

## Assets

Table 1 shows the major assets of a hypothetical commercial bank. They comprise of cash and due from banks, interbank lending (federal funds), marketable securities (government bonds), loans, and fixed assets.

Total Assets of a Hypothetical Bank (in 000's)		
		Amount
Cash and Cash Due from Banks		\$45,000
Federal Funds Sold (Interbank lending)		\$55,000
Securities (primarily Government Bonds)		\$40,000
<b>Loans, held for Investment</b>		
<b>Consumer Loans</b>		\$95,000
- Individual Loans	\$40,000	
- Auto Loans	\$25,000	
- Credit Cards	\$30,000	
<b>Commercial and Industrial Loans</b>		\$120,000
- Commercial	\$60,000	
- Trade	\$60,000	
<b>Real Estate Loans</b>		\$128,000
- Residential Mortgages	\$50,000	
- Commercial Mortgages	\$40,000	
- Construction	\$38,000	
<b>Loans, held for Sale</b>		\$12,000
- Student Loans	\$12,000	
<b>Total Gross Loans</b>		\$495,000
Allowance for Loan Losses		(\$5,000)
<b>Loans, Net</b>		\$490,000
Fixed Assets (Premises) and other non-earning assets		\$10,000
<b>Total Assets</b>		\$500,000

### Interest Income

vs

### Non-Interest Income

it is the amount of interest that has been generated during a specific period :)

it is the amount of money (\$ or won) that has been earned from fees and other activities (late fees, annual fees, overdraft fees, check fees, loan service fees, account service fees and so on)



#### Example - Citibank

As an example, Table 3-2 shows the total assets of Citigroup was \$1.73 trillion, making it the 15<sup>th</sup> largest bank in the world by assets in 2015.<sup>23</sup> Total loans made up \$617 billion and allowances for loan losses totaled \$12 billion, leaving net loans at \$604 billion. Of the total loans, \$329.8 billion were consumer loans and \$287.8 billion were corporate loans. Other major items include assets belonging to their trading activities (\$250 billion), Investment Assets (\$299 billion), and federal funds and repurchase agreements (\$220 billion).

#### CITIGROUP – Consolidated Balance Sheet –December 31, 2015

CONSOLIDATED BALANCE SHEET	Citigroup Inc. and Subsidiaries	
	December 31	
In millions of dollars	2015	2014
Short-Term Assets		
Cash and due from banks (including segregated cash and other deposits)	\$20,900	\$20,900
Deposits with banks	112,197	128,089
Federal funds sold and securities borrowed or purchased under agreements to resell	219,675	242,570
Brokerage receivables	27,683	28,419
Trading account assets	249,956	296,786
Investments		
Available for sale	299,136	300,143
Held to maturity	36,215	23,921
Non-marketable equity securities	7,604	9,379
Total investments	\$342,955	\$333,443
Loans		
Consumer	329,783	369,970
Corporate	287,834	274,665
Loans, net of unearned income	\$617,617	\$644,635
Allowance for loan losses	(12,626)	(15,994)
Total loans, net	\$604,991	\$628,641
Goodwill	22,349	23,592
Intangible assets (other than MSRs)	3,721	4,566
Mortgage servicing rights (MSRs)	1,781	1,845
Other assets	125,002	122,122
Total assets	\$1,731,210	\$1,842,181

Source: <https://www.citigroup.com/citi/investor/data/k15c.pdf?ren=inApp>



**CITIGROUP - Consolidated Statement of Income - December 31, 2015**

CONSOLIDATED STATEMENT OF INCOME		Citigroup Inc. and Subsidiaries		
		Years ended December 31		
<i>In millions of dollars, except per share amounts</i>		2015	2014	2013
Revenues <sup>(1)</sup>				
Interest revenue		\$58,551	\$61,683	\$62,970
Interest expense		11,921	13,690	16,177
Net interest revenue		\$46,630	\$47,993	\$46,793
Commissions and fees		\$11,848	\$13,032	\$12,941
Principal transactions		6,008	6,698	7,302
Administration and other fiduciary fees		3,648	4,013	4,089
Realized gains on sales of investments, net		682	570	748
Net impairment (losses) recognized in earnings		\$(265)	\$(424)	\$(535)
Insurance premiums		\$1,845	\$2,110	\$2,280
Other revenue		5,958	3,227	3,106
Total non-interest revenues		\$29,724	\$29,226	\$29,931
Total revenues, net of interest expense		\$76,354	\$77,219	\$76,724
Provisions for credit losses and for benefits and claims				
Total provisions for credit losses and for benefits and claims		\$7,913	\$7,467	\$8,514
Operating expenses <sup>(1)</sup>				
Compensation and benefits		\$21,769	\$23,959	\$23,967
Premises and equipment		2,878	3,178	3,165
Technology/communication		6,581	6,436	6,136
Advertising and marketing		1,547	1,844	1,888
Other operating		10,840	19,634	13,252
Total operating expenses		\$43,615	\$55,051	\$48,408
Income from continuing operations before income taxes		\$24,826	\$14,701	\$19,802
Provision for income taxes		7,440	7,197	6,186
Income from continuing operations		\$17,386	\$7,504	\$13,616
Discontinued operations				
Income (loss) from discontinued operations, net of taxes		\$(54)	\$(2)	\$270
Non-controlling interests		90	192	227
Citigroup's net income		\$17,242	\$7,310	\$13,659
Diluted earnings per share <sup>(2)</sup>				
Income from continuing operations		\$5.42	\$2.20	\$4.25
Income (loss) from discontinued operations, net of taxes		(0.02)	—	0.09
Net income		\$5.40	\$2.20	\$4.34

(1) Certain prior-period revenue and expense lines and totals were reclassified to conform to the current period's presentation. See Note 3 to the Consolidated Financial Statements.

(2) Due to rounding, earnings per share on continuing operations and discontinued operations may not sum to earnings per share on net income.

Source: <https://www.citigroup.com/citi/investor/data/k15c.pdf?ren=inApp>



## "Financial Assets"

### \* Financial asset classifications and measurement bases

① financial instruments are contracts that give rise to both a financial asset of one entity and a financial liability or equity instrument of another entity.

② financial assets include stocks, bonds, loans, receivables, derivatives, and loans.

\*\*\* ③ financial instruments are measured at "a) historical costs, b) amortized cost, and c) fair value."

Important!

a) Historical cost

- Loans
- Receivables

b) Amortized cost

- \* Held to maturity securities
- debt securities acquired with intent to be held to maturity

c) Fair value

debt and equity securities that are not expected to be held to maturity or traded in short run

- \* trading securities
- \* Available for sale securities

debt and equity securities acquired with the intent to profit over the near term (short-term)

## "Allowance for Loan and Lease Losses (ALL)"

• Simply stated, the reserve for bad debts!

\* Banks set aside reserves for potential losses on their loans every quarter! They must ensure that sufficient reserves are available to write-off defaulted loans. Once the potential losses are estimated, banks will add the amount to ALL as a contra account in the balance sheet :)

## "Goodwill"

• Goodwill is the excess of purchase price over the fair value of the identifiable net assets ( $\approx$  assets - liabilities) acquired in a business acquisition.

• Goodwill is not amortized, but it must be tested for impairment at least annually; as long as it is not impaired, it will remain on the balance sheet forever!!



## Financial Reporting and Analysis

- \*\*\* How to calculate Goodwill? Let's solve a problem below!!

start here

Shin's Library paid 600 won for the outstanding stock of UNO. At the acquisition date, UNO reported the following condensed balance sheet.

UNO - Condensed Balance Sheet

	Book value (won)
Current Assets	80
Plant and Equipment, net	760
Goodwill	30
Liabilities	400
Stockholders' Equity	470

UNO BS	
(A)	(L)
80	400
760	(E)
30	470

Same right?

The fair value of the plant and equipment was 120 won more than its recorded book value. All other things being equal calculate the amount of goodwill Shin's Library should report on its consolidated balance sheet.

Step

- ① figure out the fair value of net assets

$$80 + (760 + 120) - 400 = 560$$

Step

- ② Calculate the amount of goodwill

$$600 - 560 = 40$$

Goodwill!!

Why pay more? because UNO may have assets that are not reported on its balance sheet; customer loyalty, UNO reputations and recognitions have values certainly, but cannot be quantifiable! Also, perceived synergies can be Plus :)

- \* "Economic goodwill" derive from the expected future performance of the business.
- "Accounting goodwill" Comes from the result of past acquisition



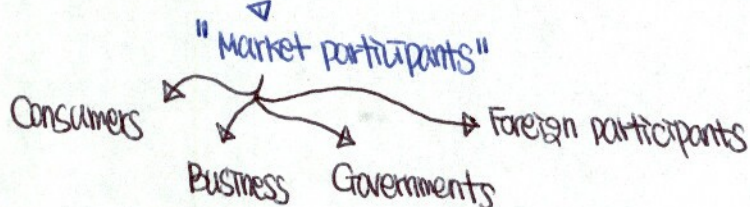
## "The Determinants of Interest Rates"

- Researchers and Economists have discussed factors that determine the level of interest rates. Two major theories can explain/provide details.



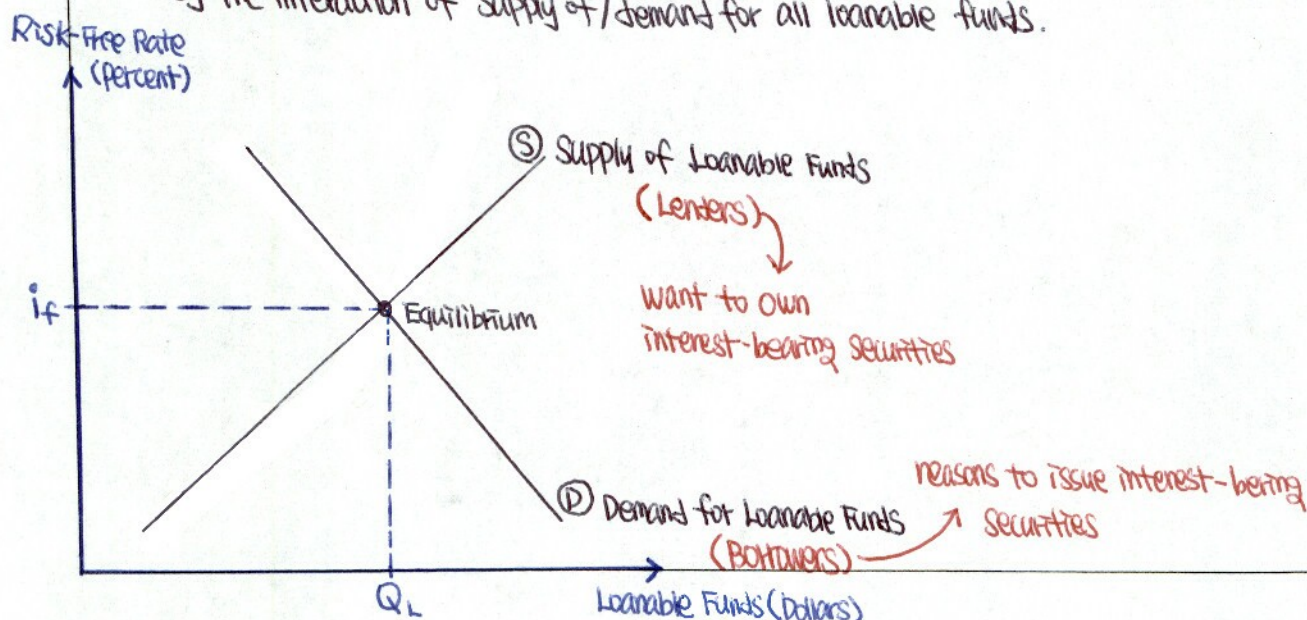
① Liquidity Preference Theory focuses on supply of /demand for liquidity assets (money). It explains movements in a single interest, which is viewed average/aggregate level of the rates on short-term securities. as an

② Loanable Funds Theory focuses on supply of /demand for aggregate loanable funds throughout the entire economy. It explains factors that affect borrowers and lenders, and analyzes movements in both short-term and long-term securities. Most institutions follow this theory and framework.



(It refers to the credit needs of all borrowers and the sources of financing provided by all lenders)

\*\*\* When all debt markets are aggregated, the risk-free rate of interest is determined by the interaction of supply of /demand for all loanable funds.





## Financial Reporting and Analysis

(under Loanable Funds Theory...)

(a) factors affecting the supply of loanable funds :

Lenders want to own interest-bearing securities !! because

- (1) "Individuals" may have excess income relative to what they spend on consumption goods, or reinvest other/another stock of wealth
- (2) "Nonfinancial businesses" usually excess cash that is invested temporarily before the proceeds are used for operating/capital expenses. This excess cash allows businesses to match in the timing of cash flows and planned operating and real expenditures.
- (3) "Government" expands and contracts the growth rate of the banking system's reserves, thus influencing the availability of credit and growth in the money supply. \* A growing money supply increases national income and the amount of funds available for consumption and saving.
- (4) "Foreign investors/businesses" evaluate alternative investments from global perspective.

(b) factors affecting the demand for loanable funds :

Borrowers issue interest-bearing securities : p

- (1) "Individuals" borrow largely to finance the purchase of real estate, vehicles, and some (expensive) goods. They take <sup>on</sup> more debt when economic conditions are good!
- (2) "Businesses" borrow to finance working capital needs and capital expenditures.
- (3) "Governments" are always borrowers! They issue debt to finance imbalances in operating revenues versus expenses.
- (4) "Foreign investors/businesses" are borrowers! They view US securities as potential \* substitutes.

\*\*\* Inflation and the level of interest rates.

Higher interest rates are associated with great levels of inflation and with increased in expected inflation. Rates decrease with lower inflationary expectations :)