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International Business Through Barter and Countertrade

Raj Aggarwal

This paper starts with a definition and review of barter and countertrade and the reasons for their growth in modern times. The author develops a classification scheme for the various forms of countertrade based on the time horizon and the degree of capital involved. In addition, he provides a conceptual framework for understanding the various forms of countertrade. He concludes by examining corporate opportunities and risks in countertrade.

World trade continues to grow faster than world production in spite of mounting protectionism. One reason may be the increased role being played by barter and countertrade, forms of trade especially designed to overcome barriers. It is a paradox that these ancient forms of trade, predating the use of money, continue to be popular and continue to grow in importance. This article addresses this puzzle and evaluates the role of countertrade as part of the strategy of a modern corporation.

Modern countertrade covers various forms of trading arrangements where part or all of the payment for the purchased goods or services may be in the form of other goods or services. It is an adult version of children trading in cigarette cards and marbles (for similar reasons i.e. lack of cash and trade of 'priceless' items). Because of its recent and projected growth and its ability to overcome market imperfections and provide opportunities for extraordinary profits, countertrade should be assessed as an important part of business strategy, especially by companies that operate internationally.

This article starts with a definition and review of barter and countertrade and the reasons for their growth in modern times. Next, unlike most other papers on this topic, it provides a conceptual framework useful for understanding and managing the various forms of countertrade. It concludes by briefly examining corporate opportunities and risks in countertrade.

Raj Aggarwal is Mellen Professor of Finance, John Carroll University, Cleveland, Ohio.

Growth of Countertrade

No reliable figures as to its overall volume are available as there is much secrecy in this business. Estimates are unreliable especially since it is estimated that only one in twenty deals that is discussed actually goes through. The U.S. Department of Commerce estimates that countertrade involves over *20 per cent of all world trade*. While others have estimated it to be 30 per cent of all world trade,[1-3] some companies specializing in countertrade estimate it to be as much as 40 per cent of all world trade. In any case, as any of these estimates indicate, countertrade has grown to be an important part of doing business across borders.

Countertrade is a higher percentage of total trade in some areas of the world such as the COMECON (Eastern European) countries and the less developed countries (LDCs), while it is a lower percentage for trade among developed countries.[1] Countertrade started by being important in trade with COMECON countries. Later, it grew in importance in trade with the developing and newly industrialized countries such as Brazil, Mexico, China, Indonesia, Iran and Nigeria and now has even become important in large trade deals among developed countries such as Sweden, Switzerland, Austria, Canada, Japan and Italy. While U.S. companies are just recently becoming aware of it, European and Japanese companies have had longer experience with countertrade.

Many countertrade deals run into the hundreds of millions of dollars (some are even in the billion dollar range). Both India and China, for example, have prepared billion dollar government purchasing lists with much of each to be paid for by reciprocal or countertrade arrangements. *The Purchasing World* magazine estimates that 48 per cent of all U.S. purchasing agents already engage in some form of barter.

Examples of modern countertrade include a wide range of transactions, from simple to increasingly complex deals. The simplest examples involve various forms of barter. They include, for example, the sale of recordings of the Swedish group Abba in the COMECON countries in exchange for commodities such as fresh fruits, chemicals, and even machine tools which are then sold for hard currencies in Western Europe. As another example, the British subsidiary of PepsiCo sends Pepsi concentrate to Soviet bottling plants and in payment receives bottles of Stolichnaya vodka which is then marketed in the West.

Chrysler sold 200 pickup trucks to Jamaica in 1982 in a more complicated five party barter deal involving aluminum ore. Flush from this success, it has since engaged in other barter deals involving simultaneous trading of Peruvian copper ore, Sudanese cotton and Liberian rubber, coffee and cocoa. The Douglas Aircraft Company sold Yugoslavia seven DC-9 airplanes. It was paid partly in cash but also agreed to sell $9m worth of Yugoslav goods in western markets including $40,000 worth of hams for its cafeterias.*

In another type of countertrade allowing trade over a longer time period, East Germany and Brazil agreed to barter machine tools for coffee so that at the end of their 2 year bilateral trade agreement, the value of machine tools bought by Brazilian companies must equal the value of coffee bought by the East Germans. However, Brazil ended up buying machine tools valued at about 30 per cent more than the coffee bought by the East Germans. The East Germans then sold their coffee contract obligation (at a discount) to a western private company for hard currency. This company arranged a three-way transaction in which Israel 'sold' potash to Poland which in turn 'sold' sugar to Brazil which 'sold' coffee to Israel. All three 'sales' were arranged and agreed simultaneously and the values of the three commodities 'sold' were exactly equal.

Another type of long term countertrade deal is illustrated by the ease of Technip of France building a chemical plant in the Peoples Republic of China and planning to recover the cost of its equipment and services by selling part of the plants output in western countries. Similarly, General Tire furnished equipment and technology for a Rumanian truck tyre plant in exchange for radial truck tyres from that plant (marketed in the west under the 'Victoria' brand).†

As these examples of increasingly complex countertrade deals indicate, countertrade covers a wide range of transactions. The next section is an attempt to bring some order to this chaos by classifying these various countertrade transactions.

Classifying Countertrade Arrangements

This section clarifies the terminology used in countertrade, classifies its various forms, and presents a two-dimensional framework useful for understanding its various forms.

The terminology used in countertrade is unfortunately characterized by a lack of standardization. A number of different expressions are often used to mean the same thing and sometimes the same expression is used with several different meanings. Examples of some terms used are: barter, countertrade, counterpurchase, countersale, clearing agreements, switch trading, bilateral trading, offset trading, reciprocal trading, parallel trading, linked trading, triangular trading, compensation agreements or arrangements, buy-sell, pay-back, back-to-back transactions, and other terms too numerous to list here. All of these represent trading arrangements that use a mixture of money and goods and services to obtain goods and services from another country.

However, the many forms of countertrade can be classified into four major categories, i.e. barter, clearing arrangements, switch trading, and compensation arrangements. Each of these four categories are explained in greater detail below.

Barter

Barter is a one time exchange of goods with no direct use of money. There can be many variations of this basic exchange:

(a) Parallel barter or counterpurchase or buy-back takes place when goods are exchanged for equal amounts of money.

(b) Offset is parallel barter with a promise to assist in the sale of goods replacing one of the contractual obligations to purchase goods.

(c) Reverse reciprocity is parallel barter for scarce goods such as oil for nuclear power plants.

*Other examples of this type of barter include the General Motors' exchange of 1400 automobiles (Opels) for a trainload of strawberries. Control Data sold a computer for a package of Polish furniture, Hungarian carpet backing and Soviet greeting cards. Ford of U.K. sold $6m worth of its automobiles to Uruguay in exchange for sheepskins which were then made into car seat covers and sold through its European dealer network. It has also 'sold' automobiles in exchange for Spanish potatoes, Finnish toilet seats, Norwegian cranes and Columbian coffee. General Electric recently sold two nuclear steam generating turbines worth $121m to Rumania and agreed to purchase an equal value of Rumanian goods.

†Additional examples include the transaction where Occidental Petroleum agreed to a 20 year fertilizer deal with the Soviet Union under which it will exchange its superphosphoric acid for Soviet ammonia, urea and potash. Surplus U.S. agricultural products were traded in the 1950s and 1960s for political goodwill overseas for the local (inconvertible) currencies used to pay for goods and services needed by the U.S. military abroad. And the list goes on.

(d) Multilateral barter is a chain of barter transactions contracted simultaneously among more than two parties.

(e) Parallel barter with co-operation is a set of two offsetting parallel barter arrangements between three organizations.

(f) Barter with co-operation and bank credit allows for a timing difference between the two parts of a parallel barter.

Examples of barter. These include transactions such as Occidental Petroleum's exchange of its phosphate rock for molten sulphur of equal value each year from Poland. Volkswagen's sale of 10,000 automobiles (Rabbits) to East Germany for other East German goods.*

Clearing Arrangements

These are bilateral trade agreements between two countries who agree to exchange specified amounts of goods and services over a specified time period. Each country extends to the other a line of credit in terms of an artificial clearing currency that can usually be used only to purchase the goods offered under the agreement. The balance of trade in these goods may 'swing' only up to a certain maximum amount in either countries' favour (say 30 per cent of the total). Trading under these arrangements generally stops until the unfavourable balance of trade, the 'swing', is eliminated or reduced from its maximum amount.

Examples of clearing arrangements. It was estimated recently that 83 countries had at least one clearing arrangement and a number of these countries had numerous clearing arrangements. For example, the U.S.S.R. had 30, Mexico 19, Brazil 17, and even France had 12. Specific examples of clearing arrangements include Moroccan oranges for Soviet capital equipment; Hungarian electrical equipment for Egyptian cotton; a Soviet clearing agreement with India that allows Britain's Rank Xerox to export copiers from India to the U.S.S.R.

Switch Trading

This occurs when the responsibility for completing a bilateral clearing arrangement is shifted to a third party by a switch trading broker. Switch trading brokers operate in a secondary market to sell unused credits in bilateral clearing arrangements to third parties.

*Other examples include, Pepsi's use of its Hungarian cash for expenses for the movie 'The Ninth Configuration', which was distributed in California. The Japanese exchange of light armanents for oil from the Middle East. Pakistani cotton for jute from Bangladesh. Pan Am exchange of an hour-long Spanish TV program for two 60 second commercials on Latin American television stations. Egyptian oil for Indian fabricated industrial products. Argentine grain for Venezuelan iron ore. Northrup and G.E. commitment to market $500m worth of Swiss goods as part of $500m contract for F5 fighter jets (offset barter). The exchange of a Canadian communication satellite for an equal value of Brazilian goods.

Switch trading can be a tricky business especially since there are often legal restrictions on the sale in third countries of goods covered by such bilateral clearing arrangements. Sometimes these legal restrictions are actually enforced and other times they are there only for appearance. There is also often a great deal of artificiality in the prices of products covered by such switch credits, and broker discounts vary from 5–6 per cent for some commodities to as much as 40 per cent for some high technology products. Switch trading can often be combined with various financing arrangements to structure complex countertrade deals.

Examples of switch trading. These include U.S. tyre making equipment for a COMECON country's clearing credits exchanged for Turkish lira credits in a bilateral agreement with the COMECON country. The Turkish lira were used to buy chrome from Turkish sources which was then sold for hard currency. As another example, Greece sold $1m of Rumanian credits for $700,000 of hard currency. These credits were used by an African country to purchase Rumanian canned goods. Iranian credits for Polish shoes worth $200,000 were sold to a switch broker for $160,000 who, in turn, sold them to a buyer in East Africa for $165,000.

Compensation Agreements

These are the countertrade equivalent to foreign equity investments in countries where such investments are either not welcome or are ideologically not permissible (for example, when it is not possible to own a factory in a communist country). Typically, a western MNC will supply equipment and technology for a plant and agree to take full or partial payment, spread over a number of years, in the form of the goods produced by that plant.

Examples of compensation arrangements. A Yugoslav licensee of Fiat supplies automobiles back to Fiat for resale. Monarch Wine Company equipment and technology are provided to China in exchange for beer and vodka from the plant and distribution rights to China's Tsingtao brand beer. Pierre Cardin technical advice is provided to China in exchange for its silks and cashmeres. An East German auto transmission plant costing $370m was built by the French company Citroen, and is being paid for with auto transmissions exported from that plant back to Citroen. Levi jeans are produced in Hungary with Levi paying with part of the output. General Motors technology was provided to a van plant in Poland in exchange for part of the plant's output in the form of auto parts.

As the above classification indicates, the four categories of countertrade differ in terms of their complexity with regard to the time period and the degree to which money is involved. Figure 1 illustrates a possible classification scheme.

According to a 1984 survey, clearing arrangements

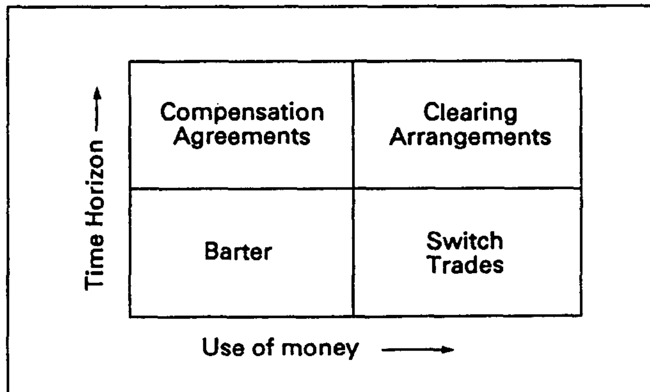

Figure 1. Classifying countertrade

accounted for 55 per cent of all U.S. countertrade transactions, compensation for 33 per cent, switch trading for 8 per cent, and barter for 4 per cent.[4] This survey also found that the proportion of countertrade varied between industries with 47 per cent of aerospace exports involved in countertrade to 20 per cent in electronics and defense and 15 per cent in minerals and chemicals.

Bases for Countertrade

Why has countertrade grown so rapidly and will it continue to grow? What are the economic driving forces propelling its growth? Answers to these questions are important for understanding and evaluating countertrade opportunities.

Reasons for the Growth of Countertrade
There are many reasons for the growth of countertrade. These include:

(a) Limited access to hard currency finances for most LDCs and COMECON countries. Countertrade avoids deterioration of payment imbalances.

(b) Protectionism. By linking exports and imports in countertrade, there is often no net loss of jobs. Occasionally, jobs may even be created on a net basis. Countertrade is a viable response to increasingly widespread restrictions on international trade and investment.

(c) New markets can be developed for a countries' products with countertrade since it often beings in much needed marketing and quality control skills. Countertrade is often viewed as a good way to 'prime' a western market for a developing countries' goods. Thus, countertrade can be especially important for countries with small internal markets.

(d) Surplus and poorer quality goods can be bundled with other goods and sold. Such goods may otherwise be difficult to sell. This can be an important consideration for centrally planned economies and for the western countries' smokestack industries with overcapacity. Countertrade disguises dumping and discounting. It helps maintain artificial prices in periods of temporary surpluses or in periods when exchange rates are maintained at unrealistic levels.

(e) Countertrade through bilateral and multilateral trade agreements may strengthen political ties between countries and may serve as a conduit for foreign aid. It may also be used to develop self-sufficiency within a region or an ideological block.

(f) Countertrade can be used as an alternative to foreign equity investments, especially in areas of high risk. Countertrade and contract manufacturing allows MNCs access to lower cost resources. Countertrade allows MNCs an opportunity to serve huge markets not otherwise available, e.g. 260 million Soviets, 105 million other COMECON residents, over a billion Chinese, 700 million Indians, etc.

Countertrade continues to grow as it is profitable and creates value for the participants. Why is it profitable? In purely competitive markets opportunities for earning extraordinary profits are usually unavailable. However, market imperfections can provide opportunities with this potential. Thus, countertrade can be particularly profitable, primarily because it is a method for overcoming government restrictions and other market imperfections that restrain cross-border movement of goods and services. The next section examines these reasons for countertrade in more detail and provides a conceptual framework useful in understanding and evaluating potential opportunities.

A Conceptual Framework
Barter, countertrade, and their variations, generally referred to as countertrade, are transactions that take place outside of normal competitive markets. When compaed to money-based transactions, countertrade suffers from a number of rigidities.[5] These include 'the need for a coincidence of needs',[6] the difficulty of assessing values of products to be traded without reference to market prices,[7] and the need to trade indivisible products.[5]

In order to overcome these disadvantages, countertrade takes place only when market imperfections make it impossible to clear markets and true market clearing prices are difficult or impossible to determine. Thus, countertrade is most likely to occur when various market imperfections make it difficult or impossible to develop market-clearing prices for the goods being traded. Thus, opportunities for profitable countertrade are most likely to be found associated with market imperfections.

The first category of market imperfections relate to the costs of restrictions on cross-border investments often imposed by governments.[8] In economic

terms, this often creates a principle-agent problem where utility maximization by individual firms may not lead to actions optimum for the nation. In such cases of market failure, it may be optimal for a government to allow certain types of countertrade while restricting the free cross-border flows of goods and services. Thus, multinational companies can often use countertrade to access markets for their outputs or to develop sources for their inputs that are inaccessible through normal free market channels.[2]

A second category of market imperfections that are likely to give rise to conditions suitable for countertrade include fnancial market pressures that result in the maintenance of non-market interest rates and exchange rates. With officially set exchange rates, many countries face persistent shortages of hard, convertible currencies while many companies in such countries also face a persistent lack of trade financing.[9] Since these conditions can be mitigated by countertrade, they are likely to lead to increased use of countertrade.[10,11] Similarly, when exchange rates exhibit persistent and significant deviations from purchasing power parity (for example because of capital flows or because of government restrictions), countries may find it necessary to disguise the international market prices of their goods and find it convenient to restrict free cross-border flow of goods again encouraging the use of countertrade.

A third category of market imperfections that lead to countertrade are related to the needs to obtain and purchase non-traded goods such as higher employment levels in a given region (for example, through protective measures), foreign political benefits such as foreign aid and military alliances, and illegal and banned products such as drugs, armaments, nuclear fuel and other equipment.[1] Countertrade is also useful when seeking goods, such as technology, that have poorly developed markets.

A fourth category of market imperfections relate to the cost of information related to product quality.[7,12] Because of real or perceived problems associated with the quality image of products made in certain countries and because of information asymmetry between buyers and sellers, it may be very expensive and time consuming to improve such an image and to develop markets for products from such countries. Similar problems are faced by countries trying to sell in markets in politically inhospitable countries. In such cases countertrade may provide a viable low-cost non-market alternative.

A fifth category of market imperfections leading to countertrade has to do with the inability of markets to price uncertainty and risk over a long time horizon.[13] In addition, for many goods no forward market exists. In such cases, countertrade often avoids such risk and pricing problems by developing offsetting, symmetrical, goods-denominated, long-term contracts.

A sixth category of market imperfections that leads to countertrade has to do with the ability of a producer to profit from a sale based only on the marginal variable cost of production rather than on the higher but more complete average cost of production.[14] In such cases, base markets, where prices reflect both fixed and variable costs, must be segmented from markets where prices reflect only marginal costs. Countertrade helps in such segmentation by disguising these price differences. This type of market segmentation, often artificially created, is particularly useful in cases where there are periods of excess capacity.

The impacts of each of these market imperfections can also be classified along two general dimensions, quota-type effects that limit quantities and tax-type effects that raise costs. Examples of the former include export and import quotas, ceilings on interest rates and other regulatory and licensing requirements. Examples of the latter include transactions costs including costs of enforcing contracts, information collection and processing costs, taxes, and other transaction costs reviewed above. Countertrade can create value by providing a company with the opportunities to overcome either or both types of market imperfections.

Thus, it can be seen that countertrade is a rational and economic response designed to overcome market imperfections and national regulation and restriction of cross-border movement of capital, goods, and services (including technology). Therefore, it can be a highly profitable activity that can add considerable value, especially since unrestricted free competition usually eliminates excess profits. Consequently, countertrade should be examined as an important part of corporate strategy.

Countertrade as Corporate Strategy

The first decision that the top management of a company must make is whether or not to engage in countertrade. Corporate strategy for using countertrade should be guided by the nature of countertrade and the corporate skills necessary to use it successfully. In addition to knowing where to look for market imperfections and, thus, for countertrade opportunities, a company must also evaluate potential pitfalls.

Problems and Risks in Countertrade

There are a number of limitations in using countertrade. These include:

(a) Lack of flexibility—'in barter there is more often a want of coincidence rather than a coincidence of wants'. It is a less preferable form than money-based trade.

(b) Limited range of products available for countertrade. The best products are easily sold in cash markets. Countertraded products often (not always) may have poor quality, be overpriced, at times they may be available in surplus and be hard to move while on other occasions timely delivery of such products may be a problem. Usually, they must be heavily discounted. It has been suggested that 'The next worst thing to loosing a countertrade contract is getting one.'

(c) Products offered may not fit the strategic or operating profile of a company that is used to operating in a free market. Such products may compete with their existing products, they may be totally unrelated, or they may not fit well into the firm's normal production process or marketing channels. Furthermore, the firm may be legally and economically restricted in terms of where it can resell the products.

(d) Dealing with Foreign Trade Organizations (FTOs) in COMECON countries takes special skills and knowledge. FTOs in the same country often (usually) do not communicate with each other regarding products available for export. Products are often offered but may have already been promised to someone else.

(e) Countertrade negotiations are not guided by market prices or Western business methods but are more likely to be influenced by ideological stances and a trading mentality. A number of negotiating techniques not common in the West are often used in countertrade to whittle down a 'final' price or offer by a western MNC. Most such companies often do not realize the need for a 'cushion' during such negotiations.

(f) Countertrade deals are difficult to evaluate in terms of the usual corporate measures such as ROI and payback because of the lack of market related prices and costs and because of artificial exchange rates. Similarly, products acquired by countertrade are difficult to value for customs and tax purposes. Valuation problems may also lead to anti-dumping type legal action.

(g) In the case of buy-back and compensation arrangements, a company is often creating new competition for itself. For example, Soviet built Fiats (Ladas) now compete with the Italian Fiats in Western Europe. Massey–Ferguson faced the same problem after it helped Poland build a tractor plant.

In spite of these limitations, countertrade in its various forms offers companies many opportunities. These include the opportunity to serve for profit and growth, huge markets not otherwise accessible; develop a competitive edge or a defensive strategy depending on the situation in its industry; an alternative to foreign equity investment to seek low cost resources with low levels of risk capital; and possible opportunities to move funds out of blocked currency areas. Because it is a way to overcome significant market imperfections, it can uncover opportunities for making extraordinary profits and possibly for developing a sustainable competitive advantage. However, a company planning to engage in countertrade must develop or acquire the skills and resources necessary to overcome the disadvantages and difficulties associated with countertrade discussed above.

Organizing for Countertrade

The countertrade should begin with an assessment of the range of goods to be exported or imported using countertrade, along with an overall analysis of the corporate need for countertrade. As indicated above, an initial assessment of the potential benefit from countertrade can be based on an analysis of the nature and extent of market imperfections that can be overcome with countertrade. Second, it should include the asessment of the competitive advantage for an in-house countertrade group vs the use of outside organizations. In disposing countertraded goods, a company can either use these goods in its own production process, use its own marketing channels to sell them to outsiders, discount them to a trading company specializing in countertraded goods, or sell them to another marketing organization. Formation of an Export Trading Company (focusing on countertrade) possibly in co-operation with other companies (to broaden the range of products) and possibly with a financial institution, should be evaluated.

If an in-house countertrade unit is to be set up, it should be able to identify markets for countertraded goods and be able to structure and negotiate countertrade deals. Thus, it should have people representing skills in international marketing, purchasing, finance, law, tax insurance and transportation.

An internal countertrade unit should be able to assess and manage the risks involved in countertrade deals. There are many types of risks in countertrade deals besides the usual business risks of changing prices and evolving competitive market structure. There are risks that the country delivering the goods will not perform in the areas of quality, delivery time, or quantity of goods. The foreign country may require the posting of a performance bond with attendant risks for the company involved. Some of these risks can be managed by the appropriate use of insurance cover. Pricing risks can often be hedged at least partially by using futures or forward markets.

The company should also be able to assess and comply with various laws that may apply to such transactions. Because of their nature, countertrade deals may violate specific product and packaging laws, laws regarding import relief, anti-trust laws, and tax laws. The company needs legal and tax expertise to manage these aspects of countertrade deals.

The company must also decide the location of the internal countertrade unit in the organization. Should it be part of the purchasing or marketing departments or should it be an independent unit? To what extent should it be centralized and have global or regional responsibility? Should it be a cost or a profit centre? Answers to these important questions depend on the nature and extent of the firms' anticipated countertrade business. In any case, the firm must establish clear financial and operating limits and develop a workable business plan for this internal unit. The identity and functions must be defined clearly to avoid 'turf' battles internally so that outsiders know the units' capabilities. Finally, such a unit must be headed by an individual experienced and qualified in countertrade. Because of the importance of personal contacts and the need for specialized knowledge of country differences in countertrade opportunities, such individuals may be difficult and expensive to recruit.

As this brief discussion indicates, an internal organizational unit for countertrade can offer a number of advantages but also needs to have a certain minimum amount of business to justify its expense and to develop sufficient depth. Thus, a firm starting in countertrade may initially want to depend on specialized outside organizations.

A survey of U.S. companies,[4] found that trading houses were used in arranging 44 per cent of countertrade transactions, in-house specialists in 22 per cent of the cases, international banks in 20 per cent of the cases, and an internal trading subsidiary in 8 per cent of the cases. Foreign government agencies and consultants accounted for the remaining 6 per cent of the cases. As for the disposal of countertraded goods, companies were able to absorb the goods in their own businesses in 45 per cent of the cases. They used outside assistance to dispose of such goods in 55 per cent of the cases.

Conclusions

Countertrade is growing in importance and it is a sensible economic response to market imperfections. Companies contemplating engaging in countertrade should develop or acquire the skills necessary to find market imperfections exploitable through countertrade, and also the skills and resources necessary to avoid its pitfalls and overcome its disadvantages. Assembling an organization that is able to accomplish these tasks is essential for success in countertrade.

This paper reviewed briefly the various forms of modern barter and countertrade. It classified these various forms into four categories with major differences with regard to the time horizon and the extent to which money is involved in the transaction. Next, it provided a conceptual framework based on market imperfections, which is useful for understanding countertrade and for identifying situations where profitable opportunities for countertrade are likely to arise. It ended with some suggestions for the nature of the corporate organization necessary for countertrade and with a brief checklist of some possible risks and pitfalls in countertrade. The discussion indicates that countertrade is not a temporary phenomenon and that its use is likely to grow even further, especially since countertrade is a way to add significantly to shareholder value by providing opportunities for overcoming market imperfections.

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