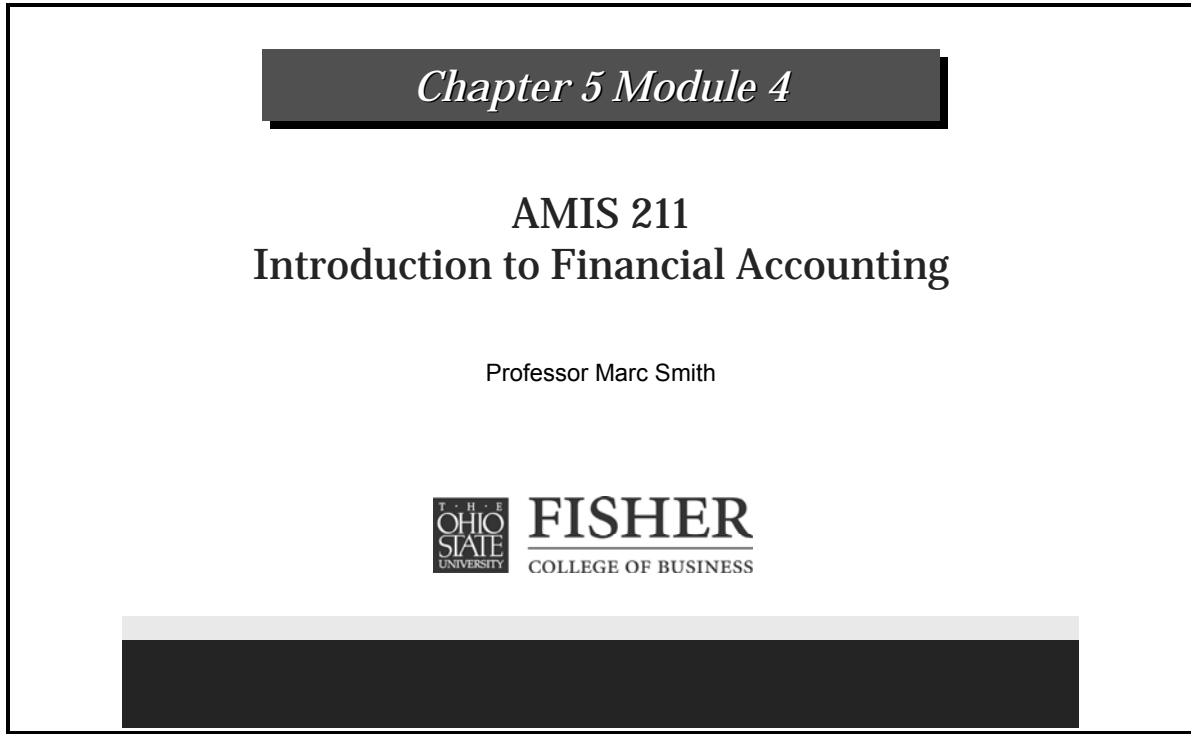


Chapter 5, Module 4

Slide 1

A rectangular box with a black border containing the slide content. At the top, a dark grey horizontal bar contains the text "Chapter 5 Module 4" in white, italicized font. Below this, the text "AMIS 211" and "Introduction to Financial Accounting" is centered in a black serif font. Underneath, "Professor Marc Smith" is centered in a smaller black serif font. The logo for The Ohio State University Fisher College of Business is centered, featuring a square with "THE OHIO STATE UNIVERSITY" and "FISHER COLLEGE OF BUSINESS" to its right. At the bottom of the box, there are two horizontal bars: a light grey one on top and a dark grey one below it.

Hi everyone. Welcome back.

That last module was kind of a long one wasn't it? We will try to keep this one a little bit shorter.

In this module, we want to spend some time talking about the other way of calculating cash flows from Operating Activities: the Indirect Method.

And, let's jump right into it.

Go ahead to the next slide.

Slide 2

Chapter 5 Module 4: Indirect Method

The indirect method starts with ACCRUAL BASIS net income then makes a series of adjustments to convert it to a CASH BASIS net income

**Net Income
+ Depreciation expense**

QUESTION: Why does the indirect method add depreciation expense to calculate cash flows from operations?

And, remember that: the Indirect Method does not list out each specific individual cash flow like the Direct Method did.

Rather, the Indirect Method begins with Net Income and then makes a series of adjustments to convert the Net Income from Accrual to a Cash Basis.

Now, the first adjustment you are always going to deal with—the first thing we are always going to see for the Indirect Method:

You take Net Income and add (+) back Depreciation Expense. That is always the first adjustment.

And, of course, the question is: Why?

Why in the world? Didn't we say Depreciation was Non-Cash? So, why are we adding (+) it in this calculation for the Indirect Method?

Go to the next slide and let's answer that.

Slide 3

Chapter 5 Module 4: Indirect Method

ANSWER: Depreciation expense reduces the accrual basis net income as it is an expense. However, it has **NO EFFECT** on cash (it is a non-cash expense). Had cash accounting been used, no depreciation would be recorded.

Thus, to convert net income from an accrual number to a cash number, you must add back depreciation.

- ▶ **Same logic used for losses (another non-cash expense). Gains, a non-cash revenue, is deducted from net income in this calculation.**

The reason is: Depreciation is Non-Cash. It has No Effect whatsoever on cash. However, it is an expense. So, it does in fact reduce Net Income.

So, it reduces Net Income as the expense but had no effect on cash. Thus, to convert from the Accrual to Cash Basis, we must eliminate its effect.

It was initially subtracted to calculate Net Income.

To eliminate the effect of the Depreciation, we add (+) it back.

This allows us to convert the Net Income from an Accrual Number to Net Income on a Cash Basis.

This is a very important idea.

The reason we add (+) back the Depreciation is this helps us convert the Accrual Net Income to a pure Cash Basis Net Income.

For the other two Non-Cash items: Losses and Gains:

Losses follow the exact same logic as what we just saw for Depreciation.

They are both Non-Cash Expenses. They both get added (+) to the adjustment to Net Income to convert from Accrual to Cash.

Gains, however, are Non-Cash Revenues. They were initially added to get to Net Income. They increase Net Income.

To eliminate the effects of gains, you, thus, must subtract (-) the Gain.

You add (+) the Losses and Depreciation.

Go to the next slide with me.

Slide 4

Chapter 5 Module 4: Indirect Method

Net income		XXX
Adjustments to reconcile net income to cash flow from operations		
+ Depreciation expense	XXX	
+ Losses	XXX	
- Gains	(XXX)	
+ Decreases in current assets (except cash and investments)	XXX	
- Increases in current assets (except cash and investments)	(XXX)	
+ Increases in current liabilities (except notes payable)	XXX	
- Decreases in current liabilities (except notes payable)	(XXX)	XXX
Net cash provided (used) by operating activities		XXX

EXCEPTIONS FROM ABOVE:

1. Cash - is detailed by entire financial statement thus it would be incorrect to include it in any one section
2. Investments - classified as an investing activity (this includes loans made by the company → notes receivable)
3. Notes Payable - represents amounts borrowed from creditors and thus would be classified as a financing activity

And, let's just take a look at what the Indirect Method looks like.

You start with Net Income. You will then make a series of adjustments to convert that from the Accrual Number that it is into a Cash-Basis Net Income.

The adjustments:

You add (+) back Depreciation Expense. You add (+) in any Losses and subtract (-) any Gains. We just spent some time talking about this.

But then we make another set of adjustments. These ones relate to Current Assets and Current Liabilities.

For Current Assets, you add (+) in any decrease in Current Asset. If the Current Asset went down; let's say from a Beginning Balance of \$5.00 to an Ending Balance of \$1.00. That is a \$4.00 decrease. That \$4.00 would get added (+) into this calculation.

Notice: there are a couple of exceptions.

We say: EXCEPT for CASH and INVESTMENTS.

For Current Liabilities, the rules simply flip.

We add (+) in the increases in Current Liabilities and we subtract (-) the decreases in Current Liabilities.

Note: again, there is one exception: that is NOTES PAYABLE.

Once you do that, you take Net Income, plus (+) Depreciation Expense; plus (+) any Losses; minus (-) any Gains; plus (+) the decrease in Current Assets; minus (-) the increase in Current Assets; plus (+) the increase in Current Liabilities; minus (-) the decrease in Current Liabilities.

That allows us to calculate Net Cash Provided by Operations.

Now, let's talk for a moment about those three exceptions that we have up there in that Schedule.

Remember for the Current Asset adjustment: it is except for CASH and INVESTMENTS. And, for the Current Liability adjustment, it is except for NOTES PAYABLE.

CASH is an exception because it is the entire Statement.

It is the Statement of Cash Flows. So, the whole Statement shows the changes in CASH. It would be inappropriate to include CASH in any one individual category.

INVESTMENTS, which include buying stock in another company as well as making loans to individuals; investments: they are an Investing Activity.

Investments=Investing.

So, we treat investments as an Investing Activity not an Operating Activity.

Finally, our NOTES PAYABLE represents money that we have borrowed from creditors.

Hence, NOTES PAYABLE is treated as a Financing Activity; not an Operating Activity.

It represents money we have either gotten from or paid to a creditor.

Slide 5

Chapter 5 Module 4: Example #1

Net income		80,000
Adjustments to reconcile net income to cash flow from operations		
+ Depreciation expense	40,000	
+ Loss on sale of investment	3,000	
+ Decrease in accounts receivable	2,000	
- Increase in inventory	(5,000)	
- Increases in prepaid insurance	(25,000)	
- Decrease in accounts payable	(7,000)	
- Decrease in salaries payable	(3,000)	
+ Increase in interest payable	2,000	
- Decreases in income taxes payable	(3,000)	4,000
Net cash provided by operating activities		84,000

Notice that the net cash provided (used) from operating activities should ALWAYS be the same under the indirect and direct methods (see module 3)

On this slide (Slide 5), we can see an example as to what the Indirect Method looks like.

Let's go through these numbers and make sure we are comfortable with where they are coming from.

We start with Net Income. That is given as \$80,000.

The first thing we do is add (+) back the Depreciation Expense right off the Income Statement. It is \$40,000.

We also see from that Income Statement, we had a Loss—a Loss on sale of investments. We add (+) in that Loss of \$3,000.

There are no Gains. So, we do not need to worry about that.

But, we now need to move to our Current Assets.

Remember that the two exceptions: CASH and INVESTMENTS; they are not going to be part of this Schedule. So, those first two Current Assets, we can ignore.

But, we do have three other ones (Current Assets): Accounts Receivable, Inventory, and Prepaid Insurance.

We know that the Prepaid is Current because it expires next year—within the next one year.

So, let's look at Accounts Receivable.

Accounts Receivable decreased during the year. It went from a \$75,000 balance to a \$73,000 balance. That is a \$2,000 decrease; that \$2,000 decrease is added (+) in this Schedule.

The Inventory and the Prepaid Insurance both increased. Inventory increased by \$5,000. Prepaid Insurance increased by \$25,000.

Increases in Current Assets are subtracted (-) using the Indirect Method for Operating Cash Flows.

So, we will subtract (-) those increases in our calculations.

There are no more Current Assets. The next one listed is P-P-E.

So, we will go down to our Current Liabilities.

And, the first Current Liability is Accounts Payable. It decreased from \$35,000 to \$28,000 balance. That is a \$7,000 decrease; that decrease in a Current Liability is subtracted (-).

It is the same story for the Salaries Payable as well as the Income Tax Payable. They both decreased. Hence, that decrease is subtracted (-) in our calculations.

However, the Interest Payable went up. It went from \$3,000 to \$5,000. That is a \$2,000 increase. An increase in a Current Liability: that is added (+).

We add (+) and subtract (-). We make those adjustments to the Net Income. We convert it from Accrual to Cash.

We get our Cash Provided from Operating Activities: \$84,000.

And, it is worth noting: using the Indirect Method as well as the Direct Method should always result in the same total Net Cash Provided from Operations.

And, if you go back to the previous module with this example, you will see that it, in fact, does.

Let's go to the next slide.

Slide 6

Chapter 5 Module 4: Example #1

Cash Flows From Investing Activities:		
Cash Paid to Purchase P-P-E		(150,000)
Cash Received from the Sale of Investments		7,000
Net cash used by investing activities		(143,000)

To calculate the cash received from the sale of investments:

- We know investments costing \$10,000 were sold in 2003 (investment account decreased by \$10,000)
- From the income statement, we know the investments were sold for a \$3,000 loss (meaning the cash from the sale was \$3,000 less than the cost of the asset sold)

Involve Investments and Long-Term Asset Items

And, let's finish it out.

Requirement 3 says to: "Prepare the entire Cash Flow Statement."

We have done the hard part. We have already done the Operating Activities.

Let's focus on Investing Activities.

Now, Investing Activities: you can see I have done it for us already. It is on the slide (Slide 6).

But remember that: Investing Activities relate to Long-Term Assets and Investments.

And, if you just look at our Balance Sheet:

Long-term Assets include things like P-P-E (Property, Plant and Equipment).

And, we see that the P-P-E increased from \$450,000 to a \$600,000 balance.

Why?

Why would it go up? Why would we have more?

Because: we went out and purchased P-P-E. Purchasing Property, Plant and Equipment (P-P-E) is a cash outflow. We have a \$150,000 outflow related to buying Property, Plant and Equipment (P-P-E).

I have a question for you:

It says here that we received cash from selling investments of \$7,000.

How did we calculate that?

Where did I get that \$7,000 of cash from selling investments?

I mean, look at the Investments account: the Investments account decreased by \$10,000.

We know that. We know that the Investments account went down.

But, what else do we know?

We know from the Income Statement that we sold these investments at a Loss. We recorded a \$3,000 Loss on the Sale of the Investment. Hence, we received less cash than the cost of the investment.

We sold investments that cost us \$10,000. We can tell that from the decrease in the Investments account. But, because we sold them at a Loss, the cash we must have received is only \$7,000. The Loss was \$3,000.

So, the cash that we received is only \$7,000.

That is kind-of an important point. You will want to be comfortable with how we calculated that.

We are able to then calculate Net Cash Used in this case—because it is negative—Net Cash Used by Investing Activity: \$143,000.

Those are our Investing Activities.

Go to the next slide.

Slide 7

Chapter 5 Module 4: Example #1

Cash Flows From Financing Activities:		
Cash Received from Borrowing (increase in note payable)		30,000
Cash Received from the Sale of Common Stock (increase in common stock account)		76,000
Cash Paid for Dividends		(35,000)
Net cash provided by financing activities		71,000

How did we calculate the cash paid for dividends?

**Involve Long-Term Liability and
Stockholders' Equity Items**

And, let's do the Financing Activities.

Remember: Financing Activities relate to Long-Term Liabilities and Stockholders' Equity items.

So, look at our Balance Sheet.

One Long-Term Liability that we have is the Note Payable.

And the Note Payable went up from \$130,000 to \$160,000 balance.

The reason it would go up is we had more borrowings. We got more cash. We have a \$30,000 inflow from borrowing money on a Note.

Another example would be the stock that we sold.

Common stock also increased from \$300,000 to \$376,000. We got cash from selling stock. The cash received is: \$76,000.

Finally, notice that I have put here: Cash Paid for Dividends: a \$35,000 outflow.

How did I calculate that? How did I come up with that Cash Paid for Dividends?

We are going to fall back on an old friend.

Go to the next slide.

Slide 8

<i>Chapter 5 Module 4: Example #1</i>	
Retained Earnings	
	90,000
Dividends X	Net Income 80,000
	135,000
$90,000 + 80,000 - X = 135,000$ $X = \text{Cash Paid for Dividends} = \$35,000$	

And, there is Retained Earnings.

Remember: What affects Retained Earnings?

Enter in your Beginning balance. Enter in your Ending balance. It is given in the Balance Sheet.

Retained Earnings goes up by the amount of Net Income—right from the Income Statement.

Retained Earnings goes down by the amount of Dividends Paid.

Remember: Beginning Retained Earnings, plus (+) Net Income; minus (-) Dividends; equals (=) Ending Retained Earnings.

And, I think when we covered it way, way back in the beginning parts of the course, I said” “Hey! That is the one that everybody forgets!” But that is the one we see over and over and over. And, here it is again.

We can do the Algebra to solve for the Dividends that we paid: \$35,000.

That is how I got the \$35,000 for Cash spent on Dividends.

Go to the last slide with me.

Slide 9

<i>Chapter 5 Module 4: Example #1</i>	
Cash flows from operating activities	
Cash collected from customers	382,000
Cash payments for:	
inventory purchases	(142,000)
insurance	(45,000)
salaries	(48,000)
interest	(10,000)
income taxes	<u>(53,000)</u>
Net cash provided by operating activities	84,000
Cash flows from investing activities	
Cash paid to purchase property-plant-equipment	(150,000)
Cash received from the sale of investments	<u>7,000</u>
Net cash used by investing activities	(143,000)
Cash flows from financing activities	
Cash received from borrowings	30,000
Cash received from the sale of common stock	76,000
Cash paid as dividends	<u>(35,000)</u>
Net cash provided by financing activities	71,000
Net change in cash (84,000 - 143,000 + 71,000)	12,000

And, there is what the final product—so to speak—looks like.

You can see we have the Operating Activities. I have done it just by the Direct Method. We have the Investing and we have the Financing.

When we add (+) the three subtotals together, our Net Change in Cash is: 12,000 bucks (\$12,000).

And, what should make us feel really good about that \$12,000? Why should we feel real happy about that?

Well, look at your Cash account on the Balance Sheet.

The Beginning Balance was \$30,000. The Ending Balance was \$42,000. For a change of...how much?

It is \$12,000, described here on this last slide as to where that \$12,000 came from.

That should happen every time.