

A new alphabet in asset management?

1. The deeper significance of meeting rooms

Anyone invited, as a customer or a guest, into a meeting room at the oldest bank in Switzerland, on the Bohl in St. Gall, will find the rooms identified with the Greek letters α , β , γ and so on, up to ω . The choice of this naming convention during the renovation of our building in 1997 had nothing to do with any particular preference for classical antiquity (although such an inclination would clearly be part of the self-image of a private bank focused on long-term relationships). Rather, it reflected a need on the part of our staff, imprinted as they are with modern financial theory, to familiarize a broader public with the range of key indicators that are so much part of their lives. For years, our Greek room numbers attracted little attention, until, about a year ago, suddenly everyone was talking about “alpha” and “beta”. Today, at conferences on asset management, private banking and the like, it’s important to seize every opportunity to mention “alpha” and “beta”. Otherwise one runs the risk of being relegated to that group of speakers who, while still tolerated, are not really up with the latest. The other Greek letters have yet to make it as trendy terms in the finance industry, but who knows? There are some key indicators, like δ (the relationship between options and stocks) for example, that certainly have the potential to do so. In this case, our bank would be excellently well equipped, as in the meantime the meeting rooms in all our branches have been numbered in Greek. This sort of thing is known as “corporate culture”.

Seriously though, all this fuss about “alpha” and “beta” is not entirely unjustified. For they have much to do with the direction in which asset management has been developing for some years now, and with the further moves foreseeable in the coming years. Further, the boom in these two terms demonstrates the explosive power of an apparently insignificant theoretical concept whose

time has come. Financial theory, regarded by practitioners as something of a joke well into the 1990s, is now radically altering the way we work. And this inevitably also affects investors, who are our ultimate concern.

What are “alpha” and “beta”? For simplicity’s sake, let us start with the latter. The risk indicator “beta” denotes the sensitivity of an individual stock or portfolio to the fluctuations of a larger, given portfolio. This “larger, given portfolio” may, for example, be a whole market or its index, and as the sensitivity of this whole market to itself must equal 1, “beta” is mostly equated with the market change or the return on an index over a given period. “Beta” in this second sense can be generated without any effort, so to speak, by simply purchasing an appropriate index product – an index fund, an Exchange Traded Fund (ETF), or an index future. “Alpha”, by contrast, denotes the *systematic* deviation of an individual stock or group of stocks (i.e. a subportfolio) from the development of the overall portfolio “beta”. Positive “alpha”, obviously a desirable phenomenon, is synonymous with systematic above-average returns, and it is exactly this that makes the term so attractive today: the attempt to demonstrate that one can produce positive “alpha” in the sense of an above-average return. If we can believe their advertising, the whole hedge fund industry appears to live from this. Let us consider this, and “alpha” and “beta” in general, in rather greater depth.

2. It all began with index products

As mentioned, in the beginning – and not only in this case – was the word. The instrumentalization of “beta” or, more simply, the market or index return, opened a whole new world of investment. The idea that a capital investment should not be exposed to the risk of specific single stocks – the attempt to reduce the impact of management mistakes, adverse external developments, good or bad luck in the management of individual enterprises, by “simply” acquiring a very large portfolio containing a large number of individual stocks – derives ultimately from the work of Markowitz

(1956) and Jensen (1968). They introduced the possibility of differentiation between the portfolio risk and the specific risk, first as a theoretical concept. The concept acquired its explosive power when people began to offer such overall portfolios cost-efficiently, in the form of financial instruments – in other words, when they began to put the theory into practice.

Previously it was the case – and often still is today – that both individual portfolios and whole investment funds contained both “beta” and “alpha” (or at least tried to). Portfolio management costs were always based on the overall result, i.e. “beta” and “alpha”. In many cases, this meant (and still means) that portfolio and fund managers shared in the overall development – that is, in the (generally long-term positive) market development – as well as the (potential, but by no means certain) specific return of the portfolio or fund. Or, somewhat more explicitly, the portfolio manager was (and still is) rewarded for something that occurred without his intervention, i.e. for the return on the market or index. The introduction of index instruments now makes it possible for investors on any scale to capture the market return significantly more cheaply – without having to share the cake with anyone.

Let us return for a minute to the golden 1980s and 1990s, when the share indices in Europe and America shot skywards, often at double-digit rates of growth. How much of a positive return was then due to skill, and how much simply to risk exposure in the indices concerned? And how many fat bonuses were simply due to performance achieved by the market as a whole? The investor bore the risk, but a third party shared in the return. Not a good idea economically, but one that lasted a remarkably long time – and is still with us.

The introduction of index instruments produced a similar effect in the financial sector to what had happened one or two hundred years previously in industry: automation. Mass-production systems for easily producible items – for market or index portfolios, produced extremely efficiently by providers capable of large economies of scale, cost-efficient for consumers, and with no involvement of – ultimately uninvolved – third parties. That’s one side of the story.

Our bank reacted early to these developments – apart from the numbers on our meeting rooms. In 2001 we agreed to work together with State Street, the largest global securities house, and since then we have been in a position to represent

the “beta” side of things completely and systematically, using their “Balzac” index fund. Introducing this investment methodology and implementing it in our advisors’ systems, our clients’ statements and our Internet portal means that we are equipped to face the coming developments in the asset management business. It was also helpful that we had no tradition of sharing in straight market performance, so that there was no need to abolish any fat sinecures enjoyed by those not ultimately responsible for this performance.

The other side, the “alpha” side, is far more difficult to manage, both in theory and in practice. Why?

3. The catch with “alpha production”

“Alpha” and “beta” are both statistical concepts, and as such necessitate a wide range of considerations, a long period of observation and a large amount of data. If “alpha” is defined as systematic deviation by an individual stock or group of stocks from the development of a market portfolio, it is also the case that a single, perhaps coincidental case of outperformance by no means represents real “alpha”. However, the voracious financial industry has already – at the above-mentioned conferences, for example – taken over the alpha concept, and now describes any above-average return against a benchmark as “alpha”. As a result, the place is crawling with “alpha generators”, and as a share in performance is standard for “alpha”, it will be the case that portfolio managers are in future royally rewarded for chance results. This may be a second-best solution for a problem that is practically insoluble, due to the long-term nature of statistically correct metrics. And it would never occur to any real “alpha generator” to work without any share in performance. Why indeed should he?

However, apart from the question of compensation, there is above all the question of the appropriate structure for generating so-called “outperformance”. There is the more traditional, pragmatic approach, and there is also the radical approach. Both have their advantages and their disadvantages, which is why they are both offered by our bank, the former as a standard, and the latter by way of exploring the new world. In the style of our clients’ traditional portfolio structures, and taking into account a mixture of “beta” and “alpha” in the actual investments (though not in performance comparisons), our stock investment matrix offers a choice between the purchase of straight index instruments and/or the selection of a number of individual stocks or instruments.

It is the nature of a matrix that it can be read and applied both vertically and horizontally. A portfolio can thus be constructed and managed by regions (Switzerland, the UK, continental Europe, North America, Asia Pacific) or by sectors (energy, industry, finance, etc.). Managed in the sense that individual regions or sectors can be over or underweighted. Index instruments make it possible to do this very simply and cost-efficiently.

If the individual stock approach to portfolio management is selected, it is then possible – by accepting less diversification than the index itself – to apply the desired weighting, or indeed to make significant bets on the generation of “alpha”. The advantage of a consistent region/sector matrix is that it makes it easily possible to check the risks involved at any time.

The individual stock approach is based on the assumption that it should be possible, with clever stock selection, to beat the index over time. We do this by keeping a very close eye on the quality of the companies concerned (balance sheets, margins, growth, ability to achieve positive cash flows, etc.), and by assessing their current stock price (price against our calculation of intrinsic value) and their corporate governance (openness and honesty of the management, and so on). This is based on the conviction that good, dynamic, well-

run businesses should do better than the rest of the index, over the long term. Were it not to be possible to generate “alpha” – once again: over the long term – with this approach, this would not merely challenge a good deal of empirical evidence, but also disappoint many hopes and expectations concerning the nature of capitalist competition.

The “alpha generator” who really knows his stuff will, however, want to bet more heavily against the index. We will come back to this. Our matrix is effectively a compromise, which is why it includes stocks that barely meet our quality criteria but must be included on the grounds of their relevance to the index. The – desired – “beta” exposure requires this. The pragmatic approach – one fully in accord with the traditional conventions of asset management – also demonstrates how hard it is to generate real “alpha” with traditional investment instruments. Benchmark comparisons on an annual basis are absolutely not suited to showing real “alpha”, for it may well be that in a given year, for whatever reason and maybe entirely incidentally, a stock that tendentially outperforms the index has a bad year. “Alpha” is not always “alpha”, and outperformance is not always related to skill. One-time stock exchange darlings can suddenly take a dive – and then generate a good deal of negative “alpha”...

Our stock investment matrix (conceptual diagram*)

Asset Allocation Matrix for Risk/Return-Class yellow						Tactical Recommendation:	Sector indices
Currency USD						Neutral	
Sector	Switzerland	UK	Europe	North America	Asia Pacific	Total	
Energy & Utilities							Balzac Utilities Balzac Energy
General Industry							Balzac Materials Balzac Industrials
Cyclical services							Balzac Consumer Discretionary
Consumer goods							
Food							Balzac Consumer Staples
Health care							Balzac Health Care
Telecommunications							Balzac Telecom
Information-technology							Balzac IT
Financial services							Balzac Financials
Total							
Regional indices	Balzac Switzerland	Balzac UK	Balzac Euro	Balzac USA	Balzac Japan Balzac Singapore Balzac Hong Kong Balzac Australia		Balzac World

* In practice, we use a far greater number of stocks; these are omitted here for convenience

As we believe that, in their search for “alpha”, the financial markets are driven by alert, intelligent, smart investors and their advisors, and because we too want to be alert, intelligent and smart, we complement the corset of our matrix with the possibility for all our client advisors to include their own ideas, within a given framework. The “beta”-based core portfolio can be complemented with so-called “satellites”, making it possible (hopefully) to generate additional “alpha”. Such satellites might include turnaround candidates, for example, which would fail our quality check miserably, or companies that could not be included in a bank’s core portfolio on account of their low market cap. The importance of such satellites should not be underestimated, particularly in view of the prevalence of “beta” investments. In an environment that, for cost reasons, relies increasingly on index instruments, extraordinary opportunities will become increasingly common. In other words, we will see a compensatory move away from “beta” towards more “alpha”. This will make the task of the alert, intelligent and smart investor and his advisor that much more interesting. We’ll come back to this too.

4. Portable “alpha”

We mentioned above the “alpha generator” who really knows his stuff – one of the probably rather rare people who achieve genuinely systematic outperformance over a long period. They have no interest in letting market fluctuations influence their results, and so tend towards the most “market-neutral” alpha portfolios possible. These tendencies can be observed in highly professional asset management circles. We know of very large American pension funds that cover their entire market or index exposure exclusively via index futures. This means that they do not have to deploy their entire capital, and can instruct specialized asset managers to generate “alpha” with the free funds. And not only with stocks but also, and particularly, with bonds. Assets managed include junk bonds, SME bonds, emerging country debt, and so on. These portfolio managers participate in the results; the performance fee is generous, but relatively insignificant overall, for these special portfolios are small when set against the pension fund’s overall portfolio. The huge ocean liner of fixed-interest investments, by contrast, is managed by means of cost-efficient index investments. Stock investments are organized on a similar basis. This basically ensures that uninvolved third parties do not participate in returns without having taken on the requisite risks. As the generation of “alpha” and “beta” are entirely separate, the portfolio’s architecture can be entirely modular.

Hence the reference to transferable, “portable alpha”. And the greatest advantage is that this portable “alpha” can be sought all over the world – anywhere where “alpha” is (perhaps) to be found.

The system is convincing in principle, though there are a couple of practical questions. Because “free funds” need to be generated for investment in the “alpha” portfolios, the purchase of index futures necessarily involves credit and the running of margin accounts. In other words, this involves leverage, which at least in theory could represent a threat to liquidity. Specifically if, for whatever reason, it becomes necessary to deliver additional margins on the index futures and, quite coincidentally, at the same time the “alpha generator” encounters liquidity problems. There remains, of course, the question whether it would not be wiser for a pension fund concerned with long-term investments to stick to “the real thing”, i.e. the real possession of actual securities, rather than just claims against futures.

The more important thing, though, is the trend of these developments. This is inexorably in the direction of the simplification and cost reduction of whatever can be automated – subject to mass production, so to speak – and in the direction of concentration on those areas that generate real, and not apparent outperformance. Those who remain indifferent to this development may just as well say farewell to asset management in the foreseeable future.

5. The world is becoming more colorful

The introduction of index instruments not only radically reduces the cost of asset management, but also makes the financial markets more interesting. Why? Because the era of more or less successfully revolving round some index, long the practice in the fund industry, will now come to an end – at least in this form and to this extent. For investors, there is simply no longer any reason to pay an expensive manager, and possibly to incur greater risk because the manager has created a tracking error, a deviation from the benchmark, due to lower diversification.

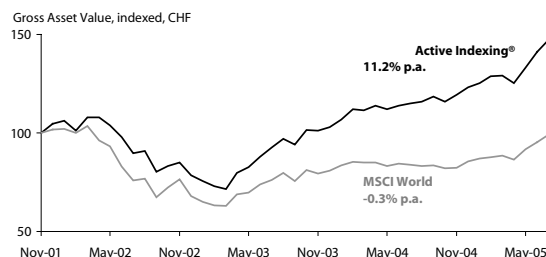
On the other hand, the players in the finance industry will have to think up new and different ideas. For the automation of the industry has not resulted in any reduction of in the quality or variety of the products – au contraire. Anyone who doubts this may take a walk through a contemporary supermarket, where just about anything is available, from local cheeses via ten different

shaving creams to wasabi paste, and compare it with the theoretically so excellent traditional corner shop. The same thing will happen in the financial industry: the automation of part of fund production will not make the range more monotonous and boring. Rather a lot more people will have to go to a lot more trouble.

We found out for ourselves what that means in practice, in our own bank. It's a true story, and deserves to be reported. In 2000, at the start of the stock market decline, we were confronted with the question whether it might not be possible to somewhat "optimize" a straight global index investment. That is, whether it might not be possible to achieve better returns by over or underweighting individual sub-indices. Or, put differently, whether we were not in a position to generate "alpha" vis-à-vis the global stock index. In such cases, the best course for entrepreneurs is to say yes, and then worry about how afterwards – which is what we did.

This question gave rise to the concept of "Active Indexing", which has been mentioned in the Investment Commentary on a number of occasions. This involves a complex and exhaustive process of evaluating the various country and sector sub-indices of the global index, and then systematically investing in the currently most attractive countries and sectors. A simple and cost-efficient concept that, unless we are entirely mistaken and neither economic logic nor common sense apply, can indeed generate "alpha". Developments to date certainly bear this out.

Better in slump as well as rebound



Source: analysis

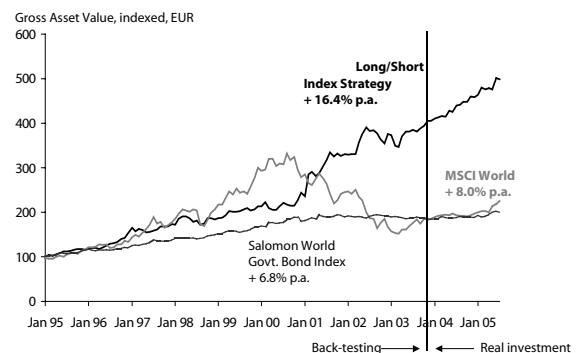
"Boring" investments in the whole of the industrialized world have thus given rise to an instrument that is entertaining and interesting for various reasons. However, as a sub-index can show a "beta" with regard to the main index – that is, a sensitivity to positive and negative changes in the global index, the need arose over time for so-called "market-neutral" investments. An instrument that follows the fluctuations of the global

stock index only to a very limited extent, if at all, and that just represents the outperformance resulting from the valuation model.

The obvious solution is a long/short structure, in which the countries and sectors indicated by the Active Indexing Model are bought, and the countries and sectors that the model defines as expensive are sold (short), so that there is an ongoing obligation to deliver. This sounds more adventurous than it is. Provided the "beta" of the indices bought and sold is similar and relatively stable over time, if there were a crash on the stock market the price of the indices bought would fall, whereas the short sales would generate profit. The result would be around zero, much as sine and cosine amplitudes balance each other out.

The structures and systems currently available on the financial markets make it possible to apply such long/short instruments in amazingly cost-efficient and formally acceptable ways, and the operational risks are well contained. The resulting instrument is an investment "deprived" of the price risks of the global stock markets, possessing wholly specific characteristics, fairly uncorrelated with developments on the global markets, and thus, among other things, very well suited for the diversification of a portfolio characterized by a high level of market correlation. The development of this newly created instrument so far is highly promising.

Long/short: different than the index



Source: analysis

"Amazingly cost-efficient": consider for a moment what a long/short structure actually involves. Hundreds, perhaps thousands of individual stocks are held physically, and on the other side there is a corresponding number of delivery obligations all over the world. A multiplicity of clearing systems, banks and fund operators is continually involved. The prices of all the individual stocks are checked and communicated on a daily basis, and the indices calculated. The credit

situation of the long positions inherent in the structure is checked continuously. And so on and so forth – but all on conditions that do not endanger the potential “alpha” returns.

The economic efficiency of today’s securities trading becomes even more apparent when we consider the emerging country strategies that we have also developed as part of our Active Index Strategy (Active Indexing Emerging Markets and Active Indexing Emerging Markets Long/Short). Until a few years ago, the idea of acquiring, at a reasonable outlay, stocks on stock markets such as Karachi or Bogotá would have been entirely inconceivable, not to mention a basket of stocks, as contained in an index.

There can be no doubt that this efficiency will increase the variety on the financial markets. This small report on product development in a small bank in St. Gall is a pale reflection of what is going on in the big wide world of finance. It’s a quantum leap comparable the introduction of the mobile phone or the breakthrough of Internet technology. We probably need to think hard about whether, given the flood of ideas and products unleashed by this quantum leap, the old familiar close correlation between the classic stock markets and indices may not tend to be reduced. An interesting aspect, and at first glance counter-intuitive: the prevalence of cheap index investments might result in the indices drifting apart. We have not heard the last of this topic.

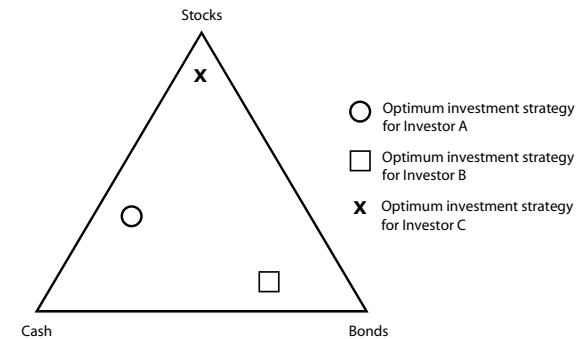
6. But still no solution to the main problem

A brave new world, that the commentator opens up for his readers, or so one might think. Lower costs, clearer structures, more efficient management, more appropriate compensation, the chance of “alpha” – what more could an investor wish for? The catch is that the theoretical, and now practical ability to distinguish between “alpha” and “beta” says nothing whatsoever about how much “beta” individual investors should get, can stand, or will stand. How much market risk – the interest risk of a bond portfolio, the stock market risk of a stock portfolio, the raw material risk of the commodities part (if at all) – is reasonable, justifiable, sensible? It is an illusion to expect to live from “alpha” alone. At least, hedge fund returns this year are sobering enough to raise questions about such a proposition.

So the old dilemma remains – the need for a trade-off between security and return. According to the portfolio theory approach, there is for every investor an optimum portfolio, tailored to

his needs and composed of a certain mix of individual investment and risk categories.

Markowitz optimization-based investment strategies



Source:

Anyone who has ever been involved as a practitioner in a Markowitz optimization process will be well aware how disillusioning the process can be. Optimization relies very strongly on the underlying risk and return assumptions for the individual investment categories. Should one use historical data? If so, which, and over what historical period? Should outliers (crashes and the like) be included or filtered out? How should changes to the basic environment, such as the end of Bretton Woods, be treated? Or, if one does not want to use historical data, what assumptions should be made? Should one, for example, rely on prices currently paid (option premiums, interest rates, etc.)? How relevant will they be for a strategic period of three, five or ten years? Experience shows that minute changes in these assumptions often cause major changes in the so-called optimum portfolios. So it’s no surprise that a bit of “handywork” on the assumptions is required for the Markowitz process to deliver reasonable results. And not a few people have shot themselves in the foot while doing it.

To be able at all to define an optimum portfolio according to Markowitz also requires other things to be in place. The investor’s risk and return preferences must be known or ascertainable, and they must remain sufficiently constant over a lengthy period for a strategy to be based on them. The asset and liability approach addresses this problem, but two main obstacles remain. Firstly, precisely because they lie in the future, future liabilities and future assets are subject to various probabilities, and dealing with these is extremely difficult. There is no clear boundary between scenario techniques and wild speculation. Secondly, experience shows that the risk preferences of investors (and of their advisors) can fluctuate substantially over time. Only exceptionally will falling stock

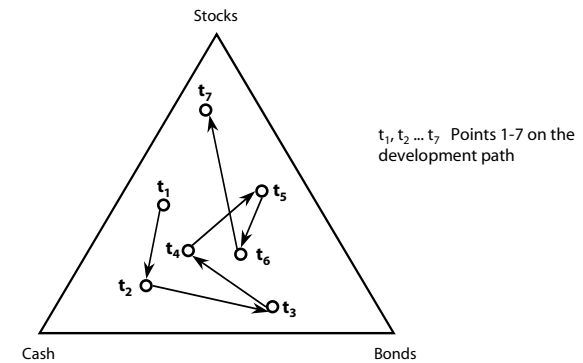
prices stimulate risk appetite, despite the fact that this is exactly what they ought to do. To avoid falling into an entirely pro-cyclical investment pattern, various self-defense mechanisms are required, such as a degree of discipline with regard to the concept of “strategy” (strategy as medium to long-term orientation or, put more brutally, strategy as a concept according to which one sometimes gets things wrong, but hopes they will come right in the end...). In our bank’s range of products, it is in particular the structured products, with their asymmetric characteristics, that should be able to provide support through all the various phases of uncertainty, with their associated doubts and anxieties.

Anyway, the optimization process as described does at least structure the extremely difficult work on the basic problem, which cannot be resolved simply in terms of “alpha” or “beta”, nor indeed “delta” or “omega”. We may expect that the quality of this advisory process will need to increase further, and as every individual situation is always somewhat different, private banking will tend to gain in importance in this area, rather than the reverse.

But we also need to think beyond this. Reference has been made in various Investment Commentaries to the work of Mordecai Kurz, the Stanford economist. To the theory of efficient financial markets and the requisite assumption of rational expectations on the part of market players, he added a novel theory of “rational beliefs”. The heart of Kurz’s theory is that (also) on the financial markets, players often copy one another for long periods, for economically explicable reasons. For one thing, one’s own opinion incurs costs and may be difficult to maintain, and for another, it often pays to follow the others, even against one’s own convictions: the others do this too. The result is the waves, longer or shorter, that we know so well, or indeed the “bubbles” that we fear, because it is sadly not so easy to see them coming.

Long waves with changing parameters (e.g. continually rising expectations on returns from stocks, sustained and “inexplicable” low interest rate expectations) suggest the need for a more dynamic investment strategy. Perhaps by determining from the previous pattern of developments on the financial markets the probabilities of future developments, and using this as a basis for portfolio optimization. So that the concept of strategy would ultimately become meaningless, as adjustment would become a continuous process.

The Mordecai-Kurz path-based world

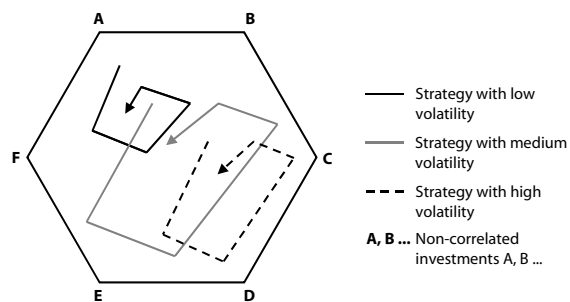


Source: Strategic Economic Decisions

This may sound attractive, but would be very difficult to put into practice. For we simply know too little about the nature of Kurz’s waves and bubbles. It is not improbable that they actually follow a much more chaotic pattern than can be represented by normal return distribution. The mathematician Benoit Mandelbrot has made this particularly clear in his recently published book *The (Mis)Behaviour of Markets* (London, 2004). Mandelbrot demonstrates that catastrophes of every kind occur more frequently than should be the case according to normal probability calculations. Sadly, his brilliant analysis does not specify the methods he would use to define, measure and control these obviously higher financial market risks. We therefore do not believe that making the optimization process more dynamic will show sound results in this regard in the near future. Compiling and evaluating the data would require a major effort, and we need to bear in mind Warren Buffett’s remark, “Financial markets don’t reward complexity”.

Rather we try to derive advantages from the prospect of ever more and ever more varied “alpha”-oriented investment concepts and products. So far, the high level of correlation between the main stock exchanges has severely restricted the benefit of Markowitz-style portfolio optimization. The new world of separate “alpha” and “beta”, of freely combinable index instruments and the possibility of cost-efficient long/short investments opens up entirely new, ideally uncorrelated investment possibilities. These need to be exploited. With the “Active Portfolios” concept (see Financial Markets Overview, p. 3) we optimize between such largely uncorrelated instruments, after we have defined a target volatility; that is, a level of portfolio risk that is not to be exceeded.

The Active Portfolio approach



Source: analysis

We do indeed follow Kurz's dynamic process, and our selection of investments is based on the assumption that they will not be subject to Mandelbrot's chaos. The concept is well researched and based on impeccable analysis. However, it must be carefully explained to investors. New approaches need to be well proven, particularly in asset management.

It's clear enough: not even "alpha" or "beta" can change the basic fact that investment involves risk. Wherever the aim is to generate above-average returns by providing capital rather than debt, *someone* must accept the risk of a "beta" investment, and *someone* must also accept the business-specific risk. In the aftermath of the 1990s and the early years of this century, we are well aware what that can mean. To this extent, there is no new alphabet in the asset management business. What has changed, and will continue to change, are the possible variations. This will bring with it higher demands on asset management as such, and on the most objective advice possible, in order to hit the right mix of colors in a significantly brighter and more multi-colored world.

KH, 22.8.2005