How Are Farms and Plants Impacted by Variation in Prices

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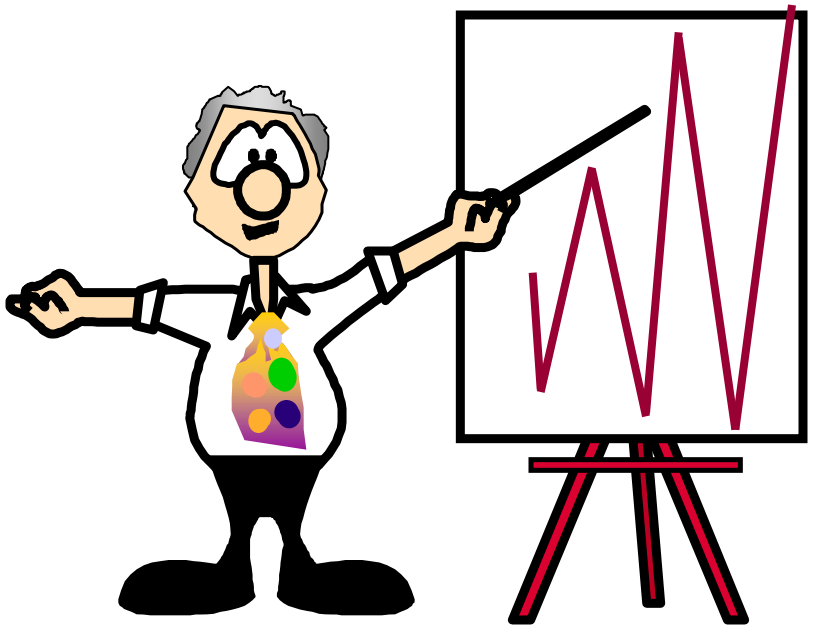
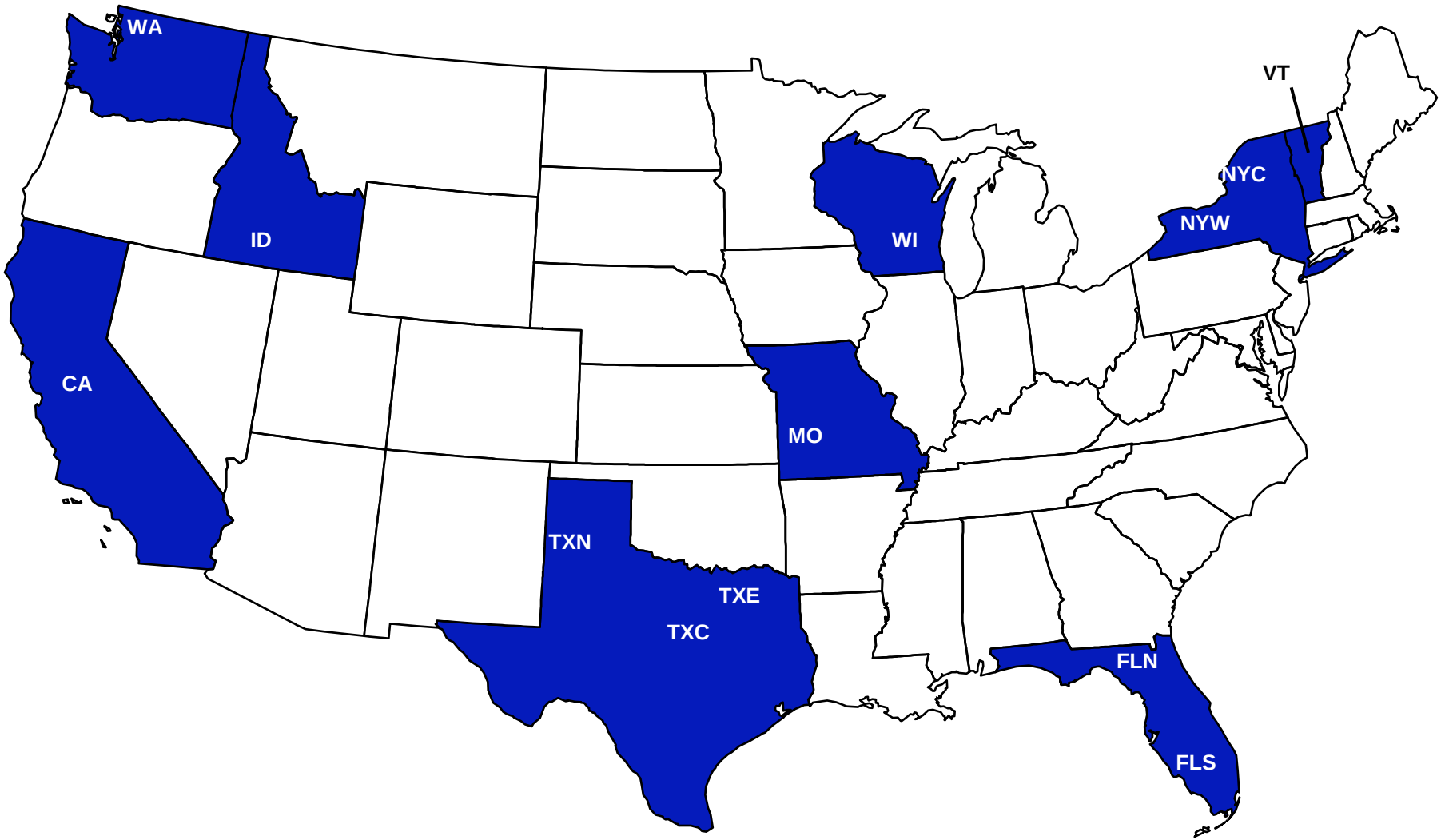
Overview

- Old Days vs Today
- Effects of Volatility
- Looking Forward



Location of Representative Dairies



Representative Farm Process

- 3-6 producers in region
- Similar in size and scope
- Farms updated every 2-3 years with face-to-face meetings
- In many cases, we have a moderate and large farm in the same location to show the effect of economies of size

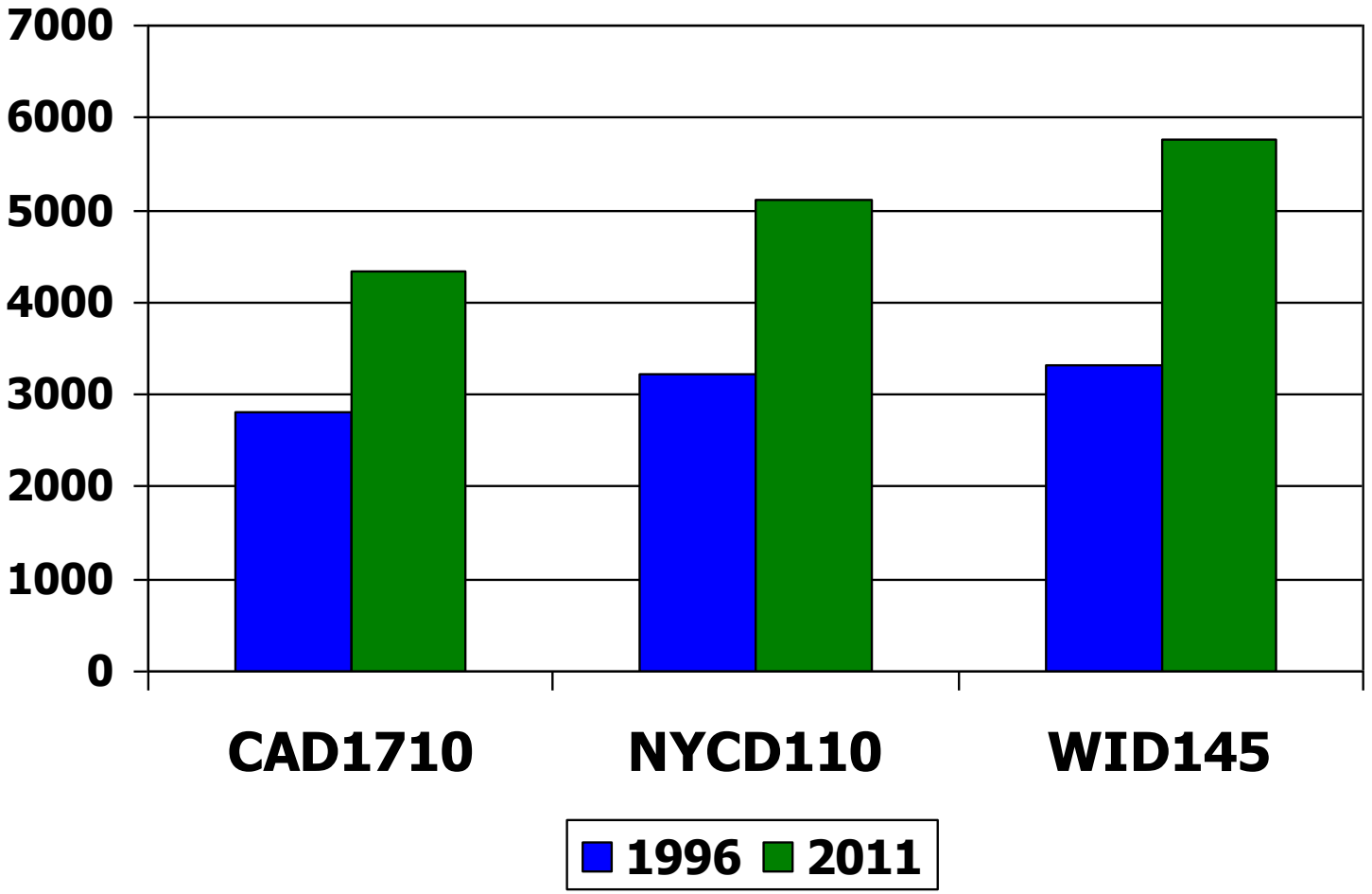
Effects of Volatility

- Using AFPC Representative Farms
- Annual Model
  - Not month to month, year to year
- Stochastic Simulation
  - Tied to FAPRI model
  - Model volatility of prices – milk, feed
  - 100 iterations – good and bad

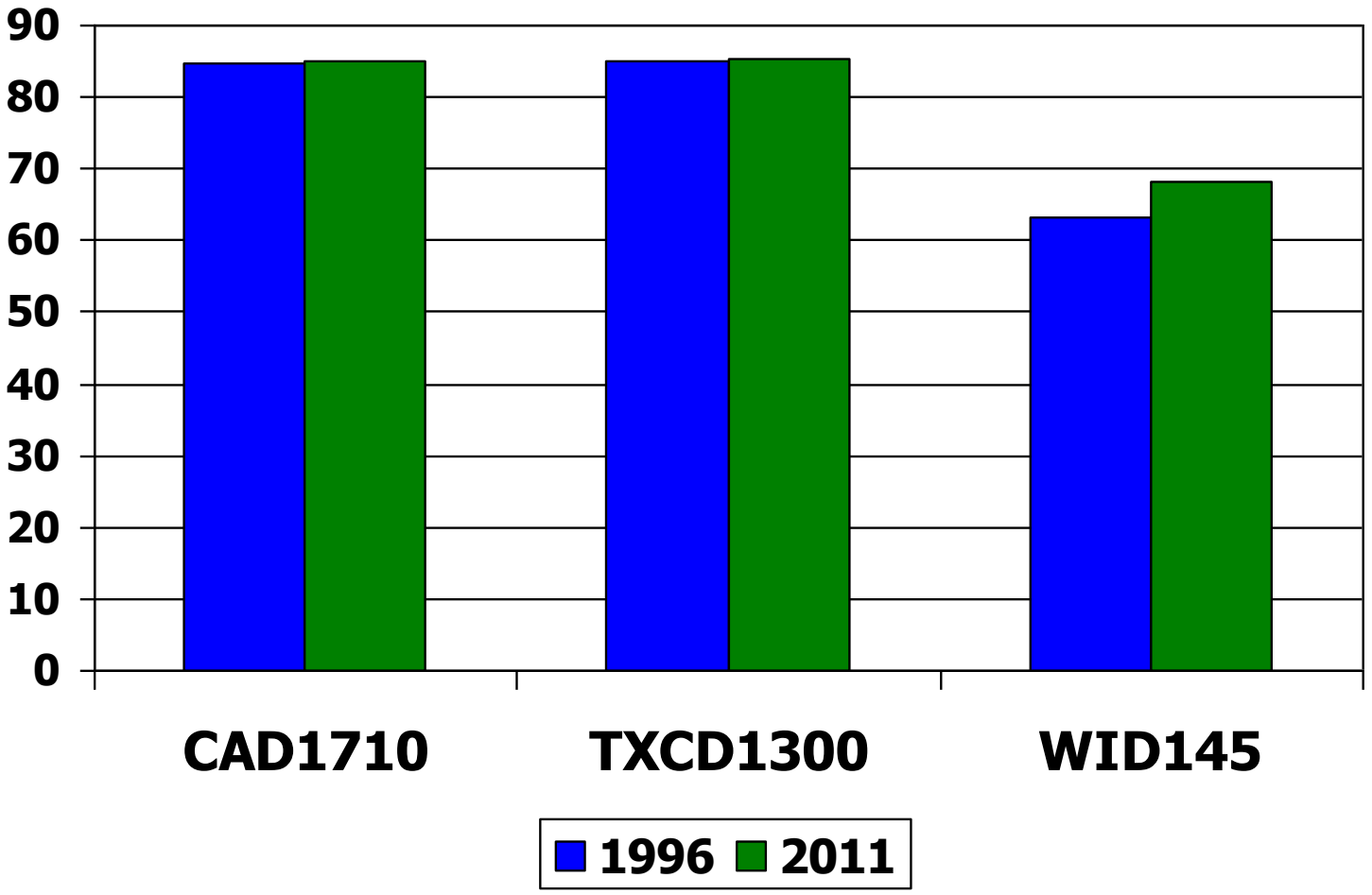
Modeling Volatility on Farms

- Looking at the Past
- Using Representative Farms in Past
  - Old baseline from 1996
  - Old distribution of prices
- What Has Changed
  - 2010-2011 FAPRI baseline
  - New distribution of prices

Average Dairy Receipts per Cow, $



Average Dairy Costs to Receipts Ratio, %



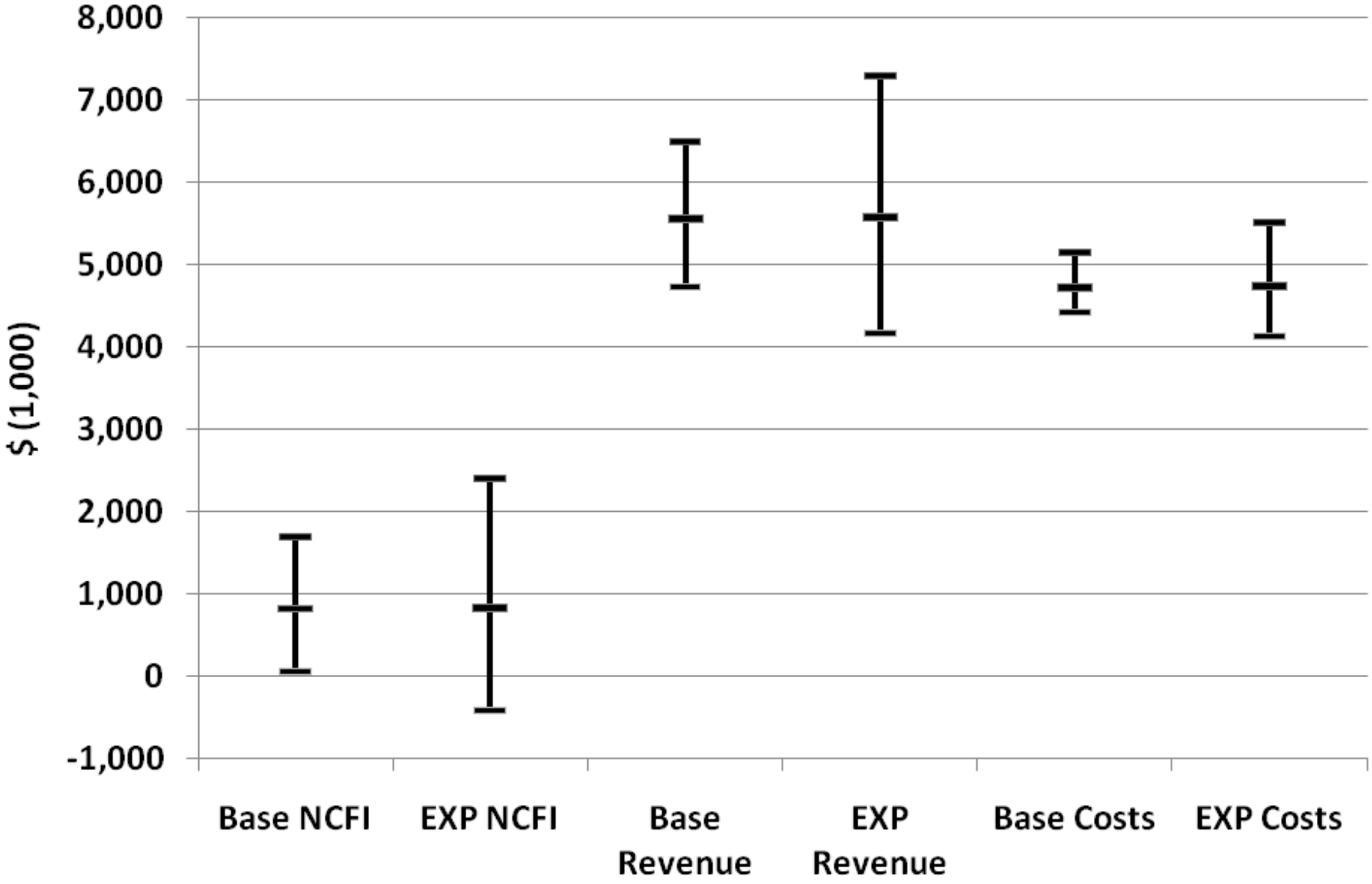
Modeling Volatility on Farms

- Higher Receipts
  - Higher milk prices
  - Increased milk per cow
- Not Much Change in Cost-to-Receipts
  - Higher returns, higher costs

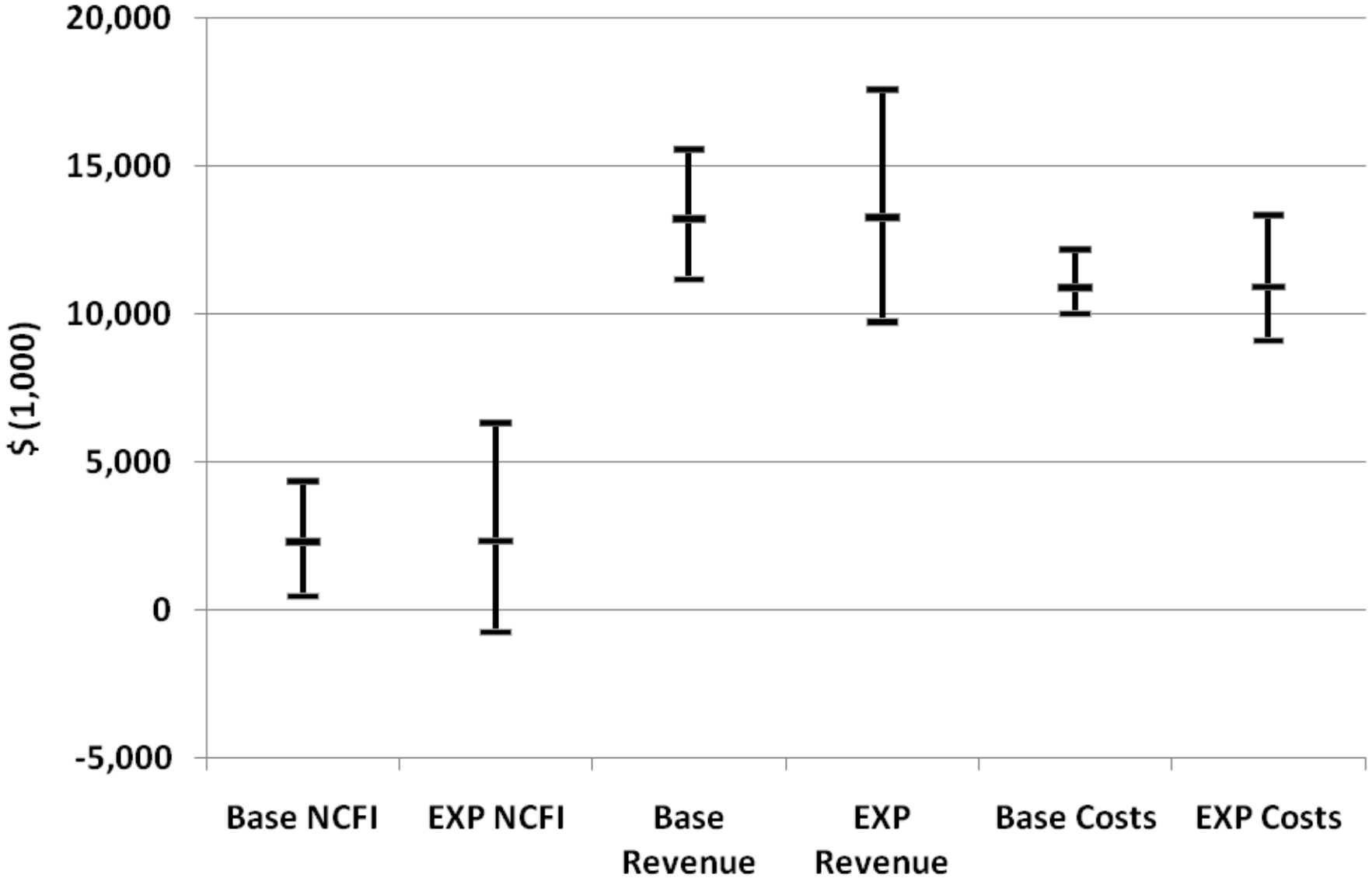
Modeling Volatility on Farms

- Examine Increased Volatility
- Expand the Distribution of Prices and Costs
  - 2X
  - 2011 FAPRI baseline

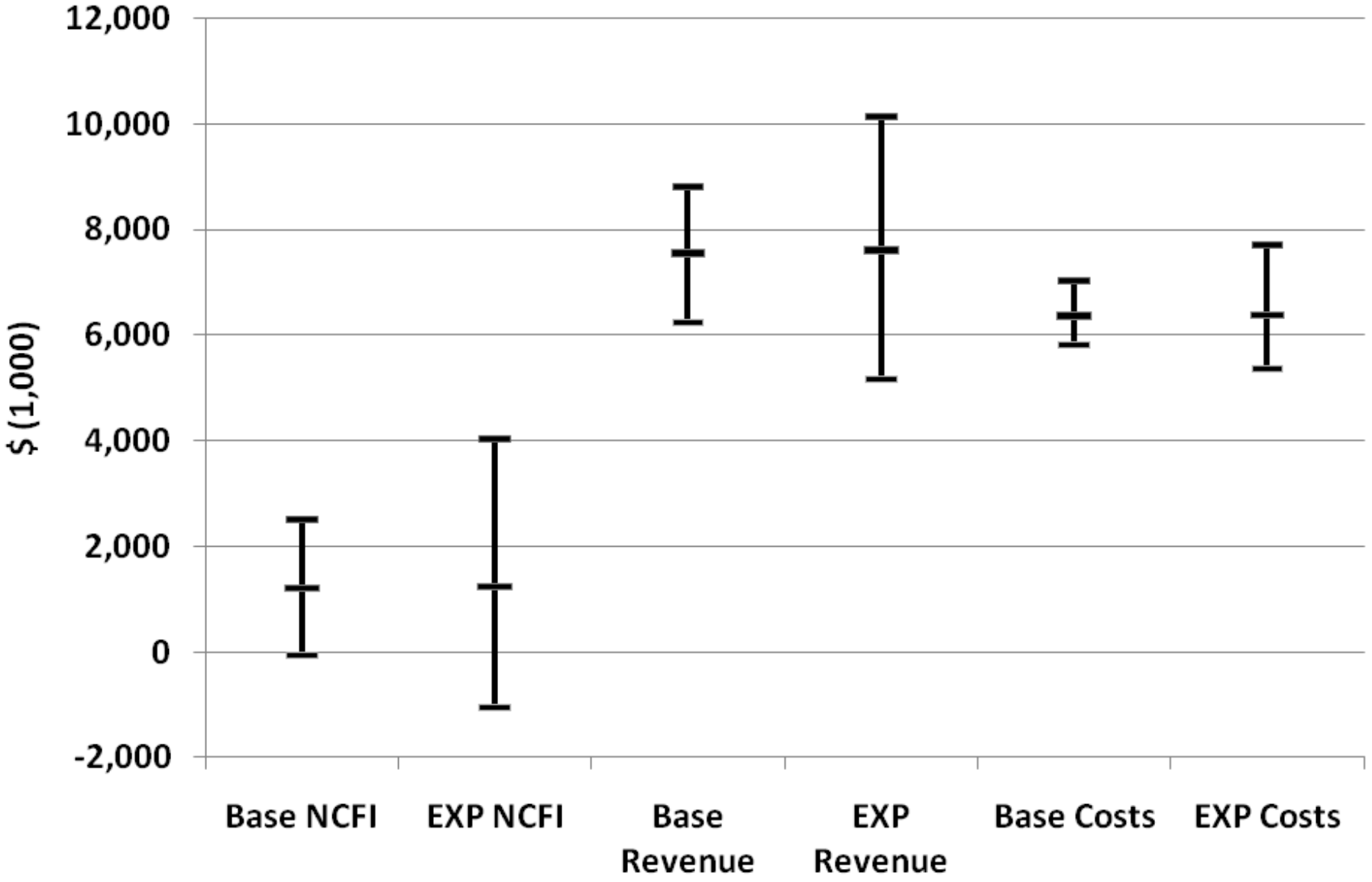
Effects of Increased Volatility on Representative Dairy Farms – TXCD1300



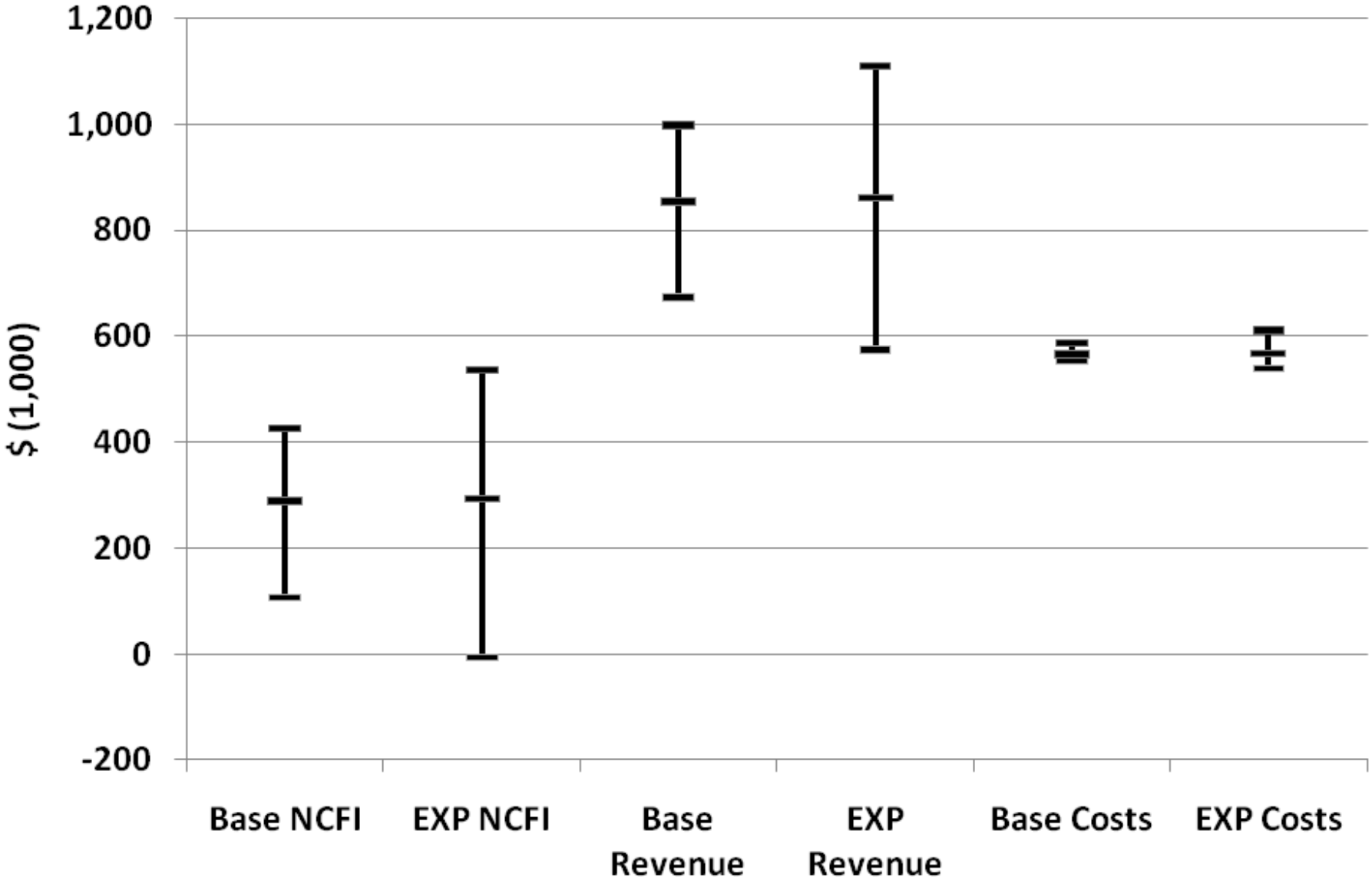
Effects of Increased Volatility on Representative Dairy Farms – TXND3000



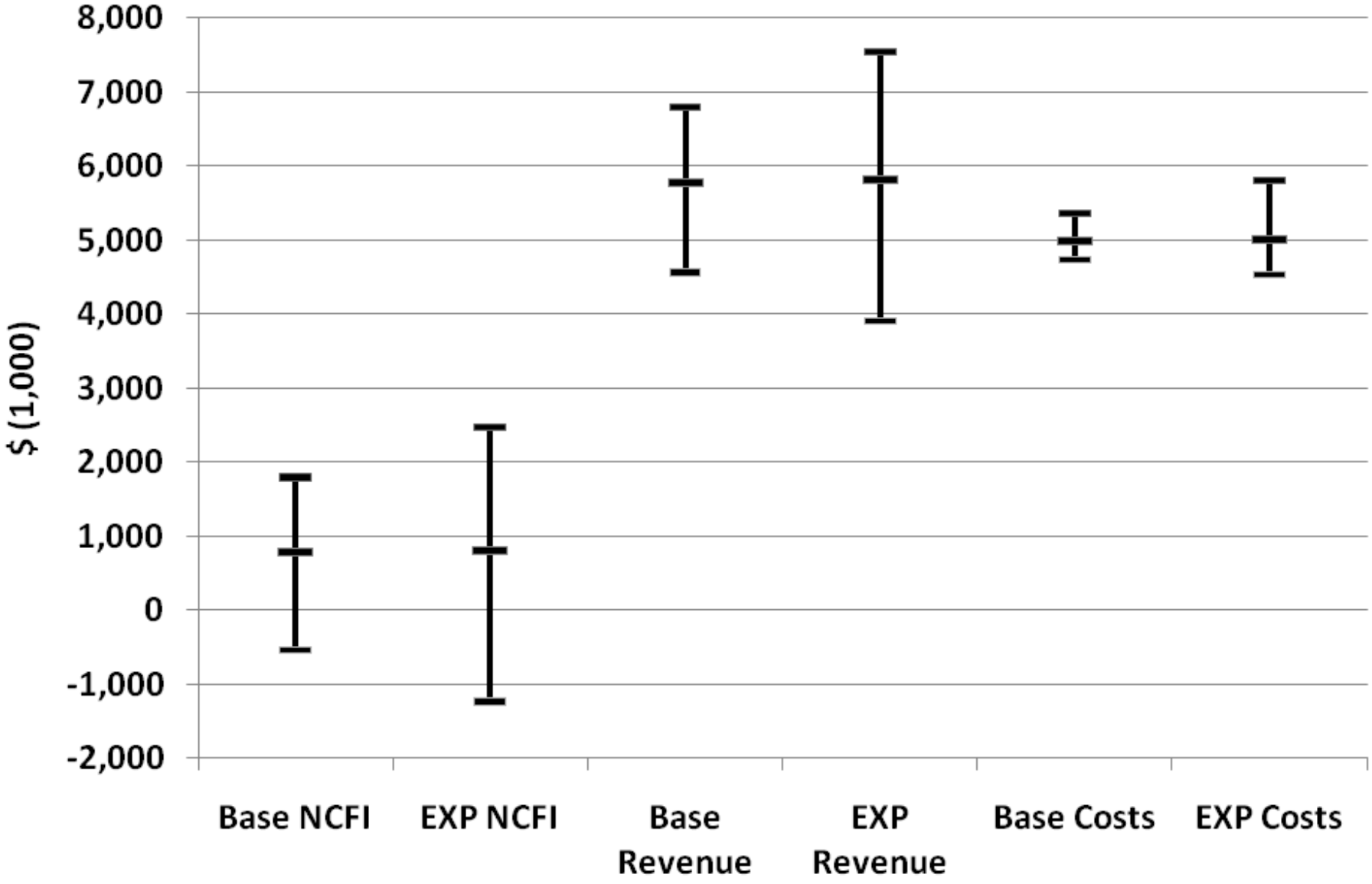
Effects of Increased Volatility on Representative Dairy Farms - CAD1710



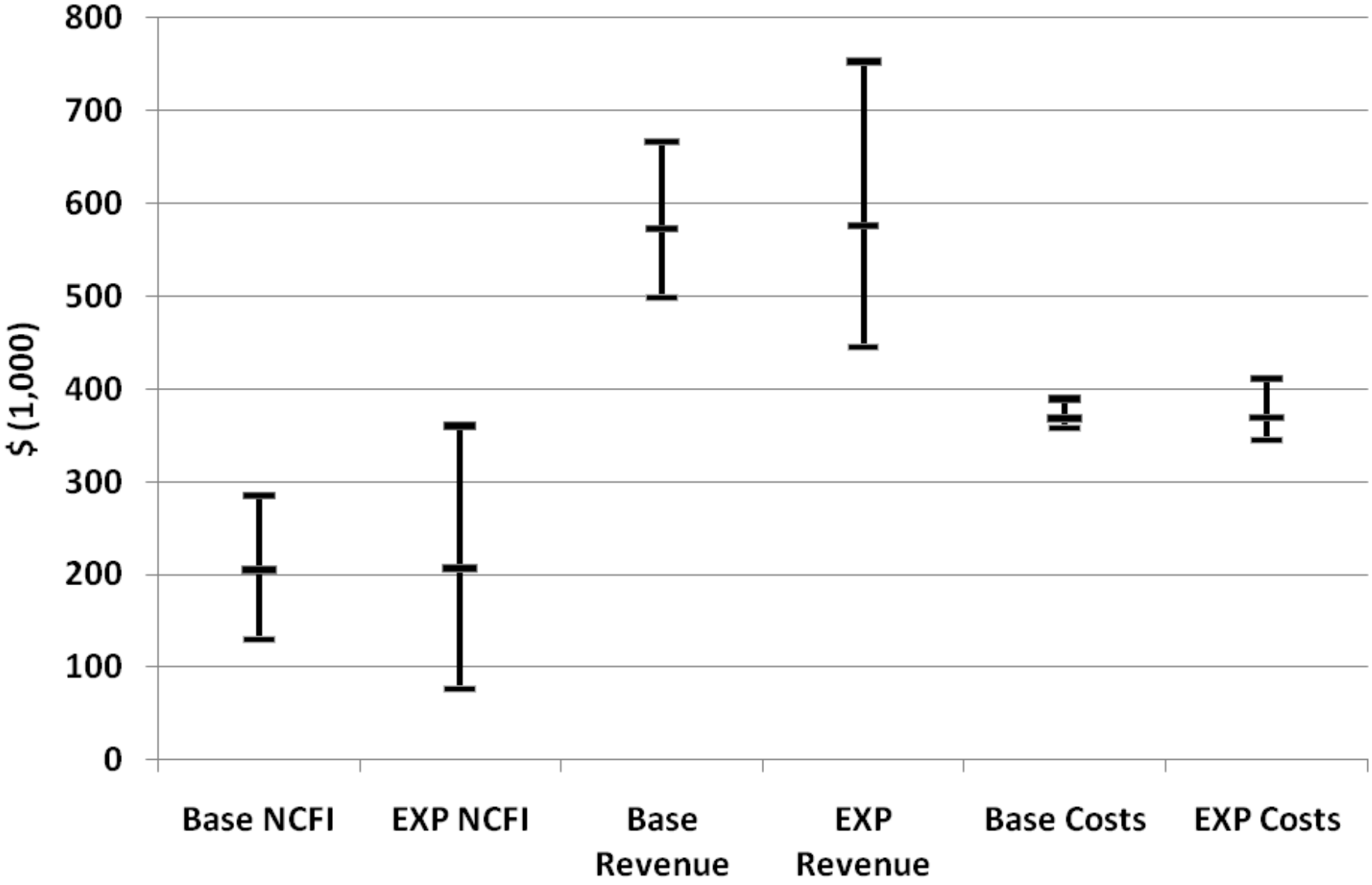
Effects of Increased Volatility on Representative Dairy Farms – WID145



Effects of Increased Volatility on Representative Dairy Farms – WID1000



Effects of Increased Volatility on Representative Dairy Farms – NYCD110



Volatility Expansion

- Higher Average Revenues, Costs, Net Cash Farm Income
  - More risk
- Difference in Buying vs Growing Feed
  - Some of difference due to modeling

Price Risk Reduction

- In General, Slightly Lower Receipts, Income
  - Small reductions
- Little Change in Average Receipts, Income

Alternatives?

- Futures Markets
  - More costly with more volatility
  - More costly protection – is it worth the price?
  - More margin exposure – need a good banker
- Insurance – Revenue or Margin
  - May be better option compared to futures strategies
  - Margin has potential given lags in price adjustment
- Contracting
  - Viable alternative?
  - Obvious policy issues

Conclusions

- Higher Receipts, Higher Costs, Higher Income, On Average
  - Higher average incomes
- More Upside Than Downside
  - Some home runs
- Compared to Past
  - Higher costs, revenues
  - Baseline milk prices $13 to $18
  - Costs $11 to $15 per cwt
  - Impact on borrowing

Conclusions (cont.)

- Highly Individual
  - Financial situation of each operation
- Timing is Critical
  - Bad first year, never make it to the next year
  - Great first year, survive bad
- Cash Reserves More Valuable
- Risk Management More Valuable
- Banker More Important

Conclusions (cont.)

- Is This Good or Bad for Dairy Farmers?