

ECSTATIC ECONOMICS · THE LUMINOUS BUSINESS METHODOLOGY

Cash Asleep in the Building

Working Capital as an Organisational Question

Ammanuel Santa Anna

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THE LICENCE

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A NOTE BEFORE YOU READ

This work is offered for education and leadership development. It is not legal, financial, accounting, investment, medical or psychological advice; take the advice of a qualified professional who knows your circumstances. Companies and events are described from the public record as the author understands it; characterisations are the author's analysis. Examples are illustrative, and no particular outcome is promised to any reader.

ABSTRACT

When a profitable firm is short of cash, the cash is rarely missing. It is held, for days at a time, on shelves and in unpaid invoices — and every one of those days was made by someone. This book is about finding them, and waking the money kindly. Working capital as an organisational question — the cycle, the stockroom, the disputed invoice, the supplier's terms and the honest measure; seven chapters with a field manual.

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CHAPTER ONE

Profitable on Paper, Short on Friday

A profitable quarter and a short Friday, and the ninety-five days between them.



Profitable on Paper, Short on Friday

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER ONE

Twenty to seven, the bank portal

It is twenty to seven on a Thursday evening, and the managing director of a firm that makes ventilation hoods for commercial kitchens is still at her desk. The office has emptied. On one screen is the management account for the quarter, and it is a good one: sales up, margin held, the best three months the firm has had since she bought it from its founder. On the other screen is the bank portal, and the overdraft is closer to its limit than it has been all year. Tomorrow is payroll. Fifty-one people will be paid, and she will

make it, because a large customer paid a fortnight early when she asked, as a favour, and she has not yet worked out what that favour will cost her in the spring. Her jaw has been set since lunch.

She is a composite, drawn from the way these evenings are described in the literature on working capital and in the house's own practice, and no firm is meant. Nearly everyone who has run a business that sells to other businesses has sat in that chair at least once. The accounts say the firm is earning money. The bank says the money is somewhere else.

Ammanuel Santa Anna's book on doing business as a living system opens its chapter on money with a sentence that would have helped her at twenty to seven, because it moves the question from how much to where[1]:

> *Money in a living venture is not the point of the organism. It is the circulatory system — the medium through which vitality flows, nutrients reach every cell, and waste is carried away.*

This chapter makes one claim. When a profitable firm is short of cash, the cash is rarely missing; it is held, for days at a time, on shelves and in unpaid invoices, and every one of those days was made by an ordinary decision at a desk inside the firm. The cash conversion cycle is usually read as a ratio. It is better read as a map of who is holding the firm's money, and for how long.

A cycle with three numbers

The idea that the time cash spends inside a business can be measured is older than most of the vocabulary now used for it. In 1974 Lawrence Gitman, writing in the *Financial Review*, proposed estimating a firm's liquidity needs from the length of what he called its cash cycle: the time between paying for materials and being paid for what was made from them.[2] Six years later Verlyn Richards and Eugene Laughlin gave the measure the name it still carries. Their 1980 paper in *Financial Management*, "A Cash Conversion Cycle Approach to Liquidity Analysis", begins with an observation every finance director will recognise: working capital "occupies the major portion of a financial manager's time and attention", though the literature gave it less attention than investment and financing.[3] Their argument was that the usual liquidity ratios, which compare what a firm holds with what it owes on a single day, miss the point. What matters is how fast each kind of holding turns back into cash.

The cycle they described is three numbers and one subtraction. The first is the number of days, on average, that stock sits in the business before it is sold. The second is the number of days, on average, that customers take to pay once they have been invoiced. Add them and you have the time between the arrival of materials and the arrival of the customer's money. The third is the number of days the firm itself takes to pay its suppliers. Subtract it, and what remains is the cash conversion cycle: the number of days for which the firm, and nobody else, is financing its own trade.

Set the managing director's firm out that way, with figures chosen only to show the arithmetic. Suppose her stock, from steel coil to finished hoods waiting for collection, sits for about seventy days. Suppose her customers, most of them contractors fitting out restaurants and hospitals, pay in about sixty-five. Suppose she pays her own suppliers in about forty. Seventy and sixty-five is a hundred and thirty-five; less forty is ninety-five. For ninety-five days, on average, every pound she has spent on making a hood is a pound she does not have.

Now suppose, as a second illustration, that her firm sells about ten thousand pounds of hoods, at cost, every working day. Each day in the cycle is then about ten thousand pounds of cash held in the business. Ten days off the cycle, held steady, is roughly a hundred thousand pounds that comes back once and stays back, as long as the days do. That is the whole of the arithmetic, and it is worth doing on a napkin because it changes what the overdraft means. Her bank is not lending her money to cover losses. It is lending her money to cover ninety-five days.

The measure has known limits, and it is honest to name them before leaning on it. The three numbers are averages over very different things; a cycle of ninety-five days can hide a few customers who pay in a week and a few who pay in a season. It is usually computed from year-end balances, which a firm can flatter by the way it times its payments and its deliveries, a matter Chapter 5, on the payment run held until Monday, returns to. And it says nothing about whether the days are well spent. A distributor that keeps spare parts for emergencies may be right to hold them. The cycle tells a leader where the cash is. It does not tell her where it ought to be.

What the Belgian accounts showed

If the cycle were only an accounting identity it would not deserve a chapter. It deserves one because a body of research has asked whether firms with shorter cycles do better, and the answers, read carefully, are more interesting than the headline.

In 2003 the Belgian economist Marc Deloof published a study of 1,009 large Belgian non-financial firms over the five years from 1992 to 1996.[4] He measured each firm's days of stock, days of receivables and days of payables, and its cash conversion cycle, and set them beside its gross operating income. His abstract reports the result in two sentences. "The results suggest that managers can increase corporate profitablity by reducing the number of days accounts receivable and inventories." And then, more quietly: "Less profitable firms wait longer to pay their bills."

The second sentence is the honest grade on the first, and it is worth slowing down for. A study of this kind finds an association across many firms. It cannot, on its own, say which way the arrow points. Firms that are doing badly may hold stock they cannot sell and chase customers they cannot afford to lose, so that weak profit produces a long cycle as much as a long cycle produces weak profit. Deloof's finding on payables is a clue that some of the arrow does run that way: the firms paying slowly were the ones under

strain. In 2007 Pedro Juan García-Teruel and Pedro Martínez-Solano tested the same question on 8,872 small and medium-sized Spanish firms, from 1996 to 2002, with methods designed to deal with that reverse direction, and reported that "managers can create value by reducing their inventories and the number of days for which their accounts are outstanding."[5] Their results held, they wrote, when they allowed for the possibility that profit was driving the cycle rather than the other way round.

There is a second honest grade, and it matters for anyone tempted to push the cycle as short as it will go. In 2015 Nihat Aktas, Ettore Croci and Dimitris Petmezas studied a large sample of American firms from 1982 to 2011 and found evidence of an optimal level of working capital: firms that moved towards it, whether by reducing their investment in working capital or by increasing it, tended to improve their stock-market and operating performance.[6] A cycle can be too long, and it can be too short. A firm that strips its shelves bare to meet a target and then cannot fill an order has not released cash. It has borrowed it from next month's customers.

What this body of work supports is modest and useful. Across thousands of firms, in several countries, holding stock and receivables for fewer days tends to go with better results, and the effect survives the obvious objections. It does not support a single target, or the idea that every day removed is a gain. Santa Anna's writing on money puts the principle in a form that holds both halves at once. "Money that moves creates vitality," he writes. "Money that stagnates creates decay." The emphasis is on movement, not on scarcity. A firm with a healthy cycle is not one that holds nothing. It is one in which nothing is held without a reason.



Days are made by people

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER ONE

Days are made by people

Here is where the cycle stops being a finance subject and becomes an organisational one. Every day in it was made by somebody.

Walk the managing director's ninety-five days and put a name beside each part. The stock that sits for seventy days sits because a buyer ordered steel coil in larger lots to get a better price per tonne, and because the planner builds the common hood sizes in batches of forty so that the press is not reset too often, and because the sales director, burned once by a lost order, asked for twenty finished units to be kept on hand.

Each of those decisions was sensible at the desk that made it. None of them was made by anyone who could see the overdraft.

The receivables that take sixty-five days take that long for reasons that are mostly not about the customer's willingness to pay. A large contractor's terms are sixty days because a salesperson agreed them, in the last week of a quarter, to close an order. Invoices for installation are raised only when the site manager returns a signed completion sheet, and site managers are not paid to return paperwork. A fifth of the invoices go out with a purchase-order number missing, because the order desk took the order by phone, and the customer's accounts office will not pay an invoice it cannot match. Each of these, again, was sensible somewhere. Chapter 3 is given to the invoice the customer could not pay, because the late payment is so often a fault the seller made first.

And the forty days the firm takes to pay its own suppliers are, for most firms, the one number in the cycle that someone has actually tried to manage, because stretching it is the fastest way to improve the total. It is also the one that moves cash out of somebody else's building rather than out of one's own. That distinction is the subject of Chapter 4, on ninety-day terms, and it is the reason this book counts payables differently from the other two numbers.

This is the same pattern the house's first business book found in an order that waited six days for fifty minutes of work. In Where the Flow Stops, John Little's 1961 proof that the time an item spends in a system equals the number of items in it divided by the rate at which they leave did the work.[7] It does the same work here. Stock is items waiting; receivables are invoices waiting; the days in each are the queue divided by the flow. A firm that halves the number of finished hoods on its floor, at the same rate of sale, halves the days they sit there. Nobody has to sell faster. Somebody has to decide to hold fewer.

The house's Luminous 100, its reading of the frameworks every consultancy sells, describes Michael Porter's value chain as something that should be redrawn in exactly these terms: the upgrade "transforms Porter's linear conveyor belt into a living circulatory system". The value chain asks where a firm creates value and where cost accumulates. The cash conversion cycle asks a narrower question with the same shape: where, in the circulation, the money pools.

There is a reason the pools go unseen, and it is the reason this is a book about organisations rather than a finance text. Each pool is held by a different department, and each department is measured on something else. Purchasing is measured on price, so it buys in larger lots. Production is measured on utilisation, so it builds in larger batches. Sales is measured on orders booked, so it trades terms for signatures. Credit control is measured on overdue debt, so it chases the invoices that are late and has no reason to ask why. Nobody is measured on the days. Santa Anna's canon, describing what happens to the material side of a value stream when its flow is impaired, gives the human cost a sentence that will be familiar to anyone who has worked in a firm like hers: "People spend their time expediting, fire-fighting, and working around a system that has become its own obstacle."

The managing director feels this in a particular way at twenty to seven. She is the only person in the building whose job includes all four departments, and so she is the only person who sees the cycle at all. Everyone else sees one desk's sensible decision. She sees ninety-five days, and an overdraft, and a favour she had to ask for.

The rhythm of the money

It is worth staying a moment with what the cycle does to the people inside it, because it is not only a number on a bank statement.

A long and irregular cycle makes a firm's cash arrive in lumps. A big customer pays and the account fills; payroll and the steel supplier fall due in the same week and it empties. Santa Anna's book on living ventures describes this exactly, and it is the passage the managing director would recognise first: "Continuous, not episodic. A venture that lurches between feast and famine — big deals followed by dry spells — is like a body with an irregular heartbeat. The cells never know when the next delivery of oxygen is coming." He adds what the irregularity produces: "This uncertainty creates anxiety, short-term thinking, and desperate decision-making."

That is not a figure of speech. Watch what the firm does in the weeks the account runs low. The managing director asks a customer to pay early, which spends goodwill she will need later. The finance team holds a supplier payment for a week, which the supplier notices. The buyer is told to stop ordering until the end of the month, so the next month's order is larger, which is how the lumps are made in the first place. Each move is a reasonable response to a bad week, and each one lengthens or roughens the cycle that caused the bad week. A firm in that pattern can spend years believing it has a cash problem when what it has is a rhythm problem, made by its own responses to the cash.

The canon's book on resource decisions describes the internal side of the same pattern, in which a firm short of money starts to behave as if every department must protect its own share. Its list begins with the behaviour that most lengthens a cycle: "budget hoarding (departments requesting more than they need to create buffers against anticipated cuts)". Stock is the most physical form that buffer takes. The sales director who asked for twenty finished hoods because he was once caught short is not being wasteful. He is protecting himself from a system he does not trust to warn him, and the twenty hoods are the price the firm pays for that lack of trust. Chapter 2 spends its length in the stockroom, on what each shelf is insuring against.

Santa Anna's *Ecstatic Economics* puts the principle underneath all of this in two short sentences, written about gift economies and true of a firm's balance sheet: "Wealth was not something you had. It was something you moved." The managing director's firm has plenty of wealth. Most of it, on Thursday evening, is not moving.



The cycle drawn with names

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER ONE

The cycle drawn with names

What changes this is not, in the first instance, a finance project. It is a way of making the cycle visible to the people who make it.

Picture the managing director a week after that Thursday. She asks her finance manager for three numbers she already has, the days of stock, receivables and payables, and then for something she does not: the same three numbers for each of the last twelve months, so that she can see whether the cycle is steady or lurching. It lurches. Then she does something less usual. She takes one ordinary order from the previous quarter,

a set of six hoods for a hospital kitchen, and follows its money, not its paperwork, from the day the steel was paid for to the day the hospital's payment cleared.

The walk takes an afternoon. At each stage she asks the person who held the money three questions: when did it arrive with you, when did it leave, and what was it waiting for? The steel sat in the yard for nineteen days because it came in a lot of three months' supply. The hoods were built in four days and then waited eleven for the installation team. The installation took two days. The completion sheet came back from site twenty-three days later, in the site manager's van. The invoice went out the next morning, without the hospital's order number, which the order desk had never been given. The hospital's accounts office queried it on day thirty, received a corrected invoice that afternoon, and paid it on day seventy-one.

Written on a single sheet, with a name beside every gap, the walk does something the ratio never did. It shows that the longest single wait in the life of that order was not the customer paying. It was a piece of paper in a van. It shows that the hospital paid in forty-one days once it had an invoice it could match, which is well inside its terms. And it shows every department, in one picture, what it holds and for how long, without accusing anyone, because each gap has a reason and every reason is true.

She does three things with the sheet, and the order matters. She shows it first to the people whose names are on it, together, before she shows it to anyone else, so that it is read as a description of the system rather than a ranking of desks. She asks them, as a group, which gap would be cheapest to close, and they choose the completion sheet, which the installation team agrees to photograph on site and send the same day. And she puts the cycle, in days, as a single line that updates each month, on the wall where all four departments can see it, with no target written beside it yet, because a target set before the firm understands its own days will be met by moving them rather than removing them.

There are predictable ways for this to go wrong. A leader who walks only the worst order designs for the exception. A leader who sets a target for days before the walk will see the days fall at quarter-end and rise again in the first week of the next. And a leader who starts with payables, because that number moves fastest, will improve the cycle on paper while her suppliers quietly raise their prices or move her to the back of the queue. Chapter 7 carries the walk as a run sheet, with the questions in order, the arithmetic laid out, and the signs that each step is failing, and Chapter 6 places it in the order of a first ninety days.

The gain in this is real, and it can be stated precisely without inventing its size. Each day taken out of stock or receivables, and held out, returns one day's cost of sales to the firm once, and saves whatever it was costing to finance that day for as long as it stays out. It belongs to the firm's own people and process, and it can be measured against records the firm already keeps. Before anyone shares in it, it has to be measured in a way both sides would sign, against those records and agreed before the first change is made, and Chapter 5 sets out what that means for a number as easy to flatter as this one.

Drawing your own cycle

The money walk is simple enough to begin this week and particular enough to go wrong in several ways, and the book can carry the finer points the article left out.

Measure it monthly, not once a year. Most firms know their cycle only from the year-end accounts, which is the one night it is most likely to have been tidied. Ask finance for days of stock, receivables and payables at the end of each of the last twelve or twenty-four months. The line those numbers draw tells you more than any single figure: whether the cycle is steady or lurching, whether it has a season, and whether the year-end is typical or a performance.

Use the right denominator for each number. Days of stock and days of payables are usually computed against the cost of what is sold, because that is what the stock and the suppliers' invoices are worth; days of receivables against sales, because that is what customers owe. Mixing them makes a cycle look shorter or longer than it is. Whatever convention finance uses, write it down beside the line and keep it, so that next year's number is comparable with this year's.

Know the difference between days and pounds. A firm that is growing needs more cash in its cycle even if its days stay the same, because each day is worth more. The managing director's ninety-five days cost her more in a quarter of high sales than in a quiet one. Read the days to see whether behaviour is changing; read the pounds to see what the bank will feel. Confusing the two is how a growing firm decides it has a working-capital problem when it has a success.

Break the averages open. A cycle of ninety-five days is an average over every customer, product and supplier. Split each number at least once by its largest parts: the ten largest customers, the main product families, the suppliers who account for most of the spend. The average often hides a single customer on long terms, or a single product family with a warehouse of its own, and the walk is better aimed at those.

Choose an ordinary order to walk. As with the order walk in *Where the Flow Stops*, the worst case misleads. Choose an order that was typical in size and route, that finished recently enough for people to remember it, and that crossed every department the cycle touches: purchasing, production, delivery, invoicing, collection. Follow its money, not its paperwork: from the day the materials were paid for to the day the customer's payment cleared. Where the records give dates, use them; where they do not, ask, and mark the date as remembered.

Ask three questions at each stage. When did the money arrive with you, in whatever form it then took: steel, a half-made hood, a finished one, an invoice? When did it leave? What was it waiting for? The third question is the one that finds the gap, and its answers are almost always ordinary: a batch, a signature, a piece of paper in a van, a number nobody asked for.

Read the sheet with the people on it, together. The single most useful thing the walk produces is a picture every department can see at once. Show it to them before you show it to anyone senior, and read it as a de-

scription of the system. Each gap has a reason, and every reason is true. The moment the sheet is used to rank departments, the next walk will be told a tidier story.

Start with the cheapest gap in your own building. The first change should cost little and release days from stock or receivables, not from suppliers. In the walk above it was a completion sheet photographed on site. In most firms it is something of that size: a document that travels slowly, a fact nobody collects at the first contact, a batch nobody has questioned. Leave payables alone until Chapter 4 has been read.

Put the cycle where everyone who makes it can see it. One line, in days, updated monthly, on a wall that purchasing, production, sales and credit control all pass. No target beside it at first. A target set before the firm understands its own days will be met at quarter-end and missed in the week after, for the reasons Chapter 5 gives.

Expect a service firm's cycle to hide in work in progress. A firm that sells time rather than goods has a cycle too. Its stock is work done and not yet billed, and its longest gap is often between the end of a piece of work and the invoice for it. The walk is the same: follow one piece of work's money, and ask what it waited for.

Chapter 6 sets the walk at the start of a first ninety days, and Chapter 7 carries the money-walk sheet, the arithmetic of the cycle laid out so that anyone can do it, and the questions in order.

Twenty to seven, a quarter later

It is twenty to seven on a Thursday evening, the night before payroll, and the managing director is at her desk again. The management account for the quarter is on one screen. It is good, though no better than the last one. On the other screen the bank portal shows the overdraft unused.

On the wall outside her office the cycle is written in marker, in days, one number for each of the last four months: ninety-five, ninety-one, eighty-six, eighty-four. Beside it, in the installation manager's handwriting, is a note that completion sheets now reach the office in a day and a half. Nobody asked a customer to pay early this quarter.

She closes the portal before seven, and the jaw she has been setting all year, without noticing, is not set.

CHAPTER TWO

What the Stockroom Is Afraid Of

Every shelf is a decision about a risk, and most stock is insurance against a fear nobody has named.



What the Stockroom Is Afraid Of

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER TWO

Quarter past seven, aisle fourteen

It is a quarter past seven on the last Saturday in December, and the warehouse is colder than the yard outside. The annual stock count began at seven. The planner has a clipboard, a hand scanner and a fleece under her high-visibility vest, and she has been given aisles twelve to sixteen, which she volunteered for because she wanted to see them. In aisle fourteen, on the second level, there is a pallet of cast motor housings wrapped in film that has gone grey with dust. The label says it was received twenty-six months ago. She

scans it, writes the count on the sheet, and stands for a moment with her hand on the film. She remembers the order. She placed it.

She is a composite, drawn from the way stock counts and the decisions behind them are described in the operations literature and in the house's own practice, and no firm is meant. She remembers, too, why she placed it. A supplier of housings had let the firm down twice in one spring, and the production director had said, in a meeting she can still hear, that it must never happen again. So she bought six months' supply. The supplier never let them down again. The housings are still here, and so is the money that paid for them.

Ammanuel Santa Anna's writing on where abundance stops moving has a phrase for the pallet that is almost too exact. Stagnation, he writes, arrives quietly, "in the corners of your life where flow has ceased and stagnation has settled in like dust on a forgotten shelf."[8]

This chapter makes one claim. Most of the cash a firm holds as stock is held as insurance, and each insurance policy was taken out against a fear: a supplier who might fail, a forecast nobody trusts, a customer who once shouted. The stock is the visible part. The fear is the part that has to be managed, and until it is named, reducing the stock only moves the fear somewhere else.

A shelf is a decision

There is a habit in finance of treating inventory as a single number, a line on the balance sheet that is too high or too low. On the warehouse floor it is never a single number. It is several thousand separate decisions, each made by a person on a day, for a reason. The pallet in aisle fourteen was a decision about a supplier. The finished units by the loading bay were a decision about a customer. The half-built assemblies on the floor by the press were a decision about how often it is worth resetting a machine. Read that way, a warehouse is the part of Chapter 1's map of who holds the firm's money that can be walked with a torch.

The engineers who built the Toyota Production System took that view further than anyone, and the account of their thinking that Taiichi Ohno published in 1978, and in English in 1988, made the case against holding stock in the strongest terms the operations literature has.[9] Ohno counted overproduction, the making of things before anyone needed them, as the worst of the wastes, because it hid the others. A factory that makes too much has stock to cover every failure, and so it never learns which failures it has.

That idea reached most managers through an image, and the image is worth handling with care. In lean teaching a factory is often drawn as a boat on a river. The water level is the stock. Beneath the surface are rocks: unreliable machines, late suppliers, quality problems, long changeovers. While the water is high the boat floats over all of them, and nobody knows where the rocks are. Lower the water and the rocks appear, one at a time, and can be removed. The image is widely associated with Toyota and is taught in many lean courses, but its first author has not been traced for this book, and it should be read as a teaching picture rather than a quotation from anyone.

Santa Anna's canon, writing about the material side of a value stream when its flow is impaired, gives the same idea without the boat, and in the plain words of a quality engineer: "Quality defects multiply because problems are buried under layers of work-in-progress rather than surfaced immediately." The pallet in aisle fourteen buried one problem, a supplier's unreliability, so completely that nobody ever went back to ask whether it had been solved.

That is the first thing to see on a stock count. Every slow-moving line is a rock that the water is still covering, or a rock that has gone and left the water behind.

The hike and the drum

The best-known account of stock as an organisational problem is not a study. It is a novel. Eliyahu Goldratt's *The Goal*, written with Jeff Cox and first published in 1984, follows a plant manager named Alex Rogo through a few months in which his factory is told it will be closed unless it improves.[10] The book's argument, carried by its plot, is that a plant does not make money by keeping every machine busy. It makes money by moving work through the one resource that limits the whole plant, and everything else should be paced to that resource. Machines kept busy for their own sake simply fill the floor with work that cannot yet go anywhere.

Goldratt's most famous scene, from memory of the novel, is a scout hike. Rogo is leading a line of boys through the woods, and the line keeps spreading out, with gaps opening behind the slowest walker, a boy the book calls Herbie. Rogo sees that the speed of the line is the speed of Herbie, and that the gaps are inventory: distance walked by the fast boys that does not bring the troop any closer to camp. He puts Herbie at the front, lightens his pack, and ties the line together. In a later book, *The Race* (1986), Goldratt and Robert Fox gave the method a name: drum-buffer-rope.[11] The drum is the constraint, which sets the pace. The buffer is a deliberate, sized stock placed in front of the constraint so that it is never starved. The rope ties the release of new work to the pace of the drum, so that nothing enters the plant faster than it can leave.

Two things in that method matter for anyone standing in aisle fourteen. The first is that it does not abolish stock. It places it, on purpose, in front of the one resource that cannot be allowed to wait, and it sizes it. The second is that every other stock in the plant is, by the method's logic, either a buffer somebody chose for a reason they could state, or an accident. The house's Luminous 100, its reading of the frameworks every consultancy sells, adds the sentence about Goldratt's theory that every stock count confirms: it "almost always reveals that the real bottleneck isn't where you think it is."

A word on the strength of this evidence. *The Goal* is a business novel, and *The Race* is an argument with diagrams; neither is a study, and the success stories that followed them are mostly practitioners' accounts. The method has lasted because its logic follows from the arithmetic of queues, the same arithmetic that John

Little proved in 1961 and that the house's first business book used to walk a single order.[12] It should be read as a sound way of thinking about where stock belongs, not as evidence of how much any firm will gain.



What the American shelves showed

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER TWO

What the American shelves showed

The question a finance director will ask next is whether any of this shows up across many firms, and there is a careful answer.

In 2005 Hong Chen, Murray Frank and Owen Wu published a study of the inventories of publicly traded American manufacturing companies from 1981 to 2000.[13] Their abstract reports that the median inventory holding period fell from ninety-six days to eighty-one over those two decades, an average reduction of about two per cent a year. The largest fall was in work-in-process inventory, the half-made goods on factory floors, which declined by about six per cent a year. Finished-goods inventories did not decline at all.

That last finding is the one to keep. Two decades of lean manufacturing, just-in-time supply and better software cleared the factory floors and left the finished-goods shelves where they were. The stock that went was the stock engineers could see and control. The stock that stayed was the stock held against customers: against a forecast, a promise, a fear of the order that might not be filled. It is the stock the planner in aisle fourteen and the sales director by the loading bay are holding.

The same study looked at what inventory meant for investors. Firms with abnormally high inventories had abnormally poor long-term stock returns. Firms with slightly lower than average inventories did well. But, in the abstract's words, "firms with the lowest inventories have only ordinary returns." That is the same honest grade that the research on the whole cash cycle gives, and it guards against a familiar mistake. Stock is not bad. Unexplained stock is expensive, and stock cut below what the work needs is a different expense, paid in lost orders and rushed deliveries. The study is of large listed manufacturers over two decades, and its stock-return findings are associations, not proof that cutting stock causes a share price to rise. What it shows clearly is where the stock went, and where it did not.

How fear is passed upstream

If finished-goods stock is held against customers, the next question is why it is so often more than the customers needed. Two pieces of research answer it, and both are about behaviour rather than arithmetic.

In 1997 Hau Lee, V. Padmanabhan and Seungjin Whang described what they called the bullwhip effect.[14] In a chain of firms, each ordering from the one above it, the orders a supplier receives tend to vary more than the sales the retailer actually makes, and the variation grows at each step upstream. They traced it to four causes, which their abstract names: "demand signal processing, rationing game, order batching, and price variations." Each is a reasonable response at one desk. A buyer who sees sales rise orders a little extra in case they keep rising. A buyer who fears a shortage orders more than she needs, expecting to be rationed. A buyer who orders once a month orders a month at a time. Each adds a little exaggeration to the signal, and the supplier, reading the exaggerated signal, builds stock against it, which is one reason the small firm at the far end of the chain, met in Chapter 4, so often holds stock it was never asked to hold.

Eight years earlier the systems scientist John Sterman had shown the same thing in a laboratory. His 1989 paper reported an experiment in which people managed a simulated distribution chain, the exercise now widely known as the beer game, with each player ordering stock from the next and orders arriving after a delay.[15] The players' choices, he found, systematically diverged from the best policy, and the cause was not

stupidity. They anchored on the stock in front of them and adjusted from there, and, in his abstract's words, were "insensitive to the feedbacks from their decisions to the environment". The commonest form of that insensitivity is easy to describe. A player orders, sees no delivery yet, and orders again, forgetting what is already on its way. When everything arrives at once, the shelves overflow.

Read the pallet in aisle fourteen through both studies. The supplier's two failures were real. The response to them, six months' supply, was the bullwhip at one desk: a fear converted into an order, at the scale of the fear rather than the scale of the need. And nobody in the meeting where the director said *never again* asked what would tell the firm, later, that the danger had passed. The order was placed against a feeling, and feelings do not send cancellation notices. *The Margin*, another of the house's books, reads the list too long to finish, a pile kept because putting anything down feels dangerous; a warehouse can be the same list in steel and cardboard.

Santa Anna's canon describes the body's side of this with unusual directness. Writing of what chronic scarcity does to the people who allocate resources, it says that the body in that state accumulates "not because accumulation is strategically wise, but because the nervous system equates having-more with being-safe." And it is careful, in the same passage, not to blame anyone for it: "This is not malice. It is survival behavior wearing a business suit." The production director who said *never again* was not being careless with the firm's cash. He was protecting the plant, and the planner, from a repeat of a bad spring. The six months of housings were his relief, made physical.

The Luminous 100 reads the lean wastes the same way, as signals rather than sins. Of the worst of them it says that "overproduction reveals an organization that hasn't learned to listen to what the living system actually needs". The listening that was missing in that meeting was not to the customer. It was to the supplier, who had fixed the problem by the summer, and to the planner, who knew.



Walking the oldest shelves

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER TWO

Walking the oldest shelves

What changes this is a walk, and it is a different walk from a stock count. A count asks how many. The walk asks why.

Picture the planner in the second week of January, with the count reconciled and a list from the stock system of the forty lines that have moved least in the last year, sorted by the value tied up in each. She takes the list to the production director and the sales director and asks for an hour. They walk the warehouse together, the three of them, starting with the most expensive line and stopping at each one.

At each shelf they ask four questions, and they write the answers on the list. Who decided to hold this, and when? What were they protecting against? Is that danger still there? And if it is, who in the firm now owns it? The first answers come easily, because most of the people who placed the orders are still in the building. The second answers are where the walk earns its hour. The housings were protection against a supplier. The finished units by the loading bay were protection against one customer who, three years ago, cancelled an order and then reinstated it in a rage. A shelf of spare control boards was protection against a component shortage that ended eighteen months ago. A rack of sheet steel in an unusual gauge was protection against nothing anybody could remember, which is its own kind of answer.

The third question is the one the planner was afraid of, and it turns out to be the kindest. Asked whether the supplier of housings is still unreliable, the production director says, after a pause, that it has not missed a delivery since the spring the order was placed. Nobody tells him he should have cancelled the order. He says it himself, and then he says the thing the walk was for: he would rather hold three weeks of housings and have the planner ring him the day a delivery slips than hold six months and hear nothing. The fear has not gone. It has been given an owner and an early warning, which is what the six months of stock were trying, badly, to be.

They make three changes, in this order. The fears that are no longer true are written off in the plan: the housings will be used before any more are bought, and the steel in the unusual gauge is offered back to its mill. The fears that are still true are given a named owner and a signal, so that the protection is a phone call rather than a pallet. And the stock that genuinely protects the slowest machine in the plant, the paint line that every hood must pass through, is sized on purpose and labelled as a buffer, so that everyone can see the difference between stock that was chosen and stock that was left.

Santa Anna's writing on stagnation lists what flow looks like when it has stopped, and two items on the list describe the shelves the three of them walked: "the account that has not been reconciled, the conversation that has not been had". Most of the forty lines were conversations of the second kind. The walk is how a firm turns a hoard back into a buffer. The Luminous 100's entry on kanban gives the reason the difference matters, in a sentence about work in progress that holds as well for a warehouse: "every living organism has a natural metabolic capacity, and exceeding it doesn't create more throughput but more toxicity". A warehouse full of fears is not safer than one that holds what the work needs. It is slower, and every slow line is cash the firm cannot use.

There are predictable ways for this to go wrong. A walk taken by finance alone becomes an audit, and the people who placed the orders defend them. A walk that ends in a target for stock reduction, set before the fears are named, produces empty shelves and rushed orders within a quarter, which is the lowest-inventory group in Chen, Frank and Wu's study, paying for its virtue in ordinary returns. And a walk that blames the person who placed the order teaches every planner in the building to stop placing orders that might later look wrong, which is how stock-outs begin. Chapter 7 carries the walk as a run sheet, with the four ques-

tions, the order of the changes and the signs that each is failing, and Chapter 6 places it in the order of a first ninety days.

The gain is plain once the shelves are walked. Every line that no longer needs to be held is cash the firm gets back once, and storage, handling and the risk of obsolescence it stops paying for as long as the line stays clear. The money is the firm's own, released by its own people, and it can be counted against the stock records the firm already keeps. It is also easy to count wrongly, by measuring a year-end snapshot that was tidied for the count, which is why the honest measure of a release has a chapter of its own, the fifth, and why it reads stock as an average over the year rather than on the night of the count.

Walking the shelves in your own building

The shelf walk asks why, where a stock count asks how many, and the difference between the two is where most of its finer points lie.

Choose the lines by value and by age together. A list of the slowest-moving lines will be dominated by cheap items nobody cares about; a list of the most valuable will be dominated by stock that moves every week. Ask the stock system for the lines that have moved least in the last year, ranked by the value tied up in each, and start with the top forty. That list is where cash is sleeping and where somebody can still remember why.

Walk with the people who placed the orders. A shelf walk taken by finance alone is an audit, and audits are answered defensively. Take the planner, the person who runs production and the person who runs sales, because between them they placed or asked for almost everything on the list. Walk, rather than meet: standing beside the pallet is what makes the questions concrete.

Ask the four questions in order, with curiosity. Who decided to hold this, and when? What were they protecting against? Is that danger still there? If it is, who owns it now? The second question is the one that matters, and it must be asked in a tone that makes the answer easy. A planner who says *I was afraid we would run out again* has told the firm something more useful than a forecast. A planner who is made to feel foolish for saying it will not say it next time.

Tell a buffer from a hoard. Some stock is there on purpose and should stay: the deliberate buffer in front of the one resource every order must pass through, which in Goldratt's method protects the whole plant from waiting. Name it, size it from how long that resource could be starved and how often, and label it on the shelf as a buffer. Everything else on the list is either a decision someone can still defend, or a decision whose reason has gone.

Give every fear that is still true an owner and a signal. The commonest outcome of the walk is not that the danger has gone; it is that the danger has shrunk and nobody was told. Replace the pallet with a person and an early warning: the supplier's lead time watched by someone named, a call the day a delivery slips, a

forecast shared by the customer the stock was protecting against. Then size the stock to the warning, not to the memory of the worst spring.

Let finance decide the write-offs, separately. Some lines will turn out to be obsolete, and writing them down is an accounting decision with its own rules. Keep that decision out of the walk. A walk that ends with the people who placed the orders watching their decisions turned into losses on a report will be the last honest walk.

Look at your own ordering for the bullwhip. Before blaming a supplier or a customer for the stock, check the firm's own habits. Does it order in large lots because of a price break, and has anyone worked out what the extra days cost? Does it place larger orders after a shortage, and smaller ones after a glut? Does it order again before the last order has arrived, as Sterman's players did? Each of these makes stock out of nothing but timing.

Set reorder rules from the work, not from the last crisis. How much to hold should follow from how long it takes to get more, how much that time varies, and how much is used while waiting. Those three can be measured from records the firm already keeps. A rule set from them can be explained to the next planner. A rule set from a meeting in a bad spring cannot.

Walk again every quarter, and keep the list. Fears return, and so does stock. A short walk each quarter, against the same list, catches the shelf that has started to fill again while the person who filled it still remembers why. Keep the answers to the second question from each walk; over a year they become a list of what the firm is actually afraid of, which is worth more to its leaders than the stock report.

Chapter 6 places the shelf walk early in the first ninety days, after the money walk has shown how much of the cycle sits in stock, and Chapter 7 carries the shelf-walk sheet, the four questions and the buffer-sizing page.

Quarter past seven, next December

It is a quarter past seven on the last Saturday in December, and the warehouse is as cold as it was a year ago. The planner has the same clipboard and the same fleece, and aisles twelve to sixteen again.

In aisle fourteen, on the second level, there is a pallet of motor housings, wrapped in clear film. The label says it arrived three weeks ago. Beside it is a card in the production director's handwriting with a supplier's name, a phone number and the words *ring me the day it slips*.

The space where the grey pallet stood is a space. She scans the new one, writes the count, and moves on to aisle fifteen.

CHAPTER THREE

The Invoice Nobody Could Pay

The late payment is usually the customer's quality check, catching a fault made several desks upstream.



The Invoice Nobody Could Pay

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER THREE

Ten past nine, the third call

It is ten past nine on a Tuesday, and the credit controller is on her third call of the morning. The invoice on her screen is seventy-four days old, for a set of stainless-steel prep tables delivered to the central kitchen of a group of care homes. Its terms were thirty days. She has emailed twice and left one message. This time a person answers, in the customer's accounts-payable office, and is perfectly pleasant. *That one's on hold,* he says. *It's been on hold since it came in. The purchase-order number doesn't match, and the delivery note says eleven tables, and the invoice says twelve.* There is a pause while he scrolls. *We sent a query. Did nobody get it?*

Somebody did. It went to a shared inbox in the sales office in the second week, and the person who read it assumed the warehouse would answer, and the warehouse assumed it was a sales matter. The credit controller writes *on hold since day 9* on the pad beside her keyboard and underlines it. The tightness that has sat under her ribs since the first call of the day does not go anywhere. It turns into something nearer anger, and she is not sure at whom.

She is a composite, drawn from the way these calls are described by people who make them and in the house's own practice, and no firm is meant. Her customer was not withholding the money. For sixty-five of the seventy-four days, it had been waiting for her firm to tell it what it owed.

Ammanuel Santa Anna's writing on where flow stops lists the forms stagnation takes in commerce, and the list could be pinned above her desk: it "appears in the marketplace as debts that accumulate, as invoices that go unsent, as money that is hoarded out of fear rather than invested in life." The invoice for the prep tables was sent. In every way that mattered to the care homes, it might as well not have been.[16]

This chapter makes one claim. Much of the cash a firm waits for from its customers is not held up by the customers. It is held up by a fault the firm itself made earlier, at the order desk, in the warehouse or in the sales meeting, which the customer's accounts office then finds and stops on. The credit controller sits at the end of that chain, and is usually the last person in the building to learn where it broke.

Why customers get thirty days

It helps to ask first why one business lets another pay later at all, because the answer changes how a late payment should be read.

Economists have offered several reasons. In 1997 Mitchell Petersen and Raghuram Rajan, studying American small firms, found evidence that firms lean on credit from their suppliers when credit from banks is not available, and that suppliers lend partly because they know their customers better than a bank does: in their abstract's words, suppliers "have a comparative advantage in getting information about buyers".[17] That is the financing reason, and it is the one most people assume.

There is another, and it is more useful to a credit controller. In 1993 Michael Long, Ileen Malitz and Abraham Ravid argued that trade credit "is not primarily financial in nature, but instead reflects production and marketing decisions".[18] They proposed reading it as a way for a seller to guarantee the quality of what it sells. A customer who pays in thirty days has thirty days to discover whether the tables are the right size, whether there are twelve of them, whether they were delivered to the right kitchen. If they are not, the customer still has the money, and the seller has a reason to put it right. The theory explained, they suggested, why terms tend to be short or absent for food and consumer goods, which a buyer can judge on sight, and longer for heavy industrial equipment, which takes time to test.

Six years later Chee Ng, Janet Kiholm Smith and Richard Smith documented, across many industries, "the rich variation in interfirm credit terms", and found that the evidence supported "primarily" the theories that explain credit terms "as contractual solutions to information problems concerning product quality and buyer creditworthiness."[19] And in 2012 Leora Klapper, Luc Laeven and Raghuram Rajan, studying almost thirty thousand supplier contracts, found support for four reasons at once, including financing, price discrimination and the screening of risky buyers, and also trade credit "as a bond assuring buyers of product quality".[20]

None of these studies is about disputed invoices directly, and it would be overreaching to say they prove anything about the care homes. What they establish is the frame. Between businesses, the payment period is in part a period of inspection, and a customer that stops an invoice because something does not match is using that period for what it is for. The care homes' accounts office was doing its job. The question is why it had something to find.

The chain behind the invoice

Follow the invoice for the prep tables backwards, the way the credit controller eventually did, and the faults turn out to be ordinary.

The purchase-order number did not match because the order was taken by phone, from the kitchen manager, who did not have a number yet. The order desk entered it with a note to add the number later, and later did not come, because nothing in the system asked for it. The delivery note said eleven tables because one was damaged in the warehouse, set aside and sent the following week on a second delivery, which was never invoiced separately; the first invoice, raised from the order rather than the delivery, said twelve. And the customer's query went to a shared inbox that three people read and nobody owned.

Each fault was made by a careful person doing something reasonable. Each was invisible from the desk where it was made, because it caused no trouble there. And each became trouble only at the end of the chain, in the customer's accounts office, where invoices are matched against orders and deliveries before they are paid. Accounts-payable departments in larger organisations commonly match each invoice against the purchase order and the goods received before paying it, and an invoice that fails the match is set aside. Such a customer is not being difficult. It is being exact, in exactly the way its own auditors expect.

This is why the measure most firms use for their receivables can mislead them. Days sales outstanding, the average number of days between an invoice and its payment, treats every day as the customer's. On the prep-table invoice, nine days were the customer's normal processing, and sixty-five were the firm's own silence. The measure put all seventy-four in the column marked *customers*.

Santa Anna's canon on the flow of value through an organisation has a sentence for what each of those handoffs was. "Every handoff between departments is simultaneously a material exchange and a relational

event." The invoice crossed the order desk, the warehouse, the billing team and the sales inbox. At each crossing it carried a fact or failed to, and at each crossing somebody assumed that somebody else held the part they did not. The house's first business book walked an order that waited six days for fifty minutes of work, much of it spent on a question that travelled by email. The invoice is the same order's money, waiting on the same kind of question, sent the other way.



A quarter that ends on a Thursday

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER THREE

A quarter that ends on a Thursday

There is a second source of long receivables, and it sits in the sales office rather than the warehouse.

In 1998 Paul Oyer published a study of what happens to American manufacturers' sales around the end of their fiscal years.[21] Salespeople and executives, he noted, are usually paid in ways that rise sharply when a revenue threshold is crossed, which gives them reason "to manipulate prices, influence the timing of customer purchases, and vary effort over their firms' fiscal years." He found exactly the pattern that reasoning predicts: sales were higher at the end of the fiscal year, and lower at the beginning, than in the middle. In 2014 Ian Larkin looked inside one large enterprise-software vendor and found salespeople "adept at gaming the timing of deal closure", agreeing significantly lower prices in quarters when closing a deal paid them more, at a cost he put at six to eight per cent of the vendor's revenue.[22]

Neither study measured payment terms, and the honest thing is to say so. But both describe the same room, the sales office in the last week of a period, in which something the firm values over the long run is traded for a signature this week. Price is one such thing. Terms are another, and anyone who has worked in that room has seen sixty days offered where thirty would have done, or an installation invoice deferred until the customer is satisfied, so that an order lands before the quarter closes. The receivable that results is long by design, and the credit controller who chases it eight weeks later is chasing a promise she did not make.

The canon's book on governance has a distinction that fits this exactly. "Default erodes trust," it says. "Renegotiation, done honestly and in good faith, can actually build it." An invoice that goes out with terms the customer was never told about, or that the salesperson agreed and nobody wrote down, is a small default waiting to happen. The customer pays when it believes it agreed to pay, the firm records it as late, and both sides leave the exchange trusting each other a little less. The same promise runs the other way too, from a firm to the people it buys from, and a payment date moved from thirty days to ninety, the subject of Chapter 4, is the same small default at the scale of a supplier's payroll.

What the calls cost

The cost of all this is easy to underrate, because none of it appears on one line.

The first cost is the cash itself: every day a disputed invoice sits unpaid is a day the firm finances its customer's purchase, as Chapter 1 worked out on a napkin. The second is the work. The credit controller's morning, three calls and a page of notes, is spent finding out what happened inside her own firm. The billing team will reissue the invoice. Someone in sales will apologise. The warehouse will find the damaged table's paperwork. That is perhaps two hours of four people's time to collect money that would have arrived on day thirty if one number had been entered on day one.

The third cost is the relationship, and it is the one leaders feel last. Santa Anna's book on living ventures describes customers as "co-creators" of a business, and lists how they shape it: "through their responses, their adaptations, their creative misuses, their complaints, their loyalty, and their departure." An accounts office that has queried three invoices from the same supplier in a quarter has formed a view of that supplier, and it is not the view the sales director would like. The care homes' kitchen manager loves the tables. Her finance department thinks the firm cannot count.

And the fourth cost is to the people at the end of the chain. The canon's book on organisational soul work describes what organisations spend on not naming what is wrong. "Not naming what is real requires continuous effort." Of the energy that effort consumes, it says: "It is the hidden tax of organizational silence". A credit controller who chases faults she did not make, in a firm that measures her on overdue debt, pays that tax every morning. Her anger on the third call was not unreasonable. It was information, arriving in the only part of the firm that could see the whole chain and had no authority over any of it.

The Margin, another of the house's books, reads the hours a team spends that nobody budgets. The chasing of disputed invoices is a clean example: work that exists only because an earlier piece of work was incomplete, done by someone measured on the result and not on the cause.



Walking a dispute backwards

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER THREE

Walking a dispute backwards

What changes this is not a firmer tone on the phone. It is a walk, taken by the credit controller with the people upstream of her, and it turns her list of overdue invoices into a list of faults with owners.

Picture her at the end of that month. She has kept, for four weeks, a simple record of every invoice that was paid late or queried, and for each one she has written the customer's stated reason, in the customer's words. There are thirty-one. She takes them to the finance director and asks for one hour with the order desk supervisor, the warehouse manager and the sales director, and she brings the list on paper.

They go through the thirty-one together and do one thing with each: they find the first desk at which the invoice could have been put right, and write that desk's name beside it. Not the desk where it was noticed, which is always hers, but the first desk where a fact was missing or wrong. Purchase-order numbers missing: the order desk, eleven times. Quantities that did not match the delivery: the warehouse, six. Prices that did not match the quotation: sales, five, all from orders taken in the last week of the quarter. Invoices sent to the wrong address at the customer: the master data, four. Genuine disputes about the work: three. Customers who simply paid late: two.

The table is short and it is startling, and the finance director reads it twice. Of thirty-one late payments, two were customers choosing to keep their money. Twenty-six began inside the firm, at desks where nobody had ever been told what the customer's accounts office needs to see.

It is worth being fair to the two, because they are real and every firm has them. Some customers do pay late on purpose, because they can, or because they are short of cash themselves, and a credit controller who treated every late payment as the firm's own fault would be naive in a different direction. The walk does not excuse them. It separates them. Once the twenty-six are seen for what they are, the two stand out clearly, and they can be handled as what they are: a conversation about terms, held by someone with the authority to have it, instead of a monthly chase that the credit controller can never win because she has nothing to offer and nothing to withhold. And the three genuine disputes about the work are worth their own conversation too, with the people who did the work, because a customer who will not pay for an installation it thinks was badly done is telling the firm something its own inspection missed.

The record itself is the part most firms do not have. Most credit-control systems hold the date an invoice was raised and the date it was paid, and somewhere a free-text field with notes from the calls. Very few hold the customer's reason in a form that can be counted, and fewer still hold the first desk where the fault began. Four weeks of a pad beside a keyboard was enough, here, to produce a table nobody in the building had seen before.

Then the changes, in the order the walk suggests. First, the order desk will not accept an order without the customer's purchase-order number, and when a customer has none yet the order waits in a visible queue rather than going through with a note. Second, invoices will be raised from the delivery, not the order, so that what is billed is what arrived. Third, a query from a customer's accounts office will go to a named person within the day, and the shared inbox will be closed. And fourth, the sales director agrees that terms other than the standard ones will be written on the order, so that the customer, the billing team and the credit controller all read the same promise.

The canon's book on governance puts the principle under the fourth change in a line about commitments: "Commitments are specific and measurable." A payment term is a commitment by both sides. It is kept more often when it is written down where both sides can see it.

There are predictable ways for this to go wrong. A walk that turns into a hunt for the person who made each mistake will empty the list of honest answers by the second month. A rule about purchase-order numbers that nobody explains will be met with invented numbers. And a firm that measures the credit controller only on overdue debt will find that she has every reason to chase harder and no reason to keep the record that made the walk possible. Chapter 7 carries the dispute walk as a run sheet, with the record she kept, the sorting rule and the four changes, and Chapter 6 places it in the order of a first ninety days.

Santa Anna's *Ecstatic Economics* has a line about the relationship between ideas and their practice that might stand over the whole exercise. A good theory, it says, needs "the poem and the muscle, the vision and the invoice." The vision of a firm with a short cash cycle is easy to state. The invoice, correct on day one, is where it is kept.

The gain is again plain once the faults are seen. Days taken out of receivables return cash once and stop costing money to finance for as long as they stay out; the hours spent chasing are given back to the people who spent them; the customer's accounts office starts paying on day thirty because there is nothing to stop on. All of it can be counted from the firm's own ledger, and all of it should be counted honestly, with the measure agreed before the first change, as Chapter 5 describes, because receivables are among the easiest numbers in a business to improve on paper and not in fact.

Keeping the dispute record

The dispute walk depends on a record most firms do not keep, and the finer points are mostly about keeping it well.

Record every late or queried invoice for four weeks. Not only the overdue ones: every invoice a customer queries, puts on hold or pays later than its terms. For each, write the date, the customer, the amount, the age, and the reason the customer gave, in the customer's own words. *PO number doesn't match* is more useful than *admin issue*. Four weeks is usually enough to see the pattern; in a firm with few invoices, take two months.

Find the first desk, not the last. For each invoice, ask where the fault could first have been put right. The credit controller is always the last desk, because she is the one who finds out. The useful answer is the earliest point at which a fact was missing or wrong: the order taken without a number, the delivery that did not match the order, the price agreed in a meeting and not written down, the customer's address held wrong in the system. Use a short list of first desks, the same every month, so that the record can be counted.

Separate the customers who choose to pay late. Some do, and every firm has a few. Counting them separately does two things: it stops the walk from being naive, and it shows how few they usually are. Those few need a conversation about terms, held by someone with authority to have it, not a monthly chase.

Split days sales outstanding in two. The usual measure treats every day between invoice and payment as the customer's. Once the record exists, divide it: days the invoice spent with the customer in ordinary processing, and days it spent waiting on the firm to correct something. The second number is the one the firm controls, and it is often the larger.

Take the record to the people upstream, together. The order desk supervisor, the warehouse manager, the sales director and whoever owns the customer records, in one room, with the list on paper. Read it as a description of the system. The faults were made by careful people at desks where they caused no trouble; the point of the meeting is to show each desk what the customer's accounts office needs to see, which most of them have never been told.

Make the changes in order of cost. Usually the cheapest is a rule at the first contact: no order accepted without the customer's purchase-order number, and orders without one held in a visible queue rather than pushed through with a note. Then invoice from the delivery, not from the order, so that what is billed is what arrived. Then give customer queries a named owner, answered within a working day, and close any shared inbox that three people read and nobody owns. Then write non-standard terms on the order, where the billing team and the credit controller can read the same promise the customer heard.

Measure the share of invoices that are right the first time. It is the companion to days outstanding and the better measure of the work upstream: of the invoices raised this month, how many were paid without a query? It rises before days outstanding falls, and it tells the order desk and the warehouse that their changes are working, which the credit controller's overdue list never will.

Do not measure the credit controller on overdue debt alone. If her only measure is the debt that is late, she has every reason to chase harder and no reason to keep the record that made the walk possible. Add the share of disputes traced to a first desk, and the share answered within the day. She is the only person in the building who can see the whole chain; measure her on helping it see itself.

Keep the record going, lightly. After the first walk, the record can shrink to a column in the credit-control system: first desk, chosen from the short list. Read it monthly with the same people. When a first desk stops appearing, say so to the people at that desk, by name, in the meeting. When a new one appears, walk it.

Chapter 6 places the dispute record in the first ninety days, beside the shelf walk, and Chapter 7 carries the record sheet, the list of first desks and the sorting rule.

Ten past nine, a season later

It is ten past nine on a Tuesday in spring, and the credit controller has made one call this morning. It was to the care homes' accounts-payable office, and the same pleasant man answered it. She had rung to say that a credit note for a returned table was on its way, before he had to ask.

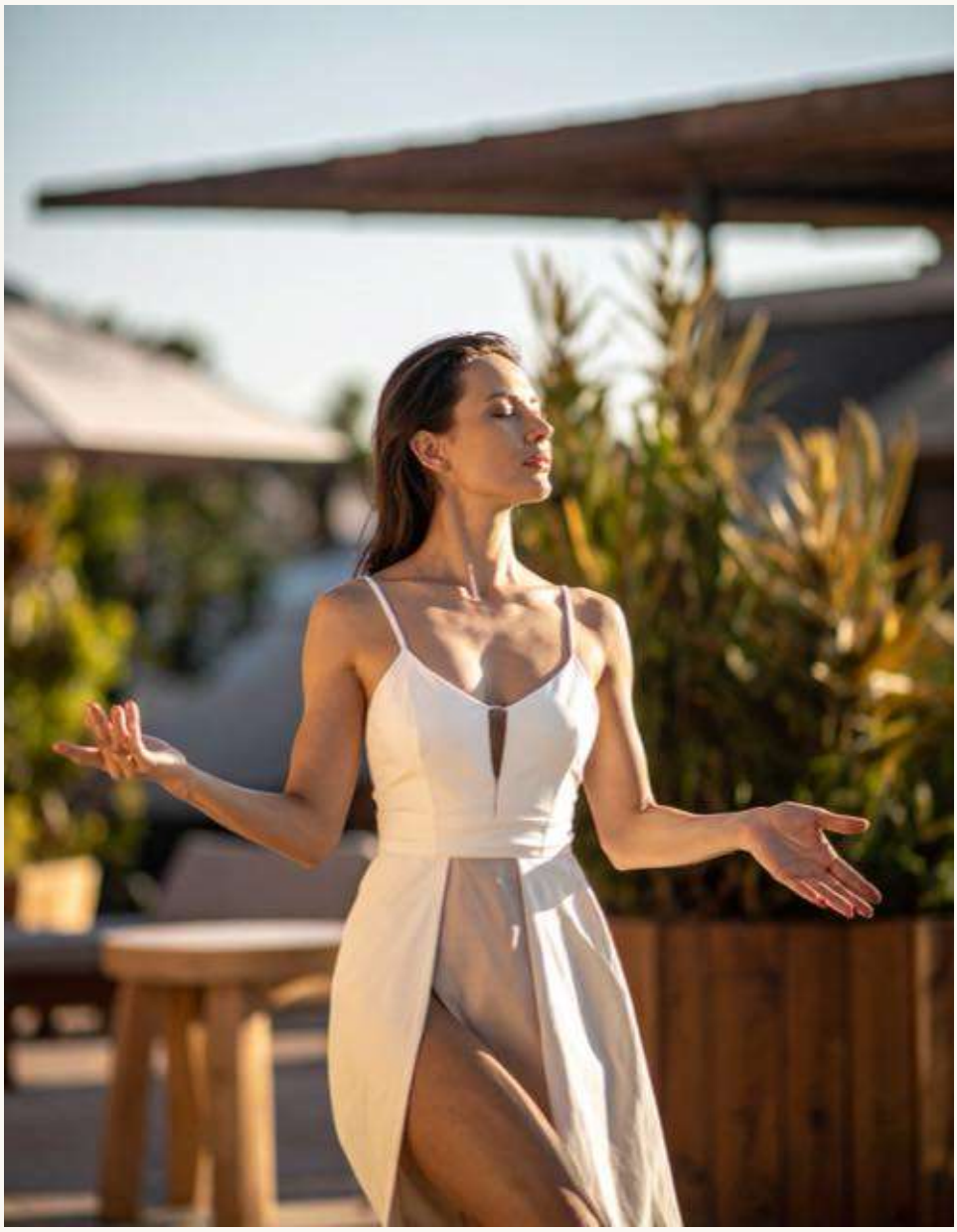
The list on the wall by her desk has two columns now: late payments, and the first desk where each could have been put right. This month the second column is mostly empty.

He thanked her for the call. She wrote nothing on the pad.

CHAPTER FOUR

Ninety Days Is Somebody's Payroll

A day added to payables is a day someone else finances, usually the firm least able to.



Ninety Days Is Somebody's Payroll

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER FOUR

Six in the morning, the kitchen table

It is six in the morning on a Monday in February, and the owner of a firm that makes printed cartons is at her kitchen table with a mug of tea and a letter she has now read four times. It arrived on Friday. Her largest customer, a food company that takes about a third of everything her factory makes, is writing to all its suppliers. From the first of April its standard payment terms will move from thirty days to ninety. Suppliers who would prefer to be paid sooner may join an early-payment programme run with a bank, at a dis-

count that will be set by the bank. The letter thanks her for her partnership. It is signed by someone whose name she does not know.

She has twenty-three people on her payroll, and it falls due every four weeks whether or not anybody has paid her. She does the arithmetic on the back of the envelope. Sixty more days of a third of her sales is a sum her bank would lend her, probably, at a price, against her house. The discount on the programme would be cheaper this year and might not be next. Her shoulders have been up since Friday, and she has not yet told her husband the figure.

She is a composite, drawn from the way these letters are described in the research below and in the house's own practice, and no firm is meant. In the food company's head office, the same morning, a treasury manager will report that the group's payables have lengthened and its cash conversion cycle has improved, and both statements will be true.

Ammanuel Santa Anna's book on doing business as a living system tells the story of a florist whose most reliable customer had squeezed her in the same way, and its list of what the customer did ends with one plain clause: "They paid on 90-day terms, creating cash flow strain." The book's verdict on such arrangements is direct. "In business, parasitic relationships are more common than most founders want to admit."[23]

This chapter makes one claim. When a firm improves its cash cycle by paying its suppliers later, it has not released any cash from the supply chain it depends on. It has moved the cash to the firm least able to hold it, and the cost comes back, later and less visibly, in price, reliability and the health of the suppliers it needs. The cash worth releasing is in a firm's own building. The way to treat a supplier's money is as a promise to be kept on the day it falls due.

Who gets the long terms

There is good evidence about who lends to whom in trade, and it runs in a direction that surprises people meeting it for the first time.

In 2012 Leora Klapper, Luc Laeven and Raghuram Rajan studied a dataset of almost thirty thousand supplier contracts for fifty-six large buyers and more than twenty-four thousand suppliers in Europe and North America.[24] Their abstract states the central finding without decoration: "the largest and most creditworthy buyers receive contracts with the longest maturities, as measured by net days, from smaller, investment grade suppliers." The firms with the easiest access to cheap money are, in this record, the ones borrowing most from the firms around them, and the lenders are often smaller than the borrowers.

What that borrowing costs the lender was measured three years later. Justin Murfin and Ken Njoroge used changes in large retailers' cash-management policies as a natural experiment, tracing what happened to the vendors when the retailers began to pay more slowly.[25] Slower payment by important buyers, they found,

was linked to cutbacks in the suppliers' own spending on their businesses. Their abstract gives one example in a single sentence: "a one month delay in payment by Wal-Mart is associated with 1.2% reduction in capital expenditures for the representative Wal-Mart supplier." The effects were sharpest when bank credit was tight and for suppliers that looked credit-constrained. The suppliers did not, for the most part, borrow their way round the delay. They invested less.

A third study shows what happens when the terms are shortened instead. In 2016 Jean-Noël Barrot examined a French reform that restricted how long the customers of trucking firms could take to pay them.[26] Comparing trucking firms with similar firms the reform did not touch, he found that the trucking firms' probability of default fell by a quarter after the restriction, that the effect lasted, that it was concentrated among firms short of cash, and that it was not offset by lower profits. The restriction was also followed by more small trucking firms entering the market. His abstract opens with the conclusion: "Long payment terms are a strong impediment to the entry and survival of liquidity-constrained firms."

These are careful studies, each with the limits of its setting: one dataset of large buyers' contracts, one set of American retailers and their suppliers, one industry in one country under one law. Read together, they make a point that no single one could make alone. Long terms imposed by large buyers on small suppliers are not a neutral accounting choice. They are a loan, made by the weaker party to the stronger, and the weaker party pays for it in investment it does not make and, sometimes, in failure.

The cycle of the whole chain

The finance literature has a name for the view this makes necessary, and it is worth knowing because it turns a moral point into an arithmetic one.

In 2010 Erik Hofmann and Herbert Kotzab argued that a firm's cash conversion cycle should be read as one link in a chain.[27] Research had shown, their abstract notes, "how individual industries and powerful companies were able to enhance their cash-to-cash cycles at both their supplier's and customer's expense." From the point of view of the chain as a whole, they argued, this "lowers the overall financial wealth of the supply chain", because the cash does not disappear when a buyer pays later; it is simply financed by somebody else, usually at a higher cost. The supplier with a bank overdraft pays more to hold sixty days of the buyer's purchases than the buyer would have paid to hold them itself, and each of those days is worth, to her, a day's cost of sales, the sum Chapter 1 worked on a napkin. Their proposal was the reverse of the letter on the kitchen table: lengthen the cycles of the firms with the cheapest money, and shorten the cycles of the firms with the dearest. A year earlier Wesley Randall and Theodore Farris had made a similar case, with worked scenarios, for managing the cash-to-cash cycle collaboratively across trading partners.[28]

Hofmann and Kotzab are candid about why this rarely happens. "An unequal distribution of power, however, between supply chain members can be the main hindrance for developing a collaborative working

capital management solution." The buyer can lengthen its terms because it can. The supplier signs because a third of her sales is a third of her sales.

The house's Luminous 100, its reading of the frameworks every consultancy sells, describes the purpose of Porter's analysis of supplier and buyer power in exactly the terms Hofmann and Kotzab would recognise. Its upgrade does not merely map where power lies; it looks for "where collaboration, shared consciousness, and mutual flourishing can convert zero-sum rivalry into positive-sum value creation across the entire industry web." A letter moving thirty days to ninety is zero-sum by construction. It improves one number by the amount it worsens another.

Santa Anna's book on living ventures names the habit of mind that writes such letters, and it is not cruelty. "And yet, most entrepreneurship education treats partnerships as transactions. Negotiate the best terms. Protect your interests. Minimize dependency. Extract maximum value." The treasury manager in the food company was doing what she was trained and measured to do. Her cash conversion cycle will improve in the second quarter, and nobody in her building will see what it costs.



What the programme lends

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER FOUR

What the programme lends

The early-payment programme in the letter has a name in the trade, supply chain finance, and sometimes reverse factoring. Its mechanics, at their simplest, are these. The buyer approves the supplier's invoice, a step at which, as Chapter 3 found from the seller's side, days are easily lost. A bank or other finance provider offers to pay the supplier early, less a discount set by the provider, usually priced on the buyer's credit rather than the supplier's. The buyer then pays the provider on the long date. The supplier gets her cash sooner and pays for it; the buyer keeps its long terms; the provider earns the discount.

Arranged honestly, this can genuinely lower the cost of the chain, because the buyer's credit is cheaper than the supplier's, which is Hofmann and Kotzab's point made into a product. Arranged as an accompaniment to a terms extension, it turns the buyer's improved cycle into a fee paid by the supplier. And there is a further difficulty, which the public record of the last few years has made impossible to ignore. For a long time a buyer using such a programme was not specifically required to disclose it, so that what was in substance a form of borrowing by the buyer could sit in its accounts among its ordinary trade payables.

The collapse of Greensill Capital made that difficulty visible. Greensill described its business as supply chain finance; administrators from Grant Thornton were appointed to Greensill Capital (UK) Limited on 8 March 2021, according to the notice in the *London Gazette*.[29] In the same month Credit Suisse closed four funds at short notice that had invested in assets connected with Greensill; the Swiss financial regulator FINMA, concluding its proceedings in February 2023, reported that "clients had invested a total of around ten billion US dollars" in them at the time of closure, and found that the bank had "seriously breached its supervisory duty to adequately identify, limit and monitor risks".[30] The House of Commons Treasury Committee, reporting on lessons from the collapse in July 2021, described supply chain finance as "a form of short-term finance where future payment obligations are transferred to a finance provider", and did not conclude that it needed to be brought within financial regulation.[31]

Greensill's failure was a failure of one financier and the institutions around it, and it should not be read as a judgment on every early-payment programme, most of which run without incident. Its relevance here is narrower. The standard-setters moved afterwards. In September 2022 the American Financial Accounting Standards Board issued an update requiring buyers that use supplier finance programmes to disclose their key terms and the amounts outstanding.[32] In May 2023 the International Accounting Standards Board amended its standards so that companies disclose the effects of supplier finance arrangements on their liabilities, cash flows and exposure to liquidity risk.[33] A shorter cash cycle that had been achieved by financing, rather than by anything changing in the business, is now meant to be visible as such.

That is the whole lesson for a leader looking at her own cycle. A day removed from stock is a day the firm no longer needs to finance. A day added to payables is a day someone else finances for it, and a day financed through a programme is a day the firm is still borrowing, in a different column. Telling those days apart, month by month, is the work of the ledger in Chapter 5.

The keystone at the edge

Santa Anna's canon has a book about keystones, the people and parts of a system that carry far more than their share and on which the rest depends. Its account of what goes wrong with them is written about people inside an organisation, and it fits the carton maker exactly. The destructive dynamic, it says, is "the tendency of systems to consume their keystones, treating disproportionate contribution as a natural resource rather than a gift that requires return."

A small supplier on whom a large firm depends is a keystone at the edge of the building. She carries the large firm's packaging, its seasonal peaks, its last-minute changes of artwork, and now sixty more days of its working capital. The large firm treats all of this as a natural resource, available at the price on the contract. The first sign that it is not comes later, and it rarely arrives as a letter. Her firm stops investing in the new printing line that would have cut the food company's lead time, which is Murfin and Njoroge's finding at the scale of one factory. Her best production manager leaves for a firm that pays on time. Her quotations for next year rise, by a little more than the cost of the discount, because she has priced the risk. And in a bad year she becomes the supplier who fails, and the food company's procurement team spends a quarter finding another, at a higher price, with a learning curve the food company pays for.

Santa Anna's book on living ventures offers a test for any such relationship that the treasury manager could apply before sending the letter: "The litmus test: Would both partners miss the other deeply if the relationship ended? Is the benefit truly reciprocal?" The carton maker would miss the food company, desperately. Whether the food company would miss her depends on whether anyone in it knows what she does beyond the price on the invoice.



The conversation before the letter

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER FOUR

The conversation before the letter

What changes this begins on the buyer's side, and it is a conversation rather than a policy.

Picture the treasury manager a year later, at the same food company, asked again to improve the group's cash cycle. This time she does three things before anyone writes to a supplier. She takes the cycle apart into its three numbers and asks her colleagues in operations and sales for the walks the earlier chapters of this book describe: the oldest shelves in the group's own warehouses, and the disputed invoices on its own receivables, because the stock nobody has asked about (Chapter 2) and the invoices (Chapter 3) that wait on

the group's own errors are cash released from its own building. She separates, in her report, the days that come from changes in the business from the days that come from changes in terms or financing, and labels each. And she asks procurement for a list of the suppliers who depend on the group most, by the share of their sales the group represents, and sits down with the first ten.

The conversations are not negotiations, and she says so at the start. She asks each supplier three things. What would longer terms cost you, and how would you pay for them? What do we do that makes you hold more stock or more cash than you need? And what could we do, short of paying you sooner, that would let both of us hold less? The answers to the second question are the ones she did not expect. The carton maker holds six weeks of printed stock for the food company because its forecasts change late and its artwork changes later. Another supplier waits an average of nineteen days for invoices to be approved, which is, in practice, nineteen days of terms the contract never agreed. A third has never been told the date on which the group pays, and so plans for the worst.

The changes that follow are small, and most of them cost the food company nothing. Forecasts are shared with the ten suppliers monthly, with the date of the next artwork change. Invoices are approved within a fixed number of days of receipt, and the payment date, once set, is kept. The terms stay where they were, and the early-payment programme is offered as an option for suppliers who choose it, priced and explained in writing, rather than as the price of keeping the old terms. The treasury manager's cycle improves by less than the letter would have improved it. It improves from the group's own stock and receivables, which means it stays improved, and it shows in her report as what it is.

The canon's book on governance says of commitments something that holds exactly for a payment date: "Commitments are calibrated to capacity." A buyer that sets terms its own approval process cannot meet, and then pays late, has made a promise it could not keep. A buyer that sets terms it can keep, and keeps them, has given its suppliers the one thing that lets them hold less cash on its behalf: a date they can trust.

There are predictable ways for this to go wrong. A conversation held after the letter is sent is a renegotiation under duress, and every supplier knows it. A programme offered as a favour, with its pricing left vague, will be read as the letter in another form. And a treasury team measured only on its days payable will, under pressure, return to the lever it controls. Chapter 7 carries the supplier conversation as a run sheet, with the three questions, the record to keep and the order of the changes, and Chapter 6 places it in the order of a first ninety days.

None of this is charity, and it is worth being exact about why. The firm that keeps its payment dates and helps its suppliers hold less gets better prices over time, earlier warning of trouble and first call on a constrained supplier's capacity in a bad season. Those gains are real, and they are harder to measure than a day of payables, which is why a measure built only on days will always favour the letter. Santa Anna's writing on abundance puts the difference in six words, about rivers and swamps: "A river flows. A swamp stag-

nates." Cash pushed into a supplier's overdraft has not started to flow. It has stopped somewhere the buyer cannot see it.

Holding the supplier conversation

The supplier conversation is the practice in this book most easily done badly, because the firm holding it has the power, and the finer points are mostly about not using it.

Hold it before any change to terms, never after. A conversation held after the letter is a negotiation under duress, and every supplier will treat it as one. If terms have already been changed, say so plainly at the start, and say what the firm is prepared to reconsider.

Choose the suppliers by dependence, not by spend. A firm's largest suppliers by value are often large firms that can look after themselves. The suppliers most affected by its terms are the ones for whom it is a large customer. Ask procurement for each supplier's share of sales that the firm represents, where it is known or can be estimated, and begin with the ten most dependent.

Say what the conversation is for. It is not a renegotiation. It is to find out what the firm does that makes the supplier hold more stock or more cash than it needs, and what could be done about it. Say so at the start, and hold to it; a buyer who opens with partnership and closes with a discount request has taught the supplier how to answer next time.

Ask the three questions, and write down the answers. What would longer terms cost you, and how would you pay for them? What do we do that makes you hold more than you need? What could we do, short of paying you sooner, that would let both of us hold less? The second question is the one that finds the gain: late forecasts, late changes, invoices approved slowly, a payment date nobody has published.

Measure your own approval lag. Before any conversation, find out how many days the firm takes, on average, between receiving a supplier's invoice and approving it for payment. That number is terms the contract never agreed. If it is long, the first change belongs to the firm's own accounts office, not to the supplier.

Publish the payment date, and keep it. Suppliers plan for the worst when they do not know when they will be paid. A fixed, published payment day, kept, is worth more to a small supplier than a few days off the terms, because it can be planned around. A payment run held for a reporting date breaks that promise, and Chapter 5 explains why it should not count.

If a finance programme is offered, offer it as an option, in writing. An early-payment programme can genuinely lower the cost of the chain, because the buyer's credit is usually cheaper than the supplier's. It should be voluntary, its pricing should be explained in writing and in full, and it should not be the price of keeping existing terms. Inside the firm, the days it produces belong in the financing column of the ledger in

Chapter 5, and the amounts outstanding under it should be visible in the accounts, as the newer disclosure standards intend.

Apply the test of the third party. Before any change to supplier terms reaches a decision, write one line naming what the supplier gains from it. If the honest line is *nothing*, the change moves cost rather than removing it, and the gain it shows in the firm's cycle is a loan from the supplier. That line is the same test the house applies to its own work: a gain that exists only because a cost was exported to someone else is not counted as a gain.

Keep a short record of each conversation. The supplier, the date, the three answers, what the firm agreed to change and by when. Read it again in three months, with the supplier. A conversation that produced changes the buyer did not make is worse than no conversation, because the supplier now knows the firm will listen and not act.

Expect the benefits to arrive slowly, and somewhere else. A supplier that holds less on the firm's behalf, and trusts its payment date, quotes more steadily, warns earlier and gives the firm first call on capacity in a bad season. None of this shows in days payable. Note each instance when it happens, so that the case for the conversation does not rest on memory when the next request for a shorter cycle arrives.

Chapter 6 places the supplier conversation after the firm has worked on its own stock and receivables, so that it is not tempted to start with the lever it controls, and Chapter 7 carries the conversation sheet, the dependence list and the third-party line.

Six in the morning, a year later

It is six in the morning on a Monday in February, and the carton maker is at her kitchen table with a mug of tea. There is no letter. There is a forecast, which arrived by email on Friday from the food company's planning team, with the date of the next artwork change in the subject line.

She reads it once. She will print two weeks of cartons, not six.

The payroll falls due on Thursday. She has not thought about it since Christmas.

CHAPTER FIVE

The Payment Run Held Until Monday

Four ways a day of cash can move, and why only one of them is a gain.



The Payment Run Held Until Monday

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER FIVE

Ten to five, the last Friday of the quarter

It is ten to five on the last Friday of the quarter, and the payments clerk has the supplier run on her screen, approved and ready. Two hundred and twelve invoices, every one of them due, every one of them checked. At four o'clock the group's finance office rang her manager, and her manager has just come over to her desk, a little embarrassed, to say that the run should be held until Monday. Nothing is wrong with it. The group would simply like the quarter's closing cash balance to be higher, and three days will do that. The suppliers will be paid on Monday morning. Most of them will not notice.

She holds the run. She knows several of the suppliers will notice, because she is the person they ring, and she knows which ones have payrolls on Monday. Her stomach is tight in the way it gets when she has been asked to do something that is allowed and not right. She logs off at half past five.

She is a composite, drawn from the way quarter-ends are described by people who work through them and in the house's own practice, and no firm is meant. On Monday the group's report will show a stronger cash position and a longer payables period. On Tuesday both will be what they were on Thursday.

Ammanuel Santa Anna's book on organisational silence lists the ways an organisation spends energy keeping up appearances it knows to be incomplete, and the first item on the list describes the closing balance exactly: "Crafting messages that are technically accurate but strategically misleading".[34]

This chapter makes one claim, and it closes the argument of the four before it. A day of cash released from a business is worth sharing only if it can be told apart from a day moved in time, moved to someone else, or borrowed; and that can be done only by measuring the cycle as an average over time, by sorting every day by where it came from, and by setting beside it the measures that would show if it had been bought at someone else's expense.

Numbers that can be made

The managing director in Chapter 1 learned to read the cash conversion cycle as a map of who holds the money. Its weakness as a map is that it is usually drawn on one night: the last day of a quarter or a year, when the balances are taken. Anything that changes the balances on that night changes the map, whether or not it changes the business.

The accounting literature has studied this for a long time, under the name of earnings management, and one strand of it is directly about working capital. In 2006 Sugata Roychowdhury published evidence that managers of American firms take real operating decisions, not only accounting ones, in order to avoid reporting an annual loss.[35] The decisions he studied included price discounts to bring sales forward, overproduction to spread fixed costs over more units and so lower the reported cost of each, and cuts to discretionary spending. Two of those three act directly on the cash cycle. Discounted, accelerated sales arrive with receivables attached, often on easier terms. Overproduction is stock. A firm can, in other words, make its profit look better this year by making its working capital worse, and the reverse is possible too.

The studies of fiscal year-ends point the same way. Paul Oyer found in 1998 that American manufacturers' sales were higher at the end of the fiscal year and lower at the start, a pattern consistent with salespeople and executives paid on annual thresholds pulling customers' purchases forward.[36] The receivables that a year-end push creates, agreed in a sales office in the last week of a period, as Chapter 3 found, are on the balance sheet on the one night the cycle is measured. The stock that the push draws down is off it. Neither tells a reader what an ordinary week looks like.

A word on the strength of this evidence. These are studies of large listed firms, using public accounts, and they find patterns consistent with deliberate timing; they cannot see into any one firm's intentions, and most firms in their samples are doing nothing of the kind. The point for a leader is not that her colleagues are manipulating the numbers. It is that the numbers can be moved by timing alone, honestly and with permission, as the payments clerk's run was, and that a measure which cannot tell timing from improvement will reward timing.

Santa Anna's canon on value streams has a sentence for the confusion that results, in a passage about what gets measured in an organisation and why: "Measurability is a property of our instruments, not a property of reality." The cash conversion cycle on the last night of a quarter is a property of the instrument.

Four ways a day can move

It helps to be exact about the different things that can shorten a cash cycle, because only one of them is the gain this book has been looking for.

The first is a change in the business. Fewer hoods sit on the floor because the planner and the sales director walked the oldest shelves in Chapter 2 and stopped holding stock against fears that had passed. Invoices are paid on day thirty because the order desk now takes the purchase-order number on the first call. These days are released from the firm's own building, by its own people, and they stay released for as long as the behaviour holds. They are the gain.

The second is a change in terms. Customers are moved from sixty days to thirty, or suppliers from thirty to ninety. The days are real, in the sense that cash really arrives sooner or leaves later, but they are taken from someone else's building. Chapter 4 read the research on what the second kind costs a supplier, and it is not small. A shortened customer term may be entirely fair, if the old term was a gift nobody had decided to give. A lengthened supplier term is, in most of the cases the research describes, a loan from the weaker party.

The third is financing. A firm sells its receivables to a factor, or its suppliers are paid early by a bank through a programme while the firm pays the bank later. The cycle shortens on paper. The firm is still financing its trade; it has moved the cost to a different line. This is the kind of day that the accounting standard-setters moved to make visible, in America in 2022 and internationally in 2023, by requiring buyers to disclose their supplier finance programmes, so that a reader can see what part of a firm's payables is, in substance, money it has borrowed.[37]

The fourth is timing. The payment run is held until Monday. The stock count is taken after a large shipment and before the next delivery. The days exist for one night. They are not a gain of any kind, and they cost the suppliers whose payment slipped, and the trust of the clerk who held it.

A measure worth signing sorts every day into one of these four, and counts only the first as found. The second is counted separately and examined, because it may be fair or it may be extraction. The third is shown, and not counted. The fourth is removed. None of this needs software. It needs someone to ask, of each change in the number, where the day came from.



How short is too short

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER FIVE

How short is too short

There is a second discipline, and it guards against the opposite error: the firm that believes every day removed is a day gained, and keeps removing them.

The research read in the earlier chapters says plainly that this is not so. Hong Chen, Murray Frank and Owen Wu, studying American manufacturers from 1981 to 2000, found that firms with abnormally high inventories had poor long-term stock returns, and firms with slightly lower than average inventories did well, but "firms with the lowest inventories have only ordinary returns."[38] Nihat Aktas, Ettore Croci and Dimitris Petmezas, studying American firms from 1982 to 2011, found evidence of an optimal level of working capital, and that firms moving towards it from either direction tended to improve their performance.[39] Both are associations across many firms, and neither sets a target for any one. Together they say that a cycle can be too short, and that the cost of too short is paid somewhere the cycle does not look: in orders lost for want of stock, in customers who move to a supplier that offers terms, in a factory that stops while a part is rushed in.

So the measure needs companions. Beside the days of stock, the share of orders shipped complete and on time, so that a fall in stock that is really a fall in service shows at once. Beside the days of receivables, the number of customer complaints and lost accounts, so that terms tightened past what customers will bear are visible before the sales figures show it. Beside the days of payables, the share of supplier invoices paid on the agreed date, and the number of suppliers asking for early payment, so that a lengthening that is really a delay is named as one. The house's first business book argued that a measure that pays people should almost never travel alone, because a lonely metric can always be accused of gaming. A working-capital figure is the loneliest metric in a firm.

The Luminous 100, the house's reading of the frameworks every consultancy sells, frames the same idea in its entry on systems thinking, where it asks of any measured system a question that turns the search for faults into a search for what already works: "Where are the virtuous cycles already alive in this system?" A good working-capital measure finds them: the department whose days have fallen and whose service has held, which is the behaviour to copy.

A number made in the light

Santa Anna's canon has a passage on what it calls shadow in governance, and one of the costs it names is the decision that looks like a decision and is not. "Shadow governance produces decisions that look like decisions but lack the genuine collective commitment that makes decisions effective." A closing balance improved by a held payment run is a number of that kind. Everyone who made it knows how it was made, and nobody believes it, and the next quarter has to be made the same way.

His writing on money describes the inner side of the same habit. "Money that is attended to with anxiety contracts," he writes. "Money that is attended to with avoidance stagnates." A group that holds its payment run every quarter-end is attending to its money with anxiety, about how one number will look on one night, and the contraction lands on the suppliers and on the clerk.

There is a better way to hold the number, and it is less dramatic than it sounds. Measure the cycle as an average over the year, from monthly balances, so that no single night decides it. Show it as a line, month by month, with the range of the last two years drawn behind it, so that a good month is read against ordinary variation before anyone celebrates it, as the finance director in Where the Flow Stops learned to read her scrap rate. Adjust for what moves the number for reasons nobody inside controls: a change in the mix of customers, a season, a rise in steel prices that makes the same stock worth more. Name those adjustments in advance. And sort every change into the four kinds above, in a ledger anyone in the firm can read.

That ledger is the practice this chapter is about. It is not a report for the board, though the board may read it. It is a record, kept monthly, of every day that has moved in the cycle, with a line for each: what moved it, which of the four kinds it is, which department's behaviour produced it, and what the companion measure did in the same month. A day of stock released by the shelf walk goes in as a change in the business, against the warehouse and the sales office, with service levels beside it. A day of payables added by a supplier who agreed to a change goes in as a change in terms, with a note of what the supplier was told. A day borrowed through a programme goes in as financing. A day made by a held payment run goes in as timing, and comes out again the following week.

The ledger has one more virtue, and it is the one the payments clerk would notice first. It gives a place to the knowledge of the people who see the timing happen. The clerk knows which runs were held and which suppliers rang. The warehouse supervisor knows that the stock count was taken the morning after the largest shipment of the quarter. The credit controller knows that three customers were persuaded to pay before the close and will pay correspondingly late in the month after. None of this is secret, and none of it reaches a board report, because there is no column for it. A ledger that asks, of every movement, what kind it was, is a ledger that has to ask these people, and in asking them it collects what the house's first business book called the knowledge of the person who already knows: paid for once, and until now collected never.

It also changes the conversation between finance and the operating teams. Before the ledger, a cycle that lengthened in a quarter produced a request from the group to bring it down by the next close, and the operating teams, sensibly, reached for whatever would move it fastest. After it, a lengthening produces a question: which kind of day moved, and where? Sometimes the answer is a season, or a large new customer on standard terms, and nothing needs to be done. Sometimes it is a shelf that has started to fill again, and the planner already knows why. The question is cheaper than the request, and its answers are better.



The ledger at quarter-end

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER FIVE

The ledger at quarter-end

Picture the group's finance director, the one who rang the payments manager at four o'clock, a year after she first saw the ledger. She is the person who asked for it, because she had grown tired of a closing balance she could not explain to her own board. Her first instinct had been to dislike what it showed. Of the eleven days by which the group's cycle had improved over the previous year, four were changes in the business, five were longer supplier terms, and two were timing. The improvement she had reported was mostly borrowed.

The second year looks different. She agrees with the operating companies, before the year begins, what the ledger will count, which records it will read and what adjustments it will make, and she writes it on one page and has it signed. The operating companies walk their shelves and their disputed invoices. The supplier terms are left alone, and the payment date is kept. And she tells her own treasury team, in writing, that no payment run will be held for a reporting date, because a held run will go in the ledger as timing and come out again, so there is no longer any reason to hold one.

The cycle improves by six days that year, less than the eleven. All six are changes in the business, and all six are still there in the first month of the following year. On-time delivery has not fallen. Supplier invoices are paid on the agreed date. The six days are the first number in the group's working capital that every operating company believes, because each company can find its own share in the ledger and name the people who produced it.

This is where the series meets the question that runs underneath all five chapters. A gain found in a firm's own building, in its stock and its invoices, belongs to the people and the process that produced it, and if it is to be shared with them, or with anyone who helped find it, it has to be measured first in a way both sides believe. The ledger is how that measurement is made for cash. It does not settle how such a gain is divided, which depends on the organisation and the people it covers, and this book does not describe it. What the ledger does is make that later decision honest, by producing a figure that is the firm's own, sorted by its source, and agreed before anyone knew what it would say.

There are predictable ways for this to go wrong. A ledger kept by treasury alone becomes treasury's defence, and the operating companies stop reading it. Adjustments agreed after the results are in will be read, correctly, as the side that lost trying to win. And a ledger that counts the second kind of day as gain, because the terms were legally agreed, will slowly fill with supplier money and empty of behaviour. Chapter 7 carries the ledger as a working page, with its four columns, the companion measures and the one-page agreement, and Chapter 6 places it in the order of a first ninety days.

Santa Anna's *Ecstatic Economics* states the principle that sits under every line of it: "Money is not neutral. It is a design system, and the design shapes the behavior." A measure of cash is a design too. Designed on one night, it produces payment runs held until Monday. Designed as an average, sorted by source and set beside its companions, it produces shelves walked and invoices put right, because those are the only things that move it.

Keeping the release ledger

The release ledger is a modest document with a large effect, and the finer points are about keeping it honest when it is inconvenient.

Agree it before the work begins. As with the measurement conversation in *Where the Flow Stops*, almost all of the ledger's credibility is earned before anyone knows what it will show. Decide, on one page, which records it will read, over what period, which adjustments it will make and how, which companion measures sit beside it, and who keeps it. Sign the page with the people whose departments will appear in it. An adjustment proposed after the results are known will be read, correctly, as the side that lost trying to win.

Measure on an average, not on a night. Take the balances of stock, receivables and payables at the end of every month, and compute the cycle as a rolling average over the last twelve or thirteen months. A rolling average cannot be moved by a held payment run or a well-timed shipment, because one night is one point among many. Report the month-end figure too, if the board needs it, but count the release only on the average.

Draw the ordinary range behind it. Plot the monthly cycle against its own history over two years where the records allow, and treat a month as news only when it falls outside that history's ordinary range, or when several months in a row move the same way. Shewhart's chart, read in *Where the Flow Stops*, is the oldest tool for this. One good month is not yet a release.

Name the adjustments in advance. Some things move the cycle that nobody inside the firm controls: a change in the mix of customers, a season, a rise in the price of materials that makes the same stock worth more, a large new customer on standard terms. For each that is likely, agree whether it will be adjusted for, from which record, and how. Keep the list short. Every adjustment is a place where judgment enters, and judgment should enter in the spring, not at the close.

Sort every movement into one of four kinds. A change in the business: stock or receivables reduced by a change in how the work is done. A change in terms: customers or suppliers moved to different terms. Financing: receivables sold, or suppliers paid through a programme. Timing: anything that exists only around a reporting date. Count the first as released. Show the second separately, with a line on what the other party gains. Show the third, and do not count it. Remove the fourth.

Name the department behind each released day. A day released from stock belongs to the warehouse, production and sales who walked the shelves; a day released from receivables to the order desk, warehouse and billing team who put the invoices right. Writing the names in the ledger is what turns it from finance's document into everyone's, and it is what the people who did the work will look for first.

Set the companions beside every line. On-time and complete delivery beside stock. Complaints, lost accounts and the share of invoices right the first time beside receivables. The share of supplier invoices paid on the agreed date, and requests for early payment, beside payables. If a released day comes with a companion moving the wrong way, it is not yet a release; it is a cost moved somewhere the cycle does not look.

Give the keeping to someone the ledger does not judge. The person who keeps it should not be measured on the number it produces. In a group, that may be a management accountant outside treasury; in a smal-

ler firm, someone in finance who reports to the managing director rather than to the department whose days move most. Whoever it is, the departments named in it should be able to check every line against their own records.

Write the no-held-run rule down. A sentence in the agreement: no payment to a supplier will be held for a reporting date, and any that is will go in the ledger as timing. Once that sentence exists, there is no longer any reason to hold one.

Say what it does not settle. The ledger produces a figure that both sides can believe: the cash released from the firm's own building, by its own people, sorted by source. It does not settle how such a gain is shared with the people who produced it, or with anyone who helped find it: the proportions, the timing, the thresholds and the terms. Those depend on the organisation and the people it covers, they are decided with them, and this book does not describe them.

Chapter 6 places the ledger agreement on the tenth day of the first ninety and the first full reading of it at day ninety, and Chapter 7 carries the ledger page, the four kinds, the companion measures and the one-page agreement.

Ten to five, a year later

It is ten to five on the last Friday of the quarter, and the payments clerk has the supplier run on her screen, approved and ready. Two hundred and eighteen invoices, every one due, every one checked.

Her manager walks past her desk on the way to a meeting and does not stop. At five o'clock the run goes, as it was always going to.

On Monday morning nobody rings her. She has time to read the ledger, which the finance office now sends round each month, and finds, near the bottom, a line about the suppliers paid on the agreed date. It says all of them.

A NOTE FROM THE HOUSE

A release ledger is the instrument a gainshare stands on: a day of cash counted in the light, from records both sides already trust, and kept apart from the three kinds of day that are not a gain. Luminous Prosperity Inc. keeps that ledger beside a firm, and is paid as a share of the gain it helps release.

REQUEST A CONVERSATION

CHAPTER SIX

The First Ninety Days

Five practices set in order, from drawing the cycle with names to a ledger both sides can sign.



The First Ninety Days

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER SIX

Monday, day one

It is half past seven on a Monday in January, and the managing director of the firm that makes ventilation hoods has the office to herself. She has read the first five chapters of a book like this one, or lived them, and she has decided that this year the firm will stop discovering its cash position on the night before payroll. On her desk are a notebook, a coffee and the management accounts for December. The temptation, which she feels at the back of her neck, is to announce a working-capital programme at Friday's meeting, with a target in days and a name.

She is a composite, drawn from the way these first weeks are described in the research the earlier chapters read and in the house's own practice, and no firm is meant. This chapter is written to her, and to anyone in her position: the person who runs something and wants to begin. It sets out the first ninety days in order, with who is in the room, what each step needs and roughly how long it takes, the decisions that change the result, the mistakes made at each step and how to see them early, how to read what comes back, and what to do on the first Monday. The working pages it refers to are gathered in Chapter 7.

Two things should be said before the plan. The first is that nothing here needs a programme, a budget or a name. A working-capital initiative announced on Friday will be met, by the following quarter-end, with exactly the behaviour Chapter 5 describes: payments held, shipments timed, the days moved rather than removed. The practices in this book work because they ask people to describe what they already do, and people describe it more honestly when nobody has told them what the answer should be. Ammanuel Santa Anna's writing on stagnation gives the opening question of the whole ninety days in a single line:[40] "The diagnostic question for stagnation is simple: Where has flow stopped". The ninety days are spent answering it with names and dates.

The second is that the order matters more than any single step. The chapters were written in the order a reader meets the cash: the cycle, the stock, the invoices, the suppliers, the measure. The ninety days run in the order the practices depend on each other, and that order is different.

Why this order

The five practices are the money walk (Chapter 1), the shelf walk (Chapter 2), the dispute record (Chapter 3), the supplier conversation (Chapter 4) and the release ledger (Chapter 5). In the first ninety days they run in this sequence: draw the cycle and fix its history; agree the ledger; walk the shelves and keep the dispute record; make the cheapest changes; then hold the supplier conversation; then read the ledger.

The reasoning is simple. Every later practice needs two things the first ten days provide: a picture of the cycle that everyone can see, so that the walks are aimed at the right places, and a history of the cycle fixed before anything changes, so that what the walks release can be counted against it. The ledger is agreed early, on the tenth day, because Chapter 5's whole argument is that a measure believed after the event must be agreed before it. The shelf walk and the dispute record come next because they release cash from the firm's own building, which is where the gain is and where nobody else pays for it. The supplier conversation comes after them, deliberately. A firm that starts with its suppliers is starting with the one lever that moves cash out of somebody else's building, and it will reach for that lever again whenever the cycle disappoints. A firm that has already walked its shelves and its invoices comes to its suppliers having done its own work, and the conversation is about holding less together rather than about who holds more.

Santa Anna's book on living ventures describes the habit the order is designed to resist. Scarcity thinking, it says, sounds like "Hold tight. Hunker down. Survive.", and the remedy it proposes is three words long:

"Circulate, don't hoard." The ninety days are a way of practising those three words in an order that keeps the firm honest about whose cash it is circulating.

Who is in the room

Three roles carry the first ninety days, and they should be named before anything else is done.

The sponsor is the most senior person who can see all four parts of the cycle: purchasing, production, sales and collection. In a small firm it is the managing director. In a larger one it may be a divisional director or a site head. The sponsor's job is not to run the work. It is to walk the first order herself, to keep the walks from becoming audits, to protect the people who describe what they do, and to refuse, on behalf of everyone, any request to improve the number by timing. Expect it to take three to five hours a week.

The working group is small: four to six people. It should include the person who plans stock, someone from sales who agrees terms with customers, the credit controller, someone from purchasing, and someone from finance who will later sit at the ledger. If the firm has an installation or delivery team, one person from it, because Chapter 1's longest gap was a piece of paper in a van. The group meets for an hour a week. Its job is to walk, to keep the dispute record, to choose the changes and to bring back what it finds.

The keeper of the ledger is one person, usually in finance, who is not measured on the number the ledger produces. The keeper pulls the monthly balances, keeps the history fixed, sorts each movement into its kind, and shows the ledger to the people named in it. The keeper needs about two hours a week, and the quality that matters most is that the departments trust the keeper to write down what moved the number rather than what the sponsor would like to have moved it.

One decision at this stage changes the result more than any other. The sponsor must decide, out loud and on the first day, that no payment to a supplier will be held and no shipment timed for a reporting date during the ninety days, and that anything of the kind will appear in the ledger as timing. Without that sentence, every later step is measured against a number the firm can move overnight.

Days one to ten: drawing the cycle

The first ten days change nothing in the business. They produce four things, and the sponsor does part of the work herself.

The first is the cycle, monthly. The keeper asks for the days of stock, receivables and payables at the end of each of the last twenty-four months where the records allow, computed on a stated convention, and draws the three numbers and the cycle as lines. The working group sees the lines on day five. Most groups are surprised by the same two things: how much the cycle moves from month to month, and how different the year-end is from the months around it.

The second is the money walk. The sponsor and two members of the group choose one ordinary order from the previous quarter and follow its money from the day the materials were paid for to the day the customer's payment cleared, asking at each stage when the money arrived, when it left, and what it was waiting for. The walk takes an afternoon. Its sheet, in Chapter 7, is read by the whole group together, before anyone senior sees it.

The third is the history, fixed. Before day eleven the keeper copies the monthly balances and the records behind them for the last one to two years, dates the copy and files it unaltered. This is the baseline the ledger will read against. It is fixed now, before the shelf walk or the dispute record can change anything, for the reason Chapter 5 gives: an improvement can only be counted against a history that was settled before it began.

The fourth is the ledger agreement. On day ten the sponsor, the keeper and the working group fill in the one-page agreement in Chapter 7: which records the ledger reads, the rolling average it uses, the ordinary range drawn from the fixed history, the adjustments it will make and how, the companion measures beside each number, the four kinds of movement, who keeps it and who checks it, and the rule about payment runs. Everyone in the room signs it.

What goes wrong at this stage. The commonest mistake is to announce. A firm told that it is beginning a working-capital drive will start managing the number before anyone has understood it, and the first sign is a question from a department head about the target. The second is to start the walk with the worst order of the year, which produces a vivid story and the wrong changes. The third is to skip the fixed history because the records are untidy. Untidy records copied and dated on day ten are worth more than tidy ones assembled on day sixty, because nobody can later be suspected of having chosen them.



Days eleven to thirty-five: the shelves

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER SIX

Days eleven to thirty-five: the shelves

In the third week the planner, the person who runs production and the salesperson in the group walk the warehouse, with the list from the stock system of the forty lines that have moved least in the last year, ranked by value. The sponsor walks the first ten lines with them.

At each shelf they ask the four questions of Chapter 2, in order, and write the answers on the shelf-walk sheet: who decided to hold this, and when; what were they protecting against; is that danger still there; and if it is, who owns it now. The walk of forty lines takes two or three sessions of about ninety minutes each.

Then the group sorts the lines into three: fears that are no longer true, fears that are still true and need an owner and a signal, and buffers held on purpose in front of the resource the whole plant waits for.

The decision that changes the result is how the group treats the person who placed the order. Most of the lines were placed by people still in the building, often by the planner walking the list. If the walk is conducted as curiosity about what the firm was afraid of, the answers to the second question will be honest, and those answers are the most valuable thing the walk produces. If it is conducted as a search for bad decisions, the answers will be defensive by the fifth shelf. Santa Anna's canon on resource decisions is the right note to strike before the first shelf: "These behavioral patterns are not character flaws." The sponsor should say something like it, in her own words, at the start of the first session.

What goes wrong. The walk ends in a target for stock reduction set before the fears are named, and the shelves empty and the rushed orders begin within a quarter. Finance turns the walk into a discussion of write-offs, which belongs in a separate meeting. The buffer in front of the constraint is cut along with everything else. The early signs are readable. If the second question is answered *I don't know* more than a few times, either the people who placed the orders are not in the room or they do not feel safe saying why. If the group is keen to cut everything, someone has been told a number.

How to read what comes back. By day thirty-five the group should have a short list of lines to be used up before more are bought, a list of fears with owners and signals, a labelled buffer, and the answers to the second question for all forty lines. The last is a list of what the firm has been afraid of, and the sponsor should read it twice.

Days twenty-one to fifty: the invoices

Overlapping with the shelf walk, from the start of the fourth week, the credit controller keeps the dispute record of Chapter 3 for four weeks: every invoice queried, put on hold or paid later than its terms, with the customer's reason in the customer's own words.

At the end of the four weeks, on or about day fifty, the working group meets for ninety minutes with the record on paper and finds, for each invoice, the first desk at which the fault could have been put right. The record is sorted by first desk, and the customers who simply chose to pay late are counted separately. The credit controller presents it; the sponsor says very little.

The decision that changes the result is who is in the room when the record is read. It must include the people at the first desks: the order desk, the warehouse or delivery team, the salesperson who agreed terms, whoever owns the customer records. A record read only by finance becomes a complaint about other departments. A record read by the people whose desks appear in it becomes the first time most of them have been told what a customer's accounts office needs to see.

What goes wrong. The record is kept for a week and then abandoned because the credit controller is too busy chasing. The reasons are written in finance's words rather than the customer's, so that every line reads *admin*. The meeting turns into a search for the person who made each mistake. The early signs: a record with fewer than a dozen lines in a firm that sends hundreds of invoices, which means it is not being kept; and a meeting in which the first desks argue about whose fault each line is, which means the record is being read as blame.

How to read what comes back. The useful numbers are three: how many of the late payments began inside the firm, how many began with the customer, and which first desk appears most often. In most firms the first is much the largest, and the third points at a change that costs very little.

Days forty-five to seventy: the first changes, then the suppliers

With the shelves walked and the invoices sorted, the group makes the cheapest changes first, in the order Chapters 1 to 3 describe. The paper that travels slowly is made to travel the same day. The order desk asks for the customer's purchase-order number at the first contact. Invoices are raised from the delivery. Customer queries get a named owner. The lines whose fears have gone are used up before more are bought, and the fears still true get their owners and signals. Each change is written in the keeper's record with a date, so that the ledger can find it later.

Then, from about day fifty-five, the purchasing member of the group and the sponsor prepare the supplier conversation of Chapter 4. They begin with the firm's own approval lag, the number of days between a supplier's invoice arriving and its approval for payment, because that number is terms the contract never agreed and the firm can shorten it on its own. They publish the firm's payment date to its suppliers. And they choose the five or ten suppliers most dependent on the firm and hold the conversation with each: what would longer terms cost you, what do we do that makes you hold more than you need, and what could we do that would let both of us hold less.

The decision that changes the result is to leave the terms where they are during the ninety days. It is the hardest decision in the plan, because the payables number is the one that would move fastest, and a sponsor under pressure from a bank or a board will feel the pull of it. The conversation's value depends on its not being a renegotiation. Santa Anna's book on living ventures gives the test to keep in mind while holding it: "Is the benefit truly reciprocal?"

What goes wrong. The firm holds the conversations and changes nothing it heard, which teaches the suppliers that it listens and does not act. The approval lag is ignored because it belongs to the accounts office, which is not in the group. An early-payment programme is mentioned in passing, and the supplier hears it as the price of keeping the existing terms. The early sign of each is the same: a supplier who answers the second question with *nothing, it's fine*, which usually means the supplier does not yet believe the question is real.



Days sixty-one to ninety: reading the ledger

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Days sixty-one to ninety: reading the ledger

In the last month the keeper produces the first full readings of the ledger: the cycle as a rolling average, drawn against the ordinary range of the fixed history, with every movement since day ten sorted into its kind and every released day named against the department that produced it, and the companion measures beside each number.

The working group reads it together, once a month, for an hour. The questions are the ones the ledger was built to answer. How much has the cycle moved, on the average and not on a night? Of what has moved,

how much is a change in the business, how much a change in terms, how much financing, how much timing? Which department's behaviour produced each released day? Did any companion measure move the wrong way: on-time delivery, invoices right the first time, supplier invoices paid on the agreed date?

The decision that changes the result is what the sponsor does with the first reading, which will usually be smaller than she hoped. A rolling average moves slowly, because each month is one point in twelve or thirteen. Released days from the shelf walk show first; days from the dispute record show later, as the corrected invoices are paid. A sponsor who answers a small first reading by asking for something faster has taught the group which lever to pull. A sponsor who answers it by asking which line moved, and naming the people behind it, has taught the opposite.

What goes wrong. An adjustment is proposed after the results are in. A month-end figure is quoted in place of the average because it looks better. A day borrowed through a finance programme is counted as released. The early sign of each is the same, and it is the one Chapter 5 of *Where the Flow Stops* also names: someone in the room, often the keeper, goes quiet.

What this step does not settle is how a released gain is then shared with the people who produced it: the proportions, the timing, the thresholds and the terms. Those depend on the organisation, its people and its history. They are decided with the people who will be covered, and for an organisation working with Luminous Prosperity they are the substance of the engagement, not of a book. What the ninety days can do is make that later decision honest, by producing a figure both sides already believe.

Day ninety: reading what you have

The working group and the sponsor meet on day ninety with six things on the table: the monthly lines from the first week, the money-walk sheet, the shelf-walk sheet with its answers to the second question, the dispute record sorted by first desk, the notes of the supplier conversations, and the ledger with its first readings.

They ask a short list of questions, in order. Where was the money walk right about where the cycle sat, and where wrong? Which fears in the stockroom were no longer true, and which were given an owner? Which first desks appeared most in the dispute record, and has the share of invoices right the first time moved? What did the suppliers say the firm does that makes them hold more, and what has been changed? How much of the cycle's movement is a change in the business, and how much is anything else? And then the question that matters most for the next ninety days: which of the practices is not yet real?

What not to conclude is as important. Ninety days are too short to say the cycle has changed; a rolling average will show the full effect of what was done only over the following year. A single good month is not a release. And a ledger that shows little movement in the business is itself a finding. It usually means one of

the walks found the gaps and the changes have not yet been made, and the first place to look is the keeper's record of changes, to see which have dates and which only have intentions.

Santa Anna's writing on money as a living system describes the shift the ninety days are for, in one sentence: "The question shifts from "How much do I have?" to "How does it flow?"" At day ninety the firm can answer the second question with names.

What to do on Monday

If the whole of this chapter is too much to begin with, three things can be done on the first Monday, and none of them needs anyone's permission.

Ask finance for the days of stock, receivables and payables at the end of each of the last twelve months, and draw them as three lines. Look at the year-end beside the months around it.

Choose one ordinary order that was paid for last month, and follow its money backwards, from the customer's payment to the purchase of its materials. At each stage, write down what it was waiting for.

And say, to the person who would otherwise be asked to do it, that no supplier payment will be held for a reporting date this quarter.

Santa Anna's book on living ventures ends its account of scarcity in finance with a sentence that could stand over all five practices: "This is not naiveté. It is ecology." The ninety days are not a campaign. They are the firm learning where its money sleeps, and asking it to move.

Monday, day ninety-one

It is half past seven on a Monday in April, and the managing director's diary is full again. On the wall outside her office the cycle is written in marker, in days, as a rolling average, with the range of the last two years drawn faintly behind it. In aisle fourteen there is a card with a supplier's phone number on it. The order desk will not take an order without the customer's number. The firm's payment date is printed on every purchase order it sends.

None of these has a name. Nobody has announced anything. The managing director looks at the payroll on Thursday, sees that it is covered, and turns to the first meeting of the week.

CHAPTER SEVEN

The Field Manual

Twelve working pages, the walks, the record, the conversation and the ledger, ready to carry into a room.



The Field Manual

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER SEVEN

How to use these pages

The chapters of this book describe five practices as people doing them.[41] This chapter holds the working pages: the worksheets, the question sets, the record sheets and the one-page agreement that the earlier chapters point to and do not print. Each page is meant to be photocopied, filled in by hand, and kept in a folder that the keeper of the ledger, described in Chapter 6, looks after. Nothing here needs software beyond the reports the firm's systems already produce.

The pages follow the order of the first ninety days, not the order of the chapters. Each opens with a line saying where it comes from and when it is used. Where a page gives a script, the words are a starting point; say them in your own voice. Where it gives a time, the time is a planning guide from practice, not a finding.

Three rules govern the whole manual. Write down what people said, not what you wish they had said. Answer everything you collect: a fear named and not owned, a dispute traced and not fixed, a supplier heard and not acted on, teaches the opposite of what the practice is for. And count a day only when you know where it came from.

What these pages do not contain is the design of any arrangement for sharing a gain: proportions, thresholds, timing or terms. Those belong to each organisation and the people it covers, and they are decided separately. Nothing in this manual is financial, accounting, legal or credit advice.

1 · The cycle, monthly

From Chapter 1, after Gitman (1974) and Richards and Laughlin (1980). Used in days one to ten, then monthly.

The arithmetic.

- days of stock = average stock ÷ cost of sales per day
- days of receivables = average receivables ÷ sales per day
- days of payables = average payables ÷ cost of sales per day
- cash conversion cycle = days of stock + days of receivables − days of payables

Write the convention finance uses beside the page, and keep it.

MONTH END	DAYS OF STOCK	DAYS OF RECEIVABLES	DAYS OF PAYABLES	CYCLE (DAYS)	COST OF SALES PER DAY	CASH HELD IN THE CYCLE (CYCLE × COST PER DAY)

Worked example, from Chapter 1. Stock about seventy days, receivables about sixty-five, payables about forty: seventy plus sixty-five less forty is ninety-five days. At about ten thousand pounds of cost of sales a working day, ten days off the cycle, held steady, is roughly a hundred thousand pounds released once. The figures are illustrations of the arithmetic, not data.

Reading it. Draw the cycle as a line. Mark the year-end. If the year-end sits well below the months around it, the firm is being measured on a night. Read days to see behaviour change; read the cash column to see what the bank will feel.

2 · The money walk

From Chapter 1. Used once in days one to ten, then every quarter.

Choosing the order. Ordinary in size and route. Paid for by the customer within the last two months. Crossed purchasing, production, delivery, invoicing and collection. Nobody's emergency.

Order: Materials paid for on: Customer's payment cleared on:

Walk backwards, from the customer's payment to the purchase of materials. At each stage, ask the three questions and fill a row. Mark each date R (from a record) or M (from memory).

STAGE (WHO HELD THE MONEY, AND IN WHAT FORM)	ARRIVED	LEFT	DAYS HELD	WHAT WAS IT WAITING FOR?

Total days, materials paid for to payment cleared:

Reading it, with the people on it. Show the sheet first to everyone whose stage appears on it, together, before anyone senior. Ask the group one question: which gap would be cheapest to close? The longest wait is often not the customer.

3 · The shelf walk

From Chapter 2. Used in days eleven to thirty-five; repeat every quarter against the same list.

The list. From the stock system: the forty lines that have moved least in the last year, ranked by the value tied up in each.

Who walks. The planner, the person who runs production, the person who runs sales. The sponsor walks the first ten lines.

LINE	VALUE HELD	WHO DECIDED TO HOLD IT, AND WHEN?	WHAT WERE THEY PROTECTING AGAINST?	IS THAT DANGER STILL THERE?	IF SO, WHO OWNS IT NOW, AND WHAT IS THE SIGNAL?	SORT: GONE / OWNED / BUFFER

Say at the start. *We are here to learn what the firm was afraid of, not to find bad decisions. Most of these were sensible when they were made.*

Keep separately. Write-offs of obsolete stock, which are finance's decision and a different meeting.

Reading it. The fourth column, read down the page, is a list of the firm's fears. Keep it from walk to walk. Lines sorted *gone* are used up before more are bought; lines sorted *owned* get a named person and a signal; lines sorted *buffer* go to page 4.



4 · Sizing a buffer

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER SEVEN

4 · Sizing a buffer

From Chapter 2, after Goldratt's drum-buffer-rope. Used once the shelf walk has found the stock that protects the resource every order must pass through.

QUESTION	ANSWER
Which resource does every order wait for (the drum)?	
How long does it take to replenish what that resource uses, from order to arrival?	

QUESTION	ANSWER
How much does that time vary, at its worst in the last year?	
How much does the resource use in a day?	
Buffer to hold: use per day × (usual replenishment time + allowance for variation)	
Where is it kept, and is it labelled as a buffer?	
Who watches it, and what do they do when it falls below half?	

Order rule for everything else. How long it takes to get more, how much that time varies, how much is used while waiting. Set from records, not from the last crisis.

Reading it. A buffer that is never touched is too large. A buffer that is often empty is too small, or the release of work into the plant is not tied to the drum. Review the sizing every quarter.

5 · The dispute record

From Chapter 3. Kept by the credit controller for four weeks from about day twenty-one; then as one column in the credit-control system.

Every invoice queried, put on hold, or paid later than its terms.

DATE	CUSTOMER	INVOICE AND AMOUNT	AGE (DAYS)	CUSTOMER'S REASON, IN THE CUSTOMER'S WORDS	FIRST DESK WHERE IT COULD HAVE BEEN PUT RIGHT	CUSTOMER CHOSE TO PAY LATE?

The short list of first desks. Use the same list every month: *order taken · delivery · pricing and terms agreed · customer records · billing · the work itself · customer's choice.*

The sort. Count the lines by first desk. Count the customers who chose to pay late separately.

Days outstanding, split in two. For each invoice: days in the customer's ordinary processing · days waiting on the firm to correct something .

Reading it. Read it with the people at the first desks, together, on paper. In most firms the largest group of late payments begins inside the firm, and the commonest first desk points at a change that costs very little.

6 · The first changes, in order

From Chapters 1 to 3. Used from about day forty-five.

1. The paper that travels slowly. From the money walk: the document that waits longest between stages. Make it travel the same day.
2. The fact nobody collects at the first contact. From the dispute record: usually the customer's purchase-order number. No order accepted without it; orders without one held in a visible queue.
3. Invoice from the delivery. What is billed is what arrived.
4. A named owner for customer queries. Answered within a working day. Close any shared inbox that nobody owns.
5. Terms written on the order. Non-standard terms in writing, where billing and credit control can read them.
6. Fears used up or owned. From the shelf walk: lines sorted *gone* are used before more are bought; lines sorted *owned* get their person and signal.

CHANGE	DATE MADE	OWNER	WHICH NUMBER IT SHOULD MOVE	COMPANION MEASURE TO WATCH

Reading it. Every change gets a date here, so the ledger can find it later. A change without a date is an intention.

7 · The supplier conversation

From Chapter 4. Prepared from about day fifty-five; held with the five to ten most dependent suppliers.

Before any conversation.

The firm's approval lag: average days from a supplier's invoice arriving to its approval for payment:

The firm's published payment date: (publish one if there is none)

- No change to terms during the ninety days.

The dependence list.

SUPPLIER	SHARE OF THE SUPPLIER'S SALES THAT THE FIRM REPRESENTS (KNOWN OR ESTIMATED)	TERMS	PAID ON THE AGREED DATE IN THE LAST SIX MONTHS?

Say at the start. *This is not a renegotiation. We want to know what we do that makes you hold more stock or cash than you need.*

The three questions.

1. What would longer terms cost you, and how would you pay for them?
2. What do we do that makes you hold more than you need?
3. What could we do, short of paying you sooner, that would let both of us hold less?

SUPPLIER	ANSWER TO 1	ANSWER TO 2	ANSWER TO 3	WHAT WE WILL CHANGE, AND BY WHEN	READ AGAIN ON

The third-party line. Before any proposed change to supplier terms reaches a decision, complete this sentence: *The supplier gains* . If the honest answer is *nothing*, the change moves cost rather than removing it, and it is not counted as a gain.

If an early-payment programme is offered. Voluntary; priced and explained in writing; never the price of keeping existing terms; recorded in the ledger as financing.

Reading it. An answer of *nothing, it's fine* to question 2 usually means the supplier does not yet believe the question is real. Act on one thing you heard before the next conversation.

8 · The release ledger

From Chapter 5. Kept monthly by the keeper from day ten; read by the working group from day sixty-one.

The four kinds. B · a change in the business (stock or receivables reduced by a change in how the work is done): counted. T · a change in terms (customers or suppliers moved to different terms): shown separately, with the other party's gain. F · financing (receivables sold, suppliers paid through a programme): shown, not counted. X · timing (anything that exists only around a reporting date): removed.

MONTH	CYCLE, ROLLING AVERAGE (DAYS)	WITHIN ORDINARY RANGE?	MOVEMENT (DAYS)	KIND (B / T / F / X)	WHAT MOVED IT	DEPARTMENT BEHIND IT	COMPANION MEASURE THIS MONTH

Companion measures. Beside stock: on-time and complete delivery. Beside receivables: invoices right the first time; complaints; lost accounts. Beside payables: supplier invoices paid on the agreed date; requests for early payment.

Reading it. Count only B as released. A B line with a companion moving the wrong way is not yet a release. One good month is not yet a release; several in a row, or a point outside the ordinary range, is news.



9 · The ledger agreement

HAUTE LUMIÈRE · CASH ASLEEP IN THE BUILDING · CHAPTER SEVEN

9 · The ledger agreement

From Chapter 5. Filled in and signed on day ten, before any change is made.

Records the ledger reads (stock, receivables, payables), and their source
Convention for days (denominators)
History fixed and dated on

Rolling average used (months)	
Ordinary range, from the fixed history	
Adjustments agreed in advance (mix, season, material prices, large new customers), and how each is calculated	
Companion measures, and their records	
The four kinds, and which is counted	B counted · T shown with the other party's gain · F shown, not counted · X removed
Who keeps the ledger; who checks it	
How often, and to whom, it is shown	
No supplier payment will be held for a reporting date; any that is goes in as timing	Agreed: yes
What happens if a record or system changes	
Date agreed	
Signed	

Mistakes to watch for. An adjustment proposed after results are known. A month-end figure quoted in place of the average. A financed day counted as released. Someone in the room going quiet.

10 · The ninety days on one page

From Chapter 6.

DAYS	PRACTICE	WHO	TIME IT TAKES	WHAT IT PRODUCES	EARLY SIGN IT IS GOING WRONG
1–10	The cycle drawn monthly, the money walk, the history fixed, the ledger agreed (pages 1, 2, 9)	Sponsor, keeper, two of the group	Sponsor about 4 hours a week; an afternoon for the walk	Three lines and a cycle; a walk sheet; a dated history; a signed agreement	Someone asks what the target is
11–35	The shelf walk (pages 3, 4)	Planner, production, sales; sponsor walks ten lines	Two or three sessions of 90 minutes	Lines sorted gone, owned or buffer; a list of fears	*I don't know* to the second question, often
21–50	The dispute record, then its reading (page 5)	Credit controller; then the first desks	Four weeks of record; 90 minutes to read	Late payments sorted by first desk	Fewer than a dozen lines in a busy month

DAYS	PRACTICE	WHO	TIME IT TAKES	WHAT IT PRODUCES	EARLY SIGN IT IS GOING WRONG
45–70	The first changes, then the supplier conversation (pages 6, 7)	Working group; purchasing and sponsor	An hour per supplier	Dated changes; the approval lag; a published payment date; supplier answers	*Nothing, it's fine*
61–90	Reading the ledger (page 8)	Keeper; working group	An hour a month	The first readings, sorted by kind and department	Someone in the room goes quiet

11 · The day-ninety review

From Chapter 6. A meeting of the working group and the sponsor, about two hours.

Bring the monthly lines, the money-walk sheet, the shelf-walk sheet, the dispute record, the supplier notes and the ledger.

Ask, in order:

1. Where was the money walk right about where the cycle sat, and where was it wrong?
2. Which fears in the stockroom were no longer true, and which now have an owner and a signal?
3. Which first desks appeared most in the dispute record, and has the share of invoices right the first time moved?
4. What did the suppliers say the firm does that makes them hold more, and what has been changed?
5. Of the cycle's movement, how much is a change in the business, and how much is terms, financing or timing?
6. Did any companion measure move the wrong way?
7. Which of the practices is not yet real, and what would make it real?

What not to conclude. That the cycle has changed: a rolling average shows the full effect over the following year. That one good month is a release. That a ledger showing little movement means there is nothing to find: it usually means changes found in the walks have intentions and no dates.

12 · The first Monday

From Chapter 6. For anyone who wants to begin with less.

- Ask for the days of stock, receivables and payables at each of the last twelve month-ends. Draw them as three lines. Look at the year-end beside the months around it.

- Choose one ordinary order paid for last month. Follow its money backwards, and at each stage write down what it was waiting for.
- Tell the person who would otherwise be asked to do it that no supplier payment will be held for a reporting date this quarter.

Santa Anna's canon on governance gives the meta-rule beneath every page of this manual, written about commitments and true of a payment date: "Commitments include the commitment to communicate."

The days in your own cycle

Every day in the cycle was made by somebody, and most of them can be given back without asking a supplier to wait one day longer. This book has walked a stockroom, an invoice and a payment run to show where the money sleeps.

Luminous Prosperity Inc. takes this work into organisations as a gainshare. The flow is opened from the inside, with the people who already hold what the firm knows. The gain is counted from records the firm already keeps, against a measure both sides sign before anyone knows the answer, and the house is paid as a share of what is found: between thirty and ten per cent of it.

A book can show where cash waits. It cannot walk your shelves, read your disputes, or sit with your finance director on the last Friday of the quarter. That begins with a conversation.

REQUEST A CONVERSATION

References

1. The author's canon in this chapter, and the works it draws on: Santa Anna, A. *Luminous Entrepreneurship: Doing Business In and As Living Systems*, "Chapter 12 — Money as Lifeblood". The Luminous Library; Santa Anna, A. *The High Frequency Workbook*, "Money as Living Energy". The Luminous Developmental Canon; Santa Anna, A. *Integrated Value Stream Mapping*, "Dimension One: Material Value". The Luminous Developmental Canon; Santa Anna, A. *Adaptive Resource Orchestration*, "The Behavioral Cascade of Chronic Scarcity". The Luminous Developmental Canon; Santa Anna, A. *Ecstatic Economics*, "The Gift Economy: Wealth as Flow, Not Stock". The Luminous Developmental Canon; Santa Anna, A. *The Luminous 100*, "Value Chain Analysis (Porter)". Luminous Prosperity Inc.
2. Gitman, L. J. (1974). Estimating corporate liquidity requirements: A simplified approach. *Financial Review*, 9(1), 79–88. https://doi.org/10.1111/j.1540-6288.1974.tb01453.x (Cited for the cash-cycle idea; the paper's text was not reopened.)
3. Richards, V. D., & Laughlin, E. J. (1980). A cash conversion cycle approach to liquidity analysis. *Financial Management*, 9(1), 32–38. https://doi.org/10.2307/3665310 (The quoted phrase is from the paper's opening, read through its OpenAlex record.)
4. Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance & Accounting*, 30(3–4), 573–588. https://doi.org/10.1111/1468-5957.00008 (Both quoted sentences are from the abstract, including its spelling.)
5. García-Teruel, P. J., & Martínez-Solano, P. (2007). Effects of working capital management on SME profitability. *International Journal of Managerial Finance*, 3(2), 164–177. https://doi.org/10.1108/17439130710738718
6. Aktas, N., Croci, E., & Petmezas, D. (2015). Is working capital management value-enhancing? Evidence from firm performance and investments. *Journal of Corporate Finance*, 30, 98–113. https://doi.org/10.1016/j.jcorpfin.2014.12.008 (Summarised from the abstract's record; the paper was not reopened.)
7. Little, J. D. C. (1961). A proof for the queuing formula: L = λW. *Operations Research*, 9(3), 383–387. https://doi.org/10.1287/opre.9.3.383
8. The author's canon in this chapter, and the works it draws on: Santa Anna, A. *Luminous Lakshmi Devotion: Grace, Mantra & the Living Goddess*, "The Faces of Alakshmi in Everyday Life" and "Stagnation: When Flow Stops". The Luminous Developmental Canon; Santa Anna, A. *Integrated Value Stream Mapping*, "Dimension One: Material Value". The Luminous Developmental Canon; Santa Anna, A. *Adaptive Resource Orchestration*, "The Behavioral Cascade of Chronic Scarcity". The Luminous Developmental Canon; Santa Anna, A. *The Luminous 100*, "Theory of Constraints (Goldratt)", "Lean Thinking (Toyota Production System)" and "Kanban". Luminous Prosperity Inc.
9. Ohno, T. (1988). *Toyota production system: Beyond large-scale production*. Productivity Press. (First published in Japanese, 1978. Book; verified in Open Library; its view of overproduction is summarised from memory, not quoted. The water-and-rocks image is a common lean teaching picture whose first author was not traced.)
10. Goldratt, E. M., & Cox, J. (1984). *The goal: A process of ongoing improvement*. North River Press. (Book; Open Library's earliest edition record is 1986; the hike scene is summarised from memory of the novel.)
11. Goldratt, E. M., & Fox, R. E. (1986). *The race*. North River Press. (Book; verified in Open Library under Goldratt; drum-buffer-rope is summarised from memory, not quoted.)
12. Little, J. D. C. (1961). A proof for the queuing formula: L = λW. *Operations Research*, 9(3), 383–387. https://doi.org/10.1287/opre.9.3.383
13. Chen, H., Frank, M. Z., & Wu, O. Q. (2005). What actually happened to the inventories of American companies between 1981 and 2000? *Management Science*, 51(7), 1015–1031. https://doi.org/10.1287/mnsc.1050.0368 (Figures and the quoted sentence are from the abstract.)
14. Lee, H. L., Padmanabhan, V., & Whang, S. (1997). Information distortion in a supply chain: The bullwhip effect. *Management Science*, 43(4), 546–558. https://doi.org/10.1287/mnsc.43.4.546

15. Sterman, J. D. (1989). Modeling managerial behavior: Misperceptions of feedback in a dynamic decision making experiment. *Management Science*, 35(3), 321–339. https://doi.org/10.1287/mnsc.35.3.321 (The ordering-twice pattern is the commonly taught reading of the experiment; the quoted phrase is from the abstract.)

16. The author's canon in this chapter, and the works it draws on: Santa Anna, A. *Luminous Lakshmi Devotion: Grace, Mantra & the Living Goddess*, "Stagnation: When Flow Stops". The Luminous Developmental Canon; Santa Anna, A. *Integrated Value Stream Mapping*, "The Relational Field". The Luminous Developmental Canon; Santa Anna, A. *Conscious Governance Models*, "Movement 2: Commitment — Making Promises We Mean". The Luminous Developmental Canon; Santa Anna, A. *Luminous Entrepreneurship: Doing Business In and As Living Systems*, on customers as co-creators. The Luminous Library; Santa Anna, A. *Organizational Soul Work*, "Consequence 1: The Energy Tax of Avoidance". The Luminous Developmental Canon; Santa Anna, A. *Ecstatic Economics*, on theory and practice. The Luminous Developmental Canon.

17. Petersen, M. A., & Rajan, R. G. (1997). Trade credit: Theories and evidence. *The Review of Financial Studies*, 10(3), 661–691. https://doi.org/10.1093/rfs/10.3.661 (The quoted phrase is from the abstract.)

18. Long, M. S., Malitz, I. B., & Ravid, S. A. (1993). Trade credit, quality guarantees, and product marketability. *Financial Management*, 22(4), 117–127. https://doi.org/10.2307/3665582 (The quoted phrase and the industry pattern are from the abstract.)

19. Ng, C. K., Smith, J. K., & Smith, R. L. (1999). Evidence on the determinants of credit terms used in interfirm trade. *The Journal of Finance*, 54(3), 1109–1129. https://doi.org/10.1111/0022-1082.00138 (Quoted phrases from the abstract.)

20. Klapper, L., Laeven, L., & Rajan, R. (2012). Trade credit contracts. *The Review of Financial Studies*, 25(3), 838–867. https://doi.org/10.1093/rfs/hhr122 (Quoted phrase from the abstract.)

21. Oyer, P. (1998). Fiscal year ends and nonlinear incentive contracts: The effect on business seasonality. *The Quarterly Journal of Economics*, 113(1), 149–185. https://doi.org/10.1162/003355398555559 (Quoted phrase from the abstract.)

22. Larkin, I. (2014). The cost of high-powered incentives: Employee gaming in enterprise software sales. *Journal of Labor Economics*, 32(2), 199–227. https://doi.org/10.1086/673371 (Quoted phrase and the six-to-eight per cent figure from the abstract.)

23. The author's canon in this chapter, and the works it draws on: Santa Anna, A. *Luminous Entrepreneurship: Doing Business In and As Living Systems*, "Chapter 10 — Partners and Symbiosis". The Luminous Library; Santa Anna, A. *The Keystone Effect*, "Principle 3: Design for Reciprocity". The Luminous Developmental Canon; Santa Anna, A. *Conscious Governance Models*, "Movement 2: Commitment — Making Promises We Mean". The Luminous Developmental Canon; Santa Anna, A. *Luminous Lakshmi Devotion: Grace, Mantra & the Living Goddess*, "Dhana Lakshmi and the Flow of Value". The Luminous Developmental Canon; Santa Anna, A. *The Luminous 100*, "Porter's Five Forces". Luminous Prosperity Inc.

24. Klapper, L., Laeven, L., & Rajan, R. (2012). Trade credit contracts. *The Review of Financial Studies*, 25(3), 838–867. https://doi.org/10.1093/rfs/hhr122 (Figures and the quoted sentence from the abstract.)

25. Murfin, J., & Njoroge, K. (2015). The implicit costs of trade credit borrowing by large firms. *The Review of Financial Studies*, 28(1), 112–145. https://doi.org/10.1093/rfs/hhu051 (The quoted sentence is from the abstract; the company is named as the study names it, and no view on it is offered.)

26. Barrot, J.-N. (2016). Trade credit and industry dynamics: Evidence from trucking firms. *The Journal of Finance*, 71(5), 1975–2016. https://doi.org/10.1111/jofi.12371 (The quoted sentence and the fall of a quarter in default probability are from the abstract.)

27. Hofmann, E., & Kotzab, H. (2010). A supply chain-oriented approach of working capital management. *Journal of Business Logistics*, 31(2), 305–330. https://doi.org/10.1002/j.2158-1592.2010.tb00154.x (Quoted phrases from the abstract.)

28. Randall, W. S., & Farris, M. T. (2009). Supply chain financing: Using cash-to-cash variables to strengthen the supply chain. *International Journal of Physical Distribution & Logistics Management*, 39(8), 669–689. https://doi.org/10.1108/09600030910996314

29. *The London Gazette*, notice 3762079: Greensill Capital (UK) Limited, appointment of administrators (Chris M Laverty, Trevor P O'Sullivan and Will G Stagg, Grant Thornton UK LLP), 8 March 2021. https://www.thegazette.co.uk/notice/3762079 (fetched 30 Oct 2026).

30. Swiss Financial Market Supervisory Authority (FINMA). (2023, 28 February). *FINMA concludes Greensill proceedings against Credit Suisse* [Press release]. https://www.finma.ch/en/news/2023/02/20230228-mm-greensill/ (fetched 30 Oct 2026; the quoted phrases are from the release.)

31. House of Commons Treasury Committee. (2021). *Lessons from Greensill Capital* (Sixth Report of Session 2021–22, HC 151). UK Parliament. (Quoted through the Committee's published summary, fetched 30 Oct 2026; the report's full text was not reopened.)

32. Financial Accounting Standards Board. (2022). *Accounting Standards Update 2022-04, Liabilities—Supplier Finance Programs (Subtopic 405-50): Disclosure of supplier finance program obligations*. (Its content and September 2022 issue date are from accounting firms' published summaries; the FASB text was not reopened.)

33. International Accounting Standards Board. (2023). *Supplier finance arrangements: Amendments to IAS 7 and IFRS 7*. IFRS Foundation. (Its May 2023 issue and the disclosure requirement are from accounting firms' published summaries; the IASB text was not reopened.)

34. The author's canon in this chapter, and the works it draws on: Santa Anna, A. *Organizational Soul Work*, "Consequence 1: The Energy Tax of Avoidance". The Luminous Developmental Canon; Santa Anna, A. *Integrated Value Stream Mapping*, "Dimension One: Material Value". The Luminous Developmental Canon; Santa Anna, A. *Conscious Governance Models*, "The Cost of Shadow Exclusion". The Luminous Developmental Canon; Santa Anna, A. *The High Frequency Workbook*, "Money as Living Energy". The Luminous Developmental Canon; Santa Anna, A. *Ecstatic Economics*, on money as design. The Luminous Developmental Canon; Santa Anna, A. *The Luminous 100*, "Systems Thinking / Causal Loop Diagrams (Senge)". Luminous Prosperity Inc.

35. Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, 42(3), 335–370. https://doi.org/10.1016/j.jacceco.2006.01.002 (Summarised from the paper's published abstract as reported in secondary records; the paper was not reopened.)

36. Oyer, P. (1998). Fiscal year ends and nonlinear incentive contracts: The effect on business seasonality. *The Quarterly Journal of Economics*, 113(1), 149–185. https://doi.org/10.1162/003355398555559

37. Financial Accounting Standards Board. (2022). *Accounting Standards Update 2022-04, Liabilities—Supplier Finance Programs (Subtopic 405-50)*; International Accounting Standards Board. (2023). *Supplier finance arrangements: Amendments to IAS 7 and IFRS 7*. (Both from accounting firms' published summaries; neither text was reopened.)

38. Chen, H., Frank, M. Z., & Wu, O. Q. (2005). What actually happened to the inventories of American companies between 1981 and 2000? *Management Science*, 51(7), 1015–1031. https://doi.org/10.1287/mnsc.1050.0368

39. Aktas, N., Croci, E., & Petmezas, D. (2015). Is working capital management value-enhancing? Evidence from firm performance and investments. *Journal of Corporate Finance*, 30, 98–113. https://doi.org/10.1016/j.jcorpfin.2014.12.008

40. Sources for this chapter: The practices and their sources are those of Chapters 1 to 5: Gitman (1974) and Richards and Laughlin (1980) on the cash cycle; Little (1961) on queues; Goldratt's drum-buffer-rope, Lee, Padmanabhan and Whang (1997) and Sterman (1989) on stock; Long, Malitz and Ravid (1993) and Ng, Smith and Smith (1999) on trade credit; Klapper, Laeven and Rajan (2012), Murfin and Njoroge (2015), Barrot (2016) and Hofmann and Kotzab (2010) on suppliers; Roychowdhury (2006), Chen, Frank and Wu (2005) and Aktas, Croci and Petmezas (2015) on measurement. Full references are in those chapters' notes; Santa Anna, A. *Luminous Lakshmi Devotion: Grace, Mantra & the Living Goddess*, "Stagnation: When Flow Stops". The Luminous Developmental Canon; Santa Anna, A. *Luminous Entrepreneurship: Doing Business In and As Living Systems*, "Chapter 12 — Money as Lifeblood" and "Chapter 10 — Partners and Symbiosis". The Luminous Library; Santa Anna, A. *Adaptive Resource Orchestration*, "The Behavioral Cascade of Chronic Scarcity". The Luminous Developmental Canon; Santa Anna, A. *The High Frequency Workbook*, "Money as Living Energy: A Living Systems Reframe". The Luminous Developmental Canon; The time estimates in this chapter are planning guides from practice, not findings of a study; adjust them to the organisation.

41. Sources for this chapter: The sources behind these pages are given in full in the notes to Chapters 1 to 5: Gitman (1974), Richards and Laughlin (1980) and Little (1961) for pages 1 and 2; Goldratt and Cox (1984), Goldratt and Fox (1986), Lee, Padmanabhan and Whang (1997) and Sterman (1989) for pages 3 and 4; Long, Malitz and Ravid (1993), Ng, Smith and Smith (1999), Oyer (1998) and Larkin (2014) for pages 5 and 6; Klapper, Laeven and Rajan (2012), Murfin and Njoroge (2015), Barrot (2016), Hofmann and Kotzab (2010) and the FASB and IASB supplier-finance disclosure rules for page 7; Roychowdhury (2006), Chen, Frank and Wu (2005) and Aktas, Croci and Petmezas (2015) for pages 8 and 9; Santa Anna, A. *Conscious Governance Models*, "Movement 2: Commitment — Making Promises We Mean". The Luminous Developmental Canon; The times given are planning guides from practice, not findings of a study.

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