

Danske Bank FX School

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FX Structuring:

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Agenda

Part 1: Currency hedging: Why and how?

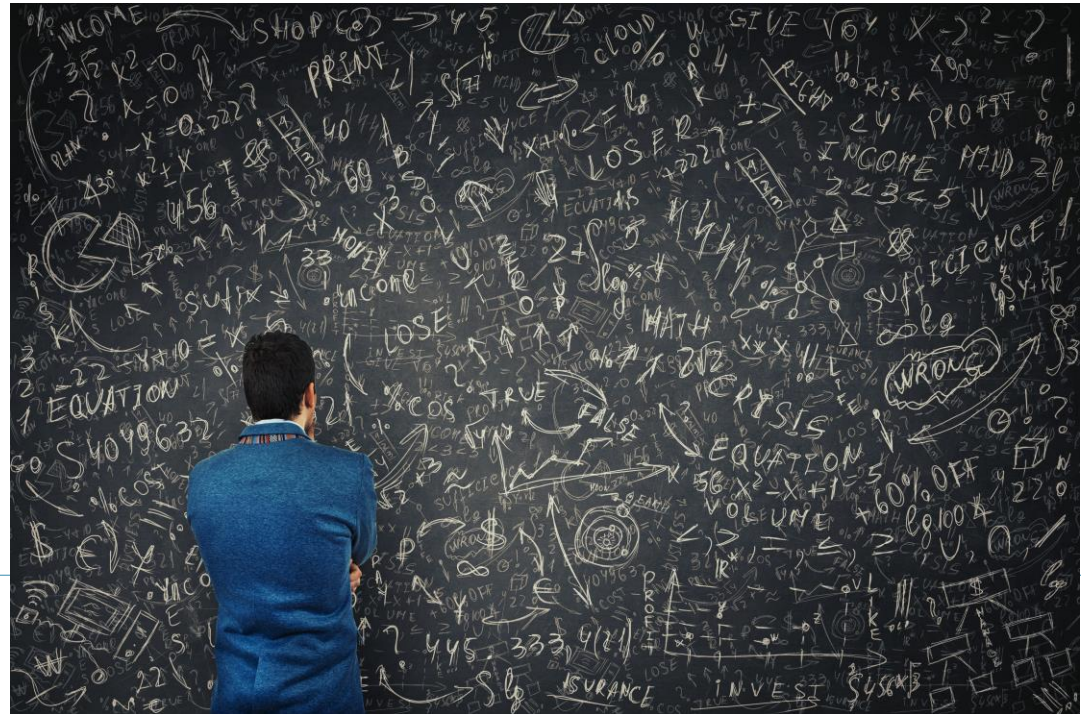
Part 2: Hedge instruments and how to use in practice

Part 3: Accounting and currency hedging

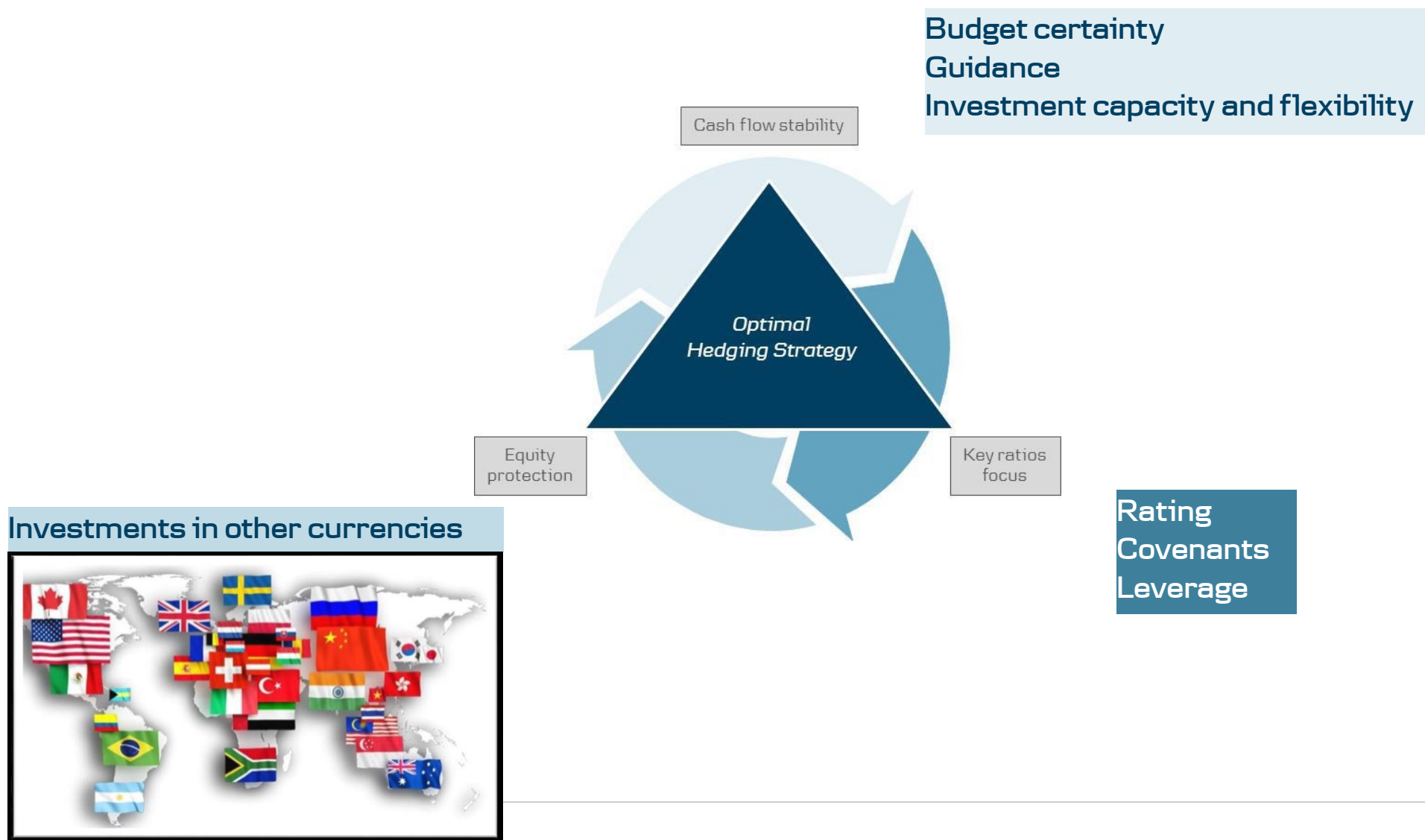
Part 1: Currency hedging: Why and how?

- Why hedge currency risk?
- Financial policy
- Hedge instruments and other derivatives:
Introduction to FX Forwards and FX Swaps

Why Hedge?

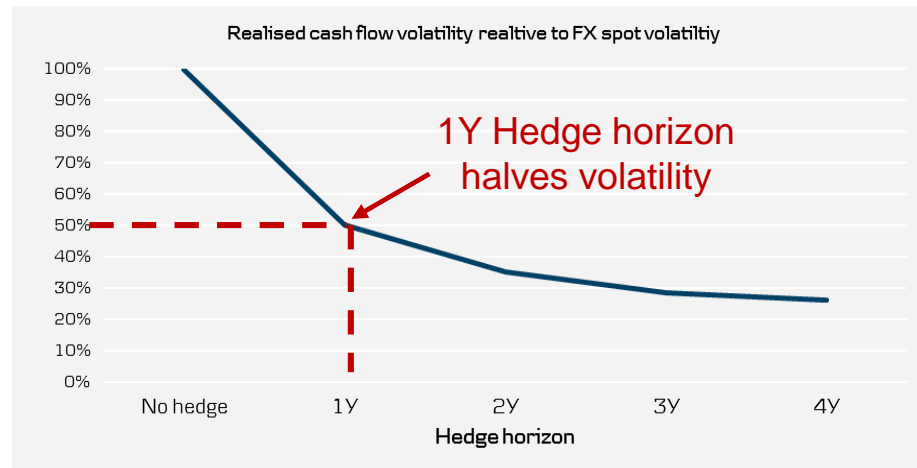
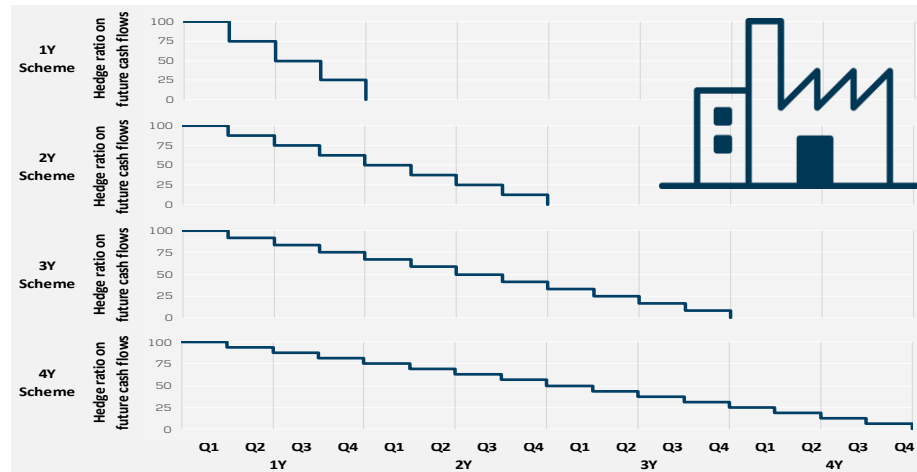


Typical strategic considerations behind Financial Risk Management



Cash Flow Stability

Hedging FX



Japan's Honda, Mazda issue profit warnings as yen rise clouds outlook

Naomi Tajitsu

4 MIN READ



TOKYO (Reuters) - Two Japanese automakers, including Honda Motor (7267.T), issued profit warnings for the current financial year on worries a stronger yen would erode their operating earnings, wiping out the impact of record high global vehicle sales.



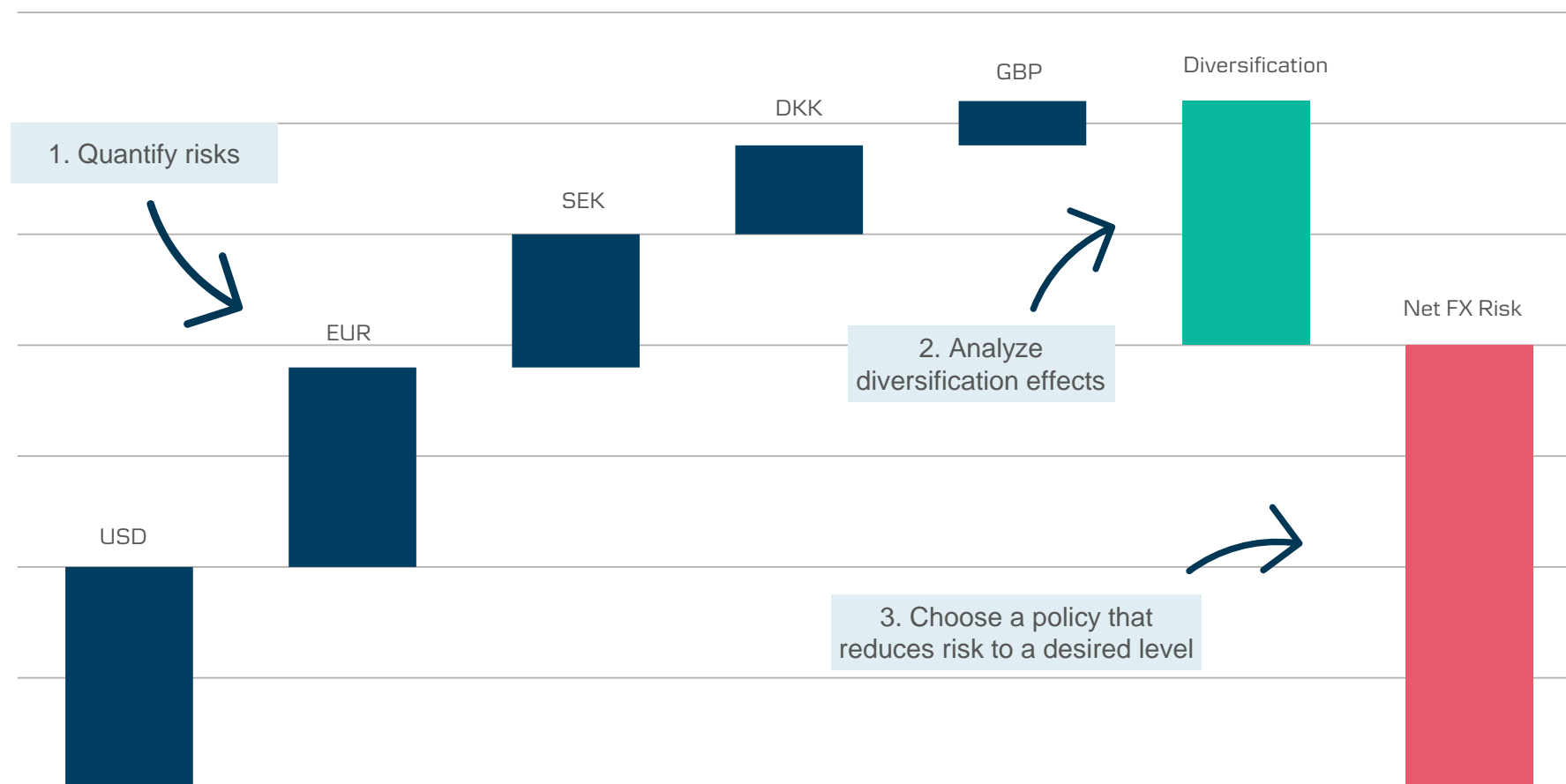
Not hedging can be ok.....



Doing nothing can be a strategy as well, as long as it is well justified


.....as long as you know the risk

Cash Flow at Risk Analysis



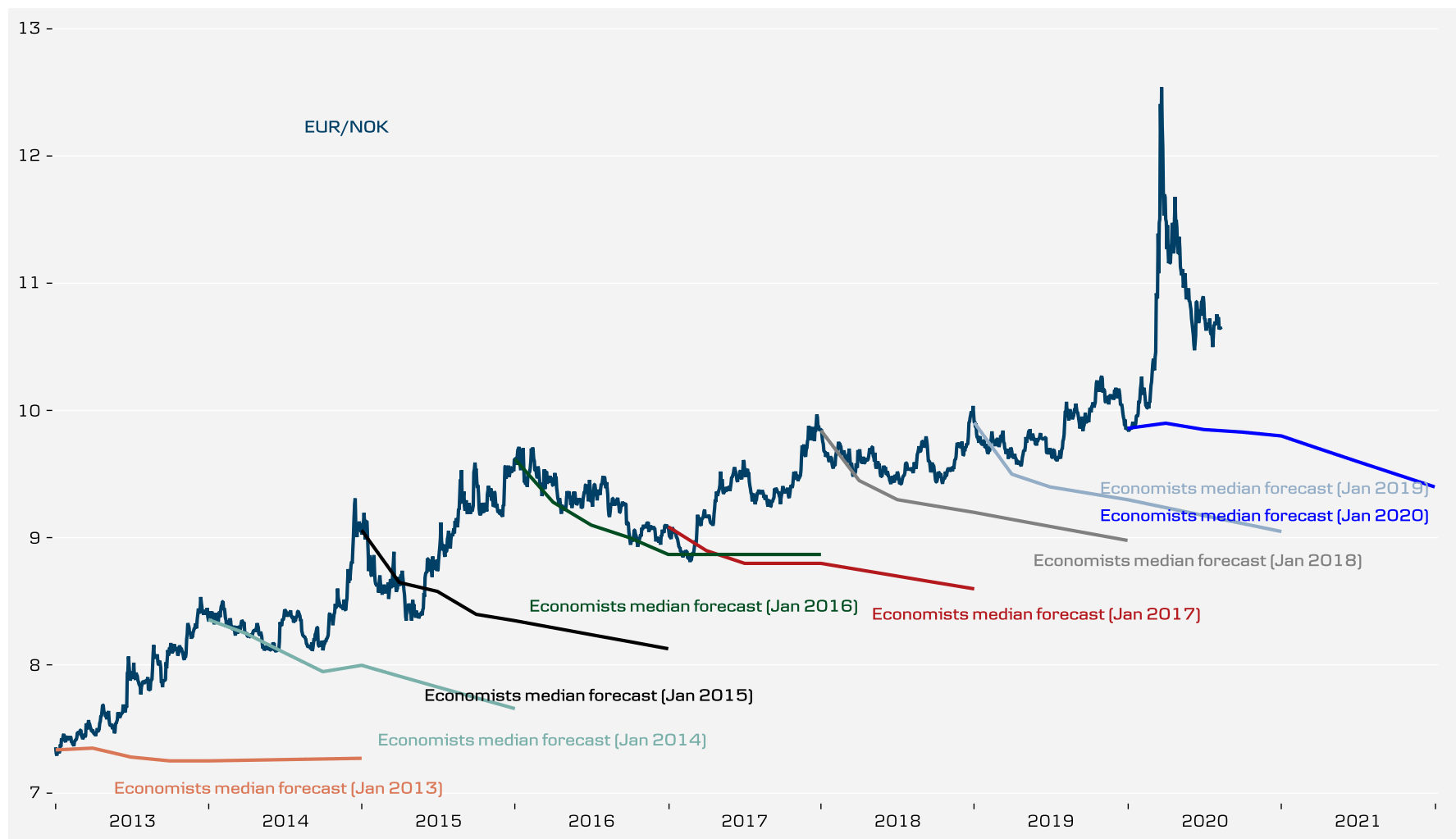
Wrong arguments for NOT hedging

I don't hedge because....

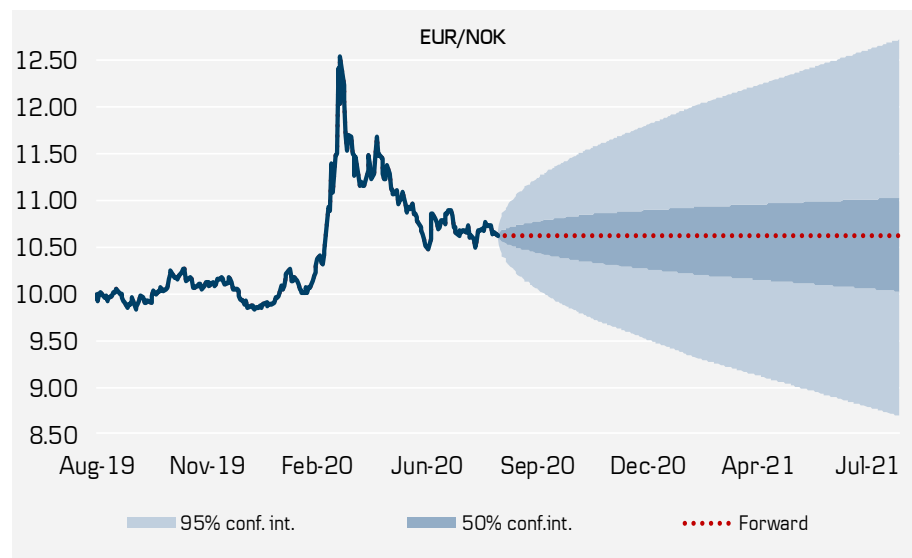


The market is expected to move in my favour. I'll be fine.

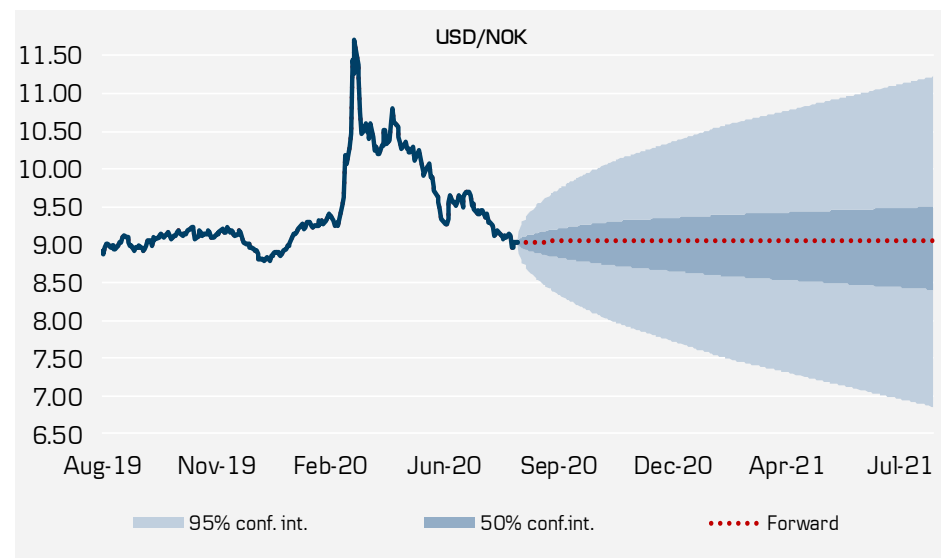
Forecasters do not always get it right: EUR/NOK example



Market's pricing of what might happen




EUR/NOK	1M	3M	6M	12M
Fwd./Consensus	10.62 / 10.63	10.62 / 10.50	10.62 / 10.45	10.62 / 10.30
50% confidence int.	10.44 / 10.77	10.32 / 10.86	10.20 / 10.93	10.03 / 11.02
95% confidence int.	10.10 / 11.17	9.71 / 11.59	9.31 / 12.02	8.69 / 12.72



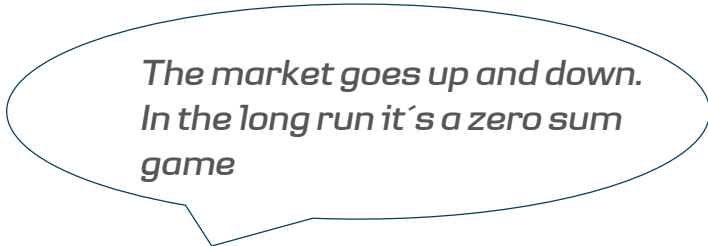
USD/NOK	1M	3M	6M	12M
Fwd./Consensus	9.04 / 9.14	9.04 / 9.22	9.04 / 8.97	9.04 / 8.84
50% confidence int.	8.85 / 9.21	8.71 / 9.32	8.58 / 9.40	8.41 / 9.50
95% confidence int.	8.42 / 9.67	7.94 / 10.15	7.50 / 10.58	6.86 / 11.22

WRONG arguments for NOT hedging

I don't hedge because....



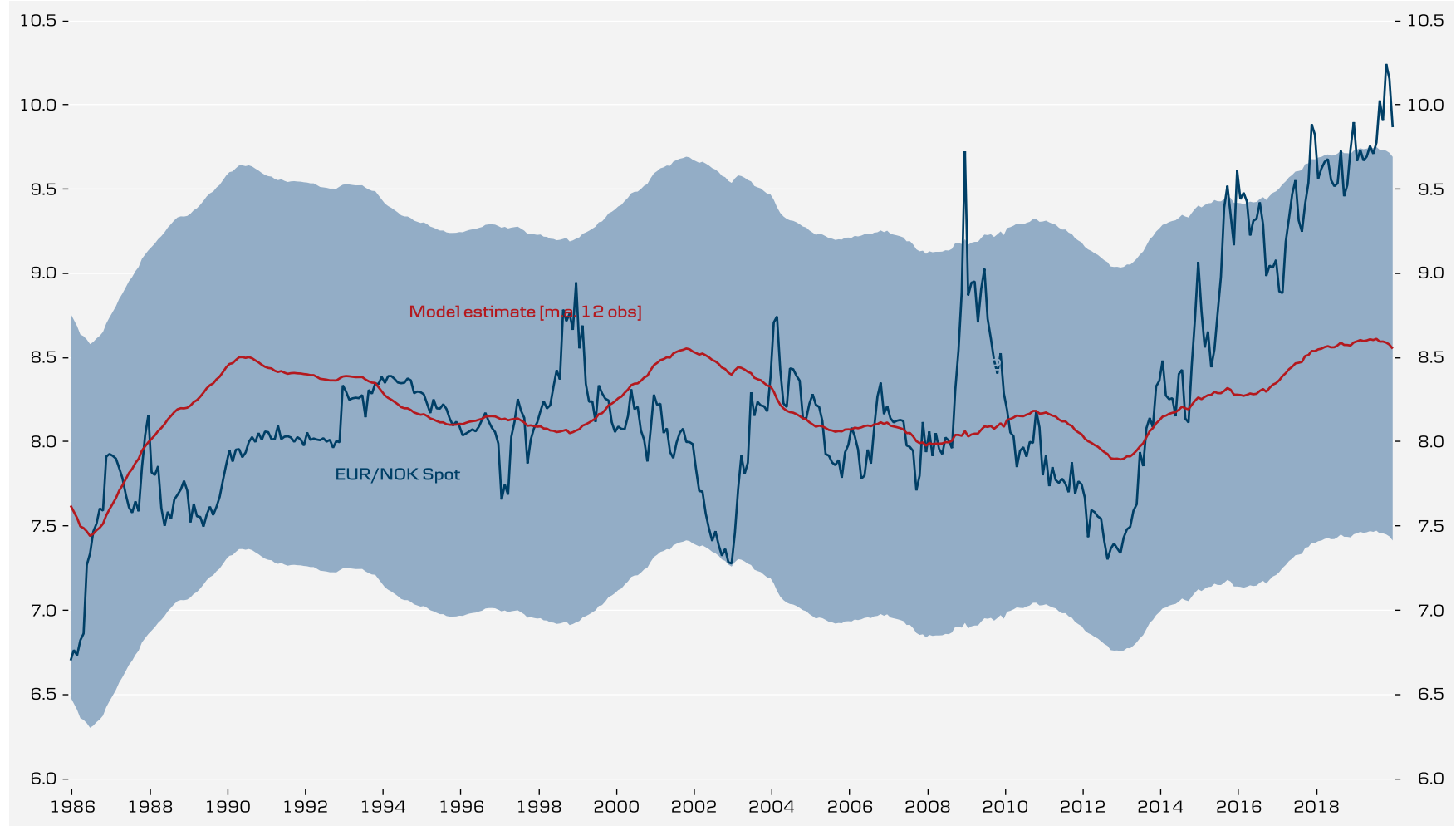
The market is expected to move in my favour. I'll be fine.



The market goes up and down. In the long run it's a zero sum game


Exchange rates can be out of sync with fundamentals for long time

Danske Bank's PPP estimate (Purchasing Power Parity)

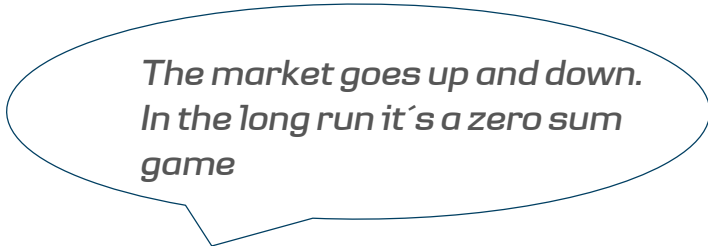


Wrong arguments for NOT hedging

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Wrong arguments for NOT hedging

I don't hedge because....

The market is expected to move in my favour. I'll be fine.

The market goes up and down. In the long run it's a zero sum game

Carry is too expensive

I don't want to pay transaction cost

"I don't speculate so we don't hedge anything"

Conclusion

- Know your risk!
- Financial forecasts are attached with (high) uncertainty.
- Hedging currency risk can help stabilise cash flows and shield the company from adverse moves on financial markets.
- Hedging currency risk is usually a good idea but it should be done in a proper way.
- Carefully consider the reasons for hedging currency risk and make sure that hedging is aligned with overall business objectives. **FINANCIAL POLICY**

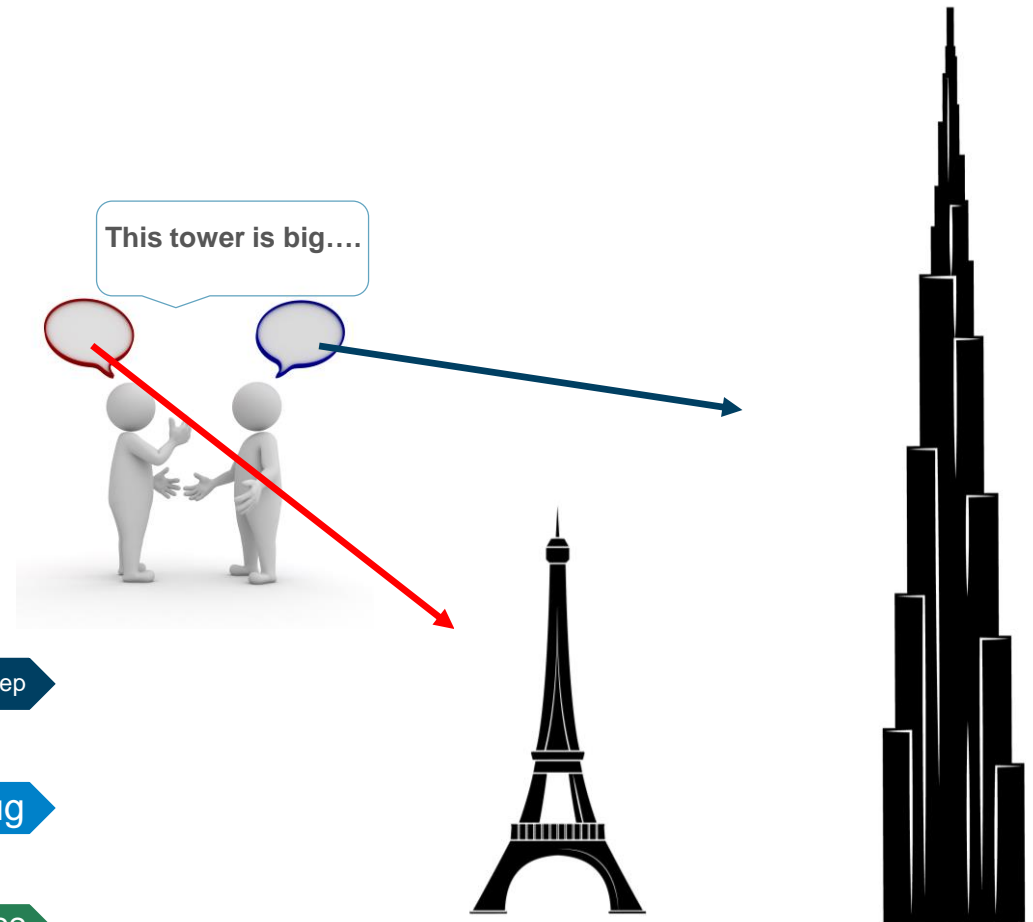
Financial policy



FX should be hedged, when risk becomes too big.....

Questions arise when policy is weak

- What is FX Risk?
- How much is "big"?
- When is when?



1 sep > 2 sep > 3 sep > 4 sep > 5sep > 8 sep > 9 sep > 10 sep

Jan > Feb > Mar > Apr > May > Jun > Jul > Aug

2015 > 2016 > 2017 > 2018 > 2019 > 2020 > 2021 > 2022

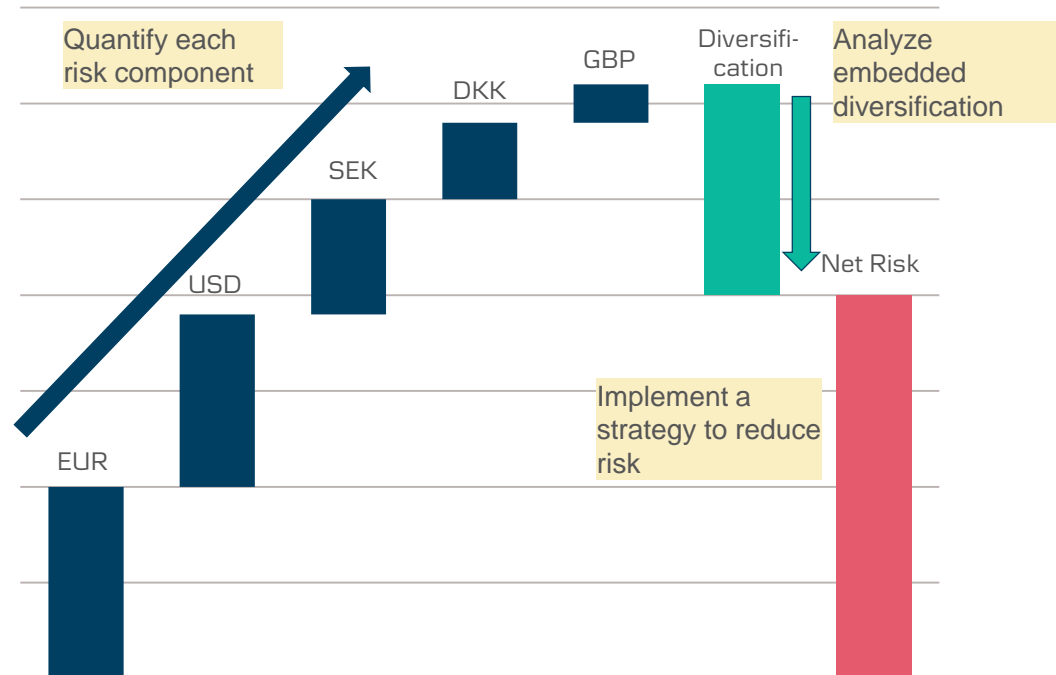
Objectives of a financial policy (list not fully comprehensive)

- Identify risk
- Monitor risk
- Identify roles and responsibility
- Execution

Objectives of a financial policy (list not fully comprehensive)

- **Identify risk**
- Monitor risk/policy
- Identify roles and responsibility
- Execution

Cash Flow at Risk (CFaR)



- Where does the risk originate from?
 - Cashflows (even in local currency)
 - Contractual FX risk
- Offsetting exposures?
 - Cashflows
 - Debt

Objectives of a financial policy (list not fully comprehensive)

- Identify risk

- **Monitor risk**



- Weekly/monthly/quarterly?

- Change business ➡ Change in risk?

- Identify roles and responsibility

- Reporting set up

- Execution

Objectives of a financial policy (list not fully comprehensive)

- Identify risk
- Monitor risk/policy
- **Identify roles and responsibility**
- Execution

Definition of roles

- Who has responsibility to execute?
- Who has right to execute?

Chain of command (e.g. in case of policy breach)

Policy review

- Who
- When

A clear definition of roles and responsibilities helps to protect both employer and employee

Objectives of a financial policy (list not fully comprehensive)

- Identify risk
- Monitor risk/policy
- Identify roles and responsibility
- **Execution**

How much should risk be reduced?

Which Instruments can be used?

- Spot*, Forward, FX Swap*, Options
- (* = not a hedge instrument)

Hedge horizon (depends on your business)

- Product price sensitivity
- Price lists
- Competition

Hedging Style

- Static – Rolling – Layered style

When to execute

- Defined frequency
- Avoid specific dates
- Execution periods

Hedge instruments

How you can decrease risk

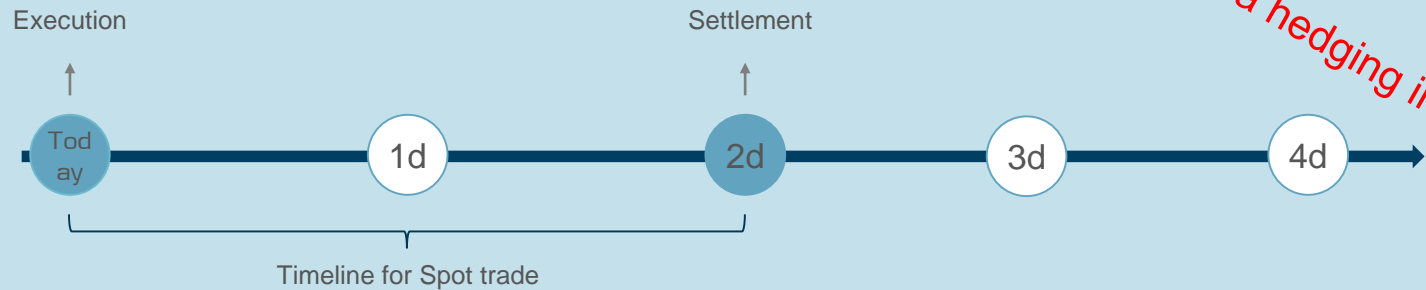


What is needed before trading Forwards, Swaps or Options



Introduction to foreign exchange: Spot and Forwards

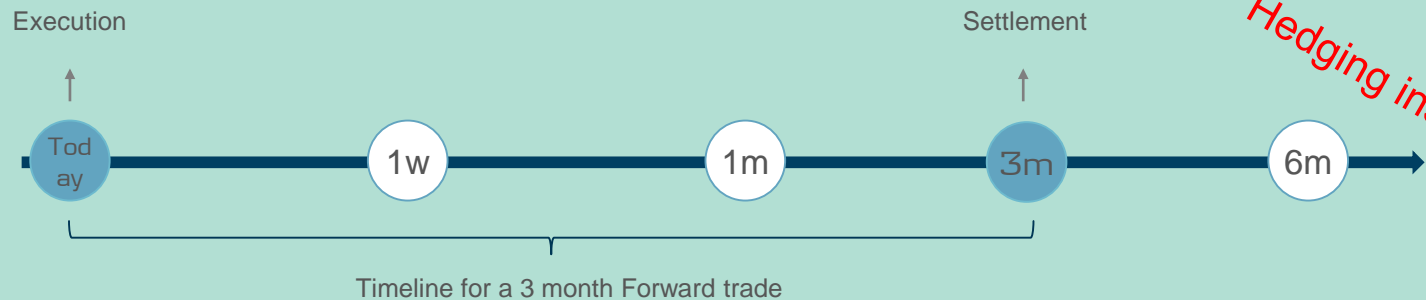
Spot



Spot trade: A spot deal executed today will be settled in 2 banking days

Not a hedging instrument!

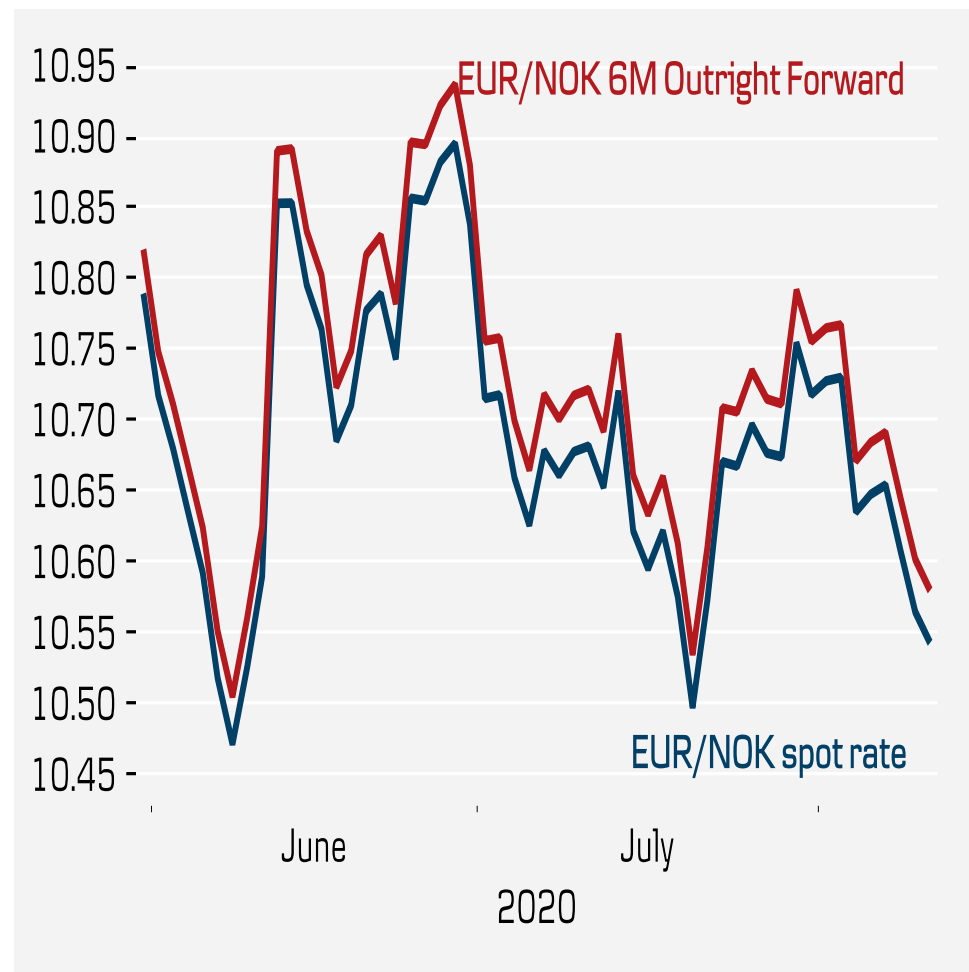
Forward



Forward transaction: A binding contract to buy or sell one currency for another at a predefined time for a predefined exchange rate

Hedging instrument

EUR/NOK forward points



Forward transaction: What determines the price?

Three factors:

1. Current market spot price
2. Current interest rate difference between the two currencies involved
3. Tenor

Pricing formula

- Forward rate =
Spot price + Forward points
- Forward points =
Spot price * Interest rate difference * Tenor

Example

Interest NOK 0.15%, Interest EUR - 0.55%

1. Interest rate diff = $0.15\% - (-0.55\%) = 0.70\%$

2. EUR/NOK spot = 10.55

3. Tenor = $180/360 = 0.5$ Y

Forward points = $10.55 * 0.70\% * 0.5 = 0.0369$

Forward rate = $10.55 + 0.0369 = 10.5869$

In theory you can sell EUR forward if you:

1. Borrow EUR for 6mth, that you exchange to NOK value spot AND receive 0.55% EUR in negative interest for the period
2. Deposit the NOK amount and receive 0.15% in NOK interest for the period

In theory you can buy EUR forward if you:

1. Borrow NOK for 6mth, that you exchange to EUR value spot AND pay 0.15% NOK in interest for the period
2. Deposit the EUR amount and pay 0.55% in EUR in negative interest for the period

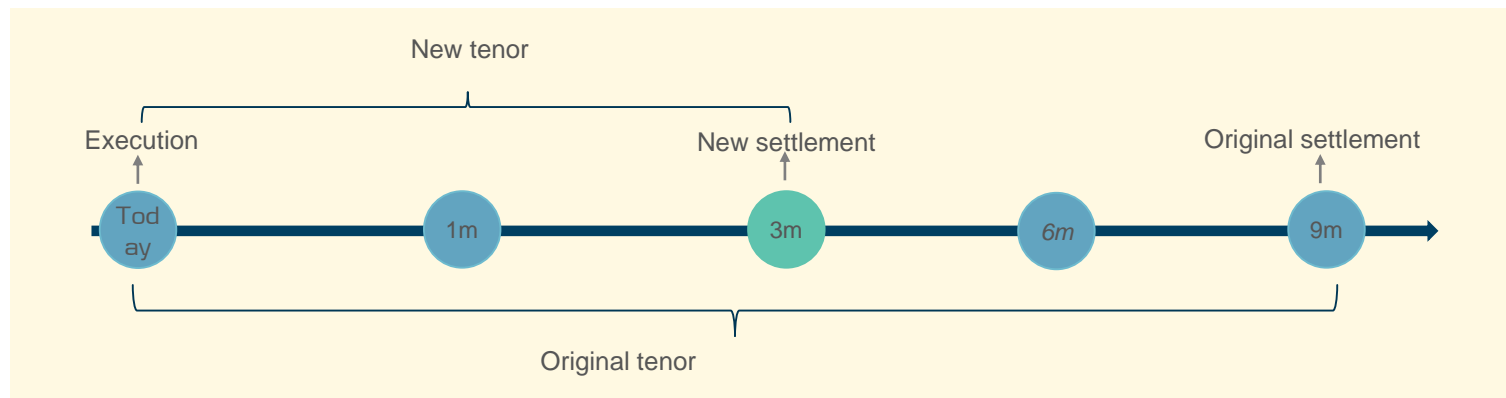
Interest rate parity

Forward transaction

Pre-settlement

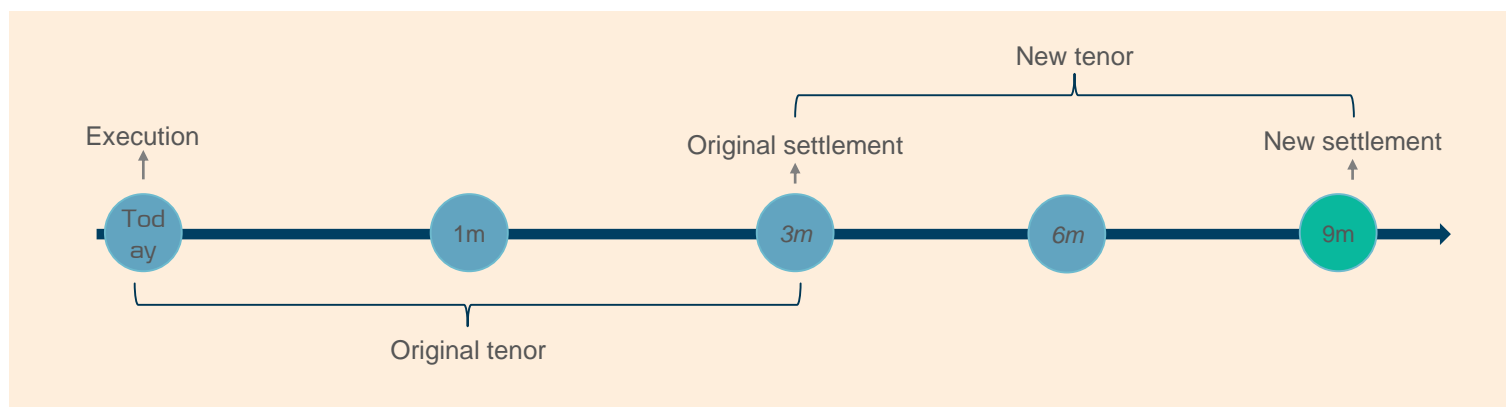
It is possible to settle the entire or partial amount prior to the original settlement date.

E.g. In case you choose to pre-settle half the amount after 3 months, the forward points will be adjusted accordingly.



Extension

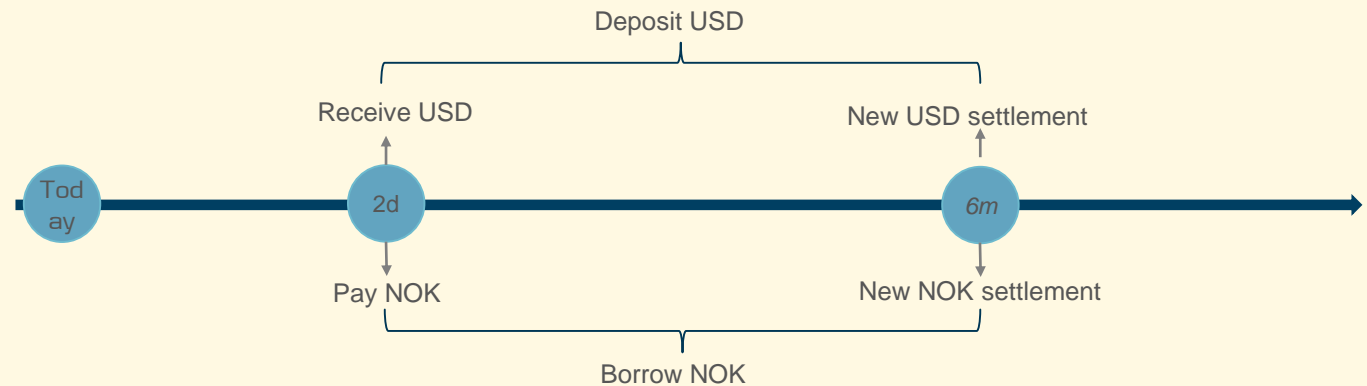
It is possible to extend a forward contract in case you need to postpone the settlement. You will be required to adjust for the liquidity effect when extending the forward contract.



Swap transaction

Moving settlement forward in time

In case the currency transaction needs to be postponed, you can use an FX Swap transaction to move the settlement for both currencies simultaneously. In this case you pay/receive the interest rate differential according to the tenor of the swap. (Requires a LEI code).



Deposit USD + Borrow NOK = FX Swap

No currency risk involved

FX Instrument summary

■ FX Spot

- Settlement now (**not a hedge**)
- Price depending on supply – demand and can change rapidly

■ FX Forwards

- Settlement in the future
- Price depends on actual spot level + the interest rate differential between the two currencies

■ FX Swap

- Settlement now against settlement in the future (**not a hedge**)
- Price depends on interest differential between the two currencies

■ FX Options

- Watch FX School Part 2

Questions?



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