

Getting started

Time Series & Curves

Nordea Analytics



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Creating a portfolio

If you have not yet read the guide Portfolio creation and saving, consider doing so before continuing.

Create a portfolio, add instruments and select Time Series under Analytics Tools. If you already had a portfolio created, drag and drop it on to Time Series.

Manual portfolio

Add new portfolio

Portfolio

The screenshot shows the Nordea portfolio management interface. On the left, there is a 'Portfolio' sidebar with 'Manual portfolio' selected. Below it, a search bar contains 'dk0002030'. A list of 'STANDARD INSTRUMENTS' is visible, including 'DK0002030097 (NDA 2 01Jan16 Bit AR (2))', 'DK0002030253 (NDA 2.5 01Oct37 (2))', 'DK0002030923 (NDA 2 01Jan25 Bit A (2))', 'DK0002030170 (NDA 2 01Oct32 (2))', 'DK0002030840 (NDA 2.5 01Oct47 IO (2))', 'DK0002030683 (NDA 2.5 01Oct47 (2))', 'DK0002030337 (NDA 3 01Oct47 (2))', 'DK0002030410 (NDA 3 01Oct47 IO (2))', and 'DK0002030766 (NDA 2 01Oct37 (2))'. The main area displays a table of instruments:

Name	Product	Symbol	Nominal	Currency	Coupon	Maturity	Issue Date	Issue Date	Default Curve
NDA 2.5 01Oct37 (2)	Danish Mortgage Bond	DK0002030253	100.00	DKK	2.50 %	01/07/2036	23/05/2014		DKKSWAP Disc DIS
NDA 2 01Jan25 Bit A (2)	Non-callable Bond	DK0002030923	100.00	DKK	2.00 %	01/01/2025	13/10/2014		DKKSWAP Disc OIS

On the right, the 'Analysis Tools' section is visible, with 'Time Series' selected. Red arrows indicate the flow from the 'Add new portfolio' button to the 'Portfolio' icon, and from the search bar to the 'Time Series' tool.

General settings

To run Time Series, press the big play-icon ▶.

By default, data for the past year will be retrieved and all series will be displayed in the same chart.

Series-specific settings can be changed from Edit Time Series. This includes among others

- Key figure
- Chart to show each series in
- Axis-settings
- Functionality to create custom series

1. Change dates to suit the analysis

2. Table settings

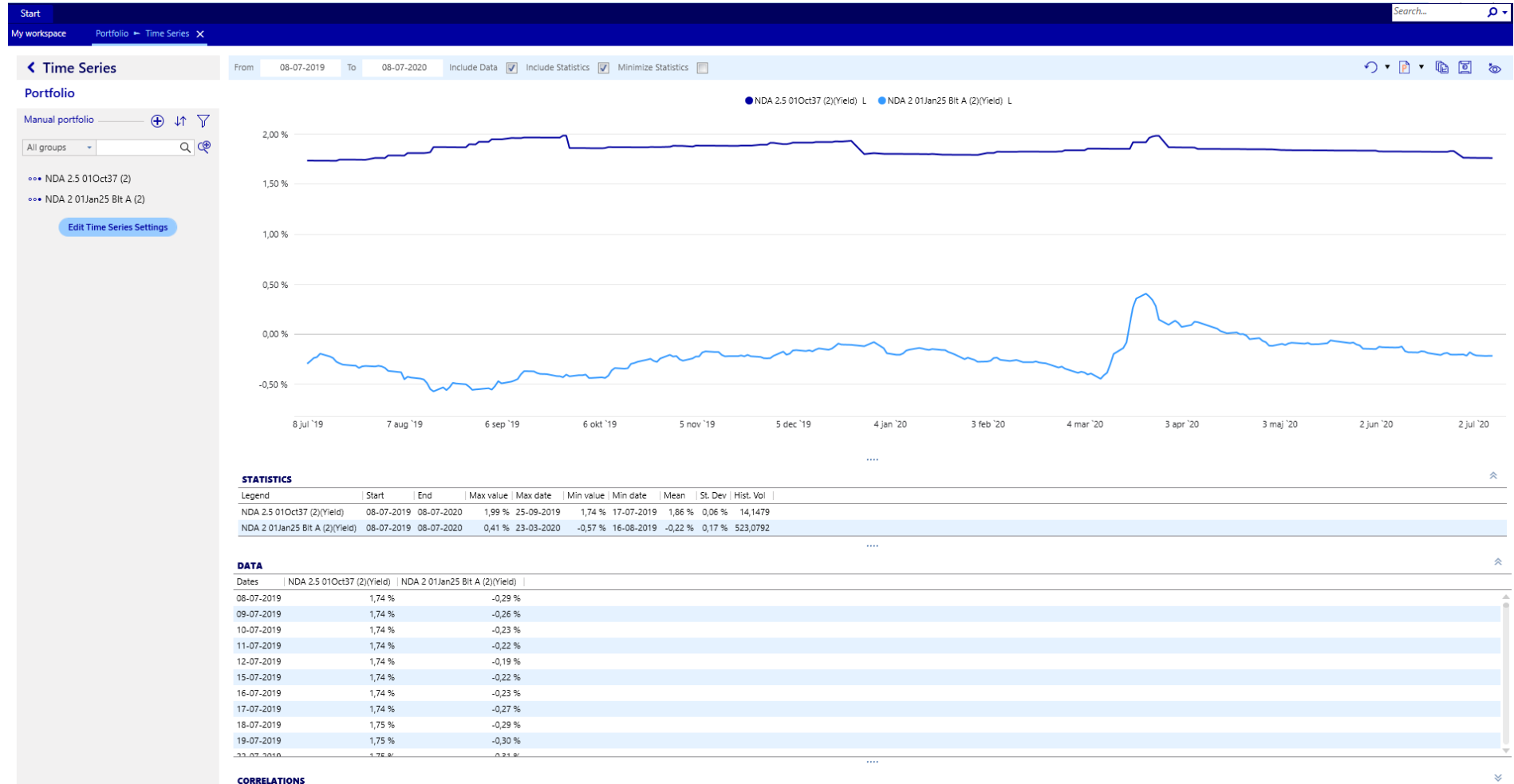
The screenshot displays the 'Time Series' configuration page. At the top, there's a navigation bar with 'Start', 'My workspace', 'Portfolio', and 'Time Series'. Below this, the 'Time Series' section has a back arrow and the title. The 'Portfolio' section includes a 'Manual portfolio' label, a search bar with 'All groups' selected, and two series: 'NDA 2.5 01Oct37 (2)' and 'NDA 2 01Jan25 Blt A (2)'. A red box highlights the date range 'From 08-07-2019 To 08-07-2020' with the label '1. Change dates to suit the analysis'. Another red box highlights the 'Include Data', 'Include Statistics', and 'Minimize Statistics' options with the label '2. Table settings'. A third red box highlights the 'Edit Time Series Settings' button with the label '3. Series-specific settings for each series.'

3. Series-specific settings for each series.

Output – Time Series

The output is split into three parts

1. Chart
2. Statistical measures
3. Data
4. Correlations



Custom Series

Select Edit Time Series Settings and press Add Custom Series to create a new custom series.

Instrument 1 and 2 defines the instruments in the custom series.

Adding NDA 2.5 01Oct37 to Instrument 1 and NDA 2 01Jan25 to Instrument 2 creates a spread series.

Edit Time Series Settings

Input series, chart settings and key figure selection

<input checked="" type="checkbox"/> Disable all								
<input checked="" type="checkbox"/> NDA 2.5 01Oct37 (2)	-	None	1	Left	1	Yield		
<input checked="" type="checkbox"/> NDA 2 01Jan25 Bit A (2)	-	None	1	Left	1	Yield		

+ Add Custom Series

Input series, chart settings and key figure selection

<input checked="" type="checkbox"/> Disable all							
<input checked="" type="checkbox"/> NDA 2.5 01Oct37 (2)	-	None	1	Left	1	Yield	
<input checked="" type="checkbox"/> NDA 2 01Jan25 Bit A (2)	-	None	1	Left	1	Yield	
<input checked="" type="checkbox"/> None	-	None	1	Left	1		

<input checked="" type="checkbox"/> NDA 2.5 01Oct37 (2)	-	NDA 2 01Jan25 Bit A (2)	1	Left	1	Yield	Yield
<input checked="" type="checkbox"/> Instrument 1	Spread vs.	Instrument 2	Chart	Axis	Axis interval	Scale	NDA 2.5 01Oct37 (2) NDA 2 01Jan25 Bit A (2)

Adding curves to portfolio

Curves have a separate section since they are more customizable.

Start by searching for and adding the curve you want.

Manual portfolio

Portfolio

Add new portfolio

Portfolio

Portfolio Information

Financial Policies

Manual portfolio

All groups

dkkswap

CURVES

- DKKSWAP
- DKKSWAP Disc OIS
- DKKSWAP Fix 1D OIS
- DKKSWAP Fix 1M OIS
- DKKSWAP Fix 1Y OIS
- DKKSWAP Fix 3M OIS
- DKKSWAP Fix 6M OIS
- DKKSWAP Libor
- DKKSWAP Libor 3M

Analysis Tools

Time Series

1. Create a portfolio and double-click on it
2. Search for the curve
3. Select the relevant curves
4. Open the portfolio in Time Series from the upper-right corner

Curves in Time Series application

Forward: Used for Forward Spot and Implied Forward curves (x)

Tenor: The point on the curve to retrieve data for

Series settings →

Input series, chart settings and key figure selection

Disable all

DKKSWAP - None 1 Left 1 Forward DKKSWAP Tenor DKKSWAP 1

Instrument 1 Spread vs. Instrument 2 Chart Axis Axis interval Scale

DKKSWAP **Curve** **DKKSWAP** **Spot** **Bootstrap** **30360** **Discrete**

Name Product Yield Curve Spot/Forward Model Time Convention IR Convention

[+ Add Custom Series](#)

Curve settings →

Use drop-down to change curve type

Spot | Boots

Forward Spot

Impl Fwd

Spot

- Spot: Zero coupon yields
- Forward Spot: Zero coupon curve forwarded x years
- Implied Forward: Implicit forward rate, which begins at t and matures at x+t years

Curves in Curves application

Date: When the data for the curve is retrieved

Forward: Used for Forward Spot and Implied Forward curves (x)

To and From: The start and end point of the curve

Series settings →

Curve and chart settings

Disable all

<input checked="" type="checkbox"/>	DKKSWAP	-	None	1	Left		1	03-09-2020	Forward	0	30
<input checked="" type="checkbox"/>	Curve 1	Spread vs.	Curve 2	Chart	Axis	Axis interval	Scale	Date		From (Year)	To (Year)

+ Add Custom Series

Instrument details of input series

DKKSWAP	Curve	DKKSWAP	Spot	Bootstrap	30360	Discrete
Name	Product	Yield Curve	Spot/Forward	Model	Time Convention	IR Convention

Curve settings →

Use drop-down to change curve type

Spot | Boots

Forward Spot

Impl Fwd

Spot

Spot: Zero coupon yields

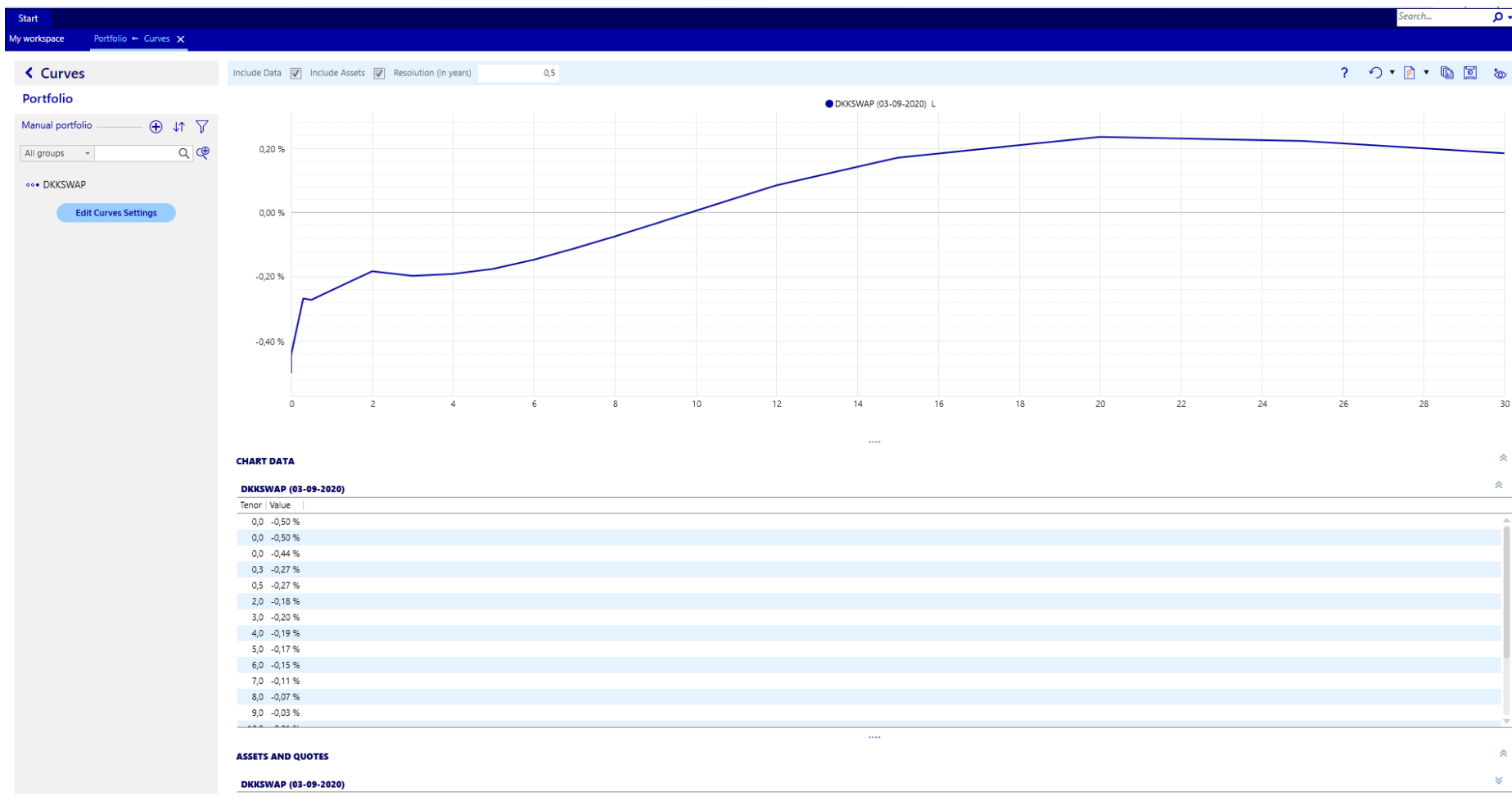
Forward Spot: Zero coupon curve forwarded x years

Implied Forward: Implicit forward rate, which begins at t and matures at x+t years

Output - Curves

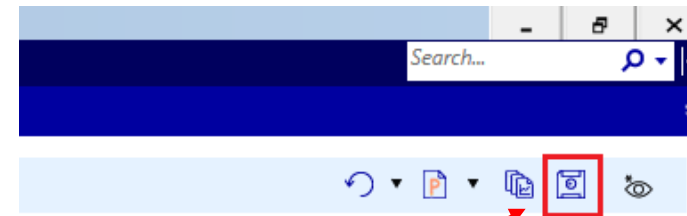
The output is split into three parts

1. Chart
2. Output data
3. Input data for generating the curve (press double arrows, ⇄, to show)



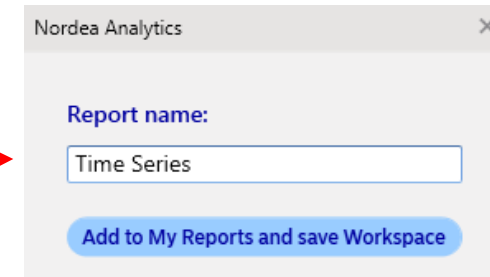
Saving a Time Series report

When the portfolio, key figures and settings have been set up, it can be saved to be easily accessed again.

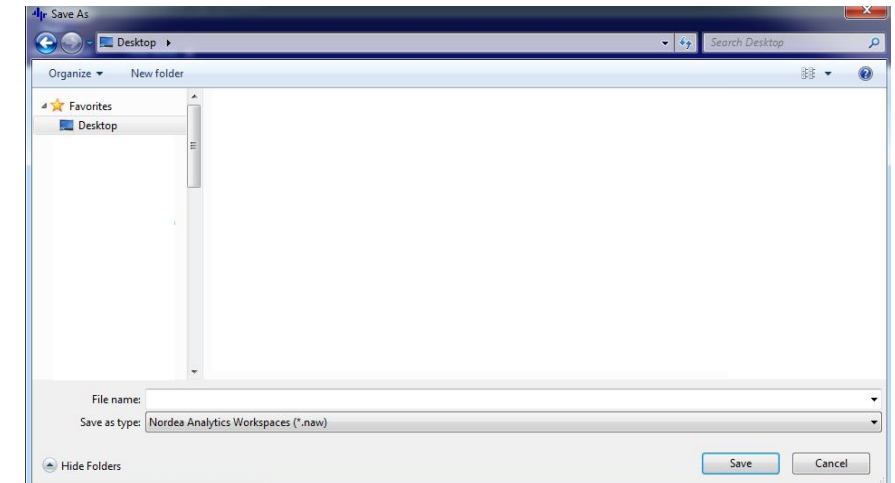


Add to My Reports: Press the save-icon

Report name: You will be prompted to name the report containing your portfolio and selection of key figures.



Save workspace: If you have not saved the workspace yet, you will be asked to do so now. This is the step that saves your settings, so they can be opened later after closing Nordea Analytics.



Opening a saved Time Series report

There are two ways of opening a saved report (workspace).

1) Select Start, Open and then find the (workspace) file saved on the previous slide

2) Alternative, the most recently used workspaces will be shown in the bottom right of the front page

In the bottom right corner, the title My Reports will show up with the saved Time Series report (or the name chosen on the previous slide).

