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The Hidden Potential of "Managerial Macroeconomics" for CEO Decision Making in MBA Programs

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Macroeconomics has profound strategic and tactical implications for CEO decision making, yet many top-ranked business schools do not offer this subject in its appropriately integrative and applied management context. I illustrate how the careful cultivation of "macroeconomic literacy" in the MBA classroom using four innovative instructional strategies can improve CEO decision making across all functional areas of the firm while helping to meet important AACSB learning goals, including curriculum integration, application of interactive teaching strategies, soft skills enhancement, and promoting a global perspective.

In a global economy episodically plagued by inflation, recession, stagflation, oil price shocks, exchange rate volatility, trade frictions, and the geopolitical risks of coups and terrorism, frankly it seems astonishing that almost one third of the top-ranked U.S. business schools do not require macroeconomics in the core curriculum (Navarro, 2005: 7). Moreover, many schools that do require macroeconomics continue to present the subject in a segregated "functional silo" fashion (Closs & Stank, 1999: 60) unrelated to most other subjects in the MBA curriculum.

Macroeconomics is a subject, however, that has profound strategic and tactical implications for CEO decision making. These decisions cut a wide swath across the MBA curriculum and range from the setting of production and inventory levels and pricing and marketing products through the "business cycle seasons" to managing accounts receivable, setting key capital financing parameters, and determining the timing of both capital expansions in general and strategic acquisitions and divestitures in particular (e.g., Cundiff, 1975; Dhalla, 1980; Greer, 1984; Mascarenhas & Aaker, 1989; McCallum, 1991, 1999; Navarro, 2004, 2006).

I argue below that the widespread practice of not offering macroeconomics in its appropriately integrative and applied management context is one of the great failures of modern MBA education. In

presenting this argument, I illustrate how a careful cultivation of "macroeconomic literacy" in the MBA classroom using four innovative instructional strategies can not only improve CEO decision making, but this innovative approach can also help meet some of the most important instructional goals that have been articulated in both the modern management education literature and latest AACSB standards.

WHY IS THERE NO "MANAGERIAL MACROECONOMICS"?

"Managerial economics" is a business applications-oriented version of college-level microeconomics and a required course at virtually all top-ranked business schools. To serve this market, all major economics textbook publishers offer managerial economics texts that are separate and distinct in both theme and content from college-level microeconomics texts.

Note, however, that "managerial macroeconomics" as a subject separate and distinct from college level macroeconomics is far less developed. Most major macroeconomics textbooks are targeted at the undergraduate market and predictably thin on business applications.

As for the almost one third of the top-ranked business schools that do not require macroeco-

nomics in the core curriculum, there have been no formal studies to explain this omission. To shed some light on this issue, I conducted a brief, informal survey of business school deans, professors, and textbook publishing editors. The responses yielded at least five plausible explanations.

The first is rooted in internal politics. Many business schools do not recognize "economics" as a stand-alone unit similar to marketing, finance, or operations. This can lead to an underrepresentation of economists on a faculty, as recruitment is often a zero-sum game. The result is often a collateral lack of any "faculty champions" for macroeconomics.

A second reason given is that "there is only so much room in the core." In this regard, recent years show a trend at some schools to reduce the size of the core to increase elective offerings, which many professors prefer to teach. Macroeconomics is often one of the first courses trimmed.

A third reason is that many doctoral economics programs do not prepare macroeconomists for a business school environment in the same way these programs produce applied microeconomists capable of teaching managerial economics. A major problem is that the "applied" element of macroeconomics in PhD programs has, by tradition, focused on applications of discretionary fiscal and monetary policies by government entities rather than on more direct business applications.

Still, the fourth and fifth reasons are the most pertinent to the themes I present here. The fourth reason is perhaps best captured in this observation by an anonymous referee who, while noting the negative effect that student complaints can have on a school's all-important rankings, indicated that

[t]hese classes have been removed from any MBA programs not because the information wasn't important but because the *instructional strategies* (methods for presenting the material) . . . [were] not interesting and so the students complained that the material was boring and uninteresting.

The fifth reason may be the most provocative: Many business school professors appear not to fully comprehend either the curriculum-integrating potential of macroeconomics or its extreme relevance to managerial decision making across the functional areas. As one respondent from a Top-20 school put it while extolling the integrative virtues of managerial microeconomics:

Managerial economics presents basic material that is important for the other core courses, such as Finance, Marketing, Accounting and Organizational Economics. . . . Therefore, it is required and placed at the first of the program.

The clear implication of this observation is that a "managerial macroeconomics" course would lack the same integrative potential and relevance as managerial microeconomics.

It is to these issues of making managerial macroeconomics an interesting and highly integrative subject with great relevance to CEO decision making that I now turn.

"MACROECONOMIC LITERACY" AND CEO DECISION MAKING

The Federal Reserve hikes interest rates, consumer confidence falls, war breaks out in Saudi Arabia, drought shrinks the coffee crop in Brazil, oil prices spike sharply in Rotterdam, the Chinese government adjusts its currency peg, and the U.S. trade deficit reaches a new record high. Each event, some thousands of miles away, will have an impact first on global financial markets, and ultimately, on the course of the business cycle and the bottom line of literally thousands of corporations around the globe.

"Macroeconomic literacy" refers to the ability of an executive team to correctly read and interpret these many and varied macroeconomic signals. In an applied management context, the careful cultivation of such macroeconomic literacy in the MBA classroom can assist executive decision making in at least three important areas: (1) the proactive management of business cycle movements and turning points to build competitive advantage; (2) the more timely and tactical application of various instruments to hedge macroeconomic risks associated with changes in exchange rates, interest rates, stock and bond prices, commodity prices, and oil price shocks; and (3) crafting appropriate strategic and tactical responses to random macroeconomic shocks associated with phenomena ranging from war and terrorism to currency crises, drought, and disease.

Managing the Business Cycle for Competitive Advantage

Managing the business cycle for competitive advantage necessarily begins with the study of why, how, and when the business cycle moves, what the relationships are between the business cycles ex-

perienced by different countries and regions, and how such cyclical movements may affect the magnitude and timing of key strategic, tactical, and functional decisions of the firm. In this regard, the question of whether the business cycle can be forecast in a timely and accurate enough manner to be meaningful in a business decision-making context is an important one. There are two useful points to consider.

... the question of whether the business cycle can be forecast in a timely and accurate enough manner to be meaningful in a business decision-making context is an important one. There are two useful points to consider.

First, skillfully managing the business cycle need not require that firms accurately anticipate recessionary and expansionary turning points. Instead, a firm may benefit simply by reacting more quickly and appropriately than rivals once a recession or economic recovery begins.

For example, at the beginning of a recession, firms frequently continue production despite declining sales and so increase their inventories, while other firms respond to declining sales by quick reductions in production. Alternatively, some cycle-related advantages do not depend on precise timing. Bromiley (1986) describes a chemical firm that increased capital investment in recessions to have new capacity available for the recovery. While this policy assumes a future recovery, it does not require precise forecasting of the recovery's timing.

Second, an important evolution has taken place in forecasting research. The prevailing view prior to the 1980s, as expressed perhaps most concisely by Moore and Zarnowitz (1984) was very similar to that of the "random walk" view of the stock market, namely, that business cycles are largely unsystematic and unpredictable. It seemed to follow that there was little reason to pay attention to their study in a business context.

However, Kessel (1965) marked an important turning point. His work represented the first time the "yield curve" was used to describe the cyclical relationship between the business cycle and the term structure of interest rates.

Numerous studies have since emerged that have sought to identify those indicators that, operating singly or in combination, most accurately forecast key cyclical movements and turning points (e.g., Diebold & Rudebusch, 1989; Hamilton, 1989; Har-

vey, 1989; Laurent, 1989; Neftci, 1991; Estrella & Hardouvelis, 1991; Estrella & Mishkin, 1998).

Today, as a result of these efforts, a growing consensus exists that at least some economic indicators can be used alone or in combination to forecast the business cycle in both an accurate and timely enough manner to be relevant in a business planning context. Most efficacious appears to be the yield curve, followed by the Index of Leading Indicators and stock market returns. Other important tools include several indices from the Economic Cycle Research Index and forecasts of major subscription services. In addition, in a recent study, Bauer, Eisenbeis, Waggoner, and Zha (2003: 17) have demonstrated that the Blue Chip Consensus Forecast "performs better than any individual forecaster."

From a managerial perspective, this recent research is of great importance because so many management decisions are business-cycle sensitive. This point is illustrated in Table 1, which presents a comprehensive set of business cycle-sensitive management principles. These principles were first formalized as a set in Navarro (2004b) and have been elaborated upon since (Navarro, 2006). They are consistent with the more informal general discussions of McCallum (1991, 1999) as well as the observations of scholars in specific functional or strategic areas (e.g., Cundiff, 1975, and Dhalla, 1980, on marketing; Greer, 1984, on human resource management; and Mascarenhas & Aaker, 1989, on the strategic timing of capital expenditures).

Table One: Managing the Business Cycle

Business cycle-sensitive advertising, marketing, and pricing provide some of the richest and most textured of strategic and tactical opportunities. For example, numerous studies have shown the benefits of countercyclical advertising to protect and expand market share (e.g., Dhalla, 1980; AnterAsian & Graham, 1989). During such recessionary times, the cost of advertising is much lower while there is far less "noise" in the market.

The macroeconomically literate executive team may also want to countercyclically trim inventories and begin to prepare for layoffs well before a recession actually hits—even as rivals continue to hire at premium wages. More subtly, the executive team may also begin to hire sooner than competitors in anticipation of an upturn. At this point in the cycle, a company may proactively "cherry pick" higher quality employees from the relatively

TABLE 1
Imaging the Business Cycle

1. Inventory and Production	<ul style="list-style-type: none"> ● Cut production/trim inventories in anticipation of a contraction ● Increase production/build inventories in anticipation of an expansion
2. Supply Chain Management	<ul style="list-style-type: none"> ● Trim input purchases in anticipation of a contraction ● Use patterns of sector rotation to tactically hedge
3. Human Resource Management	<ul style="list-style-type: none"> ● Prepare for layoffs before contraction actually hits ● Hire sooner to “cherry pick” from a larger pool of unemployed labor in anticipation of an expansion
4. Marketing, Targeting, and Sales	<ul style="list-style-type: none"> ● Boost marketing to trim inventories in anticipation of a contraction ● Change the “mood” and messages with changes in the business cycle “seasons” ● Shift product line with cyclical movements
5. Pricing the Cycle	<ul style="list-style-type: none"> ● Raise prices as an expansion takes hold ● Lower prices as the economy softens ● Build revenue in good times/protect market share in bad times
6. Accounts Receivable	<ul style="list-style-type: none"> ● Be aggressive about accounts receivable at the first glimpse of recession ● Use tardy payments as a leading indicator of recession
7. Capital Expansion/Modernization	<ul style="list-style-type: none"> ● Rein in capital expansion in anticipation of contraction ● Increase capital expansion in anticipation of recovery ● Use contractions and slowdowns to modernize existing facilities
8. Capital Financing	<ul style="list-style-type: none"> ● Increase debt financing/short-term debt near Interest Rate Cycle bottom ● Use sector rotation to issue new stock shares at premium stock prices
9. Acquisitions & Divestitures	<ul style="list-style-type: none"> ● Use <i>corporate strategy</i> analysis to determine <i>whether</i> to acquire or divest companies ● Use <i>macroeconomic</i> analysis to determine <i>when</i> to implement one’s acquisition and divestiture plans

larger pool of unemployed labor while locking in lower labor costs.¹

The broader point illustrated in Table 1 is that the application of macroeconomic analysis must inevitably take place across virtually all of the numerous functional, tactical, and strategic decisions of the firm. In this context, macroeconomics as a subject taught in the MBA curriculum should properly be viewed as a highly effective *instructional integrator*.

¹One referee objected to this “machine age” approach to human resource management. Note that proactive layoffs can be done humanely without injury to a company’s culture through early retirement and educational “sabbatical” programs. More subtly, a number of companies with macroeconomically literate executive teams, for example, FedEx, have implemented “no layoff” programs coupled with a business unit diversification strategy aimed at balancing business cycle risks. This approach, combined with a cross-training strategy that allows employees to move across business units as economic conditions dictate, likely improves morale and productivity relative to companies that simply hire and fire with the business cycle seasons.

Macroeconomically Literate Risk Hedging

A second important area where macroeconomics can assist executive decision making involves the timely hedging of specific macroeconomics risks associated with movements in such key financial variables as exchange rates, interest rates, stock prices, and commodity prices.

Consider, for example, exchange rate risk. This is highly significant, particularly for companies that produce, market, or buy their products in foreign countries. For example, if caught in an unhedged position, a weaker euro can reduce the dollar-denominated European earnings of a multinational company such as McDonald’s based in the U.S., while a strengthening euro can significantly increase the costs of purchasing new ships from Europe by a company such as Royal Caribbean.

To fully understand the nature and subtleties of such risk, an MBA student must learn about the complex interrelationships between budget deficits and trade deficits, the impact of discretionary

monetary policies of central banks across the globe on trade and capital flows, the role of comparative economic systems on macro policy decisions, the difference between fixed and floating exchange rates and their implications, and so on.

Similarly, to truly understand interest rate risk, an MBA student must understand not just how a central bank like the U.S. Federal Reserve seeks to control short-run interest rates using tools such as open market operations. A student must also learn how the "long end" of the yield curve may be affected by the market's expectations regarding the effectiveness of Fed policy and why "cost push" inflation is far less likely to lead to Fed rate hikes than "demand pull" inflation.

The broader point here is that it is not sufficient just for an MBA student to learn *how* to apply various hedging tools in, say, a corporate finance class. It is equally important to know when and why to apply such tools. This is where a more sophisticated understanding of the global macroeconomic environment is essential.

Managing the Effects of Random Exogenous Shocks

A third major application of applied managerial macroeconomics for executive decision making comes in the realm of strategic and tactical responses to "exogenous" macroeconomic shocks. Such shocks range from war and terrorism and global monetary crises to drought and disease.

Consider, for example, the far-reaching effects of a macroeconomic shock like the 1997–1998 Asian currency crisis. A macroeconomically literate executive team seeking to diversify globally would see quite correctly that rapidly falling exchange rates in Asia would provide a golden tactical opportunity to acquire additional production capacity at bargain rates. This is exactly what the Mexican cement giant Cemex did in the Phillipines and Indonesia in a short-run tactical gambit that was fully consistent with the company's longer term strategy of global diversification.²

In similar fashion, the credit-scoring company Fair Isaac correctly foresaw in a post-9/11 world that the U.S. government would dramatically increase its expenditures on homeland security. It quickly developed several software modules to detect terrorists as well as reveal the inflow of foreign funds that might support terrorist networks.

²Details on this example, and the remainder of the examples offered in this essay are reported in Navarro (2006).

SOME MAJOR GOALS OF MODERN MANAGEMENT EDUCATION

It should be clear from the discussion above that there is great hidden potential in teaching macroeconomics in an applied management context that would provide significant benefits to MBA students seeking to hone their executive decision-making skills. Before illustrating how this potential might be realized with a set of innovative instructional strategies, I first comment briefly on the congruence of these proposed instructional strategies with the goals of a modern MBA education as expressed both in the management education literature and most current AACSB standards.

Modern management education literature has its roots in the seminal 1959 Ford Foundation Report of Gordon and Howell, Cheit's incisive 1985 compendium of curriculum criticisms, and the 1988 Association for the Advancement of Collegiate Business Schools (AACSB) report of Porter and McKibbin. From this literature, one invariably arrives at four clearly identifiable instructional goals.

First, the curriculum should be *integrative*. In the "post-Ford" period, the litany of scholars arguing for such an integrative approach has become more like a drumbeat, (e.g., Watkins, 1996; Stover, Morris, Pharr, Reyes, & Byers, 1997; McKinney & Yoos, 1998; Walker & Black, 2000; Dehler, Welsh, & Lewis, 2001).

Second, the curriculum should feature *interactive* and *experiential* elements. As Holman (2000: 199) notes: "[E]ducation can be made more meaningful if it is grounded in the experience and context of the learner, and involves learning through doing."

Third, the curriculum should provide students with an opportunity to hone a variety of *soft skills*. These include the development of leadership capabilities as well as critical thinking, written and oral communication, and team-building skills (e.g., Foggin, 1992: 6–7; Hamilton, McFarland, & Mirchandani, 2000: 103; Nodoushani & Nodoushani, 1996: 177).

Fourth, the MBA curriculum should foster a *global perspective*. This goal first emerged in the 1970s and 1980s—motivated by a perceived loss of American competitiveness to the Japanese and Germans (e.g., Cheit, 1985: 58).

Each goal has been subsequently reinforced by a long list of scholars (e.g., Neelankavil, 1994: 50; Kedia & Harveston, 1998: 203; Cordell, 2001: 111) and encouraged in the latest set of AACSB standards.³

³For references to a global perspective in the most current AACSB accreditation standards (2003), see pp. 4, 9, 16, 28, 52, 69,

INSTRUCTIONAL STRATEGIES TO TEACH MANAGERIAL MACROECONOMICS

The following set of innovative instructional strategies may be productively employed in the MBA classroom to cultivate macroeconomic literacy in an applied management context. In doing so, these strategies help meet all four goals articulated above.

Strategy 1: The Weekly Macroeconomic Assessment

The first strategy involves the use of a highly interactive weekly assessment of the current macroeconomic environment and state of the business cycle as they relate to the management environment. Ideally, such a discussion will include analyses of all major economic regions—from Europe, Asia, and Latin America, to the U.S., Mexico, and Canada—as well as how differing rates of growth in each region affect each other region. For example, if the U.S. economy grows faster than Europe's, this should initially boost U.S. imports, put downward pressure on the dollar, and, over time, improve the competitive position of U.S. exporters.

Ideally, such a discussion will also be conducted in a Socratic fashion both to hone students' critical thinking skills and to promote faculty-to-student and student-to-student interactions.

The hypothetical setting for this weekly macroeconomic assessment is that of the corporate boardroom, with (student) representatives from all strategic and functional areas in attendance. The organizing framework for this assessment is the basic equation for the gross domestic product:

$$\text{GDP} = \text{Consumption} + \text{Investment} \\ + \text{Govt. Spending} + (\text{Exports} - \text{Imports})$$

In a business cycle context, this equation is critical because movements of a country's business cycle depend directly on fluctuations in the rate of growth of the GDP, and each component is vulnerable to a variety of macroeconomic events and shocks. An important part of student preparation for this first activity block thus includes following the weekly "macroeconomic calendar."

On an almost daily basis, both government agencies and private institutions around the world release regular reports as part of this monthly and

quarterly macroeconomic calendar. (The Web site www.dismalscience.com is, in my view, the "gold standard" in up-to-date coverage of this calendar and can be a valuable classroom tool.) This macroeconomic calendar is listed in Table 2 for the United States. It includes reports on all elements of the GDP equation.

Table 2: The Monthly Macroeconomic Calendar

By following the macroeconomic calendar, students cultivate an awareness of the various forces that may move the four components of the GDP equation as well as the broader financial markets. For example, the future direction of consumption in the GDP equation for the U.S. is signaled by reports ranging from consumer confidence and retail sales to personal income. In similar fashion, reports on durable goods, factory orders, and capacity utilization provide some insight into the investment component of the equation while the monthly trade report helps shed light on the "net exports" component.

To attune students to this daily flow of macroeconomic information, each student may be assigned an individual economic indicator to follow for the quarter or semester. Students may also be assigned key economic indicators for foreign countries or regions, for example, the German GDP or Euro zone unemployment numbers, the Chinese or Indian GDP and CPI, and so on.

Each student is then expected to "brief" the class on the latest report for this set of indicators and its possible effects on the business cycle and global financial markets. In this way, students as a team cover the entire calendar and inform one another on the direction and movement of these reports.

In addition to the daily flow of macroeconomic reports, there are other scheduled events worthy of discussion such as a Federal Reserve Open Market Committee meeting in the U.S. or an Asia-Pacific Economic Cooperation summit that raises the issue of the revaluation of the Chinese yuan relative to the U.S. dollar. There may also be macroeconomic shocks such as oil price hikes, war, terrorism, and disruptive weather patterns that can alter the path of the business cycle and related industry cycles. Students should be encouraged to follow these events as well and incorporate them both into class discussions and their own assessments of the business cycle and industry cycles.

and 70. For integrative and interdisciplinary references, see pp. 16, 38, 69. For the role of interactive experiences in the transformational process of higher education, see pp. 37–38; 51–52. The standards also encourage instructional innovation, e.g., pp. 52, 54; and student involvement in problem-based learning, projects, and simulations, e.g., p. 54, consistent with the instructional strategies proposed.

TABLE 2
The Monthly Macroeconomic Calendar

1. Construction Spending	Department of Commerce	First business day of the month.
2. Institute for Supply Management Index	National Association of Purchasing Managers	First business day of the month.
3. Personal Income & Consumption	Department of Commerce	First business day of the month.
4. Auto and Truck Sales	Department of Commerce	Third business day of the month.
5. The Jobs Report	Department of Labor	First Friday of the month.
6. Index of Leading Indicators	Conference Board	First week of month.
7. Consumer Credit	Federal Reserve	Fifth business day of the month.
8. <i>Productivity & Costs</i>	Department of Labor	Around 7 th of second month of quarter for prior quarter.
9. Retail Sales	Department of Commerce	Between the 11 th and 14 th of the month.
10. Producer Price Index	Department of Labor	Around the 11 th of each month for the prior month.
11. Industrial Production & Capacity Utilization	Federal Reserve	Around the 15 th of the month.
12. Business Inventories	Department of Commerce	Around the 15 th of the month.
13. Consumer Price Index	Department of Labor	Between the 15 th and 21 st of every month.
14. Housing Starts	Department of Commerce	Between the 16 th and 20 th of the month.
15. International Trade	Department of Commerce	Around the 20 th of the month.
16. Consumer Confidence	Conference Board University of Michigan Survey Research Center	Last Tuesday of month. Second and last weekend of month.
17. The Federal Budget	U.S. Treasury	Third week of the month.
18. Durable Goods Orders	Department of Commerce	Third or fourth week of the month.
19. Factory Orders	Department of Commerce	About a week after the Durable Goods report.
20. <i>Employment Cost Index</i>	Department of Labor	Near end of month of the quarter for prior quarter.
21. Existing Home Sales	National Association of Realtors	Around the 25 th of the month.
22. New Home Sales	Department of Commerce	Around the last business day of the month.
23. <i>GDP</i>	Department of Commerce	Quarterly. Third or fourth week of the month.

Note: Quarterly reports in *italics*. All others monthly.

Increasing Global Awareness and Comparative Economic Systems

As suggested in the discussion above, this kind of weekly macroeconomic assessment can often be quite effective at increasing global awareness. In addition, it can also be useful in developing a more sophisticated understanding of the impacts of different economic and political systems on economic growth and trade flows.

In this regard, an increase in the German unemployment rate, a fall in consumer confidence in Japan, or an inflationary spike in Brazil can all have important and far-reaching implications on central bank policies, international flows of foreign capital, exchange rates, trade flows, and relative growth rates. By the same token, it should become clear to students that important economic policy debates around the globe can affect one's own domestic economy in significant ways.

Consider, for example, the issue referenced above and a burning macroeconomic issue in 2006: Should China revalue its currency against the dol-

lar? If so, what impact might this have on the U.S. balance of payments, the "offshoring" of U.S. jobs, the relative competitiveness of countries like Thailand and Japan, the rates of growth and inflation within China, the stability of the Chinese banking system, and the welfare of U.S. consumers and workers?

Any classroom discussion of this issue would necessarily entail a sophisticated analysis of fixed versus floating exchange rates, an explication of "floating pegs," an awareness of the political constraints on Chinese leaders regarding the need to employ a rapidly urbanizing population, an analysis of the possible disruptive effects of relaxing internal capital controls in China on relative currency values, and the ability (or lack thereof) of the Chinese banking system to adjust to a more flexible system while relaxing controls on the flow of international capital, and the relative competitive disadvantage that China's dollar peg has put on other Asian nations.

Finally, any appropriately sophisticated dis-

cussion of such global macroeconomic issues will necessarily bring into play the role of comparative economic and political systems in driving growth, productivity, trade flows, and the like. Accordingly, Europe's "welfare state" policies and their possible contribution to the continent's sluggish economic growth, Brazil's propensity for populist reformers and its inflationary implications, and the success of China's unique brand of "communist capitalism" all can become useful parts of the discussion.

Strategy 2: Cultivating Macroeconomic and Market Literacy

A second instructional strategy involves a set of highly interactive and experiential exercises designed to develop an awareness of the many linkages between macroeconomic events and the financial markets, thereby promoting both macroeconomic literacy and a related "financial market literacy." The underlying idea, well supported by both the theoretical and empirical literature, is that movements in the financial markets are useful in helping business executives formulate expectations about future movements in the business cycle generally and industry cycles specifically.

One classroom tool that can be used to promote an awareness of the linkages between the financial markets and these business and industry cycles (and that also provides fodder for the weekly macroeconomic assessment) is the assignment of the reading of the daily "Big Picture" column in *Investor's Business Daily*. This column provides a review of the day's stock and bond market action within the context of the flow of new macroeconomic information.

For example, the column might report a lower than expected GDP growth rate or jobs growth that led, in the newspaper's analysis, to a stock market decline. Similarly, the announcement of the monthly trade numbers may have shown an unexpected improvement in the trade balance, with strong export growth. This, in turn, had, in the newspaper's view, the immediate effect of boosting the stock market and lowering bond prices in anticipation of higher inflation. In this way, students learn to test the theoretical linkages between factors such as interest rates and currency values against real-world events.

A second experiential tool that may be used to cultivate an awareness of the relationship between the macroeconomic events and the financial markets is a stock market simulation. Such simu-

lations can be conducted at the *group* level to encourage student-to-student interactions on portfolio selection as well as to further build team skills.

However, I strongly suggest that any stock market simulation be conducted quite differently from the typical simulation used in an MBA finance or investing course. In particular, I suggest that students *not* be allowed to trade the stocks of *individual* companies. Rather, students should only be allowed to trade *indices* for the broad market, individual sectors, individual countries, and geographical regions.⁴

This suggestion is consistent with modern finance theory, which clearly differentiates between the nondiversifiable "systemic" or "market" risk associated with general macroeconomic conditions and diversifiable "unsystematic" or individual company risk. By prohibiting students from trading individual stocks, performance in the simulation attributable to company risk is taken out of the equation. This constraint refocuses the students' attention on macroeconomic events that may drive more systemic movements in the markets and individual market sectors. In this way, students learn to focus on how broader macroeconomic events affect systematic risk, as reflected in broad market movements and individual sector movements.

For the broad markets, tradable instruments include QQQQ for the NASDAQ and SPY for the S&P 500. As for trading sector funds like BBH for biotechnology or PPH for pharmaceuticals, these build student awareness of the patterns of "sector rotation," which focus on how individual industry cycles might systematically move in and out of phase with the broader business cycle—an often important factor in the timing of strategic acquisitions and divestitures.

For country and geographical region funds, there are instruments like EWZ for Brazil and EWG for Germany, while ILF is a geographical fund for Latin America. Trading these funds helps students better understand linkages in the broader global economy and more specific issues such as the effects of an interest rate change by the U.S. Federal Reserve or trade policy by the Congress on world markets and currency values.

⁴For example, the Web-based software Stock-Trak is in wide use in colleges and universities and can accommodate this type of trading. <http://www.stocktrak.com>.

Strategy 3: The Master Cyclist Project

A third suggested instructional strategy that is at once highly integrative, interactive, and experiential involves the detailed analysis of a particular company's ability—or lack thereof—to proactively manage the business cycle (and other macroeconomics risks) for competitive advantage.

The hypothetical for this project assignment is this: Each student is a management consultant from a prestigious firm such as McKinsey or Bain who is assigned a client company by a principal and asked to perform the following three assessments:

1. **The Management Principles Assessment.** This assessment functions as a *comprehensive instructional integrator*. Each student assesses how well or how poorly the management team has applied the management principles listed in Table 1 in such diverse areas as marketing, finance, operations, and human resource management. This can be done over some relevant interval, for example, the years leading into and out of the March 2001 recession.
2. **The Leadership and Organizational Assessment.** As a management strategy and organizational behavior studies integrator, each student examines the capabilities and quality of the executive team. Particular attention is paid to determining the executive team's level of macroeconomic literacy and its attitudes, capabilities, and actions toward proactive management of macroeconomic risks and the business cycle. Each student also analyzes organizational architecture to determine what formal and informal structures and channels of communication it may use to forecast, track, and manage the business cycle across various functional areas.
3. **The Performance Assessment.** Each student examines the performance of the company during the relevant interval of study relative to an industry benchmark and key competitors to determine whether business cycle awareness may be a contributing factor to performance, or lack thereof. As a "hard skill" integrator, students can apply the critical "toolbox" skills of data analysis and modeling together with tools like ratio analysis that also integrate particularly well with statistics, finance, accounting, and strategy courses.

As a very broad-brush typology illustrative of the type of executive leadership students are likely to encounter, one might find at one end of the spectrum the "Macro Illiterate Manager" and the "Micro Manager." The first exhibits a low level of macroeconomic and financial market literacy, while the Micro Manager may or may not believe the business cycle can be predicted but is too busy focusing on company-specific issues to think much about the bigger picture.

At the other end of the spectrum, there are the macroeconomically literate "Random Walker" and "Master Cyclist." The Random Walker believes that, like the stock market, the business cycle is a random walk. In such a case, the best the Random Walker executive team believes it can do is to engage in full hedging strategies to insulate the organization from unfavorable movements in the business cycle and related interest rate, stock market, and currency cycles. For example, a lending institution may favor selling proportionally more adjustable rate mortgages to avoid interest rate risk—as Washington Mutual has chosen to do.

In contrast, the "Master Cyclist" executive employs a variety of formal and informal forecasting tools and methods and proactively seeks to manage macroeconomic risks. For example, an airline run by a business cycle-literate executive team might tactically increase a fuel price hedge if its forecasting model suggests a spike in oil prices—as Southwest Airlines has periodically done with great success.

As to how students might assess the executive team's degree of macroeconomic literacy, this is an important experiential exercise as each student is strongly encouraged to conduct either telephone or personal interviews. Each student should also carefully review the education and possible training in economics of the executive team—a research focus consistent with an extensive literature on top management teams (e.g., Murray, 1989; Wiersema & Bantel, 1992).

Similarly, each student should be encouraged to analyze the public speeches, statements, and writings of top company executives, particularly the annual and quarterly reports and company press releases. This, too, is an exercise consistent with a well-established literature on the content analysis of annual report text and other key documents (e.g., Jones & Shoemaker, 1994).

In assessing organizational architecture, students should seek to determine how the executive team and other key managers of their assigned company may obtain and process the flow of macroeconomic information and then translate this information into actionable items across the strategic and functional areas. In this regard, students will often be surprised at how little effort some companies have put into developing adequate procedures for parsing macroeconomic events and discerning their strategic and tactical implications.

Examples

If students were to analyze a company such as the chemical giant DuPont, they would find an enter-

prise with a highly macroeconomically literate executive team in a highly cyclical set of industries. This is a company that runs its own forecasting model, employs a team of economists, and, at least partly as a result, was able to successfully navigate through the shoals of the 2001 recession by following a number of the management principles previously outlined in Table 1, for example, swiftly cutting capital expenditures, trimming its workforce, and engaging in strategic acquisitions at favorable stock prices.

In contrast, if students were to analyze a company such as the Internet router market leader Cisco, they would find a company that by its very organizational design lacks many macroeconomic variables in its internal forecasting models. As one of Cisco's top executives once put it: "[T]he economy is too complex to get anything meaningful out of such broad numbers as GDP or interest rates."⁵ Cisco's failure to cut production in anticipation of the 2001 recession would result in a roughly \$2 billion inventory write-down.

As important, student analyses need *not* be limited to for-profit corporations. Consider, for example, the Nature Conservancy—the largest conservation group in the world. Its highly macroeconomically literate executive team was able to significantly boost charitable contributions during the 2001 recessionary interval when most other non-profits were retrenching.

Techniques included shifting its primary marketing target to high wealth individuals, counter-cyclically "cherry picking" top fundraising talent being laid off during the recession and tech collapse, and formally training fundraising personnel how—in a macroeconomically literate way—to anticipate the effects of changes in bond and stock prices on the propensity of donors to give and adjust their "ask for the gift" strategies accordingly.

The Key Deliverables of the Project

As a "soft skill" enhancer, each student can be responsible for several key "deliverables" designed to improve analytical and business communication skills. One is the traditional written report delivered, in an action learning context, in the form of the consulting firm's "action memo" to the CEO. A second "deliverable" to enhance oral presentation skills can involve a student presentation to the class, with a question-and-answer period.

Strategy 4: Teach Basic Principles Outside the Classroom

A final instructional strategy, which frees up considerable time to pursue the other three strategies, is to teach basic "chalk-and-talk" macroeconomic principles *outside* the MBA classroom. This can be accomplished using the kind of modern, multimedia instructional tools now commonly used at the college level to teach subjects as disparate as elementary calculus and inorganic chemistry.

I offer this strategy with a confidence based on my own research (see Navarro & Shoemaker, 2000). It indicates that MBA students are quite capable of learning on their own the answers to elementary questions such as "what is fiscal policy," "how is the money and banking system organized and money defined," and "what are the various ways to finance a budget deficit?" This is why, in my own classes, I assign a set of multimedia CD-Rom lectures on macroeconomic principles (Navarro, 1998) to be used *outside* of class in conjunction with an interactive study guide and guided readings from a principles textbook.⁶

To facilitate this out-of-class learning, an on-line testing center can be employed both as a rapid student feedback mechanism and to ensure that students are following the study protocol. To promote student-to-student interactions, study "teams" can also be required to meet for their own review sessions while both teaching assistant sessions and e-mail queries can be made available to answer any questions.

This asynchronous, technology-mediated approach to delivering a basic principles component directly addresses the problem of a wide variance that students typically bring to an MBA class in their mastery of macroeconomic principles. In particular, while some students have mastered macroeconomic principles from their college studies, others may never have taken any macroeconomics.

By requiring students to learn basic principles outside of class (with adequate feedback mechanisms to ensure they do), it is unnecessary for an instructor to bore the more knowledgeable students with undergraduate-level lectures. This frees up a tremendous amount of very valuable classroom time better spent on the three other instructional strategies outlined above.

⁵Scott Berinato, CIO Magazine, "What Went Wrong at Cisco." August 1, 2001.

⁶This multimedia lecture set may now be downloaded free of charge at <http://www.peternavarro.com/powerofeconomics.html>.

CONCLUDING REMARKS

Several important implications for MBA programs may be gleaned from this essay. First, the deans and faculty of those business schools that do not currently require macroeconomics in the core—almost one third of the Top 50—may be motivated to reevaluate an arguably glaring curriculum omission.

Second, for those business schools currently requiring macroeconomics but teaching it in a traditional segregated functional silo manner, this essay has offered a variety of instructional strategies to present this subject in a more integrative, interactive, and experiential fashion while emphasizing the development of both soft skills and a more global perspective.

Third, with a clearer understanding of the importance that a well-taught managerial macroeconomics course can have in the MBA core curriculum, major textbook publishers might finally see the hidden potential in a market that should be every bit as robust as that for managerial microeconomics—and produce the requisite high-quality textbooks.

Finally, while the latest AACSB standards repeatedly acknowledge the importance of the global economic environment on modern business education, the organization arguably gives short shift to the importance of macroeconomics in the core curriculum. Indeed, there is not a single use of the word “macroeconomics” in its entire accreditation standards. Perhaps this essay will stimulate some debate within the AACSB as to whether the highly integrative, interactive, and experiential potential of applied managerial macroeconomics might warrant some mention in future revisions to the standards.

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