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### Recommendations which matter and create value

The weekly updated recommendations are based on a sophisticated quantitative market timing model which relies on serial correlation and uses both convex and concave forecasting strategies. It is successfully tested out of sample for different markets.

The markets it covers are globally relevant and selected from a European respectively German perspective. The DAX, the Bund (Future) and the Euro/US-Dollar represent the stock market (earnings), the bond market (long term interests) and the currency. They stand for different factors of the economy.

The recommendations provide forecasts of movements of the markets as a whole and support no individual securities selection decisions. The recommendations are to "go long", to "do nothing" or to "go short". As a result, the returns are higher and volatilities are substantially lower than in the case of a pure buy and hold strategy (cf. page 2). The proposed basic strategy is a combination of these market decisions on a leveraged basis and gives a return of roughly 13% p.a. in the period 1991 to 2024 year to date. At the same time, the short fall risk of the basic strategy is substantially lower than the relevant risk of the DAX buy and hold alternative (cf. page 4 and 5).

The Dow Jones, the Nikkei 225 and the Euro/Yen are covered and combined in a strategy called "supplement" (cf. page 3 and 4). Finally all elements of the basic strategy and the supplement are added to the full strategy. The proposed strategy-combinations, however, are only by way of example. Their components can be combined and leveraged at discretion.

### Global Outlook (May 25, 2024)

Global market dynamics suggest that stocks are threatened with a notable weakness in Q2 2025. Compared to Germany and Japan, the US stock market is expected to perform better over the remainder of 2024. However, the Euro and the Yen are likely to strengthen against the US-Dollar during this time, probably the Yen more than the Euro. Holding Bunds is not the preferred strategy in the near future, but at least they will not perform very badly.

#### The week ahead at a glance

Referring to the DAX, to the Euro-based Dow Jones and to the Nikkei 225 on a Euro basis no position should be taken. It is recommended to go long the Euro against the US-Dollar and to do nothing with respect to the Euro/Yen. No position should be taken in the Bund (Future).

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DAX		Price		F	Perform	nance		R	Recommended Positioning			
21.06.2024 17:45 CET		18.163,53 71,92 0,40%							do nothing			
28.06.2024 17:45 CET		18.235,45							C	lo nothing		
Position		Short Long							Bı	iy and Hole	1	
	Ν	Return	Vola	1	N	Return	Vola		N	Return	Vola	
Performance per week												
1991-2024 year to date	185	0,14%	2,83%		637	0,25%	2,78%		1.747	0,15%	3,00%	
last 260 weeks	26	-0,55%	3,70%		122	-0,06%	3,02%		260	0,14%	3,04%	
last 52 weeks	0	-	-		25	0,00%	1,90%		52	0,23%	1,76%	
Performance per annum				(sl	hort an	d long con	nbined)					
1991-2024 year to date (a	year equa	ls 52 weeks	5)	33	1/2	5,44%	13,81%	33	1/2	7,64%	21,62%	
last 5 years (260 weeks)					5	-4,24%	17,08%		5	7,44%	21,94%	
one year back (52 weeks)					1	0,12%	9,38%		1	12,16%	12,66%	

<b>Bund (Future)</b>		Price		Р	erforr	nance		Reco	Recommended Positioning			
21.06.2024 22:00 CET		132,53		-		C	lo nothing					
28.06.2024 22:00 CET		131,62							C	lo nothing		
Position		Short				Long			Bι	iy and Hold	1	
	Ν	Return	Vola	N	1	Return	Vola	Ν		Return	Vola	
Performance per week												
1991-2024 year to date	265	0,08%	0,78%		496	0,08%	0,84%	1.7	747	0,03%	0,83%	
last 260 weeks	22	-0,06%	0,66%		92	-0,01%	1,20%	2	260	-0,11%	1,10%	
last 52 weeks	0	-	-		28	0,19%	1,06%		52	-0,03%	0,92%	
Performance per annum				(sh	ort an	d long con	nbined)					
1991-2024 year to date (a	year equa	ls 52 weeks	s)	33	1/2	1,76%	3,89%	33 1	/2	1,36%	5,99%	
last 5 years (260 weeks)	-				5	-0,44%	5,29%		5	-5,51%	7,94%	
one year back (52 weeks)					1	5,41%	5,59%		1	-1,60%	6,65%	

Euro/US-Dollar		Price		Perfor	mance		Recommended Positioning			
21.06.2024 00:00 CET		1,0706		0,0001	0,01%			go long		
28.06.2024 00:00 CET		1,0707						go long		
Position		Short			Long		B	uy and Hold	1	
	Ν	Return	Vola	Ν	Return	Vola	Ν	Return	Vola	
Performance per week										
1991-2024 year to date	129	0,19%	1,17%	399	0,18%	1,40%	1.747	-0,01%	1,33%	
last 260 weeks	36	0,24%	6,00%	97	0,07%	0,93%	260	-0,02%	1,07%	
last 52 weeks	0	-	-	33	-0,02%	0,89%	52	-0,03%	0,85%	
Performance per annum				(short a	nd long con	nbined)				
1991-2024 year to date (a	year equa	ls 52 weeks	s)	33 1/2	2,84%	5,36%	33 1/2	-0,56%	9,62%	
last 5 years (260 weeks)				5	3,19%	5,25%	5	-1,05%	7,69%	
one year back (52 weeks)				1	-0,69%	5,06%	1	-1,48%	6,15%	

"go long" means buying Euro and selling US-Dollar, "go short" means selling Euro and buying US-Dollar.

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Dow Jones		Price		Perfor	mance*		Recomn	Recommended Positioning*				
21.06.2024 22:20 CET		39.150,33		-31,5	5 -0,09%		do nothing					
28.06.2024 22:20 CET		39.118,86						do nothing				
Position		Short			Long		E	uy and Hol	d			
	Ν	Return	Vola	Ν	Return	Vola	Ν	Return	Vola			
Performance per week												
1991-2024 year to date	171	0,31%	2,93%	638	0,31%	2,52%	1.747	0,17%	2,55%			
last 260 weeks	20	-0,36%	2,31%	156	0,30%	2,58%	260	0,16%	2,61%			
last 52 weeks	0	-	-	25	0,21%	1,29%	52	0,28%	1,41%			
Performance per annum				(short a	and long con	nbined)						
1991-2024 year to date (a y	year equa	ls 52 weeks	5)	33 1/2	7,41%	12,84%	33 1/2	8,59%	18,41%			
last 5 years (260 weeks)				4	5 7,77%	15,17%	5	8,53%	18,81%			
one year back (52 weeks)				1	5,28%	6,45%	1	14,32%	10,16%			

\* on a Euro basis. Based on USD it yields -0,08%

Nikkei 225		Price		Perfe	orm	nance*		Recommended Positioning*				
21.06.2024 08:00 CET		38.596,47				1,40%		do nothing				
28.06.2024 08:00 CET		39.583,08							C	to nothing		
Position		Short				Long			Bı	uy and Hole	d	
	Ν	Return	Vola	Ν		Return	Vola		N	Return	Vola	
Performance per week												
1991-2024 year to date	251	0,66%	3,37%	39	95	0,09%	2,61%		1.747	0,03%	2,90%	
last 260 weeks	20	1,46%	4,06%	11	16	-0,09%	2,30%		260	0,10%	2,63%	
last 52 weeks	0	-	-	2	25	-0,06%	2,29%		52	0,17%	2,35%	
Performance per annum				(short	t an	d long con	nbined)					
1991-2024 year to date (a	year equa	ls 52 weeks	s)	33 1/2	2	6,00%	12,94%	33	1/2	1,71%	20,93%	
last 5 years (260 weeks)					5	3,81%	13,93%		5	5,05%	19,00%	
one year back (52 weeks)					1	-1,60%	11,34%		1	8,67%	16,92%	
					;	* on a Fure	basis Ba	cod (	on Ven	it vielde	2 52%	

\* on a Euro basis. Based on Yen it yields 2,52%

Euro/Yen		Price		Pe	erforr	nance		R	Recommended Positioning			
21.06.2024 00:00 CET		170,152		1,	,923	1,12%			C	lo nothing		
28.06.2024 00:00 CET		172,075							Ċ	lo nothing		
Position		Short Long							Bı	iy and Hole	d	
	Ν	Return	Vola	Ν	[	Return	Vola		N	Return	Vola	
Performance per week												
1991-2024 year to date	354	0,21%	1,59%		349	0,25%	1,28%		1.747	0,00%	1,57%	
last 260 weeks	101	-0,13%	1,16%		69	0,12%	1,07%		260	0,13%	1,17%	
last 52 weeks	20	-0,19%	1,03%		0	-	-		52	0,17%	1,04%	
Performance per annum				(sh	ort an	d long com	nbined)					
1991-2024 year to date (a y	ear equa	ls 52 weeks	s)	33	1/2	4,84%	6,64%	33	1/2	-0,20%	11,32%	
last 5 years (260 weeks)					5	-0,97%	6,57%		5	6,93%	8,43%	
one year back (52 weeks)					1	-3,87%	4,57%		1	8,95%	7,53%	

"go long" means buying Euro and selling Yen, "go short" means selling Euro and buying Yen.

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Basic Strategy	DAX	X		Bund (	Future)			Euro/US	S-Dollar
Maximum Position	short	long		short	long			short	long
in percent of allocated equity	125,00%	125,00%		500,00%	500,00%			250,00%	250,00%
Last week performance in percen	t of allocated e	equity							0,02%
Strategy			Ba	sic Strateg	<u>y</u>	]	Buy a	and Hold I	DAX
			Ν	Return	Vola	Ν		Return	Vola
Performance per week									
1991-2024 year to date			1.341	0,32%	3,36%	1.	747	0,15%	3,00%
last 260 weeks			224	-0,12%	3,89%		260	0,14%	3,04%
last 52 weeks			37	0,33%	2,40%		52	0,23%	1,76%
Performance per annum									
1991-2024 year to date (a year ed	quals 52 weeks	) 3	33 1/2	12,94%	21,27%	33 1	/2	7,64%	21,62%
last 5 years (260 weeks)			5	-5,54%	26,01%		5	7,44%	21,94%
one year back (52 weeks)			1	12,25%	14,61%		1	12,16%	12,66%

Supplement	Dow.	Jones		Nikke	ei 225		Euro	/Yen
Maximum Position in percent of allocated equity	short 125,00%	long 125,00%		short 125,00%	long 125,00%		short 250,00%	long 250,00%
Last week performance in percent	t of allocated	equity						0,00%
Strategy			S	upplement	;	Buy and	Hold 2 stoc	k markets
			Ν	Return	Vola	Ν	Return	Vola
Performance per week								
1991-2024 year to date			1.285	0,42%	3,04%	1.74	7 0,10%	2,34%
last 260 weeks			229	0,12%	2,29%	26	0 0,13%	2,35%
last 52 weeks			27	-0,07%	1,77%	5	2 0,22%	1,59%
Performance per annum								
1991-2024 year to date (a year ed	quals 52 week	(s) 3	3 1/2	16,03%	18,82%	33 1/2	5,15%	16,85%
last 5 years (260 weeks)	-		5	5,57%	15,51%		5 6,79%	16,91%
one year back (52 weeks)			1	-1,80%	9,11%		1 11,49%	11,45%

Full Strategy						
All assets mentioned above with their declared maximu	im position	S				
Last week performance in percent of allocated equity						0,02%
Strategy	]	Full Strategy		Buy and H	Hold 3 stock	k markets
	Ν	Return	Vola	Ν	Return	Vola
Performance per week						
1991-2024 year to date	1.594	0,38%	2,64%	1.747	0,12%	2,32%
last 260 weeks	240	0,11%	2,28%	260	0,13%	2,41%
last 52 weeks	37	0,27%	1,86%	52	0,23%	1,48%
Performance per annum						
1991-2024 year to date (a year equals 52 weeks)	33 1/2	17,91%	18,18%	33 1/2	5,98%	16,76%
last 5 years (260 weeks)	5	5,20%	15,77%	5	7,01%	17,37%
one year back (52 weeks)	1	9,97%	11,30%	1	11,72%	10,65%

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#### Notes:

CET is the short code for Central European Time. It is indicated from 00:00 to 23:59. Leap years are taken into account in the overall period by the regular introduction of an additional week (i.e. 53 instead of 52 weeks per year).

N is the number of weeks respectively years, over which a position is held. A year has 52 weekly data points. Finally, the achieved performance depends on the position taken. It could differ from the original one and result in zero ("do nothing") or change the sign ("go short"). Return is calculated as natural logarithm of price this week/price last week. It is exponential growth and equals compound interest on a continuous basis. If these rates are transformed to simply calculated, they become higher in case of substantial profits or lower negative amounts (i.e. also higher values) in case of substantial losses. The time series of the returns are represented by their means. Vola equals the standard deviation of the returns.

Recommendations are always based on performance in Euro.

With the exception of the Bund (Future) all assets are priced at spot rates not taking into account funding and transaction costs. However, even after consideration of costs, the proposed strategies offer significant value added in comparison with their buy and hold alternatives.

The proposed strategies are also useful but to a lesser extent, if the recommendations "go short" are ignored and only the recommendations "go long" are followed.

Page 4 provides examples of possible combinations of strategies. The advantage of these combinations is that they offer both additional return opportunities over certain periods and risk reduction through diversification.

DAX, Bund (Future) and Euro/US-Dollar are different sources of economic influence. They are combined to the basic strategy. The supplement contains Dow Jones, Nikkei 225 and Euro/Yen as alternative markets. The full strategy is a combination of all of these elements. The maximum positions are leveraged and mentioned on page 4. If more than one position is recommended at the same time, the individual maximum positions are multiplied by a factor depending on the number of involved positions, e.g. two positions are multiplied by 1/2, three positions are multiplied by 1/3, etc. Finally the positions with their individual performances are added to the total performance of the combined strategy.

The performance of the strategy-combinations is compared with that of their buy and hold alternatives, whereas the buy and hold alternatives are made up of the involved stock markets at equal parts. The comparison shows that the returns are substantially higher at a nearly similar level of volatility. However, even the risk has to be regarded as lower, when the likelihood of a loss more than 20% per annum is taken as the relevant measure of risk. The table below shows that the likelihood of a loss is substantially lower for the combined strategies compared to the buy and hold alternatives.

Loss more than 20% per annum (52 weeks)	, 1991-2(	024 year	to date			
		Strategy		В	uy and Hol	d
	Basic	Supple.	Full	DAX	2 St. M.	3 St. M.
Likelihood	6,87%	7,10%	1,66%	10,30%	10,70%	8,87%
Expected Value	-35,24%	-26,80%	-24,65%	-37,17%	-28,86%	-32,86%
Maximum Loss	-57,64%	-42,55%	-30,81%	-80,98%	-52,47%	-61,32%
Maximum Loss (simple instead of exponential growth)	-43,81%	-34,65%	-26,51%	-55,51%	-40,82%	-45,84%

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