

«...
...».

«
»

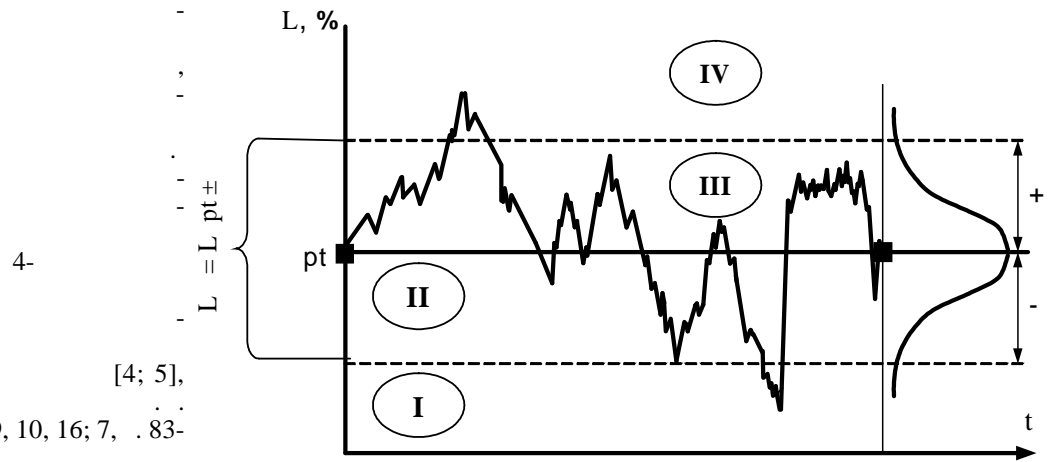
2006 . [4; 5].
(L)

(Lopt) (Lopt ±δ). (±δ).

I
IV —

III —

II
. 1.



[4; 5],
[6, . 9, 10, 16; 7, . 83-
87, 126],

. 1.

» [6, . 16]; «

: «...

(. . 1),

» [7, . 74, 126].

56,93% 69,53%.

47,56% 54,92%.

. 85, 86]
 > 62,76%); II —
 62,76%); III —
 49,63%); IV —

, I — 20%.
 (, [6, . 10; 7,
 (, 49,63%
 (, 20%
 , < 20%).

[6, . 9, 10, 16; 7, . 83-87, 126]

(I)

20%,
 62,76%.

?
 49,63% 62,76%

« ».

(49,63-62,76)%

L_{opt}

L_{opt}

(. . 1).

(n).

$$C_r = i \times t \times R_L, \quad (1)$$

R_L — ; t —

$$F(R_L, t) = 1 - e^{-\lambda R_L t}, \quad (2)$$

λ —

$$C_n = C_0 e^{-\lambda R_L t} \quad (3)$$

R_{L0} — , Δt_0 — i, $C_0 = i R_{L0} \Delta t_0$

$$C_n = i R_{L0} \Delta t_0 e^{-\lambda R_L t} \quad (4)$$

$$C(R_L, t) = C_r + C_n = i t R_L + i R_{L0} \Delta t_0 e^{-\lambda R_L t} \quad (5)$$

$$R_{L_{opt}}(t) = \frac{\ln(\lambda R_{L0} \Delta t_0)}{\lambda t}, \quad (6)$$

$$t^*(R_L) = \frac{\ln(\lambda R_{L0} \Delta t_0)}{\lambda R_L} \quad (7)$$

$$F(R_L, t) = 1 - e^{-\lambda R_L t} \quad (8)$$

[8].

$$p(R_L, t) = F'(R_L, t) = \lambda e^{-\lambda R_L t} = \lambda e^{-\lambda R_L t} - \lambda^2 R_L t e^{-\lambda R_L t} \quad (9)$$

t:

$$\{(t_1, R_{L1}), (t_2, R_{L2}), \dots, (t_N, R_{LN})\}$$

$$p(R_{Lk}, t_k) = \lambda e^{-\lambda R_{Lk} t_k} - \lambda^2 R_{Lk} t_k e^{-\lambda R_{Lk} t_k} = \lambda e^{-\lambda R_{Lk} t_k} (1 - \lambda R_{Lk} t_k) \quad (10)$$

$$FML = \prod_{k=1}^N p(R_{Lk}, t_k) = \prod_{k=1}^N \lambda e^{-\lambda R_{Lk} t_k} (1 - \lambda R_{Lk} t_k) = \lambda^N e^{-\lambda \sum_{k=1}^N R_{Lk} t_k} \prod_{k=1}^N (1 - \lambda R_{Lk} t_k) \quad (11)$$

$$(11), \quad \lambda \quad (11)$$

$$L = \ln FML = N \ln \lambda - \lambda \sum_{k=1}^N R_{Lk} t_k + \sum_{k=1}^N \ln(1 - \lambda R_{Lk} t_k) \quad (12)$$

$$L' = \frac{N}{\lambda} - \sum_{k=1}^N R_{Lk} t_k - \sum_{k=1}^N \frac{R_{Lk} t_k}{1 - \lambda R_{Lk} t_k} = \frac{N}{\lambda} - \sum_{k=1}^N \left(\frac{R_{Lk} t_k}{1 - \lambda R_{Lk} t_k} + R_{Lk} t_k \right) \quad (13)$$

$$\frac{N}{\lambda} - \sum_{k=1}^N \left(\frac{R_{Lk} t_k}{1 - \lambda R_{Lk} t_k} + R_{Lk} t_k \right) = 0 \quad (14)$$

λ root Mathcard.

$$f(\lambda) := \frac{N}{\lambda} - \sum_{k=1}^N \left(\frac{R_{Lk} t_k}{1 - \lambda R_{Lk} t_k} + R_{Lk} t_k \right)$$

$$\lambda := \text{root}(f(\lambda), \lambda)$$

$$= 0,6 \quad \lambda = 0,082, \quad R_{L0} = 50,933, \quad \Delta t_0 =$$

$$C(R_L, t) = itR_L + iR_{L0} \Delta t_0 e^{-2,07R_L t} \quad (15)$$

1

$$RL_{opt}(14,0) = 18,67$$

()	()	(.)
8,0	0,0	69
8,5	0,5	13
9,1	0,6	80
10,5	1,4	21
10,7	0,2	90
11,2	0,5	86
12,0	0,8	63
12,3	0,3	39
13,0	0,7	26
14,0	1,0	11
14,1	0,1	64
14,5	0,4	73
15,2	0,7	71
16,0	0,8	35
17,0	1,0	23

3 360

18%.

(15) R_L 2 () 3 ().

Lopt,

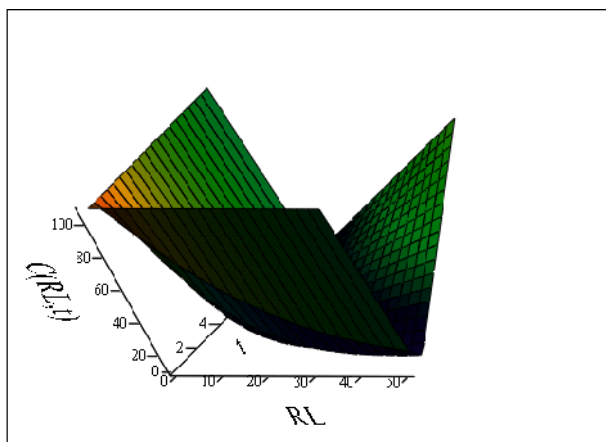
(±FD),

[9].

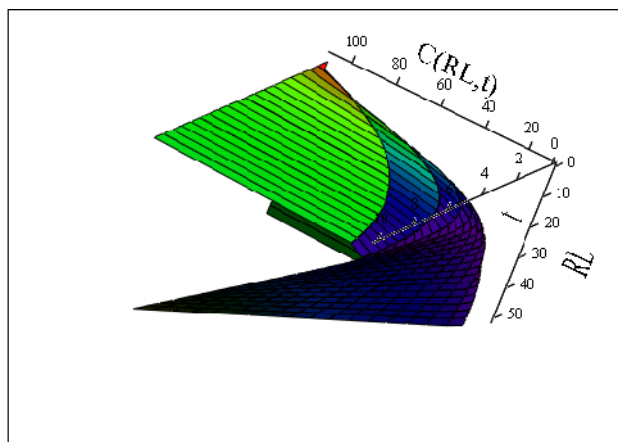
FD,

FD.

FD



C . 2.



C . 3.

R_L

. 4

. 1,

t ()

()

FD.

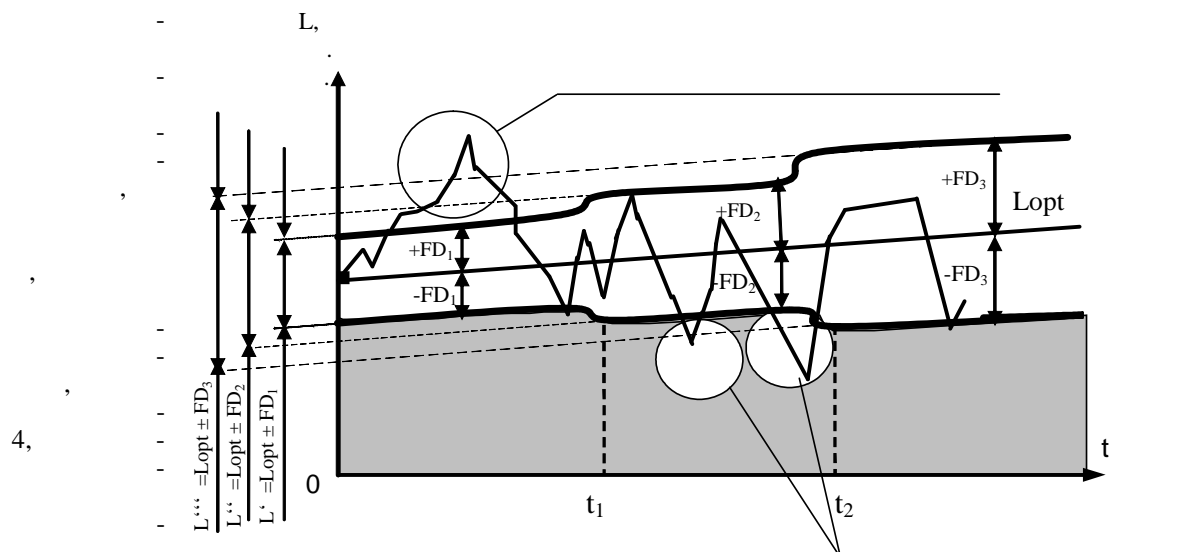
FD.

FD,

« »

FD.

(. 4).



- L' , L'' , L''' — 0 - t_1 , $t_1 - t_2$,
 - $t_2 - t_3$
 - 4.

FD

on-line,

1. — 2003. — 7-8. — .63-66.
2. // : , 2009. — .3. — « . — »./
- www.bankclub.ru/library.htm?id=21.
3. / . . // . — 2008. —
7. — .56-58.
4. / . . // . - -
5. (:) . — 2006. — .24. — .57-63. / . . // -
- 2006 . — : - , 2006. — .61-63. : . - , 6-9
6. []: / . . . — : .08.00.08 — , 2010. — 20 . [. . .]: / [. . . , 2011. — 136 . / . . -
7. ; — : , 2011. — 136 . / . . -
8. // () . — 2010. — .3. — .14-17. / . . -
9. // . — 2010. — 2. — .111-119. /