Practitioner Paper

FX Hedging for Buy-and-Hold Equity Portfolios

Why rolling forwards persist, when they fail, and how options add value under real-world constraints

Version 2, December 2025

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1. Executive Summary

Rolling FX forwards aren't wrong – but they are structurally limited.

Most buy-and-hold equity portfolios hedge FX using rolling 1–3 month forwards. This approach gets routinely criticised as lazy, or sloppy risk management.

That criticism is incomplete.

Rolling forwards persist because they optimise for operational reality: deep liquidity, easy resizing, minimal unwind risk, and governance simplicity.

This paper explains:

- When rolling FX forwards make sense for equities – and when they don't
- Why tenor matching usually fails for indefinite exposures
- How carry dominates long-term outcomes, not volatility
- Why hedge ratios should be dynamic, rather than static
- How FX options restore convexity and reduce pro-cyclicality
- How mandatory hedging changes the objective from optimisation to damage control

This framework is designed for practitioners implementing FX hedges in institutional equity portfolios.

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2. The Nature of FX Exposure in Equities

Equity portfolios present a unique FX hedging problem. Unlike bonds or loans, they have:

- No contractual maturity
- No principal repayment event
- Uncertain exit timing
- Undefined holding periods

Yet the FX exposure persists for as long as the portfolio exists – and in many cases, that's indefinite.

Economically, equity FX risk is:

- Long duration – it doesn't terminate naturally
- Open-ended – there's no fixed exit date
- Path-dependent – cumulative returns matter, not just terminal values

This creates an immediate problem: there is no "perfect" hedge. Only approximations that trade off different risks and costs against organisational constraints.

Most academic FX hedging theory assumes a fixed horizon and known cashflows. Equities violate both assumptions. That's why standard hedging prescriptions – tenor matching, duration-neutral structures, full neutralisation – often fail in practice.

The task isn't to eliminate FX risk. It's to shape it intelligently under real constraints.

3. Why Rolling Short-Dated FX Forwards Dominate

Despite endless criticism from consultants and academics, rolling short-dated forwards remain the dominant FX hedge structure for institutional equity portfolios.

This isn't accident or negligence. It's organisational Darwinism.

Rolling forwards persist because they optimise for **operational reality**, not textbook elegance:

Deep liquidity and tight pricing
1-month and 3-month FX forwards trade in enormous size with minimal bid-offer spreads. You can hedge billions without moving the market. Try doing that in 10-year FX forwards for anything outside G3 currencies (even if you could, you should be using cross currency swaps for long dated FX hedging).

Easy resizing with tactical reallocations
Equity portfolios change constantly – new mandates, divestments, rebalances, manager changes. Short-dated forwards let you adjust hedge notionals without unwinding long-dated positions at a loss.

Minimal unwind risk
If you need to exit a position, a 1-month forward is far easier and cheaper to terminate than a 5-year structure with deep negative mark-to-market.

For managed equity portfolios with active turnover, tactical tilts, or uncertain holding periods, long-dated FX hedges often create **more** problems than they solve.

Rolling forwards survive because they are **robust**, not because they are optimal.

4. What Rolling Forwards Actually Do

Let's be precise about what rolling short-dated forwards deliver – and what they don't.

They do:

- **Reduce short-term FX volatility** – month-to-month swings are dampened
- **Smooth reporting outcomes** – quarterly returns become more predictable
- **Limit drawdown amplification from FX shocks** – when equity markets fall and FX moves against you simultaneously, forwards prevent double damage

They do not:

- **Neutralise long-term FX risk** – cumulative drift and carry effects compound over time
- **Stabilise terminal base-currency returns** – path dependency remains unhedged
- **Remove FX path dependency** – sequence of returns still matters
- Rolling forwards **shape volatility**. They do not eliminate FX exposure.

If your mandate is "reduce quarterly volatility and prevent extreme drawdowns," rolling forwards do exactly what you need.

If your mandate is "neutralise long-term FX risk and deliver currency-independent returns," they don't–and nothing else will either, at least not without massive cost or tail risk.

This distinction matters. Most governance debates conflate the two objectives, then blame the hedge when it delivers one but not the other.

They shape volatility. They do not eliminate FX risk.

5. Hedge Ratios – Reality, Not Dogma

There is no universal optimal hedge ratio for equities. Anyone selling you one is either misinformed or has a product to push.

Observed institutional hedge ratios vary by jurisdiction and mandate:

- 0–30%: Growth-oriented portfolios, long investment horizons, diversified base-currency liabilities
- 30–60%: Most balanced mandates, moderate risk tolerance
- 60–80%: Liability-aware investors, shorter horizons, regulatory constraints
- 80–100%: Common under mandatory hedging regimes (Australian MySuper, some European pension regulation)

These ranges reflect global institutional practice. Australian super funds cluster higher (70-100%) due to MySuper requirements and trustee conservatism. European pension funds vary dramatically by country. US endowments typically hedge less (20-40%) due to longer horizons and different liability structures.

A static 100% hedge ratio is typically about **optics**, not economics. **In some regulatory and trustee environments, optics are the binding constraint – and must be managed explicitly.**

Why full hedging often fails:

1. **Carry drag compounds** – if you're in CHF or JPY and hedging USD or AUD equities, you pay away 2–4% per annum indefinitely
2. **FX can provide natural diversification** – during equity drawdowns, some currency moves are stabilising, not amplifying
3. **Rebalancing friction** – 100% hedges require constant resizing as equity values fluctuate, creating operational drag

The right hedge ratio depends on:

- Base currency carry characteristics
- Liability structure and horizon
- Regulatory requirements
- Governance risk tolerance
- Portfolio volatility and correlation patterns

Set a **strategic band** (e.g., 40–60%), bias it using carry economics, and adjust dynamically when dislocations appear.

Static dogma creates predictable losses.

6. Rebalancing Friction with Static 100% Hedge Ratios

Static hedge ratios create operational drag that is rarely quantified but often material.

The problem:

Equity portfolios change value constantly. If your policy is "maintain 100% FX hedge at all times," you must continuously resize hedges as equity values fluctuate.

Example:

- Portfolio: USD 200m S&P 500 equities
- Policy: 100% hedged
- Hedge: USD 200m FX forwards

Month 1: S&P falls 8%

- Equity value: now USD 184m
- Hedge: still USD 200m
- **Over-hedged by USD 16m** (8.7% over policy)

Required action:

- Reduce hedge by USD 16m (unwind USD 16m forwards)
- Transaction cost: 5 bps = USD 8,000
- Operational time: 2 hours (execution, confirmation, settlement, accounting)

Month 2: S&P rises 10%

- Equity value: now USD 202.4m
- Hedge: now USD 184m (after Month 1 reduction)
- **Under-hedged by USD 18.4m** (9.1% under policy)

Required action:

- Increase hedge by USD 18.4m
- Transaction cost: 5 bps = USD 9,200
- You just whipsawed: reduced in Month 1, increased in Month 2

Over 12 months of normal equity volatility (say 15% annualised):

- Expected number of rebalances needed to stay within ±5% of policy: 6-8 times
- Cumulative transaction costs: ~40-50 bps
- Operational burden: 12-16 hours of treasury time

Over 10 years:

- Cumulative transaction costs: 4-5% of portfolio
- Plus: opportunity cost of treasury time

- Plus: governance friction every time you breach policy limits

Alternative approach: Dynamic hedge ratio with bands

Policy: "Maintain 80-100% hedge ratio, rebalance when outside bands"

With ±20% bands around 90% target:

- S&P falls 8% → hedge ratio rises to 98% → still within bands, no action required
- S&P rises 10% → hedge ratio falls to 82% → still within bands, no action required
- Only rebalance when ratio breaches 80% or 100%

Result:

- Rebalancing frequency: 2-3 times per year instead of 6-8
- Transaction costs: 15-20 bps annually instead of 40-50 bps
- Operational burden: 75% reduction

Cumulative difference over 10 years: 2-3% of portfolio value

This is why sophisticated portfolios use bands, not point estimates. The "precision" of 100% hedging is illusory – you're constantly chasing a moving target at a cost of 2-5% per decade.

7. Carry Is the Dominant Driver

Most FX hedge discussions fixate on volatility. That's the wrong variable.

Here's the uncomfortable truth:

- Over long horizons expected FX returns approximate zero, while hedge costs do not.
- Interest rate differentials compound indefinitely, regardless of whether spot FX moves

Carry exists because interest rate differentials compound, while spot FX does not reliably offset them over time.

Hedge costs, however, are systematic and one-directional

This asymmetry is why FX hedging outcomes diverge so dramatically across base currencies.

If carry is never discussed in governance forums, it is still being paid – just without acknowledgement.

In low-rate base currencies (CHF, JPY, often SGD):

- FX hedging foreign equities is **structurally expensive**
- You pay forward points to hedge USD, EUR, AUD exposures

- Over 10 years, cumulative carry drag can exceed 30%
- Unhedged FX can provide **natural drawdown protection** during risk-off periods

Result: Lower hedge ratios often improve risk-adjusted returns.

In high-rate base currencies (AUD, NZD, some EM):

- Hedging foreign equities may **collect** forward points
- Volatility reduction comes with positive carry
- Hedging can simultaneously reduce risk **and** improve returns

Result: Higher hedge ratios are economically attractive.

Same instrument. Opposite outcome.

Carry isn't a secondary consideration. It's the dominant driver of long-term FX hedge performance.

If your governance framework mandates full hedging without reference to carry, you've hard-coded value destruction into the portfolio.

7.1 Quantifying Carry Over Time: A Worked Example

To make carry impact concrete, consider two identical portfolios with different base currencies hedging the same USD equity exposure.

Setup:

- Exposure: USD 100 million in S&P 500 equities
- Holding period: 10 years
- Hedge ratio: 70% (USD 70m hedged with rolling 3-month forwards)

Portfolio A: AUD base currency

Market conditions:

- Average USD 3-month rate: 4.5%
- Average AUD 3-month rate: 3.0%
- Forward points: -1.5% p.a. (AUD investor pays to hedge USD)
- Transaction cost: 5 bps per roll × 40 rolls = 200 bps cumulative

10-year outcome on hedged portion:

- Carry cost: -1.5% p.a. × 10 years = -15.0% cumulative (before compounding)
- With compounding: approximately -16.5%
- Transaction costs: -2.0%
- **Total structural cost: -18.5% on the hedged 70%**
- **Impact on total portfolio: -18.5% × 70% = -12.95%**

Unhedged 30% of portfolio:

- Subject to whatever FX path occurs
- If spot unchanged over 10 years: 0% contribution
- If AUD strengthens 10%: +3.0% contribution
- If AUD weakens 10%: -3.0% contribution

Net portfolio impact (assuming flat FX):

- Hedging cost: -12.95%
- Unhedged contribution: 0%
- **Total FX drag: -12.95%**

Even with zero net FX movement, the hedge cost 13% of portfolio value over a decade.

Portfolio B: JPY base currency (same USD equity exposure)

Market conditions:

- Average USD 3-month rate: 4.5%
- Average JPY 3-month rate: 0.1%
- Forward points: +4.4% p.a. (JPY investor earns carry from hedging USD)
- Transaction cost: 5 bps per roll × 40 rolls = 200 bps cumulative

10-year outcome on hedged portion:

- Carry gain: +4.4% p.a. × 10 years = +44% cumulative (before compounding)
- With compounding: approximately +54%
- Transaction costs: -2.0%
- **Total structural gain: +52% on the hedged 70%**
- **Impact on total portfolio: +52% × 70% = +36.4%**

Net portfolio impact (assuming flat FX):

- Hedging benefit: +36.4%
- Unhedged contribution: 0%
- **Total FX contribution: +36.4%**

The JPY investor gained 36% from hedging. The AUD investor lost 13% from hedging. **That's a 49 % difference purely from carry.**

Same asset. Same hedge structure. Opposite economic outcome.

Why this matters for hedge ratios:

If you're an AUD investor, a 70% hedge ratio costs you 13% over 10 years for the privilege of reducing quarterly volatility. That might be worth it – or it might not. The decision should be explicit.

If you're a JPY investor, a 70% hedge ratio adds 36% over 10 years while also reducing volatility. Higher hedge ratios become economically attractive, not just governance-driven.

If your governance framework mandates 70% hedging without reference to carry environment, you've either:

1. Hard-coded 13% value destruction (AUD base), or
2. Left 16% on the table by not hedging at 100% (JPY base)

Carry isn't a secondary consideration. **It is the dominant driver of long-term FX hedge performance.**

8. FX as Natural Diversification: Asymmetric Correlation During Stress

Not all currency exposures amplify equity risk. Some provide natural hedging during drawdowns.

The pattern:

During equity market stress, safe-haven currencies (JPY, CHF, sometimes USD) tend to strengthen, while risk currencies (AUD, NZD, EM) weaken. EUR behaviour varies by crisis.

Implication for hedging:

If you're an AUD investor holding USD or EUR equities:

- During equity drawdowns, AUD typically weakens
- This provides a natural offset: equity falls, but FX gain cushions the blow
- Hedging removes this diversification benefit

If you're a JPY investor holding AUD or EM equities:

- During equity drawdowns, JPY typically strengthens
- This amplifies losses: equity falls, and FX losses compound the damage
- Hedging prevents this amplification

Historical example: March 2020

Investor Base	Equity Exposure	Equity Return	FX Move	Unhedged Total	Hedged Total
AUD	S&P 500	-34%	AUD weakened 7%	-27%	-34%
JPY	S&P 500	-34%	JPY strengthened 9%	-43%	-34%

The AUD investor who hedged made equity losses worse by removing the natural FX offset. The JPY investor who hedged prevented amplification.

Same crisis. Same equity exposure. Opposite hedging implications.

What this means for hedge ratios:

Currency-specific hedge ratios make more sense than portfolio-wide blanket policies:

AUD base investors:

- Hedge EUR, GBP exposures moderately (50-70%) – less natural diversification
- Hedge USD exposures lightly (30-50%) – some diversification benefit
- Hedge JPY, CHF exposures minimally (0-30%) – strong diversification benefit
- Hedge EM exposures more heavily (70-90%) – correlation amplifies risk

JPY base investors:

- Hedge AUD, NZD exposures heavily (70-90%) – correlation amplifies risk
- Hedge USD, EUR moderately (50-70%)
- Hedge EM exposures very heavily (90-100%) – double amplification during stress

One-size-fits-all hedge ratios ignore this asymmetry. A blanket 70% policy might be:

- Over-hedging JPY exposure (destroying natural diversification)
- Under-hedging EM exposure (accepting amplification risk)

If governance cannot tolerate currency-specific policies, at least acknowledge the trade-off: you're accepting suboptimal outcomes for operational simplicity.

9. Why Tenor Matching Fails for Equities

Tenor-matched hedging is the right answer for bonds. It's the wrong answer for equities.

Why tenor matching works for bonds:

- There is a **maturity date**
- There is a **principal repayment**
- Cashflows are contractual and knowable

You can match hedge maturity to bond maturity, eliminate mark-to-market volatility, and lock in a known base-currency return.

Why tenor matching fails for equities:

Equities offer **neither** a maturity nor a principal repayment. Extending hedge tenors introduces new problems:

1. Termination risk
If you hedge a 10-year horizon but the portfolio changes in year 3, you're forced to unwind a hedge with 7 years remaining. If FX has moved against the hedge, you crystallise a loss that has nothing to do with investment performance.

2. Counterparty credit consumption
Long-dated FX forwards consume meaningful credit limits. For a $500m equity portfolio hedged at 50%, a 10-year tenor might tie up $15–25m of credit capacity that could be used elsewhere.

3. Mark-to-market amplification
Long-dated forwards have much higher DV01 and gamma. Small FX moves create large, unrealised gains or losses, which become operational and governance headaches even when they're economically neutral.

4. Illiquidity
Outside G3 pairs, long-dated FX markets are thin. Bid-offer spreads widen materially, execution becomes lumpy, and resizing becomes expensive.

This is why rolling structures dominate – not because of **ignorance**, but because of **structural mismatch**.

Short-dated hedges acknowledge the reality: equity FX exposure is indefinite, portfolios change constantly, and flexibility matters more than theoretical elegance.

9.1 Numerical Example: Termination Risk in Practice

Scenario:

- Australian super fund allocates AUD 400m to US equities (USD 260m at 0.6500 spot)
- Strategic asset allocation suggests 10-year holding period
- CIO implements 10-year FX forward to "match the horizon"
- Locked rate: 0.6500

Year 5: Strategic asset allocation review

- Board decides to reduce international equities from 35% to 25%
- Need to divest USD 100m of US equities
- Must also reduce FX hedge by USD 100m

The problem:

- Current spot: 0.7200 (AUD has strengthened 10.8%)
- The 10-year forward locked at 0.6500 is now deeply in-the-money
- Mark-to-market gain on the hedge: approximately USD 10.8m (or AUD 15m)

Termination options:

Option 1: Unwind USD 100m of the forward

- Pay termination fees: ~15-20 bps on USD 100m = USD 150-200k
- Crystallise AUD 1.5m accounting gain (taxable event)

- Trigger questions from auditors about "why are you exiting a profitable hedge?"
- Create performance attribution complexity (hedge gain offset by portfolio reduction)

Option 2: Keep the hedge, be over-hedged

- Now 90% hedged instead of policy 70%
- Governance breach
- Must get Board approval for exception
- Opens questions about why hedge wasn't sized correctly in first place

Option 3: Enter offsetting positions

- Sell a 5-year forward to offset USD 100m
- Now have two hedges running in opposite directions
- Creates basis risk (5-year forward rate ≠ remaining 5 years of 10-year forward)
- Doubles operational complexity
- Doubles credit limit consumption

What should have been done:

Use rolling 6-12 month forwards from the start. When divestment occurred:

- Simply reduce the next forward roll by USD 100m
- No termination fees
- No governance breach
- No accounting complexity
- Clean and simple

Cost of flexibility: Carry drag of ~1.5% p.a. over 5 years = ~7.5% on hedged portion

Benefit of flexibility: Avoided termination costs, governance issues, and operational complexity worth far more than 7.5% in institutional settings.

This is why rolling forwards dominate despite being "theoretically suboptimal." The optionality to resize without penalty is worth the carry cost.

10. A Note on Cross-Currency Swaps

This paper focuses on FX forwards and options. I'm deliberately not covering cross-currency swaps (CCS) in detail, even though they're the superior instrument for long-dated FX hedging.

Here's why:

For hedges beyond 2 years, you should generally be using CCS, not rolling forwards.

Cross-currency swaps offer:

- Better pricing on longer tenors (you're trading funding spreads, not just forward points)
- Natural matching of equity dividend flows.
- Lower all-in costs for multi-year horizons
- More efficient counterparty credit usage

Unlike forwards (which only exchange notional at maturity), CCS can be structured with periodic cashflow exchanges that align with expected dividend receipts from the equity portfolio. This creates a more natural economic hedge – you're converting both capital and income streams at locked rates. For high-dividend-yield equity portfolios (utilities, REITs, infrastructure), this is particularly valuable

But they introduce complexity that warrants separate treatment:

- Basis swap dynamics and pricing conventions
- Collateral and CSA implications
- Mark-to-market volatility and accounting treatment
- Termination mechanics and breakage costs
- Operational infrastructure requirements

Most importantly, CCS assume you're confident about a **longer holding period**. For buy-and-hold equity portfolios with genuinely long horizons (10+ years) and stable allocations, they're the right answer.

But that describes a minority of institutional equity mandates.

Most portfolios have:

- Uncertain holding periods
- Active manager turnover
- Tactical rebalancing
- Governance structures that prefer simpler instruments

For those portfolios – which is most of them – rolling short-dated forwards remain the pragmatic choice, despite their limitations.

In practice, many portfolios overestimate their holding horizon. When behaviour doesn't match stated intent, CCS quickly become the wrong instrument.

For genuinely long-dated equity exposures, CCS structures warrant deeper consideration than short-dated forward rolls.

For everyone else, this paper gives you the framework you need.

11. The Role of FX Options

FX options are not a replacement for forwards. They are a **convexity tool**.

Used correctly, they materially improve equity FX outcomes by addressing the structural weaknesses of rolling forwards.

They add value by:

1. Preserving upside FX participation
When FX moves in your favour, options let you benefit. Forwards lock you out of gains.

2. Protecting against extreme downside
During tail events, options provide asymmetric protection. This matters when equity and FX risks amplify each other.

3. Reducing pro-cyclicality during stress
Forwards force you to rehedge at the worst possible time – when FX has moved sharply and carry has widened. Options reduce this forced behaviour.

4. Avoiding forced re-locking of bad carry
When forward points widen against you, rolling forwards locks in elevated hedging costs for the next period. Options break this cycle.

Example

- You're hedging USD equities from an AUD base
- Normal carry cost: 150 bps p.a.
- During stress, USD rates spike (central bank tightening or funding stress)
- Forward points now cost 300 bps p.a.

With rolling forwards:

You must roll your hedge at 300 bps or go unhedged. If you roll, you've locked in double the normal carry cost for the next 3 months. If this happens repeatedly, cumulative carry drag accelerates.

With options:

Your existing put protection remains in place regardless of forward point movements. You can wait for carry to normalise before establishing new forward hedges. You're not forced to lock in terrible levels during temporary dislocations.

This matters most during funding stress (e.g. March 2020, October 2008), when forward points can spike 200–400 bps for extended periods.

11.1 Common structures:

1. Put spreads

Structure: Buy put at strike A, sell put at strike B (lower)

Example:

- Portfolio: AUD 100m in USD equities, currently unhedged

- Spot: 0.6500
- Buy AUD put at 0.6200 (4.6% OTM): cost 2.0%
- Sell AUD put at 0.5700 (12.3% OTM): receive 0.5%
- Net cost: 1.5% annually

Payoff:

- Protected between 0.5700 and 0.6200 (max 4.6% FX loss)
- Naked below 0.5700 (losses continue beyond this level)

When to use:

- Primarily worried about moderate FX moves (5-10%), not catastrophic tail risk
- Premium budget is constrained
- Comfortable accepting risk beyond 10-15% adverse moves

Compared to vanilla put:

- Vanilla put at 0.6200 would cost 2.0% (33% more expensive)
- You've given up protection beyond 12.3% to save 0.5% annually
- Over 5 years, that's 2.5% saved – meaningful if extreme tails are unlikely

2. Collars (Zero-Cost Structures)

Structure: Buy put at strike A, sell call at strike B (higher), sized to net zero premium

Example:

- Portfolio: AUD 200m in USD equities, currently 50% hedged with forwards
- Want to replace forwards with zero-cost collar
- Spot: 0.6500
- Buy AUD put at 0.6200 (4.6% OTM): cost 2.0%
- Sell AUD call at 0.7150 (10% OTM): receive 2.0%
- Net cost: 0%

Payoff:

- Protected below 0.6200 (maximum 4.6% FX loss)
- Participate in AUD weakness up to 0.7150
- Capped above 0.7150 (give up gains beyond 10% AUD strength)

When to use:

- Governance requires "hedging" but carry cost of forwards is painful
- Believe FX will stay range-bound
- Can tolerate giving up upside beyond 10% to avoid premium cost

Comparison to 50% forward hedge:

Over 5 years with 1.5% carry cost:

- 50% forwards cost: 7.5% cumulative
- Collar cost: 0%
- Savings: 7.5%

Trade-off: You've capped upside at 10% AUD strength. If AUD appreciates 20%, you leave 5% on the table (20% × 50% unhedged - 10% cap = 5% foregone).

Break-even: If AUD strengthens more than 17.5% cumulatively (7.5% saved carry + 10% cap), forwards would have been better. For most paths, collar wins.

3. Seagulls (Partially Funded)

Structure: Buy put spread, sell call to reduce cost further

Example:

- Buy AUD put at 0.6300 (3% OTM): cost 2.5%
- Sell AUD put at 0.5500 (15% OTM): receive 0.5%
- Sell AUD call at 0.7000 (7.7% OTM): receive 1.0%
- Net cost: 1.0% annually

Payoff:

- Protected between 0.6300 and 0.5500
- Exposed below 0.5500 (forced to buy AUD at 0.5500 even if spot is 0.5000)
- Capped above 0.7000

Critical risk: Below 0.5500, losses accelerate materially due to the sold put:

1. Portfolio loses from FX move
2. Sold put forces you to buy AUD at 0.5500, creating additional loss

Historical scenario (March 2020):

- AUD fell from 0.6700 to 0.5500 in 3 weeks (17.9% collapse)
- A seagull with sold put at 0.5500 would have just avoided detonation
- Any sold put above 0.5500 would have created amplified losses

When to use:

- Need some protection but premium budget is very tight
- Genuinely comfortable that catastrophic moves (>15%) are extremely unlikely or acceptable
- Can explain sold puts to governance (not always possible)

When NOT to use:

- During elevated macro uncertainty

- If governance cannot tolerate downside acceleration
- If you can't monitor positions actively

4. Vanilla Puts (Protective Hedges)

Structure: Simple put option with no exotic features

Example:

- Buy AUD put at 0.6500 (at-the-money): cost 4.0% annually
- Or buy AUD put at 0.6200 (5% OTM): cost 2.0% annually
- Or buy AUD put at 0.5850 (10% OTM): cost 1.0% annually

When to use:

- Downside protection is critical
- Upside participation is valuable
- Can justify premium cost to governance
- Alternative to 100% forward hedge when carry is expensive

Example comparison (JPY base investor hedging USD):

Scenario: Forward points would earn you +4% p.a., so forwards are attractive

- 100% forwards: Collect +4% annually while being fully hedged
- 100% puts (5% OTM): Pay -2% annually but preserve upside

Decision: Use forwards. The carry is too attractive to give up.

Scenario: Forward points cost you -3% p.a. (AUD or CHF base)

- 100% forwards: Pay -3% annually to be fully hedged
- 100% puts (5% OTM): Pay -2% annually but preserve upside

Decision: Use puts. Cheaper than forwards and you keep upside optionality.

The choice isn't "options vs forwards." It's "what structure fits my carry environment and risk tolerance?"

When to use options:

- Carry environment is unfavourable but some hedging is required
- Tail risk is elevated (geopolitical stress, central bank intervention risk)
- You expect mean reversion but want protection during the path
- Governance frameworks allow options (many don't)

Options aren't free. They cost premium or opportunity cost. But used **selectively**, they materially improve equity FX outcomes compared to naked rolling forwards.

11.2 Accounting Treatment: Options vs Forwards

FX options and forwards receive different accounting treatment under IFRS 9/AASB 9, which affects their attractiveness to some portfolios.

Forwards:

- Typically qualify for hedge accounting if properly documented
- Changes in fair value can be deferred (cash flow hedge) or offset against hedged item (fair value hedge)
- Straightforward to demonstrate "highly effective" relationship (80-125% effectiveness required)

Options:

- More difficult to qualify for hedge accounting
- Intrinsic value and time value must be separated
- Time value decay goes through P&L immediately (cannot be deferred)
- Effectiveness tests harder to pass due to non-linearity

Practical implication:

For portfolios that demand smooth quarterly reported earnings, forwards may be preferred even when options are economically superior – simply because forwards avoid immediate P&L volatility.

This is a governance constraint, not an economic one. But it's binding in many institutional settings.

Mitigation:

If your auditors/governance cannot tolerate option P&L volatility:

1. Use options for a smaller portion of total hedge (10-20%)
2. Focus on at-the-money or slightly OTM options (higher intrinsic value, lower time value)
3. Accept that some economic optimisation is sacrificed for accounting simplicity
4. Document the trade-off explicitly: "We use forwards for 60% of hedging to maintain hedge accounting treatment, and options for 20% where tail risk management justifies P&L volatility"

12. Mandatory FX Hedging – When Regulation Overrides Economics

Some jurisdictions impose mandatory FX hedging requirements on institutional portfolios. Australia's MySuper framework, parts of Swiss pension regulation, and certain Asian insurance mandates all include prescribed hedge ratios or constraints.

When hedging is compulsory, the game changes completely.

Optimisation stops. Compliance becomes the objective.

What mandatory hedging does:

- **Fixes hedge ratios** – often at 100% or within narrow bands
- **Pushes portfolios toward rolling short-dated forwards** – because flexibility is essential when you have no choice about hedging
- **Hard-codes carry drag into returns** – regardless of economic attractiveness

The real task becomes: **minimising second-order damage while staying compliant**.

Practical responses:

1. Use rolling forwards for baseline compliance
They're liquid, operationally simple, and meet regulatory tests without controversy.

2. Deploy FX options to reduce tail risk
Even under mandatory hedging, you can improve outcomes by replacing a portion of forwards with options structures. This reduces:

- Pro-cyclicality during stress
- Forced rehedging at terrible carry levels
- Amplification of equity drawdowns

3. Stabilise capital metrics
For insurers and banks, FX hedges affect regulatory capital calculations. Options can smooth RWA and capital volatility better than forwards alone.

4. Be explicit about trade-offs in governance documents
Don't pretend mandatory hedging is economically optimal. Document the cost, quantify the carry drag, and explain why you're prioritising compliance over return maximisation. This protects you when trustees or regulators ask questions later.

Under mandatory regimes, FX options become **more** valuable, not less. They're the main tool left for improving outcomes when strategy is dictated by regulation.

12.1 Documenting the cost explicitly:

When regulation forces suboptimal hedging, your fiduciary duty shifts from "optimise returns" to "comply with rules while minimising collateral damage."

Best practice: Include this analysis in annual reporting:

"Current policy requires 80% FX hedging. At prevailing interest differentials (USD +250 bps vs AUD), this costs approximately 200 bps annually on the hedged portion, or AUD 4 million p.a. on our USD exposure. Over 10 years at current rates, cumulative cost would be approximately 22% of hedged notional.

Alternative structures (60% forwards + 20% options) would reduce annual cost by approximately AUD 1.5 million while maintaining equivalent downside protection. However, they would require policy amendment to permit lower minimum hedge ratios.

The Board has determined that policy certainty and regulatory compliance outweigh the economic cost. This trade-off is documented and will be reviewed annually."

This creates a paper trail that:

1. Proves you understood the economics
2. Quantified alternatives
3. Deferred to governance authority
4. Protected yourself when questioned later

Silence about suboptimal mandates doesn't protect you. Documentation does.

13. A Realistic Framework

Here's a practical approach that works across most institutional equity portfolios:

1. Set a strategic hedge band

Not a point estimate. A range that reflects uncertainty about optimal positioning.

Example: 40–60% for a balanced AUD-based portfolio with diversified equity exposures.

2. Bias it using carry economics

If you're in a low-rate base currency (CHF, JPY), bias toward the lower end of the band. If you're in a high-rate base currency (AUD, NZD), bias toward the upper end.

Monitor forward points quarterly and adjust when dislocations appear.

3. Use rolling forwards for compliance and flexibility

1-month or 3-month tenors, rolled systematically. This handles governance requirements, audit trails, and operational simplicity.

4. Deploy FX options selectively for convexity and stress

Not as a replacement**. As a complement.**

Use put spreads or collars during periods of:

- Elevated tail risk
- Unfavourable carry
- Expected mean reversion with uncertain timing

5. Be explicit about trade-offs in governance documents

Document:

- Why you're not hedging 100%
- How carry affects long-term outcomes
- What scenarios would trigger tactical adjustments
- How options improve risk-adjusted returns

Transparency prevents governance battles when FX moves against you.

13.1 Communicating FX Hedging to Governance

Most FX hedging failures aren't technical–they're governance failures. The hedge did what it was designed to do, but expectations were misaligned.

Common Governance Misunderstandings

Misunderstanding 1: "100% hedged = 0% FX impact"

Reality: 100% hedged means:

- 0% impact from spot movements
- Significant impact from carry costs
- Significant impact from path dependency (if using rolling forwards)

A 100% hedged portfolio can underperform an unhedged portfolio by 10-15% over a decade purely from carry drag, even if spot is unchanged.

How to explain: "Hedging eliminates directional FX risk but not hedging costs. Those costs compound over time and are material."

Misunderstanding 2: "If the hedge lost money, it failed”

Reality: Hedges lose money when FX moves favourably. That's the point. You paid for protection you didn't need – like fire insurance on a house that didn't burn down.

How to explain: "Hedge P&L is not a measure of success. Risk reduction is. We should evaluate hedging on whether it delivered the volatility profile we paid for, not whether it made money."

Misunderstanding 3: "Hedge ratios should be set and forgotten"

Reality: Optimal hedge ratios change with:

- Carry environment (adjust every 6-12 months)
- Volatility regime (reduce hedging in calm markets, increase in stress)
- Time horizon (reduce hedging as liabilities extend)

How to explain: "Static hedge ratios are governance theatre, not risk management. We should establish a strategic band (e.g., 40-60%) and adjust dynamically within that range."

Presenting Hedge Performance

Bad framing (common but wrong):

"Our FX hedge lost AUD 15 million this year because the AUD strengthened."

This frames the hedge as a failure when it did exactly what it was supposed to do.

Good framing:

"Our FX hedge reduced portfolio volatility from 14% to 9% this year, in line with policy objectives. The hedge cost AUD 15 million because AUD strengthened–we paid for protection we didn't need, similar to insurance premiums. The alternative (unhedged) would have added AUD 15 million but with 56% higher volatility, which is outside our risk tolerance."

Annual Reporting Template

Include this table in annual hedge reporting:

Metric	Target	Actual	Commentary
Hedge ratio (average)	60%	58%	Within policy band (50-70%)
FX volatility (hedged portfolio)	<10%	8.2%	Achieved objective
Carry cost (annual)	~2%	2.3%	Slightly above expectation due to rate rises
Hedge P&L	N/A	-AUD 12m	Reflects AUD strength; hedge performed as designed
Alternative (unhedged) outcome	N/A	+AUD 20m	Would have violated volatility policy (15.7% realised vol)
Transaction costs	<30bps	25bps	Within Budget

Preparing for Difficult Questions

Q: "Why did we lose AUD 20 million on hedging over 5 years when FX barely moved?"

A: "FX moved 2%, which is small. But hedging costs – carry and transaction costs – totalled 15% over 5 years, which is large. This was disclosed in our framework document and is expected. The alternative was accepting ±12% FX volatility, which the Board determined was unacceptable. We delivered the risk profile you asked for. The cost is the price of that stability."

Q: "Why don't we just hedge 100% and eliminate FX risk entirely?

A: "100% hedging eliminates spot risk but locks in maximum carry costs. At current interest differentials, that would cost an additional AUD 3 million annually–AUD 30

million over 10 years–for the marginal benefit of removing the last 30% of FX exposure. Based on historical volatility, the extra cost exceeds the expected risk reduction. We're happy to model both approaches for the Board to compare."

Q: "Our consultant says we should use 10-year FX forwards to match our strategic horizon."

A: "10-year forwards work well for bonds with contractual maturities. They work poorly for equities with uncertain holding periods. If we commit to 10-year forwards and need to adjust our equity allocation in Year 5–which happens regularly during SAA reviews–we face material termination costs and governance issues. Rolling forwards preserve flexibility to resize without penalty. We're paying ~1.5% annually for that flexibility, which we believe is worth it given historical turnover in our equity mandates."

14. Conclusion

Rolling FX forwards are not wrong for equities. They are just **incomplete**.

Used alone, they suppress short-term volatility while bleeding carry and destroying convexity.

Used alongside adaptive hedge ratios and targeted FX options, they become part of a coherent risk framework that acknowledges reality:

- Equity FX exposure is indefinite and path-dependent
- Carry dominates long-term outcomes
- Flexibility matters more than elegance
- Regulation often constrains economics

The objective is not to eliminate FX risk. It is to shape it intelligently under real constraints.

What professionals do: Match the hedge to the exposure. Accept trade-offs explicitly. Document decisions. Adjust dynamically.

What amateurs do: Apply one structure to everything. Blame the hedge when it underperforms. Change nothing.

This paper gives you the framework to be in the first category.

15. Further Reading and Practitioner Resources

Para Bellum Advisors publishes practitioner papers and CIO Briefs: **www.parabellumadvisors.com/insights**.

16. About Para Bellum Advisors

Para Bellum Advisors is an independent advisory firm specialising in derivatives, collateral, and balance-sheet efficiency for institutional investors.

The firm works with lean investment teams managing complex, long-dated portfolios across FX, rates, credit, equity, and volatility risk. Its focus is not on product distribution or transaction volume, but on structure: how hedges are designed, how capital is consumed, and how portfolios behave under stress.

Para Bellum Advisors is practitioner-led. Its work draws on decades of experience across trading, structuring, and portfolio management in banks, asset managers, and insurance balance sheets. The objective is not theoretical optimisation, but durable improvement in capital efficiency, liquidity resilience, and realised outcomes.

For more information, visit **www.offers.parabellumadvisors.com**

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