

Chile – another horror story or time to be jolly?

Fish Pool/Nasdaq Christmas seminar 25. Nov 2015

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Agenda

- Chile road trip
- A historic perspective
- What is the problem in Chile?
 - Price
 - Cost
 - Volume
 - Biology
 - FX
- The way forward

Chile road trip in late October



A salmon (to the left) and I

Anne Hvistendahl, jefa del negocio salmonero del DNB Principal banco noruego: "Chile entró a una crisis de precios del salmón"



Anne Hvistendahl, global head of DNB Seafood



DNB Santiago office (in pink for Breast Cancer Awareness Day)

DNB is the only seafood bank with offices in both the two main salmon farming hubs – Norway and Chile.



Mari Gulsvik Næss, DNB corporate analyst, with Salmofood representatives

We are a one-stop shop offering credit, bond and equity issuance, M&A advisory, FX.

My key take-away from the road

The SRS-crisis is more of an operating model problem than an SRS-crisis..

- *The same way the ISA-crisis was a system crisis where ISA was a symptom rather than root cause*
- *Hopefully this crisis is bad enough to trigger necessary changes to regulations, there are ongoing talks between the Government and industry on the issue*

Year 2005 – «Salmon farming is meaningless»

Norway has also had its problems in the past



Næringsliv

-Nesten kriminelt i Pan Fish

Oppdrett-selskapet Pan Fish har kostet bankene dobbelt så mye som tapene etter Finance Credit-skandalen, fremgår av en ny bok som kommer på markedet i dag. -Driften i Pan Fish lå nær grensen til det kriminelle, skriver forfatteren.

DN.no

Publisert: 08.11.2004 – 05:54 Oppdatert: 28.03.2014 – 09:59

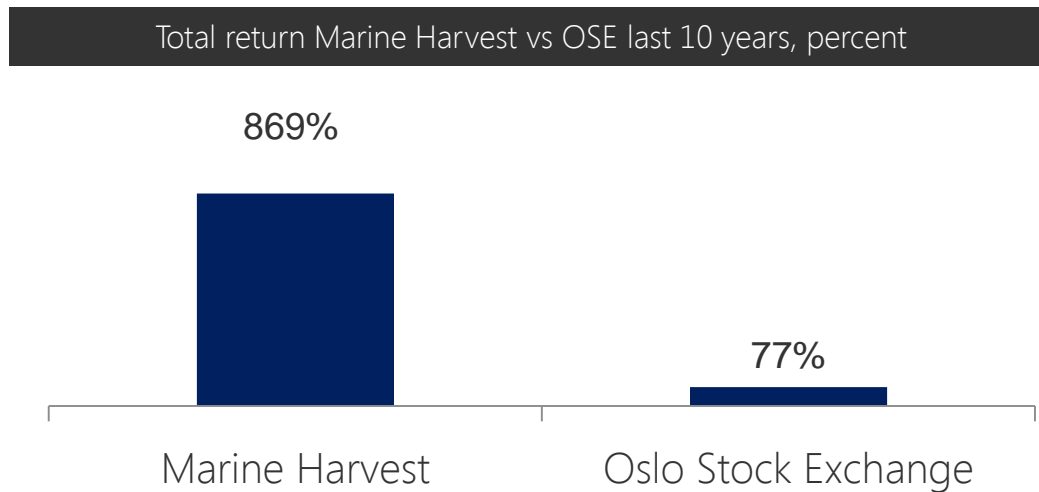
When I start in Alfred Berg I will cover all the consumer stocks except the salmon farmers because that is a meaningless business.

Alfred Berg



OK

2005-15; amazing return for a «meaningless industry»..



Annual return for MHG has been 25% vs 6% for OSE last 10 years (incl dividends)

Source: Bloomberg

The 10 years following Mr Fredriksen picking up the pieces have been astonishing

Chile 2015-25: rerun of the MHG story or game over?

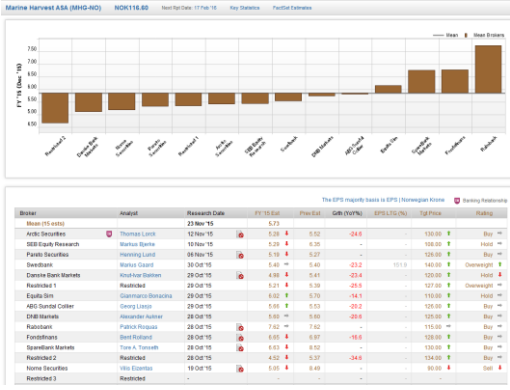
Marine Harvest vs AquaChile last 18m



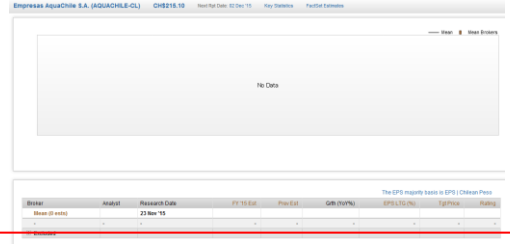
Source: Factset

Nobody covers the Chilean farmers anymore

Analyst coverage Marine Harvest



Analyst coverage AquaChile



Just like I didn't want to be a salmon analyst in 2005, nobody in Chile wants to be one today

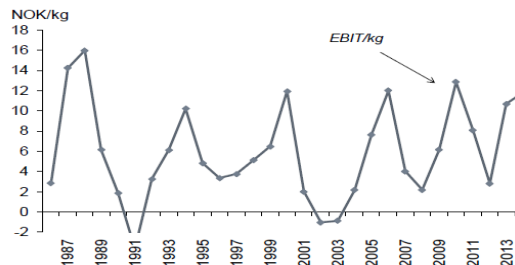
Salmon farming is still a young industry

Development in investor perceptions over time

Chaotic growth
(pre 2008)

Cyclical growth
(2008-2014)

New Dawn
(2014-)



Source: Fiskeridirektoratet, SSB, DNB

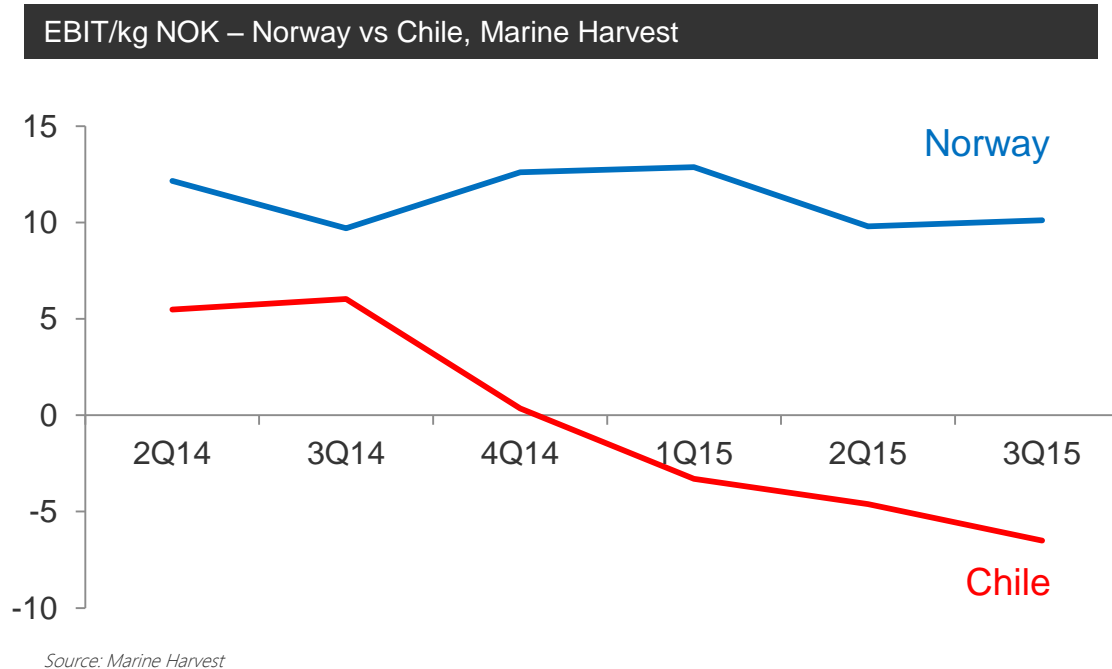


Low & stable growth:

Better margins + lower volatility =
higher company valuations

«New Dawn» in Norway while Chile reverted back to «Chaotic growth»

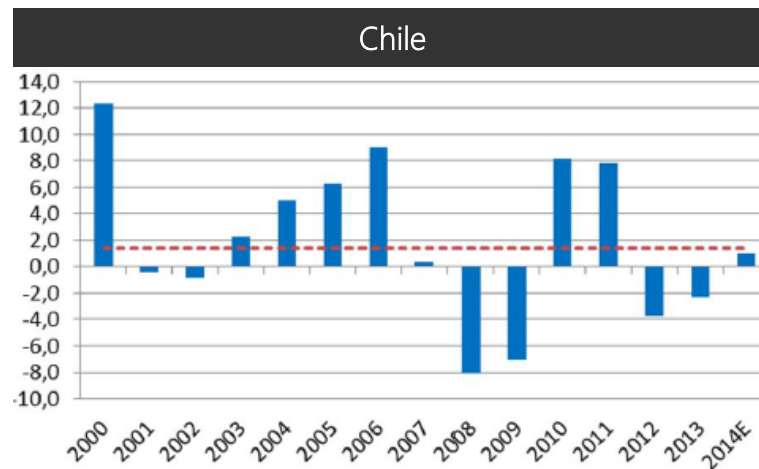
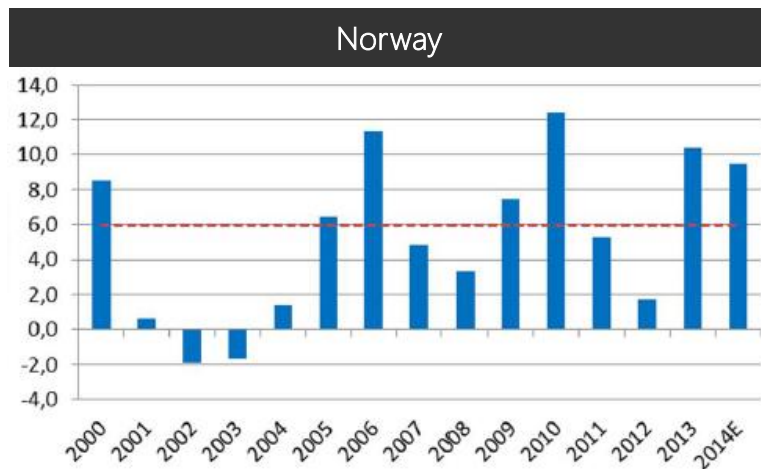
What is the problem in Chile?



While Norway is super profitable, the Chilean salmon farmers will probable lose more money in 2015 than ever before

Regional profitability, EBT/kg in NOK

Synchronized (ex regional biological crisis) but different levels

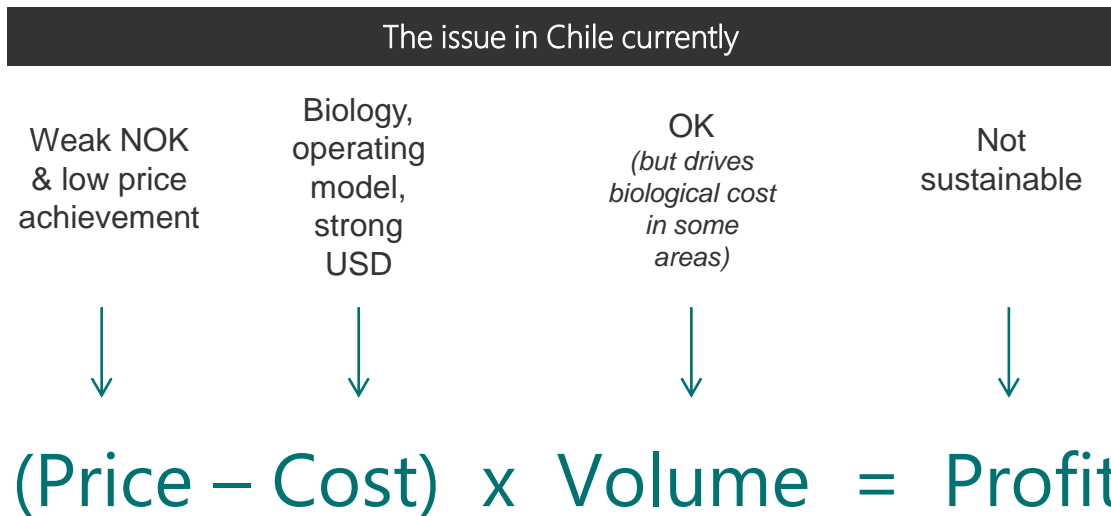


Source: Kontali

Average EBT/kg in Norway has been NOK 6 vs NOK 2 for Chile since year 2000

Analyzing salmon farming is simple

3 value drivers – price, cost, and volume



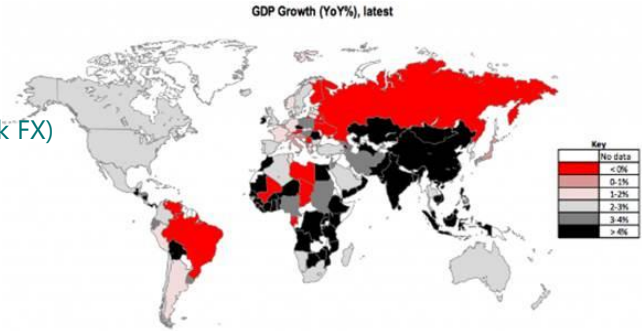
And don't forget FX (even if it works through Price and Cost)

The price problem – weak NOK & low price achievement

- FX: weak NOK impacts USD prices – the law of one price
- Antibiotics: US retailers don't like it
- Market structure: Many Chilean sellers, few buyers
 - Brazil, Chile in recession and weak currencies
- Customer relationships: On-off over the last few years
 - Bigger problem in buyers' market

A narrow customer base weakens negotiation position

- Chile sells 2/3rds of its volume to only 3 countries
 - US, Brazil, Russia
 - Of which two are in recession and have weak currencies (Japan also weak FX)
 - Norway sells 2/3rds to 10 countries
- On a positive note:
 - Chile better portfolio of free trade agreements
 - Norway has focused on WTO, as WTO talks have stalled this is a losing strategy
 - Chile stronger at VAP than Norway



Source: Thomson Reuters

Norway has easier logistics to its main markets, and has invested more money in marketing over many years

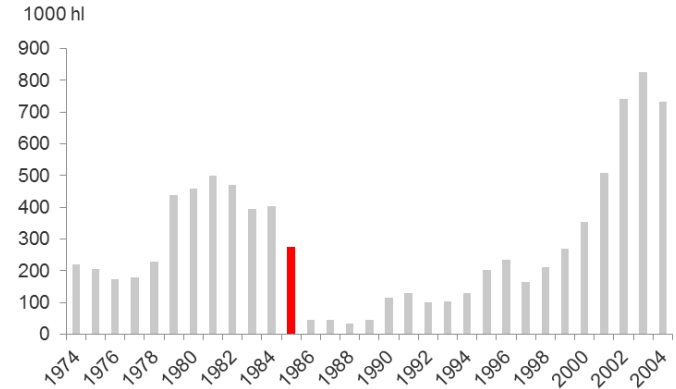
High antibiotics use is a marketing problem

If consumer confidence is lost it is hard to win it back

- It took the Austrian wine industry only 3 years to reach its old production level post the contamination scandal in 1985
- But it took 15 years before the export volume was back to its pre-scandal level



Austrian wine exports, volume



Source: Dokumentation Österreichischer Wein 2005/2006

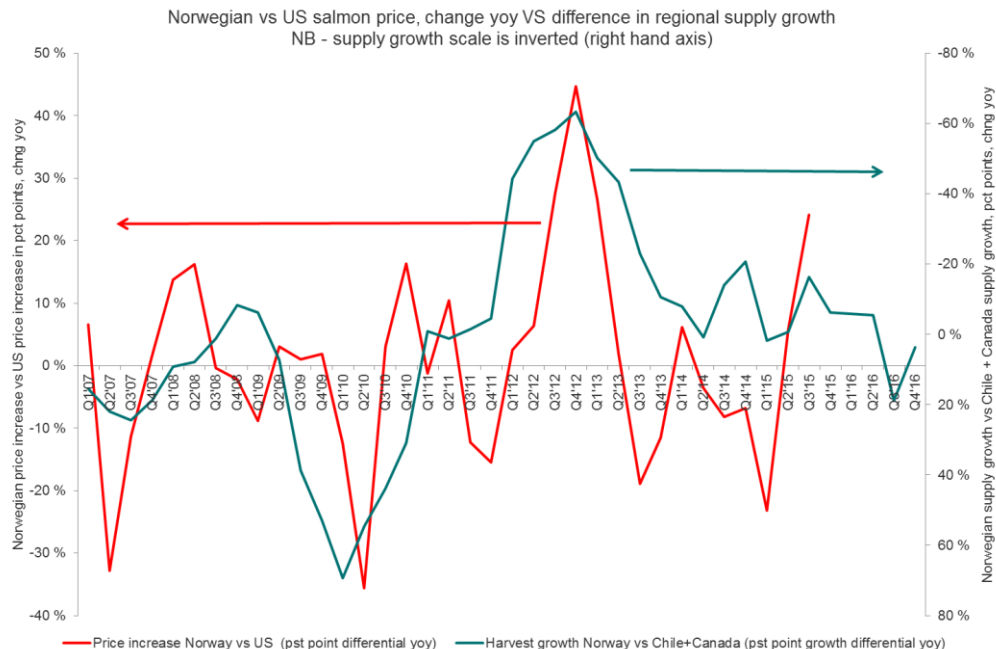


There is no antibiotics in the Chilean salmon when it is harvested, but can you successfully communicate that to the consumer?

High Canadian supply growth has hit prices

But Canadian volumes have now normalized, supportive for prices

Relative regional supply growth rates drive relative regional prices short-mid term



Source: DNB, Kontali, Urner Barry, Bloomberg

As Chilean and Canadian harvest growth slows down, prices in Americas should improve vs Norway

Chilean prices have suffered from high supply growth in the Americas (Chile + Canada)

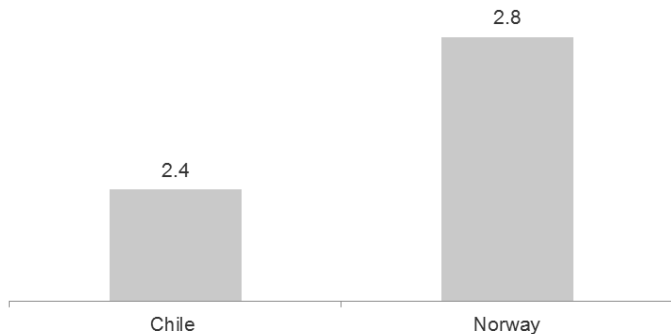
Cost – it is too high & also hit by USD link

- FX
 - Cost primarily in USD, not CLP
- Biology
 - SRS and antibiotics use
- New regulations
 - Some drive cost more than sanitary conditions
 - Farming density too low but farms too close to each other
- Smolt on land
 - Structural change post ISA crisis

Cost – from leader to laggard in a decade

- From cost leader to laggard in 10 years
 - Cost has increased by USD/kg 2 relative to Norway
 - About half due to higher underlying cost, the other half due to weak NOK vs USD

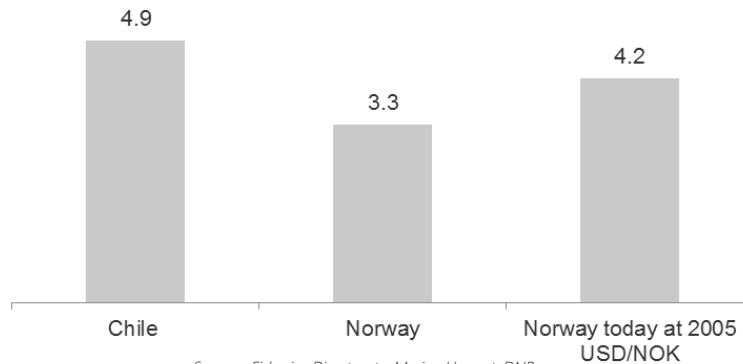
Year 2005: production cost USD/kg



Source: NILF, Kontali.

USD/NOK 6.44, GBP/NOK 13.15

Year 2015: production cost USD/kg



Source: Fisheries Directorate, Marine Harvest, DNB

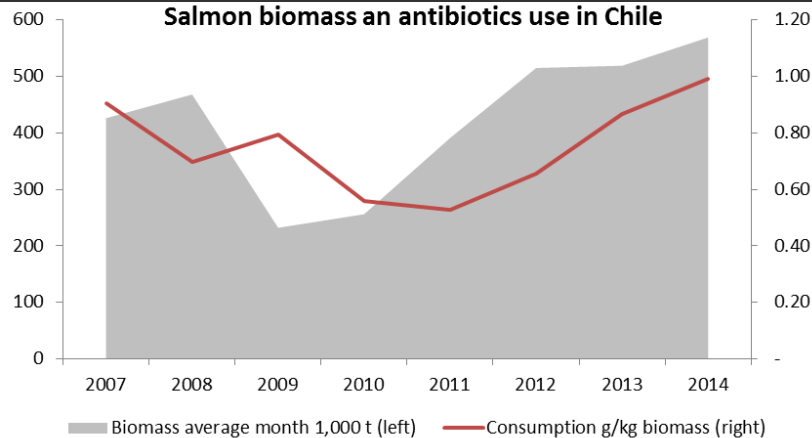
USD/NOK 8.10 current, 2005 USD/NOK 6.44

But cost varies also significantly within countries, not just between them

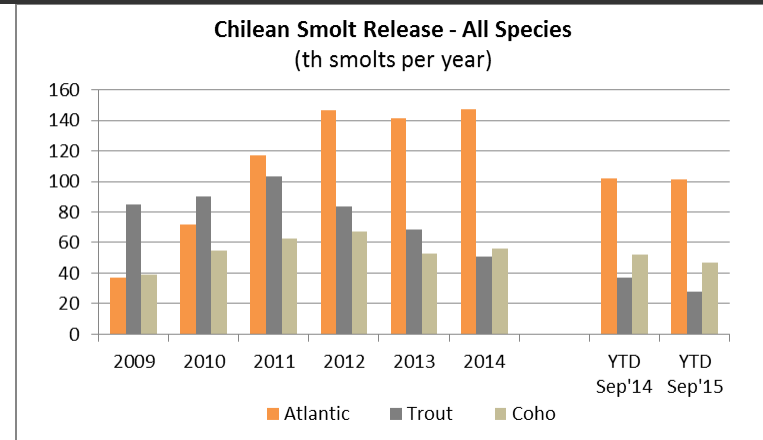
Volume is okay

- Volume is okay
- But too high from a sustainability point of view given current operations
 - Negative impact on cost and price achievement
 - No cap on volume means the pedal to the metal if the SRS problem is solved – and a new boom-bust cycle

Chile at full biological capacity utilization

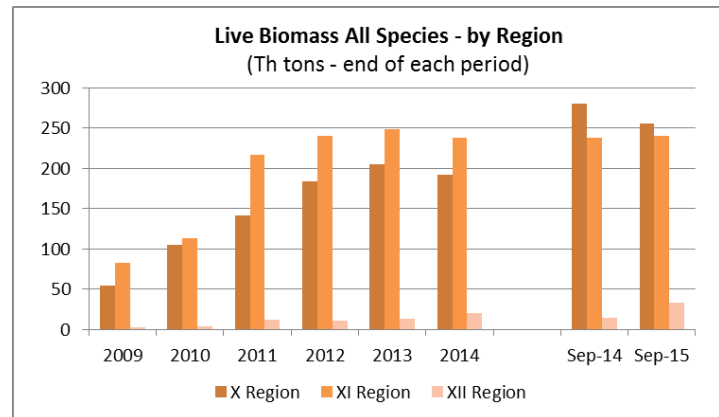
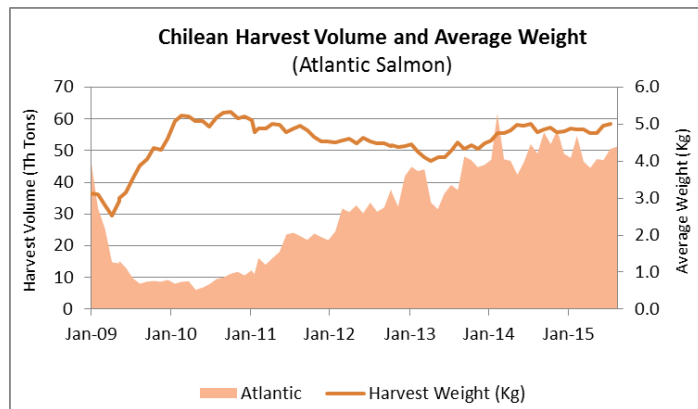
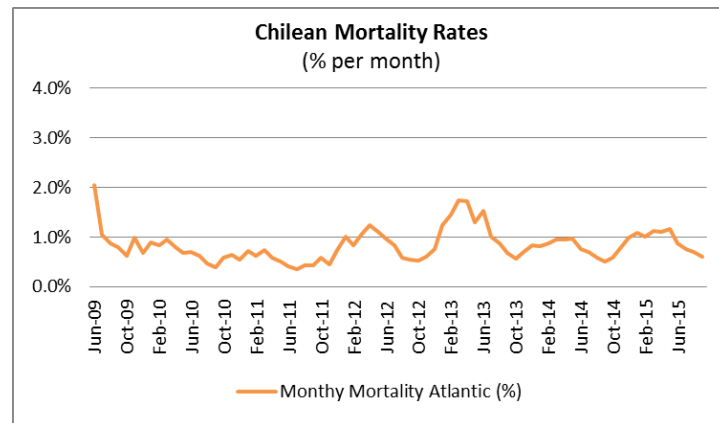
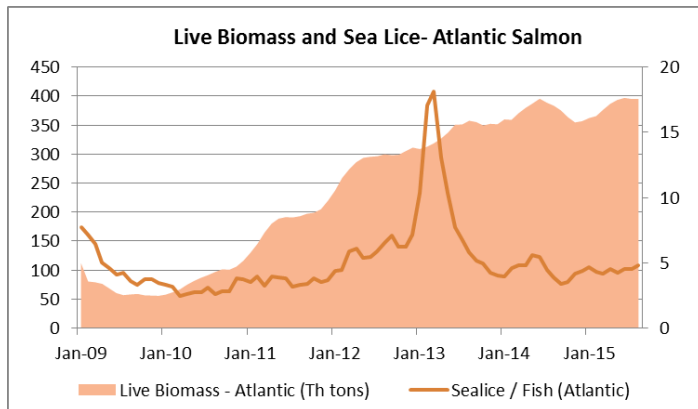


Smolt release indicates declining volumes (3 species)

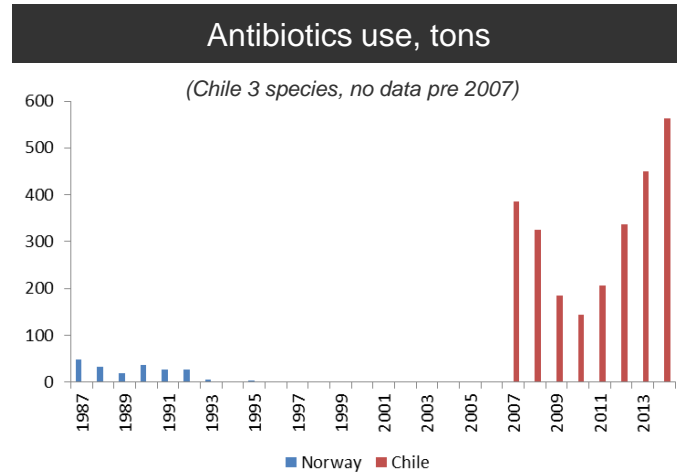


Biology looks okay too...

What is the problem in Chile? Biology



...but high antibiotics use tells a different story



Source: Sernapesca, Norwegian Veterinary Institute,

# of treatments over entire production cycle	Chile	
	2013	2014
Aquachile	1.85	3.15
Blumar	5.23	4.11
Camanchaca	2.41	2.49
Cermaq	1.13	1.45
Los Fiordos	1.3	1.62
Marine Harvest	1.15	0.96
Multiexport Foods	3.92	4.10
Ventisqueros	2.19	2.53

Source: Global Salmon Initiative

# of treatments over entire production cycle	Norway	
	2013	2014
Cermaq	0.06	0.03
Grieg Seafood	0.00	0.01
Marine Harvest	0.00	0.00
Norway Royal Salmon	0.00	0.04

Source: Global Salmon Initiative

Antibiotics use in Chile is too high. It masks an underlying problem (SRS), may cause antibiotics resistance, and it is a marketing problem

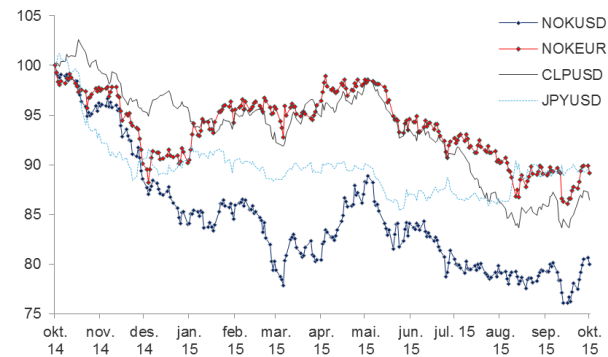
FX – a perfect storm

And a hedge which isn't a hedge

- USD – lifts Chilean cost but not prices
- NOK – improves cost position of main global competitor
- CAD – improves cost position of main US mkt competitor
- EUR – reduces demand measured in USD
- Yen – hurts demand for coho and trout in USD
- Ruble and Real - hit demand measured in USD



A perfect FX storm. Indexed



CLP – dropped as much as NOK last 2 years, but Chilean farmers have a limited share of their cost base in local currency, USD ~75%..

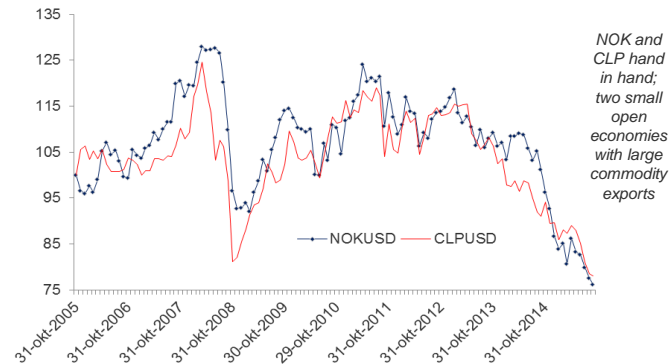
..apparently a text book hedge as sales are dominated by USD...

..but the USD salmon price is heavily impacted by the NOK exchange rate..

...hence this hedge increases risk instead of reducing it.



NOK and CLP highly correlated. Indexed vs USD



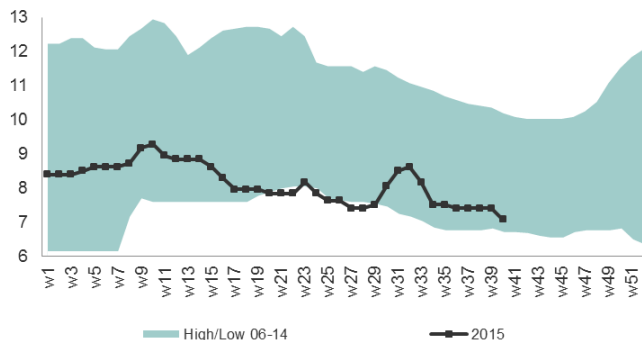
Chile price very low, Norway price very high...#1

A tale of two worlds..

- Norway sees new 10-year price highs, while Chile sees new 10-year lows..

New lows for Chilean prices

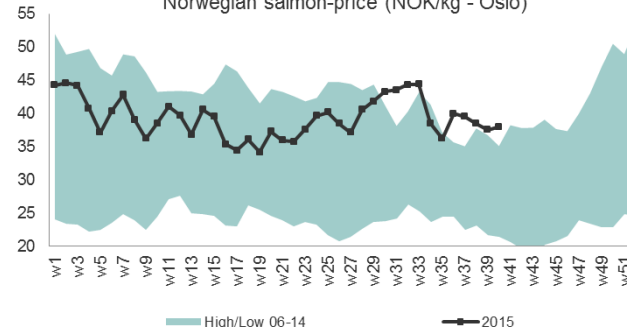
Chilean salmon-price (USD/kg - Miami) D-Trim 2-3 lb



Source: Urner Barry, DNB

New highs for Norwegian prices

Norwegian salmon-price (NOK/kg - Oslo)



Source: Kontali, DNB

Quite a paradox – Chilean prices at new lows, Norwegian prices at new highs. How can that be?

Chile price very low, Norway price very high...#2

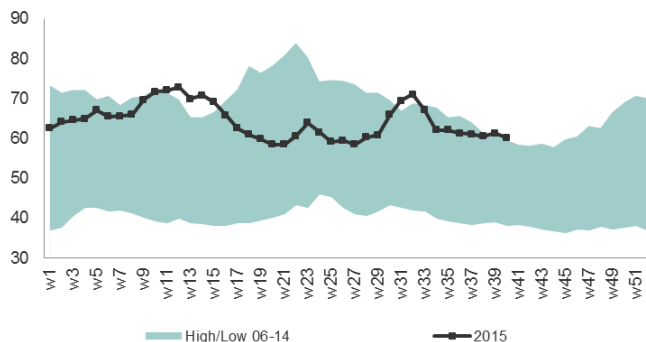
..becomes one world when measured in same FX

- When measuring Chile prices in NOK instead of USD the picture is very different
 - And looks more like Norway..



New highs for Chilean prices also...when measured in NOK

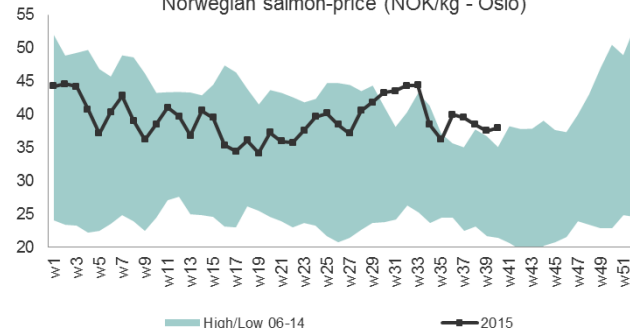
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Source: Ulner Barry, DNB

New highs for Norwegian prices

Norwegian salmon-price (NOK/kg - Oslo)



Source: Kontali, DNB

It's not a paradox – just FX effects. Chilean prices are strong when measured in NOKs...

The law of one price

Norwegian and Chilean prices are linked

- $\text{Price US} = \text{Norwegian farm gate price} + \text{air freight cost Atlantic}$
- $\text{Price US} = \text{Chilean farm gate price} + \text{air freight cost Americas}$
- $\text{Chilean farm gate price} = \text{Norwegian farm gate price} + \text{difference in freight cost Atlantic vs Americas}$



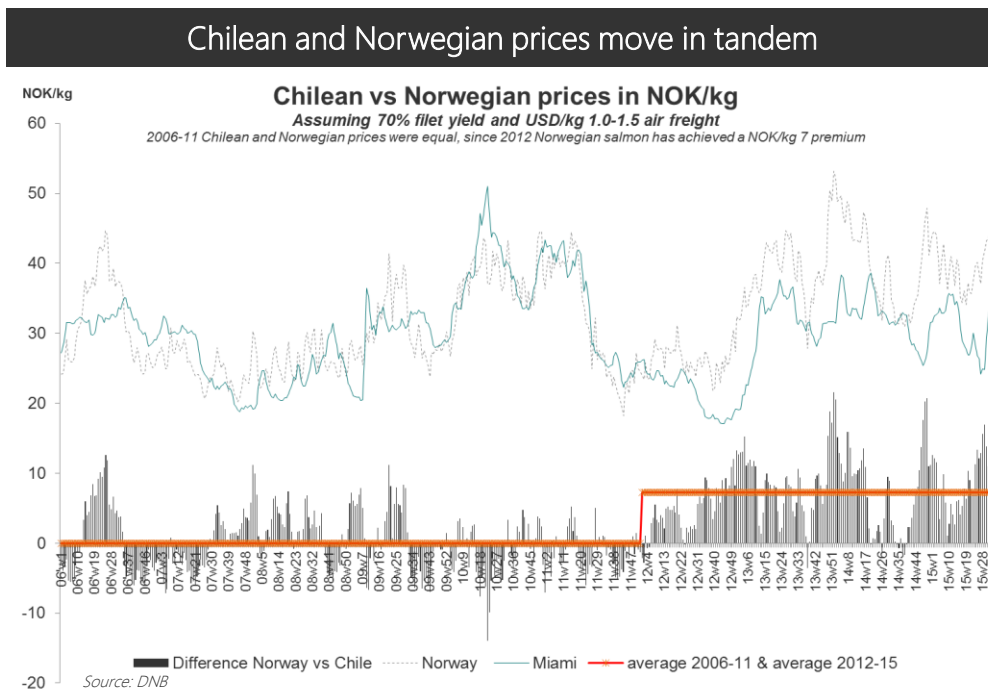
Must be measured in same currency. There can be price premiums/discount due to perceived or real differences in quality, consistency of supply. There will be time lags in price adjustments due to logistics.

The law of one price means u need to look at the salmon market as a global market in the same currency

Prices in North America

What happened to the «law of one price»?

- Norwegian prices and Chilean were in sync until 2012; then a NOK/kg 7 discount on Chilean product



Competitive position Chilean vs Norwegian farmers

- Prices – get a discount in the US
- Cost – used to be lower, now higher
- Product differentiation – stronger VAP but suffers from antibiotics perception
- Market access
 - Weaker market reach
 - Better free market agreements
- Natural conditions
 - Better & more stable temperature
 - But doesn't get the same «clean out» of lice and disease which Norway gets in the winter
 - No wild salmon sustainability issue
- Regulations
 - Norway has a cap on production
 - Norwegian regulator more proactive

At current cost level financial sustainability an issue in addition to biological sustainability

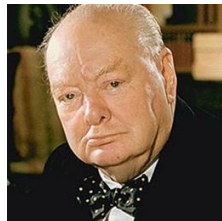
Chile – scenarios

How to regain financial sustainability?

- SRS vaccine solves the issue
 - Both cost and antibiotics use, Pharmaq live vaccine could be launched in 1H16
- Biomass is reduced which improves performance and cost
 - Industry does it voluntarily
 - So far no reduction in Atlantics smolt release (but planned growth has been scrapped), trout & coho stocking reduced
 - Industry is forced to do it due to weak cash flow and lack of financing
 - Liquidity harvesting from middle of 1H16 triggered by negative cash flows and working capital seasonality?
 - Several companies with «rich» owners
 - Government enforces a reduction
 - Gov't seems to prefer solution with high degree of voluntary participation from companies (difficult..) and also changes in regulations rather than in the law (avoiding going to the parliament)
- Long term sustainability is important
 - Could envision SRS solution, followed by biomass ramp up, and then new problems

-Never let a good crisis go to waste

The situation is so bad that hopefully it will trigger real change



Chile Salmon Farmers Want Government Intervention to End the Boom-to-Bust Cycle

by [Javier Quiroga](#) [James Attwood](#)
[Twitter](#) [Facebook](#)

November 23, 2015 – 6:11 PM CET Updated on November 23, 2015 – 6:15 PM CET



- ▶ Producers asking govt to shrink the industry as losses build
- ▶ High volume is pushing up the cost of disease prevention



Faced with mounting losses, Chilean salmon farmers are doing something that commodity producers rarely do -- asking for the government's help to downsize.

The industry, which was on its way to challenging Norway as the top producer before a virus ravaged stocks in 2008, is producing too much again, said Victor Hugo Puchi, who controls the largest local producer and sits on the board of the industry association. With margins eroded by low prices and intensive farming that's pushing up the cost of disease prevention, authorities need to "limit individual liberties," he said.



Interview with AquaChile's Victor Hugo Puchi on Bloomberg Nov 23 2015

Strong assistance from authorities and regulators is needed to ensure a long term sustainable development

Cermaq's John Hindar at the Intrafish/DNB seminar in London 4. Nov 2015

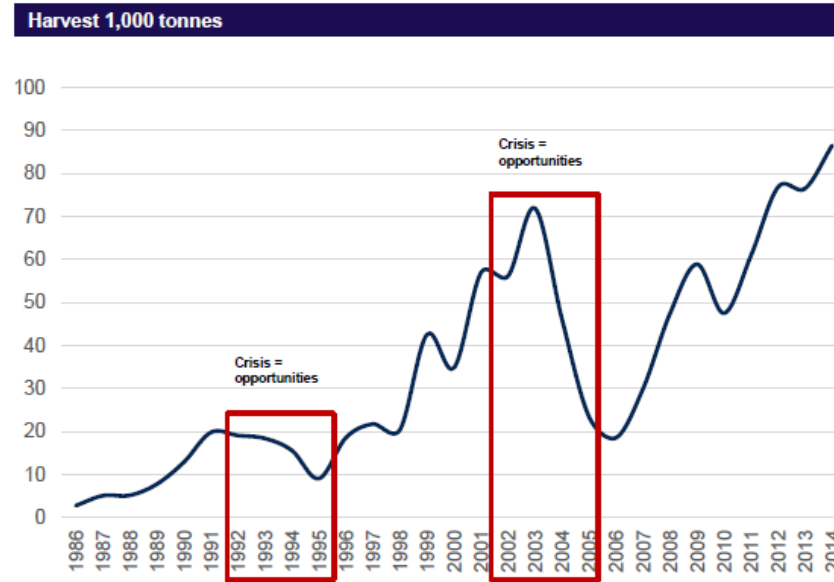


- Alt er kjørt i dass og her må det snus. Vi kan ikke holde på sånn, sa Aarskog.

Marine Harvest's Alf-Helge Aarskog to Intrafish 24. Nov 2015



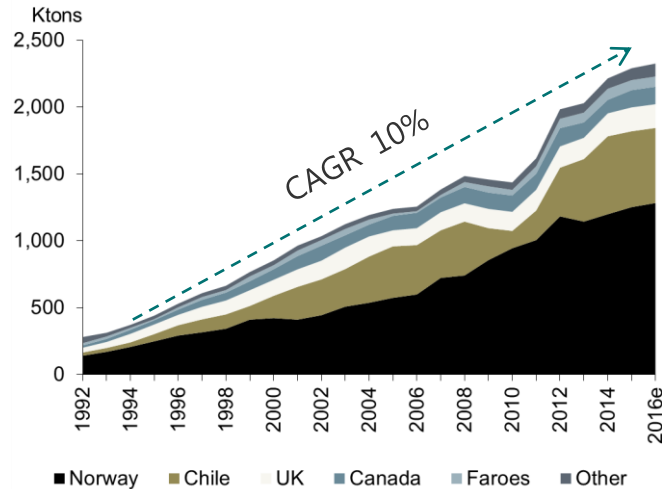
This is the 2nd large crisis in Chile, is there no hope?
Faroe Islands also needed two crisis to get it right..



Source: Bakkafröst

A road map for growth

Farmed Atlantic salmon harvest



Source: Kontali, DNB

CAGR?

A few years with very limited or no growth due to restrictions in Norway and Chile?

CAGR?

Industry and governments lift biological capacity through technological and regulatory innovation, but still supply growth below growth in demand?

The Norwegians should not get complacent

FX can change quickly

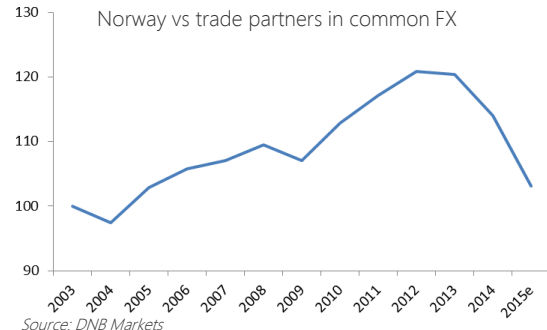
- 10 years of excessive oil driven wage growth in Norway reversed in a year due to the weak NOK



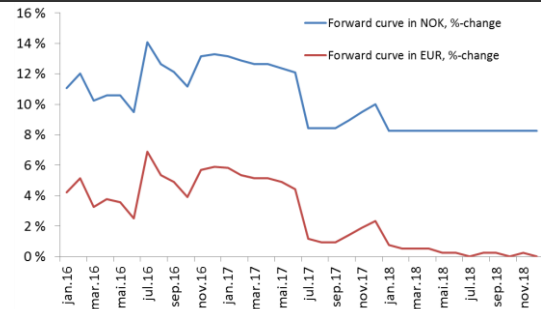
- The 2016-18 forward curve in NOK is up by 10% since February, but in Euros it is up by only 3%



Relative manufacturing wage development



Change in forward prices last 9m in pct



-The NOK exchange rate is the least faithful friend you can have in life, Director Knut Sunde in Norsk Industri

Thank you for your attention

