Dairy Progression Pathways and the Impact of Volatility

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EXECUTIVE SUMMARY

Sharemilking has long been considered a cornerstone of the New Zealand dairy industry, providing a viable progression pathway for young dairy farmers to build experience and wealth, and traditionally aiming to achieve their ultimate goal of farm ownership. This pathway has been under increased pressure in recent years, with the number of Herd Owning Sharemilking (HOSM) positions steadily declining, due to a variety of factors. In the past five years’ there has been significant fluctuation in the milk price paid to New Zealand dairy farmers, and this volatility has created additional problems for farm owners and sharemilkers alike. This report explores the latest trends and statistics relating to sharemilking, and then examines the issues that the milk price volatility is creating, and finally providing some thoughts on how the industry may need to react to ensure viable progression pathways continue.

Key Trends & Issues:

- The percentage of sharemilking agreements in the industry remains relatively static, but the percentage of HOSM continues to decline. Over the past five years the number of HOSM positions has declined by fifty per year.
- The trend away from HOSM is more pronounced in the South Island
- The variation in milk price within seasons is causing problems with setting appropriate percentages for sharemilking agreements.
- The variation in milk price between seasons, and the resulting fluctuations in herd values, is creating significant fluctuation in sharemilker returns, but also their equity levels. Timing of entry and exit is a critical feature for sharemilkers in terms of maximising equity gain (or minimising loss).
- Survey results indicated that the Variable Order Sharemilkers (VOSM) felt the most under pressure compared to Contract Milkers (CM) and HOSM.
- The three-year average return on asset for a herd owning sharemilker (2013 - 2015) is 12%. While the cash return for a HOSM has remained relatively steady (15-16%), fluctuations in herd values are dragging down the overall return on asset.
- The percentage of sharemilkers intending purchase a dairy farm at the conclusion of their sharemilking career has declined from 70% in 1996, to 55% in 2011, to 47% in 2016. This will require a re-setting of goals for some sharemilkers.
- There is anecdotal evidence suggesting an increase in variations to the standard clauses in sharemilking agreements around the sharing of the milk income. This is evidence of the market adapting to the milk price volatility.
- There appears to be a lack of assessment of the (financial) risk that sharemilkers are undertaking relative to the reward.
Key Recommendations:

Risk versus return. Further industry discussion and education around the issues of risk vs return. The progression pathway flowcharts could be expanded and adapted to discuss these issues (eg the risk/return comparisons between VOSM and CM).

Alternative structures.
It is suggested that although current sharemilking agreements are not necessarily broken, there is opportunity for further refinement. For example, in the 2015/16 season if the variable order sharemilking agreement included standard clauses around altering the percentage based on milk price (maximum/minimum thresholds), would there have been such a significant transition from variable order sharemilking agreements to contract milking or management agreements mid-season? It is suggested that industry debate and awareness around sensible modifications to sharemilking arrangements is discussed, and variations tested. There is also a risk that some of the variations tested by farmers will fall outside the statutory boundaries laid out by the Variable Order Sharemilking Statute.

Ultimately the market will decide the best approach, and there are a number of individuals who are currently investigating alternative options. The next step may be to contact some of these individuals and gather further information on specific examples, with a view to using this information for further industry awareness and discussion.

Industry Statistics
As contract milking becomes a more important and defined segment of the sharemilking sector, it is recommended that industry statistics be re-categorised to enable collection of data for this group specifically.

Due Diligence
The research highlighted that in general there is a lack of due diligence when entering new business arrangements using sharemilking agreements. In general terms there is a positional power imbalance between farm owner and sharemilker due to issues around supply and demand (of sharemilking positions), but also around age, experience and wealth (useful for undertaking due diligence). When looking at resources available to sharemilkers, while there are a range of resources available, there is an opportunity to package these up into a due diligence checklist that could assist sharemilkers and help redress the positional power imbalance previously described. For example, the checklist could include:

- Interview questions for the prospective sharemilker to ask the farm owner, e.g. farming philosophy, financial backing
- Reference checking of farm owner
- Key points with regard to negotiation skills (with farm owner but also for purchasing stock which is a major capital transaction for a young person)
- Advice on preparing financial plans, and bank guidelines regarding financial viability
- Due diligence checklist for physical aspects of the farming operation
• Where to seek professional help

Ultimately the industry will dictate its own direction. Any initiatives undertaken will help smooth out some of the volatility, with the ultimate aim of keeping good people in the industry.
1.0 INTRODUCTION

Over the past decade there has been increased volatility in the global milk prices which has had a flow on effect to the farmgate milk price. This volatility is evident between seasons with significant shifts from season to season. Additionally, there has been a significant increase in the inter-season volatility. This increases the complexity of setting management structures that provide a fair return for all parties, based on the investment and risk each party is exposed to.

This report aims to investigate how this volatility is affecting the sharemilking sector, and consequently the ability for people to progress through the industry, ensuring there is a viable progression pathway to farm ownership. Recommendations are provided to aid the industry to ensure a viable pathway exists.

2.0 BACKGROUND

In 2011 the report ‘Ensuring a Viable Progression Path in the Dairy Industry’ (Allen & Waugh, 2012) was completed following a period of high milk prices, which saw the industry concerned about a drop in herd owning sharemilking positions, due to a perception of inequality of financial returns between the farm owners and sharemilkers. However, since this time the milk price has varied from record high milk prices to the lowest milk price since 2000. This report focuses on the impact of this volatility on the progression path, whether this is an issue for the industry, and provides recommendations to the industry.

3.0 METHODOLOGY

A variety of methods has been used to collate the data for this report. This includes:

- Literature review
- ‘What are our options?’ workshops for farmers
- Survey of farmer owners and sharemilker/contract milkers
- Rural Professional meetings
- Presentation to Federated Farmers Sharemilkers and Owners Council

The Literature review builds on that completed in the report ‘Ensuring a Viable Progression Path in the Dairy Industry (Allen & Waugh, 2012). The data is based on the following:

- LIC dairy statistics
- DairyNZ Economic survey
- DairyBase benchmark data
- AgFirst financial monitoring

Survey

Two surveys were developed with similar questions but some specific to each target audience. The survey audiences were:

(a) Farm owners that have sharemilkers (herd owning and variable order) and/or contract milkers; and
(b) Herd owning, variable order sharemilkers and contract milkers.

The surveys were available through the following mediums:

- Facebook – DairyNZ, Federated Farmers, and various other farming related pages/groups
- Through the Federated Farmers Dairy membership
- AgFirst networks
- Attendees at the ‘What are my options workshops?’ held in Southland, Canterbury, Manawatu, Taranaki, Waikato and Northland

There were 187 complete surveys from Farm Owners and 243 completed sharemilker/contract milker surveys.

**Rural Professional Meetings**

Rural Professional meetings were held in Waikato, Canterbury and Southland and included a small group including bankers, farm management consultants, and accountants. The purpose of these meetings was to update them on the trends, share some of the survey results, and discuss what issues they were seeing in their region in terms of progression and changes to business structures.

**4.0 TRENDS**

The volatility in the New Zealand dairy industry over the past five years has added another level of complexity to the pathway of progression within the dairy industry. It has led to some significant gains in equity in some years, and significant losses to equity in other years. This has emphasised the importance of timing of each step in the progression pathway. It has also led to many farm owners reviewing their management structures, due to the difficulty in ensuring returns are fair for all parties, and all parties are able to provide for their families.

**4.1 Sharemilking Statistics**

The number of dairy farms in New Zealand has shown a steady decline from 1995/96 to 2007/08. Since 2007/08 there has been a slight increase due to conversion of land into dairy farming. At the same time the average size of the herds has been steadily increasing with the average herd in 2014/15 over 419 cows, 100 cows more than ten years ago (Figure 1).
This decline in number of herds has also resulted in a decline in the number of sharemilking/contract milking and herd owning sharemilking positions.

The total number of dairy farms has declined by more than 2,600 over the past 20 years and the number of herd owning sharemilkers has declined by 1564 over this same timeframe (Table 1). This has resulted in only 17% of farms in the 2014/15 season having a herd owning sharemilker running the operation compared to 23% in 2004/05 (Figure 3).
Figure 3: Percentage of farms that have herd owning sharemilkers (HOSM) and the percentage of farms that have sharemilkers (including HOSM, variable order and contract milkers)

However, there has not been the same decline in variable order sharemilkers and contract milkers. Figure 3 shows a peak period in the early 2000’s where up to 38% of farms had sharemilkers on, with 15% of these being variable order/contract milkers. In 2014/15 the percentage of variable rate/contract milkers has remained steady at 15%.

Table 1: Trend in the number of dairy farms and sharemilking positions over the past 20 years

<table>
<thead>
<tr>
<th>Year</th>
<th>1995</th>
<th>2005</th>
<th>2010</th>
<th>2015</th>
<th>2020 (est)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Farms</td>
<td>14597</td>
<td>11883</td>
<td>11691</td>
<td>11970</td>
<td>11000</td>
</tr>
<tr>
<td>All sharemilkers</td>
<td>5016</td>
<td>4260</td>
<td>4041</td>
<td>3879</td>
<td>3500</td>
</tr>
<tr>
<td>Herd Owning sharemilkers (average drop in positions/year)</td>
<td>3614</td>
<td>2719 (-90/yr)</td>
<td>2303 (-80/yr)</td>
<td>2050 (-50/yr)</td>
<td>1800 (-50/yr)</td>
</tr>
</tbody>
</table>

Even though there are 2050 herd owning sharemilking positions, the contracts are typically for a three year period. Therefore, on average only 680 of these may come up for renewal every year. Many of these positions are family sharemilking for family, which tends to result in the sharemilkers being in the position for the long term. Additionally more and more herd owning sharemilkers are rolling over contracts and remaining on the same farm for 6, 9, 12+ years, as opposed to growing their sharemilking business or purchasing their first farm. As a result, there are few opportunities for new people looking to get into herd owning sharemilking in any one year.

The estimate for 2020 is based solely on the authors’ expectation on the number of dairy farms in NZ, combined with an extrapolation of the current trend in the decline of HOSM agreements.
This decline has been more marked in the South Island compared to the North Island, with only 13% of dairy farms in the South Island having a HOSM in 2014/15 compared to 19% of North Island dairy farms (Figure 4).

Figure 4: Percentage of farms in the South Island and North Island that have herd owning sharemilkers

Reasons cited for the lower percentage of HOSM in the South Islands included:

- Higher debt levels (of the farm owners), which results in an inability to take on a HOSM
- A higher percentage of corporate farming situations. Corporate farming businesses often cite the need to retain control of the livestock, which does not always fit well with a HOSM agreement.
4.2 Debt levels

Over the past 10 years, there has been a gradual increase in the level of term debt held by dairy farmers. Figure 8 shows an increase in debt from $12/kgMS in 2004/05 to $20/kgMS in 2013/14. This is estimated to have increased by $1.50 - $2.00 by the end of the 2015/16 season.

Figure 5: Closing term liabilities $/kg MS over the past 10 years (DairyNZ Economics Group)

When considering the herd owning sharemilker debt over time, it shows how the volatility in cow prices can affect the equity percentage held within the dairy business. In 2009 the milk price and correspondingly cow price dropped, creating a situation where the average sharemilker had debt levels to 123% of the value of their assets. The above trend lines do not include the 2015/16 season, which saw a significant reduction in cow value.

Figure 6: Herd owning sharemilking debt $/cow and asset value $/cow (DairyNZ Economics Group)
4.3 Milk Price Volatility

Over the past decade there has been a significant increase in the volatility in prices for globally traded whole milk powder. Figure 8 below shows the whole milk powder prices (USD) for the past 13 years.

This volatility in whole milk powder prices directly impacts on the farmgate milk prices received in by New Zealand farmers. Figure 9 below shows the milk price and inflation adjusted milk price over time.
Figure 9: Milk price for the season and inflation adjusted milk price (NZ $/kg MS)

Although volatility in the milk price is not new, the inter-season volatility in the milk price has increased significantly over the past decade. Figure 10 below shows the opening farmgate milk price each season, followed by any inter-season changes that are made to the milk price and consequently the final milk price paid. On average there have been four changes to the milk price every year, with as many as six adjustments made in the 2013/14 season. In addition, there have been significant shifts to the milk price within season, such as in the 2014/15 season. Following the record milk price of $8.40/kgMS in the 2013/14 season an opening milk price of $7.00/kgMS was set in June 2014. By Christmas this had been revised to $4.70/kgMS and continued to decline to a closing milk price of $4.39/kgMS. This is a drop of $2.61/kgMS over the course of the season.

Figure 10: Within season volatility of the farmgate milk price from 2008/09 to current milk price for the 2015/16 season
This variability makes it very difficult to set a fair income split, particularly for farm owners with VOSM. It also makes it difficult for sharemilkers to prepare budgets. For example, if a budget for a VOSM was completed at the beginning of the 2014/15 season at a milk price of $7.00/kgMS, on a 21% agreement they would be receiving $1.47/kgMS, but by the end of the season their income had dropped to $0.92/kgMS. This has a significant impact on the ability of the variable order sharemilker to be able to run their business and provide for their family. Additionally, changes to management decisions, such as a reduction in imported feed due to a drop in milk price can also lead to a further decline in income for the variable order sharemilkers. There is a risk that some people are likely to exit the industry following this significant drop in financial returns and equity.

### 4.4 Herd Values

The price of cows is strongly correlated to the milk price (Figure 11), thus the value of a herd owning sharemilker’s business is particularly exposed to the milk price. High debt levels will exacerbate the issues of available equity.

![Figure 11: Trends in cow values (red line on left axis) and milk price (blue line and right axis) over past 20 years](image)

### 4.5 Financial Returns

The following financial data is sourced from the industry database DairyBase, which relies on farmers throughout the country submitting their financial accounts to their accountants or DairyBase to be uploaded into the DairyBase system. Therefore, some care needs to be taken when interpreting the analysis due to a potential bias of the type of farmers entering their data into DairyBase, and the sample sizes.

When comparing the average operating profit per hectare over the three years ending 2015, there was very little change in operating profit/ha between having a variable order
sharemilker compared to an owner operator. However, there is a significant difference in both operating profit ($1,082/ha) and return on dairy assets (1.8% drop) when a herd owning sharemilker is used compared to an owner operator.

Table 2: Comparison of the operating profit/ha and return on dairy assets over a three year period for an owner operator, an owner with a variable order (VO) sharemilker, an owner with a herd owning sharemilker (HOSM) and the HOSM business.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>$2,422</td>
<td>5.0%</td>
</tr>
<tr>
<td>Owner with VO sharemilker</td>
<td>$2,394</td>
<td>4.6%</td>
</tr>
<tr>
<td>Owner with HOSM</td>
<td>$1,340</td>
<td>3.2%</td>
</tr>
<tr>
<td>HOSM</td>
<td>$968</td>
<td>12.3%</td>
</tr>
</tbody>
</table>

However, these returns do fluctuate from year to year as shown in the graphs below (Figure 12).

![Figure 12: Comparison of operating profit per ha from 2008/09 to 2014/15 for owner operators, owners with a variable order sharemilker (VOSM)/contract milker and owner with herd owning sharemilker (HOSM)](image)

The milk price in the 2015/16 season is the lowest for the past 15 years. This is having a significant impact on profitability this season. On average, it is expected the average dairy farm will require an additional $1/kg MS working capital to support the business. Discussions with rural professionals throughout the country suggest the average farmer has managed to reduce their farm working expenses by $0.50-$0.80/kg MS, but despite this the AgFirst Financial survey suggests the average owner operator will have a farm profit before tax of $-812/ha.

In response to the milk price there are a number of things farm owners and sharemilkers are doing in order to reduce the pressure on the business. Figure 13 shows some of the adjustments sharemilkers/contract milkers and farm owners that completed the survey are making to adjust the low milk price. This survey shows that 73% of farm owners have taken up the Fonterra interest free loan which is consistent with the results of the AgFirst financial
survey which showed 75% of participants took out the loan. This has implications for the recovery when businesses begin to produce a positive operating surplus.

The most common changes people are making is to change their lifestyle to reduce their drawings, with 60% of sharemilkers/contract milkers and 39% of farm owners reducing drawings.

Twenty seven percent of sharemilkers/contract milkers and nine percent of farm owners have partners that are going back to work part-time or full-time.

With the largest cost for sharemilkers/contract milkers being wages this is often perceived as an easy area to reduce costs, with 35% of respondents indicating they are looking at restructuring to reduce staff numbers. This could be part-time/relief staff or full time staff. This has significant implications to the dairy sector with less jobs available and the additional work to be picked up by the sharemilker/contract milkers and their remaining staff.

Figure 13: Survey results showing some of the responses sharemilkers/contract milkers and farm owners are doing to adjust to the low milk price.¹

¹ Note, the Fonterra loan was not an option for sharemilkers to select and restructuring to reduce staff numbers and sold assets was not an option for farm owners to select.
Return on Asset

The trend of return on total assets is interesting, as it shows throughout the period of 2012/13 to 2014/15, the return on total assets for the owner with a HOSM was better than those that had a VOSM/contract milker, or the owner operators (Figure 14). The likely reason for this is the significant variation in the value of the cows through this period. This resulted in changes in the total asset value of the owners with VOSM/contract milkers and owner operators.

![Graph showing return on total assets](image)

Figure 14: Comparison of return on total assets from 2008/09 to 2014/15 for owner operators, owners with a variable order sharemilker (VOSM)/contract milker and owner with herd owning sharemilker (HOSM)

This data does not yet show the implications for the current low milk price as this data is not yet available. However, the survey respondents were asked how long they believed they could maintain the current structure of the business if the milk price remains below $4.50/kgMS.

The pie graphs in Figure 15 and 13 below show there are a number of businesses feeling they are under some significant financial pressure. **Sixty five percent of farm owners with a contract milker can only maintain their current structure for this season and next**, while 23% feel they are stable. There are very similar views of the business viability with farm owners with LOSM and HOSM.
When comparing the sharemilker/contract milker perspective, the variable order sharemilkers feel under the most pressure, with 65% of these feeling they are only able to maintain their structure for this season and next. Compare this to 33% of contract milkers and 42% of HOSM feel they can only maintain their business structure for this season and next. 52% of CM and 42% of HOSM feel they are in a stable position in terms of their business viability.
4.6 Timing of entry and exit

As a result of the significant fluctuations in milk price and herd values, the timing of entering a herd owning sharemilking position can have a significant influence on capital requirements and borrowing required. As mentioned earlier in this report there has been a steady decline in the number of sharemilking positions, and therefore a decline in the number that become available in any one year. As a result of this market shrinkage it is becoming increasingly difficult to control the timing of entry into a herd owning sharemilking position. Often this is dictated by when an opportunity arises, meaning those looking to enter or exit are frequently at the mercy of the market. Consequently, over the last few years there have been some HOSM that have taken on their first HOSM position and paid high prices for their cows, such as in 2008 and 2012, followed by a significant drop in milk price and consequently cow values in their first season. An example of this was people that entered a HOSM position in June 2008 with an investment of $2,660/cow, and 12 months later this investment having dropped to $1,530/cow, a decline of over $1,100 per cow in equity over 12 months, in addition to the drop in cash return.

This significant shift in returns over a 12-month period may result in the loss of some of our best young people who simply entered into HOSM at the wrong time. This volatility is also likely to discourage some people from taking that step beyond contract milking, due to the increased risk associated with variable order and HOSM.

As a result of the volatility in milk price there are more people adjusting their agreements/contracts in order to try to balance out the returns to each party and provide some security to the CM/VOSM/HOSM. Some of these variations include putting ‘caps and collars’ in agreements where the income split changes based on milk price. For example, if the milk price drops the percentage received or contract rate increases to ensure they are able to pay their bills and provide for their family, and as the milk price increases the percentage received or contract rate received drops, ensuring that in a high milk price year the farm owners are getting a fair return for the level of investment they have in the business.

In other situations there have been adjustments to the sharing of costs as a reaction to the market, so when the milk price was at its peak there were some adjustments made, particularly in the South Island where there are many farms of a large scale, such as the sharemilker pays for all of the grazing of young stock. This is an example of the market reacting to the situation and is likely to result in a change to cost sharing as a result of the low milk price.
4.7 Long Term Goals

Over time, the long term goals of people in the dairy industry have been changing. The same question has been asked in a survey of sharemilker/contract milkers in 1996, 2011 and again in 2016. The results in Table 3 show there has been a drop over time of the percentage of people that intend on purchasing a dairy farm when they finish sharemilking/contract milking. In 1996, 70% of responders were intending to go on to purchase a dairy farm compared to only 55% in 2011 and 47% in 2016.

<table>
<thead>
<tr>
<th>Table 3: Intentions of sharemilkers on completion of sharemilking career</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase of dairy farm</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>70%</td>
</tr>
<tr>
<td>Retire</td>
</tr>
<tr>
<td>Leave the dairy industry</td>
</tr>
<tr>
<td>Take up another job in the dairy industry</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>


Thirty eight percent of those that selected ‘Other’ in the 2016 survey were unsure or said that it would depend on what opportunities arose in the next few years. Some commented that they would like to purchase a farm but were not sure that they wanted the debt with the significant volatility in milk prices from year to year.

Thirteen percent of those that selected ‘Other’ already own a property but they are currently have someone else managing so would look at taking over this management.

An additional 13% of those that selected ‘Other’ said they wanted to go drystock farming or run a grazing block when they leave the sharemilking sector.

When sharemilkers/contract milkers were asked to strongly agree, agree, neither agree or disagree, disagree or strongly disagree whether the low milk price will have a significant impact on my ability to reach my business goals, 56% strongly agreed, 31% agreed with 9% either disagreeing or strongly disagreeing.

Many people commented throughout the survey that land was unaffordable and therefore farm ownership was unachievable. Historically the pathway has been to build an asset base via HOSM and then transition into farm ownership – thus the relativity of cow price to land price is of importance. But when looking at the trend of the number of cows required to purchase 1 hectare of land over the last 22 years it shows that over the period of 2012-2014 when cow prices were high, on average farms were just as affordable as they were in the mid 1990’s and early 2000’s. However, with the drop in cow values and relatively stable land prices in 2014-15 season there has been a significant increase in the number of cows required to purchase a hectare of land.
This chart again this emphasises the importance of timing of land purchase. If the milk price remains low in the short-term the cow value is likely to remain low, and may also result in a softening of land prices. This could mean a slight decrease in the number of cows to purchase a hectare of land, but this is not likely to change significantly until the cow values increase.

"Is the drop in people wanting to purchase a farm at the end of sharemilking an issue for the industry, or is it that only the top 20% of people ever really achieved farm ownership, so now people are more realistic about the likelihood of purchasing a farm?"

The percentage of responders that are intending to leave the dairy industry when they finish sharemilking/contract milking dropped in the 2012 survey, but has increased again in 2016. This could indicate the sentiment of the industry at the time. When the survey was completed in 2011 the milk price was high and there was a lot of positivity and confidence in the dairy industry. In 2016 there is much less positivity, prices are low and many people are struggling. This is likely to impact on their view of their future in the industry.
As businesses become more complex and there is more volatility in milk price, effective communication between parties is vital. Farmers in the survey were asked to select what options best describes the relationship between themselves and the farm owner/sharemilker/contract milker. They were then asked to select how they think the relationship should be, and given the same set of options. Figure 18 shows the results of this question, with 51% of farm owners and 45% of sharemilker/contract milkers feeling that they are business partners setting the annual plan together with an aim to maximise the profitability for both businesses. When asked what they think the relationship should be, 57% of the farm owners believed it should be a business set to maximise the profitability of both businesses, while 83% of sharemilker/contract milkers believe this should be how the relationship works. **This highlights a disparity in thinking between owner and sharemilker.**

Currently 26% of farm owners and 21% of sharemilker/contract milkers currently feel that the business is set up with the farm owner setting all the targets and how they want the farm to run and the sharemilker/contract milker responsible to achieve these. Not many people believed this is how the relationship should be with only 4% of each group selecting this option.

There were 17% of farm owners and 35% of sharemilkers/contract milkers that currently feel the farm owner is providing the land, and the sharemilker/contract milk is responsible for setting targets and running as their own to provide a financial return to the farm owner. Less sharemilkers (13%) but more farm owners (19%) believe this is how the relationship should be in an ideal situation.

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**Figure 18: Survey results showing how farmers see their relationship with the farm owner (FO)/sharemilker/contract milker (SM/CM) now and compare this to how they think it should be**
The survey also asked how many businesses shared their financial information with their farm owner/sharemilker/contract milker. This showed that 38% of farm owners and 42% of sharemilker/contract milkers had shared some aspect of their financial budget with the other party. Many of the respondents that identified with ‘other’ commented that they had had general conversation about their position but no specifics.

![Figure 19: Survey results showing the percentage of respondents that have shared aspects of their financial budgets with their counterparts](image-url)
5.0 IMPACT OF VOLATILITY ON PROGRESSION

Although volatility is not new, the milk price troughs currently seem to be deeper and last longer than in the past. This volatility has significant impacts on the business including cash returns, equity growth, and difficulty in setting fair contracts at the start of the season.

With the inter-seasonal volatility in milk price, it can be very difficult to set a fair income split between the farm owner and sharemilker for a VOSM agreement. The variable order sharemilkers bring only a very small investment into the business and therefore generally have very low equity levels. To illustrate this point, if at the start of the 2014/15 season a variable rate agreement set up at 21% when the milk price was estimated to be $7.00 the variable rate sharemilker would be looking to receive $1.47/kgMS. From this, the typical costs of labour, electricity, fuel, provision of motorbikes need to be met. These costs are largely fixed, with little room for the sharemilker to reduce them. Therefore, when the milk price dropped to $4.39 their income dropped to $0.92/kgMS, and many VOSM were in a position of financial loss for the year, with limited or even negative levels of equity.

This volatility can result in significant shifts in equity growth from one season to the next. As cow prices are strongly correlated to milk price it has significant implications for the equity of herd owning sharemilkers as the majority of their assets are in the form of cows. Figure 20 shows the significant changes to the return on assets, with the blue line including the value of the cows, and the red line indicating the cash return on investment. The drop in milk price and cow values over the past 18 months will have had a significant negative impact on the return on total assets. However, farmers that are able to enter a herd owning sharemilking position at the right time when cow values are low can experience significant increases in equity over a short period of time.

Any changes to cow values are only realised when the cows are sold.
Increased volatility in the industry therefore exenterates the importance of timing in terms of people’s first herd owning sharemilking position and the timing of selling cows to purchase a farm or do something else in their career. With the decline in herd owning sharemilking positions over time this timing is increasingly difficult to control.

There are positive aspects that are a result of volatility and a period of low milk price. It provides a great opportunity for those looking to take the next step, particularly if they are looking at purchasing their first herd of cows. The approach taken by the individual sharemilker will depend on their appetite for risk and their perceptions of future milk prices.
Figure 21: Survey responses – When thinking about your business do you agree, disagree or neither with the statements listed

- **I am looking for business opportunities that will come out of this downturn and enable my business to grow**
  - 60% Agree
  - 20% Neither
  - 20% Disagree

- **I am looking for a second/another sharemilking/contract milking position**
  - 30% Agree
  - 40% Neither
  - 30% Disagree

- **I see this downturn as an opportunity to grow my business**
  - 50% Agree
  - 30% Neither
  - 20% Disagree

- **I am concerned about the impact of the current milk price on the dairy industry**
  - 40% Agree
  - 20% Neither
  - 40% Disagree

- **I am concerned about the impact of the current milk price on the local communities**
  - 30% Agree
  - 30% Neither
  - 40% Disagree

- **I am concerned about the impact of the milk price on peoples ability to progress in the industry**
  - 20% Agree
  - 40% Neither
  - 40% Disagree

- **There are always ups and Downs in the milk price, the downturn will force some businesses...**
  - 40% Agree
  - 20% Neither
  - 40% Disagree

- **I am concerned the industry will lose some of it’s top talent as they become disheartened and...**
  - 30% Agree
  - 30% Neither
  - 40% Disagree

- **Attracting top people into the industry will become more difficult**
  - 40% Agree
  - 20% Neither
  - 40% Disagree

- **A downturn like this early in someone’s career is not a bad thing - it’ll sort out who really wants...**
  - 30% Agree
  - 30% Neither
  - 40% Disagree

- **Low milk price will open up opportunities for those willing to take them**
  - 40% Agree
  - 20% Neither
  - 40% Disagree

- **The industry needs something like this to bring land prices back to realistic levels**
  - 30% Agree
  - 30% Neither
  - 40% Disagree

- **The industry needs something like this to bring land prices back to realistic levels**
  - 30% Agree
  - 30% Neither
  - 40% Disagree

- **Attracting top people into the industry will become more difficult**
  - 40% Agree
  - 20% Neither
  - 40% Disagree

- **A downturn like this early in someone’s career is not a bad thing - it’ll sort out who really wants...**
  - 30% Agree
  - 30% Neither
  - 40% Disagree

- **Low milk price will open up opportunities for those willing to take them**
  - 40% Agree
  - 20% Neither
  - 40% Disagree

- **The industry needs something like this to bring land prices back to realistic levels**
  - 30% Agree
  - 30% Neither
  - 40% Disagree
6.0 CONCLUSIONS

6.1 Volatility

Significant fluctuation in milk price is causing significant variation in financial returns for sharemilkers and farm owners, as well as impacting on herd values, which in turn is a key determinant of sharemilker equity. This highlights the importance of timing of entry and exit into sharemilking arrangements, particularly for herd owning sharemilkers.

6.2 Viability

There is little difference in financial return for a farm owner with a manager or with a variable order sharemilker. However, there is a significant reduction in return on asset if the farm owner employs a herd owning sharemilker. The three-year average return on asset for a herd owning sharemilker (2013 - 2015) is 12%. While the individual businessperson will ultimately decide what an acceptable return on investment is, as a comparison, a cashflow based business in an urban environment would typically target a 20% return on investment in return for the risks involved.

With regard to equity levels, the industry is seeing situations whereby variable order sharemilkers or herd owning sharemilkers can end up with negative equity simply due to the rapid change in milk price, and sharemilking agreements and structures have struggled to keep pace.

6.3 Aspirations

There is a noticeable trend away from sharemilkers aspiring to farm ownership. While in some cases this is almost certainly due to the fact that sharemilkers are seeing farm ownership as a goal beyond their reach, there are increasing instances whereby the sharemilker is content to remain in their position until retirement or career changing.

6.4 Alternative Options

The workshops and surveys indicated two key points:

(a) There is an increase in the level of modification of the standard herd owning contract milking and variable order sharemilking agreements, e.g. maximum and minimum thresholds.

(b) There is a lack of understanding of alternative options, and a fair degree of caution amongst all parties about undertaking these options until further information is provided. 57% of farm owners surveyed indicated the business relationship between farm owner and sharemilker should be designed to maximise profitability of both businesses, whereas 83% of sharemilkers believed this should be the case. This highlights some disparity in thinking between owner and sharemilker. The survey also illustrated that only approximately 40% of farm owners and sharemilkers shared their financial budgets with the other party to ensure alignment of plans and targets. Overall, while many sharemilking arrangements work well, there is still room for improvement.
7.0 RECOMMENDATIONS

(i) Risk versus return

The issues of risk versus return do not appear to be well understood. For example, there is a definite trade-off between a contract milking agreement that eliminates financial risk of payout variability compared to a variable order sharemilking arrangement which includes this risk. The flow charts that have previously been prepared (reproduced in the appendices) illustrate suggested pathways based on preference for risk. It would be useful to expand on these spreadsheets and make further use of them within the industry. If undertaking this further there is the option of preparing more detailed financial examples with regard to level of risk, and financial investment required and likely returns.

(ii) Alternative structures.

It is suggested that although current sharemilking agreements are not necessarily broken, there is opportunity for further refinement. For example, in the 2015/16 season if the variable order sharemilking agreement included standard clauses around altering the percentage based on milk price (maximum/minimum thresholds), would there have been such a significant transition from variable order sharemilking agreements to contract milking or management agreements mid-season?

It is suggested that industry debate and awareness around sensible modifications to sharemilking arrangements is discussed, e.g.
- Variable order sharemilking agreements with a minimum income level (based on dollars/kgMS).
- Contract milking agreements with variable rates (depending on payout)
- Herd owning sharemilking agreements with maximum/minimum returns for the sharemilker.

As individual farm businesses experiment with options, the industry needs to learn from these initiatives.

Ultimately the market will decide the best approach to this, and there are a number of individuals who are currently investigating alternative options. The next step may be to contact some of these individuals and gather further information on specific examples, with a view to using this information for further industry awareness and discussion.

(iii) Industry Statistics

As contract milking becomes a more important and defined segment of the sharemilking sector, it is recommended that industry statistics be recategorised to enable collection of data for this group specifically.

(iv) Due Diligence

The research highlighted that in general there is a lack of due diligence when entering new business arrangements using sharemilking agreements. In general terms there is a positional power imbalance between farm owner and sharemilker due to issues around supply and demand (of sharemilking positions), but also around age, experience and wealth (useful for undertaking due diligence). There were many anecdotal instances
provided throughout the course of this research whereby sharemilkers had entered into new sharemilking arrangements without fully understanding the farming style and personal dynamics of the other party, the physical aspects of the farm, the feeding philosophies of the other party, or the financial position of the other party. Without fully researching these points, there is a definite risk of creating a mismatch between owner and sharemilker, which ultimately can lead to failure through lack of financial performance, or simply a deterioration of the business relationship. When looking at resources available to sharemilkers, while there are a range of resources available, there is an opportunity to package these up into a due diligence checklist that could assist sharemilkers and help redress the positional power imbalance previously described. For example, the checklist could include:

- Interview questions for the prospective sharemilker to ask the farm owner, e.g. farming philosophy, financial backing
- Reference checking of farm owner
- Key points with regard to negotiation skills (with farm owner but also for purchasing stock which is a major capital transaction for a young person)
- Advice on preparing financial plans, and bank guidelines regarding financial viability
- Due diligence checklist for physical aspects of the farming operation
- Where to seek professional help

Ultimately the industry will dictate its own direction. Any initiatives undertaken will help smooth out some of the volatility, with the ultimate aim of keeping good people in the industry.
What type of operating structure should I pursue for progression?

- Willing to accept risks of land price changes, can stay in investment for 5 years +
  - Equity partnership in land ownership
- Not keen to invest 5 years +, or have risks of changes in land values, or limited equity
  - Equity partnership in herd owning sharemilking
- Willing to share my business with others
  - Farm ownership
  - Lease
  - Herd owning sharemilking
- I have equity to invest
  - Prefer to keep my investment as my own
  - Normally minimum equity of $500,000
- Little or no equity
  - Willing to accept some financial risk
    - Willing to accept payout variability risk?
      - Yes
        - VOSM
      - No
        - Contract milker
    - Not keen to take on financial risk
      - Manager
- Other considerations
  - Normally minimum equity of $1.5 m
  - Can be difficult to find
- Off farm investments are also an option

Review situation and option after each step
As a farm owner, what type of operating structure should I have?

1. Release capital
   - Willing to share in land ownership
     - Yes → Equity partnership
     - No → Hardowning sharemilk
   - Other party to share the risks
     - Yes → VOSM
     - No → Contract milker
   - No need to release capital
     - Other party not sharing risk
       - Manager
       - Do they share payout risk?
         - Yes → Herd owning sharemilk
         - No → Lease
         - No need to release capital
           - Do they share risk?
             - Yes → VOSM with supervisor
             - No → Contract milker with supervisor
   - Do I want a high level of involvement?
     - Yes → Release capital
       - Want to maximise ROI
         - Yes → VOSM
         - No → Lease
       - No need to release capital
         - Do they share risk?
           - Yes → VOSM with supervisor
           - No → Contract milker with supervisor
       - Other party to share the risks
         - Yes → VOSM
         - No → Contract milker
2. Would I prefer a low level of involvement?
   - Yes → Release capital
     - Do they share payout risk?
       - Yes → VOSM
       - No → Contract milker
   - No → Manager with supervisor

Review situation and option after each step

Off farm investments are also an option

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