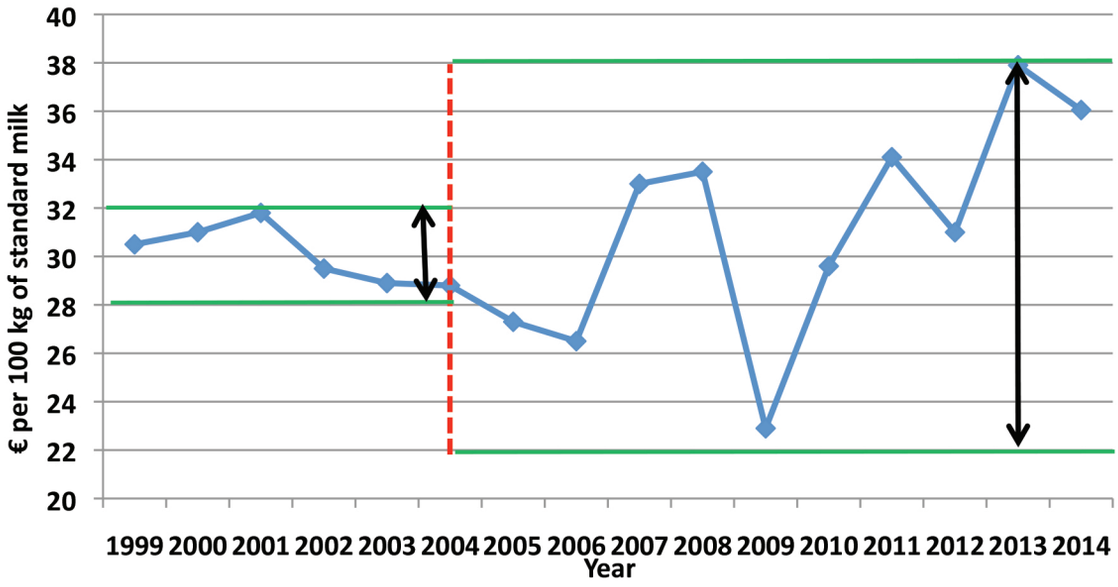
Dairy Farming Systems Post Milk Quota Abolition

Successive reforms of European Union (EU) Common Agricultural Policy (CAP) have resulted in reduced internal market price supports, reduced milk supply control and payment of the decoupled Single Farm Payment (SFP) to dairy farmers to directly compensate for the expected reduction in farm gate milk prices arising from reduced internal market supports. Fortunately for primary producers, world market milk prices have generally strengthened since 2006; with the exception of 2009, world market milk prices have remained above EU intervention levels. As a consequence of these reforms, Figure 1 below illustrates how Irish milk prices have become increasingly volatile in recent years due to global market turbulence arising from tight supply/demand conditions. Before 2004, the average yearly milk price was 30 cents/litre with little variation (+/- 2 cents/litre). Since 2004, average milk price has been 31.2 cents/litre, but with much greater variation (+/- 8 cents/litre).

Figure 1: *Glanbia milk price 1999 to 2014 (LTO-International Milk Price Comparison 2013)*



Implication of milk price volatility and EU milk quota abolition at farm level

- While the abolition of milk quotas will facilitate opportunities for expansion on many dairy farms, it will also pose challenges in terms of increased investment at farm level within a volatile milk price environment. While prudent use of debt is an effective part of growing businesses, heavily geared farms will be significantly exposed to volatile milk prices, increased input prices and climatic variability. Consequently, strict cost control will be even more important at farm level than in a milk quota environment.

- Volatility in market prices for both inputs and outputs has led to a debate as to whether a high or low input system will best maximise long term profitability post quota abolition. Table 1 shows the performance of 1,561 Irish seasonal calving dairy farms between 2008 and 2011, categorised according to the level of purchased supplementary feed. While milk production per cow and per hectare increased with increased purchased feed supplementation, milk production costs also increased and profit per hectare (€/ha) was reduced. The results show that systems of milk production that are less reliant on purchased supplementary feeds

and achieve greater pasture utilisation had lower milk production costs and were more profitable during a 4 year period where average milk price was 30 cents/litre (and varied from 22.7 cents/litre in 2009 to 34.2 c/litre in 2011).

Table 1: Systems of milk production differing in intensification (Ramsbottom et al., 2014)

Supplementary feed inputs (tonnes DM/cow)	0.35	0.70	1.14	1.70
Pasture utilised (tonnes DM/ha)	8.5	8.1	7.6	6.8
Milk solids yield (kg/cow)	359	376	391	419
Total costs (excl. own labour; cents/l)	18.0	19.2	20.7	22.1
Net profit (€/ha)	1298	1257	1180	1083

Components of a resilient Irish dairy farming system

Resilience denotes the capacity of a system to absorb shocks and thrive in a changing environment. These businesses are technically and financially efficient, generate surplus cash, consistently achieve financial expectations and are simple to operate. In Ireland, resilient dairy farm systems must have a low cost base to insulate the business from price shocks and allow family based farms to generate sufficient funds in higher milk price times to meet family commitments and finance expansion. Additionally, a resilient dairy farming system must have sufficient tactical flexibility to overcome unanticipated events that can lower short term profitability (e.g. cold wet spring etc.). The following are the key components of resilient dairy systems post milk quotas:

- *High EBI genetics:* Profitable dairy cattle for larger scale herds must be both productive and fertile, re-calving every 365 days and at a time that ensures that peak herd feed demand coincides with peak grass supply to efficiently convert grazed grass to milk.

- *High grass production and utilisation per hectare:* Overall farm profitability of Irish farms (€/ha) is closely linked to the quantity of grass utilised per hectare (tonnes DM/ha). In future, dairy farms will increasingly be limited by grass production, which can be increased by maintaining optimum soil fertility and drainage, ensuring pastures are dominated by perennial ryegrass and white clover and ensuring that post-grazing residuals are maintained at 3.5 to 4.0 cm.

- *Resource efficient and sustainable intensification:* Dairy farm systems must continue to be highly resource efficient by increasing milk production from grazed grass and per unit of input (including nutrients, water, energy and labour) while minimising undesirable outcomes (greenhouse gas emissions, water pollution, loss of biodiversity etc.).

- *Optimum stocking rate:* The optimum stocking rate for a dairy farm will depend of the level of grass production (tonnes DM/ha). At the optimum stocking rate, a grazing season of more than 280 days should be achieved with minimal (<500 kg DM) purchased feed supplementation.