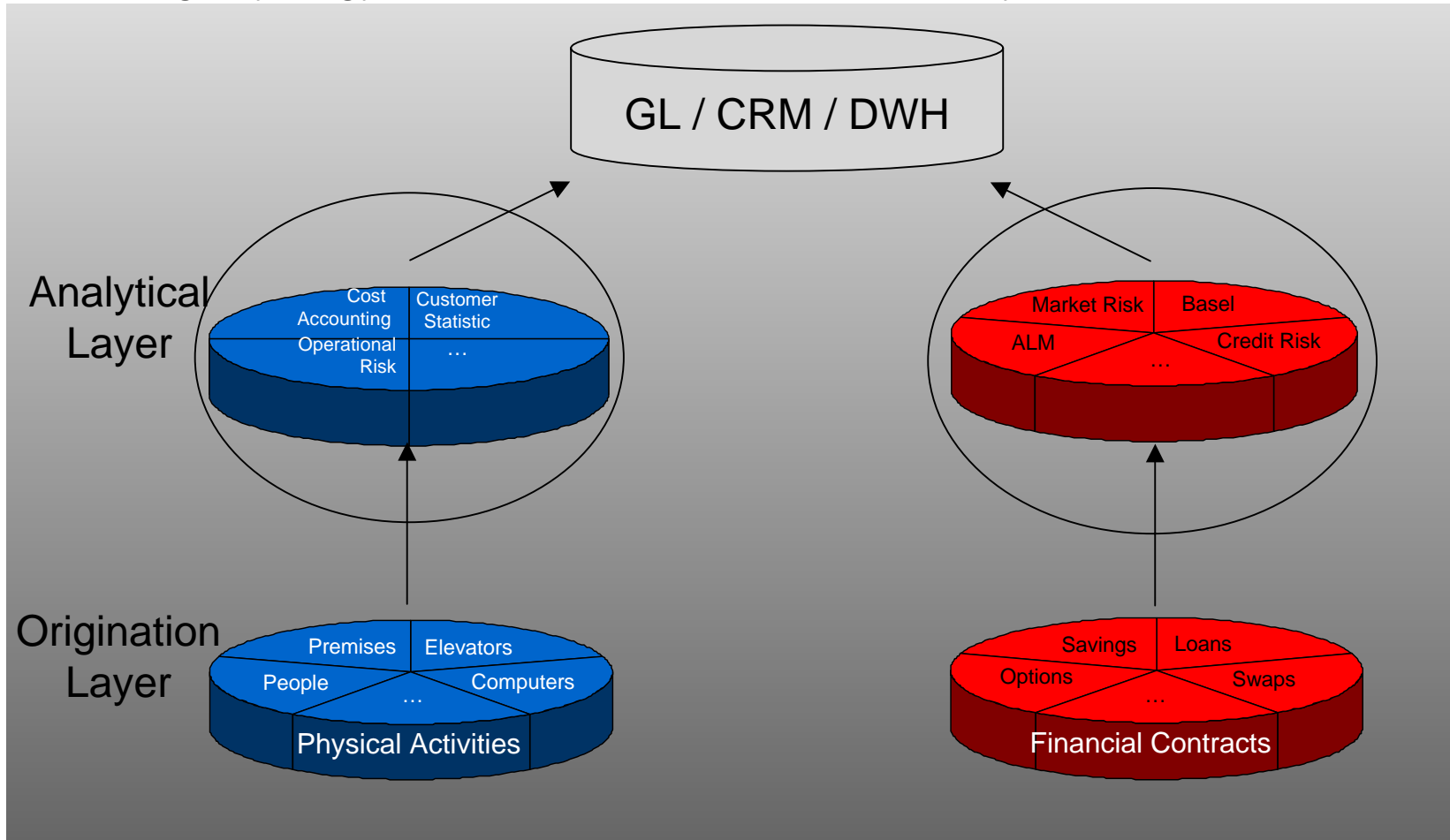


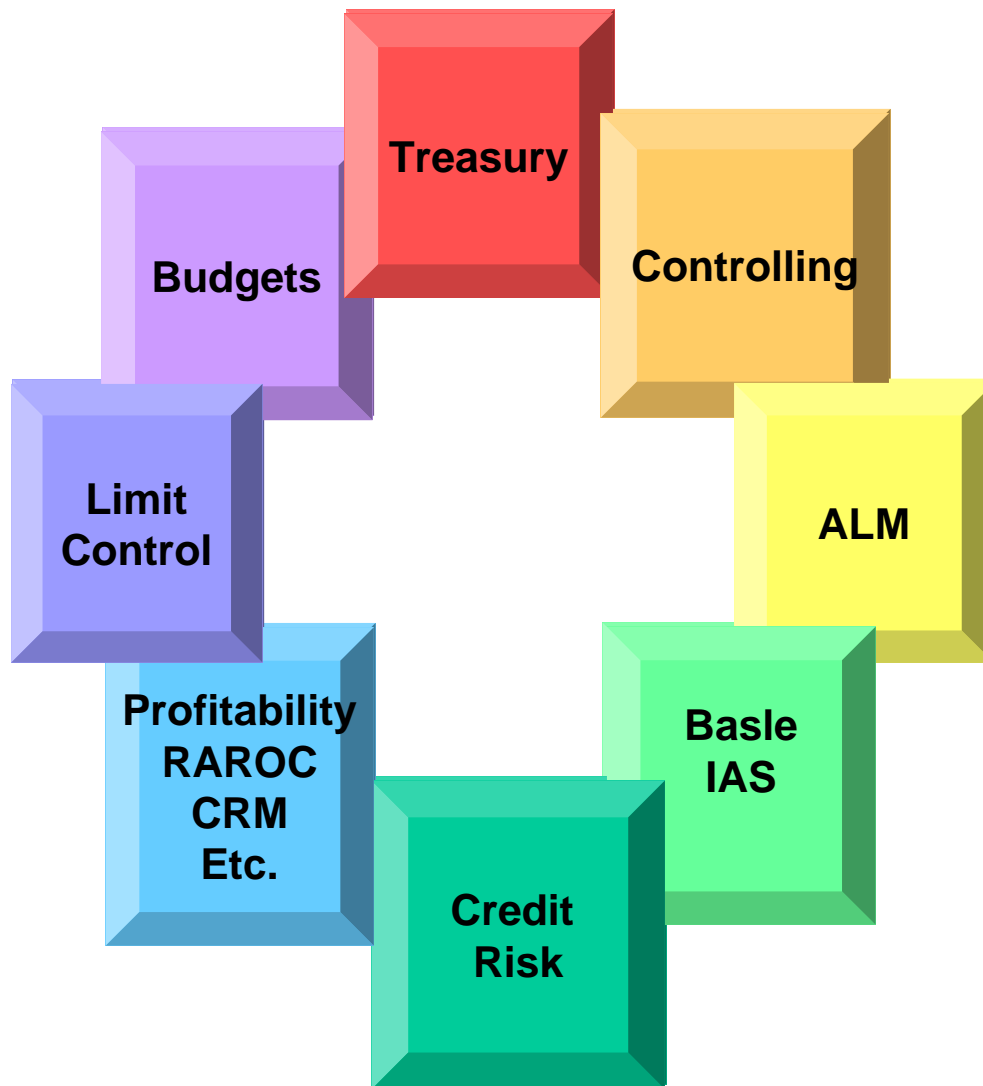
# The core of financial calculation

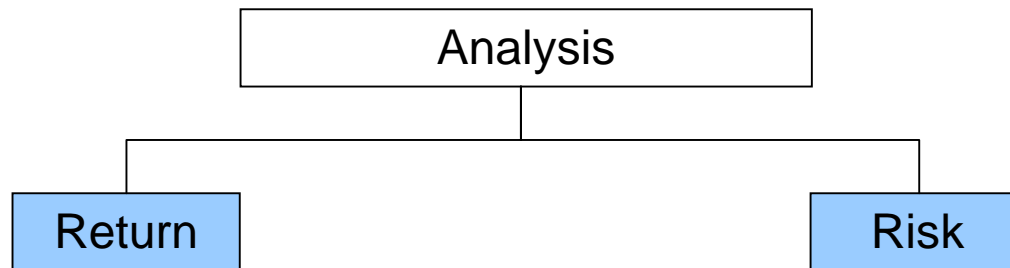
## **riskpro**<sup>TM</sup> in a Nutshell

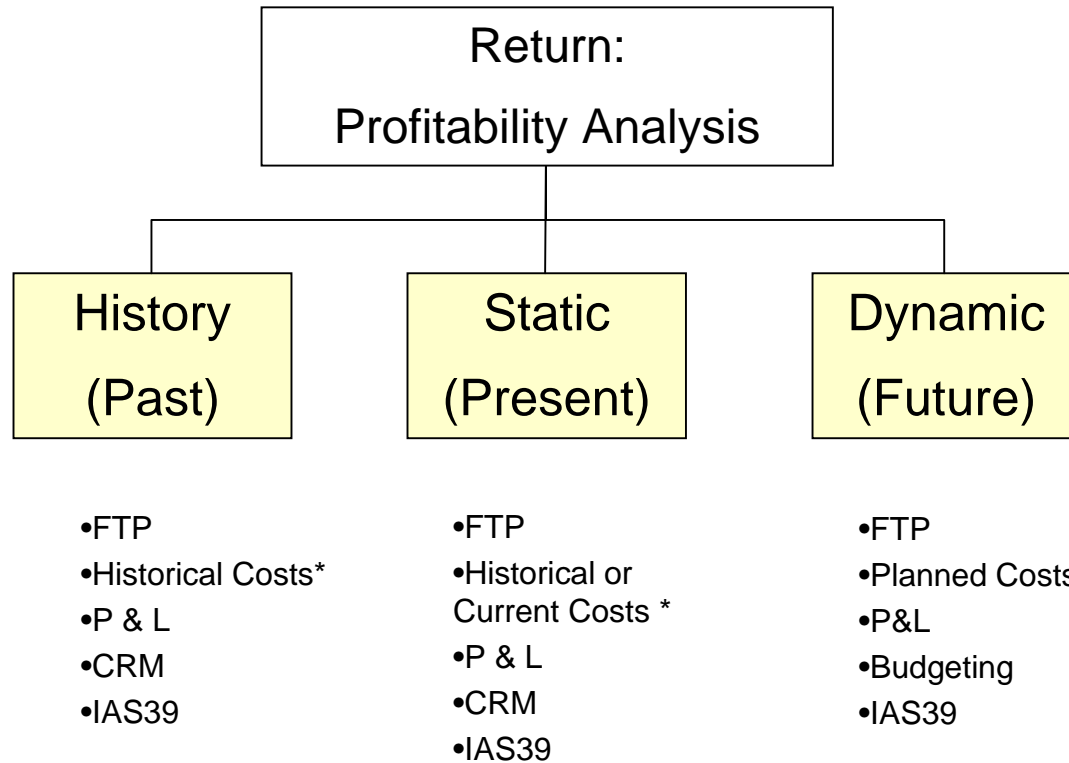
Willi Brammertz  
IRIS AG, Zurich

Huge synergy potential around each of the 2 crystallization points

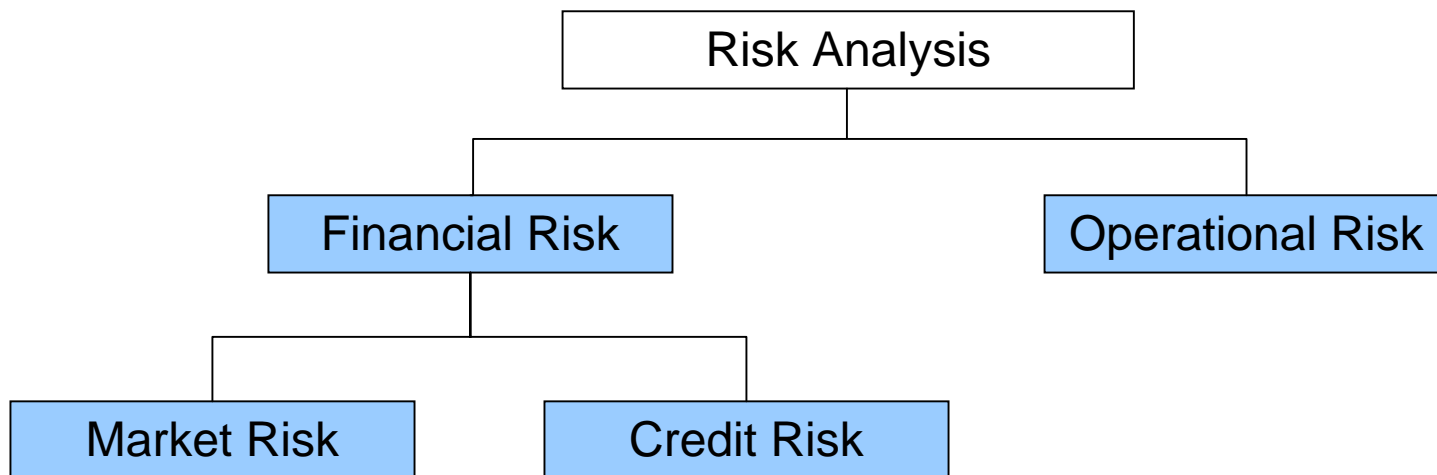


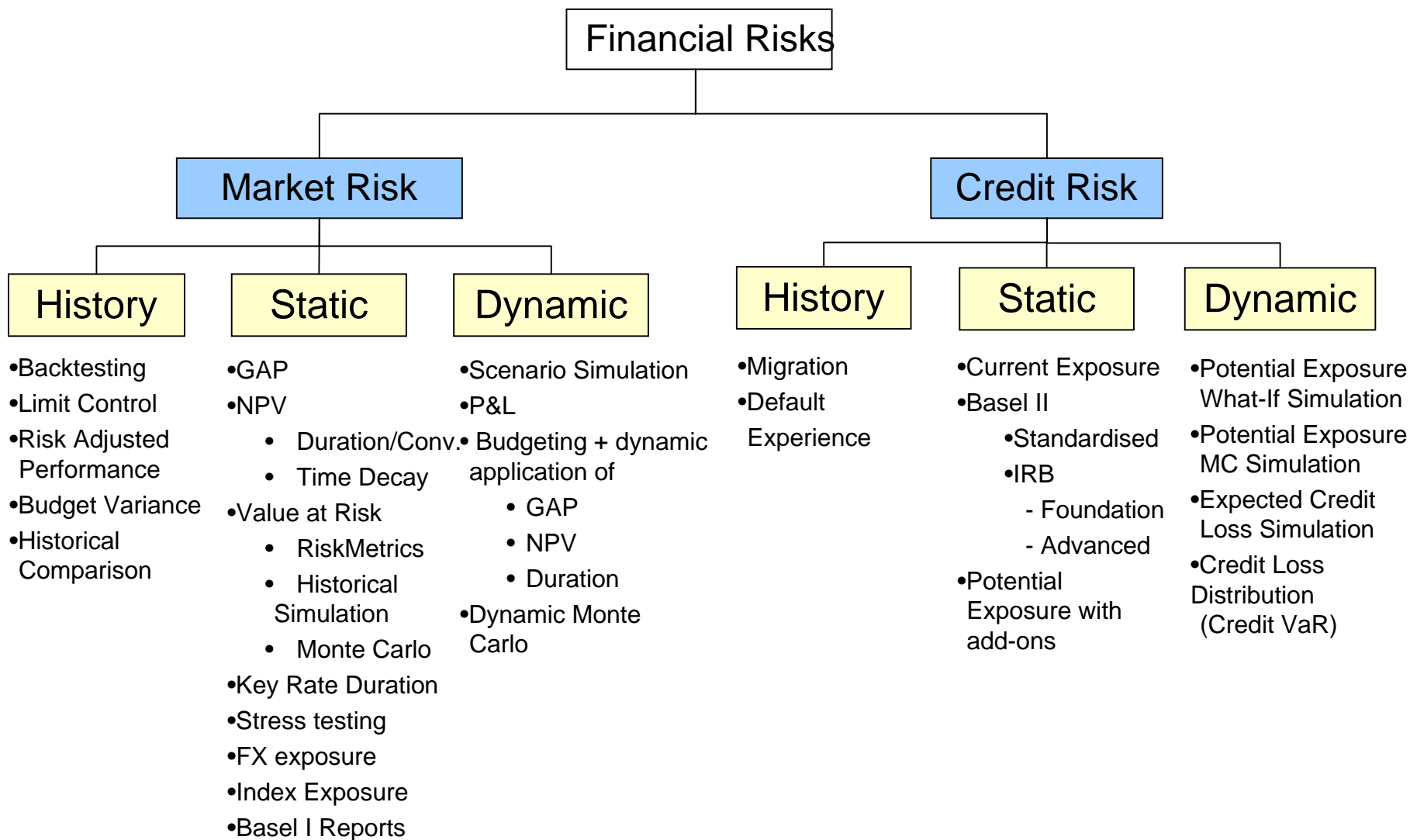


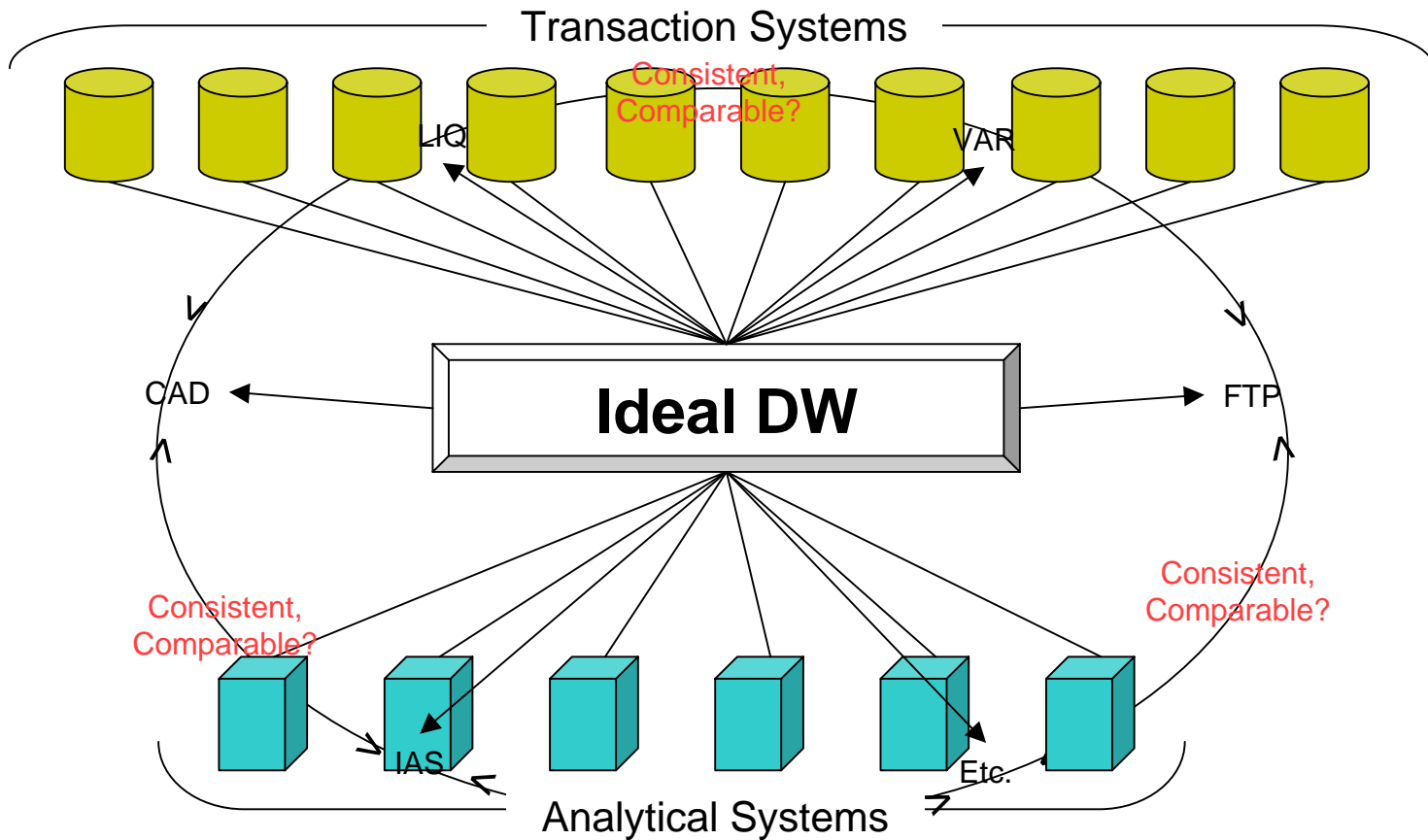




\*) from any costing system like Teradata, SAP, Oracle Financial etc.





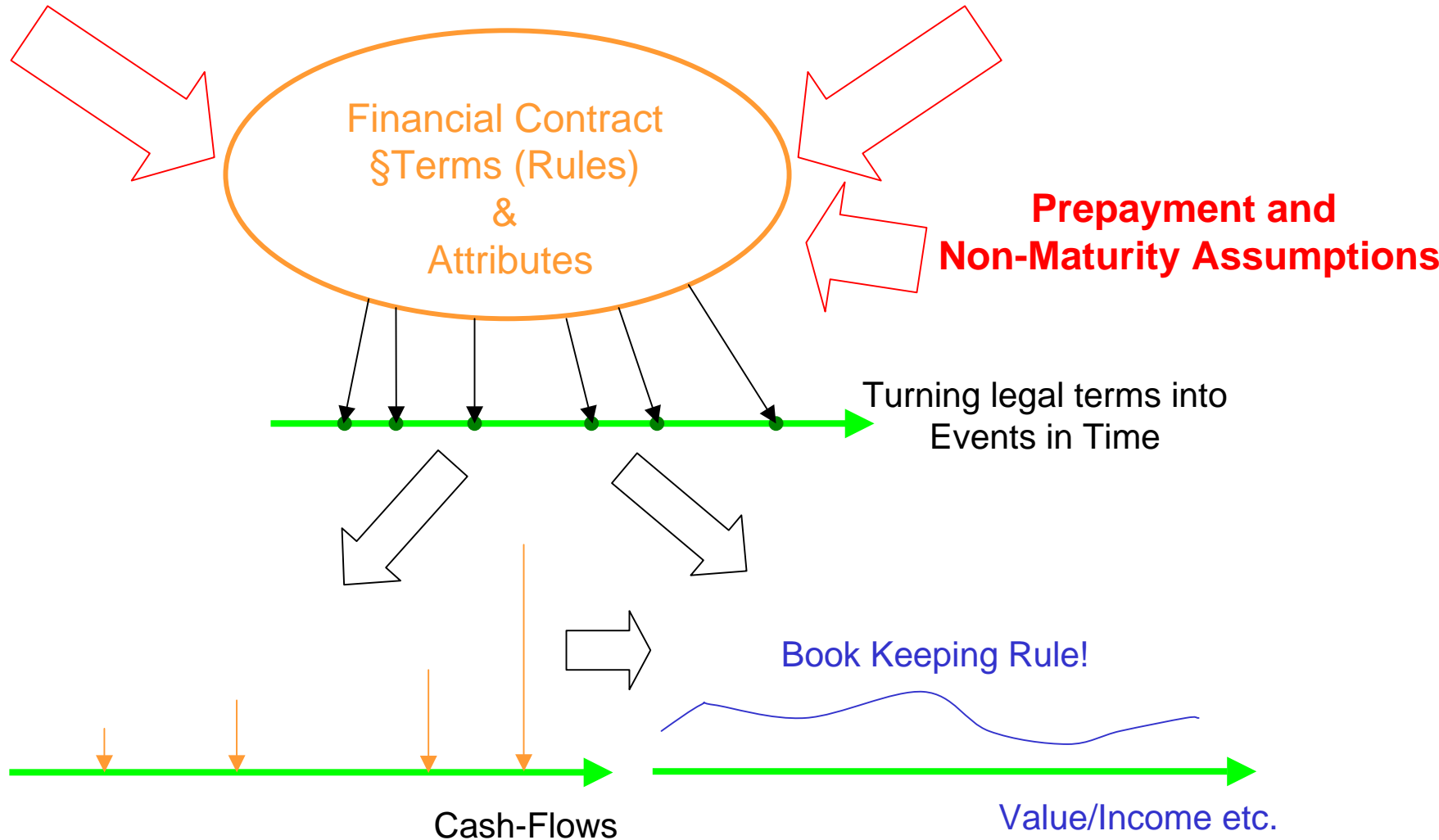


The answer to the consistency question will be No



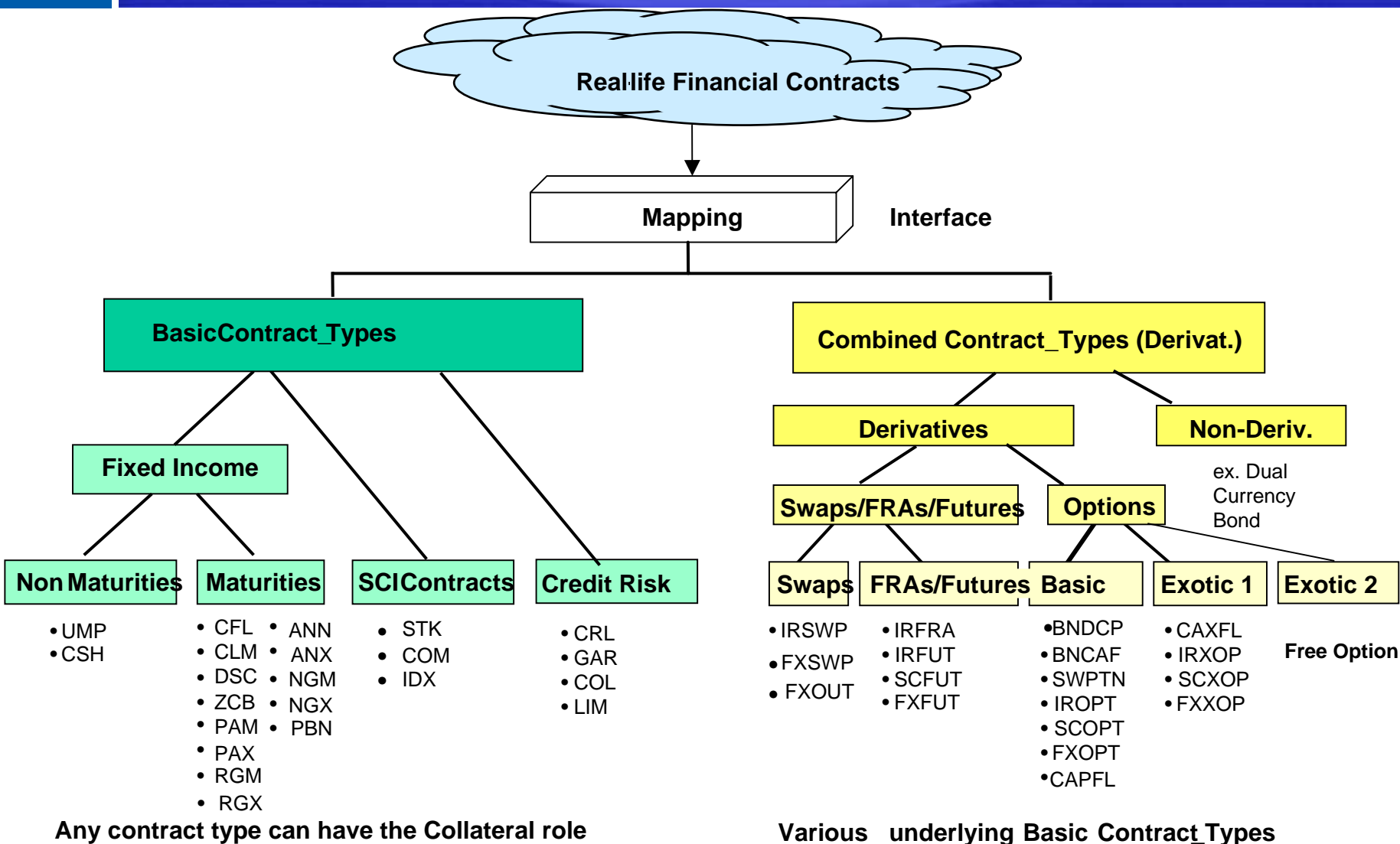
- The basis of finance is the reality behind the financial contracts
- A financial contract is an exchange of cash flows following some rules
  - On the time line
  - Related to risk factors
  - Related to the quality of the debtor
  - Depending on some behavior
- These rules are the only true facts of finance
- All financial analyses depend on these facts!

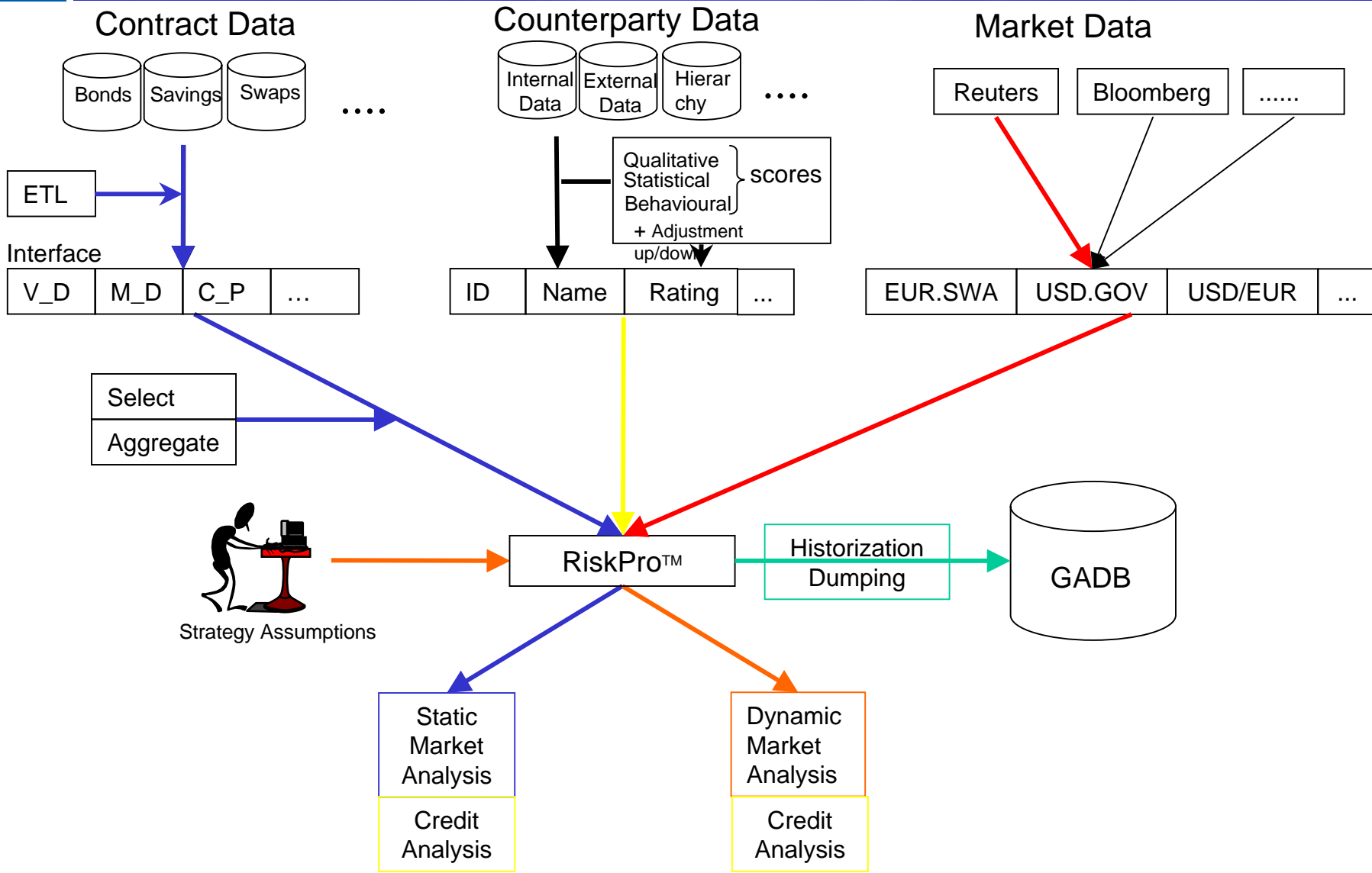
**Credit Risk Factors (PD, LGD etc.) Market Risk Factors (interest rates, FX etc.)**



# The Secret of RiskPro's Strength: Explicit Formulation of the Events

E	F	G	H	I	J	K	L	M	N	O	P	Q	R
CTP	CTC	CTK	EVD	EVK	EVT	EVC	QUA	EWV	CNP	CFS	CLI	YAA	ZDF
IRSWP	PAM	REAL	31/12/2005	RP	R	EUR	1	0.057019	0	0	0	3.99726	0.829319
IRSWP	PAM	REAL	30/06/2006	IP	R	EUR	1	-41.5877	-33.5873	-41.5877	-41.5877	4.493151	0.807627
IRSWP	PAM	REAL	30/06/2006	IP	R	EUR	1	48.19669	2.048006	2.535833	48.19669	4.493151	0.807627
IRSWP	PAM	REAL	30/06/2006	RP	R	EUR	1	0.058938	0	0	0	4.493151	0.807627
IRSWP	PAM	REAL	30/11/2006	IP	R	EUR	1	-34.85	-27.5057	-34.85	-34.85	4.912329	0.789259
IRSWP	PAM	REAL	30/11/2006	MD	R	EUR	1	-1700	-1341.74	-1700	-1700	4.912329	0.789259
IRSWP	PAM	REAL	30/11/2006	IP	R	EUR	1	41.74804	1.677176	2.125	41.74804	4.912329	0.789259
IRSWP	PAM	REAL	30/11/2006	MD	R	EUR	1	1700	0	0	1700	4.912329	0.789259
FXOUT	CFL	REAL	01/02/2004	DEC	R	USD	1	100	90.63812	100	100	2.084699	0.906381
FXOUT	CFL	REAL	01/02/2004	MD	R	USD	1	0	0	0	0	2.084699	0.906381
FXOUT	CFL	REAL	01/02/2004	DEC	R	EUR	1	-125	-114.051	-125	-125	2.084699	0.912406
FXOUT	CFL	REAL	01/02/2004	MD	R	EUR	1	0	0	0	0	2.084699	0.912406
PAM	PAM	REAL	31/12/2002	IP	R	EUR	1	%?	5.270344	5.5	5.5	0.99726	0.958244
PAM	PAM	REAL	31/12/2003	IP	R	EUR	1	%?	5.03885	5.5	5.5	1.99726	0.916155
PAM	PAM	REAL	31/12/2004	IP	R	EUR	1	%?	4.801135	5.5	5.5	2.997268	0.872934
PAM	PAM	REAL	31/12/2005	IP	R	EUR	1	%?	4.561253	5.5	5.5	3.99726	0.829319
PAM	PAM	REAL	31/12/2005	MD	R	EUR	1	%?	82.93188	100	100	3.99726	0.829319
CRL	CRL	REAL	31/12/2010	NWAMT	R	USD	1	%?	0	0	0	8.99726	0.580843
LIM	LIM	REAL	31/12/2002	NWAMT	R	EUR	1	%?	0	0	0	0.99726	0.958244
LIM	LIM	REAL	31/12/2002	NWAMT	R	EUR	1	%?	0	0	0	0.99726	0.958244
LIM	LIM	REAL	31/12/2002	NWAMT	R	EUR	1	%?	0	0	0	0.99726	0.958244
LIM	LIM	REAL	31/12/2002	NWAMT	R	EUR	1	%?	0	0	0	0.99726	0.958244

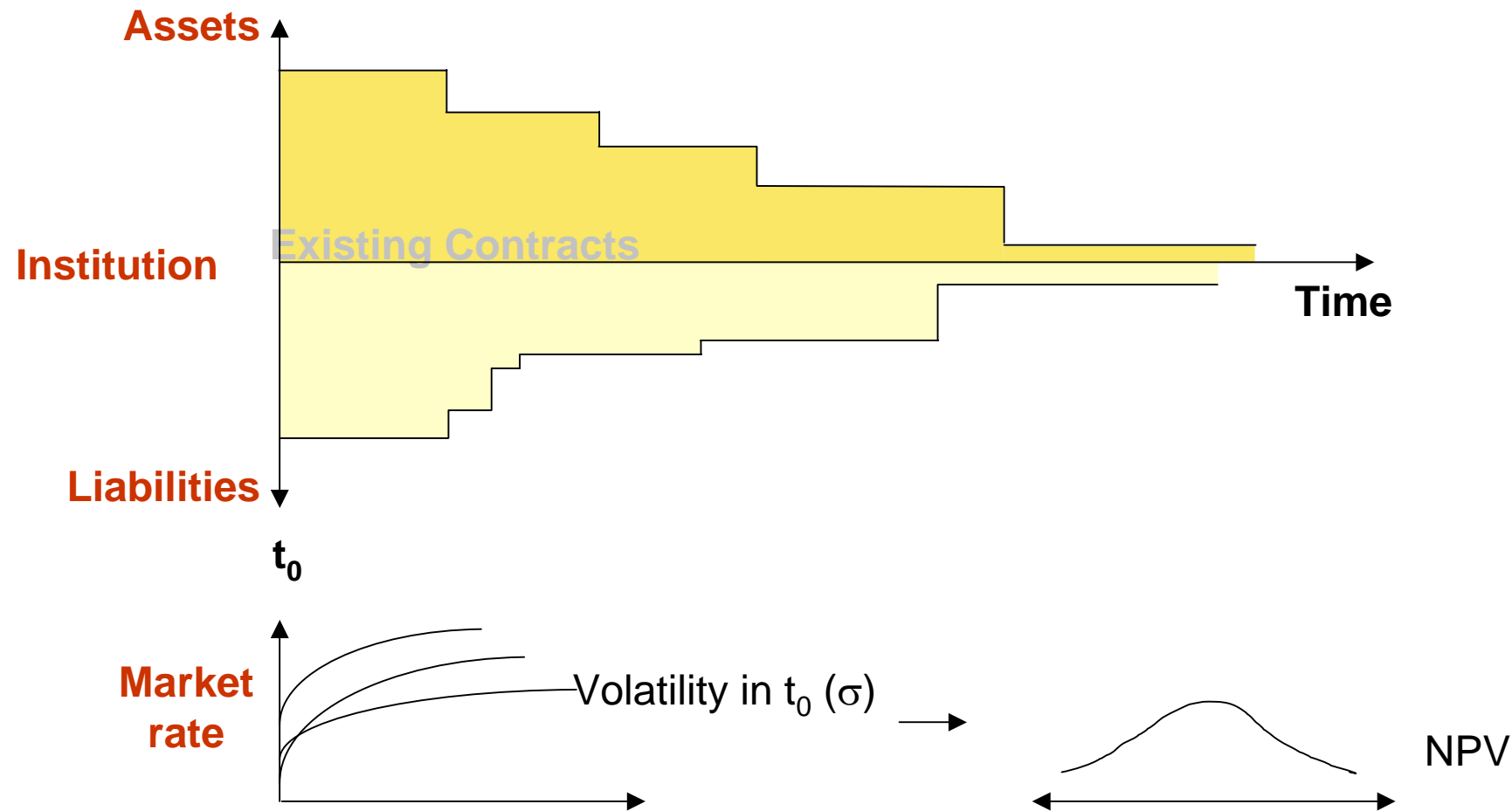


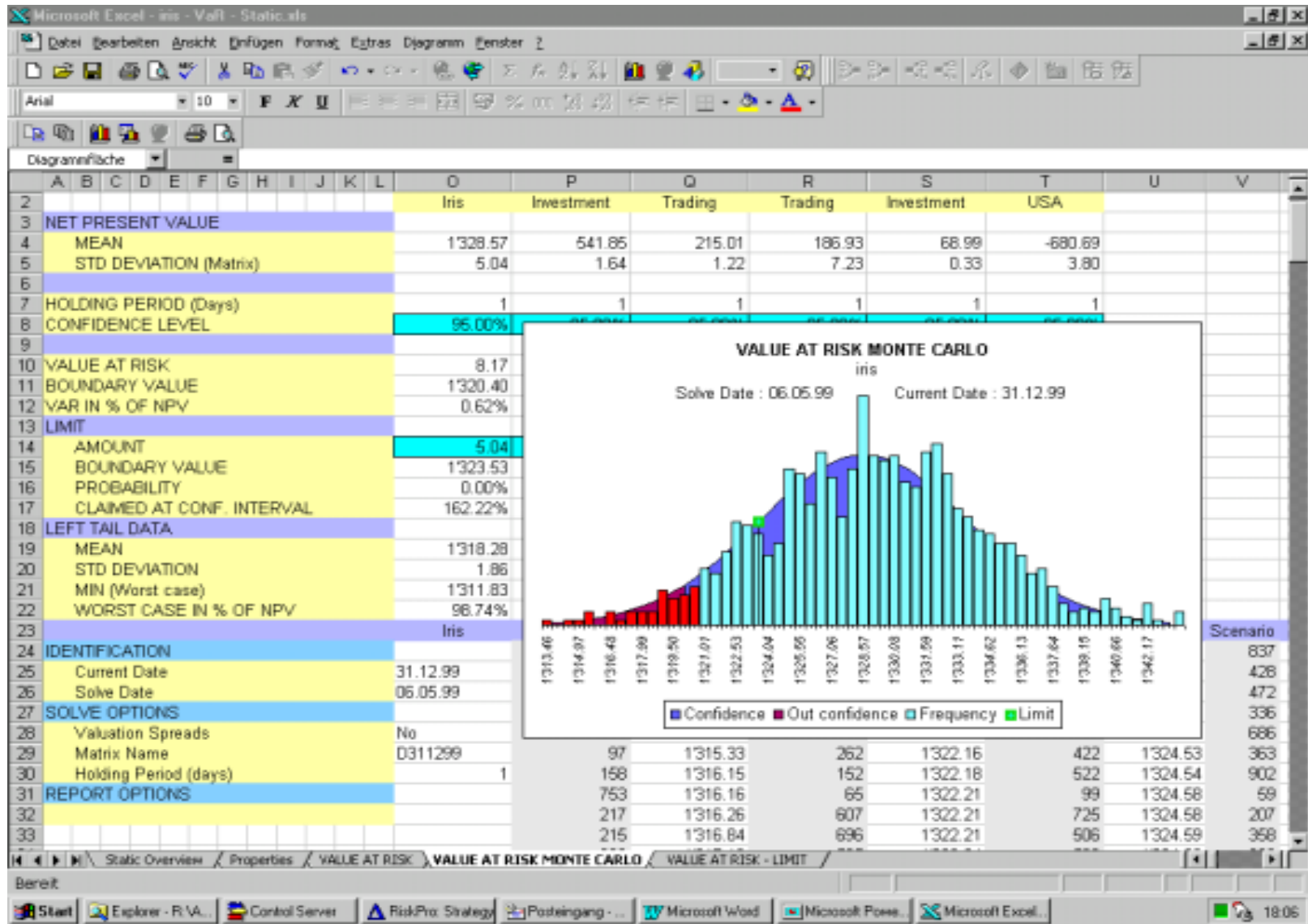


There are 3 modes of analysis

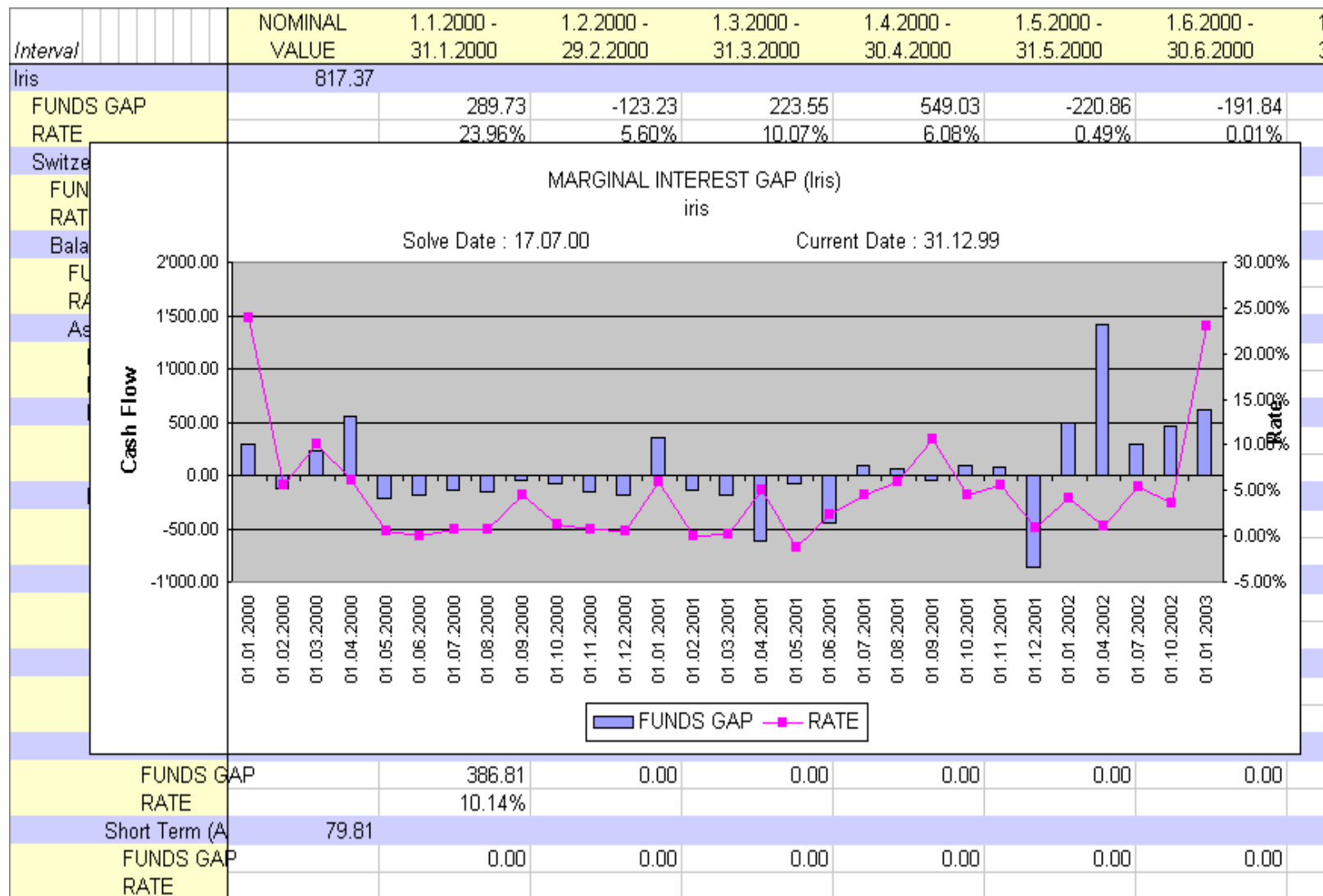
- Static
- Dynamic
- Historic

There is no distinction concerning financial calculation; the distinction is on the level of work flow.



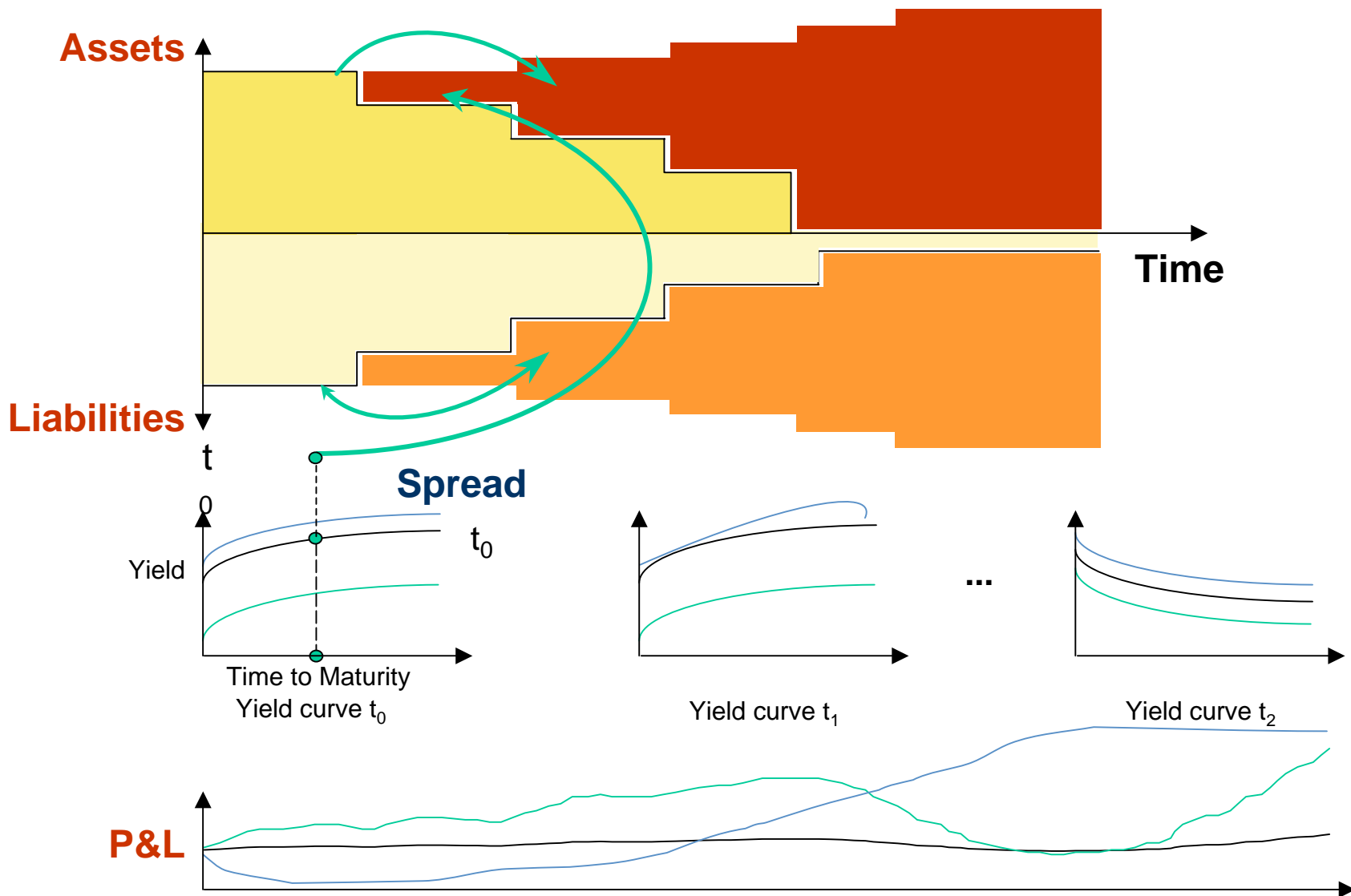




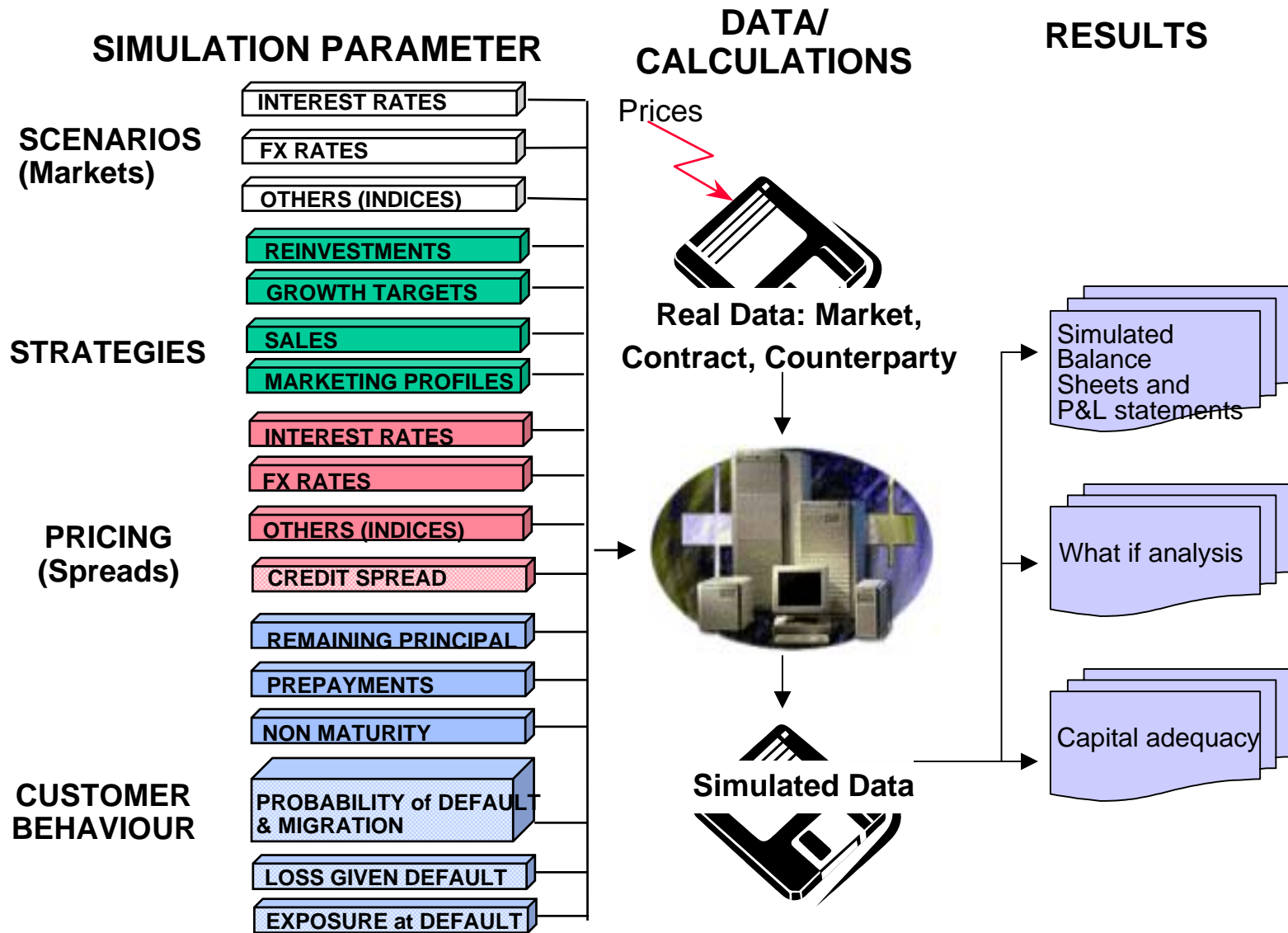


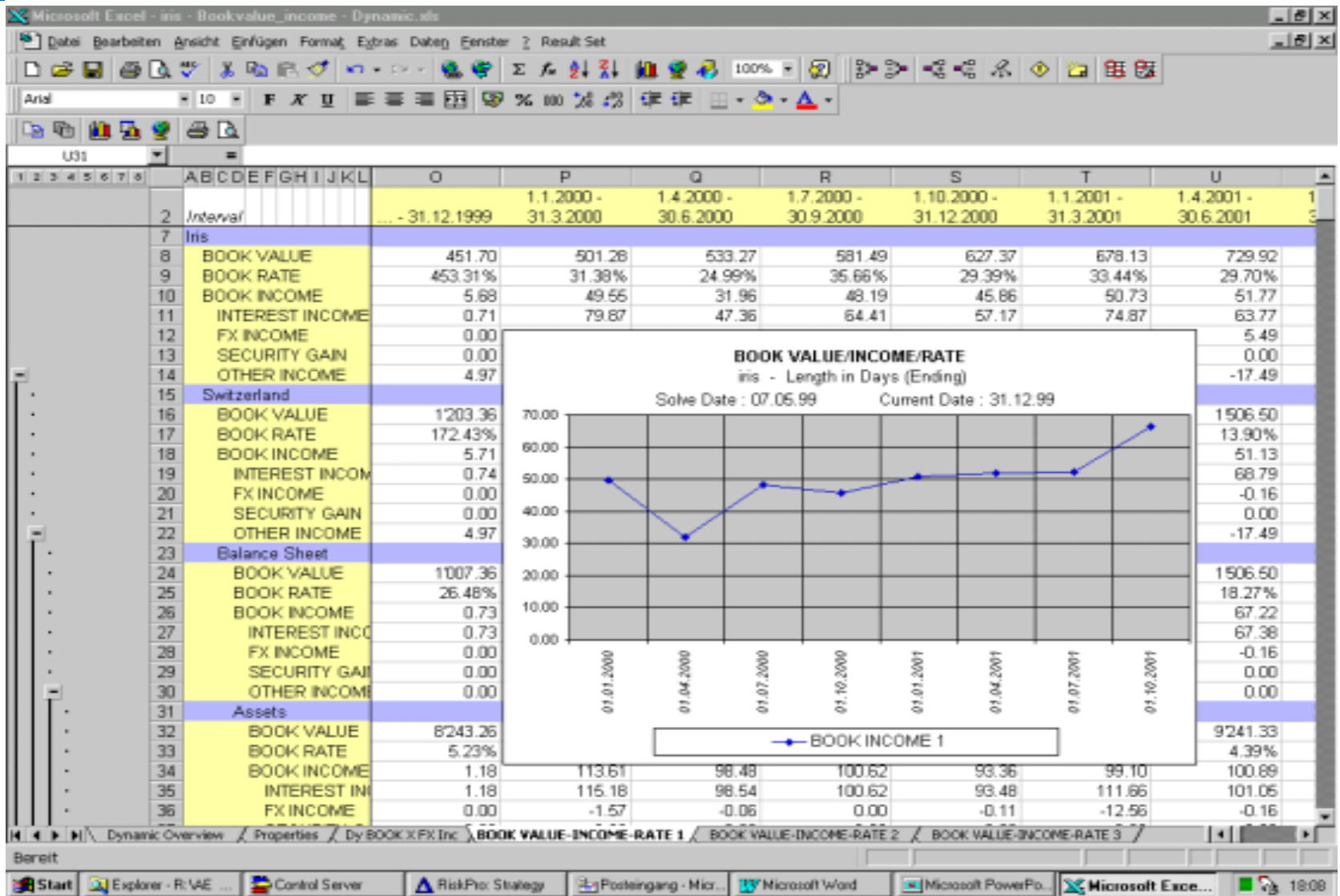
		O	P	Q	R	S	T	U	V
		GROSS EXPOSURE	EXPOSURE AFTER CLON	EXPOSURE AFTER CNTR COL	EXPOSURE AFTER CNTR GAR	EXPOSURE AFTER CP COL	EXPOSURE AFTER CP GAR	LOSS AFTER RECOVERY	LOSS AFTER RECOVERY
33	Cp_Legal_Country : DK								
34	AMOUNT	21,541,583.97	20,066,777.50	17,224,677.50	14,845,327.50	14,845,327.50	14,845,327.50	-4,763,962.80	10,061,364.70
35	Cp_Counterparty_Id : 10								
36	AMOUNT	21,541,583.97	20,066,777.50	17,224,677.50	14,845,327.50	14,845,327.50	14,845,327.50	-4,763,962.80	10,061,364.70
37	Cp_Counterparty_Id : 47								
38	AMOUNT								
39	Cp_Counterparty_Id : 50								
40	AMOUNT								
41	Cp_Legal_Country : FR								
42	AMOUNT	5,924,221.31	5,924,221.31	5,107,777.35	5,107,777.35	5,107,777.35	7,517,931.52	-4,722,220.87	2,795,710.65
43	Cp_Counterparty_Id : 4								
44	AMOUNT				0.00	0.00	0.00	0.00	0.00
45	Cp_Counterparty_Id : B								
46	AMOUNT	3,633,592.31	3,633,592.31	3,067,148.35	3,067,148.35	3,067,148.35	3,067,148.35	-2,520,093.09	547,055.26
47	Cp_Counterparty_Id : 45								
48	AMOUNT	250,000.00	250,000.00	250,000.00	250,000.00	250,000.00	250,000.00	0.00	250,000.00
49	Cp_Counterparty_Id : 48								
50	AMOUNT	250,000.00	250,000.00	0.00	0.00	0.00	0.00	0.00	0.00
51	Cp_Counterparty_Id : 51								
52	AMOUNT	1,549,706.96	1,549,706.96	1,549,706.96	1,549,706.96	1,549,706.96	3,160,799.46	-1,643,615.72	1,517,183.74
53	Cp_Counterparty_Id : 52								
54	AMOUNT						1,074,061.67	-558,512.07	515,549.60
55	Cp_Counterparty_Id : 53								
56	AMOUNT	240,922.04	240,922.04	240,922.04	240,922.04	240,922.04	-34,077.96	0.00	-34,077.96
57	Cp_Legal_Country : GB								
58	AMOUNT	19,706,210.96	19,472,004.27	18,700,754.27	23,600,012.23	23,575,012.23	21,164,858.07	-6,544,433.89	14,620,424.18
59	Cp_Counterparty_Id : 1								
60	AMOUNT	1,852,654.71	1,852,654.71	1,091,404.71	1,091,404.71	1,091,404.71	1,091,404.71	-458,450.64	632,954.08
61	Cp_Counterparty_Id : 3								
62	AMOUNT	332,342.19	98,135.51	98,135.51	98,135.51	98,135.51	98,135.51	-4,906.78	93,228.73
63	Cp_Counterparty_Id : 5								

	Unknown	Corporate	Finance	Government	Retail
Unrated	0.00	3.20	0.00	0.00	0.00
Risk weighted exposure	0.00	40.00	0.00	0.00	0.00
AAA to AA-	0.00	0.00	0.45	0.00	8.36
Risk weighted exposure	0.00	0.00	5.58	0.00	104.54
A+ to A-	0.00	31.16	0.00	0.00	0.00
Risk weighted exposure	0.00	389.53	0.00	0.00	0.00
BBB+ to BBB-	0.00	0.00	0.73	0.00	0.00
Risk weighted exposure	0.00	0.00	9.07	0.00	0.00
BB+ to B-	0.00	0.00	0.00	0.00	0.00
Risk weighted exposure	0.00	0.00	0.00	0.00	0.00
Below B-	0.00	0.00	0.00	19.32	0.00
Risk weighted exposure	0.00	0.00	0.00	241.48	0.00
Unrated	0.00	3.20	0.00	0.00	0.00
Risk weighted exposure	0.00	40.00	0.00	0.00	0.00
Default	0.00	0.00	0.00	0.00	0.00
Risk weighted exposure	0.00	0.00	0.00	0.00	0.00
<b>IDENTIFICATION</b>					
Current Date	31/12/2001				
Solve Date	21/01/2002				
Price Date	31/12/2001				

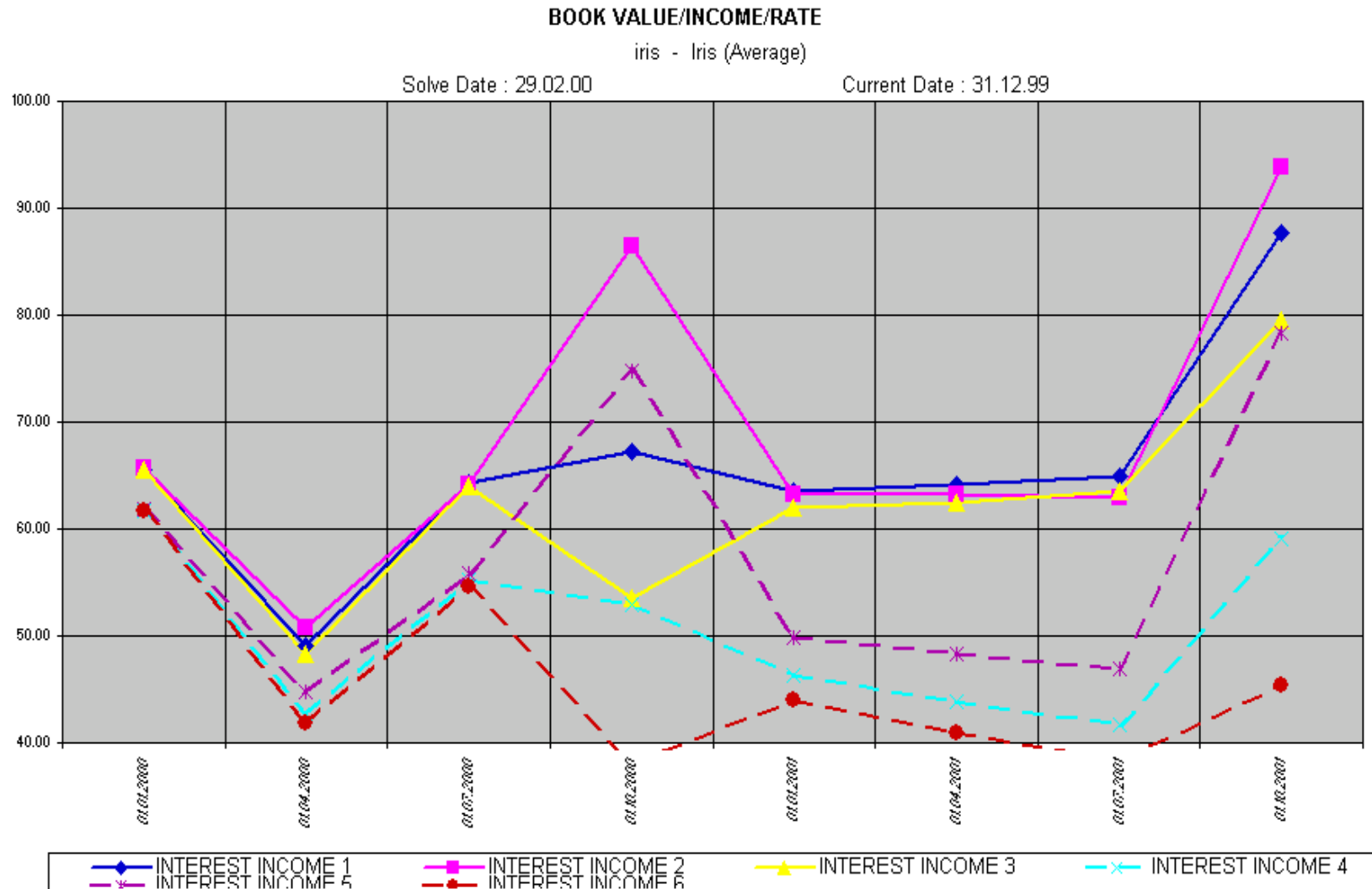


- Static analysis is based on liquidation view
- Dynamic analysis is based on a going concern view
- Transformation income not visible in static analysis
- Management decisions based on game theory

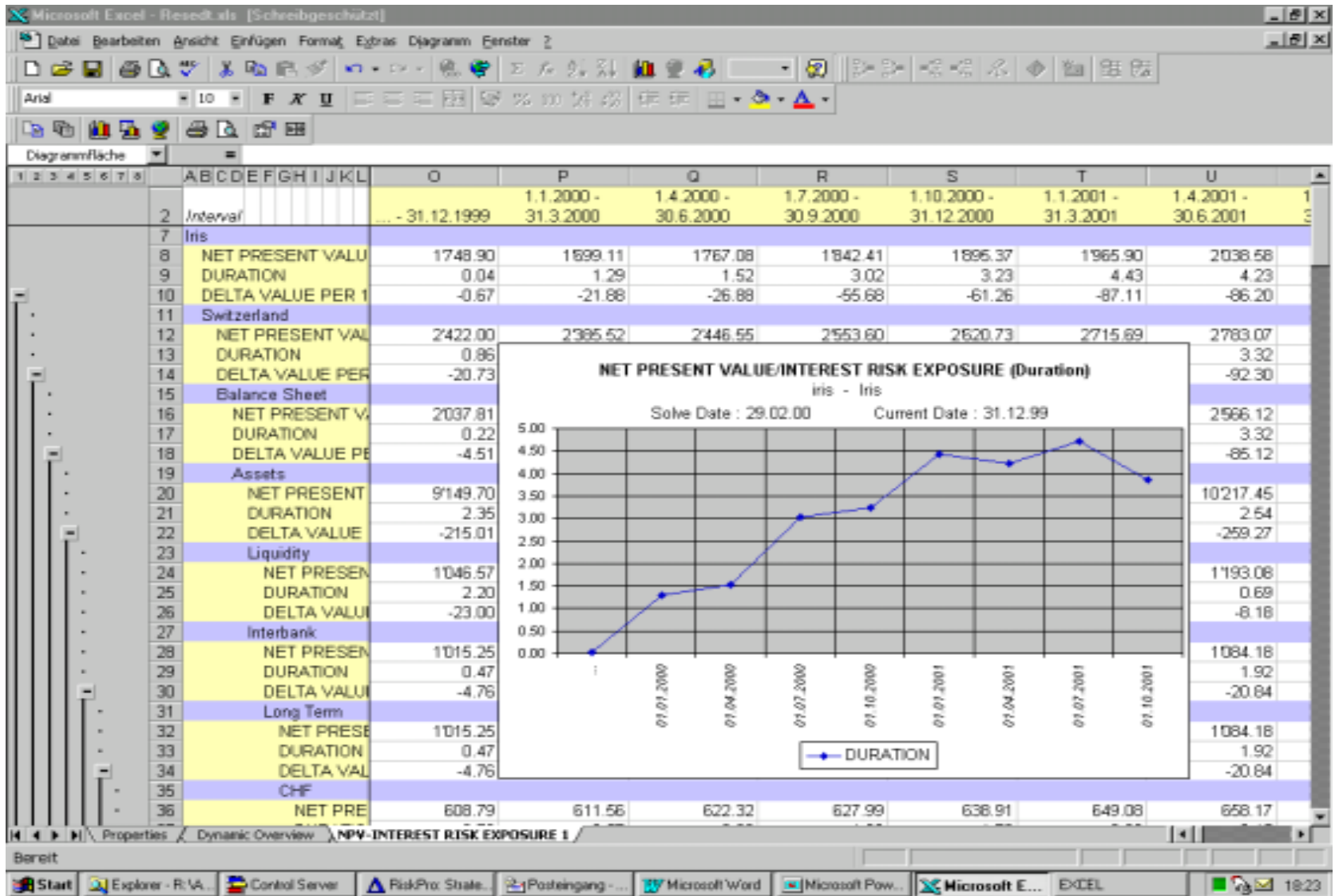


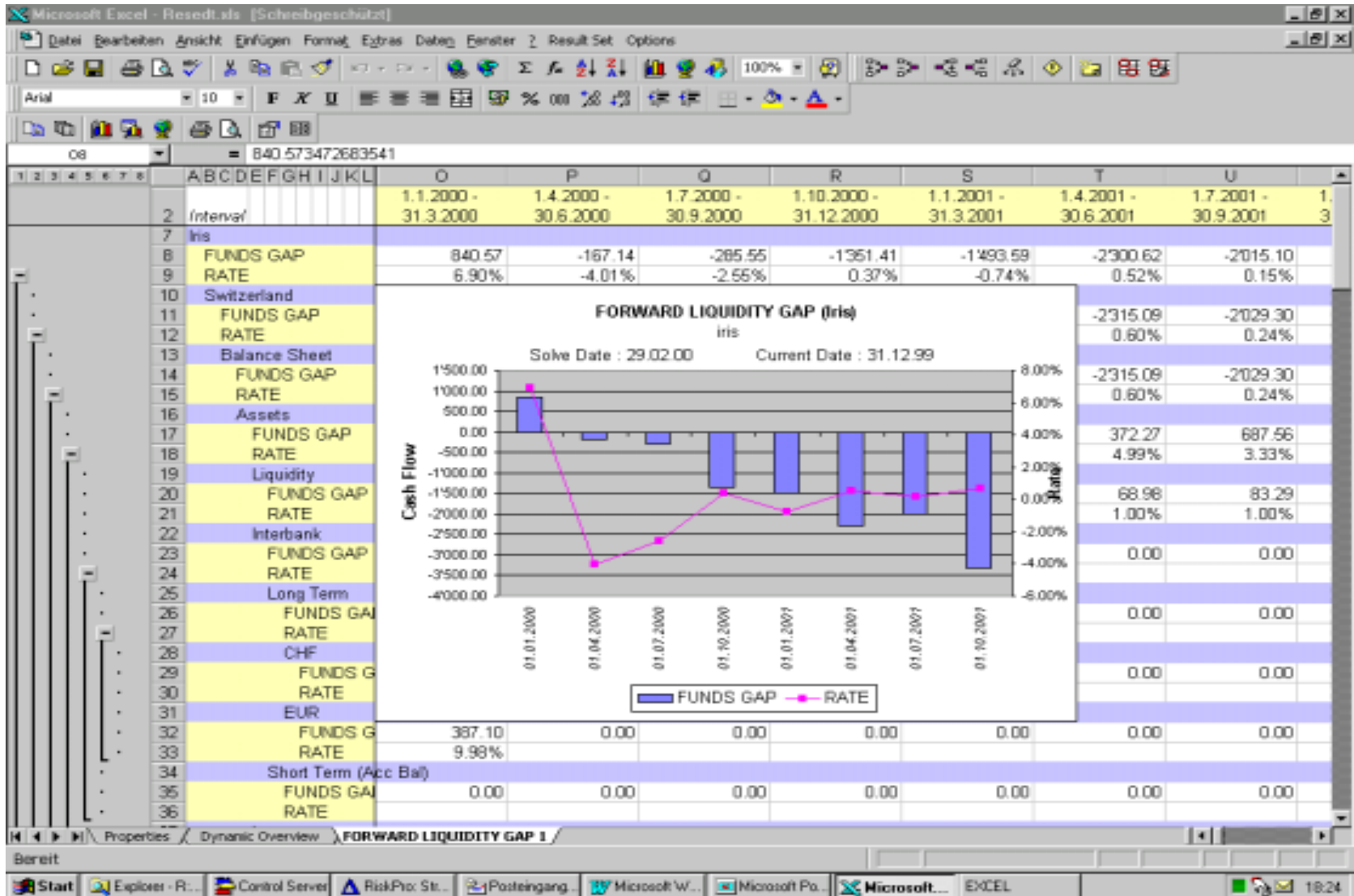












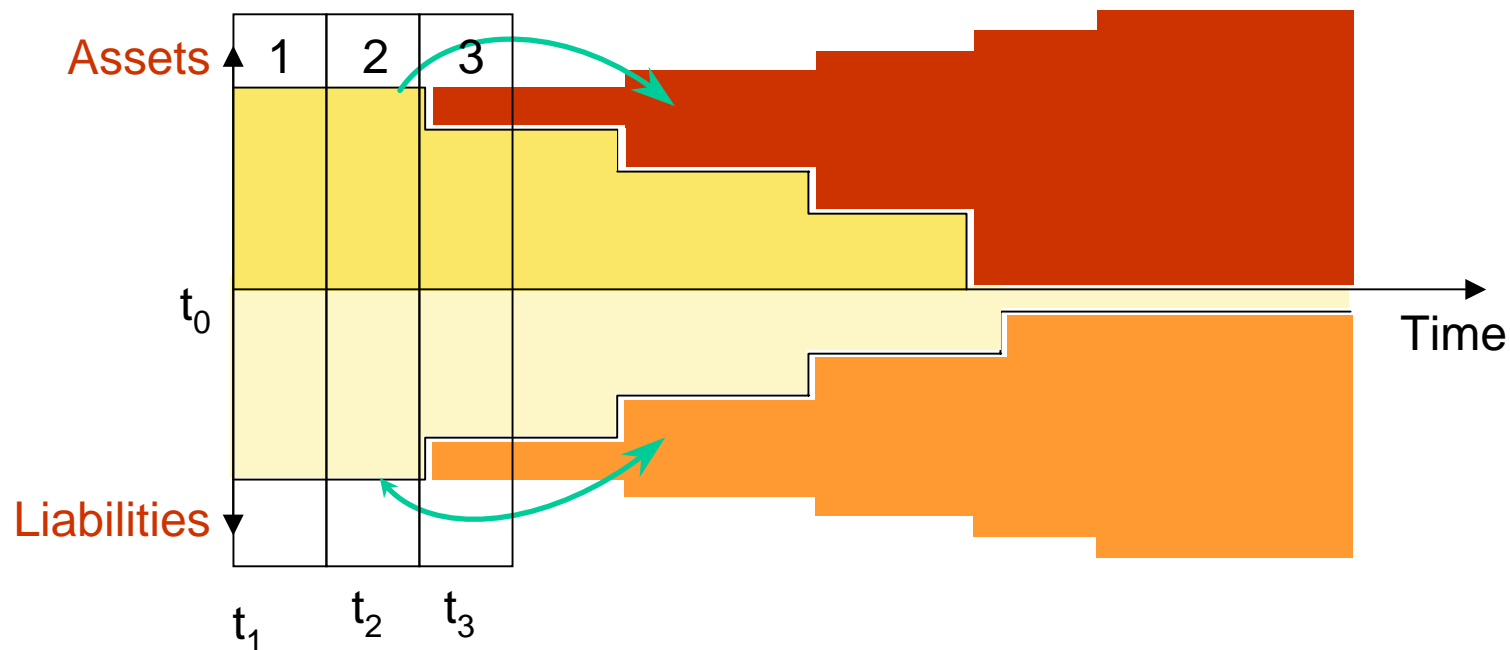
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	ABC	DEF	GHI	JK	L	N	O	P	Q	R	S	T
2	Interval						- 10.9.1999	10.9.1999 - 31.12.1999	1.1.2000 - 31.12.2000			
7	ALL											
8	GROSS EXPOSURE						141,369,320.98	154,251,917.29	175,344,026.14			
9	EXPOSURE AFTER CLON						137,451,479.58	150,158,929.13	171,014,045.00			
10	RECOVERY						-37,964,023.04	-43,049,366.87	-50,150,607.33			
11	LOSS AFTER RECOVERY						71,404,614.10	78,979,810.30	92,556,179.31			
12	Cp_Counterparty_Importance : NO VALUE											
13	GROSS EXPOSURE						141,369,320.98	154,251,917.29	175,344,026.14			
14	EXPOSURE AFTER CLON						137,451,479.58	150,158,929.13	171,014,045.00			
15	RECOVERY						-37,964,023.04	-43,049,366.87	-50,150,607.33			
16	LOSS AFTER RECOVERY						71,404,614.10	78,979,810.30	92,556,179.31			
17	Cp_Legal_Country : AU											
18	GROSS EXPOSURE						4,965,110.00	6,630,000.00	8,460,000.00			
19	EXPOSURE AFTER CLON						4,965,110.00	6,630,000.00	8,460,000.00			
20	RECOVERY						-2,347,826.00	-2,930,800.00	-3,578,400.00			
21	LOSS AFTER RECOVERY						2,637,284.00	3,699,200.00	4,881,600.00			
22	Cp_Counterparty_Id : 12											
23	GROSS EXPOSURE						4,965,110.00	6,630,000.00	8,460,000.00			
24	EXPOSURE AFTER CLON						4,965,110.00	6,630,000.00	8,460,000.00			
25	RECOVERY						-2,347,826.00	-2,930,800.00	-3,578,400.00			
26	LOSS AFTER RECOVERY						2,637,284.00	3,699,200.00	4,881,600.00			
27	Cp_Legal_Country : DE											
28	GROSS EXPOSURE						21,711,023.65	23,761,605.97	28,003,922.51			
29	EXPOSURE AFTER CLON						21,711,023.65	23,761,605.97	28,003,922.51			
30	RECOVERY						-7,052,469.14	-8,042,520.24	-9,620,768.19			
31	LOSS AFTER RECOVERY						12,095,104.51	13,119,085.73	15,533,154.32			
32	Cp_Counterparty_Id : 99											
33	GROSS EXPOSURE						250,000.00	200,000.00	300,000.00			
34	EXPOSURE AFTER CLON						250,000.00	200,000.00	300,000.00			
35	RECOVERY						0.00	0.00	0.00			
36	LOSS AFTER RECOVERY						0.00	0.00	0.00			
37	Cp_Counterparty_Id : 100											
38	GROSS EXPOSURE						1,990,239.36	1,991,474.37	2,153,371.28			

Dynamic Overview / Properties / POTENTIAL EXPOSURE WHAT IF 1 / POTENTIAL EXPOSURE WHAT IF 2 / 14

Ready



RiskPro™ historizes

- per contract
- per day

<b>Values</b>	<b>And its corresponding income elements</b>	<b>and FTP elements</b>
Nominal value	Nominal interest income	} FTP on accrual basis
Premium Discount	$\Delta$ Premium Discount	
Market value fair	$\Delta$ NPV fair	} FTP on NPV basis
Accrued Interest	Daily Accruals	
Market value observed	$\Delta$ Market value observed	
<b>Sensitivities</b>	From where we deduct Performance, Risk Adjusted Profitability, Capital Allocation, Limits, etc. and feed a Data Warehouse, CRM.....	
\$ Duration		
\$ Convexity		
\$ Time Decay		
$\Delta$		
$\Gamma$		
$\Theta$		
$\Lambda$		
<b>VaR</b>		

BLB - Test - Bank  
Limiten

Tagesreport

*11.03.99**No stro*

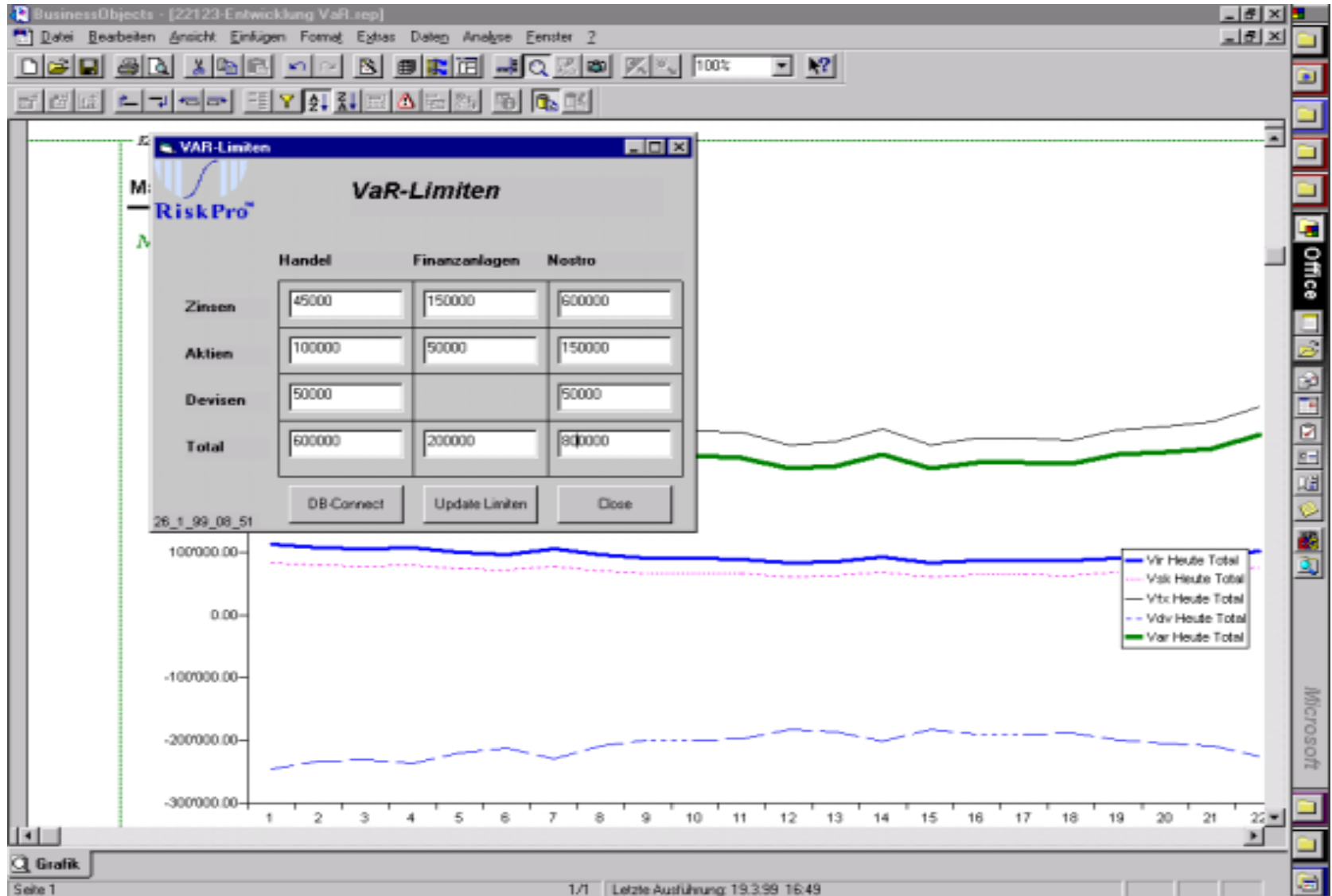
Pc Sparte	Va R heute	Va R Monat	Va R Jahr	P heute	P Monat	P Jahr	ROA	ROR
Aktie n	75'340.00	94'675.92	74'567.76	-7'257.74	954.15	31'736.55	0.01	0.05
De vise n	79'712.00	92'793.52	84'120.56	2'500.00	6'812.23	23'879.00	0.00	0.00
Zin se n	349'989.00	360'677.57	320'560.21	46'413.95	278'740.12	560'723.55	2.85	15.13
To ta l	365'355.00	372'351.15	310'665.95	41'656.21	286'506.50	616'339.10	1.02	5.43

*Hande lsbe stand*

Pc Sparte	Va R heute	Va R Monat	Va R Jahr	P heute	P Monat	P Jahr	ROA	ROR
Aktie n	75'340.00	94'675.92	74'567.76	-7'257.74	954.15	31'736.55	0.01	0.05
De vise n	79'712.00	92'793.52	84'120.56	2'500.00	6'812.23	23'879.00	-	-
Zin se n	305'431.00	345'137.03	271'833.59	41'913.75	262'308.30	514'417.64	0.96	5.11
To ta l	291'533.00	329'432.29	259'464.37	37'156.01	270'074.68	570'033.19	1.01	5.37

*Fina nza nla ge n*

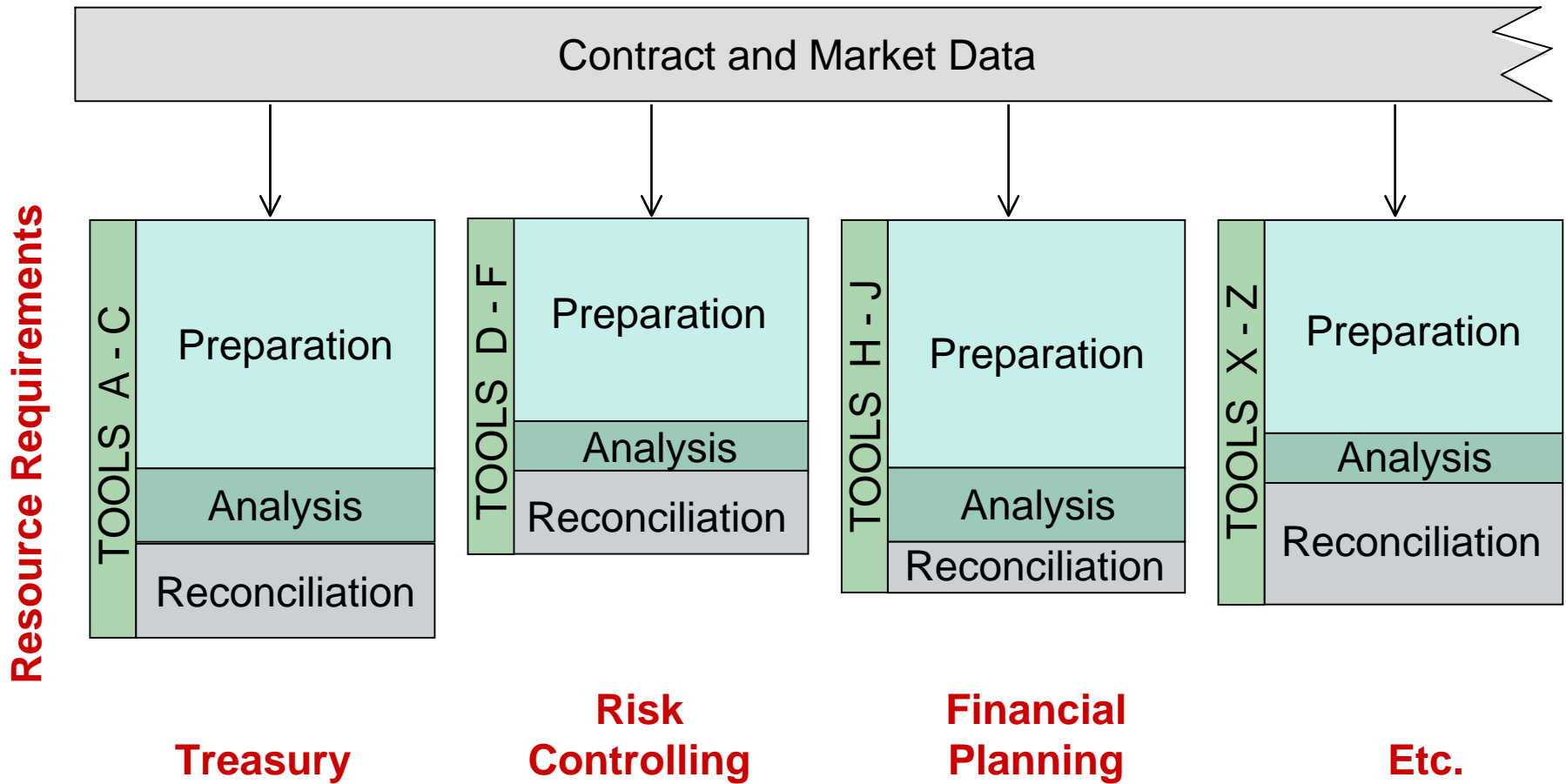
Pc Sparte	Va R heute	Va R Monat	Va R Jahr	P heute	P Monat	P Jahr	ROA	ROR
Aktie n	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Zin se n	53'529.00	60'487.77	47'640.81	4'500.20	16'431.82	46'305.91	0.52	2.78
To ta l	53'529.00	60'487.77	47'640.81	4'500.20	16'431.82	46'305.91	0.52	2.78

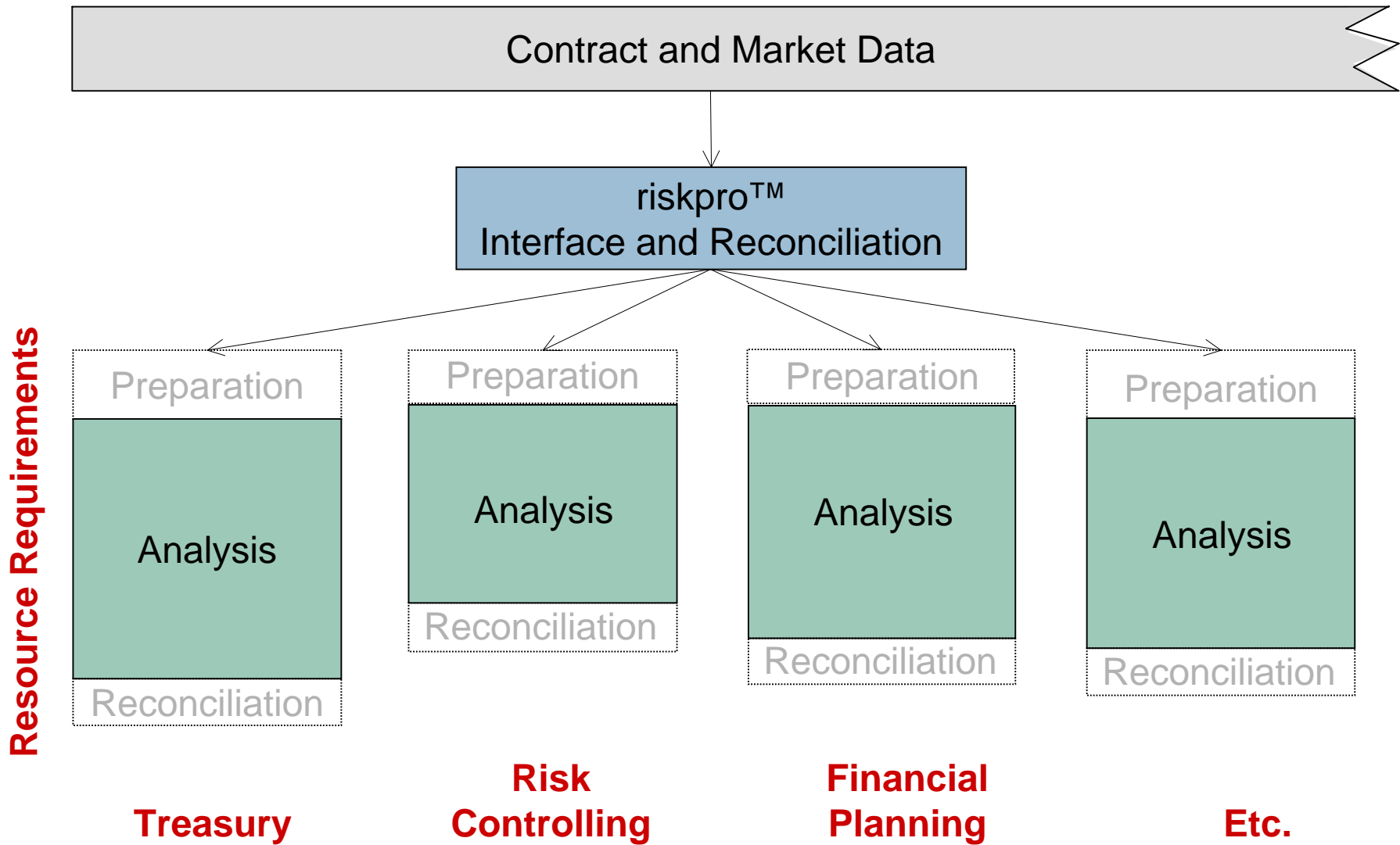




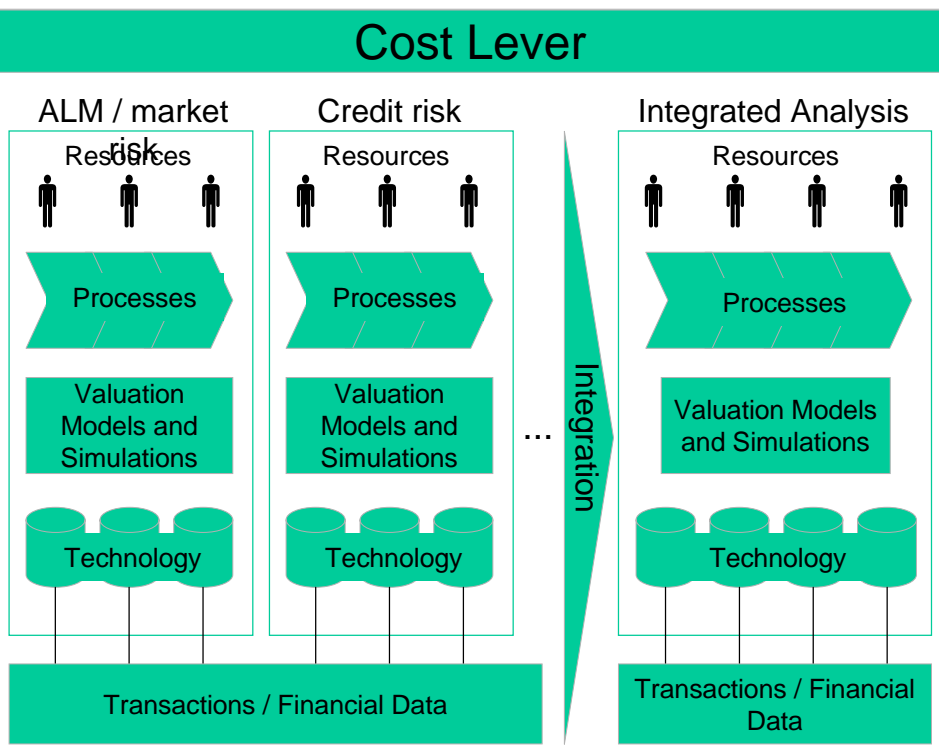
Interval	... - 31.12.1998	1.1.1999 - 31.1.1999	1.2.1999 - 28.2.1999	1.3.1999 - 31.3.1999	1.4.1999 - 30.4.1999	1.5.1999 - 31.5.1999	1.6.1999 - 30.6.1999
Top (Budget)							
Top (Histo)							
Top (Diff)							
BOOK VALUE	0.00	900.00	916.67	933.33	950.00	966.67	983.33
BOOK VALUE	0.00	900.00	918.33	933.33	950.56	966.67	983.89
BOOK VALUE	0.00	0.00	1.67	0.00	0.56	0.00	0.56
NOMINAL VALUE	0.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00
NOMINAL VALUE	0.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00
NOMINAL VALUE	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BOOK RATE		26.44%	29.85%	29.56%	33.20%	34.64%	38.32%
BOOK RATE		25.53%	28.86%	27.84%	31.51%	33.16%	36.74%
BOOK RATE	0.00	-0.01	-0.01	-0.02	-0.02	-0.01	-0.02
BOOK INCOME	0.00	20.21	20.99	23.43	25.92	28.44	30.97
BOOK INCOME	0.00	19.52	20.33	22.07	24.62	27.23	29.71
BOOK INCOME	0.00	-0.69	-0.66	-1.36	-1.30	-1.21	-1.26
INTEREST INCOME	0.00	3.55	4.33	6.76	9.25	11.78	14.30
INTEREST INCOME	0.00	2.85	3.66	5.41	7.95	10.56	13.05
INTEREST INCOME	0.00	-0.69	-0.66	-1.36	-1.30	-1.21	-1.26
FX INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FX INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FX INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SECURITY GAIN	0.00	16.67	16.67	16.67	16.67	16.67	16.67
SECURITY GAIN	0.00	16.67	16.67	16.67	16.67	16.67	16.67
SECURITY GAIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER INCOME	0.00	0.00	0.00	0.00	0.00	0.00	0.00





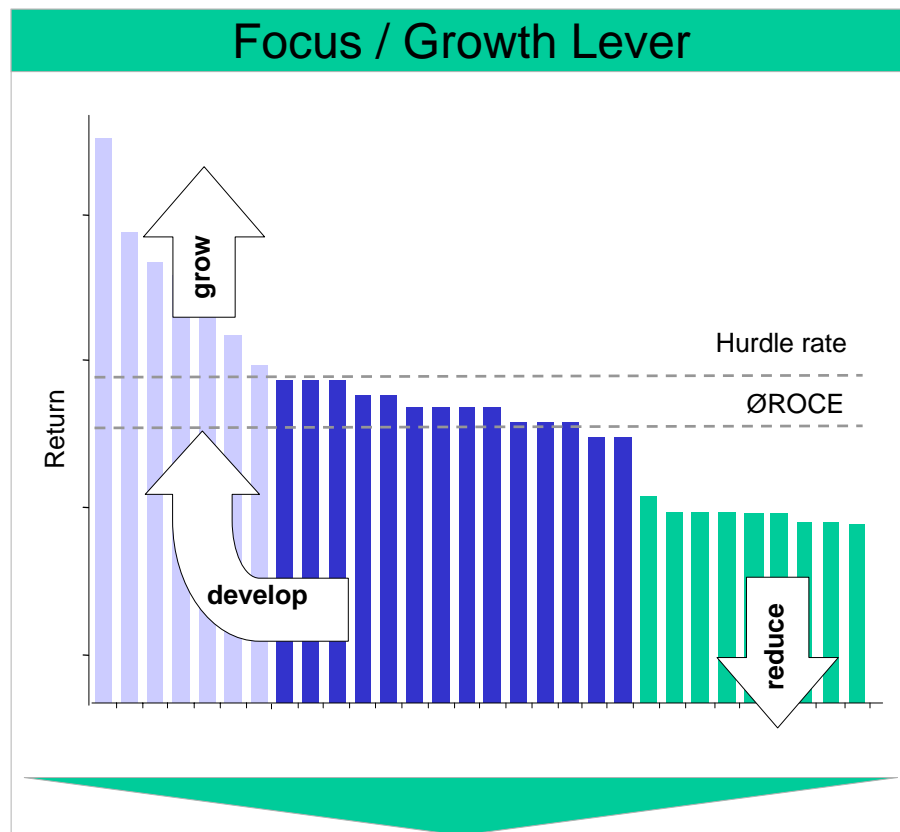


Potential value contribution of an integrated risk and profitability analysis



25% - 30% reduction of current cost of analysis

Source: Accenture research, project experience



Up to 90 bps increase of return

### Die Schweiz unter Zugzwang

Die zweite Stufe der Sarbanes-Oxley Act besteht darin, dass in Unternehmen mit SEC-Berührung bald auch die internen Kontrollsysteme durch externe Revisoren zu prüfen sein werden. Als Folge wird mit einer Erhöhung der Prüfungskosten um 30% bis 50% gerechnet. Die Kosten für die Einrichtung dieser zweiten Kontrollstufe, zu der auch der Umgang mit «Whistleblowers» zählt, werden in grösseren Unternehmen auf einen zweistelligen Millionenbetrag geschätzt. Die weltweite Ausbreitung des US-Rechts trifft indessen nicht nur Unternehmen, sondern auch staatliche Verwaltungen. In allen Ländern, in denen Revisionsfirmen Unternehmen prüfen wollen, die mit der SEC in Berührung kommen, sind Regulierungen einzurichten, die der Sarbanes-Oxley Act genügen. In der EU ist der Nachvollzug in vollem Gang, in der Schweiz soll die Botschaft zum Revisionsaufsichtsgesetz noch vor den Sommerferien vom Bundesrat verabschiedet werden, um die Verstaatlichung der Aufsicht voranzubringen.

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