



# Forensic Accounting

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## Myths vs Reality #1



### Myth

We are looking for evidence of **'fraud'** or can **accurately predict corporate collapse**



### Reality

We are looking for evidence of **bias in the numbers, which conceals poor underlying performance**

## Myths vs Reality #2



### Myth

We need detailed knowledge of all **accounting rules to spot areas of non-compliance**



### Reality

We need to know the **'soft areas' in the accounting** as this is where bias might arise

## Myths vs Reality #3



### Myth

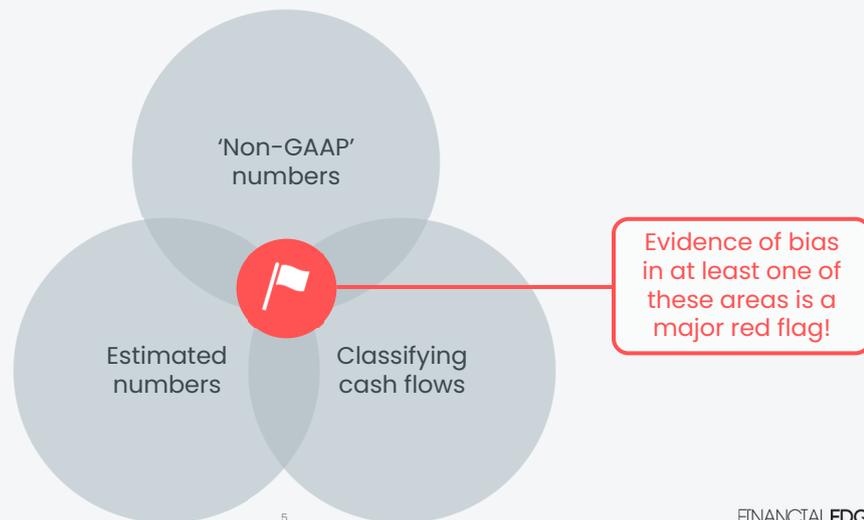
We need to read **the financials cover to cover to spot all the accounting red flags**



### Reality

We start with high level ratio analysis to **identify risk areas requiring more detailed analysis**

## 'Soft Areas' in Accounting

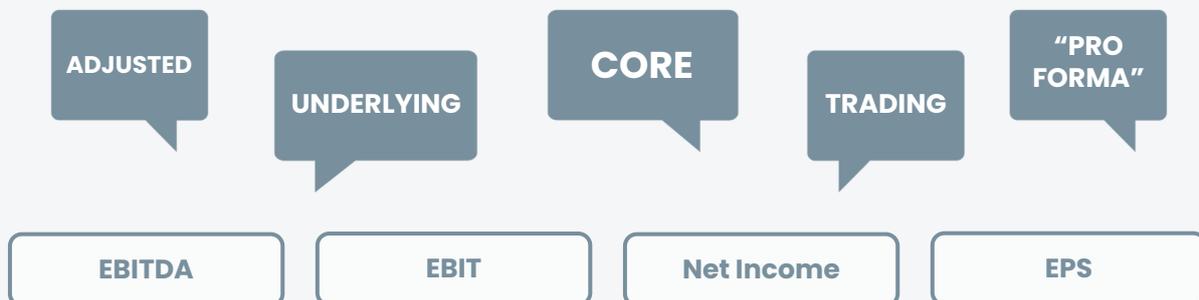


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## What are 'Non-GAAP' Numbers?



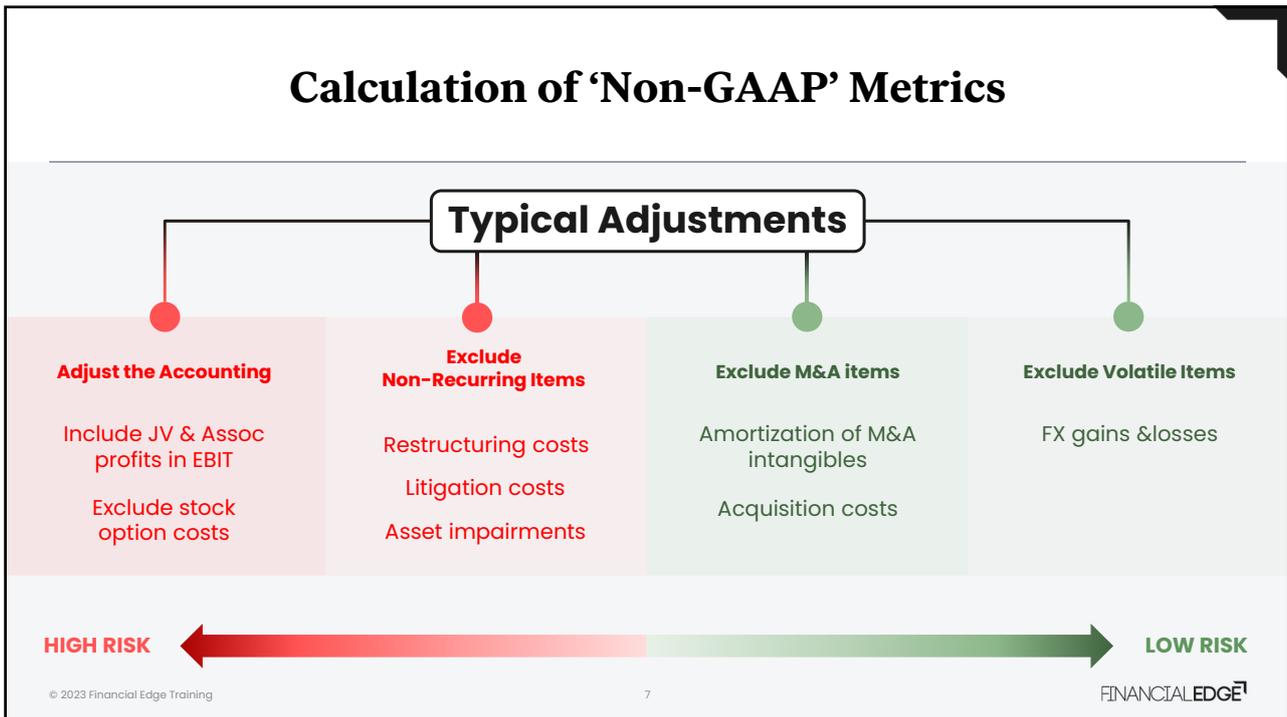
**Non-GAAP metrics are not covered by accounting rules**  
- this allows flexibility in how companies calculate them

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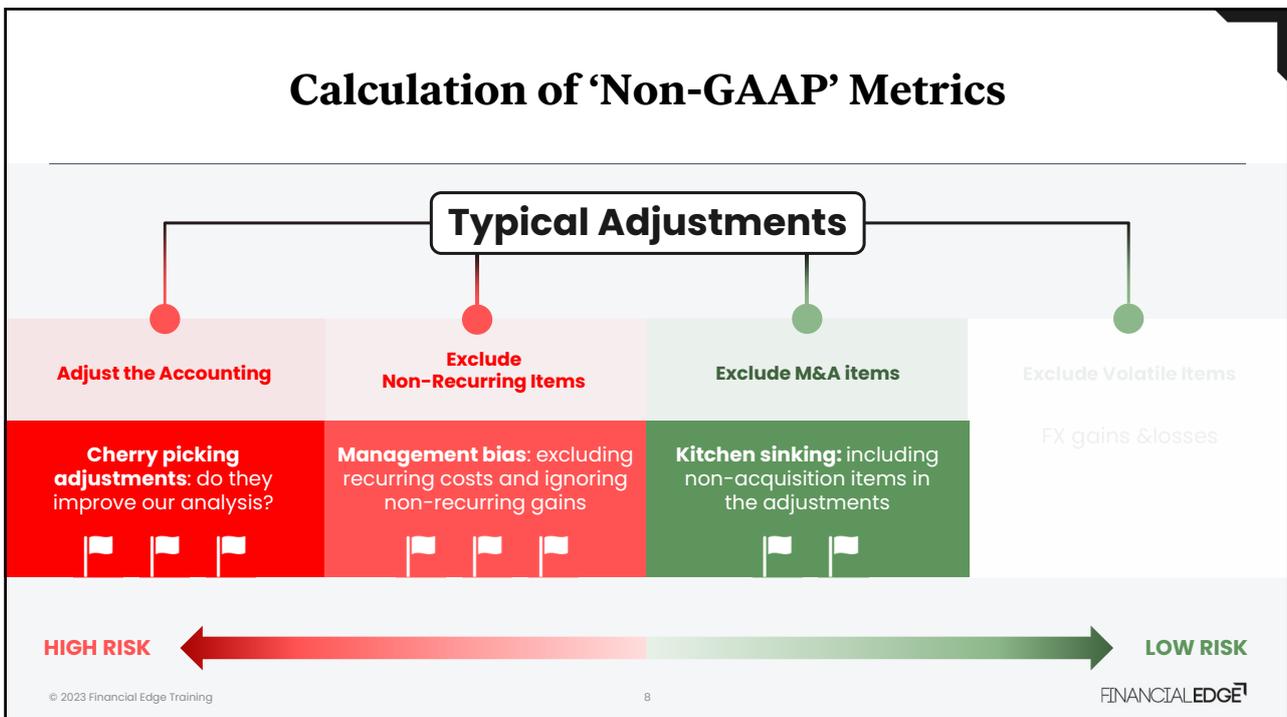
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## Calculation of 'Non-GAAP' Metrics



## Calculation of 'Non-GAAP' Metrics



## What Concerns Do You Have About the Adjustments Below?

### Underlying Earnings

	2018	2017
<b>Reported Operating Profit</b>	<b>430</b>	<b>470</b>
Restructuring costs	110	90
Asset impairments	40	-
Asset disposal costs	50	-
Pension service cost	90	80
Associate profits	80	60
Amortization of M&A intangibles	100	100
<b>Underlying EBIT</b>	<b>900</b>	<b>800</b>

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- 1 Restructuring costs appear to be recurring
- 2 Gains from asset disposal could still be in underlying EBIT
- 3 Pension service costs are a real economic cost, even if 'non cash'
- 4 Associate profits are 'non-core'. Rarely justifiable to include

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## What Concerns Do You Have About the Adjustments Below?

### Underlying Free Cash Flow

	2018	2017
<b>GAAP Operating Cash Flow</b>	<b>600</b>	<b>750</b>
Onerous contract payments	60	60
Litigation settlement	100	-
<b>Underlying Operating Cash Flow</b>	<b>760</b>	<b>810</b>
Net purchase of tangible assets	(50)	(190)
<b>Underlying FCF</b>	<b>710</b>	<b>620</b>

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- 1 Contractual cash flows might recur for many years, even if the earnings impact was 'one-off'
- 2 Proceeds from asset disposals are included in underlying FCF

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## Case Example: Thomas Cook

How exceptional are Thomas Cook's exceptional items?

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Thomas Cook went into liquidation 10 months after publishing its 2018 Annual Report

## What's the Evidence on Non-GAAP?



“Higher levels of excluded [non-recurring expenses] lead to predictably lower future cash flows. We find that investors do not fully appreciate the lower cash flow implications...

**A trading strategy based on the excluded expenses yields a large positive abnormal return in the years following the announcement”**

**The Predictive Value of Expenses Excluded from 'Pro Forma' Earnings  
(Doyle, Lundholm, Soliman 2002)**

## Estimated Numbers – What's the Risk?

**Contract Revenue and Profit Recognition**

**Inventory Valuation**

**Provision Balances**

**Accounting for M&A**



**These numbers are highly subjective, so could be affected by management bias**

## Estimated Numbers – What’s the Risk?

**Contract Revenue and Profit Recognition**

Inventory Valuation

Provision Balances

Accounting for M&A

- 1 Estimation of contract revenues
- 2 Lower cost estimates accelerate revenues and profits
- 3 Analysis of accrued income is key!

## Estimated Numbers – What’s the Risk?

Contract Revenue and Profit Recognition

**Inventory Valuation**

Provision Balances

Accounting for M&A

- 1 Inventory recorded at lower of cost and net selling price
- 2 ‘Cost’ includes allocating manufacturing overheads
- 3 Elevated inventory balances are a red flag

## Estimated Numbers – What’s the Risk?

Contract Revenue and Profit Recognition

Inventory Valuation

**Provision Balances**

Accounting for M&A

1

Provisions reflect future, probable cash outflows

2

‘Cookie jar’ provisions can be utilized or released to enhance EBIT

3

Elevated provision balances and provision ‘churn’ are red flags

## Estimated Numbers – What’s the Risk?

Contract Revenue and Profit Recognition

Inventory Valuation

Provision Balances

**Accounting for M&A**

1

Estimates of ‘fair values’ of target balance sheet and purchase price

2

Target balance sheet: working capital and provisions are a key focus

3

Earnout payments are another focus area

## Where Can We See This Risk?

### Estimates are Essentially Accruals...

	20XX	
<b>Net profit</b>	<b>300</b>	<b>Profit</b>
Depreciation & amortization	60	⊖
Changes in working capital	(40)	⊖
Changes in provisions	(30)	⊖
<b>Operating cash flow</b>	<b>290</b>	<b>Cash</b>

Changes in Accruals

The cash flow statement is essential for identifying the risks in estimates!

## What Concerns About Estimates Do You Have from the Information Below?

	2018	2017
<b>Net profit</b>	<b>730</b>	<b>690</b>
Depreciation & amortization	60	55
Contract impairment losses	1 20	-
Increase in inventories	(5)	(5)
Increase in receivables	2 (30)	(10)
(Dec)/inc in payables	10	5
(Dec)/inc in provisions	3 (30)	10
<b>Operating cash flows</b>	<b>755</b>	<b>745</b>
Purchase of PP&E	(95)	(70)
Acquisition of subsidiary*	4 (300)	-
<b>Investing cash flows</b>	<b>360</b>	<b>675</b>

\* Acquisition closed just prior to FY18 y/end

1

Could indicate poor cost control or aggressive revenue recognition

2

Large increase could indicate aggressive revenue/ profit recognition (or deteriorating credit control)

3

Large decrease could indicate provisions could be used to boost profits

4

Should not impact on FY18 numbers as deal closed at y/end. However, provides a risk to future earnings, from FV adjustment unwinds

## Case Example: Capita

How much of Capita's 2013-2015 revenues relied on estimates?

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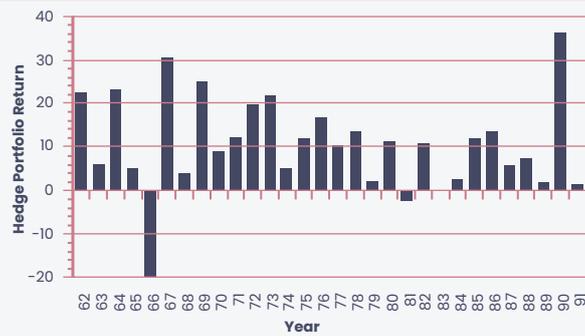


In 2016 Capita issued a series of profit warnings. In 2017 it issued a further profit warning, suspended dividend payments and announced a rights issue due to new revenue accounting rules (IFRS 15) which would result in a £0.2bn reduction in previously recognized profits (retained earnings).

## What's the Evidence on Estimates?

### The Accruals Anomaly

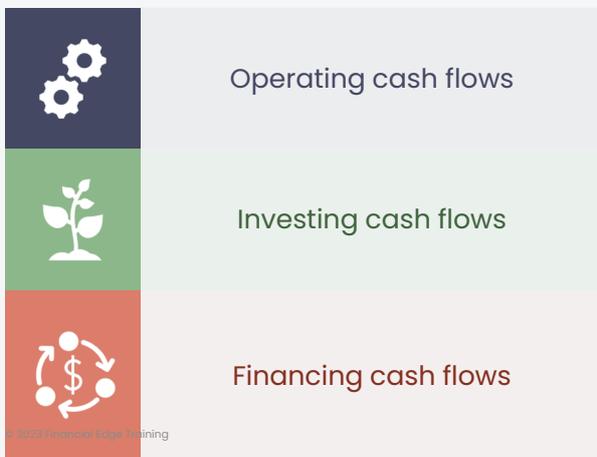
Hedge portfolio returns for low decile accrual firms and high decile accrual firms



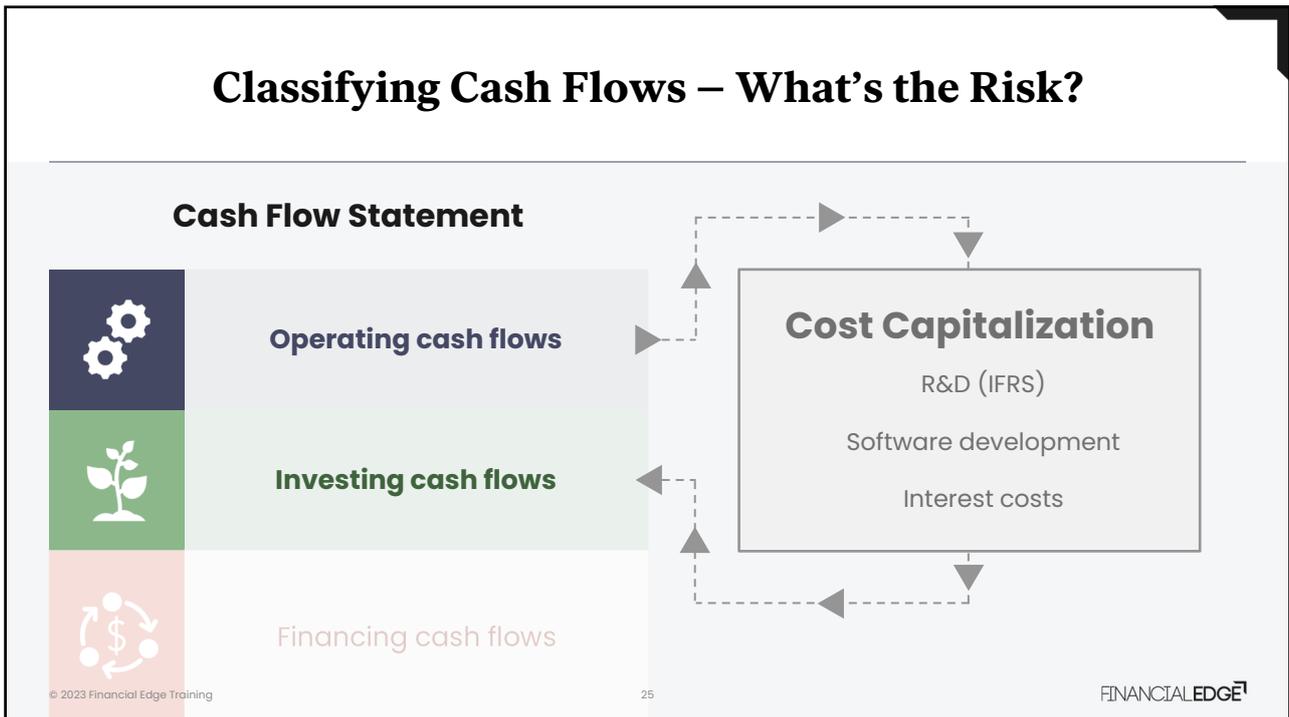
Do Stock Prices Fully Reflect Information in Accruals and Cash Flows About Future Earnings? (Sloan, 1996)

## Classifying Cash Flows – What's the Risk?

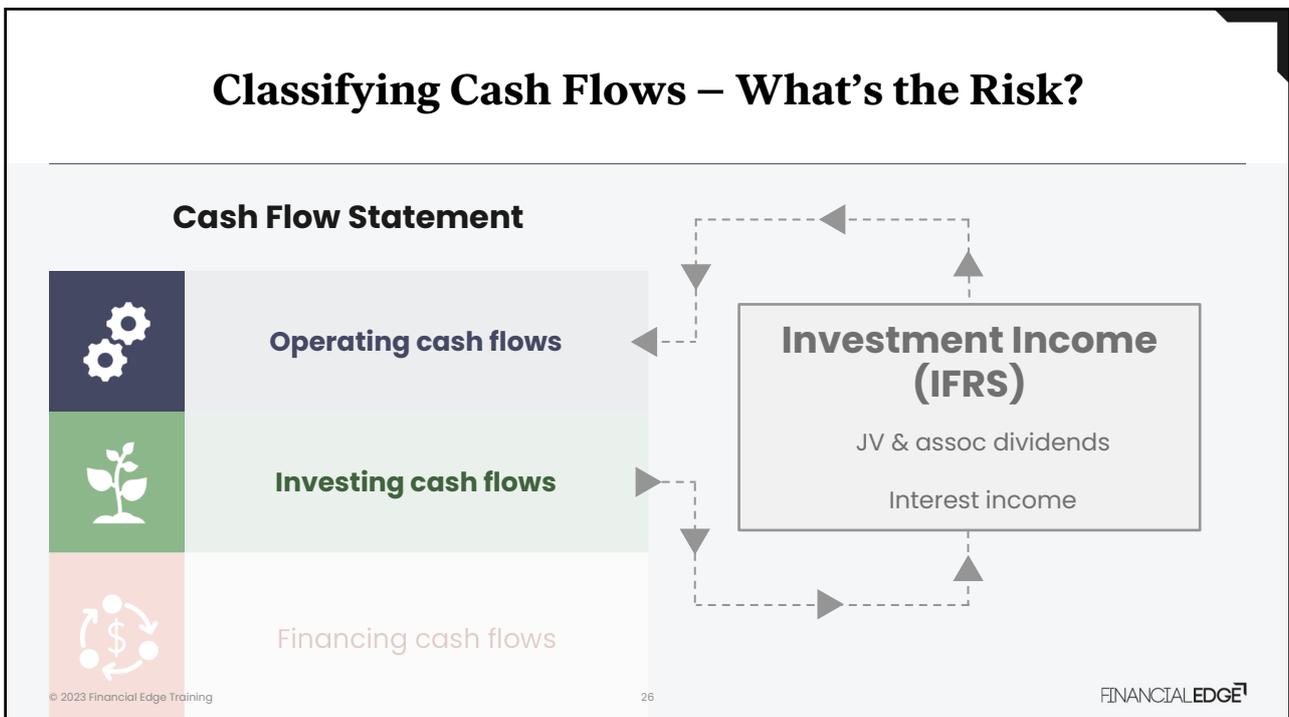
### Cash Flow Statement



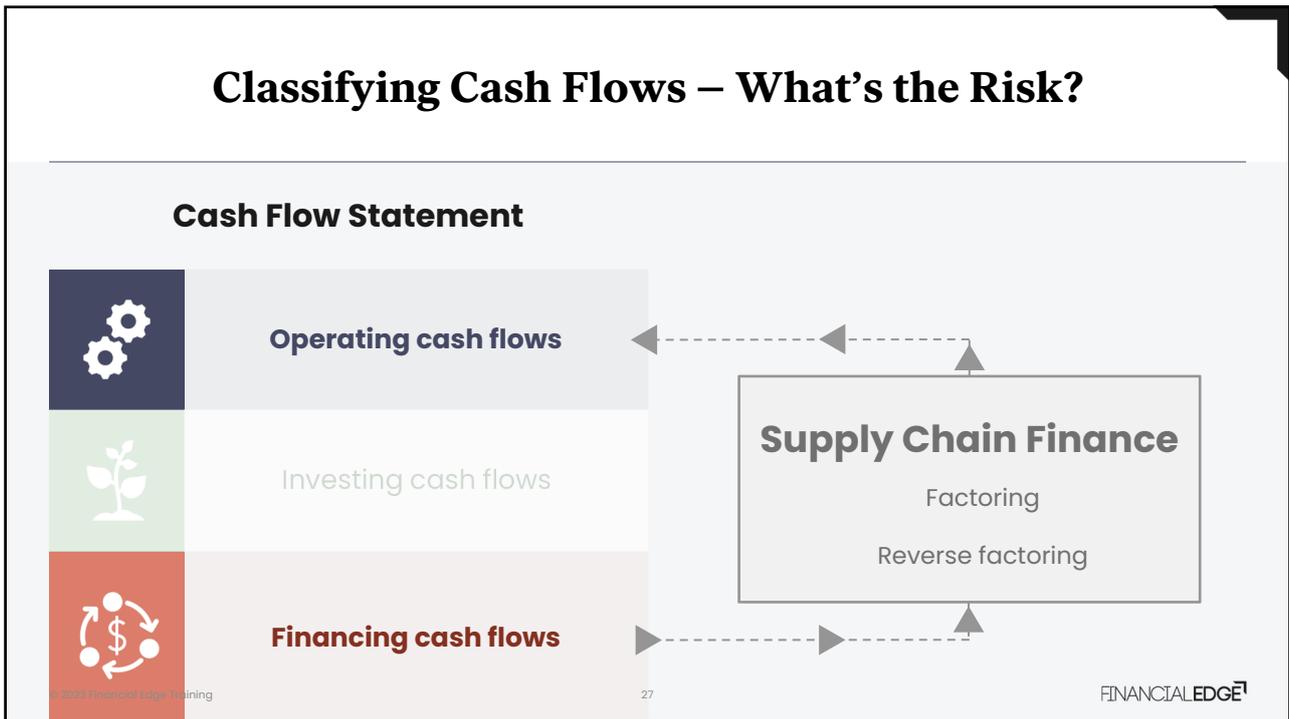
## Classifying Cash Flows – What’s the Risk?



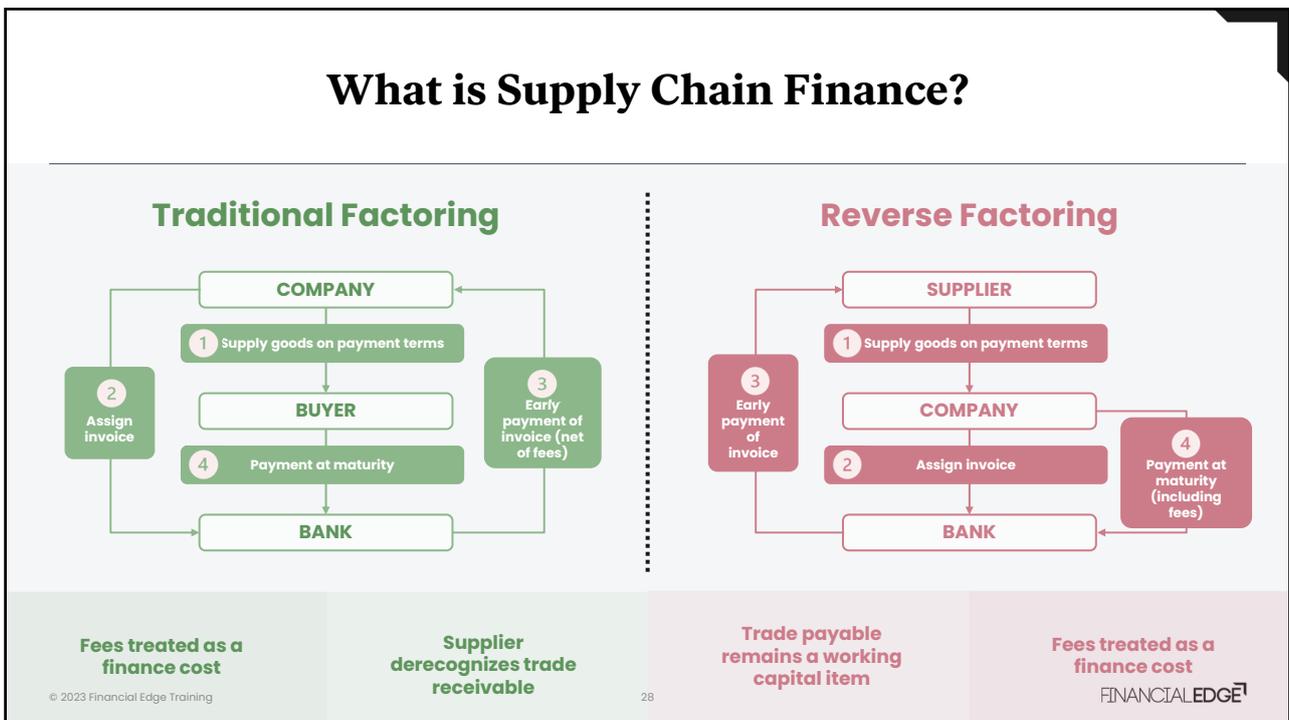
## Classifying Cash Flows – What’s the Risk?



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## What is Supply Chain Finance?



## What Concerns About Cash Flow Classification Do You Have from the Information Below?

	2018	2017
<b>Operating profit</b>	<b>1,200</b>	<b>1,165</b>
Depreciation & amortization	75	65
Impairment of intangibles	20	15
Increase in inventories	(5)	(5)
Increase in receivables	(30)	(25)
(Dec)/inc in payables	<b>1</b> 70	60
(Dec)/inc in provisions	(20)	(20)
Interest expense	(15)	(10)
Cash taxes	(180)	(175)
<b>Operating cash flows</b>	<b>1,115</b>	<b>1,070</b>
Purchase of PP&E	<b>2</b> (105)	(90)
Increase in intangible assets	(50)	(45)
<b>Investing cash flows</b>	<b>960</b>	<b>935</b>

1

Increase in payables in both years seems significant and accompanied by increase in finance costs. Could be using supplier finance

2

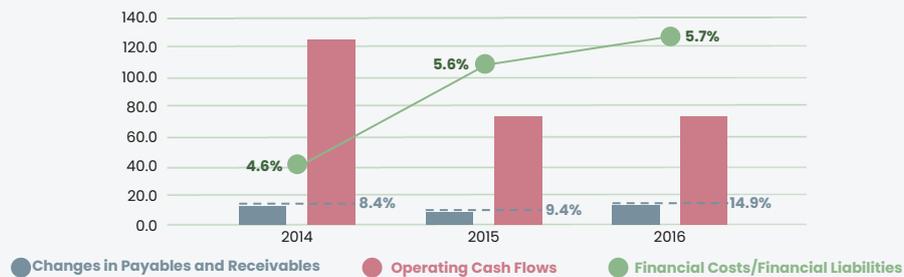
Tangible and intangible capex significantly exceeds D&A, so could indicate over capitalization. The increase in intangibles is particularly concerning as they are also recognizing intangible impairments

## Case Example: Carillion

**What does cash flow analysis tell us about Carillion's cash flows?**

## Case Example: Carillion

### What does cash flow analysis tell us about Carillion's cash flows?



In 2017 Carillion suspended dividend payments and sought £140m additional financing from lenders. They went into compulsory liquidation in early 2018.

## What's the Evidence on Cash Flow Classification?

“ ”

“Operating cash flow enhancing choices...[are linked]...to a **greater likelihood of financial distress, higher leverage, and accessing equity markets more frequently**”

**Flexibility in cash-flow classification under IFRS: determinants and consequences**  
(Gordon, Henry, Jorgensen and Linthicum, 2017)

## Forensic Toolkit



Ratio analysis is more efficient at focussing our efforts than just a blanket review of the financial statements

## Quality of 'Non-GAAP' Metrics

$$\frac{GAAP\ earnings}{Non - GAAP\ earnings} \times 100$$

$$\frac{GAAP\ cash\ flows}{Non - GAAP\ cash\ flows} \times 100$$

Non GAAP earnings should **exclude any add-back of amortization on M&A intangibles** as this can distort the ratio

If these ratios are consistently **<100% or deteriorating in the last 3 reporting periods, more detailed analysis is required**

## Quality of 'Non-GAAP' Metrics

### 🔍 Forensic Focus

#### REVIEW NON-GAAP RECONCILIATIONS

Are the reconciliations clear and adjustments well labelled?

Are some of the reconciling items recurring each year?

Are the nature of reconciling items consistent with peers?



#### REVIEW THE MD&A

Does this raise concerns about the validity of adjustments?

Are there mentions of non-recurring gains not adjusted for?



## Quality of 'Non-GAAP' Metrics

### 🔍 Forensic Focus

#### REVIEW THE CASH FLOW STATEMENT

Do investing cash flows show proceeds from asset disposals? Are gains from these disposals/ disposal proceeds adjusted for in non-GAAP metrics?



If the company provides both non-GAAP earnings and cash flows:  
**REVIEW THE NON-GAAP RECONCILIATIONS SIDE BY SIDE**



Are there items which are being adjusted for in cash flows but not in earnings or vice-versa?

## Quality of Earnings

$$\frac{\text{Adjusted Free Cash Flow}}{\text{Underlying EBIT}} \times 100\%$$

Operating cash flows **before interest and tax**  
less **gross purchases of non-current assets**

If this ratio is consistently **<100% or deteriorating in the last 3 reporting periods,**  
**more detailed analysis is required**

## Quality of Earnings

### Forensic Focus

#### REVIEW OPERATING CASH FLOWS IN THE CASH FLOW STATEMENT

Are there significant cash outflows in relation to any working capital balances?

If so, refer to the supporting notes on receivables, payables and inventory.

Is accrued income increasing ahead of total revenues?

Is accrued income becoming a large % of total receivables?

Are doubtful debt provisions/inventory provisions decreasing relative to gross trade receivable/inventory balances?



## Quality of Earnings

### Forensic Focus

#### REVIEW PROVISIONS DISCLOSURES

Are there significant cash outflows in relation to provisions? If so, does the provisions note suggest this is from provision releases?



#### REVIEW INVESTING CASH FLOWS IN THE CASH FLOW STATEMENT

Is capitalization of non-current assets increasing ahead of amortization charges? If so, is the sales /capex ratio decreasing?



## Quality of Earnings (cont'd)

### Forensic Focus

If there has been recent M&A activity:

#### REVIEW M&A DISCLOSURES FROM THE YEAR OF ACQUISITION

Do fair value adjustments to the target's balance sheet include reductions to working capital (e.g. write downs of contract balances) or increases to provision balances?



#### REVIEW 'DEFERRED CONSIDERATION' DISCLOSURES

Has the FV of consideration been reduced to reflect missed earnout targets? If so, was this separately disclosed as an exceptional gain in underlying EBIT?



#### COMPARE OPERATING MARGINS TO THOSE OF PEERS

Are margins consistently higher than that of peers?



## Quality of Cash Flows

$$\frac{\text{Operating cash flow ex changes in working capital}}{\text{Operating cash flow plus proceeds from asset disposals}} \times 100\%$$

Changes in **inventory, trade receivables and trade payables**  
per cash flow statement, if separately disclosed

If this ratio is consistently **<100% or deteriorating in the last 3 reporting periods, more detailed analysis is required**

## Quality of Cash Flows

### Forensic Focus

#### REVIEW M,D&A

Does management provide any narrative about recent improvements in working capital or reference the use of factoring or supply chain financing?



#### REVIEW 'FINANCE COST' DISCLOSURES

Are there large unexplained items (e.g. other costs) included in finance costs?



#### REVIEW FINANCIAL LIABILITIES DISCLOSURES

Has the ratio of gross finance costs to financial liabilities increased over time?



## Forensic Toolkit: Other Red Flags

Repeated Bolt-on Acquisitions

Discontinued Operations

Corporate Governance Concerns

Related Party Transactions



**Identification of any of these requires scrutiny!**

## What's the Risk?

**Repeated Bolt-on Acquisitions**

Discontinued Operations

Corporate Governance Concerns

Related Party Transactions

1

Reduced visibility of underlying performance

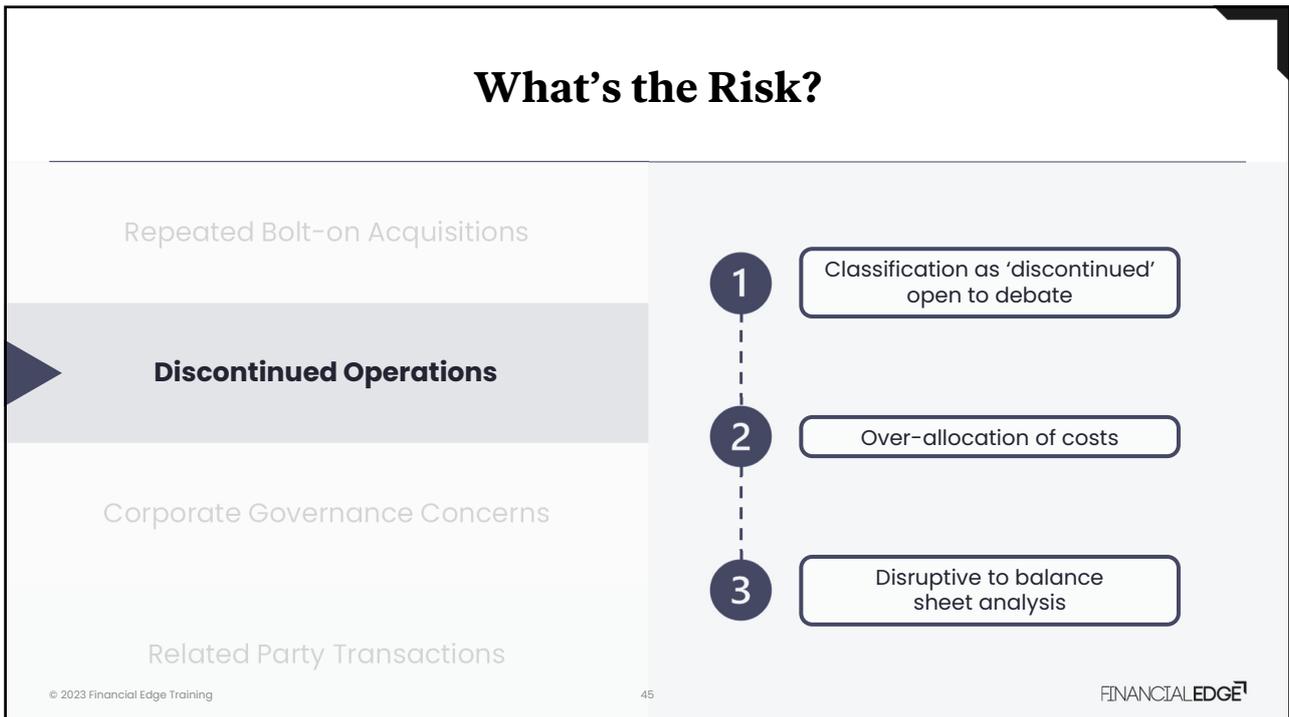
2

Disruptive to balance sheet analysis

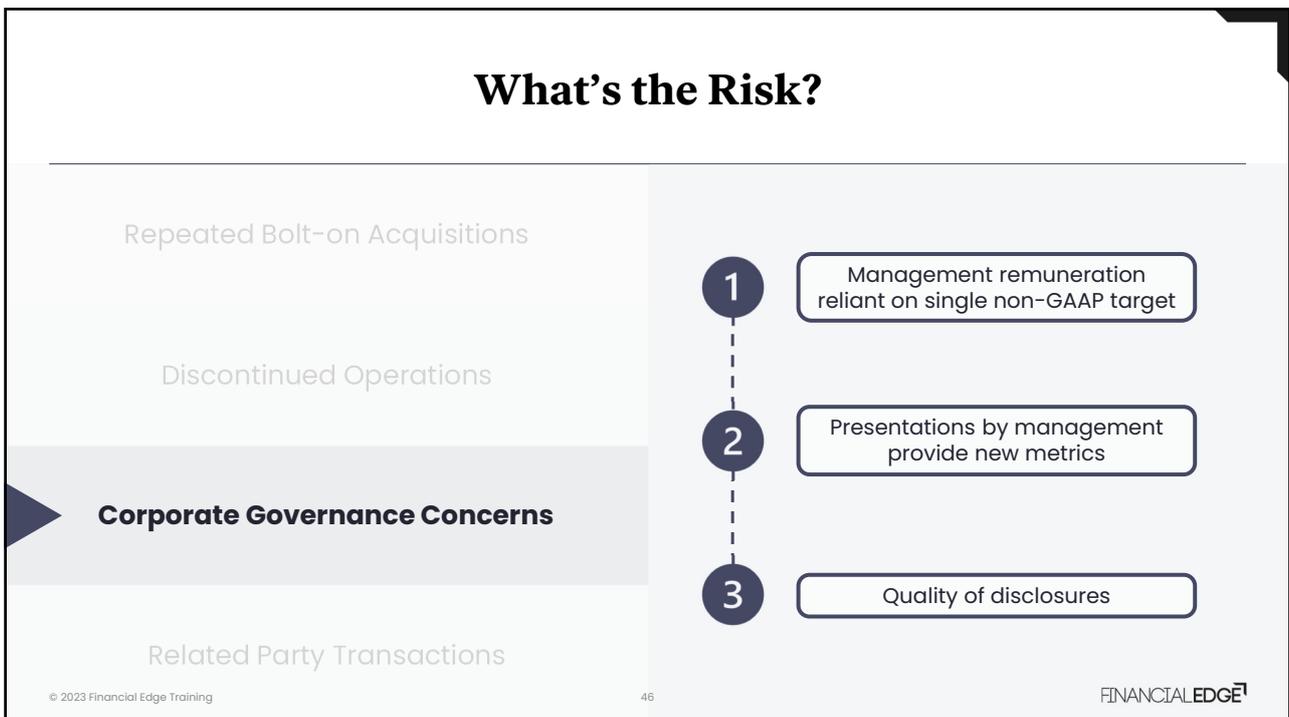
3

Use of estimates in M&A accounting

## What's the Risk?



## What's the Risk?



## What's the Risk?

Repeated Bolt-on Acquisitions

Discontinued Operations

Corporate Governance Concerns

### Related Party Transactions

- 1 Related party transactions can be used to enhance performance
- 2 Sales to JVs are a particular risk
- 3 Identify both quantum and nature

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