Landbasert oppdrett – finansielle betraktninger

Morefish og Åkerblå

9. november 2022

Dag Sletmo, Corporate Banking
DNB Ocean Industries – Seafood

DNB Bank is a global seafood player

- Banks with 17 of the top 20 salmon farmers globally
- Global leading seafood bank, presence in key markets, NOK 50-60 bn of total exposure
- In-depth industry knowledge developed through close long-term relationships with key customers
- Dedicated seafood team with an international footprint and strong track record as a banking partner and advisor
- Leading arranger of debt in seafood sector, and a full range of Investment Banking services offered

Agenda

- Drivers for land-based farming
- Current themes
- What we look for
- How banks think

Why all the focus on land-based farming? Many good reasons
- Still, the conventional salmon companies play the waiting game..

Regulatory reasons
Conventional growth is expensive and limited and less profitable in exposed areas

+ Environmental reasons - oceans
No impact on the oceans, no fish escape, seabed footprint

+ Other environmental reasons
Production close to market reduces the need for air freight and lowers the carbon footprint

+ Fish health aspects
No sea lice or treatment of the fish, reduced stress, better growth with stable temperatures

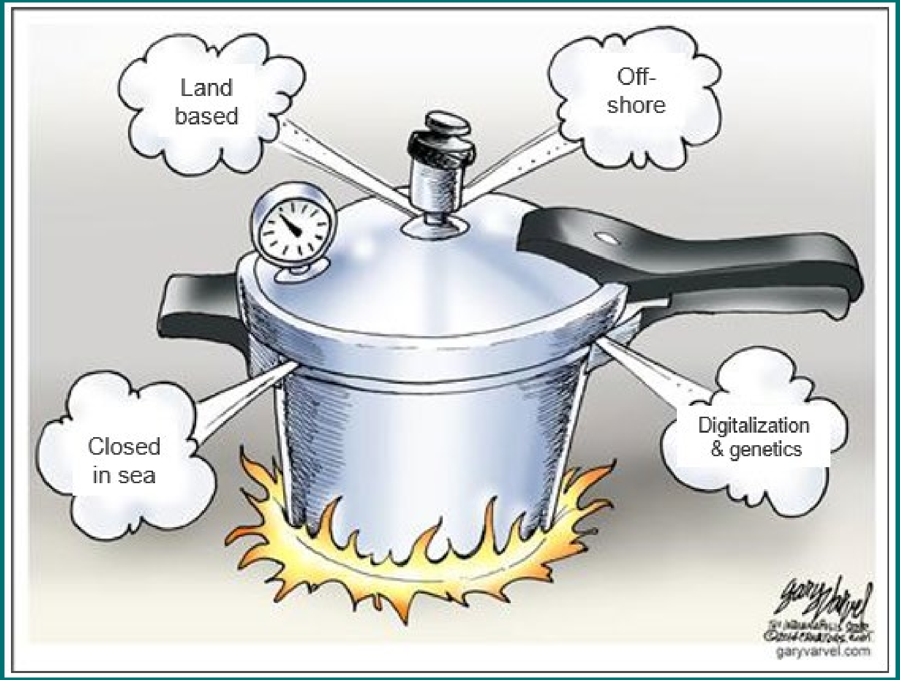
+ Consumer friendly
Fresher salmon with production close to market

= **Profitability**
The factors above are key profitability drivers for land based farming. Long term, when technological and operational risk have been reduced, the industry can become very profitable

In short: sustainability, different value proposal, lack of growth in conventional farming

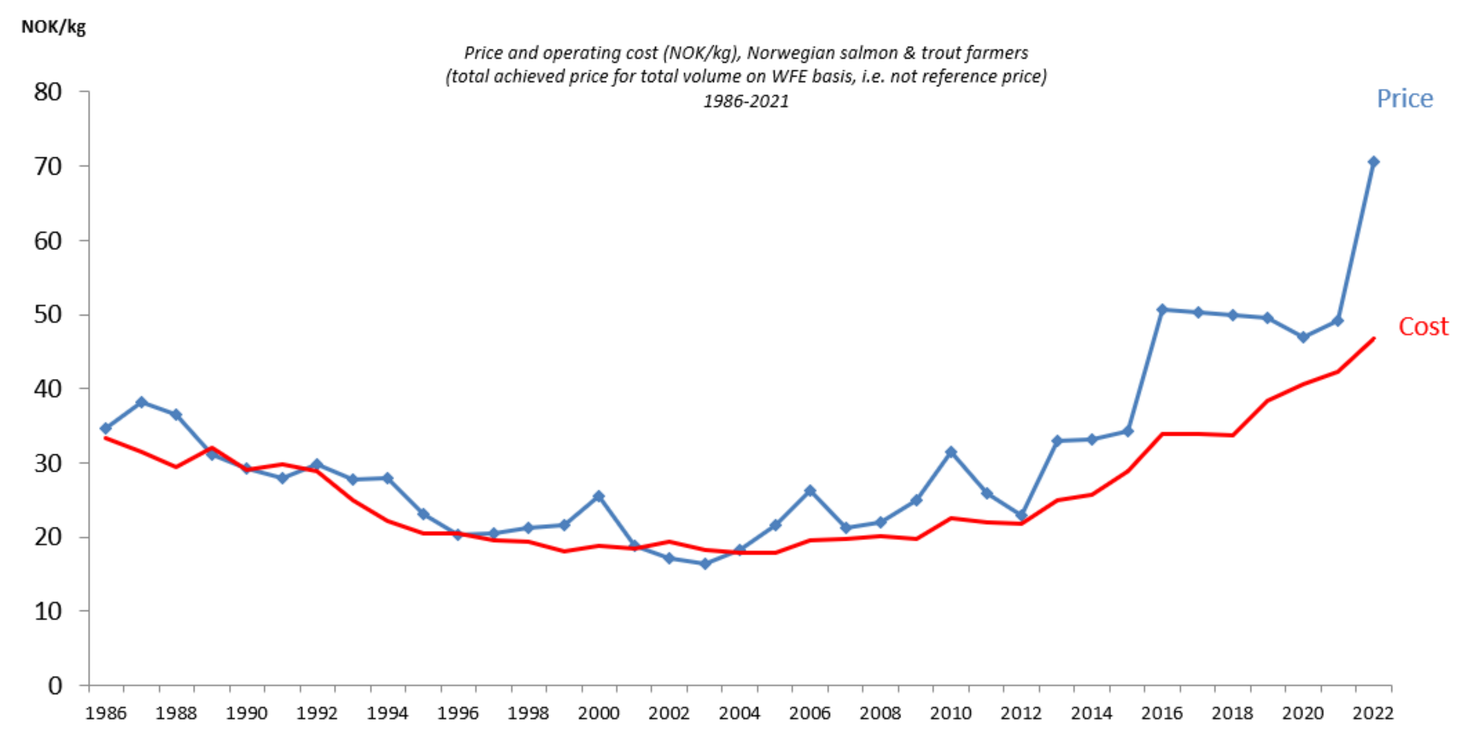
Enablers

- High profitability
- Good long-term price visibility
- Clearly defined problems



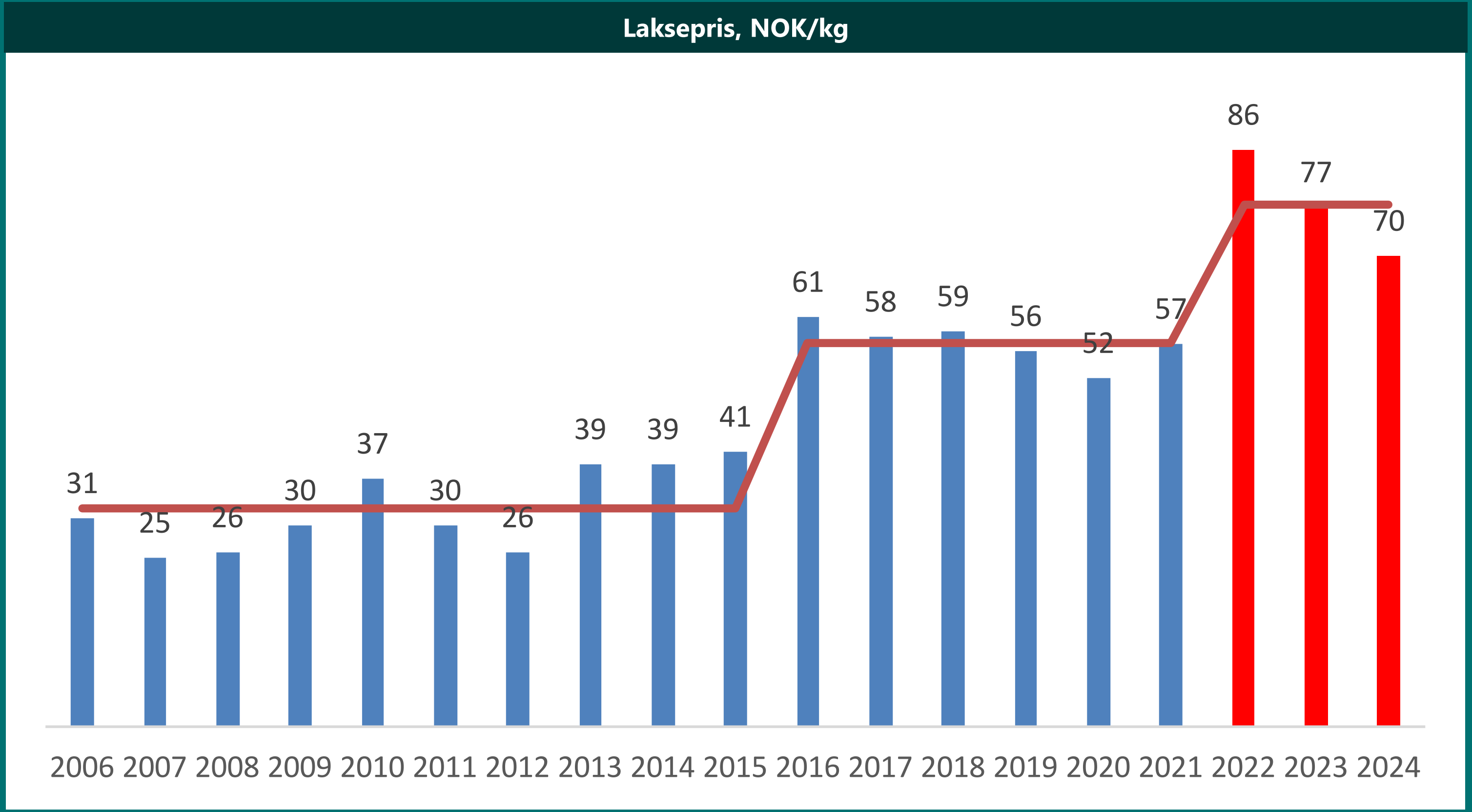
High price & high cost in sea positive for land-based farming

Salmon price and cost per kg, NOK (WFE)



Source: Fiskeridirektoratet, DNB Seafood

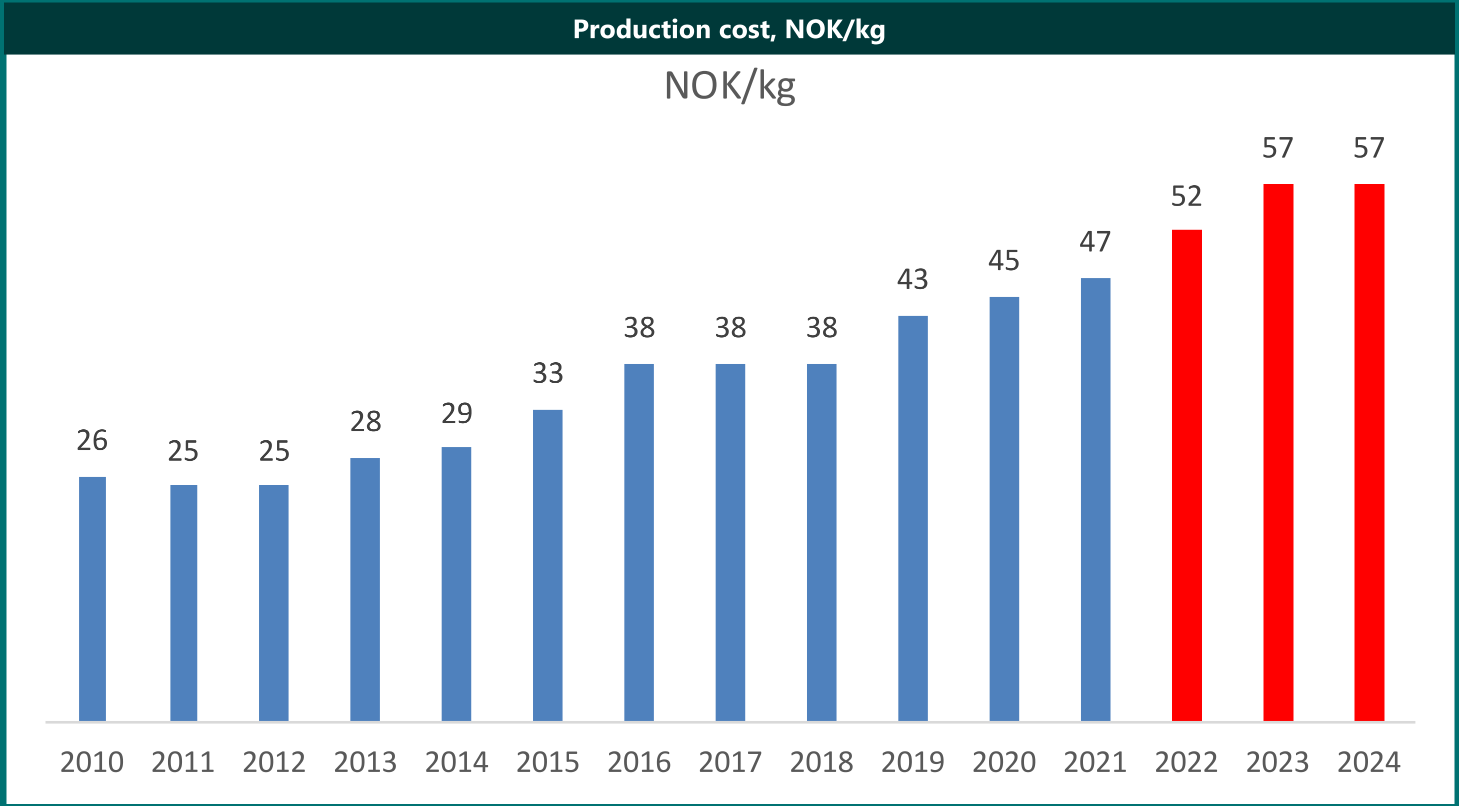
Strong prices also ahead



Source: FishPool, DNB

DNB Confidential

But cost will also pick up

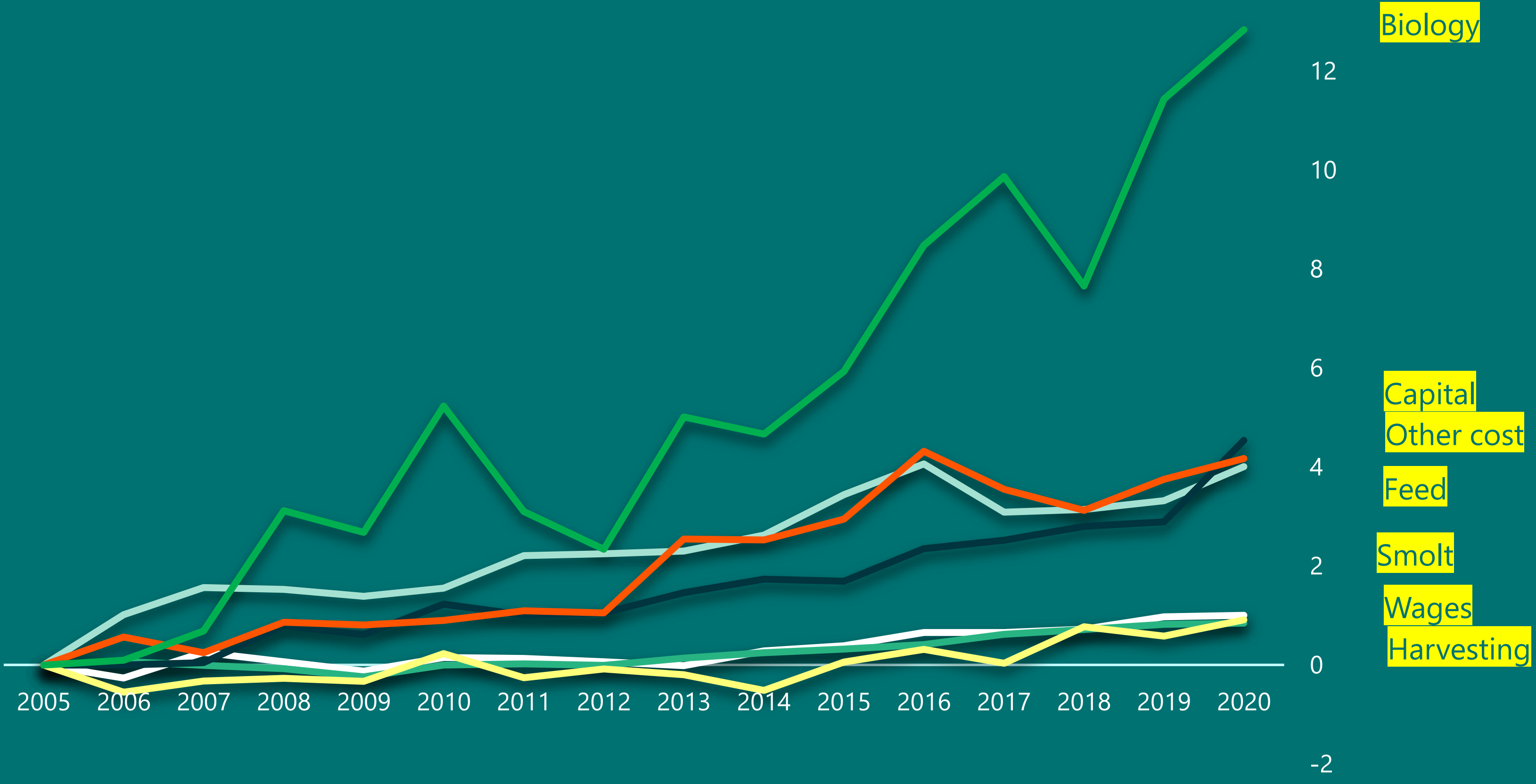


Source: DNB Markets' Alex Aukner

Biology has been the key cost driver

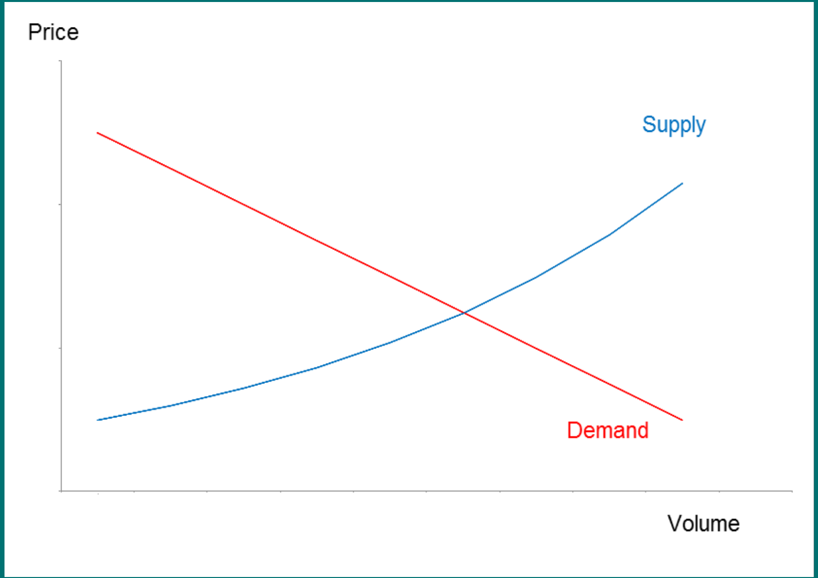
Source: *Bård Misund, University of Stavanger*

Cost per kg, NOK. Change since 2005

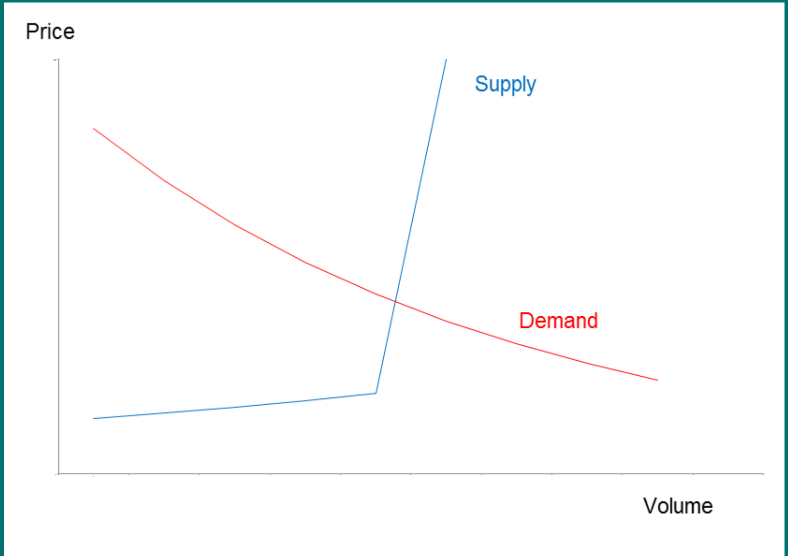


What sets the price?

Old supply curve



New supply curve

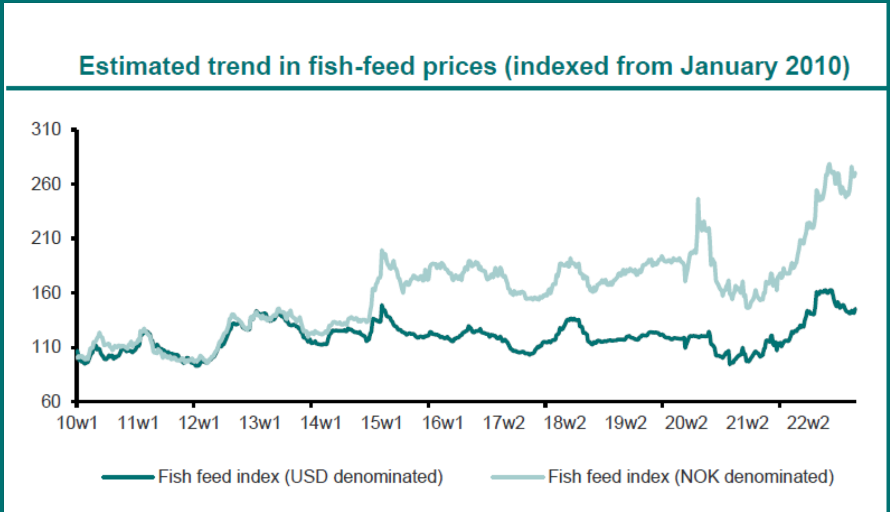


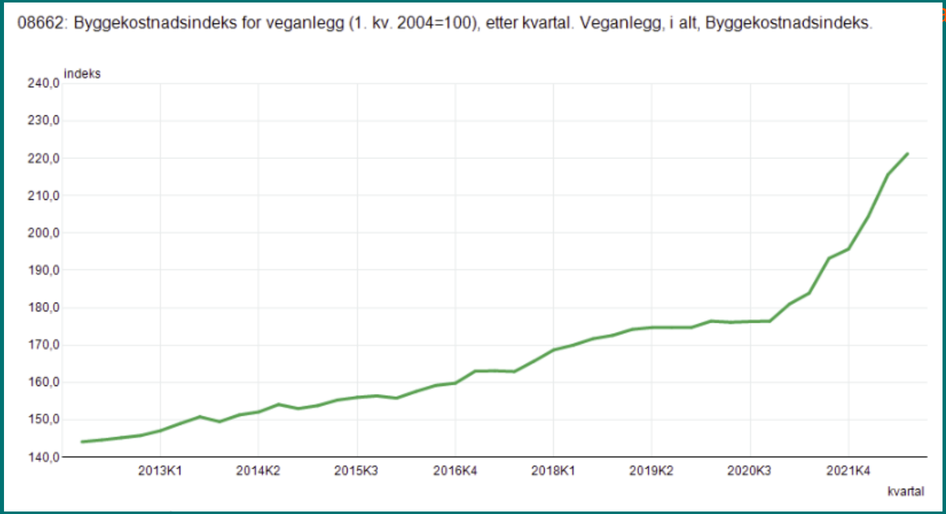
- Until 2012 higher prices meant higher volumes. Not anymore
- Will new technology add capacity high on the supply curve or low?
  - *Oil sand vs shale oil – very different impact on incumbent producers*

Source: DNB Seaood

Salmon price - a ticking bomb or a horn of plenty?

"While you were deciding, we raised our prices."


Estimated trend in fish-feed prices (indexed from January 2010)
310
260
210
160
110
60
10w1
11w1
12w1
13w1
14w1
15w1
16w1
17w2
18w2
19w2
20w2
21w2
22w2
Fish feed index (USD denominated)
Fish feed index (NOK denominated)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2013K1
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2019K2
2020K3
2021K4
kvartal


Norway 10Y Bond Yield (percent) 3.5420 +0.0720 (+2.07%)
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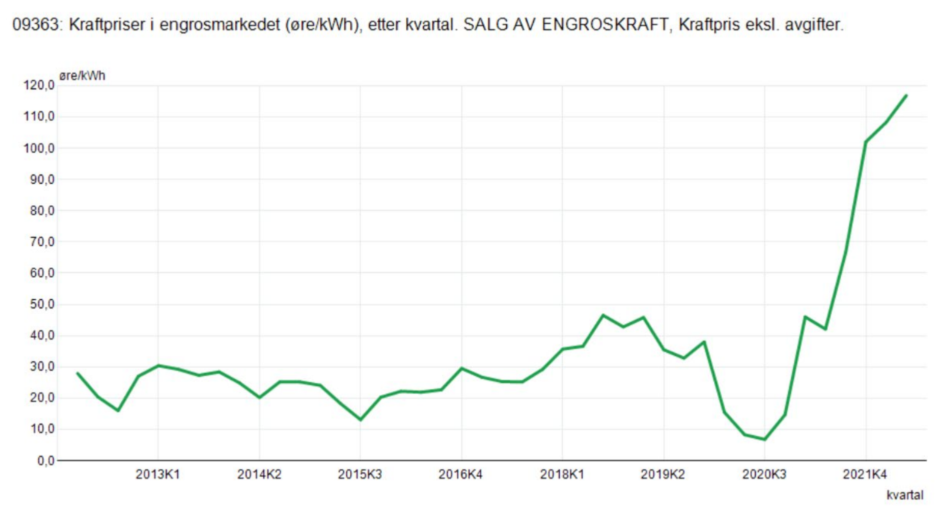
3
2
1
2014
2016
2018
2020
2022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2013K1
2014K2
2015K3
2016K4
2018K1
2019K2
2020K3
2021K4
kvartal

"I suppose I'll be the one to mention the elephant in the room."

BlackRock chief Larry Fink says Ukraine war marks end of globalisation

Boss of $10tn asset manager warns about inflation as companies reconfigure supply chains

Industrial investors

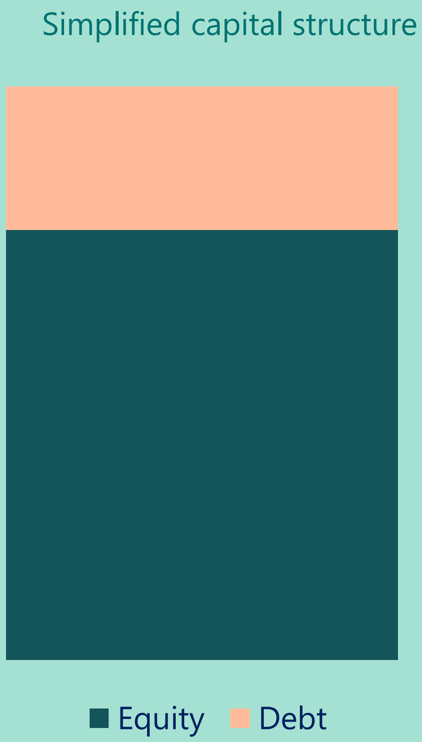
Industry experts part of management

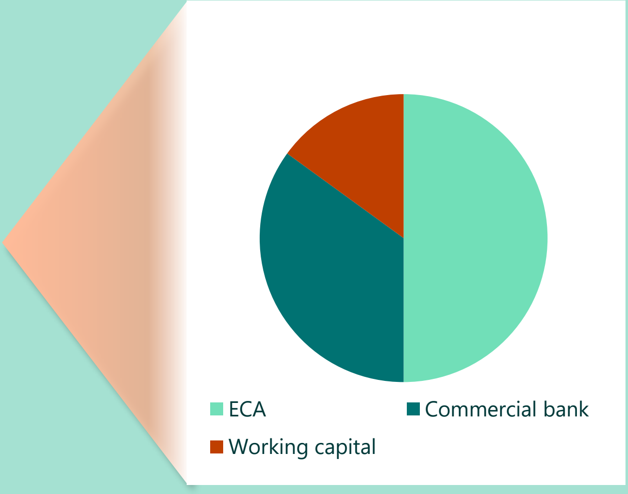
Some special advantage

Geography and political regime

Proven technology

Debt financing of land based salmon farming



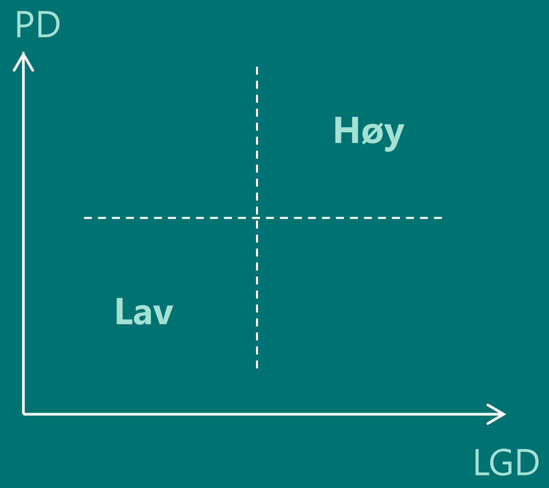


Hvordan tenker en bank? Vi ser på sannsynligheten for at bedriften misligholder gjelden og vi i så fall taper

- **Probability of Default (PD)** – sannsynligheten for at kunden går konkurs. Baseres på kundens finansielle stilling og markedsposisjon.

- **Loss Given Default (LGD)** – forventet andel av engasjement banken vil tape dersom kunden går konkurs. Avhenger av hvilket pant og hvilken forhandlingsposisjon banken har.

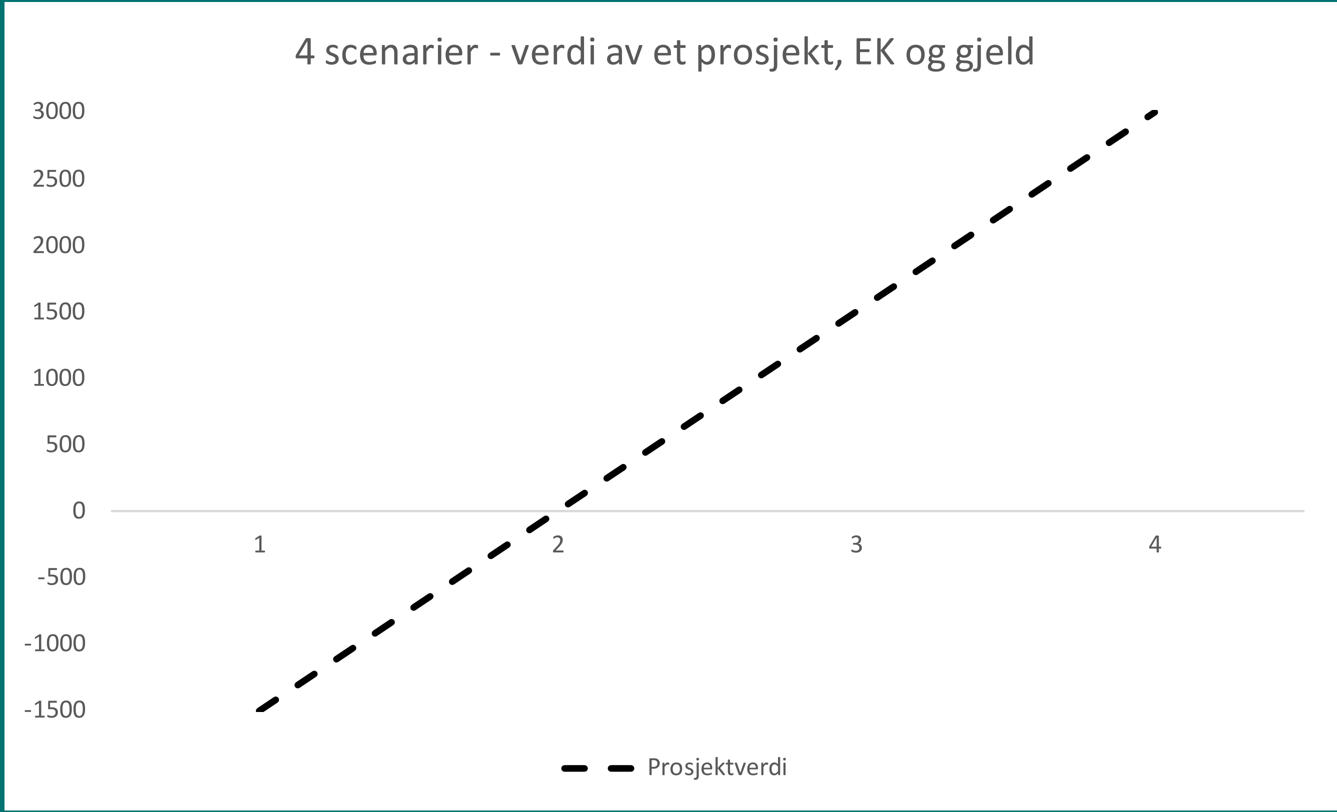
- Risikoen vi tar avgjør hvor mye kapital banken må sette av, og dermed også hvor mye banken må ta betalt for å låne ut penger.



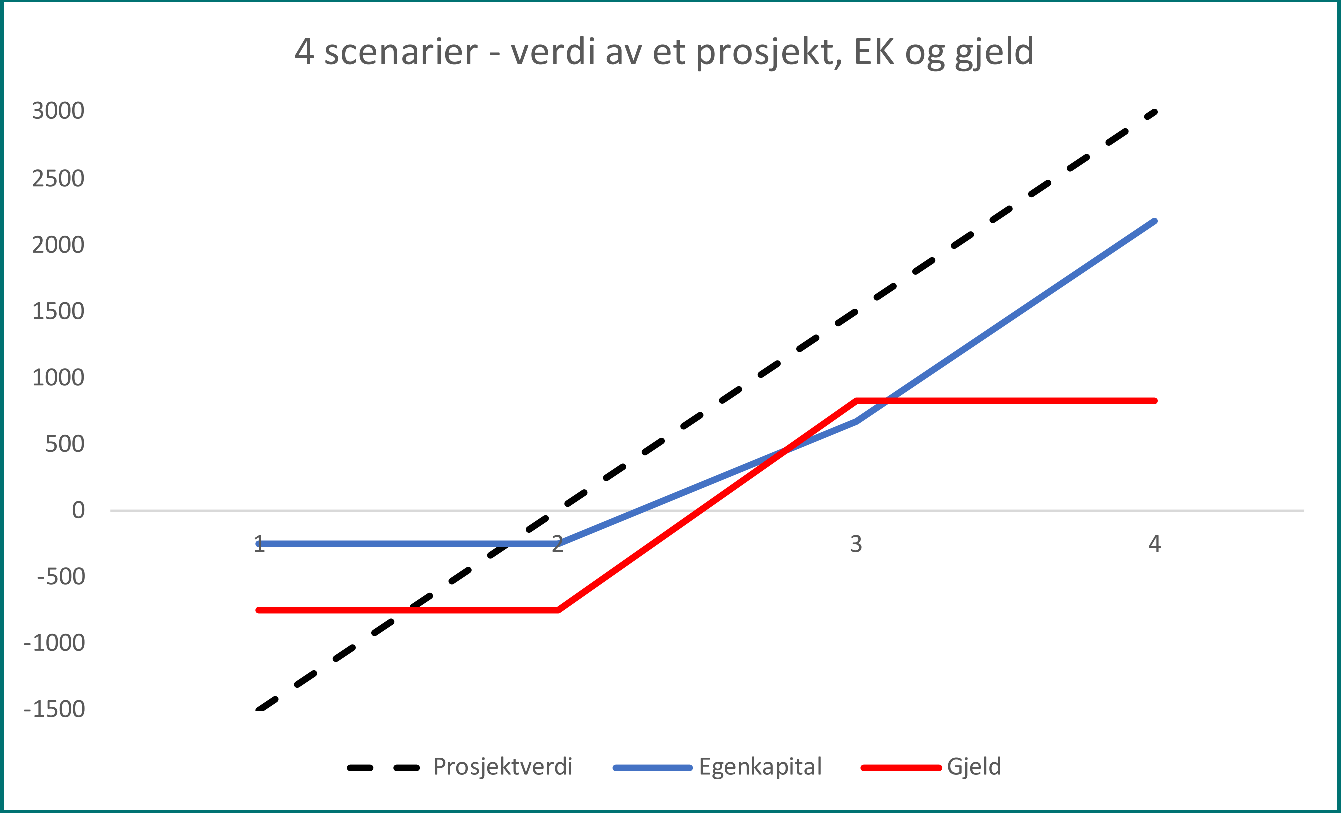
Forventet tap = PD x (1-LGD)

Kilder:

Et prosjekt med 4 mulige utfall – fra stort tap til stor gevinst



Et prosjekt med 4 mulige utfall – fra stort tap til stor gevinst



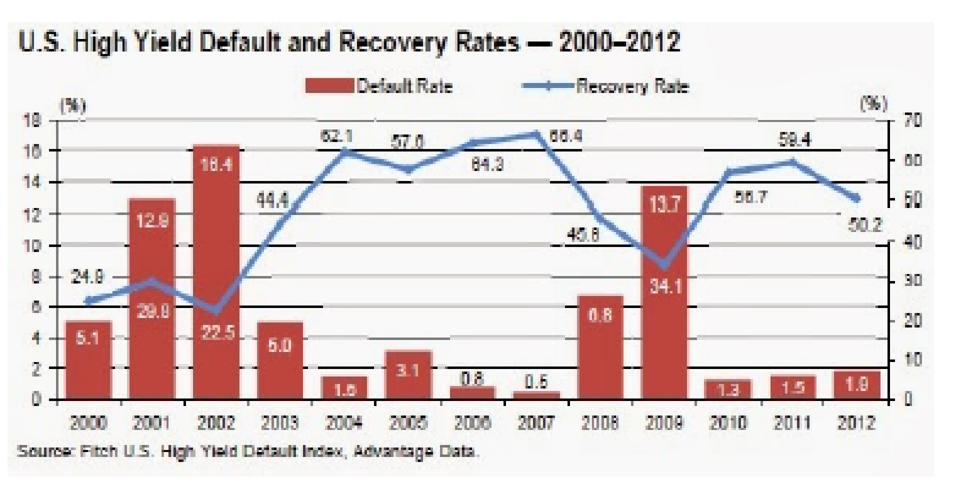
- EK 250
- Gjeld 750
- 4 scenarier med 25% sannsynlighet hver, prosjektverdi på hhv - 1500, 0, +1500, +3000
- 10% lånerente
- Forventet EK avkastning pluss 185%
- Forventet gjeldsavkastning minus 45%

Bankenes pantesikkerhet

Ulike typer pantesikkerhet

Type eiendel	Kapitalintensiv bedrift: ja	Kapitalintensiv bedrift: nei
standard	skip, næringseiendom	kundefordringer
ikke-standard	fabrikker	merkenavn, patenter

Korrelasjon mellom tapssannsynlighet og tap



Still a young industry, but promising developments in recent years - Many unknown unknows as we are still in an early phase

"There are known knowns; there are things we know we know.

We also know there are known unknowns; that is to say we know there are some things we do not know.

But there are also unknown unknowns — the ones we don't know we don't know.

And if one looks throughout the history of our country and other free countries, it is the latter category that tend to be the difficult ones" – Donald Rumsfeld

Techno-logical risk

Does the technology work well enough on a large scale? Can the technology handle/produce the volumes/density promised by the supplier?

Technical /Op. risk

Will we get to the "airplane system risk" where the important system simply doesn't break down? If the systems works fine in 90/100 batches, it is not good enough if there are major production challenges in 10/100

Biological risk

How does the fish deal with the density levels required on land over time? What if bacteria get into the tanks? H2S?

Thank you for your attention