

Livestock Valuation

The latest worldwide food crisis broke out in 2007 to 2008. Higher market prices of food triggered an extraordinary increase in the number of hungry people. There has been growing concern on the importance of stable food prices. Livestock is generally defined as domesticated animals raised in an agricultural setting to produce labor and commodities. Food derived from livestock is an important source of protein, energy, calcium and micro-nutrients — all of which are essential to people's health. Simultaneously, market price of livestock is equally important to the animal feed industry. The fluctuation of livestock's market prices has a significant impact on animal feed companies.

How livestock importance to us¹

Most common livestock includes cattle, pig, chicken and sheep. Livestock contributes 40% of the global value of agricultural output and supports the livelihoods and food security of almost 1.3 billion people. The livestock sector is one of the fastest growing parts of the agricultural economy. The growth and transformation of the sector offer opportunities for agricultural development, poverty reduction and food security gains, but the rapid pace of change risks marginalizing smallholders, and systemic risks to the natural resources, and therefore, human health must be addressed to ensure sustainability.

In many developing countries, livestock keeping is a multifunctional activity. Beyond their direct role in generating food and income, livestock is a valuable asset, serving as a store of wealth, collateral for credit and an essential safety net during times of crisis. Livestock is the world's largest user of land resources, with grazing land and cropland dedicated to the production of feed representing almost 80% of all agricultural land. Feed crops are grown in one-third of total cropland, while the total land area occupied by pasture is equivalent to 26% of the ice-free terrestrial surface.

The importance of livestock valuation

According to Hong Kong Accounting Standard 41 Agriculture, a biological asset is "a living animal or plant" and an agriculture product is "the harvested product of the entity's biological asset". Livestock is a type of biological assets under HKAS 41, under which a biological asset shall be measured on initial recognition and at the end of each reporting period at its fair value less costs to sell, except for the case where the fair value cannot be measured reliably. The change in fair value of livestock has a material effect on the financial performance of animal feed companies. Thus, a fair and accurate valuation is crucial for the financial reporting, merger and acquisition of animal feed companies.

¹ Source: "FAO role in animal production", Food and Agriculture Organization of the United Nations, 2019

Commercial **application of livestock valuation**

Financial reporting

HKAS 41 requires to measure the biological assets at fair value initially and subsequently at the end of each reporting period.

Merger and acquisition

Livestock valuation techniques now play a significant role in merger and acquisition activity. Potential acquirers of the animal feed companies increasingly use livestock valuations to provide comfort that the price being paid for a company can be substantiated by reference to the value of specific biological assets as well as the other tangible assets being acquired.

In 2018, merger and acquisition in animal feed sector was keen. Numerous transactions in this sector were completed. The following is a selected major transaction in the sector:

Land O'Frost purchases Wellshire farms²

Land O'Frost, one of the nation's best-selling brands of pre-sliced deli meats and a producer of specialty sausage products, announced on 2 April 2018 that it has purchased Wellshire Farms.

Wellshire, based in Swedesboro, New Jersey, is an established and respected leader in the natural and organic meat and poultry space whose products are sold in specialty grocery retailers such as Whole Foods Market, Trader Joe's, Sprouts Farmers Market, Earth Fare and Natural Grocers by Vitamin Cottage. Following this transaction, Land O'Frost immediately becomes a significant player in the fast growing natural/organic category.

The livestock valuation is essential to either the financial reporting or merger and acquisition of animal feed companies. A fair and accurate livestock valuation heavily relies on the appropriate valuation methodology and assumptions adopted.

Technical **application of livestock valuation**

The common valuation methodologies considered in the livestock valuation are as follows:

1. Cost approach
2. Income approach
3. Market approach

² Source: " Land O'Frost purchases Wellshire Farms", WATTAgNet.com, 2018

Methodologies on livestock valuation

Approach	Description	Whether Suitable for Livestock
The Cost Approach	The cost approach determines the value of a livestock by deciphering the overall cost in re-creating a livestock. This approach applies either the historical cost or the replacement cost in finding the value of a livestock.	Cost approach is appropriate for the case that the impact of the biological transformation on price is not expected to be material on the livestock (i.e. the initial stage of livestock production cycle). The historical cost determines the value of the livestock as the sum of accumulated costs expended on the livestock to date; while the replacement cost estimates the cost that would be incurred to replace the asset if it is destroyed.
The Income Approach	The income approach adopts an assumption that the livestock value is determined by calculating the present value of the net economic benefit over the life of the asset.	Income approach is appropriate valuation approach for the cases where no active market exists for such livestock. The commonly used method under income approach on livestock valuation is discounted cash flow model.
The Market Approach	The market approach focuses on the quoted price in the market in determining the value of the livestock. This approach may easily be comprehended; however, for this approach to work, the market price of the livestock must be observable.	Active market of livestock usually exists. Market approach is appropriate for livestock valuation where its market price is observable in the market.

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