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Letter from the Managing Editor

I am pleased to present the 2013 issue of the *Journal of Finance Case Research*, the official journal of *The Institute of Finance Case Research* (IFCR). 2013 was a very fruitful year for the journal, and this issue includes six excellent cases that I hope you will consider for classroom use.

The IFCR provides an avenue for the writing of cases and their submission for peer review. Cases accepted for publication in the *Journal* have met the quality requirements of a double-blind review process, and they are available for use through *Journal* subscriptions or by contacting the *Institute* for multiple copies (for a small fee per copy of the case). Teaching notes are available to instructors desiring to use each case by contacting the *Institute*.

The *Institute* continues to promote the interaction of casewriters in conference settings. Cases submitted for conference presentation are eligible for the review process for the *Journal*. The overall objective of this activity is to create an outlet for casewriters, and a source of high quality cases for case users.

I would like to personally invite casewriters and case users to participate in the activities of the *Institute*. Our case sessions are held at a variety of finance conferences in colorful, interesting locales and provide the opportunity for interaction with others with a similar interest. Our recent conference activities have taken place in Jacksonville, Florida; Denver, Colorado; Dallas, Texas; Maui, Hawaii; Biloxi, Mississippi; Nashville, Tennessee; Las Vegas, Nevada; Chicago, Illinois; and Pensacola Beach, Florida and other great destinations.

We sponsored IFCR case sessions at the *Academy of Economics and Finance* in Charleston, South Carolina in February 2012, and we will be participating at a variety of other conferences in the near future. All full manuscripts presented at the conferences may be entered in the review process for the Journal. We find that cases presented at our conferences, having had the advantage of being exposed to the scrutiny of experienced casewriters, have a better chance of final acceptance for journal publication.

Our acceptance rate is no more than 25%. The *Journal* is listed in *Cabell's Directory of Publishing Opportunities in Economics and Finance*, and is listed in many other quality informational references.

Again, this issue of the *Journal of Finance Case Research* contains several quality cases. We hope you find these useful. Please visit our website often for updates and conference information. We encourage all parties interested in the production, promotion, and use of cases in finance to become active participants in the IFCR.

Timothy B. Michael, Managing Editor
Journal of Finance Case Research
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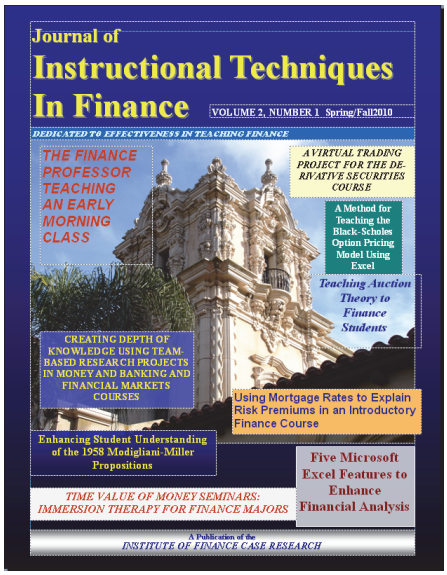

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SCATTERED ARBITRAGE

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INTRODUCTION

On August 30, 2012, the Wall Street Journal ran a story under the headline: "Short Sellers Cry Out For Yelp". The news story describes the heavy losses endured by short sellers who had bet on declines in Yelp, Inc.'s stock price on the day the company's IPO (initial public offering) lock-up provision expired. The stock soared on the very day when Yelp executives and early investors were first allowed to sell their pre-IPO holdings in the recently issued (March 2) stock, contrary to the short-sellers expectations. The expiration of the lock-up provision led many to expect heavy selling by insiders. In addition, continued weakness in other recent internet IPO stocks such as Facebook and Groupon led to a widespread expectation that the stock would decline on or around the expiration date. Some investors tried to profit on this expectation by selling Yelp stock short (i.e., selling borrowed shares) in the days leading up to expiration of the lock-up provision. When Yelp's stock price started rising strongly in morning trading on the expiration date, many traders abandoned their short positions by "buying in" the stock, fueling a price rally in what the Wall Street Journal referred to as a "short squeeze".

SHORT SELLING, PRICE DISCOVERY AND RISK

Short sellers risk their own capital in their belief that the market price for a given asset is too high, and will decline in the future. In a typical short sale, an investor, through a broker, sells a financial asset such as shares of stock that are borrowed from other investors. At some future time, the seller will buy back the asset and return it to its owner. In this they are taking an opposite position to investors who purchase the asset, believing that the price will go higher. Short sellers benefit when prices go down, leading many to demonize them as preying on bad news, and short sellers are often blamed when market prices of assets decline. Short selling serves an important purpose, however, in price discovery. Prices represent the equilibrium between buyers' demand and sellers' supply. Market pricing 'bubbles' occur when, due to over-optimism or exuberance, there is a dearth of sellers compared to many buyers. In such a circumstance short sellers can provide needed balance.

In addition, much short selling is often a part of larger hedging and/or arbitrage transactions. Consider the example of Amaranth Advisors and their trading in the natural gas futures market in 2006. Amaranth was a large and respected hedge fund that

famously failed after attempting to profit from seasonal pricing patterns in that market. Amaranth was trading what is known as a "calendar spread"; they were buying large positions in natural gas in the future month of March, and hedging by taking large short positions in the same commodity in the future month of April. The two positions hedged each other in terms of the general level of natural gas prices. But Amaranth expected that the spread (difference) between the price of natural gas in the two months would widen in a typical seasonal pattern. Natural gas prices typically are highest in the winter when demand for heating is high, and this demand tends to decline in April. Because the position was hedged, Amaranth viewed it as having very little risk, and they took huge positions in this spread trade as compared to their equity capital.

Unfortunately, in 2006, prices for the 2007 natural gas futures behaved in a way opposite to the typical seasonal pattern. The March-April futures spread narrowed by over 50% between August 15 and September 15, 2006. Over 65% of Amaranths $9.2 billion in assets were lost in this short time. Since Amaranth employed a great deal of debt to finance its trading assets, this loss wiped out all of their equity capital and their legacy is one of the largest hedge fund collapses of all time [see also Anderson (2006) and Till (2006)].

These episodes of short selling highlight some of the key types of risk inherent in short selling strategies. One risk of short selling is that the price of the shorted asset will continue to rise until the short seller's capital is no longer sufficient to buy back the borrowed assets. For example, if the price of Yelp stock eventually more than doubles from the price at which it was shorted, the loss is greater than the initial position size; a loss of over 100% is possible. Amaranth hedged against this risk by taking long positions in another month. However, the two positions were similar, not identical. The remaining difference is the source of potential gain, and loss, in a spread strategy and is known as "basis risk." Basis risk exists in a hedged position when the hedge is not quite exactly the same as the asset being hedged.

Another form of risk commonly found in short selling strategies is leverage – the use of debt to finance part of the investment positions. In the Amaranth case the leverage multiple was several dollars of investment assets per dollar of equity capital. This increased the riskiness of their hedged position by financing it mostly with debt. This meant that when the prices moved against them, they could not simply wait for more favorable prices to develop. Amaranth's trading losses were "marked-to-market" on a daily basis, and the equity capital eroded rapidly. The small size of the equity relative to the size of the positions greatly increased the risk of the trade. Position size is a key determinant not only of risk, but of potential return, in any trade. In considering the risks and rewards of short positions all of these kinds of risks must be explicitly considered.

THE LTV TRANSACTION AND SULLIVAN'S ALLEGATIONS

During a period between February 26, 1993 and June 29, 1993, Scattered Corporation, a member of the Chicago Stock Exchange (formerly the Midwest Stock Exchange) sold short approximately 170 million shares of LTV Corp. LTV was one of the nation's largest steel producers and was involved in a lengthy bankruptcy proceeding that had begun in 1986. Certain in their belief that the stock would fall in price as the

details of LTV's reorganization were better understood, traders at Scattered did not borrow the shares they had sold. They had no intention of delivering old shares of LTV. In fact they could not have delivered 170 million shares, since only 122 million pre-bankruptcy shares were outstanding. Various members of the Exchange who purchased shares from Scattered Corp., including Sullivan and Long, Inc., became aware of Scattered's actions and initiated a suit against Scattered, alleging wrongdoing and harm. Sullivan et al. argued that Scattered's sales represented a fraud, and drove down the price of the LTV securities that they, the plaintiffs, held.

SCATTERED'S DEFENSE

In their defense, Scattered Corp. argued that its sales of LTV stock constituted arbitrage. Arbitrage is usually defined as the simultaneous purchase and sale of an asset or assets in different markets so that a riskless profit is earned. This definition has often been expanded to include the purchase and sale of like assets so as to earn a profit and has also been used to refer to risky investments that capitalize on fundamental market inefficiencies. Arbitrage is founded on the Law of One Price, an economic axiom which maintains that, if markets are efficient, an asset cannot sell for two different prices at the same time, even if in different marketplaces. Scattered, unlike many, read LTV's plan of reorganization and knew after the reorganization the old stockholders would represent a very small percentage of the total new shares outstanding. The bondholders were given stock in the newly reorganized company and represent the vast majority of the new stockholders. Therefore, it was possible for Scattered to deliver warrants on the new shares against their extreme short position in the old shares, instead of the old shares of which there clearly were not enough outstanding to cover Scattered's bet.

Sullivan and Long sued in U.S. District Court in the Northeastern District of Illinois (Chicago). Judge Leinenwebber heard the case and granted defendants (Scattered Corp.) their motion to dismiss plaintiffs' case. On appeal, a three-judge panel of the U.S. Seventh Court of Appeals affirmed this decision. The decision was authored by Chief Judge Richard Posner. Posner has served on that bench since 1981, over 30 years, and he is considered one of the foremost experts on economic and financial law in the United States. The appeals court decision is excerpted in Exhibit A of this case.

After their victory, Scattered Corporation, along with other members of the Chicago Stock Exchange filed a derivative lawsuit against the exchange and some of its officials charging breach of fiduciary duties, gross negligence, breach of contract and constructive fraud. Scattered alleged that certain officials of the Exchange participated in practices favorable to some members (including Sullivan) at the expense of others (including Scattered), especially as regards penalties assessed for violations of Exchange rules. The suit did not specifically address complaints made in the press that Sullivan used knowledge of Scattered's short position gained in his capacity as a governor of the Chicago Stock Exchange.

EXHIBIT A

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In the United States Court of Appeals for the Seventh Circuit
Sullivan & Long, Incorporated, et al., Plaintiffs-Appellants
v. Scattered Corporation, Defendants-Appellee
Appeal from the United States District Court for the Northern District of Illinois, Eastern Division. Harry D. Leinenweber, Judge.
Argued November 1, 1994. Decided February 8, 1996 before Posner, Chief Judge, and Coffey and Manion, Circuit Judges.

This is an appeal from the dismissal, for failure to state a claim, of a suit that charges violations of the securities laws growing out of a notorious, or at least newsworthy, episode of short selling of common stock of LTV Corporation. The plaintiffs allege a "market manipulation" on an awesome scale that jeopardized the solvency of the Chicago (formerly Midwest) Stock Exchange. But like the district judge we have difficulty understanding what right of the plaintiffs the "manipulation" violated or how they were harmed.

LTV, a large steel producer, entered bankruptcy in 1986. In February of 1993 it announced a proposed plan of reorganization under which existing stock in the company would be replaced by new stock most of which would be issued to the bondholders and other creditors of LTV. Existing stockholders would receive warrants entitling them to purchase some of the new stock. The plan contained an estimate that the new shares would be worth only 3 or 4 cents. When the plan was announced, the old shares were trading for more than 30 cents. There were 122 million old shares outstanding.

The plan was confirmed by the bankruptcy court on May 27, 1993, and the court fixed June 29 as the last day on which the old shares would be tradable. Beginning before the confirmation date, but greatly accelerating on that date, the principal defendant, a Chicago Stock Exchange market maker (a dealer willing both to buy and sell a particular stock or other security for his account on a regular basis), with the alarming name of Scattered Corporation, sold short huge quantities of the old LTV shares. It sold short, in fact, tens of millions of such shares a week, for a total, when trading ended on June 29, of 170 million shares, far more than the 122 million old LTV shares outstanding. The excess of shares sold short over total shares outstanding is the focus of the plaintiffs' complaint.

A short sale is a sale at a price fixed now for delivery later. A trader sells stock short when he thinks the price of the stock is going to fall, so that when the time for delivery arrives he can buy it at a lower price and pocket the difference. If, for example, he sells the stock short at 50 cents a share, and the price falls to 40 cents before he delivers the stock, he can buy the stock for 40 cents a share, deliver it to the buyer, and have made a profit of 10 cents. Under the rules of the Chicago Stock Exchange, the buyer in a short sale situation is entitled to delivery within five working days of the sale. If the seller fails to make delivery (maybe he doesn't have the stock), the rules entitle the buyer to "buy in" the stock, that is, to go out and purchase it on the open market and charge the price to the short seller. If in our example the price had risen by the end of five working days to 65 cents and the seller did not deliver, the buyer would go into the market, buy the stock at 65 cents, and charge the price back to the short seller. After the completion of

the transaction, the buyer would have stock worth 65 cents that he had obtained at a net cost of 50 cents (0.50 + 0.65 – 0.65). Notice that a short seller's potential loss is unlimited, since it is simply the difference between the sale price and the market price which could be anything.

The plaintiffs in this case were buyers on the other side of Scattered's short sales. They thought the price of the old shares would rise before plunging to 3 or 4 cents by June 29. (An old share would be worth that, rather than, as one might imagine, zero, because the holder of 100 shares was entitled to turn his shares in and receive 1.08 warrants to buy new shares at the rate of one warrant per share. The warrants, being worth approximately 100 times the old shares, were selling for between $3.125 and $4.125.) Why they thought this is a puzzle. Since on May 27 it was certain, or virtually so (nothing is really certain), that shares of common stock in LTV would be worth no more than 4 cents in just a month, it is unclear why the stock did not plunge immediately to that level. In fact it remained in the two digit range for quite some time, and on the very last day of trading was trading at 7.8 cents even though it was within hours of plunging to half that.

Scattered's counsel told us that the only reason the stock did not plunge immediately is that many brokers and investors do not read a plan of reorganization carefully – it is a long, complex, and jargon ridden document – and hence many of them did not at first, or perhaps even at last, realize that the old stock in LTV would indeed be worth only 3 or 4 cents after the reorganization was completed. The problem may be endemic with reorganizations. A New York Times article suggests that many investors misunderstand the significance of news that a company is reorganizing. They see that the price of the stock is "low," and think that they are getting in on the ground floor rather than climbing aboard a sinking ship. See Kurt Eichenwald "Being Nearly Worthless, Wang Shares, Of Course, Sell Briskly," N.Y. Times, Sept. 16, 1993, p. D8. Maybe the stock exchanges or the SEC should do something about these gullibles, since competition, which usually protects the uninformed purchaser, seems not to be working. Scattered, however, disclaims any legal responsibility for educating its buyers, and indeed has none, not being a fiduciary of the people it trades with. Its counsel acknowledged that his client hoped to take advantage of these people by selling them stock short. That is what short sellers do: they bet on a declining market, trusting that they have better information or better instincts than other traders, those who will buy from them. There is nothing unlawful about trading on an information advantage, provided that it is not based on inside information which is not alleged. Scattered merely had a better understanding of the information about the reorganization than the investors with whom it traded. It was not even a matter of its having non-public information, though the cases we have just cited make clear that trading on nonpublic information is lawful unless it is inside information. It was a matter of a superior interpretation of public information, the information contained in the plan of reorganization.

The effect of trading on an information advantage is to dispel, by penalizing, ignorance and to bring market values into closer, quicker conformity with economic reality. The profit that such trading brings at the expense of less knowledgeable traders provides the incentive for a private, for profit firm, such as Scattered, to provide this economic service.

Darwinian this process may appear to be, and yet how many (if any) of the plaintiffs resemble the proverbial widow and orphan, or other harmless prey? Sullivan & Long is the first listed plaintiff. According to a magazine article that the plaintiffs cited in their complaint, "Mr. Sullivan, who is a member of the CSE's [Chicago Stock Exchange's] board of governors and is an owner of CSE member firm Sullivan & Long Inc., tried to use an arbitration (sic) strategy similar to Scattered's to profit from the difference in price between LTV's stock and warrants. But in late June, Mr. Sullivan, who was effectively betting that LTV's stock price would decline, became concerned that the price might rise when he discovered how large a short position Scattered had. He bought LTV shares to cover his own short position, and his firm incurred modest losses. In July, Sullivan & Long filed suit against Scattered. In "Stock Probe Target Fights Back," Crain's Chicago Business, August 30, 1993, the article notes an allegation that Sullivan learned of Scattered's short position in his capacity as a governor of the Chicago Stock Exchange.

Scattered had no intention of delivering any of the LTV stock that it sold short. The last thing in the world that it wanted to do was to acquire and hold a stock that it believed certain to lose most of its value within weeks. Since it had no intention of buying any of the stock, it had no compunctions about selling short more LTV stock than existed. It ran the risk that the people on the other side of the short transactions were right in betting that the price would rise before its terminal plunge, that those people would go into the market and buy stock when the price rose during the five day period for delivery, and that they would force Scattered to reimburse them for these purchases, as in our hypothetical example of the stock sold short at 50 cents that rises to 65 cents. This risk - the risk that, if the Crain's article can be believed, Mr. Sullivan flinched at - did not materialize, because the price maintained its downward course. There were few buy-ins, and Scattered ended up making more than $25 million from its campaign of short selling. The plaintiffs claim that Scattered ignored such buy in demands as were made upon it, but this is imprecise. Scattered refused to deliver old stock in response to such demands, but did offer warrants on new stock. The amount of old stock that it had sold short represented fewer than 2 million shares of new stock. This was only a small part of the total equity capitalization of the reorganized firm. The vast majority of the new stock was to go to the debt holders of the old firm. It would not have been infeasible for Scattered to buy enough warrants to satisfy all potential buy in demands with new stock. It would have been infeasible for it to obtain enough old stock to satisfy all such demands in old stock.

We can understand, therefore, Sullivan's flinching. The risk was enormous, precisely because Scattered had sold short more old LTV stock than existed. If all the buyers decided to buy in, and if Scattered were deemed not entitled to pay these buyers with warrants rather than with old stock, the price of the old stock would skyrocket unless Scattered sopped up all this demand by continuing to sell short to these buyers. But at some point the buyers would worry about Scattered's ability to make good on all its promises to redeem its short sales. They would demand stock, not further promises to pay a high price if the stock rose in value. When this happened - this balking by the buyers – the plaintiffs would, until Scattered did go broke, be able to make money buying in the stock that Scattered had sold short to them. They say that Scattered prevented the price from rising (and thereby discouraged buy ins by making them unprofitable) by selling

short more and more stock. This is just to say that Scattered, like a bluffer in a poker game, kept redoubling its bet until the other players lost heart. But so what. Scattered's principals may be reckless gamblers, sharpies, wise guys, exploiters of loopholes, even violators of the letter or spirit of the rules of the Chicago Stock Exchange. We take no position on these questions, except to note that the Chicago Stock Exchange has forbidden the practice in which Scattered engaged, that is, selling short without having borrowed the stock being sold short or having equivalent guarantees of delivery. But it did this after the short sale spree that is the basis of this suit, and anyway not every stock exchange rule confers a private right to sue.

What troubles us most about this suit is the plaintiffs' failure to identify any harm to the objectives of the securities laws under which they have sued; for that matter they have failed to identify a rule that Scattered violated. The central objective, we take it, is to prevent practices that impair the function of stock markets in enabling people to buy and sell securities at prices that reflect undistorted (though not necessarily accurate) estimates of the underlying economic value of the securities traded. An efficient stock market is one in which stock prices reflect all potentially available information that is relevant to the economic value of the stocks. Eugene Fama, "Efficient Capital Markets: A Review of Theory and Empirical Work," 25 J. Finance 383 (1970). Not every practice that might reduce the efficiency of a stock market is prohibited; the securities laws compose a patchwork of rules rather than a seamless standard. But we would think twice before concluding that these laws prohibit "schemes" that accelerate rather than retard the convergence between the price of a stock and its underlying economic value and therefore promote rather than impair the ultimate goals of public regulation of the securities markets. Objectively, from May 27 on old shares of LTV stock were worth only 3 or 4 cents, and the defendant's campaign of short selling helped move the market price toward that true value. Had the plaintiffs succeeded in their scheme of reselling for, say, 50 cents stock that they had bought for 40 cents but that was worth only 4 cents, they would have been contributing to an irrational gyration in stock prices.

The plaintiffs call what Scattered did "market manipulation," a term that refers to tactics by which traders, like monopolists, create artificially high or low prices, prices that do not reflect the underlying conditions of supply and demand. The only artificial prices, however, were the prices at which LTV stock sold between the confirmation of the plan and the expiration of the old stock. They were artificially high because they so greatly exceeded the stock's true value, which was only 3 to 4 cents. Far from launching a balloon, Scattered's short sales punctured a balloon, bringing prices down to earth where they belonged.

The name for what Scattered did is not market manipulation, but arbitrage. Arbitrageurs are traders who identify and eliminate disparities between price and value, or as in this case between today's price and tomorrow's price where the difference cannot be attributed to any prospective change in value. By doing this, arbitrageurs promote the convergence of market and economic values that we suggested was the central objective of securities regulation. Consider a case in which the identical stock is selling for different prices on two exchanges at the same time. Since the value is the same, the prices should be the same. By buying stock on the exchange where the price is lower and reselling it on the other exchange, the arbitrageur brings about a convergence of price with value. This case is only a little subtler. The old stock and the new stock that was to

be issued when the plan of reorganization was implemented were not identical, but they were nearly so. The old stock was the stock until June 29, the new stock the stock thereafter. The two stocks were so far identical (putting aside the irrelevant difference in the roughly 100 to 1 rate at which old shares were convertible into new) that any difference in price between them was more likely to reflect a failure of the stock market to work properly than a difference in underlying conditions of demand and supply. Scattered played the arbitrageur's role in trying to equate the prices of these two nearly identical goods. Arbitrage is not market manipulation. The opposite of a practice that creates artificial prices, it eliminates artificial price differences.

The plaintiffs complain that the defendant prevented them from profiting from their purchases by flooding the market with successive waves of short sales, thus keeping the market price from fluctuating upward from time to time ("capping the price," they call it). Such upturns would have enabled them either to buy in at a higher price than the short sale price and thus make a profit, if they had bought from Scattered, or to sell at a profit, stock that they already owned. But "flooding" a market with short sales is not a rational formula for keeping price falling. On the other side of each such sale is a buyer who thinks the market price will rise. If he is right, the short seller will lose money, and the more shares he has sold short, the more money he will lose. As we have already intimated, the short seller could sell so many shares short that his solvency was jeopardized. Suppose price rose and everyone who bought the shares sold short by Scattered tried to buy in. Since there would be more stock demanded than there was stock capable of being supplied, the price would soar and Scattered, which we are told was capitalized at only $1.5 million when the short selling began, would, unless it could redeem with warrants, soon go broke. But the plaintiffs are not complaining that if Scattered guessed wrong about the direction of the market, the price of the stock would rise faster than if Scattered had sold short fewer shares, for if that had happened the plaintiffs might have made money. And the threat of insolvency is one reason that buyers would have stopped accepting Scattered's offers to sell short, would instead have insisted on delivery or would have bought in and sought reimbursement from Scattered.

The plaintiffs analogize Scattered's plan to the scam in the movie “The Producers.” The "defendants" in that movie sold shares in a play to investors. They sold more than 100 percent of the shares, confident that the play, "Springtime for Hitler", would be a flop, so that the investors would not ask for their share of the profits (there would be no profits). The play was a success, so the scam was exposed and they were sent to jail. Where the analogy fails is that while investors reasonably believe that the promoter will not sell more shares than exist, since he would then be defrauding the investors, a buyer of stock does not have a basis for equal confidence that the number of shares of a stock that is being sold short does not exceed the total number of shares in existence, since the seller is not trying to raise money for a venture. If even one share of a stock is sold short, there will be more shares actually or potentially for sale than there are shares in existence since by definition the short seller does not own the share or shares that he is selling short unless the short seller has borrowed stock in order to be able to make delivery if the buyer wants delivery. Scattered was not the only short seller of LTV stock. Apparently the first listed plaintiff in this case also sold LTV stock short. If Scattered had sold only 85 million shares short, and other arbitrageurs had sold in the aggregate another 85 million, the imbalance between shares for sale and shares in

existence would have been identical, unless the arbitrageurs borrowed the stock they sold short.

Granted, it is customary for a short seller to borrow the stock that he sells short; if he did not, the buyers would lack confidence that he could deliver, and might worry that if they tried to buy in, the short seller would not have the money to reimburse them. But the plaintiffs do not point us to, and we have not been able on our own to find, a law that requires arbitrageurs or other short sellers to borrow the stock that they are selling short. So the plaintiffs could not count on the volume of short sells being capped at the total number of shares outstanding. They were on notice that the sort of thing that did happen might happen, if there were any trader as audacious as Scattered. Being on notice, they were not deceived.

It is true that in 1994, a year after the short selling of LTV's old shares, the Chicago Stock Exchange adopted a rule requiring a short seller to borrow the stock sold short or provide equivalent guarantees of being able to deliver. But that is too late to help these plaintiffs. A further complication is that, as we have mentioned, Scattered did have, so far as appears, enough warrants to deliver new stock to cover any demands for old stock, though we do not know whether responding to such demands in this way would have satisfied the short sales rules of the Chicago Stock Exchange or for that matter the contracts of short sale. Since there is not as yet any requirement of public disclosure of short sales (hence the allegation that Mr. Sullivan abused his position as a governor of the Chicago Stock Exchange), Scattered itself could not know the precise contribution that its short selling was making to the imbalance of which the plaintiffs complain.

We have thus far assumed that the short seller is not trying to deceive the market about what he is doing. The plaintiffs charge deception. They charge first of all that Scattered did not disclose that it had no intention of delivering any of the stock that it sold short. But if it was selling more shares than were outstanding, it could not deliver them the requisite number of shares did not exist so the plaintiffs' real complaint must be that Scattered did not disclose how many shares it was selling. But it was not required to disclose the number and the plaintiffs were not entitled to assume that Scattered would not sell more shares than were outstanding. Beginning on May 27, Scattered bought warrants so that it could deliver new shares to anyone who demanded delivery. The plaintiffs argue and we may assume for purposes of our decision that anyone who demanded delivery before June 29 would have been entitled to old shares. That individual's remedy, when Scattered refused to deliver old shares, would have been to buy them in. Apparently no one bothered to do that. No one who bought from Scattered is complaining that it was not able to buy in old shares, so that the Brennan case on which the plaintiffs rely is inapposite. No matter how many tens or for that matter hundreds of millions of shares Scattered sold short, it could not extinguish any of the outstanding shares and thus it could not defeat the right of the buyers, including the plaintiffs in this case, to buy in the old shares and if the price was higher than the price of the short sales to charge the price to Scattered and pocket the difference. And this is on the assumption that rule or contract required Scattered to deliver old shares, rather than warrants for new shares. If the latter form of compliance with the short sale contract was permissible, the plaintiffs' case evaporates completely, since Scattered no longer would have been selling short more shares than existed.

Our analysis has shown that nothing alleged in the complaint is the kind of conduct that the securities laws are aimed at combatting. It is therefore not surprising that none of the plaintiffs' specific legal contentions has merit. They contend first and foremost that "by unprecedented massive short selling and by disguising the nature of their trades, the defendants controlled the price of LTV," in violation of section 9(a)(2) of the Securities Exchange Act of 1934. This section forbids "a series of transactions in any security registered on a national securities exchange creating actual or apparent active trading in such security or raising or depressing the price of such security, for the purpose of inducing the purchase or sale of such security by others." As the plaintiffs themselves point out, the essence of the offense is creating "a false impression of supply or demand," for example through wash sales, where parties fictitiously trade the same shares back and forth at higher and higher prices to fool the market into thinking that there is a lot of buying interest in the stock. There was nothing like that here. On the other side of all of Scattered's transactions were real buyers, betting against Scattered, however foolishly, that the price of LTV stock would rise. And Scattered made no representations, true or false, actual or implicit, concerning the number of shares that it would sell short. Maybe the plaintiffs' theory is that every short seller implicitly warrants that it won't sell short in such quantity as to jeopardize its financial solvency. This is an argument against short selling, or perhaps against short selling without borrowing the shares to be sold short ¬or perhaps against arbitrage. But other than in tender offer situations, where short selling is prohibited, there is as yet no rule barring persons with a pronounced taste for risk from trading on stock exchanges.

As for the claim that Scattered violated section 12(1) of the Securities Act of 1933 by becoming an issuer of LTV stock without registering the offer or sale as required by that Act, this is quite fantastic. Only LTV could issue LTV stock, although persons controlling LTV, as well as (conventional) underwriters, could also be liable for selling unregistered stock, but Scattered was none of these. The remaining claims violation of RICO, unjust enrichment, and violation of an Illinois consumer protection statute are either makeweights or depend on contentions that we have already rejected. The complaint fails to state a claim and the suit was therefore properly dismissed. It was properly dismissed for another reason as well. The plaintiffs could not prove injury with the degree of certainty, low that it is, necessary to obtain an award of damages in a securities case. (They do not seek any other form of relief.) They bought stock that was selling for many times its actual value, hoping against hope that there were enough foolish investors to push the price up despite the imminence of its certain plunge. It is entirely speculative that but for Scattered's short selling, the plaintiffs would have sold at a profit or at a reduced loss before the price plunged to its value in the reorganization. The plaintiffs do not suggest that short selling in the stock of a firm undergoing reorganization is forbidden. Other traders might have seen the opportunity Scattered did, and their short selling might have driven the price sufficiently low to thwart any profit by these plaintiffs. It was not necessary that short selling drive the price all the way down to 7.8 cents (where it was when the music stopped), only that it drive the price below what it would have been had Scattered not sold short in such massive quantities. But to recapitulate the essential point of this opinion, since the conduct in which Scattered engaged appears to have served rather than disserved the fundamental objectives of the securities laws, we are not inclined to strain to find a violation of a specific provision.

The lower court finding in favor of Defendants is AFFIRMED.

Sullivan & Long, Inc. v. Scattered Corp., 47 F.3d 857, 864-65 (7th Cir. 1995).

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THE VW MARKET SQUEEZE: A LESSON FOR SHORTSELLERS

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"The risks of short selling should have been apparent to the brightest hedge-fund managers in Mayfair and Greenwich because of widespread suspicion that Porsche, a dab hand in currency-derivatives markets, was also mucking about with options on VW stock. Adam Jonas of Morgan Stanley warned clients on October 8th of the danger of playing "billionaire's poker" by betting against Porsche. Max Warburton of Alliance Bernstein said Porsche could make billions by squeezing short-sellers of VW's shares."

"Squeezy Money", The Economist, October 30, 2008

HOW THE VOLKSWAGEN TAKEOVER BEGAN

Things were not going very well for Volkswagen (VW) in 2005. Rumors spread of a possible takeover of Volkswagen by DaimlerChrysler AG, BMW or Renault. In September 2005 Porsche announced that it is planning to acquire a 20 percent stake in Volkswagen to protect their strategic interests in the company. The relation between the two companies was established in the 1930s with the development of the VW Beetle and has continued throughout the years. According to a press release by Porsche AG in late 2005, Volkswagen supplied almost 30 percent of Porsche sales volume.

Porsche continued rising its stake in Volkswagen during the following two years. In June 2006 the company spokesman announced an intended increase of Porsche's stake from 21.2 to 25.1 percent and by the end of the year the supervisory board approved a further increase of the VW investment up to 29.9 percent. The stake was raised to 35.14 percent in September of 2008, giving Porsche de facto control over their main supplier.

The takeover strategy was engineered by the chief executive Wendelin Wiedeking and the chief financial officer Holgen Härter using derivative contracts to acquire the VW shares. The use of options contracts was not new to the CFO, who has implemented a successful currency hedging strategy for years. Porsche has a substantial part of its revenue in foreign currencies and particularly in U.S. dollars, while all manufacturing operations are in Europe thus creating a significant currency exposure. The sports

carmaker started hedging its USD exposure since the beginning of the decade and the hedge against the falling dollar earned huge profits for the company.

One of the obstacles in the takeover process was the so-called VW law, which allows any shareholder holding 20 percent of Volkswagen's stock to block major decisions. In other words the most important decisions need more than 80 percent majority for approval. The government of Lower Saxony, where VW headquarters are located, holds slightly more than 20 percent of the shares. In 2006 the CEO Wendelin Wiedeking called for the abolishment of the law and brought the case to the European commission, arguing that a blocking minority should be at least 25 percent of the shares.

The European Court of Justice struck the law in October 2007 on the grounds that it prevented the free flow of capital among the EU member states. As a result, Germany introduced changes to the VW regulation in December 2008 but the key clause was left unchanged leaving the state of Lower Saxony with blocking power (more than 80,000 VW employees live in this state). Porsche did not win this time.

THE MARKET SQUEEZE

While Porsche was acquiring its stake in the Volkswagen group, VW share price started rising in September 2008 (Figure 1). Hedge funds assumed that the price has gone too far up to make sense for Porsche to buy more shares and started shorting the stock, thinking that there is no other way but down for the VW share price. Among the many financial speculators who shorted the VW stock was the German investor Adolf Merckle. (See Figure 1.)

The short seller's strategy reaps profits when the stock price does go down. If the stock price goes up, however, the short speculators need to post more collateral or buy shares in the market to close their position. For the latter, there should be enough shares floating freely in the market and not held by institutional investors.

On October 26th Porsche SE announced that it held 42.6 percent of VW ordinary shares and cash settled options for 31.5 percent more of VW ordinary shares. With the government of Lower Saxony holding slightly over 20 percent of VW shares, Porsche essentially cornered the market.

Then came the short squeeze. The price of Volkswagen ordinary shares jumped from less than EUR 200 to more than EUR 1,000 during the day of October 28th, driven by short sellers trying to unwind their position in a market with almost no free float (Figure 1). The hedge funds were furious, while Porsche was rumored to have made from 6 to 12 billion euro from the transaction. "They may struggle to sell 911s to hedge fund managers for years and years to come…" (The Economist, "*Squeezy Money*", October 30, 2009). One of the short sellers could not withstand the losses. Adolf Merckle committed a suicide on January 5, 2009 by throwing himself under a train. The great losses on VW stock were cited as one of the main reasons for his death.

One of the big questions after the market squeeze was how the German market regulations allowed for the successful corner to happen. On October 29, 2008 Porsche SE issued a press release, stating: "Porsche SE denies all responsibility for these market distortions and for the resulting risks to which the short sellers have exposed themselves. Porsche has not been active in the market during this share price movements. Allegations of price manipulation by Porsche are therefore without any foundation whatsoever."

Porsche SE did not provide any specifics of the options strategy employed, other than the use of cash-settled stock options. Cash settled options do not require the physical delivery of the underlying asset at expiration, the difference between the market price and the option strike price is received at settlement. Physical delivery of the underlying, however, could occur at settlement as well.

As a result of the market squeeze the Germany's financial regulator BaFin, launched an investigation into whether Porsche SE breached the German Securities Trading Act, which prohibits market manipulation. The question was if the sports carmaker had failed to disclose their holding of financial instruments related to the VW deal in a timely manner. As it turned out during the BaFin investigation, the definitions of instruments in the German Transparency Directive Implementation Act do not include cash-settled stock options of the type held by Porsche SE. The sports car manufacturer exploited magnificently the loophole in German financial markets regulations to build up an options position for a significant stake in VW without having to disclose it.

PORSCHE FINANCIALS

The 2007/2008 fiscal year was a good year for Porsche. Porsche sold 99,342 sports cars, with more than 1/3 of the sales were from the 911 series. The Boxter series sales remained steady and include the Cayman models as well. The Cayenne luxury SUV enjoyed sales growth during the period in Asian markets such as China. The Cayenne shares its entire chassis with the Volkswagen Touareg and Audi Q7. The Panamera, the new Porsche four-door luxury sedan, was introduced in April 2009. The launch of the Panamera opened a new chapter in Porsche's automobile history, since it will place the company in direct competition with other auto manufacturers in the premium sedan segment.

The company also went through an organizational change in 2007. Dr. Ing. h.c. F. Porsche AG was transformed to Porsche Automobil Holding SE after an extraordinary meeting of the shareholders on June 26, 2007. All shareholders of the former company became shareholders in the new company. The stock of the company was split at a ratio of 1:10 on March 3, 2008 into 175,000,000 shares. One half of the shares (87,500,000) are ordinary and the other half is preference shares. The ordinary shares are owned exclusively by the Porsche and Piech family and hold all voting rights. Porsche Automobil Holding SE has a two-tier structure of the board – a management and a supervisory level. The members of the Porsche and Piech families are members of the supervisory board. Wendelin Wiedeking was President and chief executive officer of the holding company at that time. (See Exhibit 1 and Exhibit 2.)

The automobile holding's after-tax profit rose to EUR 6.39 billion from EUR 4.24 billion in 2006/2007. The before-tax profit was more than the revenues in the 2007/2008 fiscal period (EUR 8.56 billion before-tax profit vs. EUR 7.46 billion in sales). Investors were even more impressed with the next half-year financial report. For the first six months of the 2008/2009 fiscal year, Porsche SE reported EUR 3.04 billion in Sales revenue and EUR 7.3 billion before-tax profit. (See Exhibit 3 and Exhibit 4.)

Most of the company's profit during came from stock price options, as opposed to car sales. The stock options income amassed to EUR 6.83 billion for 2007/2008 year and EUR 6.84 billion for the first six months only of 2008/2009 fiscal period. In January

2009, the CEO Wiedeking was named "The man who outfoxed the market" by Fortune magazine. "Thanks to an astute mixture of long-term strategic foresight and short-term financial wizardry, Wiedeking has Porsche headed into this downturn in an extraordinarily strong position."

EPILOGUE

The "brilliant" financial strategy employed by Wiedeking and Härter, however, did not come without a downside to it. While building the stake in VW stocks and options, the "financial wizards" at Porsche increased the company net debt position to about EUR 9 billion, almost three times more than its debt as of July, 2008.

On July 23, 2009 the Porsche CEO Wendelin Wiedeking and CFO Holgen Härter announced their resignation to facilitate the way for a VW- Porsche merger, but a merger dictated by Volkswagen this time. The failed attempt to acquire VW resulted in a substantial increase in the sports car-maker debt position. Prior to their departure, Wiedeking and Härter made a last attempt to accomplish their initial takeover plan by asking a Qatari sovereign-wealth fund to acquire a stake in Porsche and extend a cash lifeline, but the Qatari fund refused to get involved in the Porsche and Piech family clash. The sovereign wealth fund announced they will invest in the merged company. A full merger is expected by 2011. Meanwhile, Volkswagen is acquiring a 42 percent stake in Porsche, generously valuing the luxury sports carmaker at EUR 12.4 billion.

The hedge funds and German regulators may not have forgotten the market squeeze so quickly, though. A second investigation was started in August 2009 on suspicions of insider trading by the former CEO and CFO. The former executives' homes and offices were searched as a part of the investigation of alleged VW stock price manipulation. The market manipulation allegedly aimed to support a stable VW stock price during the takeover attempt, as share price fluctuations could have resulted in substantial losses on the derivatives contracts owned by Porsche.

CASE QUESTIONS

1. How did Porsche manage to acquire such a large stake in VW without having to disclose the positions?

2. How did the short squeeze occur?

3. Can Porsche executives be accused of market manipulation? Were their actions ethical?

4. Did Porsche create value for its shareholders? Would your answer be different at the beginning of 2009 and in 2011?

APPENDIX A

COMPANY HISTORY

Ferdinand Porsche (The Father)

The origins of the Porsche company trace to 1931 when Ferdinand Porsche (the father) started his engineering design and consulting company named Dr. Ing. h.c. F. Porsche GmbH. The Porsche sports cars production started much later in 1948, the 356 was the first car to carry the Porsche name.

Prior to starting his own design firm, Ferdinand Porsche designed the Lohner-Porsche electric vehicle presented in the World Fair in Paris in 1900 and also developed the world first hybrid petrol/electric vehicle at about the same time. Six years later, Ferdinand Porsche is appointed as a technical director at Austro-Daimler in Wiener Neustadt. In 1923, after joining Daimler-Motoren-Geselshaft in Stuttgart as a Technical Manager and member of the executive board, Ferdinand Porsche designed the Mercedes Compressor Sports Car.

The relationship between Porsche and Volkswagen starts in the 1930s. In 1934 Dr. Ing. h.c. F. Porsche GmbH received the order from Hitler who recently came to power to build a car for the people. The result was the first Volkswagen Beetle, one of the most successful creations of the Porsche design office and in car design history as a whole. Several years later, the first Volkswagen plant was built and Ferdinand Porsche was one of the general managers for the years that followed.

The Engineer Son

Ferdinand (Ferry) Porsche was the second of Ferdinand Porsche's four children. Since as early age Ferry Porsche worked in his father's design office. When Dr. Ing. h.c. F. Porsche GmbH received the order form the German government to design the Volkswagen; Ferry Porsche was in charge test drives. His older sister Louise married Anton Piech, an attorney-at-law at her father's design firm. Their son, Ferdinand Piech is the current chairman of the board of directors of Volkswagen.

For the duration of World War II the Porsche design office was moved from Stuttgart to Gmund, Austria. After the end of the war, Ferdinand Porsche was arrested by the French, imprisoned for 22 months and removed from the board of directors of Volkswagen. During that time his son Ferdinand (Ferry) Porsche took over management of the Porsche design bureau.

Applying the same design his father used for the Volkswagen as a foundation for a small sports car, Ferry Porsche introduced the first Porsche sports car in 1948. The 356 production started initially in Gmund, and was moved to Stuttgart in 1949. After coming back from prison from France, Ferdinand Porsche (the father) admitted that he would have built the 356 exactly the same way his son did.

The Porsche Sports Cars

The 356 marked the beginning of a successful production of the Porsche race and sports cars. Under a contract with Volkswagen, the sports cars were would be sold through the VW dealer network and serviced at VW facilities. Porsche became the

Austrian distributor of Volkswagen and also was hired by VW as consultants for further development and design of the VW automobiles.

The popularity of the Porsche sports cars grew steadily around the world over the following years. The Porsche 550 Spyder won international acclaim at the Paris Auto Show in 1953. Three years later, the 10,000th 356 was manufactured, marking the 25th anniversary of the company.

One of the most successful Porsche models, the 911, was launched in 1964. The design departed from the VW Beetle, with a much more elegant look. In the 1970s Porsche exports increased, particularly to Japan, UK and Switzerland. Revenues continued to rise in the 1980s, with models such as the 924, 928 and 944. By the end of the 80s the United States emerges as the major market for the company's sports cars.

Going Public

In 1972 Dr. Ing. h.c. F. Porsche GmbH went through reorganization. Prior to going public in 1973 the company was owned entirely by the Porsche and Piech families who held key positions. The company was headed by Ferry Porsche and his sister Louise Piech, while Ferdinand Alexander Porsche was in charge of styling and Ferdinand Piech and Michael Piech dealt with outside commitments and administration. After the company was registered as Porsche AG, Ferdinand Piech went to manage Audi and currently Volkswagen.

The members of the Porsche and Piech families retained positions on the supervisory board of the company, but the executive board and management of the company was turned over to professional managers outside the family. Ernst Fuhrmann was elected as a president and CEO of the company.

During the beginning of the 1990s the market tumbled and the sales of luxury sports vehicles fell dramatically. Some of the reasons included the slowdown of the US economy together with the increasing price of Porsche cars.

The appointment of Wendelin Wiedeking as a chief executive officer in 1992 marked the beginning of a new era for Porsche. The new CEO implemented a turnaround package including cost cutting, "just-in-time" inventory and streamlining of the production process. The Boxter was introduced in 1996 and was an instant success, especially in the United States where it was offered at less than $40,000.

Exhibit 1

Consolidated Income Statement of the Porsche Group for the 2006/2007, 2007/2008 fiscal years and 2008/2009 first half of the year (as of January 31, 2009)

EUR000,000	2008/09 first half	2007/08	2006/07
Revenue	3,043	7,466	7,368
Changes in Inventories and own work capitalized	282	311	162
Total operating performance	3,325	7,778	7,530
Other operating income	46,347	19,773	7,264
Cost of materials	-1,900	-4,170	-3,660
Employee benefits expense	-661	-1,358	-1,264
Amortization and depreciation	-302	-569	-532
Other operating expenses	-39,629	-13,744	-4,600
Profit before finance revenue	7,180	7,710	4,739
Share of profit of associates	444	1,007	1,223
Finance costs	-385	-548	-272
Other finance revenue	103	400	167
Finance revenue	162	859	1,118
Profit before tax	7,342	8,569	5,857
Income tax expense	-1,723	-2,177	-1,615
Profit for the period	5,619	6,392	4,242
thereof profit attributable to minority interests	7	14	-11
thereof profit attributable to hybrid capital investors	59	88	56
thereof profit attributable to shareholders of Porsche SE	5,553	6,291	4,197
Earnings per ordinary share (basic and diluted)	31.72	35.94	23.98
Earnings per preference share (basic and diluted)	31.73	35.95	23.99

The income of the VW group is not included in the January 2009 financial statements due to different reporting dates.

Exhibit 2

Consolidated balance sheet of the Porsche Group at the end of fiscal years 2006/07, 2007/08 and half year as of 1/31/2009

	EUR000,000	1/31/2009	7/31/2008	7/31/2007
Assets	Intangible assets	23,251	359	264
	Property, plant and equipment	29,944	1,668	1,378
	Investment in associates	6,373	8,130	7,059
	Other financial assets	639	64	68
	Leased assets	11,012	947	991
	Leased assets	399	0	0
	Trade receivables	5	3	21
	Receivables from financial services	33,697	1,301	1,322
	Other receivables and assets	3,868	732	286
	Income tax asset	820	57	64
	Securities	93	1,021	1,015
	Deferred tax assets	3,774	95	75
	Non-current assets	108,875	14,377	12,541
	Inventories	18,739	757	625
	Trade receivables	6,149	265	245
	Receivables from financial services	27,566	472	460
	Other receivables and assets	18,544	19,300	5,604
	Income tax asset	1,085	35	27
	Securities	4,139	3,383	1,419
	Cash and cash equivalents	13,588	6,990	2,410
	Assets classified as held for sale	1,007	0	0
	Current assets	90,817	31,200	10,791
		199,692	45,577	23,332
Equity and Liabilities	Subscribed capital	175	175	46
	Capital reserves	122	122	122
	Retained earnings	19,170	14,830	8,546*
	Currency translation	19,467	-61	-42*
	Equity before minority interests	1,787	15,066	8,671
	Hybrid capital		1,780	810
	Minority interests	22,770	0	0
	Equity	44,024	16,846	9,481
	Pension provisions	13,794	777	719
	Income tax provisions	3,555	0	0
	Other provisions	9,686	650	624

Deferred tax liabilities	4,210	1,015	613
Financial liabilities	37,307	3,489	3,539
Trade payables	9	6	7
Other liabilities	3,425	47	67
Non-current provisions and liabilities	71,986	5,983	5,570
Tax provisions	5,332	2,008	897
Other provisions	9,269	1,190	1,161
Financial liabilities	48,522	12,897	3,010
Trade payables	9,956	581	505
Other liabilities	9,837	6,072	2,708
Current provisions and liabilities	82,916	22,748	8,281
Liabilities classified as held for sale	766	0	0
	199,692	45,577	23,332

*Adjusted: The translation differences from investment in associates were reclassified from retained earnings to currency translation.

Exhibit 3

Other operating income

EUR000,000	2008/09 first half	2007/08	2006/07
Stock price hedge	45,718	19,256	6,927
Income from the reversal of impairments and provisions	24	157	73
Exchange rate gains	220	3	7
Sundry operating income	385	357	258
	46,347	19,773	7,264

Exhibit 4

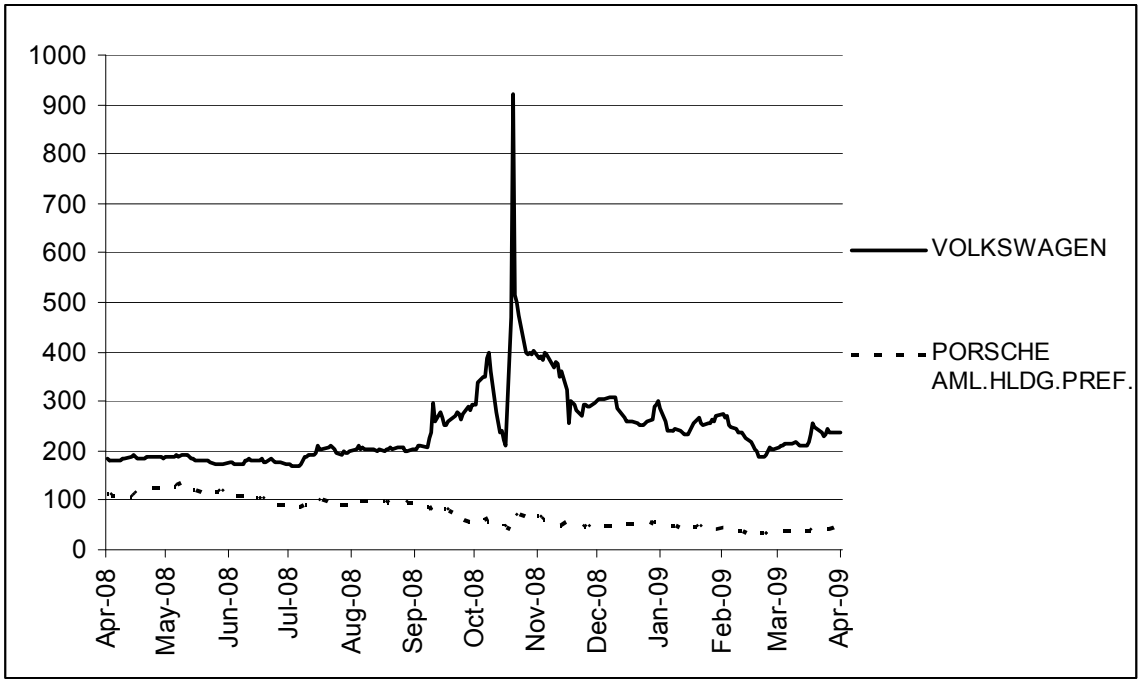
Other operating expenses

EUR000,000	2008/09 first half	2007/08	2006/07
Stock options	38,878	12,422	3,333
Advertising	127	264	253
Selling and general administrative expenses	78	174	158
Dues, charges, fees, legal and advisory costs	22	49	89
Exchange rate losses	0	112	74
Repairs and maintenance	33	67	65
Rent and leases	22	49	31
Sundry operating expenses	469	606	597
	39,629	13,744	4,600

Figure 1

Volkswagen and Porsche Automobil Holding Stock Price Performance

The figure reports closing stock prices of Volkswagen and Porsche Automobil Holding SE preference shares in euro from April 9, 2008 to April 9, 2009 from Datastream.



SURVEY RESEARCH ASSOCIATES, INC.

Raymond H. Lopez, Pace University

Introduction

"Steve, I'm glad we had this discussion. I appreciate that you want to pursue your dreams in the theater and in the movies while you are still young. I want you to take your dreams and I want you to know that I will always support you in your new endeavors.

It is time for me to slow down and retire and for you to dedicate, in the near future, full time to those areas in which you have shown talent; such as T.V. writing and theater producing. It is time to sell the company. I have some regrets and it is not going to be easy for me. In my heart I was hoping that you would lead this company in the future, but your happiness and fulfillment are more important to me than continuing in this business."

It was September of 2008 and Alfredo Sanchez, majority owner of SRA, reluctantly made the decision to sell the firm that he had been involved with as an employee and principal for more than 40 years. After graduation from Harvard University with an M.S. and a Doctorate in Geology from the University of Madrid, he had joined Survey Research Associates as a marine geologist in 1966.

The Company

Survey Research Associates (SRA) was formed in New York in 1957 by a group of scientists from the Lamont-Doherty Geological Observatory, a division of Columbia University. The firms' mission was to apply the results of advanced research studies and technical developments to the needs of firms' in the private sector. SRA also looked for mineral deposits around the world; diamonds in South Africa, phosphates in North Carolina, and gold in New Zealand.

After initial success in obtaining contracts for various seismic work projects from private companies and the U.S. government over the next few years, management concluded that taking the company "public" would expand their financing options and create a "market value" for their ownership positions in the firm. In 1963, SRA sold a successful public offering of 20 percent of the firm and had its shares listed "over the-counter." While a few insiders sold some shares on this offering, to monetize their investment in the firm, more than 80 percent of the newly issued shares were sold by the company, to strengthen its financial structure and pay down some expensive debt.

The new financial strength of the firm contributed to its business success. In 1964 the Coastal Engineering Research Center (CERC), a division of the U.S. Army Corps of Engineers, inaugurated the "Sand Inventory Program." This 2 to 3 year contact was

designed to carry out reconnaissance level surveys along a majority of the East Coast of the United States (from New England to Florida). It was the first time that an effort was made to classify sand types and locations for future beach erosion project needs.

SRA was successful in winning this contract and in order to implement the contract, Mr. Sanchez developed the Vibracorer. This device enabled geologists to take samples of the sea bottom in a new and more efficient way. The pneumatic version of the Vibracorer could be used to produce 40 foot core samples in up to 100 meters of water. They also developed an electric version that produced these core samples in up to 300 meters of water. SRA would both manufacture and use these devices to perfectly match this equipment to the needs of each application and contract. The CERC contract also allowed SRA to perfect the use of Sparker and Subbottom techniques for delineation of sand bottom areas.

Pneumatic Vibracore: Up to 40 foot cores in 100m of water.

With the success of the CERC contract, the firm was awarded a contract from the U.S. Oceanographic Office of the Department of Defense to provide and equip oceanographic vessels to the U.S. Navy. The vessels would be used to collect acoustic data in support of the navy's long range sonar research and development program. Awarded in 1965, the contract continued until cancellation in 1969 as a result of federal government spending cuts due to the Viet Nam conflict.

This cancellation adversely affected the finances of SRA and resulted in their interest in diversifying their operations into the Mediterranean region (Spain, Italy, England.) Alfredo's contacts with Spanish government officials would prove valuable to SRA's operations in the not too distant future.

Enter Mr. Sanchez

In 1966, right after graduation, Alfredo Sanchez was hired by SRA as a marine geologist. With a new wife, Nancy, M.S. and doctorate degrees he became head of data reduction in the firm's survey division.

By 1969, Mr. Sanchez was promoted to director of Overseas Scientific and Market Operations. Born in Spain and keeping in touch with colleagues there, he negotiated the lease of one of SRA's oceanographic vessels, the M/V Ruth Ann, to the National Research Council of Spain.

Within a year, SRA management decided to expand their operations to southern Europe and England. They established a wholly owned subsidiary, Marine Geophysical, in Barcelona and appointed Mr. Sanchez as its President. This company was responsible for

Electric Vibracore: Up to 40 foot cores in 300m of water.

SRA's expansion in the Mediterranean Basin, as well as Africa and the Middle East.

One of the most significant developments during this period in Europe was a three year, $6 million annual contract with Agip, S.p.A. to supply a fully equipped and staffed seismic vessel to perform geophysical studies for oil and gas pipeline routes, high resolution hazard surveys and drilling platform positioning. This was one of the most lucrative and profitable contracts entered into by the firm in recent years.

Going to Spain as President of this new venture had both professional and personal implications. Alfredo had to convince his recently married spouse to leave the U.S for at least three years. This challenge proved easier than he had anticipated.

"Nancy, I have a chance to return to Spain as President of a newly formed wholly owned subsidiary of Survey Research Associates. This is a wonderful opportunity to expand my skills beyond geology, which I truly love, to strategic and operating management. After a three year commitment, we will come back to the states."

Nancy agreed to the three year commitment. They had met in Florance during Nancy's junior year abroad while studying at Mt. Holyoke College and Spain has been very important in their subsequent lives together. Another plus; Steve, their 3 year old son, could grow up bilingual, just like his mother.

The best laid plans of husband and wife do not always come to pass. Three years later Nancy was ready to leave Spain, but Alfredo had other plans. He presented the options to her after dinner on a Sunday night.

"The business has been exceptionally strong over the last year, and we have successfully won a few contracts to provide our skills in North Africa and other parts of the Western Mediterranean. Parent company management has been quite pleased with my performance (you saw last year's bonus and raise). They would like me to stay here for another three years to lead and support these expansion initiatives."

Nancy was not pleased! "Three more years; until 1976! And then they will probably ask for three more years!" She was only partially right, since they did not return to the U.S. until 1981. Their son was then 15 years old.

While Alfredo was running the Spanish subsidiary, SRA Geophysical Corporation sold its Oceanographic and Geophysical division to its employees in the U.S. In 1978, during his second three year employment contract, Alfredo was elected to the Board of Directors of SRA, thus confirming his importance to the parent firm.

Finally, in 1981, the Sanchez family returned to the U.S., where Alfredo was made a Vice President of SRA. The company also repurchased the Oceanographic and Geophysical division, now renamed Ocean Seismic Survey Corporation, and Mr. Sanchez was named its chief operating officer. Shortly thereafter, Ocean Seismic Survey Corporation was renamed SRA Geophysical International.

After a series of restructuring operations SRA Geophysical International, Inc. was carved out of the parent company, with Mr. Sanchez as the controlling owner. A year later, 1986, the new SRA established a Spanish subsidiary in Barcelona named Ocean Europe, S.p.A. Using his experience and contacts from his decade in Spain, Alfredo successfully directed this subsidiary in the Spanish market. It was awarded numerous contracts for on – call site hazard clearance surveys as well as rig – positioning services. In a few years, this company became the dominant force in this marketplace.

By 1991, Steve had completed his bachelor's degree from Williams College. After a stint in New York as a fund raiser for a not – for-profit organization, and at the

coaxing of his father, he joined Alfredo at SRA. He worked alongside his dad, as a senior surveyor and later project manager. Some of his projects included the Chesapeake Bay Bridge Tunnel and several site hazard clearance surveys in West Africa, North Africa, Europe and South America.

In 1993, SRA faced some financial challenges, as a few of its contract sources were postponing or cancelling projects, especially in the U.S. marketplace. With reluctance and personal sadness, Alfredo had to sell his beloved Spanish operation, to a German firm named Gerard Analytics. As part of the sale agreement, SRA had to agree to a three year non-compete clause in the Spanish market.

In 1997, the non-compete clause expired, and SRA quickly reestablished its Spanish operations through a newly formed subsidiary under the name Survey Research Associates Spain. One of its goals was to use SRA's extensive U.S. experience in beach restoration in the Mediterranean basin. This was an emerging market in that part of the world, and SRA had developed special expertise in the shallow waters of the East and Gulf coasts of the U.S. over the previous decade. This proved to be a successful strategy for the U.S. "model" for beach replenishment and sand borrow area delineation generated a steady stream of projects for the company.

By 2007, with Steve now Executive Vice President, SRA generated $4.44 million in revenues, with a $550,000 profit after bonuses and before taxes.

The Business

Survey Research Associates was a privately held corporation that provided geophysical, geotechnical, oceanographic, hydrographic, geochemical and environmental services to private firms as well as government entities. These services were performed in four market segments, each of which exhibited unique growth and volatility characteristics. (Exhibit 1)

Sand Inventory

Vibracoring Platforms
Sand Inventory and Offshore Operations
R/V Atlantic Twin

The oldest and most stable business segment was sand inventory. Here the firm contracted with local and state governments to explore for the appropriate type of sand that could be used to replenish beaches after storms or floods had damaged these shorelines. While revenues in this segment had almost doubled over the last five years, and had been quite stable and profitable, they made up a smaller portion of revenues in recent years, as other divisions proved to be stronger growth drivers.

Beach erosion replenishment using Vibracore technology was recently generating almost $1.5 million per year of revenue. It involved finding the appropriate type of sand offshore that could be used to expand a beach which had been damaged over the last few years by winter storms in the northern states of the East coast or tropical storms in the South and Gulf coast regions.

Protecting barrier islands with sand restoration was another aspect of this business. These contracts were usually relatively short (10 to 25 days), with payments collected from governments 30 to 60 days after completion of core sampling and analysis. In recent years, a growing percentage of the business had been generated from repeat customers, a testament to the reputation of the firm.

Energy and Telecom

Energy and Telecom operations have been critical to the firm's revenue generation over the last five years. From under 10 percent of revenues in 2003 they peaked at 54.1 percent in 2007. Geological surveys, sampling and analysis were generated from both governments and the private sector. Pipeline and cable operators need to determine a preferred route for their products and SRA was a leader in shallow waters up to 200 meters. These routes usually run along a shore line or from a drilling platform to the shore, as well as in the bottoms of rivers, lakes and other bodies of water. As demand for the products and services that require these facilities grows around the world, SRA's expertise will be needed and utilized extensively in coming years.

Shallow Water Survey Specialists – Seafloor/Subbottom Mapping
Sediment Sampling, Positioning.

Electric and fiber optic cable contracts were much larger than those of the beach restoration division. For example, in 2006 to 2007 a contract to analyze a route for an electrical cable between San Francisco and Sacramento took one year and generated $2 million in revenue.

In the late 1990's, there was a boom in the expansion of fiber optic cable, and SRA participated in this business. After the dot com bubble burst, this business almost disappeared, as excess capacity negated the need for new cables. In the last two years, this business segment has

HDVC Cable Pre-Engineering Survey
(RTK Positioning, Swath Bathymetry, Magnetometer, Side Scan Sonar, and Subottom Profiler)

started to expand, but at a much slower pace than in the 1990's. It is expected that growth will continue, and SRA expects to win its share of the contract work. These contracts average 3 to 7 months of work and generate $250,000 to $1,000,000 in total revenue. Payment terms generally cover expenses plus progress payments, with final collections between 30 and 60 days after completion.

Civil Engineering

The Civil Engineering operations involve geophysical analysis and sediment sample analysis of sea bottom and subbottom areas for bridge, tunnel and other facilities that need a stable base for support, safety and long life. This has proved to be a fairly steady growth business, with profit margins that have expanded as overall revenues in this division have increased.

Recently, SRA had developed a precision positioning and visual system for the accurate placement of mats on the sea bottom for the protection of sea walls and other marine structures. These mats are made of heavy steel and are flexible so they cover the sea floor effectively. They must be placed precisely next to each other, to form a continuous covering of the sea bottom. SRA personally worked with the mat manufacturers and construction companies to complete these projects.

From a business perspective SRA envisioned a bright future for these contracts. Monthly revenues range between $60,000 and $100,000, payable in 30 to 60 days. They can last from 3 months to one year, with little risk and good profit margins.

A new market with interesting potential was the geophysical and sediment study of the bottom and subbottom for the placement of towers for the construction of wind farms in the shallow waters of the U.S. With growing need for the production of clean energy, growth prospects were quite positive for the foreseeable future.

Environmental Studies and Analysis

Although the smallest business segment of SRA in recent years, prospects for growth were brighter than they have been for some time. These environmental studies and analyses were contracts from government directly, but also from companies subject to government regulation. These studies were primarily multidisciplinary and required the input of biology, chemistry, sediment analysis, etc. Large engineering firms generally led a team of companies specialized in these different disciplines. For these projects, SRA provided geophysical studies and sediment sampling. Lack of a specialized laboratory for the analysis of these samples had, at times, put SRA at a competitive disadvantage in bidding for these contracts. However, recently SRA created a niche market based exclusively on its Vibracore sampling technology that is expected to contribute to a bright future in this field.

Vibracoring Platforms
Environmental Vibracore Sampling
Trailerable Vessels


Attracting Profitable Business

Contracts for each of the firm's lines of business originated from a variety of sources. Most started out with federal, state or local governments determining a need for information and implementation. Engineering firms that actually performed the needed work then contacted SRA to analyze the areas and provide information they needed to complete a project. After approximately 40 years in the business, they knew SRA's capabilities quite well and had been quite satisfied with their analyses and reports. Currently, there were 12 to 15 small, private operators similar to SRA that performed marine geological and geophysical studies along the East, Gulf and West coasts of the United States. There were also 4 large companies operating worldwide, headquartered in both Europe and the U.S.

In addition to direct contacts from engineering firms, Alfredo and Steve surveyed government publications that announce Requests For Proposals (RFP's). The internet had also become a valuable source of information to learn about potential contracts that were coming up for bids.

Company Resources

Survey Research Associates owned one large boat that had the capability to carry out bathymetry, geophysical surveys and vibracore sampling in depths of 300 to 400 feet. The R/V Eastern Twin was a steel catamaran specifically designed as a research vessel. Its twin hull construction provided a stable platform perfect for geophysical, oceanographic, core sampling and diving operations. This hull design and shallow draft also made it an ideal vessel for near shore activities. Lab space (180 square feet) and deck space (1100 square feet), coupled with an extending crane and high capacity winch, provided the crew of up to 14 people with the resources needed to complete contracts effectively and efficiently. This boat usually performed its surveys on the East coast of the U.S. For work on the West coast, the firm rented boats of an appropriate size and brought on its technological equipment for a particular contract. Private contractors were hired to operate these ships, which could be fishing boats, supply vessels or recreation boats. This allowed the company to be flexible and not tie up capital in assets that might not be needed until another contract was signed. The firms technical equipment (navigation, bathymetry, geophysics, Vibracore etc.) could be brought on board quickly and efficiently, then dismantled and put in storage until needed for the next contract.

Survey Vessels
Inshore Vessels

The firm also owned four smaller vessels between 15 and 32 feet in length for research and survey operations in the shallow waters of rivers, estuaries and streams. Two small trucks were owned and used to transport these boats, or trailers, to locations for contract operations.

SRA's main office covered 1400 square feet of rental space in Dover, Delaware. Another 7200 square feet of garage and storage space was located in a nearby building. The small boats, Vibracore equipment, core tubing, trailers, etc. were stored there when not being used for surveying activities.

In addition to Alfredo and Steve, the main office was staffed with one secretary, a comptroller and an accountant. On the technical side was a senior project manager, a geologist who was also a CAD operator, in charge of producing maps and analyzing field data. A senior geologist headed the survey team and also worked in the office providing final reports for the clients. Another junior surveyor spent most of her time "in the field." Finally, two other full time employees worked in the garage / warehouse to maintain equipment and keep it ready to be sent out to a job site.

Potential Buyers

Over the last five years, three European firms had expressed an interest in purchasing SRA. Only two of them had decided to study the firm's finances in order to provide a bid. Freeport Ocean Services was a private, family owned business that had participated in a number of projects with SRA personel over the last decade. They were a much larger firm, generating approximately $200 million per year in revenues and operated in both U.S. and Mediterranian waters. Representatives of the firm had spoken to Alfredo and Steve on a number of occasions and expressed a sincere interest in purchasing the firm, at the right time and price. Both managements believed that a combination of their firms would result in incremental business opportunities that were not being completed because of limited resources. A number of SRA contracts in recent years were not completed due to lack of available boats or personnel. Freeport's resources could be expected to complement those of SRA and result in enhanced revenue and profit levels.

The other potential buyer of SRA was Gerard Analytics, a large, public company headquartered in Germany, with offices in Spain and Houston, Texas. With over $1 billion annual revenues, Gerard Analytics was an aggressive growth company that expanded through both internal and external strategies. A few years ago it purchased C & C for over $20 million to expand U.S. operations.

Gerard Analytics was probably the major, independent geophysical analysis firm serving large companies and governments in waters surrounding all the continents. They worked with oil companies and communications companies to span the world's oceans and seas for pipelines and cables. When laying cables and pipelines in deep waters, using large, ocean going ships, there are not too many "protests." However, when they get close to the shore and have to bring the pipelines or cables on land, there are usually environmental groups waiting for them. Gerard Analytics' policy has been to use smaller firms that employ local boats, assets and personnel for the last few miles to shore. This allows these operations to remain "under the radar" so to speak and generally results in a smoother, more friendly result for all concerned. Since this portion of the total contract is so small, it is easier for a large, worldwide company to contract with small, local operators to "start" and "finish" these deals. SRA would fit this need quite nicely.

A Key Meeting – Alfredo and Steve – October 2008

"Steve, we have just received the independent consultant's report and have had a chance to examine it in detail. What are your thoughts?"

"Dad," said Steve, "the report covers most of the material we discussed with the consultant and is based on the last five years of our business performance (Exhibit 2, 3 &4). His "present value" calculation of just under $3 million seems conservative."

"I have had the same impression" said Alfredo, "There are some factors and forces that are likely to have a more positive impact on our business over the next few years. The sand inventory and beach replenishment operations give us a dominant position in both the U.S. and Mediterranean markets. Growth has been modest but steady and combining with a larger firm could only enhance our operations. Our recently signed Cooperative Research and Development Agreement (CRADA) with the U.S. Army Corps. of Engineers Laboratories for the Mediterranean also contributes value to a buyer that has not yet surfaced in our financial statements. The CRADA agreement makes SRA the exclusive representative for private and public entities wishing to use these services in the Mediterranean.

Our energy and telecom operations have expanded quickly and strongly over the last few years, to approximately one half of total revenues. With the growth of energy needs in the U.S. and new opportunities in the wind farm market segment, this division could be 60 percent of revenues in the next three years. And margins in this business are above average for SRA."

I gave the consultants what I believed to be the "most probable" revenue expectations for the next five years, reflecting both growth and volatility in revenue levels similar to those of the last few years. However, with the support of either potential buyers resources, I believe we could enhance growth by at least 5 percent over the next two years, 7 percent over the following two years and 10 percent the fifth year out. Over the last few years, we've actually turned down contract offers because our resources (boats and equipment) were being used in other geographic locations."

"I have been looking at the cost side of our business," said Steve. "There are savings that a buyer of SRA could achieve, and I think we should at least share in some of those efficiencies. For example, even after adjusting 2007 results for our "bonus" of $300,000, they can save some money on our salaries and benefits. We have been

compensated quite well, and some of that value could contribute to the exchange value of a deal.

Each of the potential buyers has facilities in the region, so consolidation and economics of scale would result in a minimum savings of 50 percent of our rents. Office expenses could also be reduced by 50 percent, and our auto and travel expenses should decline by 30 percent. At a minimum, SG&A would decline to 21 percent of revenues and provide a solid contribution to net cash flow. Finally, cost of goods sold (survey and vessel expenses) should decline by at least 2 percentage points after we combine firms and resources."

"Good thinking Steve" said Alfredo. "Why don't you revise that consultant report and we'll use our new data in the negotiations. From a strategic perspective, we should be able to identify enhanced values for the firm and at least share some of them with the buyers."

"Dad, one more item in that report" said Steve. "I know our business is risky and volatile, especially over the last five years. But a 30 percent discount rate on expected cash flows seems quite high. I'll recalculate our expected cash flows using 25 percent and 20 percent, just to see the impact on NPV."

"Another good idea" said Alfredo, "but what about the RV Eastern Twin? Its old, almost fully depreciated ($40,000 of book value as of year-end 2007 balance sheet) and probably needs to be replaced very shortly. Potentially, this could mean an expenditure in excess of $1,000,000, plus equipment (navigation, computers, etc.). I have had estimates from one boat owner who has a 110 foot aluminum catamaran available for just about that $1,000,000 figure. I'm sure I could obtain a bank loan for the full amount, at prime plus 1 (6 percent), but I would have to personally guarantee the loan. Our technical equipment from the RV Eastern Twin could be transferred to this boat, with perhaps another $100,000 for upgrading."

"We've discussed this new boat for some time", said Steve. "A deal with either buyer could lessen the need for this boat, or at least assist in its financing. Each has a fleet of boats already in operation and could easily direct one of them to support our division's operations. Our smaller boats, as well as rentals, would not have to change under new ownership. Some of our technical equipment may need upgrading to state -of-the art technology with only a modest investment of approximately $100,000 to $150,000."

Father and son completed their meeting and prepared for negotiations with the two interested firms. They had a general idea of what the offers would look like; a company value, payment structure, employment during a transition period (time, compensation, benefits, etc.) and a final payment. More detailed offers were expected in the next week, after which a final decision could be made. Steve completed the revised pro forma income statements and delivered them it to his dad's office (Exhibit 5) during the first week of November 2008.

Preliminary Offers

Both Freeport and Gerard Analytics had received the consultant's report and arranged for their personnel to visit SRA's headquarters. They each spent approximately three days talking with staff and examining the firm's financial records and statements.

In preliminary discussions with Alfredo, each proposed a slightly different structure for their offer. Freeport valued the firm at $2.9 million. They offered to purchase 75 percent of the shares immediately and the remaining 25 percent in two years. Alfredo and Steve would be expected to be available three days per week during this transition phase. Compensation would be $130,000 per year for each of them.

The Gerard Analytics offer valued SRA at $3.2 million, 50 percent payable immediately and 50 percent payable in two years. Alfredo and Steve would be expected to be available to the firm at SRA's headquarters a total of five days per week for two years and would be compensated at a rate of $140,000 for each of them.

A Heart-Wrenching Decision

After speaking with Steve on more than one occasion, Alfredo was convinced that his dream of having his son assume full ownership of SRA and continue to grow the business was not going to happen. Steve had worked alongside his dad for more than ten years and had "acquired" 30 percent of SRA equity. He knew and understood the business, having negotiated contracts with both private and public entities, worked at the survey sites, helped analyze data and negotiated loan agreements with various banks. Yet Steve's heart was not in this business but rather in theater and movie making.

Ever since his college days, Steve had been interested in the arts. He used his spare time on weekends, holidays and vacations to "pursue that dream." Over the last ten years he had written two movies for a cable channel, one of which was shown nationally. He also was the casting director for six TV productions under genre of Action, Sci-Fi, and Drama categories. Currently he was working with a college friend, Dr. Fred Borland. Over the past five years, Dr. Borland, an orthopedic surgeon had had two three month tours of duty with the National Guard in Iraq and Afghanistan. Their idea was to create a TV production that could be characterized as a serious sequel to the famous MASH series. Sale of SRA would provide both time and financing for this venture. His wife of one year, Janice agreed to continue her teaching activities and support any career change that he decided to make.

After the two offers were received and reviewed by Alfredo and Steve, the only problem they had with each was the valuation price. Another round of discussions was needed to support their adjusted expectations for SRA performance as part of each buyer's operations. They could live with either buyout structure, but valuation seemed too low. Their job was to negotiate a higher figure, based upon their earlier meeting.

After a family meeting between Alfredo, Nancy, Steve and Janice, they agreed upon a strategy to use in what they hoped would be final discussions. They set a target price of $3.9 million and would start their negotiations at $4.4 million. Could they convince either firm that SRA was worth that much? That was the challenge, and they were confident of their position.

A New Development

Comesa, a 60% owned subsidiary of Pemex, the giant Mexican government oil company, recently invited Alfredo and Steve to a meeting in Mexico City. The invitation was extended to explore a possible collaboration between the two firms. Comesa, with

approximately 1000 employees, was already carrying out most of the land geophysical surveys for Pemex. The parent company was expecting Comesa to extend their activities into the offshore survey business in the Gulf of Mexico.

Comesa proposed to use SRA's services and expertise to carry out hazard surveys, pipeline surveys, rig positioning and training of their personnel. They were proposing a three to five year contract at $6,000,000 to $8,000,000 annually. This would generate a substantial increase in SRAs revenues, but would require a significant investment in a new boat (about $1,000,000) and another $500,000 in state-of-the-art equipment. While this would represent a significant investment for SRA's owners and resources, if the firm was part of a larger firm, they could easily supply and guarantee the investment or simply redirect some of their extensive resources towards support of the SRA division's operations. After fully allocated expenses SRAs net income and cash flows would be expected to be higher by more than 85 percent over those items without this contract. If this contract was signed in the next few months, the value of SRA would increase substantially. If the sale was already completed, the initial payment would not reflect these extra values. However, the final payment would surely reflect these values and could prove quite substantial for the Sanchez family.

Exhibit 1
Survey Research Associates, Inc.
Revenue Trends (in percent)
2003-2007

Category	2007	2006	2005	2004	2003
Sand Inventory	57.1%	52.3%	23.8%	38.4%	29.3%
Energy & Telecom	9.4%	27.9%	53.4%	34.8%	54.1%
Civil Engineering	8.5%	11.1%	16.6%	26.4%	16.1%
Environmental	25.0%	8.7%	6.2%	0.4%	0.5%
Totals	100.0%	100.0%	100.0%	100.0%	100.0%
Revenues (in millions)	$ 4.442	$ 2.650	$ 3.368	$ 1.780	$ 1.295

Exhibit 2
Survey Research Associates, Inc.
Income Statements
Years End Dec 31
(in 000's)

	2007	2006	2005	2004	2003	2002
Revenues	$4,442	$2,650	$3,368	$1,780	$1,295	$2,117
Survey and Vessel Expenses (Cost of Goods Sold)	2,466	1,336	2,058	888	623	1,079
Gross Profit	$1,976	$1,314	$1,310	$892	$672	$1,038
Selling, General & Administrative Expenses						
Salaries[1]	$894	$583	$477	$399	$435	$483
Benefits	60	65	63	54	69	84
Rent	96	90	96	94	86	90
Professional Fees	50	51	26	16	17	15
Communications	27	24	29	22	24	29
Office Expenses	62	62	57	45	40	41
Bad Debts	-	-	-	-	20	15
Auto & Travel	38	38	24	20	16	29
Insurance	5	19	13	8	8	14
Misc.	9	5	12	8	7	7
Operating Expenses	$1,241	$937	$797	$666	$722	$807
Depreciation	170	178	158	169	196	189
Total Operating Expenses	$1,411	$1,115	$955	$835	$918	$996
Operating Income (EBIT)	565	199	355	57	-246	42
Other Income						
Interest	14	-	-	-	-	-
Gain on Disposal of Assets	-	-	12	-	-	-
Operating & Other Income	$579	$199	$367	$57	-$246	$42
Interest Expense	28	27	37	16	33	34
Income Before Provision for Taxes	$551	$172	$330	$41	-$279	$8
Provision for Taxes:						
Current	173	3	15	5	1	3
Deferred	61	34	59	11	-7	1
Total Taxes	234	37	74	16	-6	4
Net Income After Taxes	$316	$136	$256	$25	-$273	$4
Cash Flow (Net Income + non-cash charges)	$486	$314	$414	$194	-$77	$193
Earnings Before Interest Taxes, Depreciation & Amortization (EBITDA)	$735	$377	$513	$226	-$50	$231

Exhibit 3
Survey Research Associates, Inc.
Balance Sheets (in 000's)
Years End Dec 31

	2007	2006	2005	2004	2003	2002
Current Assets						
Cash & Cash Equivalents	$280	$134	$8	$29	$5	$12
Cash-Restricted	-	95	-	-	-	-
Accounts Receivable -Trade	200	387	634	359	266	487
Due from affiliate (SRA Spain SRL)	85	61	-	-	-	15
Inventory	8	8	15	23	32	33
Prepaid Expenses	40	115	56	63	102	79
Total Current Assets	$613	$800	$713	$474	$405	$626
Long Term Assets						
Vessels	$728	$694	$638	$608	$585	$596
Survey Equipment	2,471	2,402	2,373	1,958	1,838	1,896
Furniture & Fixtures	76	25	25	18	18	49
Autos & Trucks	91	91	90	66	66	66
Total Long Term Assets	$3,366	$3,212	$3,126	$2,650	$2,507	$2,607
Less; Accumulated Depreciation	2,719	2,549	2,406	2,276	2,124	2,066
Net Long Term Assets	$647	$663	$720	$374	$383	$541
Other Assets						
Deferred Charge	-	-	-	-	18	35
Security Deposit	19	18	18	18	18	18
Deferred Tax Asset	-	-	49	92	123	111
Advances to Executive Apparel Systems, Inc.	-	10	186	186	186	186
Total Other Assets	19	28	253	296	345	350
Total Assets	$1,279	$1,491	$1,686	$1,144	$1,133	$1,516
Liabilities & Stockholder Equity						
Current Liabilities						
Accts Payable & Accrual Expenses	$146	$148	$261	$238	$220	$204
Short Term Bank Note Payable (at 9%)			75	25	19	
Due to Affiliate -SRA, Spain, SRL			18			
Current Portion of Long Term Debt	49	168	161	79	102	164
Deferred Revenue		282				
Fed & State Taxes Payable	34	1	16	4		3
Total Current Liabilities	$229	$599	$531	$346	$341	$371
Long Term Liabilities						
Debt	$76	$286	$379	$294	$293	$380
Deferred Taxes	91	39	45	28	48	43
	$167	$325	$424	$322	$341	$423
Stockholders Equity						
Capital Stock - no par value Authorized - 2500 Shares Issued & Outstanding - 100	$16	$15	$15	$15	$15	$15

Shares						
Additional Paid -in Capital	375	375	675	675	675	675
Retained Earnings	493	177	41	-214	-239	33
Total Shareholders Equity	$884	$567	$731	$476	$451	$723
Total Liab. & Stockholders Equity	$1,279	$1,491	$1,686	$1,144	$1,133	$1,517

Exhibit 4
Survey Research Associates, Inc.
Statements of Cash Flows
Years End Dec 31

	2007	2006	2005	2004	2003	2002
Cash Flows from Operating Activities						
Net Income	$316	$136	$255	$26	($272)	$4
Adjustments to Reconcile Net Income to Net Cash Provided By Operating Activities						
Depreciation	170	178	158	152	178	171
Amortization of Deferred Charges	0	0	0	18	18	18
Deferred Income Taxes	61	34	59	11	(7)	1
(Increase) Decrease in Assets						
Accounts Receivable and Advances	163	186	(276)	(93)	236	(127)
Inventory	0	7	8	9	2	10
Prepaid Expenses	75	(59)	8	39	24	40
Unbilled Contract Costs	0	0	0	0	0	24
Increase (Decrease) in Liabilities						
Accounts Payable and Accrual Expenses	(2)	(114)	35	22	14	47
Short Term Note Payable	0	(75)	50	6	19	0
Deferred Revenue	(282)	(282)	0	0	0	0
Due to Affiliate	0	(18)	18	18	0	0
Federal & State Income Tax Payable	33	(15)	0	0	0	0
Net Cash Provided By Operating Activities	$535	$540	$315	$189	$163	$188
Cash Flows From Investing Activities						
Purchase of Equipment & Vessel Equipment (net)	($154)	($68)	($138)	($41)	($7)	($39)
Net Cash Used By Investing Activities	($154)	($68)	($138)	($41)	($7)	($39)

Cash Flows From Financing Activities						
Proceeds From Note Payable	0	30	41	0	0	0
Payment on Officer Loans	(125)	(109)	81	5	0	0
Payments on Notes Payable	(204)	(173)	(157)	(119)	(198)	(184)
Increase in Security Deposits	1	0	0	0	0	0
Net Cash Used By Financing Activities	(330)	(252)	(198)	(124)	(163)	(144)
(Decrease) Increase in Cash and Cash Equivalents	51	221	(21)	24	(7)	5
Cash and Cash Equivalents, Beginning of Year	~~$229~~	~~$8~~	~~$29~~	~~$5~~	~~$12~~	~~$7~~
Cash and Cash Equivalents, End of Year	$280	$229	$8	$29	$5	$12

Exhibit 5
Survey Research Associates, Inc.
Pro Forma Income Statements Before Adjustments
(in 000's)

	2008	2009	2010	2011	2012
Revenues	$4,245	$4,856	$4,549	$5,586	$5,883
Survey & Vessel Expenses (Cost of Goods Sold)	2,420	2,768	2,593	3,184	3,353
Gross Profit	1,825	2,088	1,956	2,402	2,530
Selling General & Administrative Expenses	1,104	1,263	1,183	1,452	1,530
Depreciation	200	200	210	210	220
Total Operating Expense	1,304	1,463	1,393	1,662	1,750
Earnings Before Interest & Taxes (EBIT)	521	625	563	740	780
Interest Expense	30	32	34	36	38
Income Before Taxes (EBT)	491	593	529	704	742
Income Taxes @40%	196	237	212	282	297
Net Income After Taxes	295	356	317	422	445
Cash Flow After Tax Income & Non-Cash Charges	$495	$556	$527	$632	$665
Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA)	$721	$825	$773	$950	$1,000

Notes: Cost of Goods Sold @57% of Revenue
SG & A @ 26% of Revenue

Source: The Consultant's Report

Exhibit 6
Survey Research Associates, Inc.
Guidelines for Valuation of SRA's Operations

Based on 2003-2007 Actual Performance and Company Growth Expectations

Valuation Measures	
Price/Earnings Ratio After Bonus	8 - 12 times
Price/Earnings Ratio Before Bonus	3 - 5 times
Price/Cash Flow	5 - 7 times
Price/EBITDA	2.5 - 3.1times
Price/EBIT	4.5 - 7.5times
Discount Rate of Expected Cash Flows For This Risk Profile Firm	30%

Source: The Consultant's Report

Glossary

AHT (Anchor Handling Tug) – A vessel for positioning and securing a barge at a work site.

Environmental Services – Combination of external or extrinsic physical conditions that affect and influence the growth and development of organisms.

Geochemical Services – Analyzing and evaluating the chemistry of the composition and alteration of the earth's crust.

GIS (Geographic Information System) – A computer based system where data, information or objects (vessels, onshore landmarks; etc) are stored and referenced according to their global coordination, allowing for management, analysis, and display of data in relation to their positions on the earth.

Geophysical Services – Defining the physics of geologic phenomenon.

Geotechnical Services – Analysis of the shape, structure and arrangement of rock masses constituting the earth's crust.

Grapple Run Vessel – A vessel with the ability to grasp and hold another vessel or other structure to stabilize its position.

HVAC Cable (High Voltage Alternating Current) – A cable used to supply electricity.

Hydrographic Services – Mapping bodies of water; scientific description and analysis of the physical condition, boundaries, flow and related characteristics of oceans, lakes, rivers, and other surface waters.

Hydro plow – A vessel with the capability to dig a trench, deposit a cable or pipe in that trench, and then cover that trench with soil.

Magnetic Field – A condition in a region of space, established by the presence of a magnet or of an electric current and characterized by the existence of a detectible magnetic force at every point in the region.

Magnetometer – An instrument that measures the earth's magnetic field in the vicinity of the instrument. Variations in the intensity of the magnetic field can be caused by certain materials such as iron, which allows surveyors to locate objects on the sea floor that are iron rich (anchors, pipes, ship hulls, chains, etc.) by mapping variations in the magnetic field. These objects could create problems in digging trenches for laying new pipes or cables.

Oceanographic Services – Exploration and scientific study of the ocean and its phenomenon.

Positioning – Determining the global coordination for a location or data point so that it can be referenced on a map, or geographic data system such as GIS (Geographic Information System)

ROV – Remotely operated vehicle.

RTK (Real Time Kinematic) – A method of using satellite GPS data, and a reference base station, to provide real time location and elevation information with a high degree of accuracy during a hydrographic survey. Horizontal and vertical location accuracy is measured in centimeters.

Sediment Sampling – Using Vibracore technology to sample sections of the sea bottom.

Side Scan Sonar – An instrument that reflects fan-shaped pulses of sound waves off the sea floor, perpendicular to the direction of ship travel. It records the intensity of the sound reflections as a series of slices that, when stitched together, form an image of the sea bottom.

Subottom Profile – A profile view, or slice through the earth's surface, showing the layers of rock or sediment beneath the sea floor. The profile is created by sending sound waves into the sea floor that reflect differently off the material beneath the surface depending on variations in the density of that material.

Swath Bathymetry – A type of sonar that reflects a ribbon-shaped swath of sound waves off the sea floor, perpendicular to the direction of ship travel, and records the time it takes the sound to travel to the sea floor and back. This travel time is then used to calculate the depth to the sea floor based on the speed of sound through the water. A series of swaths are then used together to create a 3-dimensional map of the sea floor.

Thermoresistivity – The change in electrical resistivity of a material such as soil when exposed to the heat flux, or how well the material will disperse heat. This information is useful in the installation of buried pipes and cables that may generate heat into the surrounding soil.

Turbidity – A measure of the amount of suspended solid particles in the water.

Appendix 1
An SRA Contract
Trans Bay Cable (San Francisco, California)
HVDC Cable Pre-Engineering Survey
(2007 – 2009)

After a bidding contest that included four local companies and three major competitors, SRA was awarded this $1.4 million contract. Its project management tasks included coordinating the operations of ten separate sub-contractors.

The Trans Bay Cable will run 84 kilometers, from San Francisco north and east to Sacramento, California. The survey route is up to 250 meters wide, along a complex sea floor and oceanographic environment.

This geophysical and hydrographic survey included RTK positioning, Swath Bathymetry, Magnetometer, Side Scan Sonar and Subottom Profile techniques. Seventy two diving locations were identified, 37 of which were near potential utilities.

The Geotechnical Survey included more than 100 Vibracores, ranging from 3 to 12 meters in length. Thermal resistivity readings were taken at 24 sites.

Land surveys for the project included topography, geotechnical drilling, thermal resistivity testing and utility locating operations.

In order to perform these services SRA management established a temporary office in the Bay area, fully staffed with data processing personnel and equipment. Early in 2008 a preliminary report was delivered, after completion of field operations.

In 2009, SRA is scheduled to provide the lay large positioning during installation of the cable.

The success of this project resulted in SRA's entry into the California market. Another contract was won for the Treasure Island HVAC Cable, as well as RFP's (request for proposals) from Mauson Construction for long term projects.

Appendix 2
Another SRA Contract
Neptune Regional Transmission System
HVDC Cable Installation Positioning
(2006)

In this contract, SRA first provided all the pre-engineering surveys for the project. During installation of the cable their positioning expertise included grapple run vessel, barge, AHT, hydro plow, cable tender and divers.

Positioning operations were conducted over 40 kilometers of complex river and bay environments, including several bridge and cable crossings. Using robotic total stationing from land with radio links to the barge, the cable was also positioned under four bridges.

Appendix 3
An International SRA Contract
Rhode Nielson & Montalto de Castro (Italy)
Sand Borrow Area Study
(2005)

Representatives of the Lazio Regional government recommended SRA as an experienced contractor capable of locating a potential source of sand closer to the target beach than the designated borrow site. As an integral component of the project and based on analysis of existing data, SRA recommended conducting additional subbottom profiling to the north and south of a prior survey area. This area had previously been found to have limited resources suitable for the beach rehabilitation project.

SRA conducted a campaign of geophysical, hydrography and vibracoring in both the north and south extension areas. In the northern extension area a large channel-like deposit of high quality sand was located. This deposit yielded a 10 meter thick usable borrow area directly offshore of the beach requiring rehabilitation. SRA's work resulted in significant cost savings for the overall project and a very satisfied customer.

Appendix 4
Another SRA Contract
USCOE Philadelphia District
Hereford Inlet Seawall Reconstruction
(2006)

In early 2006 SRA won a contract competition to control all survey operations, both land and marine, for the reconstruction of a 9 kilometer seawall in the Hereford Inlet, in northern New Jersey. Working at times in waters over 60 feet in depth, underwater mat and rock placement had to be monitored using a sector scanning sonar system mounted on a barge. Another project challenge was a high current environment in the inlet.

The sector scanning sonars utilized by SRA provided a number of benefits that contributed to the efficient completion of the project. Expenses were reduced, when compared to using a diver or ROV inspections. The sonar images were less susceptible to turbidity than visual inspections. The sonar equipment was relatively easy to install and operate.

Images from the sonar equipment could be viewed in real time by the crane operator, barge foreman and client representative simultaneously. These benefits allowed for on-the-spot decision-making, before, during and after the laying of mats and rock, and the geo referenced images were compatible with CAD and GIS formats.

JackieFashion, Inc.

Mary Funck & Robert Stretcher, Sam Houston State University
Timothy Michael, University of Houston-Clear Lake

The 2010 San Francisco fashion scene was blessed with many newcomers, but few with the panache of Jack Gibson (Jackie), a local clothing designer who, with some high profile clients, had launched a designer clothing store that quickly became the toast of real housewives all over town. With only an unmatched gossip network for promotion, the store became an immediate success and Jackie had opened four others very quickly, within a matter of months after the grand opening of the first store in March of 2010. Now, in 2013, Jackie was living the dream of a socialite designer and retail clothing chain owner.

The dream had dimmed in the past year, however. The initial success of the business had settled down to steady (or stagnant, depending on one's perspective) business; the pure designer fashions marketed by the initial store had been augmented by mass produced, albeit high quality, clothing from Chinese suppliers who also produced the materials used in JackieFashion's exclusive garments. The inexpensive garment specifications could be ordered easily by JackieFashion's purchasing manager, Wendy Litton, and then redesigned with a Jackie-esque flare before becoming one of JackieFashion's clothing options. The original draw to Jackie was the exclusivity of his designs, attractive to the San Francisco socialites always seeking to make a grand entrance. The expansion of the original business into multiple locations and into non-exclusive designer fashions had reduced the appeal to the San Francisco elite shoppers. What was left was a retail clothing chain with the store's traditional high-fashion look, and fashions only available at JackieFashion; and the occasional exclusive product that kept the original idea going. One of the newer stores was a wedding and party dress boutique, and Jackie's most consistent source of sales.

Initially, Jackie had taken on the role of manager of the first store, only to realize his considerable disinterest in management. He much preferred socializing with his network of friends. It was ironic, somehow; socializing with his network of friends had vaulted his designs into the stratosphere. Now, though, he was spending little time at his stores. His 'official' duty was to handle marketing, since he seemed to be good at saying the things that brought in business. One of his most recent marketing efforts had gone awry, however. He had advertised on a television special promoting a local fitness run, and some of his socialite friends were very upset with him- it was as if he had cheapened the business by advertising. While the effort had brought a boost to business, it had alienated some of his social contacts. Jackie's social position was something that Jackie was determined to maintain, so he had not advertised any more. Instead, he increased his socializing and self-promotion, and sales had kept up.

Not in Jackie's skillset was asking for payment from customers who had made purchases on credit, a common purchase method for his more exclusive design patrons. The accounts involved a discount if paid within ten days, with the net due in 30 days. Both deadlines were commonly ignored, especially after the particular fashion had been worn by the customer. The business had survived, though, even though accounts were often written off.

After the first year of operation, Jackie had hired Shanae LeClerc, a former fashion model from Paris. Shanae had received her college education at a local university, where she had majored in marketing and minored in finance. She was past her modeling prime at 34 years old, and had gone to college in an online program while working in retail clothing establishments. Jackie became enamored with Shanae's French accent, and figured Shanae could handle the business end, freeing him up for socializing. Shanae was quickly placed in charge of the business after a short period for training. What Shanae had not counted on was that she would have to make sense of the firm's financial flows and make decisions accordingly. Her education, she found out, had failed at providing the basic skills that were needed to manage a business. Through many lessons, some of them 'the hard way,' she persevered and had kept the firm on an even keel, up until recently. In November 2012, she began noticing that the firm was having cash shortages on a regular basis; that the payables had stretched past the net due date several times. Two of the Chinese suppliers, critical to the firm's production of inventory, had threatened to disallow sales until the firm's accounts were brought current. A quick check of the cash balance, though, convinced Shanae that something needed to be done, and fast!

Shanae began looking into the receivables accounts- the accounts that represented purchases by prominent customers, many in Jackie's social circles. She did a quick calculation and surmised that, if most of these accounts would be collected today, that the cash would cover the immediate cash need for satisfying the Chinese suppliers. She quickly made a call to Jackie, who was in the first store's "penthouse;" an area designated for entertaining the most elite of the firm's clients, but also the location of Jackie's office. Jackie's "office" was more of a plush, modern glass and steel entertainment area. Jackie ordered Shanae to come up to the penthouse.

Shanae entered the room with documents in hand, intending to discuss business with Jackie. But it was quickly evident that Jackie was in no mood for business. He and Ted, his significant other, were entertaining one of their elite clients. The champagne and shots were flowing and they were all a bit tipsy.

"Come in, darling," said Jackie. "Have a glass of champagne or something," he offered.

"Oh, I didn't realize you had a guest- I'll come back later," Shanae replied.

"Nonsense! Come here this instant and enjoy life with us!" Jackie said. Reluctantly, Shanae agreed, and sipped champagne with "the girls" as Jackie called the group. "So what is so important?" Jackie asked.

"I just need to discuss something with you," Shanae replied.

"Well go ahead- we're all friends here..." Jackie paused. It was uncomfortable for Shanae. "Well?" Jackie pressed, becoming irritated in his lightly intoxicated state.

"Our two biggest suppliers are threatening to cut us off," said Shanae. Jackie twisted in his chair and stared at Shanae. Ted looked shocked. Fortunately, their client was babbling on to Ted about the challenge of finding the right brassiere and didn't notice.

Jackie quickly walked Shanae out of the room. "What were you thinking? Saying something like that in front of a client?" Jackie whispered.

"I wanted to tell you privately. They are talking an immediate suspension of deliveries unless the account is paid today," Shanae replied.

"Well, PAY THEM!" Jackie said, under his breath.

"I would but the cash account is empty. It would take two months of sales to pay both accounts in full. We just don't have the cash."

"How could you let that happen, sweetie? Jackie quipped. Isn't that your responsibility?"

"We would have plenty if our delinquent receivables were paid. We have sales because of the purchases on account, but we haven't collected, so no cash," Shanae replied. Shanae wanted Jackie to know that it was his lack of collections that was partially to blame for the issues. "We pay all the other accounts within 30 days, but these two accounts are our biggest, so we don't have enough cash."

"Give me those before you hurt yourself," Jackie said sarcastically, snatching the notices from Shanae. He turned and left in a huff.

Shanae headed back to the warehouse.

Relationships with Suppliers

JackieFashion was not a significantly large customer to either supplier. It would be unlikely that JackieFashion could convince them to make further concessions; already the accounts were more than 40 days old (ten days delinquent). It was possible to find other suppliers for similar products, but JackieFashion would need trade credit to fund purchases. Given the firm's record of lateness and new suppliers' reliance on credit references, the chance of establishing effective new relationships was questionable.

Another concern was that, although other suppliers had similar products, they were seldom exactly the same. Wendy knew that the store's customers were very picky about the character of the clothing sold by JackieFashion. Last year, one of the lingerie lines that JackieFashion supplied was replaced with a similar product line, which had a different texture and feel when worn. The severity of the outcry from customers forced JackieFashion into an emergency search for the prior product. JackieFashion ended up buying the lingerie directly from the textile producer, and restored the customers' confidence, after substantial pampering efforts.

The relationships with the other suppliers were considerably less strained. JackieFashion had been able to pay within the 30-day limits, albeit usually on day 30. The firm's other short-term creditors, two local bankers, were aware of JackieFashion's cashflow problems, but had not pulled credit availability. This was probably because of Jackie's relationships with each of the bankers. All of them had been boyhood friends growing up in Pacific Heights. The two complaining suppliers, though, supplied roughly 65% of JackieFashion's basic garments. They also had products that were unavailable elsewhere or substantially more expensive if ordered from other suppliers.

JackieFashion had not had much difficulty in collecting most of the firm's accounts. The biggest problem came with the exclusive designs, when Jackie often allowed clients to take the clothing with the promise to pay for it; the clients often delayed paying, and Jackie was not in a habit of asking them to pay, partly because they were in the social elite of San Francisco and he wanted to continue to be a part of that society. Although there were often long delays before payment was received, the number of bad accounts had not been problematic.

Liquidity and Profitability

From 2011 to 2012, JackieFashion's liquidity had improved. The current ratio had gone from 1.36 to 2.21, while the quick ratio had improved from .80 to 1.14. Profitability had decreased, though, perhaps due to the decrease in business activity during 2012. The firm had also had some extraordinary income sources in 2011 that were substantially less in 2012. The 254,900 loss in 2012 had troubled Jackie, and he had communicated his expectation that Shanae would make whatever changes were necessary to put the firm back on a path of profit in 2013.

The Next Steps

Shanae silently walked back to her office in the front of the warehouse. She knew that Jackie would soon come storming through on his way out. Shanae definitely wanted to avoid additional conflict today, if possible. She decided that she needed to look physically busy until Jackie left, then she would go about the task of figuring out what the company's situation was, and how to go about solving it. She knew that Jackie would complicate matters. Hopefully, Jackie would wait to talk to the creditors and just go through his regular circuit of visiting his elite clients for today.

Required

Develop a plan for solving JackieFashion's situation. Base your solution on your calculated assessments of JackieFashion's financial condition and performance, and show how your recommendations would affect the firm's financials.

Exhibit 1. Income Statements for the years ended 2011 and 2012.

$ thousands	2011	2012
Net Sales	$101,910.59	$93,597.69
less Cost of Merchandise Sold	($83,863.07)	($76,636.73)
Gross Margin	$18,047.52	$16,960.96
Less: Operating and Other Expenses:		
Operating Expenses	($17,910.97)	($17,259.57)
Gain On Disposal	$46.43	$14.82
Rebates, other Income	$121.93	$32.04
Earnings Before Interest and Taxes	$304.91	($251.76)
less: Interest Expense	($77.68)	($88.02)
Earnings Before Tax	$227.23	($339.78)
less: income Tax Expense	($57.10)	$84.88
Net Income	**$170.12**	**($254.90)**

Exhibit 2. Balance Sheets for December 31, 2011 and 2012.

$ thousands	2011	2012
ASSETS:		
Cash	$938.91	$409.69
Accounts Receivable	$5,379.99	$4,580.95
Inventory (LIFO)	$4,370.56	$4,749.38
Refundable Taxes	$0.00	$90.74
Total Current Assets	$10,689.45	$9,830.77
Gross Property, Plant, and Equipment	$14,354.41	$12,762.62
less: Accumulated Depreciation	($7,613.51)	($8,658.24)
Net Property, Plant, and Equipment	$6,740.90	$4,104.38
Other Assets	$235.38	$193.36
TOTAL ASSETS	**$17,665.73**	**$14,128.51**
LIABILITIES:		
Notes Payable	$1,469.72	$279.95
Accounts Payable	$6,141.41	$3,908.99
Accrued Expenses	$121.44	$163.53
Taxes Payable	$130.58	$104.50
Total Current Liabilities	$7,863.15	$4,456.97
Long Term Liabilities	$1,827.70	$1,951.56
Total Liabilities	$9,690.85	$6,408.53
EQUITY:		
Common Stock	$987.50	$987.50
Retained Earnings	$6,987.38	$6,732.48
Total Equity	$7,974.88	$7,719.98
TOTAL LIABILITIES AND EQUITY	**$17,665.73**	**$14,128.51**

Exhibit 3. Notes to Financial Statements.

1. Breakdown of sales by store location:

LOCATION	Sales (%)
Downtown	38.3
Washington Square	22.1
Mission District	14.5
Pacific Heights	12.9
Sunset District	12.2

2. Sales are based on both exclusive design (74%) and sales of in-store inventory (26%). Exclusive design sales occur through the Downtown and Washington Square locations. JackieFashion headquarters is the Downtown location.

3. Terms of trade are 2/10, n/30 for both receivables and payables.

4. The Last-In, First-Out (LIFO) method of inventory costing is used.

LUCENT TECHNOLOGIES[1]

Clark M. Wheatley, Florida International University

This case examines the consequences of a firm's failure to meet analyst earnings expectations for the first time in its history. Management describes the shortfall as a "bump in the road" and, even though the company's markets are highly seasonal, says earnings will "recover" in the next quarter. Put yourself in the role of analyst to discover the underlying causes of the earnings shortfall, and to predict when earnings will "recover."

Fifteen Straight Quarters of Beating Analyst Expectations

AT&T spun off its research and development division (the former Bell Laboratories) in April of 1996, and the newly independent company - renamed Lucent Technologies - was an instant hit with investors. The company's stock became the most widely held in the United States, and over the following 3 years and 9 months its price increased 892%.[2] This remarkable price appreciation tracked a series of steadily increasing earnings that exceeded analyst expectations. Lucent, in fact, had beaten those expectations in each of its 15 quarters of operations (Zacks, 2000).

Lucent Technologies manufactures, sells and services voice and data communications systems and software. By the end of its fiscal-year 1999, Lucent generated over thirty-eight billion dollars in annual revenues, employed over 150,000 people, and had offices in more than ninety countries worldwide.

On October 26, 1999, Lucent issued a press release describing record earnings for both the quarter and the fiscal year ended September 30, 1999 (Lucent, 1999a). Lucent's revenues were up 23 percent, and earnings were up 50 percent from the fourth quarter of the previous year. For the fiscal year, Lucent's revenues and earnings were up 20 and 46 percent respectively. Lucent's chairman and CEO, Richard McGinn, described the results saying: "Lucent enters the new millennium with momentum. This was the strongest quarter and the strongest year in Lucent's history."

The report of these record results was accompanied by another press release. This second announcement outlined a realignment of Lucent into "four core businesses." This realignment was, in the words of McGinn, "...intended to mirror the way we are approaching customers today - with converged network solutions. We are sharpening our

[1] This case was prepared from publicly available data. Unless otherwise noted, the data was gathered from Lucent Technologies web site: www.Lucent.com/investor.

[2] Lucent's beta as reported by *Yahoo Finance* was 1.6 on January 6, 2000.

focus on high-growth areas - such as data networking, optical networking, wireless semiconductors, e-business and professional services - while speeding our growth in international markets. And, we will also be aligning our management structure to increase productivity and accelerate our response to customer needs" (Lucent, 1999b).

Over the ensuing days and weeks, Lucent's share price soared. Climbing steadily from $59 7/8 on October 25, 1999, it traded at prices over $82 during December 1999, and closed at $72 3/8 on January 5, 2000.

An End to the Run

On January 7, however, Lucent filed a Form 8-K with the U.S. Securities and Exchange Commission. Form 8-Ks are used to report *material events*, and Lucent's *event* was that first quarter earnings for the quarter ended December 31, 1999 would be significantly below expectations. Lucent reported that its revenue from Service Provider Networks was down 2%. A result, company executives said, that was caused by the domino effect of unanticipated customer shifts to new optical systems and the manufacturing deployment and capacity problems that ensued. Indeed, analysts estimated that Lucent lost up to $1 billion in sales because of production delays, delivery problems and cancelled orders during the quarter (Dow Jones, 1/20/00).

Although Richard McGinn said the company expected its problems to be resolved by the end of the second quarter, and Lucent's Chief Financial Officer, Don Peterson described the shortfall as a "bump in the road," (Burns, 1/27/00) the response of investors was harsh. The company's stock price fell from $72 3/8 to $52. The decline in stock price erased, in a single day, more than $80 billion in market capitalization and a year's worth of gains. Furthermore, a number of class action lawsuits were filed on behalf of investors who had purchased Lucent's stock between October 27, 1999 and January 6, 2000 (PRNewswire, 1/20/00). The suits claimed that Lucent violated Sections 10(b) and 20(a) of the Securities Act of 1934 by issuing a series of materially false and misleading statements that failed to disclose the weaker-than-expected performance in a timely fashion.

If you were an analyst or Lucent shareholder in January of 2000, your primary concerns would be whether the December 1999 performance was really just a “bump in the road” and when (or if) the company’s performance would rebound. Analyze the financial statements, to address these concerns - determining which factors contributed most to Lucent’s past success and current shortfall.

Exhibit 1. Lucent Technologies: Selected Quarterly Earnings per Share Data

	Dec-99	Sept-99	Jun-00	Mar-99	Dec-98
Earnings per Share	0.36	0.31	0.26	0.17	0.52
Analyst Expected Earnings per Share	0.43	0.29	0.23	0.15	0.50
Difference	(0.07)	0.02	0.03	0.02	0.02
% Surprise	(16.28%)	6.90%	13.04%	13.33%	5.00%

Exhibit 2. Lucent Technologies, Form 8-K, January 7, 2000

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K
CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
Date of Report (Date of earliest event reported):
January 6, 2000

Lucent Technologies Inc.

Item 5. Other Events.

On January 6, 2000, Lucent Technologies Inc. announced that, based on preliminary estimates for its first fiscal quarter of 2000 ended December 31, 1999, the company expects to report revenues in the range of $9.8 to $9.9 billion for the quarter, flat with the prior year period.(1) The company expects earnings per share for the quarter to be in the range of 36 to 39 cents compared to 48 cents for the year-ago quarter.(2)

The company attributed the lower than expected revenue and earnings for the first fiscal quarter to several factors, including:

-- faster than anticipated shifts in customers' purchases to Lucent's newest 80-channel DWDM optical product line and greater than expected demand for OC-192 capability on the 80-channel systems, which resulted in near-term manufacturing capacity and deployment constraints;

-- changes in implementation plans by a number of customers inside and outside the United States, which led to delays in network deployments by enterprises and service providers;

-- lower software revenues, reflecting an acceleration in the continuing trend by service providers to acquire software more evenly throughout the year. In the past, these purchases occurred primarily in the quarter ending December 31; and

-- preliminary results show lower than anticipated gross margins this quarter from ramp-up costs associated with introducing and implementing new products and lower software revenues.

The information provided in this Form 8-K is based on preliminary financial results, which are subject to further review and adjustment, and contains forward-looking statements based on current expectations, forecasts and assumptions that involve risks and uncertainties that could cause actual outcomes and results to differ materially. These risks and uncertainties include price and product competition, dependence on new product development, reliance on major customers, customer demand for our products and services, the ability to successfully integrate acquired companies, control of costs and expenses, international growth, general industry and market conditions, growth rates and general domestic and international economic conditions, including interest rate and currency exchange rate fluctuations. For a further list and description of such risks and uncertainties, see the discussion in Lucent's Form 10-K for the fiscal year ended September 30, 1999 in Item 1 in the section entitled "X. OUTLOOK, A. Forward Looking Statements" and the remainder of the X. OUTLOOK section.

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(1) All items in both the 1999 and 2000 periods include the results of recent mergers with International Network Services and Excel Switching.
(2) All earnings per share amounts reported in this Form 8-K are diluted EPS figures.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

LUCENT TECHNOLOGIES INC.
By: /s/ JAMES S. LUSK
Name: James S. Lusk
Senior Vice President and Controller

Date: January 7, 2000

Figure 1

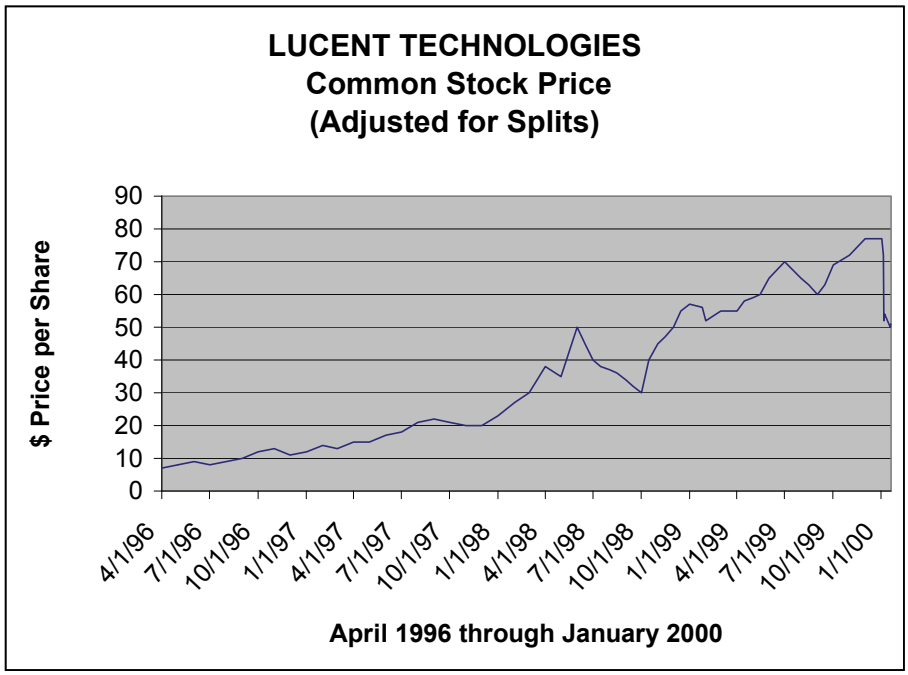

Exhibit 3. Lucent Technologies, Consolidated Quarterly Balance Sheets ($millions)

	Mar-00	Dec-99	Sep-99	Jun-99	Mar-99	Dec-98	Sep-98	Jun-98	Mar-98	Dec-97	Sep-97
Assets											
Cash	$ 1,079	$ 2,219	$ 1,816	$ 1,495	$ 792	$ 940	$ 685	$ 1,099	$ 969	$ 1,225	$ 1,350
Receivables	10,573	10,143	10,438	9,486	8,752	9,185	6,939	5,792	5,576	6,295	5,373
Less Allowance	345	381	362	393	349	346	390	374	369	344	352
Inventory	5,321	5,380	5,048	5,179	4,332	3,778	3,081	2,973	2,874	2,604	2,926
Contracts in Process, net	1,416	1,164	1,103	1,338	1,106	1,060	1,259	1,405	1,332	1,214	1,046
Deferred Taxes, net	1,579	1,504	1,583	1,784	1,632	1,620	1,623	1,554	1,477	1,469	1,333
Other Current Assets	1,816	1,168	1,943	1,528	1,160	768	491	482	481	449	473
Total Current Assets	$ 22,414	$ 21,578	$ 21,931	$ 20,810	$ 17,774	$ 17,351	$ 14,078	$ 13,305	$ 12,709	$ 13,256	$ 12,501
Property & Equipment (net)	7,051	6,986	6,847	6,257	5,751	5,645	5,403	4,957	4,805	4,729	5,147
Accumulated Depreciation	7,671	7,693	7,445	7,274	6,935	6,886	6,382	6,253	6,132	6,121	6,407
Pre-paid Pension Costs	6,336	6,078	6,485	6337	6,210	6,068	3,754	3,597	3,462	3,322	3,172
Deferred Taxes, net		-	-	-	-	-	750	832	1,002	1,120	1,262
Capitalized Software Development Costs	555	506	470	412	346	306	298	289	279	246	293
Other Assets	3,641	3,486	3,002	3,340	2,759	2,271	2,437	2,299	2,407	2,079	1,436
Total Assets	$ 39,997	$ 38,634	$ 38,735	$ 37,156	$ 32,840	$ 31,641	$ 26,720	$ 25,279	$ 24,664	$ 24,752	$ 23,811
Liabilities and Shareholders' Equity											
Accounts Payable	$ 2,518	$ 2,162	$ 2,878	$ 2,705	$ 2,410	$ 2,468	$ 2,040	$ 1,727	$ 1,659	$ 1,496	$ 1,931
Payroll and Benefit Liabilities	1,392	1,321	2,300	2,001	1,724	1,857	2,511	2,354	2,048	2,178	2,178
Post-retirement and Post-employment Benefit Liabilities	87	103	137	169	184	186	187	194	195	221	239
Debt Maturing within One Year	1,890	2,672	2,864	3,080	3,185	3,763	2,231	2,423	1,898	1,757	2,538
Other Current Liabilities	3,405	3,659	3,599	4,001	4,059	4,167	3,459	3,498	3,618	4,310	3,852
Total Current Liabilities	$ 9,292	$ 9,917	$ 11,778	$ 11,956	$ 11,562	$ 12,441	$ 10,428	$ 10,196	$ 9,418	$ 9,962	$ 10,738
Post-retirement and Post-employment Benefit Liabilities	5,954	6,013	6,615	6,533	6,471	6,413	6,380	6,286	6,249	6,136	6,073
Long Term Debt	3,833	3,832	3,812	3,712	3,716	2,404	2,409	1,899	1,918	1,945	1,665
Other Liabilities	3,336	2,793	2,908	2,552	2,040	1,946	1,969	1,976	2,043	2,038	1,948
Total Liabilities	$ 22,415	$ 22,555	$ 25,113	$ 24,753	$ 23,789	$ 23,204	$ 21,186	$ 20,357	$ 19,628	$ 20,081	$ 20,424
Common Stock	$ 32	$ 32	$ 31	$ 30	$ 27	$ 13	$ 13	$ 13	$ 13	$ 6	$ 6
Additional Paid-in Capital	9,830	9,032	7,763	7,339	4,996	4,706	4,468	4,251	4,076	3,717	3,047
Guaranteed ESOP Obligations	(26)	(30)	(33)	(34)	(34)	(49)	(49)	(63)	(63)	(77)	(77)
Retained Earnings	8,050	7,296	6,105	5,240	4,384	3,565	1,364	1,028	1,314	1,298	602
Accumulated Other Comprehensive Income or Loss	(304)	(251)	(244)	(172)	(322)	(198)	(262)	(307)	(304)	(273)	(191)
Total Shareholders Equity	$ 17,582	$ 16,079	$ 13,622	$ 12,403	$ 9,051	$ 8,437	$ 5,534	$ 4,922	$ 5,036	$ 4,671	$ 3,387
Total Liabilities and Shareholders' Equity	$ 39,997	$ 38,634	$ 38,735	$ 37,156	$ 32,840	$ 31,641	$ 26,720	$ 25,279	$ 24,664	$ 24,752	$ 23,811

Exhibit 4. Lucent Technologies, Consolidated Statements of Quarterly Income ($millions)*

	Mar-00	Dec-99	Sep-99	Jun-99	Mar-99	Dec-98	Sep-98	Jun-98	Mar-98	Dec-97	Sep-97
Total Revenues	$ 10,256	$ 9,905	$ 10,575	$ 9,315	$ 8,220	$ 9,842	$ 8,574	$ 7,642	$ 6,184	$ 8,724	$ 6,933
Cost of Sales	5,939	5,259	5,706	4,834	4,327	4,630	4,443	4,087	3,436	4,519	3,873
Gross Margin	4,317	4,646	4,869	4,481	3,893	5,212	4,131	3,555	2,748	4,205	3,060
Selling, General and Administrative Expenses	2,030	1,908	2,251	1,984	1,902	1,937	1,972	1,673	1,501	1,555	1,608
Research and Development	1,099	978	1,131	1,141	1,139	1,013	1,050	1,002	932	829	835
Total Operating Expenses	3,129	2,886	3,382	3,125	3,041	2,950	3,022	2,675	2,433	2,384	2,443
Operating Income	1,188	1,760	1,487	1,356	852	2,262	1,109	880	315	1,821	617
Other Income (Expense), net	31	66	92	19	(65)	116	(43)	(17)	31	14	51
Interest Expense	99	98	114	119	95	78	71	63	58	79	72
Income Before Taxes	1,120	1,728	1,465	1,256	692	2,300	995	800	288	1,756	596
Income Tax Expense	359	553	493	427	235	777	348	282	102	632	227
Net Income	$ 761	$ 1,175	$ 972	$ 829	$ 457	$ 1,523	$ 647	$ 518	$ 186	$ 1,124	$ 369

* Excludes one-time events and the cumulative effect of accounting changes

Exhibit 5. Lucent Technologies, Consolidated Statements of Annual Income ($millions)*

	1999	1998	1997
Sales	38,303	31,806	26,360
Cost of Goods Sold	19,616	16,715	14,898
Gross Margin	18,687	15,091	11,470
Depreciation Expense	1,806	1,411	1,499
Research and Development Expense	4,496	3,903	3,023
Other Selling, General & Administrative Expense	6,360	5,456	4,259
Other Operating Income (Expense), net	-	-	79
Total Operating Expenses	12,662	10,770	8,860
Total Operating Income	6,025	4,321	2,610
Other Income (Expense) net	169	(21)	141
Interest Expense	406	254	305
EBT	5,788	4,046	2,446
Tax on EBT	1,955	1,427	939
Net Income	3,833	2,619	1,507

* Excludes one-time events and the cumulative effect of accounting changes

Exhibit 6. Notes to Consolidated Financial Statements: Supplementary Balance Sheet Information

	Mar-00	Dec-99	Sep-99	Jun-99	Mar-99	Dec-98	Sep-98	Jun-98	Mar-98	Dec-97	Sep-97
Inventories											
Finished Goods	3024.00	3062.00	2946.00	2917.00	2281.00	1777.00	1578.00	1594.00	1463.00	1291.00	1611.00
Work in Process	2297.00	2318.00	2102.00	2262.00	2051.00	2001.00	1503.00	1379.00	1411.00	1313.00	1315.00
Total Inventories	5321.00	5380.00	5048.00	5179.00	4332.00	3778.00	3081.00	2973.00	2874.00	2604.00	2926.00

APPLE, INC.

Armand Gilinsky, Sonoma State University
Raymond H. Lopez, Pace University

Introduction

Revenue and profit growth over the last six years had been exceptional, especially for a company the size of Apple. How had this growth been financed and what assets have been utilized to support it? Can the firm expect to continue this combination over the next three years?

These were some for the interesting questions faced by both the management team at Apple as well as security analysts, institutional and individual investors at the end of 2011. The stock price had been roaring upward since the middle of 2008, following exploding quarterly earnings growth. Yet the firm's price/earnings ratio, using trailing twelve month earnings per share remained in the low teens. While using analyst's estimates of forward earnings (which the firm consistently beat) the price/earnings ratio barely exceeded single digits.

With high margins and tight cost controls, the firm continued to accumulate excess funds and invested them in primarily short term marketable securities. By year end 2011 (September fiscal year) this account, along with longer term marketable securities, amounted to over $82 billion or approximately 75% of the firm's total assets! With these funds earning barely 1 percent in a very low interest rate environment and the firm's cost of capital exceeding 10 percent, investors expected some financial management changes in the near term. Perhaps a cash dividend? What about a share buyback program? Or a stock split to bring the price per share into a range that might expand the shareholder family? These were some of the financial decisions facing the firm as the year 2012 unfolds.

Company Background [1]

Apple, Inc. and its wholly – owned subsidiaries designed, manufactured and marketed mobile communication and media devices as well as personal computers and portable digital music players. They also sold a variety of related software, services, peripherals, net-working solutions and third–party digital content and applications.

More specifically, Apple's products and services included iPhones, iPads, Macs, iPods, Apple TV, along with a portfolio of consumer and professional software applications. They also produced the iOS and Mac OS X operating systems, iCloud and a variety of accessory, service and support offerings. Digital content and applications

were sold and delivered through the iTunes Store, App Store, iBookstore and Mac App Store.

Worldwide product sales were made through retail stores, online stores and a direct sales force, as well as through third – party cellular network carriers, wholesalers, retailers and value - added resellers. Additional sales were generated through a variety of third-party iPhone, iPad, Mac and iPod compatible products, including application software printers, storage devices, speakers, headphones, and various other accessories and peripherals, through its online and retail stores. Sales were made to consumers, small and mid – sized business, educational, enterprise and government customers.

Company History – The Early Years

Apple Computer was founded by Steve Jobs and Steve Wozniak in April of 1976 [2]. A pair of college dropouts, their first product Apple I was built in the Jobs family garage in Los Altos, California. Within a few months, they were able to make and sell 200 units. Later that year, a new partner entered the firm, A.C. "Mike" Markkula, Jr. a recently retired employee from Intel, who brought business experience to the firm's management. While only 33 years old, Mike also was successful in attracting venture capital to Apple, critical for its future expansion. He complemented Wozniak, the technical genius and Jobs, the visionary who sought "to change the world through technology."

Apple's mission was to bring an easy-to-use computer to the marketplace. In April, 1978 the Apple II was launched, a machine that could be used by customers right out of the box. It proved to be a revolutionary product that led the PC industry to annual sales that exceeded $1 billion by 1981 [3]. By year end 1980, Apple was the industry leader, with annual sales of 100,000 units. With the success of this machine, the firm's management team decided on a public offering to diversify their financing sources. In December, 1980 a successful IPO was completed, bringing public investors and institutions into the firm's shareholder family.

Apple's competitive position in the PC industry changed significantly in 1981 with the entry of IBM. The IBM machine incorporated Microsoft DOS operating system and a generic microprocessor (a CPU) made by Intel. It featured a relatively ""open" system that other producers could clone. In contrast the Apple II relied on proprietary designs that only Apple could produce. While both PC businesses continued to grow, the IBM – compatibles rapidly took market share from Apple's operations [4].

As the market structure of PC sales evolved, Apple went back to its creative roots and, in 1984, introduced the Macintosh. This PC marked a breakthrough in ease of use, industrial design and technical elegance. While the Intel chips continued to increase in processing speed and capabilities, they relegated the Macs to relatively slower speeds and reduced software compatibility, thus limiting sales and revenue growth. In fiscal 1984, Apple's net income actually declined by 17 percent as the company faced crisis conditions internally and in its product marketplace.

In April of 1985, the board of directors voted to remove Mr. Jobs from his operational role at the firm. They felt that a more professional manager was needed to execute their vision for the future growth and development of the firm. They chose John

Sculley to be the CEO. He had been recruited from Pepsi-Cola in 1983 and worked in an executive capacity alongside Jobs. While at Pepsi-Cola, Scully had successfully led the firm against its rivals in the soft drinks industry. The board believed the firm needed these capabilities to guide Apple towards successfully competing against dominant firms in the PC industry. Later in 1985 Jobs left Apple to found a new company named NeXT.

Professional Management Under John Sculley (1985 – 1993), Michael Spindler and Gilbert Amelio (1993 – 1997)

Although Sculley was Apple's CEO, his expertise was in marketing. He implemented strategies to make Apple a leader in desktop publishing as well as education. The firm combined its superior software and peripherals, such as laser printers to give Macintosh unmatched capabilities in desktop publishing. In a 1998 introduction of the iMac computer, Jobs included in his presentation what he believed the "i" represented in the marketplace; internet, individual, instruct, inform, and inspire. These themes have been carried forward to all of the firm's product categories in the ensuing years. Sales expanded significantly over the next four years and, by 1990, Apple had become a global brand, with a worldwide market share of 8 percent. The education market for Macs contributed roughly 50 percent of Apple's U.S. sales, with a market share of more than 50 percent. With just over $1 billion in cash on its balance sheet, the firm was the most profitable PC company in the world.

In both hardware and software, Apple controlled the only significant alternative to the IBM - compatible PC standard. The company also implemented both horizontal and vertical integration strategies to a greater extent than any other PC manufacturer, except for IBM. They designed their products from inception, used unique chips, disk drives and monitors, as well as innovative and unique shapes for its computer products. In addition, they developed their own proprietary OS, which was bundled with the Mac, along with its own application software and many peripherals, including printers.

Most industry experts, both analysts as well as consumers (individual and business) considered Apples' products to be more versatile than comparable IBM – compatible machines. With the release of Microsoft's Windows 3.0 in 1990, the gap in ease of use narrowed significantly. But the firm retained its lead in many core software technologies such as multimedia. Since they controlled all aspects of their computers, Apple could offer customers complete desktop solutions; hardware, software and peripherals that allowed customers to "plug and play." These capabilities contributed to Apple's customer's "love" for their Macs [5].

The strong attraction that had been developed between Apple products and Apple consumers (brand loyalty) allowed the firm to sell its products at premium price levels. The most powerful Macs were sold for up to $10,000 while the firm's gross profit margin approximated a very favorable 50 percent. At the same time, IBM – compatible PC prices were declining Intel ramped up the speed and capabilities of its processor chips. The price gap between Macs and most other PC's continued to widen as a growing number of customers viewed the MACs as the "BMW" of the computer industry; high end, premium – priced PC's that appealed to a shrinking market segment. Sculley

opined, "without lower prices, we would be stuck selling to our installed base, rather than to a growing market segment [6]."

At this same time, Apple's cost structure was relatively high. They were spending 9 percent of sales on research and development compared with a 4 to 5 percent ratio for Compaq and Dell. Many other IBM – clone manufacturers were spending only one percent. Dan Eilers, vice president of strategic planning concluded, "the company was on a glide path to history [7]."

In March of 1990, CEO Sculley took on the added position of chief technology officer (CTO) and strove to position Apple towards the mainstream of the PC marketplace by offering "products and prices designed to regain market share [8]." This strategy required the firm to become a low-cost producer of computers with mass - market appeal. At the same time, he sought to maintain Apple's technological lead by bringing to market "hit products" every 6 to 12 months. The first of the mass – market offerings was the Mac Classic, a $999 computer designed to compete directly with low-priced IBM clones. One year later, the PowerBook laptop was introduced, to rave reviews. In 1993, Apple introduced the Newton, a high-profile "personal digital assistant" (PDA). This product failed to find a market niche and was discontinued within two years.

During Mr. Sculley's years at Apple, management worked diligently to drive down costs. One way of achieving this goal was to shift a growing proportion of its manufacturing to subcontractors. Although this strategy proved successful, it was not enough to sustain the firm's profitability. Gross margins declined by 14 percentage points by 1992, to a level of 34 percent, even though sales continued to rise for most of the firm's products. In June of 1993, the board of directors "promoted" Mr. Sculley to chairman and appointed Michael Spindler, then company president, as the new CEO. Mr. Sculley left Apple five months later.

With Mr. Spindler as CEO, the firm focused on reinvigorating its core markets, education (K-12) and desktop publishing. With 60 percent and 80 percent market shares respectively this seemed to be a logical strategy. A plan to put Mac OS on Intel chips was reversed while the firm announced that it would license a small number of companies to make Mac clones, charging roughly $50 per copy for a Mac OS license.

In 1992, 45 percent of company revenues were generated outside the U.S. and a key Spindler strategy was to expand these international sales. Cost control was also a critical component of company focus, as the workforce as well as R & D spending were downsized. In spite of these initiatives, Apple lost its growth focus. In a 1995 Computerworld survey of 140 corporate buyers it was found that none of the current Windows users would consider buying a Mac, while more than half of the Apple users expected to purchase an Intel-based PC [9]. Both Spindler and Sculley before him had hoped that a revolutionary new OS would turn around the company's fortunes. Unfortunately, prospects for such a break through continued to fade. With a first quarter 1996 loss of $69 million and announcements of further layoffs, Gilbert Amelio, an Apple director, replaced Mr. Spindler as CEO.

Under Mr. Amelio, Apple returned to its premium – price differentiation strategy. He redirected marketing efforts towards high – margin segments such as services, Internet access devices and PDAs. While he saw a critical need for a new OS, he cancelled development of a much-delayed next – generation Mac OS. In December of

1996, Amelio announced that Apple would acquire NeXT Software and develop a new OS based on work done by NeXT. Also announced was that NeXT founder, Steve Jobs, would return to Apple as a part-time advisor. Three more corporate reorganizations and several deep payroll cuts still could not prevent continued deterioration of the firm's worldwide market share from 6 percent to 3 percent in less than two years [10]. After losses of approximately $1.6 billion, Mr. Amelio was forced out of his CEO position by Apple directors. In September of 1997, Steve Jobs was named the firm's interim CEO.

The Return of Steve Jobs (1997)

Apple needed a quick shake up of its management team, strategies and execution. Mr. Jobs jumped right in. The firm announced in August, 1997 that Microsoft had agreed to invest $150 million in Apple and also reaffirmed its commitment to develop core products, such as Microsoft Office, for the Mac through August 2002. The Macintosh licensing program was also discontinued. Since it was first put into operation, Mac clones had grown to 20 percent of Mac unit sales while the value of the Mac market had declined 11 percent [11]. Jobs was convinced that clones were cannibalizing Apple sales and that strategy had to be reversed. The firm also consolidated its product range from 15 to 3 lines.

Jobs continued the restructuring efforts of his predecessors. Mac manufacturing was outsourced to Taiwanese contract assemblers. The distribution system was revamped by eliminating relationships with thousands of smaller firms and expanding its presence in larger, national chains. In November 1997, a website was launched to sell Apple products directly to customers for the first time. Internal streamlining of operations was focused on reducing inventory investment significantly. At the same time, a renewed emphasis on innovation was put into place as R & D spending was increased in a number of product categories.

The Apple image in the marketplace had suffered over the last decade and Jobs decided that it needed to be reenergized. The company began promoting itself as a hip alterative to other computer brands. Jobs believed that Apple was more than just a technology company; it was a cultural force.

2000 Onward—A Transformational Period for both Steve Jobs and Apple

Steve Jobs assumed the title of permanent CEO in 2001. Under his direction the company commenced a period of sustained growth in revenues, fueled by the introduction of new products created by the firm's research and development teams. An expansion strategy also included the opening of the firm's first retail store in MacLean, Virginia and investigative work towards an acquisition strategy.

Growing cash flows from the firm's main business lines resulted in a growing cash and marketable securities account on the Apple balance sheet. By fiscal year end 2001 cash and cash equivalents were $2.1 billion while short term securities amounted to another $2 billion. With 30 percent of the firm's debt being long term, Jobs' plan was to reduce these borrowings as quickly as possible, yet in a prudent fashion.

In 2002 positive cash flows continued to grow, even as the firm expanded its retail stores and purchased three firms, Firewire, Zayante and music software company Emagic. The firm also increased its research and development expenditures, to support the evolution of the Mac lines as well as the newer iPod and online music offerings.

To complement the iPod, Apple opened iTunes in 2003 and within a matter of weeks achieved 25 million downloads. Management soon realized that this business segment represented strong cash flows that could contribute to faster debt reduction and growing cash and marketable securities holdings. While cash levels increased that year, a slowdown in other business lines reduced the short term marketable securities levels by more than 50 percent, to just under $1.2 billion. By year end the firm was long term debt free, while short term debt was just over $300 million.

During the year Apple was sued by Tibco over its trademark. Settlement was reached without any significant harm to the firm's business practices or cash flow management [12].

On February 18, 2004 Steve Jobs wrote a letter to Apple employees stating that the firm had officially become long-term debt free! From a level of $1 billion of debt in 1997 the company had been able to eliminate the long term debt but also build its cash and marketable securities account to $4.8 billion. The iTunes store achieved exponential growth, driven by an advertising campaign featuring Irish rock band U2.

Mac units grew by 14 percent and iPods grew by more than 180 percent over 2003 to sales levels that were the highest in 8 years. Jobs noted, "We've got a strong product portfolio, with some amazing new additions coming later this year [13]."

Chief Financial Officer Peter Oppenheimer asserted, "Looking ahead to the fourth quarter of 2004 we expect revenues of about $2.1 billion [14]." Just a few months later these forecasts and expectations were triumphantly surpassed, as revenues reached $2.41 billion for the quarter, while EBIT increased 316 percent for the year, from $92 million to $383 million [15].

Without a doubt the firm's operating and financial performance in fiscal 2004 was exceptional and set the foundation for even greater success in the next few years. Cash flow generation was accelerating from the company's expansionary strategies, long term debt had finally been eliminated, EBIT grew at the fastest rate in company history and cash and marketable securities achieved all-time record levels [16].

Aggressive product development continued in 2005 as a new version of the iPod with integrated video was introduced to the marketplace; it was named the iPod nano. Within one year it becomes the best music player as sales reached 42 million units. Upon release of the video iPod, one million videos were downloaded, quickly contributing to the firm's cash flows.

On the acquisition front, Apple acquired Schema Soft, a Canadian-based company specializing in the development of software components that convert data between different formats. Already a customer of Schema Soft, the purchase was designed to maintain consistency in terms of strategic alliances and lucrative product developments.

With an important company focus on the Mac product portfolio Mr. Jobs developed a growing frustration with the Power PC chip line. He felt that the manufacturers of these chips, IBM and Motorola (now Freescale Semiconductors) were lagging behind in their chip's performance, especially in low-power applications. In contrast, competitive chips being produced by Intel continued to provide increasing

speeds and more efficient power consumption. They allowed personal computers to extend battery life, reduce excess heat and enhance laptop performance. Portable PCs had been a growing percentage of the PC market for Macs as well as other PC producers. In fact, by 2005, portable PC's made up 45 percent of Apple's revenues, on the way to 61 percent in 2007 [17].

In June of 2005, Jobs announced that Apple would abandon its long standing use of Power PC chips and move to Intel microprocessors [18]. Intel's dual-core technology, which allowed two chips to occupy one piece of silicon, enabled Apple to build lap tops that were both faster and less power-hungry [19]. The firm began shipments of two products with Intel Core Duo chips in January of 2006 and the entire Mac line was running on Intel chips by early 2007 [20]. With "Intel inside" Mac PC's could easily run Windows and other third-party operating systems. By loading a software package such as VMware Fusion or Parallels Desktop, Mac users could operate both Windows and Mac-based applications [21]. This combination enhanced the competitive position of Mac PC's significantly and contributed to their growth rate that exceeded that of the industry.

The move to Intel chips was considered a very significant event, similar to the move from the firm's Mac OS 9 to the Mac OS X. Although only a digit apart, Jobs noted that this move to a Unix-based operating system was a major shift for the company. "This was a brain transplant," Jobs said [22].

This key development produced a fully reconfigured operating system in 2001 and was based on UNIX; it offered a more stable environment than previous Mac platforms[23]. Every 12 to 18 months OS X was upgraded, with the goal of generating extra revenue as well as new interest in the Mac line, thus strengthening brand loyalty among existing Mac users. By October of 2007 the sixth major OS X release, named Leopard, was launched. Jobs categorized it as the "most successful" release in the firm's history. It quickly achieved sales of 4 million copies and 20 percent of the Macintosh installed base [24].

Seizing upon flourishing opportunities and managing operational risks efficiently, cash flows and company profits continued to increase. For the first time in a decade EBIT exceeded $1.8 billion with an EBIT/Sales ratio of 42 percent. Short term debt levels were also managed effectively and cash and short term marketable securities continued to grow, contributing to financial and managerial flexibility needed to compete in rapidly changing markets [25].

Apple's marketing strategy over the last 10 to 12 years had been to highlight features that differentiated them from other PC manufacturers while also emphasizing their interoperability with other machines. Attractive Apple designs, ease of use, security and high-quality bundled software were among the qualities that distinguished the Mac line from other PC's. Over this period, the Mac evolved from a closed system to one that continued to move towards open standards.

Apple continued to put a high premium on creating machines that offered cutting-edge, tightly integrated user experiences. The firm's pricing strategy followed a premium price philosophy with most items selling for higher price points than comparable machines from other producers. The more expensive Macs featured metal cases with high end graphics capabilities. At lower price points such as the Mac mini users had to purchase a keyboard, a mouse and a monitor in addition to the PC. Notebooks made up a growing share of the firm's PC sales, made up of the MacBook, the MacBook Pro and the

MacBook Air [26]. Although Mac sales were more important to the firm than even a few years ago, at 43 percent of revenues, the company, in 2008 changed its name from Apple Computer to Apple Inc.

Following its strategic plans for business expansion, software improvement and innovating as rapidly and as efficiently as possible, progress continued to be made each year. The firm's logo was changed, products were being developed and marketed effectively and profitably and the retail strategy was proving to be even more successful than expected by a confident management team. Mr. Jobs' initiatives were being realized as, for example, achieving 65 million iPods sold by year end 2006. And the firm was also preparing for the launch of another new product in 2007, the iPhone.

By yearend 2006, cash and marketable securities reached $6.39 billion as internally generated cash flows more than paid for research and development and all other corporate expenses. EBIT and net income continued to grow and the firm's stock price increased throughout the year.

On January 9, 2007 Apple introduced the iPhone to the consumer and business marketplace. It combined three products—a revolutionary mobile phone, a wide screen with touch controls and a breakthrough Internet communications device with desktop-class email, web browsing, searching and maps—into one small and lightweight handheld device [27]. This iPhone introduced an entirely new user interface based on a multi-touch display and pioneering new software, letting users' control the iPhone with just their fingers. "iPhone is a revolutionary and magical product that is literally five years ahead of any other mobile phone," said Steve Jobs [28]. While iPhone sales have grown rapidly over the last few years, as enhancements and new models were introduced annually, the firm's profits, cash flows, free cash flows, and short term investment portfolio continued to grow even faster than operating assets.

The Evolution of Distribution and Sales

In May of 2001, Apple diversified its distribution efforts by opening its first retail store in McLean, Virginia. While many analysts were skeptical of this initiative, they soon reversed their earlier opinions. By 2008, the firm was operating 215 stores and finished its 2011 fiscal year with 357 stores [29]. With most of these outlets in the U.S., Apple was expanding retail stores in a number of large foreign markets; Australia, Canada, China, Japan and the U.K.

It was generally viewed by industry analysts that Apple's retail strategy had been a marketing marvel and a huge success for the firm. The Apple retail experience had provided growing numbers of visitors with their first exposure to and experience with Mac products and the firm estimated that one half of recent Mac sales in fiscal 2007 were sold through Apple stores. These stores were also instrumental in introducing each "non Mac" Apple product—iPods, iPads, iPhone, etc. to their expanding customer family, once again strengthening the brand in the minds of product users. A so called "halo effect" had developed between the various Apple products developed in recent years and the Apple store experience nurtured and strengthened these bonds. While Mac sales continued to grow faster than the PC industry and recently achieved third place in the U.S. market at approximately an 8 percent share, its worldwide share has stagnated in the

2 to 3 percent range. With a premium price strategy, this is not very surprising as PC growth in developing markets has clustered around lower priced products. With time, it may be expected that a growing proportion of PC users will "trade up" to Mac, but so far this transition phase of market development has not materialized.

Competition [30]

The company's products and services were sold in highly competitive markets. Aggressive competition from both large and small, domestic and global firms was faced by the firm in each of its areas of business. Frequent product introductions and rapid technological advances have contributed to substantially increasing the capabilities and use of mobile communication and media devices as well as personal computers and other digital electronic devices.

Aggressive price cuts and reduced profit margins have been strategies used by competitors to gain or maintain their market shares. These firms sell mobile devices and personal computers that are based on other operating systems with different performance metrics. While recent company performance has been able to meet these competitive forces satisfactorily, they remain a constant force in the marketplace. More specifically, the principal competitive factors important to Apple in the current as well as near future marketplace include price, product features, relative price/performance metrics, product quality and reliability, design innovation, a strong third - party software peripherals ecosystem, marketing and distribution capability, service and support and corporate reputation.

In recent years, Apple has focused on expanding its market opportunities related to mobile communication and media devices. These industries are highly competitive and include several large, well-financed and experienced participants. Competition in these industry segments is expected to intensify significantly as competitors attempt to imitate some of the features incorporated in Apple's products and applications within their own products. Alternatively, they may also collaborate with each other to offer solutions that are more competitive than those they are currently offering.

These industries are also characterized by firms that employ aggressive pricing practices, accompanied by frequent product introductions. Evolving design approaches and technologies, along with rapid adoption of technological and product advancements by these competitors also require Apple to constantly support its innovative strategies and activities. Price sensitivity is also a characteristic of these markets, at both the consumer and business levels.

Apple's digital content services continue to face significant competition from firms promoting their own digital music and content products and services. In fact, some firms actually offer free peer – to – peer music and video services. The company believed that it offered superior innovation and integration of the entire solution including hardware (iPhone, iPad, Mad and iPod), software (iTunes) and distribution of digital content and applications (iTunes Store, App Store, IBookstore and Mac App Store). Some of the firm's current and potential competitors have substantial resources and may be able to provide such products and services at little or no profit or even at a loss to compete with Apple's offerings.

The Supply Chain [31]

Most components essential to the firm's business were available from a variety of sources. However, in order to obtain quantity discounts and preferred delivery, Apple consolidated its purchasing to either single or limited source firms, thus subjecting the company to significant supply and pricing risks. Industry – wide shortages and significant commodity pricing fluctuations may affect any firm at any time. While Apple had entered into various agreements for the supply of components, there was no guarantee that any of these agreements could be extended and/or renewed on similar terms. Thus the firm was subject to the risks of supply shortages and price increases that could have a materially adverse effect on both operating and financial performance.

The firm and other manufacturers in the mobile communication, media device and personal computer industries also compete for components with other industries that have experienced growing demand for their products. In addition, Apple uses some custom components that are not common to these other industries as well as new products introduced by the firm that often require custom components available from only one source. When a component or product uses new technologies, initial capacity constraints may exist until suppliers' yields have matured or manufacturing capacity has increased. If component supply for new or existing products were delayed or constrained, or if a critical manufacturing vendor delayed shipment of completed products to Apple, operating and financial performance could be affected adversely. If sufficient quantities of product from an original source are restrained and the firm needs to identify and obtain supplies from alternate sources, which could prove difficult, operating and financial performance could also be adversely affected. A final challenge that the firm could face was for suppliers to concentrate their output on common components instead of customized components that Apple required for its product lines.

Since the late 1990's, substantially all of the firm's hardware products have been manufactured by outsourcing partners primarily located in Asia. A significant concentration of current manufacturing was performed by a small number of outsourcing firms, often in single locations. Certain of these outsourcing partners were the sole – source suppliers of components and manufacturer for many of the firm's products. If any of these firms manufacturing schedules is disrupted in any way, Apple's operating results would be affected fairly quickly. Typical purchase commitments between Apple and these suppliers cover the firm's projected market requirements for periods up to 150 days.

Research and Development [32]

The company competed in industries that were characterized by rapid technological advances. Therefore, successfully competing with these firms depends heavily upon the firm's ability to ensure a continual and timely flow of competitive products, services and technologies to the marketplace. A key to Apple's success has been its ability to develop new technologies to enhance existing products and to expand the range of its product offerings through research and development, licensing of intellectual property and acquisition of third–party businesses and technology.

After a decline in R & D, spending between 1996 and 1998, the firm has seen these expenditures grow every year from a level of $310 million in 1998, representing 5.2 percent of sales. By 2002 spending reached $447 million, or 7.8 percent of sales. While R & D expenditures continued to grow rapidly, they could not keep up with the extraordinary growth rates of company sales, especially since 2007, when R & D spending was 3.3 percent of sales. Between 2009 and 2011, R & D expenditures grew by 84.6 percent, from $1.3 billion to $2.4 billion, yet on a percent of sales scale, the 2011 figure was only 2.2 percent of annual sales. As the firm's product portfolio continues to broaden, it may be expected that actual R & D spending will grow rapidly over the next few years.

Net Sales by Product Categories

Exhibit 1 provides revenues by major product categories for the last six years. Mac desktop sales have almost doubled in this period, while Mac portables have grown by almost four times, from $4 billion in 2006 to $15.3 billion in 2011. The MacBook and MacBook Pro were the price drivers in this period, as the Mac lines accounted for approximately 20 percent of total revenues in fiscal 2011, compared to 38.2 percent in fiscal 2006.

The iPod product line has remained fairly steady in terms of revenues over the last 6 years, after rapid growth earlier in the decade. While iPod sales have not grown along with other Apple hardware, the product has facilitated rapid growth of music sales, from $1.9 billion in 2006 to $6.3 billion in 2011. These music related products and services growth were due primarily to net sales from the iTunes Store which was largely driven in recent years by App Store expansion into new countries that contributed to strong growth in all of the firm's geographic regions. Over 80 percent of net retail sales came from the iTunes Store, App Store and iBookstore. Continued growth in this business segment was the result of heightened consumer interest in downloading third-party digital content, along with continued growth in the customer base of iPhones, iPads and iPods. Also contributing to sales has been expansion of third-party audio and video content available via the iTunes Store, along with continued interest in and growth of the App Store [33].

Clearly, the growth drivers of the firm's phenomenal performance over the last few years have been due to customer's embrace of two Apple products, the iPhone and the iPad. Neither product existed in the marketplace in 2006! By 2011 iPhone handset unit sales totaled 72.3 million, an increase of 32.3 million units (81%) compared with fiscal 2010. This performance reflected strong demand for iPhone 4 and expanded distribution to the Verizon Wireless network, beginning in February 2011. Growth was also supported by expansion into new countries and increased distribution with other new carriers and resellers. By year end, iPhone was available in 105 countries and through 228 carriers. iPhones were also distributed through direct channels and certain third-party resellers [34].

The iPad was first introduced in the third quarter of 2010, generating almost $5 billion in revenues in less than 6 months. Unit sales in 2011 were 32.4 million, an increase of 334 percent over 2010 levels. iPads were distributed through direct channels, certain cellular network carriers' distribution channels and certain third-party resellers.

By year end, fiscal 2011 iPads were distributed in 90 countries, up from 26 countries just one year earlier.

Software and peripheral sales of $5.284 billion rounded out total revenues in 2011, at 4.9 percent of company sales. In 2006 they totaled almost $2.4 billion in sales or 12.4 percent of the firm's total revenues.

Segment Operating Performance

The Americas' represented the largest geographic segment, from a revenue perspective, and have been so in each of the last 6 years. Net revenues in this period grew by over 407 percent, with recent growth fueled by iPhone revenues from carrier expansion and strong demand for iPhone 4, along with increased sales of iPads and Macs. Only the iPod has shown weakness in the last few years. Higher sales of third-party digital content and applications from the iTunes Store and App Store also contributed to recent growth. Yet this division has seen its share of company sales decline from 48.7 percent in 2006 to 35.4 percent in 2011.

The European segment has maintained its position as the firm's second largest division in terms of net sales. Recent growth has been led by iPhone sales from carrier expansion and strong demand for the iPhone 4. Macs and iPads have also grown while the iPod has seen a modest decrease in sales. From 21.2 percent of firm net sales in 2006, its share has grown to 25.7 percent in 2011.

Asia-Pacific net sales were the third largest market segment, reaching $22.6 billion in 2011 from just $3.25 billion in 2006, an increase of 696 percent! From relatively steady revenues through 2009, net sales grew much more rapidly the last two years. A major source of strength has been sales in Greater China, which includes Hong Kong and Taiwan. Also contributing to sales growth were performances in Korea and Australia. Once again, the iPhone 4 and carrier expansion were the prime drivers of sales, along with Macs and, in 2011, the iPad. From 16.8 percent of net sales in 2006, this region generated 20.9 percent in 2011.

The smallest market segment represents net sales in Japan. Net sales have increased by 449 percent over the last 6 years, with iPhones, iPads and Macs leading the way. Market share has declined from 6.27 percent in 2006 to 5.02 percent in 2011.

Finally retail net sales have reached 13 percent of total company sales in 2011. While the first retail store was opened in May of 2001 in McLean, Virginia, growth has been steady, with 357 stores operating at year end 2011, up 40 stores during that fiscal year (28 were opened outside the U.S.). Early store experiences for consumers were focused on the Mac product lines, primarily in the U.S. By mid-decade, stores were being opened in other regions, especially Australia, Canada, China, Italy, Japan and the United Kingdom [35]. By 2008, early analysts who had questioned the wisdom of an "Apple retail experience" became convinced that this strategy was a huge success. It gave many of those visitors their first exposure to the Mac product lines and the firm estimated that "new to Mac" consumers bought half of the 1.4 million Macs sold in Apple stores by fiscal 2007 [36]. A 2006 partnership with Best Buy allowed customers to shop for Mac products in another 270 retail locations [37]. In that period, the popularity of the iPod had a

beneficial "halo effect" on Apple's Mac business [38]. By 2011, retail net sales had grown 1,049 percent over the last 6 years, the fastest performance of all geographic segments.

Unlike the other divisions of the firm, which produced products primarily through outsourcing arrangements, the retail segment required a substantial investment in fixed assets and related infrastructure, along with operating lease commitments, personnel and other operating expenses. Capital asset purchases associated with the Retail segment since inception in 2001 and through fiscal year end 2011 have totaled $2.8 billion. As of 2011 this segment had approximately 36,000 full-time equivalent employees and had outstanding lease commitments associated with retail space and related facilities of $2.4 billion. This represented 30.9 percent of the firm's net property, plant and equipment at the end of fiscal 2011.

In relation to the firm's capital expenditures of $4.6 billion in 2011, approximately $614 million were used for retail store facilities and $4 billion for other capital expenditures, including tooling and manufacturing process equipment, real estate for future development of the firm's second corporate campus, along with other corporate facilities and infrastructure. Plans for fiscal 2012 include $900 million for retail store expansion; 40 new stores with approximately 30 located outside the U.S. [39].

Company Stock Performance [40]

Over the period September 30, 2006 through September 30, 2011, the firm's common stock price increased by 495 percent. This performance was well ahead of the S&P Computer Hardware index, which grew by 197 percent. The Dow Jones U.S. Technology index increased by 120 percent while the S&P 500 actually declined by 6 percent. Clearly the exceptional operating performance of the firm was translated into its stock price performance. Net sales in this period increased by 440 percent while net income grew by 741.7 percent, in line with earnings per share growth of 694.3 percent.

With the death of Steven Jobs, the management team under the leadership of Tim Cook is presented with a number of challenges. Can they continue to develop and market cutting edge devices that consumers will continue to purchase? Will they continue to grow the immense cash and marketable securities portfolio, which accounted for 75 percent of total assets at fiscal year-end 2011? Is there a more efficient financial model to be used by the firm to enhance shareholder values in the years ahead?

Notes

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25. www.cdrinfo.com/sections/news/Details.aspx?newsld=14055

26. All product and price information for Macintosh computers is drawn from the Apple, Inc. website, http://www.apple.com/getamac/whichmac.html.
27. www.apple.com
28. Ibid
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30. Apple Inc., Form 10-K for the fiscal year ending September 24, 2011, p. 6.
31. Apple Inc., Form 10-K for the fiscal year ending September 24, 2011, p. 87.
32. Apple Inc., Form 10-K for the fiscal year ending September 24, 2011, p. 7.
33. Apple Inc., Form 10-K for the fiscal year ending September 24, 2011, p. 31.
34. Apple Inc., Form 10-K for the fiscal year ending September 24, 2011, p. 32.
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Exhibit 1
Apple Inc.
Timeline of Company Events and Milestones

Date	Product	Event
1976	Apple I	Steve Jobs, Steve Wozniak, and Ronald Wayne found Apple Computer.
1977	Apple II	Apple logo first used.
1979	Apple II +	Apple employs 250 people; the first personal computer spreadsheet software, VisiCalc, is written by Dan Bricklin on an Apple II.
1980	Apple III	Apple goes public with 4.6 million shares; IBM personal computer announced.
1983	Lisa	John Sculley becomes CEO.
1984	Mac 128K, Apple IIc	Super Bowl ad introduces the Mac desktop computer.
1985		Jobs resigns and forms NeXT Software; Windows 1.01 released.
1986	Mac Plus	Jobs establishes Pixar.
1987	Mac II, Mac SE	Apple sues Microsoft over GUI.
1989	Mac Portable	Apple sued by Xerox over GUI.
1990	Mac LC	Apple listed on Tokyo Stock Exchange.
1991	PowerBook 100, System 7	System 7 operating-system upgrade released, the first Mac OS to support PowerPC-based computers.
1993	Newton Message Pad (one of the first PDA's)	Sculley resigns; Spindler becomes CEO; PowerBook sales reach 1 million units.
1996		Spindler is out; Amelio becomes CEO; Apple acquires NeXT Software, with Jobs as adviser.
1997		Amelio is out; Jobs returns as interim CEO; online retail Apple Store opened.
1998	iMac	iMac colorful design introduced, including USB interface; Newton scrapped.
1999	iMovie, Final Cut Pro video editing software	iBook (part of PowerBook line) becomes best-selling retail notebook in October; Apple has 11% share of notebook market.
2000	PowerMac G4 Cube	Jobs becomes permanent CEO.
2001	iPod, OS X	First retail store opens, in Virginia.
2002	iMac G4	Apple releases iLife software suite.
2003	iTunes	Apple reaches 25 million iTunes downloads.
2004	iMac G5	Jobs undergoes successful surgery for pancreatic cancer.
2005	iPod Nano, iPod Shuffle, Mac	First video iPod released; video downloads available from iTunes.

	Mini, RoKr phone	
2006	MacBook Pro	Apple computers use Intel's Core Duo CPU and can run windows software; iWork software competes with Microsoft Office.
2007	iPhone, Apple TV, iPod Touch	Apple Computer changes name to Apple Inc.; Microsoft Vista released.
2008	iPhone 3G, MacBook Air	App Store launched for third-part applications for iPhone and iPod Touch and brings in $1 million in one day; iPhone software development kit.
2009	17-inch MacBook Pro, iLife, iWork '09	iTunes Plus provides DRM-free music, with variable pricing; Jobs takes medical leave.
2010	iPad, iPhone 4	iPhone 4 provides Face Time feature.
2011	iPad2, iCloud	iPhone available on Verizon Wireless; Jobs takes medical leave again.

Exhibit 2
Apple, Inc.
Product Categories

Products

The Company offers a range of mobile communication and media devices, personal computing products, and portable digital music players, as well as a variety of related software, services, peripherals, networking solutions and third-party hardware and software products. In addition, the Company offers its own software products, including iOS, the Company's proprietary mobile operating system; Mac OS X, the Company's proprietary operating system software for the Mac; server software and application software for consumer, SMB, and education, enterprise and government customers. The Company's primary products are discussed below.

iPhone

iPhone combines a mobile phone, an iPod, and an Internet communications device in a single handheld product. Based on the Company's Multi-Touch™ user interface, iPhone features desktop-class email, web browsing, searching, and maps and is compatible with both Macs and Windows-based computers. iPhone automatically syncs content from users' iTunes libraries, as well as contacts, bookmarks, and email accounts. iPhone allows customers to access the iTunes Store to download audio and video files, as well as a variety of other digital content and applications. In October 2011, the Company launched iPhone 4S, its latest version of iPhone, which includes Siri™, a voice activated intelligent assistant. In addition to the Company's own iPhone accessories, third-party iPhone compatible accessories are available through the Company's online and retail stores and from third parties.

iPad

iPad is a multi-purpose mobile device for browsing the web, reading and sending email, viewing photos, watching videos, listening to music, playing games, reading e-books and more. iPad is based on the Company's Multi-Touch technology and allows customers to connect with their applications and content in a more interactive way. iPad allows customers to access the iTunes Store to download audio and video files, as well as a variety of other digital content and applications. In March 2011, the Company introduced iPad 2, its second-generation iPad. In addition to the Company's own iPad accessories, third-party iPad compatible accessories are available through the Company's online and retail stores and from third parties.

Mac Hardware Products

The Company offers a range of personal computing products including desktop and portable computers, related devices and peripherals, and third-party hardware products. The Company's Mac desktop and portable systems feature Intel microprocessors, the Mac OS X Lion operating system and the iLife suite of software for creation and management of digital photography, music, movies, DVDs and websites.

The Company's desktop computers include iMac , Mac Pro and Mac mini. The iMac desktop computer has an all-in-one design that incorporates a display, processor,

graphics card, storage, memory and other components inside a single enclosure. The Mac Pro desktop computer is targeted at business and professional customers and is designed to meet the performance, expansion, and networking needs of the most demanding Mac user. The Mac mini is a desktop computer in a compact enclosure.

The Company's portable computers include MacBook Pro and MacBook Air . MacBook Pro is a portable computer designed for professionals and consumers. MacBook Air is an ultra-slim portable computer designed for professionals and consumers.

iPod

The Company's iPod line of portable digital music and media players includes iPod touch, iPod nano , iPod shuffle and iPod classic . All iPods work with iTunes. In addition to the Company's own iPod accessories, third-party iPod compatible accessories are available, through the Company's online and retail stores or from third parties.

The iPod touch, based on iOS, is a flash-memory-based iPod with a widescreen display and a Multi-Touch user interface. iPod touch allows customers to access the iTunes Store to download audio and video content, as well as a variety of digital applications. The iPod nano is a flashmemory-based iPod that features the Company's Multi-Touch interface allowing customers to navigate their music collection by tapping or swiping the display. The iPod nano features a polished aluminum and glass enclosure with a built-in clip. The iPod shuffle is a flash-memorybased iPod that features a clickable control pad to control music playback and VoiceOver technology enabling customers to hear song titles, artists and playlist names. The iPod classic is a hard-drive based portable digital music and video player.

iTunes

iTunes is an application that supports the purchase, download, organization and playback of digital audio and video files and is available for both Mac and Windows-based computers. iTunes 10 is the latest version of iTunes and features AirPlay wireless music playback, Genius Mixes, Home Sharing, and improved syncing functionality with iOS devices. iTunes is integrated with the iTunes Store , a service that allows customers to discover, purchase, rent, and download digital content and applications. The iTunes Store includes the App Store™ and iBookstore. The App Store allows customers to discover and download applications, and the iBookstore features electronic books from major and independent publishers and allows customers to preview and buy books for their iOS devices. Customers can access the App Store through either a Mac or Windows-based computer or through an iOS device.

The iBookstore is accessed through the iBooks application on an iOS device.

Mac App Store

In January 2011, the Company opened the Mac App Store allowing customers to discover, download and install applications for their Macs. The Mac App Store offers applications in education, games, graphics and design, lifestyle, productivity, utilities and other categories. The Company's Mac OS X operating system software and iLife and iWork application software are also available on the Mac App Store.

iCloud

In October 2011, the Company launched iCloud, its new cloud service, which stores music, photos, applications, contacts, calendars, and documents and wirelessly pushes them to multiple iOS devices, Macs and Windows-based computers. iCloud's features include iTunes in the Cloud, Photo Stream, Documents in the Cloud, Contacts, Calendar, Mail, automatic downloads and purchase history for applications and iBooks, and iCloud Backup. Users can sign up for free access to iCloud using a device running iOS 5 or a Mac running Mac OS X Lion.

Software Products and Computer Technologies

The Company offers a range of software products for consumer, SMB, education, enterprise and government customers, including the Company's proprietary iOS and Mac OS X operating system software; server software; professional application software; and consumer, education, and business oriented application software.

Operating System Software

iOS

iOS is the Company's mobile operating system that serves as the foundation for iOS devices. In October 2011, the Company released iOS 5, which supports iCloud and includes new features such as Notification Center, a way to view and manage notifications in one place; iMessage™, a messaging service that allows users to send text messages, photos and videos between iOS devices; and Newsstand, a way to purchase and organize newspaper and magazine subscriptions.

Mac OS X

Mac OS X, the operating system for Macs, is built on an open-source UNIX-based foundation. Mac OS X Lion is the eighth major release of Mac OS X and became available in July 2011. Mac OS X Lion includes support for new Multi-Touch gestures; iCloud integration; system-wide support for full screen applications; Mission Control™, a way to view everything running on a user's Mac; the Mac App Store; Launchpad™, a new home for a user's applications; and a redesigned Mail application.

Application Software

iLife

iLife '11 is the latest version of the Company's consumer-oriented digital lifestyle application suite included with all Mac computers. iLife features iPhoto , iMovie , iDVD , GarageBand , and iWeb™. iPhoto is the Company's consumer-oriented digital photo application and iMovie is the Company's consumer-oriented digital video editing software application. iDVD is the Company's consumer-oriented software
application that enables customers to turn iMovie files, QuickTime files, and digital pictures into interactive DVDs. GarageBand is the Company's consumer-oriented music creation application that allows customers to play, record and create music. iWeb allows customers to create online photo albums, blogs and podcasts, and to customize websites using editing tools.

iWork

iWork '09 is the latest version of the Company's integrated productivity suite designed to help users create, present, and publish documents, presentations, and spreadsheets. iWork '09 includes Pages '09 for word processing and page layout, Keynote '09 for presentations, and Numbers '09 for spreadsheets. The Company also has a Multi-Touch version of each iWork application designed specifically for use on iOS devices.

Other Application Software

The Company also sells various other application software, including Final Cut Pro , Logic Studio , Logic Express 9, Logic Studio Pro, and its FileMaker Pro database software.

Displays & Peripheral Products

The Company manufactures the Apple LED Cinema Display™ and Thunderbolt Display. The Company also sells a variety of Apple-branded and third-party Mac-compatible and iOS-compatible peripheral products, including printers, storage devices, computer memory, digital video and still cameras, and various other computing products and supplies.

Apple TV

Apple TV allows customers to watch movies and television shows on their high definition television. Content from iTunes, Netflix, YouTube, and Flickr as well as music, photos, videos, and podcasts from a Mac or Windows-based computer can also be wirelessly streamed to a television through Apple TV. With the release of iCloud in October 2011, content purchased on Apple TV can be re-downloaded on iOS devices.

Product Support and Services

AppleCare offers a range of support options for the Company's customers. These options include assistance that is built into software products, printed and electronic product manuals, online support including comprehensive product information as well as technical assistance, and the AppleCare Protection Plan ("APP"). APP is a fee-based service that typically includes two to three years of phone support and hardware repairs and dedicated web-based support resources.

Source: Apple, Inc. 2011 10-K p. 3-5

Exhibit 3
Apple Inc.
Sales by Major Product Categories
(in millions)

	2011	2010	2009	2008	2007	2006
Mac Desktops	$ 6,439	$ 6,201	$ 4,324	$ 5,622	$ 4,020	$ 3,319
Mac Portables	15,344	11,278	9,535	8,732	6,294	4,056
Total Mac Sales	$ 21,783	$ 17,479	$ 13,859	$ 14,354	$ 10,314	$ 7,375
iPod	7,453	8,274	8,091	9,153	8,305	7,676
Music	6,314	4,948	4,036	3,340	2,496	1,885
iPhone	47,057	25,179	13,033	6,742	123	0
iPad	20,358	4,958	0	0	0	0
Peripherals	2,330	1,814	1,475	1,694	1,260	1,100
Software	2,954	2,573	2,411	2,208	1,508	1,279
Total Net Sales	$108,249	$ 65,225	$ 42,905	$ 37,491	$ 24,006	$ 19,315

Source: Apple's 10-K's, 2006—2011.

Exhibit 4
Apple, Inc.
Unit Sales by Product Category
(in thousands)

	2011	2010	2009	2008	2007	2006
Mac Desktops (a)	4,669	4,627	3,182	3,712	2,714	3,319
Mac Portables (b)	12,066	9,035	7,214	6,003	4,337	4,056
Total Mac Unit Sales	16,735	13,662	10,396	9,715	7,051	7,375
iPod unit sales	42,620	50,312	54,132	54,828	51,630	7,676
iPhone units sold	72,293	39,989	20,731	11,627	1,389	0
iPad units sold	32,394	7,458	0	0	0	0
Total Unit Sales	164,042	111,421	85,259	76,170	60,070	15, 051

Source: Apple's 10-K's, 2006—2011.

Exhibit 5
Apple, Inc.
Sales by Geographic Segments
(in millions)

	2011	2010	2009	2008	2007	2006
Americas net sales [1]	$ 38,315	$ 24,498	$ 18,981	$ 16,552	$ 11,596	$ 9,415
Europe net sales [2]	27,778	18,692	11,810	9,233	5,460	4,096
Japan net sales	5,437	3,981	2,279	1,728	1,082	1,211
Asia-Pacific net sales [3]	22,592	8,256	3,179	2,686	4,115	3,246
Retail net sales [4]	14,127	9,798	6,656	7,292	1,753	1,347
Total net sales	$108,249	$ 65,225	$ 42,905	$ 37,491	$ 24,006	$ 19,315

Notes: 1 North and South America
2 European countries, Middle East and Africa
3 Included Australia and Asian countries other than Japan
4 All other segments do not include retail sales

Source: Apple, Inc. 10-K, 2006—2011

Exhibit 6
Apple, Inc.
Retail Stores, Numbers and Revenues

	2011	2010	2009	2008	2007	2006
Beginning of year	317	273	247	197	165	124
Domestic new stores	12	16	12	31	27	31
Foreign new stores	28	28	14	19	5	10
Total new stores	40	44	26	50	32	41
End of year	357	317	273	247	197	165
Domestic stores	245	233	217	205	174	147
Domestic growth rate	5.15%	7.37%	5.85%	17.82%	18.37%	
Foreign stores	112	84	56	42	23	18
Foreign growth rate	33.33%	50.00%	33.33%	82.61%	27.78%	
Average stores for the year	326	288	254	211	178	142
Average stores growth rate	13.19%	13.39%	20.38%	18.54%	25.35%	
Average revenue per store [1] (in millions)	$43.3	$34.1	$26.2	$34.6	$23.1	$22.9
Average revenue growth rate	26.98%	30.15%	-24.28%	49.78%	0.87%	
Retail net sales	$14,127	$9,798	$6,656	$7,292	$1,753	$1,347
Retail net sales/average store [2] (in millions)	$43.3	$34.0	$26.2	$34.6	$9.8	$9.5

Notes: 1 Apple, Inc. annual reports on 10-K, annually
2 Author calculations using the above data

Source: Apple, Inc. 10-K, 2006—2011

Exhibit 7
Apple, Inc.
Consolidated Income Statement
(In millions, except number of shares which are reflected in thousands and per share amounts)

	2011	2010	2009	2008	2007	2006
Net sales	$108,249	$ 65,225	$ 42,905	$ 37,491	$ 24,006	$ 19,315
Cost of sales	64,431	39,541	25,683	24,294	15,852	13,717
Gross margin	43,818	25,684	17,222	13,197	8,154	5,598
Operating expenses:						
Research and development	2,429	1,782	1,333	1,109	782	712
Selling, general and administrative	7,599	5,517	4,149	3,761	2,963	2,433
Total operating expenses	10,028	7,299	5,482	4,870	3,745	3,145
Operating income	33,790	18,385	11,740	8,327	4,409	2,453
Other income and expense	415	155	326	620	599	365
Income before income taxes	34,205	18,540	12,066	8,947	5,008	2,818
Provision for income taxes	8,283	4,527	3,831	2,828	1,512	829
Net income	$ 25,922	$14,013	$ 8,235	$ 6,119	$ 3,496	$ 1,989
Earnings per common share:						
Basic	$ 28.05	$ 15.41	$ 9.22	$ 6.94	$ 4.04	$ 2.36
Diluted	$ 27.68	$ 15.15	$ 9.08	$ 6.78	$ 3.93	$ 2.27

Shares used in computing earnings per share:						
Basic	924,258	909,461	893,016	881,592	864,595	844,058
Diluted	936,645	924,712	907,005	902,139	889,292	877,526

Source: Apple 10-K's, 2006—2011

Exhibit 8
Apple, Inc.
Consolidated Balance Sheet
(in millions)

	2011	2010	2009	2008	2007	2006
Assets:						
Current assets:						
Cash and cash equivalents	$ 9,815	$ 11,261	$ 5,263	$ 11,875	$ 9,352	$ 6,392
Short-term marketable securities	16,137	14,359	18,201	10,236	6,034	3,718
Accounts receivable [1]	5,369	5,510	3,361	2,422	1,637	1,252
Inventories	776	1,051	455	509	346	270
Deferred tax assets	2,014	1,636	1,135	1,447	782	607
Vendor non-trade receivables	6,348	4,414	1,696	-	-	-
Other current assets	4,529	3,447	1,444	5,822	3,805	2,270
Total current assets	44,988	41,678	31,555	32,311	21,956	14,509
Long-term marketable securities	55,618	25,391	10,528	2,379	-	-
Property, plant & equipment net	7,777	4,768	2,954	2,455	1,832	1,281
Goodwill	896	741	206	207	38	38
Acquired intangible assets, net	3,536	342	247	285	299	139
Other assets	3,556	2,263	2,011	1,935	1,222	1,238
Total assets	$ 116,371	$ 75,183	$ 47,501	$ 39,572	$ 25,347	$ 17,205
Liabilities and Shareholders Equity:						
Current liabilities:						
Accounts payable	$ 14,632	$ 12,015	$ 5,601	$ 5,520	$ 4,970	$ 3,390
Accrued expenses	9,247	5,723	3,852	3,719	4,310	3,053
Deferred revenue	4,091	2,984	2,053	4,853	-	-
Total current liabilities	27,970	20,722	11,506	14,092	9,280	6,443
Deferred revenue- non-current	1,686	1,139	853	3,029	-	-
Other non-current liabilities	10,100	5,531	3,502	1,421	1,535	778
Total liabilities	39,756	27,392	15,861	18,542	10,815	7,221
Commitments and contingencies						

Shareholders' equity:						
Common stock, no par value [2]	13,331	10,668	8,210	7,177	5,368	4,355
Retained earnings	62,841	37,169	23,353	13,845	9,101	5,607
Accumulated other comprehensive income/(loss)	443	(46)	77	8	63	22
Total shareholders' equity	76,615	47,791	31,640	21,030	14,532	9,984
Total liabilities and shareholders' equity	$ 116,371	$ 75,183	$ 47,501	$ 39,572	$ 25,347	$ 17,205

Notes:1 Accounts receivable, less allowances of $53, $55, $52, $47and $52 respectively

2 Common stock, no par value; 1,800,000,000 shares authorized; 929,277,000 and 915,970,000 shares issued and outstanding, respectively

Source: Apple, Inc. 10-K's, 2006—2011

Exhibit 9
Apple, Inc.
Consolidated Statement of Cash Flows
(In millions)

Five years ended September 24, 2011	2011	2010	2009	2008	2007
Cash and cash equivalents, beginning of the year	$ 11,261	$ 5,263	$ 11,875	$ 9,352	$ 6,392
Operating activities:					
Net income	25,922	14,013	8,235	6,119	3,496
Adjustments to reconcile net income to cash generated by operating activities:					
Depreciation, amortization and accretion	1,814	1,027	734	496	317
Share-based compensation expense	1,168	879	710	516	242
Deferred income tax expense	2,868	1,440	1,040	398	78
Loss on disposition of property, plant and equipment		24	26	22	12
Changes in operating assets and liabilities:					
Accounts receivable, net	143	(2,142)	(939)	(785)	(385)
Inventories	275	(596)	54	(163)	(76)
Vendor non-trade receivables	(1,934)	(2,718)	586	110	-
Other current and non-current assets	(1,391)	(1,610)	(713)	(95)	(1,459)
Accounts payable	2,515	6,307	92	596	1,494
Deferred revenue	1,654	1,217	521	718	1,139
Other current and non-current liabilities	4,495	778	(161)	1,664	612
Cash generated by operating activities	37,529	18,595	10,159	9,596	5,470
Investing activities:					
Purchases of marketable securities	(102,317)	(57,793)	(46,724)	(22,965)	(11,719)
Proceeds from maturities of marketable securities	20,437	24,930	19,790	11,804	6,483

Proceeds from sales of marketable securities	49,416	21,788	10,888	4,439	2,941
Payments made in connection with business acquisitions, net of cash acquired	(244)	(638)	0	(220)	-
Payments for acquisition of property, plant and equipment	(4,260)	(2,005)	(1,144)	(1,091)	(735)
Payments for acquisition of intangible assets	(3,192)	(116)	(69)	(108)	(251)
Other	(259)	(20)	(175)	(48)	32
Cash used in investing activities	(40,419)	(13,854)	(17,434)	(8,189)	(3,249)
Financing activities:					
Proceeds from issuance of common stock	831	912	475	483	365
Excess tax benefits from equity awards	1,133	751	270	757	377
Taxes paid related to net share settlement of equity awards	(520)	(406)	(82)	(124)	(3)
Cash generated by financing activities	1,444	1,257	663	1,116	739
(Decrease)/increase in cash and cash equivalents	(1,446)	5,998	(6,612)	2,523	2,960
Cash and cash equivalents, end of the year	$9,815	$11,261	$5,263	$11,875	$ 9,352
Supplemental cash flow disclosure:					
Cash paid for income taxes, net	$3,338	$2,697	$2,997	$1,267	$ 863

Source: Apple, Inc. 10-K, 2007—2011

Exhibit 10
Apple, Inc.
Annual Earnings
(in millions)

	2011	2010	2009	2008	2007	2006
Pretax domestic earnings	$10,205	$ 5,540	$ 5,466	$5,447	$2,808	$1,318
Pretax international earnings	24,000	13,000	6,600	3,500	2,200	1,500
Total	$34,205	$18,540	$12,066	$8,947	$5,008	$2,818

Source: Apple, Inc. 2011 10-K p. 62, 2009 10-K p. 75, and 2008 10-K p. 71

Exhibit 11
Apple, Inc.
Other Income
(in millions)

	2011	2010	2009	2008	2007	2006
Interest and dividend income	$ 519	$ 311	$ 407	$ 653	$ 647	$ 394
Other expense, net	(104)	(155)	(81)	(33)	(48)	(29)
Total other income and expense	$ 415	$ 156	$ 326	$ 620	$ 599	$ 365
Weighted average interest rate on cash, cash equivalents, and marketable securities	0.77%	0.75%	1.43%	3.44%	5.27%	4.58%

Source: Apple, Inc. 2011 10k p. 36, 2010 10k p. 39, 2009 10k p. 47, 2008 10k p. 47

Exhibit 12
Apple, Inc.
Balance Sheet Adjustments
(in millions)

	2011	2010	2009	2008	2007	2006
Operating leases [1]	$ 3,032	$ 2,089	$ 1,922	$ 1,760	$ 1,425	$ 1,154
Purchase obligations [2]	13,949	8,700	4,783	5,378	3,179	2,306
Asset retirement obligations			32	28	24	19
Other obligations [3]	2,415	1,096	356	471	50	39
"Inventory component prepayments"						
Total	$19,396	$11,885	$7,093	$7,637	$4,678	$3,518

Notes: 1 *Lease Commitments*: The Company's major facility leases are typically for terms not exceeding 10 years and generally provide renewal options for terms not exceeding five additional years.

2 *Purchase Commitments with Contract Manufacturers and Component Suppliers*: The Company utilizes several outsourcing partners to manufacture sub-assemblies for the Company's products and to perform final assembly and test of finished products. These outsourcing partners acquire components and build product based on demand information supplied by the Company, which typically covers periods up to 150 days

3. *Other Obligations*: Other outstanding obligations were $2.4 billion as of September 24, 2011, and were comprised mainly of commitments under long-term supply agreements to make additional inventory component prepayments and to acquire capital equipment, commitments to acquire product tooling and manufacturing process equipment, and commitments related to advertising, research and development, Internet and telecommunications services and other obligations.

Source: Apple, Inc. 10-K 2006-2011

Exhibit 13
Apple, Inc.
Liquidity and Capital Resources
(in millions)

	2011	2010	2009	2008	2007	2006
Cash, cash equivalents and marketable securities						
Held in foreign subsidiaries [1]	$ 54,300	$ 30,800	$ 17,400	$ 11,300	$ 6,500	$ 4,100
Held domestically	$ 27,270	$ 20,211	$ 16,592	$ 13,190	$ 8,886	$ 6,010
Total holdings	$ 81,570	$ 51,011	$ 33,992	$ 24,490	$ 15,386	$ 10,110
Average annual growth rate	59.91%	50.07%	38.80%	59.17%	52.19%	

Note: 1 Held by foreign subsidiaries and generally based in US denominated holdings

Source: Apple, Inc. 10-K, 2006—2011

Exhibit 14
Apple, Inc.
Financial Instruments Used for Cash and Marketable Securities Investments
(in millions)

	2011	2010	2009	2008	2007	2006
Cash, Cash Equivalents & Short-term Marketable Securities						
Cash	$ 2,903	$ 1,690	$ 1,139	$ 368	$ 256	$ 200
Money market funds	1,911	2,753	1,608	1,536		
Mutual funds	1,193					
U.S. Treasury securities	3,399	4,701	3,132	461		
U.S. agency securities	2,043	6,255	8,855	8,621		
Total U.S. Treasury and agency securities	5,442	10,956	11,987	9,082	1,028	499
Non-U.S. government securities	2,099	875	219	83		
Certificates of deposit and time deposits	1,705	1,224	1,714	3,046		
Commercial paper	2,853	3,168	4,197	5,683		
Corporate securities	7,251	4,580	2,466	2,313		
Municipal securities	595	374	134			
U.S. Corporate Securities [1]					10,315	7,010
Foreign securities [2]					3,787	2,401
Total cash, cash equivalents & short-term marketable securities	25,952	25,620	23,464	22,111	15,386	10,110
Long-term Marketable Securities						
U.S. Treasury securities	7,354	5,213	484	100		
U.S. agency securities	11,445	2,472	2,252	751		
Non-U.S. government securities	3,469	1,786	102	0		
Certificates of deposit and time deposits	2,470	1,515	0	32		
Corporate securities	28,008	12,862	7,320	1,496		

Municipal securities	2,872	1,543	370	0		
Total long-term marketable securities	55,618	25,391	10,528	2,379		
Total cash, cash equivalents and marketable securities	$81,570	$51,011	$33,992	$24,490	$15,386	$ 10,110

Notes: 1 U.S. Corporate securities consist primarily of commercial paper, certificates of deposit, time deposits, and corporate debt securities.

2. Foreign securities consist primarily of foreign commercial paper issued by foreign companies, and certificates of deposit and time deposits with foreign institutions, most of which are denominated in U.S. dollars.

Source: Apple, Inc. 10-K, 2006—2011

Exhibit 15
Comparable Company Stock Price Ranges and Earnings Per Share

	2011	2010	2009	2008	2007	2006
Apple						
High Price	$ 422.90	$326.70	$214.00	$200.25	$203.00	$93.20
Low Price	310.50	190.25	78.20	79.10	81.90	50.20
EPS (Sep. fiscal)	27.67	13.98	5.76	5.37	3.94	2.28
Dell						
High Price	17.60	17.50	17.25	26.00	30.80	32.25
Low Price	13.00	11.30	7.80	8.70	21.60	19.00
EPS (Jan. next year)	2.14	1.60	1.00	1.35	1.31	1.15
Google						
High Price	646.75	630.90	626.00	697.40	747.25	513.00
Low Price	473.00	433.60	282.75	247.30	437.00	331.60
EPS	36.04	29.60	23.20	19.49	15.58	10.24
Hewlett Packard						
High Price	49.40	54.75	52.90	51.00	53.50	41.70
Low Price	21.50	37.30	25.40	28.25	38.20	28.40
EPS (Oct. fiscal)	4.87	4.60	3.84	3.62	2.92	2.22
IBM						
High Price	194.90	147.50	132.90	130.90	118.90	97.90
Low Price	146.60	116.00	81.75	69.50	88.80	72.70
EPS	13.49	11.58	10.01	8.96	7.19	6.09
Intel						

High Price	25.80	24.40	21.25	26.30	28.00	26.60
Low Price	19.20	17.60	12.10	12.10	18.75	16.75
EPS	2.39	2.05	0.77	0.92	1.18	0.86
Microsoft						
High Price	29.50	31.60	31.50	36.00	37.50	30.25
Low Price	23.70	22.70	14.90	17.50	26.60	21.50
EPS (Jun. fiscal)	2.69	2.10	1.70	1.88	1.49	1.27
Oracle						
High Price	36.50	32.30	25.10	23.60	23.30	19.75
Low Price	24.70	21.25	13.80	15.10	16.00	12.10
EPS (May fiscal)	2.22	1.67	1.44	1.30	1.02	0.81
Cisco						
High Price	22.30	27.75	24.80	27.70	34.25	28.00
Low Price	13.30	19.00	13.60	14.20	24.80	17.10
EPS (Jul. fiscal)	1.61	1.61	1.35	1.56	1.34	1.10

Source: Standard & Poors', Company Reports

Exhibit 16
Comparable Company
Dividends per Share

	2011	2010	2009	2008	2007	2006
Apple	0.00	0.00	0.00	0.00	0.00	0.00
Cisco	0.12	0.00	0.00	0.00	0.00	0.00
Dell	0.00	0.00	0.00	0.00	0.00	0.00
Google	0.00	0.00	0.00	0.00	0.00	0.00
Hewlett Packard	0.40	0.32	0.32	0.32	0.32	0.32
IBM	2.90	2.50	2.15	1.90	1.50	1.10
Intel	0.78	0.63	0.56	0.55	0.45	0.40
Microsoft	0.61	0.52	0.50	0.43	0.39	0.34
Oracle	0.21	0.20	0.05 [1]	0.00	0.00	0.00

Note: 1 Quarterly
Source: Standard & Poors', Company Reports

Exhibit 17
Comparable Company
Cash Flow per Share

	2011	2010	2009	2008	2007	2006
Apple	29.61	16.26	9.89	5.88	4.29	2.52
Cisco	1.61	1.68	1.35	1.59	1.40	1.10
Dell	2.39	1.84	1.16	1.64	1.58	1.34
Google	35.41	30.63	25.19	18.01	16.36	11.79
Hewlett Packard	5.67	5.73	5.10	4.56	3.67	3.00
IBM	17.02	15.27	13.73	12.49	10.22	9.39
Intel	3.51	2.83	1.67	1.72	1.98	1.65
Microsoft	3.02	2.40	1.90	2.07	1.57	1.28
Oracle	2.21	1.66	1.48	1.34	1.03	0.79

Source: Standard & Poors', Company Reports

Exhibit 18
Comparable Company
Share Repurchase Plans
(in millions)

	2011	2010	2009	2008	2007	2006
Cisco						
Shares repurchased	361	331	202	372	297	435
Total outstanding shares (year beg.)	5,382.9	5,585	5,789	5,883	6,091	6,070
Dell						
Shares repurchased	57	0	134	179	118	204
Total outstanding shares (year beg.)	1,906.7	1,957.7	1,951.0	2,042.3	2,235.9	2,307.0
Google						
Shares repurchased	0	1.597	0	0	0	0
Total outstanding shares (year beg.)	325	321.6	318	315.3	313.4	311
Hewlett-Packard						
Shares repurchased	258.9	241.2	119.7	229.6	269.0	222.9
Total outstanding shares (year beg.)	1,984	2,190	2,364	2,416	2,574	2,720
IBM						
Shares repurchased	87	118	67	90	178	98
Total outstanding shares (year beg.)	1,163	1,227	1,305	1,339	1,385	1,506
Intel						
Shares repurchased	653	80	94	328	113	226
Total outstanding shares (year beg.)	4,996	5,488	5,524	5,562	5,788	5,767
Microsoft						
Shares repurchased	447	380	318	402	971	754
Total outstanding shares (year beg.)	8,387	8,653	8,911	9,130	9,375	9,970
Oracle						
Shares repurchased	40	43	226	97	234	147
Total outstanding shares (year beg.)	5,066	5,026	5,007	5,156	5,113	5,283

Source: Standard & Poors', Company Reports

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