Why and how do original national evaluations deviate from joint Nordic EBVs – Finland

Växa Sverige

Elisenda Rius-Vilarrasa

Freddy Fikse

(Emma Carlén)

SEGES

Lisa Hein

Kevin Byskov

(Anders Fogh)

NAV

Gert Pedersen Aamand

Faba Co-op

Jukka Pösö

Kaisa Sirkko

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Benefits from a joint evaluation

- Animal data exist in several countries
  - Same bulls, imported animals, pedigree information
  - All available information used -> increased reliability
- Joint research and development
  - Saving resources
  - Getting more with same amount of money
  - More wide research and development

Reasons for differences

- Data not 100 % same (editing), trait definitions
- Statistical models not 100 % same
- Different genetic parameters applied
  - Especially maternal effect vs direct effect
- New data from other countries -> **new information**
  - Especially imported animals affected
- New and possibly changed pedigree information
  - Especially imported animals affected
- EBVs expressed differently: different base and SD
  - Ranking may be same but index value look different

Finnish national beef evaluations

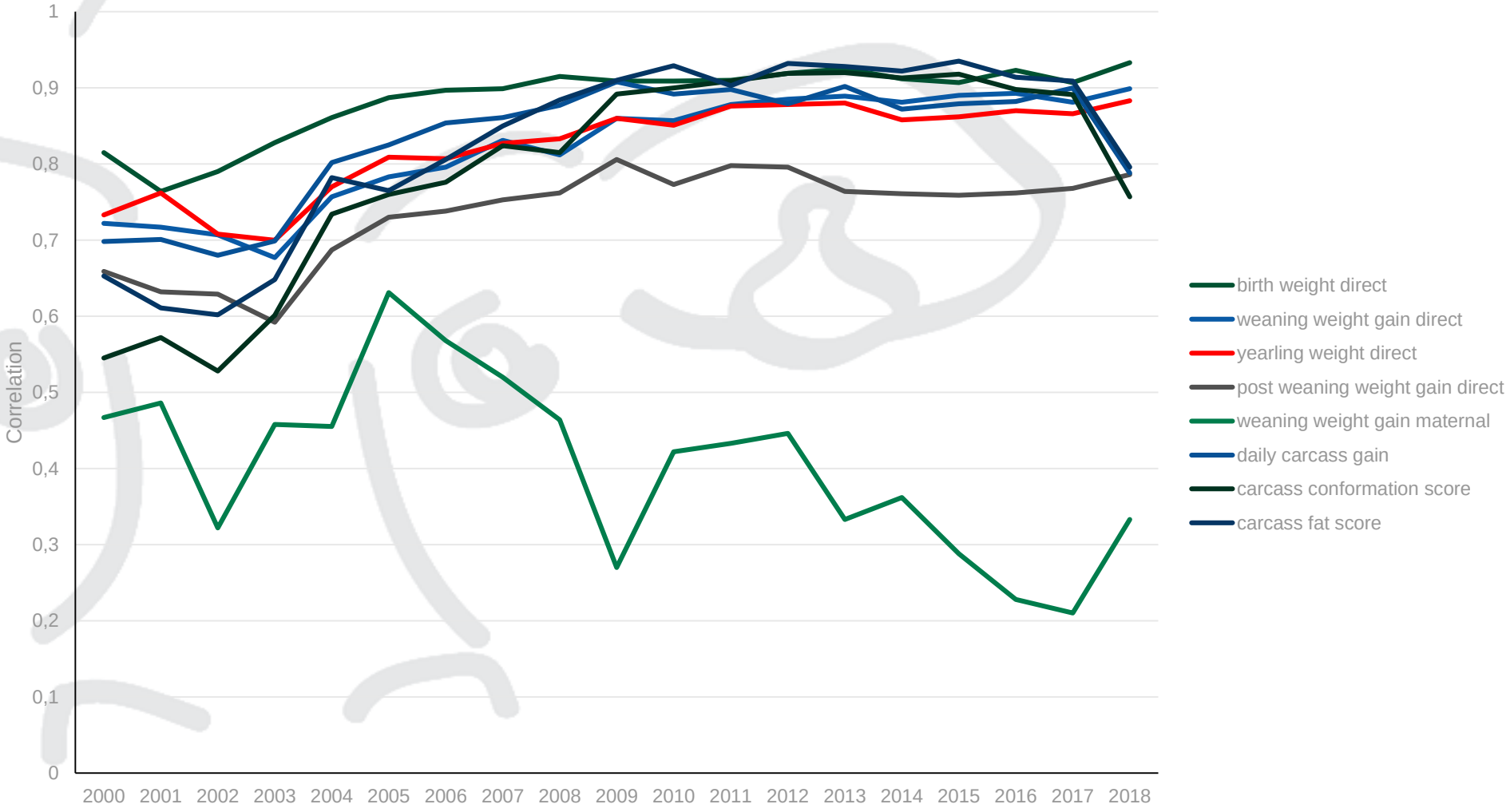
3 trait groups

- Weight evaluation
  - Birth weight, 200d weight, 365d weight, (slaughter weight)
- Slaughter traits
  - Slaughter weight, carcass conformation score, carcass fat sore, (birth-, weaning and yearling weight)
- Calving ease
  - Calving difficulty scores, (birth weight)

Comparison of NAV and national EBVs

- Some examples of correlations and genetic trends
- Based on animals having an observation in either birth, weaning or yearling weight

Correlations between NAV and Faba EBVs: Aberdeen Angus



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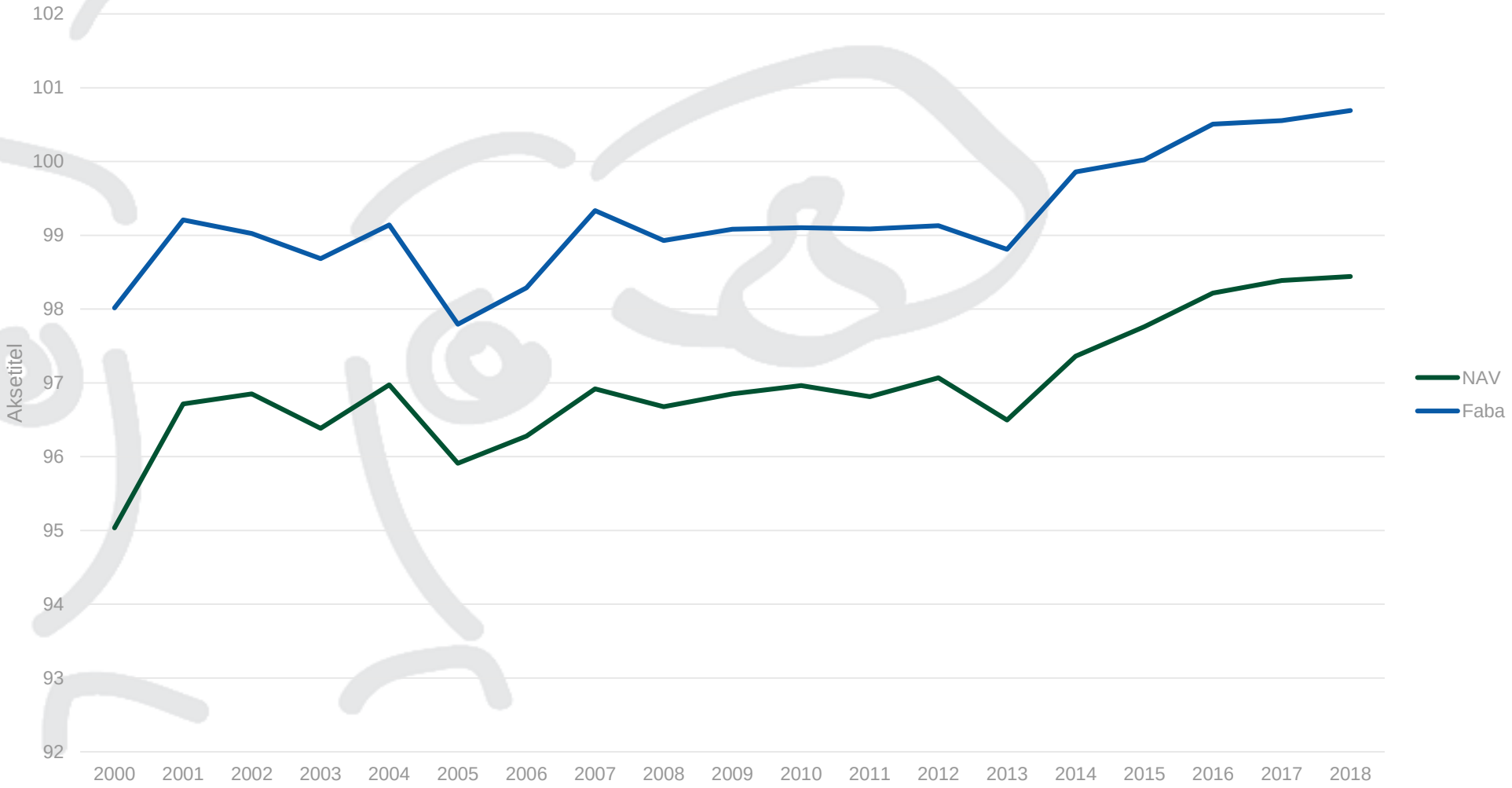
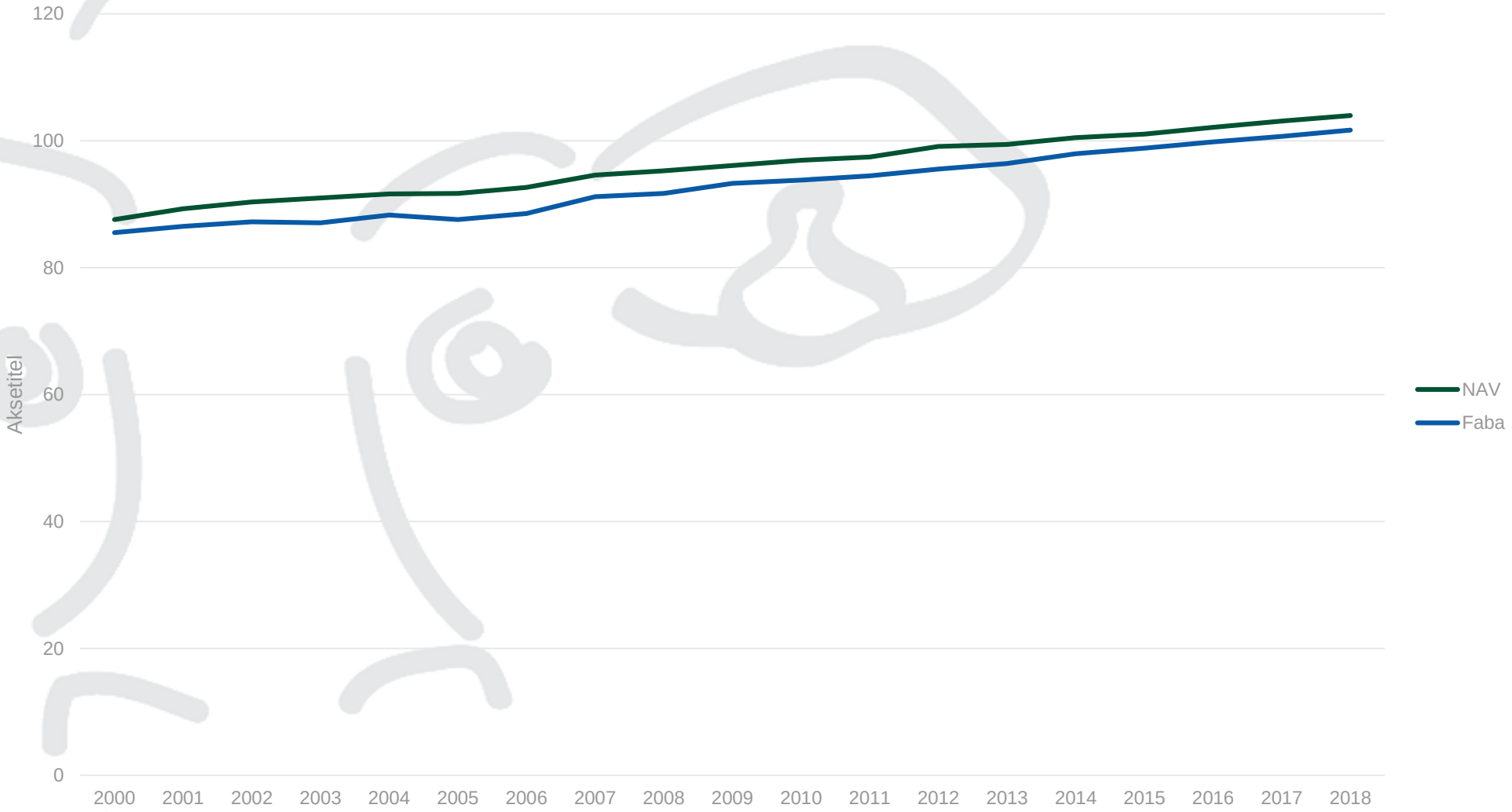
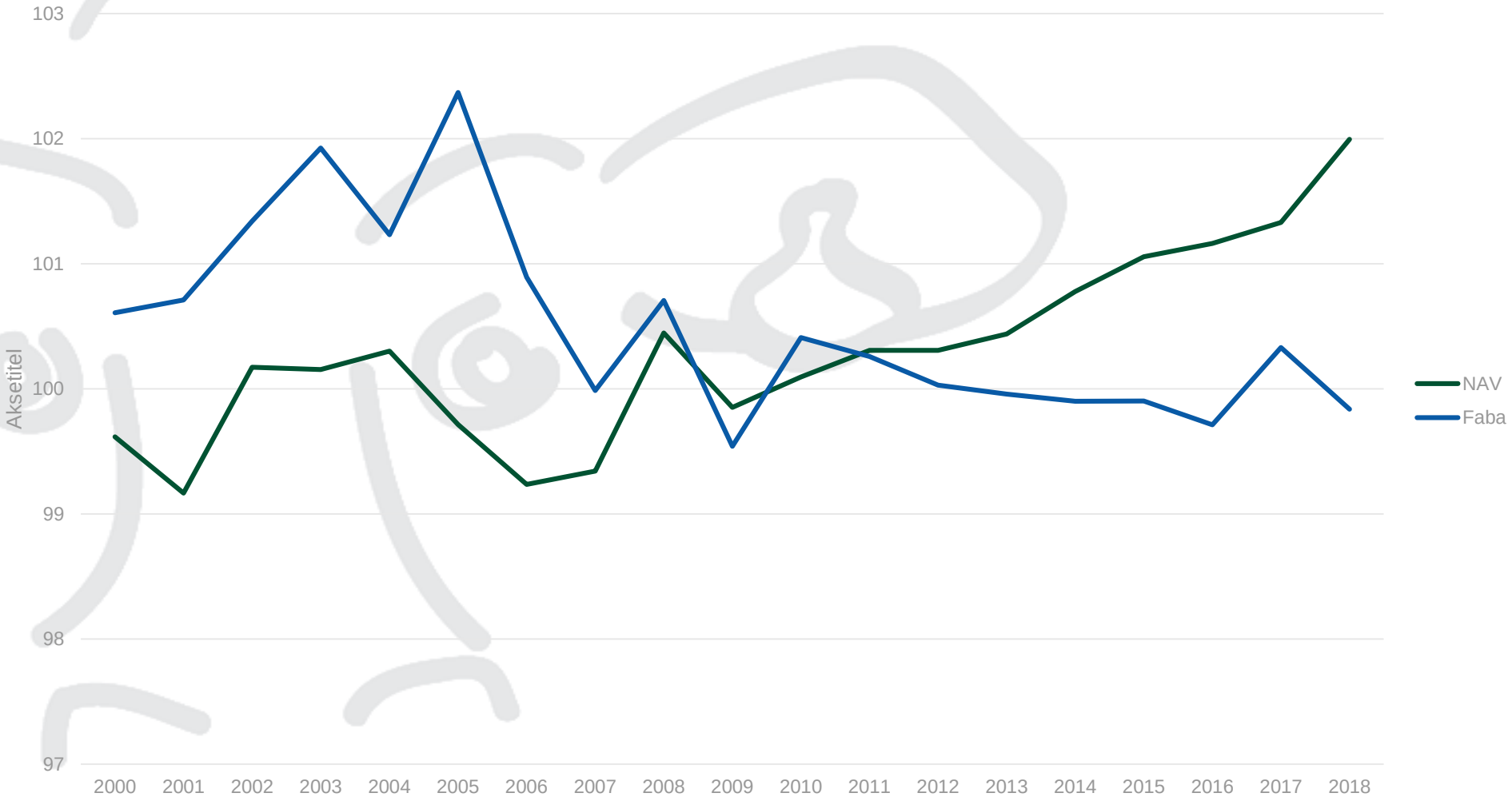
Genetic trend in birth weight direct: Charolais



Genetic trend in weaning weight gain direct: Charolais



Genetic trend in weaning weight gain maternal: Charolais



Some conclusions

- Correlations between joint NAV and national FIN EBVs are about 0.80-0.90 in the recent birth years, lower for older
  - Means some re-ranking between animals, which is expected!
  - Slightly lower for post weaning weight gain when compared to yearling weight
  - Lower for preweaning weight gain maternal when compared to weaning weight maternal effect
- Genetic trends are in general very similar in joint NAV compared to FIN national evaluations (HER birth weight is an exception)
  - In some traits clear change of level (different base level)
  - Clear differences in maternal EBVs (except for LIM)
    - Differences in genetic assumptions between direct and maternal effects in FIN nat evaluation vs NAV

Thank you!

Photo: Kaisa Sirkko