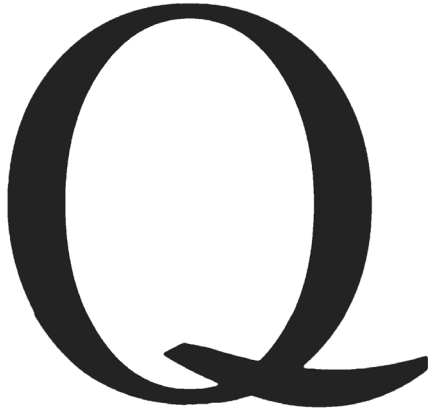


UBS Investment Research

Q-Series™: Product Guide



Webster's Definition:

So-crat-ic (So-'kra-tik) — Of or relating to Socrates, his followers, or his philosophical method of systematic doubt and questioning of another to elicit a clear expression of a truth supposed to be implicitly known by all rational beings

UBS: Where Socrates Meets Wall Street

■ Initiative and philosophy

The Q-Series™ initiative is focused on continual questioning, leading a firmwide drive for more thoughtful, proprietary, valuable research. Our objective is to focus and leverage the global resources of UBS to form a strong partnership with our clients.

■ Mechanism

Raw material for Q-Series™ research reports resides in the UBS QuestionBank, the central repository of investment questions gleaned from all constituencies of research (clients, analysis, salespeople). By posing the pivotal questions, we can produce more creative reports and allow for a high level of discussion.

■ Questioning methodology

The Q-Series™ philosophy attempts to apply the Socratic method to the creation of Wall Street research. Critical thinking, challenging assumptions, reasoning by analogy, and constructive dialogue are paramount.

■ Basic criteria

Reports must pose a pivotal investment question, as vetted with the UBS Research Development Committee. They must answer the question utilizing incremental analysis and primary research supporting the case. And the reports must make the investment conclusions clear.

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ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 31

UBS does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Initiative and Philosophy

The objective of the Q-Series™ is to drive UBS intellectual leadership through questioning.

Through the Q-Series™ initiative, we hope to create a paradigm shift, redirecting our intellectual capital by adopting a “demand pull” research approach. This will allow us to achieve a true partnership between our investing clients, our research analysts, and our salespeople.

Q-Series™ proprietary research product drives UBS intellectual leadership through questioning

Our mandate is: “UBS research aggressively anticipates and answers pivotal questions—helping our analysts make better investment recommendations.” We are implementing a process to optimize much of the excellent work already being done by our research analysts.

- The Q-Series™ initiative argues that in the investment process, the questions themselves may be as valuable as the answers.
- With the Q-Series™ initiative, we want to have an intellectually challenging, constructive dialogue with our clients. We want to help sort through the masses of research product available, and ensure that great research rises above the noise. Sometimes less is more.
- Through the Q-Series™ philosophy, we hope to better penetrate our clients’ decision-making process and aggressively anticipate and answer pivotal investment questions so that our analysts can make better investment recommendations.
- In driving the initiative, we attempt to apply the Socratic method to the creation of Wall Street research. The method argues that continual questioning can lead to new areas of inquiry and greater understanding. Critical thinking, challenging assumptions, reasoning by analogy, and constructive dialogue are paramount.
- Q-Series™ is an attempt to reallocate analysts’ efforts toward product that clients really care about—research that helps move clients as they make investment decisions.
- The UBS QuestionBank mechanism, which helps drive the product, is intended to help capture and broadly scale all the creativity inherent in the thinking of our analyst teams, our clients, and our salesforce.
- The Q-Series™ is an effort to help leverage the global resources of the UBS research department toward serving our clients’ needs.

We apply the Socratic method to the creation of Wall Street research

Basic criteria for Q-Series™ reports are as follows: 1) Reports must pose a pivotal investment question as vetted with the UBS Research Development Committee. 2) They must answer the question utilizing incremental analysis and primary research supporting the case. 3) And the reports must make the investment conclusions clear. Additionally, Q-Series™ reports may not be single-stock specific. Rather, they must address a key sector issue, in a global context when appropriate. Q-Series™ reports should be useful, both in the short and long term, to all the constituencies of UBS research.

Our analysts are regularly asked to consider their research products in the context of an effort to better serve our clients in their decision-making processes. The Q-Series™ initiative also helps us to highlight some of our analysts' key reports over the course of a year.

Mechanism

The UBS QuestionBank

Ideas for Q-Series™ products are generated and aggregated from the UBS QuestionBank.

The intent of the QuestionBank is to provide a central repository for discussion of key questions, issues, and drivers that need to be addressed as we attempt to provide valuable research and investment recommendations to all the constituencies of our research product.

QuestionBank provides a central repository for discussion of the key questions, issues, and drivers that need to be addressed

We have established the UBS QuestionBank, with “accounts” for each analyst (including sector, strategy, valuation, and quantitative), which are managed by our regional product management teams. The quality of these “assets” is maintained in conjunction with our research analysts and global sector marketing teams.

We ask analysts, clients, and salespeople to make regular deposits into these accounts. Individuals may take time to brainstorm the questions (issues and drivers) that affect industries and stocks. Those questions are deposited into the QuestionBank. Additionally, questions regarding any industry, company, or investment issues can be deposited at any time. Our client base makes deposits to accounts via the various groups within our salesforce. Analysts' global counterparts and any other constituency of our research product can make deposits. Questions are also aggregated through our ongoing research and product management efforts, including our Investment Review Committee, Corporate Access Team, and analyst marketing programs.

We ask analysts, clients, and salespeople to make regular deposits into these accounts

In developing the Q-Series™ initiative, our intent is to raise awareness of the importance of a particular question in an effort to better focus the potential avenues of fundamental research. We mean to set no explicit expectation regarding a commitment to directly respond to any specific question. Through these ongoing efforts, we hope to raise the overall responsiveness, differentiation, and quality of our research.

Equity product management may choose to periodically review the contents of an analyst's QuestionBank account and compare it with his or her body of work to consider the effectiveness of the research effort in meeting the needs of our clients.

To help fund the QuestionBank, “deposit drives” for our analysts initially collect the key questions within a particular sector with which our investing clients struggle.

UBS analysts may choose to segregate the questions within their respective accounts based on a more specific category (i.e., top line, balance sheet, regulatory, or competitive landscape) as they plan their research efforts. On occasion, this may drive the production of fewer, but more effective, research reports with greater focus and visibility. It may also highlight that an analyst has already addressed the question, but perhaps not in enough depth. Additionally, opportunities arise to disaggregate and broaden research that responds to specific pivotal investment questions.

The QuestionBank itself may be a valuable product for all the constituencies of our research, as it is an “open-architecture” asset. UBS professionals on their own or their clients' behalf may access the QuestionBank. For example, we have found when an individual has needed to learn about the market perceptions and concerns regarding a particular sector, the QuestionBank has proven to be a helpful resource. Many clients find it useful to know the issues with which their colleagues are struggling.

The QuestionBank itself may be a valuable product for all the constituencies of our research, as it is an “open-architecture” asset

Product Access

Q-Series™ research is available through all regular UBS distribution channels, (e.g., the Equities Client Portal). We have also established an email distribution list for clients who wish to receive all the Q-Series™ research directly.

UBS analysts always host conference calls after a Q-Series™ note or report is released, and replays are available. This either happens on the same day of release or shortly thereafter.

Related Products

In driving this potential paradigm shift toward demand-driven research, it is important that the questioning methodology be extended beyond the Q-Series™ products themselves.

Questioning Methodology Prepares Clients

UBS Major Conferences

We use the questioning methodology to best prepare our clients for our major conferences and assess presenters' insights, and we express this in marketing efforts. For instance, we typically create a compilation of questions regarding the sector and company-specific issues facing our presenters and drill down during the presentations to gain insight into the answers. We present our findings in our *As If You Were There* reports.

Additionally, the methodology is helpful in preparing for UBS-sponsored events, including corporate access roadshows and field trips.

- Our Financial Institutions research team produced a question handbook in preparation of the 2003 UBS Global Banking Conference (see page 8).
- Our IT and Internet Services analyst, Adam Frisch, marketed his IT Government Services meeting with a very helpful preview question note (see page 15).
- Attached also please find an example of recent Q-Series™ report from our Telecommunications Services analyst, John Hodulik (see page 18).

Additionally, the methodology is helpful in preparing for UBS-sponsored events, including corporate access roadshows and field trips

Summary

In pursuing this new initiative, UBS truly aims to assist our investing clients by bringing to bear the full intellectual capacity of our firm to aggressively anticipate and answer the pivotal questions that need to be addressed in the context of the investment process.