

Danish firms can save a **billion** kr on better dollar hedging



Family



Danish companies can save more than a billion DKK annually on currency hedging

Webinar 28 January 2020

Hosted by

Tao Bindslev, CEO, OptionX
Kristian Siggaard-Jensen, CIO, OptionX



CEO's struggle to hedge themselves against FX volatility

Option

FINANCIAL TIMES

Novo Nordisk shares hit as FX hedging contracts go awry

Nathalie Thomas FEBRUARY 3 2016



The US dollar has not been a friend recently to Novo Nordisk, the Danish pharmaceuticals company that [specialises in diabetes treatments](#).

Novo Nordisk's shares have taken a bit of a hammering this morning, falling more than 7 per cent at one stage, after the group reported fourth quarter results that undershot expectations and warned that it is expecting to make a net loss in 2016. The shares are down 4.6 per cent at publication time to DKK 360.

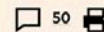
The company has told shareholders to brace themselves for a net loss of around DKK 1.3bn from foreign exchange hedging contracts this year. These are largely related to the recent appreciation of the US dollar versus the Danish krone, the company said (see the relevant paragraph from its outlook statement below).

For 2016, Novo Nordisk expects a **net financial loss** of around DKK 1.3 billion. The current expectation primarily reflects losses associated with foreign exchange hedging contracts, mainly related to the appreciation of the US dollar versus the Danish krone compared to the prevailing exchange rates in 2015.

FINANCIAL TIMES

Brexit boom in currency hedges sparks fears of mis-selling

Eva Szalay in London JULY 23 2019



The tumbling pound is encouraging nervous UK importers to enter into complex currency transactions as they scramble to avoid higher costs. But some consultants warn those deals could expose them to significant losses.

One popular strategy being touted by brokers: a contract known as a “target redemption forward”. This is designed to help businesses to buy and sell currencies at better rates they would otherwise be able to obtain, in return for a greater risk of exchange rates moving against them.

Such contracts, known as TARFs, can be profitable for the customer. But unfavourable movements can mean that TARF holders are forced to trade at costly rates — and in bigger amounts than they originally wanted to buy or sell.

High street banks such as Barclays and Royal Bank of Scotland offer TARFs only to a small number of sophisticated clients, conscious of the potential risks of being seen to [mis-sell](#) them — especially to small businesses. Meanwhile, for [currency brokers](#) such as London-based Moneycorp and Western Union of Denver, Colorado, the TARF business has become a lucrative income stream.

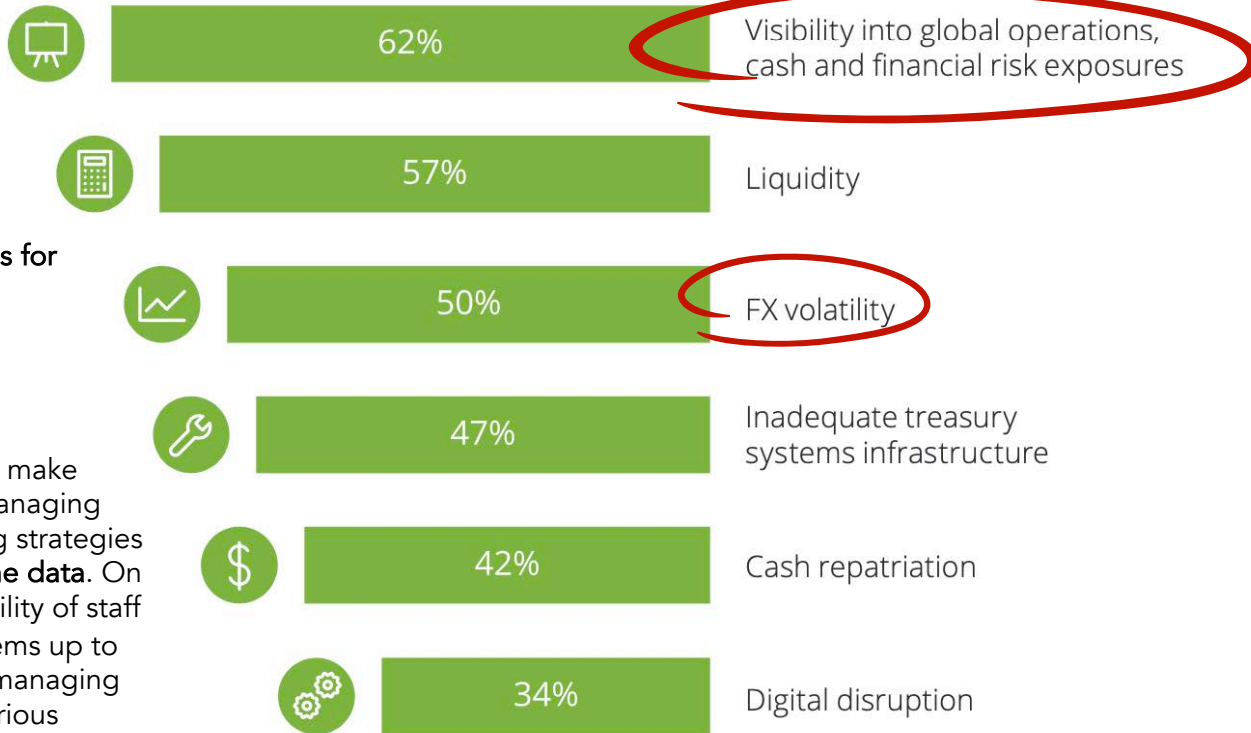
Top challenges treasury managers face

The FX market is one of the most volatile markets in the world due to the current levels of global political and economic uncertainty.

The 2019 Deloitte survey revealed **currency risk plays a critical component in the most pressing strategic challenges for treasurer managers.**

FX volatility has been among the top 3 strategic challenges since 2017

Many corporate treasuries are unable to make informed decisions When it comes to managing FX risk and building associated hedging strategies due to the **lack of capacity to process the data.** On top of internal factors, such as the reliability of staff within those locations and keeping systems up to date, there are external factors such as managing liquidity and counterparty credit with various financial institutions.



Companies underestimate randomness of the FX market



What will AI mean for treasury?

The treasury toolbox will increasingly migrate away from an industry **powered by** Excel spreadsheets **to one** comprised of APIs and code.

Financial models becoming the equivalent of applications built to access ever-growing data streams, where more **traditional bankers** are largely replaced by **data scientists** and apps.

Hedge financial assets with real-time insights from benchmark results

FX HEDGING

Recommendations in real-time with a scientific model

STATISTICAL

Optimization with machine learning

BENCHMARK

Historical performance

STRESS TEST

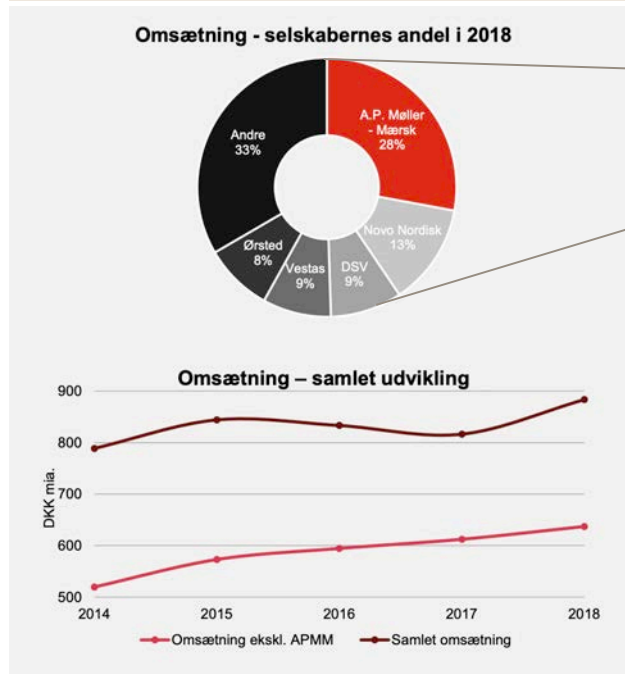
FX hedging strategy with AI



OMX25 companies export DKK 100 billion+ to USA

Option 

Danish export DKK 900 bn



Danish export by country DKK bn

Tyskland 157

USA 143

Sverige 114

Storbritannien 96

Norge 79

Kina 54

Nederlandene 50

Frankrig* 26

Resten af EU 213

Resten af verden 320

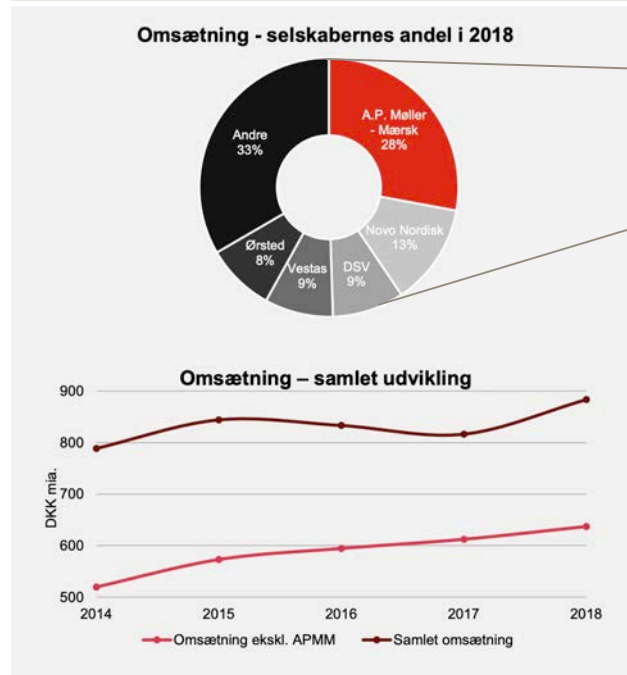
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Benchmarking research reveals DKK 1 billion in annual savings in USD exposure among the largest Danish companies **OptionX**



OMX25 companies export DKK 100 billion+ to USA

Danish export DKK 900 bn



Danish export by country DKK bn

Tyskland	157
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USA	143
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Sverige	114
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Storbritannien	96
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Norge	79
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Kina	54
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Nederlandene	50
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Frankrig*	26
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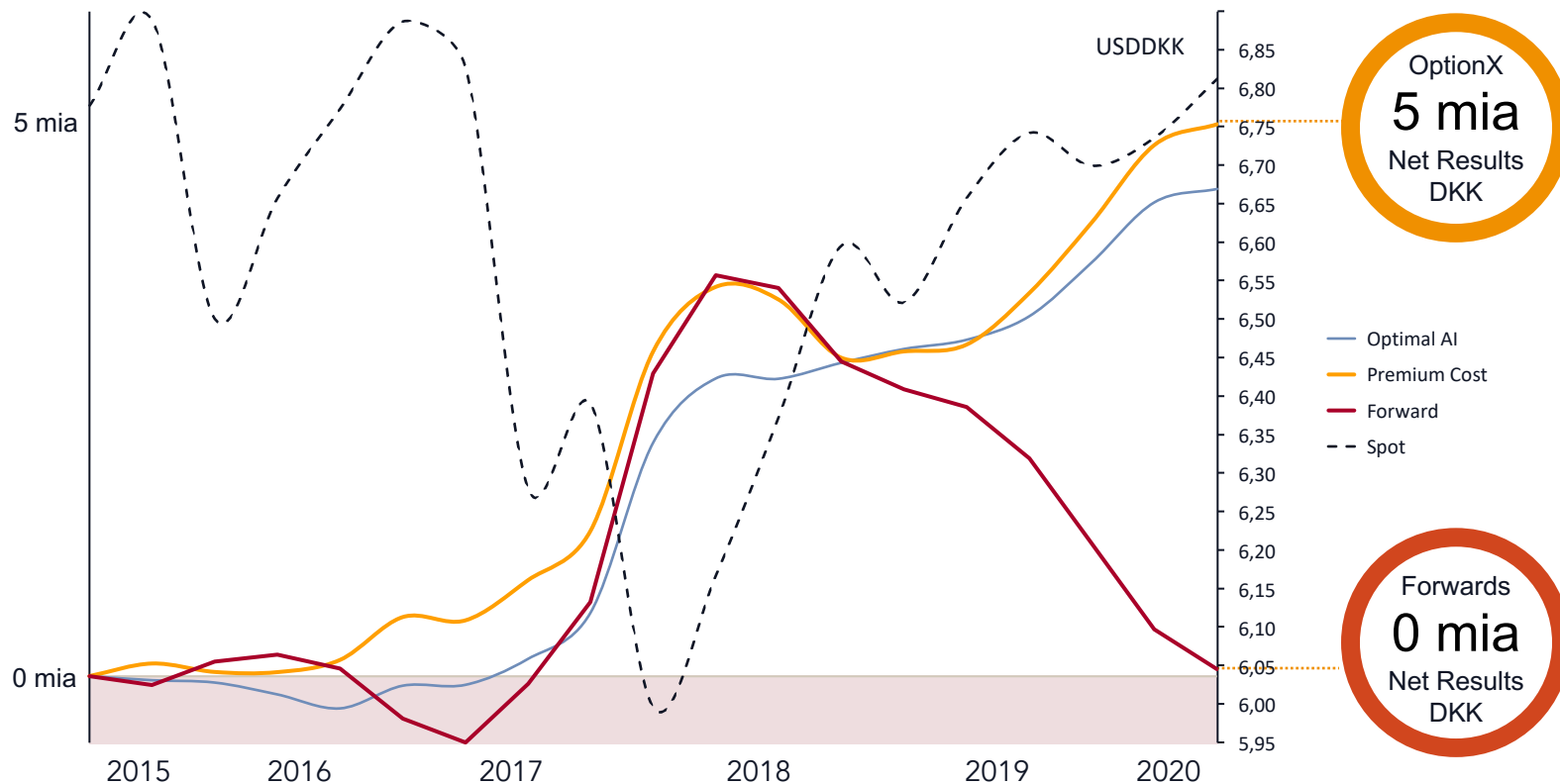
Resten af EU	213
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Resten af verden	320
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USDDKK Benchmark indicate savings of DKK 5 billion in 5 yrs when comparing a forward outright strategy vs the OptionX AI

OptionX



We benchmarked 8 years of DKKGBP with 12 month rolling hedges

Currency Pair GBPKDKK		QUERY COMPLETED				OPTIONX		CONTACT		SETTINGS			
Price Date 01/18/2021		RANKING		STRATEGIES		SCENARIO BUILDER		OPTIONS BOARD		PAYOFF		BENCHMARK	
Expiry Date 12/31/2021		Hedge Maximization		Hedge Protection		FX Volatility		Premium Cost		Total Cost			
Risk Type Receivables		1 VANILLA HEDGE		2 RISK REVERSAL		3 FORWARD EXTRA							
Notional 1,000,000		Strike		Strike		Strike							
Max Unfavourable Move 7.7% 7.7113		Rate		Rate		Rate							
Max Cost of Structure		Distance		Distance		Distance							
		Probability		Probability		Probability							
Calculate		10.6939		28%		0%		10.6939		28%		0%	
		9.4407		13%		6%		9.4407		13%		6%	
		8.4381		1%		87%		8.4381		1%		87%	
		8.3546		0%		95%		8.3546		0%		95%	
		8.2711		-1%		4%		8.2711		-1%		4%	
		7.2685		-13%		0%		7.2685		-13%		0%	
		6.0153		-28%				6.0153		-28%			
		Premium Cost		2.53%		Premium Cost		1.65%		Premium Cost		0.00%	
		Total Cost		3.04%		Total Cost		2.15%		Total Cost		1.12%	
		Structure		VANILLA HEDGE		Structure		RISK REVERSAL		Structure		FORWARD EXTRA	
		Currency Pair		GBPKDKK		Currency Pair		GBPKDKK		Currency Pair		GBPKDKK	
		Hedge Score		11.12		Hedge Score		8.56		Hedge Score		5.72	
		Metrics (HP/OG/FFP/RR)		5.38/5.69/-0.05/2.12		Metrics (HP/OG/FFP/RR)		5.34/3.17/-0.05/2.11		Metrics (HP/OG/FFP/RR)		4.72/1.55/0.54/2.09	
		Spot @ Expiry		--		Spot @ Expiry		--		Spot @ Expiry		--	
		Profit and Loss		--		Profit and Loss		--		Profit and Loss		--	
		Total Cost		Buy Put		Total Cost		Sell Call Buy Put		Total Cost		Sell Up & In Buy Put	
		Price Date		8.3127		Price Date		8.6835 8.3122		Price Date		8.8613 8.2611	
		01/18/21 15:41:03		DKK 2117		01/18/21 15:41:03		DKK 740 DKK 2115		01/18/21 15:41:03		DKK 1886 DKK 1886	
		Spot		8.3546		Spot		8.3083		Spot		8.3083	
		Forward		RFQ		Forward		RFQ		Forward		RFQ	

GBPDKK benchmark reveal DKK 21 million in annual savings opportunity

STRATEGY	MAX DRAWDOWN	NEGATIVE OUTLIER	POSITIVE OUTLIER	P&L
TOTAL COST	-127,675,054	-67,447,819	128,964,512	28,342,844
PREMIUM COST	-74,910,505	-74,910,505	121,452,991	229,505,244
HEDGE PROTECTION	-60,227,236	-60,227,236	107,512,539	136,931,594
HEDGE MAXIMIZATION	-26,894,954	-26,894,954	107,512,539	199,034,250
FX VOLATILITY	-26,894,954	-26,894,954	107,512,539	157,605,815
FORWARD OUTRIGHT	-127,675,054	-67,447,819	128,964,512	28,342,844

Forward Outright

GBPDKK Benchmark Results

-127,675,054	-67,447,819	128,964,512	Forward Outright							8	28,342,844	DKK	
Max Drawdown	Negative Outlier	Positive Outlier	Strategy							Trades	Net Result	Currency	
Trade Date	Expiry Date	Structure	Dir.	Spot@Hedge	FWD Rate	Base Amount	Base	Variable Amount	Var.	Strike1	Spot@Exp	Eff.Rate	P&L Var.
01/04/2013	12/30/2013	Forward Outright	Sell	9.1750	9.1121	100,000,000	GBP	911,214,900	DKK	9.1121	8.9198	9.1121	19,234,900
01/06/2014	12/30/2014	Forward Outright	Sell	8.9801	8.9288	100,000,000	GBP	892,882,764	DKK	8.9288	9.5311	8.9288	-60,227,236
01/05/2015	12/30/2015	Forward Outright	Sell	9.5094	9.4385	100,000,000	GBP	943,852,181	DKK	9.4385	10.1130	9.4385	-67,447,819
01/04/2016	12/30/2016	Forward Outright	Sell	10.1381	10.0098	100,000,000	GBP	1,000,984,512	DKK	10.0098	8.7202	10.0098	128,964,512
01/04/2017	12/29/2017	Forward Outright	Sell	8.7338	8.6334	100,000,000	GBP	863,341,644	DKK	8.6334	8.3828	8.6334	25,061,644
01/04/2018	12/31/2018	Forward Outright	Sell	8.3604	8.2560	100,000,000	GBP	825,603,974	DKK	8.2560	8.3033	8.2560	-4,726,026
01/04/2019	12/30/2019	Forward Outright	Sell	8.3399	8.2100	100,000,000	GBP	821,004,300	DKK	8.2100	8.7491	8.2100	-53,905,700
01/06/2020	12/30/2020	Forward Outright	Sell	8.7900	8.6577	100,000,000	GBP	865,768,568	DKK	8.6577	8.2438	8.6577	41,388,568

95% of companies hedge 95% of their FX exposure using forward contracts

Hedge Max AI

GBPDKK benchmark with risk metrics

-26,894,954

Max Drawdown

-26,894,954

Negative Outlier

107,512,539

Positive Outlier

Hedge Maximization
Strategy

8

Trades

199,034,250

Net Result

DKK

Currency

Trade Date	Expiry Date	Structure	Dir.	Spot@Hedge	FWD Rate	Base Amount	Base	Variable Amount	Var.	Strike1	Strike2/Barrier	Spot@Exp	Eff.Rate	P&L Var.
01/04/2013	12/30/2013	Vanilla	Sell	9.1750	9.1121	100,000,000	GBP	885,324,167	DKK	9.0888		8.9198	8.8532	-6,655,833
01/06/2014	12/30/2014	Vanilla	Sell	8.9801	8.9288	100,000,000	GBP	927,388,981	DKK	8.9224		9.5311	9.2739	34,506,216
01/05/2015	12/30/2015	Vanilla	Sell	9.5094	9.4385	100,000,000	GBP	980,198,162	DKK	9.4224		10.1130	9.8020	36,345,981
01/04/2016	12/30/2016	Risk reversal	Sell	10.1381	10.0098	100,000,000	GBP	979,532,539	DKK	10.1073	10.7658	8.7202	9.7953	107,512,539
01/04/2017	12/29/2017	Risk reversal	Sell	8.7338	8.6334	100,000,000	GBP	841,346,279	DKK	8.6617	9.3792	8.3828	8.4135	3,066,279
01/04/2018	12/31/2018	Vanilla	Sell	8.3604	8.2560	100,000,000	GBP	803,435,046	DKK	8.3296		8.3033	8.0344	-26,894,954
01/04/2019	12/30/2019	Vanilla	Sell	8.3399	8.2100	100,000,000	GBP	838,293,107	DKK	8.2833		8.7491	8.3829	17,288,807
01/06/2020	12/30/2020	Risk reversal	Sell	8.7900	8.6577	100,000,000	GBP	858,245,215	DKK	8.7419	8.9584	8.2438	8.5825	33,865,215

The Hedge Maximization AI is designed to lower volatility with max profits

Premium Cost AI

GBPKKK Benchmark Results

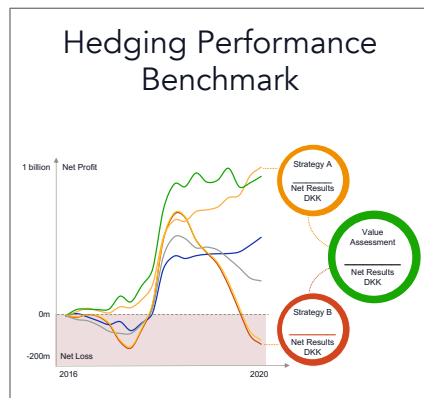
<div>-74,910,505</div> <div>Max Drawdown</div>		<div>74,910,505</div> <div>Negative Outlier</div>	<div>121,452,991</div> <div>Positive Outlier</div>	Premium Cost Strategy						<div>8</div> <div>Trades</div>	<div>229,505,244</div> <div>Net Result</div>	<div>DKK</div> <div>Currency</div>		
Trade Date	Expiry Date	Structure	Dir.	Spot@Hedge	FWD Rate	Base Amount	Base	Variable Amount	Var.	Strike1	Strike2/Barrier	Spot@Exp	Eff.Rate	P&L Var.
01/04/2013	12/30/2013	Forward Extra	Sell	9.1750	9.1121	100,000,000	GBP	905,644,256	DKK	9.0564	9.0564 / 9.7732	8.9198	9.0564	13,664,256
01/06/2014	12/30/2014	Forward Extra	Sell	8.9801	8.9288	100,000,000	GBP	953,110,000	DKK	8.8599	8.8599 / 9.6399	9.5311	9.5311	60,227,236
01/05/2015	12/30/2015	Forward Extra	Sell	9.5094	9.4385	100,000,000	GBP	936,389,495	DKK	9.3639	9.3639 / 10.2906	10.1130	9.3639	-74,910,505
01/04/2016	12/30/2016	Forward Extra	Sell	10.1381	10.0098	100,000,000	GBP	993,472,991	DKK	9.9347	9.9347 / 11.0892	8.7202	9.9347	121,452,991
01/04/2017	12/29/2017	Forward Extra	Sell	8.7338	8.6334	100,000,000	GBP	855,225,763	DKK	8.5523	8.5523 / 9.6192	8.3828	8.5523	16,945,763
01/04/2018	12/31/2018	Forward Extra	Sell	8.3604	8.2560	100,000,000	GBP	830,330,000	DKK	8.1863	8.1863 / 8.9917	8.3033	8.3033	4,726,026
01/04/2019	12/30/2019	Forward Extra	Sell	8.3399	8.2100	100,000,000	GBP	874,910,000	DKK	8.1357	8.1357 / 9.1050	8.7491	8.7491	53,905,700
01/06/2020	12/30/2020	Forward Extra	Sell	8.7900	8.6577	100,000,000	GBP	857,873,777	DKK	8.5787	8.5787 / 9.3156	8.2438	8.5787	33,493,777

The Premium Cost AI is limited to zero cost structures, but enables companies to implement a hedging strategy without any upfront premiums

How do I get started?

OptionX

Benchmark



Request a hedging performance benchmark report for free

Bloomberg

OptionX

- > Rule based hedging
- > Fully automated
- > 500+ currency pairs

APPS OPTIONX <GO> 11 Trial

\$575/month

App available on Bloomberg terminal with real-time results

Web

https://optionx.ai/hedge

OptionX Hedge Query

Currency Pair (ie EURUSD)

Price Date for historical queries (optional)

mm/dd/yyyy

Expiry Date up to 18months

mm/dd/yyyy

Risk Type

☐ Receivables

☐ Payables

Notional

Submit

Get a second opinion for free on your next FX hedge

White Label

Integration / API

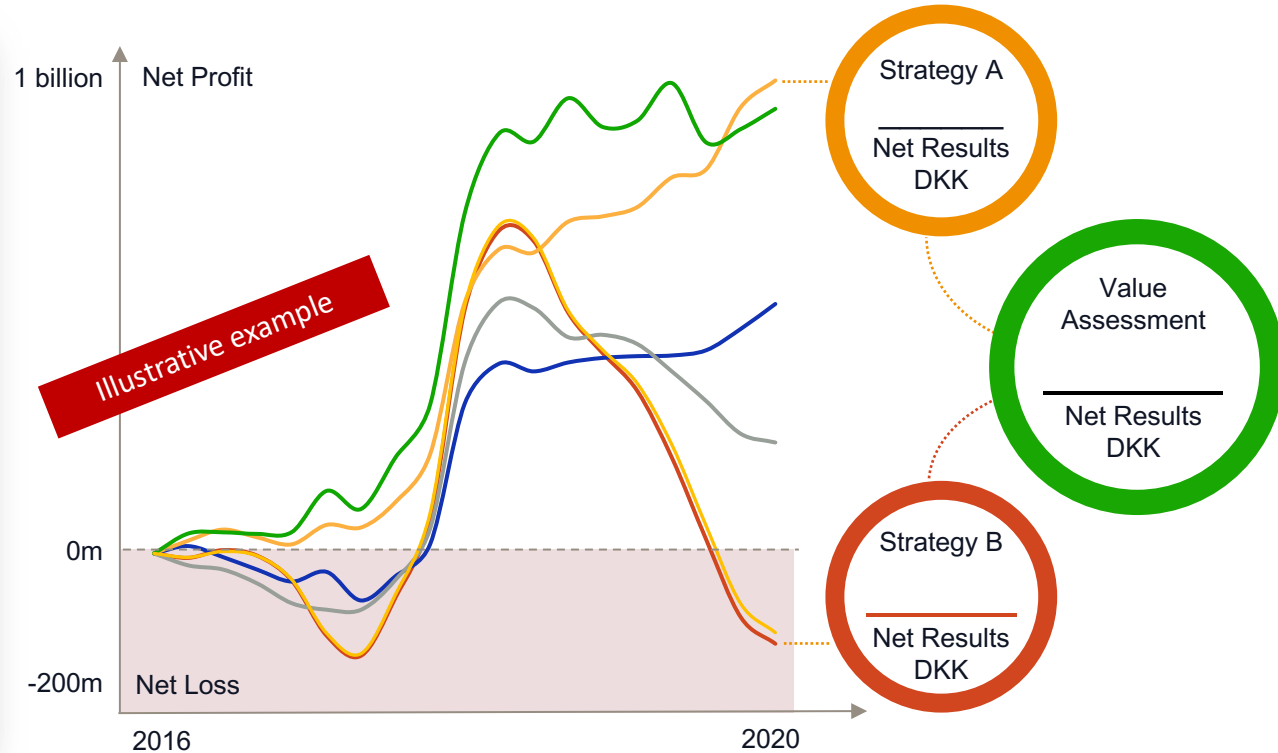
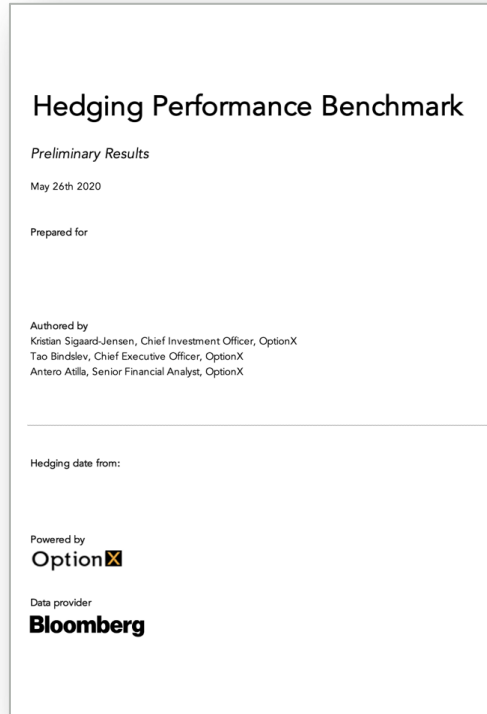
For banks & payment companies



Integration to seamlessly push automated hedging suggestions

Companies can request a free benchmark report and quantify expected impact on cash flow and hedging performance

OptionX



Strong interest from banks and MNC on Bloomberg Terminal

<Search Applications>



Bloomberg Application Portal

APPS OPTIONX

X OptionX by OPTIONX APS

OptionX

- > Rule based hedging
- > Fully automated
- > 500+ currency pairs



☒ APPS OPTIONX <GO>
\$575/month

11) Trial



Get a second opinion at <https://optionx.ai/hedge>

Submit web query...

... to receive same day email response with custom hedging recommendation

OptionX Hedge Query

Currency Pair (e.g. EUR/USD)
USDDKK

Price Date for historical queries (optional)
08/03/2020

Expiry Date up to 18months
01/29/2021

Risk Type
☒ Receivables
☐ Payables

Notional
1,000,000

Max Unfavorable Move (optional)
Select from dropdown

Max Cost of Structure (optional)
Select from dropdown

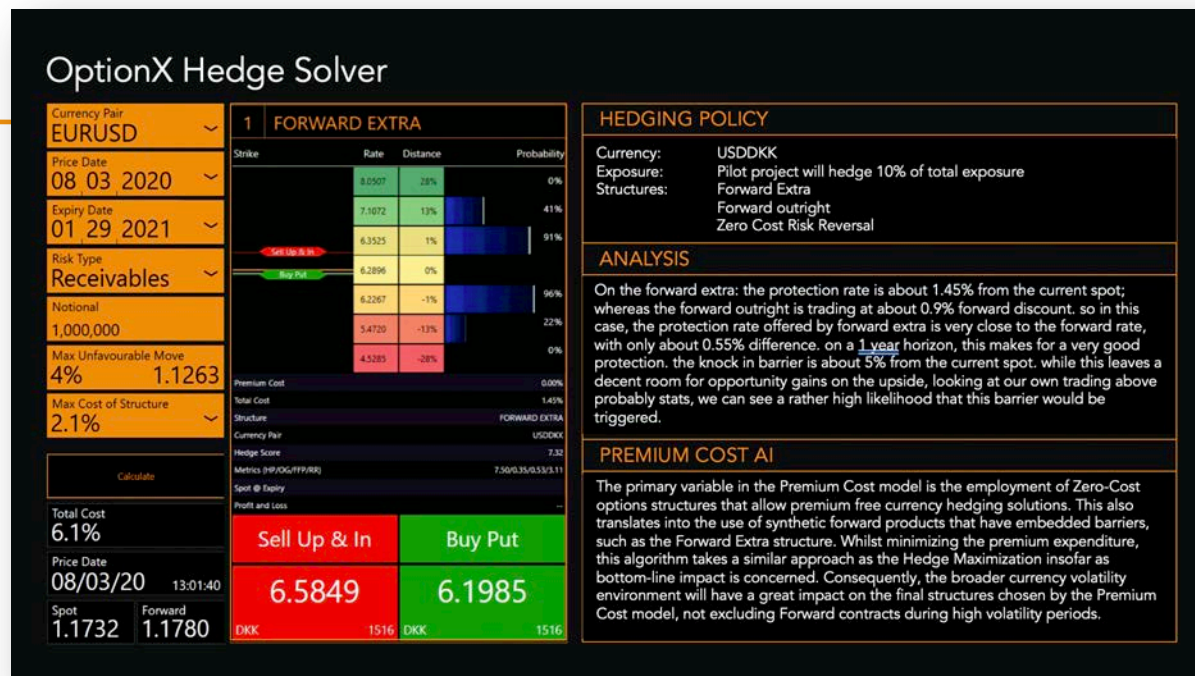
Hedging requirements or comments (optional)
Only zero cost structures and forward outright

Company name
Lundbeck

Name
Martin Høien

Send results to
MHCM@lundbeck.com

Submit



Email
response



Thank you

Hedge financial assets with real-time insights
from millions of benchmark results

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