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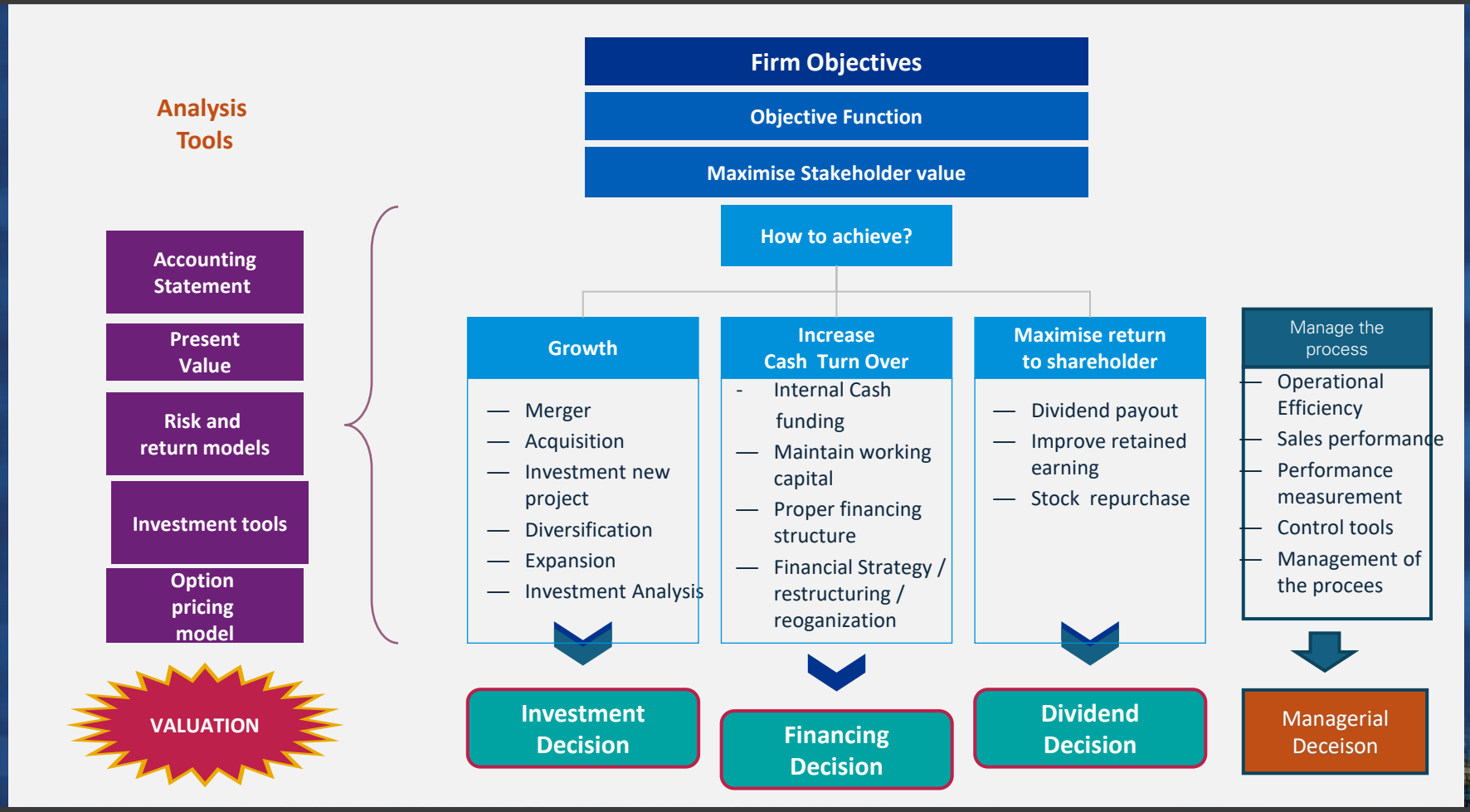
*IAI Future Leaders*
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# Manajemen Keuangan Lanjutan

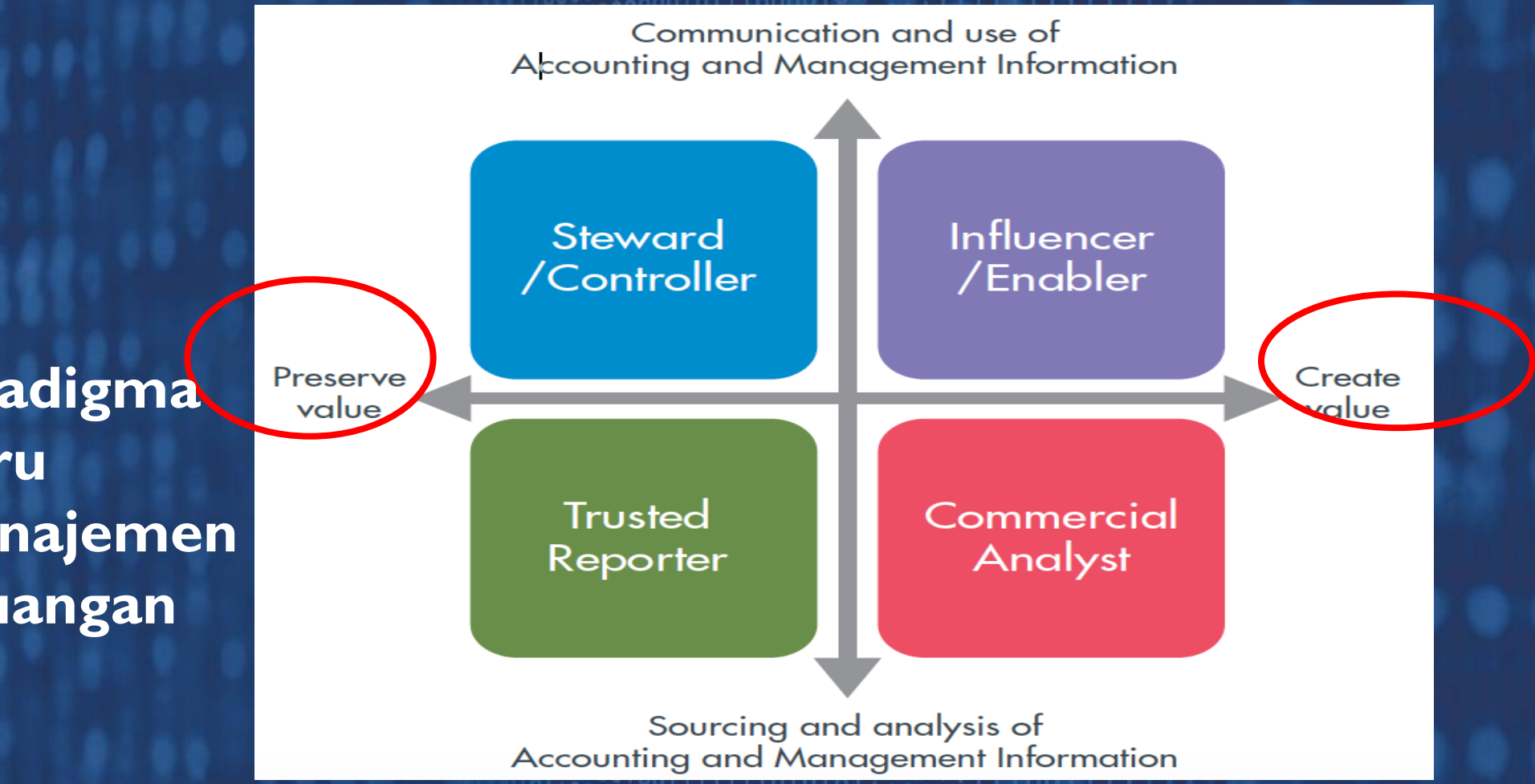
**Irwan Djaja**
**Dewan Sertifikasi Akuntan Profesional (DSAP)**
**Ikatan Akuntan Indonesia**

Be Number 1
Become a CA Indonesia
Become a Difference Maker

# I. Fungsi & Peran Manajemen



# Paradigma Baru Manajemen keuangan




Key DELIVERABLES : VALUE ENHANCEMENT

*Source: AICPA*

# 2. Perspektif Pemegang Saham




Growth

ROIC=
Dividen and stock repurchase

Social Responsibility, Community Service

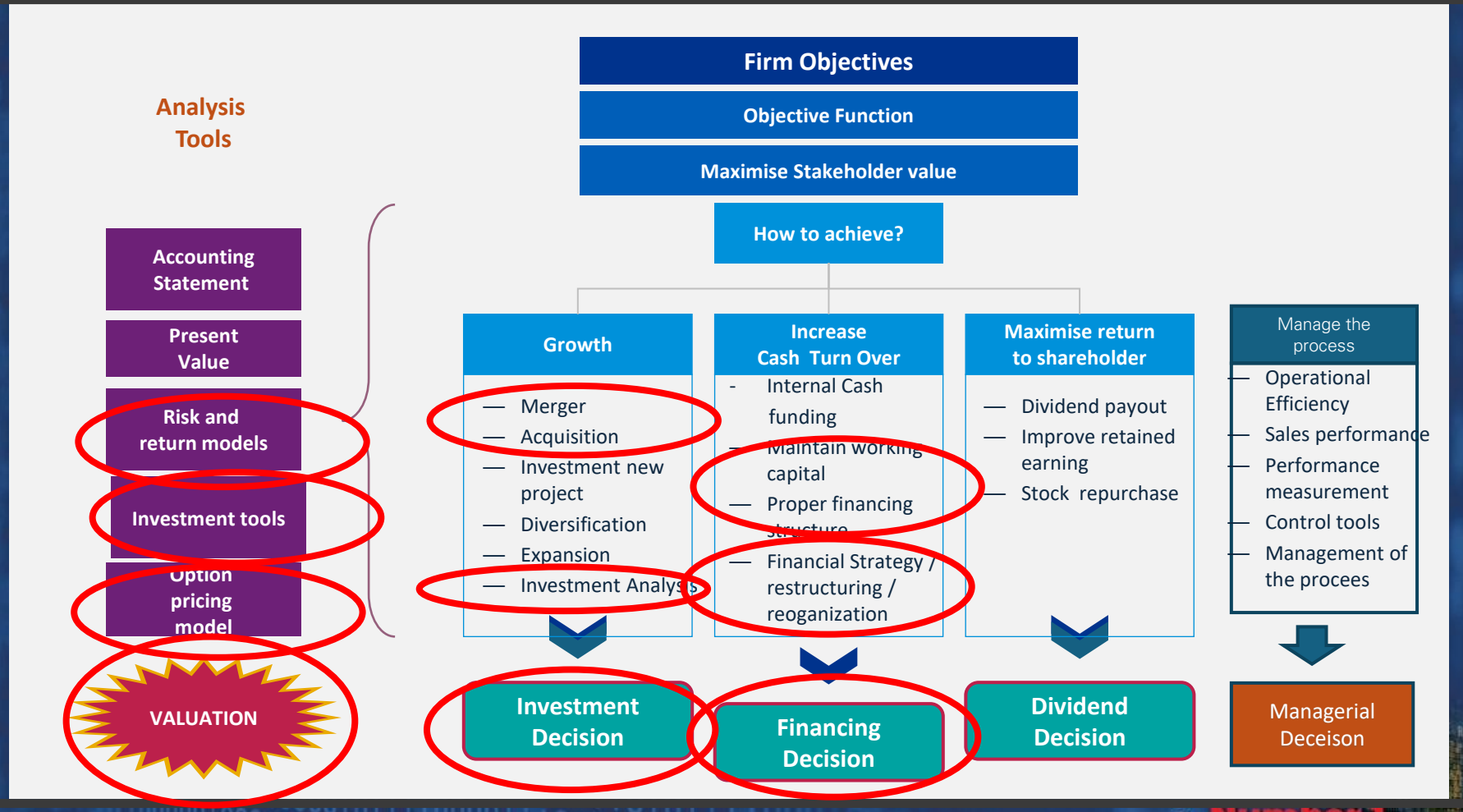
# TUJUAN PEMBELAJARAN



Tujuan yang ingin dicapai dari mata ujian ini adalah agar peserta ujian memiliki kompetensi sebagai berikut:

1. Menerapkan teknik penilaian investasi yang sesuai dengan mempertimbangkan faktor-faKtor lain yang mempengaruhi keputusan investasi. (LO-1)
2. Menerapkan penilaian bisnis (business valuation). (LO-2)
3. Mengidentifikasi kebutuhan modal usaha, menilai pilihan pembiayaan dan merekomendasikan metode pembiayaan yang relevan. (LO-3)
4. Mengevaluasi strategi keuangan dalam restrukturisasi, reorganisasi, dan kepailitan perusahaan (financial distress). (LO-4)
5. Menilai rencana dan proses merger, akuisisi, dan divestasi. (LO-5)
6. Memahami manajemen risiko keuangan terkait lindung nilai dan derivatif. (LO-6)
7. Memahami manajemen risiko keuangan terkait perdagangan internasional. (LO-7)

# I. Fungsi & Peran Manajemen



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| NO | TOPIK | SUBTOPIK | PENCAPAIAN PEMBELAJARAN | TUJUAN PEMBELAJARAN | LEVEL |
|---|---|---|---|---|---|
| **1.** | Penganggaran modal lanjutan | 1. Keputusan Investasi Lanjutan<br>2. Capital rationing<br>3. Investasi internasional<br>4. Real option<br>5. Isu keberlanjutan (sustainaibility issues) | a. Menganalisis kelemahan metode investasi, menghitung arus kas bersih, menghitung rata-rata tertimbang biaya modal, dan investasi pada aset finansial (surat berharga)<br>b. Menghitung investasi yang optimal dari capital rationing.<br>c. Menganalisis investasi yang dilakukan oleh investor asing.<br>d. Memahami dan menerapkan real option.<br>e. Proyeksi berdasarkan triple bottom line dan isu keberlanjutan. | LO-1 | 2 & 3 |

| NO | TOPIK | SUBTOPIK | PENCAPAIAN PEMBELAJARAN | TUJUAN PEMBELAJARAN | LEVEL |
|---|---|---|---|---|---|
| **2.** | Pengelolaan nilai perusahaan | 1. Tujuan perusahaan<br>2. Nilai perusahaan<br>3. Etika dan tata kelola | a. Menjelaskan dan mengevaluasi tujuan perusahaan dalam memaksimalkan kekayaan pemegang saham.<br>b. Menjelaskan dan mengevaluasi pembentukan dan penciptaan nilai perusahaan.<br>c. Menjelaskan dan mendiskusikan tiga langkah dalam meningkatkan nilai perusahaan.<br>d. Menghitung nilai dengan menggunakan arus kas.<br>e. Menganalisis nilai dari pemegang saham.<br>f. Menganalisis nilai perusahaan menggunakan *real option pricing model.*<br>g. Memahami manajemen berbasis laba.<br>h. Menghitung laba ekonomi.<br>i. Menghitung nilai tambah ekonomi (NITA)/ *economic value added* (EVA).<br>j. Menerapkan etika dan tata kelola terkait dengan nilai-nilai perusahaan. | LO-2 | 1 & 2 |

| NO | TOPIK | SUBTOPIK | PENCAPAIAN PEMBELAJARAN | TUJUAN PEMBELAJARAN | LEVEL |
|---|---|---|---|---|---|
| **3.** | Sumber Keuangan | 1. Kebijakan struktur modal<br>2. Biaya modal | a. Efisiensi pasar uang.<br>b. Pasar uang internasional.<br>c. Menjelaskan teori struktur modal.<br>d. Menghitung dan menginterpretasikan biaya modal.<br>e. Menghitung dan menjelaskan biaya ekuitas seperti *Capital asset pricing model* (CAPM), *Arbitrage Pricing Theory* (APT).<br>f. Menghitung dan menjelaskan biaya utang.<br>g. Menggabungkan biaya modal atau *weighted average of capital* (WACC). | LO-3 | 1 & 2 |

| NO | TOPIK | SUBTOPIK | PENCAPAIAN PEMBELAJARAN | TUJUAN PEMBELAJARAN | LEVEL |
|---|---|---|---|---|---|
| **4.** | *Financial distress* | *1. Financial distress* | a. Menjelaskan definisi dari *financial distress*.<br>b. Menjelaskan dan menganalisis tindakan yang dilakukan perusahaan ketika mengalami situasi *financial distress.*<br>c. Menjelaskan definisi dari restrukturisasi, reorganisasi, dan kepailitan.<br>d. Menganalisis pilihan yang tepat antara *private workout* atau kepailitan.<br>e. Mengidentifikasi *prepackaged bankruptcy* (kombinasi *private workout* dan *legal bankruptcy*).<br>f. Memahami opsi Penundaan Kewajiban Pembayaran Utang (PKPU) atau kepailitan.<br>g. Menerapkan prediksi kebangkrutan perusahaan menggunakan *Z-score model*. | LO-4 | 1, 2 & 3 |

| NO | TOPIK | SUBTOPIK | PENCAPAIAN PEMBELAJARAN | TUJUAN PEMBELAJARAN | LEVEL |
|---|---|---|---|---|---|
| **5.** | Merger, akuisisi, dan divestasi | 1. Akuisisi<br>2. Konsep sinergi<br>3. Sumber sinergi<br>4. Merger<br>*5. Leverage Buyout*<br>6. Divestasi | a. Menjelaskan bentuk dasar dari akuisisi.<br>b. Menjelaskan dampak akuisisi terhadap keuangan.<br>c. Menganalisis dampak perpajakan dari akuisisi.<br>d. Menerapkan akuntansi akuisisi.<br>e. Menjelaskan konsep dari sinergi.<br>f. Menjelaskan sumber dari sinergi.<br>g. Menghitung nilai kini (NPV) dari proses merger.<br>h. Memberikan penilaian apakah merger memberikan nilai tambah.<br>i. Menjelaskan dan mengevaluasi pengambilalihan perusahaan (*friendly versus hostile takeovers*).<br>j. Menjelaskan *going private* dan *leverage buyout*.<br>k. Menjelaskan dan menerapkan konsep dari divestasi. | LO-5 | 1, 2, & 3 |

| NO | TOPIK | SUBTOPIK | PENCAPAIAN PEMBELAJARAN | TUJUAN PEMBELAJARAN | LEVEL |
|---|---|---|---|---|---|
| **6.** | Manajemen risiko keuangan: lindung nilai dan derivatif | 1. Konsep lindung nilai<br>2. Konsep derivatif<br>*3. Option*<br>*4. Forward* dan *future*<br>*5. Swap* | a. Menjelaskan konsep lindung nilai.<br>b. Memahami dan mendeskripsikan konsep derivatif.<br>c. Menerapkan derivatif dalam lindung nilai.<br>d. Menjelaskan definisi dari kontrak opsi.<br>e. Menjelaskan dan mengaplikasikan *call option*.<br>f. Menjelaskan dan menerapkan *put option*.<br>g. Menjelaskan dan mengevaluasi kontrak opsi kombinasi (*put* dan *call*).<br>h. Menilai kontrak opsi dengan model *binomial* dan *black scholes.*<br>i. Menggunakan formula opsi keuangan.<br>j. Memahami modal saham dan utang dalam suatu kontrak opsi.<br>k. Menerapkan kontrak opsi dalam pengambilan keputusan perusahaan.<br>l. Menjelaskan dan menghitung kontrak *forward* dan kontrak *futures*.<br>m. Menjelaskan dan menghitung kontrak *swap*. | LO-6 | 1 & 2 |

| NO | TOPIK | SUBTOPIK | PENCAPAIAN PEMBELAJARAN | TUJUAN PEMBELAJARAN | LEVEL |
|---|---|---|---|---|---|
| **7.** | Manajemen risiko keuangan: perdagangan internasional | 1. Pasar uang<br>2. Pasar valuta asing<br>3. Kondisi paritas internasional<br>4. Pengelolaan risiko valuta asing | a. Efisiensi pasar uang.<br>b. Memahami perluasan geografis pasar valuta asing.<br>c. Memahami dan menganalisis fungsi pasar valuta asing.<br>d. Menyebutkan pelaku pasar valuta asing.<br>e. Memahami dan menganalisis transaksi pasar valuta asing antar bank.<br>f. Menghitung harga dan nilai tukar.<br>g. Menghitung tingkat suku bunga dan nilai tukar.<br>h. Memahami dan mengevaluasi *forward rate* sebagai prediktor tidak bias dari *future spot rate*.<br>i. Menghitung harga, tingkat suku bunga, dan keseimbangan pasar.<br>**Eksposur transaksi:**<br>a. Menjelaskan tipe transaksi eksposur mata uang asing.<br>b. Mengevaluasi syarat dilakukan lindung nilai.<br>c. Menghitung eksposur transaksi.<br>d. Menganalisis eksposur transaksi dan manajemen perdagangan.<br>e. Menerapkan manajemen risiko ke dalam eksposur transaksi. | LO-7 | 1, 2, & 3 |

| NO | TOPIK | SUBTOPIK | PENCAPAIAN PEMBELAJARAN | TUJUAN PEMBELAJARAN | LEVEL |
|---|---|---|---|---|---|
| **(LANJ**<br><br>**7.** | Manajemen risiko keuangan: perdagangan internasional | 1. Pasar uang<br>2. Pasar valuta asing<br>3. Kondisi paritas internasional<br>4. Pengelolaan risiko valuta asing | **Eksposur translasi:**<br>a. Memahami eksposur translasi<br>b. Mengaplikasikan metode translasi.<br>c. Membandingkan eksposur translasi dan eksposur operasi.<br>d. Menerapkan manajemen eksposur translasi.<br>**Eksposur ekonomi/operasi:**<br>a. Menyebutkan garis besar karakteristik eksposur operasi.<br>b. Memahami dan mendiskusikan manajemen stratejik eksposur operasi.<br>c. Menjelaskan dan menganalisis manajemen proaktif eksposur operasi.<br>d. Menjelaskan dan menganalisis pendekatan kontraktual: lindung nilai terhadap transaksi yang tidak dapat dilindungi. | LO-7 | 1, 2, & 3 |

# KEPUTUSAN INVESTASI

## Topik 2

## 1. Keputusan Investasi



- **Keputusan pengalokasian dana dalam asset jangka panjang sejalan dengan tujuan strategis perusahaan.**
- **Keputusan Organik growth (Capital Budgeting – maintenance, expansion, diversification) dan Non Organic growth (Akusisi)**
- **Konsep : Pengalokasian dana dalam jumlah yang besar pada saat sekarang (initial outlay) dengan manfaat di masa yang akan datang (future free cash flow)**
- **Mempertimbangkan keseluruhan arus kas**
- **Secara umum arus kas (initial outlay) di awal lebih diharapkan dibandingkan arus kas free di belakang**
- **Memilih proyek yang bersifat independent atau mutually exclusive**

## 2. Teknik Evaluasi Penganggaran Modal

- Nilai Kini Bersih ( *Net Present Value*)
- Periode Pengembalian (*Payback Period*)
- Indek Profitabitas (*Profitability Index*)
- Rata-rata Imbal Hasil Akuntansi (*Average Accounting Return*)
- Imbal Hasil Internal (*Internal Rate of Return*)

## 3. Net Present Value (NPV)

- Teknik NPV menggunakan prosedur valuasi diskonto arus kas (*discounted cash flow valuation*)
- Langkah:
  1. Estimasi arus kas (kas keluar, kas masuk, periode, besaran)
  2. Estimasi imbal hasil yang diharapkan
  3. Menghitung nilai diskonto arus kas
  4. Penilaian/ keputusan → NPV positif, layak
- **NPV = *PV of Net Cash Flow - PV of Investment***

# 3. Net Present Value (NPV)

## Contoh Penghitungan NPV

| | Th 0 | Th 1 | Th 2 | Th 3 | Th 4 | Th 5 |
|---|---|---|---|---|---|---|
| | dalam jutaan rupiah | | | | | |
| Investasi awal | -35000 | | | | | |
| Pendapatan tahunan | | 20000 | 20000 | 20000 | 20000 | 20000 |
| Biaya tahunan | | -12000 | -12000 | -12000 | -12000 | -12000 |
| Arus kas bersih | | 8000 | 8000 | 8000 | 8000 | 8000 |
| Nilai residu | | | | | | 2500 |
| Arus kas bersih | -35000 | 8000 | 8000 | 8000 | 8000 | 10500 |

**Misalnya tingkat diskonto = 10% per tahun**

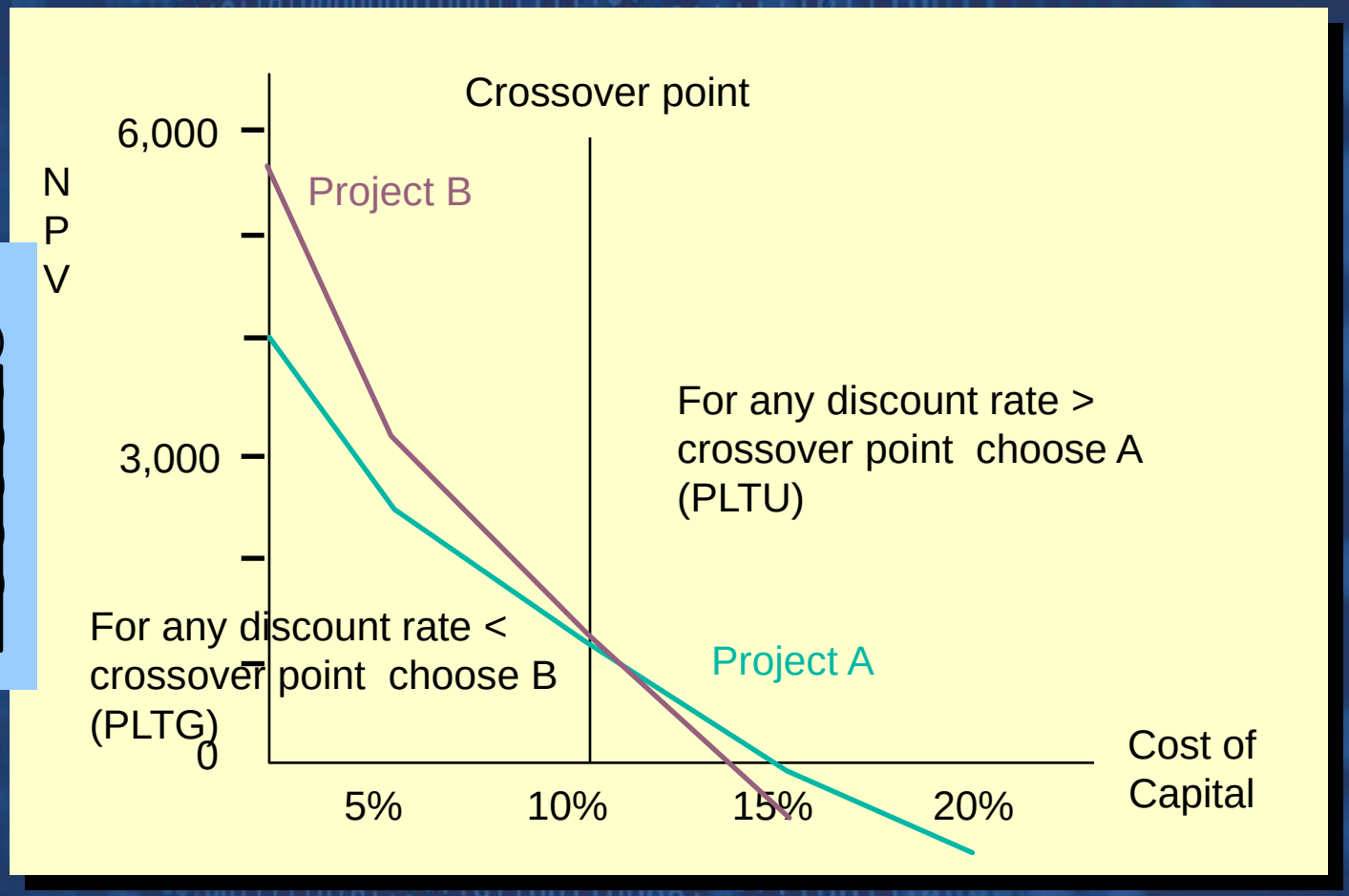
**NPV = $[8000/(1,1)^1] + [8000/(1,1)^2] + [8000/(1,1)^3] + [8000/(1,1)^4] + [10500/(1,1)^5] - [35000/(1,1)^0]$**

**NPV = 3121,35**

# 3. Net Present Value (NPV)

- Bandingkan NPV dari dua proyek untuk required rates yang berbeda

| | PROJECT | |
|---|---|---|
| Time | PLTU (A) | PLTG (B) |
| 0 | (10,000.) | (10,000.) |
| 1 | 3,500 | 500 |
| 2 | 3,500 | 500 |
| 3 | 3,500 | 4,600 |
| 4 | 3,500 | 10,000 |



## 4. Internal Rate of Return (IRR) *

- Teknik IRR melakukan valuasi kelayakan investasi dengan menentukan tingkat imbal hasil yang menguntungkan → IRR adalah tingkat imbal hasil dimana NPV investasi = 0

$$IRR = i_1 + [NPV_1 / (NPV_1 - NPV_2)] * (i_2 - i_1)$$

- Apabila IRR lebih besar dari tingkat imbal hasil yang diinginkan → layak

# Contoh Penghitungan IRR

| | Th 0 | Th 1 | Th 2 | Th 3 | Th 4 | Th 5 |
|---|---|---|---|---|---|---|
| | dalam jutaan rupiah | | | | | |
| Investasi awal | -35000 | | | | | |
| Pendapatan tahunan | | 20000 | 20000 | 20000 | 20000 | 20000 |
| Biaya tahunan | | -12000 | -12000 | -12000 | -12000 | -12000 |
| Arus kas bersih | | 8000 | 8000 | 8000 | 8000 | 8000 |
| Nilai residu | | | | | | 2500 |
| Arus kas bersih | -35000 | 8000 | 8000 | 8000 | 8000 | 10500 |

**IRR = 10% + [(3121,35 / 10061,17) * (15% -10%)**

**IRR = 11,55%**

**Dengan, $i_1$ = 10% per tahun → NPV = 3121,35**
**Dengan, $i_2$ = 15% per tahun → NPV = -6939,82**

# Contoh Penghitungan Payback Period

## 5. Payback Period

| | | |
|---|---|---|
| Investasi awal | -35000 | |
| Arus kas bersih th 1 | 8000 | Belum tertutup |
| Arus kas bersih th 2 | 8000 | Belum tertutup |
| Arus kas bersih th 3 | 8000 | Belum tertutup |
| Arus kas bersih th 4 | 8000 | Belum tertutup |
| Arus kas bersih th 5 | 8000 | |
| | 3000 | |

Dalam 4 tahun belum tertutup, namun pada tahun ke 5 tinggal 3000 yang belum tertutup sedangkan arus kas bersih operasional yang dihasilkan tahun ke 5 sebesar 8000 sehingga pada tahun ke 5 butuh waktu penutupan investasi = (3000/8000 * 12) = 4,5 bulan.
Payback Period = 4 tahun 4,5 bulan

# 6. Profitability Index (PI)

- Teknik PI diskonto arus kas masuk terhadap nilai investasi → sering juga disebut *benefit-cost ratio* (BC ratio)

- Langkah:
  1. Estimasi arus kas (kas keluar, kas masuk, periode, besaran)
  2. Estimasi imbal hasil yang diharapkan
  3. Menghitung nilai diskonto arus kas
  4. Penilaian/ keputusan → PI > 1, layak

- **PI = *PV of Net Cash Flow / PV of Investment***

# 6. Profitability Index (PI)

## Contoh Penghitungan PI

| | Th 0 | Th 1 | Th 2 | Th 3 | Th 4 | Th 5 |
|---|---|---|---|---|---|---|
| | dalam jutaan rupiah | | | | | |
| Investasi awal | -35000 | | | | | |
| Pendapatan tahunan | | 20000 | 20000 | 20000 | 20000 | 20000 |
| Biaya tahunan | | -12000 | -12000 | -12000 | -12000 | -12000 |
| Arus kas bersih | | 8000 | 8000 | 8000 | 8000 | 8000 |
| Nilai residu | | | | | | 2500 |
| Arus kas bersih | -35000 | 8000 | 8000 | 8000 | 8000 | 10500 |

**Misalnya tingkat diskonto = 10% per tahun**

**PI = {[8000/(1,1)$^1$] + [8000/(1,1)$^2$] + [8000/(1,1)$^3$] + [8000/(1,1)$^4$] + [10500/(1,1)$^5$]} / [35000/(1,1)$^0$]**

**PI = 1,089**

## 7. Average Accounting Return (AAR)

- Teknik AAR melakukan valuasi kelayakan investasi menggunakan dasar laba akuntansi
- Langkah:
  1. Estimasi laba rugi tahunan
  2. Estimasi nilai buku investasi
  3. Penilaian/ keputusan → AAR > imbal hasil yang diharapkan
- **AAR = Rerata Net Income / Rerata Nilai buku Investasi**

# 7. Average Accounting Return (AAR)

## Contoh Penghitungan AAR

**Nilai Investasi Rp 35 M umur ekonomis 5 th penyusutan metode garis lurus, nilai residu Rp. 2,5M. Estimasi L/R tahunan sbb:**

| | Th 0 | Th 1 | Th 2 | Th 3 | Th 4 | Th 5 |
|---|---|---|---|---|---|---|
| | dalam jutaan rupiah | | | | | |
| Pendapatan tahunan | | 20000 | 20000 | 20000 | 20000 | 20000 |
| Biaya operasional tahunan | | -15000 | -15000 | -15000 | -15000 | -15000 |
| Laba Operasional (NI) | | 5000 | 5000 | 5000 | 5000 | 5000 |
| Biaya Penyusutan | | -6500 | -6500 | -6500 | -6500 | -6500 |
| Nilai Buku Investasi | 35000 | 28500 | 22000 | 15500 | 9000 | 2500 |

**Rerata Net Income = (5000 + 5000 + 5000 + 5000 + 5000) /5 = 5000**
**Rerata Nilai Buku Investasi = (35000 + 28500 + 22000 + 15500 + 9000 + 2500) / 6**
**= 18750**
**AAR = 5000/ 18750 = 0,2667**

# 8. Return On Investment

One additional tool to measure return on investment is CFROI, where return on investment is measured against is Net Operating Cash Flow

Net Operating cash flow = EBIT * (1-tax) + depreciation

CFROI = Net Operating cash flow/ Investment Outlay

Example:

If the investment outlay is USD 100 mio

Depreciation is for 5 years , tax rate 25%

If the company expects min CFROI of 30%

How much the min EBIT

CFROI = (EBIT *(1-25%) + 20 / 100

EBIT = 66.7 mio

# KEPUTUSAN PENDANAAN

Topik 3

**Utang, ekuitas atau Quasi Ekuitas ?**

**Utang jangka pendek atau panjang**

**Tingkat imbal hasil yang diinginkan/ dinikmati atas modal (debt dan Ekuitas)**

## I Cost of Debt (Cod)

- **Bagi investor utang**
  **Cod menggambarkan tingkat imbal hasil yang diinginkan/ dinikmati atas uang yang dipinjamkan**
- **Bagi perusahaan**
  **Cod menggambarkan pengorbanan untuk dapat menggunakan sumber dana yang dipinjam**

**Sumber Dana dengan penerbitan Obligasi**

**Cb = ( Coupon + Discount atau premium)/ Rerata Harga Obligasi**

**Cb after taxes = Cb X (1- tax rate)**

# Contoh Menghitung Cost of bond

| | | |
|---|---|---|
| Obligasi Nominal | = | Rp. 1000000 |
| Kupon | = | 10% dibayar tahunan |
| Jatuh tempo | = | 10 tahun |
| Harga penjualan | = | Rp. 950000 |
| Biaya Obligasi …..?? | | |

Cb = [100000 + (50000/10)] / [(950000+1000000)/2]

Cb = 10,77%

Jika pajak korporasi 20%

Cb sesudah pajak = 10,77% * (1-20%) = 8,62%

## 2. Cost of Equity (Coe) *

- **Bagi investor ekuitas**
  **Coe menggambarkan tingkat imbal hasil yang diinginkan/ dinikmati atas uang yang diinvestasikan**
- **Bagi perusahaan**
  **Coe menggambarkan pengorbanan untuk dapat menggunakan sumber dana yang diterima**

**Sumber Dana dengan penerbitan Saham Preferen**
**Cp = Dividen/ Harga pasar saham preferen**

**Sumber Dana dengan penerbitan Saham biasa**
**Ce = (D1/Harga saham) + tingket pertumbuhan dividen**
**Dimana D1 = D0 * (1+g)**

# Contoh Menghitung Cost of Equity ^

Saham preferen Nominal = Rp. 1000
dividen = 10% dibayar tahunan
Harga jual = Rp. 1200
Biaya saham prefere …??

Cp = 100/ 1200 = 8,33%

Saham biasa Nominal = Rp. 1000
Dividen saat ini = Rp.100
Pertumbuhan dividen = 5%
Harga jual = Rp. 1200
Biaya saham biasa …??

Cs = [(100 *(1.05))/(1200)] + 5%
= 13,75%

## 3. Weighted Average Cost of Capital (WACC)

**Rerata biaya modal dari seluruh komponen sumber dana yang digunakan perusahaan**

**WACC = Proporsi setiap sumber dana X biaya modal setiap elemen sumber dana**

# 5. Weighted Average Cost of Capital (WACC)



# Contoh Menghitung WACC

| Sumber Dana | Jumlah | Proporsi | Biaya modal |
|---|---|---|---|
| Obligasi | Rp. 1000000 | 16,67% | 8% setelah pajak |
| Saham Preferen | Rp. 2000000 | 33.33% | 10% |
| Saham biasa | Rp. 3000000 | 50% | 15% |

**WACC = [16,67% * 8%] + [33,33% * 10%] + [50% * 15%]**

**= 12,167%**

# MANAJEMEN RISIKO DALAM INVESTASI

Topik 4

# 2. Konsep Risk-Return

## RISIKO VS RETURN




10

# 3. Jenis Risiko

Sumber: Dimitris N. Chorafas, 2008

## Strategic Risks

### External Factors Risks
- Industry Risk
- Economy Risk
- Competitor Risk
- Legal and Regulatory Change Risk
- Customer Needs and Wants Risk

### Internal Factors Risks
- Reputation Risk
- Strategic Focus Risk
- Parent Company Support Risk
- Patent/Trademark Protection Risk

## Operations Risks

### Process Risks
- Supply Chain Risk
- Customer Satisfaction Risk
- Cycle Time Risk
- Process Execution Risk

### Compliance Risks
- Environmental Risk
- Regulatory and Government Compliance Risk
- Policy and Procedures Risk
- Litigation Risk

### People Risks
- Human Resources Risk
- Employee Turnover Risk
- Performance Incentive Risk
- Training Failure Risk

## Finance Risks

### Treasury Risks
- Interest Rate Risk
- Foreign Exchange Risk
- Capital Availability Risk

### Credit Risks
- Capacity Risk
- Collateral Risk
- Concentration Risk
- Default Risk
- Settlement Risk

### Trading Risks
- Commodity Price Risk
- Duration Risk
- Measurement Risk

## Information and Technology Risks

### Financial Risks
- Accounting Standards Risk
- Budgeting Risk
- Financial Reporting Risk
- Taxation Risk
- Regulatory Reporting Risk

### Operational Risks
- Pricing Risk
- Performance Measurement Risk
- Employee Safety Risk

### Technological Risks
- Information Access Risk
- Business Continuity Risk
- Virus and Improper Systems Access Risk
- Availability Risk
- Infrastructure Risk

# 4. Perlunya penerapan manajemen risiko

## Proses Penerapan Manajemen Risiko




*seluruh faktor risiko yang bersifat material*

*Perlu dukungan Sistem Informasi Manajemen untuk menghasilkan laporan yang akurat, informatif & tepat waktu mengenai kondisi keuangan, kinerja aktivitas fungsional dan eksposur risiko.*

# RISIKO DAN IMBAL HASIL

Topik 5

# 1. Konsep Imbal Hasil

- Imbal Hasil Investasi (Return)
- *Tingkat Imbal Hasil (Rate of return)*
- Imbal Hasil Realisasi (realized rate of return)
- Total Return (TR)
- Return Relative (RR)
- Cumulative Wealth Index (CWI)
- Imbal hasil ekspektasi (Expected Rate of Return)

## 3. Mengukur Imbal Hasil Ekspektasi → AVERAGE

| *ARITHMETIC MEAN* | *GEOMETRIC MEAN* |
|---|---|
| $AM_{it} = [\sum_{t=1}^{n} R_{it}] / n$ | $GM_{in} = [(1+TR1)(1+TR2)\ldots(1+TRn)]^{1/n} - 1$ |

# Mengukur Imbal Hasil Ekspektasi

→ Berdasarkan Probabilitas

## *ARITHMETIC MEAN*

$AM_{it} = [\sum_{t=1}^{n} R_{it}] / n$

atau

$E(R_i) = \sum_{i=1}^{n} [TR_i \times P_{TRi}]$

| | | |
|---|---|---|
| $E(R_i)$ | = | *Expected rate of return* investasi i |
| $TR_i$ | = | Kemungkinan *rate of return* ke n dari investasi i |
| $P_{Ri}$ | = | Probabilitas terjadinya *rate of return* ke n dari investasi i |
| n | = | Banyaknya kemungkinan yang terjadi. |

| Kondisi Ekonomi | Probabilitas (P) | TR | P * TR |
|---|---|---|---|
| Bearish | 0,20 | -0,053 | -0,0106 |
| Fair | 0,50 | 0,120 | 0,0600 |
| Bullish | 0,30 | 0,300 | 0,0900 |
| | | Exp.return --> | 0,1394 |

# 4. Mengukur Risiko Keuangan *

→ **STANDAR DEVIASI**

- Dengan menggunakan data historis, rumus standar deviasi adalah;

$$\sigma_i = \sqrt{\sum_{t=1}^{n} [R_{it} - E(R_i)]^2 / (n-1)}$$

- Dengan menggunakan distribusi probabilitas, rumus standar deviasi adalah;

$$\sigma_i = \sqrt{\sum_{i=1}^{n} [R_i - E(R_i)^2 \text{ X } P_i]}$$

| Periode (n) | TR | (TR-Avg)^2 |
|---|---|---|
| 1 | - | |
| 2 | 0,1184 | 0,0034 |
| 3 | 0,0655 | 0,0000 |
| 4 | 0,0781 | 0,0003 |
| 5 | 0,0745 | 0,0002 |
| 6 | 0,0862 | 0,0007 |
| 7 | 0,0383 | 0,0005 |
| 8 | -0,0609 | 0,0147 |
| 9 | 0,0735 | 0,0002 |
| 10 | 0,0704 | 0,0001 |
| average | 0,0604 | |
| sum | | 0,0025 |
| Stdev | | 0,05005 |

| Kondisi Ekonomi | Probabilitas (P) | TR | (TR-Exp)^2 | P*(TR-Exp)^2 |
|---|---|---|---|---|
| Bearish | 0,20 | -0,053 | 0,0370 | 0,0074 |
| Fair | 0,50 | 0,120 | 0,0004 | 0,0002 |
| Bullish | 0,30 | 0,300 | 0,0258 | 0,0077 |
| | Exp.ret | 0,1394 | | |
| | stdev | | 0,1238 | |
| | sum | | | 0,0153 |
| | stdev | | | 0,1238 |

## 5. Imbal Hasil Ekspektasi Portofolio

$$E(R_p) = \sum_{i=1}^{n} [W_i \times E(R_i)]$$

| | Proporsi Dana (W) | Exp.return (ER) | W*ER |
|---|---|---|---|
| Aset 1 | 40% | 0,15 | 0,06 |
| Aset 2 | 60% | 0,20 | 0,12 |
| | | ER(p) | 0,18 |

# 6. Risiko Portofolio

Rumus untuk menghitung standar deviasi portofolio adalah:

$$\sigma_p = \sqrt{\sum_{j=1}^{n} \sum_{k=1}^{n} W_j . W_k . Cov_{jk}}$$

Dimana:

| | | |
|---|---|---|
| $\sigma_p$ | = | Standar deviasi portofolio |
| $W_j$ | = | Proporsi dana yang ditempatkan pada instrument j |
| $W_k$ | = | Proporsi dana yang ditempatkan pada instrument k |
| $Cov_{jk}$ | = | Covarian antar imbal hasil instrument j dan k |

dan $Cov_{jk} = r_{jk} . \sigma_j . \sigma_k$

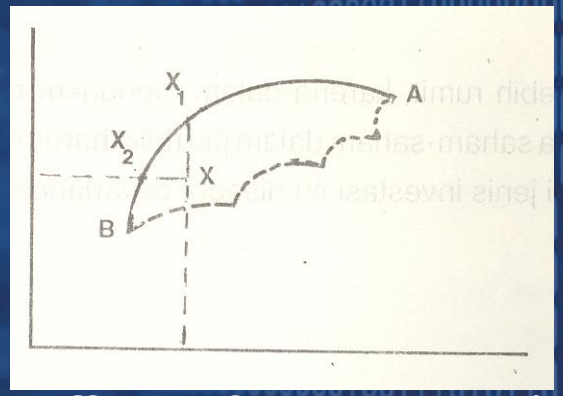
$r_{jk}$ = korelasi antar imbal hasil instrument j dan k

$$Cov_{jk} = \sum_{i=1}^{n} (R_{ij} - E(R_j)\ (R_{ik} - E(R_k) . P_i$$

# RISK & RETURN PORTOFOLIO



## Efficient Frontier



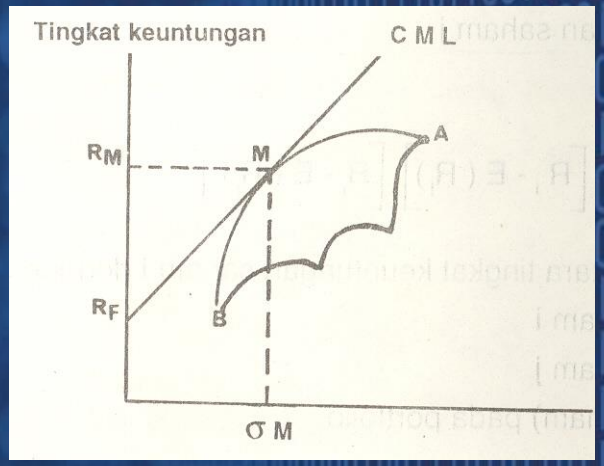

- Efficient frontier = A-B line
- Efficient frontier = portfolio that given the highest expected return for the certain level of risk
- X1 more efficient than X → HIGHER RETURN

  X2 more efficient than Y → LOWER RISK

# RISK & RETURN PORTOFOLIO



## Efficient Frontier




- With the investment opportunity in risk free instrument, the portfolio lies on efficient frontier is no longer efficient, except portfolio M
- CML and capital market line
- With the introduction of CML, if there are opportunities to lend and borrow interest, only portfolio lies on CML is efficient

$$E(Rp) = R_F + \left[\frac{R_M - R_F}{\delta_m}\right] \delta Rp$$

# PENILAIAN

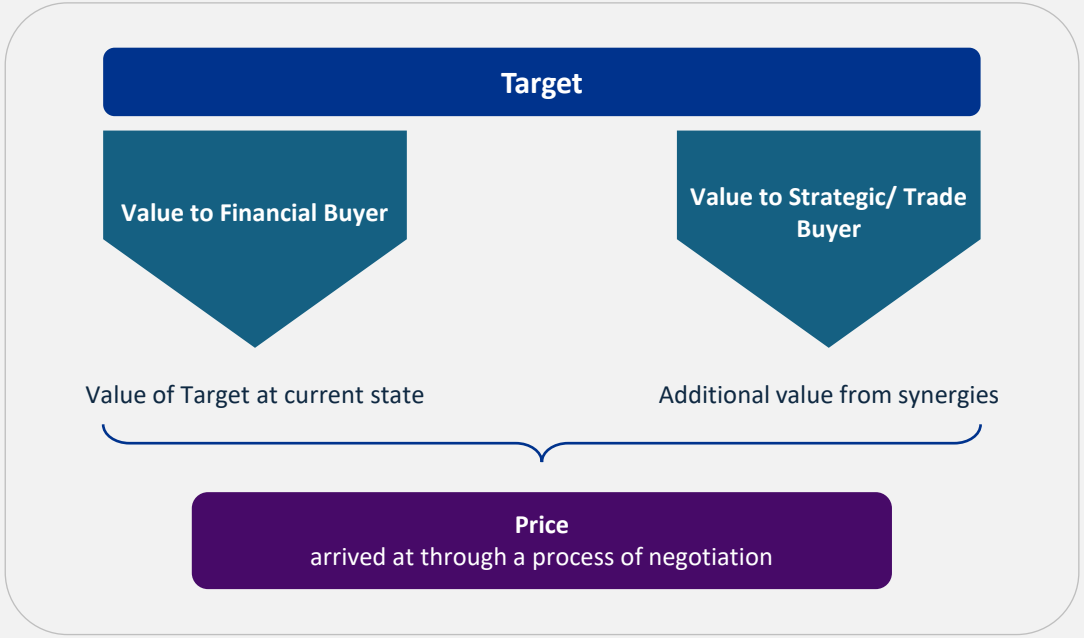
Topik 6

# Konsep Nilai

- Valuations

## I. Konsep Nilai

Value is typically enduring and in most cases specific to the particular circumstances and resources available to a buyer or seller, whereas price is a reflection of the agreement between two parties in respect of the quantum to be paid for an asset at a particular time.

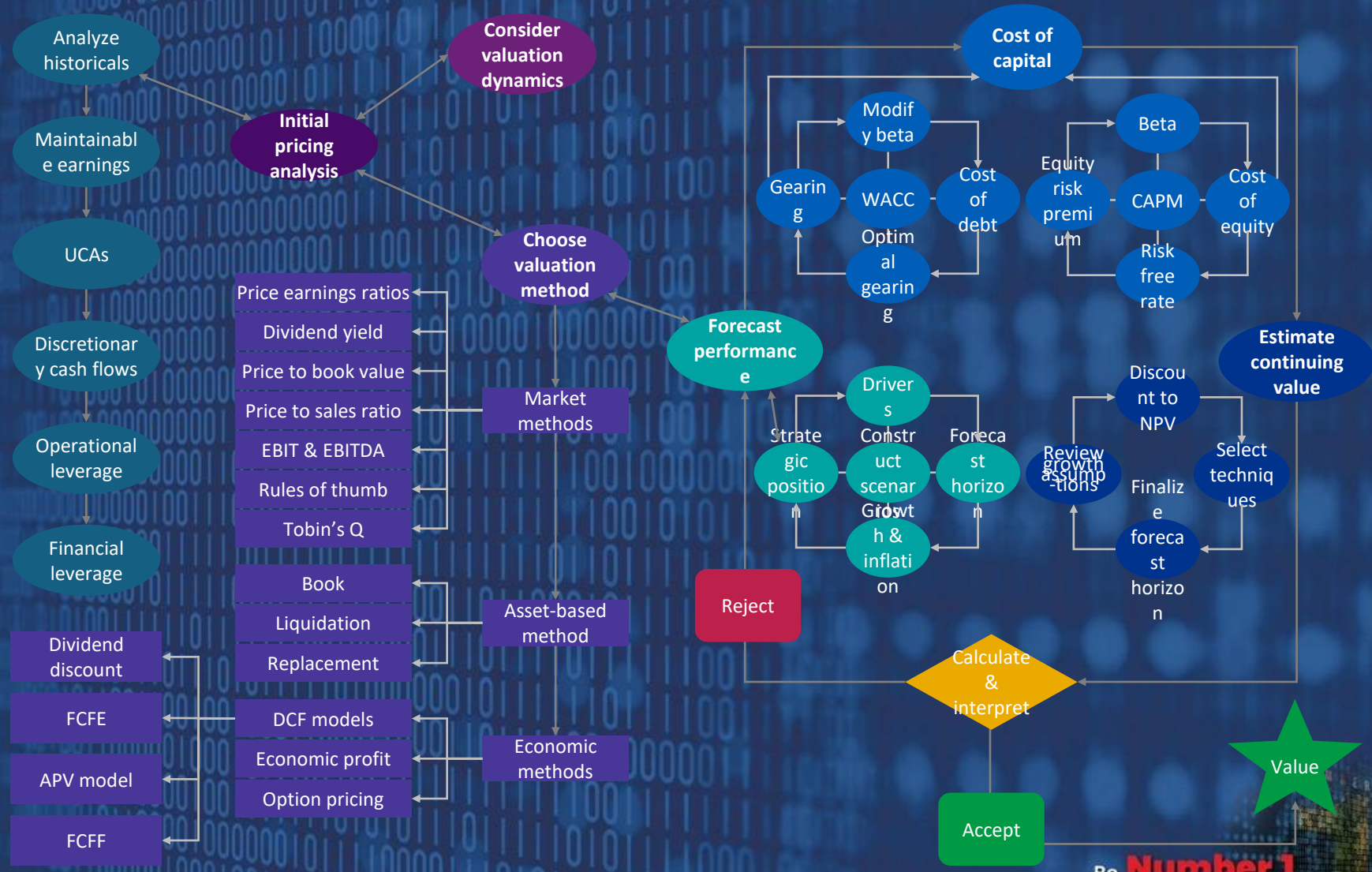



In estimating Value, whether for a Financial or Strategic Buyer, a valuer applies similar methodologies but considers situation-specific assumptions.

# • Valuations

## I. Proses Valuasi

- Analysis of historical information
- Initial pricing analysis
- Appropriate valuation methodology
- Forecast performance
- Estimate cost of capital
- Estimate continuing value
- Calculation and interpretation




Sumber : KPMG

# 2. Pendekatan Valuasi

- Valuations

| Market Approach | Income Approach | Cost Approach |
|---|---|---|
| Quoted prices in an active market | Net present value attributable to the asset based on either cash-flow obtained or costs avoided from the asset | Reproduction Cost Method – Considers the cost of producing an exact duplicate of the asset |
| Analogy Methods - Based on multiples or prices from reference market transactions for comparable assets | Discounted Cash Flow Method<br>Relief from Royalty Method<br>Multi-Period Excess Earnings Method | Replacement Cost Method – The cost of producing an asset having the same utility |

# 2. Pendekatan Pasar

- Valuations

The selection of the appropriate multiples is often dependent on the industry or particular circumstances of the Target:

| Industries | Market Multiples | | | Others |
|---|---|---|---|---|
| | P/BV | P/E | EV/ EBITDA | |
| Commercial Banks | | | | |
| Media | | | | |
| oms | | | | |
| Technology | | | | P/Sales |
| Real Estate | | | | Cap Rates |
| Mature Infrastructure companies with stable cash flows (including gencos) | | | | |
| Developmental infra companies before stable cash flows | | | | |
| Mining and resources extraction | | | | EV/Unit Resource |
| Energy (e.g., utilities, oil and gas) | | | | EV/Unit Resource |
| Transportation & Logistics | | | | |
| — Shipping | | | | |
| — Ports | | | | |
| — Airlines | | | | |
| — Logistics | | | | |
| Consumer & Lifestyle | | | | |
| Life Sciences | | | | P/Sales |
| Biosciences investments | | | | P/Sales |

| Growth Stage | Common Market Multiples |
|---|---|
| Infancy | — P/BV |
| Intermediate and Mature | |
| Capital Intensive | — EV/EBITDA |
| Service-related / asset light | — P/Sales, P/E, EV/EBITDA |
| Companies whose value depends on underlying assets or linked to the operating output produced | — P/BV (bank)<br>— EV/Unit Resource (Energy/ mining) |

# Relative valuation



**2. Pendekatan Pasar**

- COCO – melakukan perbandingan atas trading multiples dari comparable sectors / firms, atas asumsi bahwa control tidak termasuk yang di acquired

- CoTrans – melakukan perbandingan the implied multiples dari transaksi- transaki with the sector, dan untuk itu termasuk a premium dari controlling and possible synergies

# The Market Approach Or Relative Valuation



- PE HIGH Indicates that Investors believe
  - The company has sound growth opportunities
  - Relatively high quality earnings
  - Low risk
- Hence, investor prepare to accept a lower return

Example: share price = Rp 1000

EPS = Rp 200

P/E = 5x

Earning yield = $\frac{\text{Rp 200}}{\text{Rp 1000}}$ = 20%

If P/E = 10x

Earning yield= 1/10 = 10%

- Valuation

## 2. Pendekatan Biaya – realizable assets

***PT Mitra Pembaharuan, Model Realisasi Aset***

| PT. Mitra Pembaharuan | Estimasi Nilai Buku (Rp juta) | Faktor Realisasi (%) | Nilai Realisasi (Rp juta) |
|---|---|---|---|
| Kas dan Bank | 7,000 | 100 | 7,000 |
| Piutang Usaha (net cadangan piutang tak tertagih) | 80,000 | 95 | 76,000 |
| Persediaan | 240,000 | *Keterangan | 203,000 |
| Aset tetap (luar tanah dan bangunan) | 15,000 | 80 | 12,000 |
| Tanah dan Bagunan | 60,000 | 150 | 90,000 |
| Goodwill | 10,000 | - | - |
| Hutang Usaha | (150,000) | 100 | (150,000) |
| Provisi Pajak Penghasilan | (10,000) | - | - |
| Total | **252,000** | | **238,000** |
| Dikurangi cadangan untuk: | | | |
| Akumulasi kerugian selama masa penutupan (*wind down*) | | | (12,000) |
| Pajak atas penjualan aset | | | (8,000) |
| Bunga, real estate dan komisi-komisi lainnya | | | (10,000) |
| Biaya konsultan Hukum, Jasa Akuntansi/Audit dan biaya professional lainnya | | | (12,000) |
| Biaya penagihan piutang | | | (16,000) |
| Biaya-biaya lainnya | | | (15,000) |
| Margin Laba untuk pembeli selama periode konversi net assets menjadi cash (asumsi) | | | (15,000) |
| | | | - |
| **Valuation berdasarkan *realisation of assets*** | | | **150,000** |
| ***Keterangan** | | | |
| Persediaan diasumsikan untuk dapat di realisasikan sebagai berikut: | | | |
| 50 % at normal selling price with average 30% margin | | | 156,000 |
| 25% at cost | | | 60,000 |
| 15% pada diskon 25% | | | 27,000 |
| 10% tidak dapat dijual | | | - |
| | | | 243,000 |
| Dikurangi Biaya untuk penjualan, distribusi dan penagihan untuk periode yang dibutuhkan untuk merealisasikan persedian | | | (40,000) |
| Nilai realisasi persediaan | | | **203,000** |

# • Valuations

## 3. Pendekatan Income

- The income approach assumes that the firm is worth the present value of a future flow of income or (more usually) cash flows. The most common models under the income approach are DCF models, multi-period excess earnings models, relief from royalty and some options pricing models
- **Free cash flows to the firm model (FCFF)**
- **Free cash flows to equity model (FCFE)**
- Adjusted Present Value model (APV)
- Dividend discount model (DDM)

Earnings Before Interest and Taxes (EBIT)

\- Taxes on EBIT

Net Operating Profit After Taxes (NOPAT)

\+ Depreciation and Amortisation

\+ Non-cash items

\- Changes in Working Capital

\- Capital Expenditure

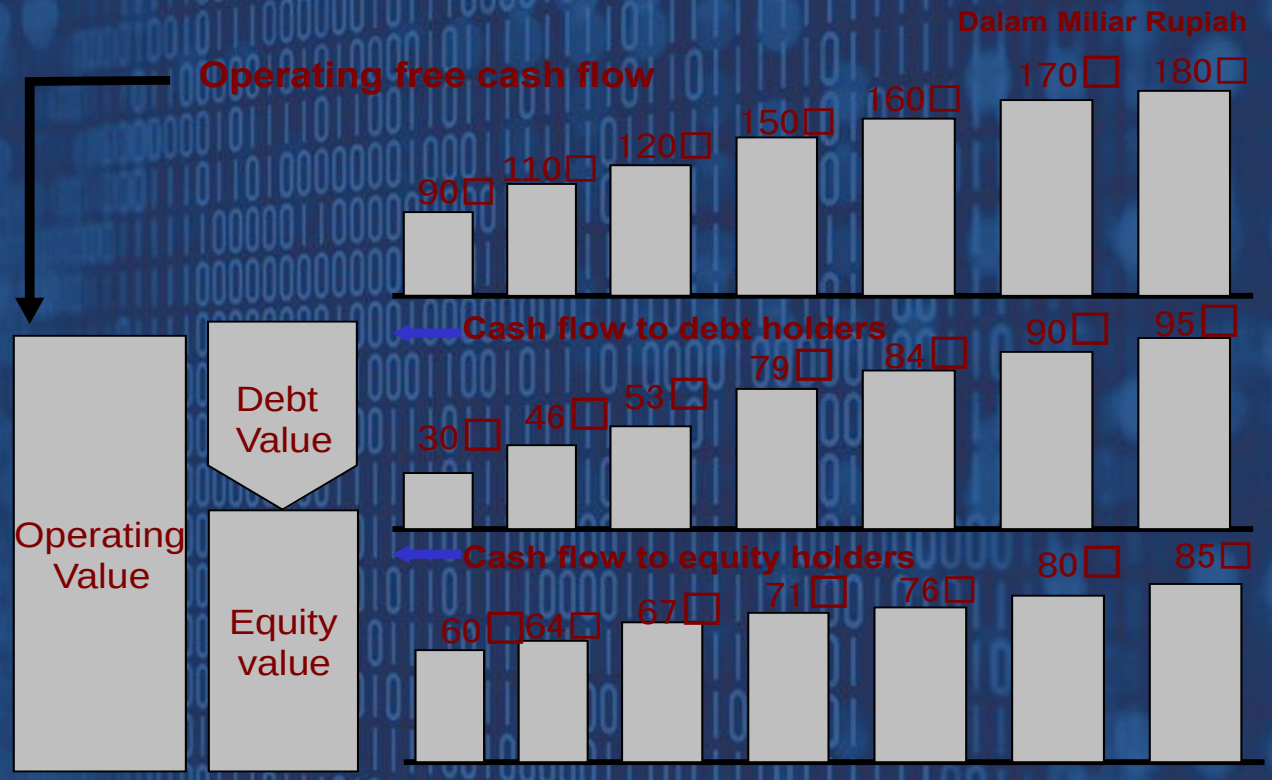
**Free Cash Flows to Firm**

\- Debt Service

**Free Cash Flows to Equity**

# The income approach

3. Pendekatan Income




FCFF = FCFE + Interest Expenses (1 - Tax) +

Principal repayments - New debt issues +

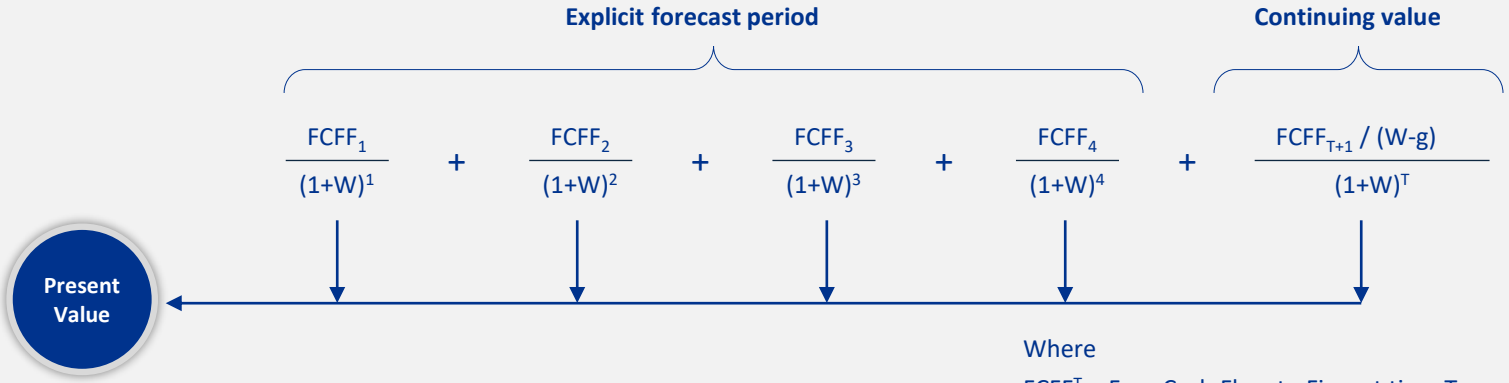
Preferred dividend

# The Income Approach – Calculation And Interpretation



## 3. Pendekatan Income

- The principle of valuation underlying the income approach is that a potential buyer will pay no more than the value of the amount of cash generated by the asset discounted at an appropriate discount rate
- The value is typically estimated by:
  1. Forecasting the free cash flows ("FCF") generated by the asset over an explicit period
  2. Forecasting the normalised level of free cash flows after the explicit period ("terminal or "residual" value). To be done only if the life of the asset is indefinite
  3. Estimating an appropriate discount rate commensurate to the risk of the free cash flows




Where

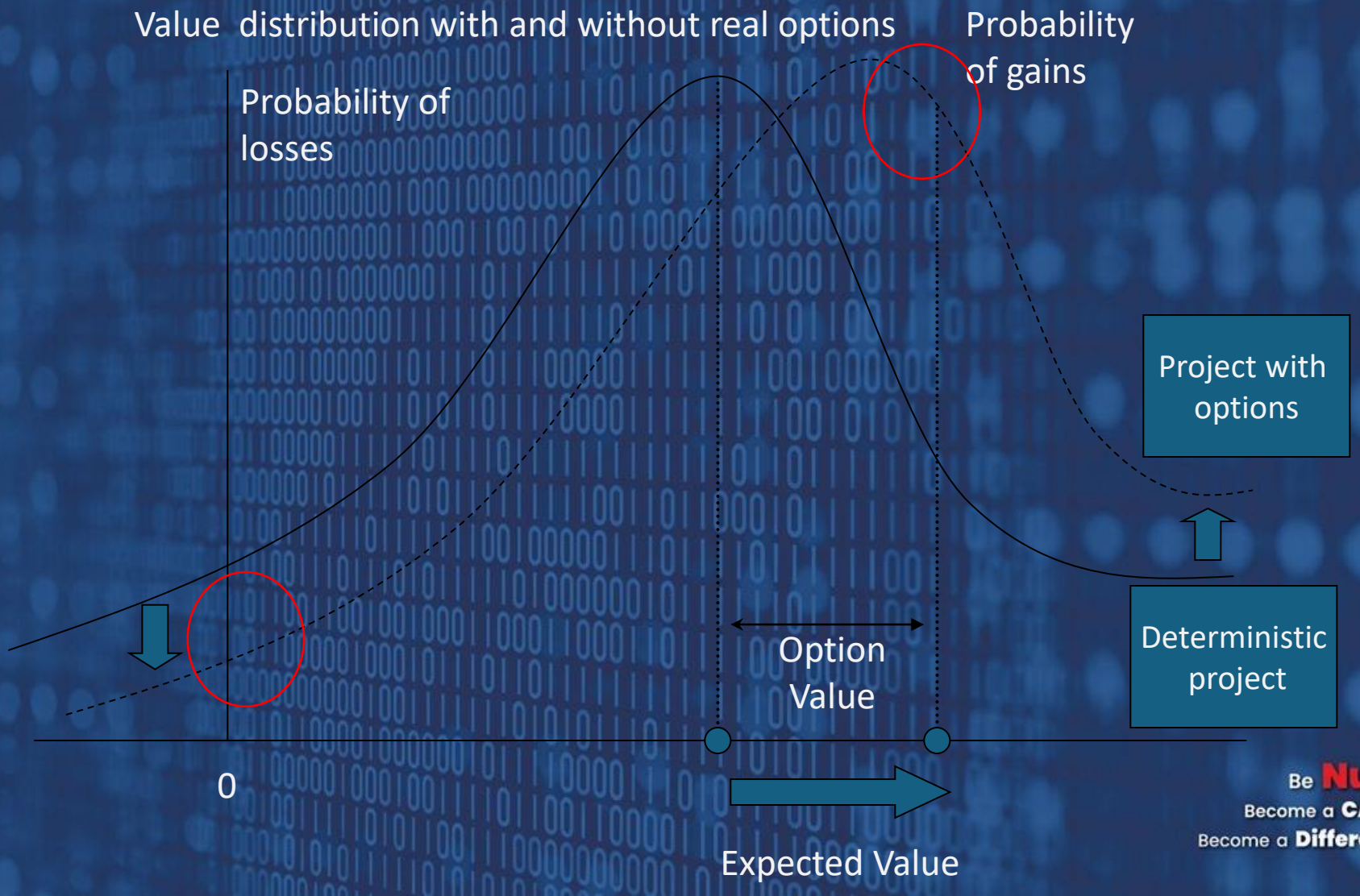
$FCFF^T$ = Free Cash Flow to Firm at time T

$W = WACC = K_e * E/C + K_d * D/C$

g = Terminal Growth Rate

# Real Option Pricing Model

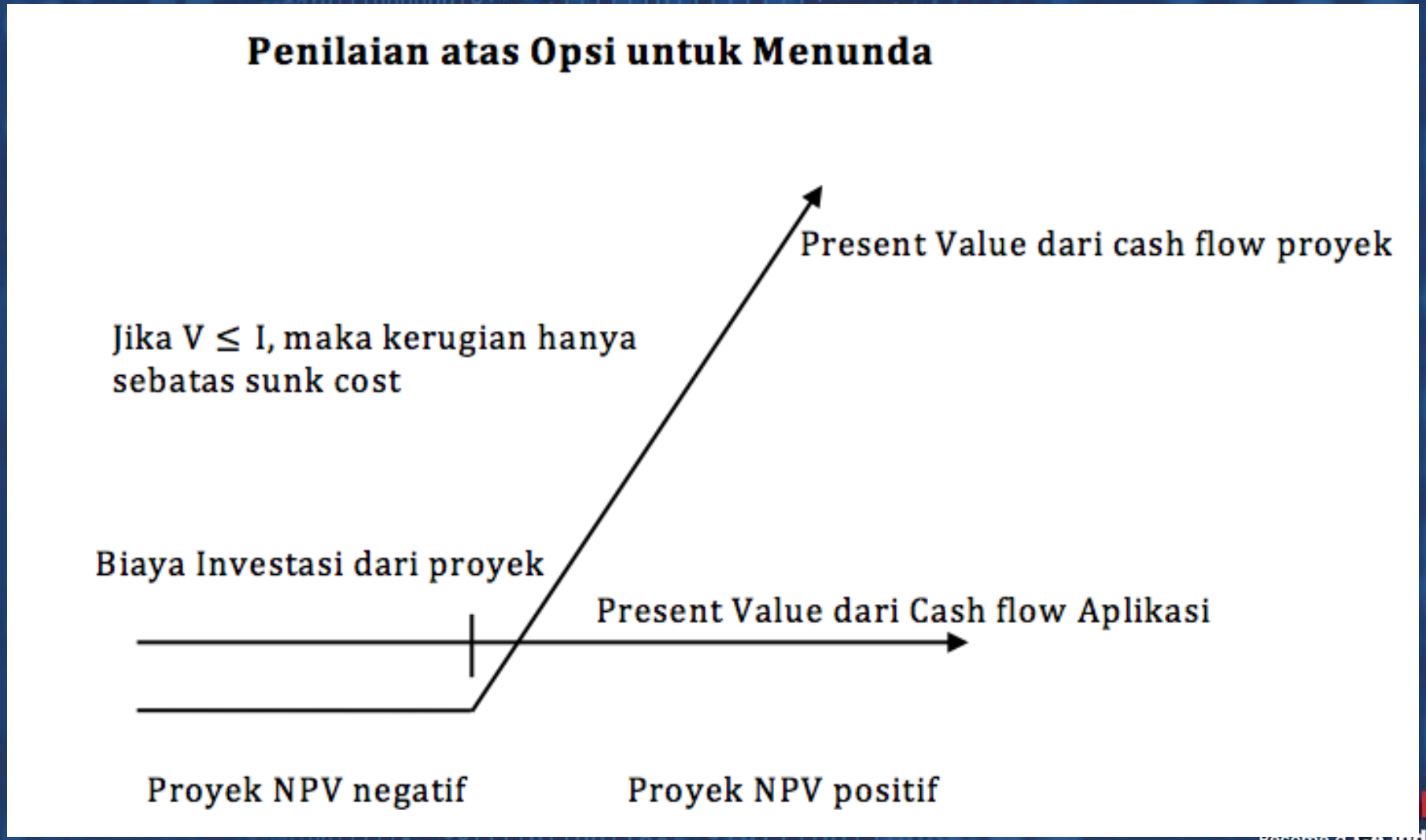
## 4. Pendekatan OPM



# Real Option Pricing Model



4. Pendekatan OPM



# Real Option Pricing Model



## 4. Pendekatan OPM

**Pemetaan Variabel Masukan – Opsi untuk Menunda**

| Variabel masukan | Proses Estimasi |
|---|---|
| • *Value* dari aset yang dihitung (S) | • *Present Value* dari *cash flow* masukan bila menjalankan proyek sekarang |
| • *Variance* dari nilai aset yang dihitung ($\delta^2$) | • *Variance* dari *cash flow* masukan dari aset atau perusahaan yang sama<br>• *Variance* dari *present value* dari simulasi *capital budgeting* |
| • *Strike Price* dari *Option* (K) | • *Option* di *exercise* bila investasi telah dilakukan<br>• Biaya untuk investasi proyesk diasumsikan konstan dalam *present value* nilai nominal |
| • Waktu hingga kadaluarsa (t) | • Jangka waktu umur paten |
| • *Dividend Yield* | • Biaya menunda<br>• Setiap tahun penundaan berati satu tahun berkurang waktu untu menciptakan *cash flow*<br>• Biaya penundaan per tahun = $\frac{1}{n}$ |

# Real Option Pricing Model

SEE BEYOND THE NUMBERS BECOME A CHARTERED ACCOUNTANT

$r$ = Riskless interest rate corresponding to life of option

$\sigma^2$ = Variance in ln(value) of underlying asset

The value of a call is then:

$$\text{Value of call} = S\,N(d_1) - K\,e^{-rt}\,N(d_2)$$

$$\text{where } d_1 = \frac{\ln\left(\frac{S}{K}\right) + \left(r + \frac{\sigma^2}{2}\right)t}{\sigma\sqrt{t}}$$

$$d_2 = d_1 - \sigma\sqrt{t}$$

Be Number 1
Become a CA Indonesia
Become a Difference Maker

# Economic Value Added

$$EVA = NOPAT - (BOYIC \times WACC)$$

**PT Surya Jaya**

**EV- Metode FCFF dan EVA**

**(dalam jutaan rupiah)**

| Description | | 2015 | 2016 | 2017 | T |
|---|---|---|---|---|---|
| **FCFF** | | **10,820** | **12,310** | **14,349** | **15,571** |
| Discount Factor (WACC) | 13.0% | 0.8850 | 0.7831 | 0.6931 | 7.1384 |
| Terminal Growth | 3% | | | | |
| **FCFF Enterprise Valuation** | **140,315** | **9,575** | **9,641** | **9,945** | **111,155** |
| **NOPAT** | | **16,920** | **18,310** | **20,149** | **19,330** |
| Capital Charge on Interest Capital | | -12,519 | -13,312 | -14,092 | -14,846 |
| **EVA** | | **4,401** | **4,998** | **6,057** | **4,484** |
| **Net Present Value of EVA** | **44,015** | **3,895** | **3,914** | **4,198** | **32,009** |
| **Beginning Balance Capital** | **96,300** | | | | |
| **EVA Enterprise Valuation** | **140,315** | | | | |

**PT Mentari Kontraktor Tbk.**

**EV-Metode FCFF dan EVA**

**(dalam jutaan rupiah)**

| Description | | 2015 | 2016 | 2017 | T |
|---|---|---|---|---|---|
| **FCFF** | | **10,820** | **12,310** | **14,349** | **15,571** |
| Discount Factor (WACC) | 13.0% | 0.8850 | 0.7831 | 0.6931 | 7.1384 |
| Terminal Growth | 3% | | | | |
| **FCFF Enterprise Valuation** | **140,315** | **9,575** | **9,641** | **9,945** | **111,155** |
| **NOPAT** | | **16,920** | **18,310** | **20,149** | **20,880** |
| Capital Charge on Interest Capital | | - 18,642 | - 19,435 | - 20,215 | -20,969 |
| **EVA** | | **-1,722** | **-1,125** | **-66** | **-89** |
| **Net Present Value of EVA** | **-3,085** | **-1,524** | **-881** | **-46** | **-634** |
| **Beginning Balance Capital** | **143,400** | | | | |
| **Enterprise Valuation** | **140,315** | | | | |

# Struktur modal

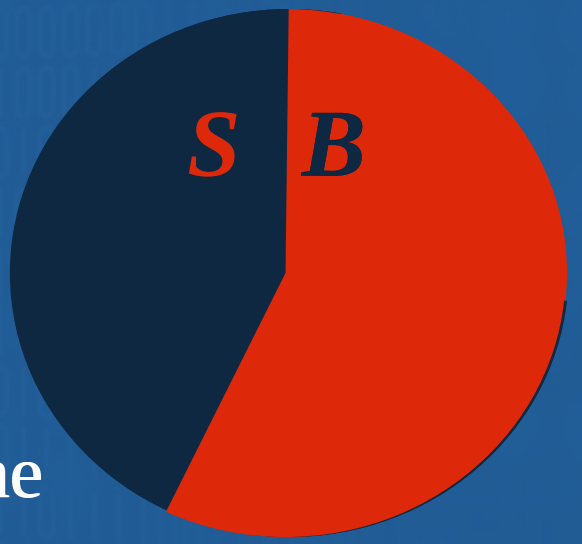
Topik 7

# Capital Structure And The Pie

- The value of a firm is defined to be the sum of the value of the firm's debt and the firm's equity.

  $V = B + S$

- If the goal of the firm's management is to make the firm as valuable as possible, then the firm should pick the debt-equity ratio that makes the pie as big as possible.



Value of the Firm

# Stockholder Interests

There are two important questions:

1. Why should the stockholders care about maximizing *firm* value? Perhaps they should be interested in strategies that maximize *shareholder* value.
2. What is the ratio of debt-to-equity that maximizes the shareholder's value?

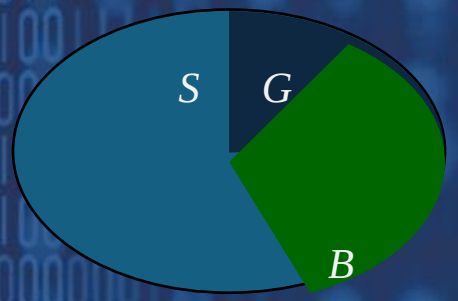
As it turns out, changes in capital structure benefit the stockholders *if and only if* the value of the firm increases.

# Total Cash Flow to Investors

All-equity firm




Levered firm




The levered firm pays less in taxes than does the all-equity firm.

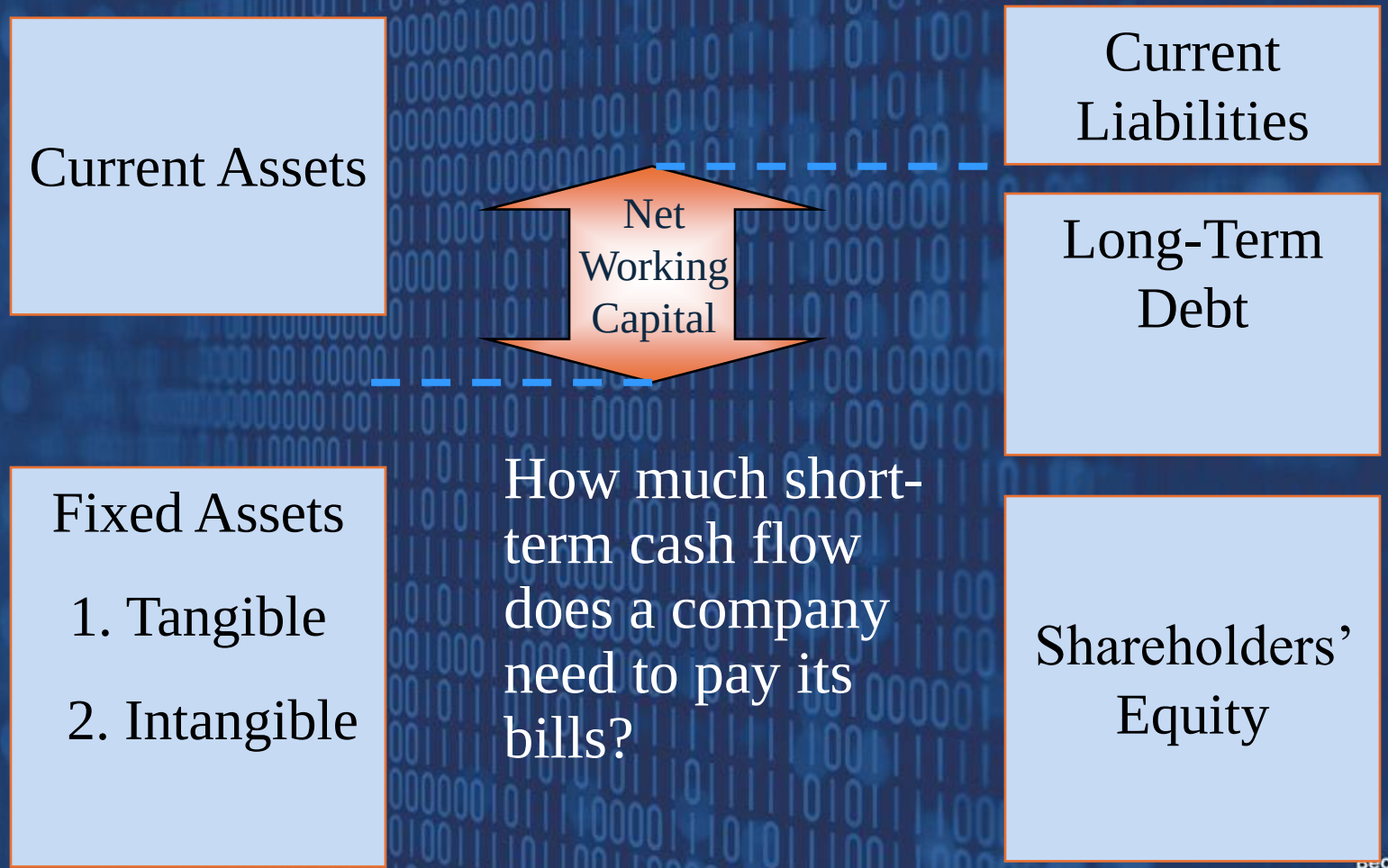
Thus, the sum of the debt plus the equity of the levered firm is greater than the equity of the unlevered firm.

This is how cutting the pie differently can make the pie "larger."
-the government takes a smaller slice of the pie!

# PENDANAAN JANGKA PENDEK

Topik 5

# Balance Sheet Model of the Firm



# Defining Cash in Terms of Other Elements

$$\text{Net Working Capital} + \text{Fixed Assets} = \text{Long-Term Debt} + \text{Equity}$$

$$\text{Net Working Capital} = \text{Cash} + \text{Other Current Assets} - \text{Current Liabilities}$$

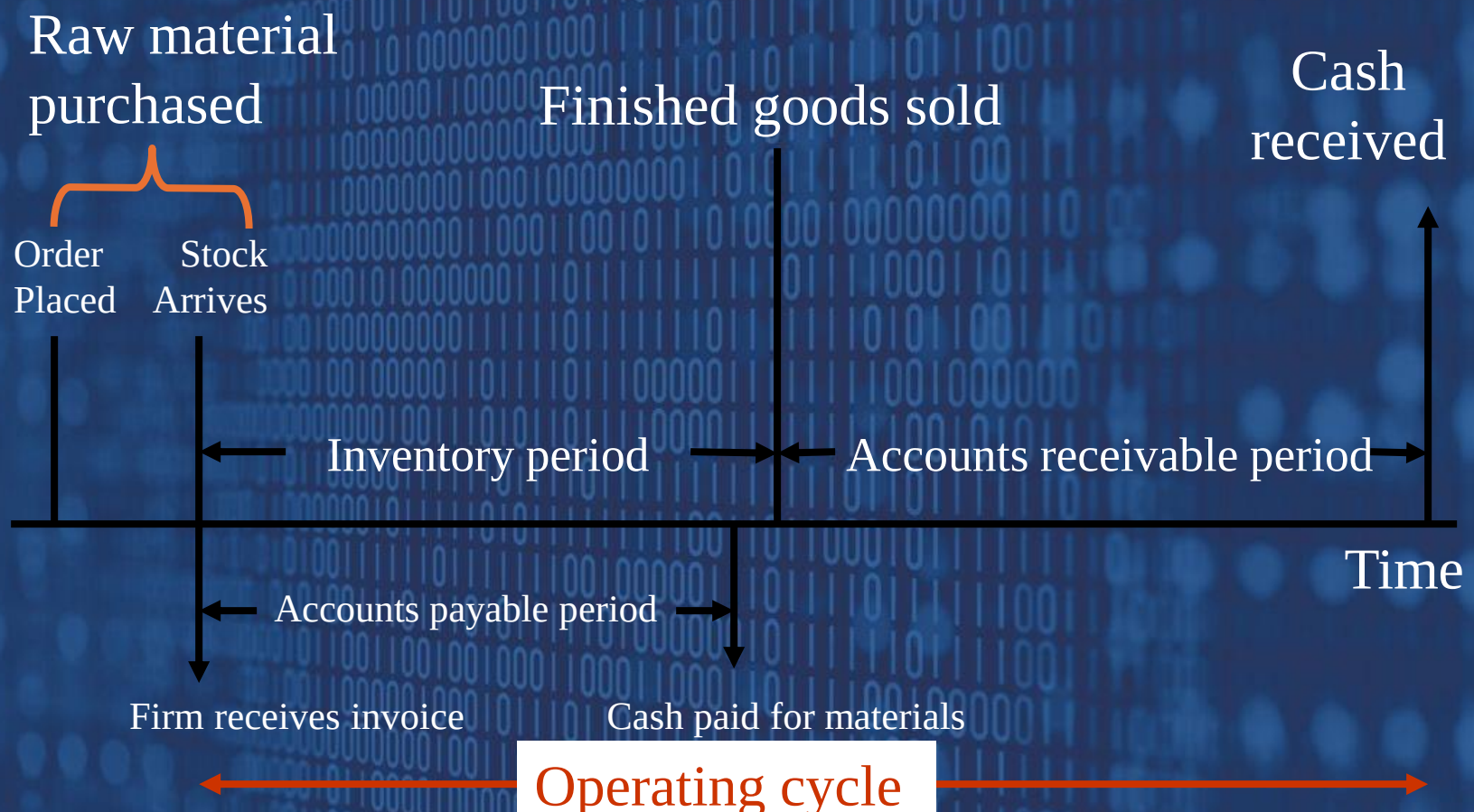
$$\text{Cash} = \text{Long-Term Debt} + \text{Equity} - \text{Net Working Capital (excluding cash)} - \text{Fixed Assets}$$

# Defining Cash in Terms of Other Elements

$$\text{Cash} = \text{Long-Term Debt} + \text{Equity} - \text{Net Working Capital (excluding cash)} - \text{Fixed Assets}$$

- An increase in long-term debt and or equity leads to an increase in cash—as does a decrease in fixed assets or a decrease in the non-cash components of net working capital.
- The sources and uses of cash follow from this reasoning.

# The Operating Cycle and the Cash Cycle#



# The Operating Cycle and the Cash Cycle#

$$\text{Cash cycle} = \text{Operating cycle} - \text{Accounts payable period}$$

- In practice, the inventory period, the accounts receivable period, and the accounts payable period are measured by days in inventory, days in receivables, and days in payables, respectively.

# Size of Investment in Current Assets

A flexible short-term finance policy would maintain a high ratio of current assets to sales.

- Keeping large cash balances and investments in marketable securities
- Large investments in inventory
- Liberal credit terms

A restrictive short-term finance policy would maintain a low ratio of current assets to sales.

- Keeping low cash balances, no investment in marketable securities
- Making small investments in inventory
- Allowing no credit sales (thus no accounts receivable)

# The Short-Term Financial Plan



| | |
|---|---|
| Unsecured Loans | • Line of credit (at the bank) |
| Secured Loans | • Accounts receivable can be either *assigned* or *factored*<br>• Inventory loans use inventory as collateral |
| Other Sources | • Banker's acceptance<br>• Commercial paper |

# PENDANAAN JANGKA PANJANG

Topik 6

# Features of Common Stock

- Voting rights (Cumulative vs. Straight)
- Proxy voting
- Classes of stock
- Other rights
  - Share proportionally in declared dividends
  - Share proportionally in remaining assets during liquidation
  - Preemptive right – first shot at new stock issue to maintain proportional ownership if desired

# Features of Preferred Stock

- Dividends
  - Stated dividend must be paid before dividends can be paid to common stockholders.
  - Dividends are not a liability of the firm, and preferred dividends can be deferred indefinitely.
  - Most preferred dividends are cumulative – any missed preferred dividends have to be paid before common dividends can be paid.
- Preferred stock generally does not carry voting rights.

# Debt versus Equity

## DEBT

- Not an ownership interest
- Creditors do not have voting rights
- Interest is considered a cost of doing business and is tax deductible
- Creditors have legal recourse if interest or principal payments are missed
- Excess debt can lead to financial distress and bankruptcy

## EQUITY

- Ownership interest
- Common stockholders vote for the board of directors and other issues
- Dividends are not considered a cost of doing business and are not tax deductible
- Dividends are not a liability of the firm, and stockholders have no legal recourse if dividends are not paid
- An all-equity firm cannot go bankrupt

# The Bond Indenture

Contract between the company and the bondholders that includes:

- The basic terms of the bonds
- The total amount of bonds issued
- A description of property used as security, if applicable
- Sinking fund provisions
- Call provisions
- Details of protective covenants

# Bond Classifications



## Registered vs. Bearer Forms

## Security

- Collateral – secured by financial securities
- Mortgage – secured by real property, normally land or buildings
- Debentures – unsecured
- Notes – unsecured debt with original maturity less than 10 years

## Seniority

# Required Yields

The coupon rate depends on the risk characteristics of the bond when issued.

Which bonds will have the higher coupon, all else equal?

- Secured debt versus a debenture
- Subordinated debenture versus senior debt
- A bond with a sinking fund versus one without
- A callable bond versus a non-callable bond

# MANAJEMEN KREDIT

Topik 7

# Credit Management: Key Issues

Granting credit generally increases sales

Costs of granting credit

- Chance that customers will not pay
- Financing receivables

Credit management examines the trade-off between increased sales and the costs of granting credit

# Components of Credit Policy



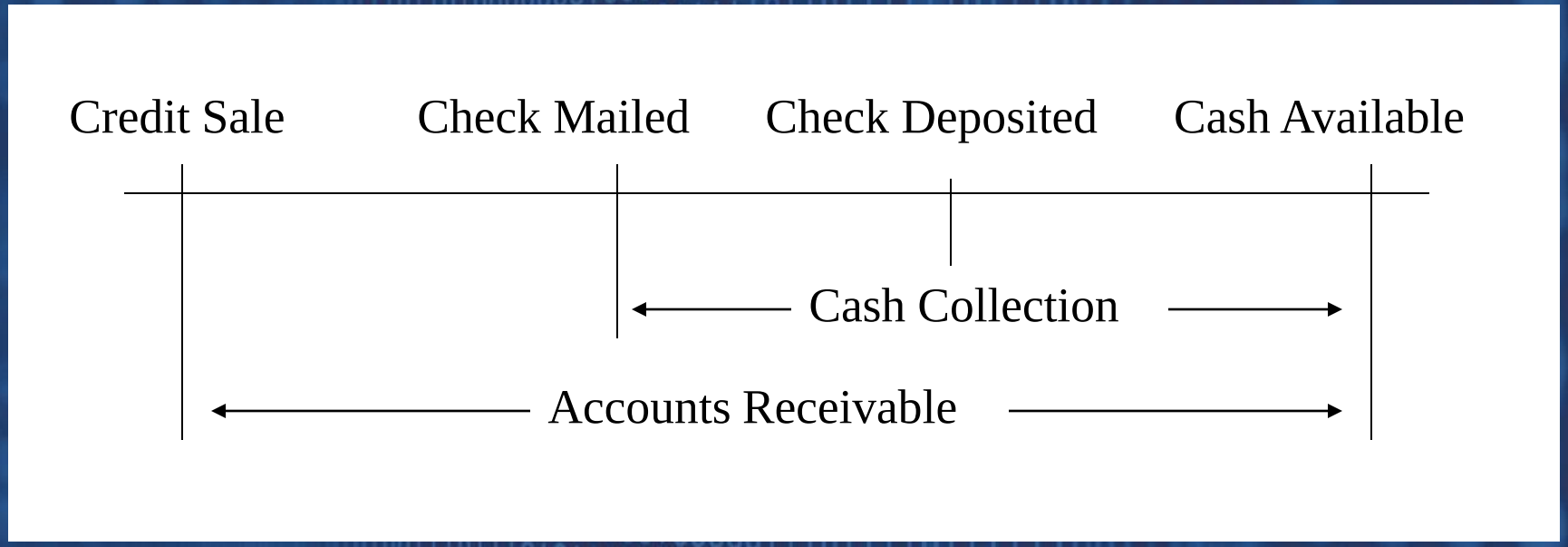
Terms of sale

- Credit period
- Cash discount and discount period
- Type of credit instrument

Credit analysis – distinguishing between “good” customers that will pay and “bad” customers that will default

Collection policy – effort expended on collecting receivables

# The Cash Flows from Granting Credit



# Terms of Sale



- Basic Form: 2/10 net 45
  - 2% discount if paid in 10 days
  - Total amount due in 45 days if discount not taken

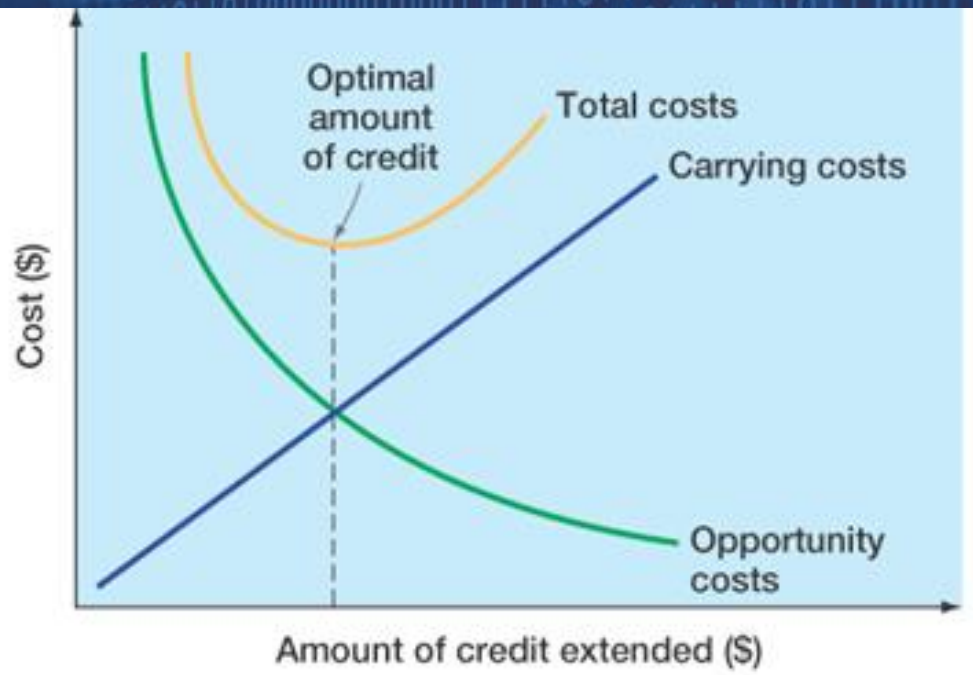
- Buy $500 worth of merchandise with the credit terms given above
  - Pay $500(1 - .02) = $490 if you pay in 10 days
  - Pay $500 if you pay in 45 days

# Example: Cash Discounts



- Finding the implied interest rate when customers do not take the discount
- Credit terms of 2/10 net 45
  - Period rate = 2 / 98 = 2.0408%
  - Period = (45 – 10) = 35 days
  - 365 / 35 = 10.4286 periods per year
- EAR = $(1.020408)^{10.4286} – 1 = 23.45\%$
- The company benefits when customers choose to forgo discounts

# Carrying cost




*Carrying costs* are the cash flows that must be incurred when credit is granted. They are positively related to the amount of credit extended.

*Opportunity costs* are the lost sales resulting from refusing credit. These costs go down when credit is granted.

# EOQ Model

SEE BEYOND THE NUMBERS BECOME A CHARTERED ACCOUNTANT

The EOQ model minimizes the total inventory cost

**Total carrying cost** = (average inventory) x (carrying cost per unit) = (Q/2)(CC)

**Total restocking cost** = (fixed cost per order) x (number of orders) = F(T/Q)

**Total Cost** = Total carrying cost + total restocking cost = (Q/2)(CC) + F(T/Q)

Be Number 1
Become a CA Indonesia
Become a Difference Maker

# Extensions



**Safety stocks**

- Minimum level of inventory kept on hand
- Increases carrying costs

**Reorder points**

- At what inventory level should you place an order?
- Need to account for delivery time

**Derived-Demand Inventories**

- Materials Requirements Planning (MRP)
- Just-in-Time Inventory

# DERIVATIF

Topik 8

# Forward Contracts



- A forward contract specifies that a certain commodity will be exchanged at a specified time in the future at a price specified today.
  - Its not an option: both parties are expected to hold up their end of the deal.
  - If you have ever ordered a textbook that was not in stock, you have entered into a forward contract.

# Futures Contracts

A futures contract is *like* a forward contract:

- It specifies that a certain commodity will be exchanged at a specified time in the future at a price specified today.

A futures contract is *different from* a forward:

- Futures are standardized contracts trading on organized exchanges with daily resettlement ("marking to market") through a clearinghouse.

# Futures Contracts



## Standardizing Features

- Contract Size
- Delivery Month

## Daily resettlement

- Minimizes the chance of default

## Initial Margin

- About 4-10% of contract value
- Cash or T-bills held in a street name at your brokerage

# Hedging



- Two counterparties with offsetting risks can eliminate risk.
  - For example, if a wheat farmer and a flour mill enter into a forward contract, they can eliminate the risk each other faces regarding the future price of wheat.
- Hedgers can also transfer price risk to speculators, who absorb price risk from hedgers.
- Speculating:  Long vs. Short

# Interest Rate Futures Contracts



Pricing of Treasury Bonds

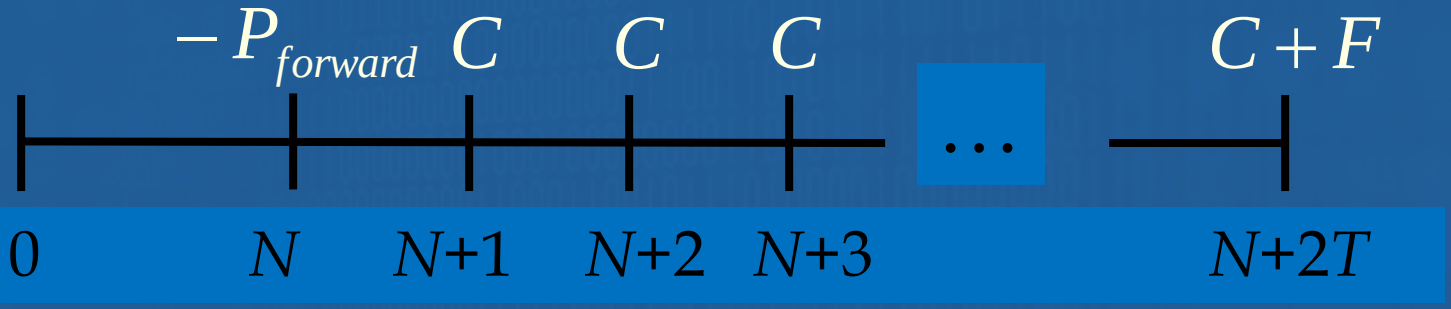
Pricing of Forward Contracts

Futures Contracts

Hedging in Interest Rate Futures

# Pricing of Forward Contracts

An *N*-period forward contract on that T-Bond:




Can be valued as the present value of the forward price.

$$PV = \frac{P_{forward}}{(1+R_N)^N}$$

$$PV = \frac{\frac{C}{(1+R_{N+1})} + \frac{C}{(1+R_{N+2})^2} + \frac{C}{(1+R_{N+3})^3} + \cdots + \frac{C+F}{(1+R_{N+2T})^T}}{(1+R_N)^N}$$

# Swaps Contracts

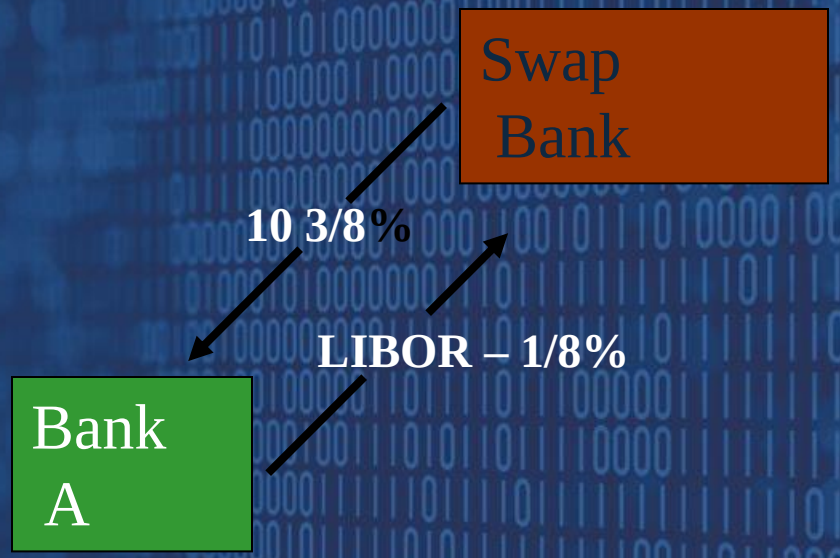
- In a swap, two **counterparties** consent to a contractual arrangement wherein they agree to exchange cash flows at periodic intervals.
- There are two types of interest rate swaps:
  - Single currency interest rate swap
    - "Plain vanilla" fixed-for-floating swaps are often just called *interest rate swaps*.
  - Cross-Currency interest rate swap
    - This is often called a *currency swap*; fixed for fixed rate debt service in two (or more) currencies.

# An Example of an Interest Rate Swap



- Consider this example of a “plain vanilla” interest rate swap.
- Bank A is a AAA-rated international bank located in the U.K. and wishes to raise $10,000,000 to finance floating-rate Eurodollar loans.
  - Bank A is considering issuing 5-year fixed-rate Eurodollar bonds at 10 percent.
  - It would make more sense to for the bank to issue floating-rate notes at LIBOR to finance floating-rate Eurodollar loans.

# An Example of an Interest Rate Swap




The swap bank makes this offer to Bank A: You pay LIBOR – 1/8 % per year on $10 million for 5 years, and we will pay you 10 3/8% on $10 million for 5 years

| | *COMPANY B* | *BANK A* |
|---|---|---|
| ***Fixed rate*** | 11.75% | 10% |
| ***Floating rate*** | LIBOR + .5% | LIBOR |

# M&A

Topik9

# The Basic Forms of Acquisitions



There are **three** basic legal procedures that one firm can use to acquire another firm:

- Merger or Consolidation
- Acquisition of Stock
- Acquisition of Assets

# Merger versus Consolidation

## MERGER

- One firm is acquired by another
- Acquiring firm retains name and acquired firm ceases to exist
- Advantage – legally simple
- Disadvantage – must be approved by stockholders of both firms

## CONSOLIDATION

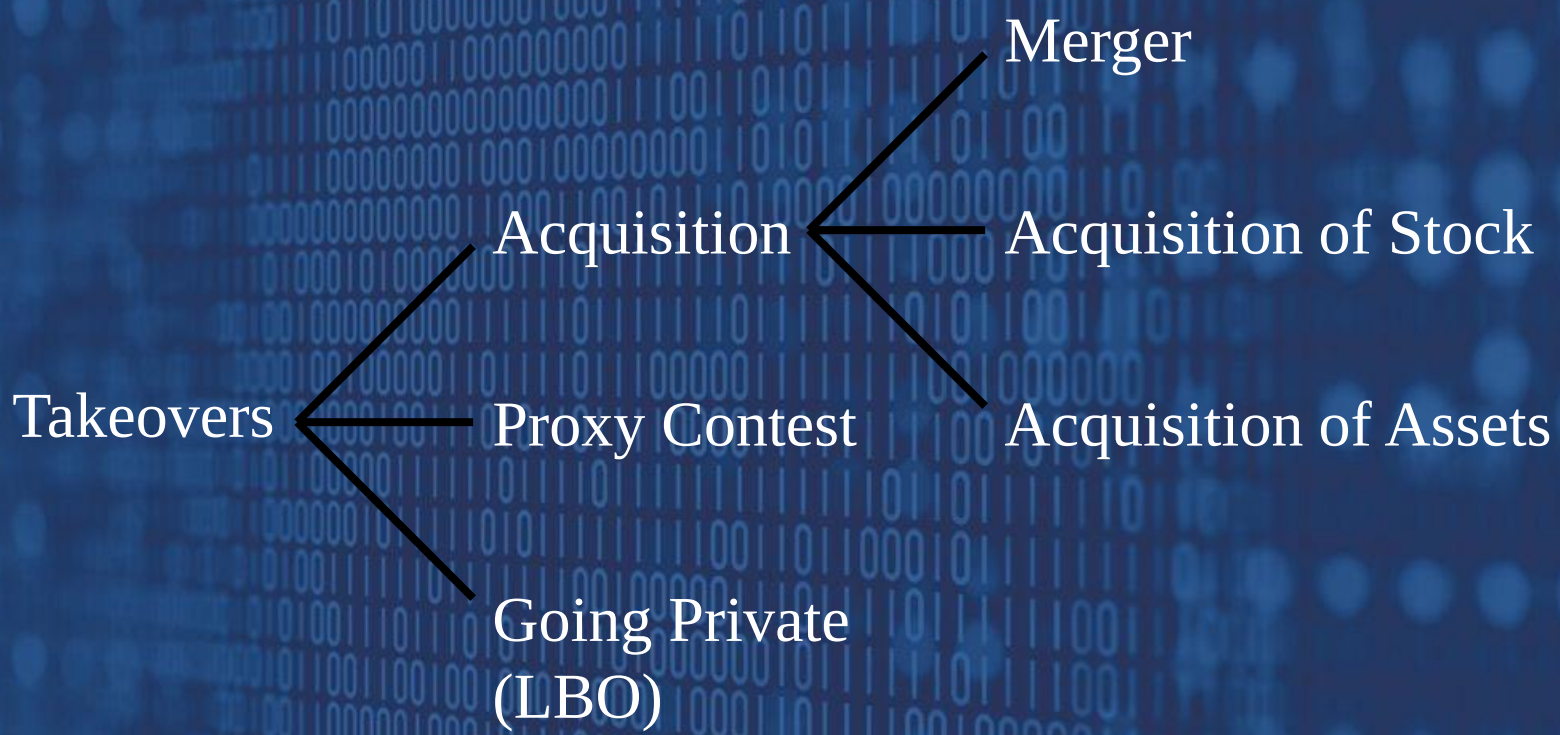
- Entirely new firm is created from combination of existing firms

# Acquisitions



- A firm can be acquired by another firm or individual(s) purchasing voting shares of the firm's stock
- Tender offer – public offer to buy shares
- Stock acquisition
  - No stockholder vote required
  - Can deal directly with stockholders, even if management is unfriendly
  - May be delayed if some target shareholders hold out for more money – complete absorption requires a merger
- Classifications
  - Horizontal – both firms are in the same industry
  - Vertical – firms are in different stages of the production process
  - Conglomerate – firms are unrelated

# Varieties of Takeovers



# Synergy

- Most acquisitions fail to create value for the acquirer.
- The main reason why they do not lies in failures to integrate two companies after a merger.
  - Intellectual capital often walks out the door when acquisitions are not handled carefully.
  - Traditionally, acquisitions deliver value when they allow for scale economies or market power, better products and services in the market, or learning from the new firms.

# Friendly vs. Hostile Takeovers



- In a friendly merger, both companies' management are receptive.
- In a hostile merger, the acquiring firm attempts to gain control of the target without their approval.
    - Tender offer
    - Proxy fight

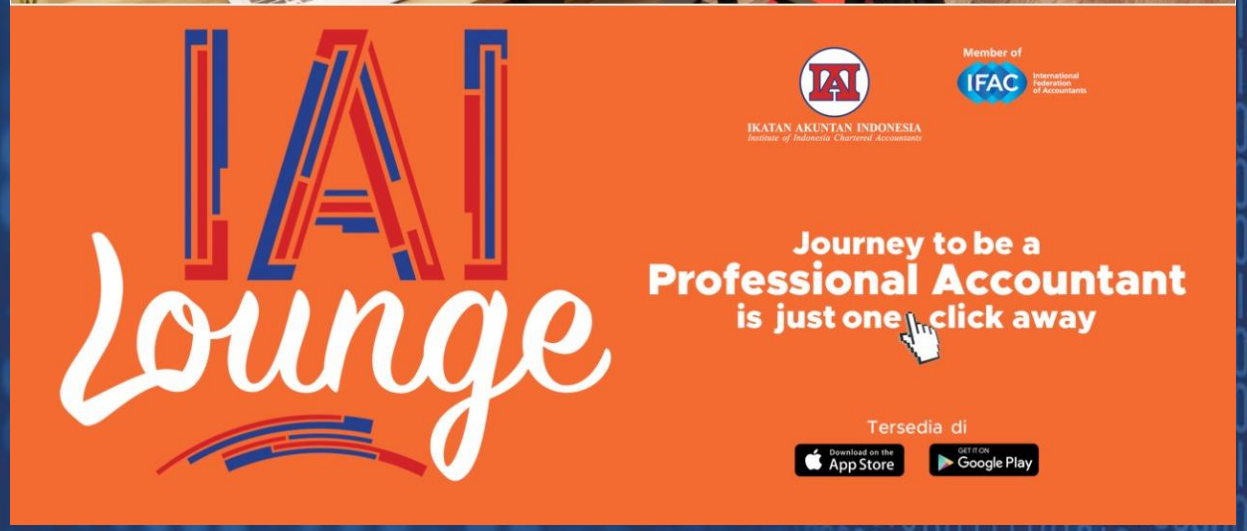
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