

Chapter 37

MARKET MAKERS¹

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Abstract

The primary focus of this entry is on market maker services, revenues, and costs. A market maker's basic function is to service the public's demand to trade with immediacy by continuously standing ready to buy shares from customers who wish to sell, and to sell shares to customers who wish to buy. Additionally, the market maker helps to stabilize prices and to facilitate a reasonably accurate price discovery. Further, a special type of market maker – a stock exchange specialist – fulfills the role of an auctioneer. The bid–ask spread is the classic source of market maker profits, while the costs of market maker operations include: order-processing, risk-bearing (the cost of carrying an unbalanced portfolio), and adverse selection (the cost of trading with a better-informed participant). The paper further considers the competitive environment that market makers operate within, and concludes with the thought that institutionalization, the advent of electronic trading, deregulation, and globalization of the equity markets have led to major changes in market maker operations in the recent past, and will continue to do so in the coming years.

Keywords: adverse selection; bid–ask spread; competitive environment; electronic trading; exchange specialist; immediacy; market maker; order-processing; price stabilization; price discovery; risk-bearing

Market makers play a central role in many equity markets by buying and selling shares to service the public's demand to trade immediately (the classic service provided by a dealer). Market makers are also responsible for stabilizing prices (making a market “fair and orderly”) and facilitating price determination. Some market makers, such as stock exchange specialists, also perform the role of auctioneer.

Demsetz (1968) was one of the first to analyze the supply of immediacy. Buyers and sellers arrive sporadically at the market, and it is not a simple matter for them to find each other in time. The market maker provides a solution by continuously standing ready to trade from his or her own inventory of shares. The service is not free, however. The dealer sells to buyers at higher ask prices, and buys from sellers at lower bid prices. The bid–ask spread is the market maker's compensation (sometimes referred to as “the dealer's turn”).

Market makers are not necessary for immediacy to be provided to a market. Public traders can post limit orders with commission brokers acting as middlemen. However, immediacy is not the only marketability service provided by a market maker.

The liquidity provided by market makers also helps to stabilize prices. Most participants in the securities markets prefer prices that, all else equal, are less volatile. They care about this as investors because they are generally assumed to be risk-averse. They care about this as traders because

they are averse to transaction price uncertainty. Market maker intervention helps to stabilize price fluctuations in the short run. The U.S. exchange specialist in particular has an “affirmative obligation” to make a fair and orderly market.

Market makers also facilitate the determination of accurate prices. First, their own quotes directly set market prices. Second, their quotes are signals that public traders react to in writing their orders; therefore, market makers indirectly affect market prices by influencing the public order flow. Third, exchange specialists establish market-clearing prices at the opening of the trading day and at the resumption of trading after halts caused by the advent of news.

Price stabilization and price discovery are both consistent with the provision of immediacy. This is because “immediacy” means not only the ability to trade promptly, but also the ability to trade in reasonable amounts at prices that properly reflect current market conditions. (Smidt, 1971 emphasizes the supply of liquidity in depth, namely the ability of investors to trade quickly and in size, at the market maker’s quotes.) Consequently, transactional immediacy, price stability and accurate price discovery are all attributes of markets that are “fair and orderly.”

As auctioneers in an agency market, market makers also organize and oversee trading. Stock exchange specialists do so by maintaining the limit order books and by assuring that trading rules are not violated. On some exchanges (such as the Tokyo Stock Exchange), market makers act only in the clerical bookkeeping and regulatory oversight capacities, and are not allowed to trade the stocks assigned to them.

The bid–ask spread set by the market maker reflects the following components: order-processing costs, risk premium or inventory costs, adverse selection costs, and profit (Stoll, 1989). The order-processing costs compensate market makers for their time and effort, cost of paperwork, etc. Risk bearing is central to the dealership function (Amihud and Mendelson, 1980; Ho and Stoll, 1981). The market maker trades to make a

market rather than for his or her own investment motives. If buyers appear, a market maker must be willing to assume a short position; if sellers arrive, the market maker must be willing to assume a long position. As a result, the market maker generally acquires an unbalanced portfolio. The market maker is then subject to uncertainty concerning the future price and the future transactions volume in the asset. Not knowing when transactions will be made, the market maker does not know for how long an unbalanced inventory position will have to be maintained. An unbalanced inventory position implies the existence of diversifiable risk. Thus, the market maker requires a risk premium on the inventory risk, which other investors can eliminate by proper portfolio diversification (the expected return on a stock compensates all investors and market makers for accepting nondiversifiable risk).

Market makers also protect themselves against adverse selection. Public orders to purchase or to sell securities are motivated by either idiosyncratic liquidity reasons or informational change. The market maker typically does not know whether an order has originated from an informed trader or from a liquidity trader. If a public trader receives news and transmits the order before the market maker has learned of the informational change, the public trader profits at the market maker’s expense (Bagehot, 1971; Copeland and Galai, 1983; Glosten and Milgrom, 1985). The market maker responds to the cost of ignorance by increasing the ask quote and lowering the bid so that the expected loss to the informed traders is compensated by the expected gain from the liquidity traders. The market maker cannot achieve total protection, however, by sufficiently widening the spread. Regardless of how much the offer is raised and/or the bid is lowered, any informationally motivated trade would be at the market maker’s expense.

And the defensive maneuver is not costless. The market maker profits from liquidity trades, and in the process of widening the spread to guard against

informed traders, increases the cost of transacting and so loses an increasing number of liquidity traders. Yet, there must be investors who trade for noninformational reasons. Without the liquidity traders, the dealer market would collapse (Grossman and Stiglitz, 1980).

The competitive environment of a market maker firm differs depending on whether it operates in an agency/auction environment or in a dealer market. In an agency/auction market, limit order traders and floor traders provide competition for the single market maker (stock exchange specialist). In contrast, a dealer market is competitive only if the order flow for a security is directed to more than one dealer firm. This competition for marketability services fragments the informational content of the order flow, however. In other words, each dealer firm knows what buy and sell orders it receives, but does not observe the flow of orders to competing dealer firms. However, in a screen-based system, each dealer firm does see the quotes posted by others. In addition, information is transferred by transaction price reporting and via inter-dealer trading.

The online reporting of large transactions, however, can signal information about a dealer's inventory position to its competitors. And, when the order flow is dominated by institutional investors, as on the London Stock Exchange, other problems can arise (see Neuberger and Schwartz, 1990). These include fair-weather market making (taking the privileges but failing to meet the obligations of market making), preferencing (the diversion of order flow to a market maker firm that is not necessarily posting the best quotes, but that has guaranteed best-price execution nonetheless), handling a lumpy order flow (few trades but of large size), and coping with one-way markets (buyers only or sellers only). All told, market making is a complex, multifaceted operation.

Institutionalization, the advent of electronic trading, deregulation, and globalization of the equity markets are having a profound impact on securities trading and price determination. These forces have led to major changes in market maker

operations in the recent past, and will continue to do so in the coming years.

NOTE

1. This material is modified from an equivalent entry from *The New Palgrave Dictionary of Money and Finance*, by Newman, Peter. Reprinted with permission of Palgrave Macmillan. Copyright © Newman, Peter.

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