



BY CHARGE FORWARD

Embedded Payments Revenue Optimization

Seven levers across five stages: guide to growing payments revenue at each GMV.

WHAT THIS IS

A playbook for software executives - CEOs, CPOs, CFOs and heads of Fintech in vertical SaaS & AI platforms. Seven optimization levers across five maturity stages, and the dollar gap between top-quartile execution and median at each GMV tier.

How much payment revenue you're NOT making



Recoverable annual revenue and the dominant lever at each GMV stage.

GMV	MATURITY STAGE	RECOVERABLE ANNUAL REVENUE	TOP LEVER
\$50M	Stage 1-2	\$200K-\$500K	Model upgrade
\$100M	Stage 2	\$500K-\$1.5M	Model upgrade
\$250M	Stage 3	\$2.5M-\$4M	Attach rate
\$500M	Stage 4	\$4M-\$8M	Attach rate
\$750M	Stage 4	\$6M-\$10M	Attach rate
\$1B+	Stage 5	\$10M+	Attach rate

CHARGE FORWARD INSIGHT

These ranges are observed across the Charge Forward advisory portfolio. Mid-points; vertical and card mix shift actuals \pm 30%.

Run the math for your specific platform at chargeforward.io/payment-optimization.



What top-quartile execution looks like

Three public proof points anchor the framework. Same levers, three different stages of execution.

Toast

TOST

NET TAKE RATE

50 bps

\$159B GPV (FY24)

~86% of total revenue from FinTech Solutions. The framework's realized end state.

ServiceTitan

TTAN

NET TAKE RATE

29 bps

\$82.1B GTV (FY26)

Up from 22 bps a year prior. Management explicit that ~25 bps more is on the table.

Bill.com

BILL

ON TPV

31 bps

\$329.8B TPV (FY25)

Transaction fees ~69% of revenue. Different vertical, same prioritization framework.

THE PATTERN

Toast, ServiceTitan, and Bill.com are at Stages 5, 3, and 3 respectively. The bps gap between them is not strategy — it's execution against the same seven levers, at different points on the curve.

The Charge Forward Maturity Framework



Five stages of embedded payments maturity in vertical SaaS, anchored on GMV.

1	Capability \$0 - \$50M 10 - 35 bps	PSP referral <i>Stripe Connect Standard, Square Referral, PayPal Partner</i>	TEAM Part-time PM
2	PFaaS Transition \$50M - \$250M 40 - 65 bps	Light PFaaS / revenue-share <i>Stripe Connect Custom, NMI, WePay/Chase</i>	TEAM Payments Manager
3	Margin Expansion \$250M - \$500M 65 - 80 bps	Full PFaaS / Managed PayFac <i>Rainforest, Finix, Tilled, Payabli, Forward, Infincept</i>	TEAM Head of Payments
4	Orchestration \$500M - \$1B 75 - 90 bps	Managed PayFac + orchestration <i>Adyen for Platforms, Worldpay/Payrix Pro, Finix mid-market</i>	TEAM Head of Fintech
5	Fintech \$1B+ 90 - 120+ bps	Full Registered PayFac (optional) <i>Adyen Enterprise, Stripe Custom Registered, Finix Open</i>	TEAM Head of Fintech + Compliance dept.

CHARGE FORWARD INSIGHT

Roughly 90% of platforms spend their lifetime in Stages 2-4. Stage 5 is an optional terminal state, not an aspirational endpoint — most platforms shouldn't register.

Five payment models mapped to GMV



Model selection is the biggest single lever on take rate. Right model for your GMV tier > vendor choice within a tier.

GMV <\$10M	GMV \$10-\$50M	GMV \$50M-\$250M	GMV \$250M-\$1B	GMV \$1B+
PSP Referral	Light PFaaS	PFaaS / Managed PayFac	PayFac + Orchestration	Full Registered PayFac
Refer merchants to a processor; bounty or rev-share	Processor owns risk; platform negotiates buy-rates	PFaaS partner runs PayFac infrastructure	Managed PayFac + routing across processors	Platform registers with networks; full risk
NET TAKE RATE	NET TAKE RATE	NET TAKE RATE	NET TAKE RATE	NET TAKE RATE
0-20 bps	20-40 bps	40-80 bps	65-90 bps	100-120+ bps
KEY PROVIDERS	KEY PROVIDERS	KEY PROVIDERS	KEY PROVIDERS	KEY PROVIDERS
Stripe Connect Square Referral PayPal	NMI Stripe Connect Custom WePay/Chase	Rainforest, Finix Tilled, Payabli Forward, Infiniccept	Worldpay/Payrix Pro Adyen for Platforms Finix mid-market	Adyen Enterprise Stripe (custom) Finix Open

THE TRAP

\$50M GMV is the most common 'wrong model' boundary. Platforms above this threshold on a referral or light rev-share model can typically 2-3x payment revenue by graduating to PFaaS — without a single new customer.



The seven optimization levers

What each lever is, and what it's typically worth across \$50M-\$1B GMV.

1	Commercial model upgrade PSP referral → Full PFaaS → orchestration. Same volume, different economics.	TYPICAL IMPACT +25 to +40 bps
2	Attach rate expansion Share of merchant base on your embedded product. Median 50-60%, leaders 80-95%.	TYPICAL IMPACT +\$100K to +\$3.75M/yr
3	Contract negotiation Renegotiate processor markup within current model. Most platforms haven't.	TYPICAL IMPACT +5 to +35 bps
4	Interchange-level optimization L2/L3 data, downgrade prevention, MCC, 3DS. Highest ROI for B2B.	TYPICAL IMPACT +15 to +22 bps
5	Payment mix steering ACH for high-ticket invoices, regulated debit routing, CP push where viable.	TYPICAL IMPACT +8 to +18 bps
6	Pricing Reprice sell rate to merchant-perceived value. Back-book cohort increases.	TYPICAL IMPACT +10 to +18 bps
7	Ancillary revenue Surcharging in B2B. Instant Deposit. FX margin. New revenue lines, not cost.	TYPICAL IMPACT +5 to +15 bps

THE TAKEAWAY

Most platforms run two or three of the seven. Mature programs run all of the levers. The right sequence depends on stage.

Which lever is most important at your stage



Annual recoverable revenue, by lever and stage. Read down your stage column.

	Stage 1 \$0-50M	Stage 2 \$50-250M	Stage 3 \$250-500M	Stage 4 \$500M-1B	Stage 5 \$1B+
Model upgrade	—	\$210K #2	\$300K	\$300K	\$900K
Attach rate	\$113K #1	\$300K #1	\$1.2M #1	\$2.4M #1	\$3.8M #1
Contract negotiation	—	\$72K	\$500K #2	\$1.1M #2	\$2.1M #2
Interchange opt.	\$36K #2	\$120K #3	\$420K	\$700K #3	\$1.1M
Mix steering	\$24K #3	\$84K	\$360K	\$648K	\$1.1M
Pricing	—	\$84K	\$420K #3	\$648K	\$1.1M #3
Ancillary	—	\$48K	\$300K	\$540K	\$900K

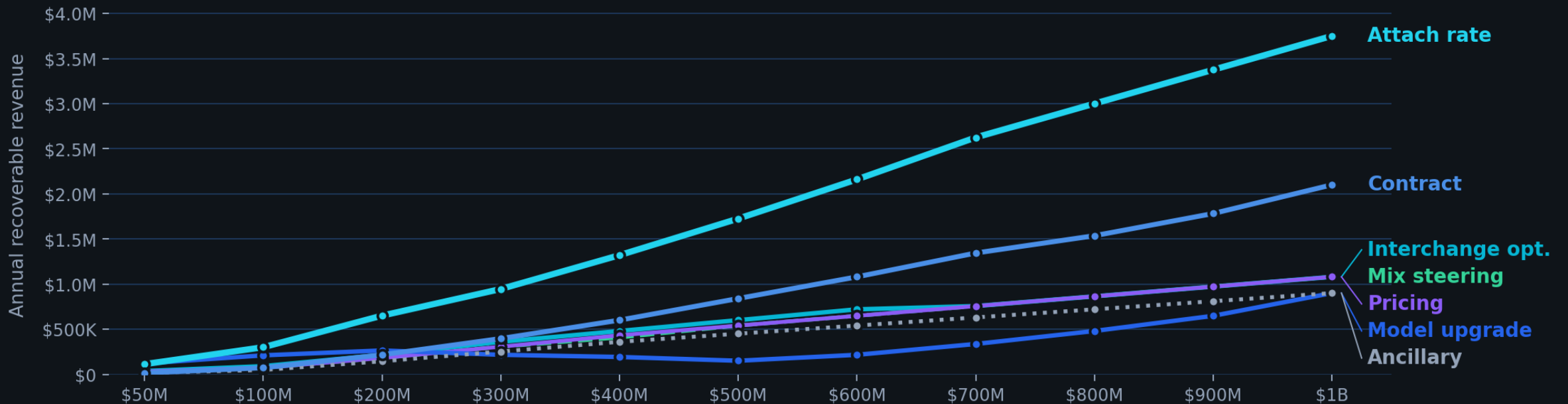
CHARGE FORWARD INSIGHT

Attach rate sweeps the top spot from Stage 3 onward. Contract negotiation compounds with scale. Model upgrade dominates at Stage 2 then fades. The same lever can be the #1 move at one stage and irrelevant at another.

Where the dollars are



Annual recoverable revenue by lever as GMV grows. Attach rate dominates above \$200M.



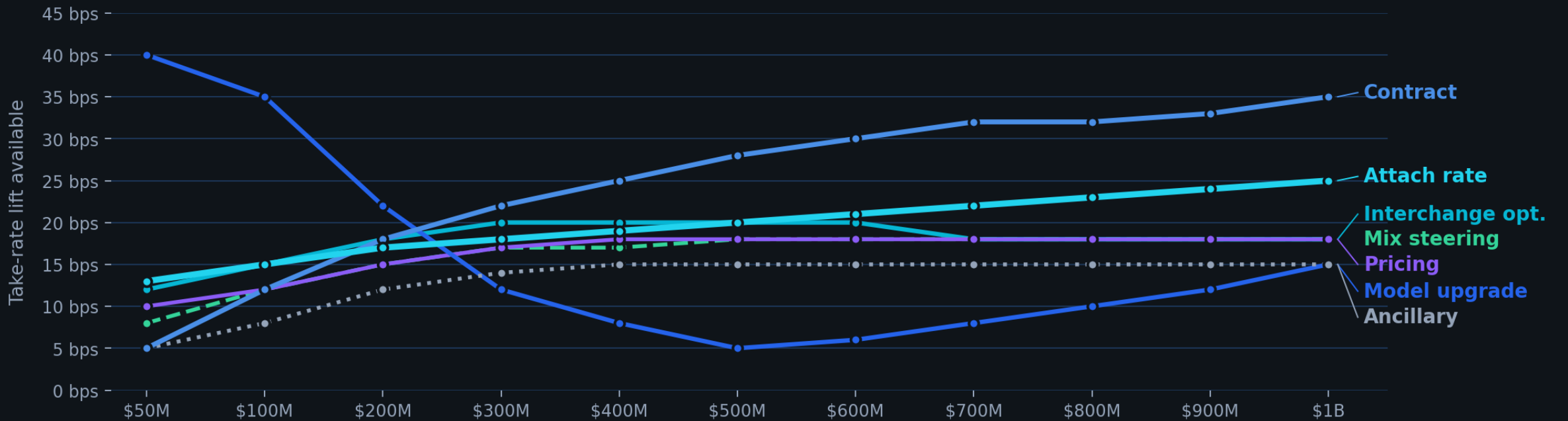
WHAT THIS SHOWS

The attach line goes nearly vertical relative to everything else. Contract negotiation overtakes model upgrade by \$300M. At \$1B, the gap between attach and the next-best lever is \$1.65M/year.

Take-rate lift by lever as GMV grows



Basis points of available take-rate lift. Model upgrade peaks at \$50M and fades; contract negotiation compounds.



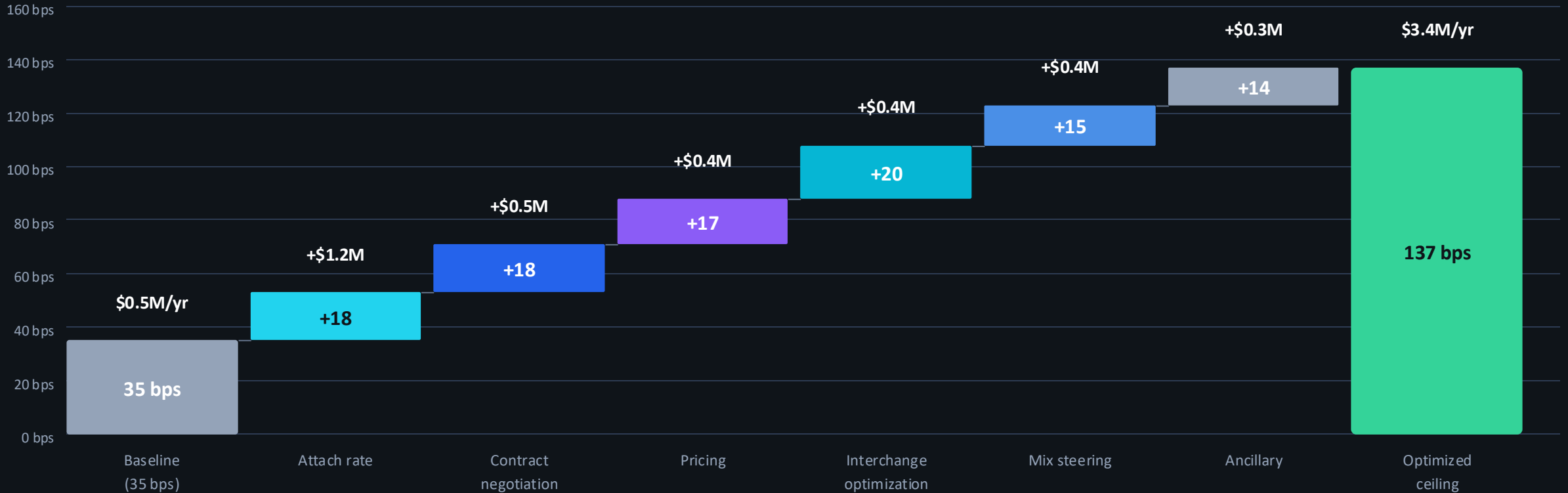
THE READ

Model upgrade is the only lever that peaks early and fades. Contract negotiation is the silent compounder. Attach rate sits on top of all of these — it's the volume effect, not a bps lever.

How much more a \$250M GMV platform can earn



From a 35 bps unoptimized baseline to a 137 bps optimized ceiling — ~\$3M of recoverable annual revenue.



HOW IT SCALES

At \$500M GMV the same exercise doubles to ~\$6M. At \$1B it doubles again to ~\$12M. The waterfall is the same shape at every stage — the bars just get taller.

Stage 1: Capability — don't worry about optimization yet



Build the foundation. Ship the product. Get to \$50M.

<p>GMV BAND</p> <p>\$0 - \$50M</p>	<p>TAKE RATE</p> <p>10 - 35 bps</p>	<p>TOP LEVER</p> <p>Foundation work</p>	<p>RECOVERABLE</p> <p>\$200K-500K/yr</p>
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- 1 Get the structural choice right**

PSP referral or Light PFaaS is the right answer below \$50M. Capture clean card-mix data so you have the analytical asset for the \$50M conversations.
- 2 Don't run an optimization project**

A few hundred K/year is real but the cost of attention to chase it is higher than the upside at this scale.
- 3 Validate product-market fit on payments**

Confirm merchants will adopt your payments product before you invest in PFaaS. Attach is the next milestone.

TOP THREE LEVERS

- 1 Enable capability to accept payments**
- 2 Learn: e.g. card-mix data capture**
- 3 Stay on PSP referral (0-20 bps)**

CHARGE FORWARD INSIGHT

Below \$50M, payment optimization isn't a project — you don't have the volume to negotiate, and the cost of attention is higher than the upside. Build the foundation.

Stage 2: PFaaS Transition — the model lever



The most expensive single mistake in vertical SaaS payments is staying on a referral past \$50M.

<p>GMV BAND</p> <p>\$50M - \$250M</p>	<p>TAKE RATE</p> <p>40 - 65 bps</p>	<p>TOP LEVER</p> <p>Model upgrade</p>	<p>RECOVERABLE</p> <p>\$500K-1.5M/yr</p>
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- 1 Migrate to PFaaS**

A \$100M GMV platform on Stripe Connect Standard earns ~\$100K/year on payments. The same volume on PFaaS earns \$400-450K. Migration is worth \$300-350K every year you delay it.
- 2 Audit interchange qualification**

If you have commercial card mix, L2/L3 data submission can be 50-100 bps on that volume. Cheap to implement, fast payback.
- 3 Start attach work in product**

Attach rate becomes the dominant lever at Stage 3. Begin instrumenting the funnel now so it's measurable when you cross \$250M.

TOP THREE LEVERS	
1	Model upgrade ~\$210K/yr at \$100M
2	Attach rate (50→75%) ~\$300K/yr
3	Interchange optimization ~\$120K/yr

CHARGE FORWARD INSIGHT

Staying on a referral past \$50M is the most expensive single mistake in vertical SaaS payments. The migration is worth \$300-350K every year you delay it.

Stage 3: Margin Expansion — attach rate takes over



Once the model is right, attach rate quietly takes over and stays the top lever for the rest of the curve.

GMV BAND \$250M - \$500M	TAKE RATE 65 - 80 bps	TOP LEVER Attach rate	RECOVERABLE \$2.5M-4M/yr
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1 Make attach rate the CEO metric

ServiceTitan went from 22 to 29 bps in FY26 on \$82.1B of GTV. Management explicit: next \$200M+ is in adoption, not pricing. Most platforms haven't started — attach lives in product, not finance.

2 Run a competitive RFP

The modal Stage 3 platform we work with has never run an RFP since original vendor selection. The markup was set when they had no leverage. Economics shift fast once they prove they can move volume.

3 Reprice the back book

Most platforms underprice for 18-24 months after the product is genuinely embedded. Tiered pricing by software plan is the second-largest sell-side lever.

TOP THREE LEVERS

- 1 **Attach rate**
~\$1.2M/yr
- 2 **Contract negotiation**
~\$500K/yr
- 3 **Pricing**
~\$420K/yr

CHARGE FORWARD INSIGHT

ServiceTitan is the public proof point: 22 to 29 bps in FY26, and management explicit that the next \$200M+ is in adoption, not pricing.

Stage 4: Orchestration — every lever on



The differentiator isn't which lever you pull. It's whether payments has a C-suite owner.

GMV BAND

\$500M - \$1B

TAKE RATE

75 - 90 bps

TOP LEVER

Attach rate

RECOVERABLE

\$4M-8M/yr

1

Add a C-suite payments leader

Rainforest 2026: platforms with C-suite payments leadership average 100 bps; without average 55 bps. A 45-bps spread on \$500M is \$2.25M/year. Same product, same vertical, different org chart.

2

Move to multi-processor orchestration

PFaaS-to-orchestration adds 5-15 bps via routing and auth-rate optimization at this volume. The model upgrade reappears as a graduation question.

3

Attach rate still wins

At \$750M GMV with a Stage 4 take rate of 82 bps, a 15-point attach lift is \$1.8M/year — about twice what any other single lever delivers.

TOP THREE LEVERS

1

Attach rate

~\$2.4M/yr

2

Contract negotiation

~\$1.1M/yr

3

Interchange/Mix/Pricing (tied)

~\$650-700K each

CHARGE FORWARD INSIGHT

The 45-bps Rainforest spread between platforms with a C-suite payments leader and platforms without is the highest-ROI org-design decision in vertical SaaS.

Stage 5: Fintech — operating-model question



The question shifts from "which lever" to "do we internalize." For most platforms, the answer is no.

GMV BAND

\$1B+

TAKE RATE

90 - 120+ bps

TOP LEVER

Attach rate

RECOVERABLE

\$10M+/yr

1

Full Registered PayFac is optional

Right answer only for platforms with specific fund-flow requirements. Outside those circumstances, Stage 4 Orchestration delivers equivalent economics at lower overhead.

2

Total upside continues to scale

A Stage 5 platform running all seven levers at top quartile typically captures \$10M+ of recoverable annual revenue against an unoptimized baseline.

3

Adjacent fintech becomes the question

At Stage 5, the conversation shifts to product expansion (lending, banking, cards). Payments becomes the data engine for everything else.

TOP THREE LEVERS

1

Attach rate

~\$3.75M/yr

2

Contract negotiation

~\$2.1M/yr

3

Adjacent fintech

separate playbook

CHARGE FORWARD INSIGHT

Stage 5 Full Registered PayFac is the right answer for a minority with specific fund-flow requirements. Most platforms should stay at Stage 4 Orchestration.

The single highest-ROI decision in vertical SaaS payments



Who owns payments at the exec level determines roughly half your achievable take rate.

PLATFORMS WITH C-SUITE PAYMENTS LEADERSHIP

100 bps

average net take rate

PLATFORMS WITHOUT

55 bps

average net take rate

= 45 bps spread

On \$500M of processed volume, that's \$2.25M/year. Same product, same vertical, different org chart.

THE MOVE

Add a payments leader — even fractional — before you run an optimization project. No individual lever fixes a gap that an org chart creates.

Source: Rainforest 2026 Vertical SaaS Embedded Payments Strategic Benchmarking Survey, presented at Vertex April 2026.

Three actions for the next two weeks



If you're in Stage 2 or 3, this is the highest-leverage sequence. Each is a 1-2 week project, not a quarter-long initiative.

01

Run the attach rate calculation

Active merchants on your embedded product divided by eligible merchants on the platform, segmented by vertical and cohort. If you're under your vertical's top-quartile benchmark, you have your top lever. Toast, AppFolio, Lightspeed, and ServiceTitan publish enough data to anchor the comparison.

02

Audit your downgrade rate

Pull your last 12 months of processor invoices. If your payments team cannot answer 'what is our downgrade rate' within 10 minutes, you have 15-25 bps recoverable that nobody is watching. The L2/L3 piece is the largest sub-component for B2B verticals.

03

Answer the leadership question

Don't run an optimization project until payments has a C-suite owner — even fractional. The 45-bps Rainforest spread is the highest-ROI org-design decision in vertical SaaS this decade, and no individual lever fixes a gap that an org chart creates.

HOW WE DO IT

These three actions are what we run with advisory clients in every engagement. The diagnostic part is fast – from hours to days. Execution takes time and effort over weeks and months.

60-second self-assessment



Built on the same framework you've just read. Output is the personalized version of this playbook for your platform.

FIVE INPUTS

Estimable in under a minute

- Annual GMV processed
- Vertical (restaurants, property mgmt, field svc, etc.)
- Current payments model (referral, PFaaS, etc.)
- Effective take rate (or 'I don't know')
- Payment attach rate (optional)

YOU GET

Five personalized outputs

- Your stage diagnosis
- Top three levers ranked by annual \$ impact
- Your specific recoverable revenue per year
- The gap to your vertical's top-quartile ceiling
- One-page PDF for your next board meeting

Try it: chargeforward.io/payment-optimization

Four resources to learn more



You've located your stage and your top lever. Here's where to go from here.

01 · READ THE FULL GUIDE

The Embedded Payments Guide

Twelve chapters on payment economics, optimization, vendor selection, attach rate, data, and adjacent fintech.

payments.chargeforward.io

02 · PICK THE RIGHT MODEL

Payment Model Fit Navigator

Interactive tool that walks the five-question decision framework and outputs a stage-specific recommendation.

chargeforward.io/tools

03 · QUANTIFY THE GAP

Payments Revenue Calculator

Plug in your GMV, vertical, and current take rate. Returns recoverable revenue and the top-3 ranked levers.

chargeforward.io/tools

04 · GET ADVISORY SUPPORT

Engage Charge Forward directly

Payment diagnostic and optimization engagements. Stage 2-4 vertical SaaS platforms.

chargeforward.io/contact



Thank you

Resources:

chargeforward.io/payment-optimization

payments.chargeforward.io