

## RiskyBondPricer 설명서

DLL 경로를 찾을 수 없을 경우 1~3을 따라 세팅합니다.

이 모델은 신용위험이 존재하는 채권의 공정가격을 산출하는 모델입니다.

### 1. 자신의 엑셀 bit수 확인

파일>계정>엑셀정보

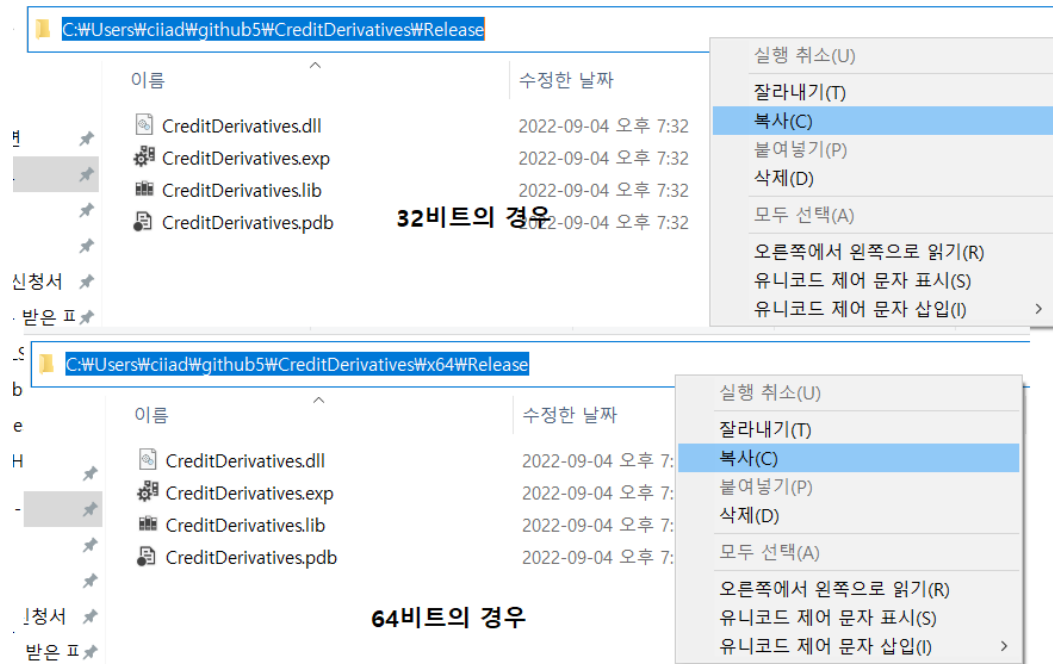


### 2. Alt + F11로 VBA창 키기

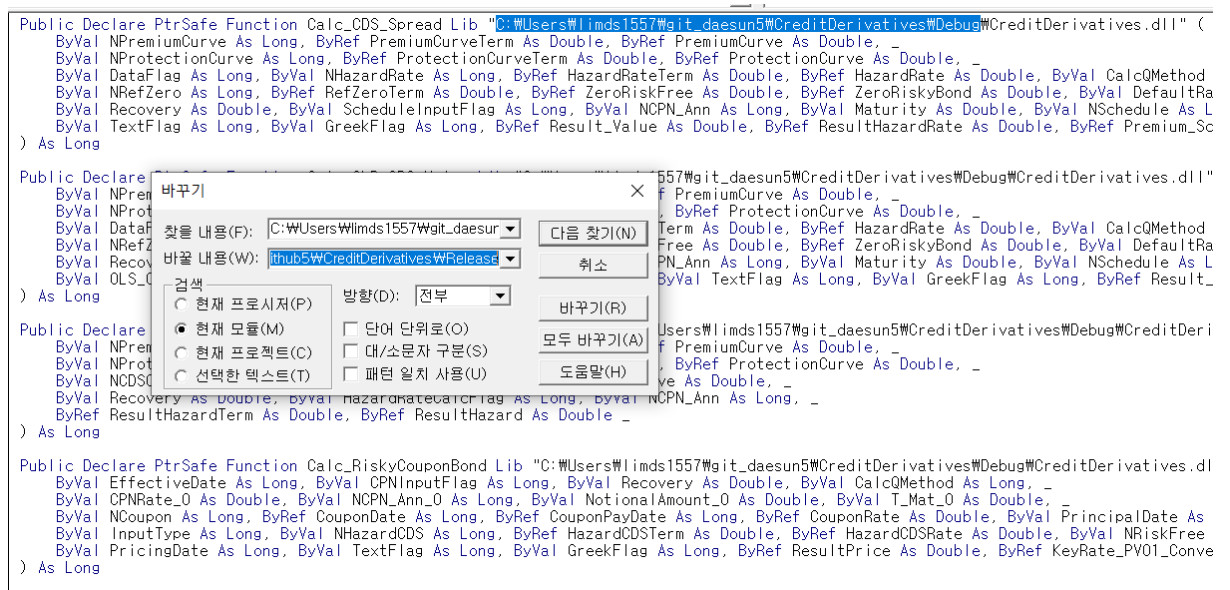
### 3. VBA 모듈 들어가서 다음 순서에 따라 dll의 디렉토리 바꾸기 (현재 dll이 설치되어있는 디렉토리로 바꾸기)

또한 엑셀이 64bit일 경우 Declare Function -> Declare PtrSafe Function으로 선언해야함

#### 3-1. 엑셀 비트수에 따라 경로 복사



### 3-2. Ctrl + F로 복사된 위치로 한꺼번에 바꾸자



### 3-3. (64비트의 경우 CreditDerivatives\Wx64\Release\CreditDerivatives.dll)

```

Public Declare PtrSafe Function Calc_CDS_Spread Lib "C:\Users\ciciad\github5\CreditDerivatives\Release\CreditDerivatives.dll" ( _
    ByVal NPremiumCurve As Long, ByRef PremiumCurveTerm As Double, ByRef PremiumCurve As Double, _
    ByVal NProtectionCurve As Long, ByRef ProtectionCurveTerm As Double, ByRef ProtectionCurve As Double, _
    ByVal DataFlag As Long, ByVal NHazardRate As Long, ByRef HazardRateTerm As Double, ByRef HazardRate As Double, ByVal CalcQMethod As Long, _
    ByVal NRefZero As Long, ByRef RefZeroTerm As Double, ByRef ZeroRiskFree As Double, ByRef ZeroRiskyBond As Double, ByVal DefaultRate As Double, _
    ByVal Recovery As Double, ByVal ScheduleInputFlag As Long, ByVal NCPN_Ann As Long, ByVal Maturity As Double, ByVal NSchedule As Long, _
    ByVal TextFlag As Long, ByVal GreekFlag As Long, ByRef Result_Value As Double, ByRef ResultHazardRate As Double, ByRef Premium_Spread As Double) As Long

Public Declare PtrSafe Function Calc_OLDS_CDS_Value Lib "C:\Users\ciciad\github5\CreditDerivatives\Release\CreditDerivatives.dll" ( _
    ByVal NPremiumCurve As Long, ByRef PremiumCurveTerm As Double, ByRef PremiumCurve As Double, _
    ByVal NProtectionCurve As Long, ByRef ProtectionCurveTerm As Double, ByRef ProtectionCurve As Double, _
    ByVal DataFlag As Long, ByVal NHazardRate As Long, ByRef HazardRateTerm As Double, ByRef HazardRate As Double, ByVal CalcQMethod As Long, _
    ByVal NRefZero As Long, ByRef RefZeroTerm As Double, ByRef ZeroRiskFree As Double, ByRef ZeroRiskyBond As Double, ByVal DefaultRate As Double, _
    ByVal Recovery As Double, ByVal ScheduleInputFlag As Long, ByVal NCPN_Ann As Long, ByVal Maturity As Double, ByVal NSchedule As Long, _
    ByVal OLS_CDS_Spread As Double, ByVal Protection_Position As Long, ByVal TextFlag As Long, ByVal GreekFlag As Long, ByRef Result_Value As Double, ByRef ResultHazardRate As Double, ByRef Premium_Spread As Double) As Long

Public Declare PtrSafe Function Calc_CDS_Spread Lib "C:\Users\ciciad\github5\CreditDerivatives\Release\CreditDerivatives.dll" ( _
    ByVal NPremiumCurve As Long, ByRef PremiumCurveTerm As Double, ByRef PremiumCurve As Double, _
    ByVal NProtectionCurve As Long, ByRef ProtectionCurveTerm As Double, ByRef ProtectionCurve As Double, _
    ByVal DataFlag As Long, ByVal NHazardRate As Long, ByRef HazardRateTerm As Double, ByRef HazardRate As Double, ByVal CalcQMethod As Long, _
    ByVal NRefZero As Long, ByRef RefZeroTerm As Double, ByRef ZeroRiskFree As Double, ByRef ZeroRiskyBond As Double, ByVal DefaultRate As Double, _
    ByVal Recovery As Double, ByVal ScheduleInputFlag As Long, ByVal NCPN_Ann As Long, ByVal Maturity As Double, ByVal NSchedule As Long, _
    ByVal TextFlag As Long, ByVal GreekFlag As Long, ByRef Result_Value As Double, ByRef ResultHazardRate As Double, ByRef Premium_Spread As Double) As Long

Public Declare PtrSafe Function Calc_OLDS_CDS_Value Lib "C:\Users\ciciad\github5\CreditDerivatives\Release\CreditDerivatives.dll" ( _
    ByVal NPremiumCurve As Long, ByRef PremiumCurveTerm As Double, ByRef PremiumCurve As Double, _
    ByVal NProtectionCurve As Long, ByRef ProtectionCurveTerm As Double, ByRef ProtectionCurve As Double, _
    ByVal DataFlag As Long, ByVal NHazardRate As Long, ByRef HazardRateTerm As Double, ByRef HazardRate As Double, ByVal CalcQMethod As Long, _
    ByVal NRefZero As Long, ByRef RefZeroTerm As Double, ByRef ZeroRiskFree As Double, ByRef ZeroRiskyBond As Double, ByVal DefaultRate As Double, _
    ByVal Recovery As Double, ByVal ScheduleInputFlag As Long, ByVal NCPN_Ann As Long, ByVal Maturity As Double, ByVal NSchedule As Long, _
    ByVal OLS_CDS_Spread As Double, ByVal Protection_Position As Long, ByVal TextFlag As Long, ByVal GreekFlag As Long, ByRef Result_Value As Double, ByRef ResultHazardRate As Double, ByRef Premium_Spread As Double) As Long

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#### 4. 발행정보 및 파라미터 입력하기

발행일	2018-10-15	쿠폰입력Flag가 0일 경우	Coupon Rate	3.80%
쿠폰입력Flag	1		연 이자지급횟수	2
RecoveryRate	0.4000		액면금액	10000
생존율계산방식	0		만기(년)	5.5

쿠폰입력Flag 1일 경우					HazardRate(or CDS Spread)		무위험금리	
쿠폰 스케줄		원금 스케줄			입력데이터유형	0	무위험 개수	8
쿠폰개수	12				입력 개수	8		
쿠폰일	CouponRate	쿠폰지급일	원금지급일	원금	Term	Rate/y (or Spread)	Term	무위험금리
2019-04-15	3.80%	2019-04-18	2024-10-15	10000	0.25	1.00%	0.25	1.25%
2019-10-15	3.80%	2019-10-18			0.50	1.20%	0.50	1.50%
2020-04-15	3.80%	2020-04-18			1.00	2.00%	1.00	1.75%
2020-10-15	3.80%	2020-10-18			2.00	2.20%	2.00	1.87%
2021-04-15	3.80%	2021-04-18			3.00	2.30%	3.00	1.99%
2021-10-15	3.80%	2021-10-18			5.00	2.40%	5.00	2.11%
2022-04-15	3.80%	2022-04-18			7.00	2.50%	7.00	2.23%
2022-10-15	3.80%	2022-10-18			10.00	2.60%	10.00	2.35%

#### 5. 가격계산 매크로 실행

가격계산

ResultCode	1
CleanPrice	10204.711
Accrued Interest	63.507
Dirty Price	10268.217