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1.

60

26,3

10,4

3,9

40,6

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. 1.

2.

8-10

1893-1897

« »

1980-

100

2
URL: <http://news.ngs.ru/more/50420481>

« »,

[7].

(*IRR*), (*NPV*), (*PI*), (*DPP*).

[5]: 1) ; 2) ; 3) ; 4) , *NPV* :

NPV () [4].

28

[3; 5].

»

«

: 4,3

4.

4 ∴

« ∴ « » 2016. ».

1

, %

			-	
	4,0	13,40	17,40	12,15
	4,0	10,68	14,68	9,35
	4,0	7,95	11,95	6,55

;

;

1 : ,

(-) : 1)

; 2)

; 3)

5

4%

(2014–2015 .),

(2012–2013 .).

5 .. URL:
http://www.cbr.ru/DKP/print.aspx?file=standart_system/rates_table_17.htm&pid=dkp&sid=ITM_49976.

6.

1984 .

8 . 7

1984 .

212,25 ⁸.

1,698

()

1,7

2

/

6 .: . – URL: http://www.gks.ru/free_doc/new_site/prices/potr/tab-potr1.htm .

7 .: . – URL: <http://novosibtoday.ru/index.php/mosty-novosibirska/73-pervyj-zheleznodorozhnyj-most> .

8 2017 .

12 2017 .

/2017-05 «

2017 .».

5,5	,								-
			1,2						-
2,07		1				16			
1,035									-
40,6									
25,6%			- 10,4						-
							64,8%		-
							- 9,6%		-
									-
									-
								(-
)								-
									[4].
									-
64,8	9,6%)						(25,6,
									-
							512		..
						- 529,9			
									-

:

[8], « »

()

:

$$(z - u - x) \times 0,2 + x = y, \quad (1)$$

$x -$;

$z -$; $u -$;

$y -$ ().

.2.

,

24,18 „ : -

10,298 , -0,952 , -

-1,872 . -0,759 , -

.

(. . 1).

.

,

100 . ,

.

[7],

86 . ./ , . .

	1	2	3	4	5	6	7	8
	4292	4522	4802	2721	2925	3443	3703	3977
	605	630	655	681	708	737	766	797
	2749	2749	2749	2749	2749	2749	2749	2749
	370,50	344,25	305,50	681,00	708,00	737,00	719,00	689,25

(81 .
 /)
 (100 . /)¹⁰.
 ,
 « »)
 11.
 100 . (30% ,
) (. 2).
 ,
 43–50 .¹²
 . 2

¹⁰ .: . – URL: <https://auto.ngs.ru/articles/2409703> .

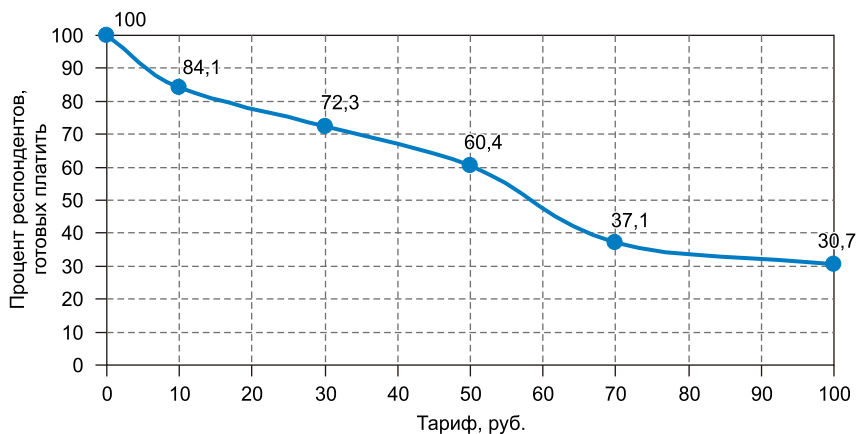
¹¹ , , -

2014 . 3960 . ,

¹² 2017 . 194 -

[2].

9	10	11	12	13	14	15	16	17	18	19	20
4280	4576	4875	5144	5442	5725	6037	6365	6729	7073	7453	7853
829	862	896	932	970	1009	1049	1091	1135	1180	1227	1276
2749	2749	2749	2749	2749	2749	2749	2749	2749	2749	2749	2749
653,50	620,75	588,50	566,25	539,25	517,25	489,25	459,75	423,75	394,00	357,75	319,00



. 2.

50 . 100 . -0,978.

$$= \frac{Q_1 - Q_0}{P_1 - P_0} \times \frac{P_1 + P_0}{Q_1 + Q_0}, \quad (2)$$

$Q_0 -$		$; Q_1 -$	-
	$; P_0 -$	$; P_1 -$	-
$= \frac{30,7 - 60,4}{100 - 50} \times \frac{100 + 50}{30,7 + 60,4} = -0,978.$			
			-1,
			-
			-
		100	.
50	..		
50	2		
		100	..
			-
			-
			-
			-
			-
50			-
	50		-
	:		
			-
			-
1	1296,2	11	1472,3
2	1365,6	12	1553,5
3	1450,2	13	1643,5
4	821,7	14	1729,0
5	883,4	15	1823,2
6	1039,8	16	1922,2
7	1118,3	17	2032,2
8	1201,1	18	2136,0
9	1292,6	19	2250,8
10	1382,0	20	2371,6

12- 25 144 3600 / 50 65,7

[1]:

$$PI = \frac{\sum_{t=1}^n CF_t / (1+r)^t}{\sum_{t=1}^n I_t / (1+r)^t}, \tag{3}$$

I_t - ; CF_t - ; n - ; r - ; t -

		, %	
	17,4	14,68	11,95
	<i>PI</i>		
	0,332	0,374	0,431
()	1,102	1,053	1,005
(-)	1,078	1,017	0,959

(3),

1

PI 1.*PI*

. 3.

$$s_i > s_{i+1}, \quad \frac{1}{n_k} a_{ik} > \frac{1}{n_k} a_{i+1k}, \quad (4)$$

 $s_i -$; $a_i -$; $n -$

		()	()
/	61718	3600	3600
,	30200,0	1488,0	1540,1
(/)/	2,04	2,42	2,34
.2		(50 .).	-
20		61718 / .	-
	30,2	.13	-
		,	-
	(. 4).		-
,			-
,	2,42 ¹	.	-
1		2,34	-
		.	-
		2,04.	-

13 .:

URL: <http://news.ngs.ru/more/50420481> .

40,6

25 32 1,5

14,

(,),

1., 2011. – . 1. – 80 .
2. // : . – 2017. – . 17, . 2. – . 114–126.
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4. // : . – 2012. – 2 (74). – . 161–187.
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DOI: 10.15372/REG20170410

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R.V. Bekker

**PROJECT FOR THE CONSTRUCTION OF THE FOURTH
OB RIVER MOTORWAY BRIDGE IN NOVOSIBIRSK:
ANALYSIS AND EVALUATION OF ALTERNATIVES
UNDER RISK**

The article estimates the expected efficiency of constructing a motorway bridge across the Ob River in Novosibirsk under risk. We analyze alternatives that require much lower financial contribution and provide an opportunity to improve the city traffic situation in a short time. We consider organizing piggy-back traffic across the Ob, which would involve vehicle carriage over railway bridges. Investment decisions are evaluated using indicators of a project's commercial and fiscal efficiency. The calculations have shown that the piggy-back bridge crossings are more economically viable than a new motorway bridge.

Keywords: investment project; investment; economic efficiency; motorway bridge; piggy-back traffic

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Information about the author

Bekker, Roman Voldemarovich (Novosibirsk, Russia) – student at Siberian Transport University (191, Dusya Kovalchuk st., Novosibirsk, 630049, Russia, e-mail: r.bekker@mail.ru).

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