NASDAQ Hedged Index Methodology
July 2024

TABLE OF CONTENTS

Nasdaq

1.   Introduction

1.1 Background

This document specifies the methodology for the NASDAQ Hedged Indexes.

1.2 The Indexes

The NASDAQ Hedged Indexes (the "Hedged Indexes") are designed to represent returns for global investment strategies that involve hedging currency risk, but not the underlying constituent risk. The currency hedged strategy indexes aims to eliminate the effect of currency fluctuations in the index. By factoring the impact of selling foreign currency forwards at the one month forward rate, the Hedged Indexes mitigate the currency exposures in the index compared to the 'home' currency. The amount of forward return per currency applied to the index level corresponds to the percentage weight of the securities traded in each currency in the underlying unhedged index as of the close of two trading days before the first trading day of the new month but taking account any following month end changes implemented as of close of the last btrading day of the month. The currency weights used to generate the daily forward return are then kept constant over the full month.

By selling foreign exchange forward contracts, global investors are able to lock in current exchange forward rates, and manage their currency risk. Profits (losses) from the forward contracts are offset by losses (profits) in the value of the currency, thereby negating exposure to the currency.

The Hedged Indexes are calculated as daily return indexes and hedged on a monthly basis.

The Hedged Indexes can be constructed for any developed and emerging market index. However, for some currencies, especially emerging market currencies, the hedged impact cannot be calculated due to data unavailability. In such cases, the affected currency weight is set to zero.

For specific information related to the underlying reference index, Nasdaq Indexes, please see the "Nasdaq Index Methodology."

1.3 Currency Data Definitions

1.3.1 Closing Spot Rates

Nasdaq uses the WM Company, Closing Spot Rates at 16:00:00 UK time in the calculation of the closing Index Values [1]. SIX Financial Information Intraday Spot Rates are applied to the real time Index calculations during the trading day.

---

[1] The WM/Reuters Spot Rates and Forward Rates provided by The World Markets Company plc ("WM") in conjunction with Reuters. WM shall not be liable for any errors in or delays in providing or making available the data contained within this service or for any actions taken in reliance on the same, except to the extent that the same is directly caused by its or its employees' negligence

Nasdaq

1.3.2 Closing Forward Rates

Nasdaq uses the WM Company, Closing Forward Rates at 16:00:00 UK time in the calculation of the closing Index Values. WM 1-month Intraday Forward Rates are applied to the real time Index calculations during the trading day.

1.3.3 Missing Spot or Forward Rates

In the case WM/Reuters does not provide a Spot or a Forward rate for specific markets on given days the previous business day's rates will be used.

2.   Index Calculation

There are two components to a Hedged Index return:

+ The performance of the unhedged underlying index in the portfolio home currency
+ The Hedge Impact (aimed to represent the profit or loss on the forward contracts) in the portfolio home currency

Home Currency: Home Currency=Index Currency (currency of the country of the investor)

Foreign Currency: Foreign currencies= all currencies in the underlying index that is a non-home currency

Example: NDXEUR is calculated in EUR by converting the component securities from USD into EUR using the EURUSD spot rate. NDXEURMH is the hedged version of NDXEUR.

Step 1: Determine Home and Foreign Currency. NDXEUR is calculated in EUR for EURO investor so home currency is EUR. Foreign currency are the currencies of the underlying components of NDXEUR which in this example is USD.

Step 2: Combine **Home Currency** and **Foreign Currency** to create the spot rate for Hedge Impact calculation as the amount of foreign currency worth of one unit home currency: **EURUSD**

Step 3: Calculate weights for each foreign currency in the unhedged underlying index by aggregating the Market Cap weight of each security quoted it that currency. In the example USD will have 100% weight .

Step 4: Calculate Hedge Impact based on EURUSD Spot and Forward Rates and foreign currency weights

Step 5: Calculate the Hedged Index value, NDXEURMH, by combining the unhedged underlying index , NQDXEURO , return with the Hedge Impact

2.1 Hedge Ratio

The hedge ratio is the proportion of the portfolio's currency exposure that is hedged. The standard NASDAQ Hedged Indexes uses a hedge ratio of 1 (100%).

2.2 Hedge Impact Calculation

The Hedge Impact, *HI*, expressed in percent, is calculated as follows:

$$HI_t = MAF * \sum_{i=1}^{n} Weight_{i,m-1} \; x \; HR \; x \; \left(\frac{SR_{i,m-1}}{FR_{i,m}} - \frac{SR_{i,m-1}}{FIR_{i,t}} \right)$$

Where;

HI_t = *The Hedge Impact (profit or loss) for the currency/ies i on the calculation day t*

$Weight_{i,m-1}$ = *Weight of the currency i in the unhedged underlying index one day prior*

to the last business day in the previous month[2]

HR = *The Hedge Ratio assigned for currency i (100% in the Nasdaq standard indexes)*

$SR_{i,m-1}$ = *Spot rate at the close for currency i one day prior to the last business day*

in the previous month

$FR_{i,m}$ = $1 - month$ *Forward rate at the close for currency i on the last business day*

in the previous month

$FIR_{i,t}$ $1 - month$ *Forward Interpolated Rate of the currency i on calculation day t*

(see details in 2.1.2*)*

MAF = *Monthly Adjustment Factor which is calculated as* $\frac{Hedged\ Index_{,m-1}}{Hedged\ Index_{,m}}$

2.2.1 Forward Interpolated Rate Calculation

The 1-month Forward Interpolated Rate is calculated by using a linear interpolation between the Spot Rate and the Forward Rate

$$FIRi_{,t} = SR_{i,t} + \left[\left(FR_{i,t} - SR_{i,t} \right) x \frac{Days\ Left_{i,t}}{TotDaysMonth} \right]$$

Where;

$FIR_{i,t}$ = *The Forward Interpolated Rate of the currency i on* the

calculation day t

$SR_{i,t}$ = *The Spot Rate of the currency i on the calculation day t*

$FR_{i,t}$ = *The Forward Rate of the currency i on the calculation day t*

$DaysLeft_{i,t}$ = *Number of days from calculation date t (not counting t) until the last business day*

of the month

$TotDaysMonth$ = *Total number of days in month until the last business day of the month*

2.3 Hedged Index Calculation

---

[2] taking into account any changes in the composition of the index implemented as of the close of the last business day of the month

Nasdaq

The Hedged Index, HIX, is the combination of the Unhedged Underlying Index return and the Hedge Impact and is calculated as follows:

$$HIX_t = HIX_m \; x \; (\frac{UNHIX_t}{UNHIX_m} + \; HI_t)$$

Where;

HIX_t = The Hedged Index value on the calculation day t

HIX_m = The Hedged Index value on the last calculation day in the previous month

$UNHIX_t$ = The Underlying Unhedged Index value on the calculation day t

$UNHIX_m$ = The Underlying Unhedged Index value on the last calculation day in the previous month

3. Disclaimer

Nasdaq may, from time to time, exercise reasonable discretion as it deems appropriate in order to ensure Index integrity including but not limited to quantitative inclusion criteria. Nasdaq may also, due to special circumstances, if deemed essential, apply discretionary adjustments to ensure and maintain the high quality of the index construction and calculation. Nasdaq and its affiliates do not guarantee the accuracy or completeness of any Index or of the data used to calculate the Index or determine the Index components, or the uninterrupted or undelayed calculation or dissemination of any Index. Nasdaq and its affiliates do not guarantee that any Index accurately reflects past, present, or future market performance.

4. Limitation of Liability

Nasdaq and its affiliates assume no liability of any nature (including, but not limited to negligence) for any loss, damages, costs, claims and expenses related to or arising out of the use of the Indexes or any data included therein. Nasdaq and its affiliates hereby expressly disclaims all warranties, expressed or implied, as to the availability, accuracy, uninterrupted calculation, completeness, merchantability or fitness for a particular purpose with respect to the Indexes or any data included therein. Neither Nasdaq, its affiliates nor any third party makes any express or implied warranties or representations with respect to the Indexes, the results to be obtained by their use or the value of the Indexes at any given time. Without limiting any of the foregoing, in no event shall Nasdaq or any of its affiliates have any liability for any direct damages, lost profits or special, incidental, punitive, indirect or consequential damages, even if notified of the possibility of such damages.

Nasdaq

Appendix 1. List of calculated Indexes

Ticker	Index Name	Currency
NDXEURMH	NASDAQ -100 Hedged EUR Index	EUR
XNDXEURMH	NASDAQ -100 Hedged EUR TR Index	EUR
NDXCHFMH	NASDAQ -100 Hedged CHF Index	CHF
XNDXCHFMH	NASDAQ -100 Hedged CHF TR Index	CHF
NDXGBPMH	NASDAQ -100 Hedged GBP Index	GBP
XNDXGBPMH	NASDAQ -100 Hedged GBP TR Index	GBP
DATLOCCADMH	NASDAQ International Dividend Achievers Local CAD	CAD
DATLOCCADTRMH	NASDAQ International Dividend Achievers Local CAD TR	CAD
DATLOCCADNTRMH	NASDAQ International Dividend Achievers Local CAD NTR	CAD
DAACADMH	NASDAQ US Broad Dividend Achievers Currency Hedged CAD	CAD
DAACADTRMH	NASDAQ US Broad Dividend Achievers Currency Hedged CAD TR	CAD
DAACADNTRMH	NASDAQ US Broad Dividend Achievers Currency Hedged CAD NTR	CAD
COMPCADMH	NASDAQ Composite Monthly Currency Hedged CAD	CAD
XCMPCADMH	NASDAQ Composite Monthly Currency Hedged CAD TR	CAD
XCMPCADNNRMH	NASDAQ Composite Monthly Currency Hedged CAD NTR	CAD
NDXAUDMH	NASDAQ -100 Currency Hedged AUD Index	AUD
XNDXAUDMH	NASDAQ -100 Currency Hedged AUD TR Index	AUD
XNDXNNRAUDMH	NASDAQ -100 Currency Hedged AUD NTR Index	AUD
NQFGSLAUDMH	NASDAQ Future Global Sustainability Leaders Currency Hedged AUD	AUD
NQFGSLTAUDMH	NASDAQ Future Global Sustainability Leaders Currency Hedged AUD TR	AUD
NQFGSLNAUDMH	NASDAQ Future Global Sustainability Leaders Currency Hedged AUD NTR	AUD
NDXJPYMH	NASDAQ -100 Currency Hedged JPY Index	JPY
XNDXJPYMH	NASDAQ -100 Currency Hedged JPY TR Index	JPY
XNDXNNRJPYMH	NASDAQ -100 Currency Hedged JPY NTR Index	JPY
NGXCADMH	Nasdaq Next Generation 100 Currency Hedged CAD Index	CAD
NGXTCADMH	Nasdaq Next Generation 100 Currency Hedged CAD TR Index	CAD
NGXNCADMH	Nasdaq Next Generation 100 Currency Hedged CAD NTR Index	CAD
NDXECADMH	NASDAQ -100 Equal Weighted Currency Hedged CAD Index	CAD
NETRCADMH	NASDAQ -100 Equal Weighted Currency Hedged CAD TR Index	CAD
NETRNNRCADMH	NASDAQ -100 Equal Weighted Currency Hedged CAD NTR Index	CAD
NDXEAUDMH	NASDAQ -100 Equal Weighted Currency Hedged AUD Index	AUD
NETRAUDMH	NASDAQ -100 Equal Weighted Currency Hedged AUD TR Index	AUD
NETRNNRAUDMH	NASDAQ -100 Equal Weighted Currency Hedged AUD NTR Index	AUD
NDXEEURMH	NASDAQ -100 Equal Weighted Currency Hedged EUR Index	EUR
NETREURMH	NASDAQ -100 Equal Weighted Currency Hedged EUR TR Index	EUR
NETRNNREURMH	NASDAQ -100 Equal Weighted Currency Hedged EUR NTR Index	EUR
NDXEGBPMH	NASDAQ -100 Equal Weighted Currency Hedged GBP Index	GBP
NETRGBPMH	NASDAQ -100 Equal Weighted Currency Hedged GBP TR Index	GBP
NETRNNRGBPMH	NASDAQ -100 Equal Weighted Currency Hedged GBP NTR Index	GBP
NDXEJPYMH	NASDAQ -100 Equal Weighted Currency Hedged JPY Index	JPY
NETRJPYMH	NASDAQ -100 Equal Weighted Currency Hedged JPY TR Index	JPY

Nasdaq

NETRNNRJPYMH	NASDAQ -100 Equal Weighted Currency Hedged JPY NTR Index	JPY
NDXEHKDMH	NASDAQ -100 Equal Weighted Currency Hedged HKD Index	HKD
NETRHKDMH	NASDAQ -100 Equal Weighted Currency Hedged HKD TR Index	HKD
NETRNNRHKDMH	NASDAQ -100 Equal Weighted Currency Hedged HKD NTR Index	HKD
NDXECHFMH	NASDAQ -100 Equal Weighted Currency Hedged CHF Index	CHF
NETRCHFMH	NASDAQ -100 Equal Weighted Currency Hedged CHF TR Index	CHF
NETRNNRCHFMH	NASDAQ -100 Equal Weighted Currency Hedged CHF NTR Index	CHF
NDXG01MH	Nasdaq-100 ESG Currency Hedged AUD Index	AUD
NDXG11MH	Nasdaq-100 ESG Total Return Currency Hedged AUD Index	AUD
NDXG21MH	Nasdaq-100 ESG Notional Net Total Return Currency Hedged AUD Index	AUD
NDXG02MH	Nasdaq-100 ESG Currency Hedged CAD Index	CAD
NDXG12MH	Nasdaq-100 ESG Total Return Currency Hedged CAD Index	CAD
NDXG22MH	Nasdaq-100 ESG Notional Net Total Return Currency Hedged CAD Index	CAD
NDXG03MH	Nasdaq-100 ESG Currency Hedged CHF Index	CHF
NDXG13MH	Nasdaq-100 ESG Total Return Currency Hedged CHF Index	CHF
NDXG23MH	Nasdaq-100 ESG Notional Net Total Return Currency Hedged CHF Index	CHF
NDXG04MH	Nasdaq-100 ESG Currency Hedged EUR Index	EUR
NDXG14MH	Nasdaq-100 ESG Total Return Currency Hedged EUR Index	EUR
NDXG24MH	Nasdaq-100 ESG Notional Net Total Return Currency Hedged EUR Index	EUR
NDXG05MH	Nasdaq-100 ESG Currency Hedged GBP Index	GBP
NDXG15MH	Nasdaq-100 ESG Total Return Currency Hedged GBP Index	GBP
NDXG25MH	Nasdaq-100 ESG Notional Net Total Return Currency Hedged GBP Index	GBP
NDXG06MH	Nasdaq-100 ESG Currency Hedged HKD Index	HKD
NDXG16MH	Nasdaq-100 ESG Total Return Currency Hedged HKD Index	HKD
NDXG26MH	Nasdaq-100 ESG Notional Net Total Return Currency Hedged HKD Index	HKD
NDXG07MH	Nasdaq-100 ESG Currency Hedged JPY Index	JPY
NDXG17MH	Nasdaq-100 ESG Total Return Currency Hedged JPY Index	JPY
NDXG27MH	Nasdaq-100 ESG Notional Net Total Return Currency Hedged JPY Index	JPY
NGXG01MH	Nasdaq Next Generation 100 ESG Currency Hedged AUD Index	AUD
NGXG11MH	Nasdaq Next Generation 100 ESG Total Return Currency Hedged AUD Index	AUD
NGXG21MH	Nasdaq Next Generation 100 ESG Notional Net Total Return Currency Hedged AUD Index	AUD
NGXG02MH	Nasdaq Next Generation 100 ESG Currency Hedged CAD Index	CAD
NGXG12MH	Nasdaq Next Generation 100 ESG Total Return Currency Hedged CAD Index	CAD
NGXG22MH	Nasdaq Next Generation 100 ESG Notional Net Total Return Currency Hedged CAD Index	CAD
NGXG03MH	Nasdaq Next Generation 100 ESG Currency Hedged CHF Index	CHF
NGXG13MH	Nasdaq Next Generation 100 ESG Total Return Currency Hedged CHF Index	CHF
NGXG23MH	Nasdaq Next Generation 100 ESG Notional Net Total Return Currency Hedged CHF Index	CHF
NGXG04MH	Nasdaq Next Generation 100 ESG Currency Hedged EUR Index	EUR
NGXG14MH	Nasdaq Next Generation 100 ESG Total Return Currency Hedged EUR Index	EUR
NGXG24MH	Nasdaq Next Generation 100 ESG Notional Net Total Return Currency Hedged EUR Index	EUR
NGXG05MH	Nasdaq Next Generation 100 ESG Currency Hedged GBP Index	GBP
NGXG15MH	Nasdaq Next Generation 100 ESG Total Return Currency Hedged GBP Index	GBP

NGXG25MH	Nasdaq Next Generation 100 ESG Notional Net Total Return Currency Hedged GBP Index	GBP
NGXG06MH	Nasdaq Next Generation 100 ESG Currency Hedged HKD Index	HKD
NGXG16MH	Nasdaq Next Generation 100 ESG Total Return Currency Hedged HKD Index	HKD
NGXG26MH	Nasdaq Next Generation 100 ESG Notional Net Total Return Currency Hedged HKD Index	HKD
NGXG07MH	Nasdaq Next Generation 100 ESG Currency Hedged JPY Index	JPY
NGXG17MH	Nasdaq Next Generation 100 ESG Total Return Currency Hedged JPY Index	JPY
NGXG27MH	Nasdaq Next Generation 100 ESG Notional Net Total Return Currency Hedged JPY Index	JPY
NQFGSLNZDMH	Nasdaq Future Global Sustainability Leaders Currency Hedged NZD	NZD
NQFGSLTNZDMH	Nasdaq Future Global Sustainability Leaders Currency Hedged NZD TR	NZD
NQFGSLNNZDMH	Nasdaq Future Global Sustainability Leaders Currency Hedged NZD NTR	NZD