



Collinson

Grant



Inter-company trading

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1 Introduction

Collinson Grant has helped businesses in the United Kingdom, in continental Europe, and in the United States, to change the character and effectiveness of their business models. This is in response to changes in markets, technology, the supply chain, cost and competitive pressures generally.

In this document we describe our experience of business models in which a number of businesses, all subordinate to a common parent organisation, inter-trade – that is to say they buy and sell goods and services to each other often within a closed transactional regime regulated by that common parent. The usual reason for this, and the one we are most concerned with in this book, is that the goods or services bought and sold are moving down a single value chain owned by the common parent before being sold ultimately into a third party marketplace.

When this happens, the managers in the subordinate businesses and in their common parent may have to answer such questions as:

- How should the inter-trading prices and terms be set?
- How would that affect profit and loss reporting, and how would the financial returns of each inter-trading business be measured objectively?
- What principles should be adopted and transactional methods used to report inter-trading business?
- How can commercial and planning disputes between inter-traders be avoided?
- What information systems and support for decisions are needed to understand and control inter-trading transactions?
- What are the best models and configurations to maximise the common owner's profit?

This document stresses the importance of making the right choices in support of a chosen trading strategy. The alternative may be for the businesses to face the consequences of buying and selling to each other in an unregulated regime, and at arm's length with no direction from above.

2 The business model

Let's look at an example of a value chain model. An oil company has four incorporated subsidiaries all reporting through conventional financial accounting, to conduct exploration, to pump oil from its wells, to refine the product and to market the oil in the form of products. The outputs of each subsidiary are valued and sold on to the next business unit in the value chain until the fourth and last one finally sells into a third party market.

Although the parent company will consolidate the total revenues and costs of all the business units in order to calculate its own net profit or loss (after making the necessary eliminations) our interest here is the accurate and realistic measurement of the profit performance of each of the individual subsidiary business units, and to understand the influence on their profit and loss of the prices used in the inter-trades.

The prices used to assign value to the product when the first business trades with the second, the second with the third and so on need to be set in such a way that the profit reported is a fair reflection of the real performance achieved by each. In a fully managed system of inter-

trading prices would best be fixed using a suitable method determined or approved by the parent company. It is that managerial level that needs to be satisfied how and where profit is being generated at each points along the value chain. More than anything else it is the inter-trade prices used that determines where and how profit is taken.

A failure to understand the profit performance of each business by ignoring this will inevitably prejudice decisions about how the business model should be designed and directed and whether it is configured to deliver economic and operational optimisation.

2.1 Defining characteristics

There are five features associated with inter-trading business models we shall recognise in this discussion.

- Sale and purchase transactions take place between organisations under the authority of a parent company which owns the business model and the value chain of the inter-trading transactions
- The parent company operates a strategy that instructs its subsidiary businesses to trade with each other – it mandates their inter-trade and the method by which prices are set
- These sibling organisations each add value to the products or services traded between them, establishing their participation in the common supply/value chain
- The value added by the inter-trade transactions underwrites the profitability of the parent organisation's overall business model
- The sibling organisations are accountable for, and report through, their own, separate, profit and loss statements – they are discrete profit centres and report as such.

Normally, all five conditions are present when businesses engage in inter-trading.

2.2 Transactions and value

In conventional capitalism resources are allocated in response to free and open market supply and demand. This is how they are able to determine or heavily influence the cost and price of the goods and services that they buy and sell. Prices tend to find their own level when willing buyers and willing sellers act on the relative strengths of supply and demand. This is so fundamental to industry and commerce as we know it that it is easy to forget that other options for setting prices may be appropriate in some circumstances.

And so it is that in a closed inter-trading regime the determination of price will be a function of policy, not of open market economics. Inter-trading is a transactional process that requires regulation and intervention. Units bound together by common ownership and a common value chain cannot or should not create price in the same way the free market does.

In these circumstances, the utmost care is needed to obtain a true and fair view of the reality behind how incremental value is measured and ends up as profit. The managerial hierarchy at the parent which 'owns' the business model and mandates the inter-trading regime needs to create and retain a transparent overview and full understanding of how trading works.

2.3 Value chain

The concept of the value chain helps us to point up the stages through which partly finished goods or services pass as value added by each profit centre business in the chain. Each profit centre and its processes are links in the chain of value and supply. The configuration of

any such chain is shaped by the corporate structure of the profit centre subsidiaries within the parent company. The chains will vary as to length (number of business units in the chain) and size (total value added).

How the chain is configured and inter-trade prices set may be a product of design and strategy, or it may have just evolved without much thought. In the latter case it is always best that the methodology for valuing outputs are reviewed and tested so that reported profit and margin show a financial result that is meaningful having been arrived at with deliberation. With a 'just evolved' chain that rarely happens by chance.

2.4 Reporting the business

Although financial accountants have various ways of dealing with inter-trading book-keeping, the information of interest to managers is what supports decisions that report profit at the point where we want to. Managerial information needs to provide answers such as (taking the example of the oil company):

- How profitable is drilling?
- What are the margins from the refining process?
- What is the return on capital employed in marketing end-products through retail filling stations?

The answers are valuable, not just because it is better they should be right rather than wrong, but because they will, potentially, inform logical, profit-seeking decisions on investment, cost control, capacity and so on.

In addition, decision-supporting information will help the company:

- to retain control over its business model, particularly when inter-trading assumes some complexity, and there are dangers of losing transparency
- to set transaction prices so that it can take profit in the amount and at the point in the value chain that best serve the company's interests
- to promote efficiency and effectiveness in managing the processes at all points in the value chain.

Inter-trading may be at the heart of a business model or merely peripheral to it. That depends on how much of its revenue and cost is represented by the value of inter-trading transfers between the sibling subsidiary businesses. Anything above, say, 5% could materially influence the reported financial results of the parties to the inter-trades. So around this size there begins to be a need for a thoughtfully considered policy for inter-trading, and a regular system that reports and accounts for its transactions. Of these, the most important is the inter-trading price of each product bought and sold.

3 Inter-trading pricing

3.1 The necessity to regulate

The common parent of the businesses that buy and sell to each other ought to exercise authority to fix the method by which the inter-trading prices are set. The subsidiary businesses in the value chain of supply cannot properly do this for themselves, or if they believe they can then they should not be permitted to do so without agreement by the parent.

Even if any pair of inter-traders agree a price with which both are satisfied just any agreement is not to the point here. Because neither own the business model within which they exist, neither separately or in combination, are they entitled to act with that authority.

Only the parent company is able to ensure that the prices all along the chain are established on a consistent basis so that comparisons of subsidiary business performances are no random and skewed. The effect of prices on the measurement of each subsidiary business' profit performance has to be taken at arm's length and not rigged by the entities themselves

The absence of a free market removes from the subsidiaries any option to negotiate and agree on a market price that reflects the negotiating strengths of their respective positions.

Furthermore, because the goods and services in which they are directed to trade are in the common value chain, the supplier is obliged to plan capacity so as to offer an uninterrupted supply of a quantity of output exactly equal to the user's expressed demand.

It is interesting to note that when it comes to sibling businesses making agreements between themselves goodwill can be in as short supply in 'corporate families' as in others. It has been known that sibling organisations, abandoned by the common owner to 'slog it out' through bullying or bluff and counter bluff, have then been known to resort to expensive internecine strife; or end up making cartel-type agreements to cover up inefficiencies that act against the interest of their common owner.

Parent companies should not adopt a disinterested position. It is important that they understand and are able to correctly measure the wealth creation taking place in the value chain at each point of its ownership - how its wealth is created; where its profits come from; and how effective its business model is.

3.2 Mechanics of price

There are a number of ways by which the parent company can determine the best way to set inter-trading prices in use between its subsidiaries. Usually it must know the cost of their operations so that the relationship between cost and price can support the pricing decisions. For example, is the inter-trading price to be more than, the same as, or less than the understood cost? And if more than cost, by how much more?

Usually costs are researched from internal management accounting data in order to test the margins available at a given price. This can then be followed by a series of commercial judgements supporting financial plans which can take into account whether the same or similar goods are to be inter-traded *and* sold concurrently in the open market.

A decision will have to be made whether a business supplying along a common value chain to a sibling should discount the price or perhaps expect a premium. Unless there is good reason it is better that there is parity of price between inter-trade and external sales because this will avoid the profit being affected by a customer mix variance. If the cost bases of inter-trade and external sales differ then prices should reflect parity of margin for the same reason.

Many inter-trading prices are set to a cost plus formula of a type common in the public sector and sometimes in the private sector too when a contract for capital goods is expected to run for a similarly long and uncertain period, or when the external customer is a public sector body that wishes to put a cap on the profitability of a private sector contract. An example might be a ground-works contractor in a construction group which is sibling to the design and build business in the same group. In other cases cost plus means, say, cost plus 18% to give a 15% return on sales, or cost plus 20p per £1 to yield (say) a 15% return on capital employed calculated from the company budget data.

The policy applied to setting inter-trading prices might properly be influenced by the lower commercial risk that is associated with inter-trading. Conventional calculations of return assume that high risk of the loss of capital, or of an under-utilisation of capacity because of

unstable demand, merit commensurately high returns but inter-trade is not exposed on these fronts so prices may be at a discount.

3.3 Pricing policies

Banking profit early in the value chain

If the value chain of the parent company extends through several of its subsidiaries, as owner of the business model it is able to choose to turn cost into profit (or loss) by fixing prices so margin is made disproportionately along the value chain. It can for example choose to take margin available in the chain early. Margins and profit in the first profit centre are then set fatter than those to be realised from the second or from others further down the chain.

Adding margin early then becomes a defining characteristic of the business model. The purpose of this stratagem is to squeezing the last drop of profit out of increasingly challenging inter-trading prices on subsequent trades, lower down the chain, particularly at the last one where supply is to the third-party customers.

Where there are low inter-trading prices and relatively high targets for margin and profit low down and late, in the chain this can be an instrument for forcing cost out and building overall profit. Sometimes the strategy here is that it prevents sales teams from 'giving away margins' at the point of sale, to the external customers. That is to say, when salesmen have no margin to give away but are struggling to meet budget margins in hard markets, they cannot be seduced by customers into agreeing to low tariffs or spot prices, 'low ball tenders', or other stratagems to shift volume or rescue total revenue targets. The parent company on the other hand has not much to lose having already banked its profit further back in the value chain.

In extreme cases, any potential margin from the open market may already have been exhausted before the last amount of value has been added, but this can present the problem that the margin earned on the whole chain including sales of product to third parties becomes harder to know, and understanding the customer's motivation for buying harder to interpret.

This is particularly so if the value chain is long and the relationship between sibling parties at the high and low ends of the chain is remote. The control over the profitability of products may not be centred in a recognisable place on the chain. Furthermore, the sales personnel and profit-responsible managers at the end of the chain who are selling to 'real' customers may become demoralised when little or no profit can be made and attributed to their efforts. This can adversely affect the quality of the external sales effort at the point where it should be at its most effective.

Another concern is that the high margin yields won early in the passage of the product down the value chain may lead to complacency in managers there, disguising inefficiencies which, if they could be seen for what they are and tackled, would reduce costs and create higher profits for the parent.

Taking all the margin available at the external point of sale

The opposite strategy is also commonplace and we believe may often be the more commendable. In this model little (sometimes no) margin over cost is built into the inter-trading prices. All or most of it is reserved for the final, external, free market sale. The logic of this is that the only 'real' margin that is ever realised in a free market is that between a supplier and its third party customer. To know and report this, and use it on which to base all the analysis of product profitability, is the purest and truest measure of profitability. In addition, the maximum sales effort can be focussed in one place.

If necessary to avoid the 'low balling' problem, it is usual to put controls on the sales prices to a design approved by the parent owner of the business model, and possibly even implemented under its direct authority.

It is common for companies to suffer systemic bidding failure if sibling businesses need to collaborate to win bids. Each business often blames the other for destroying competitiveness, usually accompanied by allegations of greed aimed at those early in the chain who are not engaged with external customers. This problem can be solved by instituting centrally a procedure for approving supplier tenders in which there is an oversight at the level of parent organisation of any bid price or tariff to which two or more profit centre business units are key contributors.

Pricing to achieve equitable returns

There is one important consideration that may discourage the model described in the last section. It may be very important to understand the inherent profitability of one or more of the subordinate business units. And this might be particularly so if only a small amount of the sales are inter-trading transactions.

As value is inter-traded between the businesses they own, some parent companies consider that each subsidiary that adds value should be targeted to earn a fair return on the capital used or the revenue generated. This targeted return is calculated to reflect how the inter-trading prices have been set.

There are always as many views about what is a fair return as there are parties whose performance is to be judged, even after any agreement on the best type of return to be targeted, whether it be on sales, capital employed, net assets or fixed cost.

And there are further challenges to be faced when, for example, a 'fair' figure of, say 5% on sales, is thought to be a fair average, but it is felt to be more fair, or more challenging for some of the relevant business units than for others. The technology, innovation, or quality required may not equally affect the costs of production. Some business units in the chain may think it more just that some be asked to add value at 5% ROS but others at, say, 10%. All such judgements can feel very subjective.

This problem is compounded if reasonable returns are agreed but the sibling organisation that sells to the external customer is having trouble hitting its target return because the market has stopped paying the prices necessary for it to achieve it. In that scenario those merely inter-trading win out and appear to perform effortlessly even though they might have the most scope for reducing costs. The sibling business which is the final adder of value and has the vital task of selling is then unfairly over-exposed to failure. This is not a recipe for harmony between fellow managers up and down the parent company's value chain.

If the value chain is short, a fast and flexible response to external market problems may be possible. If the value chain is long it may be that may, because of the number of links in it, a flexible response is more difficult to engineer. The difficulty may be affected by the size of the stake which players in the value chain have in it. Is the inter-traded product line central to their sales effort or merely peripheral to it? If they have large external markets for the partly processed product, or for unrelated products then the inter-traded transaction prices are less crucial to their profit performance and are easier to set and agree without fuss. The natural arbiter and principal decision maker of the model and pricing policy is still the parent organisation.

What should be avoided is an arbitrary agreement for a percentage return – a sort of 'ex gratia gift of margin or profit'. In an actual case a manufacturer used a sibling organisation as a depot for low-cost stocking before onward transit to a third sibling for final manufacture and external sale. In an informal arrangement, the depot service was 'awarded' a nominal 5% of the value of goods crossing its threshold, thereby ill-advisedly distorting the measurement of relationships between costs and revenue at the other business units in the chain.

Pricing using market synthetics

As already mentioned it is not unusual for one proportion of a product line to be sold in the open market while another portion is transferred downstream to a sibling business for further processes before external sale. In such cases the price achieved in the open market provides a sound basis for setting the inter-trading price.

Even if the inter-trading sibling company does not sell externally, it may still be possible to research price equivalents when there is another (third-party) organisation that does. The inter-trading value can then be synthesised from data gathered from market intelligence.

The problem with this attractive option is that open market prices may vary with location, product, customer, rebates earned, or otherwise. Nevertheless, a realistic price can often be synthesised. Data are simply projected or extrapolated (incorporating 'what if' and 'if only') to arrive at a convincing basis for setting the inter-trade price.

3.4 International inter-trade pricing

As we have seen, inter-trading takes place between separate business units that are accountable for profit and loss where they exist as subordinates of a single parent company or group of companies, but the units within the parent group, though linked by the same value chain, may be located in more than one country. In one respect, the management accounting for profit and loss in each domain can just ignore this, the effect of currency movements being shown as a variance. Exposure to currency fluctuation can be excluded from or included in the inter-trading price according to how information on margin is to be used. Thus, the system of accounting for profit in one place or the other, in order to measure added value consistently, can be entrusted to the Finance Department to make the necessary adjustments to profit performance reporting.

A greater challenge, however, may be the need to employ different transaction prices to fix profit in each country by a method, or at an amount, that satisfies different tax regimes. Some tax authorities are said to be suspicious of any parallel transaction prices used for management information or cost accounting. They may spot that these, were used to calculation liabilities for tax, would improve their take. So, it may be prudent to keep transfer prices that are primarily used as internal measures and controls over performance well away from the statutory audit trail. .

4 Terms of trading

4.1 Terms and conditions

It can sometimes be appropriate for formal terms of trading to exist for inter-trade transactions. These would include credit given or taken, conditions of sale, warranty and so on. Whether the business units are self-accounting or served by a shared or centralised service centre may make a difference.

The inter-trading parties may not only do separate profit and loss accounting but have separate banking arrangements and their own set of performance indicators and budgetary targets for controlling cash flow. Terms of trading will therefore cover transactions for which invoices will be rendered against terms for credit given and taken, perhaps even with penalties for non-compliance with the agreement or contract.

Compliance with uniformly used group practice may be required. The general rule should be that terms and conditions are a part of the price and tariff structure. Their application would thus follow follows practice as it applies to price.

Terms of trading also need to have provision for how transaction prices can be changed and, particularly, how and when adjustment may be made for cost inflation, such as in the cost of commodities. Getting a price increase (or resisting it) in an inter-trading relationship can be one of the more frustrating and time-consuming tasks undertaken by managers. None of this matters too much provided that there are rules in place for both behaviour and process. There can be no place for free-for-all in-fighting between sibling subsidiaries.

Restitution and compensation

As a general rule settling disputes between inter-trading parties is usually more difficult than doing so in conventional customer/supplier transactions where there will be pre-existing terms and conditions of trade backed by law.

When things do go wrong, for example if inter-traded goods or services from the supplier are alleged to be unsatisfactory by the buyer, it is usual to have ready a code of practice that determines the provision for restitution, if any. It is important to have put in place a very robust process to handle this well before it is ever needed. As with the inter-trading price itself, terms and conditions between buyers and sellers are bound together by the ultimate owner of the business to whom both belong.

Neither is able to walk away, even though the dissatisfaction might make this a natural course of action if the relationship between parties had been at arm's length. With inter-trading, agreement on restitution in the wake of a complaint can be especially difficult to reach, while recourse to law is impracticable and unlikely, even though this has been known to happen when the parent has been weak and allowed a policy vacuum to exist.

A longer list of things that can go wrong, and for which some standing agreement on corrective action or compensation may be needed, includes:

- Supply of sub-standard quality, or failure to meet specification, together with the alleged associated costs of returning or disposing of those goods.
- Poor performance on delivery, possibly leading to consequential loss of performance in downstream processes, including the costs of the overtime required to make up for the delays and the costs of penalties imposed by external customers.
- Unscheduled deliveries causing unplanned levels of stock, with the associated excess costs, which may include writing off the value of work-in-progress cost associated with cancelled orders, for whatever the reason or cause attributed.

This all puts responsibility on the parent company to devise or agree, and then authorise some principles that provide a consistent line to follow on dispute resolution, but it might be that the answer to some problems is not to be found in restitution at all. Not all parent organisations would, for example, wish time and money to be used pursuing disputes and sending money backwards as well as forwards down the value chain. For example, inter-trading suppliers' performance can be monitored and action taken by the parent to resolve cases of malpractice or under-performance through focussing on performance management actions rather than financial penalties.

4.2 Book-keeping and accounting

The accounts of subsidiary companies usually include inter-trading revenues and costs as an integral part of the published management accounts. Consolidated Group accounts, however, will invariably treat inter-trading revenue transactions as eliminations, so avoiding double-counting their income.

5 Strategy and structure

5.1 Structure

In a business with a conventional unitary organisational structure all value-adding activity takes place within the single corporate profit centre for which its chief executive and managerial team take the responsibility for a profit and loss account and balance sheet. There is, of course, a value chain, but it will pass through the departmental and functional areas that make up the whole structure, not a series of true profit centres. Such a model offers no real inter-trading challenges of the sort discussed so far.

There may however be advantage in breaking up the unitary structure of a large single profit centre company into subordinate but non-corporate (without balance sheet) cost and income centres. These can be created to make it easier to measure managers' performance and accountabilities and to exercise control. Each can be operated as a self-contained division of the larger business. This may enable the company to:

- Place a limit on managerial spans or unit size
- Distinguish particular activities or skills and so sharpen focus on performance
- Recognise the effects of location, site, sunk and new investment, and so on.

With such a devolved platform of operations the company will have the means of attributing profit performance to, controlling the cost of, and pursuing 'sales' from the cost and income quasi 'profit centre' units. These can be managed and reported as de facto inter-trading siblings and subject to some rules on price, terms, behaviour and so on. Such entities would not enjoy the status of incorporated subsidiary companies or publishing statutory accounts.

However, with a value chain comprising such non-incorporated business units a useful variant is to designate these quasi-profit centres as cost centres by setting transaction prices based on actual cost or better still standard cost. Managerial performance can then be measured not on profit generated, but the surplus or deficit (the variance) against the budgeted cost recorded on the divisional or department management account. Section 7 elaborates on this highly interesting and in our view, effective solution.

5.2 Synergy

A devolved business model structure may be the strategy being used as the means of building synergy throughout a corporate value chain. The synergy enjoyed is almost always associated with an over-riding objective owned by the group parent or common owner rather than by the individual inter-trading units. The oil company is a good example of this in that its vertically integrated configuration is its main competitive advantage over organisations that have more fragmented or looser structures.

For the oil company the synergy that comes with inter-trading down a value chain makes a major contribution to its ability to exploit the various streams of profit being made from the scarce raw material. Keeping control of every point along the value chain maximises the profit to be wrung out of owning of its licences. The business model puts up barriers to competitors entering the market or attempting to do so.

The use of a vertically integrated model, with multiple business units strung along the value chain, does not prevent those units from also trading with third parties in an open market. A vital decision for those managing the whole organisation is how much to release into the open market from each subsidiary business at intermediate points on the chain and how much to retain until the process at its end - retail sales is complete.

As we know, large quantities of crude oil end up as petrochemical products because supply and demand and pricing are used in this way to maximise profit. Making sales at multiple points along the chain generates cash flow for the investment that sustains the chain. This decision also faced the organisation we discuss in the next section which makes cable.

5.3 Reviewing the value chain

It is just as important to analyse and understand the inter-trading data of a business as it is to study and report its external transactions. However, we find that managers often ignore this aspect of their company's transactions, assuming wrongly that there is nothing to learn from analysing that internal data. There is a widespread tendency to assume that inter-trading and intra-Group sales are a lower 'grade' of sale for which the only reporting necessity is the figure required for group eliminations, and then only if the business units in question publish their own statutory accounts.

We believe strongly that the impact of the inter-trading configuration on the business model ought always to be clear and the configuration of value chain be mapped with transactional data fully reported, analysed and just as well understood as external sales figures.

In the real example shown below the parent company operates six incorporated (publishing balance sheets for statutory accounts) manufacturing profit centres, (DON, WQ, BAC, SSS, BTS and PTB). Each one operates different processes which for historic reasons are at different locations around the United Kingdom. All the businesses make external sales as well as inter-trading with their sibling profit centres, supplying other processes downstream on the value chain. The businesses also inter-trade with three other home and overseas divisions engaged in the distribution of finished products (CUK, CFE and BNZ).

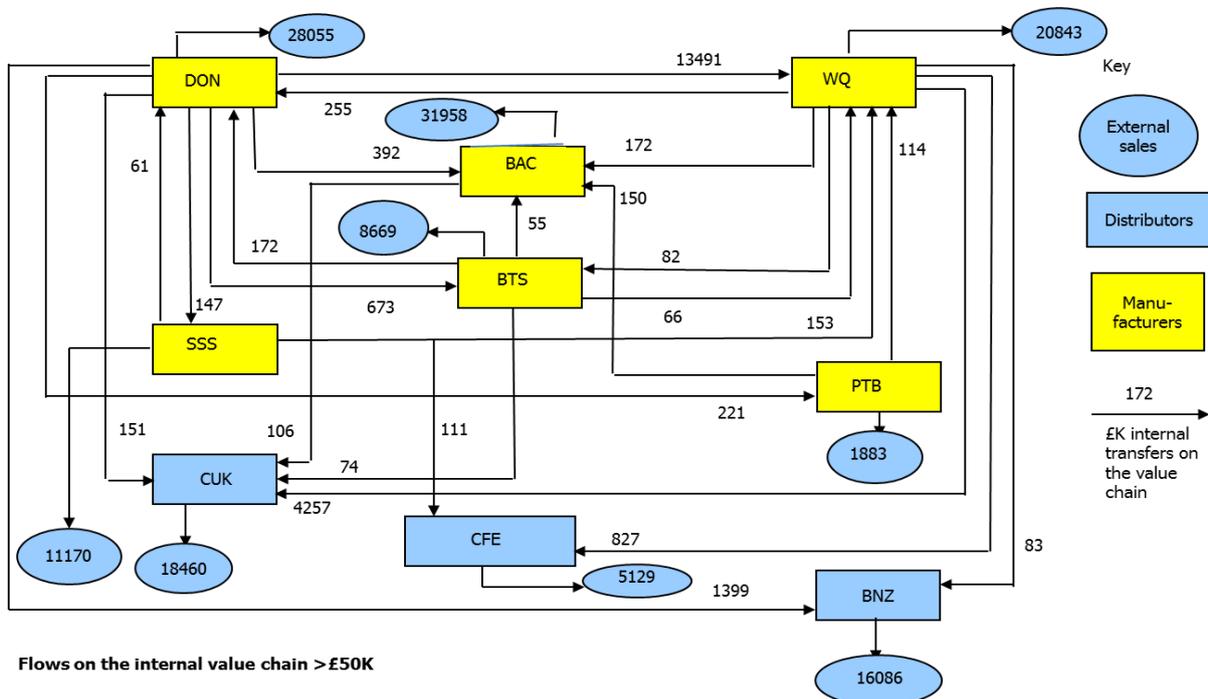
The data on sales, margin and margin percentage in the following three tables were collected by special analysis from the management accounts. Prior to this the analysis shown here was unknown.

The data in the first of the three tables below were used to create the value chain map shown overleaf.

Sales inter-trade value							
£K	S&J Group inter-trade sales (extract only)					External	Inter-
Sales by/to	DON	SSS	PTB	WQ	CUK	sales total	trade %
DON		147	221	13491	151	28055	33
SSS	61			153		11170	1
PTB				114	106	31958	10
WQ	255				4,257	20843	18
CUK						18460	
Margin inter-trade value							
£K	S&J Group inter-trade margins					External	
Sales by/to	DON	SSS	PTB	WQ	CUK	margin total	
DON		59	99	6476	38	15150	
SSS	37			77		3798	
PTB				89	58	17577	
WQ	122				1831	14590	

CUK							4615
Margin inter-trade %							
%	S&J Group inter-trade margin %					External %	Inter-
Sales by/to	DON	SSS	PTB	WQ	CUK	margin average	trade % average
DON		40	45	48	25	54	48
SSS	61			50		34	53
PTB				78	55	55	67
WQ	48				43	70	46
CUK						25	

The map shows a value chain of twenty-three inter-trading flows between the nine profit centres. In some flows, such as DON and WQ, inter-trading transactions take place in both directions, making a complex picture, imperfectly understood by managers.



Equivalent maps were also drawn with data embedded for margin and margin percentage. Other maps could be drawn for different product types, and for volume and added value.

The data in the third table above shows margin percentages achieved by the sellers on peer-to-peer inter-trading and the weighted average margin percentages for all the inter-trades. No consistent pattern of margin percentage can be discerned comparing either inter-trade or external sales data.

The conclusion we draw is that these profit centre businesses, despite sitting on a common value chain, inter-trade without a strategic direction from the centre that would give a defining characteristic to the business model through their policies for prices and margins.

The worst aspects of the regime's lack of coherence is that the profit and loss accounts of the businesses must lack any truth or meaning because the inter-trading revenue is calculated

from a tariff for prices which has no semblance of structure. Data on percentage margins earned by each business is meaningless - no business information, standard for control or variance analysis can be extracted.

The full consequence of this is the impossibility of any managerial control in the usual sense. First, there will be an inability to understand the significance of profit and loss and its elements, cost, margin and average selling price.

Secondly, it is not clear how the internal value chain can best be configured and optimised or, therefore, how the company's business model should best function to promote its efficiency and effectiveness. For example, just some of the questions that could be asked but not answered are:

- Is the current number of subsidiary profit centres necessary?
- Is there a case for rationalising the managerial structure as to its population, layers and spans, and thus the scope and scale of managerial accountabilities for profit?
- Need all the existing business units report full profit and loss and balance sheet for statutory purposes?
- Could some processes be contracted out at lower cost and more added value?

As shown in this example we find it to be common for senior managers not to have no maps or analysis of the inter-trading transactional flows for which they have accountability, despite the importance of this data which can affect the health of the business model, which should be their primary concern. For there to be managerial control over a business, inter-trading data need to be reported for:

- Inter-trading sales
- Margin and margin per cent on inter-traded sales
- Volumes of sales
- Average selling prices (ASPs)
- All the above broken down, if necessary, by product or process
- Comparison between inter-trading data and the equivalent for external sales.

6 Contracting out

A parent organisation that is in control of its business model, the configuration of its value chain, and the terms on which it trades with sibling businesses is in a position to consider whether it could with advantage contract out any of the processes of its business units. In this way it might be able to control the value chain and the inter-trading pricing structures without having to own all the assets employed.

The oil industry again provides an example. Oil companies often contract out major processes such as drilling. For such arrangements to work properly it is essential to be able to demonstrate that the inter-trading prices negotiated result in additional added value, and also that the amount of extra risk has been fully assessed and balanced.

In some business models the whole or most of the supply/value chain is contracted out and the owner of the model may own very few of the assets employed in it. This does not imply a loss of control over the configuration of the chain and the inter-trading prices charged.

In a real example a company required shipping containers for its leasing business and contracted out their manufacture. It exercised control over the whole manufacturing chain of value/supply by negotiating the inter-trading prices for the raw materials and the value added by the first and second-tier suppliers to the final assembler. The option to put all its effort into negotiating the lowest possible purchase price of fully built containers was replaced by a series of separate contracts with each supplier it placed in the chain by way of the contracts it negotiated. Each individual contract set an inter-trading price, part of which was remitted directly to it as the ultimate purchaser and owner of the business model. It thus banked margin at each stage as the product moved down the chain as well as from the final process of leasing which it operated through the processes and resources it wholly managed and own.

A particularly complex example of such a virtual value chain owned by a single company in control of the business model is to be found in the insurance industry. An insurance company owns the model through which it conducts its business while sharing the value/supply chain with other companies with whom it contracts for services. An insured customer buys a policy from a sales and marketing agent such as a bank or a broker for whom the commission paid is a negotiated inter-trade price at the front end of the chain. The underwriter's fee is settled at another such inter-trade price. In the event of a claim, the claims handler and (if appropriate) the specialist medical or other service provider also operate processes and are remunerated through further inter-trade prices pre-arranged with the insurance company.

The whole value chain is owned and commercially managed by the insurance company, whose business model determines and controls the operational relationships of all the contracted parties. The inter-trading prices all along this complex chain are devised and owned by the company to which all other players are symbiotically linked. In the past insurance companies performed all these processes themselves on what was then a wholly in-house sequence of processes within in one profit centre model. Now, although contracting out these processes, they continue to own the network of what are in effect a series of virtual inter-trades.

7 Inter-trading prices at cost

Of the various policies available to those designing inter-trading models, one that gives the firmest and most exemplary control over margins and costs uses a cost-based standard for inter-trading between business units. While not suitable for all business models (it would not be used by the oil company, for example) it effectively turns profit centres into either production cost centres or external sales margin centres.

The model then requires the production cost centres to break even on cost at standard, and the sales margin centres to maximise the margin earned from their sales to third parties. Thus, all inter-trade transactions between production cost centres are at cost standard the variance being a measure of surplus or deficit and thus of managerial performance.

This model configures the value chain so that the production cost centres pass finished products to the sales margin centre(s) at the inter-trading cost standard price, again no margin being taken. Only at the final, external sale from the sales margin centre is any margin taken, and that on the open market price.

The result is that the centres of production record surpluses or deficits (variances to standard cost or budget) depending on whether the inter-traded value created and 'sold' on at cost is greater or less than the actual expenditure incurred in production.

The gross margins on sales of finished products (revenue less inter-trade price of cost at standard) are charged with the related costs of selling and overheads.

In this system the accountabilities for producing at cost standard, and for selling at the required margin, could hardly be clearer. Control is firm. Information on managerial performance and financial results is transparent and largely without ambiguity.

Instead of the complex configuration of inter-trades between many profit centre business units, these can be consolidated into a simpler structure. This changes the meaning of inter-trading by rationalising to a known cost the basis of charging along the whole length of a value chain however complex. It improves accountability and control and makes for easier and more transparent reporting. Importantly, it removes the difficult challenge of finding a logical way of determining inter-trading prices.

Behind this model is the principle that business units with production processes should be managed with accountability for optimising unit cost, with no expectation of generating margin out of manufacturing processes.

Similarly, sales and marketing units should be accountable for achieving selling prices that generate the best possible margin percentages. And margin does not move around if costs change because the effect is confined to the production unit.

It is usual to operate this business model with a system of price controls, because, although the whole margin is the property of sales managers, their exposure to the results is easily and unambiguously measured. Inter-trading pricing at cost offers more control over accountability and performance than any other model of inter-trading.

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