Working Capital, Cash Flow and Treasury

Interview preparation summary · FP track

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INT.FW.1.a · Working capital

Calculate receivable, inventory and payable days from accounts, combine them into the cash conversion cycle, and say how much cash a change in each one ties up or releases.

Working capital is the cash a business has tied up in its trading cycle: receivables and inventory, less payables. Three day measures describe it. Receivable days (DSO) are receivables divided by revenue, times 365. Inventory days (DIO) are inventory divided by cost of sales, times 365. Payable days (DPO) are payables divided by cost of sales, times 365 (some teams use purchases). The cash conversion cycle is DSO plus DIO minus DPO: the days between paying suppliers and collecting from customers. A shorter cycle means less cash is tied up. One day of revenue or cost of sales is the annual figure divided by 365, so a change in days converts to cash by multiplying by that daily amount, which differs for receivables (revenue basis) and for inventory and payables (cost basis). Interviewers ask this to test basic fluency and whether you use the right denominator. Usual mistakes are putting all three on revenue, using an average balance in one measure and a year-end balance in another, and reading a good cycle as good without checking why it moved.

WORKED EXAMPLE: PENNICK PACKAGING: THE THREE DAY MEASURES AND WHAT FIVE DAYS ARE WORTH

Pennick Packaging is an invented maker of cartons. For the year it reports revenue of 240.0m and cost of sales of 168.0m. At the year end receivables are 42.0m, inventory 31.5m and payables 23.1m. Use 365 days and year-end balances. Find the three day measures and the cash conversion cycle, then the cash released by cutting receivable days by 5 and by cutting inventory days by 5.

Answer: Receivable days are 63.9, inventory days 68.4 and payable days 50.2, so the cycle is 82.1 days. Five fewer receivable days free about 3.29m and five fewer inventory days about 2.30m.

> **Interview tip:** Name the denominator for each measure as you go, then convert days to cash with the daily figure. Add that the numbers are year-end snapshots, so you would check whether the year end is typical before drawing conclusions.

INT.FW.1.b · Working capital

Show why growth and seasonality consume cash even when a business is profitable, estimate the funding need, and match it to the right kind of funding.

A growing business must buy inputs, hold more stock and extend credit to more customers before it is paid, so working capital rises with sales. If net working capital is a stable share of revenue, extra revenue needs that share in extra funding. A firm can therefore be profitable and still run out of cash, which is often called overtrading when growth outruns funding. A simple test of self-funded growth sets new profit equal to the new working capital: with a net margin m and working capital w as a share of revenue, revenue can grow by a factor of w divided by (w minus m) before outside funding is needed, ignoring capex and dividends. Seasonal businesses add a swing: working capital peaks before the selling season and unwinds after it. Typically the permanent core is funded by long-term sources and the seasonal peak by a revolving facility sized with headroom. Usual mistakes are forgetting that capex and dividends add to the need, assuming days stay constant when a large customer asks for longer terms, and sizing a facility to the average rather than the peak.

WORKED EXAMPLE: DUNMORE TRADING: PROFITABLE GROWTH THAT STILL NEEDS FUNDING

Dunmore Trading is an invented wholesaler. Revenue is 80.0m and plans to rise to 100.0m. Net working capital is 22% of revenue and the net margin is 4%. Depreciation is 1.2m, capex 3.0m and there is no dividend. Find the extra working capital, the cash change from the year, and the highest growth the firm could fund from its own profit if it spent nothing on capex.

Answer: Growth needs 4.4m more working capital, so the year shows a cash outflow of 2.2m despite 4.0m of profit. Without capex the firm could grow about 22.2% from its own profit, less than the 25% planned.

> **Interview tip:** Say that profit and cash are different things and give the one-line reason: sales are booked before cash arrives. Then give the number and the funding choice, and mention capex and dividends as extra calls on cash.

INT.FW.1.c · Working capital

Compare working-capital levers such as collections, inventory, payment terms, early-payment discounts and supply-chain finance, and weigh the cash released against its cost and risk.

Working capital can be released by collecting faster (clear invoicing, credit control, dispute resolution), holding less stock (better forecasting, fewer slow-moving lines) and paying suppliers on agreed terms but no earlier. Each lever has a cost. An early-payment discount of d% for paying in n days instead of m days costs d divided by (100 minus d), annualised by 365 divided by (m minus n), which is often far above the cost of a bank facility, so a buyer with spare cash typically takes the discount and a seller usually should not offer it unless short of cash. Supply-chain finance lets suppliers be paid early by a funder against invoices the buyer has approved, while the buyer pays on the due date, sometimes extended. It can help suppliers, but a cash release from longer terms is one-off, may reverse if the programme ends, and lenders and analysts may treat large balances as debt-like. Usual mistakes are counting a one-off release as recurring, ignoring supplier health, and stretching payables until suppliers tighten terms.

WORKED EXAMPLE: LARCH APPLIANCES: TAKE THE DISCOUNT, AND WHAT STRETCHING SUPPLIERS IS WORTH

Larch Appliances is an invented maker of kitchen equipment. A supplier offers 2% off for payment in 10 days instead of 30 days. The firm could borrow on its revolving facility at 7.0% a year. Separately, annual purchases are 120.0m and the buyer is considering moving payment terms out by 30 days. Find the annualised return from the discount and the cash from the longer terms, then give a view.

Answer: Skipping the discount costs about 37.2% a year, well above the 7.0% facility, so take it if liquidity allows. Moving terms out by 30 days would release about 9.86m once, with supplier risk.

> **Interview tip:** Convert the discount into an annual rate and put it next to the borrowing rate in one sentence. Then say the working-capital release from extended terms is a one-off and name one risk.

INT.FW.2.a · Cash and treasury

Build and read a short-term cash forecast of weekly receipts and payments, spot the lowest cash point, and separate cash flow from profit through free cash flow and cash conversion.

A 13-week cash forecast is a direct cash forecast: for each week it lists cash receipts (customer collections, other income) and cash payments (suppliers, payroll, tax, interest, capex, dividends), rolls the closing balance forward and compares it with a minimum cash level and the facility available. It is the treasury team's early warning because lumpy payments such as payroll, quarterly tax and loan repayments can push cash low in one week even when the month looks fine. It is rolled weekly and compared with actuals so that forecasting errors, often in collection timing, are learned from. Free cash flow is the cash left after running and investing in the business: typically EBITDA less tax paid, less capex, less the increase in working capital, before interest and financing flows (definitions differ, so state yours). Cash conversion compares that cash with profit. Usual mistakes are forecasting receipts from sales rather than from customer payment days, forgetting one-off outflows, and checking only the month-end balance.

WORKED EXAMPLE: FERROW COMPONENTS: FINDING THE LOW POINT IN A SIX-WEEK EXTRACT

Ferrow Components is an invented parts maker. Opening cash is 4.0m, its policy minimum is 1.5m and it has an undrawn facility of 3.0m. The forecast for six weeks gives receipts and payments in GBP m: Week 1 3.4 in and 2.6 out; Week 2 2.8 in and 2.9 out; Week 3 2.5 in and 5.9 out; Week 4 3.6 in and 2.7 out; Week 5 4.1 in and 3.0 out; Week 6 3.9 in and 3.2 out. Week 3 includes a quarterly tax payment. Find the closing cash each week, the low point and any draw needed.

Answer: Cash dips to 1.3m at the end of week 3, 0.2m below the 1.5m minimum. A draw of 0.2m on the facility would cover it, and cash recovers to 4.0m by week 6.

> **Interview tip:** Describe what the forecast is for before the arithmetic: the lowest point in the period and the action it triggers. Mention that you would compare it with actuals each week to improve the timing of receipts.

INT.FW.2.b · Cash and treasury

Size a liquidity buffer from cash and committed facilities, and test covenant compliance and headroom for leverage and interest cover.

Liquidity is cash on hand plus facilities the company can draw without anyone's permission. Committed facilities, such as a revolving credit facility (RCF), must be lent while conditions are met, whereas uncommitted lines and overdrafts can typically be withdrawn, so treasury counts them differently. Liquidity headroom is usually cash above a minimum operating level plus the undrawn committed amount. Loan agreements typically contain financial covenants tested at set dates: a maximum net debt to EBITDA, and often a minimum interest cover of EBITDA to interest. Headroom is how far EBITDA could fall, or net debt rise, before the test fails. Drawing an RCF and holding the cash does not change net debt, but spending it does. Treasury forecasts covenants forward, includes pro forma effects of acquisitions only as the agreement allows, and talks to lenders early if headroom is thin. Usual mistakes are counting uncommitted lines as liquidity, measuring headroom in turns instead of per cent of EBITDA, ignoring definitions in the agreement, and waiting for the test date.

WORKED EXAMPLE: QUILLON BRANDS: HOW MUCH ROOM BEFORE THE LEVERAGE TEST FAILS

Quillon Brands is an invented consumer goods maker. Net debt is 61.0m and EBITDA is 24.0m. The facility agreement requires net debt to EBITDA of no more than 3.0x at each test date. Cash is 9.0m and the undrawn RCF is 25.0m. Find the leverage, the headroom in EBITDA and in net debt, and the liquidity.

Answer: Leverage is 2.54x against 3.0x, so EBITDA can fall about 15.3% or net debt rise 11.0m before a breach. Liquidity is 34.0m in total, but the covenant could bind first.

> **Interview tip:** Give headroom as a percentage of EBITDA, which a business partner understands, as well as in turns. Then say that covenant headroom and liquidity are different tests.

INT.FW.2.c · Cash and treasury

Identify foreign exchange and interest-rate exposures, explain how forwards, swaps and options reduce them, and judge how much to hedge.

Transaction exposure arises when a known foreign-currency receipt or payment will be converted later at an unknown rate. Translation exposure arises when foreign subsidiaries' results are converted into the reporting currency for the accounts. Interest-rate exposure arises mainly on floating-rate debt, where a rise in the base rate raises interest cost. A forward contract fixes the exchange rate for a future date; the forward rate is not a forecast but is set by spot and the interest-rate difference between the two currencies, so the currency with the higher rate trades at a forward discount (approximately, forward equals spot adjusted by the ratio of one plus each interest rate over the period). An interest-rate swap exchanges floating for fixed payments; a cap sets a ceiling and keeps the benefit if rates fall, for a premium. Typical policy hedges committed exposures fully and forecast exposures in layers that shrink with distance, because over-hedging a forecast that does not happen is a speculative position. Usual mistakes are treating a forward as a prediction, hedging the wrong currency pair, and ignoring that hedging has a cost and an accounting effect.

WORKED EXAMPLE: HARBURY EXPORTS: FIXING A DOLLAR RECEIPT AND A FLOATING LOAN

Harbury Exports is an invented sterling-based maker that will receive USD 5.0m in six months. Spot is 1.2500 US dollars per pound. Six-month simple interest rates are 3% a year in dollars and 4% a year in sterling. Find the forward rate, the sterling received if hedged, and the range if unhedged with spot at 1.2000 or 1.3000. Separately it has a floating loan of 40.0m; find the extra annual interest if the base rate rises 1 percentage point.

Answer: The six-month forward is about 1.2439, so the hedged receipt is 4.020m sterling against a range of 3.846m to 4.167m unhedged. A one point rate rise costs 0.40m a year on the loan unless it is swapped or capped.

> **Interview tip:** Say what is being fixed, then state the trade: certainty in return for giving up gains. Avoid calling the forward a forecast of where the exchange rate will go.

Summary of the Charta interview-preparation topic. Companies and figures in the examples are invented. Draft content, not yet expert reviewed.