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Winning through the Supply Chain

From Chasing Price to Adding Value in the F&A Sector

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Rabobank International

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From chasing price to adding value

Managing the supply chain is a topic that always comes up in our discussions with F&A companies. Experienced executives in all sectors talk to us about the price pressure they face from their customers. They talk about the challenges of securing supply based on physical availability in the near term and on what they will need to reach their growth aspirations in the longer term. Their main concern, of course, is being able to maintain and grow their margins.

We know why these issues keep coming up. In the last five years, structural tightness in agri commodity markets has become a constant. In the second half of 2012, we saw another episode of record high prices, triggered this time by drought across the United States. Consumer confidence has remained at low levels, keeping a lid on prices in end markets and exacerbating pressure on F&A supply chains. In our view, this situation is not about to change: in fact, the operating environment and challenges for F&A companies are becoming even more complex.

So how do F&A companies grow their businesses under these conditions? How do they grow while managing the pressure, navigating through the complexity and positioning for a future in which food production needs to increase markedly from an already stressed resource base? These are the questions we pose and answer in this report.

In 'Re-thinking the F&A Supply Chain' in 2011, we mapped out a continuum of sourcing strategies that F&A companies could adopt to improve their control over sourcing. Its starting point was that companies are elevating the significance of supply and sourcing, in response to higher prices and volatility.

This report goes much further. Here we recognise how complexity has grown within the F&A operating environment, heaping even more pressure onto F&A supply chains. We argue that the best opportunities for F&A companies to reach their growth aspirations lie in closer cooperation along the supply chain. Companies need to shift their approach from chasing price to adding value.

Some F&A companies are already maximising value in a dedicated supply chain model. We believe this report will help them develop their approach further. Other F&A players are looking to take their first steps on this road. This report will clarify the issues and benefits for them in both the near and long term. Some F&A companies will choose to keep chasing price in the open market. This report will give them insight into how that market will change under the influence of companies cooperating in dedicated supply chains. There are also some F&A companies that are already thinking further ahead than the dedicated supply chain model; they see closer cooperation as a stepping stone to reorganising business operations to achieve longer term growth.

I look forward to discussing the analysis and ideas in this report with all F&A companies, from farmers to processors and retailers. With those best placed to lead and initiate change, and those who will follow.

Sipko Schat
Member of the Executive Board, Rabobank

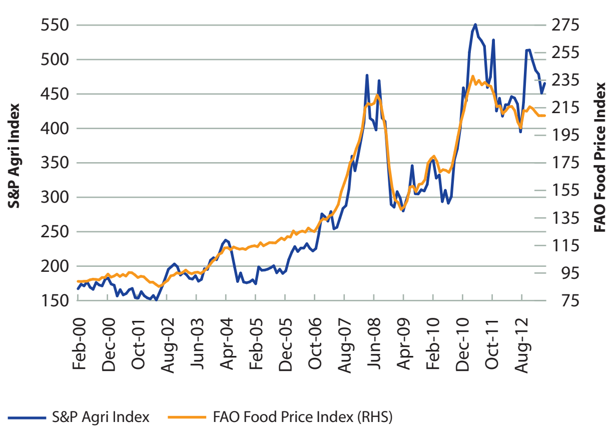
1 Looking for success amid growing F&A complexity

For a long time, the food & agribusiness (F&A) sector has been comforted by the knowledge that whatever was happening in the world, people would always need to eat. Supply may have varied in line with changes in the weather and planting decisions made by millions of farmers around the world, but demand was steadily growing. F&A players were glad that demand within the sector did not mirror the cyclicality of discretionary consumer goods markets or suffer shocks from global macroeconomic events. But F&A has changed in response to new dynamics within the sector and as a product of economic, political and social changes in the wider world.

The F&A sector is currently adjusting to pressures created by uncertainty, volatility and complexity. At the heart of this adjustment is the need to rebalance the traditional dynamics of supply and demand with the fragile and uneven outlook for global growth and the ongoing series of spikes in agri commodity prices (*see Figure 1.1*).

Producers in most sectors rejoice at the sound of high prices, and especially record prices, but the F&A sector is genuinely different. While agri commodity prices are high, and have in fact doubled in less than a decade, F&A companies have not been able to pass on all the cost increases. In developed economies, consumers have become accustomed to spending a decreasing share of their

Figure 1.1: Agri commodity price spikes of recent years are expected to continue



Source: Bloomberg, Rabobank, 2013

household budgets on food, and in some developing economies, governments have intervened to protect domestic supply and enhance stockpiles to keep a lid on prices paid by end consumers. F&A companies' inability or reluctance to pass the full extent of agri commodity price rises through to end consumers, and the implications of this along the supply chain, is a major dynamic and driver of the adjustment within the F&A sector.

The players in F&A supply chains are now being asked to do more than ever before: produce more with fewer resources, access new markets, reduce costs, respond to new consumer demands, adapt to new outside influences and prepare for a long-term structural increase in demand (*see Figure 1.2*). So to ensure success, F&A companies must increasingly strengthen the supply chains they are a part of.

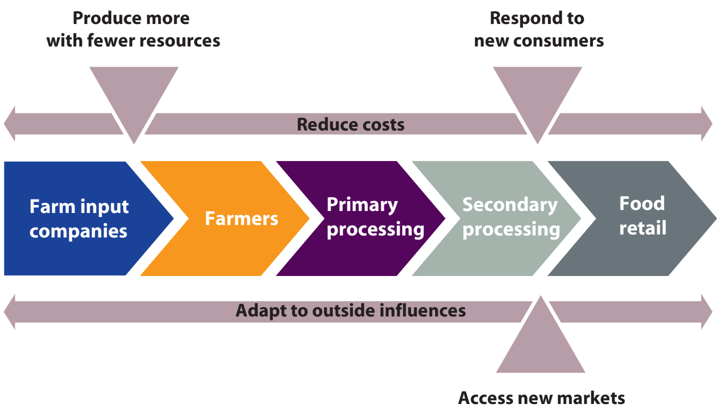
Supply chains and relationships within the F&A sector are not as well developed as in other sectors. In the automotive, consumer electronics, clothing, and oil & gas sectors, for example, downstream companies with big brands anchor their success in sophisticated relationships with suppliers all along the chain. Suppliers in these sectors are more deeply engaged in contributing to the success of a big brand than in F&A, based on longer term agreements with more sharing of risk and reward. Given the current pressure on F&A supply chains, lessons can probably be learned from winning strategies in other sectors.

Winning through the supply chain should now be a major theme for F&A companies. Turning the pressure into a new business and organisational model for F&A supply chains will bring more success than battening down the hatches and waiting for the pressure to dissipate.

Rabobank's long-term view is that a new paradigm, such as the circular economy model, will be needed to facilitate growth, given the scale of demand expansion and looming resource constraints. Productivity growth, yield enhancements and resource efficiency will be value drivers on this journey, as will access to growth markets. However, implementing a new paradigm of this scale takes time, and a near-term solution is also needed. Rabobank believes that the formation of dedicated supply chains is the key to extracting more value from the F&A supply chains and chain partners in the near term, and to success for F&A companies in the coming years (*see Box 1.1*). Dedicated supply chains will help forge supply chain partnerships, engage with players more than one step away in the chain, and generate greater value from cooperation in the supply chain than from working alone. Forming dedicated supply chains will also position F&A companies to take the subsequent step towards adopting the circular economy model.

The overall outlook for the F&A sector is undoubtedly positive. While it will be challenging to increase food production by the magnitude needed—especially given the current pressures and complexity—for most F&A companies, the problem of meeting increasing demand is a good one to have. Change at the sector level, throughout the supply chain and within companies themselves, is inevitable. There is no simple solution in a process of change like this, and there will be winners and losers. Given the level of changes that are underway, the key to winning for F&A companies is through the supply chain, and those companies most engaged with their supply chains are more likely to be winners.

Figure 1.2: F&A supply chains are being asked to do more than ever before



Source: Rabobank, 2013

Box 1.1: Dedicated supply chains—a significant step forward in F&A

The defining characteristic of dedicated supply chains is a shared commitment between companies to work closely together, generally from one end of the chain to the other.

This commitment is usually formalised on a medium-term basis, and is based on supply that is 'dedicated' to meeting the needs of the 'captain' at the downstream end of the chain. The 'dedication' is to cooperate along a supply chain and should not imply that a company dedicates all of its available supply to just one chain.

Dedicated supply chains involve companies who normally interact but have made the decision to cooperate differently. They do this because they see more value in closer, more formalised cooperation than in working alone. Importantly, they agree that overall business value creation is stronger through this model than a traditional approach to regular negotiations over price.

2 The unprecedented pressure on the F&A supply chain

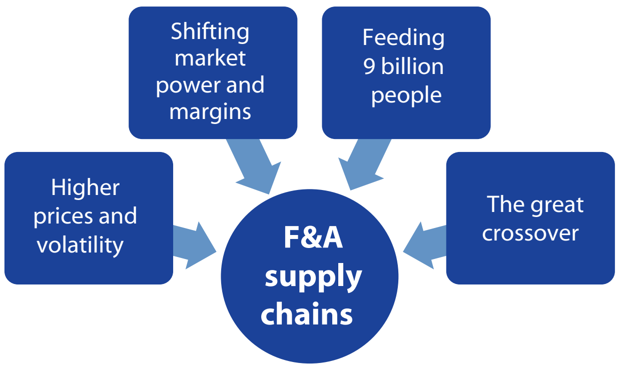
Four drivers are exerting pressure on the supply chain

Pressure on the F&A supply chain has reached unprecedented levels over the past decade, ratcheted upwards by four drivers. Three of the drivers—rising agri commodity prices, shifting market power and margins, and feeding 9 billion people—are now well known, while the fourth, the great crossover, is new (*see Figure 2.1*).

The first driver, rising agri commodity prices and increased volatility, has moved F&A into an era of agri commodity scarcity[1]. As a result, sourcing has shifted from an operational to a strategic function as F&A companies pursue new strategies to improve control over supply and manage increases in both price and volatility.

The second driver, shifting market power and margins, refers to pressure on margins for processing companies as well as improvement in margins for input companies upstream and retailers and foodservice companies downstream as they command more market power. Managing pressure on margins is a perpetual challenge for F&A companies, which has been compounded by the agri commodity scarcity. Price signals in F&A can be confusing. Agri commodity prices have recently reached record levels, yet this price signal has been dampened as it has moved down the supply chain, and

Figure 2.1: Pressure on the F&A supply chain from four drivers has reached unprecedented levels



Source: Rabobank, 2013

[1] *For a more detailed discussion on the specifics of this transition, refer to Rabobank's report 'Re-thinking the F&A Supply Chain: Impact of Agricultural Price Volatility on Sourcing Strategies', September 2011*

food prices paid by consumers have not risen by the same amount. This creates pressure on margins, which is exacerbated by increasing requirements
on production and process controls used to meet food safety and sustainability requirements, for example.

The third driver is the long-term challenge of feeding a population that is set to reach 9 billion by 2050. The effect of population growth is compounded by significant expansion of the world's middle-class population, with dietary preferences shifting to meat and dairy. A parallel shift to a more urbanised global population will also require adjustments in F&A supply chains. The resource challenge is another compounding factor of demand growth as more food means more land, water and other inputs—this is now known as the energy-water-food nexus. It refers to the challenge of meeting growing demand for food (50 percent growth by 2030, according to the FAO), water (30 percent growth by 2030, according to International Water Management Institute) and energy (30 percent demand growth by 2030, according to the International Energy Agency). The nexus proposition is that these demands need to be managed interdependently—growth in one area cannot be met without recognition of the resource needs in each of the other areas.

The final driver of pressure on the F&A supply chain, the great crossover, has not yet been widely recognised. The F&A sector is going through a period of adjustment to several complex factors, including the boom in demand during the last decade and the shifts in supply and prices that are still taking place, as well as a growing number of external agendas. Rabobank calls this complexity the great crossover—referring to the external agendas crossing over into the F&A sector in a material way. This complexity is compounding the existing pressure on F&A supply chains.

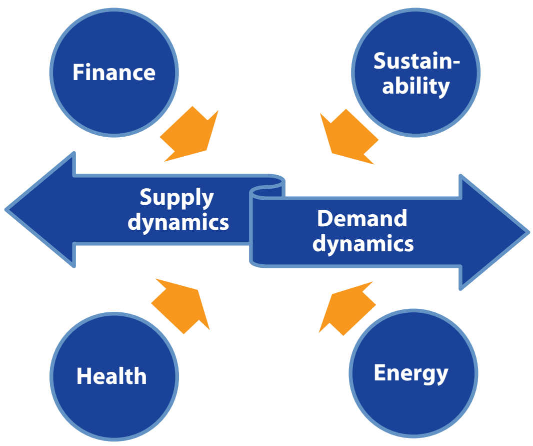
The great crossover significantly increases complexity for the F&A sector

The great crossover in F&A took place sometime in the last five years, without fanfare. The F&A sector has always been connected to the wider world and its many influences, including politics and trade and social development topics such as hunger and food security. However, before the great crossover, the overall direction of the F&A sector was tied to the dynamics of supply and demand, and when outside influences occasionally made themselves felt, it was more as a light hand on the tiller than as a driving influence.

The great crossover marks the time when the direction of the F&A sector became materially influenced by a number of external agendas. These agendas include finance, health, sustainability and energy—issues that have long been relevant, but have now crossed over into the F&A sector in a significant way (*see Figure 2.2*). When exactly the great crossover took place is not important. What matters is that it has happened, that the F&A sector is now materially affected by these outside influences, and that it has become increasingly complex as a result.

The main trigger for the great crossover was the transition into an era of agri commodity scarcity from an era of surplus. Furthermore, as agri commodity prices have risen and become more volatile, outside interest in the F&A sector has grown.

Figure 2.2: Complexity created by the great crossover in the F&A sector



Source: Rabobank, 2013

Although the crossover took place almost unnoticed, its impact is here to stay. It has created a strong focus on the supply chain, as the issues and agendas it brought into F&A can rarely be effectively managed in isolation from the supply chain.

Increasing complexity for F&A businesses means more risk but also more opportunity. Managing more risk is challenging. But managing risk well, or at least better than the competition, and having better insights into how the external influences are shaping the F&A sector also create new opportunities for F&A companies. Increasing complexity is not necessarily bad news.

The finance agenda

The finance sector—including both lenders and investors—is currently more engaged with F&A than in past decades, and this looks set to remain the case into the foreseeable future. Accessing capital to invest in land, equipment, infrastructure and logistics, against a backdrop of weather risk and related commodity price cycles, where governments have a long history of intervening in markets, and where returns have not always been spectacular, has meant the F&A sector has always needed finance but has not always been an attractive prospect for returns. The F&A sector is even more interested in the finance sector today, given the limited availability of capital.

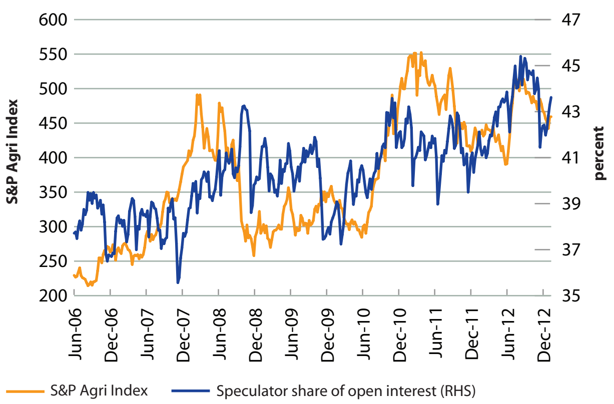
The finance sector expressed quite specialised and sometimes limited interest in F&A until about five to ten years ago, when higher and more volatile agri commodity prices triggered new interest from lenders and investors. This includes investors in agricultural land, commodity trade, and food production and sales. While F&A is affected by the general scarcity of liquidity, arguably, the sector now has better access to capital than prior to the recent spike in agri commodities, which triggered deeper engagement of the finance sector.

Perhaps the most noticeable aspect of the finance sector's crossing over into F&A has been the engagement of financial markets in agri commodity markets. As agri commodity prices began rising appreciably, traded commodity markets were growing in maturity and offering more sophisticated tools to help F&A companies manage market price risk. Speculators now play a significant role in the price discovery function of agri futures markets, and since the 2008 agri commodity rally, they have moved to increase their shares of these markets (*see Figure 2.3*). Speculators' (e.g. large hedge funds, small commodity pool operators and long only index funds) interest appears to be following the rise in prices. These investors' activities can elevate volatility in short-term price movements in some markets, but supply and demand fundamentals continue to drive medium and long-term prices.

Agri futures markets offer a way for speculators to diversify their portfolios and are regarded as a natural hedge against inflation and depreciation of the US dollar. The tight inventories that played a role in price increases of many commodities in 2007/08 drew the interest of investors that traditionally had little to do with agri commodity markets. The share of speculator open interest in the US agri futures markets has increased; the current 12-month average is 4 percentage points higher than the same period in 2006/07 (*see Figure 2.3*).

Regulators are taking steps to limit the influence of speculators on agri commodity prices, citing concerns over the volatility of

Figure 2.3: The growing interest of speculators in agri commodity markets



Note: open interest share of speculators in all the US agricultural futures markets

Source: Bloomberg, Rabobank, 2013

food prices. For example, in the EU, a proposed directive would introduce limits on the positions that speculators and traders can hold in agri commodity derivatives markets. Regulators in the US have already introduced similar limits. Non-government organisations in Europe, concerned about the impact of speculation on the affordability of food for the world's poorest people, are seeking stronger regulation to help ensure speculators and traders do not exert a strong influence on agri commodity prices.

The same increase in agri commodity prices has driven the crossover of the finance sector into other parts of the F&A chain. In South America, it is now common for agri commodity traders and farm input companies to offer finance to local farmers in the form of fertilisers, seeds and crop protection chemicals, in return for guaranteed access to agri commodities at harvest time. This is known as barter trade, and it helps farmers who may otherwise struggle to attract financing. The trader is advantaged by collateralising their accounts receivable with a crop, for which price risk can be hedged on commodity markets. While this was initiated in response to restrictions in local credit markets, it has grown through the greater interaction between the finance and F&A sectors.

The health agenda

Most consumers care about what they eat as it is central to their wellbeing, so the influence of health concerns on the F&A sector is nothing new. However, at the end of the last century, the way the health agenda affected the F&A sector began to change as the health implications of poor diet and lifestyle choices, principally obesity, started attracting increasing attention from governments and health authorities. Food processors, retailers and foodservice companies are responding to these concerns, especially in developed economies, where the obesity issue is most significant. However, these issues are not easily resolved, and as a result, the health agenda is set to materially influence the F&A sector for at least the next decade.

Consumer interest in health and wellness has become particularly prominent in the US, with the emergence of a US health crisis that has brought national, public and policy attention to the subject. Over one-third of the US adult population is now considered obese, and 8 percent has diabetes, while 17 percent of US children are considered obese, according to the US Center for Disease Control and Prevention.

Government actions—including high-profile campaigns that exhort greater consumption of fresh produce, a balanced diet and exercise—have focused on educating consumers on the impacts of the food choices they make. Regulations have been introduced, such as New York City's recent ban on large-sized soft drinks and its 2007 restriction on the use of trans fats in foodservice, as well as the federal menu labelling law passed in 2010, which requires chain restaurants to display calories and nutrition information. These steps do not go as far as the UK's 2006 ban on television advertising of foods high in fat, sugar and salt during children's viewing times, or Denmark's short-lived tax levied on the amount of saturated fat in food products.

Some food companies have moved to capitalise on increasing consumer interest in health. The US is now the world's largest market for health and wellness positioned processed foods, with retail sales totalling over USD 150 billion in 2010, about one-fifth of overall US retail food sales (*see Figure 2.4*). As a result, most US food brand owners, retailers and foodservice operators now consider the health implications of their products. For example, McDonald's menu now includes more 'wholesome choice' items, such as fresh fruits and vegetables, grilled chicken and whole grains. Walmart's 'Great for You' programme promotes the health benefits of certain foods and includes a pledge to reduce sodium and sugar in its private-label brands. The Walt Disney Company's recently announced ban on 'junk food' advertising directed at children means that to advertise on Disney's television networks, food makers will have to conform to a Disney nutrition policy that limits calories, sugar and sodium content.

Another dimension to the health agenda is food safety. In developed economies, food safety is often taken for granted, at least until there is a food-safety 'scare', such as the outbreak of a deadly strain of E. coli in northern Europe in 2011, which was incorrectly attributed to cucumbers, tomatoes and lettuce, therefore affecting producers. In developing economies, food safety remains a top-of-mind issue for many consumers. Opinion polls in China suggest that consumers there are uncertain about food safety, likely in response to a series of food-safety scares. For example, China's dairy sector has seen a number of recent food-safety scares, and as a result, systems that provide assurance around food safety have become a major feature of dairy supply chain development in China.

Globally, a number of independent food-safety schemes have been established, and supplier certification against a recognised scheme is one step some downstream F&A companies have taken to increase food-safety assurance. For example, companies such as Walmart, Coca-Cola and ConAgra Foods require suppliers to be certified against a food-safety standard recognised under the umbrella of the Global Food Safety Initiative.

The sustainability agenda

The sustainability agenda (i.e. the social, economic and environmental issues neatly summarised by the metric of people, profits and planet), now has strong links to the F&A sector. For some F&A companies, sustainability has always been part of their DNA; others are newer to the scene but are learning fast as witnessed by the expansion of corporate responsibility initiatives in response to a combination of consumer activism, peer pressure and tightening regulation. The trend is now clear; either in terms of reputation risk, long-term strategic sourcing or winning more business, tackling the sustainability agenda has moved closer to the top of CEOs' 'to-do' lists, where it looks set to remain.

As a major consumer and transformer of the environment, agriculture is on the frontline of many sustainability conflicts. Agriculture takes up over half of the world's habitable landscape, accounts for 70 percent of all fresh-water usage, and is responsible for 30 percent of greenhouse gas emissions (including through its supply chains). It also provides employment for 40 percent of the world's 7 billion people. If this were not enough, the demands placed on global agriculture will only become greater as it expands to feed a growing, more affluent and urbanised population. Given this scope of interaction, there is a significant opportunity to improve outcomes for both the environment and society by changing agricultural and food production practices as well as the way F&A supply chains are managed.

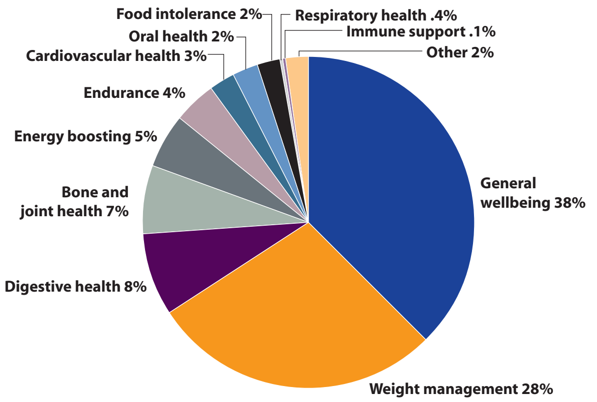
The interactions cover a broad scope, and correspondingly, there is a wide range of views on sustainability in the F&A sector. In Rabobank's view, there are eight major sustainability issues for F&A over the next three to five years, and each can been seen as an opportunity or risk (*see Figure 2.5*). None of these issues can be resolved quickly or easily—they will require cooperation between the F&A sector, governments, science and technology providers, and the community.

One particular initiative that is putting the sustainability agenda into action and bringing together the diverse elements of the F&A supply chain is being led by the global environment group, WWF. This group is engaging with the biggest F&A companies in what it cites as the 10 most important agricultural, forestry and seafood commodities, to encourage them to approach sustainability as a pre-competitive issue rather than as a competitive advantage (*see Box 2.1*).

The energy agenda

Energy crossed over into F&A about a decade ago and has become a material influence on the F&A sector in two ways: through the direct use of agri commodities as feedstocks for biofuel production, and more subtly, through increased awareness of the energy intensity of food production and of the challenges in providing energy to support future food production.

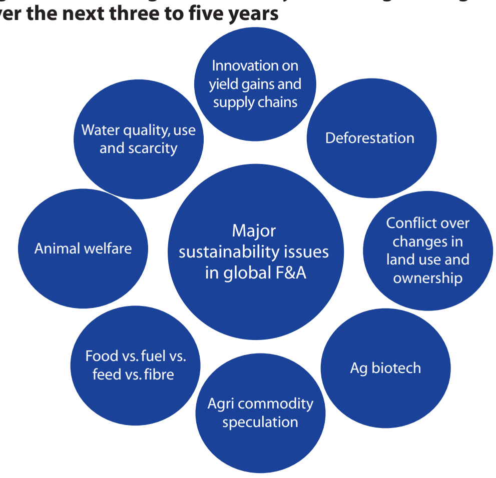
Figure 2.4: Sales of health foods show consumer interest in weight management



Note: Based on total sales of USD 153 billion in 2010

Source: Euromonitor International, 2012

Figure 2.5: Leading sustainability issues in global agriculture over the next three to five years



Source: Rabobank, 2013

Box 2.1: Moves to shift sustainability from a competitive to pre-competitive issue in F&A

WWF argues that consumers should not be forced to choose sustainability, and that all food products should be sustainably produced and consumed. By directly engaging with leading companies, WWF argues it will move the market towards a firmer sustainability footing and do so more quickly than by waiting for consumers to take coordinated action. Some F&A companies are reluctant to leave consumers outside the scope of such initiatives. They maintain that consumer signals in favour of sustainably produced food and beverages are a critical driver of business action, making consumer engagement an essential element of the process.

Examples of pre-competition include Mars' decision to release the cocoa genome sequence into the public domain. This is part of Mars' broader commitment to sustainably source all cocoa purchases by 2020. Unilever has made similar commitments on sustainable sourcing of agricultural inputs. Many other F&A companies, who also perceive long-term threats to their supply chains, are getting involved in the industry-specific roundtable initiatives such as those for beef, soybeans or sugarcane.

The production of biofuels has been a key driver of increased demand for agri commodities since the introduction of ambitious biofuel targets in the US and Europe about 10 years ago. Rabobank analysis indicates that biodiesel production now absorbs 12 percent of global vegetable oil production and has been responsible for about 30 percent of the total increase in vegetable oil demand over the past decade. Ethanol production in the US absorbs about 40 percent of the domestic corn crop or 14 percent of global corn production. As a result, biofuels have started to influence agri commodity prices—as the price of crude oil increases, the profitability of and incentives for biofuel production can also increase. However, biofuel markets are more heavily influenced by government policies than by energy and feedstock prices. Blending mandates and production incentives generate a supply and demand environment that is somewhat independent of commodity prices.

While the food versus fuel debate already has a particularly high profile, general awareness of the energy intensity of food production has been growing over the past five to ten years. Farming has become more energy intensive as labour units are replaced by machinery and as more energy-intensive farm inputs are used. Water for irrigation requires increasing amounts of energy as groundwater is being extracted from deeper aquifers and more distant sources. The development of cold chains in emerging markets and government policies in various countries to promote self-sufficiency through controlled production also requires more energy. The globalisation of supply chains also increases transport energy needs (e.g. fresh food air-freighted to meet out-of-season needs, and the logistics of managing modern food retail and foodservice).

As the FAO projects a 50 percent increase in food production is needed by 2030, producers will need to significantly increase production in the coming years. In determining how food production can be stepped up, energy is becoming a more material consideration in terms of the increase in energy used to produce more food and the link to the level of greenhouse gas emissions from agriculture and food production (*see Figure 2.6*).

Global food production is currently responsible for almost one-third of global energy use and a similar share of global greenhouse gas emissions, according to the FAO. The latter includes agriculture's responsibility for emissions as a major driver of land use change. While it may be possible to increase energy production to support a 50 percent increase in food production, it will be difficult to justify any increase in the greenhouse gas emissions currently associated with food production in a world that is aiming to at least halve emissions by the middle of the century. The need to resolve this challenge means that the crossover of energy into F&A is here to stay.

In addition to these specific crossover points, significant changes are currently taking place in the global energy landscape.

- Rapid expansion of shale gas production in the US is driving down electricity prices and could help make the US energy-independent in the next decade.

- The future for nuclear power is uncertain as some countries scale back nuclear power over safety and public-liability concerns, while others seek to expand.
- Renewable energy is growing, and integrating intermittent power generation into the grid is starting to become a challenge in some regions.
- Current carbon policy is failing to drive effectiveness in the energy sector to low emissions sources.

These changes are just beginning to influence the F&A sector, for example, by changing the relative prices paid for energy in different countries and regions. They are expected to have more material impacts in the coming years.

Implications of the four key drivers

Pressure on the F&A supply chain is being driven by higher prices and volatility, shifting market power and margins, feeding 9 billion people and the great crossover.

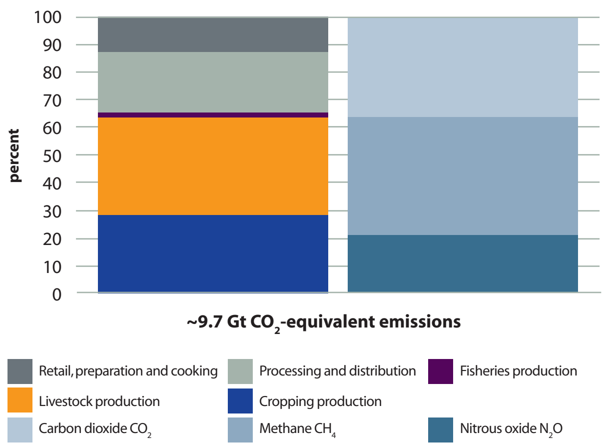
As a result of the great crossover, growing complexity now surrounds the F&A sector, and in Rabobank's view, this is not about to change. Not only does the great crossover represent a shift towards greater complexity in the F&A sector that will remain in place for the foreseeable future but also greater challenges for those managing F&A companies to develop a successful business strategy.

Put simply, companies at the downstream end of chain are under pressure to deliver more with less. In the near term, they will be under pressure to deliver food that responds to the various outside agendas. In the longer term, they will also be under pressure to deliver more food. While the timeframes and exact requirements of increasing demand may vary, one thing is a constant; it is difficult to increase prices for end consumers in the current competitive environment.

The only way for downstream companies to respond to these challenges is by asking for more out of their supply chains, which is what many are now starting to do. However, they are finding that their current supply chains are not always sufficiently well organised or formalised to manage the pressure they are currently facing.

F&A companies now need to respond to many issues as they seek to capitalise on opportunities and manage risks. This means the spotlight is very much on the way supply chains—particularly supply chain relationships—are managed. The question is how F&A companies can win through the supply chain.

Figure 2.6: Global food production is strongly linked to energy use and greenhouse gas emissions



Source: Food and Agriculture Organization of the United Nations, 2011

3 Change needed for F&A companies to win through the supply chain

The need for F&A companies to demand more from their supply chains has often placed downstream food processing, retail and foodservice companies in conflict with their supply chains. Downstream companies are under pressure to deliver more (e.g. additional supply and new attributes) in a more complex operating landscape, with more volatile prices, against a back-drop of steadily growing global demand. Upstream suppliers are willing and able to increase and enhance supply, but are looking for higher prices to signal the change. These price signals have not always been forthcoming, and as a result, many supply chains can be characterised as a tug-of-war between one end and the other. There has to be a better way to organise supply chains.

The need for change is clear and already widely accepted in the F&A sector; what is less clear, is how to make the change. In Rabobank's view, the winning strategy is to increase cooperation between companies in F&A supply chains, to manage pressure and build a platform for growth. Ultimately, this cooperation will need to lead to new business and organisational models. The circular economy model increasingly looks like the best way to fulfil this need in the long term (*see Box 3.1*).

While the principles are simple, the change they are directing is not. In the circular economy, an entire chain works together, optimising resource flows at each step in the process, maximising the value of all outputs and turning wastes into new cashflow opportunities[2]. This is big change in response to big challenges and requires a system transition rather than a series of incremental adjustments.

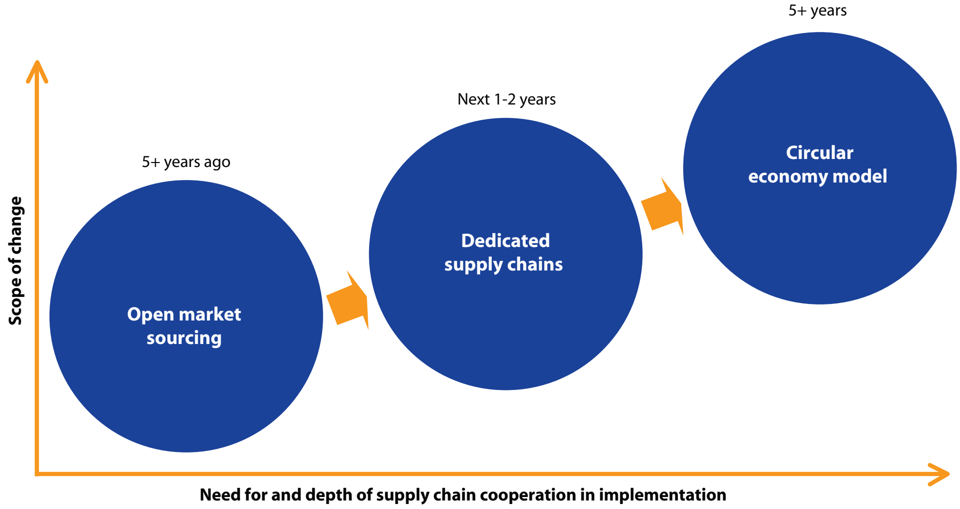
The circular economy model is a big step forward from the current open market sourcing model. It will take time to implement, so it cannot alleviate the pressure on supply chains in the near term. An interim step is needed, and Rabobank sees dedicated supply chains as the most effective way to manage supply-chain pressure while enabling growth. This transitional path would allow companies to progress from open market sourcing—the dominant business and organisational model of the recent past—to dedicated supply chains, and then to a circular economy model (*see Figure 3.1*).

An example from the seafood sector makes clear how this transition from open market sourcing to dedicated supply chains and the circular economy model can take place (*see Figure 3.2*).

In dedicated supply chains, F&A companies make a shared and formalised commitment to working together, which generally extends end-to-end along the chain. The cooperation between companies in a dedicated supply chain builds new levels of trust between them, fostering a basis for innovation in production processes, products and brands.

[2] The circular economy model and its role in the F&A sector is discussed in recent Rabobank reports 'What Makes the World Go Round; Pathways to a Circular Economy' (August 2012) and 'Pathways to a Circular Economy—A New Model for Food and Agribusiness' (October 2012).

Figure 3.1: The expected progression from open market sourcing to dedicated supply chains and to the circular economy model

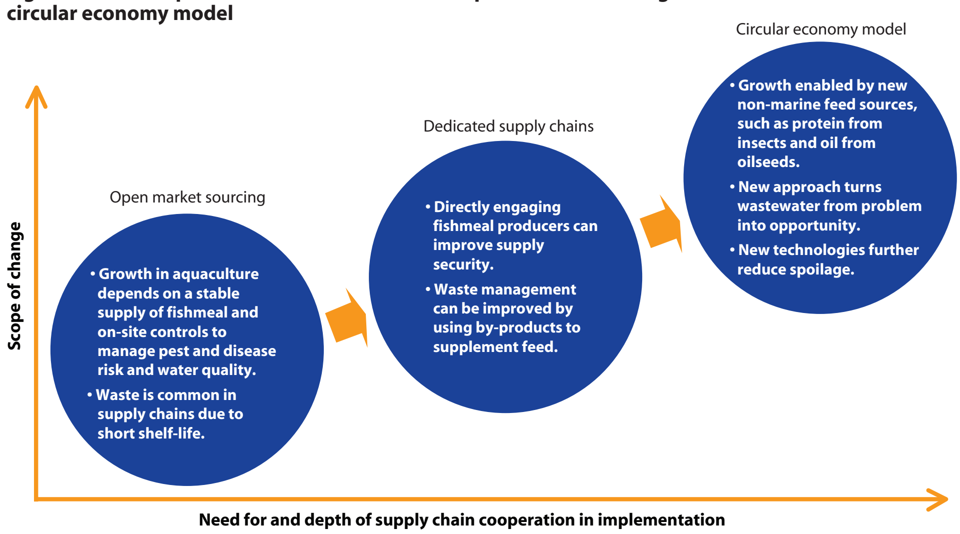


Source: Rabobank, 2013

It is this combination of trust and innovation that will be needed to establish circular economy models in the longer term. The circular economy model holds the prospect of transforming the use and management of resources, which do not necessarily change fundamentally in the dedicated supply chain model.

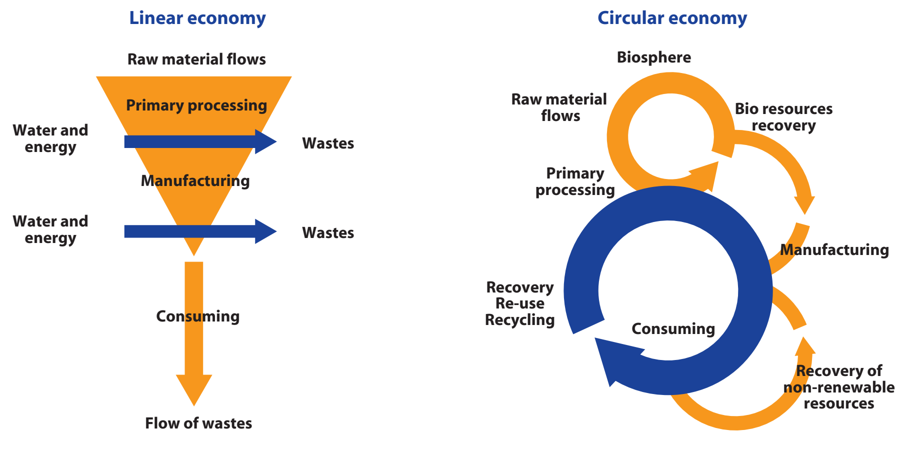
Dedicated supply chains and the circular economy model are not only responses to higher and more volatile prices they are also responses to increased pressure on F&A supply chains and increased complexity within those chains. Furthermore, both dedicated chains and the circular economy focus on what can be achieved through closer cooperation between companies along supply chains—one main aspect of the sourcing options mapped out in Rabobank's report 'Re-thinking the F&A Supply Chain'.

Figure 3.2: How aquaculture can transition from open market sourcing to the circular economy model



Source: Rabobank, 2013

Box 3.1: Shifting from a linear to a circular model requires a re-thinking of resource flows and supply partnerships



Source: Port of Rotterdam, Rabobank, 2012

In the linear economy, the central premise is to take, make, use and waste. The supply chain is built on separate steps, each with their own inputs and producing their own wastes.

Companies focus on their own processes and improve efficiencies in isolation from others. In addition, they focus on short-term competition, and this narrow outlook results in a tendency to make use of conventional feedstocks and products and a mentality based on incrementally 'doing things better'.

Resource depletion and waste threaten the continuity and availability of resource supply. This creates uncertainty in terms of physical availability and risks of new regulation to manage scarcity.

Businesses along the supply chain are organised and financed in different ways. Risks and profit profiles vary, but weak partners can impact others.

In the circular economy, the central premise is to make, improve and renew. Remanufacturing, reusing and recycling of products, by-products and residues eliminates waste and reduces raw material use.

Company focus is on cooperation to increase value along the supply chain. Companies work together to optimise the entire chain rather than working independently on each link. New products and alternative feedstocks are used and designed from a 'doing better things' mentality, where a shared long-term outlook influences short-term strategies.

Resources are given an elevated value—scarcity and pollution decrease as wastes are reused and inputs reduced to a minimum. The supply chain is integrated and risks and benefits are shared.

New opportunities for financing exist as added-value and decreased risk in one part of the chain translate to benefits in other parts of the same chain.

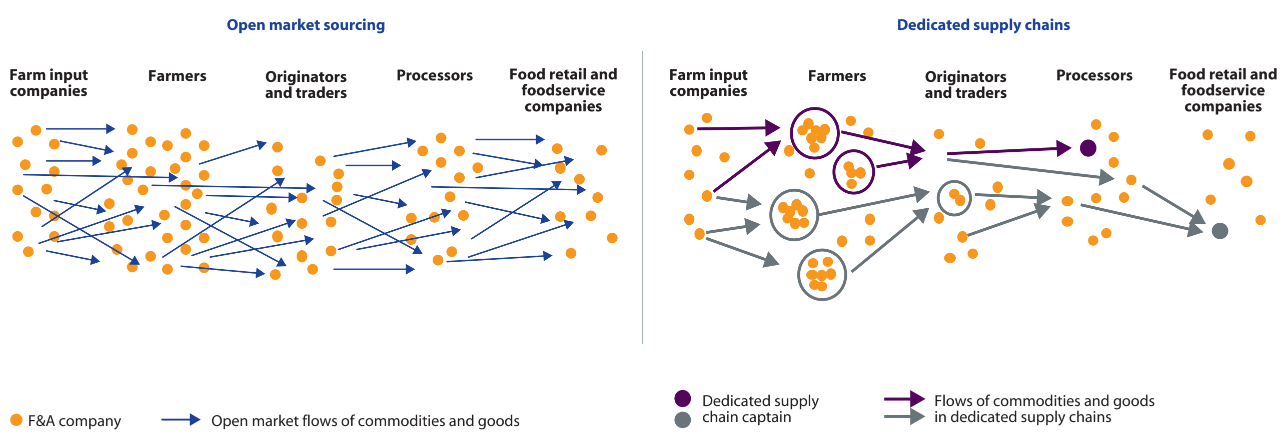
4 Adding value through dedicated supply chains

Dedicated supply chains are an impressive near-term approach

In Rabobank's view, the key to winning in the F&A sector is an even greater focus on the supply chain. Furthermore, the key to success in the supply chain is closer cooperation between F&A companies; for most companies, success is easier to achieve by working with others than by working alone. While ultimately we see the adoption of the circular economy model as an important step in transforming the F&A sector to a business and organisational model that can address future challenges, the transition to this model is not straightforward.

Rabobank believes that in the near term, closer cooperation will lead to the formation of dedicated supply chains in many cases (*see Figure 4.1*). We believe dedicated supply chains are a good business model for now and will help manage the pressure on F&A supply chains. They are also a good enabling step towards adopting the circular economy model in the future. Within dedicated chains, the relationships between companies shift from transactional connections—which are typical of the open market sourcing model where multiple parties negotiate over price—to transformational partnerships. These partnerships are based on creating mutual benefit—parties want to work together because they see shared value in doing so. The defining characteristic of a dedicated supply chain is a shared commitment

Figure 4.1: Shifting from open market sourcing to dedicated supply chains in the F&A sector



Source: Rabobank, 2013

between companies to work closely together, generally from one end of the chain to the other. This commitment is usually based on a formalised, medium-term agreement around supply that is 'dedicated' to meeting the needs of the 'captain' at the downstream end of the chain. Importantly, there is a continuous flow of information in both directions all along the dedicated chain, supporting the greater sharing of both risk and reward, rather than information flowing imperfectly through a series of transactions.

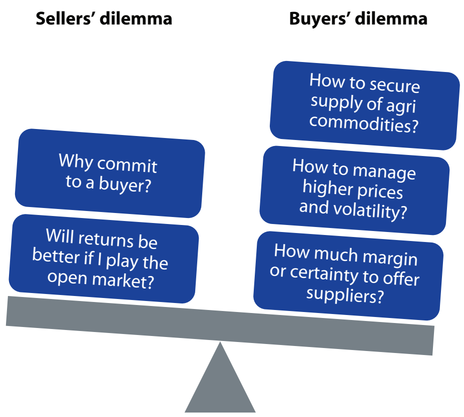
Aspects of dedicated supply chains are already in place in some segments of the F&A sector. In the sugar and dairy sectors, for example, close cooperation has long existed between farmers and processors to maximise the integrity and value of production and help ensure efficient processing as sugarcane and milk deteriorate quickly if not processed. Traditional long-term supply agreements and supply contracting are also similar to dedicated supply chains in many ways. However, the difference in dedicated chains is that these arrangements are formalised right along the supply chain, rather than created just to strengthen the link between adjacent supply chain partners.

In Rabobank's view, as dedicated supply chains continue to evolve, they will form the basis for competition in the F&A sector, replacing competition between individual companies. Competition will continue at the company level, based on joining chains, expanding roles within chains, and delivering productivity gains and innovation that allow companies to increase their margins.

The formation of dedicated supply chains is not the same as vertical integration or consolidation within the F&A sector, even though there are similarities. Both vertical integration and dedicated chains can enhance companies' ability to improve security of supply as both offer resilience against supply shocks. However, vertical integration offers direct control in situations where a company has the balance sheet, appetite and opportunity to expand its direct operations. By contrast, dedicated chains require no direct capital outlay and provide less control to downstream companies, while offering some flexibility to all companies in the chain. In dedicated chains, companies agree to deepen cooperation because they see mutual value in doing so, but they retain their individual identities.

Establishing or joining dedicated supply chains presents dilemmas for both buyers at the downstream end and sellers along the chain. All parties want to capture more margin and secure supply. The question for each is how much flexibility and potential upside do they need to trade-off to manage risk and achieve targeted returns (*see Figure 4.2*). For the main buyer, the question they need to consider is how much margin or certainty they should offer to secure supply, given the general concern over security of supply and higher prices and volatility. Suppliers need to consider the value in committing to a particular supply chain and whether the certainty that a dedicated chain can offer will lead to better returns than staying with open market sourcing. Each company that establishes or joins a dedicated supply chain needs to make a judgement call on these questions.

Figure 4.2: Buyers and sellers need to find a balance between risk and reward in a dedicated supply chain



Source: Rabobank, 2013

Defining attributes of dedicated supply chains

At the heart of dedicated supply chains is the sharing of risk and reward end-to-end along the chain. This underlying principle provides the basis for alleviating the pressure faced by F&A supply chains—more so than is possible under an open market sourcing model—and for extracting more value in the process.

Four attributes define this model: a downstream company being captain of the chain, the continuous flow of information in both directions end-to-end along the chain, new longer-term supply agreements, and the transformational nature of partnerships between buyers and sellers (*see Figure 4.3*).

A chain dedicated to supplying one downstream company

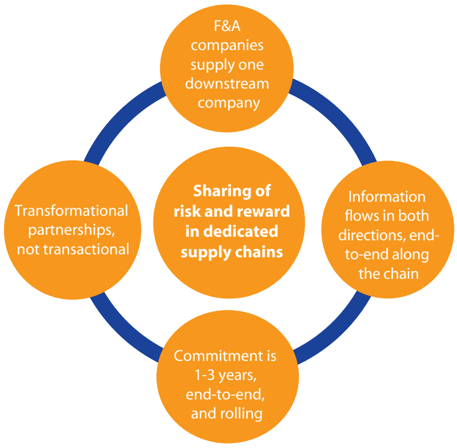
Dedicated chains represent a shift from securing supply based on open market sourcing and reflect the reality of operating in an era of agri commodity scarcity. At the head of the chain, the major processor, retailer or foodservice company acts as a captain, showing leadership and providing commitments to suppliers joining each chain.

F&A companies may belong to more than one dedicated chain, depending on the scale and scope of their operations. At the downstream end, F&A companies may establish several dedicated chains based on different products and requirements. In the midstream and upstream, companies may join several dedicated chains that supply the same output to different end-users. Producers may join one or several dedicated supply chains, and may also continue with an open market sourcing model to provide some flexibility and chance of upside. The 'dedication' is to cooperate along a supply chain to meet the needs of a company at the end of the chain and should not imply that a company dedicates all of its available supply to just one chain. In situations where suppliers are not willing to join a dedicated supply chain, the chain captain has three options: enhance the value proposition for suppliers joining the chain, invest directly in supply (backwards integration) or continue to rely on an open market sourcing model.

Major agri commodity traders, such as Cargill and Louis Dreyfus Commodities, belong to several dedicated supply chains and also operate through an open market sourcing model. This strategy is a response to the pressure on chains created by rising prices and volatility, and these companies are part of the movement of margins along the chain.

By contrast, US berry company, Driscoll's, which is active in North America, Latin America, Europe and North Africa, develops berry varieties and works with a short dedicated supply chain to ensure year-round supply. Driscoll's has a strong reputation for tasty varieties and imposes strict quality standards on growers. Driscoll's manages the supply chain to maintain high quality and a proper balance between supply and demand, which enhances its brand in the market. For growers, committing all supply to Driscoll's offers stable returns because marketing high-quality varieties attracts high prices, but this comes with the disadvantage that joining this chain can restrict flexibility.

Figure 4.3: Dedicated supply chains have many appealing attributes



Source: Rabobank, 2013

Continuous flow of information

On first inspection, the continuous flow of information along dedicated supply chains may not appear to be a major development. But the reality for many F&A companies is that they receive very limited information from suppliers and customers about their needs, and second-guessing those needs is always going to include some inefficiency. The continuous flow of information, end-to-end along the chain, allows all players in dedicated chains to optimise production to meet end-market needs.

In the fresh food segment, the continuous flow of information can make a material difference to production costs and to meeting demand shifts. For example, Dutch food retail chain, Albert Heijn, works closely with Vezet, a Dutch supplier of fresh-cut fruits and vegetables. Albert Heijn shares market information with Vezet, and this underpins a close working relationship that means Albert Heijn can access fruits and vegetables with consistent quality in required amounts, and gives the retailer the ability to react quickly to consumer trends and market circumstances. In return, Vezet has a chain captain that will share the risks of new investments by guaranteeing new product purchasing and can generate a reasonable and stable profit.

New agreements between suppliers and buyers

Agreements that lock-in supply provide certainty over revenues for producers, through-put for processors and the ability to meet market needs for downstream companies. In the F&A sector, supply contracting is already widely used to provide this sort of certainty, and extending this end-to-end along a chain is the foundation of the dedicated supply chain. Extending certainty for all parties in the chain provides the basis for working closely together, especially around innovation. Supply agreements tend to be longer in dedicated supply chains than in open market sourcing, and may be structured on a rolling basis, to be renewed as suppliers achieve performance benchmarks.

New Zealand meat processor, Silver Fern Farms, has recently begun offering producers three-year supply contracts. By granting producers greater foresight into future production needs, these longer term contracts provide considerable certainty in an industry that has previously operated with pricing agreements of up to only one year. In return, Silver Fern Farms can continue with its product and brand innovation, confident that it will be able to meet the future market demand that it is trying to build. Similarly, in the Scotch whisky industry, some distillers have responded to competition for available arable farmland by offering multi-year supply contracts to malt barley farmers. These farmers now have greater certainty about future demand and prices for their crops—which can help them manage their businesses—while the distillers have greater certainty over supply.

The transformational nature of partnerships

Partnerships in dedicated supply chains become transformational to each business within the chain, taking a significant step forward from the transactional arrangements that typify open market sourcing. Transformational partnerships provide a basis for close cooperation (i.e. to shorten dedicated supply chains and drive innovation in those chains).

The approach that the McDonald's Corporation takes to working with its suppliers provides an example of how supply chain relationships have moved away from being transactional. McDonald's has long-term relationships with suppliers that are based around sharing risk and reward. These relationships are based on the principle that what is good for each supplier needs to benefit the wider supply system. McDonald's assesses the contribution of each supplier by comparing them against each other and against McDonald's own supplier performance guidelines.

Bayer Crop Sciences has taken a new approach to working directly with retailers and producers of vegetables. The retailers pick the best vegetables, Bayer Crop Sciences produces the matching seed, and farmers use these seeds to produce the vegetables that are then exclusively sold to the retailers in this dedicated supply chain. Information on end-market preferences drives the process, and the close cooperation between participants in this dedicated chain means risk is reduced all around.

The value case for dedicated supply chains is clear

Along the chain, thinking needs to shift to adding value rather than pursuing price per se as F&A companies deepen supply chain partnerships. Understanding this value-price nexus will be critical to the success of dedicated chains. Dedicated chains should reduce risks along the chain and through this process create value, even if prices offered for goods are no different to those available in the open market. By reducing risk, dedicated chains can and should provide a platform for growth for all participants. The case for dedicated chains is based on a value proposition that is broader than reducing risk as improving productivity, improving access to capital, increasing access to new markets and enhancing reputation and brand are also value drivers of dedicated supply chains (*see Figure 4.4*). These drivers provide value to F&A companies (i.e. help boost returns) in ways that cannot always be compared to higher prices. Companies that see higher prices as the only way of boosting returns will not join dedicated supply chains.

Figure 4.4: The value case for dedicated supply chains

Reduce risk	Reduce exposure to market price volatility through longer term, more stable pricing agreements
	Improve resilience to market shocks
Improve productivity	Optimise production through increased certainty on inputs and outputs
	Improve process innovation through better insights into chain requirements
	Work with partners to optimise resource flows and valorise waste flows
Improve access to capital	Improve investment opportunities through more stable cashflow and longer-term supply agreements
	Access new models that provide leverage from chain partners, such as supplier finance
Access new markets	Improve product innovation—working alone or with chain partners—through better insights into downstream needs and opportunities
Enhance brand and reputation	Work with chain partners on other product attributes, such as quality and sustainability

Reducing risk through dedicated supply chains

Reducing risk creates value for any company. In F&A, the range of risks companies now face as a result of the great crossover and volatility in agri commodity markets has increased markedly. Dedicated supply chains can create value through improved risk management, by working with supply chain partners to strengthen capabilities and identifying tools to manage risks.

Rabobank classifies risks faced by F&A companies into four main areas. The first is price risks, which are most simply expressed as volatility in the market. The second area is market risks related to demand issues, which can be caused by governments opening and closing markets, food-safety issues and buyers coming into or leaving a market. Supply risk is the third area of risk, and has long been a part of F&A, resulting from production setbacks caused by weather, pest and disease outbreaks and counter-party risks. The final area of risk is reputation, which has taken on greater significance since the great crossover as external groups are taking a closer interest in the environmental and social aspects of food production.

Danone is using a dedicated supply chain approach to help manage price and supply risks. In the US, Danone has moved to secure milk through a multi-year exclusive sourcing agreement with a large dairy farm in Kansas. This agreement, one of the first of its kind, will reduce price risk for both parties during periods of volatile milk pricing. As part of the agreement, a processing plant was built to condense the milk on the dairy. Danone then reconstitutes the milk at its Fort Worth, Texas plant to make yogurt. This process reduces the environmental impact of hauling liquid milk over 1,000 kilometres, allows the water from the condensing process to be reused on the farm, and helps ensure an end-product that meets the specifications of Danone. This agreement shows the holistic approach to risk management taken by both sides as well as the steps being integrated into such dedicated chains to reduce price and supply risks, improve product assurance and enhance brand through a more sustainable approach.

In large F&A companies, approaches to risk management are being up-scaled and becoming more holistic. For example, Rabobank has seen F&A companies forming or enlarging risk management teams, moving them out of the treasury into the corporate office. These teams are now including agri commodity supply and sustainability issues along with traditional interest rate and foreign exchange considerations. This has all been done in an effort to establish a more stable and transparent basis for assessing risks as well as reducing counterparty risks. The tools available to better manage risks in the F&A sector are ever-improving, and joining a dedicated supply chain can enhance the effectiveness of these tools and approaches (*see Figure 4.5*).

Figure 4.5: Dedicated supply chains can enhance risk management tools and approaches

Price risks	Tools include finding partners to take price risks for a fee, such as over-the-counter derivatives and exchange-traded futures and options.
Market risks	Tools include expanding sources of intelligence, including outside the F&A sector, to understand the agendas that are influencing F&A.
Supply risks	Closer cooperation between supplier and buyer through a dedicated supply chain reduces supply risks in times of scarcity.
Brand risks	Tools include building reputational capital through engaging with community and interest groups, to understand emerging issues and potential areas of reputational impact.

The move to dedicated supply chains helps with the management of all of these risks. Through dedicated chains, F&A companies become more resilient in the face of increased risks as well as better equipped to understand and respond to risks. Furthermore, in dedicated chains, there is an incentive to actively work with partners to reduce risk, given the more active sharing of risk and reward.

Viterra has taken steps in several markets, including Australia and Canada, to strengthen relationships with grain growers by providing agronomic advice. The intention is to better connect farmers with market requirements (e.g. for malting grade barley or high protein wheat). This reduces growers' risks of not being able to market their grain, and reduces Viterra's risk of holding grain that is outside market specifications. The reduction in risk for both parties depends on closer cooperation.

Improving productivity through dedicated supply chains

Dedicated supply chains open up new opportunities for F&A companies to realise productivity gains. While individual companies will continue their own efforts to look for productivity gains, dedicated supply chains, with their flow of information on supply availability and demand requirements, provide partners with the option of working together to optimise production processes and resource flows. F&A companies that are fostering innovation through dedicated supply chains are often motivated by the pressure on their supply chains caused by the long-term need to feed 9 billion people and the complexity caused by the great crossover. Productivity gains are boosted by dedicated supply chains in four main areas.

The continuous flow of information end-to-end along a dedicated supply chain enables F&A companies to increase production by addressing knowledge, capital and infrastructure needs. This is the first area of productivity gains. This approach also allows F&A companies to optimise their production by using the most appropriate sources of supply, including substitutes, to meet demand as closely as possible. Increasing or optimising production is the first area of productivity gains.

US-based Green Mountain Coffee Roasters takes a broad view on its role in improving productivity in grower regions. It has an active interest in and provides financial support for organisations that support food security, clean water, economic development, health and education in its grower communities. Supported seasonal food-security programmes reached over 19,000 coffee-growing families in 2011 and established water projects in four countries. The intention of these programmes is to support coffee producers to improve productivity and build healthy, environmentally sound communities. Through its Sustainable Cocoa Initiative, Mars' takes a more direct approach to boosting productivity in the cocoa supply chain. Mars' is identifying plant genetics and production techniques to deliver a near four-fold increase in production by 2020. The whole chain benefits from this as farmers increase income, traders have more flow and processors have the supply. Mars' has invested in sharing good agricultural practices with growers and in building capacity, investments that will be returned in the form of growing supply in a dedicated chain.

Encouraging and rewarding innovation is the second area of productivity gains boosted by dedicated chains. Supply chain partnerships based on sharing risk and reward engender trust, which provides F&A companies with the confidence to focus on growth through innovations in production and processing. These innovations could be related to optimising resources, improving quality or new production processes.

McDonald's expects that all of its suppliers will innovate. It is enshrined in the way suppliers work with McDonald's that they pursue innovation and share the gains—finding ways to do things better to improve the overall system. This includes innovation to improve supply delivery, optimise food and raw material use, reduce production costs and contribute to product development. McDonald's manages supplier relationships so that suppliers clearly understand McDonalds' expectations and have considerable flexibility to determine how best to meet requirements.

The third area of productivity gain is in identifying potential supply and demand shocks. The end-to-end information flow means news of any possible demand and supply shocks is shared along a dedicated chain as early as possible, helping partner companies to minimise losses or implement contingency plans.

New Zealand meat processor, Silver Fern Farms, is driving development of a new initiative, FarmIQ, in New Zealand's meat sector. FarmIQ will share information on consumer demand trends and processing requirements along dedicated supply chains, to enable farmers to deliver the optimum product to meet Silver Fern Farms' needs. The initiative is also intended to direct farmers towards opportunities to increase their productive capacity, and in this process, generate more value from their operations.

Capitalising on residual values is the fourth area of potential productivity gain through dedicated chains. F&A supply chains produce a considerable amount of food waste as well as residues from primary production and processing. Working with supply chain partners to reduce losses, and innovating to ensure unavoidable losses are turned into valuable by-products, are both facilitated by dedicated supply chains.

Improving access to capital through dedicated supply chains

Dedicated supply chains offer the opportunity to improve access to capital, which has become increasingly important since the global financial crisis. In many cases, the financing of dedicated chains may rely on existing financial products and structures, but dedicated chains also offer the scope to apply new products and structures, such as trade finance, supplier finance and inventory finance. New approaches to financing are particularly relevant given the way margin pressure is shifting along the supply chain (*see Box 4.1*).

A lender or investor may be more interested in financing a company when it is part of a dedicated supply chain, given reduced risk, improvements in the cost base by increasing productivity, and potential upside through access to new markets and enhanced reputation and brand. In addition, being part of a dedicated chain opens up the possibility of finance being provided through the chain itself. One example is the pre-financing of suppliers, which is a long-standing method of strengthening supply chain cooperation. For example, some European fruit importers, that sell Chilean grapes to UK food retail, have provided finance to their Chilean partners to enable the purchase of fertilisers and chemicals. The risk in this approach is that the produce may not be delivered when finally harvested. However, this risk can be reduced through stronger formalisation of supplier partnerships in a dedicated supply chain.

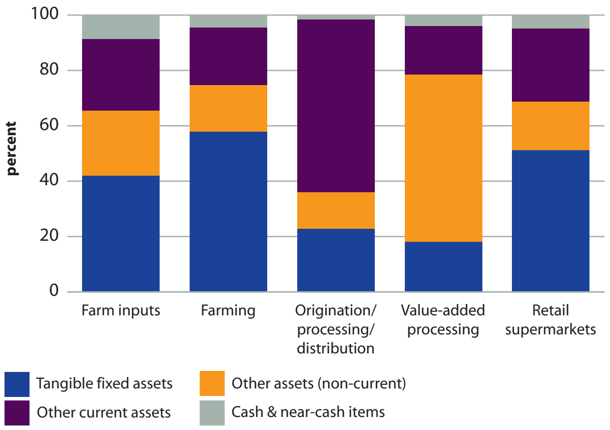
Box 4.1: How the dedicated supply chain approach can improve companies' access to finance

New models of trade finance—leveraging advantages

The development of finance options associated with agri commodity trade is one new financing model that is well suited to closer supply chain cooperation. Agri commodities are now seen as a short-term asset class that can be leveraged under specialised financial structures. Trade finance can allow F&A companies to transfer agri commodities from their balance sheet, freeing up capital in the process, while still retaining a guarantee over the commodities when they need to be delivered. Trade finance allows traders to better utilise the short-term value of agri commodities, where appropriate infrastructure is in place to segregate traded commodity lots and expertise is available for independent valuations.

The companies using trade finance models have been midstream originators and distributors who have the greatest exposure to short-term assets (*see Figure 4.6*). In some cases, traders now provide finance directly to supporting suppliers and processors/off-takers in the form of pre-paid inputs and deferred payment arrangements, respectively. The strengthening of the supply chain relationships between these parties leads to the formation of dedicated supply chains. The evolution of this model has been prominent in Asia, where the emergence of agri commodity traders Noble, Olam and Wilmar is testimony to the importance of midstream market power.

Figure 4.6: Balance sheet asset structure of F&A companies highlights the opportunity for traders



Agri commodities occupy a large proportion of traders' balance sheets

Source: Bloomberg, Rabobank, 2012

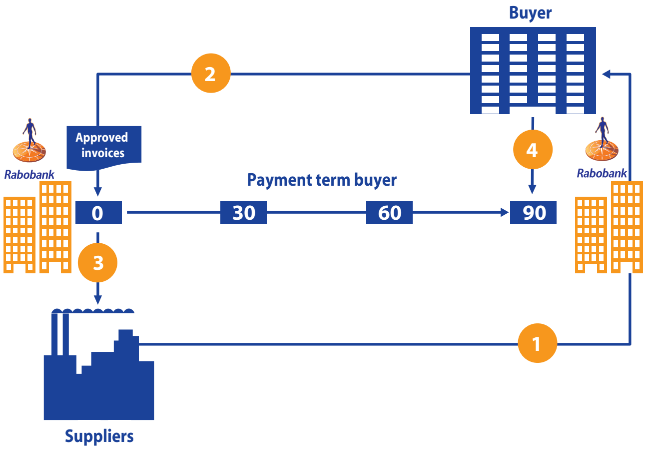
Suppliers and supply chain finance

Supplier finance is another new finance model that can deepen relationships in a dedicated supply chain. Supplier finance addresses the inefficiencies in current financing models, where goods are financed multiple times through the supply chain at the individual level of each company. As supply chains grow, the total amount of credit facilities in the chain can grow to a multiple of the value that is added in the chain itself. This duplication can be eliminated by offering supplier finance (or reverse factoring) solutions, which offer financial stability for buyers (bank clients) and their suppliers, taking a supply chain approach to remove administrative inefficiencies, streamline the handling of disputes and errors, provide transparency of inventory positions, reduce the use of working capital and efficiently deploy securities.

This solution is set up as a partnership between a buyer, a selected group of suppliers and a bank. It provides the supplier with increased liquidity (cheap and fast cash), while enabling the buyer to improve its working capital position (*see Figure 4.7*).

Box 4.1: How the dedicated supply chain approach can improve companies' access to finance (continued)

Figure 4.7: Supplier finance improves cashflow by leveraging the strength of the chain



New supplier finance model:

1. Buyer receives, checks and approves supplier invoices
2. Buyer uploads approved invoices to Rabobank
3. Suppliers are paid by Rabobankas soon as approved invoices are received. The amount paid is discounted by the payment term agreed between buyer and supplier and the SF margin based on the credit rating of the buyer
4. The buyer pays the bank 100% of the original invoice at maturity date

Source: Rabobank, 2013

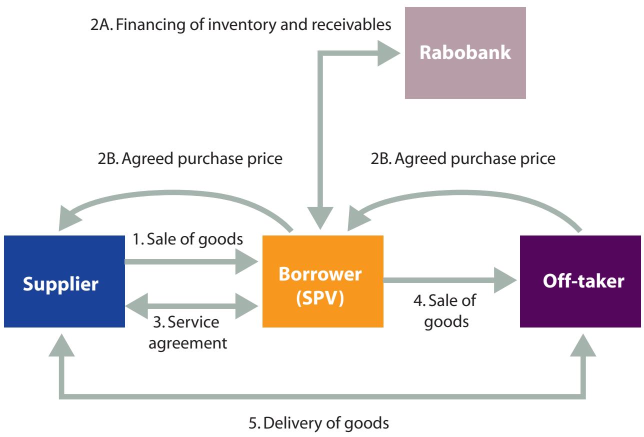
Inventory finance

Inventory finance is designed to provide an alternative source of funding for suppliers on attractive terms, where they have secure off-take arrangements, such as through a dedicated supply chain. Suppliers to large companies within a dedicated chain are often faced with a need to improve cashflow and can look to do this by leveraging the balance sheet strength of a dedicated supply chain partner. This approach requires an off balance sheet solution, which can be advantageous for both the supplier and the buyer of strategic stocks and key ingredients that are underpinned by long-term contracts (*see Figure 4.8*).

The main elements of this approach are:

- The establishment of a Special Purpose Vehicle (SPV), which becomes the legal owner of and has access to the stock
- An agreement that the off-taker (the buyer) will buy stock at fixed prices once it has signed-off on quality
- A pre-arranged financing package that delivers cashflow to the supplier on agreed terms in advance of purchase and payment from the off-taker

Figure 4.8: Inventory finance solutions build stronger relationships in dedicated chains



New inventory finance model:

1. Goods (typically key ingredients or strategic stocks) sold by supplier to Special Purpose Vehicle (SPV) jointly owned by supplier and off-taker/buyer

2A. Bank provides financing of inventory and receivables on agreed terms that reflect the joint balance sheet strength of off-taker and supplier

2B. Purchase price agreed between supplier and SPV, and between SPV and off-taker

3. A service agreement established between supplier and SPV dictates quantities and quality of goods required

4. Sale of goods from SPV to off-taker/buyer, who signs-off on quality

5. Final delivery of goods to off-taker

Source: Rabobank, 2013

Accessing new markets though dedicated supply chains

Dedicated supply chains provide a basis for organising supply to efficiently access and capitalise on new market opportunities. This includes opportunities for launching new products in existing markets and for taking current or new products into new markets. New markets are inherently attractive, especially those in emerging economies where the increased spending power of consumers who are seeking higher value products offers the tantalising prospect of both volume and value growth. However, the road to these markets is not straightforward. Emerging market supply chains are often difficult to access due to their informality, multi-tiered nature and unorganised distribution networks. Furthermore, companies on both sides of any border typically face a regulatory environment where tariff and non-tariff trade barriers change frequently.

Despite these challenges, company investment in emerging markets is growing, and sectors that have seen the ebb and flow of investment in these areas for many years are now showing clearer trends. For example, in the dairy sector, 75 percent of the 2012 Rabobank top-20 global dairy companies already have investments in China. This is after several companies initially invested during the 1990s, but subsequently withdrew. The trend is now more pronounced and the opportunity too big to ignore as structural demand growth in China has altered global dairy market dynamics.

Dedicated chains offer two particular advantages in accessing new markets compared to the open market sourcing model. The first advantage of dedicated chains is a shared commitment to provide supply, which creates a solid platform for expanding production. While this does not necessarily mean that existing partners are best placed to meet new demand, strong existing partners can work through the challenges of delivering new products into new markets together. Dedicated chains also enable closer coordination of any new investment plans, including the scheduling of capex against what can be high operational risks (and costs) of new market entry. This can be seen in Asia, where global food retailers, who once launched ambitious plans to establish themselves across Asia, have retreated from this brand-led approach in favour of a supply-led approach. These same retailers now encourage their suppliers to establish themselves and their chains first, with retail coming afterwards. The pressure on supply chains caused by higher prices and volatility leaves little margin for error in market entry strategies.

The second advantage dedicated supply chains offer is the sharing of insights and market intelligence that is relevant to accessing new markets. Again, this can be a particular challenge in emerging economies—where supply chain evolution is occurring at a rapid pace in complex, often fragmented markets—as new market entrants have limited time to develop their own networks and relationships.

A good example of sharing insights comes from the work McDonald's is doing with poultry suppliers, OSI and Keystone Foods in China. McDonald's is helping its suppliers access new markets for the four-fifths of a chicken that it does not use, working on the basis that increasing the value of the other components should reduce pricing pressure on McDonald's needs. More generally, commodities house, Olam, works closely with many of its downstream supply chain partners to gain access to new markets. Buyers receive Olam's assurances on product consistency and traceability, and in return, Olam receives insights into new market requirements and the opportunity to establish its operations in new markets themselves.

Enhancing reputation and brand through dedicated supply chains

It is quite possible to work towards achieving additional product attributes through dedicated supply chains, such as achieving particular quality standards and meeting the requirements of sustainability certification schemes. In part, this is also a response to the great crossover. The longer term basis of relationships in dedicated chains aligns incentives for all chain partners to add value to the chain and its outputs by taking coordinated action as partners in dedicated chains have shared incentives to innovate for mutual reward.

Often, the bulk of the investment and reorganisation needed to meet these third-party standards falls on the supply chain, while the recognition and reward falls disproportionately to the brand owner, whether it be a food company, food retailer or foodservice company. This is especially the case in organising supply chains to demonstrate appropriate product segregation or chain of custody controls as is often required by third-party standards. The experience of pursuing non-product specific carbon emissions improvements through the supply chain highlights some of the challenges in motivating the supply chain to follow the lead of a brand owner (*see Box 4.2*).

Unilever's headline ambition is to double the size of its business while halving the environmental impact of its products. Through its Sustainable Living Plan, Unilever has the specific goal of sustainably sourcing its agricultural raw materials by 2020, a goal that cannot be met unless Unilever's supply chain is fully engaged. In the first instance, Unilever is focused on its top-10 agricultural raw materials, and where possible uses third-party certification schemes to demonstrate sustainability. Progress to date has been impressive, with 24 percent of these raw materials being sustainably sourced in 2011. Working with suppliers on this goal fits with Unilever's broader engagement of strategic suppliers through its 'Partner to win' programme. Unilever and its strategic suppliers are striking agreements on how they will work together for mutual benefit over the long term.

Unilever and Cargill have established a dedicated supply chain to provide sustainably sourced rapeseed oil. Cargill has engaged a group of growers in southern Germany to deliver certified sustainable rapeseed, which Cargill crushes and delivers to Unilever. Because currently, there is no independent sustainability certification of rapeseed oil, Unilever and Cargill have had to establish credible sustainability criteria and performance metrics as well as a compliance system for the entire rapeseed supply chain, involving a third-party auditor. They have also had to engage farmers in the initiative, though a suitable mutual value proposition. In mid-2012, Cargill supplied the first sustainably produced rapeseed oil to Unilever, which covered about 5 percent of Unilever's annual demand. While such partnerships and the broader supplier engagement suggest Unilever's overall ambition could be met, a key challenge is to engage a group of suppliers that is sufficiently large enough to meet Unilever's sizeable requirements. In this specific example, farmers have been paid as participants, with certification costs met for them, rather than being seen as partners engaged in a longer term agreement to meet a specific need.

The approach taken by Starbucks in China serves as an example of how dedicated supply chains can sharpen a supply chain's focus on other attributes—in this case quality. Starbucks has recently established a coffee farmer training centre in Pu'er, Yunnan Province, to support local coffee farmers in taking up advanced coffee-growing practices, such as disease resistance, and in the process, improve the quality of Yunnan coffee. Through this initiative, Starbucks hopes to increased local production, improve its access to valuable local supply and be able to market high-quality Yunnan coffee, both in China and throughout its global franchise. Starbuck's believes that positioning itself as a high-quality coffee company will help it to secure the local supply chain and access growth opportunities in China.

Dedicated chains may not suit all companies at all times

There is a flip side to the benefits of joining a dedicated supply chain, which means they may not offer the ideal solution to the supply chain pressure faced by all F&A companies, in all sectors and all regions, at all times.

By joining a dedicated supply chain, F&A companies are less likely to benefit from short-term price spikes in the open market. For some companies, such price spikes offer considerable potential upside that they may not be willing to trade for more stable cashflows. In addition, some F&A companies may be concerned that joining a dedicated chain may provide too much insight to downstream chain partners who will use this to leverage greater control over pricing, making them reluctant to cooperate more closely. Other companies that might not see dedicated chains as the right model are those providing specialised inputs or with specialised processing technologies who are seeking to service multiple chains. And in some cases, F&A companies will be concerned that by joining a dedicated supply chain they are betting on the wrong approach.

In a sector as diverse as F&A, there is never going to be a one-size-fits-all approach to alleviating pressure on the supply chain and organising for growth. However, in Rabobank's view, the dedicated supply chain model offers good potential for F&A companies to increase business value in current market conditions.

Box 4.2: Action to reduce carbon highlights challenges in motivating supply chain partners

Increasing sustainability credentials is seen as a way to enhance corporate reputation, according to 2,500 global company respondents to the January 2013 *Carbon Disclosure Project's Supply Chain Program* survey. 'Leveraging reputation through sustainability credentials' and 'changing consumer behaviour related to sustainability' are seen as the top opportunities for business value creation through action on climate change/carbon by survey respondents.

The survey highlights that while the value may seem clear, the process of engaging the supply chain to respond to climate change/carbon is not straightforward. Over two-thirds of survey respondents identified a current or future risk related to climate change with the potential to significantly affect business value. As part of their response, almost 70 percent of supply chain programme members (i.e. branded companies) are investing in emissions reductions actions. However, just 27 percent of their suppliers are making similar investments, and the gap between programme members and suppliers is growing, not shrinking.

It is a measure of the influence of close engagement along the supply chain that suppliers who are in the supply chain of more than one programme member were found to be much more likely to be aware of climate change/carbon risks.

These survey results highlight the challenges of engaging suppliers, in this case on an additional product attribute. This survey assumes all suppliers have the same relationship with their buyers, even though some would be partners working together in dedicated supply chains based on shared value, while others would be participants negotiating over price.

5 Implications and next steps for F&A companies

The open market will contract as supply chain cooperation grows

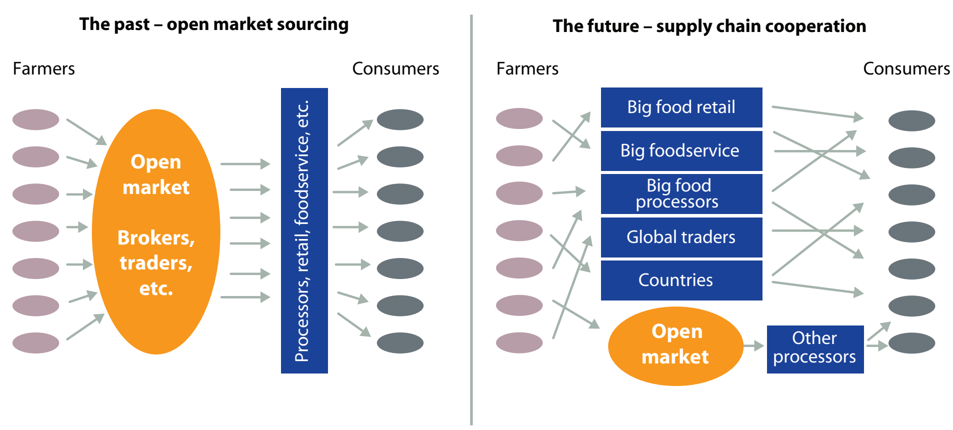
The formation of dedicated supply chains will create opportunities and risks for all companies in the F&A sector. The most likely effect will be a contraction in the scale of the open market as supply chain cooperation grows (*see Figure 5.1*). The increase in chain cooperation also highlights a shift from competition between companies to competition between chains.

The implications of this contraction raise key questions for F&A companies: should they join dedicated supply chains, and if so, when?

Even though dedicated chains may not be the right solution for all F&A companies in all sectors and all regions, Rabobank's view is that joining or forming a dedicated chain makes good business sense and that all F&A companies should—as a minimum—consider the value proposition that dedicated chains represent.

Dedicated supply chains offer the prospect of strong value creation, based on reducing risk, increasing productivity, improving access to capital, accessing new markets and enhancing reputation and brand. Yet, dedicated chains also represent a risk as considerable time is needed to develop and strengthen supply chain partnerships (i.e. achieve the closer cooperation that fosters trust between chain participants) in order to get this model right in practice. The opportunities and risks around dedicated

Figure 5.1: The contraction of the open market as supply chain cooperation increases



Source: Rabobank, 2013

supply chains vary for each company along the chain (*see Figure 5.2*).

A further consideration is whether there is another model that better suits an F&A company (and its supply chain partners). Some companies will be reluctant to join dedicated supply chains because they feel this approach will not generate adequate returns. For other F&A companies, closer supply chain cooperation may not realise growth ambitions, making vertical integration a more attractive model for expanding along the supply chain.

Next steps for F&A companies

Rabobank proposes a three-point plan for F&A companies to become part of a dedicated supply chain, in recognition of the value proposition they represent and in response to the unprecedented pressure and complexity that F&A supply chains are facing. In essence, the plan is to deeply engage in the concept of finding common ground along the chain, and to build on this by establishing a clear basis for working together that will benefit all players in the supply chain, and to then take action (*see Figure 5.3*).

The first step, engaging in finding common ground along the chain, is more difficult for many companies than it may appear. Trust is often lacking in supply chain relationships that have been based on price negotiations, which can make initial dialogue time consuming. Understanding what creates value for partners' businesses, which challenges they are seeking solutions for, what opportunities they need help in pursuing, etc., is crucial to building a durable mutual value proposition that engages the whole chain and aligns incentives. The second step, forging mutual value propositions, is about getting specific about what is needed, including the quality and quantity sought, duration of supply agreements, the basis of information sharing along the chain, performance metrics, audit requirements, and risk management, productivity and marketing goals. In the third step, putting the new agreements in place, the fair assessment of suppliers and buyers is crucial. This may require the use of third-party auditors to report on outcomes along the chain.

Using this three-point plan, any player in the chain can initiate closer supply chain cooperation, although in most cases, the initiator will be the F&A company that has most value at stake or the most to lose through supply shocks. These players are generally found at the downstream end of the chain, where companies have the least direct control over supply, and their process of initiating closer cooperation is relatively simple. As the buyer, they will be accustomed to talking to suppliers and can readily bring them together to discuss needs, and when ready, offer longer-dated supply agreements, subject to a set of performance conditions. A number of companies are already talking to suppliers about their needs and challenges.

Figure 5.2: The considerations in increasing supply chain cooperation vary along the chain

Farm input companies	Input companies are often constrained in engaging downstream, but closer cooperation could provide the basis for doing so.
Farmers	Farmers may require scale to directly participate in dedicated chains.
	Dedicated chains may present opportunities to shorten chains and deal directly with end-users.
Traders and brokers	Traders need to decide how many dedicated chains they should join.
	Traders can also initiate dedicated chains, instead of pursuing vertical integration.
Primary processors	Processors need to decide how many dedicated chains they should join.
	Dedicated chains may present opportunities to shorten chains and deal directly with retailers, etc.
Value-added processors	Processors need to decide how many dedicated chains they should join, and if there is a threshold size of supply below which the model does not work.
	Dedicated chains may present opportunities to shorten chains and deal directly with suppliers and retailers, etc.
Retailers and foodservice companies	Retailers need to decide how many dedicated chains they need, and if there is a threshold size of supply below which the model does not work.
	Dedicated chains may present opportunities to shorten chains and deal directly with suppliers.

Figure 5.3: A three-point plan allows F&A companies to get started with dedicated supply chains

1

Engage the chain

- Start a specific dialogue to better understand what motivates each player along a chain.
- This dialogue needs to extend from end-to-end along the chain.

2

Forge mutual value propositions

- Find the balance that can be struck between the buyers and sellers dillemma, and put this at the centre of new, enforceable, supply agreements.
- Companies need to make an agreement that balances risks and reward along the chain.

3

Live up to it

- Implement the agreements and ensure incentives are aligned.
- Establish initiatives to enhance productivity, target new markets, enhance reputation and brand.
- Assess performance fairly.

Source: Rabobank, 2013

These include UK food retailer, Sainsbury's, and global beverages company, Diageo. In addition, companies such as Coca-Cola and global food retailer, Tesco, have tried a senior management 'job swap' in an effort to better understand each others' businesses.

Cooperation along chains can also be initiated by players in the midstream and upstream parts of the chain—after all, the unprecedented pressure on chains that is motivating change affects all players. The initiation of closer cooperation with upstream suppliers is based on agreeing to changes in the terms of a supply agreement. The opposite is the case in initiating closer cooperation with downstream customers; here the initiator can prompt the discussion by offering the buyer more certainty over supply conditions in return for a longer-dated supply agreement. There is no fundamental difference in the way a dedicated supply chain operates as a result of the initiation point.

Supply chain cooperation moves towards the circular economy model

Developing or joining a dedicated supply chain can deliver good business value to F&A companies along the chain, but Rabobank believes this strategy should be an interim step between the open sourcing model of the past and the longer term transition to a new model in global F&A—the circular economy model. The circular economy model offers a more effective response to the strategic challenges facing global F&A in the coming decades.

The long-term challenge of feeding the world from a finite resource base demands that the F&A sector take significant steps forward this decade to improve productivity and resource efficiency. In Rabobank's view, this is best achieved by working in partnership along supply chains—using closer cooperation to foster trust and provide a basis for innovation. Many F&A companies understand the scope of change required and see the potential to achieve this change through harnessing the power of their supply chains, but few have already adopted a circular economy model.

It will take time to implement circular economy models, and dedicated supply chains represent an important interim step towards this new future for F&A. The specific benefits of dedicated chains in preparing for a circular economy model are building trust and fostering cooperation between chain partners, acting as incubators for innovation and providing a captive market for commercialising new practices and technologies, and opening up the possibilities of chain-based and chain partner dependent financing models. But the dedicated supply chain model does not go far enough in addressing the strategic challenges the F&A sector faces.

Rabobank's view is that cooperation between chain partners can and should be directed at taking concrete steps towards designing and refining circular economy models. The three steps F&A companies should take now to develop and test circular economy models are: to share a vision on the solution; build trust and deepen cooperation so companies become more comfortable working closely together; and to make a start by putting ideas and plans into practice (*see Figure 5.4*). Building trust and increasing familiarity along the chain is important because the most effective ideas are likely to be developed with supply chain partners, taking into account all of their needs. Particular needs will be the flexibility to adapt current and new processes to fit into a new model, and financing investments in new processes, new resource flows and new equipment.

Figure 5.4: A three-point plan enables companies to actively adopt a circular economy approach

1

Share a vision

- Engage supply chain partners on ideas and potential solutions to the key challenges.
- Refine the concepts to find a balance between the urgency of the situation, the scale of the challenges and the strength of the value case for action.

2

Build trust between partners

- Companies need business partners to provide them with the flexibility to adapt to new products and processes.
- Trust enables relationships in which the risks and benefits of new products and processes are shared mutually.

3

Make a start

- Test ideas and models with progressive companies and innovative proponents.
- Quantifying the advantages of a circular model compared to linear processes will be an important test as companies move along pathways to a circular economy.

Source: Rabobank, 2013

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