CLO

(2015 年)

联合资信评估有限公司

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1.

Monte Carlo

，

1).

R

$p_t^{(R)} = P\{R \quad t \quad D\}\ t > 0, R ? \{AAA, AA, ..., CCC\}$

$p_t^{(R)}$ R t

$p_t^{(R)}$ R t

$p_t^{(R)}$

,)C¾ Eá1D_ #,FÀ4×Ë,Ò z&1s á êa 0q VÃcÈ¡F a ì•p >˜/j R

R

$(p_t^{(R)})_{t\ 0}$

H 1 1 $F_n(x_n)$

Copula C $H(x_1,...,x_n) = C(F_1(x_1),...,F_n(x_n))$ 1 1

$F_n(x_n)$ Copula

G n G Copula

$C(x_1,...,x_n) = G(G_1^{-1}(x_1),...,G_n^{-1}(x_n)) \quad x ? [0,1]^n$

R Copula

$C(x_1,...,x_n;R) = f_{n,R}(f^{-1}(x_1),...,f^{-1}(x_n))$

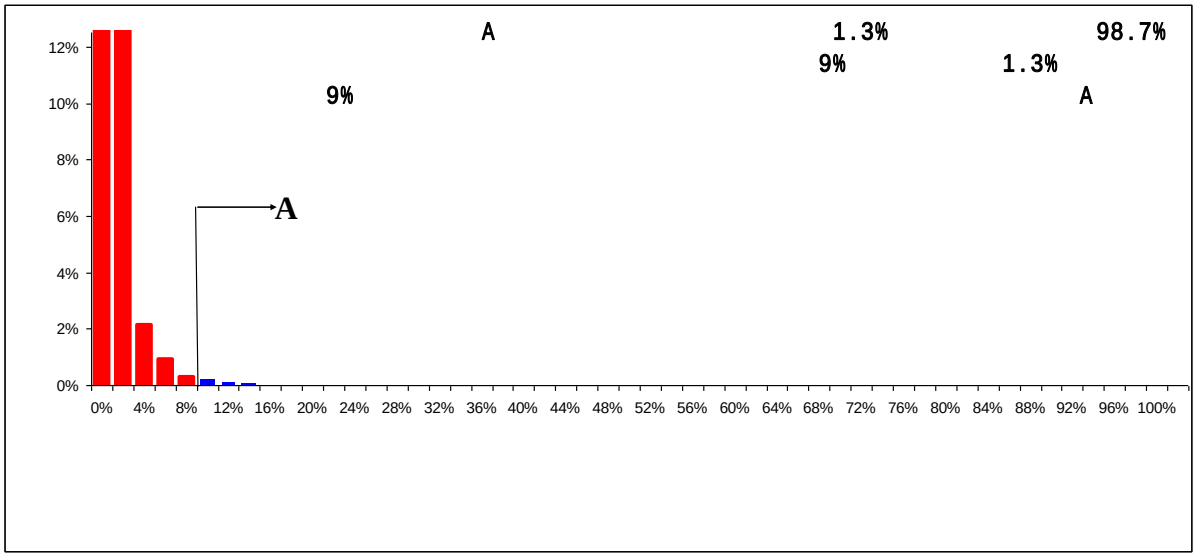
v R t Copula

$C(x_1,x_2,...,x_n;v,R) = T_{v,R}(t_v^{-1}(x_1),t_v^{-1}(x_2),...,t_v^{-1}(x_n))$

2).

[0 1]

Cholesky


A
1.3%
98.7%
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A
12%
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0%
0% 4% 8% 12% 16% 20% 24% 28% 32% 36% 40% 44% 48% 52% 56% 60% 64% 68% 72% 76% 80% 84% 88% 92% 96% 100%

1

CLO

1.

CLO

A

A

2.

3.

CLO

1.

CLO

CLO

2.

CLO

CLO

BDRs

1).

1

	1	**2**	**3**	**4**	**5**
1	15	30	30	15	30
2	40	20	20	10	10
3	20	20	20	20	20
4	25	25	25	25	-

40/20/20/10/10

20/20/20/20/20

2).

CLO

3).

- 2

4).

1.

2.

AAA AA

A BBB BB B CCC CC C AAA CCC

-

	AAA	
	AA	
	A	
	BBB	
	BB	
	B	
	CCC	
	CC	
	C	