

# MY ULTIMATE GUIDE TO FINANCIAL MODELING

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BY CHRIS REILLY

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See the list on the next page... [➔](#)

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# A GUIDE TO SIMPLIFY YOUR MODELING FORMATTING

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BY CHRIS REILLY

# A GUIDE TO SIMPLIFY YOUR MODEL FORMATTING

BY CHRIS REILLY

## The 5 Core Formats

Description	What it Means	What it Looks Like
Black font, no shading	Formula	<b>\$1,000</b>
Blue font, no shading	Known actual or hardcode	<b>\$1,000</b>
Blue font, yellow shading	Model Input	<b>\$1,000</b>
Dark green font	Links to another tab	<b>\$1,000</b>
Yellow font, red shading	Model check	<b>\$1,000</b>

## Helper Formats

Description	What it Means	What it Looks Like
Yellow Shading	Work in Progress	<b>\$1,000</b>
Orange Shading	Unique cell or formula	<b>\$1,000</b>
Teal Shading	Ties to document (LOI)	<b>\$1,000</b>

# OVERVIEW

BY CHRIS REILLY

- Excel files grow organically. They just do.
- Before you know it you've got the full color spectrum throughout your file "helping" you match different numbers together
- I find it's much more helpful to stick to a core set of formats and rarely (if ever) deviate
  - Details to follow →

# THE 5 CORE FORMATS - SUMMARY

BY CHRIS REILLY

This is where I live 80% of the time, just sticking to these 5 core formats

Description	What it Means	What it Looks Like
Black font, no shading	Formula	<b>\$1,000</b>
Blue font, no shading	Known actual or hardcoded	<b>\$1,000</b>
Blue font, yellow shading	Model Input	<b>\$1,000</b>
Dark green font	Links to another tab	<b>\$1,000</b>
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# BTW...

BY CHRIS REILLY

- I will also put this “formatting guide” on the very first page of the financial model
- That way, when someone opens the file, they know what they’re looking at
- Perfect formatting isn’t helpful unless you understand it

# THE 5 CORE FORMATS - FORMULA

BY CHRIS REILLY

## Description

Black font, no shading

## What it Means

Formula

## What it Looks Like

**\$1,000**

- A formula really means “don’t touch it”
  - It’s working just fine on its own
- I will often protect sheets and leave these locked to avoid any accidental errors



# THE 5 CORE FORMATS - HARDCODE

BY CHRIS REILLY

## Description

## What it Means

## What it Looks Like

Blue font, no shading

Known actual or hardcode

**\$1,000**

- A known or actual hardcode means this number took place in the past and won't change
- The blue font optically tells your eye the number is "written there" like signing a document with a blue pen
- These won't change the model, rather, they serve as the basis for historical analysis

# THE 5 CORE FORMATS - INPUT

BY CHRIS REILLY

## Description

Blue font, yellow shading

## What it Means

Model Input

## What it Looks Like

\$1,000

- These are the Assumption or Input tabs — **these are the ones you can change**
  - This is where all the thinking and scenario planning happens
  - I will often unlock these when using Protect Sheets and also constrain with data validation

# THE 5 CORE FORMATS – GREEN FONT

BY CHRIS REILLY

## Description

Dark green font

## What it Means

Links to another tab

## What it Looks Like

**\$1,000**

- Similar to a formula, the green font means the information comes another tab (hopefully not workbook)
  - It also means “hey leave this alone, I’m just telling you where it came from”
  - The shortcut to check on these is to press “ctrl + [“

# THE 5 CORE FORMATS – CHECK CELL

BY CHRIS REILLY

## Description

Yellow font, red shading

## What it Means

Model check

## What it Looks Like

**\$1,000**

- One of my favorites, built with conditional formatting
- I want these cells to be as loud and obnoxious as possible, so I'm alerted to a possible error
- All of these are linked to an "Error Checking" tab (a topic I will expand on in the future)

# THE 3 HELPER FORMATS - SUMMARY

BY CHRIS REILLY

- There are exceptions to every rule
- I'll use these "helper" formats when needed

Helper Formats		
Description	What it Means	What it Looks Like
Yellow Shading	Work in Progress	\$1,000
Orange Shading	Unique cell or formula	\$1,000
Teal Shading	Ties to document (LOI)	\$1,000

# THE 3 HELPER FORMATS – WIP

BY CHRIS REILLY

## Description

Yellow shading

## What it Means

Work in progress

## What it Looks Like

**\$1,000**

- Pretty straight-forward here — a work in progress, something to revisit
  - Bright and stands out
- If you use the **Wall Street Macros plugin (free download online)**, the shortcut key is Ctrl+Shift+Y

# THE 3 HELPER FORMATS – UNIQUE

BY CHRIS REILLY

## Description

Orange shading

## What it Means

Unique cell or formula

## What it Looks Like

**\$1,000**

- Every now and again there's a truly unique formula that needs to be flagged
- This helps you avoid accidentally overwriting it when you're in the Ctrl+R or Ctrl+D motion
- It's best to also include a comment with these cells so the user knows what's going on (Alt+R+C)

# THE 3 HELPER FORMATS – TIE OUT

BY CHRIS REILLY

## Description

## What it Means

## What it Looks Like

Teal shading

Ties to document (LOI)

**\$1,000**

- I will most often use these in a private equity setting
- This is an easy way to make sure your input cells (earlier slide) match a legal document such as an LOI or Purchase Agreement
- These will change version to version as the business terms change



# CONCLUSION

BY CHRIS REILLY

- You don't have to match mine exactly, just stick to something consistently
- You can see how these get out of control — this is a PPT on simplifying your formatting and I gave you 8 examples (that's a lot)
- Most importantly, I hope you found this helpful 😊

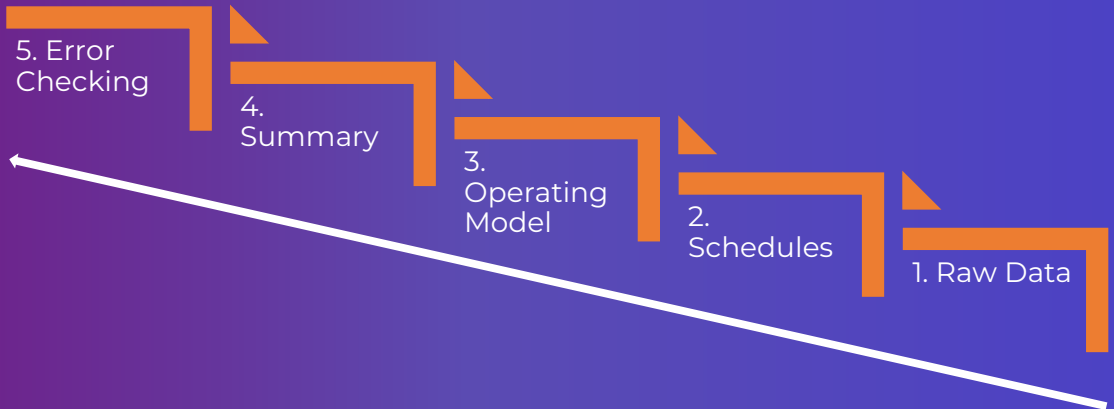
# HOW I LAYOUT NEARLY ALL MY FINANCIAL MODELS

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BY CHRIS REILLY

# HOW I LAYOUT NEARLY ALL OF MY FINANCIAL MODELS (FROM RIGHT TO LEFT)

BY CHRIS REILLY



# 1. RAW DATA

BY CHRIS REILLY

- This is where I'll bring in all data from an accounting system (QuickBooks, Xero, etc.)
  - I don't make any changes to the data, rather, I build my helper formulas around the data
  - More sophisticated approach is to use Power Query, but that's often beyond the understanding of my clients

# 2. SCHEDULES

BY CHRIS REILLY

- This is where I'll build P&L or Balance Sheet schedules that require detail
- Common examples are Headcount, Known Contracts, and Capital Expenditures (broken down by Maintenance and Growth)
  - These schedules link up to the Operating Model

# 3. OPERATING MODEL

BY CHRIS REILLY

- This is the big **THREE STATEMENT MODEL** where everything comes together
  - All schedules & historical data link here
    - Easy line items are built here (i.e., year-over-year growth)
- Other Balance Sheet schedules include Working Capital, Debt, Cash Flow Sweep, Covenants, and Equity Returns
  - Often a 600+ row tab

# 4. SUMMARY

BY CHRIS REILLY

- One page dashboard that someone can actually read (and print)
- Usually an annual summary of the Operating Model
  - Touches on all the high points
  - Example on the next page →

# 4. SUMMARY EXAMPLE

BY CHRIS REILLY

Project Ivory   Annual Summary							
	Actual	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
	2013	2016	2017	2018	2019	2020	2021
	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021
<b>INCOME STATEMENT</b>							
Sales	\$16,366,882	\$17,896,653	\$18,686,538	\$21,655,192	\$23,850,711	\$26,202,782	\$28,823,000
Growth ytd/y	0.0%	9.3%	10.0%	10.0%	10.0%	10.0%	10.0%
Gross Profit	\$9,106,205	\$9,758,488	\$10,827,596	\$11,910,356	\$13,101,391	\$14,411,530	\$15,825,663
Margin	55.6%	54.5%	55.0%	55.0%	55.0%	55.0%	55.0%
<b>Diligence-Adjusted EBITDA</b>	<b>\$3,829,183</b>	<b>\$3,930,435</b>	<b>\$4,493,399</b>	<b>\$4,686,201</b>	<b>\$5,375,608</b>	<b>\$6,140,897</b>	<b>\$6,989,777</b>
EBITDA Margin	23.4%	21.8%	22.5%	21.6%	22.6%	23.4%	24.3%
<b>BALANCE SHEET</b>							
Cash	\$953,628	\$2,685,712	\$545,981	\$534,344	\$601,078	\$675,990	\$936,783
Other Assets	\$7,007,281	\$7,838,179	\$26,706,735	\$27,313,352	\$27,678,621	\$28,708,158	\$29,512,440
<b>Total Assets</b>	<b>\$7,860,909</b>	<b>\$10,524,090</b>	<b>\$27,252,716</b>	<b>\$27,847,696</b>	<b>\$28,578,699</b>	<b>\$29,385,138</b>	<b>\$30,449,023</b>
Other Liabilities	\$2,266,803	\$1,697,728	\$2,151,397	\$3,136,484	\$3,626,378	\$4,165,528	\$4,770,093
Revolver	\$0	\$0	\$1,184,505	\$2,860	\$0	\$0	\$0
Senior Debt	\$0	\$0	\$9,077,797	\$7,681,213	\$5,259,080	\$2,331,116	\$0
Mezzanine Debt	\$0	\$0	\$1,984,710	\$2,045,097	\$2,107,301	\$2,171,297	\$1,330,641
Total Liabilities	\$2,266,803	\$1,697,728	\$14,298,429	\$12,865,654	\$10,992,758	\$6,668,041	\$6,100,734
Total Equity	\$5,594,106	\$8,826,363	\$12,854,287	\$14,982,042	\$17,586,940	\$20,717,097	\$24,348,289
<b>Total Liabilities &amp; Equity</b>	<b>\$7,860,909</b>	<b>\$10,524,090</b>	<b>\$27,252,716</b>	<b>\$27,847,696</b>	<b>\$28,578,699</b>	<b>\$29,385,138</b>	<b>\$30,449,023</b>
<b>DEBT COVENANTS</b>							
Current Ratio - Required Covenant	0.00x	0.00x	1.25x	1.25x	1.25x	1.25x	1.25x
Current Ratio - As Calculated	0.00x	0.00x	4.26x	4.26x	4.26x	4.26x	4.26x
PASS / FAIL	0	0	PASS	PASS	PASS	PASS	PASS
FCR - Required Covenant	0.00x	0.00x	1.10x	1.10x	1.10x	1.10x	1.10x
FCR - As Calculated	0.00x	0.00x	1.34x	1.40x	1.67x	2.00x	3.07x
PASS / FAIL	0	0	PASS	PASS	PASS	PASS	PASS
Senior Leverage Ratio - Required Covenant	0.00x	0.00x	3.50x	3.50x	3.50x	3.50x	3.50x
Senior Leverage Ratio - As Calculated	0.00x	0.00x	2.31x	1.44x	0.98x	0.38x	0.00x
PASS / FAIL	0	0	PASS	PASS	PASS	PASS	PASS
Total Leverage Ratio - Required Covenant	0.00x	0.00x	4.50x	4.50x	4.50x	4.50x	4.50x
Total Leverage Ratio - As Calculated	0.00x	0.00x	2.76x	2.88x	1.37x	0.73x	0.18x
PASS / FAIL	0	0	PASS	PASS	PASS	PASS	PASS
<b>RETURNS</b>							
Time Proceeds to LPS	\$0	\$0	\$8,948,548	\$10,287,082	\$11,540,050	\$15,164,198	\$18,198,786
Original LP Investment	\$0	\$0	\$5,461,646	\$5,461,646	\$5,461,646	\$5,461,646	\$5,461,646
ROI	0.00%	0.00%	1.62x	1.88x	2.30x	2.77x	3.30x
IRR	0.00%	0.00%	166.42%	52.34%	39.36%	33.68%	30.34%
Time Proceeds to Seller	\$0	\$0	\$4,561,768	\$6,094,078	\$6,738,007	\$11,780,905	\$15,108,798
Original Seller Investment	\$0	\$0	\$6,208,248	\$6,208,248	\$6,208,248	\$6,208,248	\$6,208,248
ROI	0.00%	0.00%	0.74x	0.98x	1.41x	1.90x	2.46x
IRR	0.00%	0.00%	-45.62%	1.22%	14.63%	20.95%	22.12%
Time Proceeds to Sponsor	\$0	\$0	\$1,582,322	\$2,988,075	\$3,177,085	\$4,307,938	\$5,188,884
Original Sponsor Investment	\$0	\$0	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
ROI	0.00%	0.00%	1.58x	2.19x	3.18x	4.31x	5.00x
IRR	0.00%	0.00%	148.51%	68.30%	58.67%	51.70%	46.58%

I will normally have graphs over here too for Working Capital, Capex, and Covenants  
(just don't have one I can use for this document)



# 5. ERROR CHECKING

- One page that shows me where all my possible errors are throughout the file, either structural or business
- I will link the “Master Error Check Cell” to the top of every tab I build, that way if an error pops up I can check it immediately

Master Error Check Cell	
Circularity Breaker	
OFF (Default)	Toggle ON/OFF to fix interest expense (Default setting is OFF)
Model Error Checks	
Indicator	Description (business issue)
0	FCCR not in compliance
0	Leverage Ratio not in compliance
0	Maximum turns funded at close exceeded
0	Revolver exceeds Borrowing Base and/or Capacity
Indicator	Description (model issue)
0	Consolidated Balance Sheet doesn't balance
0	Consolidated Statement of Cash Flows doesn't tie to Balance Sheet
0	Pro Forma Balance Sheet doesn't balance
0	Cash Flow Sweep doesn't tie to Balance Sheet
0	Revolver doesn't tie to Balance Sheet
0	Senior Debt doesn't tie to Balance Sheet
0	Mezzanine Debt doesn't tie to Balance Sheet
0	Revolver Fee doesn't tie to Balance Sheet
0	Senior Fee doesn't tie to Balance Sheet
0	Mezzanine Fee doesn't tie to Balance Sheet
0	Cash goes below minimum 1
0	Cash goes below minimum 2
0	Global Waterfall proceeds don't go to zero
0	GP/LP Waterfall proceeds don't go to zero
0	Total Proceeds don't match total Equity value
0	Sources don't match Uses on Dashboard
0	Balance Sheet doesn't balance on Dashboard
0	Statement of Cash Flows doesn't tie to Balance Sheet on Dashboard
0	Cash at close doesn't match Sources & Uses
0	2022 Budget doesn't tie to monthly financials
0	Budget sum of parts doesn't tie out to whole
0	Consolidated Net Income doesn't tie to QoF
0	Consolidated EBITDA doesn't tie to QoF
0	Flash Report doesn't tie to underlying data

# YOU CAN BUILD A 3 STATEMENT MODEL WITH **THESE 4 THINGS**

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BY CHRIS REILLY

# (1) HISTORICAL INCOME STATEMENT

BY CHRIS REILLY

- **Need by month (1 yr fine, 2 yrs better, 3 yrs awesome)**
  - No forecast yet?
    - Make Revenue year-over-year growth
  - Make Gross Margin consistent with its history
    - Make OpEx year-over-year growth
- **Bonus tip: Make next year flat (i.e., no growth). This is a great way to make sure the rest of your model is working.**
- **Next step:** ask if Management has a budget for the forthcoming year

# (2) HISTORICAL BALANCE SHEET

BY CHRIS REILLY

- **Need by month (1 yr fine, 2 yrs better, 3 yrs awesome)**
- **Build Cash? Link to your Statement of Cash Flows \***
  - Build AR? Use historical DSOs
  - Build AP? Use historical DPOs
  - Build Inventory? Use historical DOH
- Build Fixed Assets? Link to Capex & Depreciation (more on that next)
  - Build Debt? Link to Debt Schedule (more on that next)
    - **Build Equity? Prior Period + Net Income \***
- **\* If you do these two things and leave everything else flat, your Balance Sheet will balance**

# QUICK BREAK — DID YOU KNOW??

BY CHRIS REILLY

- **If you have the Historical Income Statement and Balance Sheet you can easily build the Statement of Cash Flows?**
  - (1) Take Net Income from the Income Statement
  - (2) Take the **change in** Assets and Liabilities & Equity
    - **Assets:** Previous Period minus Current Period
    - **Liabilities & Equity:** Current Period minus Previous Period
- **Believe it or not, just doing that will get you to ending cash. You can drag these formulas forward into your forecast period.**

# (3) CAPEX BUDGET

BY CHRIS REILLY

- You actually don't NEED this (immediately), but it's helpful
  - **Fixed Assets = Previous Period + Capex – Depreciation**
- Ask for management to split projects into Growth (brand new stuff) and Maintenance (fixing old stuff) if possible (potentially helps your lender)
  - **No forecast yet? Look at your Statement of Cash Flows Investing Section. If you built the history correctly, you should see the historical capex. Use that as an average for your forecast.**
- Once you know the timing of the capex, you can depreciate it using the SLN() function in Excel — link that result to your Income Statement

# (4) DEBT TERMS

BY CHRIS REILLY

- **Ask for the most recent/final term sheet from the lender. You don't need to scour through a Credit Agreement.**
- This will give you all the major info you need in terms of interest, amortization, cash flow sweeps, and covenants
  - Structure your debt schedule as:
    - Beginning Balance
    - Less: principal payments
    - Plus/Less: new draws (positive) or cash flow sweeps (negative)
      - Ending Balance **(link this to your balance sheet)**
  - Easy interest:  $\text{Beginning Balance} \times (\text{Interest Rate}/12)$
  - Harder (more accurate) interest:  $\text{Average Balance} \times (\text{Interest Rate}/12)$
  - **Build your covenants right below the debt schedule so you can monitor them monthly**

# EVENTUALLY YOU'LL GET THE DETAILS

BY CHRIS REILLY

- **Believe it or not, with those 4 things you can build the structure of a “fully integrated” (nice buzzword) 3 statement model**
  - Then, the details come:
    - Revenue forecast, headcount forecast, known contracts, advertising budget, contractor budget, updated capex forecasts, etc., etc., etc.
      - **Don't worry! You've already built the structure!**
    - Once you get these knew details, simply link them up to your 3 statement model. The whole thing will still work.



# TAKEAWAY

BY CHRIS REILLY

- Make the model work first at the top level
  - From there, adding the details is easy

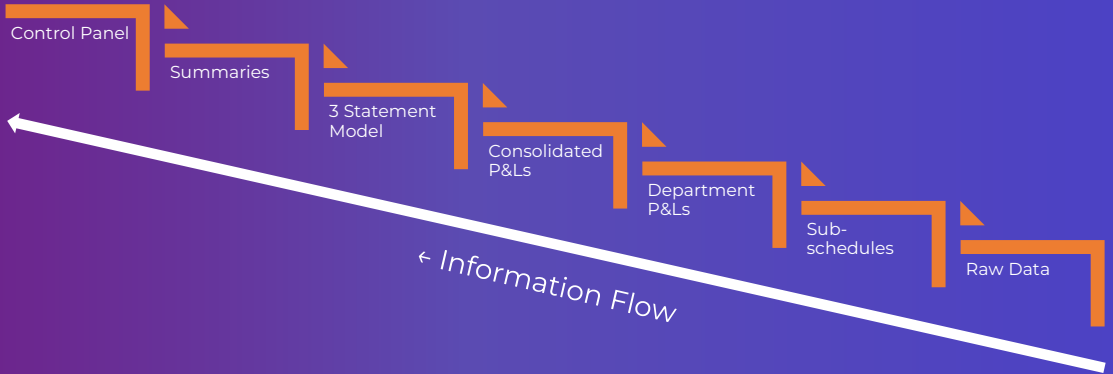
# HOW I BUILD FP&A OPERATING MODELS

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BY CHRIS REILLY

# ZOOMING WAYYYYY OUT...

BY CHRIS REILLY



# ONE LAYER DEEPER...

BY CHRIS REILLY



← Information Flow

# RAW DATA

BY CHRIS REILLY

- This is where I'll bring in all data from an accounting system (QuickBooks, Xero, etc.)
- I don't make any changes to the data, rather, I build my helper formulas around the data
- More sophisticated approach is to use Power Query, but that's often beyond the understanding of my clients

# SCHEDULES

BY CHRIS REILLY

- This is where I'll build P&L or Balance Sheet schedules that require detail
- Common examples are Headcount, Known Contracts, and Capital Expenditures (broken down by Maintenance and Growth)
  - These schedules link to various P&Ls / BS as needed

# DEPARTMENT P&LS

BY CHRIS REILLY

- Most departments want a budget for their stuff
  - Their Revenue, their COGS, their people, etc.
  - Previous schedules will be mapped accordingly
    - i.e., Headcount, Contractors, etc.
- Excludes any “Corporate Expense” like CEO, CFO, etc.

# CONSOLIDATED P&LS

BY CHRIS REILLY

- Have to bring it all together
  - Includes “Corporate Expense” like CEO, CFO, etc.
    - Includes Interest, Taxes, & Depreciation
  - Too hard to model at dept level even if actuals recorded there
    - Will show 2 views:
      - (1) Total by Chart of Accounts (i.e., total software sales)
      - (2) Totals by Department (i.e., total Depts 1-4 + Corporate)
    - Both should tie out



# CONSOLIDATED P&LS (CONTINUED...)

BY CHRIS REILLY

- Freeze one P&L for a "Budget"
- One P&L purely grabs "Actuals" from Raw Data
  - One P&L is "Rolling" i.e., Actuals + Budget
- If model date > latest actual date, pull Budget, else pull Actuals
  - One P&L is "Variance"
- Line by line comparison to budget for mgmt. to explore
  - Will chat with department heads, etc.

# 3 STATEMENT MODEL

BY CHRIS REILLY

- Condensed P&L here (or detailed if preferred)
  - EBITDA build
  - Primary purpose is to forecast cash
  - All (or nearly all) Balance Sheet schedules
    - Except for Capx & Depr
- Will be a rolling forecast each month as Actuals come in
  - Will “freeze” budget as own file before using rolling fcst
- Modeled vertically (giant tab, 600-1,000+ rows)

# SUMMARIES

BY CHRIS REILLY

- Print-friendly summaries of all the details
- Usually presented in thousands (\$000s)
  - Several items bucketed together
  - Big picture YTD performance
- Various summaries built to end user preferences
- Easy to print & forward — purpose is to have conversation

# CONTROL PANEL

BY CHRIS REILLY

- Easy to update Actuals date (change one cell)
  - Flags business issues
    - Covenants, Debt Capacity, etc.
    - Flags all model issues
- Summaries aren't set until all errors are fixed

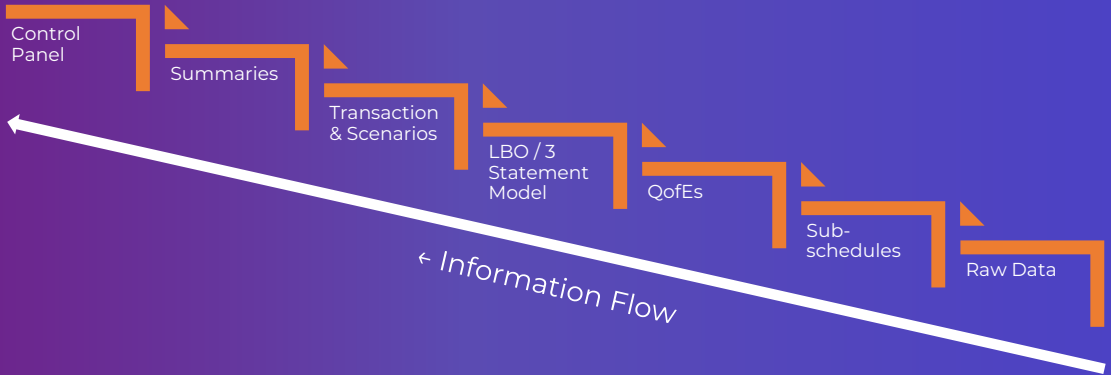
# HOW I BUILD LBO BUYOUT MODELS

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BY CHRIS REILLY

# ZOOMING WAYYYYY OUT...

BY CHRIS REILLY



# ONE LAYER DEEPER...

BY CHRIS REILLY



← Information Flow

# RAW DATA

BY CHRIS REILLY

- This is where I'll bring in all data from an accounting system (QuickBooks, Xero, etc.)
- I don't make any changes to the data, rather, I build my helper formulas around the data
- **Key: I only use this data until the QofEs ("Quality of Earnings") are ready**



# SCHEDULES

BY CHRIS REILLY

- This is where I'll build P&L or Balance Sheet schedules that require detail
- Common examples are Headcount, Known Contracts, and Capital Expenditures (broken down by Maintenance and Growth)
- **Key: These schedules link to various P&Ls / BS as needed and I only build them when I have to**

# QofEs OR “QUALITY OF EARNINGS”

BY CHRIS REILLY

- A “Quality of Earnings” is performed by an independent firm (called “QofE”)
- **Key 1: It gives an impartial view of the Adjusted EBITDA of the target business**
- This has been reclassified as needed to give me the most accurate financials we can get (up to this point)
  - **Key 2: This QofE becomes my raw data for the file**

# 3 STATEMENT MODEL

BY CHRIS REILLY

- Consolidated P&L
- **Key 1: My Balance Sheet shows a buyout, meaning:**
  - Cash goes to zero on the closing date
  - Retained earnings goes to zero + the transaction expenses
  - New debt & new equity hit the balance sheet at closing
    - Old debt is paid off at closing (usually)
- **Key 2: Cash flow statement still built based on changes in the Balance Sheet, LBOs don't need to complicate this**
- Modeled vertically (giant tab, 600-1,000+ rows) b/c I have tons of other Balance Sheet schedules in here

# TRANSACTION & SCENARIOS

BY CHRIS REILLY

- Need to build the “buyout” somewhere
- Purchase Price, Debt/Equity Structure, Sources & Uses, Fees & Expenses, Covenants, Cash Sweep, Option Pool, etc.
- **Key: someone should be able to control 90% of the model from this tab**
  - Pro Forma Balance Sheet (what will balance sheet look like after deal closes?)
- Scenarios: Base Case, Downside Case, Upside Case (I will usually use the =CHOOSE() function here)

# SUMMARIES

BY CHRIS REILLY

- Print-friendly summaries of all the details
  - Usually presented in thousands (\$000s)
- Shows the entire buyout from an annual perspective
- Easy to print & forward — purpose is to have conversation
  - **Example on next page →**

# SUMMARY (EXAMPLE)

BY CHRIS REILLY

## TRANSACTION ASSUMPTIONS

Purchase Price	\$1,492,000
Purchase Price Multiple	8.5x
LTM Adjusted EBITDA, \$mil annual	\$182,800

SOURCES	Turns	USES		
		2023	2024	
Revolvers	0.5x	\$ 151,433	Cash to Sell	\$ 1,340,400
Senior Debt	2.5x	432,000	Legacy Debt Paid Down at Close	180,000
Equity	1,124,127		Sell Side Fees	50,000
			Buy Side Fees	50,000
			Cash to Retain: Share of Close	200,000
Total Sources	9.5x	\$ 1,672,400	Total Uses	\$ 1,670,400
Senior Check				-

INCOME STATEMENT	2022	2023	2024	2025	2026	2027	2028
Total Revenue	\$ 1,835,944	\$ 1,793,007	\$ 1,570,141	\$ 1,371,833	\$ 1,207,016	\$ 1,033,096	\$ 1,000,000
Total Revenue Year-over-Year Growth		0.3%	-12.0%	-12.2%	-13.4%	-13.4%	-2.0%

Total Gross Profit	\$ 263,811	\$ 266,781	\$ 261,208	\$ 264,030	\$ 269,212	\$ 278,232	\$ 278,000
Total Gross Profit Margin	48.2%	48.5%	48.8%	48.9%	49.0%	49.0%	49.0%

EBITDA, As Adjusted	\$ 384,763	\$ 382,820	\$ 226,605	\$ 204,030	\$ 185,436	\$ 173,406	\$ 185,703
EBITDA, As Adjusted LTM Merg	10.3%	10.2%	11.5%	12.2%	13.2%	14.1%	13.0%

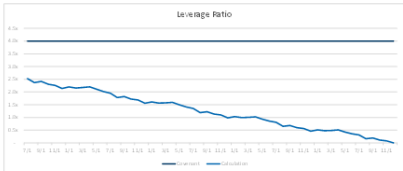
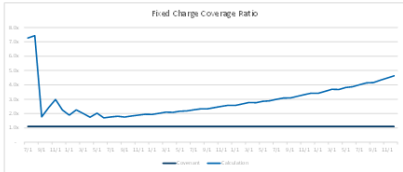
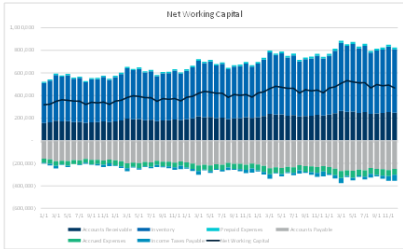
BALANCE SHEET	2022	2023	2024	2025	2026	2027	2028
Cash	\$ 194,610	\$ 224,180	\$ 203,000	\$ 203,000	\$ 210,000	\$ 203,000	\$ 210,500
Current Assets	442,869	452,487	547,002	608,918	646,367	740,643	823,150
Other Assets	217,014	276,510	\$ 1,021,405	\$ 1,030,000	\$ 1,050,350	\$ 1,020,817	\$ 1,240,500
Total Assets	\$ 854,493	\$ 953,167	\$ 1,871,407	\$ 1,833,918	\$ 1,896,710	\$ 1,964,459	\$ 2,244,150
Current Liabilities	\$ 178,018	\$ 171,158	\$ 226,002	\$ 252,540	\$ 262,750	\$ 317,200	\$ 336,500
Long-Term Debt	260,000	280,000	-	-	-	-	-
Revolvers	-	-	\$ 10,464	24,210	-	-	-
Senior Debt	-	-	484,210	388,000	330,360	271,716	-
Total Liabilities	\$ 438,018	\$ 451,158	\$ 710,676	\$ 665,540	\$ 653,110	\$ 689,116	\$ 716,500
Total Equity	417,480	502,009	1,160,731	1,168,378	1,243,600	1,275,349	1,527,650
Total Liabilities & Equity	\$ 855,498	\$ 953,167	\$ 1,871,407	\$ 1,833,918	\$ 1,896,710	\$ 1,964,459	\$ 2,244,150

STATEMENT OF CASH FLOWS	2022	2023	2024	2025	2026	2027	2028
Total Cash From Operations	\$ 194,610	\$ 212,400	\$ 121,810	\$ 121,810	\$ 116,310	\$ 112,000	\$ 112,000
Total Cash From Investing	(52,174)	(87,218)	(54,000)	(54,000)	(54,000)	(54,000)	(54,000)
Total Cash From Financing	(83,000)	(22,517)	(71,810)	(102,199)	(102,199)	(102,199)	(171,716)
Beginning Balance		\$ 194,610	\$ 224,180	\$ 203,000	\$ 203,000	\$ 203,000	\$ 210,500
Change in Cash	261,436	(24,380)	-	-	-	-	73,502
Ending Balance	\$ 194,610	\$ 224,180	\$ 203,000	\$ 203,000	\$ 203,000	\$ 203,000	\$ 210,500

DEBT COVENANTS	2022	2023	2024	2025	2026	2027	2028
PCRs: Required Covenant			1.5x	1.5x	1.5x	1.5x	1.5x
PCRs: As Calculated			2.3x	2.0x	1.8x	1.6x	1.4x
PAS/FAL			PASS	PASS	PASS	PASS	FAIL
Leverage Ratio: Required Covenant			4.0x	4.0x	4.0x	4.0x	4.0x
Leverage Ratio: As Calculated			2.3x	1.8x	1.6x	1.4x	1.2x
PAS/FAL			PASS	PASS	PASS	PASS	FAIL

BETTERFITS	2022	2023	2024	2025	2026	2027	2028
ROI	1.4x	1.7x	1.7x	1.3x	1.2x	1.2x	1.3x
EBE			84.2%	82.1%	85.7%	82.4%	80.5%

## CHARTS



- I know it's hard to see but you get the idea
- I will often include Capex graphs here too
- Key: it can be printed & emailed easily**

# CONTROL PANEL

BY CHRIS REILLY

- Flags business issues
- Covenants, Debt Capacity, etc.
- Flags all model issues
- Balance sheet in balance, cash flow sweep working, etc.
- Summaries aren't set until all errors are fixed
- I link my "Master Check Cell" to all other tabs in my file

# HOW I BUILD ROLLUP CONSOLIDATION MODELS (ADD-ONS)

---

BY CHRIS REILLY



# WHAT'S A "ROLLUP MODEL" ?

BY CHRIS REILLY

- Private equity deals are often broken into 4 stages:
  - (1) Buy the first company called the "platform"
    - This is an industry leader (usually)
  - (2) Buy several smaller (but similar) companies called "add-ons"
    - These are often cheaper than the platform
    - **Key: Can often be purchased with just debt**
  - (3) Consolidate the companies
    - They are worth more together than separate, so the add-ons immediately get "arbitrage value" once the deal is complete
  - (4) Sell the "rolled up company" to a new buyer
    - This is how the PE firm makes a return on its initial investment
  - **Key 2: A "rollup model" illustrates this process**

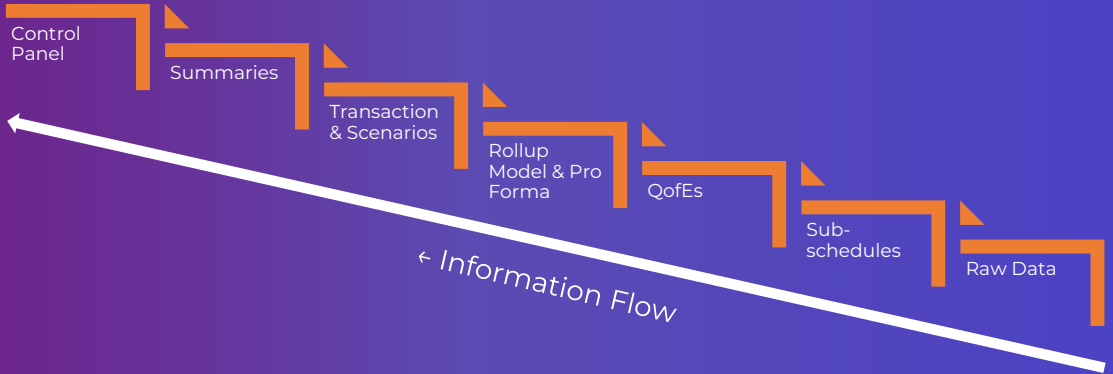
# HOW THE HECK DO YOU MODEL IT?

BY CHRIS REILLY

- Honestly, it's complicated
- You need platform financials first, then:
  - All the add-on financials, then:
- Triggers for the various close dates, then:
  - A view of what everything looks like:
    - Going forward, and:
- What it would have looked like had the add-ons been owned the whole time (called "pro forma")

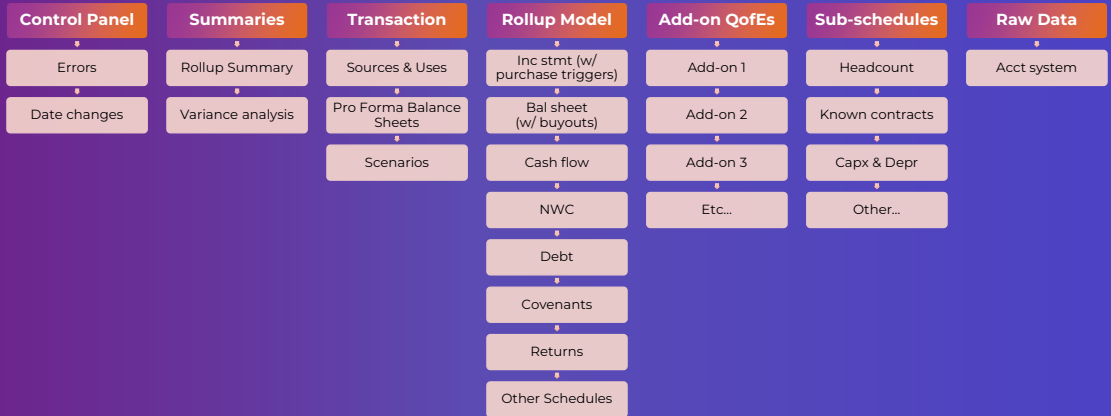
# ZOOMING WAYYYYY OUT...

BY CHRIS REILLY



# ONE LAYER DEEPER...

BY CHRIS REILLY



← Information Flow

# RAW DATA

BY CHRIS REILLY

- This is where I'll bring in all data from an accounting system (QuickBooks, Xero, etc.)
- I don't make any changes to the data, rather, I build my helper formulas around the data
- **Key: I only use this data until the QofEs ("Quality of Earnings) are ready for the add-ons**

# SCHEDULES

BY CHRIS REILLY

- This is where I'll build P&L or Balance Sheet schedules that require detail
- Common examples are Headcount, Known Contracts, and Capital Expenditures (broken down by Maintenance and Growth)
- **Key: These schedules link to various P&Ls / BS as needed and I only build them when I have to**

# ADD-ON QOFES OR “QUALITY OF EARNINGS”

BY CHRIS REILLY

- A “Quality of Earnings” is performed by an independent firm (called “QofE”)
- **Key: It gives an impartial view of the Adjusted EBITDA of the add-on companies**
- This has been reclassified as needed to give me the most accurate financials we can get (up to this point)
- **Key 2: I link these to the 3 statement Roll-up model with date-based triggers so the financials appear after the respective deal closes**

# ROLL-UP 3 STATEMENT MODEL

BY CHRIS REILLY

- **Key 1: My P&L shows the add-ons, meaning:**
  - After each closing date, a new set of financials appears
- **Key 2: The Balance Sheet reflects all the incremental capital needed to complete the add-on purchases**
  - Incremental debt
  - Incremental equity
  - Incremental seller rollover, etc.
- Modeled vertically (giant tab, 600-1,000+ rows) b/c I have tons of other Balance Sheet schedules in here



# PRO FORMA FINANCIALS

BY CHRIS REILLY

- PE firms often want to show these add-on deals “pro forma”
- Meaning, what *would the company have looked like* if we’d owned these add-ons the whole time?
- **Key: This is to get historical credit for the add-on EBITDA for debt covenant purposes**
- It enables the PE firm to finance these add-on deals with debt and limit the amount of incremental equity required

# TRANSACTION & SCENARIOS

BY CHRIS REILLY

- This tab gets complicated b/c you're building sources & uses for several deals at once
- The closing date selected for each deal needs to flow through the rest of your model
- **Key: someone should be able to control 90% of the model from this tab**
- Pro Forma Balance Sheet (what will the balance sheet look like after each add-on closes?)
  - Scenarios: Base Case, Downside Case, Upside Case  
(I will usually use the =CHOOSE() function here)
- Note: sometimes these models get too complicated for scenario buildouts. If that happens, we'll just save different files and label them accordingly

# SUMMARIES

BY CHRIS REILLY

- Print-friendly summaries of all the details
  - Usually presented in thousands (\$000s)
- Shows all the different add-on purchases from an annual perspective
- Easy to print (usually) & forward — purpose is to have a conversation
  - **Don't have an example for this one, sorry :(**

# CONTROL PANEL

BY CHRIS REILLY

- Flags business issues
  - Covenants, Debt Capacity, etc.
  - Flags all model issues
    - Balance sheet in balance, cash flow sweep working, etc.
- Summaries aren't set until all errors are fixed
- I link my "Master Check Cell" to all other tabs in my file

# LOOK FAMILIAR?

BY CHRIS REILLY

- Most of my models are very similar in structure
- Summaries ← 3 statement modeling ← Underlying data
- **Key: The information flow is always the same**
- We're just doing different stuff at the 3 statement level, be it:
  - FP&A / Ops modeling
  - LBO Buyout modeling
  - Add-on roll-up modeling

# HOW TO FIND OUTLIERS IN YOUR DATA

---

BY CHRIS REILLY

---

# THANK YOU FIRST...

BY CHRIS REILLY

- To Sumit Bansal
  - Founder of **TrumpExcel.com**
- Amazing website full of Excel resources
  - Often pops up as first Google result

# MY USE CASE FOR OUTLIERS

BY CHRIS REILLY

- **Big picture, you want to identify outliers because they can skew conclusions about your data**
- Personally, I'm often looking at monthly expense data for Private Equity deals
  - I like a quick way to "tag" expenses that might be outliers
- These outliers may be one-time in nature and become add-backs for valuation purposes



# HOW TO FIND OUTLIERS IN YOUR DATA

	A	B	C	D	E
1	Data	Outlier?			
2	56	NO	Q1		49.5
3	51	NO	Q3		62.0
4	60	NO	IQR		12.5
5	62	NO	Lower Limit		30.8
6	326	YES	Upper Limit		80.8
7	49	NO			
8	62	NO			
9	64	NO			
10	47	NO			
11	61	NO			
12	46	NO			
13	59	NO			
14	(7)	YES			
15	62	NO			

Thank you to TrumpExcel.com for giving me step-by-step instructions on how to do this.

# WE NEED TO CALCULATE 5 THINGS

BY CHRIS REILLY

- (1) First Quartile
- (2) Third Quartile
- (3) Interquartile Range
- (4) Lower Limit
- (5) Upper Limit

	A	B	C	D	E
1	Data	Outlier?			
2	56			Q1	???
3	51			Q3	???
4	60			IQR	???
5	62			Lower Limit	???
6	326			Upper Limit	???
7	49				
8	62				
9	64				
10	47				
11	61				
12	46				
13	59				
14	(7)				
15	62				

# (1) FIRST QUARTILE

BY CHRIS REILLY

- **What is it?** The value **under which 25%** of data points are found when they are arranged in increasing order

	A	B	C	D	E	F
1	Data	Outlier?				
2	56			Q1	=QUARTILE.INC(A2:A15,1)	
3	51			Q3		
4	60			IQR		
5	62			Lower Limit		
6	326			Upper Limit		
7	49					
8	62					
9	64					
10	47					
11	61					
12	46					
13	59					
14	(7)					
15	62					

# (2) THIRD QUARTILE

BY CHRIS REILLY

- **What is it?** The value **under which 75%** of data points are found when they are arranged in increasing order

	A	B	C	D	E	F
1	Data	Outlier?				
2	56			Q1	49.5	
3	51			Q3	=QUARTILE.INC(A2:A15,3)	
4	60			IQR		
5	62			Lower Limit		
6	326			Upper Limit		
7	49					
8	62					
9	64					
10	47					
11	61					
12	46					
13	59					
14	(7)					
15	62					
16						

# (3) INTERQUARTILE RANGE = (Q3 - Q1)

BY CHRIS REILLY

- **What is it?** The value **middle 50%** of data points are found when they are arranged in increasing order

	A	B	C	D	E
1	Data	Outlier?			
2	56			Q1	49.5
3	51			Q3	62.0
4	60			IQR	=E3-E2
5	62			Lower Limit	
6	326			Upper Limit	
7	49				
8	62				
9	64				
10	47				
11	61				
12	46				
13	59				
14	(7)				
15	62				
16					

# (4) LOWER LIMIT = (Q1 - (1.5 X IQR))

BY CHRIS REILLY

- **What is it?** The smallest data value that can go into the class

- In other words,

**anything lower than**

**this is an outlier**

	A	B	C	D	E
1	Data	Outlier?			
2	56			Q1	49.5
3	51			Q3	62.0
4	60			IQR	12.5
5	62			Lower Limit	=E2-(1.5*E4)
6	326			Upper Limit	
7	49				
8	62				
9	64				
10	47				
11	61				
12	46				
13	59				
14	(7)				
15	62				

# (5) UPPER LIMIT = (Q3 + (1.5 X IQR))

BY CHRIS REILLY

- **What is it?** The largest data value that can go into the class

- In other words,

**anything larger than**

**this is an outlier**

	A	B	C	D	E
1	Data	Outlier?			
2	56			Q1	49.5
3	51			Q3	62.0
4	60			IQR	12.5
5	62			Lower Limit	30.8
6	326			Upper Limit	=E3+(1.5*E4)
7	49				
8	62				
9	64				
10	47				
11	61				
12	46				
13	59				
14	(7)				
15	62				

# FORMULA TO FIND THE OUTLIERS

BY CHRIS REILLY

- **What are we saying?**

- If the data point is EITHER less than the lower limit OR greater than the upper limit, say "YES", otherwise, say "NO"

- In other words, **"YES" will be an outlier**

	A	B	C	D	E
1	Data	Outlier?			
2	56	=IF(OR(A2<=\$E\$5,A2>=\$E\$6),"YES","NO")			
3	51		Q3		62.0
4	60		IQR		12.5
5	62		Lower Limit		30.8
6	326		Upper Limit		80.8
7	49				
8	62				
9	64				
10	47				
11	61				
12	46				
13	59				
14	(7)				
15	62				
16					



# COPY THE FORMULA DOWN

BY CHRIS REILLY

- You can see **the formula** **identified two outliers**

- 326**: much larger than the upper limit of 80.8
- 7**: much lower than the lower limit of 30.8

	A	B	C	D	E
1	Data	Outlier?			
2	56	NO		Q1	49.5
3	51	NO		Q3	62.0
4	60	NO		IQR	12.5
5	62	NO		Lower Limit	30.8
6	326	YES		Upper Limit	80.8
7	49	NO			
8	62	NO			
9	64	NO			
10	47	NO			
11	61	NO			
12	46	NO			
13	59	NO			
14	(7)	YES			
15	62	NO			

# IN REAL LIFE

BY CHRIS REILLY

- This is really helpful for large data sets
- Think hundreds or thousands of data points
  - What can you do with outliers?
- Here's a great article explaining what you can do next:  
<https://statisticsbyjim.com/basics/remove-outliers/>

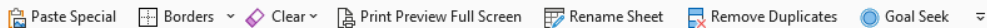
# MY 7 MOST USED EXCEL SHORTCUTS

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BY CHRIS REILLY

# HERE'S ALL 7

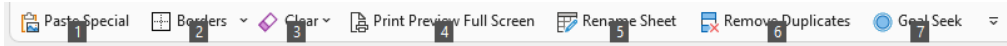
BY CHRIS REILLY



1. Paste Special (the GOAT)
2. Borders
3. Clear
4. Print Preview
5. Rename Sheet
6. Remove Duplicates
7. Goal Seek

# THE TRICK TO MAKING IT FAST...

BY CHRIS REILLY

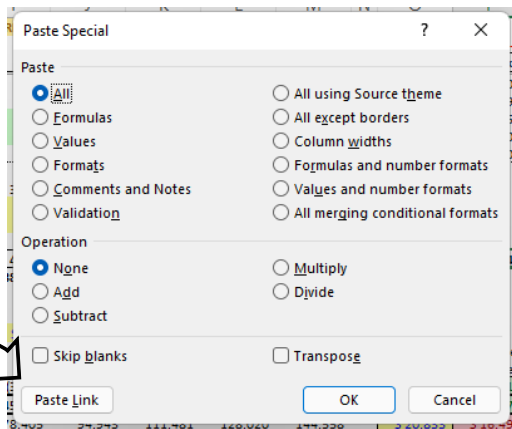


- Add the shortcuts to your **Quick Access Toolbar**
  - All I need to think about is Alt + 1, 2, 3, etc.
    - (see the numbers in the picture above?)
- Saves me even more time than memorizing Alt + e + s  
(for Paste Special)

# (1) PASTE SPECIAL

BY CHRIS REILLY

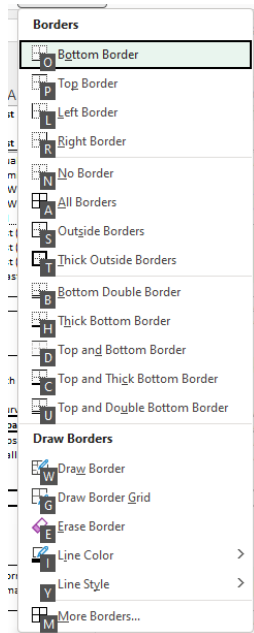
- **Shortcut:** Alt + e + s
- GOAT b/c I use this 80% of the time for everything
- **Hidden gem:** Paste Link (lets you link to a cell in another sheet)



# (2) BORDERS

BY CHRIS REILLY

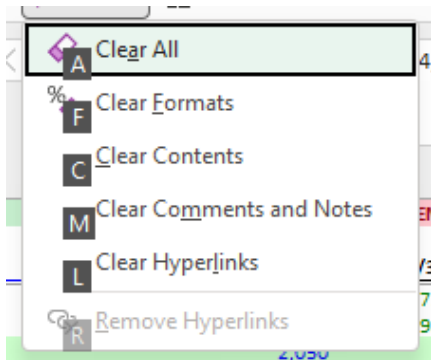
- **Shortcut: Alt + h + b**
- Awesome for quick formatting
- Greatly reduces mouse clicking



# (3) CLEAR

BY CHRIS REILLY

- **Shortcut: Alt + h + e**
- Sometimes you just want to remove specific things
- I use it mostly for getting rid of comments





# (4) PRINT PREVIEW

BY CHRIS REILLY

- **Shortcut: ctrl + p (sort of)**
- I prefer **Print Preview Full Screen**  
(alt + 4 for me)
- I can see the image **and** adjust the margins

Income Statement							
	Jan	Feb	Mar	Apr	May	Jun	Jul
Total Revenue	\$6,257	\$6,591	\$6,924	\$6,824	\$7,084	\$6,732	\$6,749
Total Gross Profit	1,888	1,988	2,089	2,059	2,137	2,031	2,036
Margin	30%	30%	30%	30%	30%	30%	30%
Net Income	311	349	381	368	400	352	356
EBITDA, Management Adjusted	\$623	\$685	\$739	\$720	\$773	\$693	\$698
Margin	10%	10%	11%	11%	11%	10%	10%

Balance Sheet							
	Jan	Feb	Mar	Apr	May	Jun	Jul
Cash	\$2,621	\$1,376	\$1,417	\$500	\$500	\$500	\$500
Other Assets	31,945	32,879	33,508	34,604	35,334	35,118	35,104
Total Assets	\$34,566	\$34,255	\$34,925	\$35,104	\$35,834	\$35,618	\$35,604
Other Liabilities	10,371	9,981	10,541	10,437	11,036	10,737	11,030
Revolver	3,539	3,270	3,124	3,039	2,770	2,624	1,962
Senior Debt	9,000	9,000	8,875	8,875	8,875	8,750	8,750
Total Liabilities	22,910	22,251	22,540	22,351	22,681	22,112	21,742
Total Equity	11,656	12,004	12,385	12,753	13,153	13,506	13,862
Total Liabilities & Equity	\$34,566	\$34,255	\$34,925	\$35,104	\$35,834	\$35,618	\$35,604
Check	-	-	-	-	-	-	-

# (5) RENAME SHEET

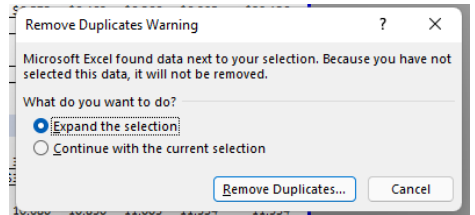
BY CHRIS REILLY

- Shortcut: alt + h + o + r
- Nothing fancy here, just time saver
- Alt + 5 is faster and easier to remember than alt + h + o + r
- Old shortcut I've kept from Excel 2010 days

# (6) REMOVE DUPLICATES

BY CHRIS REILLY

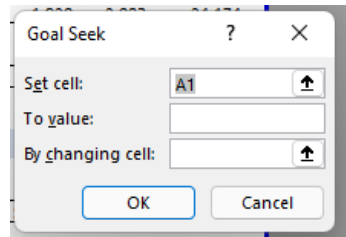
- Shortcut: alt + a + m
- Need to use this often in data analysis
- Sets the stage for SUMIFS & other data analysis formulas



# (7) GOAL SEEK

BY CHRIS REILLY

- **Shortcut: alt + a + w + g**
- Sometimes you need a result, not an input
- I set my result to X by changing Y (my input)
- Saves me from guessing



# I THOUGHT THEY'D BE... FANCIER?

BY CHRIS REILLY

- Me too when I put this together
  - Been using these for ~15 years
  - The primary goal is to save time
- I use these more than anything else in the program
  - **Quick Access Toolbar makes it even faster**

# **FINANCIAL MODELING TIPS** **I WISH I HAD WHEN I FIRST STARTED**

---

BY CHRIS REILLY

---

# EVERYTHING COMES BACK TO THE 3 STATEMENTS

BY CHRIS REILLY

- Doesn't matter if you're building a traditional 3 Statement Operating Model or working on some 40,000 row random analysis
- **It always comes back to the 3 Statements in some way, shape, or form**
  - More on next slide →

# EVERYTHING COMES BACK TO THE 3 STATEMENTS

BY CHRIS REILLY

- In fact, **I've navigated ~80% of my career by knowing this:**
  - If anything happens to the business (new customer, new cost, new capex)...
- **How does it affect Revenue, Margin, EBITDA, and Cash?**
  - **↑Knowing this in your head will be a game changer**



# IF I COULD ONLY GIVE YOU 2 OF THE 3 STATEMENTS, WHAT WOULD YOU CHOOSE?

BY CHRIS REILLY

- Life-changing question that helps your financial modeling
- **You would choose the Income Statement & Balance Sheet**
- **Why? Because you can make the Cash Flow Statement from the other two**
- Net Income (from I/S), plus: changes in the Balance Sheet
  - ↑This will get you to cash (no crazy formulas needed)
  - Remember this one for your next interview!

# UNDERSTAND THE FUNDAMENTALS OF EBITDA

BY CHRIS REILLY

- EBITDA is a proxy for operating cash flow used to value the business
- It gets multiplied by a market multiple (i.e., 8x)
- **EBITDA isn't part of GAAP, meaning it includes discretionary adjustments that can have a big effect on valuation**
- So, it needs to be scrutinized on both the buy-side and sell-side
- **In your model, create rows for every adjustment in the QofE, it will make your life easier**

# JUST B/C IT'S COMPLICATED DOESN'T MAKE IT GOOD

BY CHRIS REILLY

- This takes a long time to come to terms with
- **I need to “show” I’m good at modeling by making it complicated, right??**
- I’ve built models with 10,000+ inputs b/c we wanted to “customize everything”
- What happens? File breaks and computer freaks out
- **I prefer to start with a top-down approach and add details where needed (80/20) rule**

# BE CONSISTENT WITH YOUR FORMATTING

BY CHRIS REILLY

- Have seen some great different approaches on this recently
- So use whatever system you'd like, just be consistent throughout and communicate to the user
- This is the one that works for me, but you choose what works for you

The 5 Core Formats		
Description	What it Means	What it Looks Like
Black font, no shading	Formula	\$1,000
Blue font, no shading	Known actual or hardcode	\$1,000
Blue font, yellow shading	Model input	\$1,000
Dark green font	Links to another tab	\$1,000
Yellow font, red shading	Model check	\$1,000
Helper Formats		
Description	What it Means	What it Looks Like
Yellow shading	Work in progress	\$1,000
Orange shading	Unique cell or formula	\$1,000
Teal shading	Ties to document (LOI)	\$1,000

Just use what's best for you

# HAVE A SINGLE PLACE TO DOUBLE-CHECK YOUR WORK

BY CHRIS REILLY

- Wish I remembered who at FTI I learned this from back in the day (thank you)
- Link your Master Error Check Cell to all other tabs in your model
- That way, you can quickly fix any errors that pop-up (they will)

0 Master Error Check Cell

**Circularity Breaker**

OFF (Default) ↓ Toggle ON/OFF to fix interest expense (Default setting is OFF)

**Model Error Checks**

Indicator	Description (business issue)
0	FCCR not in compliance
0	Leverage Ratio not in compliance
0	Maximum turns funded at close exceeded
0	Revolver exceeds Borrowing Base and/or Capacity

**Indicator** **Description (model issue)**

0	Consolidated Balance Sheet doesn't balance
0	Consolidated Statement of Cash Flows doesn't tie to Balance Sheet
0	Pro Forma Balance Sheet doesn't balance
0	Cash Flow Sweep doesn't tie to Balance Sheet
0	Revolver doesn't tie to Balance Sheet
0	Senior Debt doesn't tie to Balance Sheet
0	Mezzanine Debt doesn't tie to Balance Sheet
0	Revolver Fee doesn't tie to Balance Sheet
0	Senior Fee doesn't tie to Balance Sheet
0	Mezzanine Fee doesn't tie to Balance Sheet
0	Cash goes below minimum 1
0	Cash goes below minimum 2
0	Global Waterfall proceeds don't go to zero
0	GP/LP Waterfall proceeds don't go to zero
0	Total Proceeds don't match total Equity value
0	Sources don't match Uses on Dashboard
0	Balance Sheet doesn't balance on Dashboard
0	Statement of Cash Flows doesn't tie to Balance Sheet on Dashboard
0	Cash at close doesn't match Sources & Uses
0	2022 Budget doesn't tie to monthly financials
0	Budget sum of parts doesn't tie out to whole
0	Consolidated Net Income doesn't tie to QoF
0	Consolidated EBITDA doesn't tie to QoF
0	Flash Report doesn't tie to underlying data

# AVOID CIRCULARITY (UNLESS...)

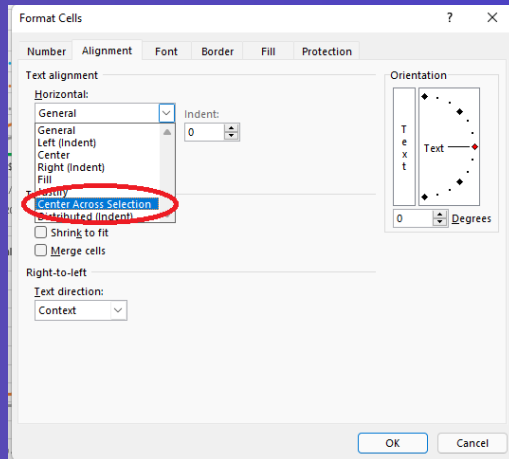
BY CHRIS REILLY

- Big picture, try to avoid circularity in your model
- The exception is making a 3 Statement Model where average debt balances are used (alongside a cash flow sweep) to calculate interest expense
- **Build a circularity breaker: =if(CircBreak="ON",0,[interest expense])**
- The circularity breaker temporarily sets your Interest Expense to zero and "shorts" any errors in the model

# DON'T MERGE & CENTER

BY CHRIS REILLY

- Why? It messes up your lookups
- Instead, Center Across Selection
- Looks the same, but doesn't affect lookups



# USE SUMIFS NOT SUMIF

BY CHRIS REILLY

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- SUMIF is one dimensional (one range, one criteria)
- SUMIFS is multi-dimensional (one range, multiple criteria)
- **You can make the exact same SUMIF formula using SUMIFS**
- But if you need to add criteria, you can quickly edit your SUMIFS formula instead overwriting your original SUMIF one



# USE INDEX/MATCH NOT VLOOKUP

BY CHRIS REILLY

- VLOOKUP uses a bunch of PC resources and can only go one direction (left to right)
- INDEX/MATCH is multi-directional and doesn't burden your system in the same way
- I'm still warming up to XLOOKUP but I believe the functionality is similar to INDEX/MATCH (takes a long time to change old habits)

# ADD A PLACEHOLDER ROW BEFORE YOUR SUBTOTAL

BY CHRIS REILLY

- **Small trick with a huge impact**
- It's not if, but when, you will have to add new rows (think new customer, new cost, etc.)
- Adding the blank "placeholder row" allows your =SUM() formula to "come with you" as you insert new rows (Alt + i + r)

Number 1	1,000
Number 2	1,000
Number 3	1,000
Number 4	1,000
<b>[[ leave this row blank ]]</b>	
Subtotal	4,000

# THANK YOU

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BY CHRIS REILLY