Stochastic Processes : $dX_t = (\alpha + \beta X_t)dt + \sigma X_t^{\gamma} dW_t$

financial and actuarial models

models	Expressions	α	β	γ
Merton(1973)	$dX_t = \alpha dt + \sigma dW_t$		0	0
Vasicek(1977)	$dX_t = (\alpha + \beta X_t)dt + \sigma dW_t$			0
CIR SR(1985)	$dX_t = (\alpha + \beta X_t)dt + \sigma\sqrt{X_t}dW_t$			$\frac{1}{2}$
Brennan & Schwartz(1980)	$dX_t = (\alpha + \beta X_t)dt + \sigma X_t dW_t$			1
CEV	$dX_t = \beta X_t dt + \sigma X_t^{\gamma} dW_t$	0		
Dothan(1978)	$dX_t = \sigma X_t dW_t$	0	0	1
CIR VR(1980)	$dX_t = \sigma X_t^{\frac{3}{2}} dW_t$	0	0	$\frac{3}{2}$
Black & Scholes	$dX_t = \beta X_t dt + \sigma X_t dW_t$	0		1
Longstaff(1989)	$dX_t = (\alpha + \beta\sqrt{X_t})dt + \sigma\sqrt{X_t}dW_t$	**	**	**