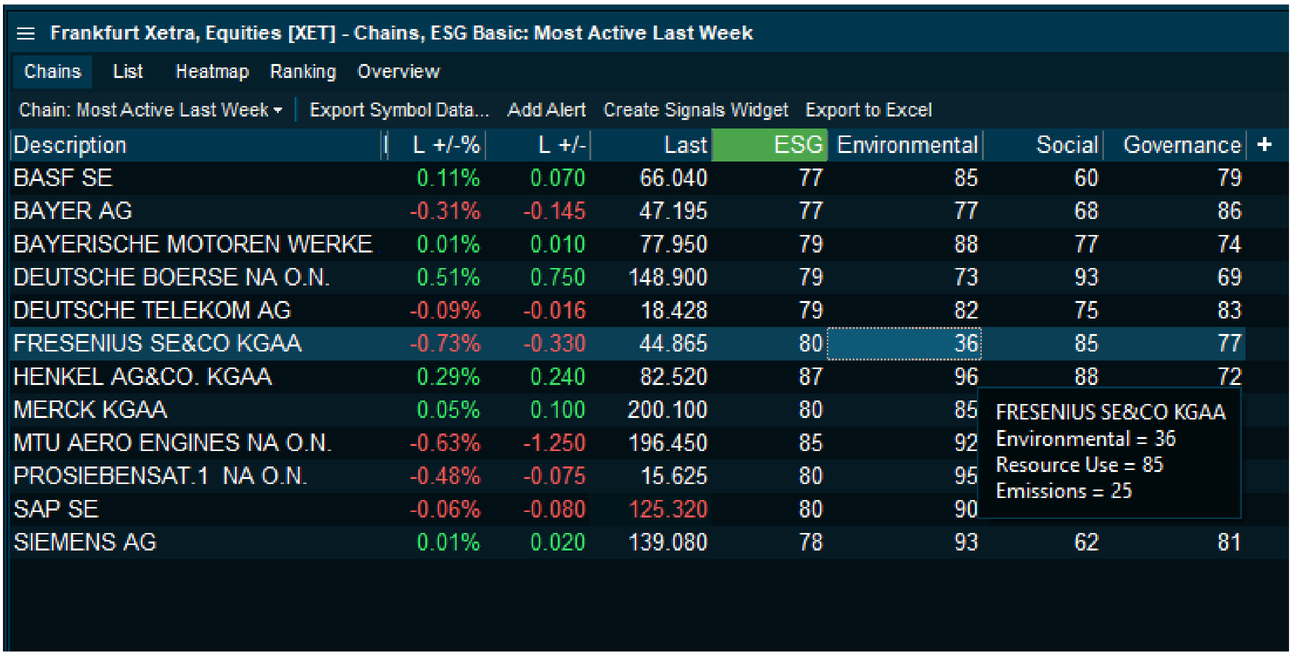


- A new column set is introduced to be applied in market overview and watchlists to bring forward this advanced dataset. Applying the terminal's column sorting and filtering, this enables you to easily screen and structure an entire market based on overall ESG score. Detailed parameters such as Supplier Footprint or Corporate Ethics may be applied as well as seen in the example with the Xetra exchange below:



Description	Last	ESG	Environmental	Social	Corporate Ethics & Behavior	Suppliers Footprint
ADIDAS AG	302.450	67	94	44	92	94
BASF SE	67.040	77	85	60	88	60
BEIERSDORF AG O.N.	103.700	66	87	47	85	93
HUGO BOSS AG NA O.N.	47.970	72	94	64	99	94
DIALOG SEMICOND. LS-,	67.460	63	68	41	98	96
GEA GROUP AG	39.590	61	51	59	83	81
HENKEL AG&CO. KGAA	83.880	87	96	88	75	96
INFINEON TECHNOLOGII	36.565	73	74	63	96	98
KION GROUP AG	90.540	62	68	48	100	59
LANXESS AG	62.760	67	61	68	76	70
RHEINMETALL AG	83.280	60	61	46	86	78
K+S AG	12.175	61	59	58	100	78
SIEMENS AG	141.140	78	93	62	74	87
SYMRISE AG INH. O.N.	121.550	63	65	59	94	87

- By applying the ESG Basic layout to the Xetra main market, you can filter out only the top ESG score candidates by sliding the bar in the column filter. For example, you will find that even though Fresenius falls within this range at the total score, Fresenius' "Environmental" score is quite poor at 36 further explained by the third level parameters shown in the hover, clearly weakened by the "Emissions" score at only 25.

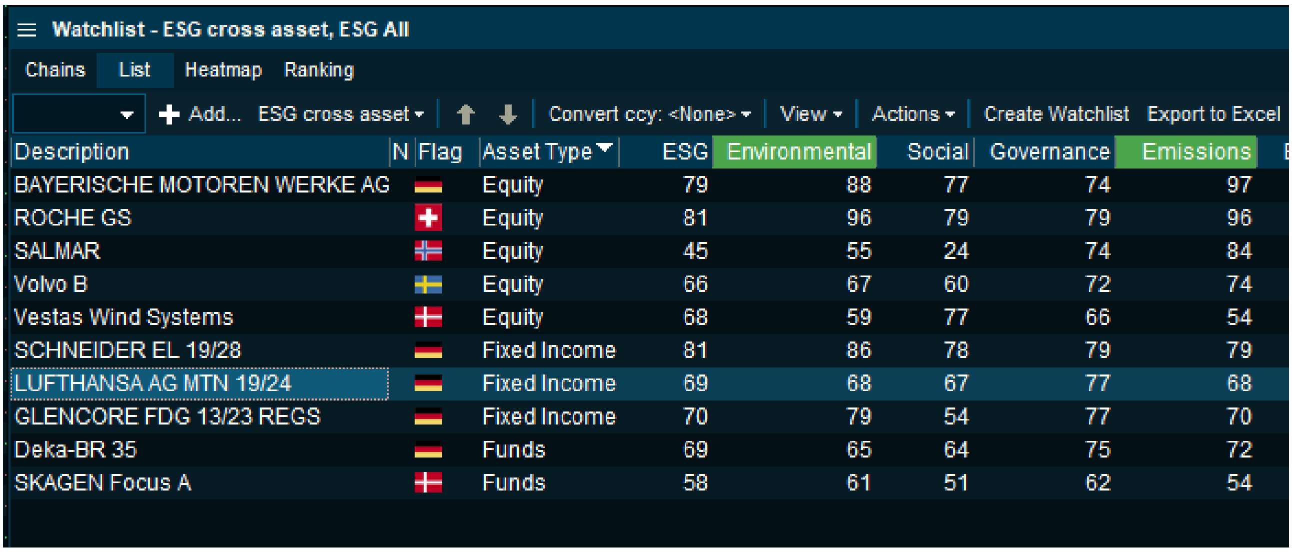


Description	L +/-%	L +/-	Last	ESG	Environmental	Social	Governance
BASF SE	0.11%	0.070	66.040	77	85	60	79
BAYER AG	-0.31%	-0.145	47.195	77	77	68	86
BAYERISCHE MOTOREN WERKE	0.01%	0.010	77.950	79	88	77	74
DEUTSCHE BOERSE NA O.N.	0.51%	0.750	148.900	79	73	93	69
DEUTSCHE TELEKOM AG	-0.09%	-0.016	18.428	79	82	75	83
FRESENIUS SE&CO KGAA	-0.73%	-0.330	44.865	80	36	85	77
HENKEL AG&CO. KGAA	0.29%	0.240	82.520	87	96	88	72
MERCK KGAA	0.05%	0.100	200.100	80	85		
MTU AERO ENGINES NA O.N.	-0.63%	-1.250	196.450	85	92		
PROSIEBENSAT.1 NA O.N.	-0.48%	-0.075	15.625	80	95		
SAP SE	-0.06%	-0.080	125.320	80	90		
SIEMENS AG	0.01%	0.020	139.080	78	93	62	81

- In addition to a new column category found in the configurator, two new ESG layouts were added to the factory layouts and can easily be applied to any market overview or watchlist.

The "ESG Basic" layout includes 2 levels of granularity, and the "ESG Full" layout naturally includes all the parameters for a more detailed approach:

- The dataset covers equities, fixed income and funds, so by applying the layout in a watchlist you may combine these for a cross-asset overview.



- Individual scores are available in the "Details" tab of every "Instrument Overview" window and included in the "Peer group" overview on the "Company Overview" tab.

For questions or additional information, please refer to your respective Client Success Manager or reach out to our support.

2.2.3 ATR-based day-trading signals

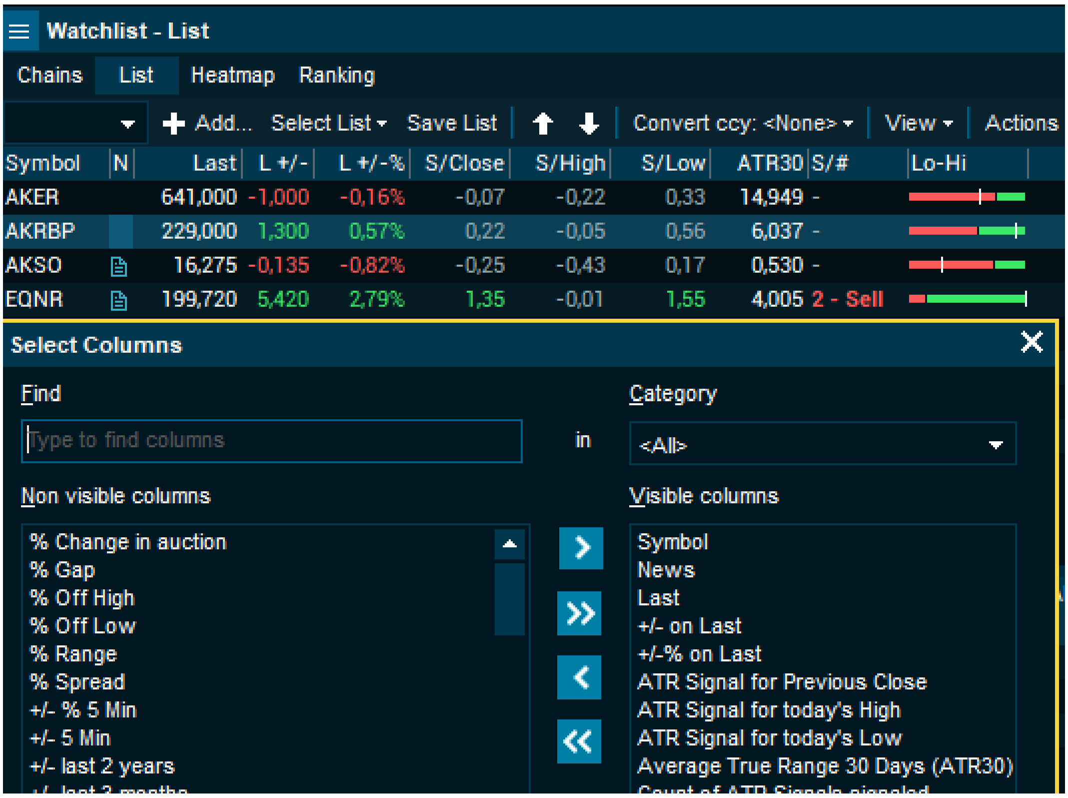
We have introduced four new columns related to the calculation of ATR-based day-trading signals.

Using the values of these columns (and the possibility to sort or filter to only see the interesting signals) can help you make decisions about when to buy or sell securities in the market.

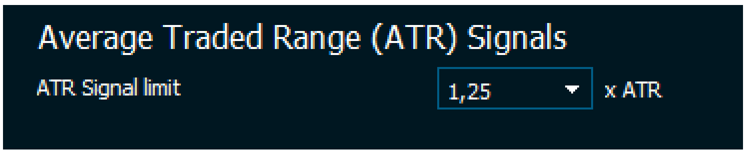
ATR30 (Average True Range 30 days) is a column we already support. It gives a measure of how much volatility there is typically/statistically the last 30 days in terms of nominal price changes.

This is used as the basis of calculating how much volatility there is in today's trading (measured in number of ATRs). There are three such measurements:

- Change between previous close and high (S/High)
- Change between previous close and low (S/Low)
- Change between previous close and the current last price (S/Last)



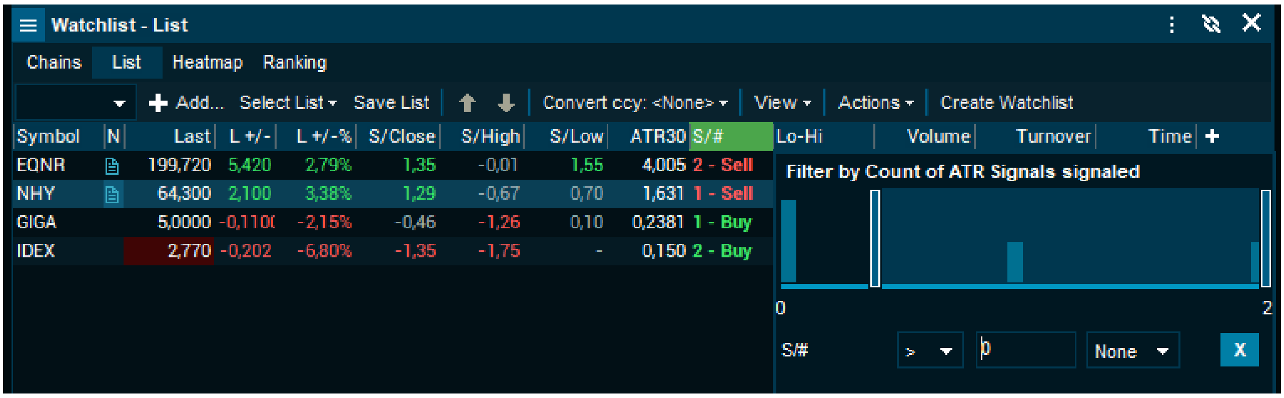
Each of these is a signal, but only those signals above a minimum strength are of interest. This is set to 1 ATR by default, but it can be configured in the settings to a value between 0.75 and 2 ATRs.



That limit settings indicates how aggressive or conservative you want to be in interpreting the signals.

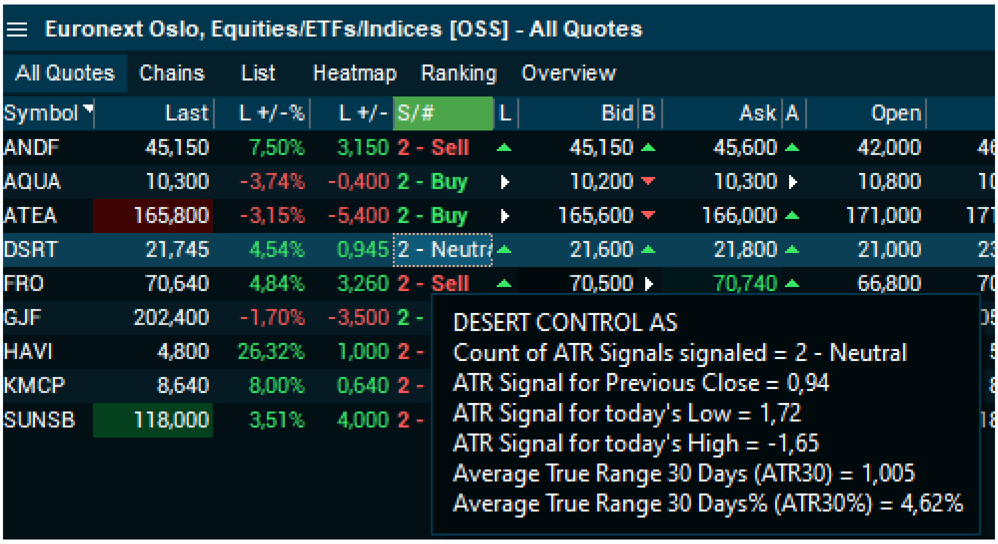
The fourth column (S/#) is an aggregated count that will be 0, 1 or 2. It indicates how many of the three signals above currently have a value exceeding the ATR Signal limit.

It can be convenient to sort on or filter on this signal count column to see only the ones with 1 or 2, because these will be the "interesting" cases in your universe of instruments (a market list or watch list). Normally, only a signal count of 2 should be considered a confirmed trigger.



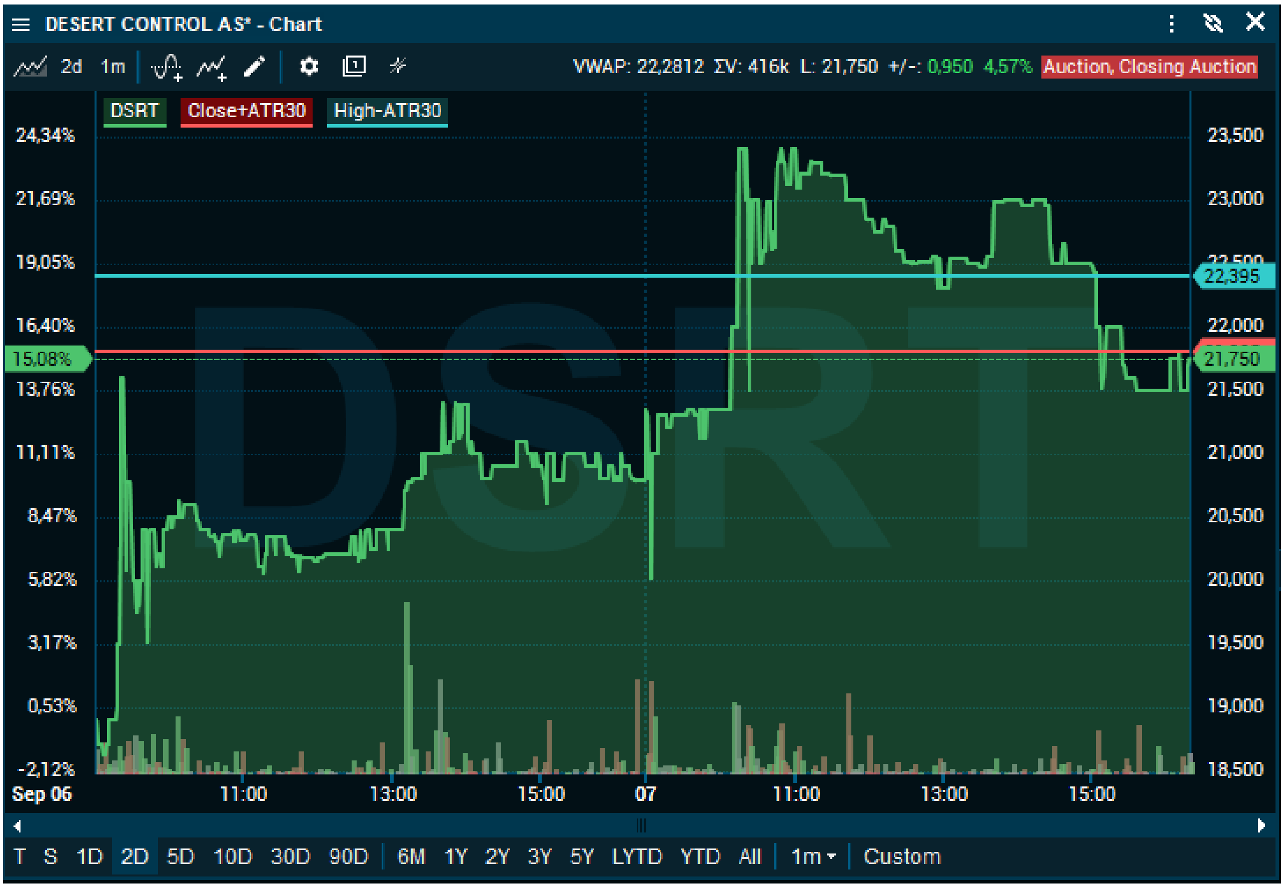
The count column will be red for a sell signal and green for a buy signal. The signal will be opposite of the recent (possibly exuberated) movement, the theory being that it will return to normal.

The different ATR signal columns will show a hint with additional detailed information. This can be useful to optimise space by reducing the number of columns shown, while still being able to quickly look at the details behind any of the scores:



Notice that in some cases there can be two opposite scores, giving a score count of 2, but tagged as neutral.

To drill down further and see how the broken ATR levels show themselves in an intraday chart, it is possible to add various horizontal lines.



The chart above shows that intraday trading first broke the PrevClose+ATR limit (blue line), then it broke down falling below the High-ATR level (red line) - giving in total a neutral signal now. Earlier in the day, it would probably have given a sell signal.

Always consider other factors, such as fundamental news, and other technical indicators before making a trading decision.

2.3 Release Notes 8.6.500

See also:

- Credit ratings and WM data in the Infront Professional Terminal
- Summary of new features and views
- Ratings Schema and Links
- WM Data

2.3.1 Credit ratings and WM data in the Infront Professional Terminal

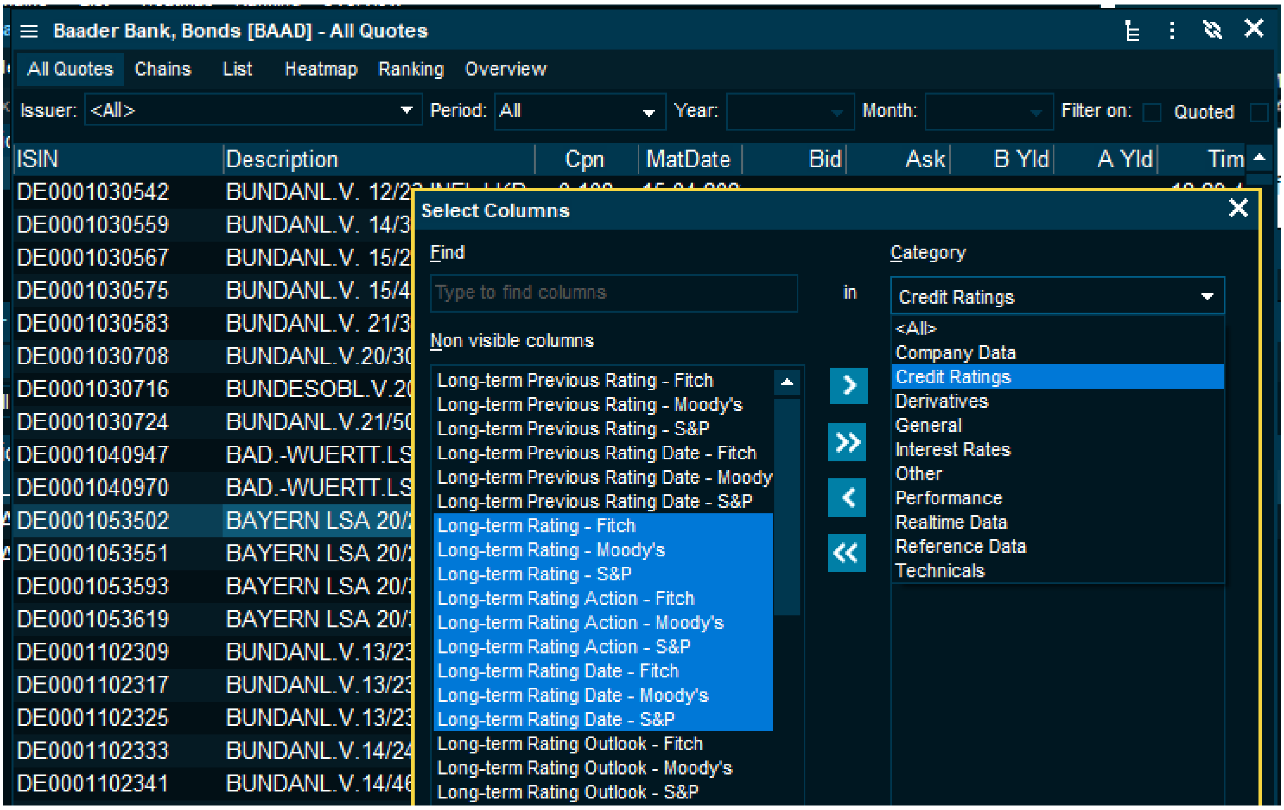
As the next step in our integration plan and fixed income strategy, we introduced credit ratings and WM data in the latest version of Infront Professional Terminal.

Following the integration of contributor bond data, credit ratings provide an added layer of insight into the debt market and its inherent credit risk. Ratings data is provided by the market leading agencies S&P, Moody's and Fitch* and includes ratings on the individual bonds on the issue level as well as the issuer on the overall entity level.

Several new features were introduced to help you navigate and structure this data:

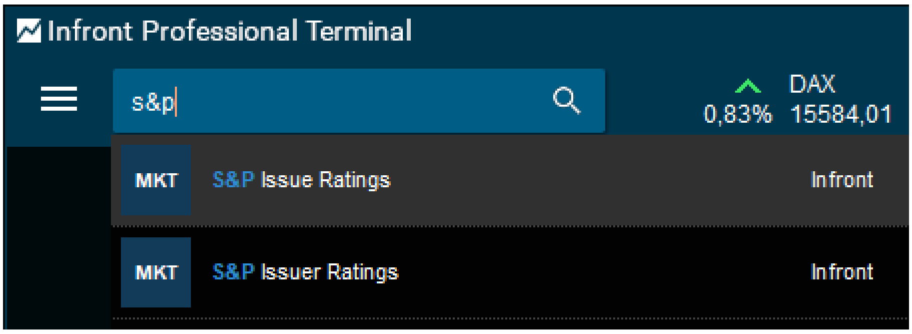
- First and foremost, a new set of columns which can easily be added to a "Market view" or your personal watchlist.

Columns can be added by using the "+" icon on the right of the columns. Or you can view the full selection in the "Select Columns" dialog window by the "Credit Ratings" category:

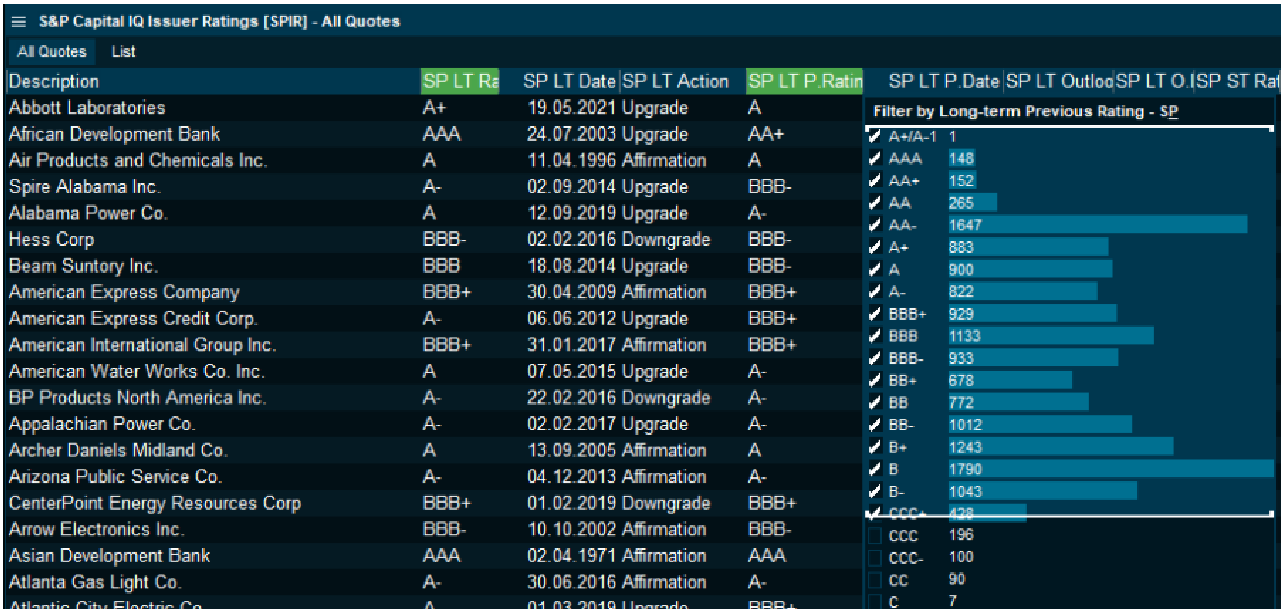


As the agencies apply different scales to their rating methodology, each agency holds their own dedicated set of columns and fields. This means that there is no consolidated rating view across sources.

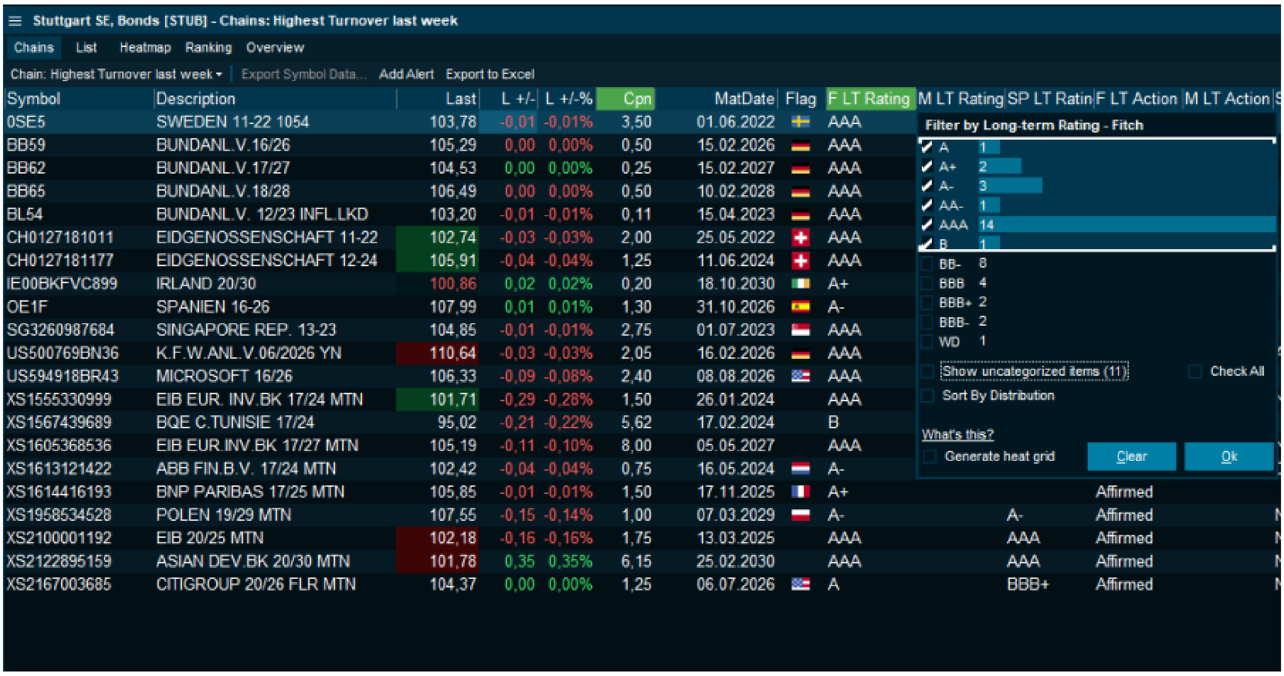
Consequently, individual agency feeds are also available in the "Market" view:



In the individual agency feeds, the respective columns are automatically populated as seen below with S&P:

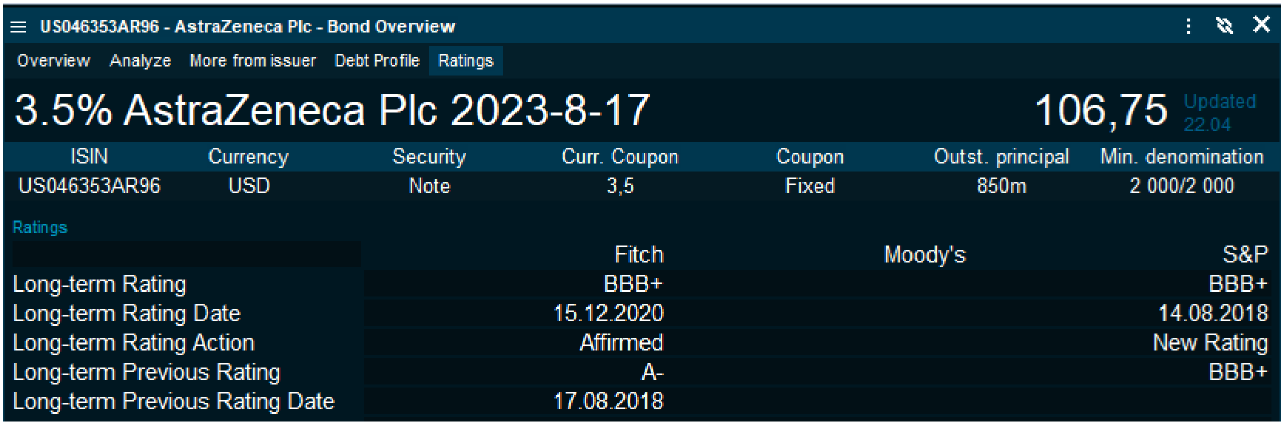


- Every column offers filtering capabilities, allowing you to screen on a market or agency universe. Typical filtering scenarios include: only investment grade ratings, only the most recent assessments by date or only affirmations. For example, you can filter the Frankfurt Floor market based on Fitch rating, only "B" and above, by simply sliding the bar to the preferred level:

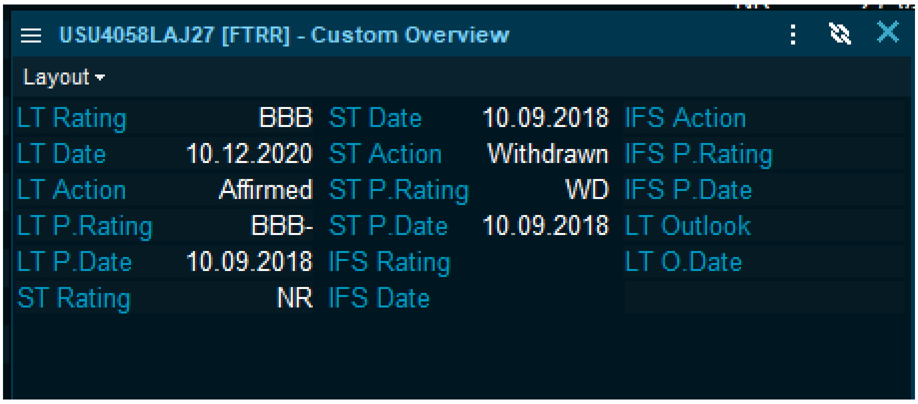


- In the "Market" and "Watchlist" view, this can be applied across the agencies to show multiple rating agencies' columns (that is, S&P and Moody's). Moreover, the column filtering tool displays the distribution in a certain market or from the agency universe.
- Feeds are available from each agency so you can typically filter out S&P's most recent upgrades by date, with a stable outlook and a current rating of A+ and above if you have a conservative mandate.
- You can also filter yield intervals to capture any relationship between high yields and respective rating which traditionally should not fall within investment grade.
- In the watchlist, you have full flexibility to further analyse different bonds across issuers and discover if certain properties of the loan affect the rating across the issuers' bonds.

A new tab was added to the "Bond Overview", consolidating the information for the specific bond. Long-term ratings are displayed on the "Overview" tab:



The "Custom Overview" consolidates all ratings data for the instrument and substitutes the "Instrument Overview".



2.3.2 Summary of new features and views

- New column set for ratings with filtering capability
- "Bond Overview" with new "Rating" tab
- "Bond Overview" with long term rating fields in the "Overview" tab
- A new ratings window replacing the "Instrument Overview" for a consolidated view of all ratings values

2.3.3 Ratings Schema and Links

For reference, please see the following resources available directly from the credit rating agencies. S&P and Fitch share the same scale while Moody's operate with their own scoring with Aaa to C:

Moody's		Standard & Poor's		Fitch Ratings		Rating description
Long-term	Short-term	Long-term	Short-term	Long-term	Short-term	
Aaa	P-1	AAA	A-1+	AAA	F1+	Prime
Aa1		AA+		AA+		High grade
Aa2		AA		AA		
Aa3		AA−		AA−		
A1		A+	A-1	A+	F1	Upper medium grade
A2		A		A		
A3	P-2	A−	A-2	A−	F2	
Baa1		BBB+		BBB+		Lower medium grade
Baa2	P-3	BBB		BBB	F3	
Baa3		BBB−	A-3	BBB−		
Ba1	Not Prime	BB+	B	BB+	B	Non-investment grade speculative
Ba2		BB		BB		
Ba3		BB−		BB−		
B1		B+		B+		Highly speculative
B2		B		B		
B3		B−		B−		
Caa1		CCC+	C	CCC+	C	Substantial risks
Caa2		CCC		CCC		
Caa3		CCC−		CCC−		
Ca		CC		CC		Extremely speculative
		C		C		Default imminent
C		RD	D	DDD	D	In default
/		SD		DD		
/		D		D		

In general, a time horizon of one year or under is considered short term, and anything above that is considered long term. In the past institutional investors preferred to consider long-term ratings.

S&P: https://www.spglobal.com/ratings/en/about/intro-to-credit-ratings

Fitch: https://www.fitchratings.com/products/rating-definitions#about-rating-definitions

Moody's: https://ratings.moodys.io/ratings#rating-scale

2.3.4 WM Data

"Bond reference data" from WM include new columns data and provides reference and price data points on duration, yields, convexity and many more as well as loan terms such as callable properties of the loan and at what time these can be called at the issuer's discretion.

Description	Flag	Cpn	MatDate	Yield	Duration	Convexity	Accrued	Call Date	Call Price
HAPAG-LLOYD AG 21(28)REGS		2,500	15.04.2028	2,1731	6,274	45,7734	0,5486	15.04.2024	102,5000
CHEPLAPHARM REGS 20/28		4,375	15.01.2028	3,7421	5,682	38,2919	1,9444	15.01.2024	104,3750
TUI CRUISES REGS 21/26		6,500	15.05.2026	5,5351	4,253	21,5427	0,7403	15.05.2023	106,5000
PREOS GLB.OFF.RE. WA19/24		7,500	09.12.2024	21,8937	2,964	8,5550	4,0685	09.12.2022	100,0000
CARREFOUR B. 21/25 MTN		0,107	14.06.2025	0,0969	3,963	19,6455	0,0033	14.06.2022	100,0000
MIT.UFJ FIN.21/27 FLR MTN		0,337	08.06.2027	0,3234	5,903	40,6620	0,0159	08.06.2022	100,0000
WIENER ST.VERS. 17-27		3,500	11.05.2027	1,5352	5,422	35,2049	0,4278	11.05.2022	100,0000
EUROBANK 21/27 FLR		2,000	05.05.2027	2,0599	5,574	36,1194	0,2778	05.05.2022	100,0000
OP AOYJ 21/31 MTN		0,050	25.03.2031	0,1057	9,727	104,2728	0,0125	25.03.2022	100,0000
DNB BANK 21/29 FLR MTN		0,250	23.02.2029	0,4751	7,591	64,9407	0,0847	23.02.2022	100,0000
GLO.FSHN.GR. 21/28 CV		1,250	15.03.2028	1,2742	6,446	47,9455	0,3472	03.01.2022	100,0000

For a complete overview on the individual bond level, the fields populate at the bottom of the "Details" tab in instrument overview under "Bonds Info":

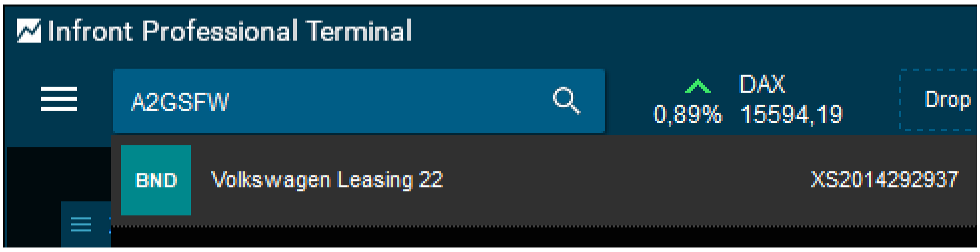
Period	Yield	High	Low	Last	L +/-	L +/-%
Today	2,1731	102,4960	102,1300	102,3940	-	-
YTD	2,2299	-	-	-	-	-
1 week	2,0052	102,9000	102,0400	102,0600	0,3340	0,33%
1 month	2,3062	102,9000	100,7600	100,7200	1,6740	1,66%
3 months	-	102,9000	99,3810	-	-	-

Time	16:23:47	LV +/-	0,26%	0,2640	Trades	26	BLValue	1	Capped Not capped
LV Pr Cls	102,1300	O +/-	0,26%	0,2640	B Lot	1	Liquidity	Undefined	

ISIN	XS2326548562	Current Outstanding Principal	300m	Ask Yield	2,0333
Issuer Fullname	HAPAG-LLOYD AG	Bond Type	Unknown	Coupons Per Year	2
Currency	EUR	Amortization Type	Annuity	Call Date	15.04.2024
Issue Date	06.04.2021	Face Value	1 000	Call Price	102,5000
Maturity Date	15.04.2028	Dirty Price	102,6786	Call Type	2
Duration	6,274	Yield	2,1731	Primary Exchange	LU
Coupon Rate	2,5000	Bid Yield	2,1731	Issue Amount	300m

As with the "Ratings", this data can be applied as columns, allowing you to screen or sort a market and combine your own selections in a watchlist for further comparison and analysis.

WKNs are also supported as a new column which is searchable across terminal windows and functions, allowing you to quickly identify instruments based on WKN:



For questions or additional information, please contact your respective Client Success Manager or reach out to our support.

2.4 Release Notes 8.6.400

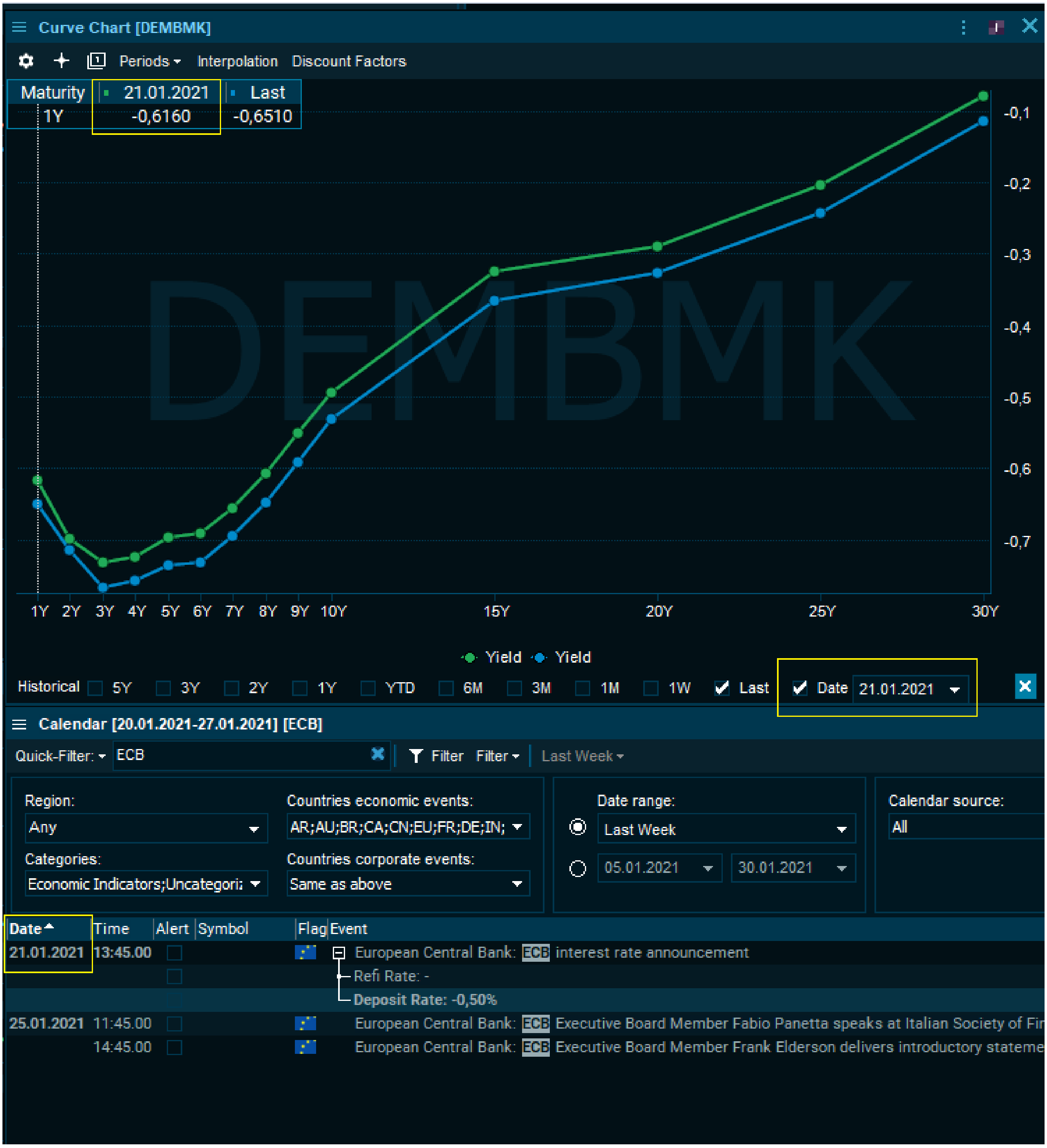
See also:

- Date specific historical lookback and compare in curve chart.
- Debt maturity profile
- Drag and drop symbol to watchlist
- Volatility smile
- Chart performance for custom period
- FX Forwards and calculator view update

2.4.1 Date specific historical lookback and compare in curve chart.

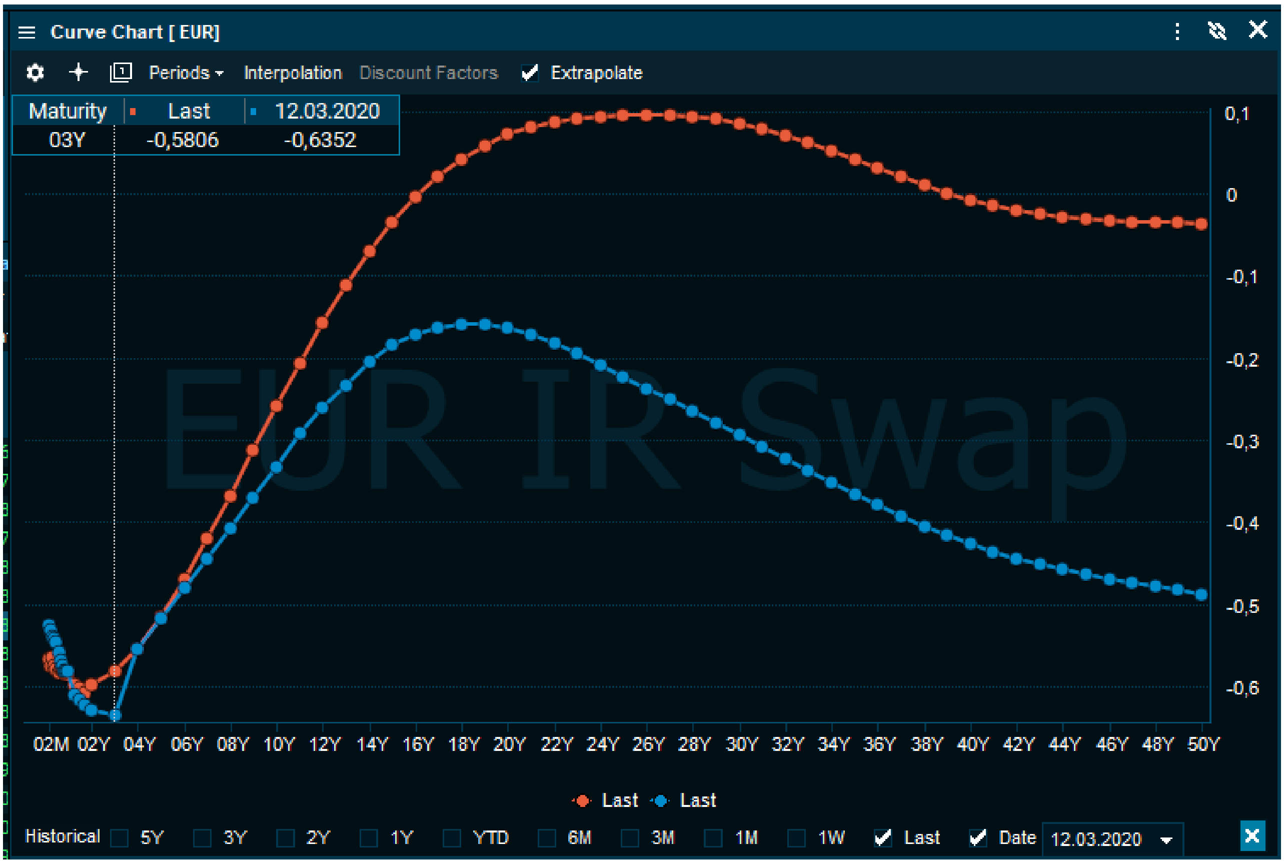
Discover how forward, swap or yields curves reacted to historical events such as ECB announcements, inflation news and market incidents on specific dates. The date-specific lookback allows you to uncover movements and shifts in the curve for a particular day in question and enables you to pinpoint your preferred point in time.

In this example, we see the German yield curve and how it reacted to the ECB announcement January 21, 2021 in green with a slight shift compared to the current view from the Last curve in blue.



You can apply the date-specific compare function by selecting the "Date" checkbox in the bottom right corner in any curve chart to discover shifts in IR swap curves, FX Forward curves, CDS curves and so on.

Interest rate swap curve in euro on March 12, 2020, when WHO declared COVID-19 a global pandemic compared to the current Last value (in this case February 21, 2021).

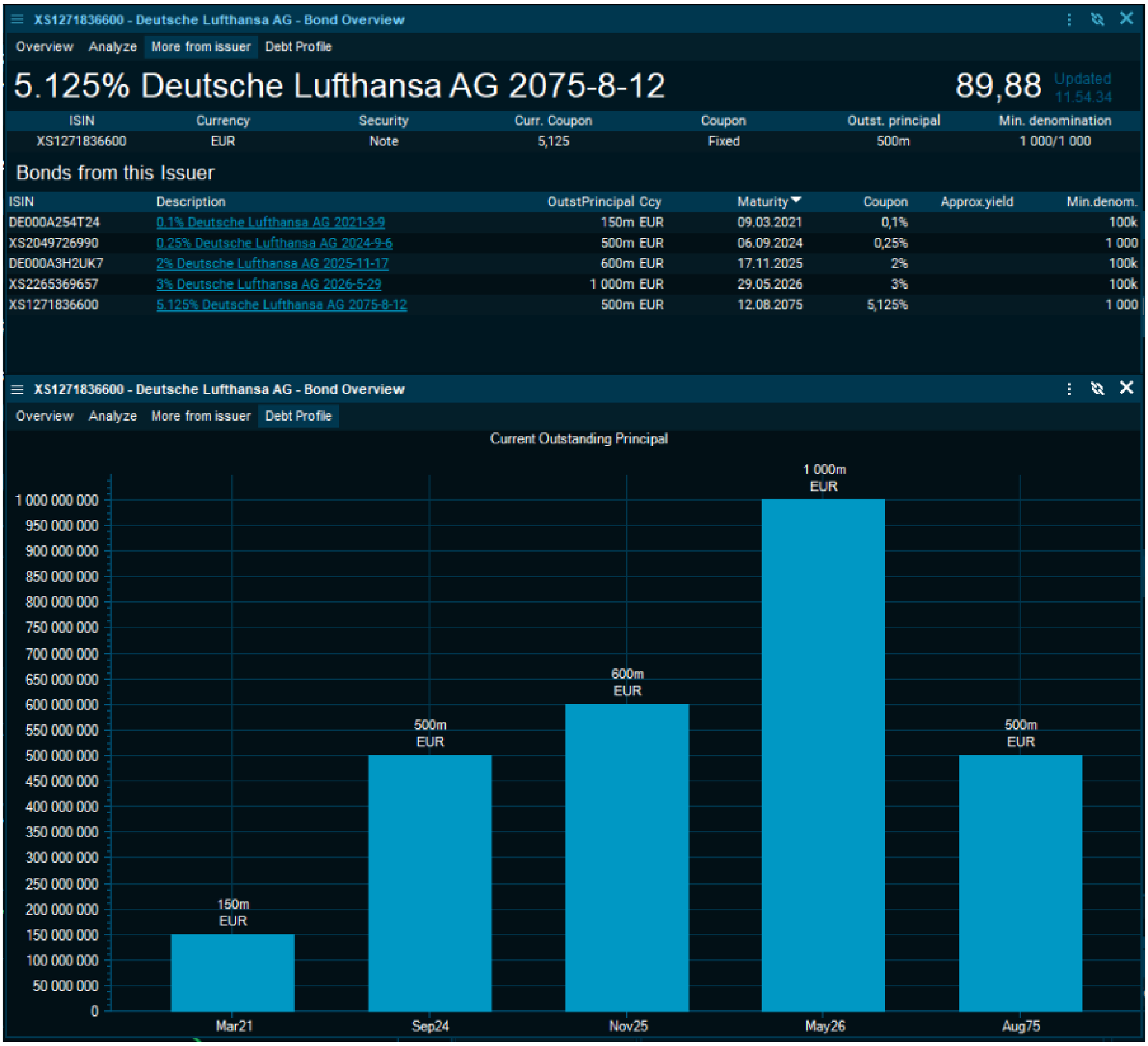


2.4.2 Debt maturity profile

Visual breakdown of a company's issued debt, when it is maturing and respective notional outstanding amount. You can hover each bar to view coupon and additional data.

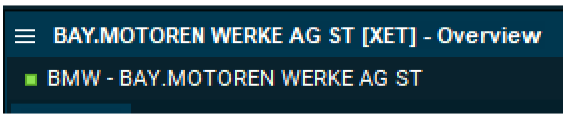
If bonds are issued in different currencies, the chart automatically converts the currency to your selected conversion currency to compare them to scale in one axis.

From "Bond Screener" or any search, open the bond overview. On the "More from Issuer" tab, you can see if there are other bonds from the same issuing entity of the corporate, government or municipality. The "Debt Profile" tab will chart these and you can easily view the distribution of debt with respective maturity uncovering when the outstanding principal is maturing requiring the issuer to either pay back, refinance or restructure the loan. You may further analyse their cash flow and earnings ability to do so in the Company Analytics.



2.4.3 Drag and drop symbol to watchlist

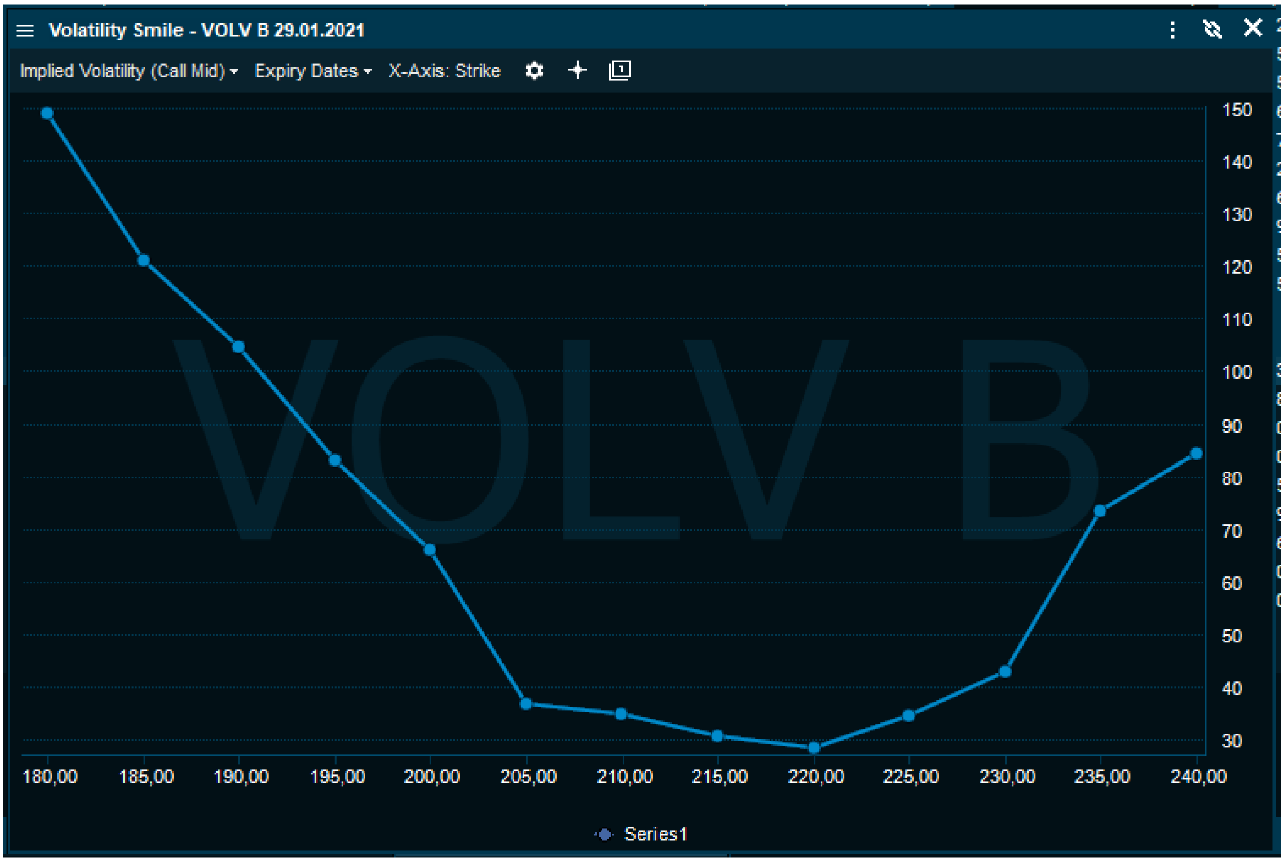
The green symbol info indicates that you can drag and drop it into a watchlist, allowing you to build lists based on already identified Instrument Overviews, Company windows and so on.



2.4.4 Volatility smile

The volatility smile charts the volatility of an option across strike prices. It visually represents how options with the same underlying and expiry date are valued base on implied volatility across strike prices.

Open an option market, right-click and select "Volatility Smile" under charts and a series of 6 steps below and above of strike prices are selected and is charted to easily see if the typical U shape for your selected strike range and its moneyness (ITM, ATM or OTM) applies or if market perception differs from the traditional pattern.

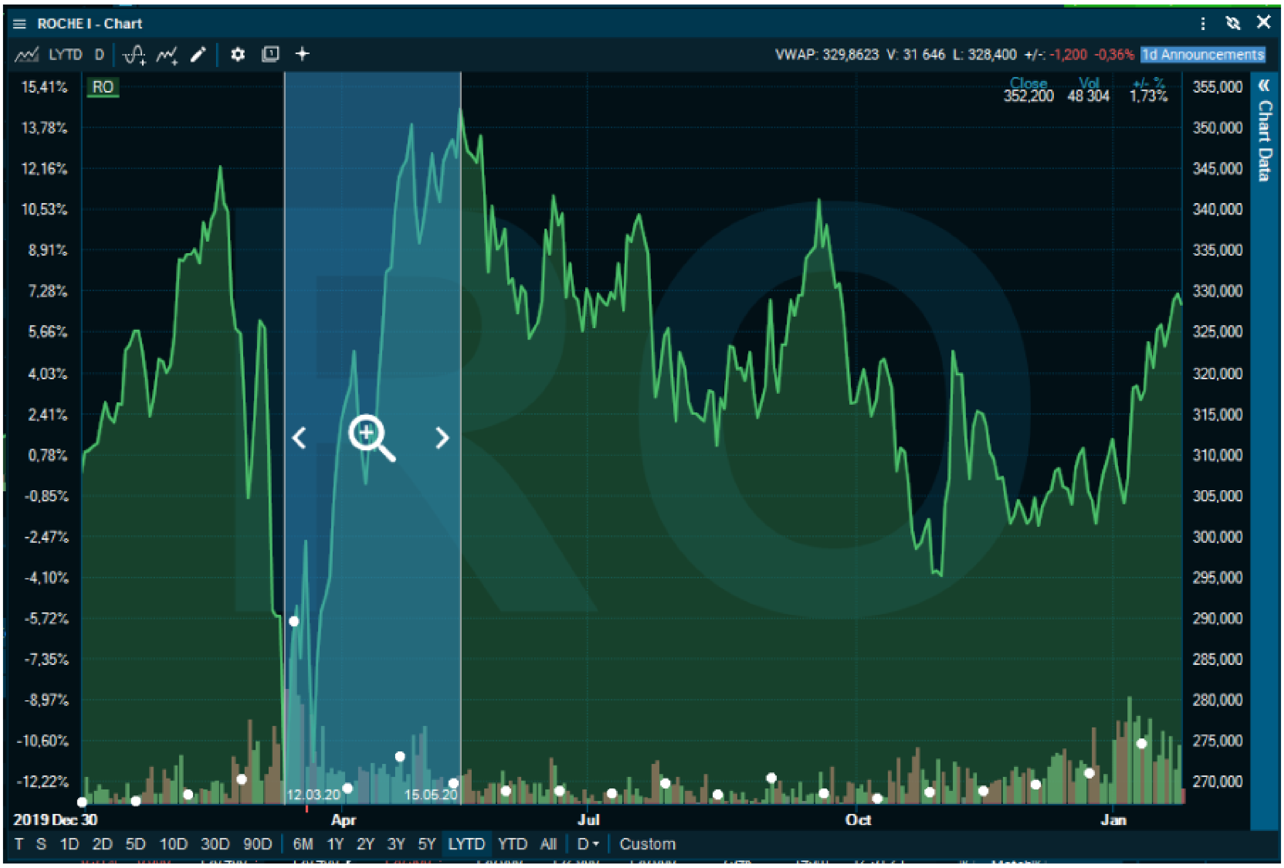

Volatility Smile - VOLV B 29.01.2021
Implied Volatility (Call Mid)
Expiry Dates
X-Axis: Strike
VOLV B
150
140
130
120
110
100
90
80
70
60
50
40
30
180,00
185,00
190,00
195,00
200,00
205,00
210,00
215,00
220,00
225,00
230,00
235,00
240,00
Series1

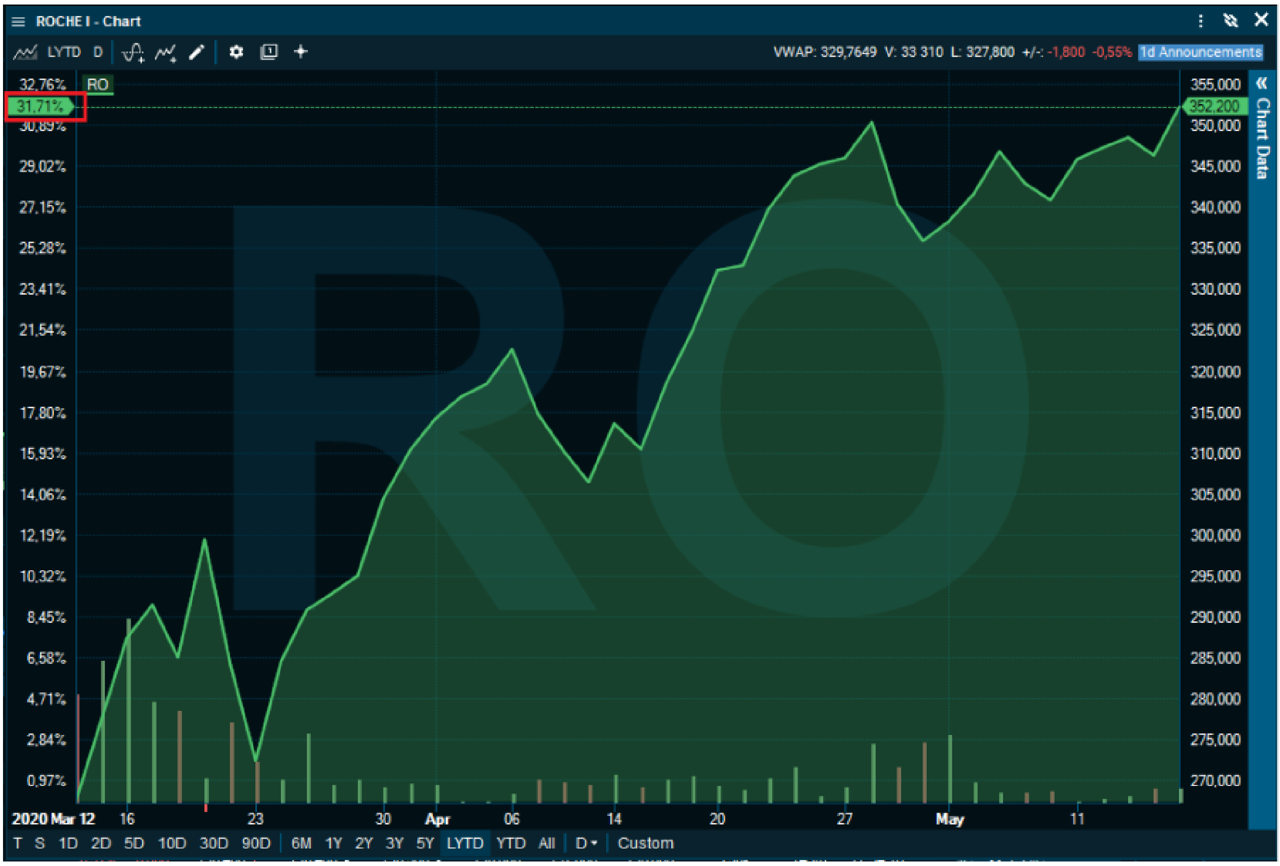
2.4.5 Chart performance for custom period

You can quickly zoom in on a particular time period within a chart and the percentage performance on your left axis will adjust, automatically recalculating the return for that period.

For example, to take a closer look at the extreme movements for Roche as of COVID-19 hit and the lowest point at March 12, 2020 to the recovery back to the top at May 2020.

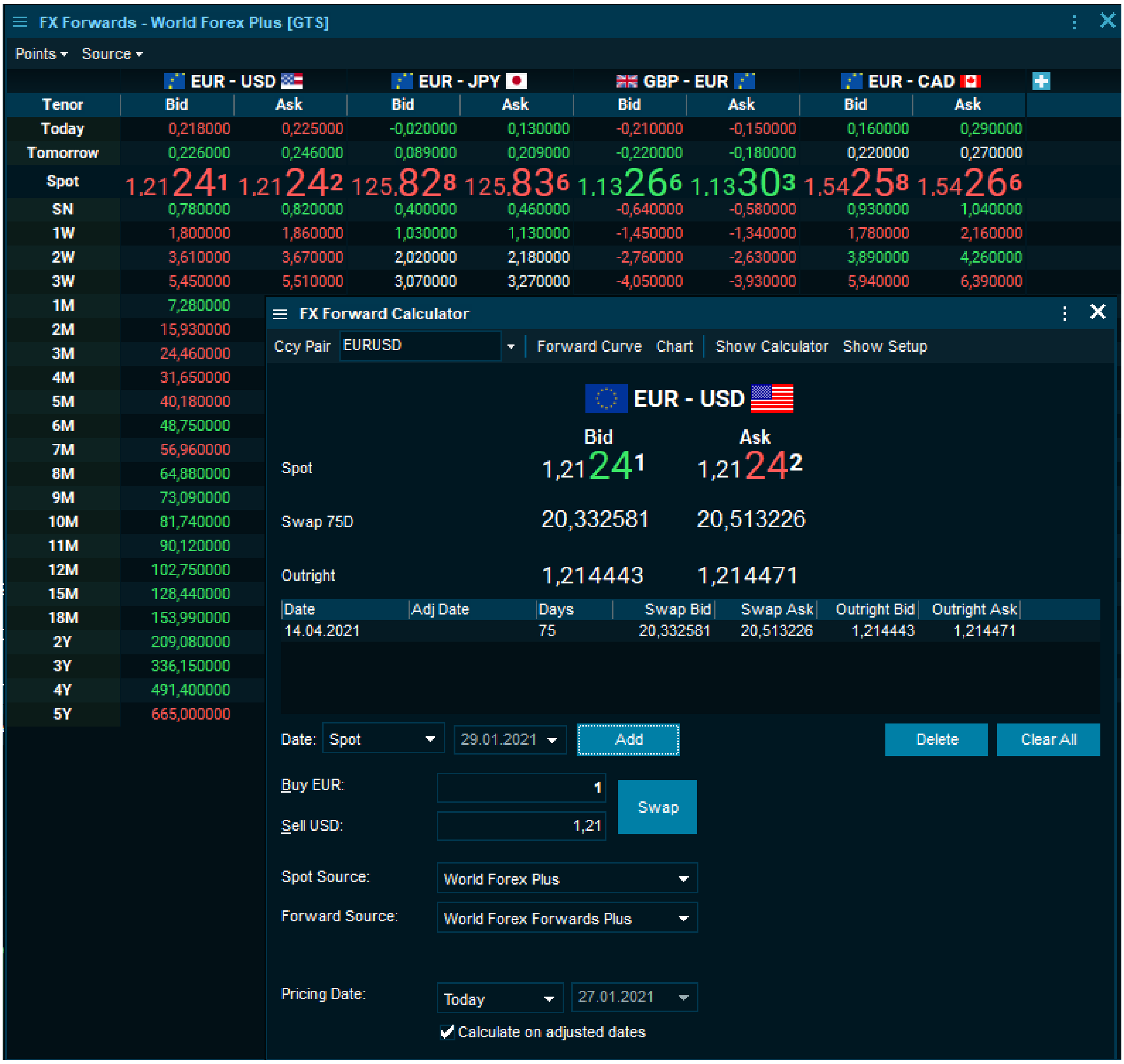
After zooming in on this specific period of your choosing, the percentage performance is re-adjusted on the left axis and we can quickly see the periods return on 31.71%.


ROCHE I - Chart
LYTD D
VWAP: 329,8623 V: 31 646 L: 328,400 +/-: -1,200 -0,36%
1d Announcements
RO
Close 352,200
Vol 48 304
+/- % 1,73%
Chart Data
15,41%
13,78%
12,16%
10,53%
8,91%
7,28%
5,66%
4,03%
2,41%
0,78%
-0,85%
-2,47%
-4,10%
-5,72%
-7,35%
-8,97%
-10,60%
-12,22%
355,000
350,000
345,000
340,000
335,000
330,000
325,000
320,000
315,000
310,000
305,000
300,000
295,000
290,000
285,000
280,000
275,000
270,000
12.03.20
15.05.20
2019 Dec 30
Apr
Jul
Oct
Jan
T S 1D 2D 5D 10D 30D 90D 6M 1Y 2Y 3Y 5Y LYTD YTD All D Custom


ROCHE I - Chart
LYTD D
VWAP: 329,7649 V: 33 310 L: 327,800 +/-: -1,800 -0,55%
1d Announcements
RO
Chart Data
32,76%
31,71%
30,89%
29,02%
27,15%
25,28%
23,41%
21,54%
19,67%
17,80%
15,93%
14,06%
12,19%
10,32%
8,45%
6,58%
4,71%
2,84%
0,97%
355,000
352,200
350,000
345,000
340,000
335,000
330,000
325,000
320,000
315,000
310,000
305,000
300,000
295,000
290,000
285,000
280,000
275,000
270,000
2020 Mar 12
16
23
30
Apr
06
14
20
27
May
11
T S 1D 2D 5D 10D 30D 90D 6M 1Y 2Y 3Y 5Y LYTD YTD All D Custom

2.4.6 FX Forwards and calculator view update

- Currency pair is split into two parts "Base" - "Quote" and shows a flag per currency.
- Spot prices are displayed with enhanced decimals in "FX Forward Calculator", "FX Forwards" window and "Instrument Overview".
- Swaps and outrights are displayed with a fixed decimal percision = 6.
- Clarification on Swap and Outright components.



3 Getting started

Get an overview of the Infront Professional Terminal user interface and learn about the various possibilities that the terminal offers.

See also:

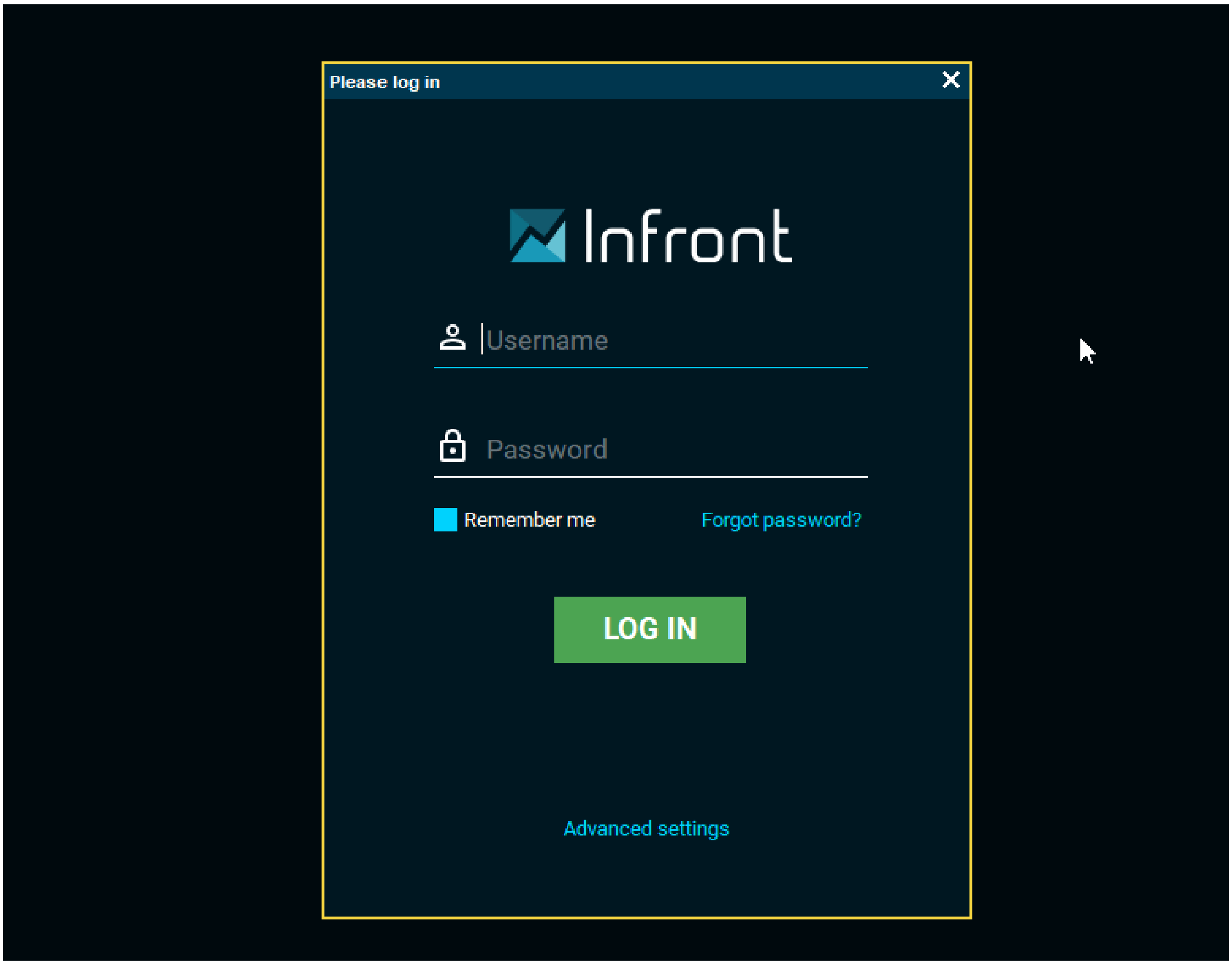
- Login
- My Profile
- Main menu
- Search
- Desktop
- Workspace
- Keyboard shortcuts

3.1 Login

To log into Infront Professional Terminal, you need credentials (username + password). This information is sent to you, either by your broker or by Infront, depending on which terminal you have.

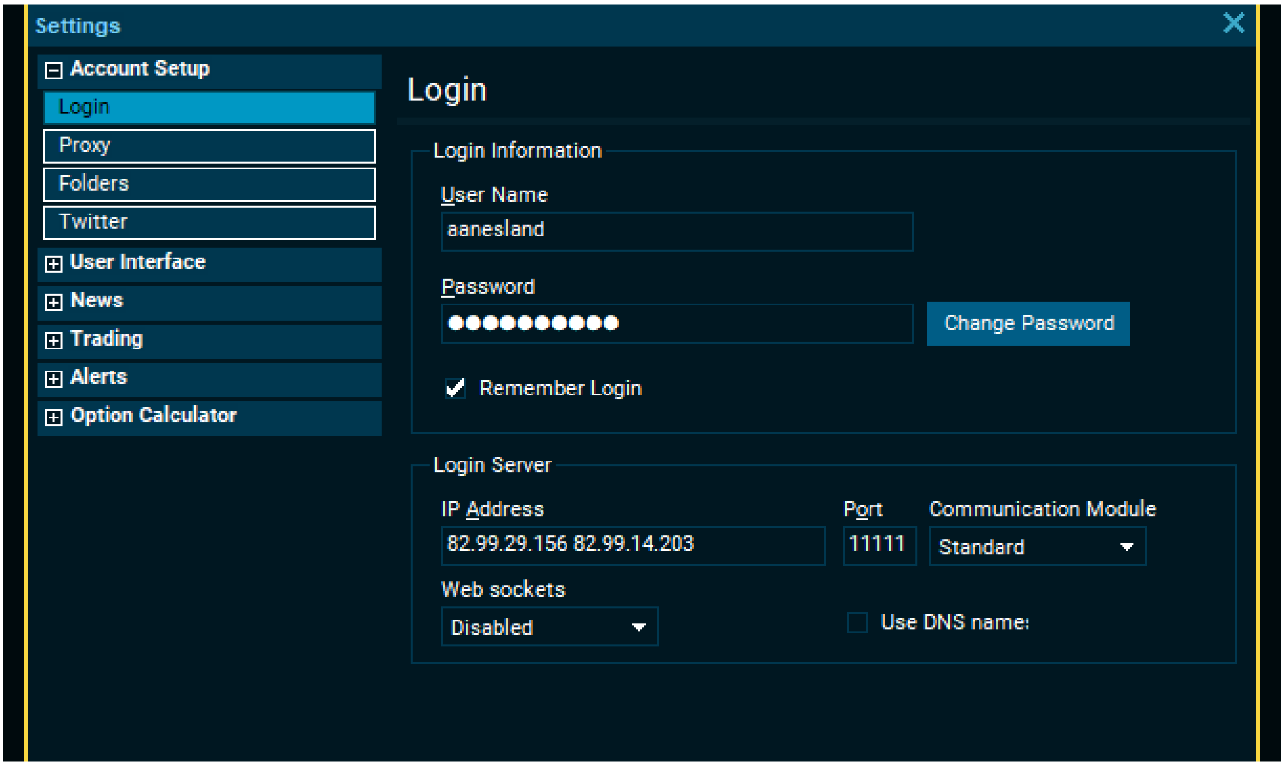
3.1.1 How to log in to the Infront Professional Terminal

1. Download Infront Professional Terminal from our website.
2. Once the terminal opens, a login window will appear.
3. Type in your login credentials and click the "Log in" button.
4. To avoid entering login credentials every time you log in, select the "Remember me" checkbox.

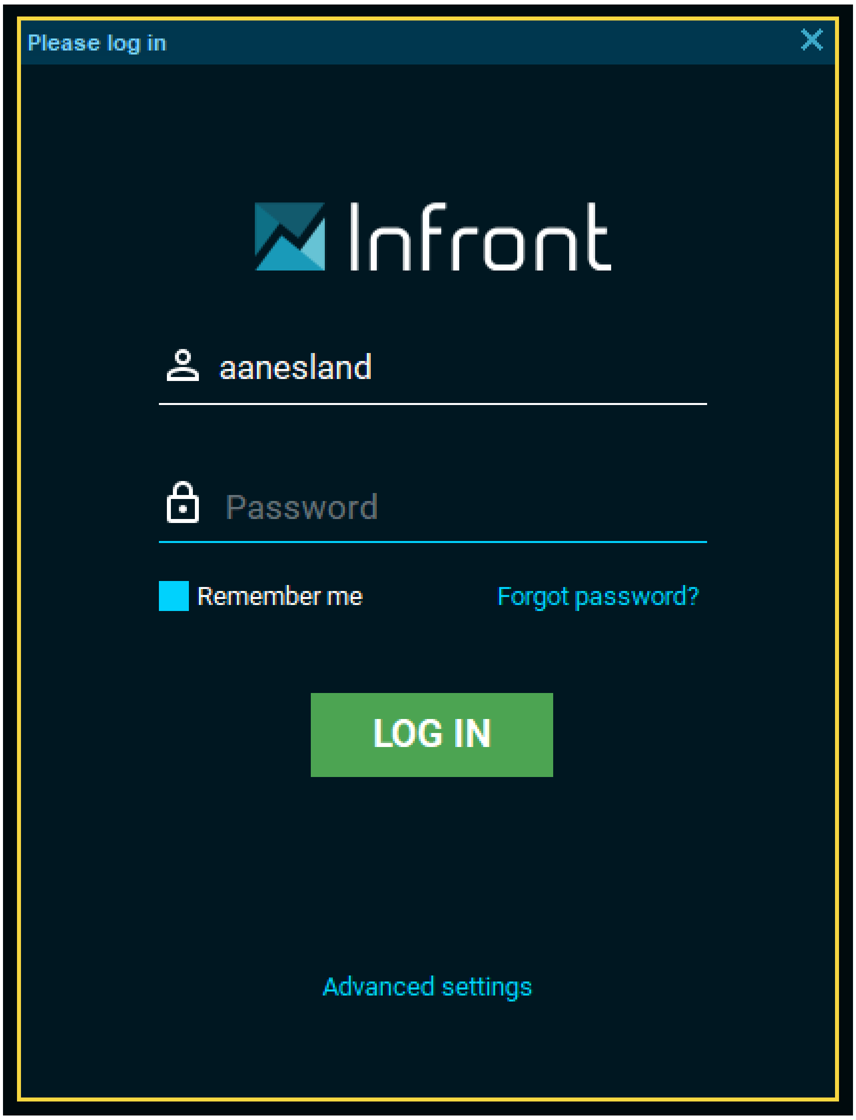


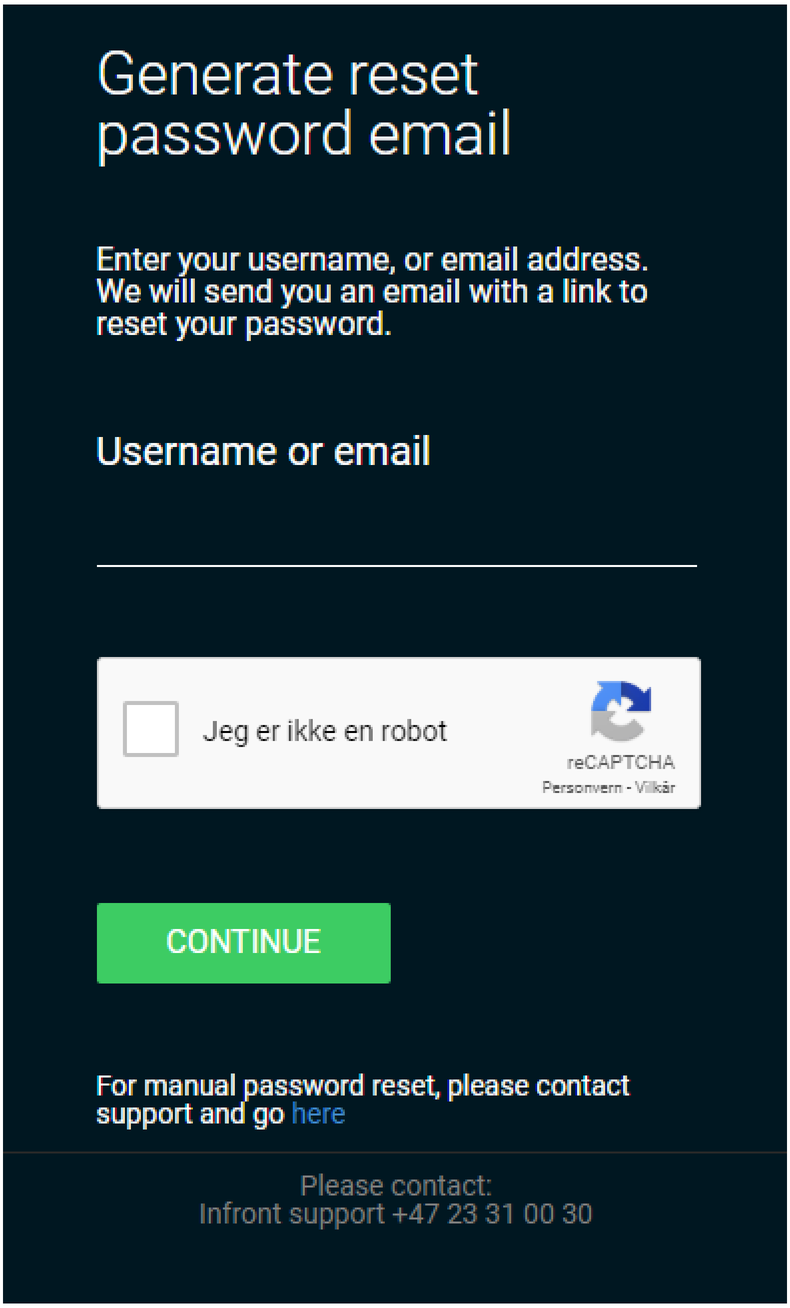
3.1.2 How to change password

To change your password, go to "Advanced settings" > select "Account Setup" > select "Login" > click the "Change Password" button.



If you don't remember your password, you can click "Forgot password?", which you can find in the login window. Next, a new browser will appear where you can type in your username or e-mail. Once you have entered the necessary information, you will receive an e-mail, which contains instructions explaining how to generate a new password.

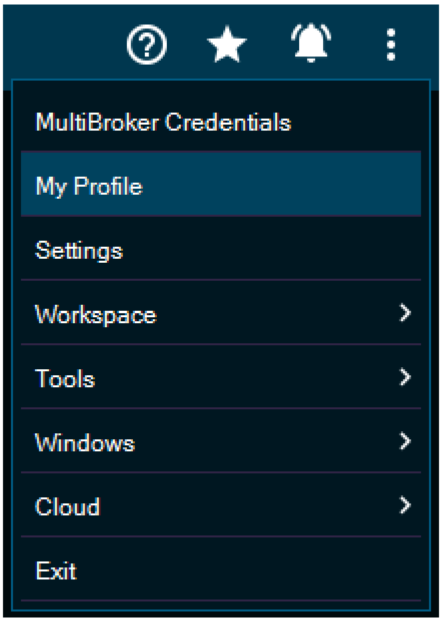

Please log in
Infront
aanesland
Password
Remember me
Forgot password?
LOG IN
Advanced settings



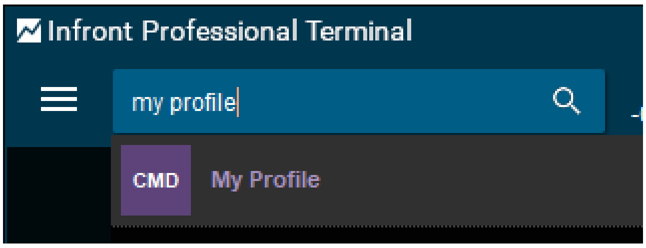
3.2 My Profile

"My Profile" provides an overview of your user account and services you currently subscribe to. You can view and update your information on the "Account" page.

Click the " ⋮ " icon in the upper right corner of Infront Professional Terminal and then select "My Profile".



Alternatively, type the command "My Profile" in the search field and press <ENTER>.



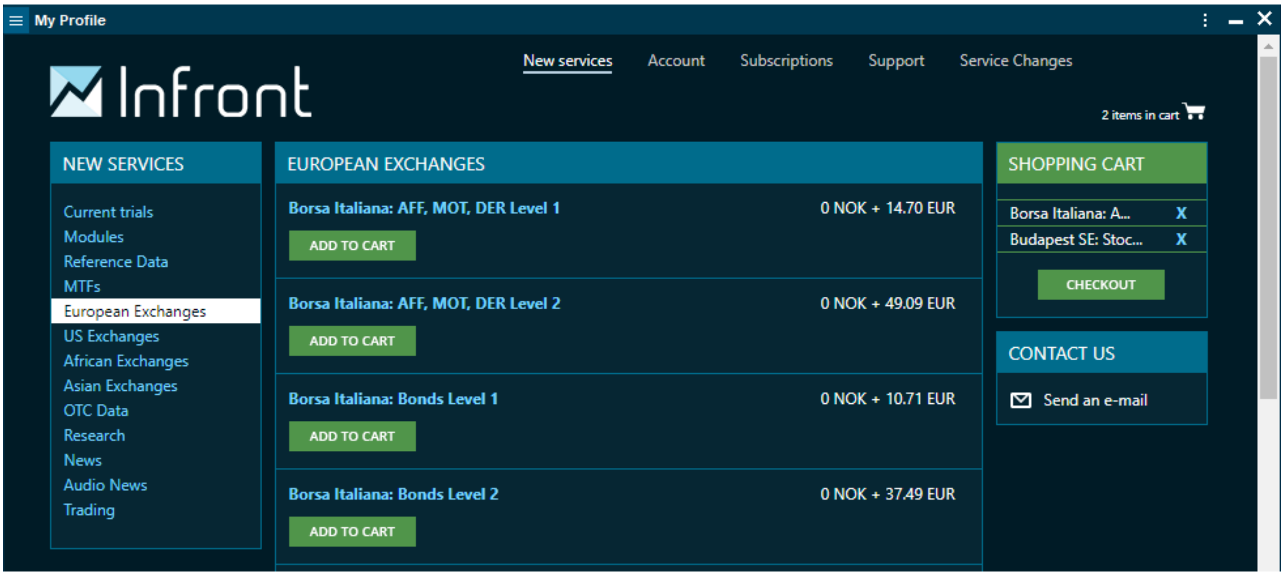
3.2.1 Add a free trial in My Profile

Some users can test features and various market data services. Order a trial by clicking the "Free Trial" button on the "New Services" page.

3.2.2 Order additional services

Some users can also order additional services. The payment method varies. If VISA and Mastercard icons are displayed, then this indicate that you have access to payment by credit card.

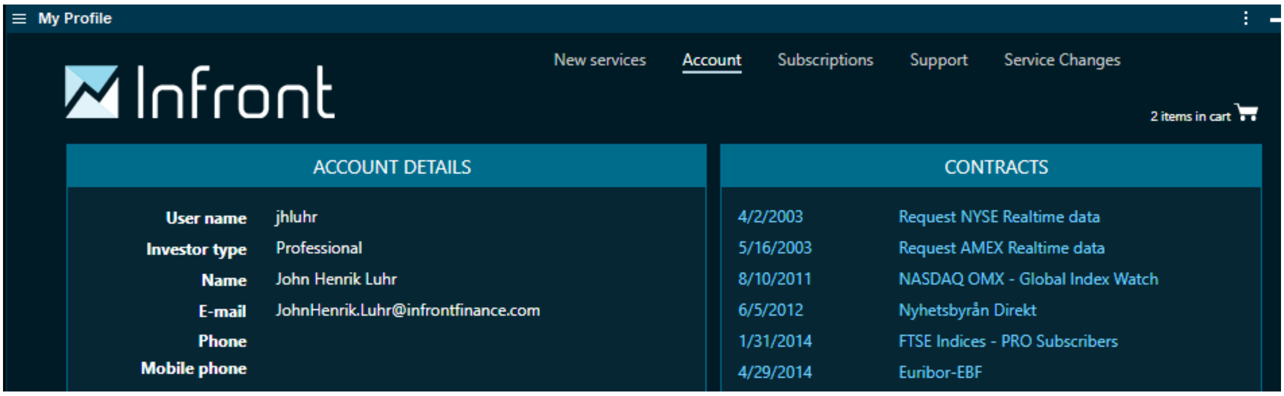
Example of My Profile



3.2.3 My profile and credit card payment

3.2.4 Subscription agreements

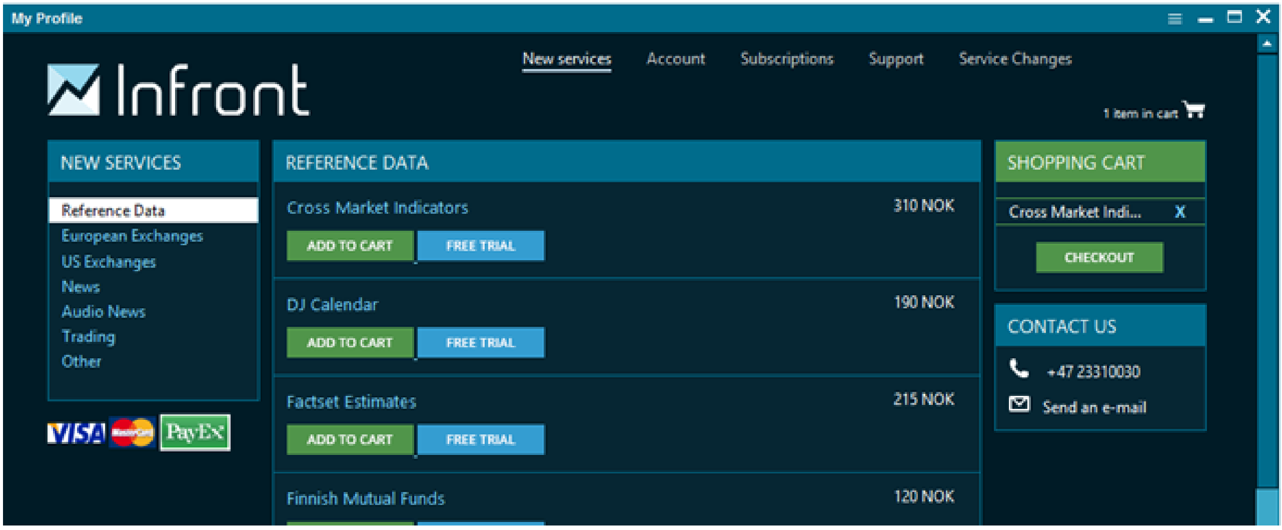
On the "Account" page, you will find your account details and a list of the Contracts (EULAs) for the separate services you subscribe to.



3.2.5 My profile and credit card payment

Pay by credit card for additional services

The Visa and Mastercard icons indicate that you have access to payment by credit card. Select the services you want to add and click the "Checkout" button.



In the next step, you accept the credit card agreement which states that monthly recurring charges will be made to your credit card once you start the subscription, that you can cancel the subscription at any time and that no refunds are made once the recurring payment for that month was processed.

The next step informs you of all recurring monthly costs.

After you have entered your credit card details on the PayEx page, you will be taken back to "My Profile", where you are informed that you may need to restart Infront Professional Terminal.

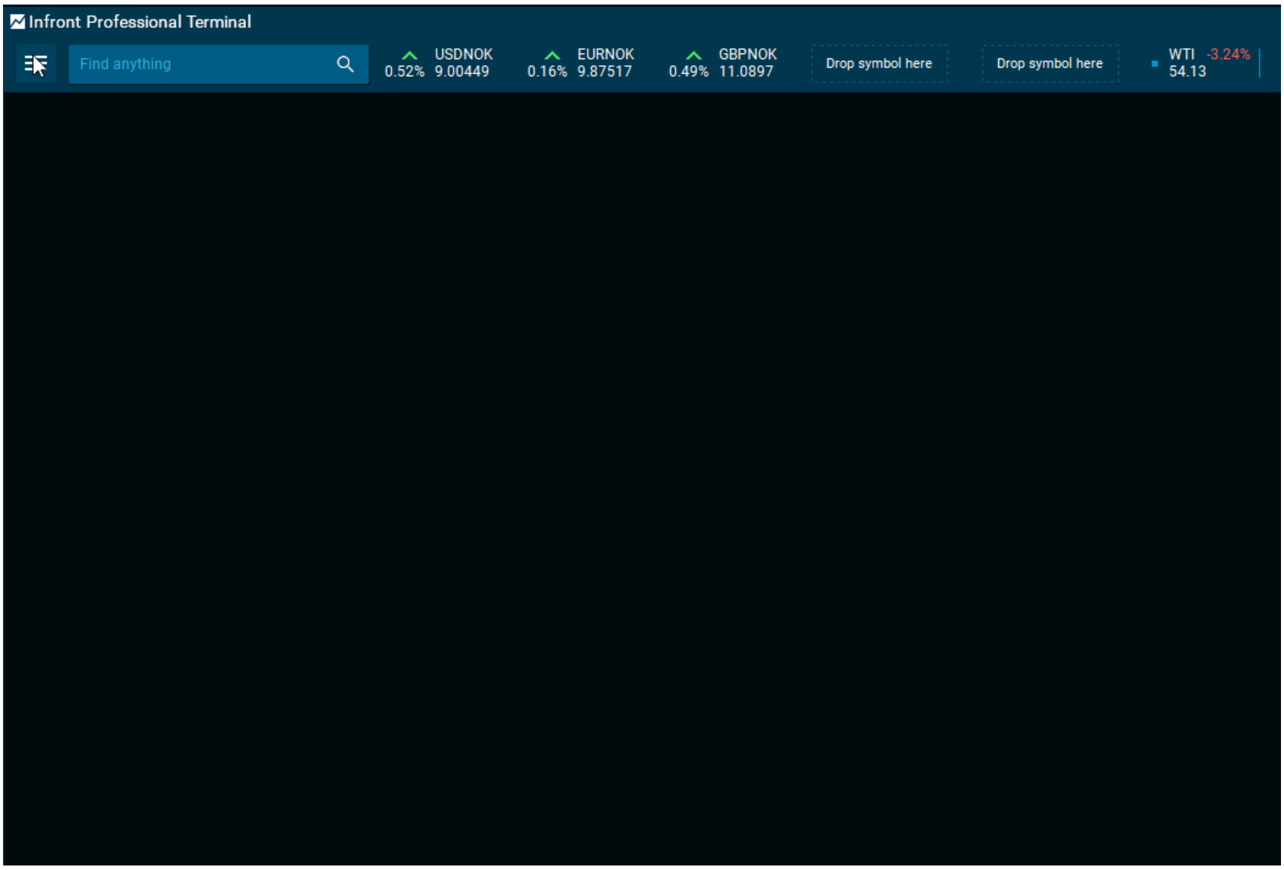
> You can, at any time, cancel subscriptions on the "Subscriptions" page in "My Profile". The access expires at the end of the period paid for.

3.3 Main menu

The main menu is found on the toolbar and allows you to easily access all the ready-made asset class windows and tools in Infront Professional Terminal. The items in the menu depend on the features you have access to. If a link appears dimmed, this means that you do not have access to the content displayed in the main menu.

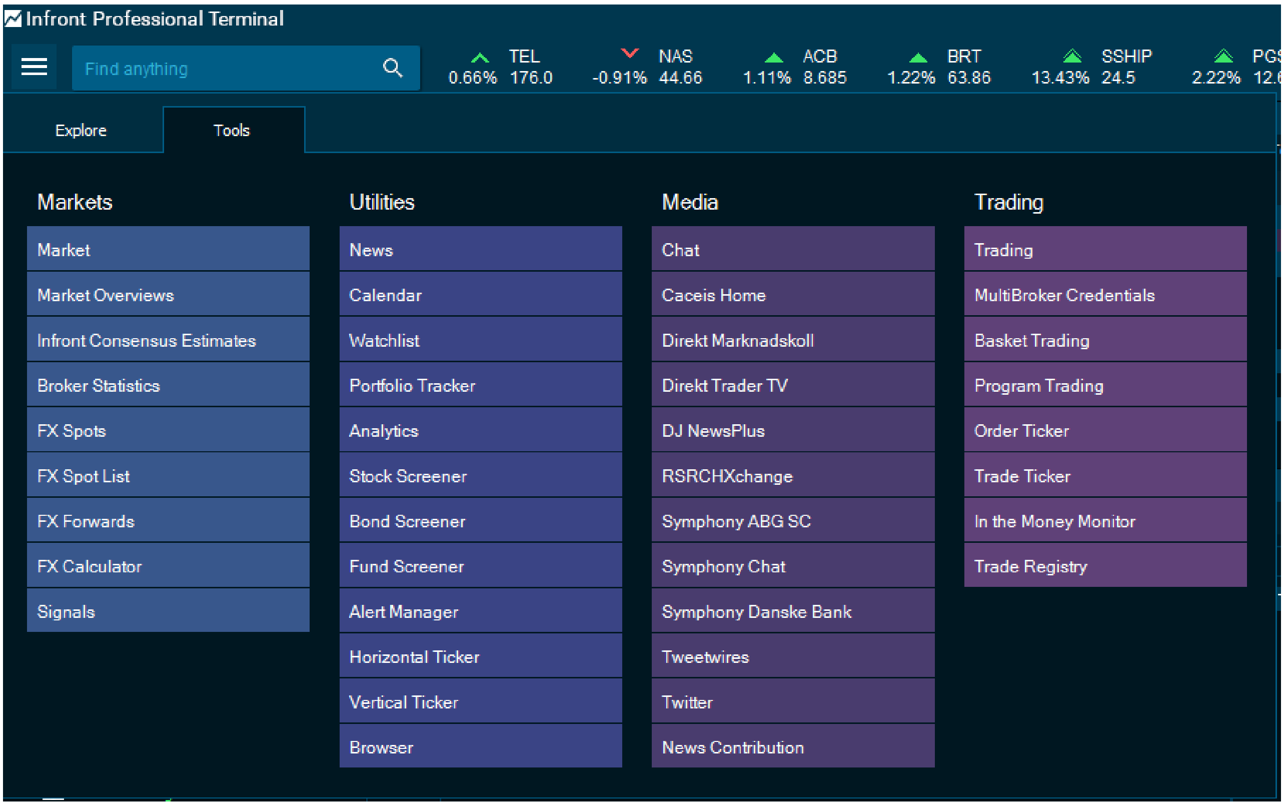
3.3.1 The Explore tab

On the "Explore" tab, we have created direct links to a range of content overviews to make the most important information available at your fingertips.

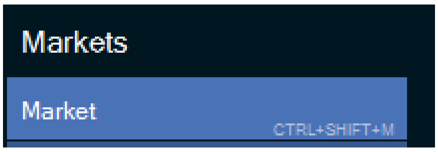


3.3.2 The Tools tab

On the "Tools" tab, you can find the different tools available in Infront Professional Terminal. For example, market windows, news, calendar, watchlists or login to your trading account.



You can hover your mouse pointer over a menu item to see the corresponding keyboard shortcut, if available.



3.4 Search

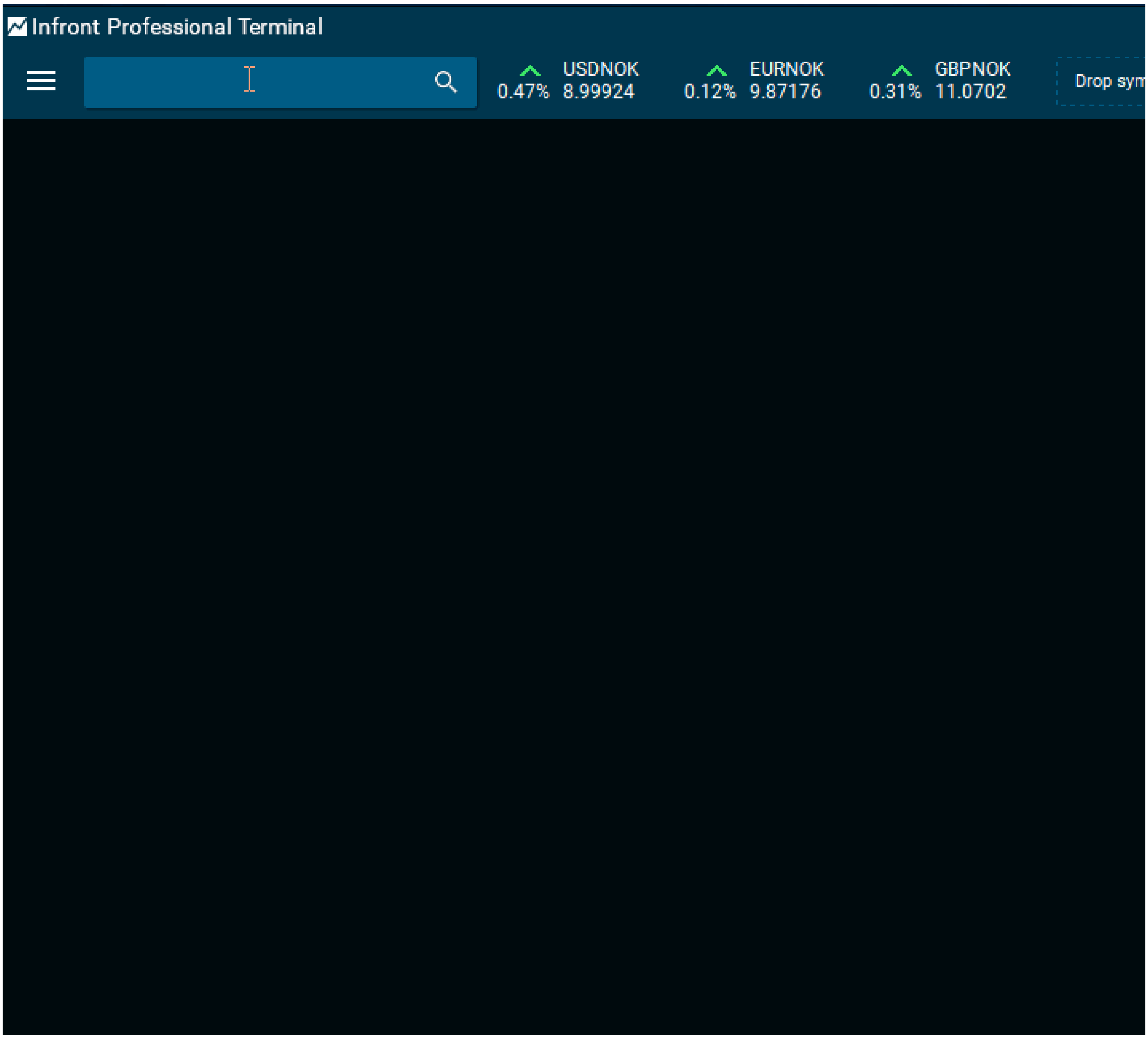
3.4.1 Easy search

You can search for instruments (<CTRL>+<F>) by typing in any of the following details of an asset:

- Ticker code
- ISIN
- Company name
- Descriptive name

The powerful search functionality ranks the search to display the most relevant results.

When selecting an instrument from the search results, a submenu will show up, giving you more options about what you would like to open.

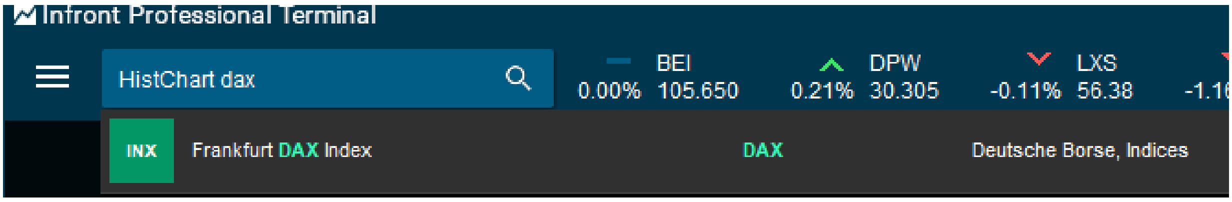


3.4.2 Commands

You can also execute commands from the search field.

Example

Type "histchart" and press <ENTER>. Start typing to find the instrument for which you want display the historical chart. There are many more commands you can use.



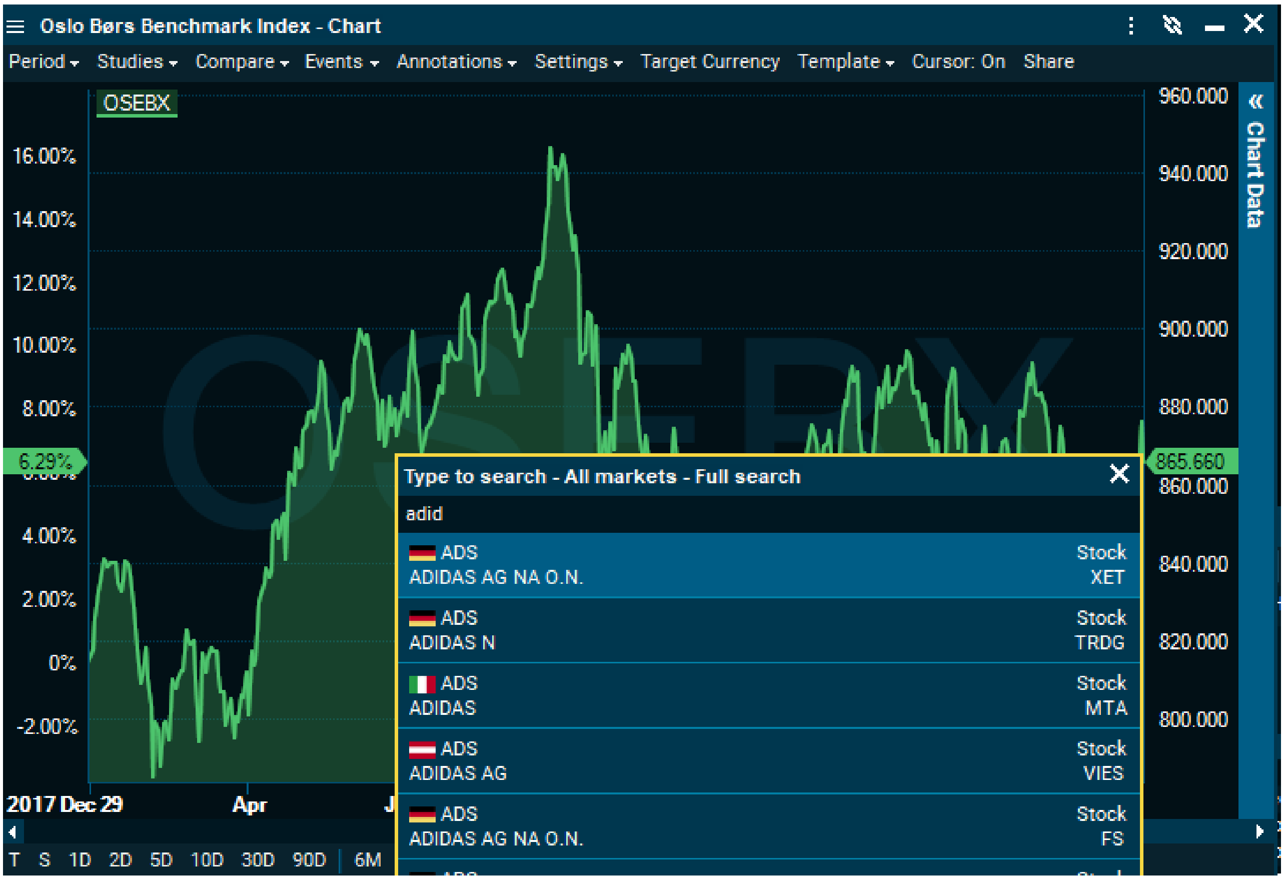
Learning the keyboard shortcuts for your favorite commands will let you find information even faster. For more information, see Keyboard shortcuts.

3.4.3 Search in specific windows

Search directly in a chart, watchlist, orderbook or market window. Just start typing to perform the search on the list of symbols in an automatically prompted search window.

For example, you can search in a "Market" window.

Or you can search directly in a chart.



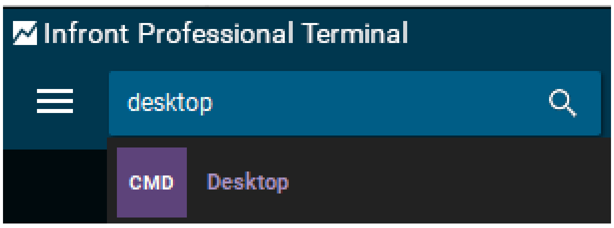
3.5 Desktop

A workspace is collection of desktops, while a desktop is a collection of windows. Desktops can be compared to worksheets in Microsoft Excel and are only visible one at a time.

You can create your own desktops or choose from ready-made ones.

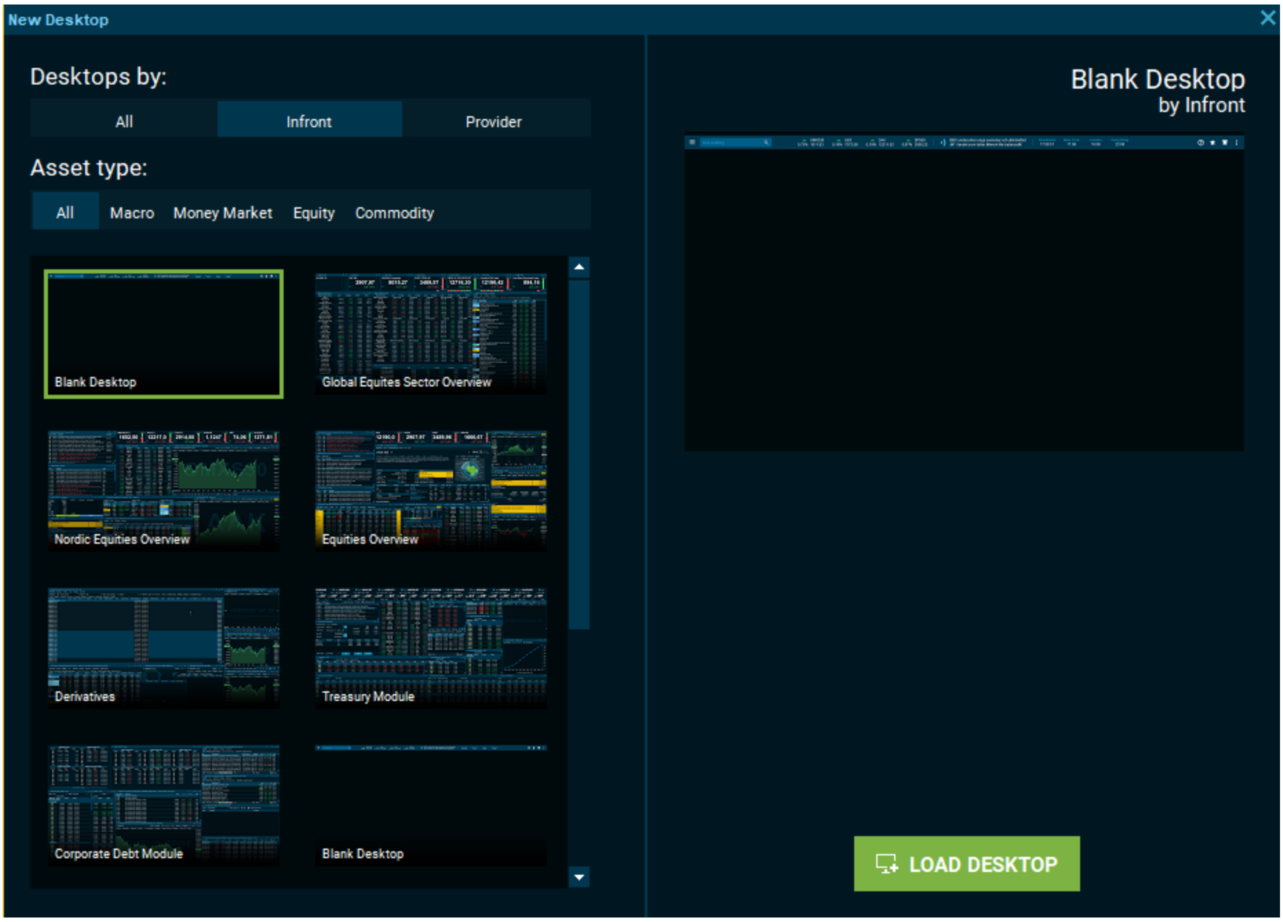
3.5.1 Open a desktop

Search for "desktop" in the search field and select the "Desktop" command.



Or click the "Add Desktop" button on the bottom left of Infront Professional Terminal.

Select "Blank Desktop" to create your own desktop, or load an existing desktop and customize it to suit your needs.



When saving a workspace, all open desktops are stored in the workspace file.

Open desktops show up as tabs in the bottom left-hand corner.

> When running in floating mode, the tabs are just below the top tool bar.

3.5.2 Keyboard shortcuts

To switch between desktops, just click the corresponding tabs. Or use the keyboard shortcuts <ALT>+<1>, <ALT>+<2> and so on.

To move a window from one desktop to another, pin the window and change desktops, then unpin the window.

3.5.3 Change the order of the tabs

There are 3 menu options that allow you to freely move desktops around. These are available by right-clicking the "Desktop" tab, or by using keyboard shortcuts.

"Move desktop" will prompt you for a new desktop number for the desktop.

The "Move desktop left" (<CTRL>+<SHIFT>+<PAGE UP>) and "Move desktop right" (<CTRL>+<SHIFT>+<PAGE DOWN>) commands can be used to quickly move a desktop to another position.

3.6 Workspace

See also:

- Workspace layout
- Link windows
- Right-click menus
- Window settings menu
- Share window
- Alert and alert manager

3.6.1 Workspace layout

Floating mode vs standard mode

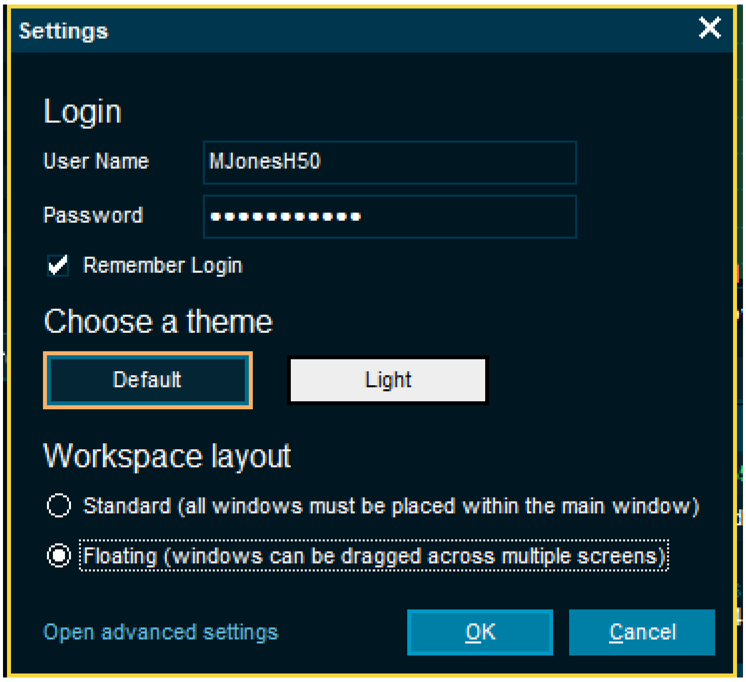
The Infront Professional Terminal was traditionally a Multiple Document Interface (MDI) application (standard mode).

In the standard mode, there is one large main window that contains all the individual windows (such as markets, orderbooks, watchlists and charts). This makes it very easy to use, but it does limit the flexibility in where you can place windows and external applications. To overcome these limitations, we introduced an optional mode, the floating mode. In the floating mode, each individual window can be dragged across multiple screens and is not confined to one large main window.

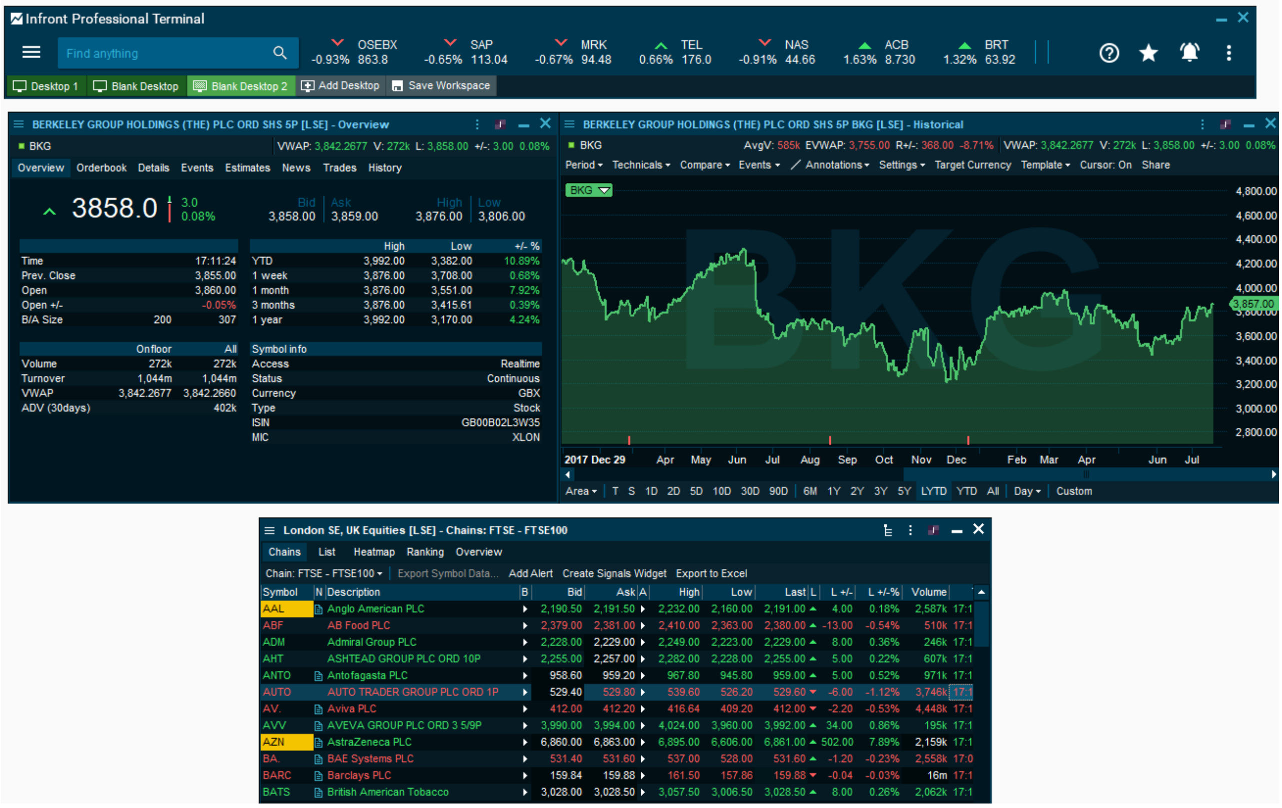
Enable floating mode

To enable floating, go to the " ⋮ " menu on the top right, and select "Settings". Under "Workspace layout", select the "Floating (windows can be dragged across multiple screens)" option.

You need to restart the Infront Professional Terminal for the changes to take place.



We recommend placing the toolbar at the top of your monitor so that it is easy to find.



3.6.2 Link windows

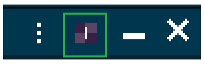
Description

Linking windows allows you to view a lot of information on many instruments quickly without having to open any new windows. Just type the symbol code or double-click a symbol to change the content in the linked windows.

Linking windows one by one

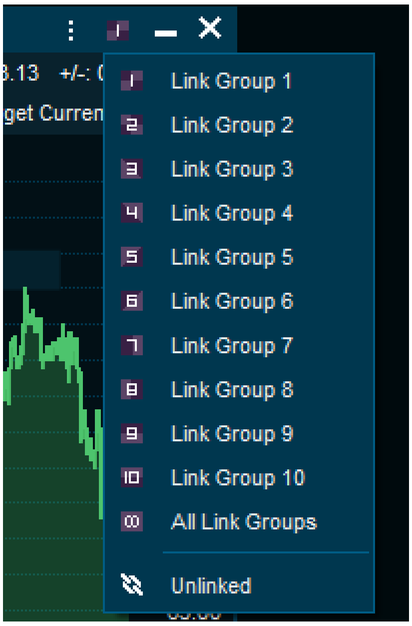
Open the window you want to link and click the "Link Window" icon on the right of the window title bar. Do the same for all windows you want to link.

The "Link Window" icon now displays the number of the link group. In the screenshot below, it is linked to group 1.



Link windows by group

To create different groups of linked windows, use one preferred channel for each group.



Link all groups

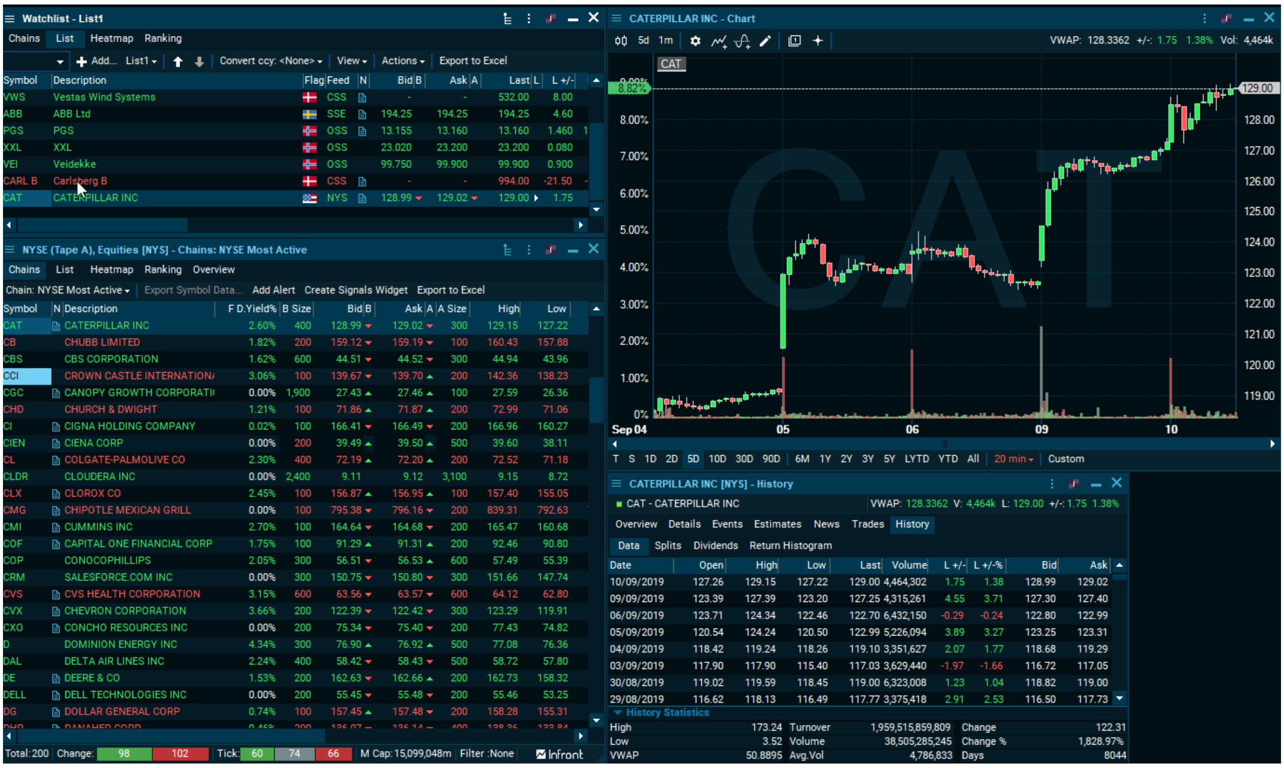
If groups of linked items are needed in addition to having some windows linked to everything, you can use the "All Link Groups" selection for those specific windows.

Example

The groups do not affect one another.

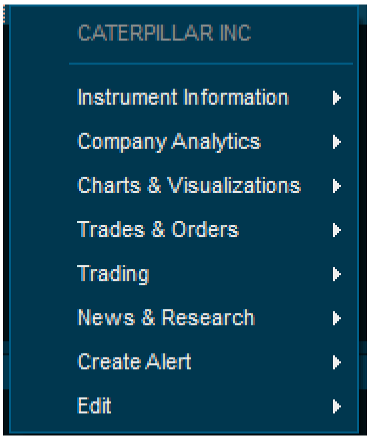
Double-clicking CARL B in the watchlist will change the chart and the orderbook to show data for CARL B.

Double-clicking CAT in the market window will change the historical prices to show data for CAT.



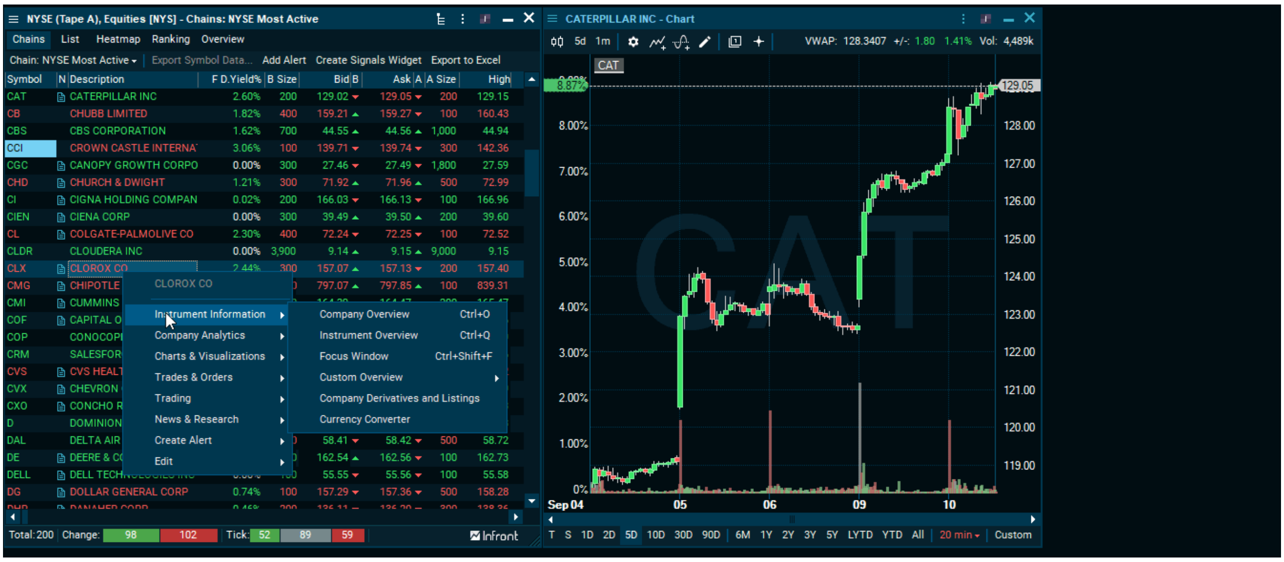
3.6.3 Right-click menus

Right-click any symbol to access the menu options for the given symbol. For example, right-clicking the ticker "CAT" opens the following menu.



If you right-click a particular feature, you get a menu allowing you to change settings or make changes to it. For example, you can right-click the y-axis of a chart to open a menu.

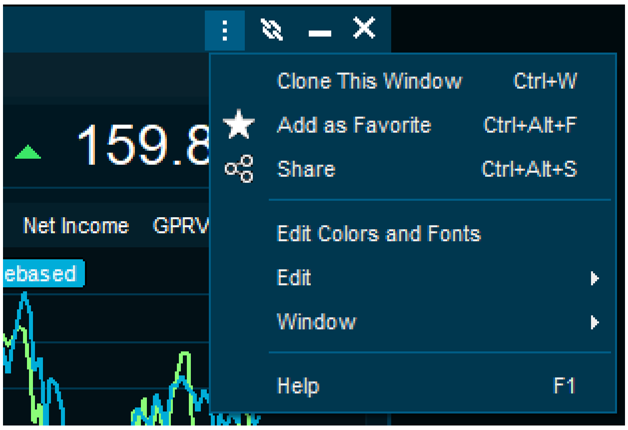
It's also possible to right-click any window in the Infront Professional Terminal to access the different options.



3.6.4 Window settings menu

Most windows in the Infront Professional Terminal have a " ⋮ " tools menu in the top right corner for quick access to settings of the current window.

Below is an example of the tools menu from the "Company" window:



Commands common for all window menus

- Clone This Window
- Add as Favorite
- Share
- Edit Colors and Fonts
- Window
- Help

Clone This Window

Creates a duplicate of the current window.

> Cloning a window will result in a window of the same size. While the window is selected, type to search for another instrument. This makes it easy to add a lot of information to your workspace quickly.

Add as Favorite

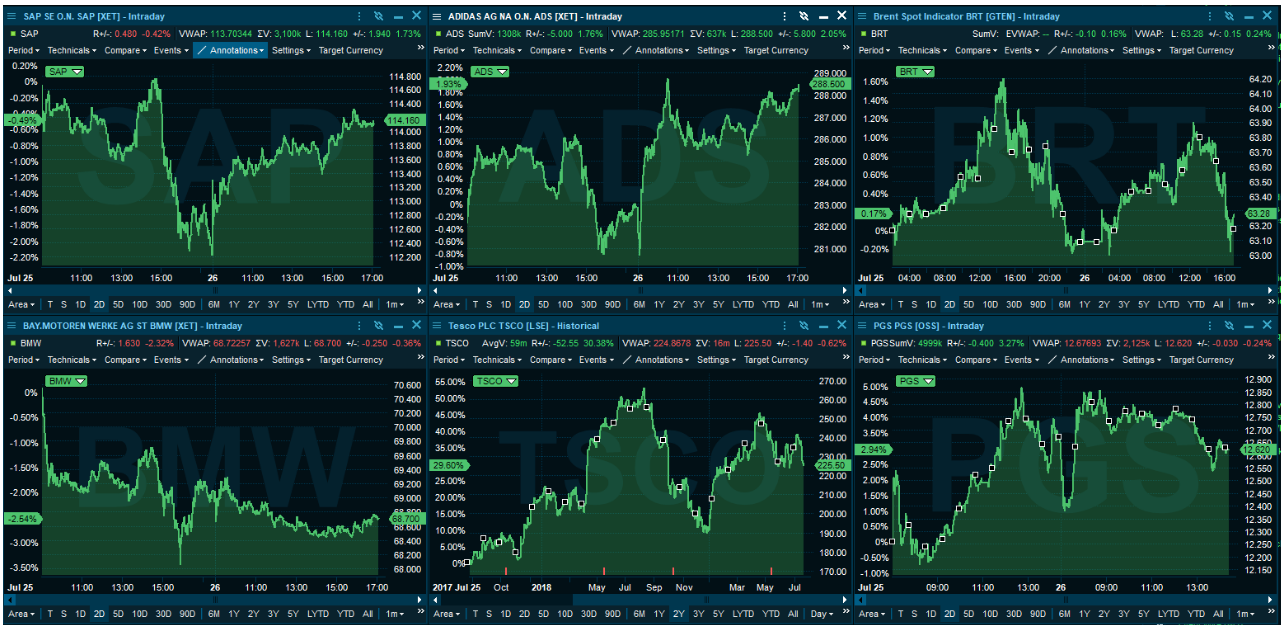
Adds the window as a favorite. Favorites are available from the main menu on the very right.

Share

For more information, see Share window.

Edit Colors and Fonts

Change colors and fonts for different windows.



Window

Element	Description
Show Extra Information	Clear this command to collapse the bar showing additional information. Press <F11> or select the command from the menu to display the bar again.
Show Caption	Cancel the selection to hide the title bar of the window. Press <F12> or select from the menu to display it again.
Pin Window	You can force a window to stay on the screen for all desktops (see Desktop). This is useful for windows that you always want to see - no matter which desktop you move to.

Help

Opens the online help for this window.

3.6.5 Share window

You can easily share any window in the Infront Professional Terminal with friends and coworkers.

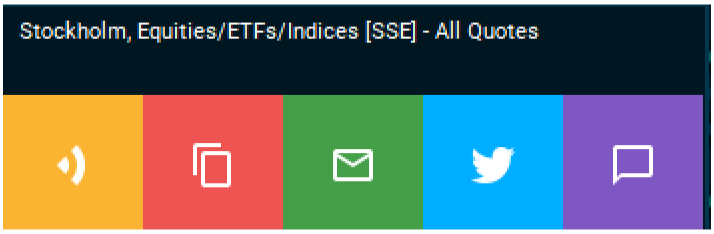
The "Share" command creates a link, an e-mail or a tweet which allows you to share the content of the window with other users. A screenshot of the window will be generated. Also, underneath the screenshot of the window, a link will be generated allowing any user of theInfront Professional Terminal to open the same window in their installation of the Infront Professional Terminal.

To share a window:

1. Open the window you want to share.

2. Click the " ⋮ " settings menu on the upper right of the window.
3. Select "Share".

You can either share your window via an URL link, e-mail or on Twitter.



You can also use the <CTRL>+<ALT>+<S> keyboard shortcut to open the "Share" menu.

Using the URL link to share the window will allow anyone to see the window you shared in a browser. Additionally, other users of the Infront Professional Terminal can use the URL to open the window in the Infront Professional Terminal (providing they have access to the same services). This is a great way of communicating about the changing market situation.

3.6.6 Alert and alert manager

Create an alert

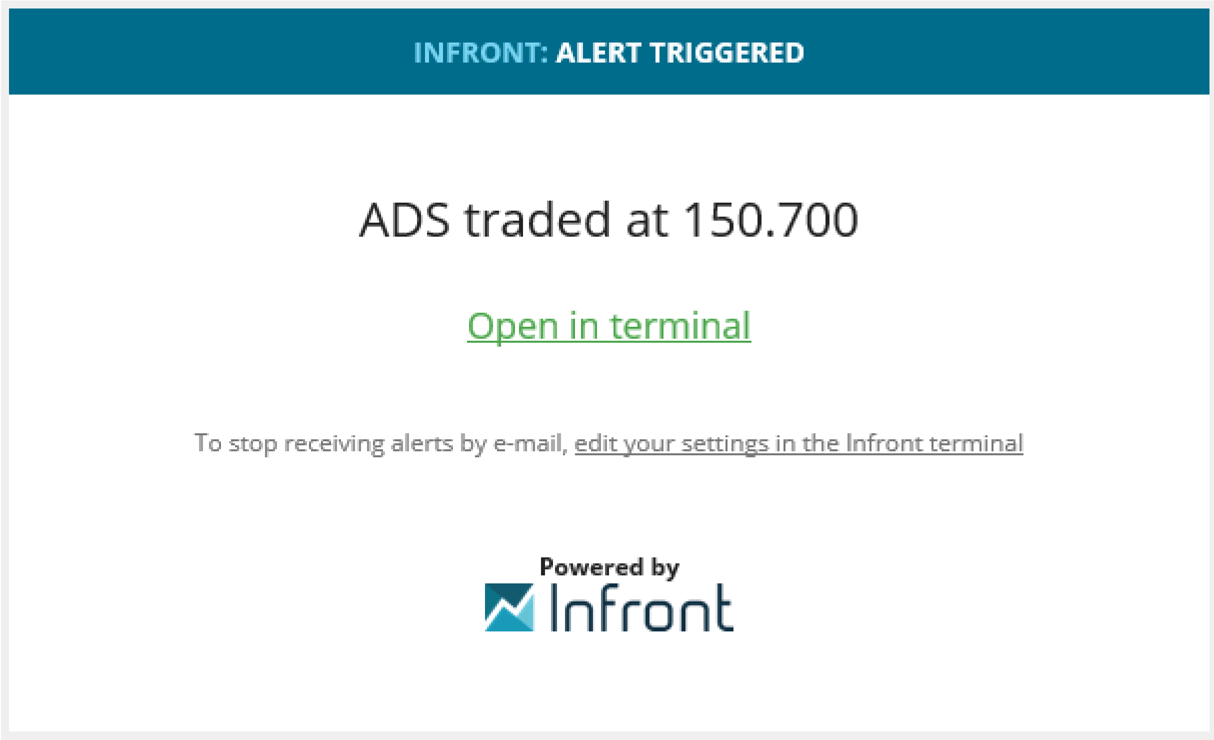
To create an alert:

1. Right-click the symbol you want to create an alert for.
2. Select "Create Alert" and the type of alert.
3. This opens the "New Alert" window. Select the relevant settings for your alert.

Alerts inform you when certain price movements have happened for a given symbol, chain or watchlist. The Infront Professional Terminal monitors these for you around the clock and informs you as soon as they happen.

Alerts in the Infront Professional Terminal

In the Infront Professional Terminal, a small notification is displayed alerting you that one of your alerts has been triggered.



Alerts by e-mail

You can also receive alerts by e-mail.

Alerts on Mobile

If you have Infront Mobile, and you login with the same user as the Infront Professional Terminal, then you will also receive push notifications to your device.

Alert Manager

You can access the "Alert Manager" by clicking the "Bell" icon in the upper right corner of the desktop and then click "Manage my alerts".

The "Alert Manager" will allow you to edit and delete your alerts, look at you notifications as well as change your e-mail.

News Alerts

News alerts are only available in the Infront Professional Terminal and are not available via e-mail or on your mobile device.

You can define a list a news alerts for a "News" window.

> ⚠ The alerts belong to the specific "News" window open in your workspace. Closing this window will remove the alerts.

To create an alert:

1. Open a "News" window.
2. Right-click an item and select "Add alert", which will open the "News Alert" list for the window.

Element	Description
Conditions	Specify if the alerts should apply to all the sources or to more than the ones selected.
Text in headline	Specify if the news has a certain word, or combination of words in the headline.
Symbol tickers	Define if a news source indicates that the news article is related to one of the symbols specified.
Classifications & Geographical areas	Some premium news sources include data which classifies the news articles. You can use these filters to only get alerts when a specific classification or geographical area is triggered.
Actions	When the alert is triggered, you can define the alert actions. The alerts apply to the news feeds configured for a specific window and will be saved with the workspace.

3.7 Keyboard shortcuts

To make using the keyboard more efficient, Infront Professional Terminal provides various keyboard shortcuts. You can use these keyboard shortcuts to perform the most important functions.

Shortcut keys are displayed in this documentation as uppercase letters in angle brackets, for example "<CTRL>+<P>".

- Keys that need to be pressed simultaneously are linked with a "+".
- <CTRL> is the "Control" key at the bottom left of your keyboard.
- <DEL> is the "Delete" key.
- The <SHIFT> key switches between uppercase and lowercase.
- The <F> keys are the function keys at the top of the keyboard.

In addition to the comprehensive user manual, you can also find a compact PDF document (**Keyboard shortcuts overview.pdf**) with all the important keyboard shortcuts for quick download in the "Downloads" section.

See also:

- Keyboard shortcuts in all windows
- Main menu commands
- Search and search commands
- Chart window
- Market window/watchlist
- News window
- Trading shortcuts
- Other

3.7.1 Keyboard shortcuts in all windows

Keyboard shortcut	Function
<CTRL>+<P>	Print content of current window
<CTRL>+<C>	Copy to Clipboard
<CTRL>+<W>	Clone current window
<CTRL>+<A>	Select all
<F11>	Toggle extra information
<F12>	Toggle title bar
<SHIFT>+<F11>	Toggle extra information in all windows
<SHIFT>+<F12>	Toggle title bar in all windows
<ALT>+<1> <ALT>+<2>...	Select specific desktop
<ALT>+<F>+<1> <ALT>+<F>+<2>...	Select specific workspace
<CTRL>+<PAGE DOWN>	Go to next desktop
<CTRL>+<PAGE UP>	Go to previous desktop
<ALT>+<PAGE DOWN>	Move active window to next desktop
<ALT>+<PAGE UP>	Move active window to previous desktop
<CTRL>+<SHIFT>+<PAGE UP>	Move desktop left

Keyboard shortcut	Function
<CTRL>+<SHIFT>+<PAGE DOWN>	Move desktop right
<ESC>	Close selected window
<F4>	Search to change contents in window
<CTRL>+<ALT>+<S>	Share window
<CTRL>+<ALT>+<F>	Add as favourites
<F1>	Help

3.7.2 Main menu commands

Keyboard shortcut	Function
<ALT>+<G>	Explore menu
<ALT>+<M> **<ALT>+<D>**	Tools menu
<ALT>+<A>	Analyse menu
<ALT>+<T>	Trade menu
<ALT>+<R>	Favourites menu
<ALT>+<O>	Tools
<ALT>+<W>	Workspace
<ALT>+<I>	Windows
<ALT>+<H>	Help

3.7.3 Search and search commands

Search

Keyboard shortcut	Function
<CTRL>+<F>	Search anything
<CTRL>+<M>	Search markets
<CTRL>+<N>	Search news services

Search commands

Discover

Command	Function
Calendar	Opens economic calendar
Twitter	Opens Twitter in browser
Custom list	Opens custom list
Chart	Intraday chart
Intraday Chart	Intraday chart
HistChart	Historical chart
Orderbook	Orderbook
News	Symbol news
News Service	News search
Trades	Opens trades for a symbol
BrokerStats	Broker statistics
Focus	Focus window
Symbol	Symbol overview

Command	Function
Market	Search markets
Feed	All feeds (market, news, etc)
Page	Pre-made views
Chain	Market chains
Index	Index overview
FX calculator	Forward calculator
Forex Cross Table	Forex cross table
Fund	Fund overview page
Fund Screener	Funds search functionality

Analyse

Command	Function
Factsheet	Company factsheet
Analytics	Fundamentals
SME Estimates	Consensus estimates

General

Command	Function
Help	Help guide
Support	Mail to support
Preferences	Advanced Settings
Exit	Exit application
About	About page

Command	Function
Menu	Main menu window
Desktop	Desktop choice page
Alert	Alert manager
Shortcuts	Shortcuts PDF file
Excel	Link to templates and FAQ

3.7.4 Chart window

Keyboard shortcut	Function
<CTRL>+<I>	Intraday chart
<CTRL>+<H>	Historical chart
<INSERT>	Add study
<CTRL>+<P>	Percent change

3.7.5 Market window/watchlist

Keyboard shortcut	Function
<CTRL>+<SHIFT>+<M>	Open new market window
<CTRL>+<SHIFT>+<C>	Open new watchlist
<CTRL>+<INS>	Add symbol to list
<DEL>	Delete symbol in list
<CTRL>+<DEL>	Delete column
<CTRL>+<UP ARROW>	Move symbol up
<CTRL>+<DOWN ARROW>	Move symbol down

Keyboard shortcut	Function
<CTRL>+<E>	Copy DDE links
<CTRL>+<R>	Copy RTD links
<CTRL>+<SHIFT>+<I>	Open index constituents
<CTRL>+<L>	Add symbol alert
<F9>	Toggle summary bar
<CTRL>+<D>	Orderbook for a symbol
<CTRL>+<O>	Company overview
<CTRL>+<SHIFT>+<F>	Focus window

Double-click shortcuts in Market window and Watchlist

In the "Market" window and the "Watchlist" window, double-clicking certain columns will open the following windows:

Column	Function
Last column	Open trades
Ask column	Place a buy order
Bid column	Place a sell order
Symbol column	Open quote overview
L+/- column	Open fast chart intraday
Column heading	Change sorted column
Low column	Historical Chart
Infinancials column	Fundamentals
High column	Historical prices
News column	News for symbol

Column	Function
Historical change column	Performance

3.7.6 News window

Keyboard shortcut	Function
<CTRL>+<SHIFT>+<N>	Open "Select News Service(s)" window
<CTRL>+<L>	Add news alert
<ENTER>	Read news story
<CTRL>+<DEL>	Hide news item

3.7.7 Trading shortcuts

Keyboard shortcut	Function
<CTRL>+<SHIFT>+<O>	Select Trading Service
<CTRL>+<K>	Click trading
<CTRL>+<T>	Trades
<CTRL>+<D>	Orderbook
<+>	Buy order
<->	Sell order

3.7.8 Other

Calendar

Keyboard shortcut	Function
<CTRL>+<SHIFT>+<A>	Open new "Calendar" window

Alerts

Keyboard shortcut	Function
<CTRL>+<L>	Open "New Alert" window
<CTRL>+<SHIFT>+<L>	Open "Alert Manager"

SME Direkt

Keyboard shortcut	Function
<CTRL>+<SHIFT>+<H>	Chart for the selected symbol
<CTRL>+<SHIFT>+<Q>	Details for the selected symbol
<CTRL>+<SHIFT>+<S>	Consensus estimates

Quote overview

Keyboard shortcut	Function
<CTRL>+<Q>	Overview
<CTRL>+<SHIFT>+<W>	News
<CTRL>+<T>	Trades
<CTRL>+<D>	Orderbook

Workspace

Keyboard shortcut	Function
<CTRL>+<S>	Save workspace

Broker statistics

Keyboard shortcut	Function
<CTRL>+<B>	Open broker statistics (available for SSE, CSS, HSS, TRS, BDM only)

Keyboard shortcut	Function
<CTRL>+<SHIFT>+<B>	Broker statistics for the selected symbol

Communication status

Keyboard shortcut	Function
<CTRL>+<ALT>+<M>	Communication status

4 Settings

Learn about the many setting options in the Infront Professional Terminal.

See also:

- Account Setup
- User interface
- News
- Trading settings
- Alerts
- Option Calculator
- Advanced
- Configuration settings

4.1 Account Setup

4.1.1 Open Advanced Settings

To open the "Advanced Settings", open the " ⋮ " settings menu on the top right, then select "Tools" and select "Advanced Settings".

4.1.2 Account Setup

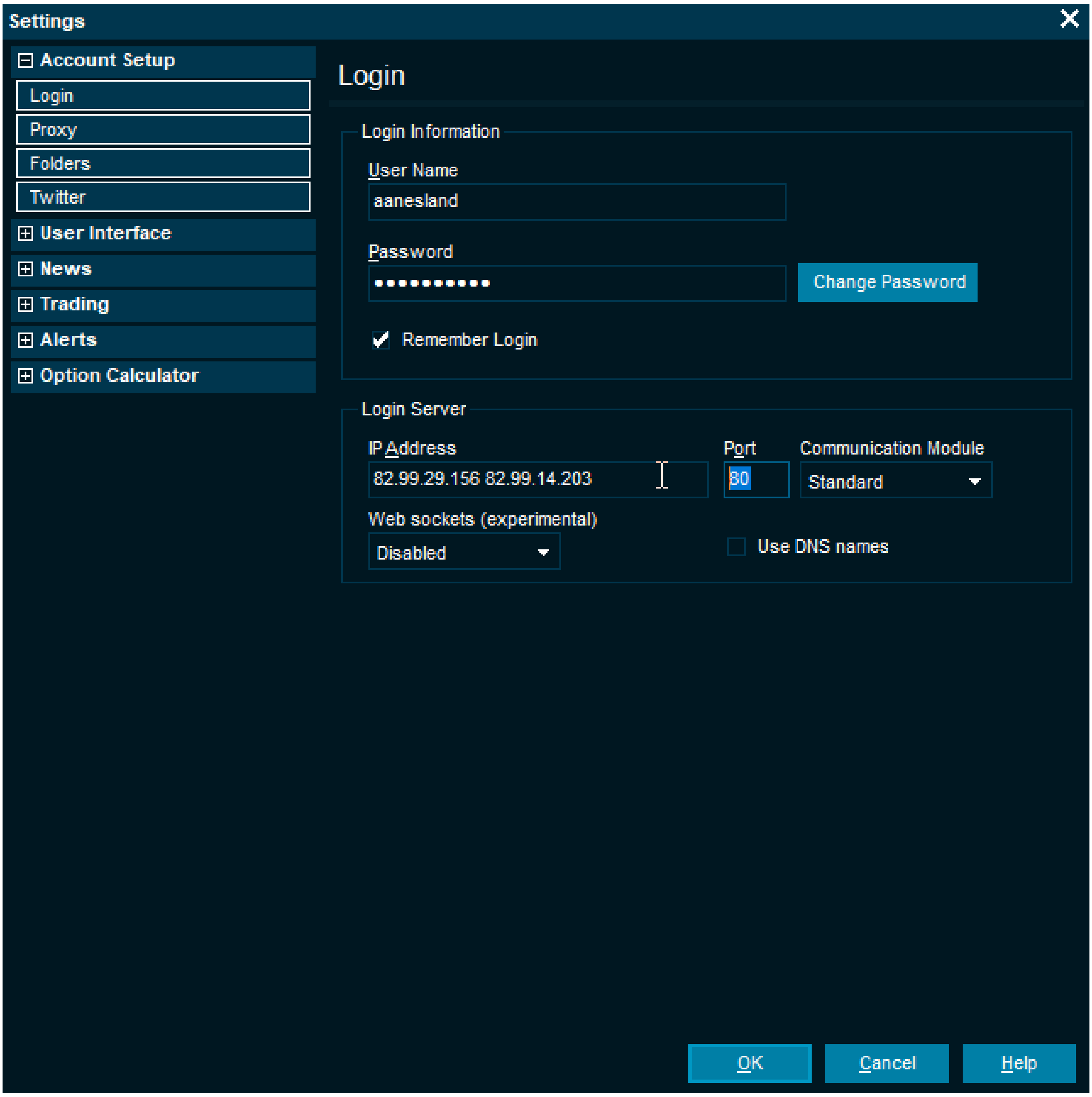
The "Account Setup" dialog consists of 4 subcategories.

4.1.3 Login

In addition to the user name and password from the settings window, you can enter the IP address and port information here.

If the firewall is blocking the access to the Infront Professional Terminal, try to change the port to any of the following below and restart the Infront Professional Terminal:

- 80/tcp
- 443/tcp
- 11111/tcp
- 40000/tcp



4.1.4 Proxy

> ⚠ These settings are for advanced users only. Consult your network administrator if possible.

Element	Description
Automatic Configuration	This is used if your network administrator supplies an automatic configuration script (with proxy information, usually PAC files or similar).
Proxy Settings	Here, you can configure the proxy settings.

Element	Description
Firewall Login	Add your user name and password if you use a local firewall that requires a login for outbound connections.

4.1.5 Folders

Specifies where various data from Infront Professional Terminal should be stored. The folders must be unique and the defaults are usually sufficient for most users.

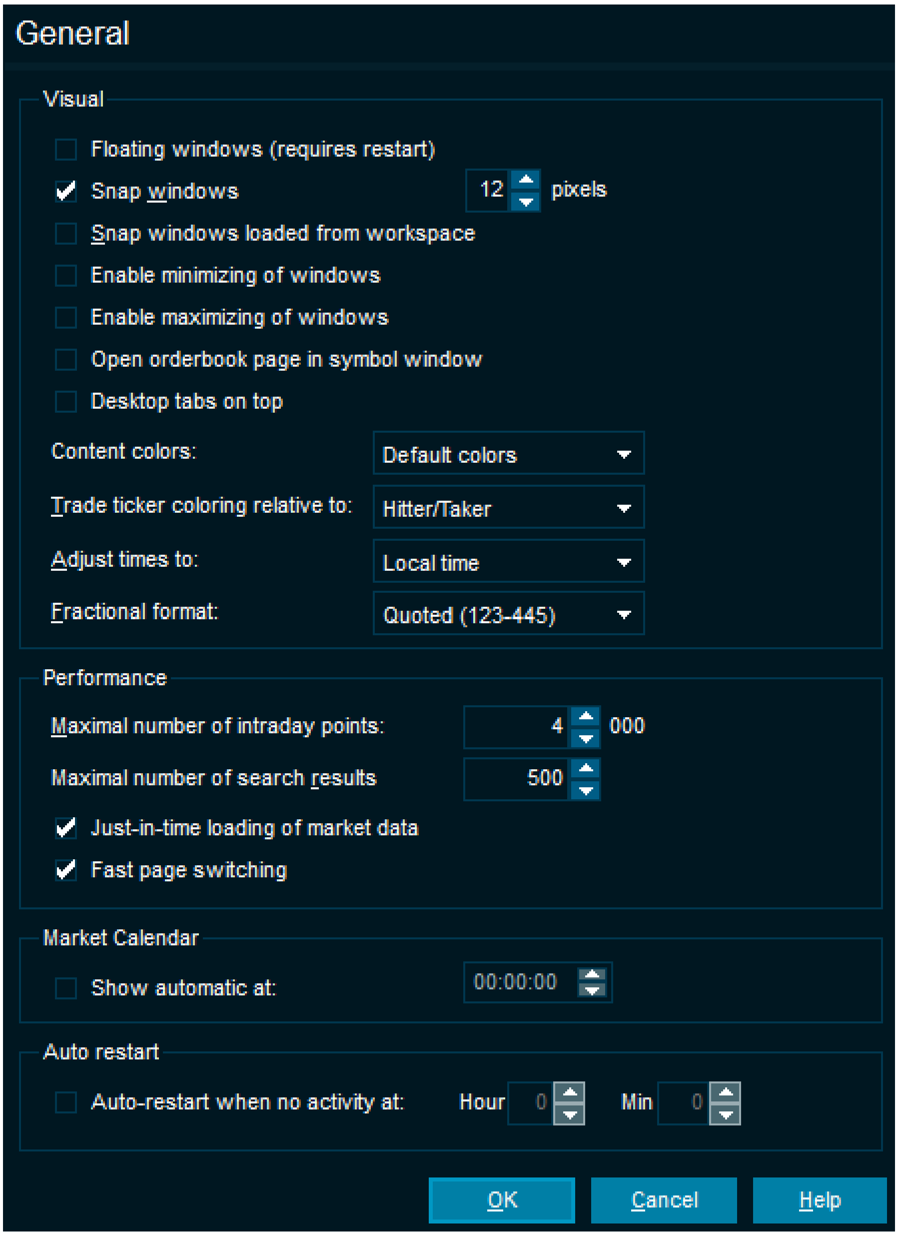
4.1.6 Web Proxy

Used for Twitter login details and Twitter proxy settings.

4.2 User interface

The user interface setup consists of 9 subcategories.

4.2.1 General

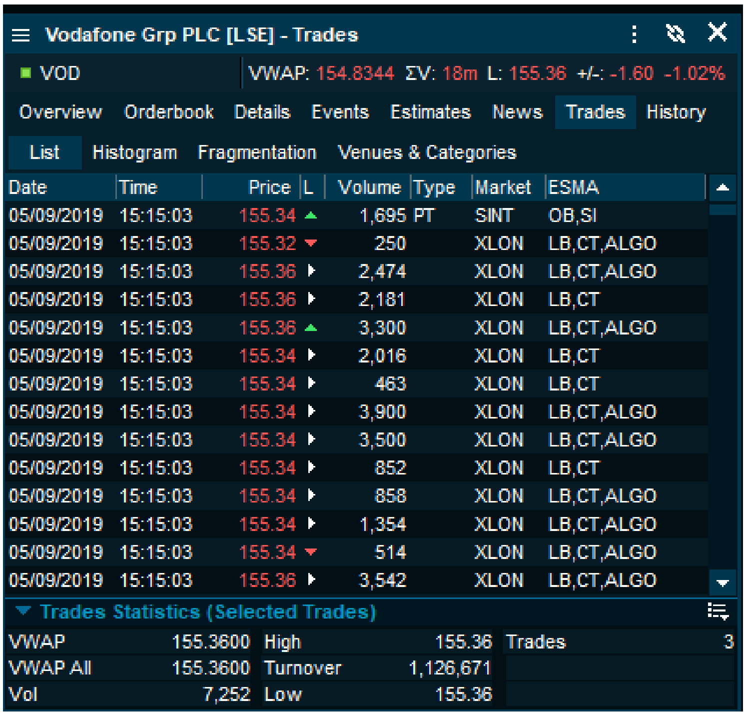


Here, you can configure the following elements:

Element	Description
Visual	
Floating windows	Enables the floating mode when selected.
Snap windows	Every nth pixels: a feature to make it easier to place windows next to each other correctly.

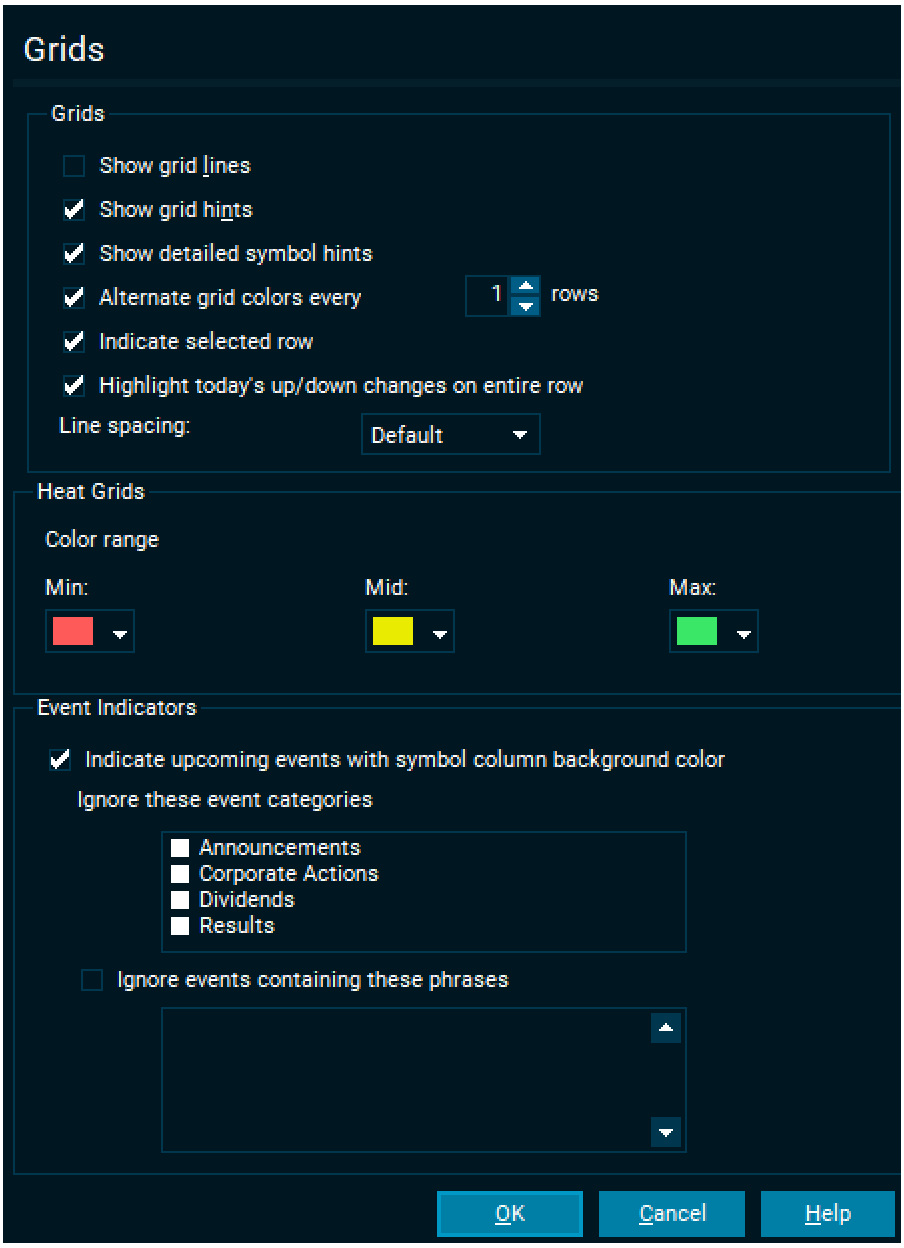
<table>
<tr><td>Snap windows loaded from workspace</td><td>Same function as above, but it will snap all the windows together when you load a workspace.</td></tr>
<tr><td>Enable minimizing of windows</td><td>Adds the "Minimize" icon in all windows.</td></tr>
<tr><td>Open orderbook page in symbol window</td><td>Opens the "Orderbook" (OB) tab by default instead of the "Overview" tab when opening an "Overview" window (<CTRL>+<Q>).</td></tr>
<tr><td>Content colors</td><td>Allows you to change between color themes.</td></tr>
<tr><td>Trade ticker coloring relative to</td><td>Changes the trades list (time and sales) colors for up and down.

The trades below are colored red because the prices are lower than the previous close in the example below.


</td></tr>
<tr><td>Adjust time to</td><td>Local / Feed / GMT / Unadjusted</td></tr>
<tr><td colspan="2">Performance</td></tr>
<tr><td>Maximal number of intraday points</td><td>The maximum number of prices or last values to be displayed in a chart.</td></tr>
<tr><td>Maximal number of search results</td><td>Limits the number of search results.</td></tr>
</table>

Just-in-time loading of market data	If you have several desktops open, the terminal will not load market data on them until you view them.
Market Calendar	
Show automatic at	Set a time at which you want the "Market Calendar" window to open.
Auto-restart when no activity at	If there is no user activity (no mouse or keyboard activity detected in the last 4 minutes), then the Infront Professional Terminal automatically restarts, saving and restoring the current workspace at the time you specified, for example at 20:00 (8 P.M.).

4.2.2 Grids

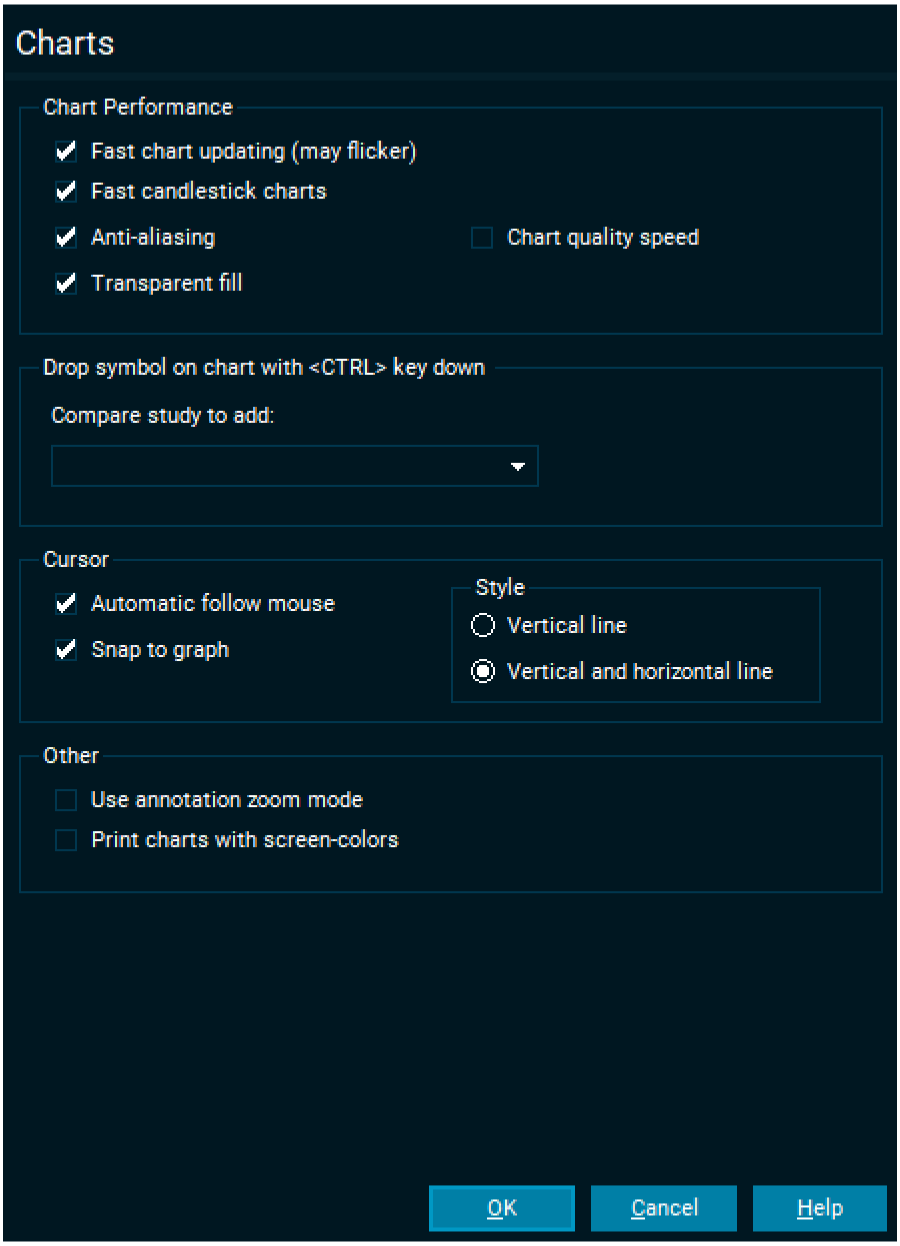


Select the relevant checkboxes to display grid lines, grid hints and alternate grid colors on rows or mark selected row.

Element	Description
Grids	
Show grid lines	Displays grid lines in tables to clearly separate rows and columns.
Show grid hints	Shows hints with more information for certain data fields you hover over.

Element	Description
Grids	
Show detailed symbol hints	Shows an informative hint with a chart for the symbol you hover over.
Alternate grid colors every *x* rows	Applies different colors to alternate rows.
Indicate selected row	Marks the selected row.
Highlight today's up/down on entire row	Sets the font color for the entire row to the corresponding up/down color and not just the +/- columns which is the default.
Line spacing	Refers to the space taken by each row in a market window, news window, custom lists and orderbooks. You can increase the spacing to improve readability or decrease to save space.

4.2.3 Charts



Element	Description
Chart performance	
Fast chart updating	When there are too many data points in the chart relative to the space available, some periods in the chart may be drawn on top of neighboring periods. This setting provides a performance improvement when such is the case.
Fast candlestick charts	Adjusts the resolution of the chart (1, 10, 15 minutes intervals) so that all the data points for the time period selected can fit in the chart window. Turn on for a performance improvement.

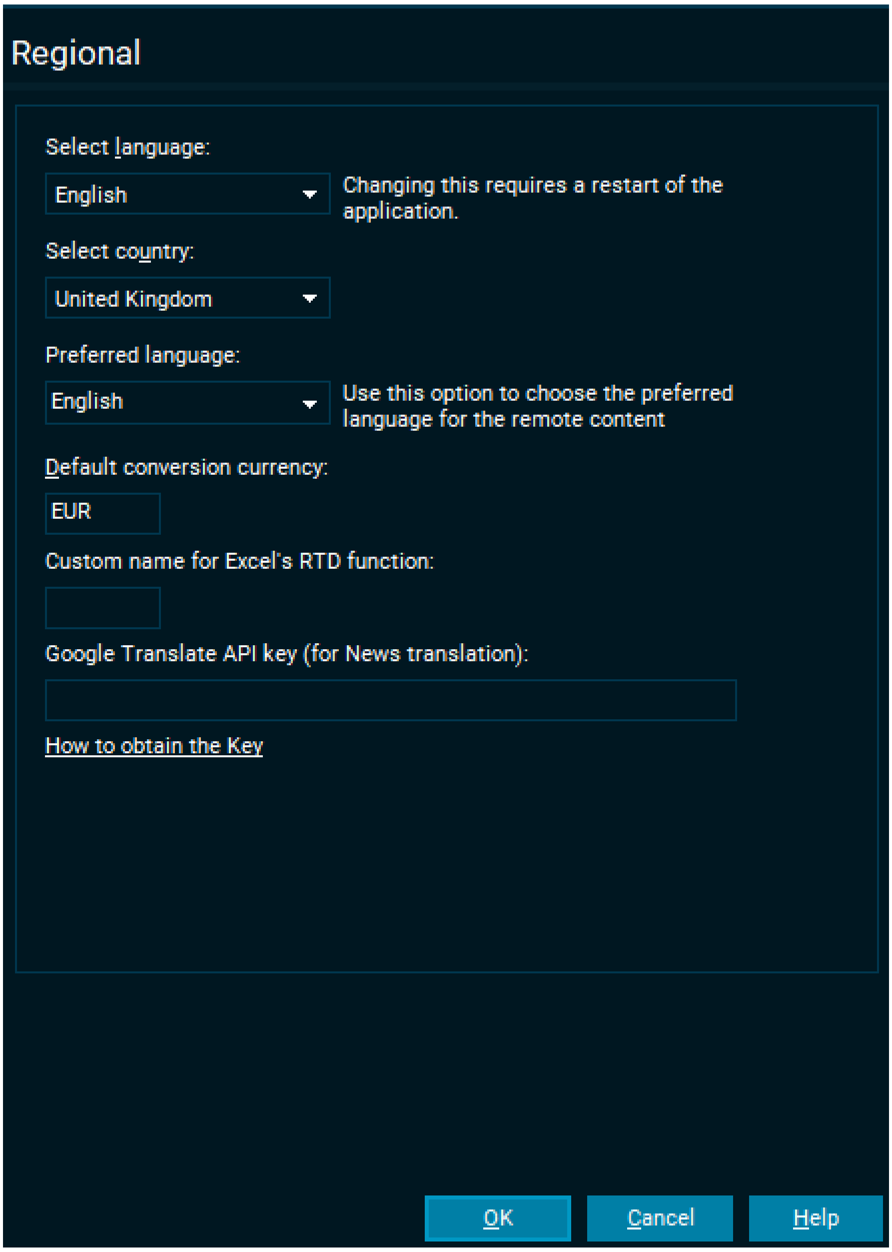
Anti-aliasing	Smoothing of jagged appearance of charts. Turn off for a performance improvement.
Transparent fill	Area charts are partially transparent. Turn off for a performance improvement.
Drop symbol on chart with <CTRL> key down	This setting controls what type of compare chart you get if you hold down the <CTRL> key when dragging and dropping a symbol into the chart.
Cursor	
Automatic follow mouse	When moving your mouse across the chart, a visual grid cursor will update the date/ time and price on the x and y axis.
Snap to graph	Combined with "automatic follow mouse", switch this setting off to only see a visual grid cursor for date/time on the x axis. Example below with this feature switched off.
Style	Choose between a "vertical and horizontal" cursor (crosshair) or only a "vertical" cursor.
Other	
Use annotation zoom	If switched on, it is no longer necessary to hold down <CTRL> to draw annotations in charts.
Print charts with screen-colors	By default, the charts will optimize ink usage by printing with a white background. Switch this setting off if you wish to print with the same colors as the screen is showing.

4.2.4 Market Data

Element	Description
Consolidation	
Use consolidated markets (where available)	Automatically switches on consolidated data for users with access to alternative marketplaces such as MTFs.
Support separate unconsolidated markets (where available)	Instead of consolidating market data to one market place, switching this option on will give access to the unconsolidated feeds separately.
Market	

Calculate yesterday's +/- values	Show yesterday's +/- change while the market is closed.
Calculate pre-market +/- values	When pre-trade Bid and Ask values match, this option calculates change (+/- and +/-%) values in the pre-market period when there were no trades (and no last price). This allows you to see where the market will open for each symbol that has pre-market orderbooks.
Separate tab for Indices in Market windows	Move all indices from the "All Quotes" tab to a separate tab called "Indices".
Auto-save quote list per feed	Automatically save the list you build up on the "List" tab in a market window.
Auto-save named Custom Lists	If you have opened a previously saved custom list, any changes you make to it will automatically be saved.
Highlight when Last equals High or Low	The last column in a market window or custom list will the change background color if the last price is the same as today's high or low.
Put / Call	
Enable multiple selection of underlyings	Allows the user to select more than one underlying instrument in the put/call tab for derivatives markets.
Put/call order	Determine whether derivatives markets should be shown with calls on the left and puts on the right, or opposite.
Put/Call columns logic	Normal mode shows default columns for derivatives market. "Include subtype" will add the subtype column.

4.2.5 Regional



Select language and country

Infront Professional Terminal will try to detect an appropriate default country and language for your Infront Professional Terminal. If you want to change this, you can select a preferred default country and language.

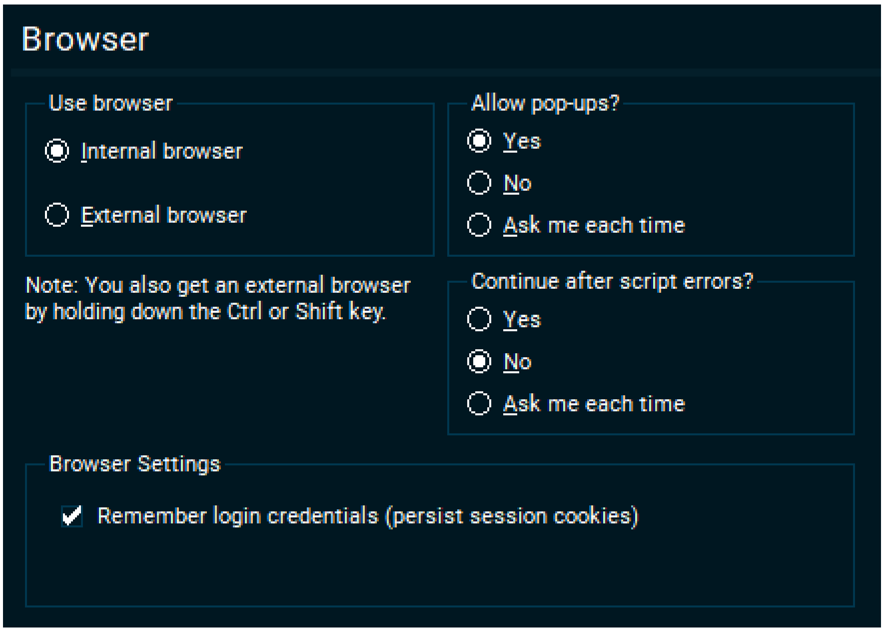
> Note that the list of countries only includes countries from which you have access to streaming quotes.

The selected country is shown by default when opening some desktops in desktop builder. It also determines what country is shown at the top of the "Select Market" dialog and the "Select News" dialog.

Default conversion currency

The default currency used by the trading window as a target currency for conversion of your portfolio values.

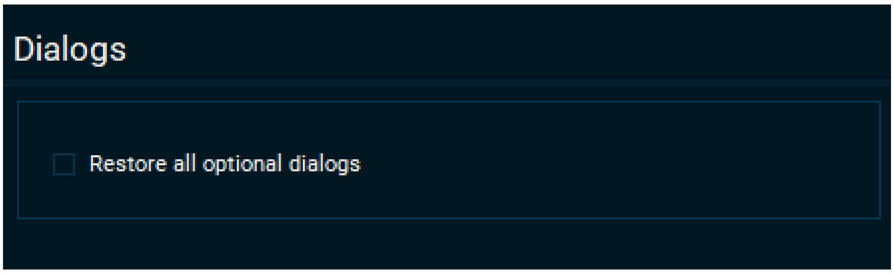
4.2.6 Browser



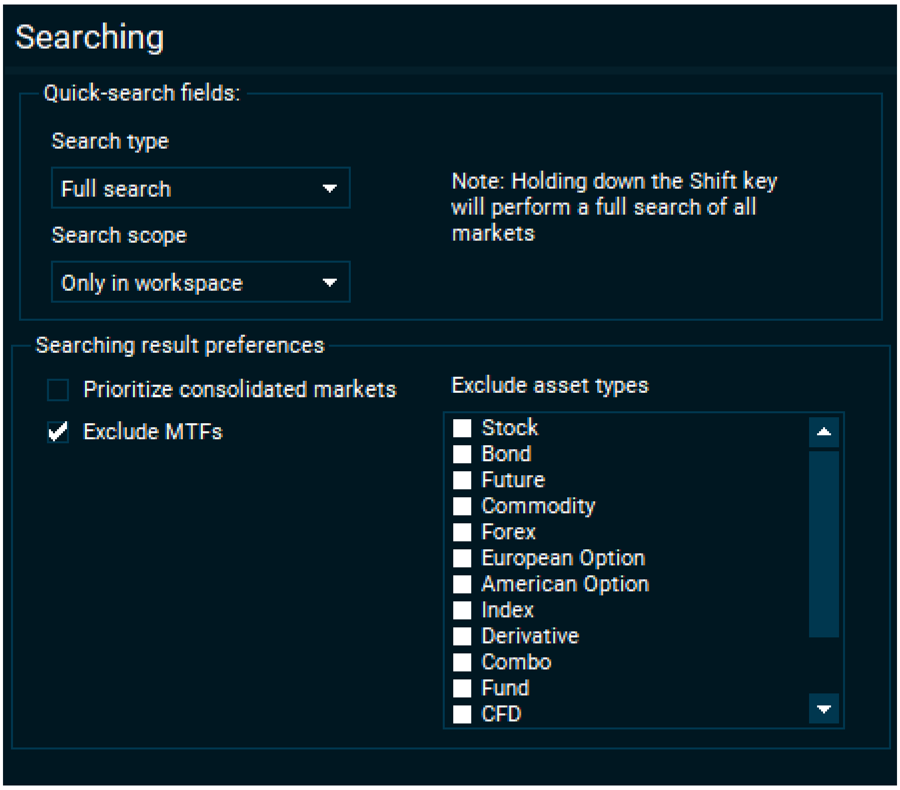
Choose internal or external browser and decide if you want to allow pop-ups or not.

4.2.7 Dialogs

Select the checkbox to restore all warnings and other information dialogs where you have selected "Don't show this message again."



4.2.8 Searching



Quick-search fields

Element	Description
Quick-search fields	
Search type	Select between "Full search" (ticker and instrument name) and "Ticker" when using quick search inside market windows, custom lists, charts, orderbooks and more.
Search scope	Select whether the quick-search should search in: • All markets you have access to (slowest) • The same market (as the instrument you are looking at, fast) • Only in workspace (Infront Professional Terminal checks what is currently open in your workspace and searches through the markets, fast)
Searching result preferences	
Prioritize consolidated markets	Some users have static consolidated markets from the server. When this is available, the search results can be prioritized to display results from these markets first.
Exclude MTFs	Select this checkbox to avoid seeing search results from MTFs such as BATS and Chi-X.

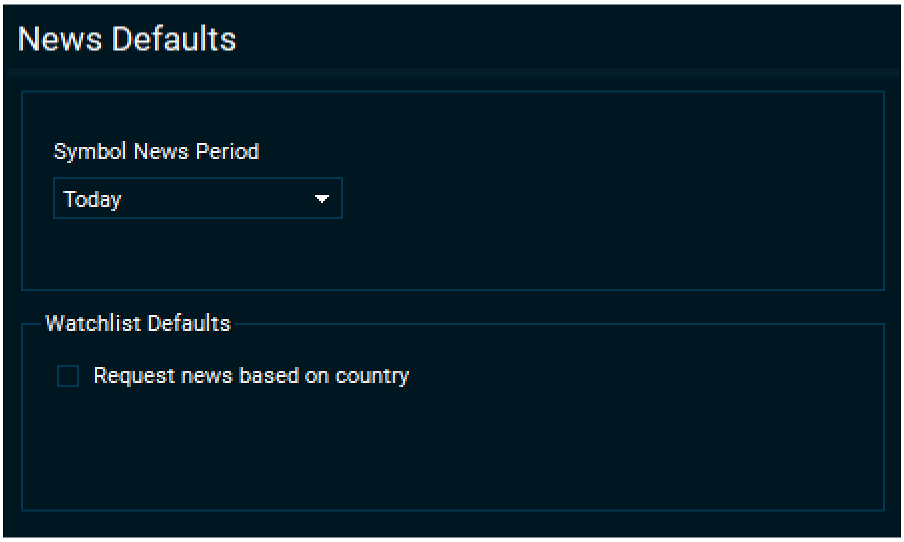
Exclude asset types	Removing asset types you never search for can help display results most relevant to you.

4.2.9 Signals

Element	Description
Enable Signals	For more information, see Signals.
Show "While away report"	Infront Professional Terminal may detect interesting movements and events that occurred while you were away from your computer.
Show Signals Polar hints	When holding your mouse over a given signal, the terminal will try to display a polar chart.

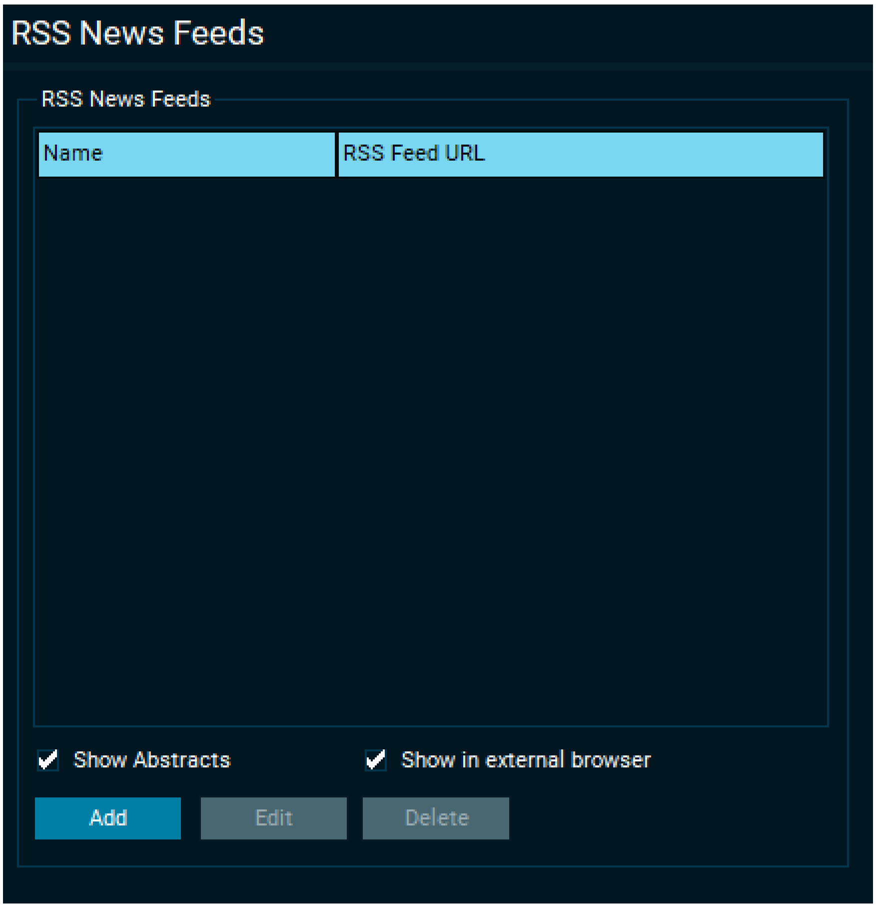
4.3 News

4.3.1 News Defaults



Element	Description
Symbol News Period	Set the relevant period for symbol news in the "Symbol" window.

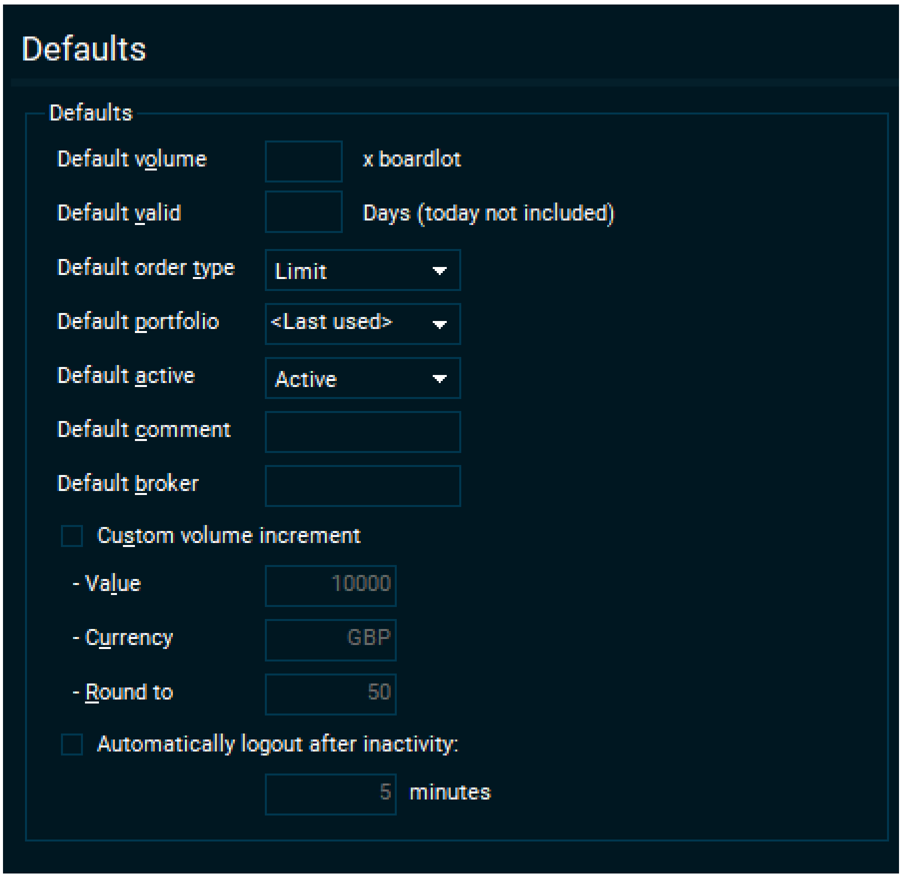
4.3.2 RSS News Feeds



Add RSS news feeds to the Infront Professional Terminal and see them in a "News" window. Right-click in the news window, and then select "Sources". Then find the "RSS News Feeds" category and select your news feeds.

4.4 Trading settings

4.4.1 Defaults



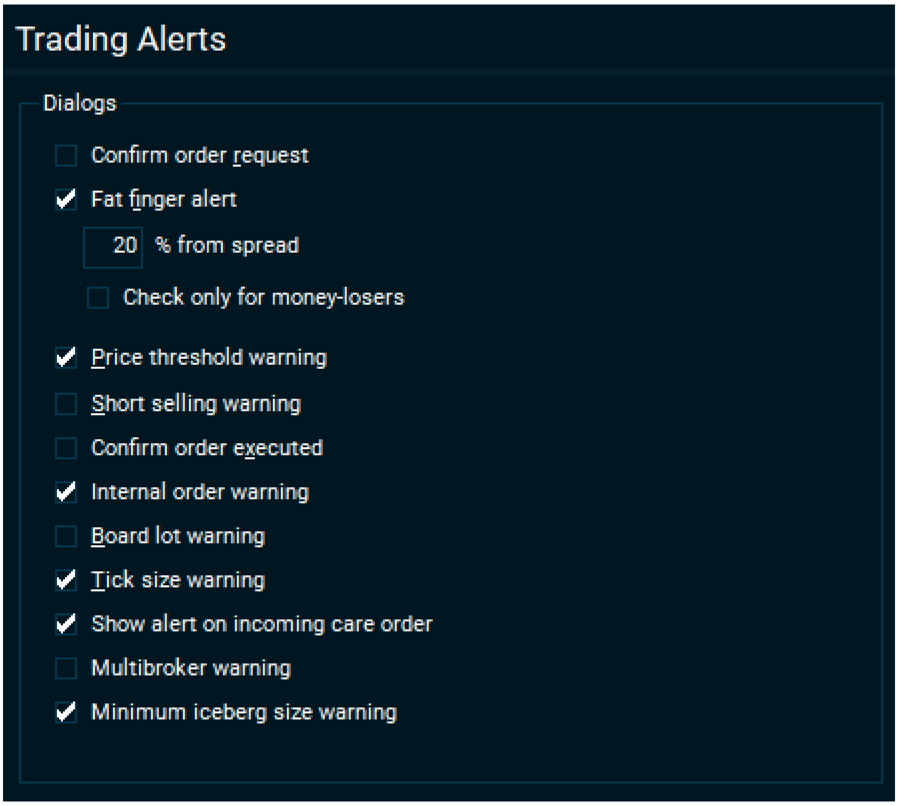
Element	Description
Default volume	Set the default board lots you wish to see in the "Order Entry" window. (A board lot is a standardized number of shares defined by a trading venue as a trading unit).
Default valid	The number of days an order should be valid for.
Default order type	When opening an "Order entry" window, this setting allows you to specify the default order type.
Default portfolio	Useful if you have access to more than one portfolio.
Default active	Orders can be sent as active or inactive to your trading service.
Default comment	Some trading services allow for sending comments. Use the "Default comment" field if you want to include information in a comment by default.

Element	Description
Default broker	Select your preferred broker.
Custom volume increment	The volume field of an "Order Entry" window can be made to increase or decrease by a certain amount when clicking on the up and down arrows or using the up and down arrows on your keyboard.

4.4.2 Limits

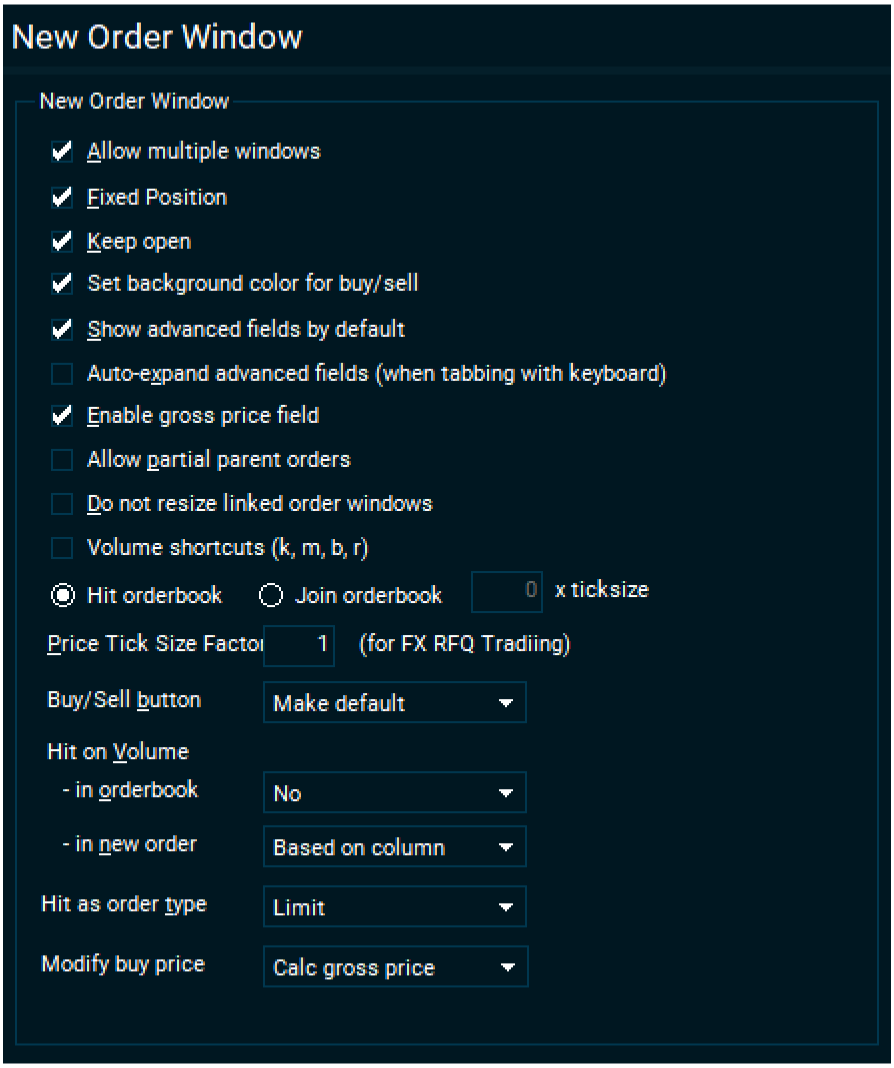
Element	Description
Limit per order	Set the currency value per order as a limit. If you exceed the limit per order, the gross price field will highlight in red and you will receive a warning.
Limit per day	As with the limit per order, you can also specify a currency value limit per day. You will also receive a warning.
Limits currency	Set the currency of the limits.

4.4.3 Trading Alerts



Element	Description
Confirm order request	If this checkbox is selected, you will be asked to confirm before the order is placed.
Fat finger alert	Specify how far away from the current bid/ask spread the price you enter should be before it triggers a warning. This is useful to safeguard against typing in extra numbers by accident. For example , the user my have entered 2000 instead of 200 as the price.
Short selling warning	Checks the volume of long positions in your portfolio for an instrument you are selling and warns you if you are selling more than you own.
Confirm order executed	Get a confirmation when the trading service confirms your order as executed.
Tick size warning	Warns you when the price you enter violates tick size rules of the trading venue.
Show alert on incoming care order	Get an alert if a care order was received from the trading service.

4.4.4 New Order Window



Element	Description
Allow multiple windows	By default, only one is shown in the Infront Professional Terminal.
Keep open	When an order was placed, the default is to close the new "Order" window. Use this setting to keep the new order window open.
Set background color for buy/sell	When placing a buy or sell order via the right-click menu or via keyboard shortcuts, the background color of the new order window will be colored green for buy orders and red for sell orders.
Shows advanced fields	When opening a new order window, defines whether the advanced fields should be shown immediately or hidden until you click the "Adv" button.

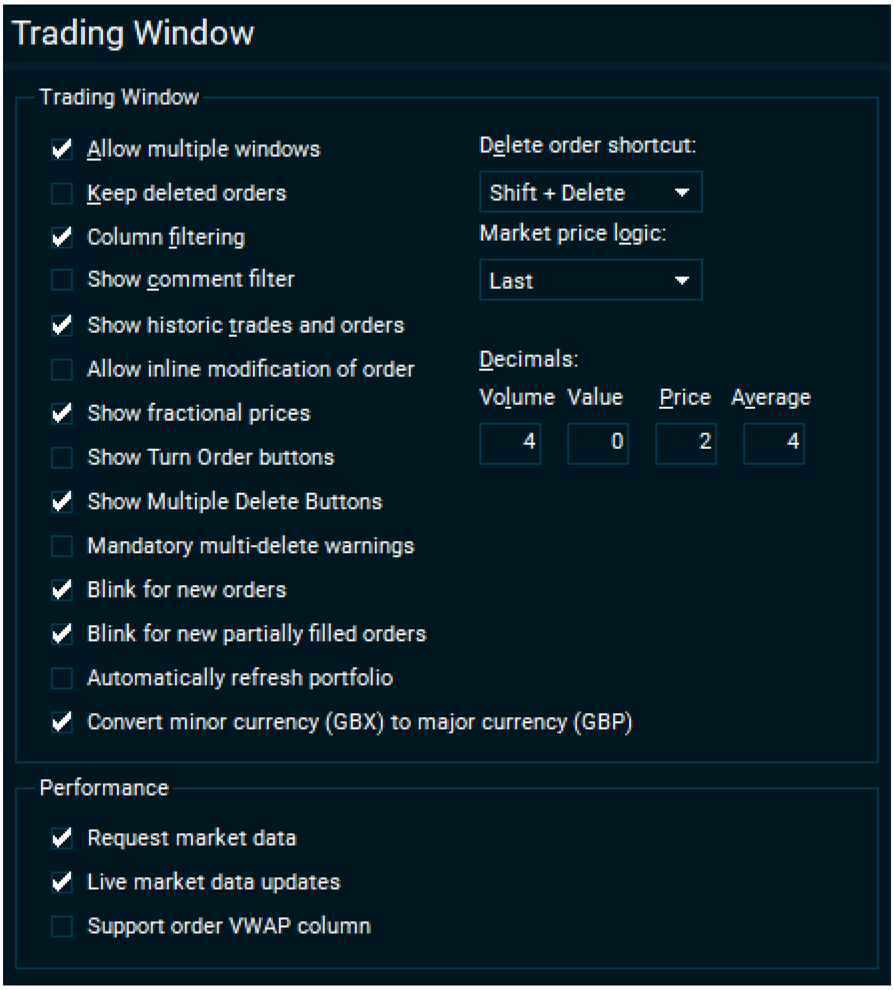
<table>
<tr><th>Element</th><th>Description</th></tr>
<tr><td>Auto-expand advanced fields</td><td>If the "Shows advanced fields" checkbox is cleared, tabbing with your keyboard through the new order window will make the advanced fields show up automatically after gross price.</td></tr>
<tr><td>Enable gross price field</td><td>The gross price field is displayed in an order entry window. This option switches on the ability to type in your own gross price. If you have also entered a price, then the closest volume corresponding to the gross price will be calculated for you. In the example below, a price of 347 and gross price of 100,000 was entered. The terminal then calculated a volume of 288 automatically.</td></tr>
<tr><td>Do not resize linked order windows</td><td>In a compact workspace, it may be desirable to not resize the new order window when changing instruments.</td></tr>
<tr><td>Hit orderbook, Join orderbook</td><td>When opening an new order window buy clicking the "BUY" button (or "SELL" button):
"Hit orderbook" will place the price at the best ask price (best bid price for SELL orders)
"Join orderbook" will place the price as the best bid price (best ask price for SELL orders)</td></tr>
<tr><td>Price Tick Size Factor</td><td>(Available for FX RFQ trading only.) When increasing or decreasing the price of a new order with the up and down arrows, this will multiply by a factor of X with the tick size rules.

Example: If the factor is set to 3, and the tick size is 0.0001, then clicking the up arrow on the price field will increase the price by 0.0003.</td></tr>
<tr><td>Buy/Sell button</td><td>When opening a new order window by selecting BUY or SELL from a right click menu or using keyboard shortcuts. This setting defines the behaviour of the BUY and SELL buttons.
"Normal": Both "BUY" and "SELL" buttons show up and function as normal.
"Make default": The "BUY" or "SELL" button (depending on what you choose) will be highlighted and pressing <ENTER> on your keyboard will cause the order to be placed.
"Disable other": Will show you but not allow you to click on the SELL button if you have chosen to BUY from the right-click menu or keyboard shortcuts. Or it will disable the "BUY" button if you have chosen to sell.
"Hide other": If you have chosen "BUY" from the right-click menu or keyboard shortcuts, then the SELL button will be hidden. Or the the "BUY" button will be hidden if you have chosen to sell.</td></tr>
</table>

Element	Description
Hit on volume	• In orderbook • In new order

4.4.5 Trading Window

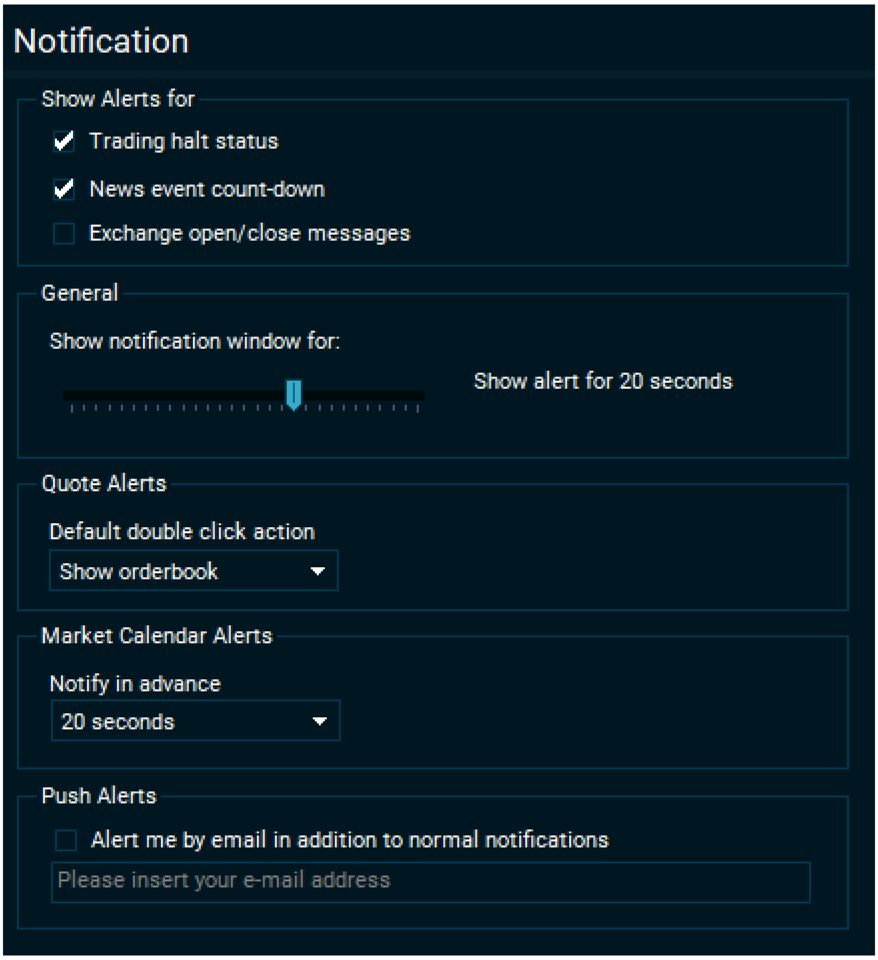
The "Trading Window" is where you can see all orders, trades and your portfolio positions.



Element	Description
Trading Window	
Allow multiple windows	The default is to only show one.
Keep deleted orders	If selected, deleted orders will also be shown on the "Orders" tab.

Column filtering	Allows the user to filter orders based on various criteria. Below is an example where it is possible to choose to only show portfolio positions in a particular currency.
Allow inline modification of order	Allows the user to edit an order's price or volume by clicking in the field ("Orders" tab) without having to open an order window.
Show fractional prices	For some markets, the convention is to use fractions instead of decimals.
Show Turn Order buttons	For active orders, this feature allows you to change a buy order to a market sell order (turns sell orders to market buy orders). These buttons show up on the "Orders" tab.
Show Multiple Delete Buttons	If this feature is turned off, then only one "Delete" button is shown. Select the order and delete it. If it is turned on, three extra options are available: "Delete Buy", "Delete Sell", "Delete All".
Blink for new orders	New orders placed will blink on the "Orders" tab.
Blink for new partially filled orders	Partially filled orders placed will blink on the "Orders" tab.
Automatically refresh portfolio	When an order is placed or executed, check for updates to the portfolio.
Performance	
Request market data	Infront Professional Terminal will request the market data even if the user has not opened the market in their workspace. Turn this off for a small performance boost if you have a very large portfolio.
Live market data	Enable live market data updates.
Support order VWAP column	Show the VWAP column.

4.5 Alerts



Element	Description
Show Alerts for	
Trading halt status	When trading is halted by an exchange.
News event count-down	Some news feeds support time-based releases.
Exchange open/close messages	When an exchange is opening or closing.
General	
Show notification window for	The amount of time an alert should be visible for.
Quote alerts	
Default double click action	Defines what should happen when double-clicking a quote (price) alert.

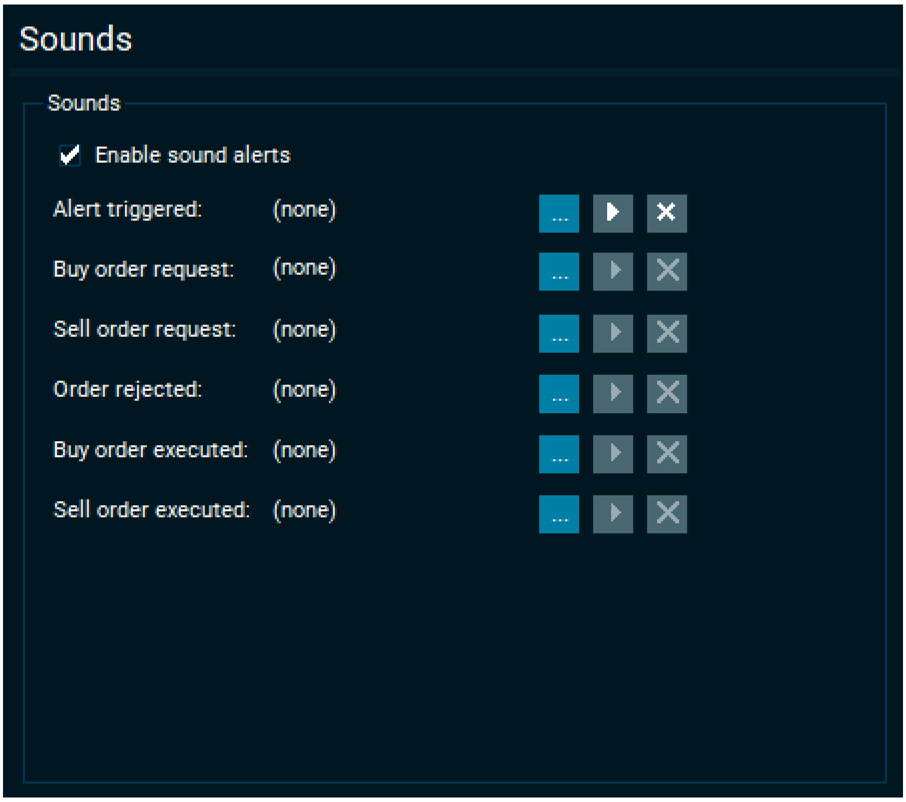
Market calendar alerts	
Notify in advance	When setting an alert for calendar events, Infront Professional Terminal can warn you in advance.
Push alerts	
Alert me by email in addition to normal notifications	When an alert is triggered by activity in the markets, you can receive the notifications by email (watchlist and quote alerts only).

4.5.1 Trading alerts

See Trading Settings.

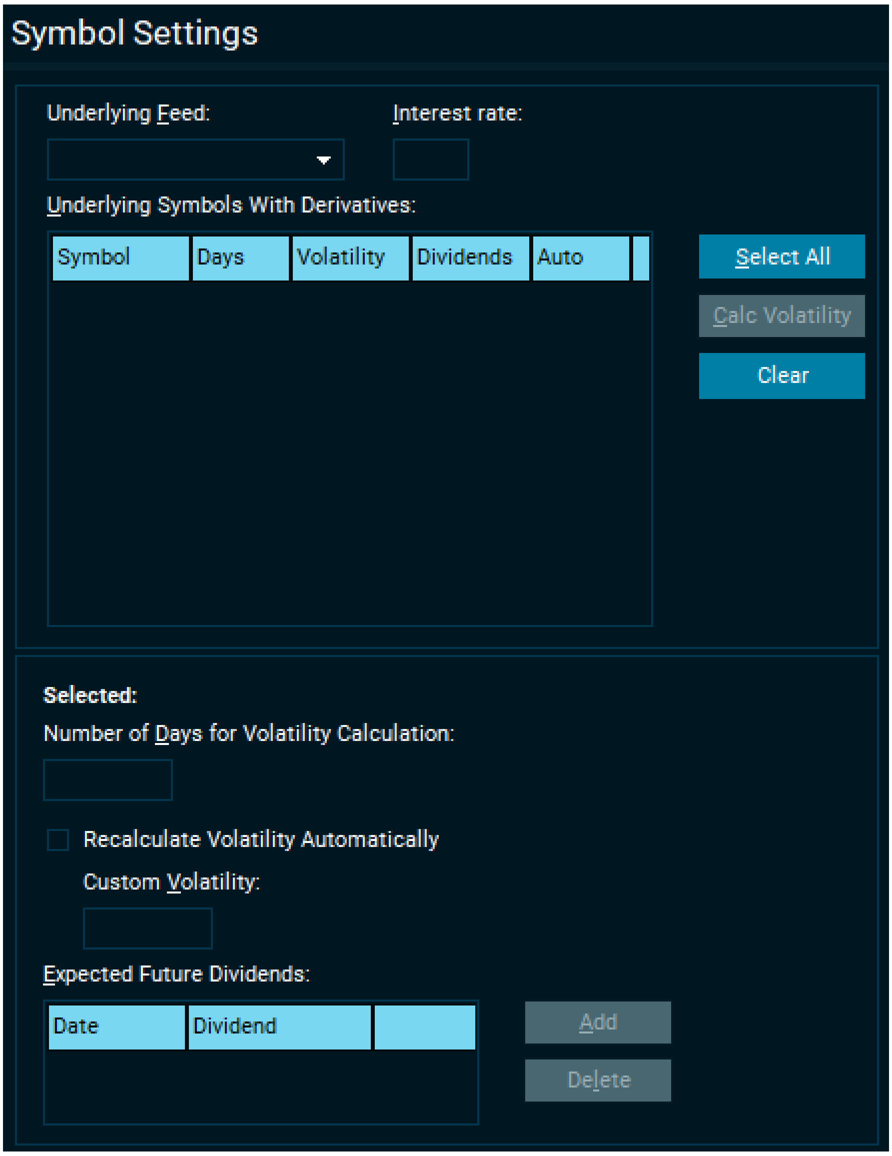
4.5.2 Sounds

Music, sound clips or any other type of audible alert can be used to notify you when trading related events have taken place. Wave (*.wav) files are supported.



4.6 Option Calculator

4.6.1 Symbol Settings



Element	Description
Underlying feed	The settings will apply to all underlying symbols for the options feed you select.
Interest rate	Many calculations require an interest rate in order to calculate the values. Specify an interest rate here you wish to use.
Selected	Once you have selected some underlying symbols, you can set custom volatility periods, and have them recalculate automatically. Alternatively, set a custom value for volatility.

Volatility

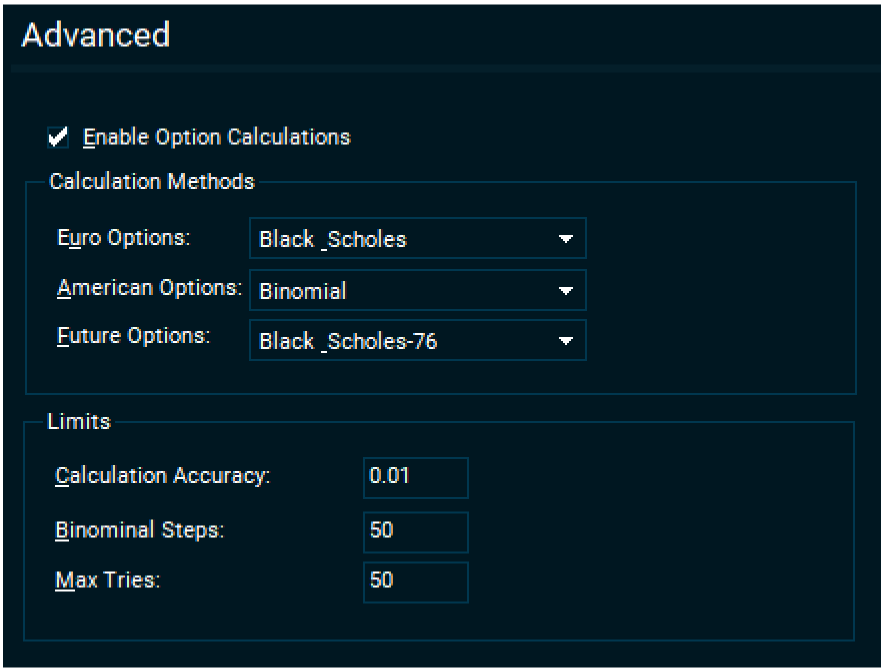
Volatility measures how much the underlying instrument is expected to change over time. This value is needed by the option calculations and must be set manually in this dialog.

Calculating the historical volatilities may take some time.

Element	Definition
Define Feed and symbols	Select the feed and the underlying instrument. The list of feeds will only include the active underlying feeds of the currently loaded option feeds.
Define Interest rate	Determines the basic risk-free rate for the market as a whole. This default value is 5%.
Set Volatility	Select symbol(s) in the list and click the "Set Volatility" button to change the volatility value. This requires that you have determined a preferred volatility value for each underlying symbol. You can alternatively have the server calculate a historical volatility. The server calculates the actual volatility of the underlying instrument for the last number of days. 20 days is used as default, but you can override this by selecting the symbol(s) and clicking the "Set Days" button. When you are ready, select the symbol(s) and click the "Calc Volatility" button. The "Select All" button easily lets you select all the underlying symbols in the list. Calculating the historical volatilities may take some time. You may close the "Option Calculation Setup" dialog, and the volatilities will still be calculated and updated correctly as they are received from the server. You will get a notification about this, but this message can be suppressed in the future by checking the "Don't show this message again" checkbox.
Dividends	If the company of the underlying instrument is planning to pay dividends in the future (but before the option expires), this will influence the option price. To ensure that the calculations are adjusted accordingly, enter the dividend date and amount here. Each underlying instrument may have any number of future dividends registered. Only dividends inside the expire period will be considered during the calculations. Use the "Add" button to add new dividends. Use the "Delete" button to remove a dividend.

Element	Definition
Calculation Methods	The option calculation engine supports three different option models. Each method is used for different kinds of options as indicated by the default values in the dialog.
Black & Scholes	This is option-pricing model was first introduced by Fischer Black and Myron Scholes in 1973. It is used for European options (such as the OBX options on Oslo Options). European options cannot be exercised before the expire date.
Binomial	John Cox, Stephen Ross and Mark Rubinstein introduced the Binomial Option-pricing Model in 1979. It is used for American options (such as the NHY options on Oslo Options). American options can be exercised any time up to and including the expire date.
Black & Scholes-76	This option-pricing model is a variation of the standard Black & Scholes model, and was presented by Fischer Black in 1976. This model is used when the underlying instrument is a futures contract.
Limits	The option calculation engine will produce results of a specific accuracy. The minimum acceptable accuracy can be specified here. Also, the engine relies on iterating through a number of calculations, increasingly finding a more accurate answer. The maximum number of iterations can also be set here.

4.7 Advanced



The "Advanced" tab contains instructions on the requirements of running the option calculations. You can clear the "Enable Option Calculations" checkbox on the "Advanced" tab if you don't want to have these calculations executed.

Element	Description
Enable Option Calculations	If enabled, Infront Professional Terminal will calculate "greeks" using the specified pricing methods.
Limits	Settings for the various option pricing methods.

4.8 Configuration settings

4.8.1 [IAS] Section - Login details

The "IAS" section in the **ontrade.ini** file contains configuration details used to connect to the IAS (Infront Access Server) and login to the system. Some of the settings are related to handle connections through proxy servers.

[IAS]

UserName=<username>

Password="<shuffled password>"

Address=login2.goinfront.com

Port=443

OwnerProviderID=123

ProxyAddress=

ProxyPort=80

ProxyUserName=

ProxyPassword=

ProxyID=0

ProxyType=1

UsePACFile=0

PACFileAddress=

These settings can be edited by the user by opening the " ⁝ " menu on the top right > "Tools" > "Advanced Settings" > "Login" in the "Account Setup" category page.

4.8.2 [FILES] Section - Folder paths

The "FILES" section in the **ontrade.ini** file contains information about what folders to use for different storage files.

[FILES]

Cache=C:\Users\Username\Documents\OnTrade\Cache

Workspace=C:\Users\Username\Documents\OnTrade\Workspace

Setup=C:\Users\Username\Documents\OnTrade\Setup

Portfolio=C:\Users\Username\Documents\OnTrade\Portfolio

MarketPages=C:\Users\Username\Documents\OnTrade\MarketPages

SharedScreens=

These settings can be edited by the user by opening the " ⁝ " menu on the top right > "Tools" > "Advanced Settings" > "Folders" in the "Account Setup" category page.

4.8.3 Workspace folder

The "Workspace" folder contains the workspace files that the user has saved ("File" > "Save Workspace"). The default workspace is named "**Default.wksp**". Each workspace is stored in XML format in a file with ".wksp" as extension.

4.8.4 Setup folder

The "Setup" folder contains files with various global settings and named symbol files.

The following table summarises what content is stored in the Setup folder:

Element	Description
***.bol**	Basket trading order list
***.BrokersGrid.col**	Saved BrokerStats column layout files
<feednr>.col	Default columns for market windows (per feed)
***.MarketGrids.col**	Saved market window column layout files
ChartDefaults.ini	Defaults for new chart windows (Chart Setup)
GraphDefaults.ini	Default for each study (Study properties)
lines_<feednr>_<ticker>_*.ini	Old 4.4 per symbol chart trendlines
***.tof**	Per symbol chart annotations in new 4.5 XML format
colors.dat	Global per window type colors (Edit color)
***.filter**	Saved news window filter in XML format
***.OrdersView.gv**	Saved column layout from "Trading" window
IgnoreChat.lst	List of chat nicks the user ignores

Element	Description
<feednr>.ontrademylist	Market window symbol list (per feed, List page) in XML format
***.sl**	Named symbol list in XML format
ChatAlerts.str	Chat alerts
OrderEntry<providerid>_<serviceid>_<YYYYMonDD>.log	Log of trading activity (per provider and date)

4.8.5 Portfolio folder

The "Portfolio" folder contains files with information for the standalone "Portfolio" window (not the "Portfolio" page that is part of the "Trading" window).

The following table summarises what content is stored in the "Portfolio" folder:

Element	Description
***.gv**	Column layout for Portfolio window (per named portfolio)
***.pse**	Configuration settings for portfolio (Portfolio Setup)
***-Trades.TR2**	Cache of last Trading trades (per trading login)
***.trd**	Portfolio contents, with all assets

4.8.6 Cache folder

The "Cache" folder contains temporary cached information. Caching information in these files can reduce the time and bandwidth used to download large, but slow moving information such as history, instrument static information and so on. You can delete the contents of the cache with the "Tools" > "Delete Cache" command.

The following table shows what is stored in the "Cache" folder.

Name	Description
<feed><ticker>*.HST	Historical prices (per feed/symbol)
<feednr>_<providerid>.SYM	Static symbol information for full feeds (per feed)

4.8.7 MarketPages folder

The "MarketPages" folder contains files to support the "Market Pages" functionality.

The following table shows what content is stored in the "MarketPages" folder.

Name	Description
marketpages.ini	List of all Market Pages files that should be available for everyone
marketpages_<providerid>.ini	List of all Market Pages files that should be available for provider's users
***.html**	The HTML contents of a single Market Page
***.gif**	Graphic logos, images etc referenced from HTML files

4.8.8 [OptionCalc] Section - Option Calculator settings

The "OptionCalc" section in the **ontrade.ini** file contains configuration details used during option calculations.

[OptionCalc]

Enabled=0

EuroOptionMethod=0

AmericanOptionMethod=2

FutureOptionMethod=1

Accuracy=0.01

BinomialSteps=50

MaxTries=50

In addition the "Option Calculator" module uses settings stored per feed and underlying, like this:

[18177]

IntRate=0.061

[18177_DNBNOR]

Volatility=0.7429

VolatilityDays=20

[18177_NHY]

Volatility=0.5656

VolatilityDays=20

These settings can be edited in the "Tools" > "Option Calc" dialog.

4.8.9 [Workspace] Section - Last used files

The Workspace section in the **ontrade.ini** file contains a list of the 5 last used workspace files. This information is used to populate the workspace list on the "File" menu and the "Open toolbar" button drop-down.

[Workspace]

File0=C:\Users\Username\Documents\OnTrade\Workspace\Default.wksp

File1=C:\Users\Username\Documents\OnTrade\Workspace\Click1.wksp

File2=C:\Users\Username\Documents\OnTrade\Workspace\DefaultFlatLine.wksp

File3=C:\Users\Username\Documents\OnTrade\Workspace\ModifyNewsTest.wksp

The list of files are updated each time you open a new workspace.

4.8.10 [Portfolio] Section - Last used files

The "Portfolio" section in the **ontrade.ini** file contains a list of the 5 last used portfolio files. This information is used to populate the portfolio list on the " ⋮ " settings menu > "Workspace".

[Portfolio]

File0=C:\Users\Username\Documents\OnTrade\Portfolio\Private.pse

File1=C:\Users\Username\Documents\OnTrade\Portfolio\test2.pse

File2=C:\Users\Username\Documents\OnTrade\Portfolio\test3.pse

The list of files are updated each time you open a new portfolio.

4.8.11 [OrderEntry] Section - Trading settings

The "OrderEntry" section in the **ontrade.ini** file contains configuration details used by the trading module.

[OrderEntry]

LimitPerOrder=0

LimitPerDay=0

DefaultValidDateIndex=0

VolumeDecimals=0

PriceDecimals=2

AvgPriceDecimals=4

DefaultPortfolio=HVTest

DefaultOrderType=otNormal

DefaultPortfolioFrom=dpfSpecific

KeepOrderEntryOpen=True

AllowMultiOrderEntry=True

AllowMultiOrderStatus=True

BuySellButtonUI=bsMakeDefault

OrderbookSummary=True

OrderbookSummary2=False

OrderbookMarketMaker=True

OrderbookAveragePrice=False

OrderbookAccumulatedVolume=False

OrderbookHeadings=True

OrderbookVolumeBars=True

OrderbookFull=True

ShowAdvanced=False

AutoExpandAdvanced=True

AllowValueEdit=True

ShowCommentFilter=False

FixedOrderEntryPosition=False

HitOnVolumeOption=hvNo

HitAsOrderType=otNormal

MarketPriceLogic=mplLast

ColumnFiltering=True

DefaultActiveOrder=True

FatFingerAlert=True

FatFingerPercent=0.1

SetBuySellBgColor=True

ShowHistoricTrades=True

KeepDeletedOrders=True

DefaultComment=

EnableBasketTrading=True

AllowMultiBasketTrading=False

BasketPosition=bpBuy

BasketPriceSource=psAsk

DistributeRounding=brDownBoardLot

DefaultVolumeBoardlots=0

MaxHistTradeDays=7

PlaySoundAlerts=True

SoundBuyOrderPlaced=drip.wav

SoundSellOrderPlaced=drip.wav

SoundRejectedOrder=buzzer2.wav

SoundBuyTradeExecuted=doink.wav

SoundSellTradeExecuted=doink.wav

AllowPartialParentOrders=False

InternalOrderWarning=True

InternalTradeWarning=True

ConditionalSingleClick=True

ConditionalPriceDeltaInTicks=2

ConditionalOrderType=otNormal

SingleClickHints=True

HitOnVolumeOrderEntry=hvNo

DefaultBroker=

SupportOrderVWAP=False

SupportRequestMarketData=False

SupportLiveUpdatesMarketData=True

OrderbookYields=False

OrderbookBlinkOnChange=False

OrderbookHighlightLevelCnt=1

OrderbookSectionSeparator=False

LimitCurrency=SEK

DeleteOrderShortcut=0

BoardLotWarning=True

TickSizeWarning=True

UseVolumeLot=True

VolumeLotValue=10000

VolumeLotCurrency=NOK

VolumeLotRoundTo=100

PriceThresholdWarning=True

These settings can be edited by the user by opening the " ⁝ " menu on the top right > "Tools" > "Advanced Settings" > "Trading".

4.8.12 [MarketPages] Section - Market Pages cache

The "MarketPages" section in the **ontrade.ini** file contains information about automatically downloaded "Market Pages" files.

[MarketPages]

logo_tullettprebon.gif=20070913

tullettprebon_eur_composite.html=20080405

tullettprebon_EONIAOIS_composite.html=20071211

tullettprebon_nok_composite.html=20081105

tullettprebon_sek_composite.html=20081105

4.8.13 [CustomSymbolLinks] Section - Per symbol links

The "CustomSymbolLinks" section in the **ontrade.ini** file can be used to configure web- or application links. These links will be available in the right-click, symbol menu.

[CustomSymbolLinks]

Open Notepad=notepad.exe

Infront.no=http://www.infront.no/

Oslo Stock Exchange,0=http://www.oslobors.no/markedsaktivitet/stockOverview?newt__ticker=*ticker*

The text on the left side of the equals sign will be used as the menu item caption. The right side contains the path and name of the application or the full URL of the web page you want to link to.

By default the links will appear directly in the top-level symbol menu and they will open external browser windows. It is possible to override this by ending the caption with a comma (,) and a numeric value. For instance, using 0 as above the Oslo Stock Exchange link will appear in the Web-links sub-menu and open an internal browser window.

Web links may use field codes surrounded by asterisk (*) to include dynamic information from the selected symbol.

4.8.14 [Clocks] Section - Toolbar clock configuration

The "Clocks" section in the **ontrade.ini** file contains configuration for the different time-zone clocks you can display on the toolbar.

[Clocks]

Clock0TZ=Romance Standard Time

Clock0Cap=Time

Clock0Sec=1

4.8.15 [Settings] Section - Misc. settings

The "Settings" section in the **ontrade.ini** file contains miscellaneous settings.

[Settings]

ROtest=canwrite

HelpFileName=ontradeENG.chm

AliasName=TOT-Vassbotn

CertificatesPath=C:\Svnpas\Apps\TOT\Cert*.cer

4.8.16 ROtest

The "ROtest" value is just used to test that the application has write access to the **ontrade.ini** file.

Name	Description
HelpFileName	Saves the last used help file.
AliasName	Stores your selected Chat module nick name.
CertificationPath	Used for providers that require a client certificate to be present on each client machine.

5 Trading

Learn how to use the trading functionality in this chapter.

See also:

- Trading login
- Guide to trading
- Order types
- Click Trading
- Multibroker
- Trading window
- Export of orders and trades
- Trade ticker
- Basket trading
- Algo trading
- Smart orders

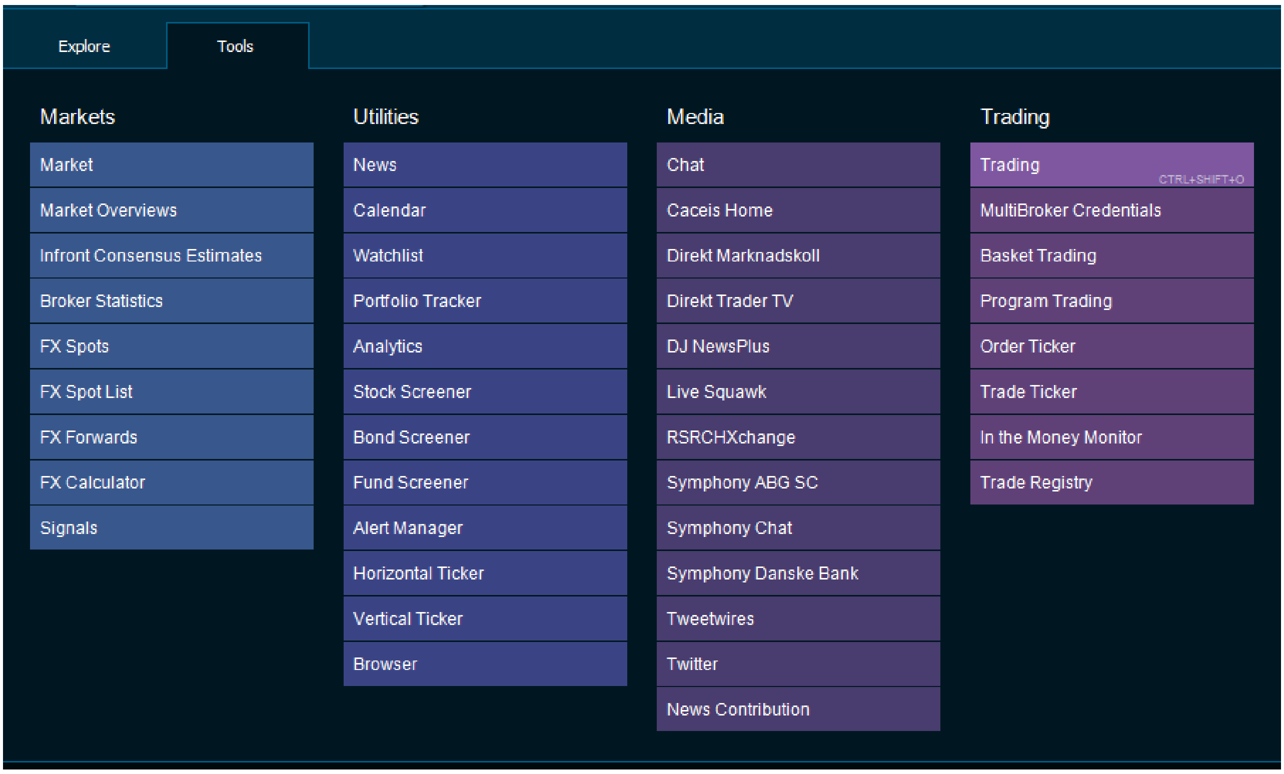
5.1 Trading login

To trade in the Infront Professional Terminal, you need additional credentials for the Trading gateway. You should receive these credentials from your broker.

To log in to trading via the Infront Professional Terminal:

1. Go to the main menu.
2. Select "Tools".
3. Select "Trading" under "Trading".
4. Select the "Trading" service you use (that is, the broker) and enter the credentials you received from your broker.


Select Trading Service
Type to search
Arctic Securities ASA Trading
Arctic Securities ASA Trading UAT
Avanza Trading
Baltikums Bank Trading Production (Hosted)
Bolero Trader
BRD Trading
CACEIS Trading
CACEIS UAT Trading
Danske Bank Hosted Trading
Danske Bank Trading UAT
DNB Markets Trading
DNB Markets Trading UAT
DNB Trading 1 Hosted
EFG Trading
EFG UAT
Add services
OK
Cancel


Explore
Tools
Markets
Market
Market Overviews
Infront Consensus Estimates
Broker Statistics
FX Spots
FX Spot List
FX Forwards
FX Calculator
Signals
Utilities
News
Calendar
Watchlist
Portfolio Tracker
Analytics
Stock Screener
Bond Screener
Fund Screener
Alert Manager
Horizontal Ticker
Vertical Ticker
Browser
Media
Chat
Caceis Home
Direkt Marknadskoll
Direkt Trader TV
DJ NewsPlus
Live Squawk
RSRCHXchange
Symphony ABG SC
Symphony Chat
Symphony Danske Bank
Tweetwires
Twitter
News Contribution
Trading
Trading
CTRL+SHIFT+O
MultiBroker Credentials
Basket Trading
Program Trading
Order Ticker
Trade Ticker
In the Money Monitor
Trade Registry

5.2 Guide to trading

5.2.1 How to access

The "Trading" window is the main window for trading where you can see the full overview of all your orders, trades and the portfolios you have access to.

Open the main menu > "Tools" > "Trading" > and select your trading service.

The "Trading" window provides an overview of your portfolios, orders and trades.

5.2.2 Place an order

You can add an order in several ways:

- Select the symbol from a watchlist, market window, or overview window. Then press the <-> or <+> key on your keyboard. The <-> key is for sell orders and the <+> key is for buy orders.
- The second way is to right-click the symbol, then click "Trading" and then either "Buy" or "Sell". Fill in volume and then click "Buy"/"Sell".
- Another way to place a trade is by using the "Infront Click Trader". For more information, see Click Trading.

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But you can reach it using the following URL:

http://youtube.com/watch?v=uy7AuKjqB2E

5.2.3 Supported order types

The program supports different order types depending on the exchange, asset class and trading service.

- Standard types: At market, Fill or Kill, Fill and Kill, All or nothing, Limit, Market to Limit, At Market and Kill
- Depending on exchange: Contingent, Flex, Interest, Best Possible, Funari
- Conditional orders
- Direct Market Access or Care Orders
- Request for Quote

5.2.4 Position keeping

You can have access to one or several portfolios. You can define your default portfolio or select a portfolio each time you place an order.

Each portfolio will give you an overview of all assets, limits and trading power.

5.2.5 Access to several portfolios

Depending on your trading account, you may have access to several portfolios. You can select between your different portfolios when placing orders.

It is also possible to retrieve account information for each individual portfolio.

5.2.6 Limits

Limits such as cash, trading power, shorting limits, credit limits and so on are defined by the account you are trading on. In addition, you can define your own limits in trading settings.

5.2.7 Basket trading window

The "Basket trading" window enables you to set default conditions or specify conditions for each order. For more information, see Basket Trading.

5.2.8 Slicing of orders (parent & children)

The program supports parent and child orders where you can either split an order to different accounts or to different brokers.

5.2.9 Trading algorithms

The program was developed to support trading on different algorithms provided by brokers. For more information, see Algo trading.

5.2.10 Smart orders

Some trading providers also support automatic trading a company on multiple exchanges, so called Smart orders.

5.3 Order types

- The program supports most order types. The default order type is a "Normal order" where you define the price and the volume and send the order to the trading venue.
- The specific meaning of each order type is subject to provider and market rules. Different types of orders can be sent to the trading system and trading place.

⚠ The order types you have access to depends on the exchange and your broker.

Order type	Description
Normal Order	An order where you define the price and the volume and send the order to the trading venue. Should the order not be completed in its entirety, then it shall remain in the market until it is filled or removed.
Fill and Kill Order	An order to buy or sell that can be filled partially or cancelled. If the order cannot be filled in its entirety at the specified premium, then as much as possible of the order is filled and the rest is killed.
Fill or Kill Order	An order to buy or sell that must be filled completely or cancelled.

Order type	Description
All or Nothing	If the order cannot be filled in its entirety, the order will stay in the market.
Market Order	An order to buy or sell a stated number of contracts at the best price available in the market. An order submitted at any time within a trading session, executable immediately at the current market price.
Limit Order	An order to buy or sell a stated number of contracts at a specified price or at a better price.
Stop Limit Order	An order to buy or sell when the market for a particular contract reaches a specified price. A Stop Limit Order to buy becomes a Limit Order when the relevant contract trades or is bid at or above the stop limit price. A Stop Limit Order to sell becomes a Limit Order when the relevant contract trades or is offered at or below the stop limit price.
Stop Order	An order to buy or sell when the market for a particular contract reaches a specified price. A Stop Order to buy becomes a Market Order when the relevant contract trades or is bid at or above the stop limit price. A Stop Order to sell becomes a Market Order when the relevant contract trades or is offered at or below the stop price.
Market To Limit	A Market to Limit order is submitted as a market order and executes at the current best market price. If the order is only partially filled, then the remainder of the order is cancelled and re-submitted as a limit order with the limit price equal to the price at which the filled portion of the order executed.
Good 'Til Cancelled Order (GTC)	An order, unless executed, remains in the Trading System until it is withdrawn by the broker, trading venue or the person who placed it or the expiration date of the contract to which it relates, whichever occurs first.
Request Quote	An order where you request the price for the instrument and the broker replies with a price that is normally is valid only for a certain time, for example,15 seconds.
Iceberg Order	Iceberg (reserve) orders allow you to submit an order (generally a large volume order) while publicly disclosing only a portion of the submitted order.

Order type	Description
Conditional Order / Monitor Order	A Conditional order will not be activated to the market until one or more conditions are met that you have defined. Support for conditional orders is subjected to restrictions in the Trading Gateway. *Example:* Trigger order only if Last is less than X and Bid higher than Y...
Calendar Spread	A strategy which entails buying one delivery month of a contract and simultaneously selling another delivery month of the same contract on the same exchange.
Trailing Stop Limit	Trailing stop limit orders work just like trailing stop loss orders, except that the order becomes a limit order (instead of a market order) when the order is triggered. The limit price is the last stop price set before the order was triggered. The primary benefit of trailing stop orders is that when a customer establishes a trail amount on the security, the stop price adjusts with positive market activity. Trailing stop limit orders are available on Listed equities, OTC securities and single-leg options.
Trailing Stop Loss	A trailing stop loss order is a stop loss order that adjusts in price with favourable market movement on the security. Trailing stop loss orders follow the same trading principles and mechanics commonly associated with stop loss orders. The primary benefit of trailing stop orders is that when a client establishes a trail amount on the security, the stop price adjusts with positive market activity. For a trailing stop loss order to sell, the stop price moves up as the price of the security moves up. For a trailing stop loss order to buy, the stop price moves down as the price of the security moves down. If the price of the security is moving against the client's order, then the stop price does not adjust.
Validity	Today The order is valid the entire day until close.
Closing auction only	The order is valid only during closing auction.
Opening auction only	The order is only valid during opening auction
Odd Lot	Odd lot is the minimum accepted order in the market.

5.4 Click Trading

With Click Trading, you can place an order in the market by simply clicking in the "Click Trading" window once, thus making it easier and more efficient for you to place trades.

Depending on what type of terminal you have, it might be necessary to add the "Click Trader" as an extra service if you do not have access. The access requirements are:

- Access to trading
- Access to "Click Trading" window
- Access to Orderbook Data (level 2 data)

If you do not have access, please contact Infront or your broker.

5.4.1 How to open Click Trading

- Right-click a symbol > Select "Trading" > Then select "Click Trading".
- Or use keyboard shortcut: Select the instrument> Press <CTRL>+<K>.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

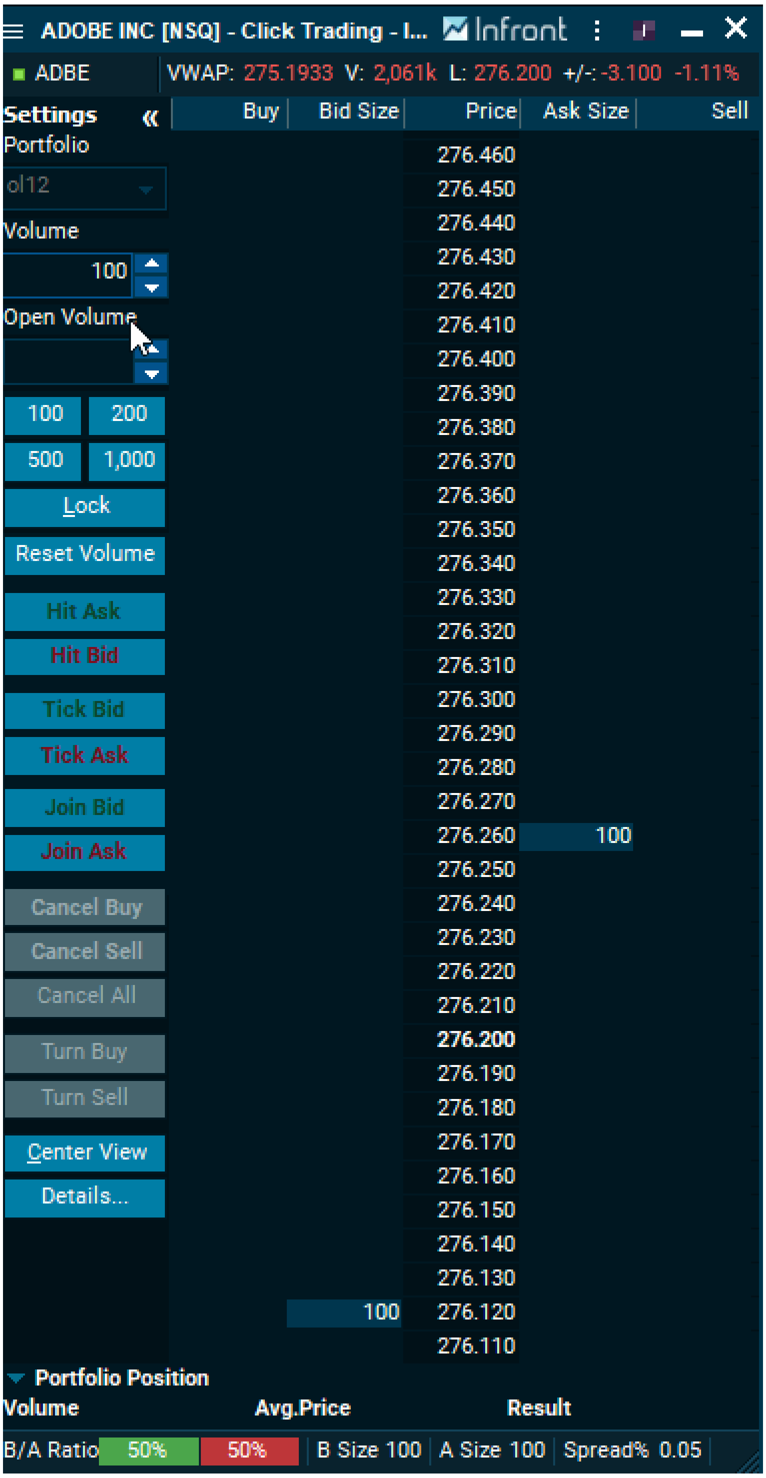
http://youtube.com/watch?v=Q5Pzardbxu8

5.4.2 How to use Click Trading

The view presents an ascending vertical list of prices centered between the current bid/ask levels. The outermost column displays all your active and pending orders in the selected portfolio. The "Bid Size" and "Ask Size" columns show the order depth volumes at their respective price levels. The middle column displays the price based on the tick size.

Element	Description
Place an order	Select the portfolio you want to trade on. Select the volume you want to place in the trading venue. Then click with the left mouse-button on the "Bid Size" (for buy order) or the "Ask Size" (for sell order) at the relevant price level.
Add multiple order at the same level	Click several times in the Bid Size or Ask Size at a certain price level.
Cancel order	Click the order in the "Buy" or "Sell" column.
Drag-and-drop	The "Click Trading" window allows you to drag-and-drop from one level to another to change the price. Select the order you want to move. Drag it to a different price level (up/down). It is also possible to move an order from buy-side to sell-side and vice versa.

Element	Description
Enable "Gap" mode	Gap handling allows you to remove levels in the order book where no orders have been placed. This is especially useful on instruments with very small tick sizes and big gaps between orders. To enable this, right-click in the "Click Trading" window > select "Gap mode" > select between "All", "One" or "None".
Lock the "Click Trading" window	While the lock is enabled, it is not possible to enter orders in the "Click Trading" window. To enable the lock, right-click in the "Click Trading" window > click "Lock".
Setup menu	In the "Setup" menu for the "Click Trading" window, you will see several optional settings, such as conditional orders (possible to define the order type), enable/disable hints, clear volume after sending order and more. To access the "Setup" menu, click the " ⋮ " three dots in the upper right corner of the "Click Trading" window > click "Setup". This opens another window, where you find settings under "Settings" and "Visual".



5.5 Multibroker

In Infront Professional Terminal, the Multibroker function allows you to connect with different brokers in the same trading window that requires a customized login.

The Multibroker solution will encrypt and store the credentials of each trading access in a local file on your PC. The encryption is tied to the current Windows account. This will allow you to connect to all of your brokers available with one single login, making your trading easier and more efficient.

You need access to the "Trading" module to access the Multibroker solution.

5.5.1 How to create Multibroker credentials

1. Clicking the " ⋮ " system menu at the upper right corner of the desktop > select "Multibroker credentials".
2. Fill in the connection name of your choice and create a password that must follow the following rules:
    - At least 8 characters in length.
    - Contains at least one uppercase character.
    - Contains at least one lowercase character.
    - Contains at least one digit.
    - Contains at least one special character.
3. Then add your preferred trading service to your Multibroker solution by clicking "Add" > click "Save" when you are done.

You can now log in by clicking the " ⋮ " system menu icon > log in to Multibroker and enter the credentials that you have created. Once logged in, you will have a secure connection to your broker or trading network.

The Multibroker login now appears as a separate trading service. This will make it easy and efficient to access all your portfolios in the same trading window.

5.6 Trading window

The "Trading" window is the main window for trading where you will have the full overview of all your orders, trades and the portfolios you have access to. You will need access to the Infront Professional Terminal and connection to your broker to get access to the trading window.

The window can be opened by clicking the main menu > "Tools" > "Trading". When the login window appears, enter the login and password provided by your broker. Note that this is not the same login as the one you use to log into the Infront Professional Terminal. After you have successfully logged in, the "Trading" window appears.

From the top of the "Trading" window, you can change your portfolio and target currency. The trading window has a total of 5 tabs.

You can also change the columns for each tab by right-clicking a column and choosing "Field chooser".

Field	Description
Orders	The "Orders" tab shows the status of all your orders. An order can be either active or inactive; an inactive order is not sent to the marketplace, while an active order is sent to the marketplace. As soon as the order is activated, it's sent to the exchange. The right-click menu in the "Order" tab allows you to activate, modify, view or delete an order, or insert a new order.
Trades	Trades displays all trades for the selected portfolio. Usually only intraday is available. This tab shows TradeID, symbol, volume, value, price and more for the executed trades.

Field	Description
Net Trades	Net trades will accumulate all buy and sell orders and show the net volume and values of all buy and sell orders per symbol.
Portfolio	Portfolio shows positions in the currently selected portfolio. Portfolio values such as trading power, market value, total invested and so on are retrieved from the Trading Service. There may be more values shown depending on what the trading service supports.
Log	All communication between Infront Professional Terminal and the Trading Services are logged on the "log" tab. To copy the log files, use the "Window tool menu" on the upper right of the window > "Edit" > "Copy", then paste the log to a text editor such as Notepad.

5.7 Export of orders and trades

5.7.1 Description

All orders, trades and portfolio information from the "Trading" window can be exported to files by selecting "Edit" > "Save as".

5.7.2 Formats

- MS Excel files (XLS)
- XML Files (XML)
- HTML files (HTM)
- Text files (TXT)

5.7.3 Scheduled export of orders and trades lists

This is an optional module that enables periodic automatic export of the orders and/or trades currently listed in the "Trading" window.

The exported data is the same that can be stored manually with the "Edit" > "Save as" command and supports 4 different formats: MS Excel, XML, HTML and Text.

5.7.4 How to access

The module must be enabled centrally with the package called "Advanced: Order Entry - Export Module". The functionality is available by selecting "Automatic Export" from the right-click menu in the "Trading" window.

5.7.5 How to use

When the dialog is displayed, there are a number of ways to configure how and when the export should be executed.

The content of the export is from the portfolio selected in the "Trading" window.

Also, the "Trading" window needs to be kept open in order for the automated export to work.

The "Trading" window indicates that automatic export is enabled in the window caption text.

5.7.6 General Settings

This is the configuration of the content. There are two checkboxes that you can use to select if to export trades, orders or both. The date drop-down list contains a pre-configured set of date formats that will be used when writing the export file. Finally, there is a drop-down list of the export format:

- MS Excel files (XLS)
- XML files (XML)
- HTML files (HTM)
- Text files (TXT)

5.7.7 Period

Drag the "Start export at" slider back or forth to set the relevant start time of the export, and do the same with "End export at". The automatic export will then work within this time frame every day as long as the export scheduled export job is active. In the "Export every" drop-down box, set how often the export should be executed within the time frame.

5.7.8 Export To

Each export operation produces a new file with a file name consisting of the portfolio name, date, time and orders or trades. In the "Edit" field, enter the target path for the export, or click the "Browse" button to open a dialog where you can select the folder. The file name preview will show an example of how the file name will look like with the currently selected settings. Click the "Export Now" button to execute an export manually.

Clicking the "Export Now" button will only start the export once, it will not start the automatic job.

If the configuration of the export schedule is OK, then click the "Start Job" button to start the automatic export. If the system is within the time frame, it will execute an export immediately and then a new one after the "Export every" setting. From now on, the schedule will be active until you click the "End Job" button.

5.8 Trade ticker

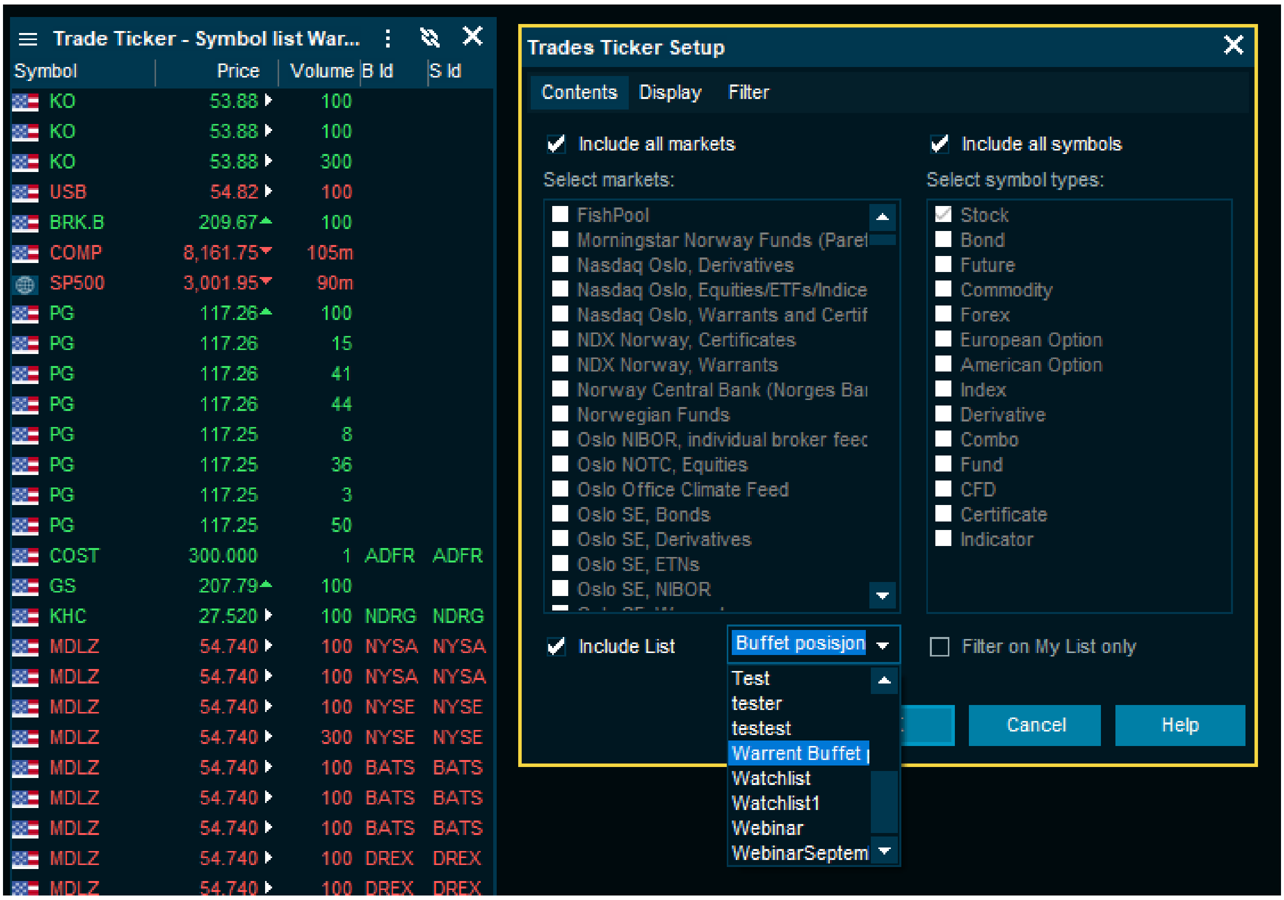
5.8.1 How to open

Open "Horizontal Ticker" or "Vertical Ticker" from the main menu under "Tools" > "Utilities".

5.8.2 Description

Similar to the "Trades" tab in the symbol overview, the trade ticker displays time and sales information. The trade ticker can show trades for many symbols from a number of markets and asset classes.

To show only trades in symbols from your watchlist, select the "Filter on My List only" checkbox.



5.8.3 Trade ticker setup

Setup is available from the window settings menu (press <F10>).

The "Contents" tab specifies which markets and asset classes (symbol types) you want to see in the trade ticker. You can also select to see only symbols from a watchlist.

The "Display" tab contains options for which columns to show and also configures behaviour such as smooth scrolling and color changes.

Element	Description
Reverse direction	Default direction is down for a vertical tickerline or from right-to- left for horizontal tickerlines.
Smooth scrolling	Will make the display of the ticker smoother.
Color changes	Indicates whether each trade is to be displayed in colors if the price is up or down compared to the previous trading day.

The "Filter" tab can be used to remove irrelevant trades or to only show interesting ones. Options include minimum volume and value, broker codes and trade types.

5.8.4 Available columns

- Flags (country associated with the symbol's market)
- Symbol (ticker code)
- Description (instead of ticker code)
- Price (last trade)
- Hitter/Taker (the arrows indicates whether the last price is up or down compared to the previous trade)
- Volume (trade volume)
- B Id (Broker buyer ID. Only available for selected sources)
- S ID (Broker seller ID. Only available for selected sources)
- Bid (bid price at the time of the trade)
- Ask (ask price at the time of the trade)
- Time (time for the trade. Can be setup with seconds)
- Trades outside bid/ask price range are marked with a diverging color.
- Feed (datafeed on the trade)
- Value (last value)
- Change (last change)
- Change % (change in percentage)
- ESMA Type (trading type)

5.9 Basket trading

5.9.1 How to open

To open a new "Basket Trading" window, go to the main menu > "Tools" > "Basket Trading" under "Trading".

5.9.2 Requirements

- Access to Trading
- Access to Basket Trading

5.9.3 Description

The "Basket Trading" module allows you to define any number of orders locally that can be sent in one go, that is, as a basket of orders. There are several ways to define the orders, their types and acceptable price.

5.9.4 Creating, editing and deleting orders

The window has a simple toolbar at the top and a grid with columns and rows below. Use the "Edit" field and "Add" button to add new symbols to the basket - just as you would in the "Composite" window. Clicking "Add" without entering any value in the "Edit" field will allow you to perform a symbol search. To delete an order in the list, select it and click the "Delete" button (or press <SHIFT>+<DEL>).

Once you have one or more symbols in the basket, you can adjust the order's volume, open volume and price directly in the grid. Alternatively, you can use right-click, "Edit Order" (or press <CTRL>+<ENTER>) to edit the current order in a familiar dialog similar to the "New Order" dialogue window.

When you are satisfied with the orders, you can send them as one basket with the "Execute Basket" button in the toolbar.

> A basket must be given a name so that you can recognize the live orders and trades it will generate.

5.9.5 Saving and opening lists

Once you have defined a basket trading list, you can save it for later use. Click the "Save List" button in the toolbar, or use the right-click menu "List" > "Save List" and "List" > "Save List as..." commands.

5.9.6 Using price sources

We have made a concept of price source and price delta - as you can see in the "Source" and "Delta" columns, respectively. The "Source" column lets you select from a list of market values (last, bid, ask, mid, vwap). The current market value of that field is shown in the "MarketPrice" column and copied to the "Price" column. You can use the "Delta" column to adjust the price above or below the market price. As the market changes, the price will always be equal to MarketPrice + Delta.

To go back to setting manual prices, set "Source" to "Custom". This disables the "Delta" column and allows you to directly set the price.

> The default value of the "Source" column is defined in the "Tools" > "Trading settings".

5.9.7 Distributing a fixed amount

Sometimes you have a fixed amount of money that you want to use for buy or sell orders. If all the symbols in the basket list use the same trading currency, the program can help you distribute an amount on all the orders.

To make this easier, the amount, currency indicator and "Distribute" button on the toolbar are used. When distributing, the price you have configured for each symbol is used and a new volume is calculated. You can use the "Weight" column to set the relative weight (value) for the corresponding symbol.

Another factor that influences how the volumes are calculated is the "Volume rounding" setting in the "Distribute value" area on the Basket Trading page of the "Tools" > "Trading settings" dialog. The possible values are None, Down to Boardlot, Nearest Boardlot and Up to Boardlot. Depending on this setting the total value of the orders can be very close to, or slightly below or above the target amount.

Currently, the "Distribute" functionality is disabled if you have more than one trading currency in the orders list.

5.9.8 Importing and exporting

If you have defined a list of orders that should be executed in an external system such as Excel, the import and export functions available in the "Basket Trading" window come in handy.

A basket trading list can be imported via an external text file or via the Clipboard. In both cases, the data must be formatted in a simple tab-separated text format.

To import from the clipboard, use right-click "List" > "Import" from the Clipboard (or the shortcut <SHIFT>+<CTRL>+<V>).

To export to the Clipboard, use right-click "List" > "Export selected orders to Clipboard" (or the shortcut <SHIFT>+<CTRL>+<C>).

To import from a text file, use right-click "List" > "Import" from the file.

To export to a text file, use right-click "List" > "Export" to file.

5.9.9 Copy and paste

The Clipboard export and import commands make it easy to duplicate one or more orders inside a basket list. This can be useful if you want to duplicate and then make small changes (for instance change the portfolio name).

5.9.10 The "Include" field and disabled orders

Orders in your basket list might be greyed out. This happens when one or more of the following conditions are not met:

- Symbol identified by the program
- Price set (or the order type does not require a price)
- Volume set
- Portfolio set
- "Included" column selected

The basket cannot be executed until all orders are valid. Orders that do not have the "Included" column selected will be ignored for distribution and execution.

5.9.11 Available columns

You can easily change the default settings by right-clicking the columns, select "Field Chooser" and use drag-and-drop on the columns you want.

Most of the columns are self-explanatory or are explained above. The Custom#1-Custom#6 fields are used for custom fields defined by the trading provider for that specific market. It is easiest to use the "Edit Order" (<CTRL>+<ENTER>) command to set these fields.

5.10 Algo trading

5.10.1 Description

Algorithmic Trading (also known as Strategy Trading) uses a dedicated third-party server to automatically execute certain rules and parameters.

Technically, the algorithmic engine runs on a server for a third party vendor. The trading provider programs this server by defining a number of named "strategies". For each strategy, several input parameters are defined. The list of available strategies and their parameters is sent to the end user during the login. The user selects from the list of strategies, fills in the mandatory parameters and sends the order to the server. Then the algo server monitors conditions such as market prices, volumes, time and so on and enters or cancels orders to try and fulfill the purpose of the strategy.

5.10.2 Access requirements

- Access to trading server with algo support
- Access to algo trading feature

5.10.3 How to access

Select the "Strategy" page of the "Trading" window.

5.10.4 Technical information

- A strategy and each strategy field has a name that is displayed in the "Strategy" page of the "New Order" window.
- A strategy and each strategy field can have a server-configured description or explanation that is displayed as a hint when the mouse pointer hovers over the field.
- A strategy can be marked as default - this will be the selected strategy in a new "New Order" window.
- A strategy can be limited to be supported only for a specific broker (for servers that support "Client"/"Asset Manager"/"Broker" fields)
- A strategy can be marked as available only for a specific set of markets.
- A strategy field can be of the following field types:
    - Drop-down list
    - String
    - Double
    - Integer
    - Date
    - Time
    - Boolean
    - Price
    - Volume
- A strategy field can be limited to be displayed only for a set of feeds.
- A strategy field can have a default value.
- A string field can be multiline.
- A strategy field can have constraints such as minimum and maximum value, maximum length and be marked as mandatory.
- If the value of a strategy field violates the field's constraints, the field label is displayed in red and the mouse hint will show the constraint limits.

5.11 Smart orders

5.11.1 Access requirements

- Access to trading server with algo support
- Access to "Smart Order Trading" feature

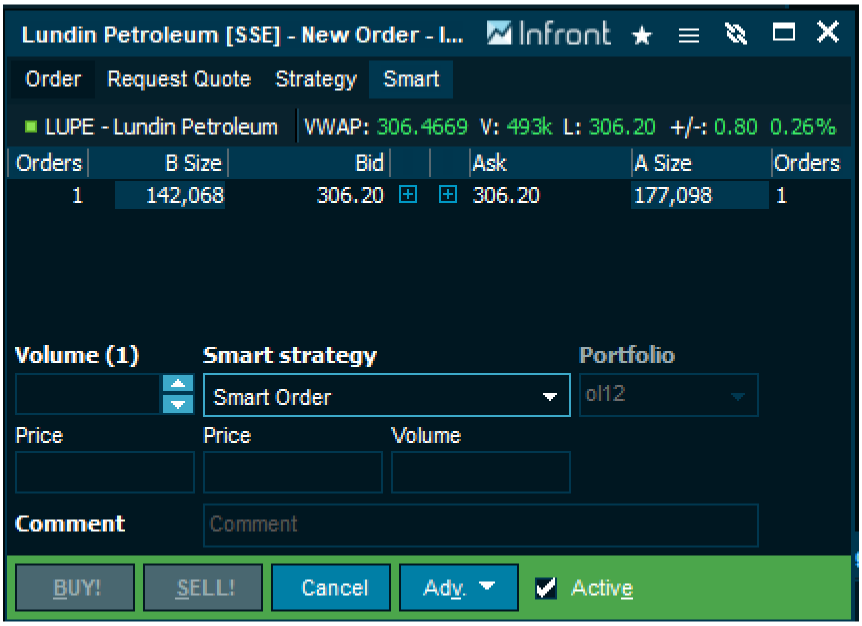
5.11.2 How to access

- Select the "Smart Order" page of the "New Order" window.
- In the "Consolidated Orderbook" window, "Smart Order" is the default order type.

5.11.3 Description

Smart orders are orders that can be executed on one or more exchanges that all have the same company listed. This is can be useful in automatically dividing a large order on multiple trading venues and getting a better average price than would be possible if the order was executed only on a single exchange.

For instance, the Swedish Ericsson company is listed on several exchanges, including the Stockholm Stocks Exchange and on MTF (Multilateral Trading Facility) feeds such as Turquoise, Chi-X, Nasdaq OMX Europe and Burgundy. When you send a "Buy Smart Order" on Ericsson to a server that supports these markets, your order may trade on all of these exchanges.



A Smart Order is a special case of the more general concept of Algo Trading. The details of how your smart order is executed on the different exchanges is delegated to a separate third-party algo or smart order server.

Just as with algo trading, you can be presented with a list of named smart order algorithms and each order may take a number of input parameters.

The user selects from the list of "Smart strategies" orders, fills in the mandatory parameters and sends the order to the server. Then the server monitors conditions such as cross-market prices, volumes, time and so on and enters or cancels orders to try and fulfill the purpose of the strategy.

6 Market data

Find detailed descriptions of the market data windows available in Infront Professional Terminal.

See also:

- Bar Chart
- Calendars
- Chart
- Chart Data
- Correlation Matrix
- Curve Chart
- Company Overview
- Focus window
- Heat Grid
- Index Overview
- Instrument Overview
- Macronomic Indicators
- Market pages
- Market window
- Top Investors
- Broker Statistics
- Derivatives
- Option Calculations
- News (market data)
- Noise reduction
- Orderbook
- Orderbook Visualizer
- Portfolio Tracker
- Return Histogram
- Search Screener
- Seasonality Matrix
- Watchlist
- Fund Overview

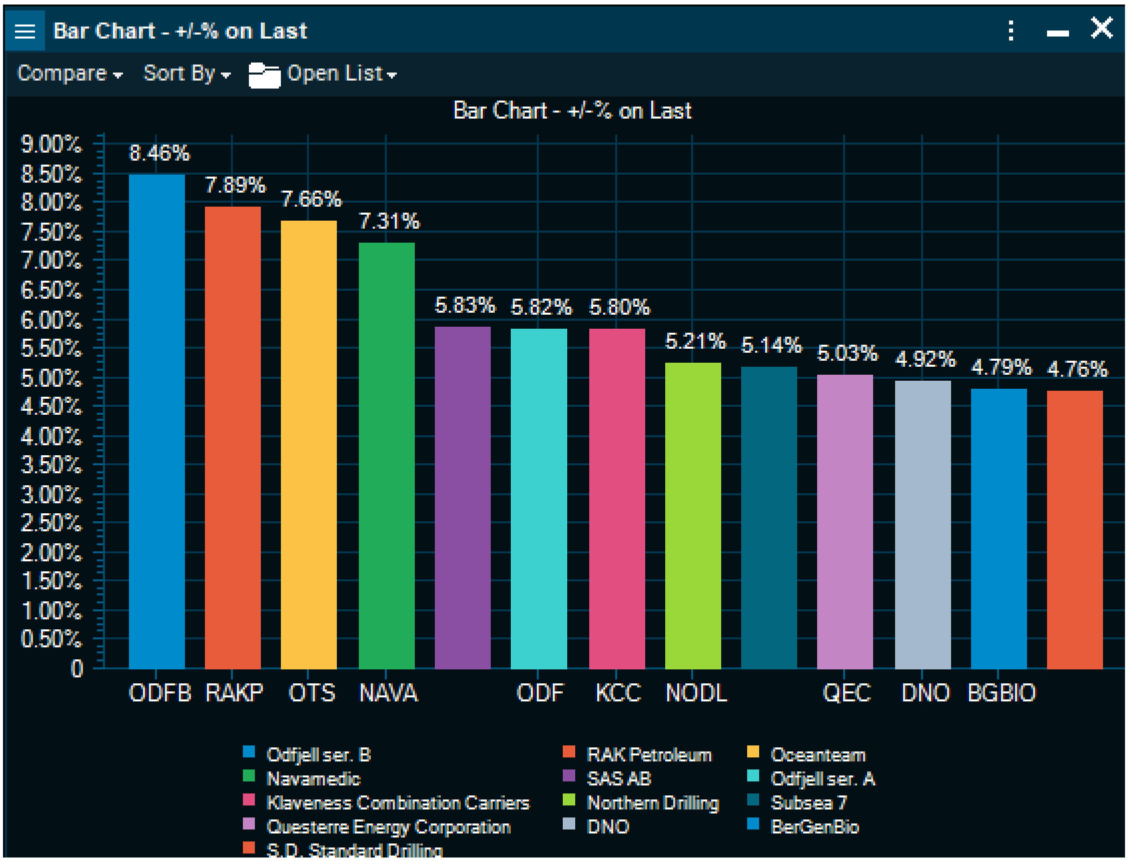
6.1 Bar Chart

6.1.1 Description

The bar chart displays one or more instruments side-by-side. By default, it will display the selected instruments net change in percent. It can be configured to chart a number of historic values in order to quickly compare the instruments' performance against each other.

6.1.2 How to access

Select a range of symbols in a "Market" window, "Composite" window or a "Market Page" and select "Charts & Visualizations" > "Bar Chart".



6.2 Calendars

With the Infront Professional Terminal's live "Calendar Service", you will be alerted to global macro-economic key figures and other events before they happen. In addition, you will immediately receive the data once it is released.

The calendar can also be set up to show company events such as corporate actions, earnings releases, dividends and general meeting, providing you a full overview of the upcoming events.

6.2.1 How to open calendars in multiple ways

Main menu

To find equity calendars:

Open the main menu > select "Calendar" under "Equities".

To find macro calendars:

Open the main menu > select the calendar of your choice under "Macro".

The "Calendar" function is also found under "Utilities" in the main menu. Open the main menu > "Tools" > under "Utilities" you will find "Calendar".

"Find anything" search function

Type "Calendar" or "Macro" in the "Find anything" search field.

There are macroeconomic calendars, country calendars and equity calendars.

6.2.2 How to use calendars

The calendar gives you a global overview on corporate and macro events, both current and historical.

The events are presented in a grid sorted on date, type and time with content based on the current selected filter.

Depending on events you will be able to view the following category of events:

- Announcements
- Results & dividend
- Corporate actions
- New listings & IPOs
- Economic indicators
- Government auctions
- Other macro events

Filter calendars

To filter the events displayed by the calendar grid, click "Filter". This opens filtering menu below the toolbar.

By using the filtering function, you can select the period for which the events will be displayed by choosing either the predefined date range or defining the range yourself.

You can easily change which regions the calendar should display events for and what category of events should be visible.

Calendar grids show upcoming events in white, and past events are grayed out 15 minutes after the event values are received.

If an event has estimates, the actuals will be colored green or red depending on whether the outcome is better or worse than expectations.

6.3 Chart

6.3.1 How to open

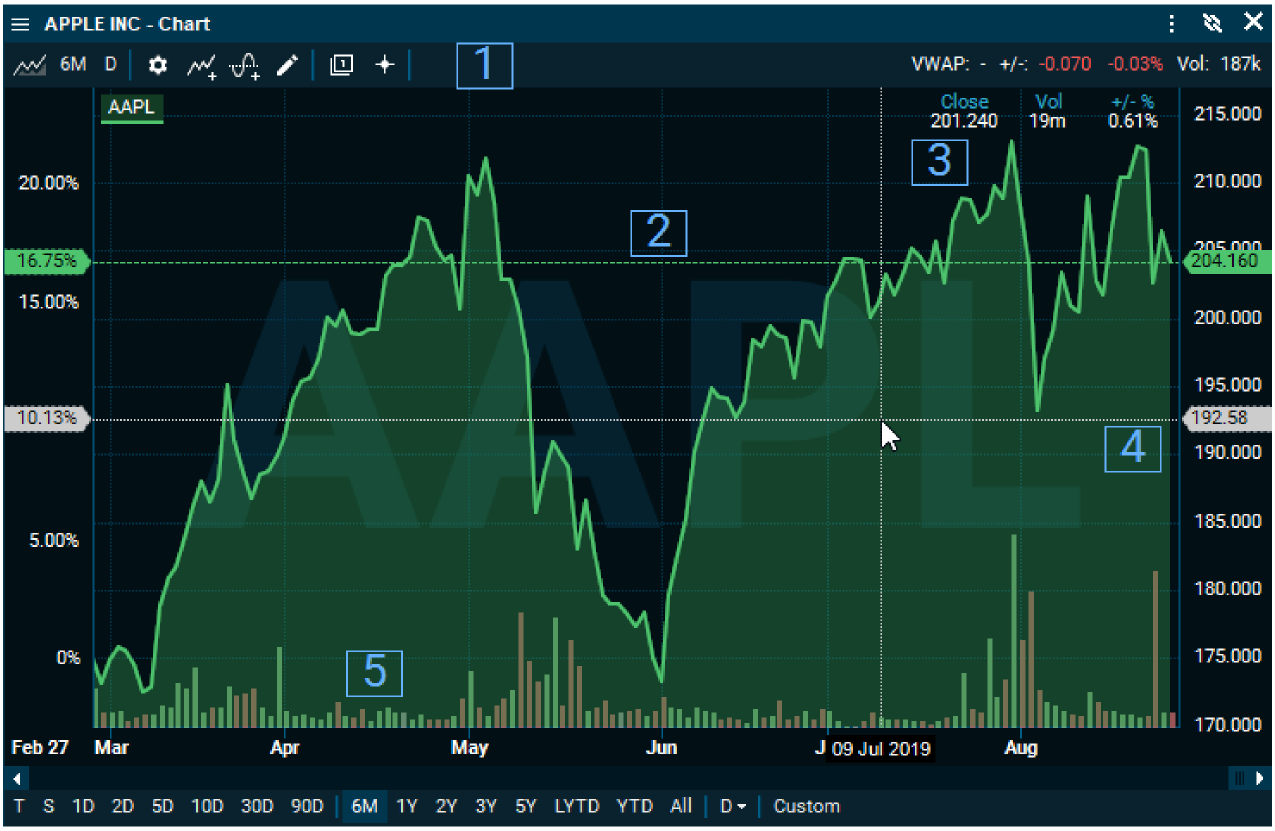
Intraday charts and historical charts can be opened in several ways:

- Right-click a symbol in a market window, watchlist or a market page and select "Charts and visualizations" > "Intraday chart" or "Historical chart".
- Search for "IntradayChart", "HistChart" or "Chart" in the "Find anything" search field.
- Use the shortcuts <CTRL>+<I> to open intraday charts and <CTRL>+<H> to open historical charts.

6.3.2 Default chart

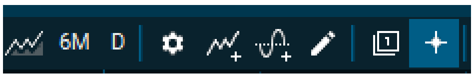
Element	Description
Toolbar (1)	Here you can find the cursor, chart templates, annotations, studies, compare studies, chart settings, resolution, time-period and chart type.
Price line (2)	Visually indicates the current price level.
Hover data (3)	When cursor is on, a data-table is displayed for the selected date.

Element	Description
Hover price (4)	Shows the price level on the right axis.
Volume bars (5)	Are displayed in the background as a visual indicator.



6.3.3 Toolbar

Cursor



Turn on and off the cursor by clicking the "Show cursor" icon.

Templates

Find your templates by clicking the "Templates" icon.

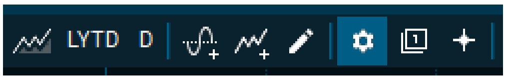
Chart templates can be used for several purposes such as:

- Create a default charting layout
- Create different technical analysis templates
- Quickly change charting layout without manually removing or adding elements to the chart

- Create several color themes for different chart types

You can also restore factory default, save and load your templates. All your saved templates will be placed in your "ontrade\Setup" folder.

Settings

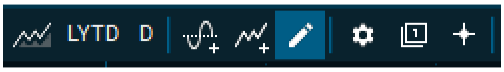


Change your chart settings by clicking the gear icon in the chart toolbar. From here, it's also possible to revert back to the old chart setup, used in Infront Professional Terminal in the 8.5 versions and earlier.

Among other things, allow you to:

- Choose axis
- Target currency
- Chart type (Area, Candle Stick, Line and so on)
- Line style
- Extend the chart
- Show chart data
- Show events
- Adjust for splits/dividend
- Change back to the legacy toolbar / summary bar

Annotations



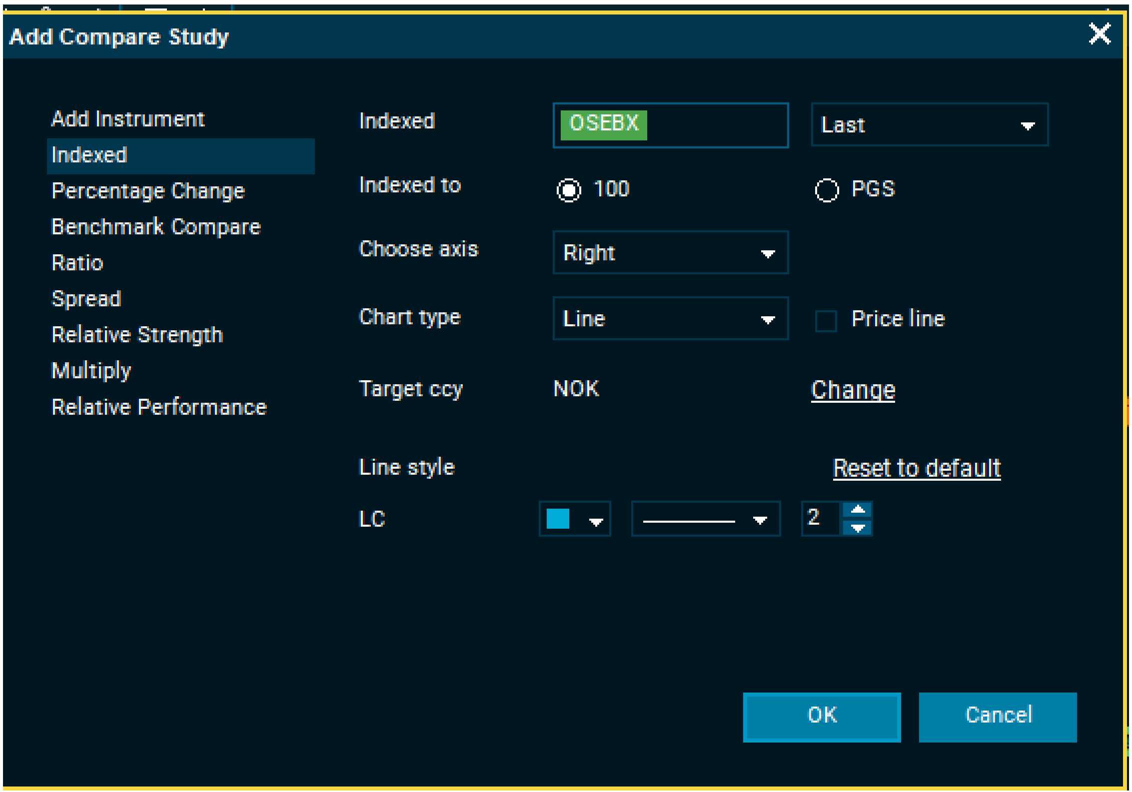
Add annotations to your chart. This can be lines, channels, circles, arrows or for example long/short positions.

> Hold <CTRL> on the keyboard to draw the annotations.

To change the coordinates, right-click on the annotations to prompt the different options.

Add compare study

Compare studies to different instruments by choosing a study comparison. By adding an instrument, you can also change axis, currency or line style. The compare study can be also be indexed, see percentage change, benchmark compared and much more.



Add study

Add studies to your charts such as Moving Averages, Bollinger Bonds, RSI, Standard Deviation and much more. You can also select Instrument/Line, axis, period and line style for the different studies. The chart also updates in the background before clicking "OK", making it easy to see how the changes are reflected in the chart.

> You do not have to press <CTRL> when using Line Snap. To use the Line Snap, make sure the cursor is turned on and mark a point on the chart to generate a starting point.

Resolution, time period and chart type

In the options in the top left, you can change chart type, time period and resolution.

Study definitions

Study	Definition
Average True Range (ATR)	Measures volatility. High ATR often occur at market bottoms following a panic sell-off. Low ATR value is often found during extended sideways periods, such as those found at tops and after consolidation periods.
Chande Momentum Oscillator (CMO)	The indicator is created by calculating the difference between the sum of all recent gains and the sum of all recent losses and then dividing the result by the sum of all price movement over the period. This oscillator is similar to other momentum indicators such as the Relative Strength Index and the Stochastic Oscillator because it is range bounded (+100 and -100).
Commodity Channel Index (CCI)	Quantifies the relationship between the price, a moving average (MA) of the price, and normal deviations from that average. The index is scaled by a factor of 1/0.015 to provide more readable numbers. Therefore, it is essentially a MACD, normalizing the deviation. The CCI can be adjusted to the time frame of the market traded on by changing the averaging period.
Directional Movement DI+/DI- (DI)	Helps determine if a security is "trending". The DMI trading system involves comparing the 14-day DI+ ("Directional Indicator Up") and the 14-day DI- ("Directional Indicator Down"). This can be done either by plotting the two indicators on top of each other or by subtracting the DI+ from the DI-. Wilder, who developed the system, suggested buying when the DI+ rises above the DI- and selling when the DI+ falls below the DI-.

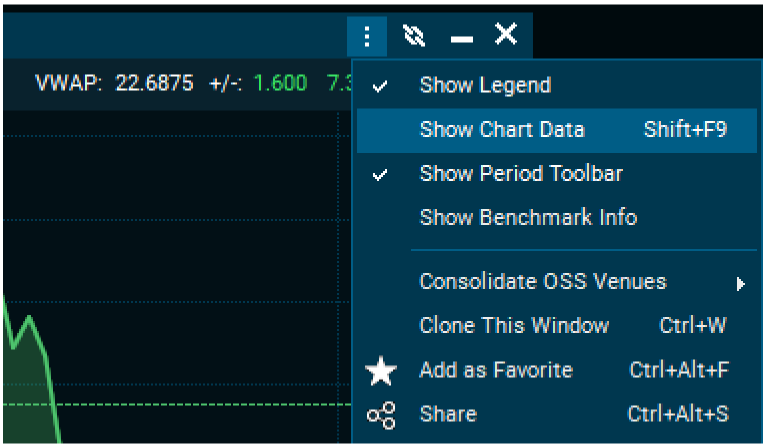
Study	Definition
Directional Movement ADX (ADX)	ADX is an averaged combination of DI+ and DI- which serves as an indicator of the trend strength. The ADX is as an oscillator fluctuating between 0 and 100. Low readings (below 20) indicate a weak trend and high readings (above 40) indicate a strong trend.
Directional Movement ADXR (ADXR)	Quantifies momentum change in the ADX. It is calculated by adding two values of ADX (the current value and a value n periods back), then dividing by two. This additional smoothing makes the ADXR slightly less responsive than ADX. The interpretation is the same as the ADX; the higher the value, the stronger the trend.
Directional Movement DX (DX)	Combines the two DI+ and DI- lines of the DI analyses into one line.
High/Low Oscillator (HLO)	A simple model that uses today and yesterday's price to determine an oversold/ overbought situation. If the HLO curve is above zero, it indicates an overbought situation. Similarly, if the HLO curve is below zero, it indicates an oversold situation.
Intraday Momentum Index (IMI)	The IMI is an oscillator which is constructed by averaging *n* day's worth of upward price changes (close is greater than open) to *n* day's worth of downward price changes (close is less than open). Sell signals are issued when the index crosses above the overbought level of 70% and buy signals are issued buy signals are issued when the index crosses below the oversold level of 30%.
Market Facilitation Index (FI)	Analyzes the amount that the price is changing for each unit of volume. It does not include any information concerning the direction of price changes. Instead, it is used to determine the efficiency with which the price is changing. The value of this indicator is the difference between the high and low prices divided by the volume. Therefore, its value tends to be very small.
Moving Average Convergence Divergence (MACD)	The MACD is calculated by subtracting a 26-day moving average of a security's price from a 12-day moving average if its price. A 9-day exponential moving average called "signal" or "trigger" line is plotted on the top of the MACD to show buy/sell opportunities. The result is an indicator that oscillates above and below zero. When MACD is above zero, it means that the 12-day MA is higher than the 26-day MA. This is bullish; since it shows that recent expectations (that is, the 12-day moving average) are more bullish than previous expectations (that is, the 26-day MA). This implies bullish (upward) shift in supply/demand lines. When MACD falls below zero, this implies that the 12-day MA is below the 26-day MA, implying a bearish (downward) shift in supply/ demand lines.
Price Oscillator	Almost identical to the MACD except that it can use any two user-defined moving averages and can display the difference in either points or percentage (MACD displays only points).
QStick	Provides a way to quantify the amount and size of black and white bars in a candlestick chart. Black candlesticks represent a period when the price closed lower than it opened. Likewise, the white candlesticks represent a period when the price closed higher than it opened.

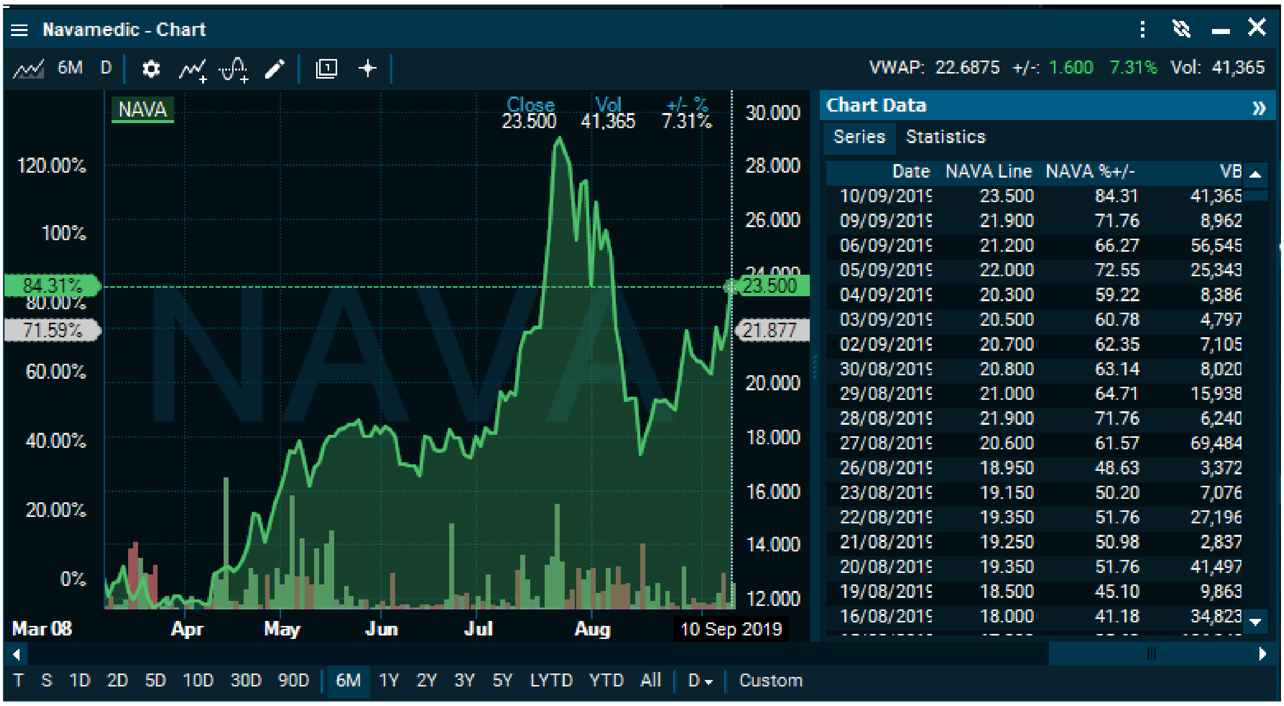
Study	Definition
Rate of Change (RC)	Displays the difference between the current price and the price *n* time periods ago. The RC displays the wavelike motion in an oscillator format by measuring the amount that prices have changed over a given time period. As prices increase, the RC rises - as prices fall, the RC falls. The greater change in the price, the greater the change in RC.
Relative Momentum Index (RMI)	The RMI is a variation on the Relative Strength Index (RSI) that adds a momentum component. As an oscillator, the RMI exhibits the same strength and weakness of other overbought/oversold indicators. During strong trend markets, the RMI will remain at overbought or oversold levels for an extended period. During non-trending markets, the RMI tends to oscillate predictably between an overbought level of 70 to 90, and oversold level of 10 to 30
Relative Strength Index (RSI)	The RSI is a price following oscillator that ranges between 0 and 100. A method for analyzing RSI is to look for divergence in which the security is making a new high but the RSI is failing to surpass its previous high. This divergence is an indication of an impending reversal. When the RSI then turns down and falls below its most recent trough, it is a confirmation of the impending reversal.
Relative Volatility Index (RVI)	The RVI measures the direction of volatility. The calculation is identical to the Relative Strength Index (RSI) except that the RVI measures a 10-day standard deviation of high and low prices instead of measuring period-to-period price changes. RVI rules of confirmation: • Only act on buy signals when RVI >50 • Only act on sell signals when RVI <50 • If a buy signal was ignored, enter long when RVI>60 • If a sell signal was ignored, enter short when RVI<40 • Close a long position if RVI falls below 40 • Close a short position if RVI rises above 60
Standard Deviation (SD)	The SD is a statistical measure of volatility. It is typically used as a component of another indicator. High standard deviation values occur when the data item being analyzed is changing dramatically. Low standard deviation values occur when prices are stable.
Stochastic Oscillator (SO)	The SO displays overbought and oversold levels. The SO consists of two lines where one is a 3-day average of the other. It should only be used in situations without a dominating tend.
Volatility (VOL)	The VOL indicator compares the spread between a symbol's high and low prices. It assumes that market tops are generally accompanied by decreased volatility, and that the latter stages of a market bottom are generally accompanied by decreased volatility.
Williams %R (WR)	The WR measures overbought/oversold levels. Very similar to Stochastic Oscillator, except that Williams %R is plotted upside down and the Stochastic Oscillator has internal smoothing.
Williams Accumulation/ Distribution (WAD)	"Accumulation" is used to describe a market controlled by buyers. A market controlled by sellers is defined by "distribution". Williams recommend trading on divergences: • Distribution of the security is indicated when it is making a new high and the Acc./ Distr. indicator is failing to make a new high - Sell. • Accumulation of the security is indicated when it is making a new low and the Acc./ Distr. indicator is failing to make a new low - Buy.

6.4 Chart Data

6.4.1 How to access

Chart data can be opened from the "Chart" window by selecting the "⋮" menu > "Show Chart Data" (<SHIFT>+<F9>). A blue sideline called "Chart Data" will populate on the right hand side of the chart. Click the extension arrows on the sidebar to open the chart data.





The chart data includes all indicators displayed in the chart.

6.4.2 How to export chart data

Chart data can also be copied or directly saved as a text file. This can be done by right-clicking the data > "Copy" / "Save to file".

6.5 Correlation Matrix

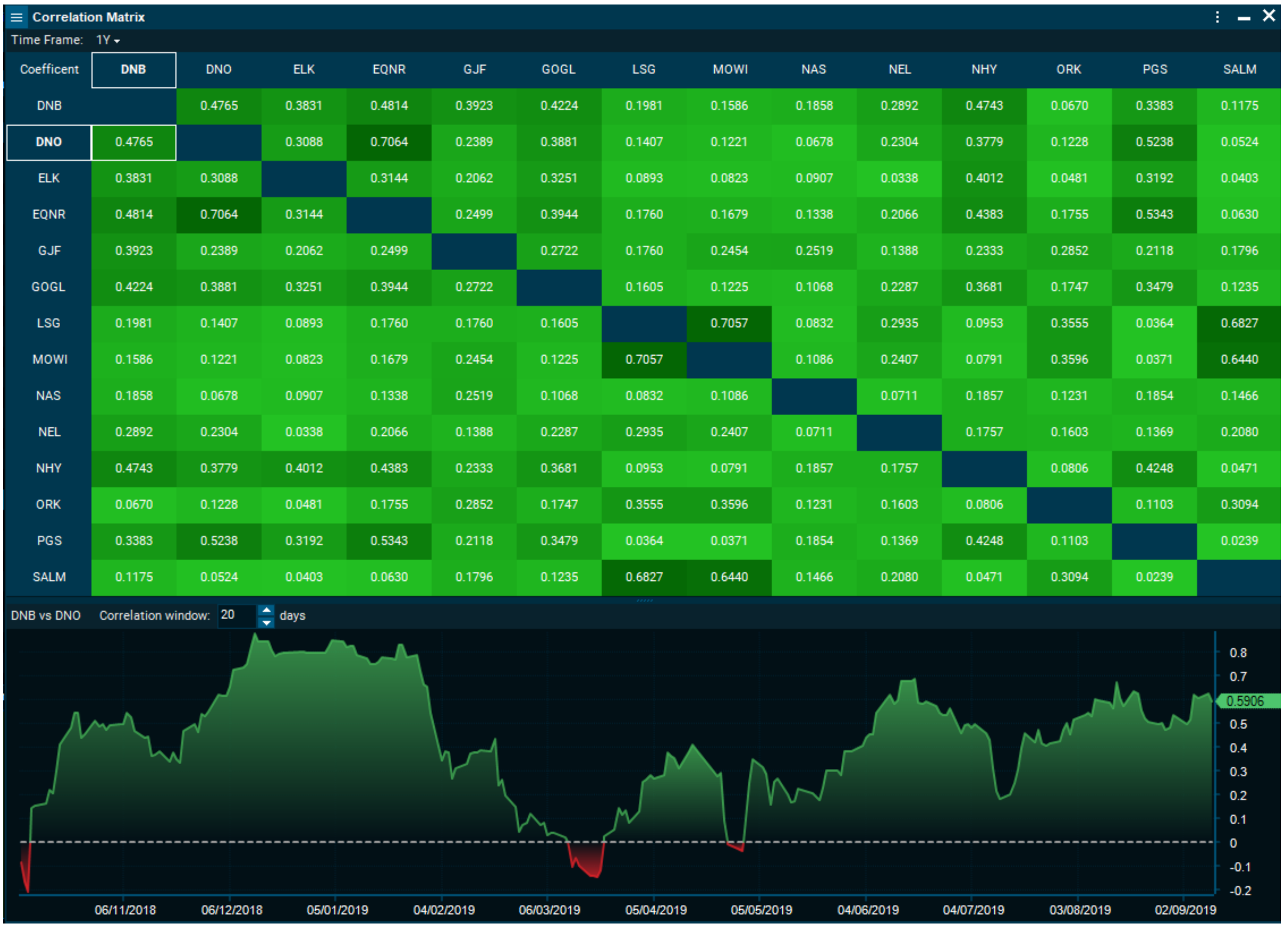
6.5.1 How to open

Select multiple instruments in a market window or a watchlist > right-click > "Charts & Visualizations" > "Correlation Matrix".

6.5.2 Description

The "Correlation Matrix" window displays the cross correlation among multiple instruments.

Element	Description
Time Frame	Time series length. You can select from the following options: • All • Last year to date (LYTD) • Year to date (YTD) • 1 to 5 years
Matrix	Displays the cross-correlation across instruments as in "Pearson Correlation Coefficient". The coefficient displayed in the Matrix corresponds to the entire sample given the time frame selected at the upper left of the window.
Coefficient	Each coefficient in the matrix can be selected. A single click will display a rolling coefficient, while a double click will display a comparison chart for the selected time frame.
Rolling correlation	When a coefficient is selected, that is, Rho(Instrument A, Instrument B), a chart with a rolling coefficient will appear in the lower panel. The user can modify the size of the rolling window changing the number of "Correlation window".



Coefficent	DNB	DNO	ELK	EQNR	GJF	GOGL	LSG	MOWI	NAS	NEL	NHY	ORK	PGS	SALM
DNB		0.4765	0.3831	0.4814	0.3923	0.4224	0.1981	0.1586	0.1858	0.2892	0.4743	0.0670	0.3383	0.1175
DNO	0.4765		0.3088	0.7064	0.2389	0.3881	0.1407	0.1221	0.0678	0.2304	0.3779	0.1228	0.5238	0.0524
ELK	0.3831	0.3088		0.3144	0.2062	0.3251	0.0893	0.0823	0.0907	0.0338	0.4012	0.0481	0.3192	0.0403
EQNR	0.4814	0.7064	0.3144		0.2499	0.3944	0.1760	0.1679	0.1338	0.2066	0.4383	0.1755	0.5343	0.0630
GJF	0.3923	0.2389	0.2062	0.2499		0.2722	0.1760	0.2454	0.2519	0.1388	0.2333	0.2852	0.2118	0.1796
GOGL	0.4224	0.3881	0.3251	0.3944	0.2722		0.1605	0.1225	0.1068	0.2287	0.3681	0.1747	0.3479	0.1235
LSG	0.1981	0.1407	0.0893	0.1760	0.1760	0.1605		0.7057	0.0832	0.2935	0.0953	0.3555	0.0364	0.6827
MOWI	0.1586	0.1221	0.0823	0.1679	0.2454	0.1225	0.7057		0.1086	0.2407	0.0791	0.3596	0.0371	0.6440
NAS	0.1858	0.0678	0.0907	0.1338	0.2519	0.1068	0.0832	0.1086		0.0711	0.1857	0.1231	0.1854	0.1466
NEL	0.2892	0.2304	0.0338	0.2066	0.1388	0.2287	0.2935	0.2407	0.0711		0.1757	0.1603	0.1369	0.2080
NHY	0.4743	0.3779	0.4012	0.4383	0.2333	0.3681	0.0953	0.0791	0.1857	0.1757		0.0806	0.4248	0.0471
ORK	0.0670	0.1228	0.0481	0.1755	0.2852	0.1747	0.3555	0.3596	0.1231	0.1603	0.0806		0.1103	0.3094
PGS	0.3383	0.5238	0.3192	0.5343	0.2118	0.3479	0.0364	0.0371	0.1854	0.1369	0.4248	0.1103		0.0239
SALM	0.1175	0.0524	0.0403	0.0630	0.1796	0.1235	0.6827	0.6440	0.1466	0.2080	0.0471	0.3094	0.0239	

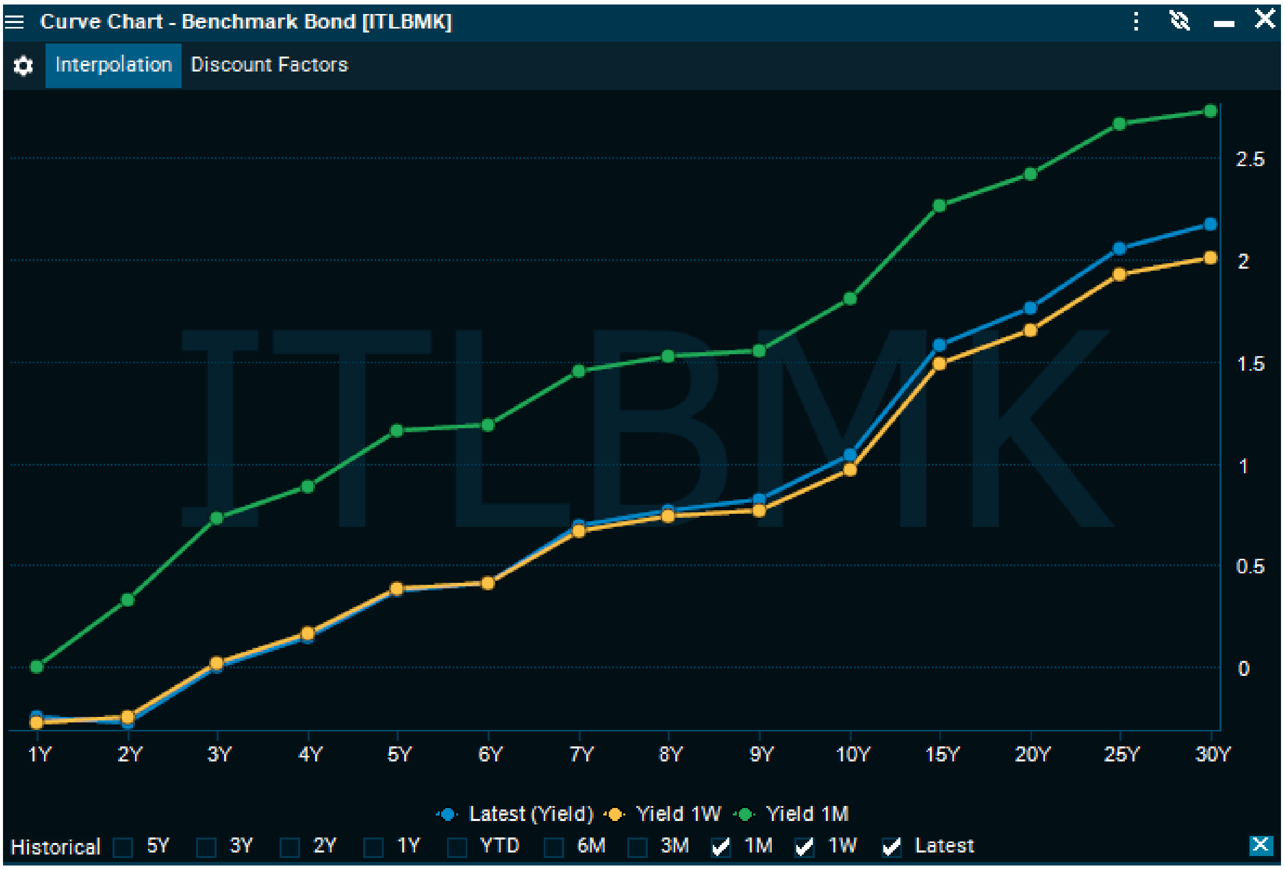
6.6 Curve Chart

6.6.1 Description

The yield line chart displays one or more instruments side-by-side in a single line chart. By default, it will display the selected instruments net change in percent. It can be configured to chart a number of historic values to quickly see the performance.

6.6.2 How to access

- Go to the main menu > "Explore" > "Yield Curve" in the "Fixed Income" category and select a country from the list.
- Right-click, for example, a benchmark bond in a "Watchlist" or a "Market Page" window and select "Charts & Visualizations" > "Curve Chart".



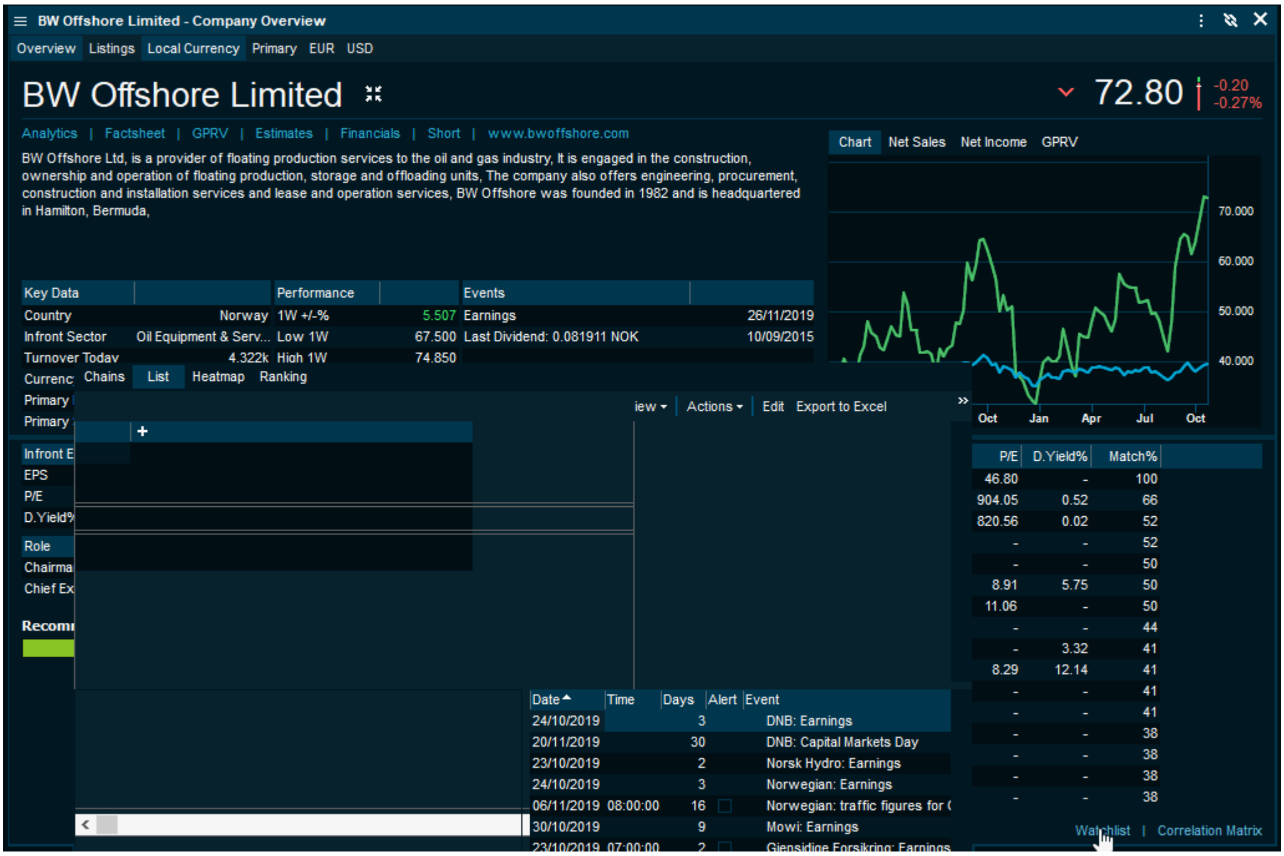
6.7 Company Overview

6.7.1 How to open a Company Window

- Type in a company in the "Find Anything" field > select the company > select "Company Overview".
- Right-click in the "Instrument Overview" window > select "Instrument information" > select "Company Overview".
- Use the <CTRL>+<O> shortcut on your keyboard.

6.7.2 What is a Company Overview

The "Company Overview" window displays a lot of content in a relatively small window, separated by tabs. The window display an introduction of the company in a brief summary, the company's key data, performance and events. Furthermore, it shows chart, estimates and company peers, which allows users to stay up-to-date. It is also possible to access Watchlist and Correlation Matrix via the "Company Overview" window.



Overview

In the "Overview" window, you have several tabs available.

Analytics

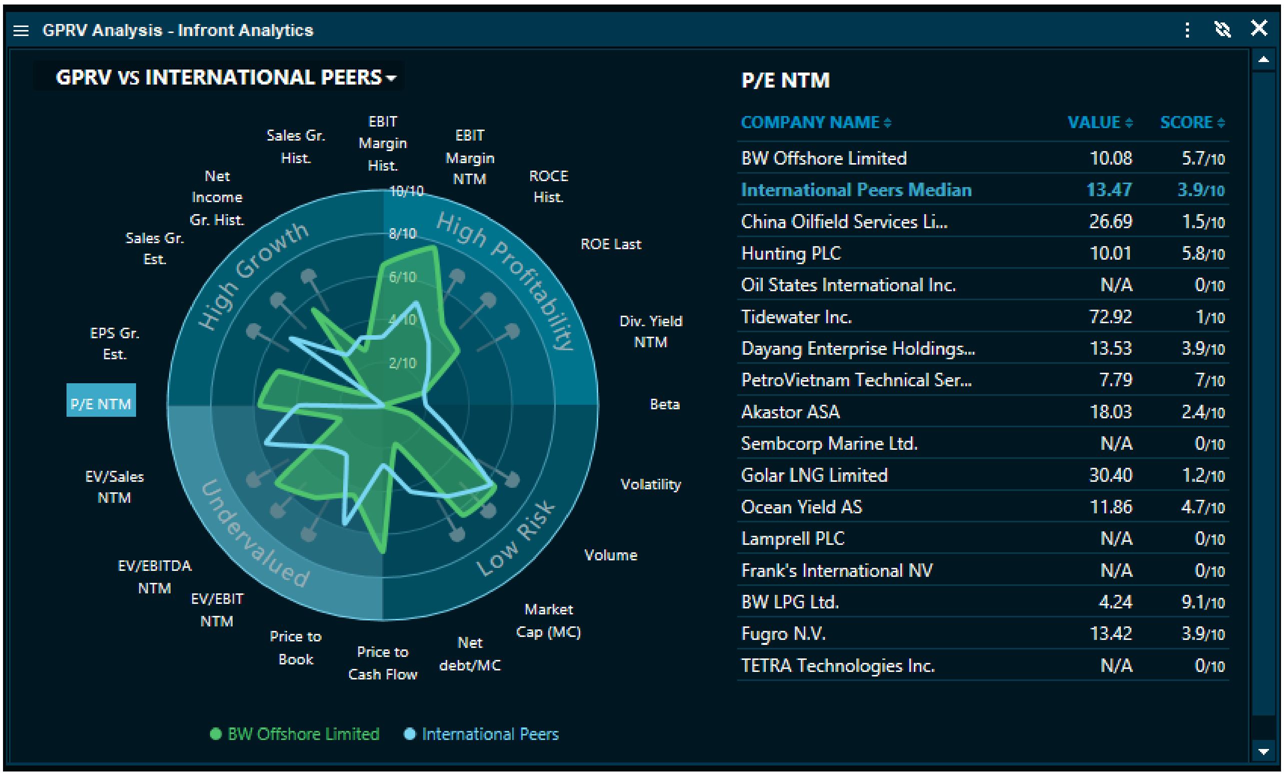
Provides the "Analytics Overview".

Factsheet

This tabs gives a "Company Factsheet" in PDF format, which provides a full overview of the company. The content of the report is provided by Infront Analytics and its third-party content providers for user personal information only.

GPRV

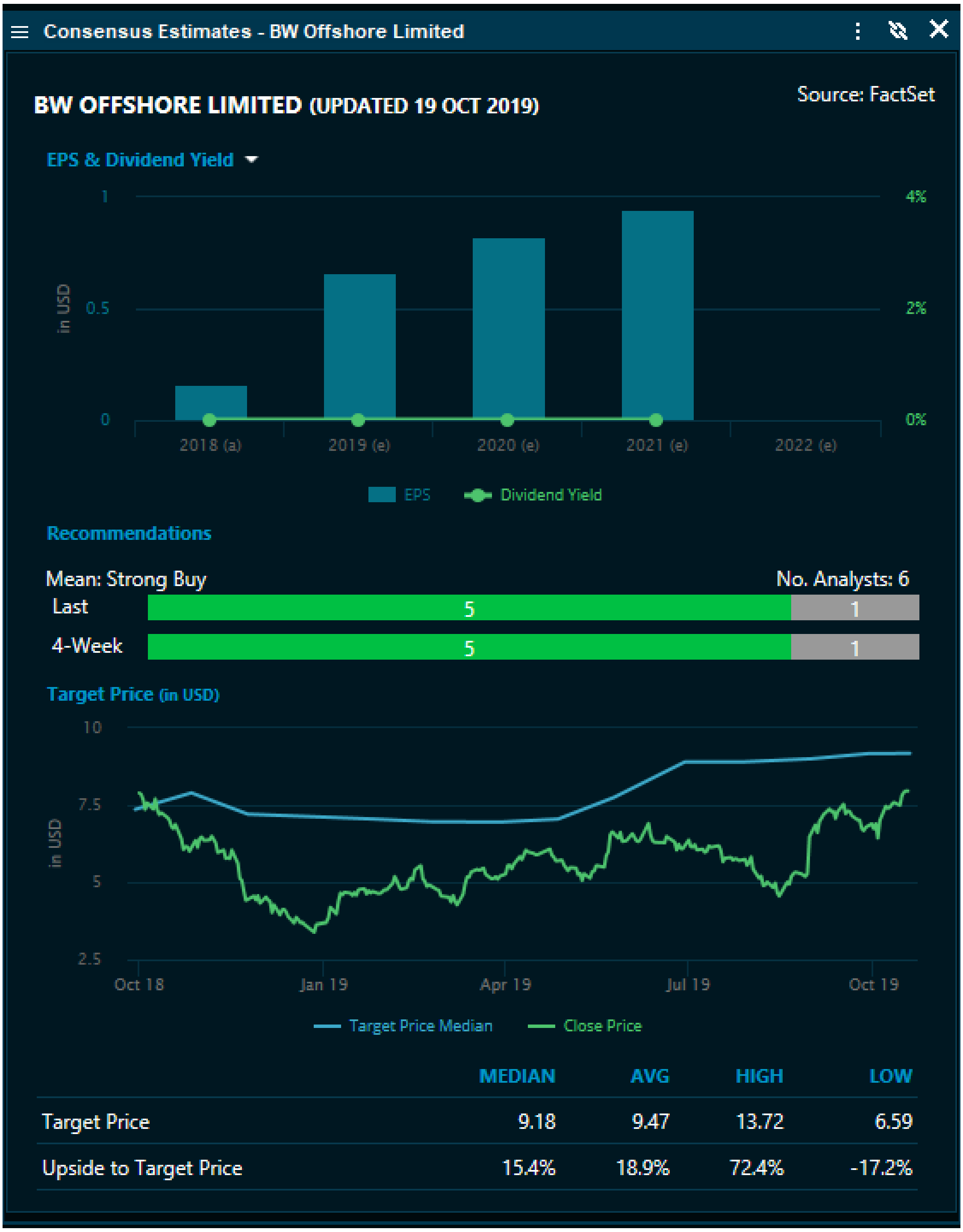
The GPRV (Growth, Profitability, Risk and Value) chart compares the company with all of its competitors. The greener the outer-circle, the better the companies perform compared to their competitors. It is possible to choose between international peers, regional peers and domestic peers.



Estimates

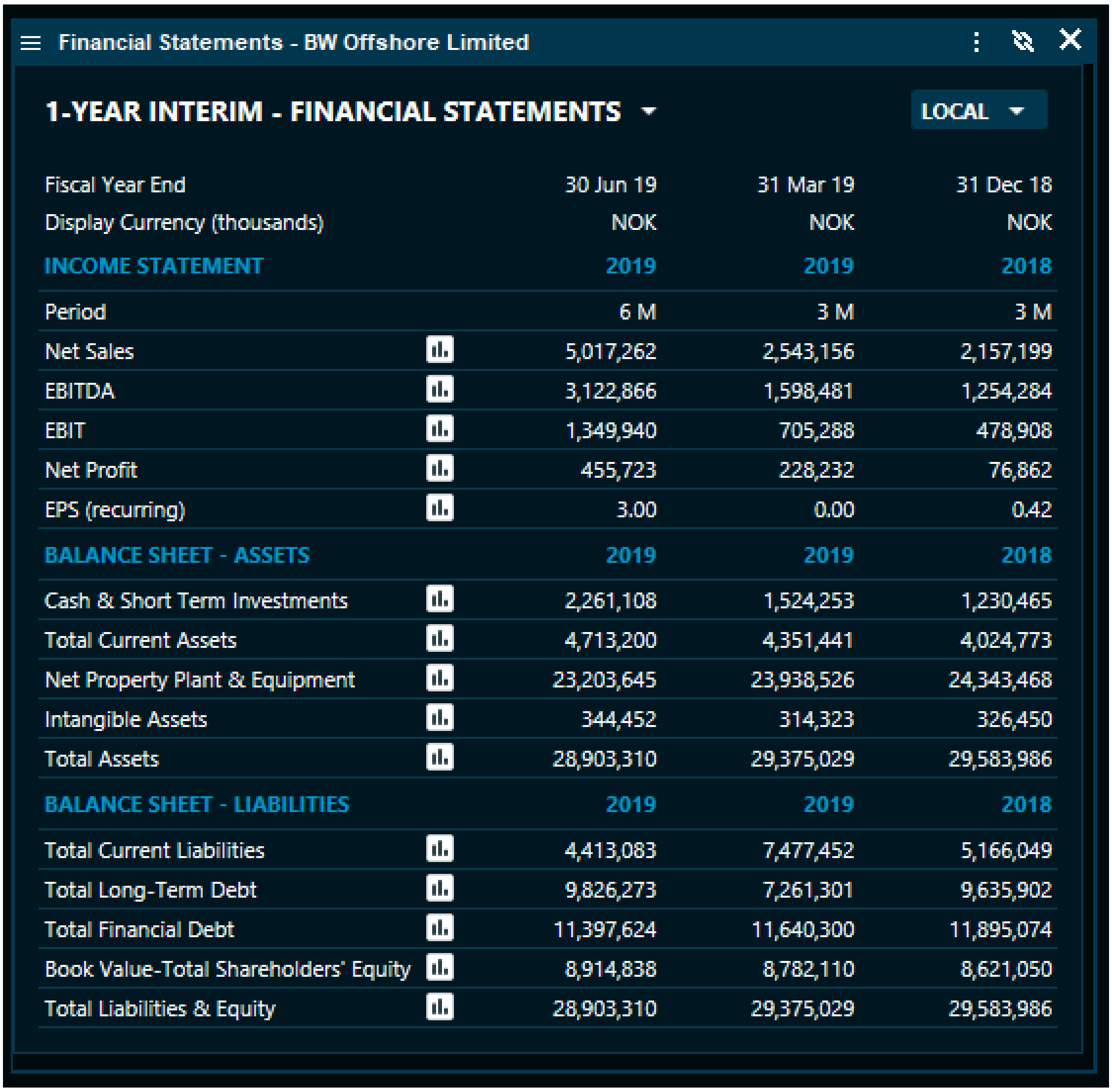
This tab shows the consensus estimates for the company. The source is Factset. The estimates available in this window are:

- EPS % Dividend Yield
- Net Sales
- EBITDA & Margin
- EBIT & Margin
- Net Income & Net Margin
- Net Debt & Net Debt/Equity
- Book Value & ROE



Financials

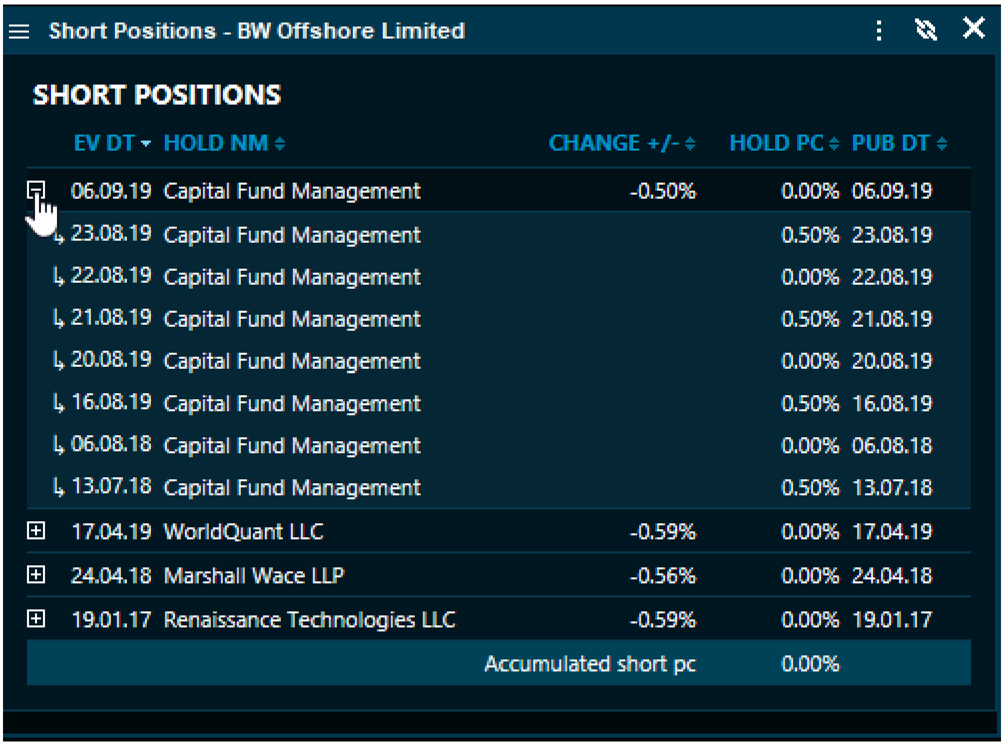
This tab displays the company's financial statement. It is possible to choose between 1-year interim statement or 5-year annual statement. It is also possible to change currency between local, USD or EUR.



Fiscal Year End	30 Jun 19	31 Mar 19	31 Dec 18
Display Currency (thousands)	NOK	NOK	NOK
INCOME STATEMENT	**2019**	**2019**	**2018**
Period	6 M	3 M	3 M
Net Sales	5,017,262	2,543,156	2,157,199
EBITDA	3,122,866	1,598,481	1,254,284
EBIT	1,349,940	705,288	478,908
Net Profit	455,723	228,232	76,862
EPS (recurring)	3.00	0.00	0.42
BALANCE SHEET - ASSETS	**2019**	**2019**	**2018**
Cash & Short Term Investments	2,261,108	1,524,253	1,230,465
Total Current Assets	4,713,200	4,351,441	4,024,773
Net Property Plant & Equipment	23,203,645	23,938,526	24,343,468
Intangible Assets	344,452	314,323	326,450
Total Assets	28,903,310	29,375,029	29,583,986
BALANCE SHEET - LIABILITIES	**2019**	**2019**	**2018**
Total Current Liabilities	4,413,083	7,477,452	5,166,049
Total Long-Term Debt	9,826,273	7,261,301	9,635,902
Total Financial Debt	11,397,624	11,640,300	11,895,074
Book Value-Total Shareholders' Equity	8,914,838	8,782,110	8,621,050
Total Liabilities & Equity	28,903,310	29,375,029	29,583,986

Short

This window displays the short positions of the company. Clicking the plus sign next to the company name displays several positions.

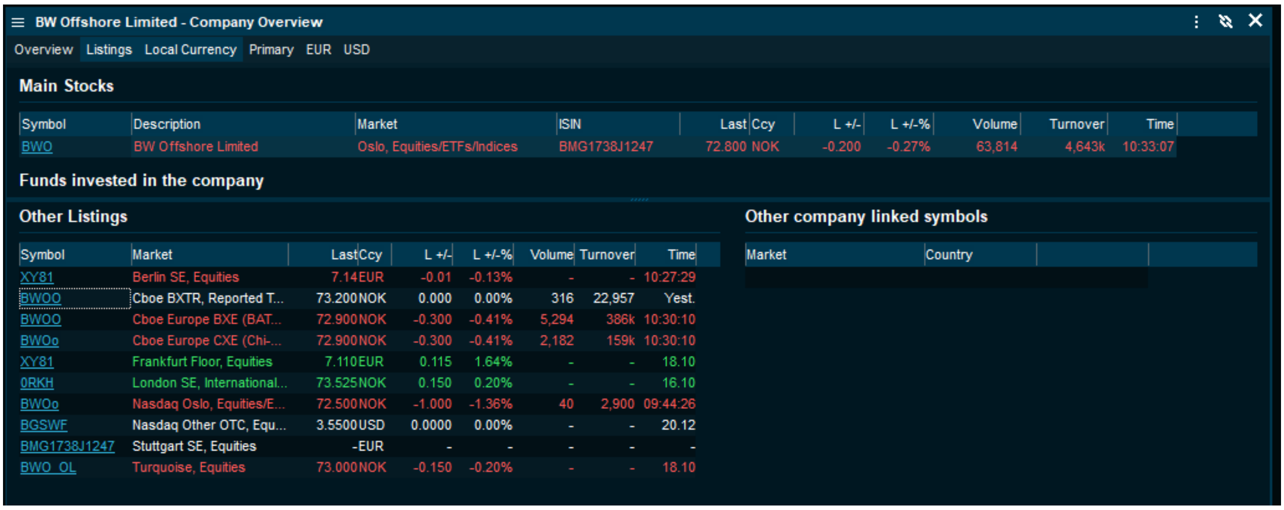


Company's homepage

By clicking on this link, the user will be directed to the Company's homepage.

Listings

This tabs shows the company's listing, which funds are invested in the company and other listings. This data can be shown in local currency, primary, EUR or USD.



6.8 Focus window

6.8.1 How to open a Focus window for a specific instrument

- Right-click the instrument > select "Instrument information" > "Focus" window.
- Select the instrument > press <CTRL>+<SHIFT>+<F>.

6.8.2 What is a Focus window

The "Focus" window gives the user a quick overview of one specific instrument. The symbol field can show either the symbol ticker or full symbol name of the instrument. The price field allows the user to select between last bid or ask, and below either change +/- change +/-% or both are displayed. At the bottom, the change indicator will display the current trend based on the price field. The right part of the window consists of a range panel, with values in both ends displaying today's high and low. An arrow indicates where the price is according to high/low, and the bar will be red on negative since open and blue on positive.

6.8.3 Setup

The "Focus" window can be customized by going to the "Settings" menu in the window > select "Setup".

Element	Description
Symbol label	Choose between showing the "symbol ticker" and full "symbol name".
Price field	The focus window can show bid, ask or last prices. Some users choose to open two focus windows for the same symbol with one showing bid price and the other showing the ask price.
Change field	Choose to see percentage change, absolute change in price or both in the symbol window.
Decimals	It is possible to override the intelligent decimals settings by specifying exactly how many decimals the focus window should show for the current symbol.

6.9 Heat Grid

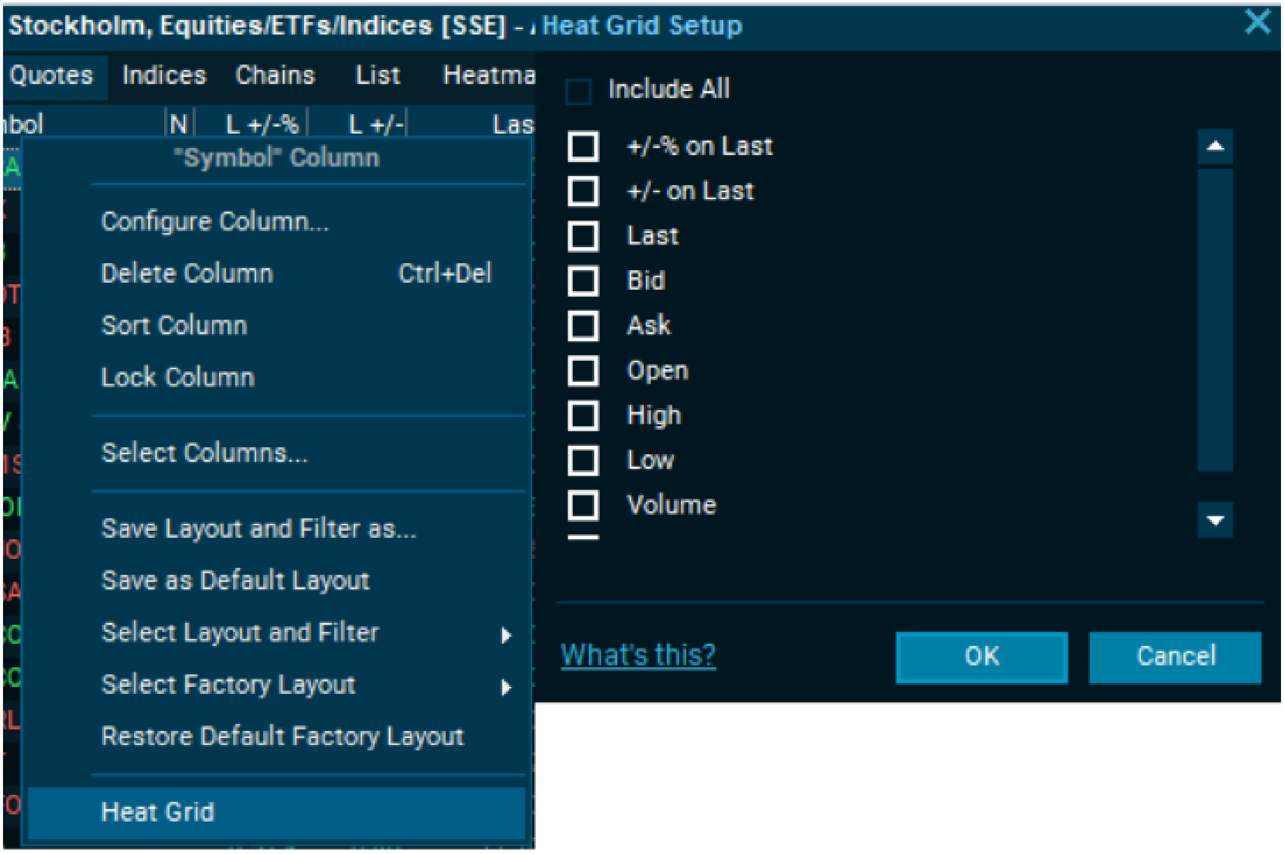
6.9.1 Description

Heat grids allow for easier visualization and interpretation of column-based data.

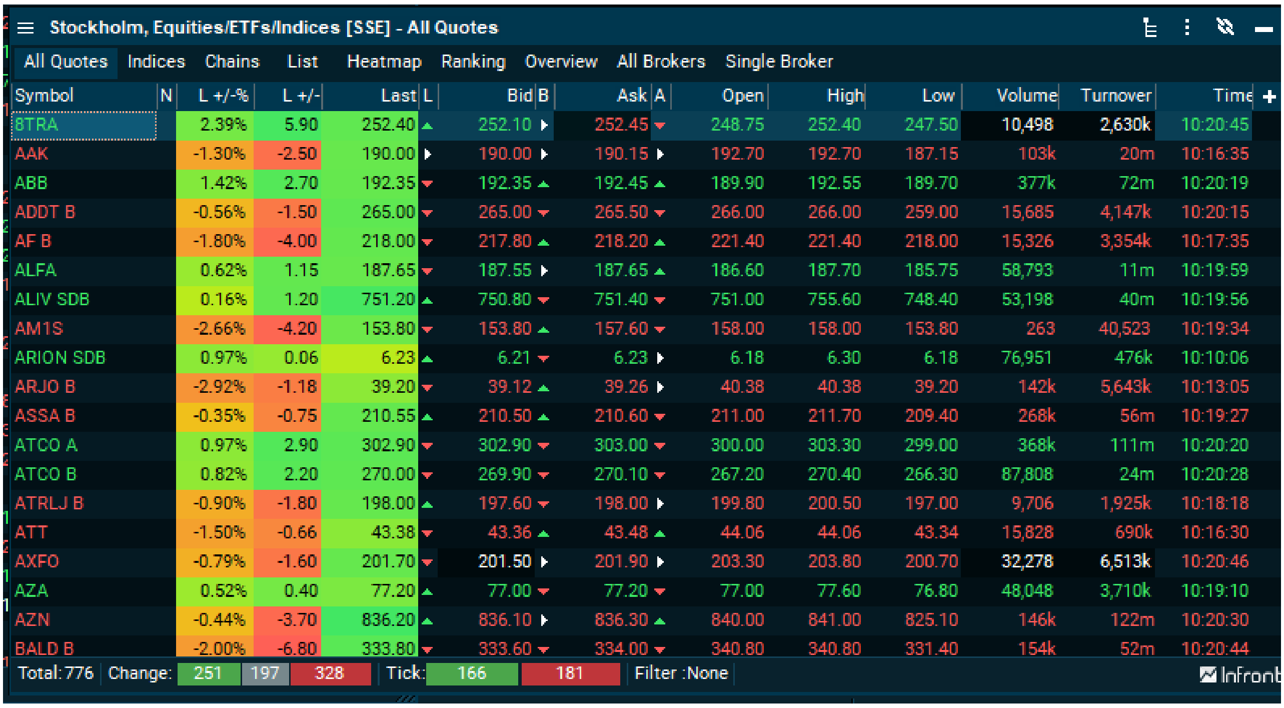
6.9.2 How to access

Right-click any column header and select "Heat Grid".

This opens the "Heat Grid Setup" window. This window lets you select from the columns available in the previous window to paint heat grids on.



The colouring of the columns will colour the highest value of a column with the brightest green and the lowest in deep red.



6.10 Index Overview

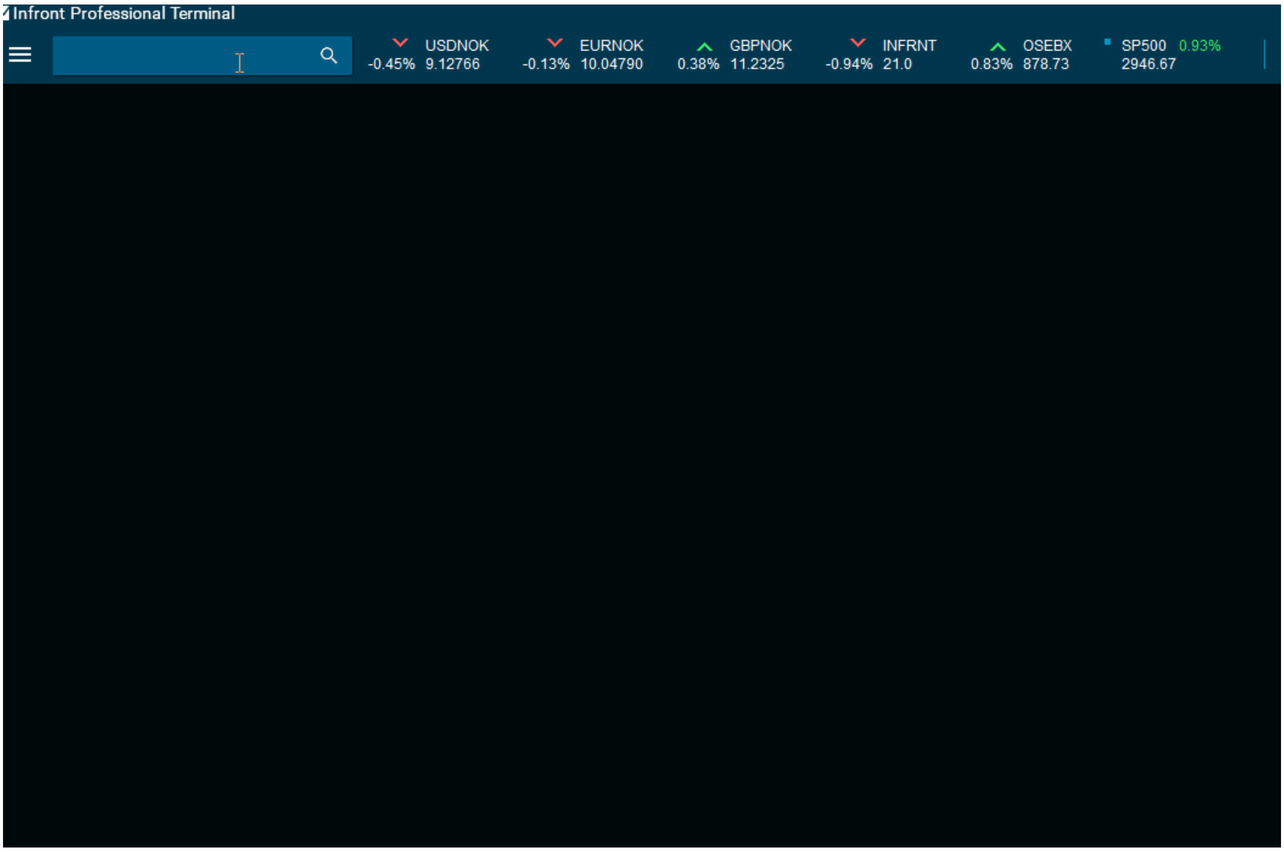
6.10.1 How to open an Index Overview Window

- Type in the index in "Find anything" field > select the relevant index > "Index Overview".
- Right-click in the "Instrument Overview" window > select "Instrument Information" > "Index Overview".
- Use the <CTRL>+<O> shortcut on your keyboard.

6.10.2 What is an "Index Overview" window

The "Index Overview" window displays a lot of content in a relatively small window, separated by tabs. The window gives a full overview of the specific index and allows users to stay up to date.

Element	Description
Overview	Displays summarized information regarding the index, key data and performance, index movers as well as intraday and historical chart. In addition, it contains the leaders and laggers of the index.
Derivatives	Displays associated derivatives markets.
News	Displays news for the companies in the selected index. Filter out news headlines and add alerts to get notified when certain headlines are published.
Index Constituents	Display all of the companies in the index. Here you can easily customize the window by adding preferable columns.



6.11 Instrument Overview

6.11.1 How to open an Instrument Overview window for a specific instrument

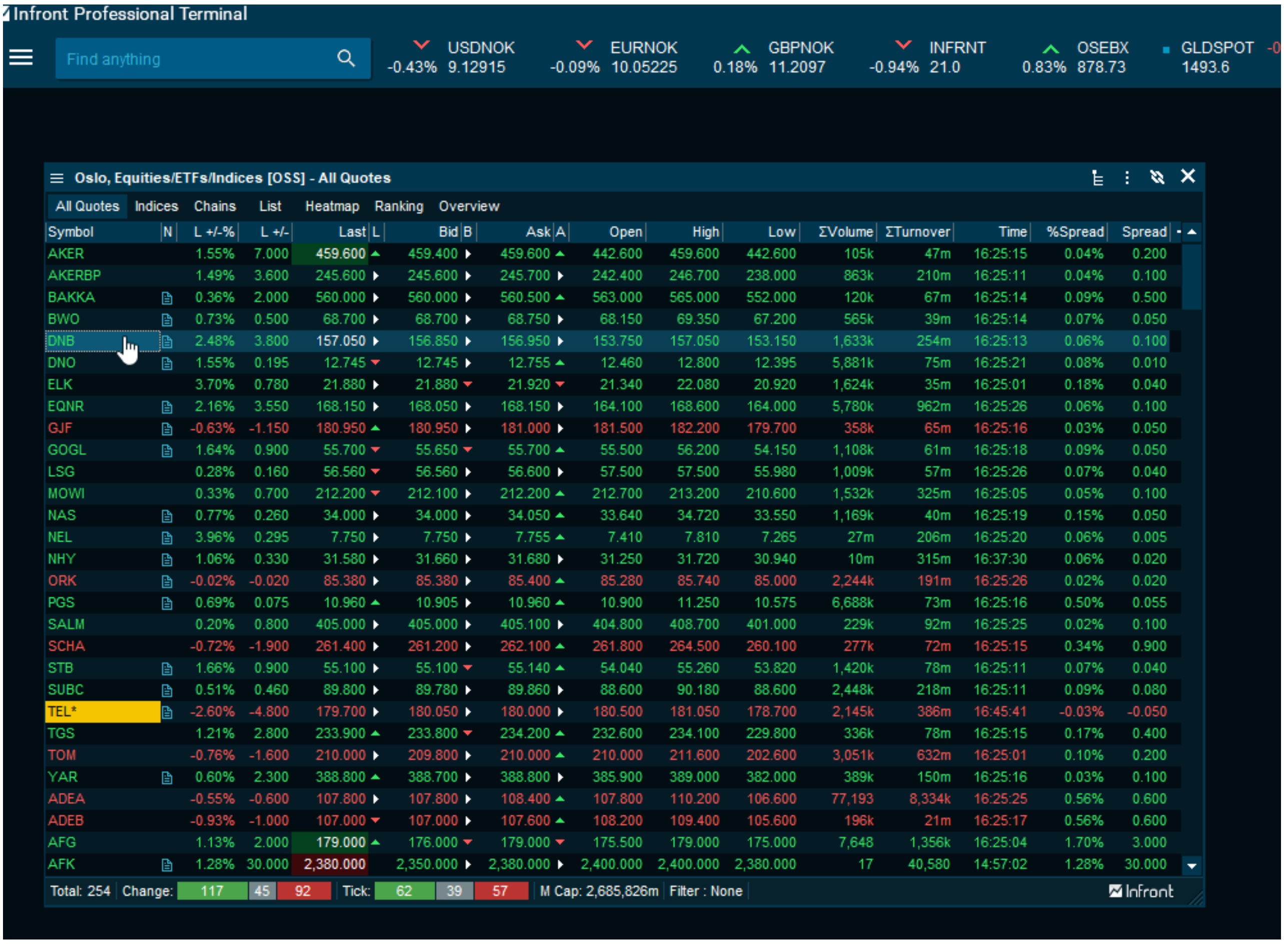
- Right-click the instrument > select "Instrument information" > "Instrument Overview".
- Select the instrument > press <CTRL>+<Q> on your keyboard.

6.11.2 What is an Instrument Overview window

The "Instrument Overview" window is one of the most frequently used windows in Infront Professional Terminal. There is a lot of content packed into a small amount of space, separated by tabs.

Element	Description
Overview	The "Overview" tab contains summarized information regarding price movements, performance and symbol information.
Order book	For more information, see Orderbook.

Element	Description
Details	Shows details regarding performance, trades information and fundamental information such as share cap (usually equal to market cap), segment, country and so on.
Events	Shows relevant company events such as upcoming events in the company calendar, last dividend and rights issues.
Estimates	Estimates provides actual results and consensus estimates from Factset. For Nordic markets, SME Direkt is also available.
News	Shows news for the current symbol. Filter out news headlines and add alerts to get notified when certain headlines are published.
Trades	Shows price movements (usually trades) and information regarding the trades such as trading venue, buyer ID and seller ID. You can also filter a trades list for specific volumes, prices, buyers, sellers, market codes and more. For more information about order types, see Order types.
History	Shows historical price movements and statistics. Select a range of dates by highlighting the relevant rows. The statistics will automatically calculate for the period selected. If no period is selected, then the statistics will be based on the entire history of the symbol.



6.12 Macronomic Indicators

The Macroeconomics Indicators window bring completely new coverage to macroeconomics analytics and data discovery. You can cover a vast array of criteria, from consumer spending and GDP growth, to car manufacturing, weapon sales and unemployment. You can also easily track historical data as well as forecasted data for each and every global data point. With all this data in reach, you need a powerful tool to find and make sense of the information that is relevant to you. The Macroeconomics Indicator makes it easy to search, filter, sort and analyse data so that you can cut through the noise and identify investment opportunities quickly and easily.

6.12.1 How to open the Macroeconomic Indicators

Go to the main menu > "Explore" > under "Macro", you can access the "Macro Indicators".

6.12.2 How to use the Macroeconomic Indicators

With over 7000 macroeconomic indicators available, we've made it easier to find the data points you need using predefined drop-down menus available for region, individual country topics and indicators.

Indicator	Description
Region	In the drop-down menu named "Region", which you will find in the upper left corner of the window, you can select countries for predefined regions such as World, TOP, EU, Scandinavia G7, OPEC and more.
Country	Select and/or clear all or individual countries.
Topic	Select one or several macroeconomic topics that you want to display. You can select topics such as Business, Climate, Consumer, GDP and more.
Indicator	This menu will allow for even more granular selection of specific indicators within a topic. As you will see, the topics you choose in the "Topic" menu will affect the selection in the "Indicator" menu.

6.12.3 Create a Macro Overview

Each indicator comes with a detailed overview window where historical values are combined with forecasted values both in a chart and as a table.

To create a macro overview, use the "Macro Overview" button in the upper right corner of the window.

Alternatively, right-click a row with an indicator, and then select "Instrument Information" > "Macro Overview". Or press <CTRL>+<O> on your keyboard.

Looking at the "Macro Overview" window, the chart displays a green section and a yellow section. The green sections shows the actual data, while the yellow section shows the forecasted data (if available).

6.12.4 Create a Chart

You can also create a "Historical Chart" or a "Bar Chart".

To do so, use the "Historical Chart" or "Bar Chart" buttons in the upper right corner of the window.

Alternatively, right-click a row, select "Charts & Visualizations" > "Historical Chart" or "Bar Chart".

When you place the cursor over one of the bars in the Bar chart, you will see that the corresponding country is highlighted in the
bottom section.

6.12.5 Create a Visual Comparison

You can create a visual comparison of the indicator you have chosen.

To do so, use the "Compare" button in the upper right corner for a full comparison between countries available in that given indicator.

6.12.6 Macro Grid

The tab called "Macro Grid" shows an overview of selected countries and their GDP, GDP growth rate, Interest rate, Inflation rate and Unemployment. Green indicates a high value, while red indicates a low value. Yellow indicates a mid-high value and orange indicates a mid-low value.

6.13 Market pages

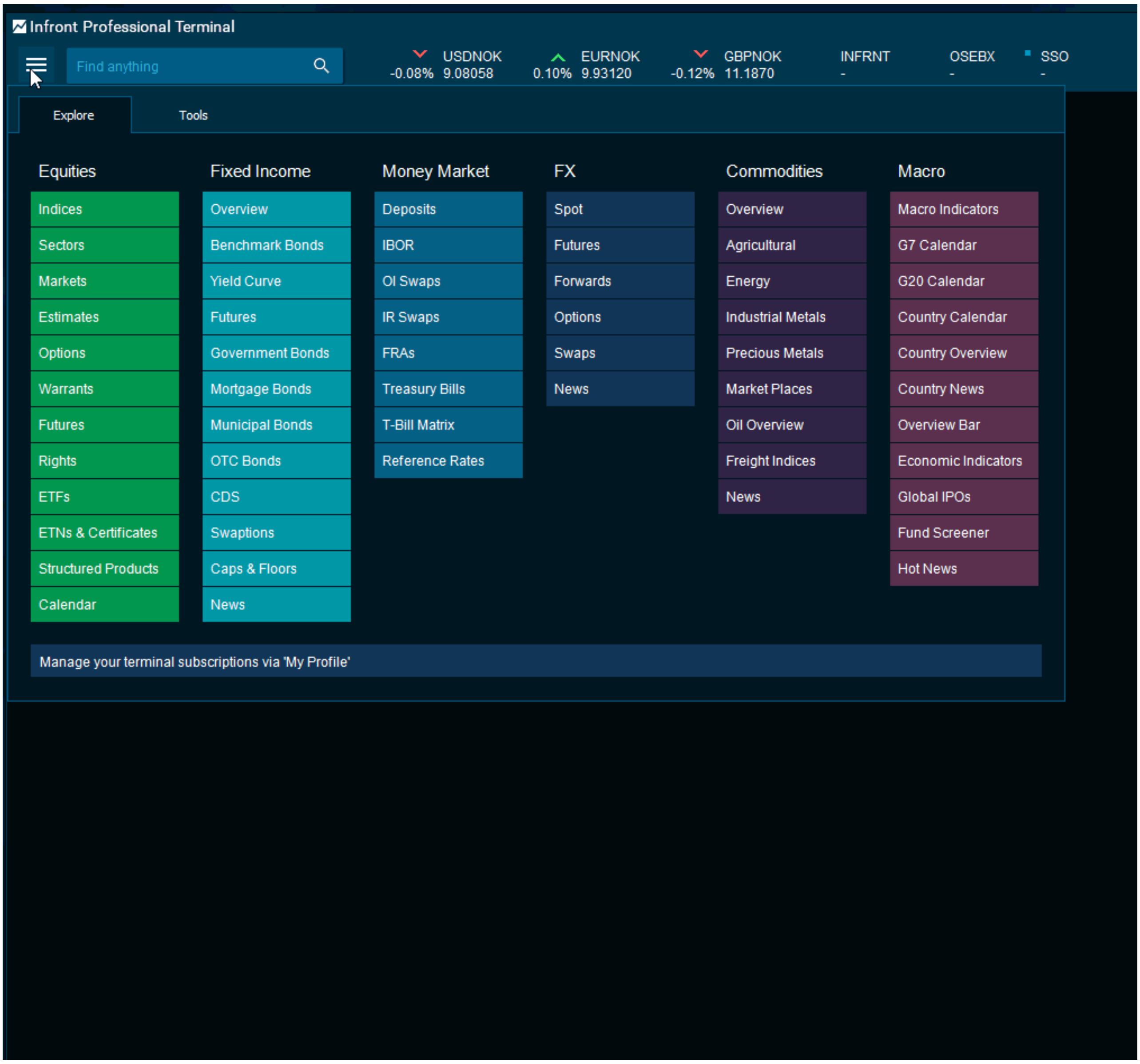
6.13.1 Market Overview

Market Overviews are premade pages that provide useful information for those who want to be updated and gain an insight into the market. You can easily find relevant market data belonging to particular asset classes, sectors and regions.

How to open

Go to the main menu > "Tool" > "Market Overview" > select a market overview (such as Norway Overview Dashboard).

You can right-click any symbol on a market page to get a symbol menu.



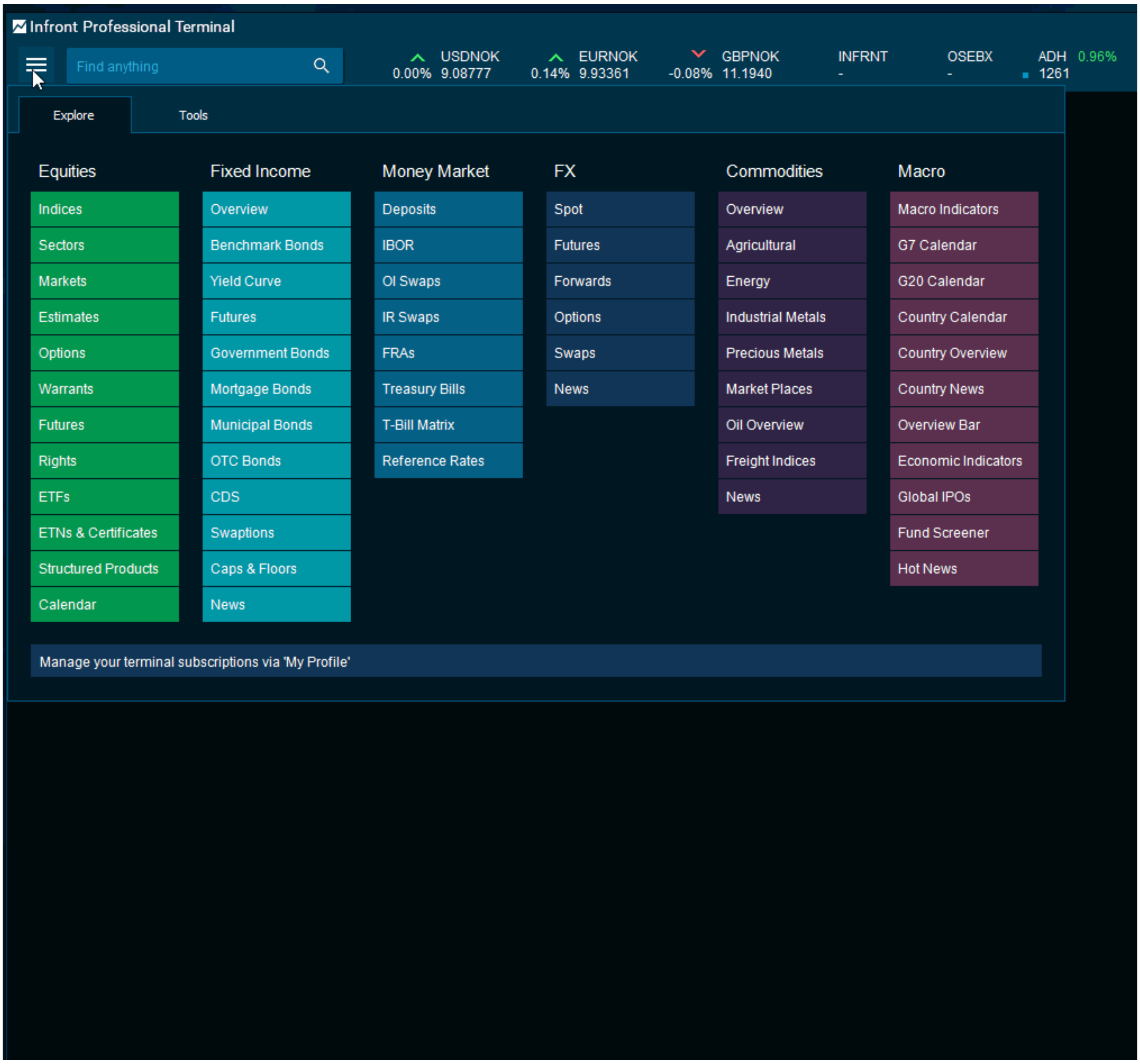
6.13.2 Market pages

Markets are default market pages that gives you full overview of the activity in the market.

The Market window is one of the main ways to see a list of streaming quotes in addition to "Watchlist" and "Market Overview". All information is updated continuously and changes in prices are highlighted. Some markets may have many thousands of symbols available. If this is the case, Infront Professional Terminal will not show the "All Quotes" tab and instead default to the "Chains" tab.

How to open

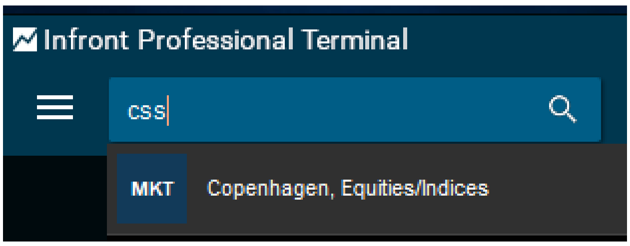
- Use the main menu: Select "Markets" under "Equities" > browse through the different regions or simply begin typing to filter the list.
- Use the "Find anything" field: Type "Market" in the search field and press <ENTER> on the keyboard. Then type the name of a market you are looking for.
- Keyboard shortcut: Use <CTRL>+<SHIFT>+<M>.



6.14 Market window

6.14.1 How to open a Market Window

- Go to the main menu > Select "Markets" under "Equities" > Type in the preferable market and press <ENTER>.
- Type in the preferable market in the "Find anything" field and press <ENTER>.



6.14.2 What is a Market window

The "Market" window is one of the main ways to see a list of streaming quotes in addition to Watchlist and Market Pages.

The "Market" window displays a number of tabs depending on which market you are looking at. It is possible to filter the window by adding several columns in order to display data.

Element	Description
All Quotes	All information is updated continuously and changes in prices are highlighted. Some markets may have many thousands of symbols available. If this is the case, the terminal will not show "All Quotes" and instead default to the "Chains" tab.
Indices	The "Indices" tab has the same features as the "All Quotes" tab but only displays indices for the selected market.
Chains	The "Chains" tab offers a selection of market lists usually containing a specific segment, category or constituents belonging to the market.
List	The "List" tab in a market window only displays the symbols you have added manually from the "All Quotes", "Indices" or "Chains" tab. To do this, right-click a symbol and selecting "Edit" > "Add to List". By default, all symbols added to the "List" tab in market windows are automatically saved when the application closes.

6.14.3 How to use

Element	Description
Symbol information	To get more information about a symbol, right-click any row and choose an option from the right-click menu.
Keyboard search	With the window selected, begin typing on your keyboard to search within the list. Once you press <ENTER> on your keyboard, the symbol will be displayed on the top of the "Market" window. See User interface to configure what should happen when you search in this window.
Select Columns	If you want to add, change or remove any of the data shown in a "Market" window, open the "Settings" menu > "Select Columns".
Sorting Columns	Sort by turnover, last price or any other column by double-clicking the column headers. The list will automatically keep itself sorted.

Custom headlines can be added by right-clicking on any instrument in the list > select "Edit" > "Add headlines".

Notice that in a list with headlines, sorting by clicking the column captions is disabled. You can move symbols up or down your list by selecting it, and using the "Up" and "Down" arrows in the interface.

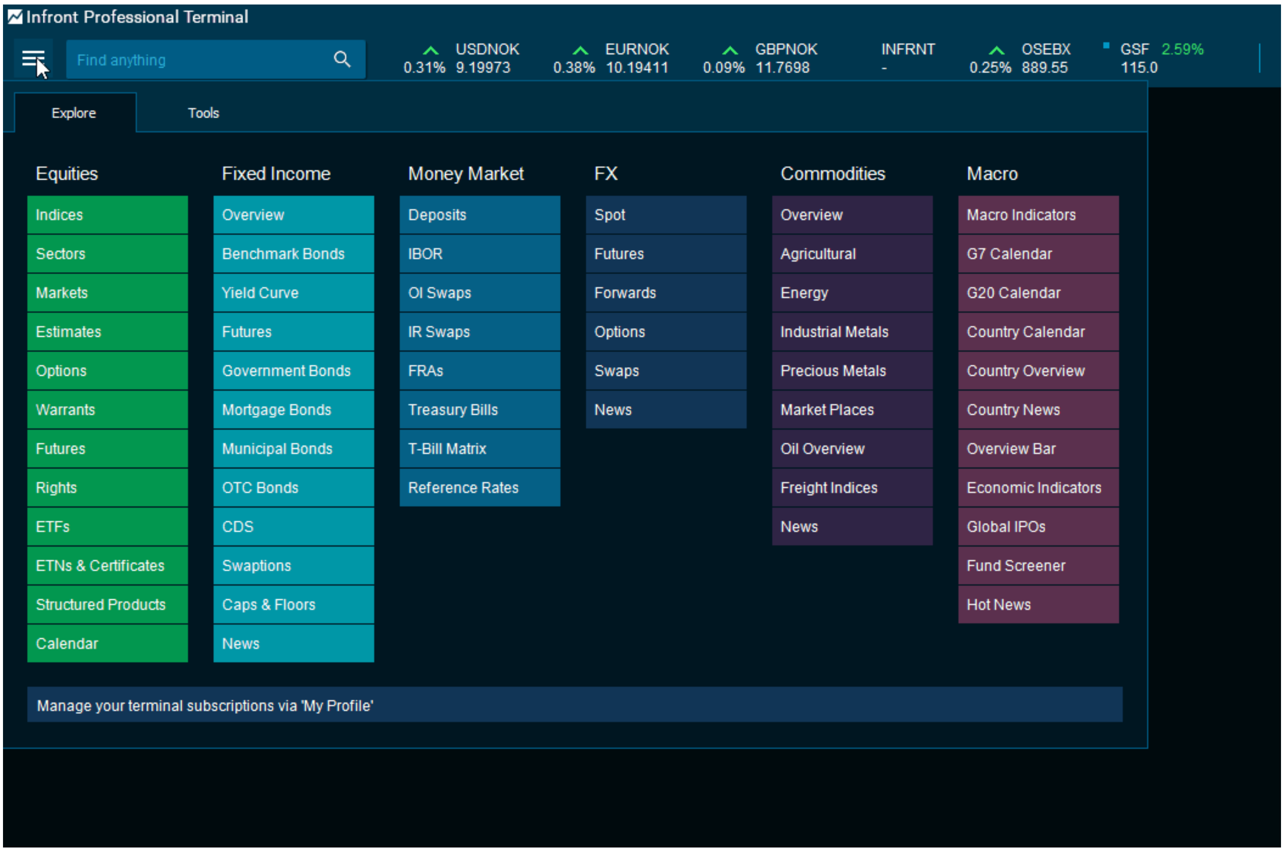
6.14.4 Highlighting and modifying symbol

Element	Description
Custom Background color	Change background color for a symbol by right-clicking > select "Edit" > then "Symbol Color". To remove a custom background color, right-click the symbol and select "Edit" > then "Clear Symbol Color".
Custom Symbol Description	Enter a customized description for a symbol by right-clicking > select "Edit" > "Custom Symbol Description". The custom description will also be used by other windows in the Infront Professional Terminal, such as charts.

To reduce potential confusion, all custom descriptions begin with an asterisk (*).

To remove a custom description, right-click the symbol and select "Clear Custom Description".

Element	Description
Ranking	The "Ranking" tab displays today's winners, losers and highest turnover. Select whether the ranking should be based on "all quotes", "chains" or "list" by selecting the source.
Overview	"Overview" provides a visual view of the selected market, the main market index, percent of shares traded (calculated using market capitalization) and number of symbols up/down.



6.15 Top Investors

The "Top Investors" window provides information about the largest stockholders on selected exchanges for a company. The "Top Investors" combines the number of stocks with the current market price and calculates the market value on each investors portfolio. It also calculates the share percentage each investor holds in the company, and presents this information in a diagram. In a case where one investor is among the largest shareholders in several companies listed on the Exchange, each market value is presented in a diagram with a percentage of the investor's total portfolio.

6.15.1 Availability and Requirements

Professional user on Oslo Stock Exchange (Top 50 Investors).

"Top Investors" are updated on Monday every week.

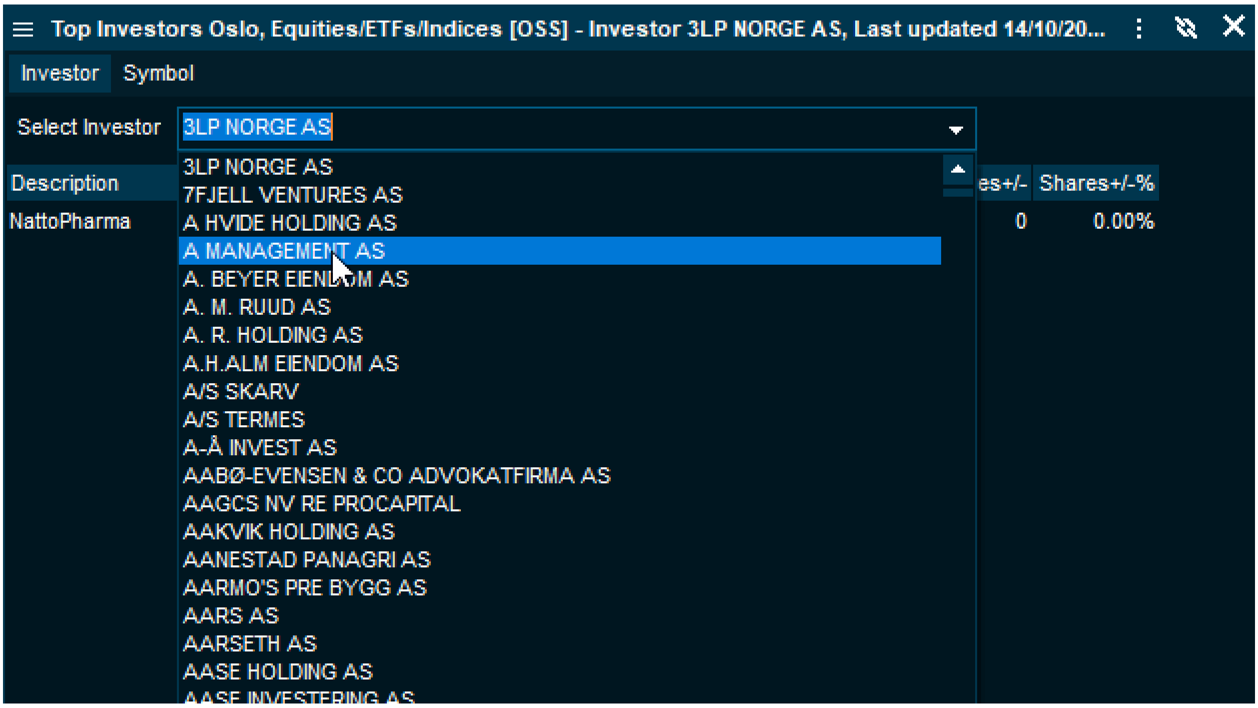
6.15.2 How to open Top Investors

- Right-click an instrument on Oslo Stock Exchange > select "Instrument Information" > "Top Investors".
- Select the stock you want to see "Top Investors" for and press <CTRL>+<SHIFT>+<T> on your keyboard.

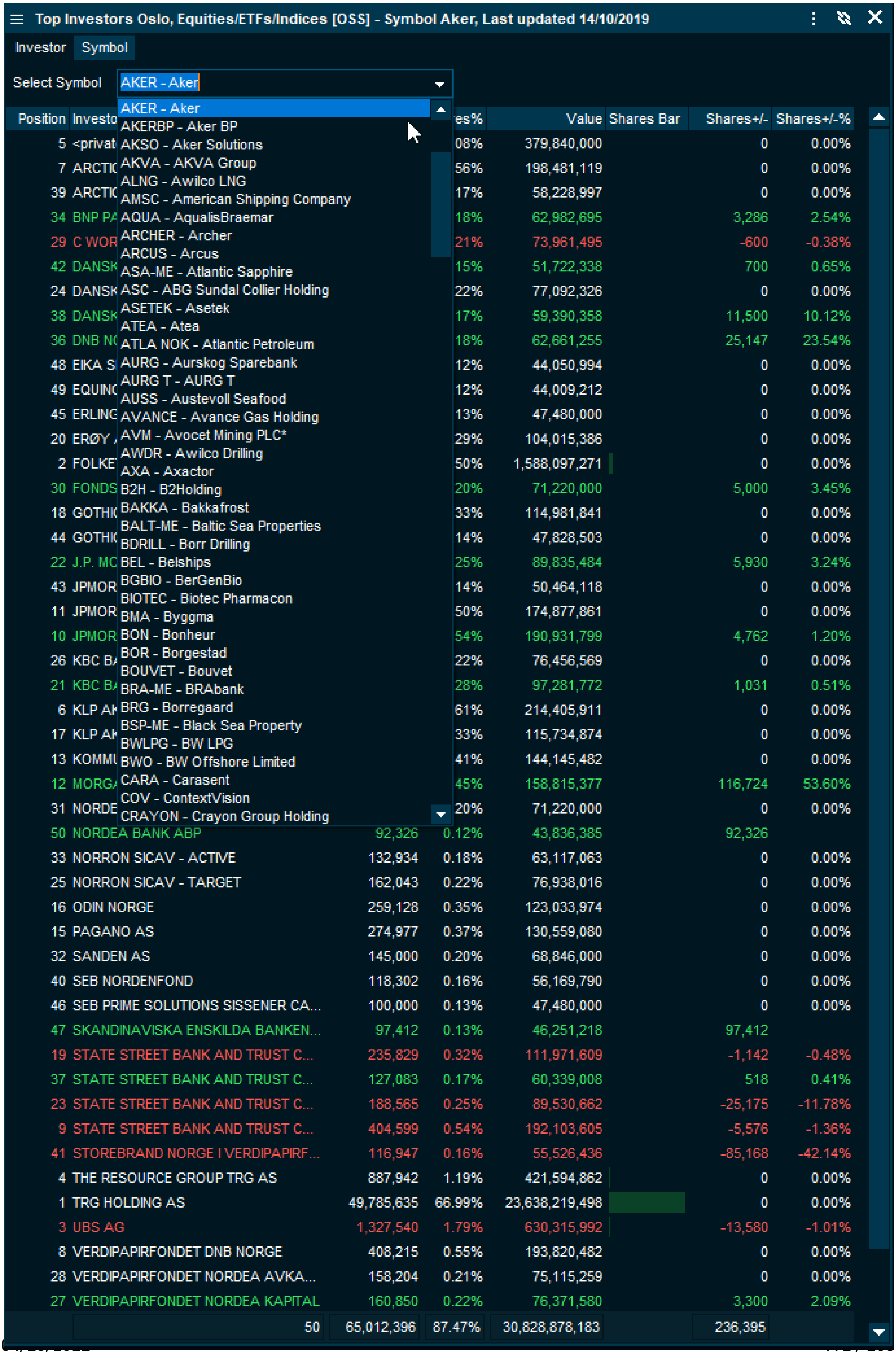
6.15.3 Investor and Symbol

The "Top Investors" window includes two tabs, "Investor" and "Symbol".

- The "Investor" tab shows the investors and which companies the investors are shareholders in.



- The "Symbol" tab displays the largest share holders in the selected company.



Position	Investo		es%	Value	Shares Bar	Shares+/-	Shares+/-%
5	<privat		08%	379,840,000		0	0.00%
7	ARCTIC		56%	198,481,119		0	0.00%
39	ARCTIC		17%	58,228,997		0	0.00%
34	BNP PA		18%	62,982,695		3,286	2.54%
29	C WOR		21%	73,961,495		-600	-0.38%
42	DANSK		15%	51,722,338		700	0.65%
24	DANSK		22%	77,092,326		0	0.00%
38	DANSK		17%	59,390,358		11,500	10.12%
36	DNB NO		18%	62,661,255		25,147	23.54%
48	EIKA S		12%	44,050,994		0	0.00%
49	EQUINO		12%	44,009,212		0	0.00%
45	ERLING		13%	47,480,000		0	0.00%
20	ERØY A		29%	104,015,386		0	0.00%
2	FOLKE		50%	1,588,097,271		0	0.00%
30	FONDS		20%	71,220,000		5,000	3.45%
18	GOTHIC		33%	114,981,841		0	0.00%
44	GOTHIC		14%	47,828,503		0	0.00%
22	J.P. MO		25%	89,835,484		5,930	3.24%
43	JPMOR		14%	50,464,118		0	0.00%
11	JPMOR		50%	174,877,861		0	0.00%
10	JPMOR		54%	190,931,799		4,762	1.20%
26	KBC BA		22%	76,456,569		0	0.00%
21	KBC BA		28%	97,281,772		1,031	0.51%
6	KLP AK		61%	214,405,911		0	0.00%
17	KLP AK		33%	115,734,874		0	0.00%
13	KOMMU		41%	144,145,482		0	0.00%
12	MORGA		45%	158,815,377		116,724	53.60%
31	NORDE		20%	71,220,000		0	0.00%
50	NORDEA BANK ABP	92,326	0.12%	43,836,385		92,326	
33	NORRON SICAV - ACTIVE	132,934	0.18%	63,117,063		0	0.00%
25	NORRON SICAV - TARGET	162,043	0.22%	76,938,016		0	0.00%
16	ODIN NORGE	259,128	0.35%	123,033,974		0	0.00%
15	PAGANO AS	274,977	0.37%	130,559,080		0	0.00%
32	SANDEN AS	145,000	0.20%	68,846,000		0	0.00%
40	SEB NORDENFOND	118,302	0.16%	56,169,790		0	0.00%
46	SEB PRIME SOLUTIONS SISSENER CA...	100,000	0.13%	47,480,000		0	0.00%
47	SKANDINAVISKA ENSKILDA BANKEN...	97,412	0.13%	46,251,218		97,412	
19	STATE STREET BANK AND TRUST C...	235,829	0.32%	111,971,609		-1,142	-0.48%
37	STATE STREET BANK AND TRUST C...	127,083	0.17%	60,339,008		518	0.41%
23	STATE STREET BANK AND TRUST C...	188,565	0.25%	89,530,662		-25,175	-11.78%
9	STATE STREET BANK AND TRUST C...	404,599	0.54%	192,103,605		-5,576	-1.36%
41	STOREBRAND NORGE I VERDIPAPIRF...	116,947	0.16%	55,526,436		-85,168	-42.14%
4	THE RESOURCE GROUP TRG AS	887,942	1.19%	421,594,862		0	0.00%
1	TRG HOLDING AS	49,785,635	66.99%	23,638,219,498		0	0.00%
3	UBS AG	1,327,540	1.79%	630,315,992		-13,580	-1.01%
8	VERDIPAPIRFONDET DNB NORGE	408,215	0.55%	193,820,482		0	0.00%
28	VERDIPAPIRFONDET NORDEA AVKA...	158,204	0.21%	75,115,259		0	0.00%
27	VERDIPAPIRFONDET NORDEA KAPITAL	160,850	0.22%	76,371,580		3,300	2.09%
	50	65,012,396	87.47%	30,828,878,183		236,395	

6.16 Broker Statistics

"Broker Statistics" provides information on which brokers are purchasing and selling in the market. It also gives detailed information about how many trades the different brokers are doing, what their buy volume, sell volume and net buy volume is and so on. "Broker Statistics" are only available on:

- Stockholm Stock Exchange
- Copenhagen Stock Exchange
- Helsinki Stock Exchange
- Bolsa de Madrid, Equities
- Toronto Stock Exchange

6.16.1 How to open Broker Statistics

- Open one of the markets that display "Broker Statistics" > right-click one of the companies listed on the corresponding stock exchange > select "Trades & Orders" > go to "Broker Statistics".
- Select the company in the "Market" window > press <CTRL>+<SHIFT>+<B> on your keyboard.

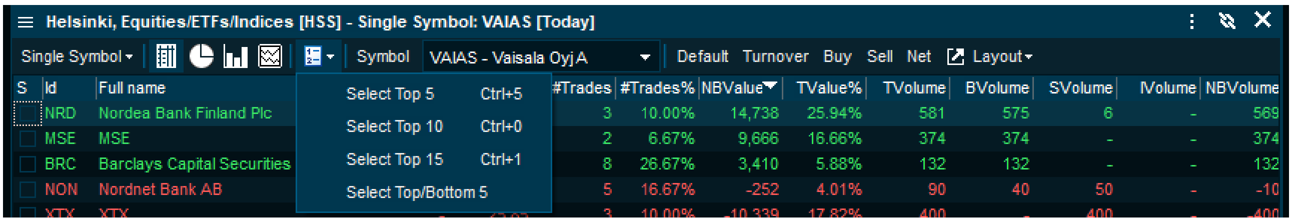
6.16.2 How to use Broker Statistics

Realtime and historical data

The broker statistics module provides you both real time (intraday) and historical data. To change the time period, right-click and select "Interval". Historical data is available for up to three years.

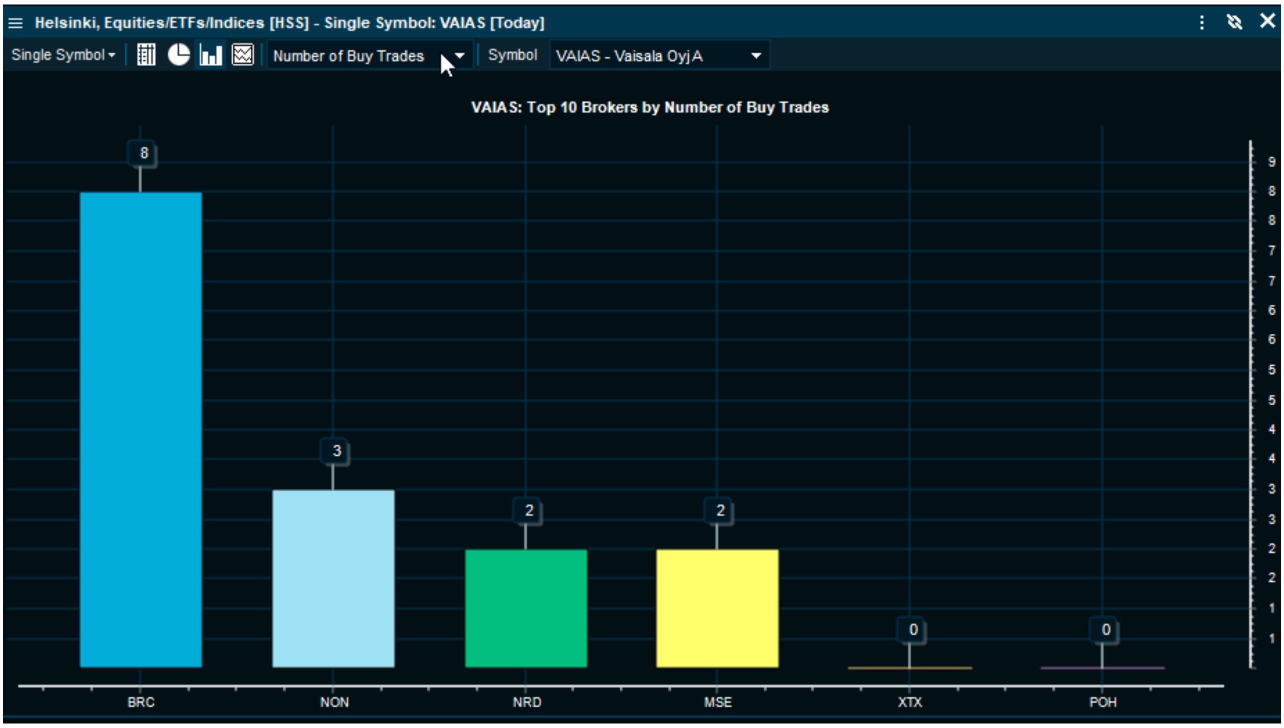
Select criteria to drill down

Use the "Show" drop-down list to select a range of brokers you want to see visually, or select the checkboxes to the left of the broker codes.



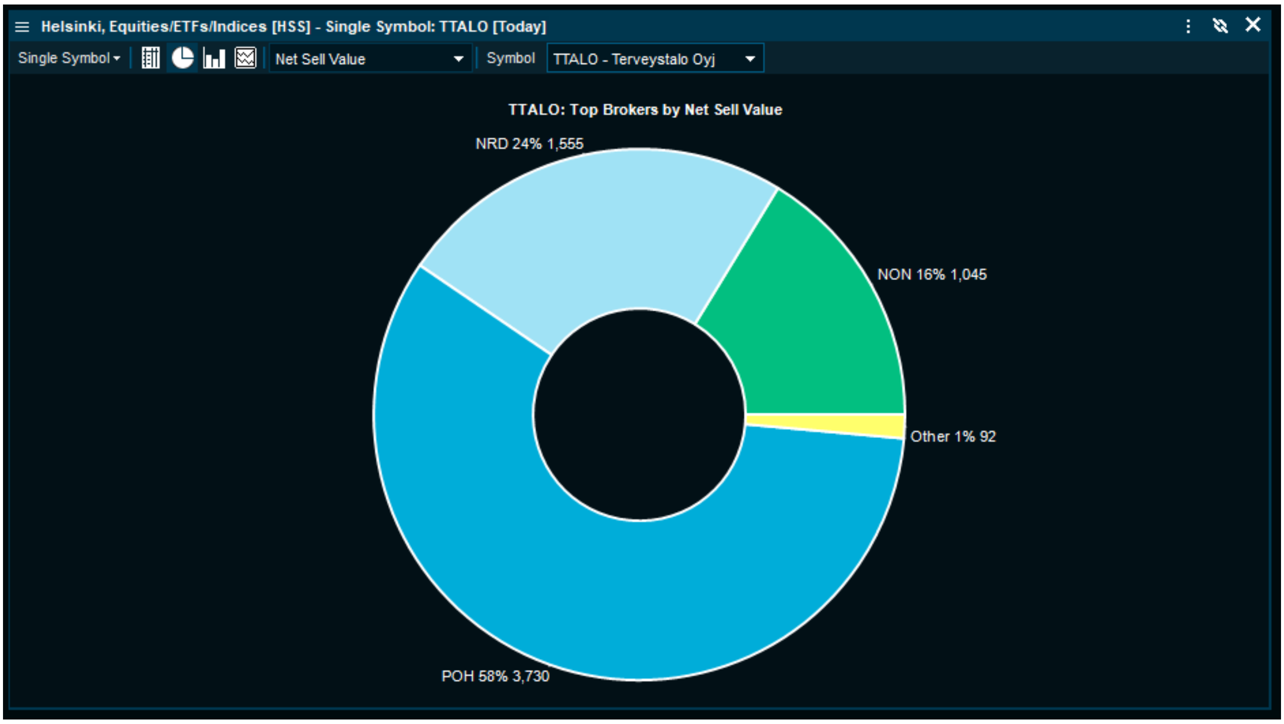
Ranking Bar Chart

Click the "Ranking Bar Chart" icon to rank the brokers by preferable factor.



Ranking Pie Chart

The "Ranking Pie Chart" provides a visual representation of all broker statistics data.

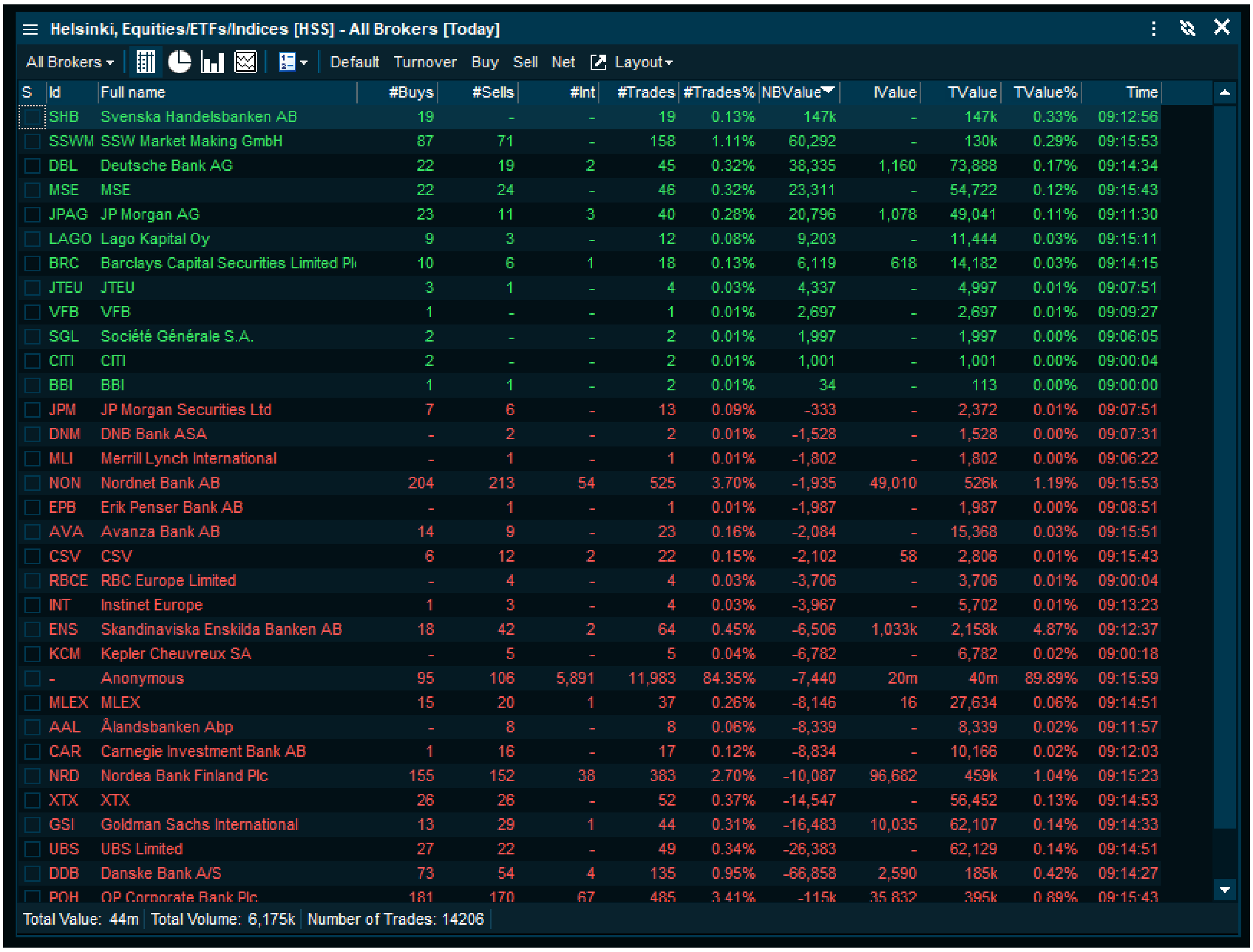


6.16.3 All Brokers / Single Symbol

You can select between the following views.

All brokers

Statistics for one market where all information about each broker is accumulated. In the "Table" view, each broker is represented with a number of trades executed, turnover and more.



S	Id	Full name	#Buys	#Sells	#Int	#Trades	#Trades%	NBValue	IValue	TValue	TValue%	Time
	SHB	Svenska Handelsbanken AB	19	-	-	19	0.13%	147k	-	147k	0.33%	09:12:56
	SSWM	SSW Market Making GmbH	87	71	-	158	1.11%	60,292	-	130k	0.29%	09:15:53
	DBL	Deutsche Bank AG	22	19	2	45	0.32%	38,335	1,160	73,888	0.17%	09:14:34
	MSE	MSE	22	24	-	46	0.32%	23,311	-	54,722	0.12%	09:15:43
	JPAG	JP Morgan AG	23	11	3	40	0.28%	20,796	1,078	49,041	0.11%	09:11:30
	LAGO	Lago Kapital Oy	9	3	-	12	0.08%	9,203	-	11,444	0.03%	09:15:11
	BRC	Barclays Capital Securities Limited Pl	10	6	1	18	0.13%	6,119	618	14,182	0.03%	09:14:15
	JTEU	JTEU	3	1	-	4	0.03%	4,337	-	4,997	0.01%	09:07:51
	VFB	VFB	1	-	-	1	0.01%	2,697	-	2,697	0.01%	09:09:27
	SGL	Société Générale S.A.	2	-	-	2	0.01%	1,997	-	1,997	0.00%	09:06:05
	CITI	CITI	2	-	-	2	0.01%	1,001	-	1,001	0.00%	09:00:04
	BBI	BBI	1	1	-	2	0.01%	34	-	113	0.00%	09:00:00
	JPM	JP Morgan Securities Ltd	7	6	-	13	0.09%	-333	-	2,372	0.01%	09:07:51
	DNM	DNB Bank ASA	-	2	-	2	0.01%	-1,528	-	1,528	0.00%	09:07:31
	MLI	Merrill Lynch International	-	1	-	1	0.01%	-1,802	-	1,802	0.00%	09:06:22
	NON	Nordnet Bank AB	204	213	54	525	3.70%	-1,935	49,010	526k	1.19%	09:15:53
	EPB	Erik Penser Bank AB	-	1	-	1	0.01%	-1,987	-	1,987	0.00%	09:08:51
	AVA	Avanza Bank AB	14	9	-	23	0.16%	-2,084	-	15,368	0.03%	09:15:51
	CSV	CSV	6	12	2	22	0.15%	-2,102	58	2,806	0.01%	09:15:43
	RBCE	RBC Europe Limited	-	4	-	4	0.03%	-3,706	-	3,706	0.01%	09:00:04
	INT	Instinet Europe	1	3	-	4	0.03%	-3,967	-	5,702	0.01%	09:13:23
	ENS	Skandinaviska Enskilda Banken AB	18	42	2	64	0.45%	-6,506	1,033k	2,158k	4.87%	09:12:37
	KCM	Kepler Cheuvreux SA	-	5	-	5	0.04%	-6,782	-	6,782	0.02%	09:00:18
	-	Anonymous	95	106	5,891	11,983	84.35%	-7,440	20m	40m	89.89%	09:15:59
	MLEX	MLEX	15	20	1	37	0.26%	-8,146	16	27,634	0.06%	09:14:51
	AAL	Ålandsbanken Abp	-	8	-	8	0.06%	-8,339	-	8,339	0.02%	09:11:57
	CAR	Carnegie Investment Bank AB	1	16	-	17	0.12%	-8,834	-	10,166	0.02%	09:12:03
	NRD	Nordea Bank Finland Plc	155	152	38	383	2.70%	-10,087	96,682	459k	1.04%	09:15:23
	XTX	XTX	26	26	-	52	0.37%	-14,547	-	56,452	0.13%	09:14:53
	GSI	Goldman Sachs International	13	29	1	44	0.31%	-16,483	10,035	62,107	0.14%	09:14:33
	UBS	UBS Limited	27	22	-	49	0.34%	-26,383	-	62,129	0.14%	09:14:51
	DDB	Danske Bank A/S	73	54	4	135	0.95%	-66,858	2,590	185k	0.42%	09:14:27
	POH	OP Corporate Bank Plc	181	170	67	485	3.41%	-115k	35,832	395k	0.89%	09:15:43

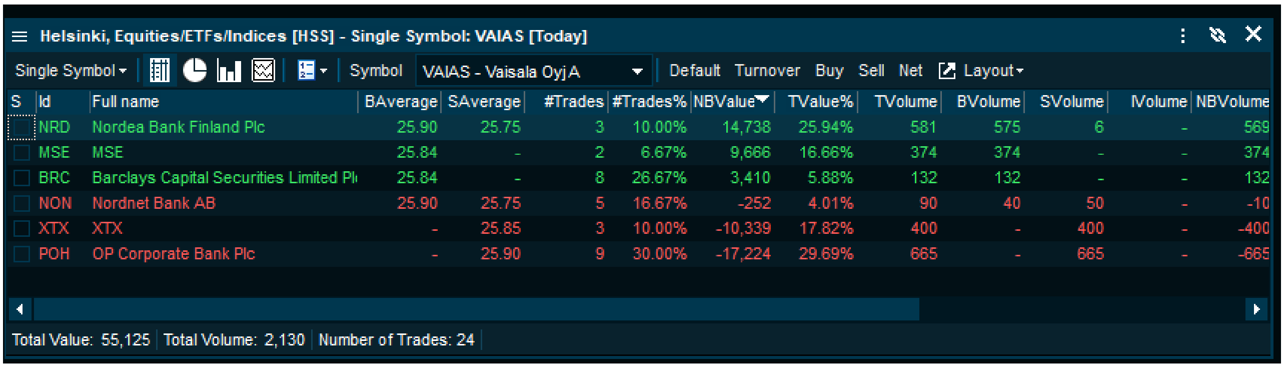
Total Value: 44m Total Volume: 6,175k Number of Trades: 14206

Available columns

- S (checkbox for Timeline Selected)
- Full name (the broker's name)
- ID (the broker's ID)
- Time (time of last trade/update)
- #Buys (number of Buy Trades)
- #Sells (number of Sells Trades)
- #Int Trades (number of Internal Trades)
- #Trades (total number of trades)
- #Trades % (trades shown in percent of total trades)
- NB Value (Net Buy Value)
- IValue (Internal Value)
- TValue (Turnover Value)
- TValue% (Turnover Value in percent)

Single Symbol

Statistics for one symbol where all active brokers activity is accumulated. This view displays accumulated data on all brokers active for the selected symbol. This enables you to get fast access to the brokers that are the largest buyers, sellers, most active and so on.



S	Id	Full name	BAverage	SAverage	#Trades	#Trades%	NBValue	TValue%	TVolume	BVolume	SVolume	IVolume	NBVolume
	NRD	Nordea Bank Finland Plc	25.90	25.75	3	10.00%	14,738	25.94%	581	575	6	-	569
	MSE	MSE	25.84	-	2	6.67%	9,666	16.66%	374	374	-	-	374
	BRC	Barclays Capital Securities Limited Pl	25.84	-	8	26.67%	3,410	5.88%	132	132	-	-	132
	NON	Nordnet Bank AB	25.90	25.75	5	16.67%	-252	4.01%	90	40	50	-	-10
	XTX	XTX	-	25.85	3	10.00%	-10,339	17.82%	400	-	400	-	-400
	POH	OP Corporate Bank Plc	-	25.90	9	30.00%	-17,224	29.69%	665	-	665	-	-665

Available columns

- S (checkbox for Timeline Selected)
- Full name (the broker's name)
- ID (the broker's ID)
- Time (time of last trade/update)
- #Buys (number of Buy Trades)
- #Sells (number of Sells Trades)
- #Int Trades (number Internal Trades)
- #Trades (total number of Internal Trades)
- #Trades % (trades shown in percent of total trades)
- NB Value (Net Buy Value)
- IValue (Internal Value)
- TValue (Turnover Value)
- TValue% (Turnover Value in percent)

6.17 Derivatives

The program includes a window for derivatives that structures and presents the data in a certain view.

6.17.1 How to open the Derivatives window

Go to the main menu > "Tools" > "Derivatives" in the "Markets" category.

6.17.2 Requirements

- Orc Software Derivatives feeds (for example, Eurex, EuroNext Liffe, OMX)
- Access to "Advanced Derivatives" functionality package

6.17.3 What is the Derivatives window

The "Derivatives" window consists of the following tabs:

- Outrights
- Strategies
- Spread Matrix
- Packs

Outrights

The "Outrights" tab shows all the options and the combo symbols for the selected underlying instrument. There is a list of default columns, but this is configurable by the user. The user can sort on any column and right-click to get to the symbol commands for a single symbol, including "Overview", "Orderbook", "Chart", "Buy", "Sell" and so on.

Spread Matrix

The "Spread Matrix" is used to compare the futures and forwards of an underlying, and get information about any combination contracts that are made up of these futures or forwards. You can also trade from the "Spread Matrix". The prices and volumes of calendar spreads (the "roll") are set out in a graph. All futures and forwards are represented both with a column and a row. The futures/forwards are sorted according to their expiry date. Early expiry dates are found to the left along the x-axis and near the top along the y-axis. If there is a combination of two futures/forwards, then you can find the combination in the intersection of the contracts. Each cell in the "Spread Matrix" provides information about the bid (Bid), ask (Ask), and last (Last) price of the contract, the volumes on the bid (b#) and ask (a#) side, and the volume in the last trade (Last #). There are two types of spreads displayed in the "Spread Matrix", front month over and back month over.

Front month over

The leg with the later expiry date is bought and the leg with the earlier expiry date is sold.

Back month over

The leg with the later expiry date is sold and the leg with the earlier expiry date is bought.

Which spread type is shown is determined automatically by the "Spread Matrix" and cannot be changed by the user. You cannot display two different spread types at the same time.

Example

In the preceding screen shot, you can see that there are two combination contracts, the OMX3DC and the OMX CS K03-M03 contracts. When you buy an OMX3DC combination, you buy a OMX May Forward contract, and sell an OMX Apr Forward. Hence, this "Spread Matrix" only show front month over spreads.

Calculate implied values for combo derivatives

Mostly used in the new "Derivatives" window, we now dynamically calculate the implied values for combination symbols. Each combination symbol has a number of leg symbols and volumes associated with it. The program now calculates implied Bid, Ask, BidSize and AskSize from the streaming quotes of the legs. In addition, there are Best Bid/Ask/BidSize/AskSize columns that show the "best" of the actual combo instrument prices and the implied prices from the legs.

6.18 Option Calculations

The program has an integrated real time module for calculations of implied volatility and "Greeks" such as Vega, Theta, Gamma and Delta. The calculation methods are Black Scholes, Black Scholes 76 and Binominal method.

6.18.1 How to open Option Calculations

Go to the main menu > select "Options" under "Equities" > choose a market.

Put/Call tab

A drop-down menu appears on to the left. Choose an underlying instrument. This displays all options connected to the instrument. Calls is on the left side and Puts on the right. Forwards or futures are displayed to the left. Every expiry change is marked with a different background color (can be changed in the "Settings" menu).

> The columns you select are duplicated and shown on both sides, both for call and put. Some columns are removed because they take up too much space, and do not show any useful information (ISIN, Symbol, Description, Subtype). Some columns have equal values for both Call and Put; these are shown in the center (Shortsynth, Longsynth, Strike, Expire Years, Expire Month, Expire Date, Expire Days). Some columns will have the same order on both sides, as close to the middle as possible (Bid, Bid Impvol, Bid Yield, Bid Arrow, Bid Size, Ask, Ask Impvol, Ask Yield, Ask Arrow, Ask Size). All other columns are seen in reverse on both sides.

6.18.2 Filtering

You can filter which options are shown in a series by ticking off the checkbox on the top.

Element	Description
Bid/Ask	Include only lines with Bid or Ask (on the put or call side). Last - include only lines with Last (on the put or call side).
Strike	Keeps only 5 options above and below underlying last.
Underlying	Select the underlying instrument by using the drop-down menu.
Expires	You can also filter the options by expiry date. The generic expires (<First expiry>, <Second expiry>, ...) are useful when creating workspaces because they always refer to the first three upcoming expiry dates and do not need to be modified.
Filter	Click this if you have a filter, then increasing activity will include further options. The filter is not dynamic. If there is a Bid price on an option, this will not be visible until you click "Update Filter" (or turn the Bid/Ask filter on and off). You can sort all columns. To go back to ordinary "Expire/Strike" sort, select "Expire Month".
Layout	You can choose between "Analysis", "Default" and "Trading".
Volatility	It is possible to choose between "Implied", "Historical" and "Custom".

Calculating Theoretical Values

Select "Option Calculator Setup" or right-click an option or stock and select "Calculation Setup" > select the feed for the underlying symbols (for example, Oslo Stock Exchange) and set the risk-free rate for that market (for example, 4%). You can also set up volatility for the underlying symbol manually, or fill in the number of days you want and ask the server to calculate a historical volatility.

Example

Click "Select All" > "Set Days" > enter "30", press <ENTER> > click "Calc Volatility". A request is sent to the server to calculate historic volatility over 30 days for all stocks on "Oslo Stocks" (this may take a while to save the first time). You can also fill in future dividends for each stock.

The values in the "Quote" windows are now being calculated.

For more information, see Calculation Setup.

6.19 News (market data)

6.19.1 Mixed news window

Infront Professional Terminal includes a "News" window where you can select and display news from several sources and filter the news in different ways. The news sources available vary from country to country. For more information about sources, please contact your vendor. Each news source is continuously updated and can be presented in text, HTML or other standard formats.

To open the main "News" window, select the main menu > "Tools" > "News". This opens a list of countries with available sources. To select from the list of sources, click the "+" icon to open the list. Click the sources you want displayed, then click "OK". If you want to select all sources, click the country node.

News in HTML format can be displayed in a browser within the program or in an external browser (such as Google Chrome).

The top panel in the "News" window displays a drop-down list with selected sources. To select one source only, select the corresponding source in the list. To edit the list, click the "Edit News Services" button or right-click in the "News" window and select "Edit News Services". Click the sources you want displayed/ removed and click "OK".

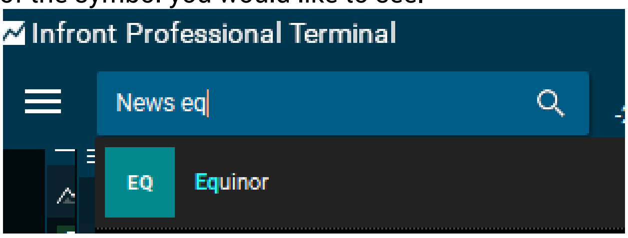
The top panel in the news window displays a drop-down list with chosen sources. To select one source only, mark the source in the list. To edit the list, click the "Edit News Services" button or right-click in the "News" window and select "Edit News Services". Click the sources you want displayed/removed and click "OK".

6.19.2 Company specific News window

The company specific "News" window includes only news for a specific company.

A company specific news window can be opened in three different ways.

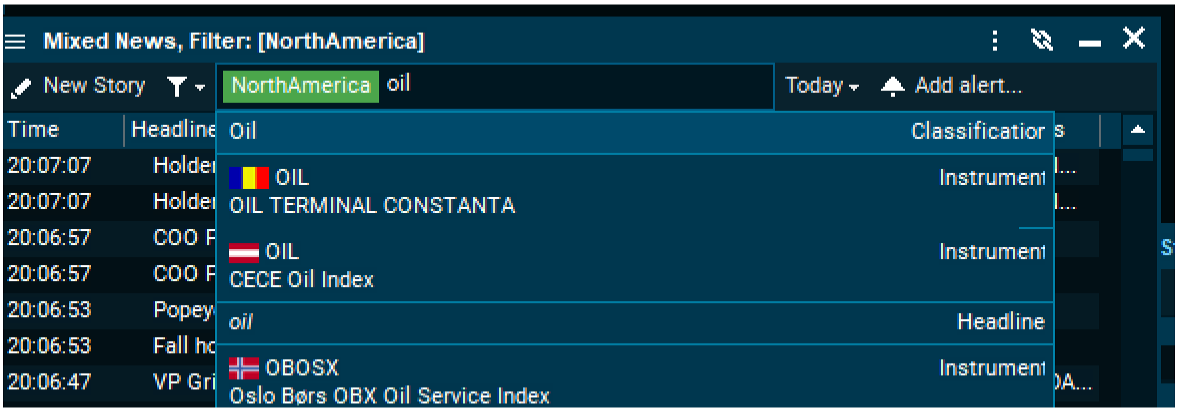
- Search for "news" in the "Find anything" search field > press <ENTER> and type in the ticker or name of the symbol you would like to see.



- Right-click a symbol > "News & Research" > "News".
- Select a symbol and press <CTRL>+<SHIFT>+<W>.

6.19.3 Filter News

Filter news by typing directly in the search field. For example, you can search for "North America" and see the filter criteria on the right hand side is "Geographical Area". If you also add "oil" in the search field, you can see that this can be filtered as a "classification".



You can also filter news stories by clicking the funnel icon and select "edit filter". Set conditions to filter the stories so that only stories that satisfy the conditions you have set are included in the list.

Element	Description
Text in headline	Type a filter expression string that must appear as part of the news headline matches will appear in bold.
Symbol tickers	Type a list of comma separated symbol ticker codes that the news item must be linked to.
Classifications	Check one or more classifications that the news item must belong to.
Geographical areas	Check one or more geographical areas the news item must be tagged with.

Click the "Advanced" button to see more options. The following four options can be controlled by using checkboxes:

Element	Description
Full text news	Include non-flash news (news with stories).
Flash news	Include flash news (news with no story).
Web-stories	Include web-based news (via URL).
Plain text stories	Include integrated news (showing text inside a window).

Finally, you can filter by news source as well as specific Category, Industry, Country and Topic codes. Most of the time, it is easier just to use the Classifications and Geographical areas filters above.

Filter expression strings

The text input lines in the filter and alerts dialogs accept filter expression strings. The supported rules are:

- Type a word to match that word.
- Two words separated with a space work as an AND filter (both words must occur).
- Two words separated with a plus sign ("+") or a pipe sign ("|") work as an OR filter (either word must occur).
- A word prefixed with a minus sign ("-") work as a NOT filter (the word must not occur).

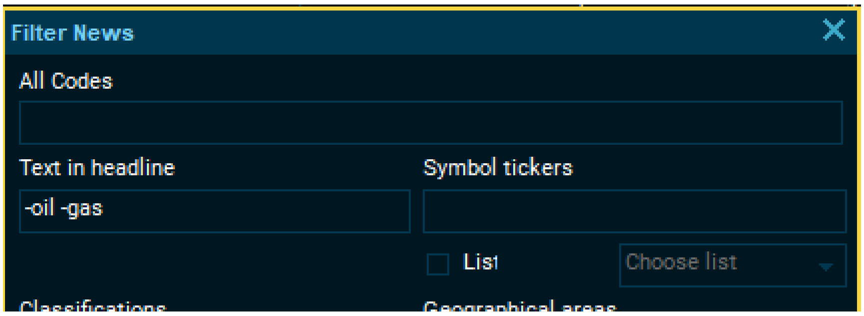
Examples filter explanation:

"OIL"
Field must contain "OIL"

"OIL" "GAS"
Field must contains "OIL" AND "GAS"

"OIL "+" GAS"
Field must contain "OIL" OR "GAS"

"-OIL" "-GAS"
Field must NOT contain neither "OIL" nor "GAS"



6.19.4 Historical news

The "News" window lets you view news items from yesterday or any other day in the past. In addition to the news source drop-down menu, there is a date drop down where you select what date it should show news for. The default "Today" shows all today's news and update with new news items in real time.

The other options let you see yesterday's news or any other date in the last week. You can select a specific date in the past with the "Select date" option. Note that historical news is not available from all news services.

In the "News list" window, there are new available columns for Category, Country, Industry, Language and Topic. These columns are used in news feeds such as AFX and Dow Jones.

In addition, there is a new FeedSymbols column that shows the explicit feed and symbol reference of each news item. It is mostly useful when tracking down issues with the news to symbol links.

A headline in the news list that is longer than the width of the column now has an ellipsis (...) at the end of the line. If you hover the mouse over the text, a hint pops up with the complete headline.

When you read an integrated (not web-based) news article, the date and time of the news item will now be included with the name of the news vendor at the top of the "News story" window.

For some news feeds (such as Dow Jones and AFX), a (red) flash news item might have a body, and a normal (black) news item might only have a headline.

6.19.5 Flash News

Flash news are colored red in the "Composite" window, the "Symbol" window and in the "My List" page of the "Market" window.

6.19.6 Select background color

Right-click a column to select a unique background color for each news source.

6.19.7 Edit columns

To edit columns displayed, right-click one of the existing columns and select "Select Columns".

6.19.8 Available news columns

Field	Description
Category	Native category codes (differs between news sources)
Classification	Logical classification (same for all feeds with codes)
Country	Native country codes (differs between news sources)
Date	Date of news item publication
FeedSymbols	Feed and Symbol ticker codes related to this news item
Geographical Area	Logical Geographical Area (same for all feeds with codes)
Headline	Headline text
Industry	Native industry codes (differs between news sources)
Language	Native language codes (differs between news sources)
Story Id	Story Id
Story Number	Story Number
Story source	3-4 letter short code for the news feed source
Story web address	The URL of web news stories
Symbols	Symbol ticker codes related to this news item

Field	Description
Time (and date)	Time of news item publication (includes date if not today)
Topic	Native topic codes (differs between news sources)

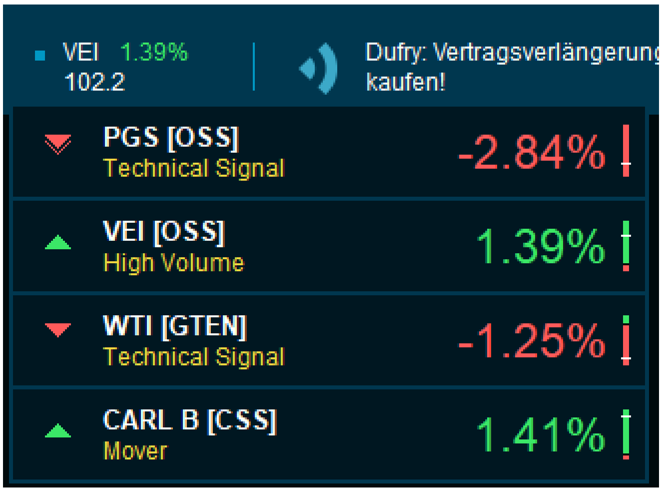
6.20 Noise reduction

Noise reduction technology analyzes market data in your workspace and informs about interesting price movements and events.

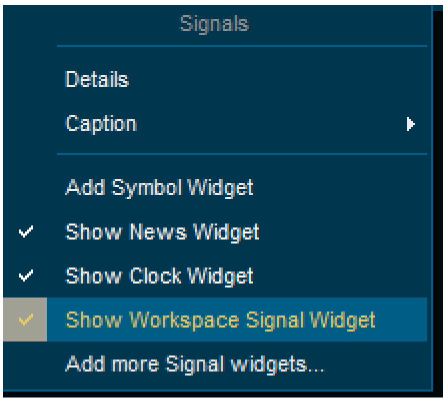
Noise reduction is a set of tools that gives you faster alerts when something happens in the markets. Large workspaces with hundreds of instruments updating every second becomes easier to monitor when the terminal tells you of extraordinary movements and events.

6.20.1 Signals widget

Displays the five most interesting instruments in your workspace. The widget scrolls through the 5 instruments replacing them when a new instrument becomes more interesting. Click the widget to see all 5 instruments and details as to whether price, news, volume or speed of price movement is causing the signal.



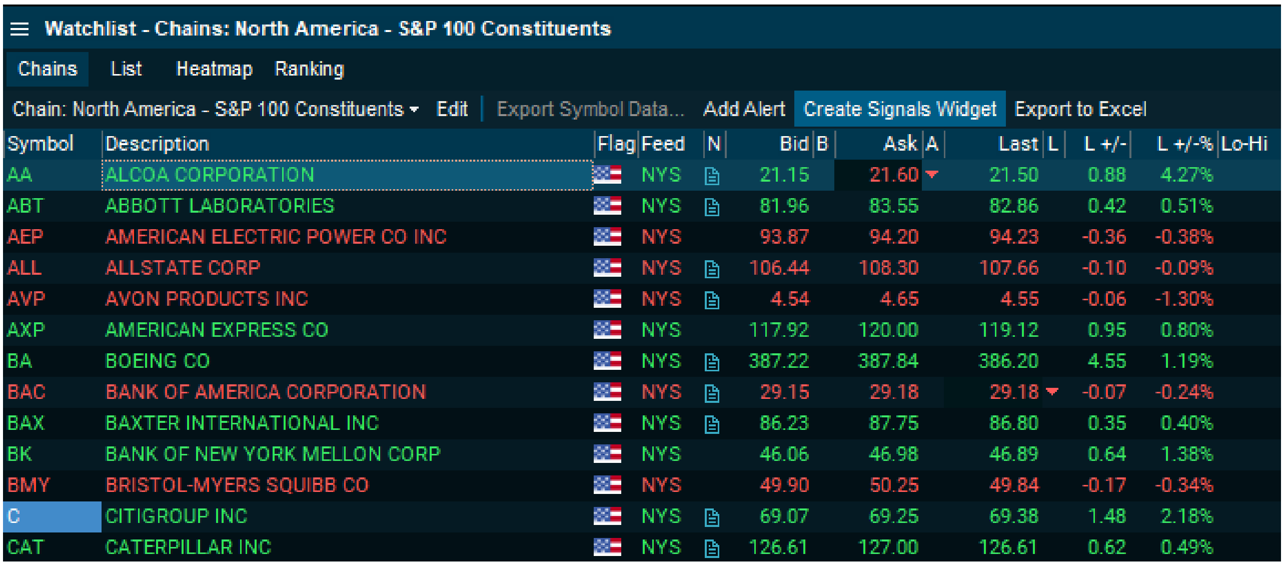
You can turn signals on/off by using the right-click menu.



6.20.2 Signals chain widget

Add a "Chain" widget: From a "Market" window or a "Watchlist" window, go to the chain tab, click the "Create Signals Widget" button in the toolbar.

This creates a new "Signals " widget in the main toolbar of Infront Professional Terminal, displaying only the most interesting instruments from your chosen chain.



Symbol	Description	Flag	Feed	N	Bid	B	Ask	A	Last	L	L +/-	L +/-%	Lo-Hi
AA	ALCOA CORPORATION		NYS		21.15		21.60		21.50		0.88	4.27%	
ABT	ABBOTT LABORATORIES		NYS		81.96		83.55		82.86		0.42	0.51%	
AEP	AMERICAN ELECTRIC POWER CO INC		NYS		93.87		94.20		94.23		-0.36	-0.38%	
ALL	ALLSTATE CORP		NYS		106.44		108.30		107.66		-0.10	-0.09%	
AVP	AVON PRODUCTS INC		NYS		4.54		4.65		4.55		-0.06	-1.30%	
AXP	AMERICAN EXPRESS CO		NYS		117.92		120.00		119.12		0.95	0.80%	
BA	BOEING CO		NYS		387.22		387.84		386.20		4.55	1.19%	
BAC	BANK OF AMERICA CORPORATION		NYS		29.15		29.18		29.18		-0.07	-0.24%	
BAX	BAXTER INTERNATIONAL INC		NYS		86.23		87.75		86.80		0.35	0.40%	
BK	BANK OF NEW YORK MELLON CORP		NYS		46.06		46.98		46.89		0.64	1.38%	
BMY	BRISTOL-MYERS SQUIBB CO		NYS		49.90		50.25		49.84		-0.17	-0.34%	
C	CITIGROUP INC		NYS		69.07		69.25		69.38		1.48	2.18%	
CAT	CATERPILLAR INC		NYS		126.61		127.00		126.61		0.62	0.49%	

6.20.3 How are interesting signals detected?

The criteria used for detecting signals are several types of calculations based around:

- Intraday price movements
- Volume increase
- News activity

6.20.4 New columns

More advanced users will also find that there are new columns you can add to the "Market" window to monitor or sort your instrument list based on:

- Volume/ADV (Volume as percentage of Average Daily Volume)
- High/low (price hitting historical high/low)
- Signal MA Cross (moving averages crossings today)
- Signal Score (the higher the score, the stronger the motion signal

6.21 Orderbook

Orderbooks display public buy and sell orders and are available as MBO (Market by order) and MBL (Market by level). Infront offers access Level 1 data, Level 2 and full depth data depending on access and market, as well as consolidated orderbooks (combines orderbooks from the main listing exchange with multilateral trading facilities).

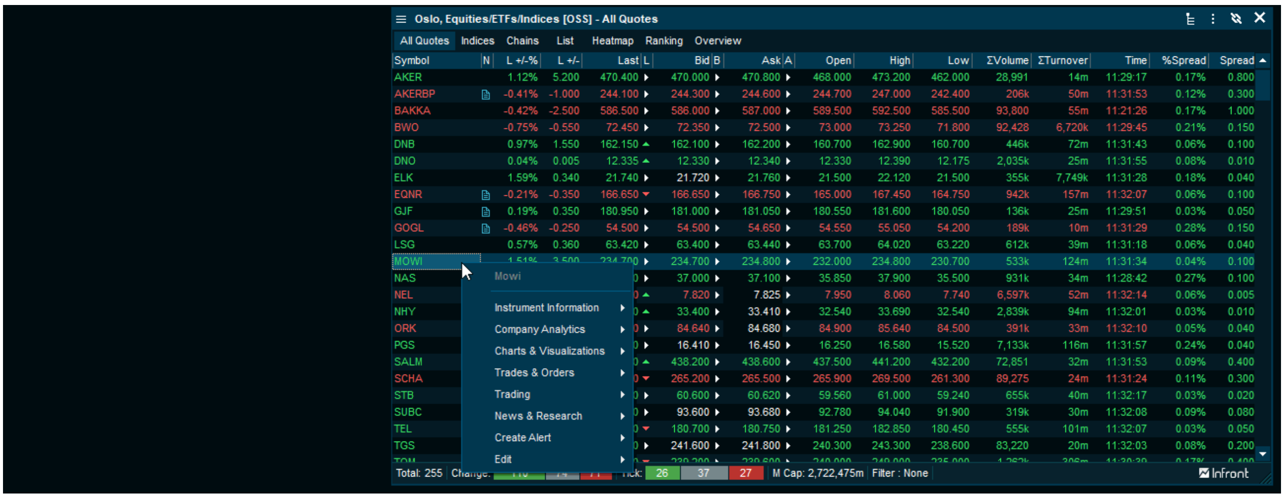
Element	Description
Market by Level (MBL) Orderbook	In this kind of orderbook, all the public orders on a symbol from a specific exchange are accumulated into unique price levels. So if there are 35 orders at 52,30 SEK, there will be only one level in the orderbook with an accumulated volume of 55,748.
Market by Order (MBO) Orderbook	The Market by Order orderbook contains all details o single orders in the public orderbook. An MBO orderbook may contain a large number of orders with exactly the same price. So you get much more detailed information about each order in the market.
Trading	If you place an order through a trading service using Infront, the orderbook will highlight the price level that matches the price of your active order (green below). The feature is on by default, but can be turned off in Settings.
Market By Level from MBO Orderbooks	Sometimes the MBO orderbooks may contains just too much information to be useful or digestible, sorting by level will help you get the information you need.

Accumulated MBL orderbooks aggregate all the orders that have the same price into one level. The advantage is the detailed MBO information available. Each order will get a separate line in the orderbook viewable by clicking the "+" icon next to bid/ask.

6.21.1 How to open an orderbook

There are various ways to open an orderbook:

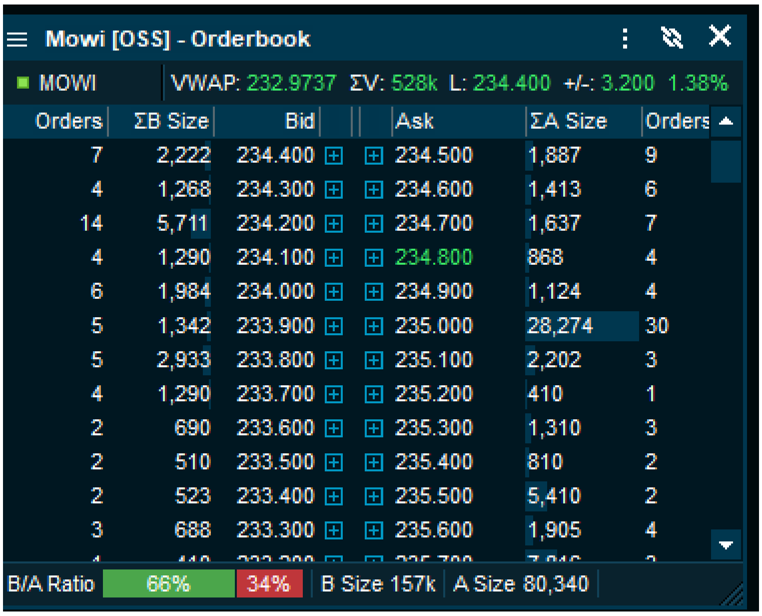
- Select the company for which you want to display the orderbook > right-click the company > select "Trades & Orders" > select "Orderbook".
- Select the company > press <CTRL>+<D> on your keyboard.
- Open the Instrument Overview > select the orderbook.



6.21.2 Summary lines

The orderbook contains two summary lines. These can be turned on/off by right-clicking in the orderbook:

- Summary line 1: Symbol ticker / VWAP / Volume / Last / Net change / Net Change %
- Summary line 2: Orders / Bid Size / Bid / Ask / Ask Size / Orders



6.21.3 Suspensions

If an instrument (normally a stock) is suspended, the orderbook will automatically be displayed with an "X" mark. It is also possible to define a color for a suspended quote under "Edit Colors" > "Background if Status Set".

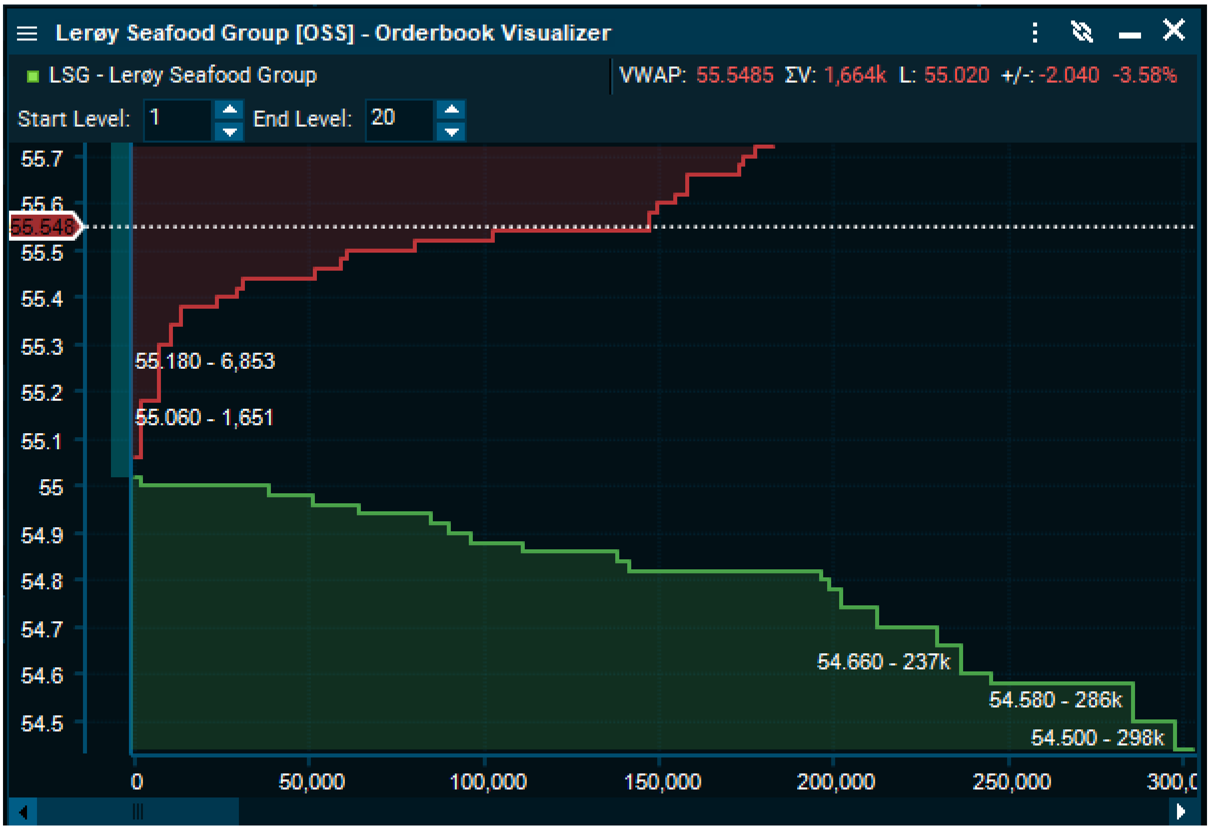
6.21.4 Display of Auction Surplus volumes

Display imbalance volume in an opening or closing auction on the following exchanges; Xetra Frankfurt, Euronext Paris, Copenhagen, Helsinki, Stockholm, Oslo. For more information, see Trading settings.

6.22 Orderbook Visualizer

6.22.1 How to access

Right-click an instrument > "Charts & Visualization" > "Orderbook Visualizer".



6.22.2 Interpretation

The Orderbook Visualizer (OB Visualizer) has an x-axis representing the aggregate volume (sum of volumes at each price level), and a y-axis representing the price. The chart displays what is the available liquidity at each price level of the order book. One can think about it as "who is willing to buy at $10, would also like to buy at $9; Who is willing to sell at $10, would also like to sell at $11". Because of this logic, we can see it as an aggregation of the volume in a stepped fashion, where each step represents the next price level (because they are more favourable to the trader sitting on the best bid and offer, we can aggregate them.)

The graphic display of the orderbook has two main objectives. One is to deliver an easy-to-learn chart that enables the user, in a matter of seconds, to understand the market sentiment for the security under analysis for a given day; the other, to infer changes on the expectations about its fundamental value and perceived risk, as well as capture intraday market microstructure imperfections that create price distortions.

For the identification of the market sentiment for the instrument, the scope of interest is high since the order book is more informative about the aggregate supply and trading interests than quoted volumes and prices. With the possibility to compare today's liquidity dynamics with respect to averages, the analysis will be enhanced, allowing the user to spot changes on the instrument's liquidity supply. Moreover, the range of prices at which the chart analysis is performed has also different usages. Let us consider the analysis of the time series. The time frame selection is obvious and it depends on the user's interest, and this will also define the price range under analysis. Working with a live feed of the orderbook, the range selection is less obvious and we then provide the user with range filters that will facilitate the reading of the chart and the inference of information. If the user analyses the orderbook with the full range, that is, from the minimum value of Bid and the maximum of Ask, then the use of the OB Visualizer is to read changes on the expectations regarding the fundamental price of the instrument. For example, one might notice that closer to earnings release dates the shape will tend to widen, that is, the bid and ask legs will spread out.

On the other hand, and shorter price rage is best for analysing intraday market microstructure imperfections and profit from its mean reverting dynamics. In addition, the shape of the orderbook reveals a lot of information regarding the fundamental characteristics of the firm: solid, larger, and liquid companies tend to have a distribution of order prices that converge in the current best bid and offer; on the other hand, small, less established companies tend to have limited volumes and a high price dispersion.

6.23 Portfolio Tracker

Portfolio Tracker is the ultimate tool for real-time portfolio oversight. The Portfolio Tracker allows you to view, track and interact with your portfolio and the market. Real-time alerts based on Infront Professional Terminal's Noise Reduction algorithm keep you up to date on portfolio performance. In addition to integrating with your Portfolio Management system, Portfolio Tracker can also import portfolios via Excel or CSV files. With multi-account management, you can easily search your client's portfolios and oversee intraday performance of multiple portfolios.

6.23.1 Open Portfolio Tracker

You can open the Portfolio Tracker in various ways:

- Main menu > "Tools" > under "Utilities" find the "Portfolio Tracker".
- Type "Portfolio Tracker" in the "Find anything" search and press <Enter>.
- Main menu > "Tools" > under "Trading" find "Trading" > use your "Trading portal" > "Portfolio" > "Portfolio Tracker".

6.23.2 How to use the Portfolio Tracker

Click "+New" > create a name for the Portfolio > select currency.

To create a new portfolio without importing from Excel:

Click "+New" > create a name for the Portfolio > select currency > .

To compare your Portfolio to a benchmark, search for a Benchmark (for example, STOXX 600) > click "Create" to create your portfolio > to add instruments, click "Add" > add symbol.

To create a new portfolio via watchlist:

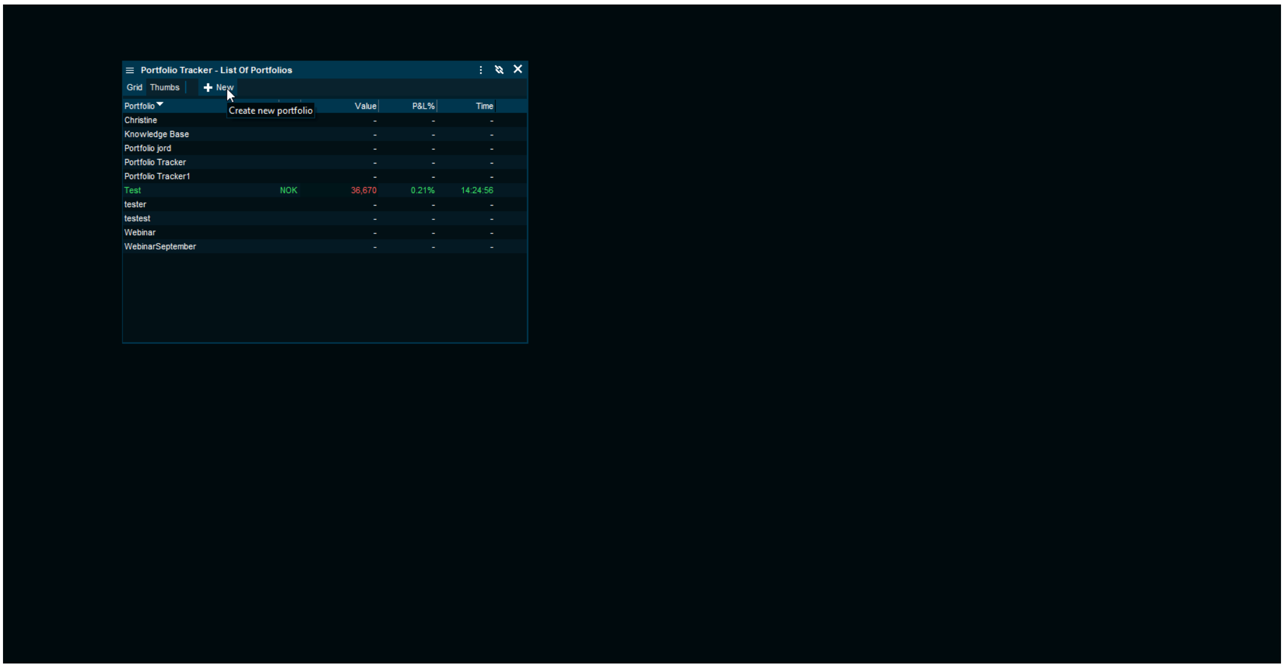
Create a list with instruments of choice > click "Actions" > "Convert to Portfolio" > create a name for the portfolio > select currency.

To compare your Portfolio to a benchmark, search for the benchmark > "Create".

To create a new portfolio by importing from Excel

Click "+New" > create a name for the portfolio > select currency.

To compare your portfolio to a benchmark, search for "Benchmark" > "Load" > the information you import from Excel will be reflected in the Portfolio Tracker > select the columns the Portfolio Tracker should identify; that is, Symbol, ISIN, Quantity, Open price > import > create.



6.23.3 Dashboard

Element	Description
The Allocation chart	Gives you a quick overview of your portfolio divided into various categories (for example, Financials, Banks, Airlines).
Geographical allocation chart	Show you where in the world the companies are located. You can filter the map by clicking the drop-down menu named "Map". Positive signals are shown in green, while negative signals are shown in red.
Contribution diagram	Shows the positive/negative weight of your investment. You can filter the diagram by using the drop-down menu in the middle.
Winners and losers	Displays today's winners and losers.
Signals and upcoming events	Additionally, at the bottom of the window, you can see the latest signals and upcoming events for the stocks in your portfolio.

6.23.4 Holdings

Holdings gives an overview of your holdings. In the heading, you can see the value, which equals your total value of the portfolio; P&L %, which equals the development for your portfolio; the benchmark's development; and the difference between your portfolio and the benchmark.

Element	Description
Edit	To make any changes to your portfolio, click "Edit". Here, you can manually change quantity by typing directly in the column, change currency by clicking "Target Currency", save portfolio and easily choose between various portfolios by clicking on drop-down menu to the left of the toolbar.
Add alert	Click "Actions" > "Add Portfolio alert"or "Add Symbol alert" for single symbols in your portfolio. These alerts can be edited and deleted in the "Manage Alert" window.

6.23.5 Characteristics

This tab shows the characteristics of your portfolio.

To change asset type, view, and edit how your portfolio is grouped, click on the tabs and select what you prefer.

The GPRV (growth, profitability, risk and value) chart compares the companies in your portfolio with all of their competitors. The GPRV scores measure the company's attractiveness, relative to its competitors in the same sector. The bigger the green area, the better. To filter the GPRV chart, click the drop-down menu to the upper right of the chart and choose your preferable part of the world.

6.23.6 Backtest

Element	Description
Return Histogram chart	Shows the statistics of your portfolio (including Mean, Sigma, Skewness, Kurtosis, Observations). You can change the time frame of the chart by clicking "Period". It is also possible to change the step size by using the arrows up and down.
Backtest & Measures chart	Shows the performance of your portfolio compared to the Benchmark index. Green shows a positive performance, while red shows a negative performance compared to the benchmark. You can filter the chart by a specific period, change the rate, change asset type and position.

6.23.7 Events

Shows all upcoming corporate events for the stocks in your portfolio, as well as the technical signals. These are the same technical signals that you can find on the Dashboard overview (first tab).

You can filter the events by right-clicking in the calendar. Here you can choose the time frame, as well as category.

6.23.8 Macro

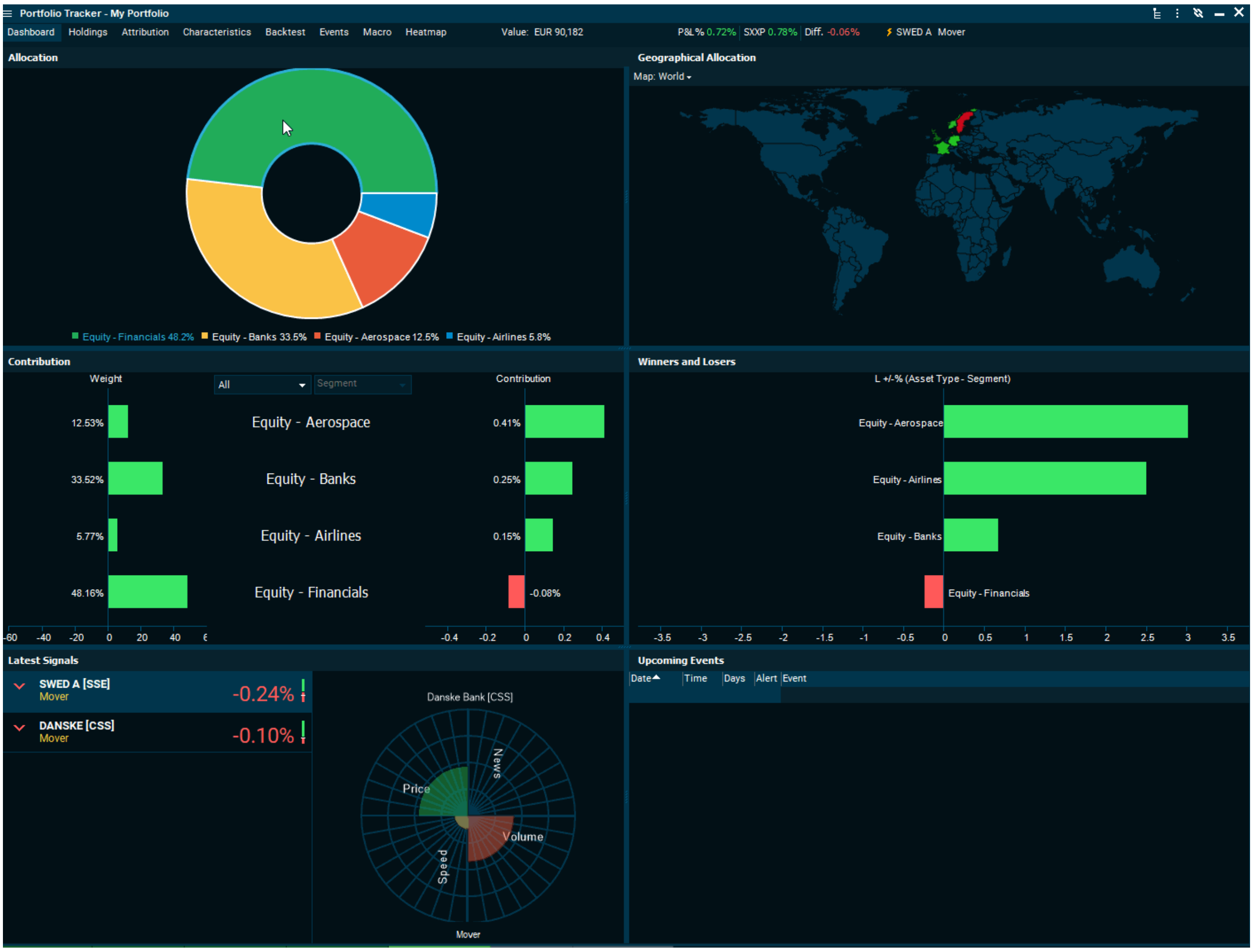
Shows upcoming events for the countries you have invested in as well as a geographical allocation chart, which you can also find in the Dashboard. You can filter the map by clicking the drop-down menu named "Map". Positive signals are shown in green, while negative signals are shown in red.

You can filter the events by right-clicking in the calendar. Here you can choose the time frame as well as category.

6.23.9 Heatmap

The map helps you to follow real-time market movements visually. It is a graphical illustration of your portfolio. To filter the heatmap, use the settings menu on the left side of the widow, select "Heatmap Settings".

Here you can change "Size", "Grouping", "Size filter", "Color by", "Change filter" and "Color range" and select the layout you prefer.



6.24 Return Histogram

6.24.1 How to access

Right-click an instrument > "Charts & Visualizations" > "Return Histogram".

6.24.2 How to use

This window displays the empirical distribution of the daily returns for a particular instrument or portfolio.

6.24.3 Period

Time series length. Options: "All", "LYTD" (last year to date), "YTD" (year to date), and 1 to 5 years. You can also specify a custom period by selecting "Custom".

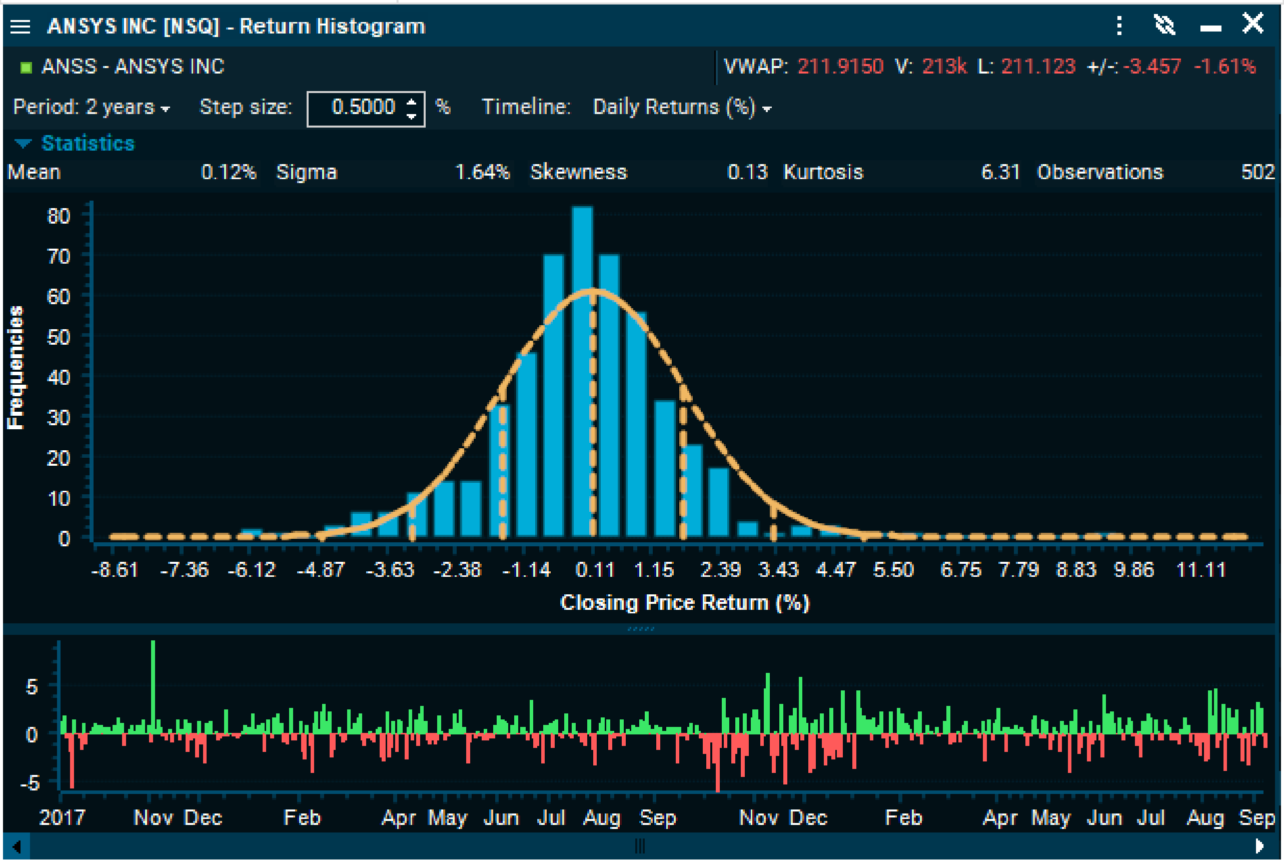
6.24.4 Timeline

Allows the user to select the overview of the series in the lower panel. "Daily returns" displays the log returns in a bar chart, and "History" the actual values of the series.

6.24.5 Statistics bar

On the top of the histogram, the moments of the empirical distribution are displayed.

Element	Description
Mean	Log daily returns.
Sigma	Standard deviation from the log return series.
Skewness	Standardized skewness of the empirical distribution as in Pearson's moment coefficient of skewness.
Kurtosis	Excess kurtosis of the empirical distribution.



6.25 Search Screener

The "Search Screener" includes the "Bond Screener", the "Fund Screener" and the "Stock Screener". The tool can be used to find the specific instruments you are looking for based on a range of criteria in the entire universe of data.

To access the full functionality of the Search Screener, you will need the "Treasury" module for the "Fund Screener", the "Funds" module for the "Fund Screener" and the "Equity Analytics" module for the "Stock Screener".

You can open the "Search Screener" in multiple ways:

- Click the magnifying glass in the "Find anything" search field in the top left corner.
- Use the "Find anything" search field > type "Screener" and press <ENTER>.
- Click in the "Find Anything" field and press <ENTER>.

6.25.1 How to use the Search Screener

Search

The first tab is called "Search", where you can find different types of asset classes. From here, you can search for name, ticker or ISIN codes to find the instrument that you are looking for. The results will give you the ticker, description, feed and asset class.

Bond Screener

The "Bond Screener" contains several search fields allowing you to filter and narrow down your search results. The first search field is "Free text". If you enter "Glencore" in this search field, your results will show all instruments matching that description.

Furthermore, you can select the type of bond, industry, security, issue date, coupon type, issuer country, maturity, yield, coupon and minimum denomination.

You can also mark the bonds from your search result and click the "Create List" button. This will create a new watchlist with all the bonds that you have selected.

Fund Screener

The "Fund Screener" works in a similar way as the "Bond Screener". You can narrow down your search results based on a wide range of criteria. You can filter your result based on name, country, currency, category, regions invested, fund type, issuer, risk level, Morningstar rating, portfolio manager and more.

Stock Screener

The Stock Screener is an Infront Analytics tool and is therefore a bit different from the other screeners. It is called "Market Screener" in the Infront Analytics tool.

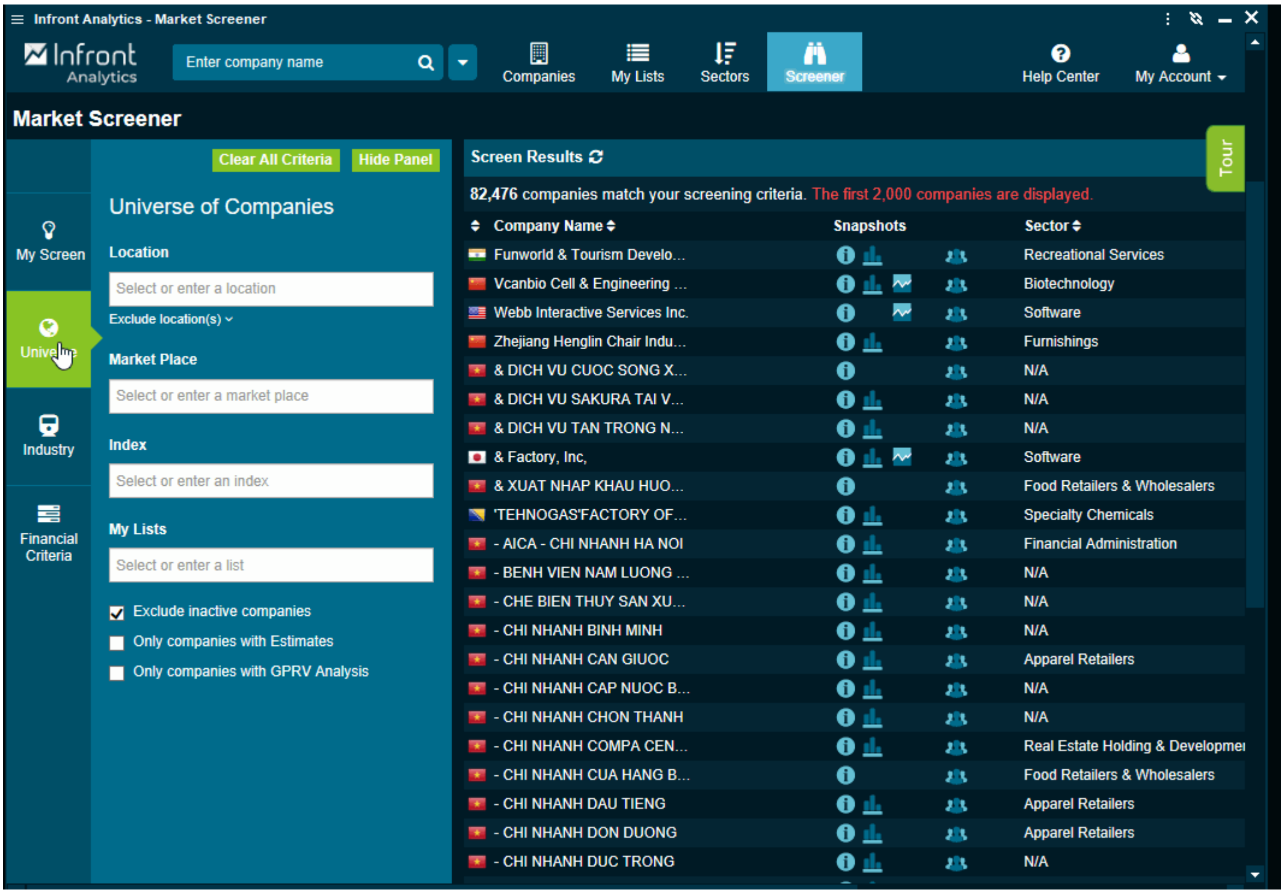
Search categories

You can screen your results based on the three main categories:

- Universe is based on location, marketplace and index.
- Industry is based on Sector, including NAICS, Factset and SIC sectors.
- Financial criteria is based on financial criteria as such as market cap, P/E, net sales and much more.

For example, you can add P/E and choose between 5 and 12. A list with all the Norwegian stocks with P/E value from 5 to 12 will then be shown in the screen results.

Find symbol
Search
Bond Screener
Fund Screener
Stock Screener
adid
Symbol | Description | Feed | Type | Access | Tradable | Rank
ADS | ADIDAS AG NA O.N. | Frankfurt Xetra, Equities | Stock | Realtime | Yes | 183 (147)
ADS | ADIDAS | Milan SE, Equities | Stock | Realtime | Yes | 140 (112)
ADS | ADIDAS N | Tradegate Exchange | Stock | Realtime | Yes | 140 (112)
ADS | ADIDAS AG | Vienna SE, Equities | Stock | Realtime | Yes | 125 (100)
ADS | ADIDAS AG NA O.N. | Frankfurt Floor, Equities | Stock | Realtime | Yes | 123 (99)
ADS | ADIDAS AG NA O.N. | Munich SE, Equities | Stock | Realtime | Yes | 116 (93)
ADS | ADIDAS AG NA O.N. | Hamburg SE, Equities | Stock | Realtime | Yes | 115 (92)
ADS | ADIDAS AG NA O.N. | Dusseldorf SE, Equities | Stock | Realtime | Yes | 113 (91)
ADS | ADIDAS AG NA O.N. | Berlin SE, Equities | Stock | Realtime | Yes | 112 (90)
ADS | ADIDAS AG NA O.N. | Hanover SE, Equities | Stock | Realtime | Yes | 112 (90)
ADS1 | ADIDAS AG ADR 1/2/O.N. | Frankfurt Floor, Equities | Stock | Realtime | Yes | 98 (79)
ADILW | ADIAL PHARMACEUTICALS INC C/ ... | NASDAQ Issues (Basic) | Derivative | Realtime | Yes | 132 (106)
ADIL | ADIAL PHARMACEUTICALS INC | Nasdaq NM, Equities | Stock | Delayed 15 min | Yes | 131 (175)
ADS | ADIDAS N | Tradegate Exchange | Stock | Realtime | Yes | 127 (102)
ADV | ADIUVO | Warsaw SE, Equities | Stock | Realtime | Yes | 127 (102)
ADS | ADIDAS | Milan SE, Equities | Stock | Realtime | Yes | 126 (101)
ADNT | ADIENT PLC | NYSE Tape A Issues (Basic) | Stock | Realtime | Yes | 123 (99)
ADS | ADIDAS AG | Vienna SE, Equities | Stock | Realtime | Yes | 115 (92)
ADS | ADIDAS AG NA O.N. | Frankfurt Floor, Equities | Stock | Realtime | Yes | 115 (92)
ADS | ADIDAS AG NA O.N. | Munich SE, Equities | Stock | Realtime | Yes | 107 (86)
ADS | ADIDAS AG NA O.N. | Hamburg SE, Equities | Stock | Realtime | Yes | 106 (85)
ADS | ADIDAS AG NA O.N. | Dusseldorf SE, Equities | Stock | Realtime | Yes | 105 (84)
ADS | ADIDAS AG NA O.N. | Berlin SE, Equities | Stock | Realtime | Yes | 103 (83)
ADS | ADIDAS AG NA O.N. | Hanover SE, Equities | Stock | Realtime | Yes | 103 (83)
18I | ADIENT RG | Tradegate Exchange | Stock | Realtime | Yes | 101 (81)
ADS1 | ADIDAS AG ADR 1/2/O.N. | Frankfurt Floor, Equities | Stock | Realtime | Yes | 90 (72)
ADS | ADIDAS AG | Bucharest SE, Equities & Indices | Stock | Realtime | Yes | 87 (70)



Infront Analytics - Market Screener
Infront Analytics
Enter company name
Companies
My Lists
Sectors
Screener
Help Center
My Account
Market Screener
Clear All Criteria
Hide Panel
My Screen
Universe
Industry
Financial Criteria
Universe of Companies
Location
Select or enter a location
Exclude location(s)
Market Place
Select or enter a market place
Index
Select or enter an index
My Lists
Select or enter a list
Exclude inactive companies
Only companies with Estimates
Only companies with GPRV Analysis
Screen Results
Tour
82,476 companies match your screening criteria. The first 2,000 companies are displayed.
Company Name | Snapshots | Sector
Funworld & Tourism Develo... | Recreational Services
Vcanbio Cell & Engineering ... | Biotechnology
Webb Interactive Services Inc. | Software
Zhejiang Henglin Chair Indu... | Furnishings
& DICH VU CUOC SONG X... | N/A
& DICH VU SAKURA TAI V... | N/A
& DICH VU TAN TRONG N... | N/A
& Factory, Inc, | Software
& XUAT NHAP KHAU HUO... | Food Retailers & Wholesalers
'TEHNOGAS'FACTORY OF... | Specialty Chemicals
- AICA - CHI NHANH HA NOI | Financial Administration
- BENH VIEN NAM LUONG ... | N/A
- CHE BIEN THUY SAN XU... | N/A
- CHI NHANH BINH MINH | N/A
- CHI NHANH CAN GIUOC | Apparel Retailers
- CHI NHANH CAP NUOC B... | N/A
- CHI NHANH CHON THANH | N/A
- CHI NHANH COMPA CEN... | Real Estate Holding & Developmei
- CHI NHANH CUA HANG B... | Food Retailers & Wholesalers
- CHI NHANH DAU TIENG | Apparel Retailers
- CHI NHANH DON DUONG | Apparel Retailers
- CHI NHANH DUC TRONG | N/A

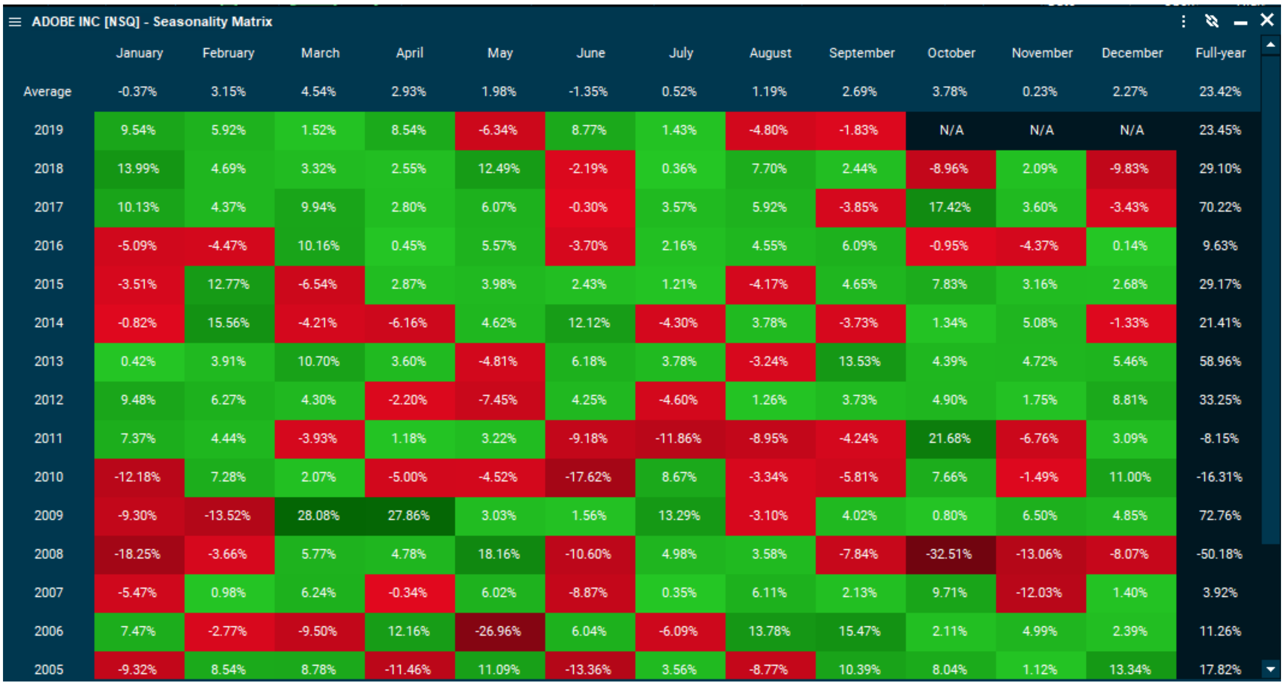
6.26 Seasonality Matrix

6.26.1 How to access

Right-click an instrument > "Charts & Visualizations" > "Seasonality Matrix".

6.26.2 How to use

The Seasonality Matrix provides a graphical overview on the previous performance for specific months and years.


ADOBE INC [NSQ] - Seasonality Matrix

	January	February	March	April	May	June	July	August	September	October	November	December	Full-year
Average	-0.37%	3.15%	4.54%	2.93%	1.98%	-1.35%	0.52%	1.19%	2.69%	3.78%	0.23%	2.27%	23.42%
2019	9.54%	5.92%	1.52%	8.54%	-6.34%	8.77%	1.43%	-4.80%	-1.83%	N/A	N/A	N/A	23.45%
2018	13.99%	4.69%	3.32%	2.55%	12.49%	-2.19%	0.36%	7.70%	2.44%	-8.96%	2.09%	-9.83%	29.10%
2017	10.13%	4.37%	9.94%	2.80%	6.07%	-0.30%	3.57%	5.92%	-3.85%	17.42%	3.60%	-3.43%	70.22%
2016	-5.09%	-4.47%	10.16%	0.45%	5.57%	-3.70%	2.16%	4.55%	6.09%	-0.95%	-4.37%	0.14%	9.63%
2015	-3.51%	12.77%	-6.54%	2.87%	3.98%	2.43%	1.21%	-4.17%	4.65%	7.83%	3.16%	2.68%	29.17%
2014	-0.82%	15.56%	-4.21%	-6.16%	4.62%	12.12%	-4.30%	3.78%	-3.73%	1.34%	5.08%	-1.33%	21.41%
2013	0.42%	3.91%	10.70%	3.60%	-4.81%	6.18%	3.78%	-3.24%	13.53%	4.39%	4.72%	5.46%	58.96%
2012	9.48%	6.27%	4.30%	-2.20%	-7.45%	4.25%	-4.60%	1.26%	3.73%	4.90%	1.75%	8.81%	33.25%
2011	7.37%	4.44%	-3.93%	1.18%	3.22%	-9.18%	-11.86%	-8.95%	-4.24%	21.68%	-6.76%	3.09%	-8.15%
2010	-12.18%	7.28%	2.07%	-5.00%	-4.52%	-17.62%	8.67%	-3.34%	-5.81%	7.66%	-1.49%	11.00%	-16.31%
2009	-9.30%	-13.52%	28.08%	27.86%	3.03%	1.56%	13.29%	-3.10%	4.02%	0.80%	6.50%	4.85%	72.76%
2008	-18.25%	-3.66%	5.77%	4.78%	18.16%	-10.60%	4.98%	3.58%	-7.84%	-32.51%	-13.06%	-8.07%	-50.18%
2007	-5.47%	0.98%	6.24%	-0.34%	6.02%	-8.87%	0.35%	6.11%	2.13%	9.71%	-12.03%	1.40%	3.92%
2006	7.47%	-2.77%	-9.50%	12.16%	-26.96%	6.04%	-6.09%	13.78%	15.47%	2.11%	4.99%	2.39%	11.26%
2005	-9.32%	8.54%	8.78%	-11.46%	11.09%	-13.36%	3.56%	-8.77%	10.39%	8.04%	1.12%	13.34%	17.82%

6.27 Watchlist

The "Watchlist" window is one of the main ways to see a lost of streaming quotes in addition to "Market" windows and "Market" pages.

The main difference that separates a watchlist from the others windows is that is is possible to add symbols from all markets you have access to.

6.27.1 How to open

- Press <CTRL>+<SHIFT>+<C> on your keyboard.
- Open the main menu > "Tools" > "Watchlist" under "Utilties".
- Type "Watchlist" in the "Find Anything" search field.

6.27.2 Add instruments to watchlist

- In the watchlist, type the name of the instrument in the blank field below "Chains" and "List" and select the instrument.
- Click the "+ Add" button, and then type in the instrument you want to add.
  Or drag instruments from multiple windows in Infront Professional Terminal. Open a "Market" window, select the relevant instruments, and drag them to the watchlist.

You can also select another window such as the German Overview Dashboard and select the instrument you want to add to your watchlist and drag.

6.27.3 Save list

You can save the list by clicking the "Save List" button in the bar and then give the list a name. The lists are saved in a cloud, so they are available on your computer, phone or iPad.

6.27.4 Deleting symbols

Right-click and select "Edit" > "Delete" or just press <DEL> on your keyboard to delete a symbol from the watchlist.

6.27.5 Deleting entire lists

Once you have opened a saved list, right-click and select "Edit" > "Delete List" to delete it.

6.27.6 Adding custom headlines

Custom headlines can be added by right-clicking a symbol in the list > "Edit" > "Add headlines".

The text and background color of all headlines can be customized in the "Edit colors and fonts" window tool menu.

You can move symbols and headlines up or down your list by selecting it, then press <CTRL> while using the up and down arrows on your keyboard.

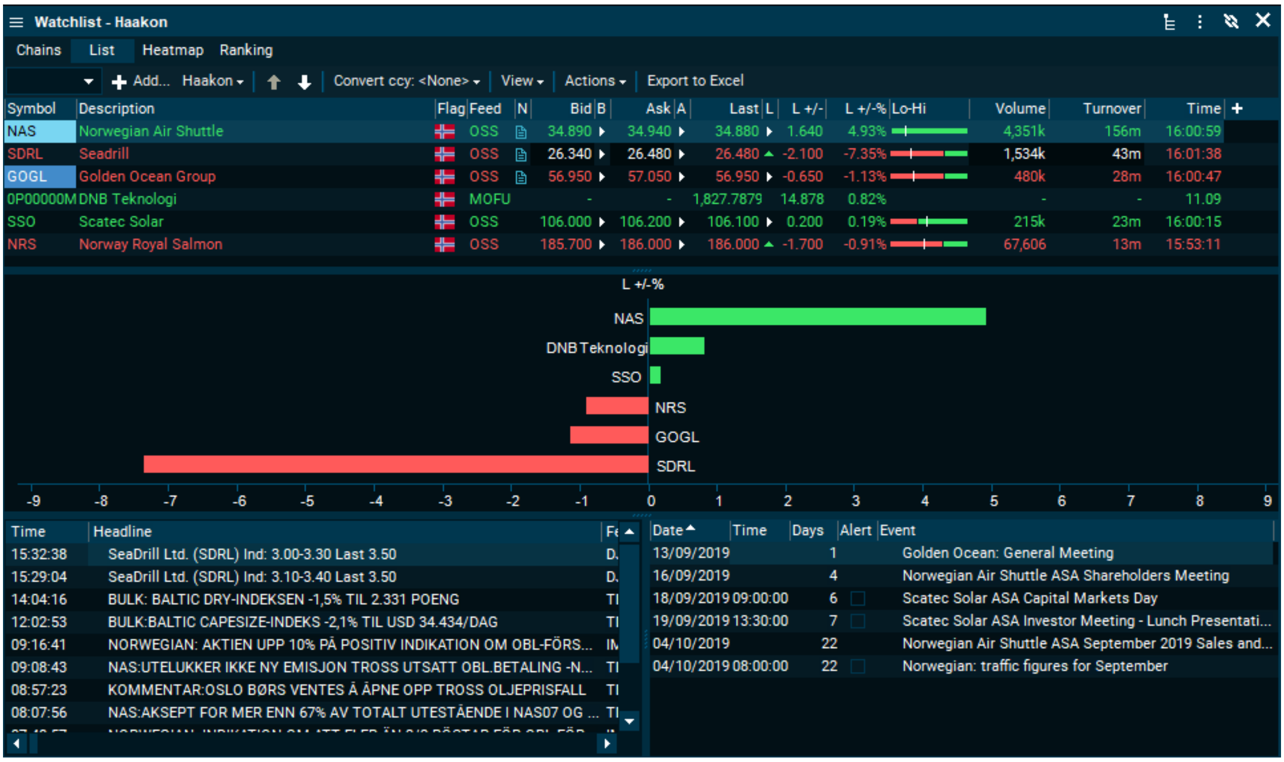
6.27.7 Group your holdings

You can group your holdings in your portfolio from the drop-down menu called "Group By".

6.27.8 Ranking

Rank today's winners, losers and symbols with highest turnover.

To do so, click "View" and then select "Winners and Losers" to turn this option on.



6.27.9 News and Events

You will see news and events related to your instruments in the "News" and "Events" panel. You can customize the sources for your news by right-clicking in the panel and selecting "Sources".

You can adjust the time period of upcoming events by right-clicking in the "Events" panel and selecting the relevant period.

6.27.10 Portfolio Tracker using watchlist

You can convert your watchlist to a Portfolio Tracker. To do this, right-click in the watchlist, select "Edit" > "Convert To Portfolio". You can change the name of your portfolio, currency, add a benchmark and so on.

For more information, see Portfolio Tracker.

6.27.11 See Live Market Data in any currency

In your watchlist, you can choose to see your instruments market data in one of many currencies.

To do so, select your target currency from the "Convert ccy" drop-down menu.

6.27.12 Column Layout

Select columns

If you want to add, change or remove any of the data shown in a "Watchlist" window, click the content menu in the upper left of the watchlist > "Select Column" > select the columns you want to add.

Sort Columns

Sort by turnover, last price or any other column by double-clicking the column headers. The list will automatically keep itself sorted.

6.27.13 Save Layout

After you have added the columns you want, this new column layout can be saved for later use.

Click on the content menu again > click "Save layout and filter as..." > enter a name for the layout.

To set this layout as the default layout for all new watchlists windows, right-click the content bar (column header), and then click "Save as default layout" and all watchlist windows you open after this will have this layout.

All custom layouts that you have saved in Infront Professional Terminal will also be available directly from a market window.

6.28 Fund Overview

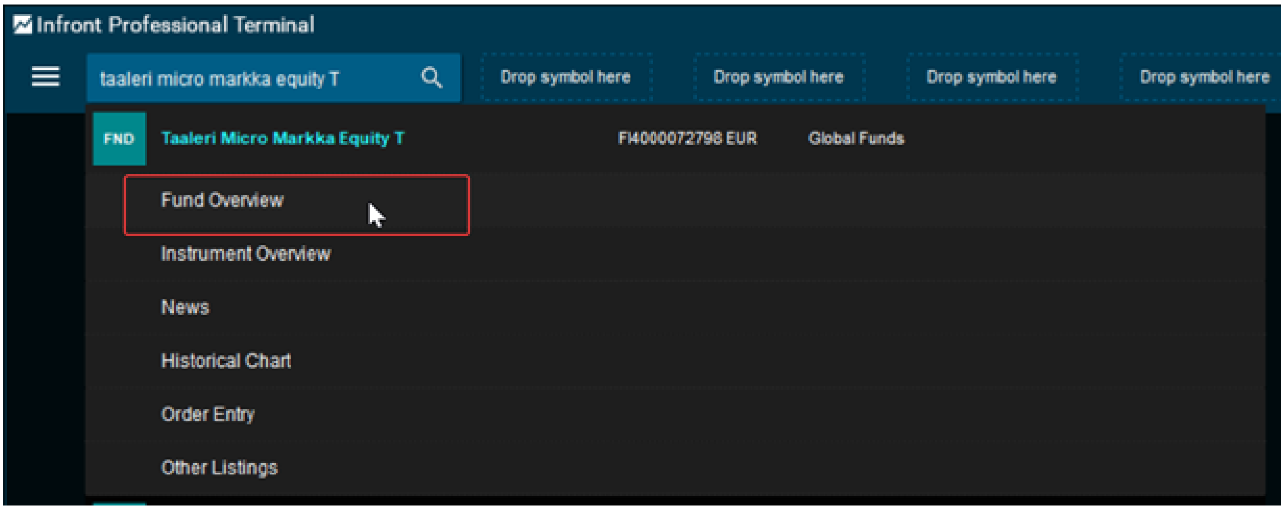
6.28.1 What is a Fund Overview?

The "Fund Overview" window displays a lot of content into a relatively small window. Different tabs show important details about the fund itself. These tabs display amongst other things: a brief introduction of what kind of fund it is and its year of start, its Net Asset Value (NAV), statistics, and so forth allowing the viewer in question to access all important information in just one window.

6.28.2 How to Open a Fund Overview

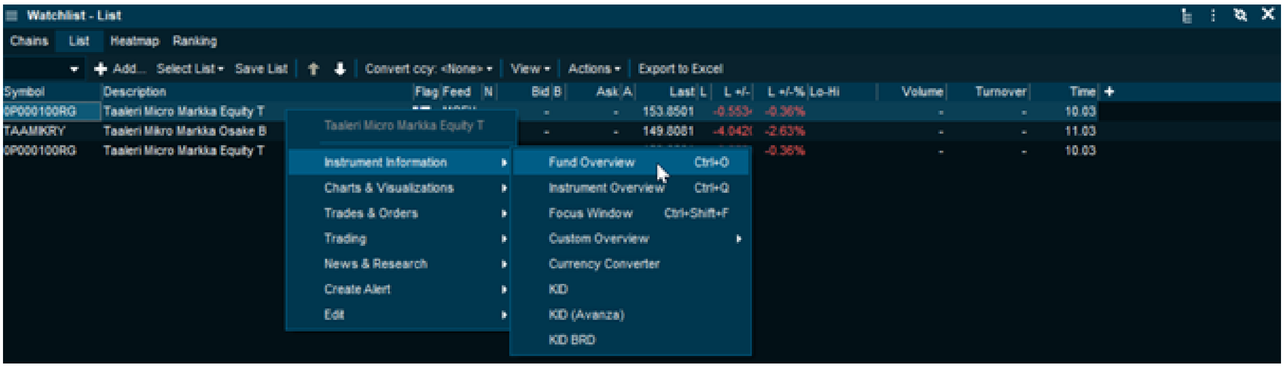
Find anything

Insert the name of the fund you are looking for in the "Find Anything" search field > select the fund when it appears beneath the search field > scroll down and select "Fund Overview".



6.28.3 Watchlist

Right-click the fund in your watchlist > select "Instrument Information" > "Fund Overview".



6.28.4 Result Overview

6.28.5 How to access the KIID and homepage

The KIID (Key Investor Information Document), is a mandatory document created by fund distributors to promote common supervisory approaches and practices in the application of the UCITS Directive and its implementing measures.

Click in the KIID link in the top right corner.

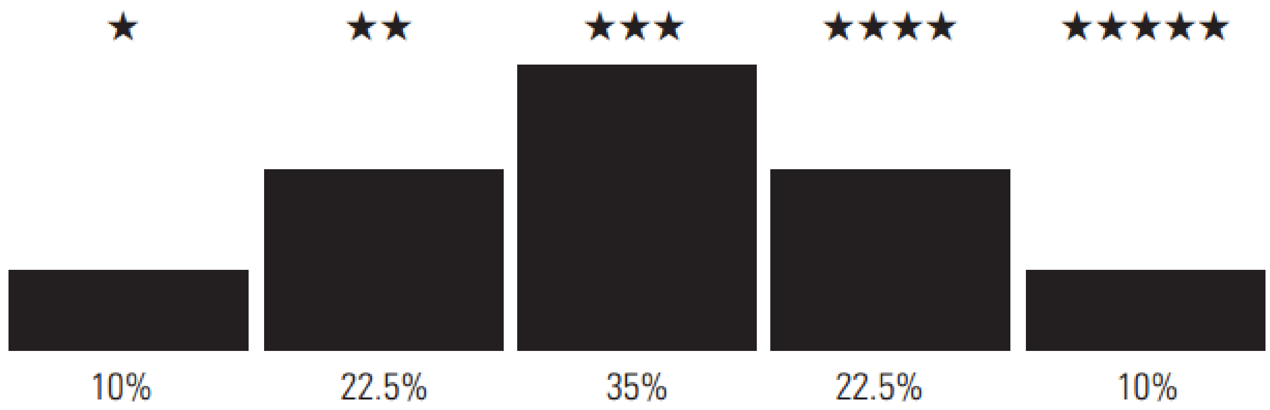
6.28.6 How to access fund company's homepage

The homepage of the fund can be found displayed on the top right corner of the window. Simply click the link, and it will guide you directly to your web browser where the homepage will be accessed.

6.28.7 Morningstar Star Rating and statistics

This is a proprietary Morningstar data point.

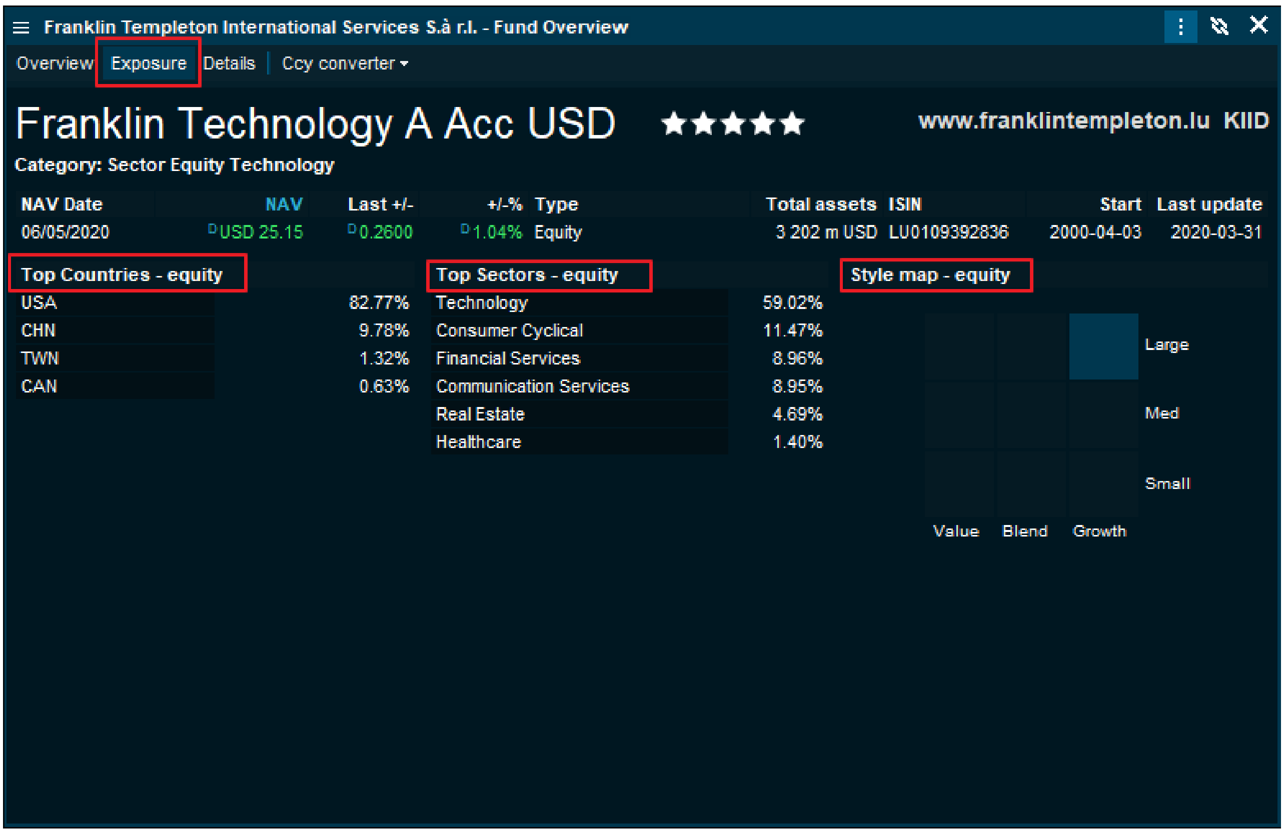
Mutual funds are rated 1 to 5 stars based on risk-adjusted rate of return. It takes into account the sales charges and compares similar funds in a category. The rating is based on 3, 5 and 10 years of performance history.



For more information about custom calculation of the statistic data, see Morningstar's documentation.

Data definitions can be found on Morningstar's Investing Glossary and Morningstar Rating & Risk.

6.28.8 Exposure tab



Top countries

The table lists top 10 countries that the fund is invested in and their weights in descending order.

Top sectors

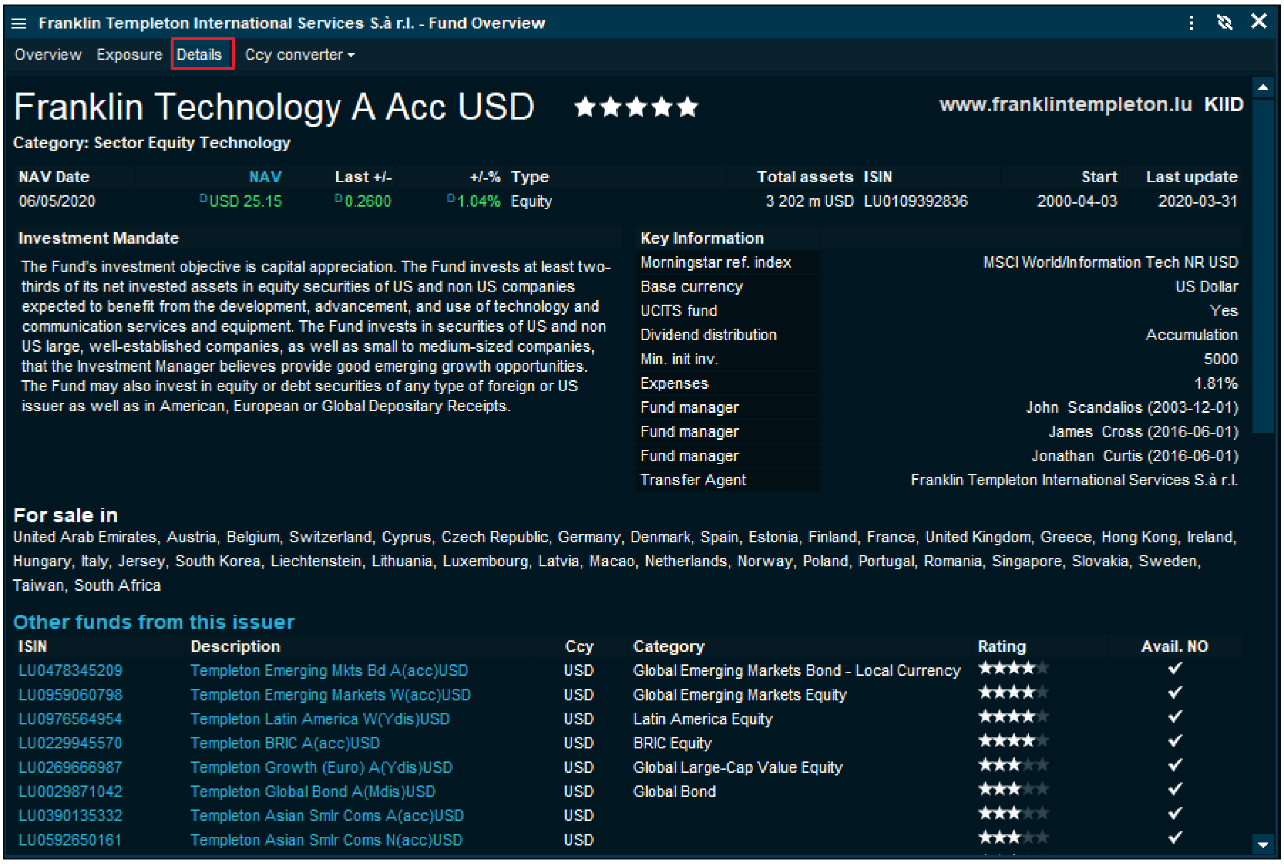
The table lists sector exposure of the fund. In some cases however, the total might not add up to 100%. This is due to the fact that not all the funds report their holdings fully.

Style map equity

The Morningstar Style Box is a nine square grid that classifies funds by size along the vertical axis and by value and growth characteristics along the horizontal axis.

6.28.9 Details tab

The "Details" tab provides key information as well as the fund's investment objective.



Dividend distribution

Element	Description
Accumulation	Funds that reinvest dividends back to the fund.
Income	Funds that pay out dividends. For income funds, the user can click "Income" and get an overview of all the previously paid out dividends.

Expenses

The total expenses of the fund.

Other funds from this issuer

The table shows other funds that the issuer offers in the same currency as the current fund.

A user can open a "Fund Overview" for funds in the list by double-clicking on a fund.

7 Excel

Learn all about the integration of the Infront Professional Terminal and Microsoft Excel.

See also:

- RTD linking
- Excel Add-in

7.1 RTD linking

See also:

- Introduction to RTD links
- Step-by-step RTD linking
- RTD cell referencing
- Why do my RTD links turn #N/A?
- RTD linking for historical Data

7.1.1 Introduction to RTD links

What are RTD links?

RTD stands for Real Time Data. With RTD links, the data will update in real time and by default all the quotes are updated every two seconds.

Infront can display live, streaming data or historical data from the Infront Professional Terminal in Microsoft Excel.

Infront also has the option to use DDE (Dynamic Data Exchange) links. Both RTD and DDE links provide access to the same information. RTD, however, is a newer protocol that offers several advantages over DDE, including more flexibility and better performance and reliability.

What can I export to Excel?

The Infront Professional Terminal can display live, streaming data or historical data from the Infront Professional Terminal in Microsoft Excel. The rule of thumb is that if the column is available in the Infront Professional Terminal's market windows, custom lists or chains and there is data available, then you should be able to export this data to Excel. Both RTD (Real Time Data) and DDE (Dynamic Data Exchange) links provide access to the same information.

System requirements

- RTD requires Excel 2002 or later. For older version of Excel, use DDE links instead.
- The Infront Professional Terminal must be running in order for the RTD links to return any data; please make sure the Infront Professional Terminal is open and is completely logged in before opening any spreadsheets containing RTD links.

RTD formula

The RTD formula consists of the following elements:

=RTD("ontrade.quotes","","feed code:symbol ticker", "", "field name")

It also supports an equivalent syntax, where the feed and symbol ticker are separate parameters:

=RTD("ontrade.quotes","","feed code", "symbol ticker", "field name")

The RTD formula explained

Element	Description
ontrade.quotes	Infront Professional Terminal's application name for the quotes module.
Feed code	The cell which contains the market feed code.
Symbol ticker	The cell which contains the ticker symbol.
Field name	The cell that contains the name of the field data to display.

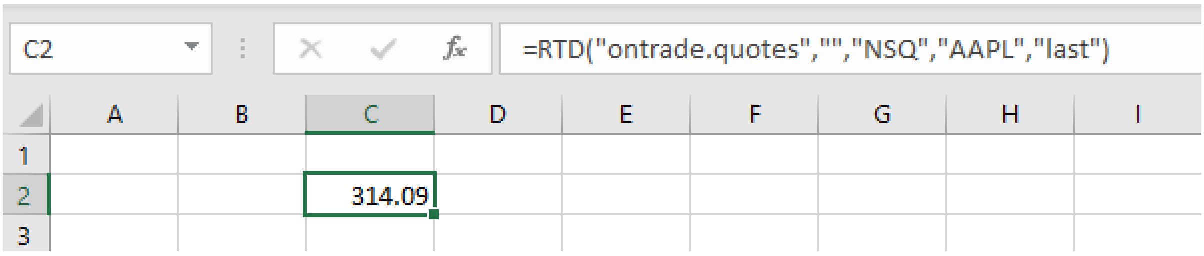
Example

In the below example, the formula is requesting the the last price for APPLE on the Nasdaq stock exchange (NSQ):

=RTD("ontrade.quotes","","NSQ:AAPL","","last")

Alternative syntax:

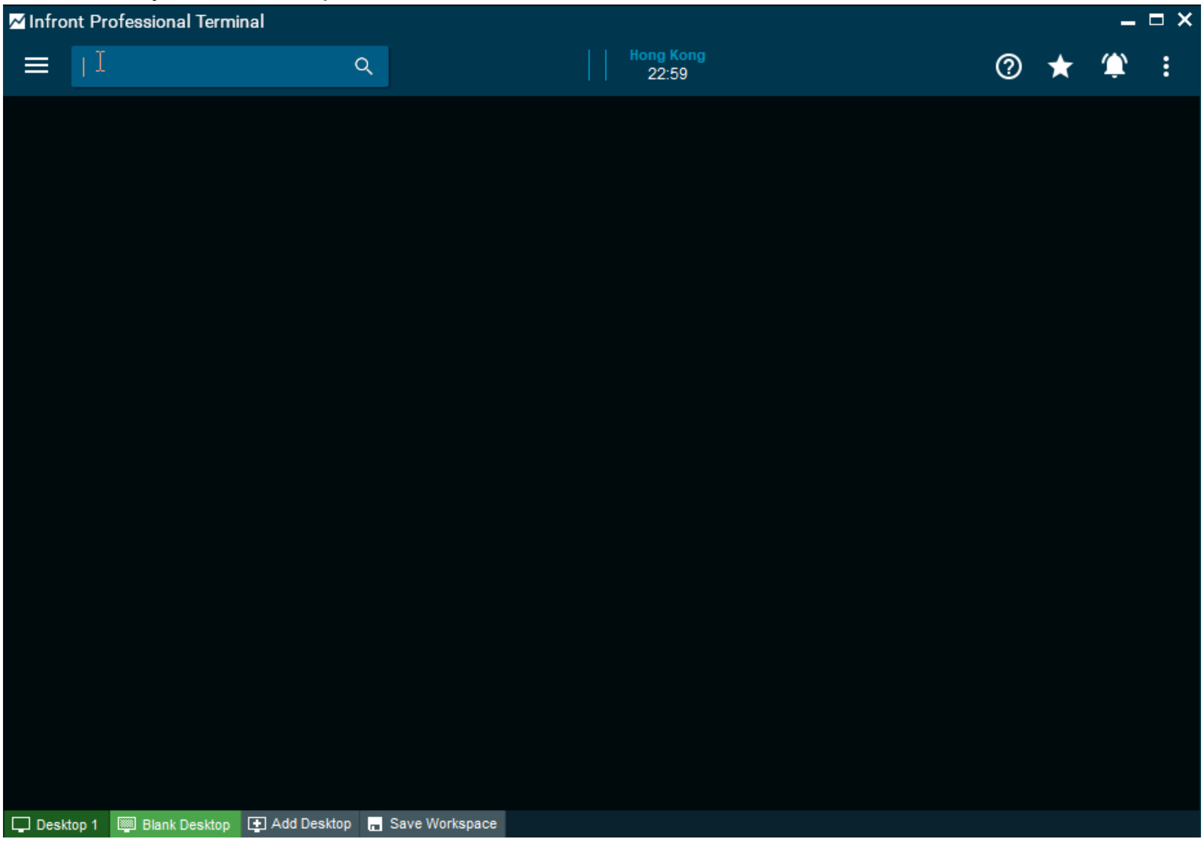
=RTD("ontrade.quotes","","NSQ","AAPL","last")



7.1.2 Step-by-step RTD linking

1. Open a "Market" window/"Watchlist". Right-click on the column headings and choose "Select Columns". From the "Select Columns" window, you can add and delete column headings. These will

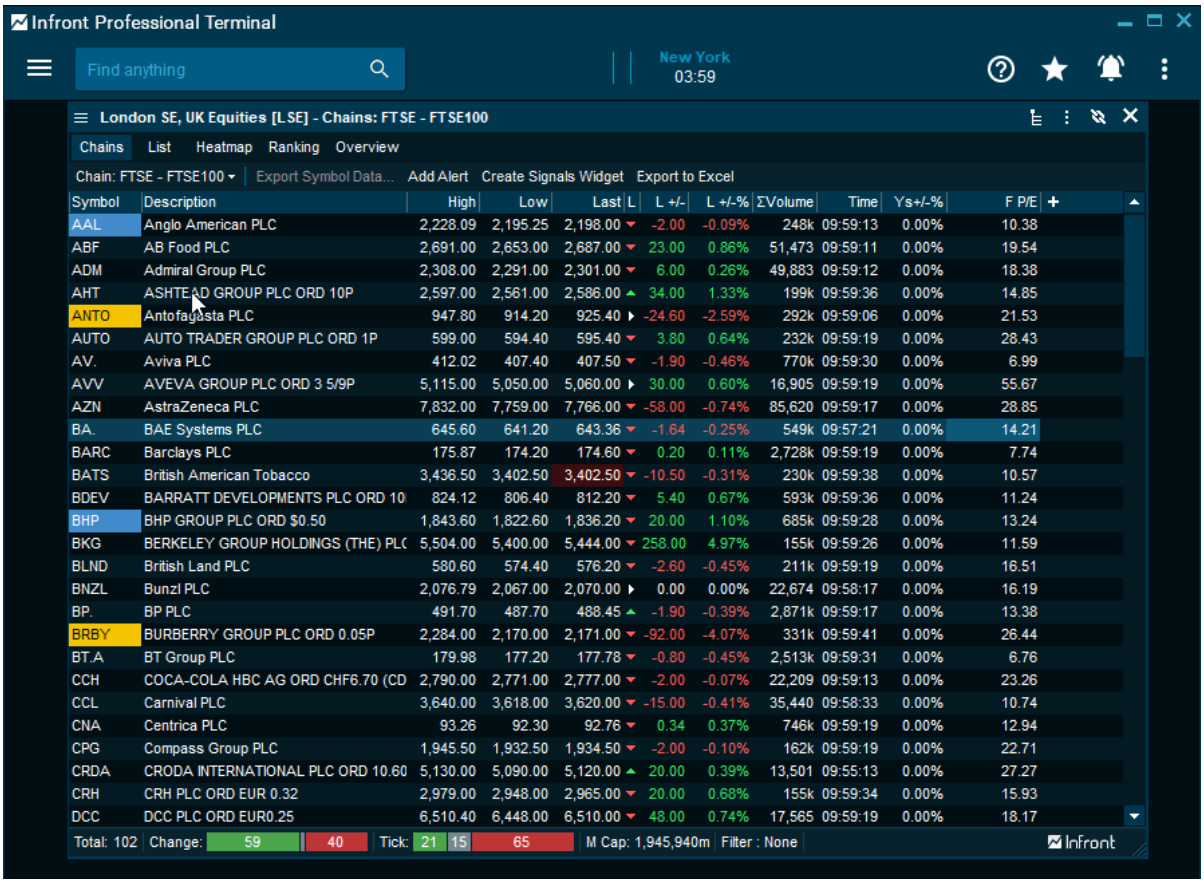
be the fields you wish to export to Excel.



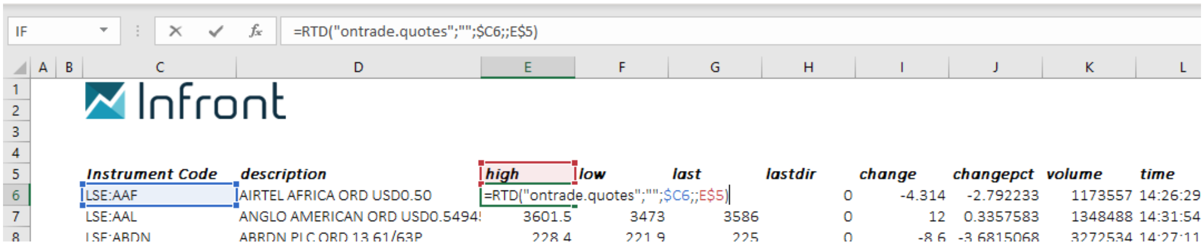
2. There are two ways to export to Excel using RTD links. The first step for both methods is to select the cells you want to be exported to Excel by holding down left click on the mouse and dragging the mouse across all of the data you want to export.

When you have highlighted your selection, you can export the selection to Excel following the below directions:

3. Open as Excel sheet.
Click the Excel icon which appears to the top of the window. (The Excel Add-in needs to be installed for this button to appear.)
This will automatically open an Excel sheet with your selection. Alternatively, use the keyboard shortcut <CTRL>+<SHIFT>+<E> when you make the selection.



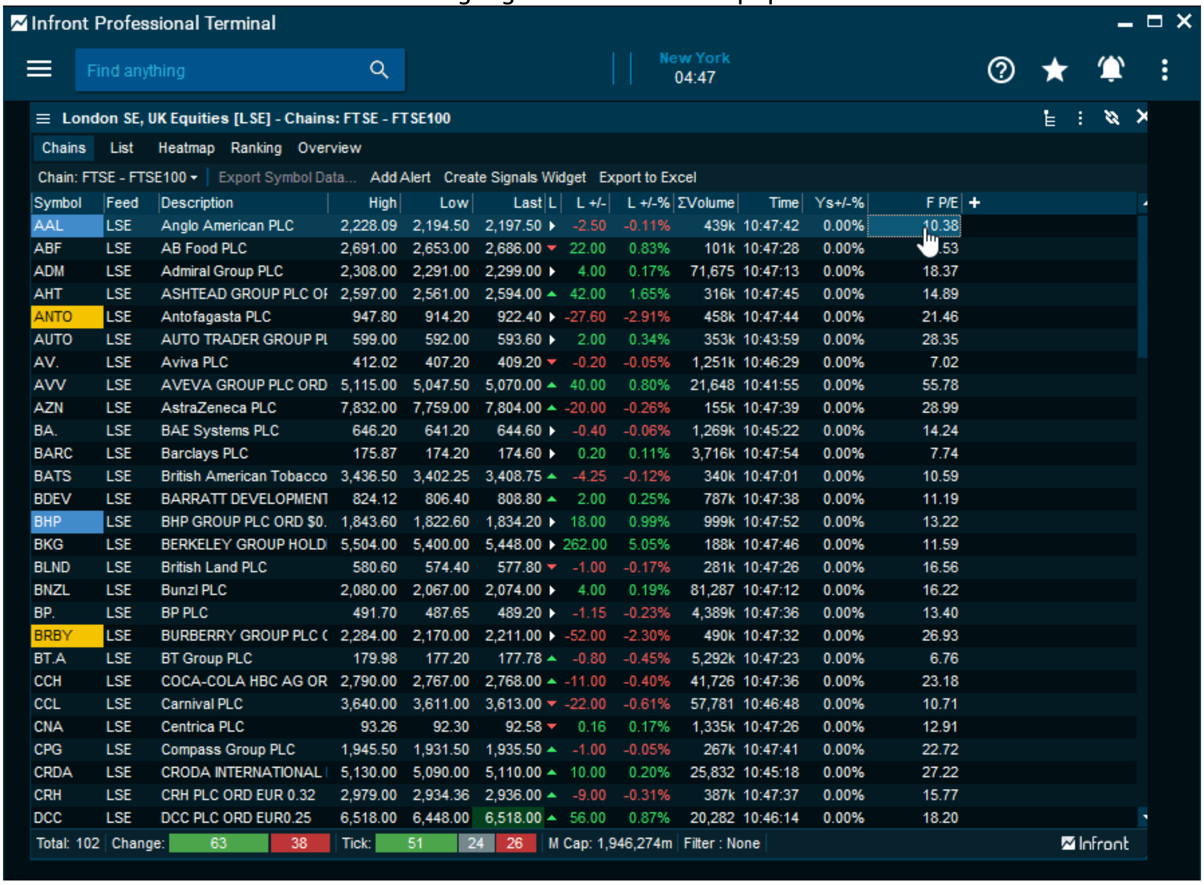
If you click on one of the cells, you can see the RTD function used to get the data in the formula bar. As you can see from the below, the formula uses cell referencing and is therefore dynamic and more flexible.



=RTD("ontrade.quotes","",$C6,"",E$5)

Element	Description
ontrade.quotes	Infront Professional Terminal's application name for the quotes module.
C6	The cell which contains the market feed code and ticker symbol.
E5	The cell that contains the name of the field data to display.

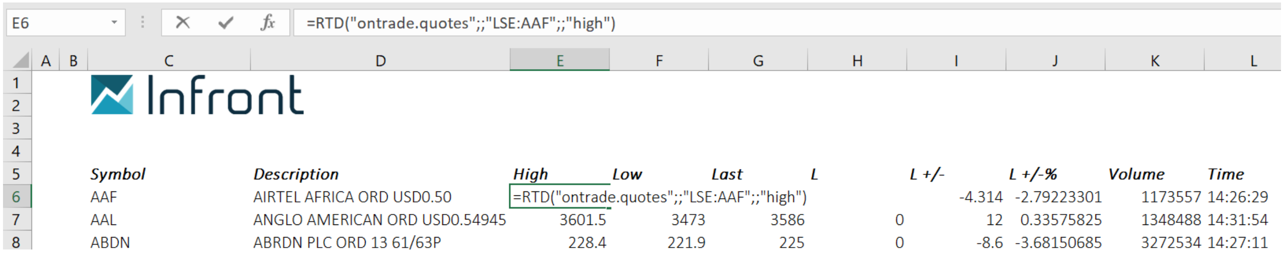
4. Alternatively, you can copy the RTD link.
   Right-click the selection and select "Edit" > "Copy RTD Link". Alternatively use the keyboard shortcut <Ctrl>+<R>. Paste into Excel and the highlighted selection will populate the Excel worksheet.



If you click one of the cells, you can see the RTD function used to get the data in the formula bar.

Differing from the cell referencing method used in the 3.1 example, this method is hard coded and references specific feed codes and ticker symbols in the formula.
=RTD("ontrade.quotes","","LSE:AAL","","last")

Element	Description
ontrade.quotes	Infront Professional Terminal's application name for the quotes module.
"LSE:AAL"	The market feed code and the ticker symbol.
"last"	The name of the field data to display.



7.1.3 RTD cell referencing

One benefit of RTD links is that it is like any other function in Excel. This means that RTD links support referencing to other cells (as can be seen in the section "Step-by-step RTD linking").

RTD formula elements:

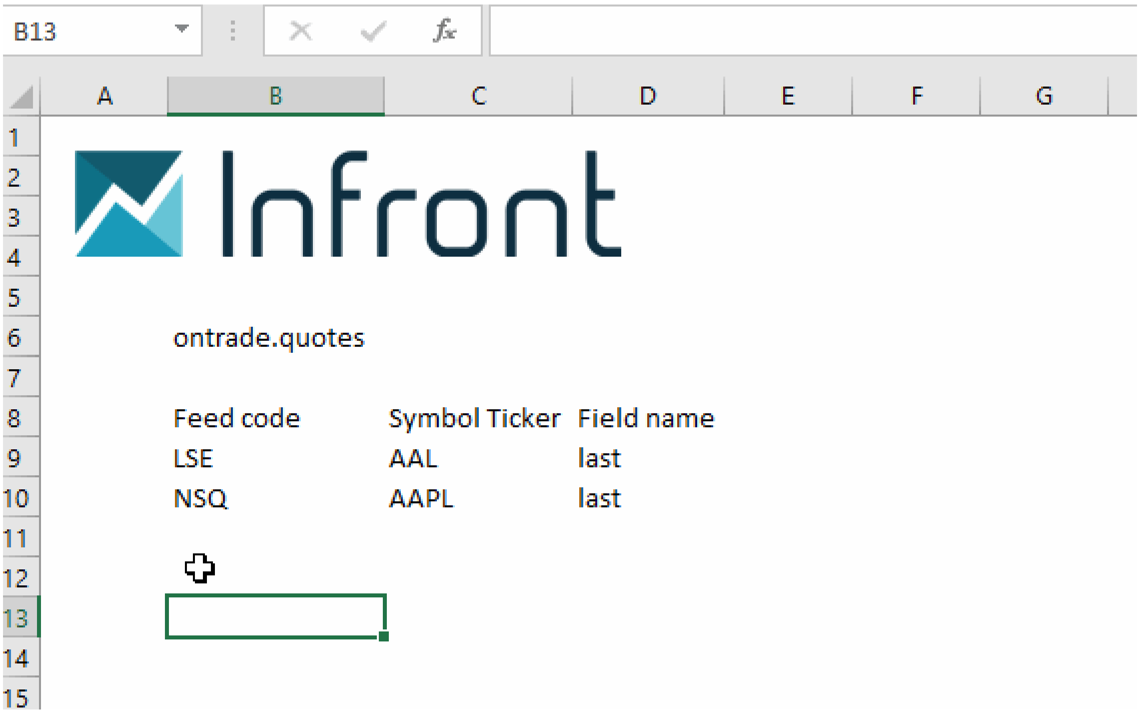
An RTD formula consists of the following elements:

=RTD("ontrade.quotes","",feed code,symbol ticker,field name)

Element	Code
ontrade.quotes	Infront Professional Terminal's name for the quotes module.
feed code	The cell which contains the market feed code.
symbol ticker	The cell which contains the ticker symbol.
field name	The cell that contains the name of the field data to display.

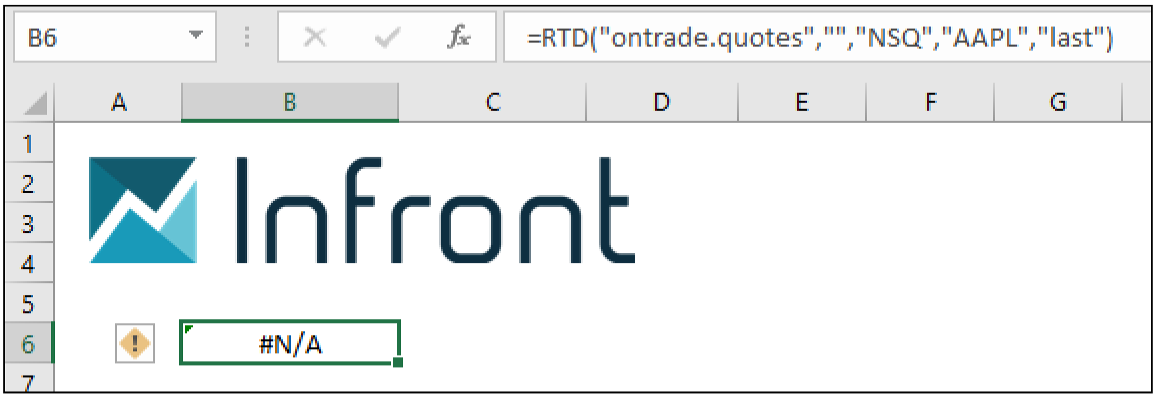
With the following formula (cell B13) to get the Last price for an instrument:

Element	Description
ontrade.quotes	Cell B6
feed code	Cell B9 (LSE)
symbol ticker	Cell C9 (AAL)
field name	Cell D9 (last)



7.1.4 Why do my RTD links turn #N/A?

#N/A means "Not Available" and this could be caused by different reasons.



This is a common Excel error that is not related to Infront Professional Terminal, but a known problem that can occur in Microsoft Excel. We highly recommend you to run Infront Professional Terminal before you open any Excel spreadsheets containing RTD links. This is necessary for the RTD links to work.

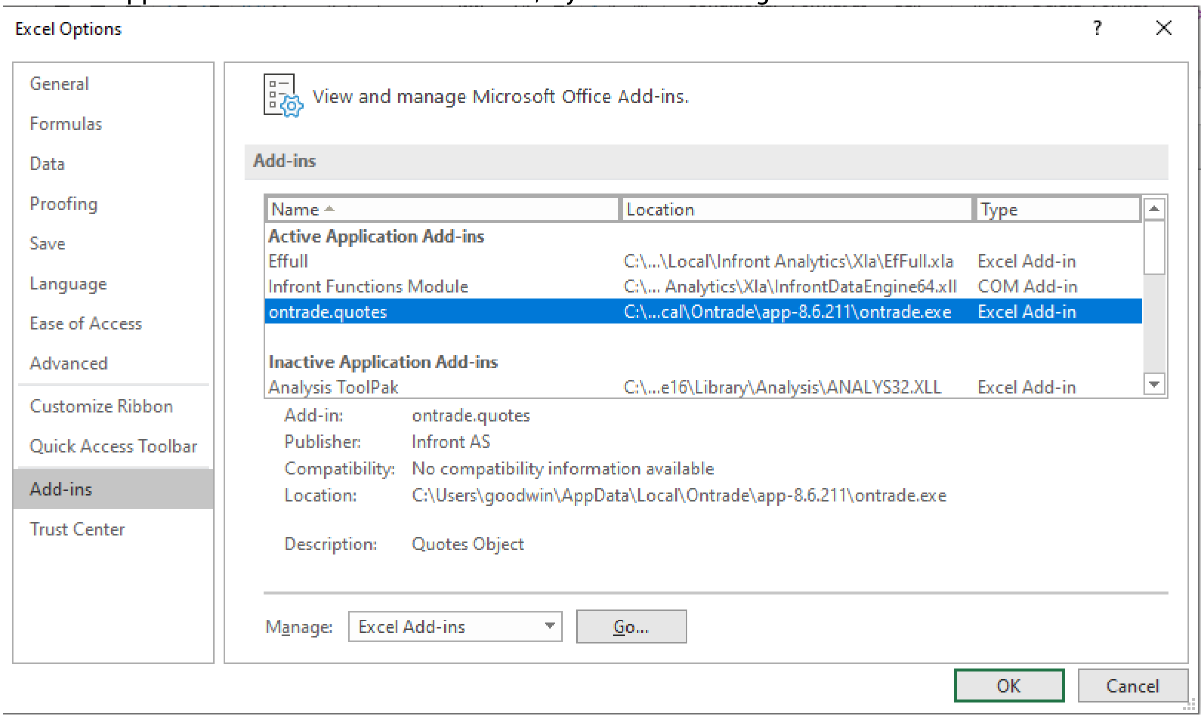
#N/A might appear if some files are not placed correctly according to the installation. Therefore, repairing Excel from the "Control Panel" could solve the issue. This can be done by following the instructions below:

1. Click the Windows "Start" button and open the "Control Panel."
2. Click the "Uninstall a program" link under "Programs".
3. Scroll down and select "Microsoft Office".
4. Click the "Change" button and wait for a new window to open.
5. Click to select the "Repair" option and click "Continue" to authorize your computer to repair Microsoft Excel to its default settings.

Other troubleshooting options

The issue can also be related to the add-in options in Excel. You can also try the following:

1. Go to file > Options > Add-ins.
   Make sure that "ontrade.quotes" is shown as **active**. Make sure that the add-in is not placed under "Inactive Application Add-ins". If it is inactive, try to activate it again.



2. Make sure that you are running the latest version of Windows and that all updates are installed.

7.1.5 RTD linking for historical Data

Export dynamic historical data from Infront Professional Terminal using RTD to Excel. This means that each date is dynamically updated every day.

Historical RTD Formula

A historical RTD formula consists of the following elements:

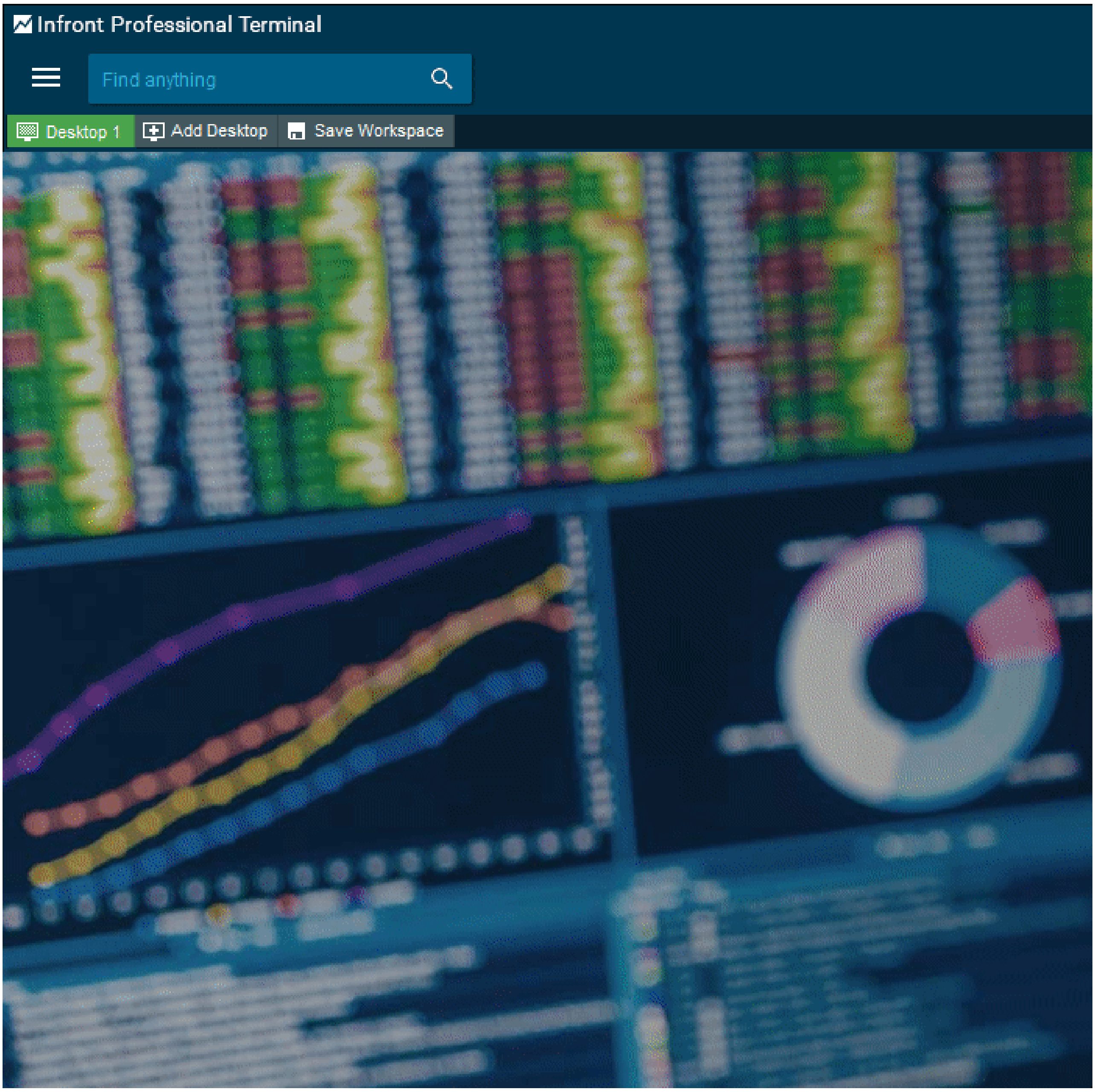
=RTD("ontrade.hist","",feed code,symbol ticker,"prices",row number,field name)

Element	Description
ontrade.hist	The module in Infront Professional Terminal where data is requested.
feed code	The cell which contains the market feed code.
symbol ticker	The cell which contains the ticker symbol.
prices	Specifies pricing data.

Element	Description
row number	The date for the most recent day available will be 0. If the row is 1, this will always be yesterday, row 2 will be 2 days ago and so on.
field name	The cell that contains the name of the field data to display.

Step-by-Step Historical Data Export using RTD

1. Open a symbol overview.
2. Switch to the "History" tab.
3. Highlight the selection of data you want to export by holding down the left mouse button and dragging across your data selection.
4. Right-click > "Edit" > "Copy RTD Link" (or press <CTRL>+<R> on your keyboard).
5. Paste into Excel.



In the example below, the formula is requesting the open price for BARC on feed LSE (London Stock Exchange) for the row 0 (the most recent date available):

=RTD("ontrade.hist","","LSE","BARC","Prices","0","open")

Static Historical Data by Date

Export static historical prices. This means that the data will not dynamically update every day, but rather be static and reference data on specific dates instead.

A historical RTD formula consists of the following elements:

=RTD("ontrade.hist","",feed code,symbol ticker,PricesByDate,date,field name,CW/ C/ "")

Element	Description
ontrade.hist	The module in Infront Professional Terminal where data is requested.
feed code	The cell which contains the market feed code.
symbol ticker	The cell which contains the ticker symbol.
PricesByDate	Reference to a specific date in the formula.
date	The date for which you want to view the data.
field name	The cell that contains the name of the field data to display.
CW	Copy data for weekdays only, do not copy weekends.
C	Copy data for all days (including weekends).
""	Copy data for all days excluding national holidays.

For example, in the example below, the formula is requesting the open price for BMW on feed XET (Frankfurt Xetra, Equities) for 20/04/2022:

=RTD("ontrade.hist","","XET","BMW","PricesByDate","2022-2-22","open","CW")

7.2 Excel Add-in

See also:

- Download and system requirements
- User login
- Quick report
- Time series

7.2.1 Download and system requirements

Download the Infront Excel Add-in

Infront Professional Terminal comes with an advanced equity and sector Analytics platform. Install the Excel Add-in to use the full depth of equity fundamental information available in Excel.

To download and install the Excel add-in, type "Excel" into the <CTRL>+<F> search bar and select "Install Excel Add-in". This will direct you to the Infront website and a set of instructions for installing the add-in.

The Infront Professional Terminal must be running for the Infront Excel Add-in to to return any data.

System requirements

- Operating system: Windows 7/8/10
- Processor: 2 GHz Intel or more
- Internal memory (RAM): 4 GB or more
- Screen resolution: 1024x768 resolution (1920x1080 or higher will offer the best experience)
- Monitors: The program can run on one or multiple monitors
- Hard disk: approx. 100 MB required for the program
- Internet connection: 2 Mbit/s or higher (depending on data volumes)
- Microsoft Excel: 2010/2013/2016/2019/365 - 32 or 64bit
- .NET Framework : 4.7 (it will be automatically installed if needed)

Connections through Firewalls and Antivirus Software

Firewalls

Check the local firewall settings. Some personal firewalls are poorly designed and might unintentionally limit Internet usage more efficiently than the user intends.

You have to authorize Infront Analytics IP addresses and domain names on your firewall.

Antivirus Software

Antivirus software installed on a user's computer can sometimes block an application from running, and sometimes it does not inform the user about it.

Many antivirus programs offer a way around this in their settings.

Loading the add-in in Excel

You do not need to load the add-in manually in Excel if automatic loading is activated.

If you prefer to load the add-in only when you need it:

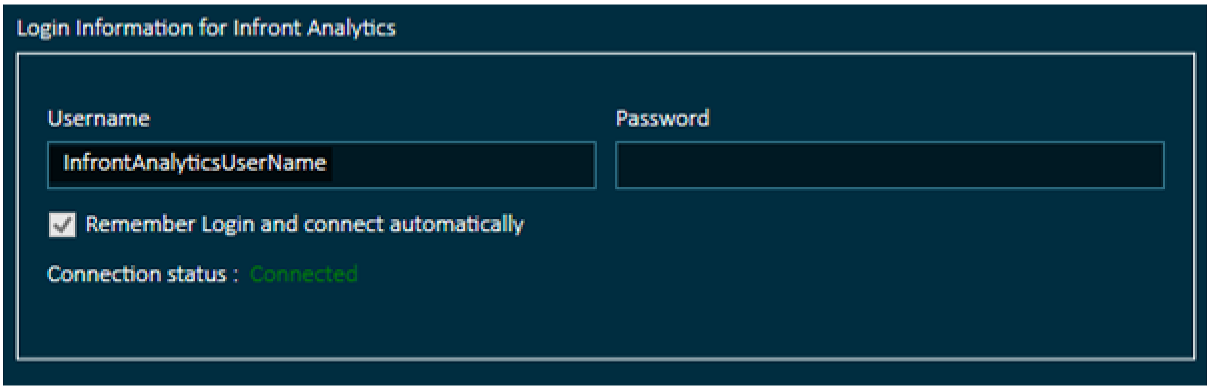
1. Start Excel.
2. Type "*Infront*" in the Windows "Start" menu and select the application Excel Add-in.

Alternatively, you can open the Windows "Start" menu and search for the add-in in the folder "Infront Analytics".

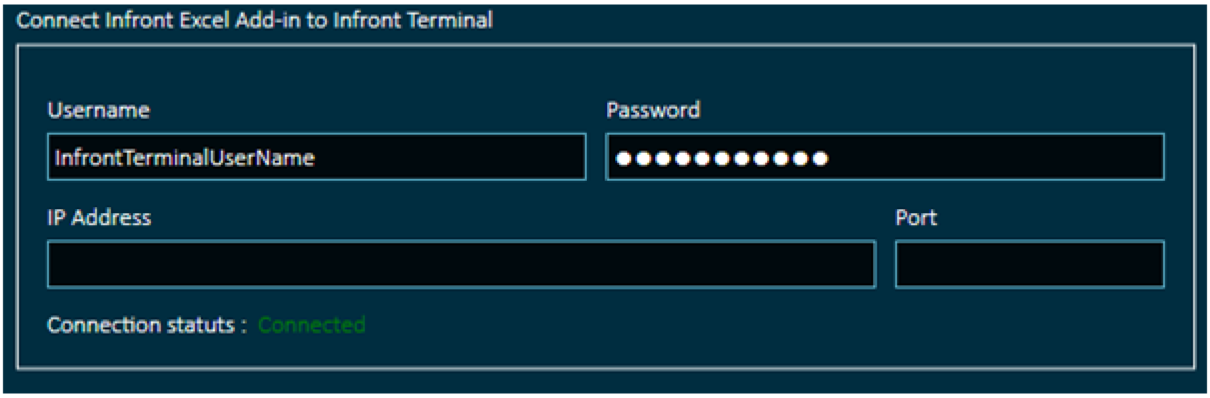
7.2.2 User login

User login

The login tab on the "Settings" window has two sections: one for Infront Analytics credentials and one for Infront Professional Terminal:



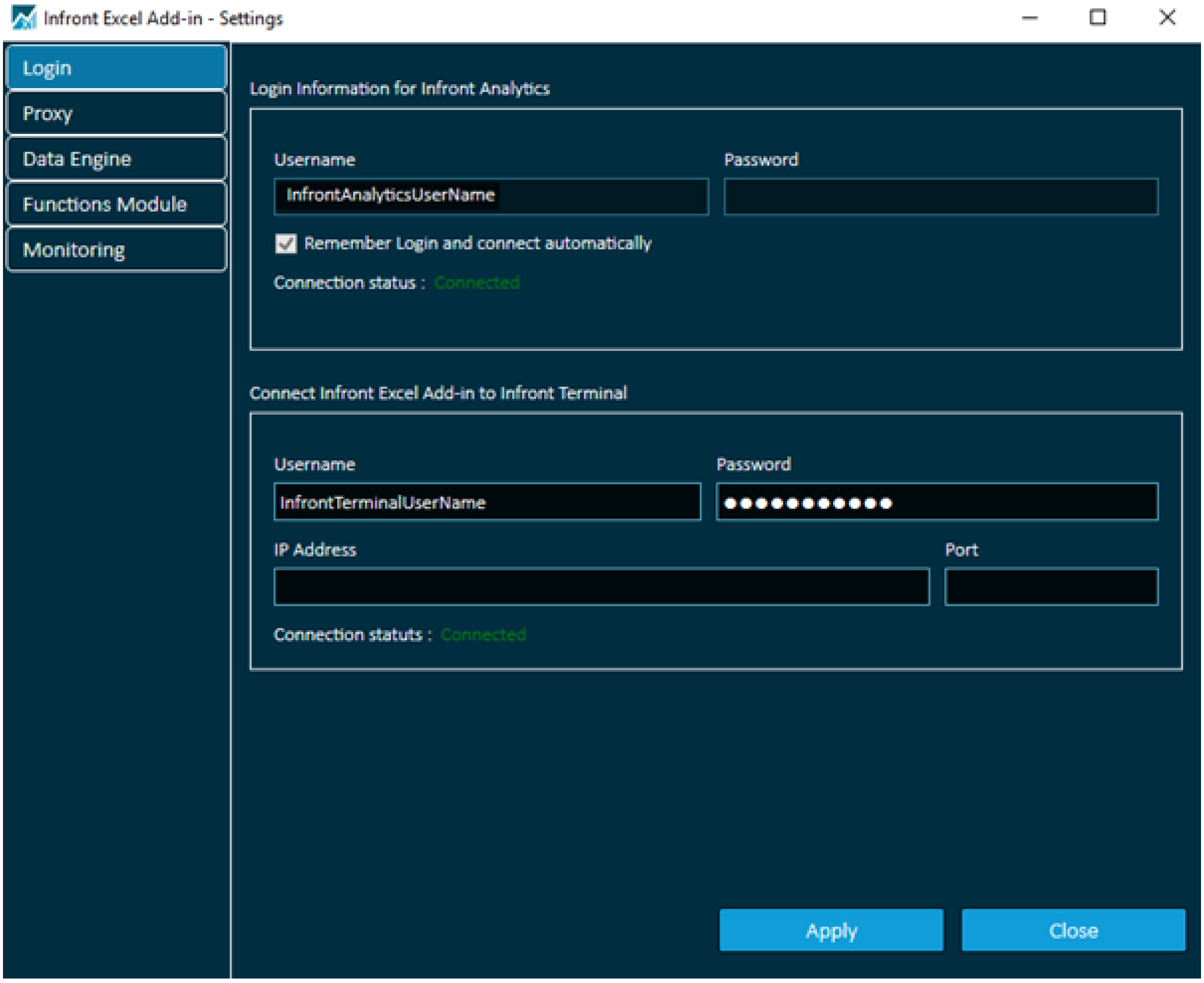
Infront Analytics



This connection is mandatory to be able to use the Excel Add-in and by default, your are connected with your Infront Analytics credentials. Once logged in, you cannot modify the connection credentials.

This connection provides you access to the Infront Analytics data universe (companies, lists, fundamentals, estimates…).

Infront Professional Terminal



In addition to the mandatory default Infront Analytics connection, if your are using the Excel Add-in from Infront Professional Terminal, then you need to connect with your Infront credentials that give you also access to the Infront data universe (Instruments quotes, trading data…).

7.2.3 Quick report

Quick report is the functionality that allows you to import field-based data from the Infront Analytics platform into Excel. In addition to retrieving the data, it creates a connection from your workbook to the platform that makes it easy to refresh the data when needed.

Quick report format

The default format for a Quick report on multiple companies is companies in rows and data items in columns.

Quick Report	REFRESH	EDIT		
	Updated : 09-Feb-17 10:34:45			
	Close Price (IN)	Market Capitalization Last (IN)	Net Sales (IN)	Net Sales (IN)
Currency : USD (thousands)	CURRENT	CURRENT	2015	2016
Alphabet Inc.	829.8800	560,843,739	74,989,000	90,272,000
Amazon.com Inc.	819.7100	391,001,670	107,006,000	135,987,000
Apple Inc.	132.0400	694,242,025	233,715,000	215,639,000
Facebook Inc.	134.2000	391,292,202	17,928,000	27,638,000

However, when creating a new Quick Report, you have the option to transpose your data in order to have companies in columns and data items in rows.

As you can see below, the currency is set by default to "Reference" (reporting currency), which is the currency used by the company when reporting its financial statements:

Quick report editing and updating

Once created, a Quick Report can be edited (use the "Edit" button) to perform changes on the company universe, the selected data items, or any other options except the format.

A Quick Report is a database snapshot that can become stale (out of date) when the data on the platform changes. At any time, you can trigger a refresh action by using the "Refresh" button to update your data.

7.2.4 Time series

Time series is the functionality that allows you to import historical data for a list of instruments into Excel. In addition to retrieving the data, it creates a connection from your workbook to the platform that makes it easy to refresh the data when needed.

Instrument types

Available instrument types include:

- Companies
- Market indices
- Industry sector indices
- Currencies
- Bonds*
- Funds*
- Futures*
- Options*
- Stocks*

Data types

Available data types include:

- Quotes Daily
- Market capitalization
- Dividends
- Estimates FactSet
- Target Price
- Quotes Intraday*

Time series format

By default, the time series format is a vertical descending table (most recent date at the top).

Time Series REFRESH EDIT

Updated : 09/02/2017 15:13:00

	Microsoft Corporation	International Business Machines Corp. (IBM)	Alphabet Inc.	Oracle Corporation	McKesson Corp.
	Close Price USD	Close Price USD	Close Price USD	Close Price USD	Close Price USD
08/02/2017	63.3400	176.1600	829.8800	40.0200	140.8900
07/02/2017	63.4300	178.4100	829.2300	40.0700	139.9300
06/02/2017	63.6400	175.8500	821.6200	40.0900	139.7900
03/02/2017	63.6800	175.7600	820.1300	40.4200	138.9100
02/02/2017	63.1700	174.6000	818.2600	39.9800	139.0100
01/02/2017	63.5800	174.2900	812.0000	39.8600	139.9900
31/01/2017	64.6500	174.4900	820.1900	40.1100	139.1300
30/01/2017	65.1300	175.7700	823.8300	40.2200	137.1000
27/01/2017	65.7800	177.3500	845.0300	40.2250	136.7200
26/01/2017	64.2700	178.6600	856.9800	40.1200	138.5500
25/01/2017	63.6800	178.2900	858.4500	40.1400	151.1000
24/01/2017	63.5200	175.9000	849.5300	40.1000	148.3100

You can switch to ascending format by editing your time series.

As you can see below, the currency can be set to "Reference" (reporting currency) which is the currency used by the company when reporting its financial statements:

Time series editing and updating

You can edit a time series by using the "Edit" button. Instruments, time period and formatting options can be modified. However, the data type cannot be modified in an existing time series.

A time series is a database snapshot that can become stale (out of date) when the data on the platform changes. At any time, you can trigger a refresh action by using the "Refresh" button to update your data.

*only available for Infront Professional Terminal users

8 API

Learn how to use Infront's Destop API for R and Python to perform portfolio analyses, simulate extreme events, create visualizations and indicators.

See also:

- End-of-Day API
- Python API
- R API

8.1 End-of-Day API

The EOD Desktop API provides you with End-of-Day or Historical data and can be accessed directly from a 3rd party console.

The Infront End-of-Day service can be used by 3rd party server systems to request end-of-day prices from Infront for a specific set of instruments.

The server system first posts a request for data and then polls the Infront service for the response until it is ready.

To access the EOD Desktop API, you need access to the Infront Professional Terminal, the EOD module and the market data for the API request. The data returns formatted as JSON or XML. The Infront End-of-Day Web API documentation can be found here:

https://eod.infrontservices.com/#documentation

Instruments are identified by using "Operating MIC", "ISIN" and (optional) "currency". Alternatively, instruments can be identified by using the Infront "feed number" and "ticker code". Be aware that instruments that are not found by Infront or that have multiple possible matches (ambiguous) will be marked in the result with an error code. The API is also case sensitive. For example, spelling "operating_mic" as "Operating_MIC" will not work.

The End-of-Day service is HTTP/REST based and uses JSON as data protocol.

The server accepts four types of requests:

Request type	Description
End-of-Day	Service used to make a request for one or multiple instruments.
Historical	Service used to make a request for one or multiple instruments.
Instrument Search	Service used to get information about an instrument.
Accessible Markets	Service used to get information about accessible markets for a given user.

The following data can be retrieved with EOD API:

Data type	Description
EOD	Name, Previous close date, Previous close, Volume, Turnover, Bid, Ask, Currency.
Historical	Last, Volume, Turnover, Bid, Ask, Open, High, Low.
Instrument Search	Operating mic, ISIN, Feed, Instrument type, Feed name, Ticker, Name, Currency.
Accessible Markets	Operating mic, Feed, Feed code, Feed description.

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eod.infrontservices.com/#documentation+

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Instrument Search	Operating mic, ISIN, Feed, Instrument type, Feed name, Ticker, Name, Currency.
Accessible Markets	Operating mic, Feed, Feed code, Feed description.

8.2 Python API

The Infront Python API is an easy way to analyse data with your own Python scripts. It provides finished wrapped data in data frames, and you can use it with a Command Line Interface (CLI). Using Infront's Python API, you can conduct portfolio analyses, simulate extreme events and their effect on prices, and create visualizations and indicators to better understand the market dynamics and much more. Python, as your daily companion with your Infront Professional Terminal, provides you with over 114,000 open-source packages covering thousands of use cases.

To access the full functionality of the Python API, you will need:

- Infront Professional Terminal
- EOD Module
- Access to relevant market data

> If you do not have access, please contact Infront.

8.2.1 How to open the Python API

First, you need to install Python.

> Following the external link below opens a new browser tab and sends you to a website outside of the Help Center.

1. You can find the installation for Python here. Click "Download Python" and install Python on your computer.
2. A new window will pop up, click "Customize installation".
3. The next window will show optional features.
   We recommend you to install all features. Select:
   - Documentation
   - pip
   - tcl/tk and DLE
   - Python test suite
   - py launcher and for all users
4. Click "Next" which will forward you to a window with overview of "Advanced Options".
5. Select "Associate files with Python."
6. Create shortcuts for installed applications.
7. Add Python to environment variables.

8. Click "Install" and the installation will start.

Once you have installed Python, you can follow the instructions under the Infront Connect Installation. You can find this on our website.

8.2.2 How to use the Python API

Finding a symbol

The Feed and Ticker fields are required to find a match for an instrument. These can be found in the "Overview" window for the instrument in the Infront Professional Terminal. It is also possible to find this information in a watchlist. To do so, open a watchlist, add the preferable instrument and add the columns Ticker and Feed.

An example, Feed = "OSS" and Ticker = "DNB". In Python code it will look like this: ["OSS:DNB"]

> ⚠ Following the external link below opens a new browser tab and sends you to a website outside of the Help Center.

To send an API request: You can use the documentation to send an API request here.

There are a few variables you can change:

- Tickers: You should change FEED and TICKER to the feed and ticker that you want to export history from. If you want to export data DNB from Oslo Stock Exchange you put in OSS instead of FEED and DNB instead of TICKER, for example ["OSS:DNB"]
- Fields: The fields that are supported in the Python API are
  - open
  - high
  - low
  - last (last value from the day before)
  - turnover
  - volume
  - bid
  - ask
  - Start date: Here you can set the date from when you would like to get the historical data. The date format is "YYYY-MM-DD", for example "2019-01-01".
  - End date: This date has the same format as Start_Date and you can set the last date in the period you want to export history from. If you set this to a future date, for example "2099-01-01", you will get all the data from the start date until yesterday's date.

Example of an API request without information inserted

MySymbol = infront.GetHistory(tickers = ["FEED:TICKER"], fields = ["open", "high", "low", "last", "turnover", "volume", "bid", "ask"], start_date = "YYYY-MM-DD", end_date = "YYYY-MM-DD")

Example of an API request with information inserted

(Ticker= DNB, Feed= OSS. Start_date= 2019-01-01, End_date= 2099-01-01: MySymbol = infront.GetHistory(tickers = ["OSS:DNB"], fields = ["open", "high", "low", "last", "turnover", "volume", "bid", "ask"], start_date = "2019-01-01", end_date = "2099-01-31")

The data that can be retrieved with Python API includes:

- Historical Data
- Stocks, bonds, futures, forex, warrants
- Fields: open, high, low, last, turnover, volume, bid, ask

8.3 R API

The Infront R API makes it efficient to analyse data with the built in tools that R supports. You can easily create your own graphical charts like return histograms by using R's graphical user interface (GUI). Using Infront's Desktop API for R, you can conduct portfolio analyses, simulate extreme events and their effect on prices, create visualizations and indicators to better understand the market dynamics, and much more.

As your daily companion with your Infront Professional Terminal, R provides you with over 6,500 open-source packages covering thousands of use cases.

To access the full functionality of the Python API, you will need:

- Infront Professional Terminal
- EOD module
- Access to relevant market data

> If you do not have access, please contact Infront.

8.3.1 How to open the R API

You can use various types of software to access the R API. An example of software you can use is RStudio. Once you have decided on your software of choice you can follow the installation instructions here.

8.3.2 How to use the R API

To find a symbol: There are a few fields that are required to find a match for an instrument. That is, Feed and Ticker. This can be found in the

Overview window for the instrument in the Infront Professional Terminal. It is also possible to find this information in a Watchlist.

To do so, open up a Watchlist, add the preferable instrument and add the columns Ticker and Feed to your Watchlist.

Example

Feed = "OSS" and Ticker = "DNB". In RStudio it will look like this:

["OSS:DNB"]

To get multiple symbols in the same request you can use a comma as a separator. Example:

["OSS:DNB", "SSE:VOLV A", "..."]

You can use the documentation to send an API request here. There are a few variables you can change. These are:

Variable	Description
Tickers	You should change FEED and TICKER to the feed and ticker you want to export history from. If you want to export data for DNB from Oslo Stock Exchange, you use OSS instead of FEED and DNB instead of TICKER, that is, c("OSS:DNB"). **Fields** The fields that are supported in the R API include: • open • high • low • last (last value from the day before) • turnover • volume • bid • ask
Start date	Here you can set the date from when you would like to get the historical data. The date format is "YYYY-MM-DD", for example "2019-01-01".
End date	This date has the same format as Start_Date and you can set the last date in the period you want to export history from. If you set this to a future date, for instance "2099-01-01" you will get all the data from the start date until yesterday's date.

Example of an API request without information inserted
MySymbols = GetHistory(tickers = c("FEED:TICKER), fields = c("bid","ask","turnover","volume","last"), start_date = "YYYY-MM-DD", end_date = "YYYY-MM-YY")

Example of an API request with information inserted (Ticker= DNB, Feed= OSS
Start_date= 2019-01-01, End_date= 2099-01-01): MySymbols = GetHistory(tickers = c("OSS:DNB"), fields = c("bid","ask","turnover","volume","last"), start_date = "2019-01-01", end_date = "2099-01-01")

The data that can be retrieved with R API includes:

- Historical Data
- Stock, bonds, futures, forex, warrants
- Fields: open, high, low, last, turnover, volume, bid, ask

9 Treasury

Find out more about the Infront Professional Terminal Treasury module.

See also:

- Interest rate swaps
- Forward rate agreement
- Overnight Index Swaps
- Bond Matrix
- Interpolation Tool

9.1 Interest rate swaps

9.1.1 How to open

- Search for "Interest Rate Swaps" by using the search field > select a given base currency from the list.
- Main menu > "Explore" > "Money Market" > "IR Swaps".

Function	Description
Base	Currency selection. When more than one currency is selected, then the currencies will appear below the toolbar as tabs. The Infront Professional Terminal will remember your selection for convenience when the window is saved in a workspace.

Function	Description
Basis	Select the type of swap: Interest Rate Swap, Currency Basis Swap, Tenor Basis Swap.
Contributor	Select the sources of the information to be displayed. It can be global and regional banks, or inter-dealer broker data.
Columns	Allows the tailoring of the data to be displayed, such as mid yield and symbol name.
Consolidation	When selected, it displays a single set of quotes that correspond to the last updates.
Excel RTD Linking	Select the series or instrument to export to Excel and press <CTRL>+<R>.
Swap Curves	Double-click any series to chart them.To compare them, click any instrument while holding <CTRL> to drag and drop into an existing chart. Other instruments are supported.

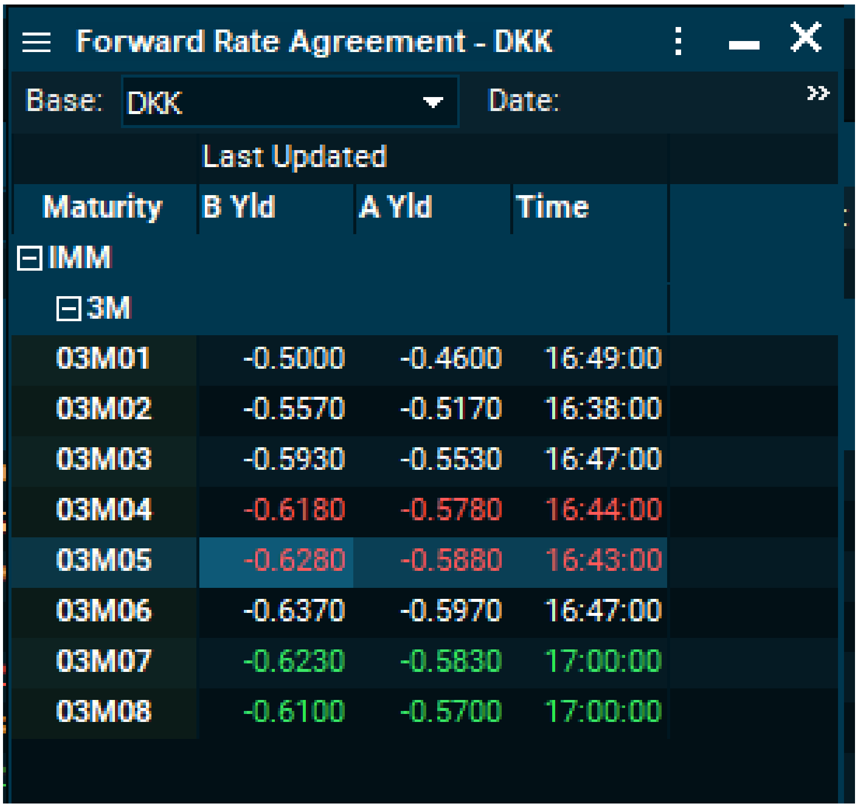
9.1.2 Useful keyboard shortcuts

Keyboard shortcut	Description
<F11>	Hides toolbar.
<CTRL>+<C>	Consolidates the contributed data on a time of update basis.
<CTRL>+<RIGHT>	Expands all collapsed groups.
<CTRL>+<LEFT>	Collapses all groups.

9.2 Forward rate agreement

9.2.1 How to open

- Search for "FRA" in the search field and click the first result in purple > choose a given currency from the list.
- Main menu > "Explore" > "Money Market" > "FRAs" > select a currency from the list.



Function	Description
Base	Currency selection. When more than one currency is selected, they will appear below the toolbar as tabs. The terminal will remember your selection for convenience when the window is saved in a workspace.
Date	Select FRAs based on International Money Market Dates, and free Forward Rate Agreements.
Contributor	Select the sources of the information to be displayed. It can be global and regional banks, or inter-dealer broker data.
Columns	Allows to customize the data to be displayed, such as mid yield and symbol name.
Consolidation	When this option is selected, it displays a single set of quotes that correspond to the last updates.
Excel RTD Linking	Select the series or instrument to export to Excel and press <CTRL>+<R>.
Forward Curves	Double-click on any series to chart them. To compare them, click on any instrument while holding <CTRL> to drag and drop into an existing chart. Other instruments are supported.

9.2.2 Useful keyboard shortcuts

Keyboard shortcut	Description
<F11>	Hides toolbar.
<CTRL>+<C>	Consolidates the contributed data on a time of update basis.
<CTRL>+<RIGHT>	Expands all collapsed groups.
<CTRL>+<LEFT>	Collapses all groups.

9.3 Overnight Index Swaps

9.3.1 How to open

- Search for "Overnight Index Swaps" in the search field and click the first result in purple > select a given currency from the list.
- Main menu > "Explore" > "Money Market" > "OI Swaps" > select a currency from the list.

Function	Description
Base	Currency selection. If more than one currency is selected, then these currencies will appear below the toolbar as tabs. Infront Professional Terminal will remember your selection for convenience when the window is saved in a workspace.
Contributor	Select the sources of the information to be displayed. It can be global and regional banks, or inter-dealer broker data.
Columns	Allows the tailoring of the data to be displayed, such as mid yield and symbol name.
Consolidation	If selected, it displays a single set of quotes that correspond to the last updates.
Transpose	Displays the data in a transposed matrix form.
Excel RTD Linking	Select the series or instrument to export to Excel and press <CTRL>+<R>.
Forward Curves	Double-click any series to chart them. To compare them, click on any instrument while holding <CTRL> to drag and drop into an existing chart. Other instruments are supported.

9.4 Bond Matrix

9.4.1 How to open

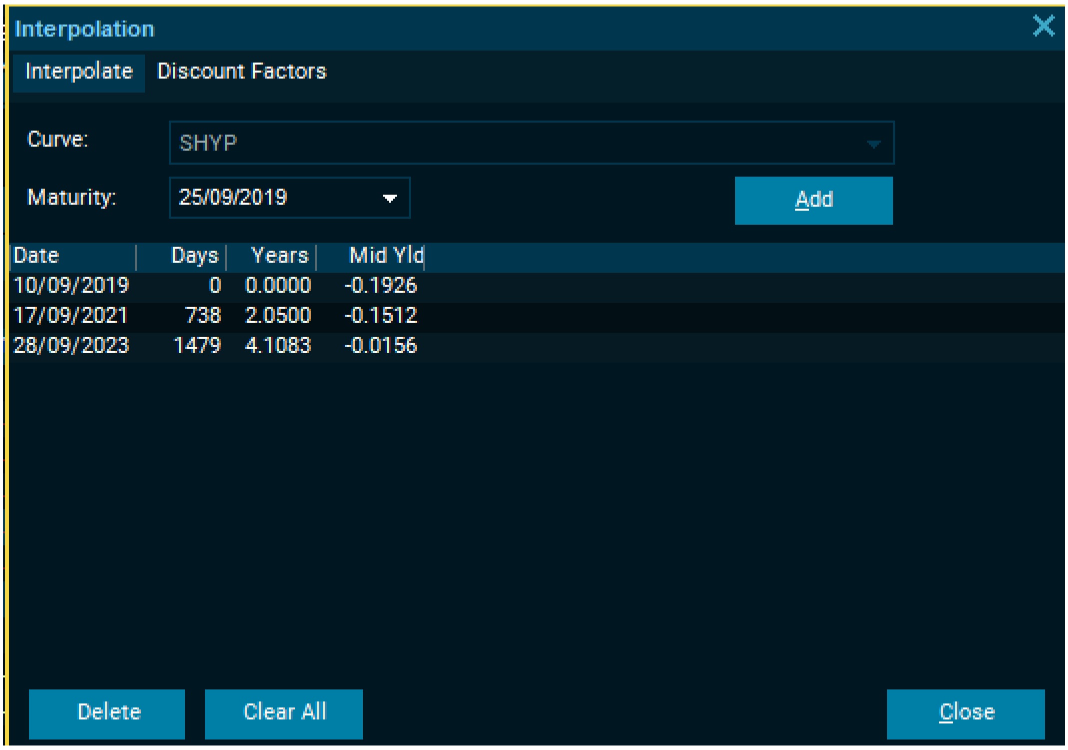
- Search for "mortgage bonds" in the search field and click on the first result in purple > select a country from the list.
- Main menu > "Explore" > "Fixed income" > "Mortgage bonds" > select a country from the list.

Element	Description
Issuer	Select issuers.
x-axis, for example 1579 17-06	Displays issued series of the selected contributor.
y-axis, for example NRD	Displays the quoted bid (bid yield) and ask (ask yield) of each contributor.
Yield Chart	Opens the yield curve of the current series. Press <CTRL> and drag and drop to add any other series to the existing yield curve. Alternatively, double-click anywhere in the matrix.
Mid	Displays the median of the mid-quotes of the listed contributors on the intraday time interval.

9.5 Interpolation Tool

9.5.1 How to open

For example, click a mortgage bond > this opens a curve chart > click "Interpolation".



Function	Description
Interpolation	The default interpolation method is cubic splines, with constraints to ensure monotonicity, and overshooting minimisation. The output is the annualized rate for the selected date.
Curve	Select the curve to interpolate.
Maturity	Select the desired broken dates.
Discount factors	Displays the discount factors for the selected dates.
Cash flow input	Add the scheduled cash flows to calculate the present or future value.
Present and Future Value	The sum of the inserted cash flows is displayed at the bottom of the window. Calculations are performed in continuous time (that is, not discrete).

10 Corporate Debt module

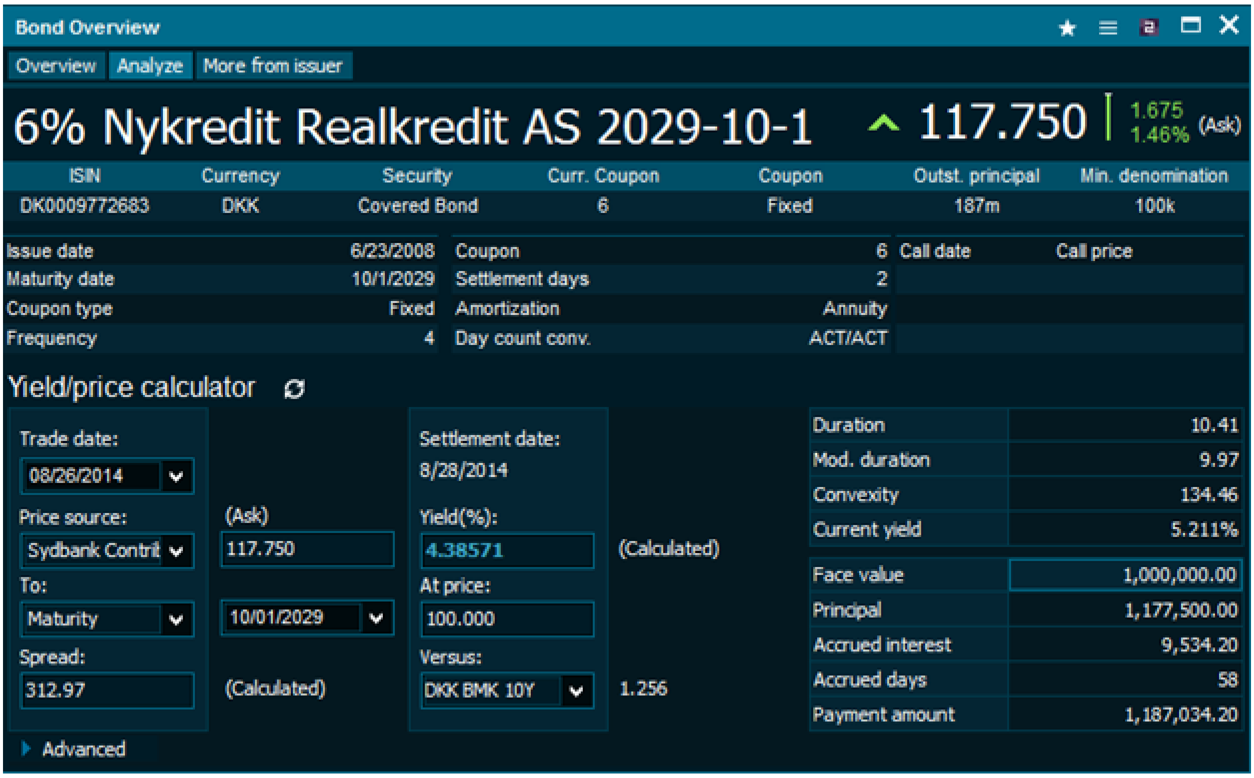
Find out more about the Infront Professional Terminal Corporate Debt module.

Corporate Debt module has a special focus on pricing and fundamental data for listed and OTC debt in the Nordic and biggest European debt markets. The module is targeting buy and sell-side market participants looking for an effective, venue/contributor overview, possibility to calculate yield or price a bond on a given yield as well as calculate several important risk indicators. A powerful debt screening functionality allows the user to search by several important factors such as type, security, issuer industry and yield in addition to a free-text search which ensures the user will find what they are looking for every time.

Unique "Bond Overview" pages consolidate data for the instrument and display it in a way that provides the user with critical information in a timely and effective way. Bond overview covers reference data, market and indicative prices and an overview of the other issues from the same issuer. From here, the user can navigate further to each and every venue the bond is traded on, issuer fundamentals or proceed with analytics. Yield calculator calculates yield from price and price from yield until Maturity, Next call, Worst as well as a Custom date. The calculated yield is compared to a benchmark for spread analysis. Last but not least, the user can calculate the payment amount for a transaction taking into account principal and accrued interest.

10.1 Yield/price calculator - methodology

An analytic tool allowing to calculate a yield on a bond from a given price or a price from a given yield. The calculator provides flexibility to modify several calculation input factors for sensitivity analysis.



Calculator is filled with the reference and market data needed to perform a calculation. The latest available price (either market or indicative) is used by default.

Infront yield/price calculator currently supports calculations on the following types of bonds:

- Fixed rate callable bonds
- Floating rate bullet bonds
- Floating rate callable bonds

- Zero coupon bonds
- Perpetual fixed bonds

User can change the following values manually by either typing a new value or choosing a value from a drop-down list:

Element	Description
Trade date	Affect the settlement date.
Price source	Depends on user's access rights.
Price	
Yield	
To date	The date to which calculation will be performed.
At price	The redemption price of the bond.
Spread	Spread between a chosen benchmark and current bond instrument.
Versus	Benchmark to which the current bond will be compared.

10.2 Usability

Changing a price will trigger a yield and spread calculation.

Changing a yield will trigger a price calculation.

Modifying a spread will adjust the yield and trigger a price calculation.

> Calculated values are marked in bold and are blue. Modified values are marked bold and are green.
>
> Use refresh button to restore the original setup.

Calculator performs calculations to the following "exit" dates:

10.3 Maturity – chosen by default

Element	Description
Next call	For instruments with one or more call option dates.
Worst	Returns the worst yield and a date at which the yield is worst out of all possible exit dates.
Custom	Calculation is performed for a date you specified.

Currently, spreads are calculated against a pre-defined list of government benchmark bonds. Default benchmarks are chosen based on maturity and country of a bond instrument. User can choose any benchmark bond from the drop-down list.

10.4 Floating rate bonds

Infront yield/price calculator prices floating rate bonds using swap curves.

10.4.1 Methodology - Swap curves

Swap curves are bootstrapped using deposit rates for the short-term of the curve up to 1 year. For the long-term of the curve, from 1 to 30 years, the curve is built using swap rates. These rates reflect the fixed coupon rate of a fixed-floating swap where the fixed leg would be valued at 100. Linear interpolation method is used to smooth out the curves. Where direct swap rates are unavailable due to illiquidity, basis swap rates are using to derive the needed swap rates.

Infront currently prices bonds using the following reference rates:

NIBOR: 1M, 3M, 6M

STIBOR: 3M

CIBOR: 6M

EURIBOR: 1M, 3M, 6M, 12M

$$\sum_{i=1}^{n} \frac{CF_i}{\left(1 + \frac{Yield\ to\ Maturity}{100 \times Frequency}\right)^{Year\ Fraction_i \times Frequency}}$$

10.4.2 Other methodology:

Price + Accrued interest =

$$\frac{1}{p}\sum \frac{CF_i \times L_i}{\left(1 + \frac{Yield}{Frequency}\right)^{L_i \times Frequency}}$$

Duration =

Where:

Frequency is the number of payments per year

P is the clean price plus accrued interest

N is the number of periods until maturity

Yield is yield to maturity

Li is the year fraction between the settlement date and the i^{th} coupon

$$\frac{D}{1 + \frac{Yield}{Frequency}}$$

Modified duration =

Where:

D is duration

Yield is yield to maturity

$$\frac{1}{P \times (1+y)^2} \sum_{t=1} \left[\frac{CF_t}{(1+y)^t} (t^2 + t) \right]$$

Convexity =

Where:

P is the current bond price

Y is yield to maturity

T is maturity in years

Current yield: annual interest payment / current price

Principal: Current price x Face Value

Accrued interest: CouponValue Date x Year fraction, where year fraction is calculated based on a day count convention for a bond

Payment amount: Principal + Accrued interest

10.5 Advanced

Advanced section of the calculator allows the user to modify several factors affecting the calculation. A new yield will be calculated immediately after a user changes an input. Each of the following input values can be changed by either typing in a new value or choosing a value from a drop-down menu:

- Calendar country
- Current coupon type
- Coupon frequency
- Day count convention
- Current coupon size
- Reference rate (for floating instruments only)
- Spread (for floating instruments only)

11 FX

Learn about the support for FX trading of spots and forwards.

See also:

- FX trading
- FX Forward Calculator

11.1 FX trading

11.1.1 FX trading

The program includes support for FX trading of spots and forwards if your provider supports it. You can place and execute deals on both asset classes and follow the deals of the day to get a full overview of FX deals.

The following windows are available for FX trading:

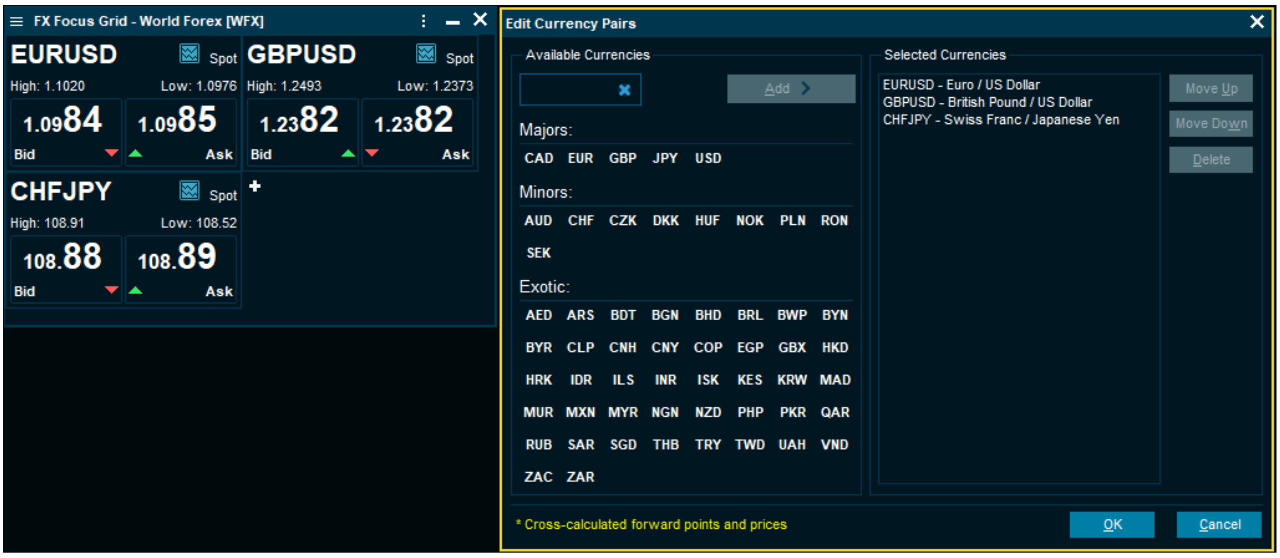
Window	Description
"FX Spots" window	Enables a grid view which can be customized to view selected spot currencies.
"FX Forwards" window	Enables a grid view which can be customized to view selected forward currencies.
"Trading" window	Provides overview of your deals and deal requests.
"New Deal" window	Standard window for placing both spot and forward orders.

11.1.2 FX Spots window

The "FX Spots" window is the main window for displaying spot prices in the Infront Professional Terminal. It is a grid consisting of the spots of your selection which can easily be customized.

Each spot in the grid consists of:

- Name of currency cross
- Button to view a chart of the spot
- High/Low
- Sell and buy price
- Tick indicator to display positive/negative change on price



11.1.3 Currency setup

Before you can use the "FX Spots" window, you need to add the currency pairs you want to follow. The currency setup can be accessed by clicking the "+" sign in the spot grid or by clicking the " ⋮ " settings menu icon in the top right corner followed by "Edit currency pairs".

There are two ways to add a new cross rate to the grid: By typing in the cross in the top left field or by click on the available currencies in the window. Typing in a cross and pressing <ENTER> or clicking "Add" will move that cross to the "Selected currencies list". Typing in an unavailable cross, the field will turn red and adding it in incorrect order will make the field yellow. When selecting a cross by using the mouse unavailable, crosses will go from bold to normal.

11.1.4 FX Forwards window

The "FX Forwards" window gives you a quick overview of selected currency pairs.

FX Forwards - World Forex Plus [GTS]

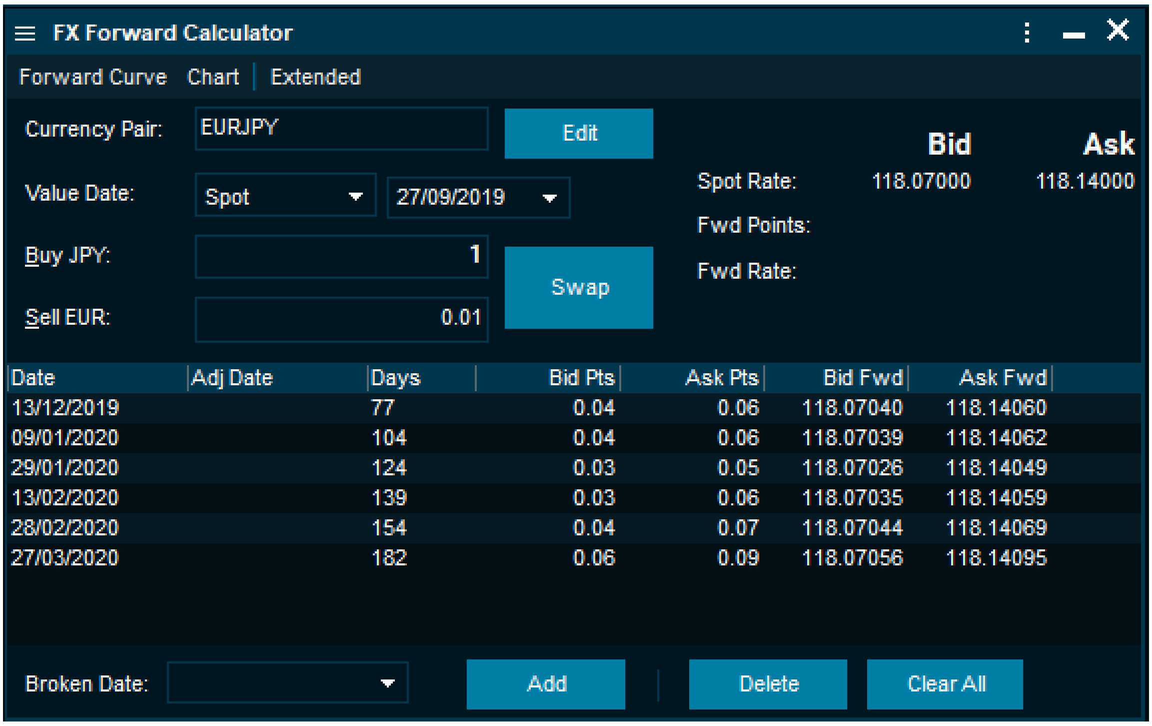
Points ▾ Source ▾

	USDJPY		GBPUSD		EURUSD		USDCAD	
Tenor	Bid	Ask	Bid	Ask	Bid	Ask	Bid	Ask
Today	-1.17	-0.28	0.4500	0.5700	0.7740	0.8040	-0.4300	-0.3300
Tomorrow	-0.73	-0.65	0.4800	0.5900	0.8300	0.8900	-0.2500	-0.2200
Spot	107.49	107.50	1.2381	1.2382	1.0982	1.0986	1.3274	1.3280
SN	-2.21	-2.19	1.5600	1.7500	2.5300	2.6000	-0.2400	-0.1700
1W	-8.93	-8.89	5.5620	5.6580	7.1800	7.9800	-3.3000	-2.7000
2W	-14.16	-13.96	9.1200	9.6200	13.2000	13.7000	-5.0200	-4.6500
3W	-19.26	-18.86	12.9400	13.1000	19.0700	19.5700	-6.3800	-5.9100
1M	-26.53	-25.53	17.5200	17.9400	27.2700	27.4700	-8.7100	-8.4200
2M	-47.11	-46.82	31.9000	32.3000	51.1300	51.6300	-14.0300	-13.4400
3M	-67.40	-67.15	44.1700	45.2800	73.9000	74.2000	-18.8000	-17.9100
4M	-100.50	-99.00	62.4800	63.1200	105.6300	106.6500	-27.9600	-26.1800
5M	-120.15	-118.65	72.6000	73.4000	128.1800	128.8800	-28.7500	-27.2500
6M	-137.97	-136.75	81.0300	83.2700	147.7600	149.0600	-29.3400	-28.5400
7M	-159.71	-157.71	91.9700	93.8500	170.7100	174.2100	-31.8900	-29.6800
8M	-177.45	-175.45	101.2000	103.3000	192.5000	194.7000	-29.4500	-24.7200
9M	-197.90	-196.40	110.2000	113.5600	214.9800	217.4800	-28.4400	-26.7400
10M	-216.73	-215.23	119.1400	121.8400	235.0000	240.0000	-28.2000	-24.9000
11M	-234.94	-231.44	127.9000	129.9000	255.6700	261.1700	-26.9400	-23.9400
12M	-253.15	-251.15	136.1100	139.1100	276.8900	279.7900	-25.2700	-22.7700
15M	-305.20	-303.60	160.2000	166.0000	338.0000	341.5000	-22.7180	-16.7340
18M	-363.00	-358.00	185.9000	195.9000	399.8500	404.8500	-19.9200	-12.9200

11.2 FX Forward Calculator

11.2.1 FX Forward Calculator

Infront FX Forward Calculator allows you to calculate forward points and rates for a currency pair and any value (settlement) date, display forward curves as well as points charts. The calculator adjusts for non-banking days and informs you about specific holidays and weekends. In addition, it allows you to set a pricing date in the past to extract the points and rates for the date chosen and display the adjusted forward curve. You can easily setup a broken date schedule with several date lines for a quick overview of the upcoming transaction prices.



11.2.2 Single calculation panel

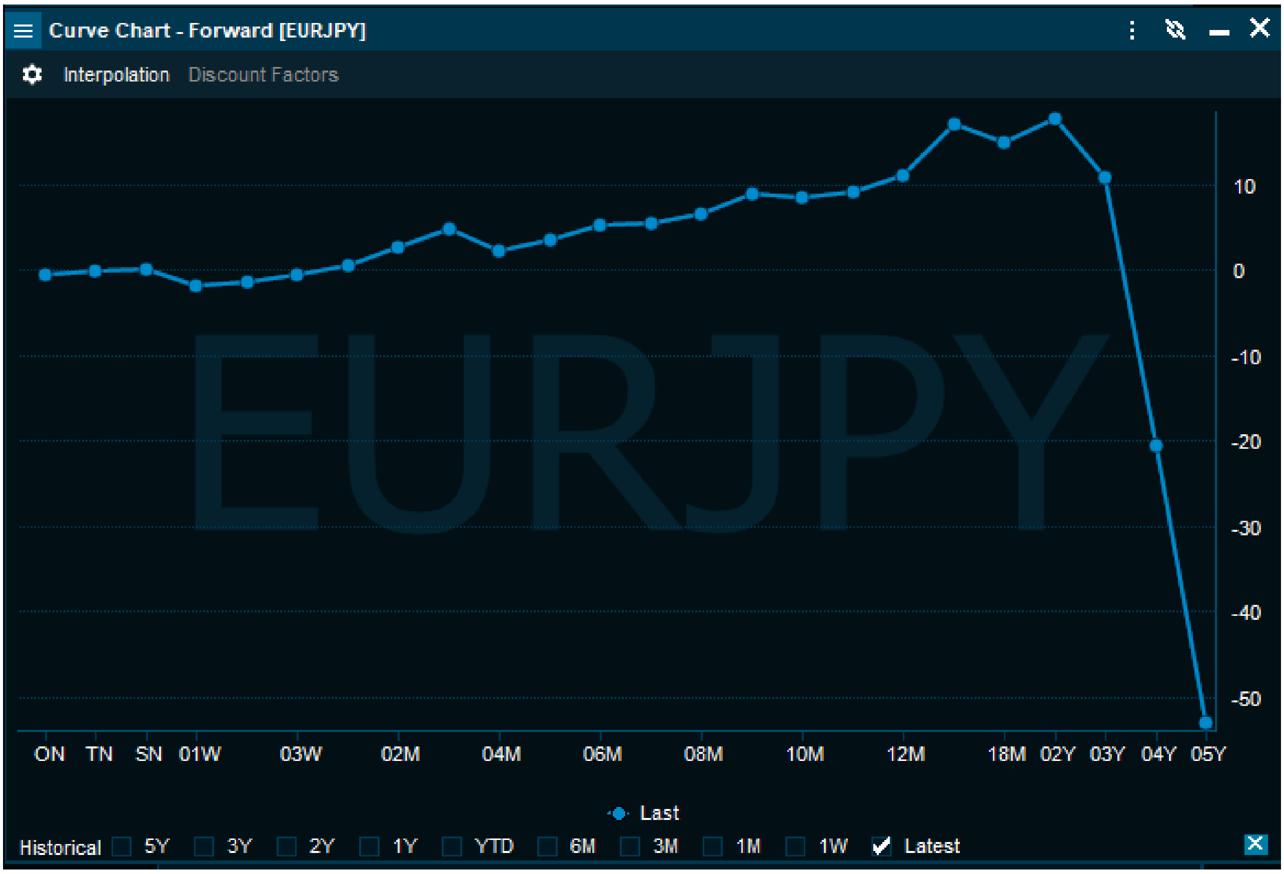
You can calculate forward points and rate for a single date by entering a currency pair and a value date. The value date is either a standard tenor (1M, 3M) or a broken date. If the chosen value date falls on a non-business day, it will be rolled-over to the following business day automatically.

Spot date, day count convention and number of days can be checked by holding the mouse above the single calculation panel.

You can also calculate the transaction amount based on the real time rates of the chosen currency pair. This is done by entering a Buy or Sell amount which then triggers the calculation of the opposite. User can define an amount by typing in codes K for thousand and M for million. Typing in 25M will fill in the Buy/Sell section with an amount of 25,000,000.

11.2.3 Forward Curve and Chart

You can display a forward curve, points and rates, for the chosen currency pair by clicking "Forward Curve". The curve is adjusted once the user changes the currency pair. You can also display a forward curve chart by clicking the chart. The chart is built by using the forward points of the chosen currency pair. When changing a currency pair, the chart is not adjusted automatically.



11.2.4 Broken dates schedule

FX Forwards Calculator calculates forward points and rates for any date by applying linear interpolation as follows:

Previous rate + ((Next Rate - Previous Rate)/DLP)*DPY

where

DLP = Number of days in the time interval between the two regular dates (first and second rate)
DPY = Number of days from the earlier regular date to the interpolated date
User can check which rates are used to interpolate each of the broken date rates by holding the mouse above the broken date line in question.

If any of the broken dates fall on a non-business day, it will be rolled-over to the following business day. These dates will be marked yellow. This feature can be disabled in the "Extended" menu of the FX Forwards Calculator.
User can define broken dates by using several user-friendly codes:

Code	Description
DD	Sets day in the same month and year as Today.
DDMM	Sets day and month in the same year as Today.
DDMMYY, DDMMYYYY	Sets day, month and year.

Code	Description
+X, +Xd	Adds X days to Today.
+Xm	Adds X months to Today.
+Xy	Adds X years to Today.

11.2.5 Extended menu

Extended menu allows for advanced functionality:

- Price source changes
- Pricing date changes
- Day count changes

User can change both, spot and forward price sources.

User can change the pricing date to a past date. This will cause the calculations to be performed as-of-the chosen date. The rates used in calculations are the average rates for different tenors on the date defined as a pricing date. User is able to display a forward curve using those points and rates as well as perform broken date calculations.

User can disable the calculation on the adjusted dates. Calculations will then be performed on all dates disregarding holidays and other non-business days.

12 Web trader

Discover, analyze and trade directly in your browser with the Infront Web Trader.

12.1 Before you start

Infront Web Trader is compatible with both Windows and Mac (OSX).

For the best experience, we recommend using Google Chrome or New Microsoft Edge.

Make sure that your bandwidth connection is sufficient.

12.2 Anti-Virus

Anti-virus software can interfere with the Web Trader data traffic. For more information, visit our FAQ page. To ensure the best performance, you should allow all traffic to the site domain.

To do this open your anti-virus program, go to advanced settings and URL Address Management.

Then add an exclusion URL to the Infront domain:

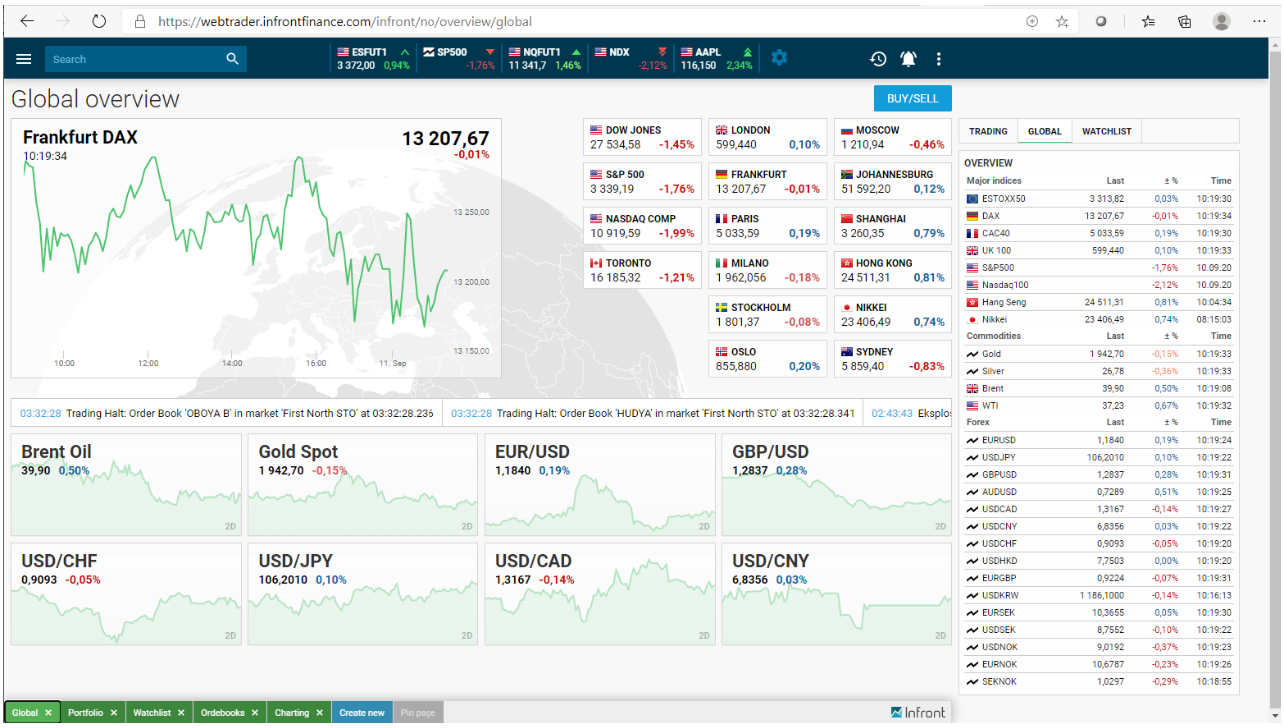
***.infrontservices.com**

12.3 Cookies

Site cookies can interfere with Web Trader performance.

They can be cleared manually in the browser settings under "Privacy, Search and Services" (optionally enable the "clear browsing data on close" setting for "cookies and other site data").

Now you are ready to use Infront Web Trader



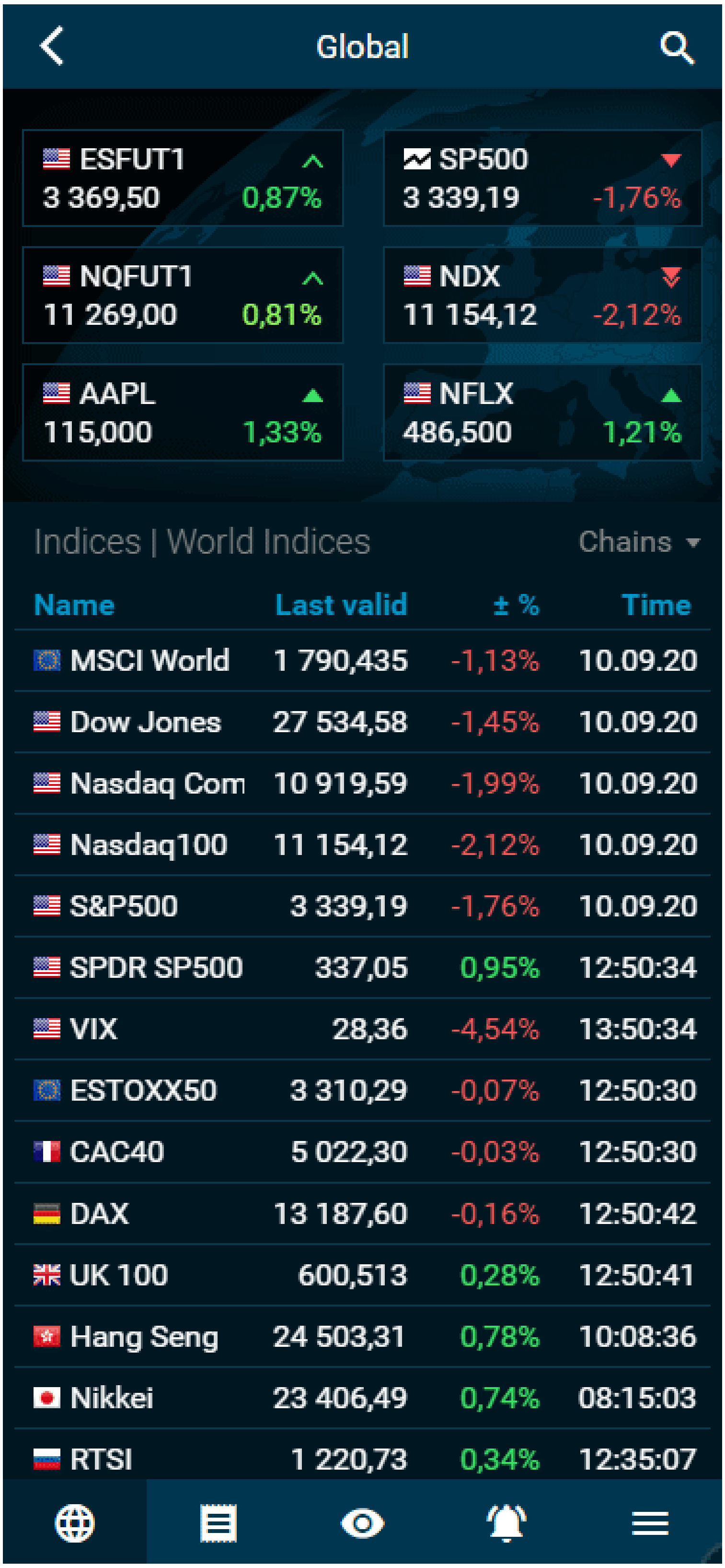
13 Mobile app

Find out more about the mobile apps for iPhone, iPad and Android Infront provides.

Please visit Support and Downloads for the latest updates.

13.1 How to install the app

For more information, see the installation guide.



13.2 Keep your watchlists and price alerts in the cloud

Do away with maintaining duplicate watchlists or price alerts. Create a list or price alert in Infront Professional Terminal or on any of your mobile devices and it will automatically be synced in the cloud.

All of your alerts and watchlists are therefore saved to your specific user, making it easy to receive the alerts and access the same watchlists on any device.

13.2.1 Features

- Orderbook with level 1 and level 2 data
- Charts, orderbook and trades data
- Customizable user interface on iPad
- Equity analytics on global listed companies
- Trading via your broker
- News feed
- Alerts

13.3 Available data

You will have access to the same services as through your Infront Professional Terminal subscription.

14 FAQ and support

Access the Knowledge Base to get answers on frequently asked questions (FAQ) or just to create a new support ticket for the Infront Professional Terminal.

Clicking this link will open the Knowledge Base in a new tab: https://iptsupport.infrontfinance.com/en/support/home

15 Archive

16 Infront Professional Terminal tutorials

16.1 Getting started tutorial

Learn how to use the Infront Professional Terminal with this getting started tutorial. Learn the basics and get a good overview how to use the market data and trading terminal.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=x3BmfQnwaZw?rel=0

16.2 Trading module tutorial

Watch part 1 of the trading tutorial where you will learn about the trading functionality and how to place a trade.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

http://youtube.com/watch?v=KHSihwKLRVY

Watch part 2 of the trading tutorial where you will learn about trading functionality, how to display trades in a chart, and to create Matrices.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

http://youtube.com/watch?v=6_6engWO4Ys

16.3 Curve chart tutorial

Discover the new "Curve Chart" function and how to navigate the menu icons, now included in the Infront Professional Terminal. Easy access toolbars and peer comparisons will make streamlining your work easier.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=S36yz6acsWU?rel=0

16.4 Charting tutorial

Learn how to use the Charting Tool within the Infront Professional Terminal.

16.5

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=nPJ4BGitK-k?rel=0

16.6 Watchlist tutorial

Learn how to create and use a watchlist and manage layouts in the Infront Professional Terminal.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

http://youtube.com/watch?v=n7Pa6UgleKI

16.7 Funds module tutorial

The Funds module allows you to access all the funds and ETF data you need, including all the data that you need to make an analysis or comparison.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=L-d4KNJq2hg?rel=0

16.8 Equity Analytics module

The "Equity Analytics" module is the smartest equity analysis and valuation platform for finance professionals, streamlining your process with easy access to key information and time saving tools and Infront Estimates Data.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=QTyy4gA3RIs?rel=0

Learn how to use the Infront Professional Terminal Equity Analytics module in detail.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

http://youtube.com/watch?v=Z330XyO8Iy0

16.9 Infront Analytics tutorial

Discover the smartest business valuation and equity research platform for finance professionals.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=KXFpTaNSlWM?rel=0

16.10 New RSP/RFQ function tutorial

Discover at a glance how the new RSP/RFQ feature within the Infront Professional Terminal allows for easy to use and fast trading tailored for the UK market.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=gwX5-Swf7RU?rel=0

16.11 Portfolio Tracker tutorial

Learn how to use the Infront Professional Terminal Portfolio Tracker function to help streamline your workspace, and visualize your holdings.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=Aem5OTXoqkA?rel=0

17 Excel Add-in tutorials

You can find more video tutorials on this topic in the help of Excel Add-in.

17.1 Introduction to Excel Add-in

The Excel Add-in allows you to export real-time data from Infront Professional Terminal to create up to the minute reports.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=AoaMkXbZRMA

17.2 Retrieve and compare company analytics part I

Learn how to retrieve and compare company analytics by using the Infront INFGET() function in Infront Professional Terminal.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=BbEIERqheBI

17.3 Retrieve and compare Company Analytics part II

Learn how to use the INFGET () function panel to help you create customised reporting models to meet your specific business needs.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=AoaMkXbZRMA

17.4 Advanced parameters in Excel

Understand how to use the Infront Professional Terminal Excel INFGET function's "Advanced Parameters".

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=ipYAPjFMjeg

17.5 Period and reference dates

Understand how to use the Infront Professional Terminal Excel INFGET function and use the "Period" and "Reference Dates" parameters in the Advanced Parameters.

Sorry, the widget is not supported in this export.
But you can reach it using the following URL:

https://www.youtube.com/watch?v=9n187B79LRI

18 Downloads

Generate the current user manuals by clicking the corresponding buttons.

The comprehensive user manual can be downloaded directly.

User manual Version: 8.6.500 Exported on: August 26, 2021 Size: 9.2 MB	Infront Professio...nal--20210826.pdf
Keyboard shortcuts in Infront Professional Terminal	shortcuts.pdf

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