

NOS and NASDAQ price



Fish Pool
part of Oslo Børs ASA

FAQ – Frequently asked questions:

What is the main difference between NOS and NASDAQ price?

NOS price was an exporters buying price. Price paid by exporters buying from external farmers in Norway. (*external* means farmers not owned by the exporters). NASDAQ price is an exporters selling price. Price paid by European buyers to exporters.

How to understand the NASDAQ Salmon report, example [week 14 in 2013](#) ?

- NQSALMON for week 14 was 40,21 NOK/kg average price all sizes. This is a volume weighted calculation. Same way as the NOS price was calculated (price SUP1-2 of 32,35 * 0,42 % + price SUP2-3 of 35,82 * 7,24% ... + price SUP9+ of 41,79 * 0,20%)
- Week change. Price in week 14 was 2,10 higher than in week 13, and 1,26 higher than in week 10 (4 week change) and 7,18 higher than week 2 (12 week change)
- Distribution, This is % of reported volume (not slaughtered volume). Remember that only export to Europe is included. Volume sold by air-freight etc is not included
- St.dev. Standard deviation is a mathematical formula of the variation in the prices reported. A low st. dev means that the exporters reported quite equal prices. A very easy example with 2 exporters. Average price 30,60 NOK/kg and st.dev 0,49. According

	Volume	Price	Aver price:	Price dev	Square 0,60*0,60	Mult with volume
Exp A	2000	30,00	30,60	0,60	0,36	720
Exp B	3000	31,00	30,60	-0,40	0,16	480
Total:	5000	30,60				1 200
				Total volume:		5 000
				Var/kg (1200/5000):		0,24
				Standard dev (√ of 0,24):		0,49

to the mathematics 68% of the reported volume is within 30,60 NOK/kg plus/minus 0,49 NOK/kg. The mathematics need a lot of statistics to give a correct answer, but st dev is a good indication of the spread in prices reported from the exporters

When is the volume that is reported slaughtered?

The price reported in both NOS and NASDAQ price is volume slaughtered in the reported week.

- NOS price: Day of slaughtering decisive: Ex week 13-2013 was the last NOS – price. The volume reported was slaughtered in week 13 and delivered from the farmer to the exporter in week 13.
- NASDAQ price: Day of invoicing decisive: ex week 14-2013 is the first week of NASDAQ reporting. The volume reported was invoiced in week 14. All exported volume must be followed by an invoice to be custom cleared. There is a possibility that salmon slaughtered in week 14 is not sold and invoiced before Monday - Tuesday next week. If so, the volume will be reported in week 15-2013 as day of invoicing is decisive for the NASDAQ –report

When is the price that is reported agreed?

The price reported in the NASDAQ and NOS are agreed at a little different times, and the NASDAQ price will be reported a little closer to the actual market prices

- NOS price: The majority of volume slaughtered is contracted the week before delivery. Ex week 13-2013. The farmers have normally agreed the price on Thursday or Friday in week 12. When we publish the NOS price the following Monday, one can say that the NOS price reported reflects a market price about 10 days ago.
- NASDAQ price: The price is agreed between exporter and customer in Europe at very different times. Some volume is agreed the week before delivery, and some volume is agreed on the day of slaughtering and transporting. Ex week 14-2013, a lot of the volume invoiced is agreed on Thursday and Friday in week 14. When the NASDAQ price is reported in the beginning of week 15, the NASDAQ price will reflect a market price only 4-5 ago

What volume is reported?

In the NOS price, the exporters selling own fish were not allowed to report. Only exporters buying external salmon was included. In the new NASDAQ price all exporters may report. On average, since week 44 in 2012 until week 13 in 2013 2248 tons per week were reported in NOS – price, 6597 tons were reported in the NASDAQ price. There are plans for broadening the panel even further.

What information is used from each exporter in producing the price?

Only information from the invoiced amounts is used in the report. The NASDAQ – report is calculated using only the following information on each order:

- Volume in kg. Ex: 1.110 kg SUP3-4
- Invoiced amount in currency. Ex: 4.440 Euro
- Incoterms. Ex: DDP
- Country of delivery: Ex: Germany

What standard information is used to calculate the NASDAQ price?

The following information is used to calculate the standard price:

- Average standard currency for the relevant week. (all exporters use exactly the same average currency rate)
- Freight from Oslo to each country (average freight estimate. The same standard freight is used for full-loads, part-loads and pallets transported)
- Custom 2% into EU and export fees 1,05%

Using this example – how do you come from 4 EUR/kg DDP to 27,78 NOK/kg Oslo price?

Pink figures: info from IT system of exporter			
Red figures: standard figures for all exporters			
Country	Germany		
Incoterm:	DDP		
Invoiced	4 440 Euro		
Weight	1 110 kg		
Amount	4,00	Eur/kg	
EURNOK	7,5000		Average currency for the week
In NOK	30,00	NOK/kg	
Freight	-0,98	NOK/kg	Same freight all over Germany
EU-cust 2%	-0,57	NOK/kg	Customs to EU is 2%
Added	-0,01	NOK/kg	Calculated as 2% of customs
Fixed 400/order	-0,36	NOK/kg	400 NOK divided by kg - here 1110kg
Exp duty 1,05%	-0,30	NOK/kg	Exp. Fee 0,75%, science fee 0,30%
Oslo price	27,78	NOK/kg	

What are the standard freights used in the calculation?

When the seller pays the freight, the invoiced amount includes freight costs. To calculate Oslo prices a standard freight rate is deducted. For deliveries in the European countries, the following freight rates are used.

This is an estimated average of full-loads, pallets etc. Most sales to Russia and east-Europe are sold FCA and EXW packing station, where the customer collects the salmon. Freight is thus not included in the invoice. All salmon sold at FCA and EXW terms are added 0,65 NOK/kg as standard freight rate to Oslo (same standard 0,65 NOK/kg wherever in Norway the customer collects his salmon)

Country	Freight	Country	Freight	Country	Freight	Country	Freight
Swed	0,55	Germ	0,98	Austr	1,58	Ukraine	1,75
Finl	0,60	Belg	1,05	Switz	1,58	Belar	1,75
Denm	0,63	Neth	1,05	Italy	1,73	Czech	1,75
Estl	1,00	Lux	1,05	GB	1,88	Slov	1,75
Latv	1,00	Poland	1,10	Spain	1,93		
Lita	1,00	France	1,50	Port	2,07		

Why do you use 0,65 NOK/kg as add-on to Oslo from all over Norway?

For all salmon sold delivered outside Norway (DDP og DAP) the 0,65 NOK/kg is not used at all. The freight costs are included in the invoiced price, and the deduction method – see above is used.

The add-on to Oslo is only relevant for salmon sold FCA and DDP, where the buyer collects the salmon in Norway. The invoice does not contain freight, and 0,65 NOK/kg is thus added to calculate an Oslo price. Most of the salmon sold to eastern Europe and Russia is sold FCA or EXW. For these sales 0,65 NOK/kg is added, wherever in Norway the salmon is collected.

How can I use the NASDAQ price to calculate my selling and buying price?

The new NASDAQ Salmon Index will give a correct estimate of the prices in the physical market. As with the existing NOS price, Fish Pool recommend all buyers and sellers to calculate the difference between the price they sell at packing station or buy DDP delivered own plant and the NASDAQ price. This is important for comparing a fixed price delivery contract DDP your plant with a financial contract with reference Oslo. As both NOS and NASDAQ prices are calculated using standard freight rates etc. buyers should be careful in expecting that a cost calculation using the exact transport costs from Oslo to your plant will give an exact price for a DDP delivery

Why is salmon sold to overseas markets not included?

Salmon sold by air-freight to overseas markets are not included in the NASDAQ price calculations. The freight costs are a large part of the invoiced amount. It would be impossible to use standard calculations for salmon transported by air-freight and the errors in calculating an Oslo price would be too high.

What is the difference of 0,75 NOK/kg between the NOS and NASDAQ price?

This is the estimated difference between the old NOS price and the new NASDAQ price. From week 29 in 2012 until week 13 in 2013 the exporters had a parallel reporting of both NOS and NASDAQ price. Kontali has done additional analysis for 3 exporters for the whole of 2012. The historical difference was 0,75 NOK/kg, and Fish Pool thus deducts 0,75 NOK/kg from the NASDAQ price for SUP3-6 kg to convert to FCA Oslo, used for all financial contracts. See www.fishpool.eu document *Correction factor for the Nasdaq price* for detailed information.

Please note that the NASDAQ price is a completely new price at a new point of measuring with very different exporters reporting. It is thus not correct to say that the difference between NASDAQ and NOS is selling price minus buying price and thus exporter's margin.

What is exporter's margin?

Exporters margin is normally defined as sales price minus purchasing cost and all costs that can be allocated to each order; transport, duties, terminal costs etc. (Fixed costs like salary, rent, phones etc are not included)

Was the NOS price an exact purchasing price Oslo?

The NOS price reported price paid to farmer at packing station. A standard add-on for freight to Oslo was used for all; South Norway 0,50 NOK/kg, Nordland 1,00 NOK/kg and Troms/Finnmark 1,30 NOK/kg. If a lot of salmon was transported from the north of Norway eastbound, and from the west of Norway south and westbound, the exporters may have had lower costs than the standard NOS calculation to Oslo indicated.

Is the NASDAQ price an exact selling price Oslo?

Only salmon transported by truck is included in NASDAQ, (around 80-85% of volume exported in 2011-12). Figures from SSB – Export Statistics Norway indicate that salmon sold by air-freight is sold

at higher average prices. The NASDAQ report uses standard calculations and rates for freights, duties etc. The real costs for each exporter may vary.

Is the difference of 0,75 NOK/kg the exporters margin?

Fish Pool has documented a difference of 0,75 NOK/kg between NASDAQ and NOS in the 38 weeks we had parallel reporting. The NASDAQ price is a completely new price at a new point of measuring with very different reporters reporting. The concept of standard calculations, see above, also indicates that the exporters margin cannot be defined using NASDAQ and NOS as reference.

How can we know that 0,75 NOK/kg is correct in the future?

The NOS price stopped in week 13-2013. That comparison can no longer be done. But the Fish Pool Index consists of 3 other prices that can be used as benchmark. The following correction factors are used at present to calculate FCA Oslo – purchasing price/old NOS price:

- Farmers index +0,50 NOK/kg
- NASDAQ price -0,75 NOK/kg
- SSB – exp statistics -0,62 NOK/kg

If one of these prices deviate from the others this will be evaluated by the Fish Pool Index Surveillance Board, using Kontali Analyse as secretariat. They quarterly receive an assessment report from Kontali as basis for their evaluation. The new NASDAQ price will of course be followed closely the coming quarters.

Status correlation NASDAQ and Farmers index by week 23-2013:

Farmers index and NOS/NASDAQ have historically had a very high correlation. Key figures of the difference:

	NOS/NAQ - Farmers
Diff Y-2009	0,17
Diff Y-2010	0,03
Diff Y-2011	-0,20
Diff Y-2012	-0,14
Diff week 1-13	-0,23
Diff week 14-23	-0,24

The Farmers index was 0,08 NOK/kg higher than the NASDAQ index (both corrected to FCA Oslo prices) in the first 7 weeks of NASDAQ reporting. This indicates that the NASDAQ price reflects the market prices in the same way as the NASDAQ reports did.

Where can I find more details about spot prices for salmon?

Click the following link to get an overview of weekly spot prices: [Spot prices](#). On this page, you will also find a link to historical NASDAQ and NOS/FHL prices back to 1995.

How did Fish Pool calculate the FPI Settlement price using the old NOS prices?

All financial contracts until end 2014 traded on Fish Pool are settled against the Fish Pool Index - FPI. The FPI is a weighted sum of 4 different prices, all converted to an Oslo price by using Correction Factors. The table below illustrates the calculation used until week 13-2013:

Fish Pool Index	Weight	Correction factor
Farmers Selling Price FOB Packing station	25%	+ 0,50 NOK/kg
NOS Exporter's purchase prices FCA Oslo	50%	0
SSB Custom export statistics	20%	- 0,62 NOK/kg
Mercabarna market prices	5%	- 0,91 EUR/kg
Sum	100%	

How does Fish Pool calculate the FPI Settlement price using the new NASDAQ prices?

From week 14 the NOS-price (purchase price) is replaced by the NASDAQ Salmon Index (sales price). In order to adjust for the changed point of measurement (from a purchase price to a sales price) the NASDAQ Salmon Index is adjusted with a Correction Factor of 0,75 NOK/kg in the FPI – Fish Pool Index. All other calculations in the FPI – settlement price remains unchanged. Mercabarna prices were taken out of the calculation end 2013, and the weight of the NASDAQ price was increased to 55%. And the 0,75 NOK/kg deduction was introduced to convert NASDAQ to NOS (buying prices)

Fish Pool Index	Weight	Correction factor
Farmers Selling Price FOB Packing station	25%	+ 0,50 NOK/kg
NASDAQ prices FCA Oslo	55%	- 0,75 NOK/kg
SSB Custom export statistics	20%	- 0,62 NOK/kg
Sum	100%	

What will happen in the 2015 contracts?

The reference price will be changed from the NOS – price (buying price) to NASDAQ – price (sales price). We will thus no longer deduct 0,75 NOK/kg from the NASDAQ price. Farmers price and SSB will be increased with 0,75 NOK/kg to reflect the Sales price.

Fish Pool Index 15	Weight	Correction factor
Farmers Selling Price FOB Packing station	25%	+ 0,50 NOK/kg + 0,75 NOK/kg
NASDAQ prices FCA Oslo	55%	0
SSB Custom export statistics	20%	- 0,62 NOK/kg + 0,75 NOK/kg
Sum	100%	

Why is a contract for 40,00 NOK/kg in 2014 the same as 40,75 NOK/kg in 2015?

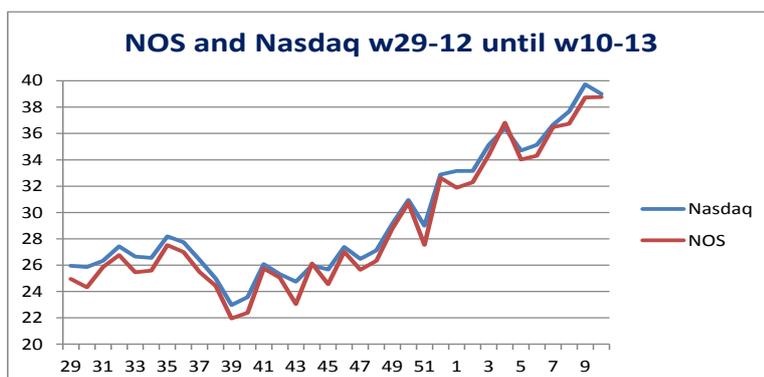
IN 2015 we no longer deduct 0,75 NOK/kg from the NASDAQ price. Farmer and SSB are thus adjusted +0,75 NOK/kg to reflect a sales price Oslo. An example where reported spot prices (before correction factors) are:

- 42,00 NOK/kg for NASDAQ
- 40,75 NOK/kg for Farmers
- 41,87 NOK/kg for SSB

	Reported price	2014 spot	2015 spot
Farmers	40,75	41,25	42,00
NASDAQ	42,00	41,25	42,00
SSB	41,87	41,25	42,00
Contract price		40,00	40,75
Settlement:		1,25	1,25

Will 0,75 NOK/kg always be the correct difference?

The old NOS price stopped in week 14-2013, and we now only have the NASDAQ prices. 0,75 NOK/kg was the difference in the period we had both NOS and NASDAQ reports, from week 29-2012 until



week 13-2013. Kontali Analyse also did a detailed study of 3 exporters for the whole year 2012 and the NOS findings were supported by the analysis done by Kontali.

The Correction Factor was found to be 0,75 NOK/kg for 3-6 kg used in the Fish Pool Index.

As expected there were some fluctuations from week to week, as illustrated in the graph.

The Fish Pool Index Surveillance Board follows the prices used in the calculation of the Fish Pool Index settlement price. There is a status every quarter based on price analysis of these 4 prices used. The aim is that the Fish Pool Index shall reflect correct spot market prices. The correction factors used may thus be adjusted, if needed, to reflect spot market prices better.

What was the experience of the first year of calculation?

Below you see a graph of the Farmers index (+0,50 NOK/kg) and the NASDAQ price (-0,75 NOK/kg) from start up in week 14-2013 until week 13-2014. The correlation has been very good, On average Farmers index was 0,21 NOK/kg higher than NASDAQ (both converted to buying price Oslo). The first year indicates that 0,75 NOK/kg deduction from NASDAQ to old NOS may be a little high.

