

# The value of creating plus-products – the Norwegian Marine Ingredients Industry

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In our study, we looked at the performance of firms that are creating value of by-products in Norway, often referred to as the Norwegian Marine Ingredients Industry (NMII). We believe “plus-products”, loaned from the meat industry, creates more positive connotations for the new products from by-products.

There has been challenges in creating profitability for the Norwegian fillet industry, especially in white fish production, but lately also for the producers of sal-

mon fillets. Falling profitability is due to lower prices for the fillets, high raw material costs and high labour costs in Norway (Iversen, A. et al. 2016). Simultaneously, scientific reports claim substantial value creation potential for marine by-products (Richardsen, R. et al. 2015). This has boosted both new business creation and intrapreneurship with-in the industry. We looked at how they are performing, and if we could find any factors explaining their economic results.

## Are they making money?

Economic performance (Average 2014-2016)

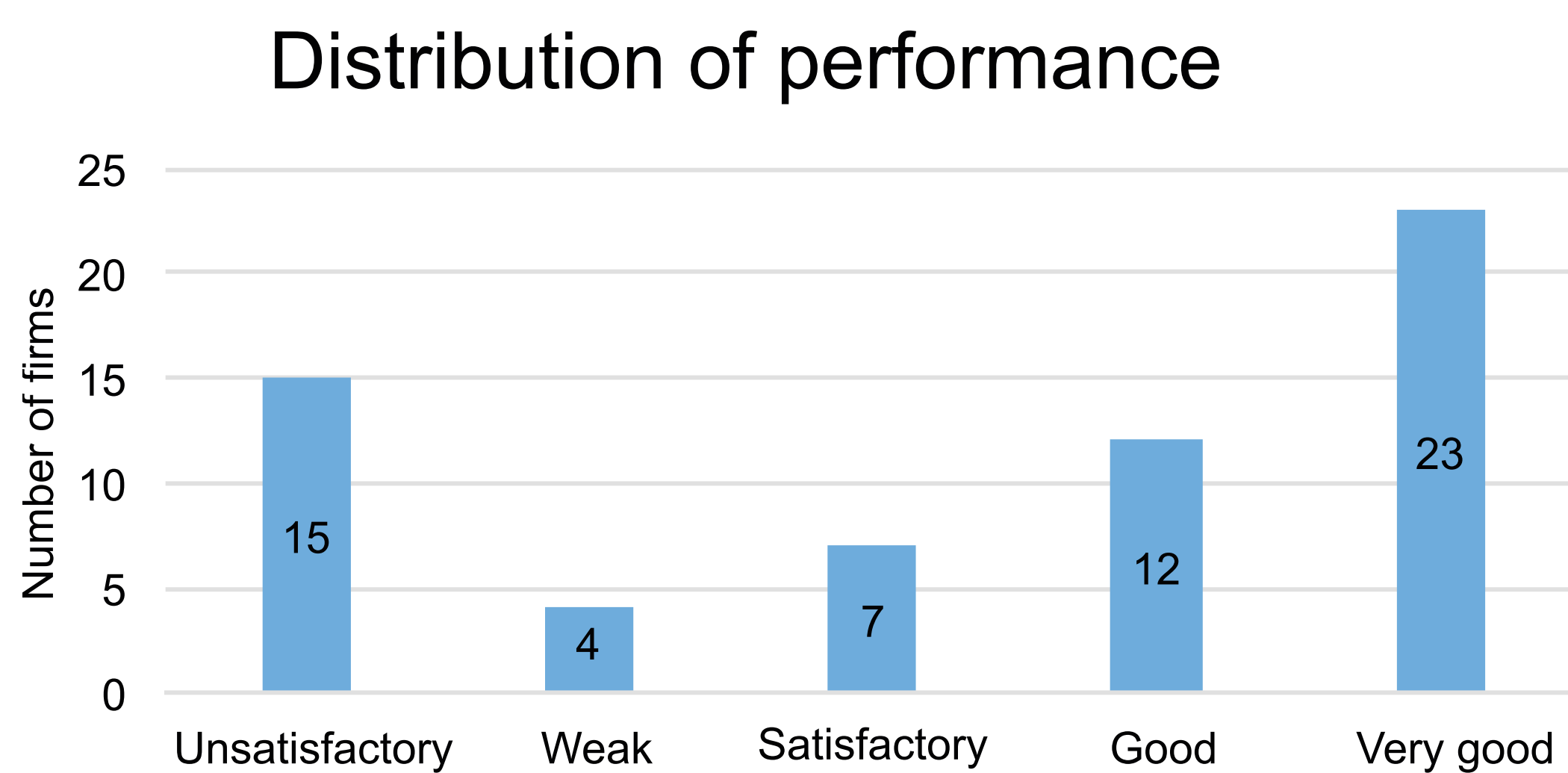


FIGURE 1: Numbers of firms in the NMII distributed in profitability

## How long have they been in business?

Entrepreneurs or well established firms?

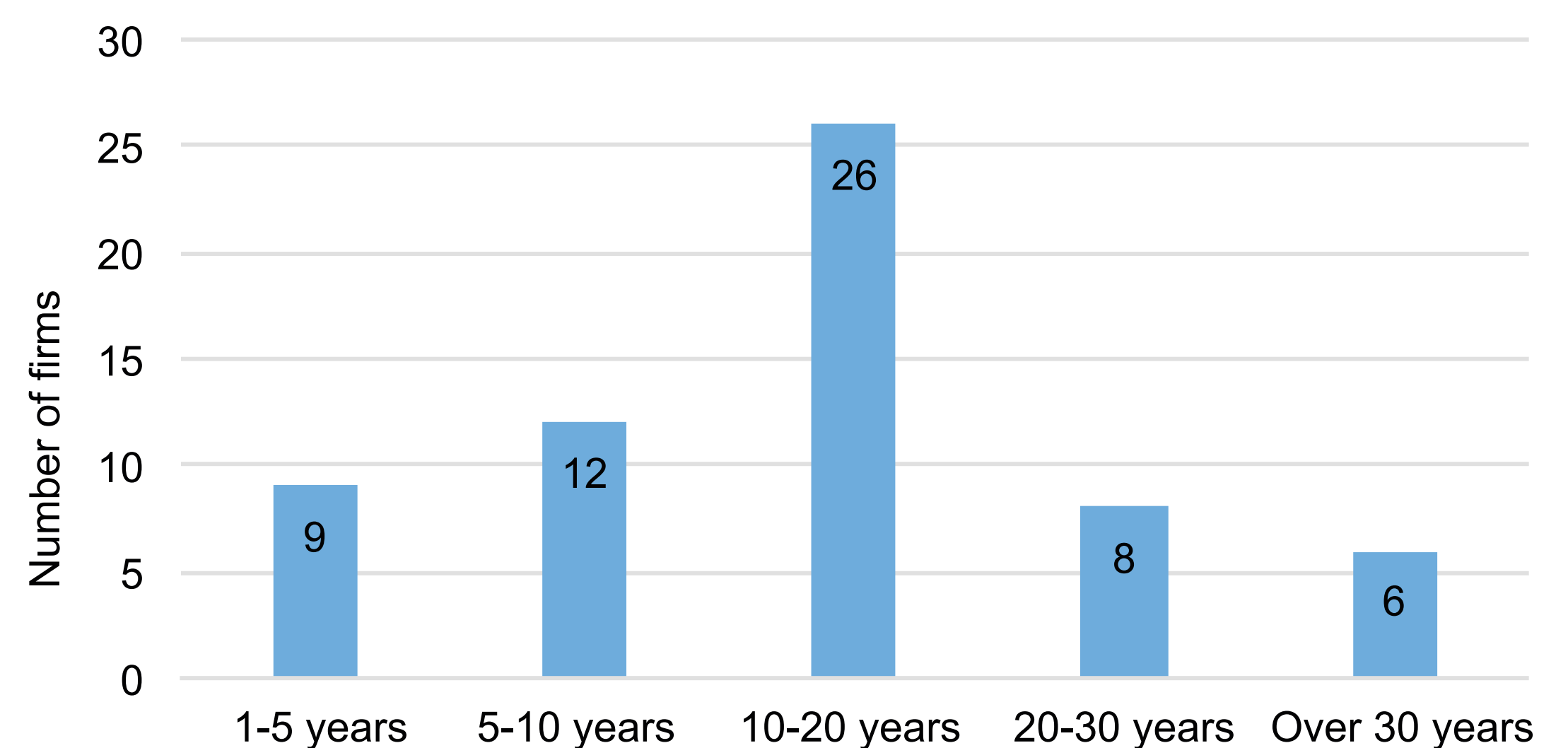


FIGURE 2: Distribution of age of the firms in the NMII

## Results from the survey

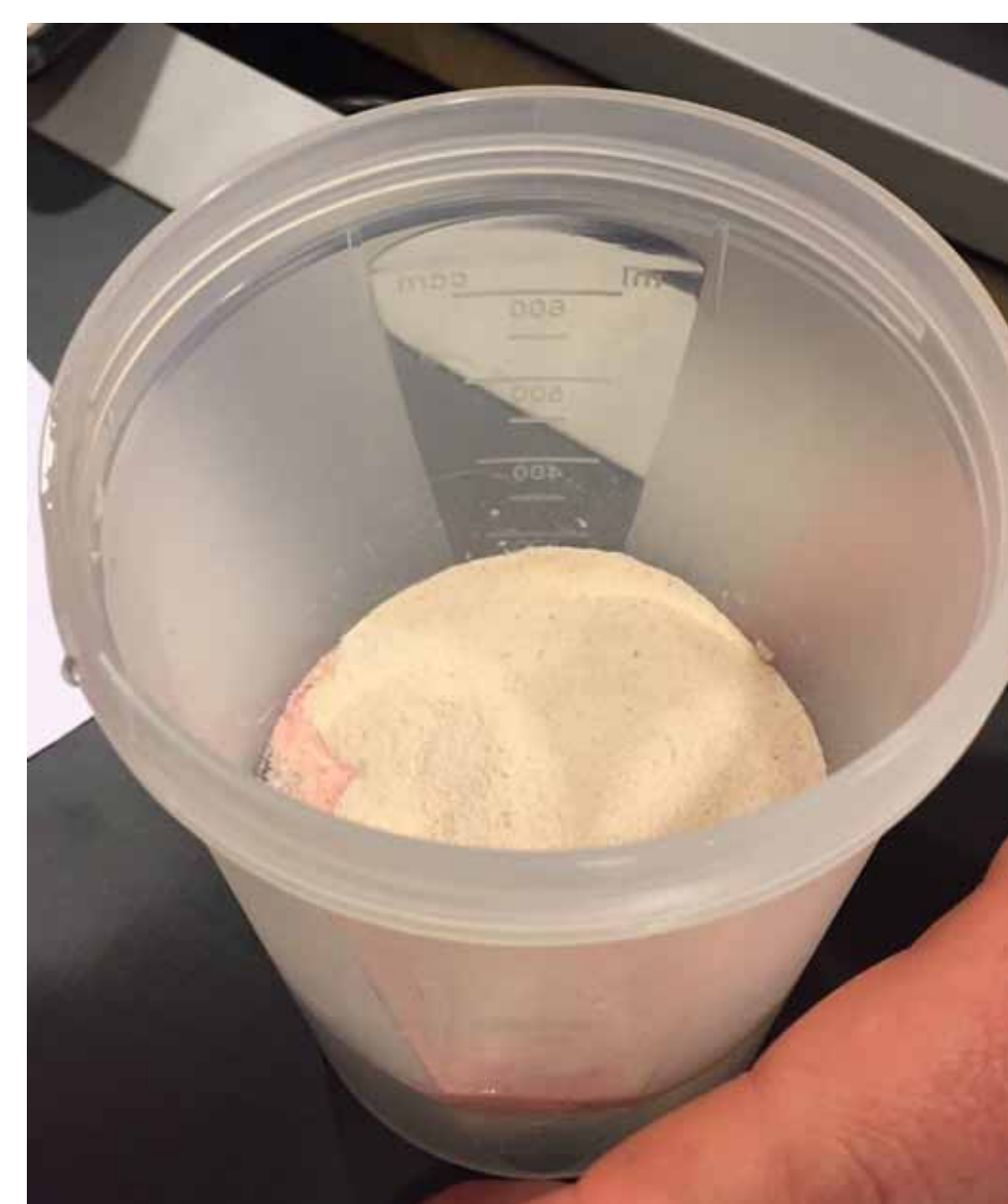
The industry consists of firms that either have production based on raw material in its original form or on further processed raw material. We have categorized the products into ensilage, powder/meal and oil. The firms produce either one or combinations of these.

- The profitability turns out to be very fragmented in this industry (2014-2016)
- Results show that 18 of 28 firms have good or very good profitability
- 21 of 28 firms are targeting the ingredients market
- Salmon is present in all performance categories
- Those producing purely on raw material from whitefish has satisfactory to very good profitability
- Oil production is most common, and we see that those including oil in the production have a better profitability
- Still, difficult to find any strong common factors explaining their economic performance

## Main challenges

- 10 listed by-product access as their main challenge
- 11 listed “market” as their main challenge
- Other: Supply chain flow, technical, policies, financing

### Marine protein powder



### Marine protein shake



## What we did

The data was collected through a short survey, fit for telephone interviewing. Questions were developed with colleagues across disciplines. We managed to interview 28 of 61 firms. We also gathered public data from tax-records and other relevant secondary sources.