

# FX Cash Products

Figures & Tables Reference

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Foreign Exchange Markets Professional Series · Book 1

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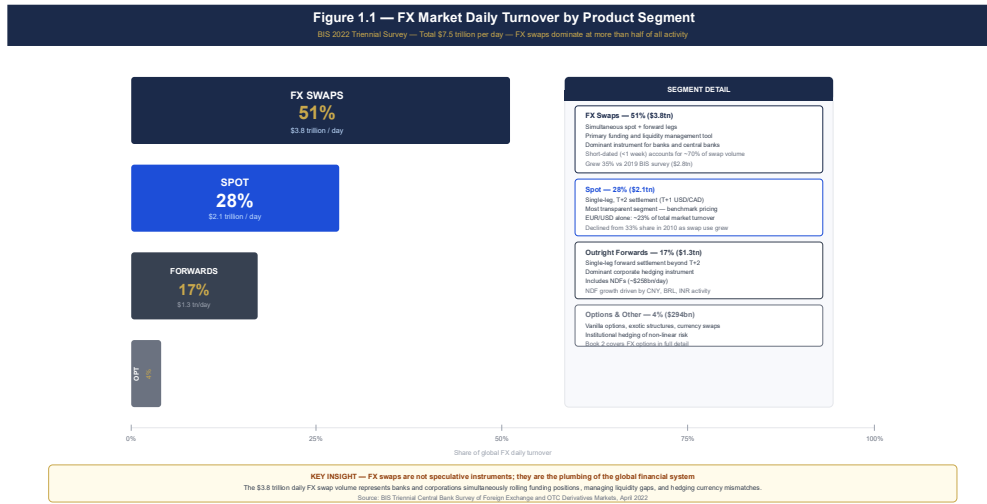
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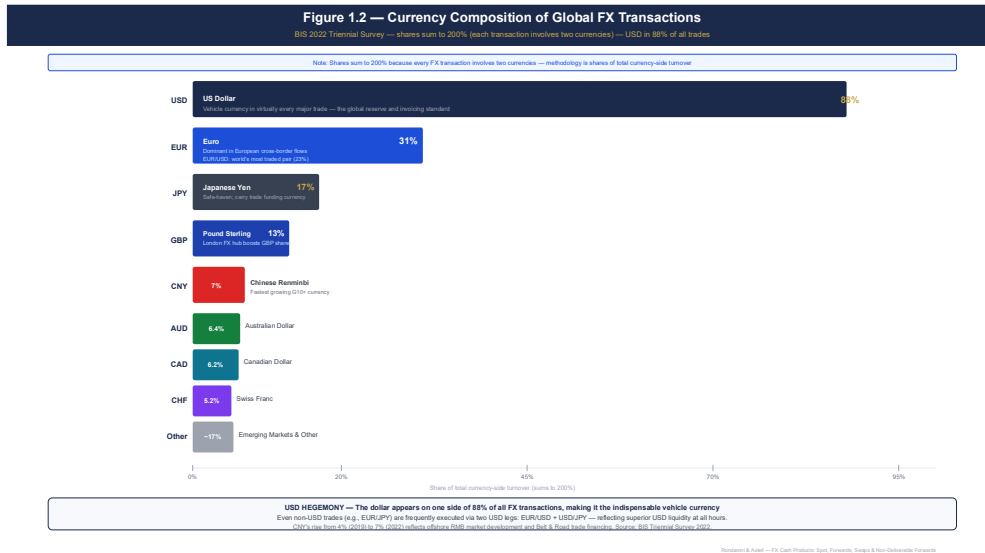
Figure 1.1



Reinhold & Aabel — FX Cash Products: Spot, Forwards, Swaps & Non-Deliverable Forwards

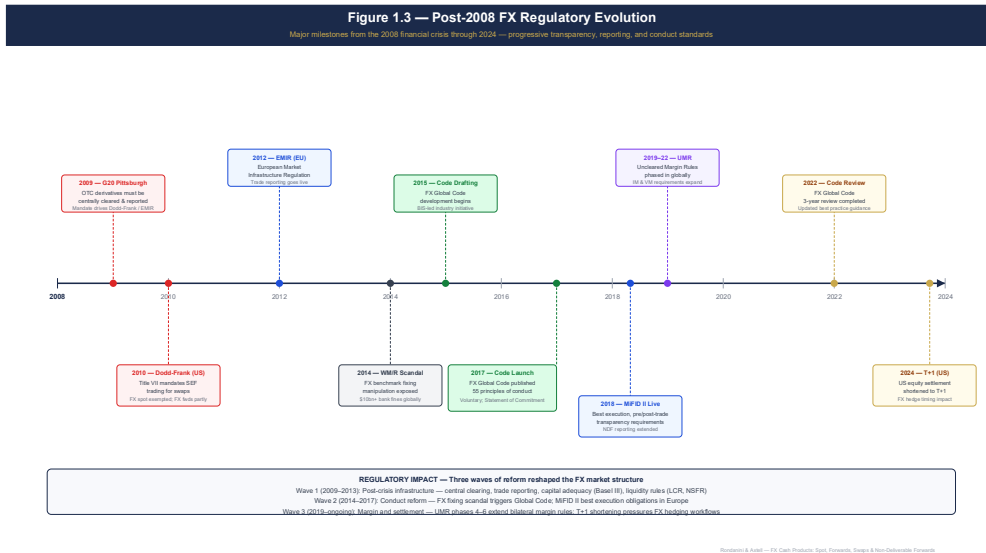
FX market daily turnover by product segment showing FX Swaps (51%), Spot (28%), Forwards (17%), and Options (4%) based on BIS 2022 Triennial Survey

Figure 1.2



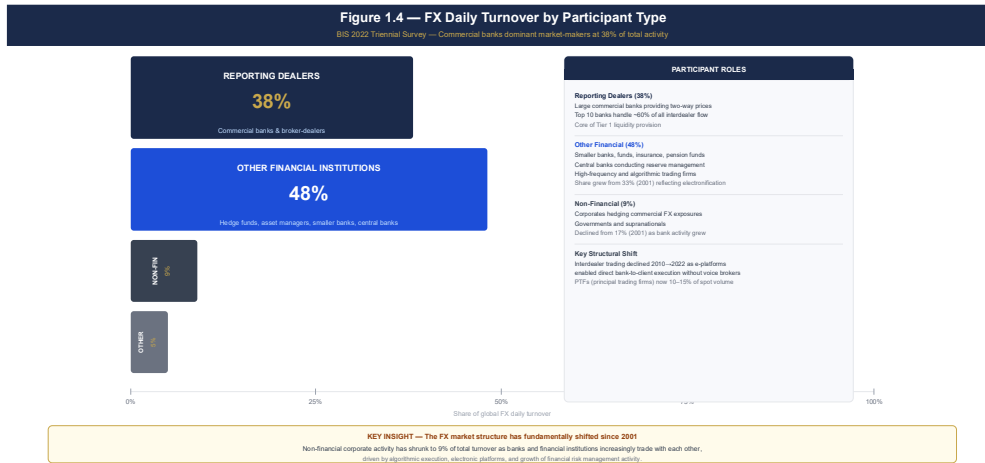
Share of major currencies in global FX transactions highlighting USD dominance and emerging market currency growth

Figure 1.3



Timeline of major FX regulatory milestones following the 2008 financial crisis showing progressive implementation of transparency, reporting, and conduct standards

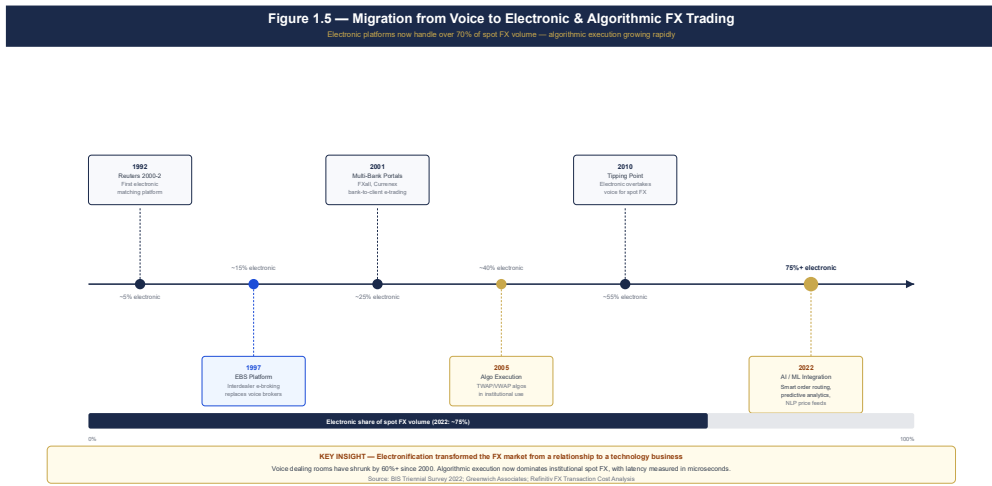
Figure 1.4



Source: BIS & Axiell — FX Cash Products: Spot, Forwards, Swaps & Non-Deliverable Forwards

Daily turnover share by participant type showing commercial banks' dominant market-making role alongside diverse customer segments

Figure 1.5



Timeline showing migration from voice trading to electronic platforms and algorithmic execution dominance

Figure 1.6

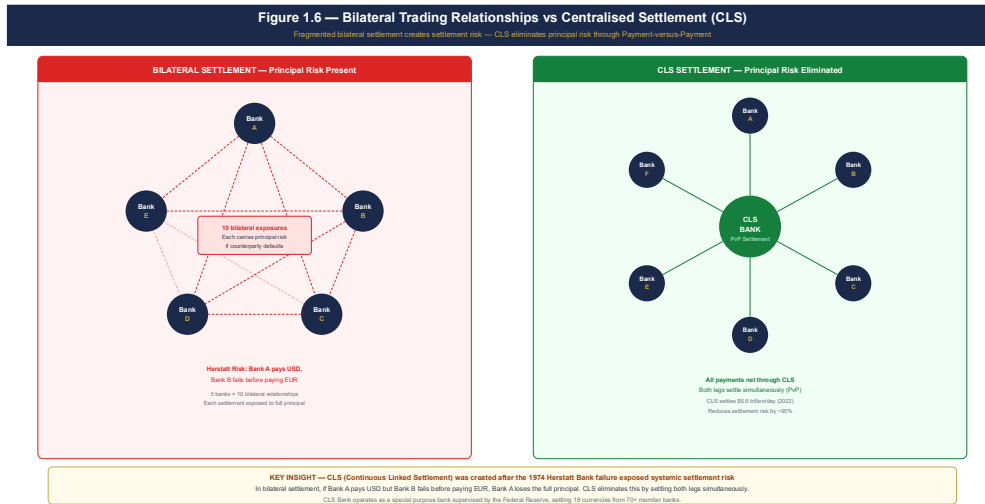
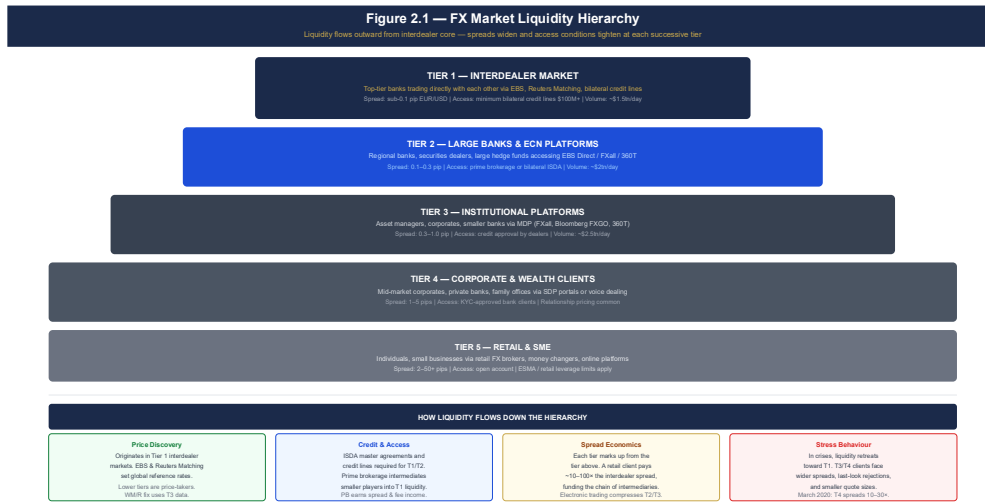


Illustration of bilateral trading relationships across multiple venues contrasted with centralized exchange architecture

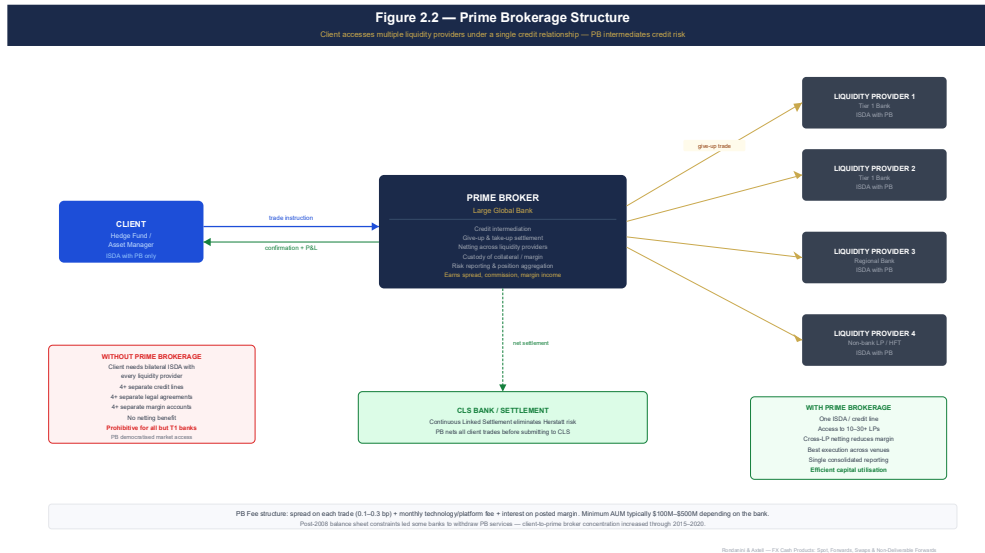
Figure 2.1



Woodruff & Aibel — FX Cash Products, Swap Products, Deposits & Non-Deliverable Forwards

Hierarchical structure of FX market liquidity from interdealer (Tier 1) to retail (Tier 5), showing typical spread ranges and participant types at each level

Figure 2.2



Prime brokerage model showing client access to multiple bank liquidity providers through credit intermediation

Figure 3.1

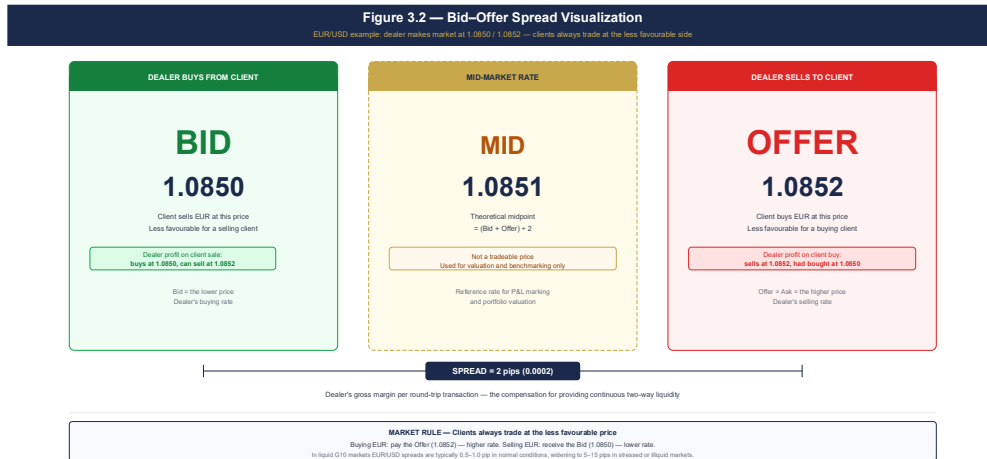
Figure 3.1 — Base / Quote Currency Convention Matrix					
Standard market conventions for major currency pairs — base currency is always the unit; quote currency is the price					
Currency Pair	Base Currency	Quote Currency	Pip Size	Decimal Places	Example Rate
<b>EUR/USD</b> <small>Direct / European terms</small>	<b>Euro (EUR)</b> <small>1 unit of base = variable USD</small>	<b>US Dollar (USD)</b> <small>Price / terms currency</small>	<b>0.0001</b>	5 decimal places	<b>1.08503</b> <small>5th decimal = sub-pip</small>
<b>USD/JPY</b> <small>American terms (JPY)</small>	<b>US Dollar (USD)</b> <small>1 unit of base = variable JPY</small>	<b>Japanese Yen (JPY)</b> <small>Price / terms currency</small>	<b>0.01</b> <small>lower nominal value</small>	3 decimal places	<b>140.750</b> <small>1 pip = 0.01</small>
<b>GBP/USD</b> <small>"Cable"</small>	<b>Pound Sterling (GBP)</b> <small>1 unit of base = variable USD</small>	<b>US Dollar (USD)</b> <small>Price / terms currency</small>	<b>0.0001</b>	5 decimal places	<b>1.26854</b>
<b>USD/CHF</b> <small>"Swissie"</small>	<b>US Dollar (USD)</b> <small>1 unit of base = variable CHF</small>	<b>Swiss Franc (CHF)</b> <small>Price / terms currency</small>	<b>0.0001</b>	5 decimal places	<b>0.89421</b>
<b>AUD/USD</b> <small>"Aussie"</small>	<b>Australian Dollar (AUD)</b> <small>1 unit of base = variable USD</small>	<b>US Dollar (USD)</b> <small>Price / terms currency</small>	<b>0.0001</b>	5 decimal places	<b>0.65231</b>
<b>USD/CAD</b> <small>"Loonie"</small>	<b>US Dollar (USD)</b> <small>1 unit of base = variable CAD</small>	<b>Canadian Dollar (CAD)</b> <small>Price / terms currency</small>	<b>0.0001</b>	5 decimal places	<b>1.36152</b>

**KEY CONVENTION — Base / Quote = "How many units of the Quote does it cost to buy one unit of the Base?"**  
 EUR/USD = 1.08503 → 1 EUR costs USD 1.08503. USD/JPY = 140.75 → 1 USD costs JPY 140.75. The base is always expressed as exactly 1 unit.  
 Sub-pip precision (5th decimal place) is now standard on electronic platforms for all pairs except JPY, where 3 decimal places apply.

Relevant & Add'l — FX Cash Products, Spot, Forwards, Swap & Non-Deliverable Forwards

Standard market conventions for major currency pairs showing base currency, quote currency, pip sizes, and typical quote precision

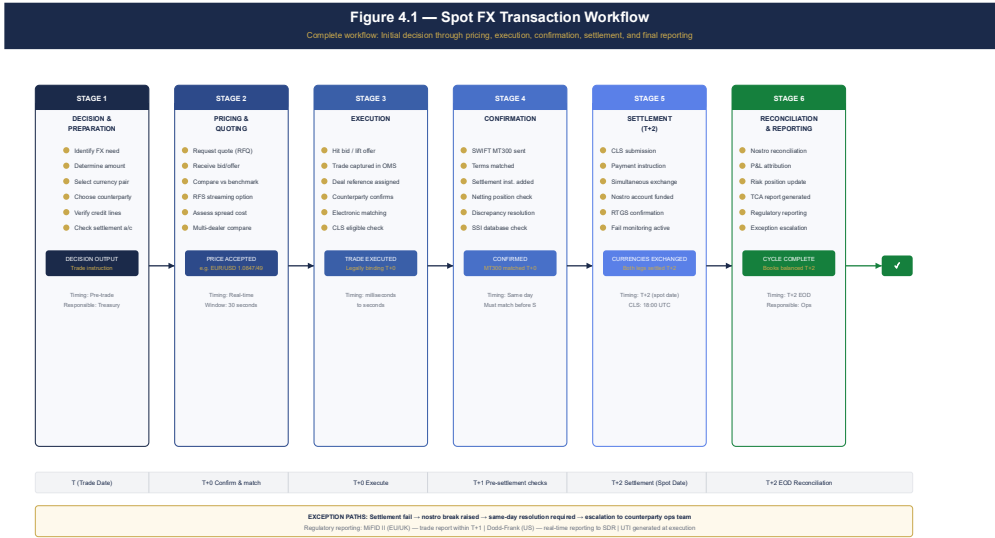
Figure 3.2



Revised 8 April — FX Cash Products: Spot, Forwards, Swaps & Non-Deliverable Forwards

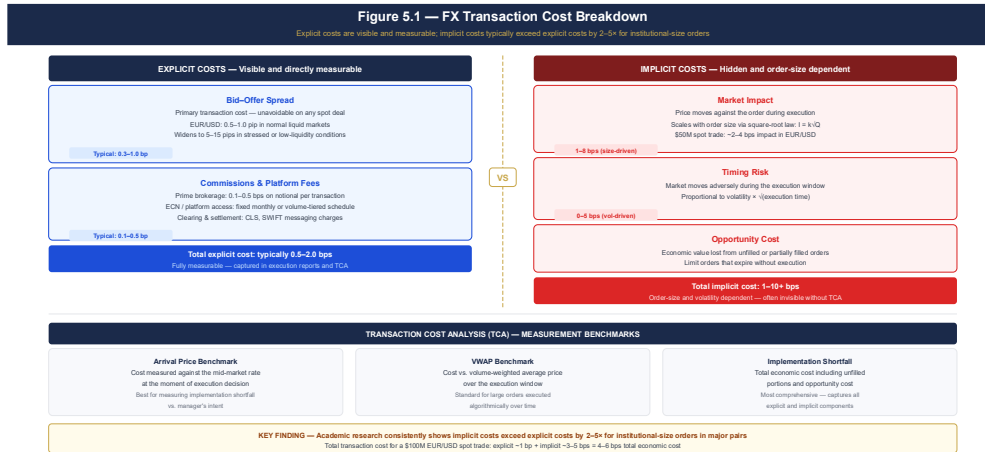
Visual representation of bid-offer spread showing dealer buy and sell prices, with customers always trading at less favorable prices

Figure 4.1



Complete workflow for spot FX transactions from initial decision through pricing, execution, confirmation, settlement, and final reporting

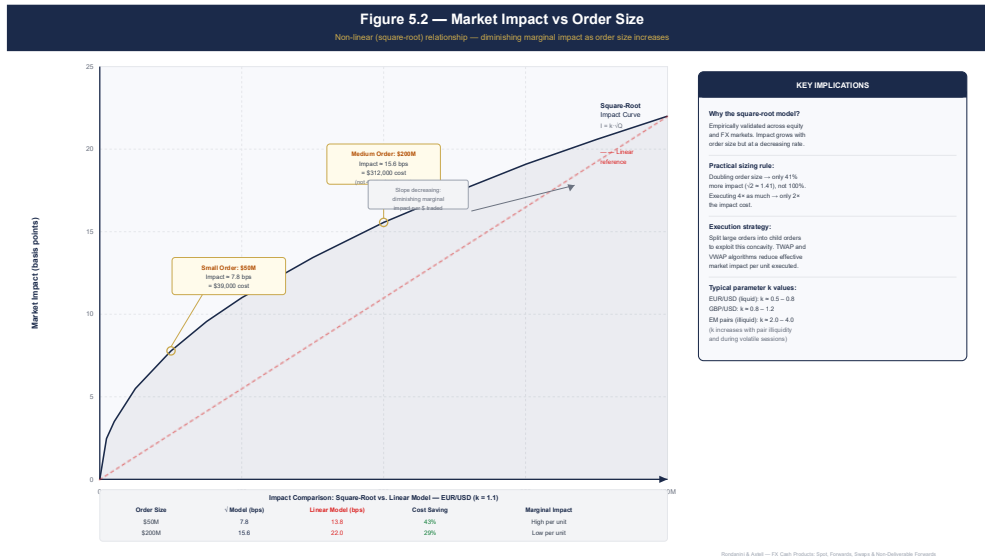
Figure 5.1



Bontempi & Alesi — FX Cash Products: Spot, Forwards, Swaps & Non-Deliverable Forwards

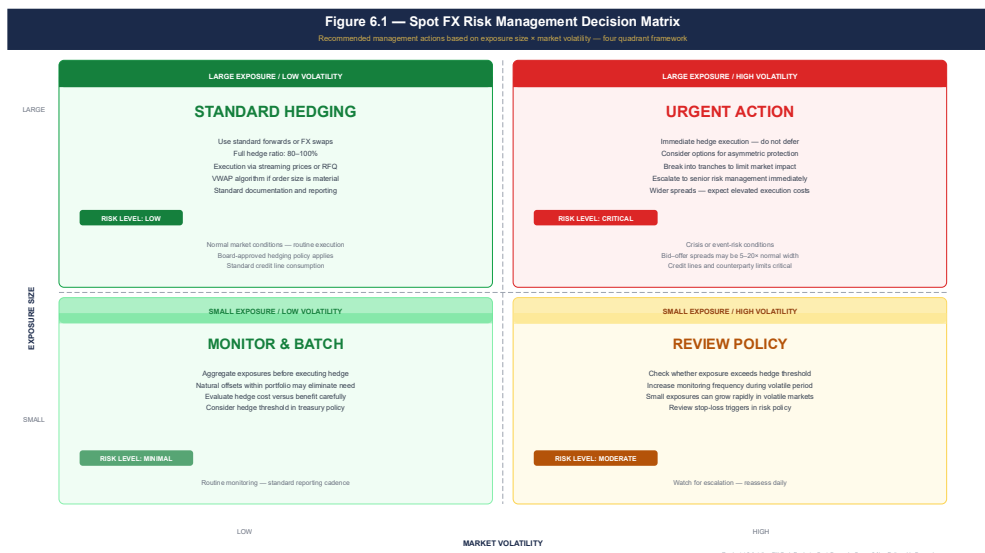
Comprehensive breakdown of FX transaction costs showing explicit components (spreads, commissions) versus implicit components (market impact, timing risk, opportunity cost)

Figure 5.2



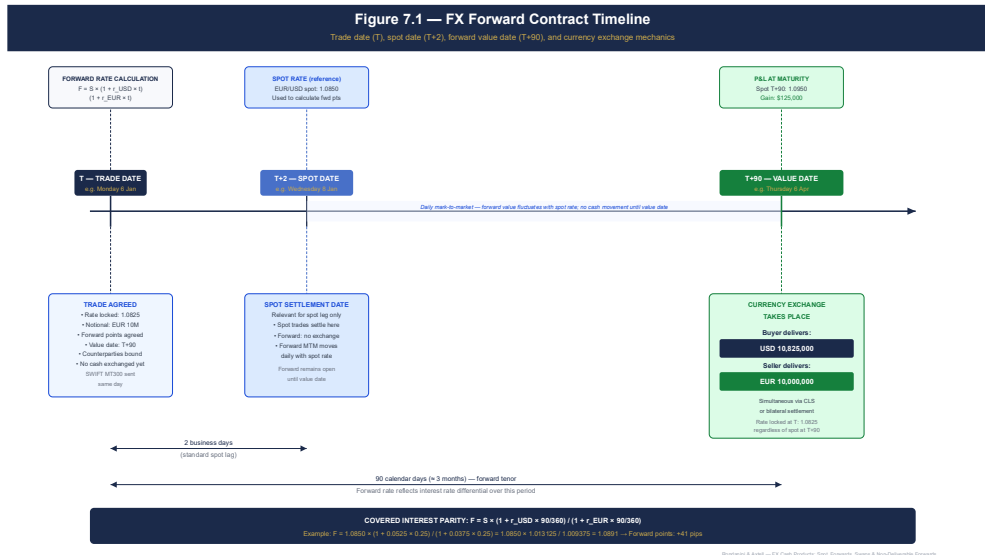
Non-linear (square-root) relationship between order size and market impact, demonstrating diminishing marginal impact as order size increases

Figure 6.1



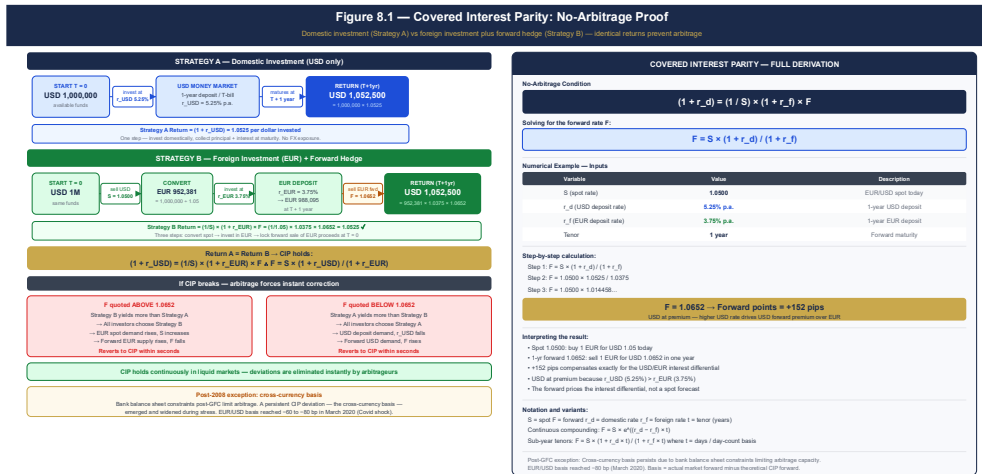
Risk management decision framework showing recommended actions based on exposure size and volatility combinations across four quadrants

Figure 7.1



Complete timeline showing trade date, spot date (T+2), forward value date (T+90), and currency exchange mechanics

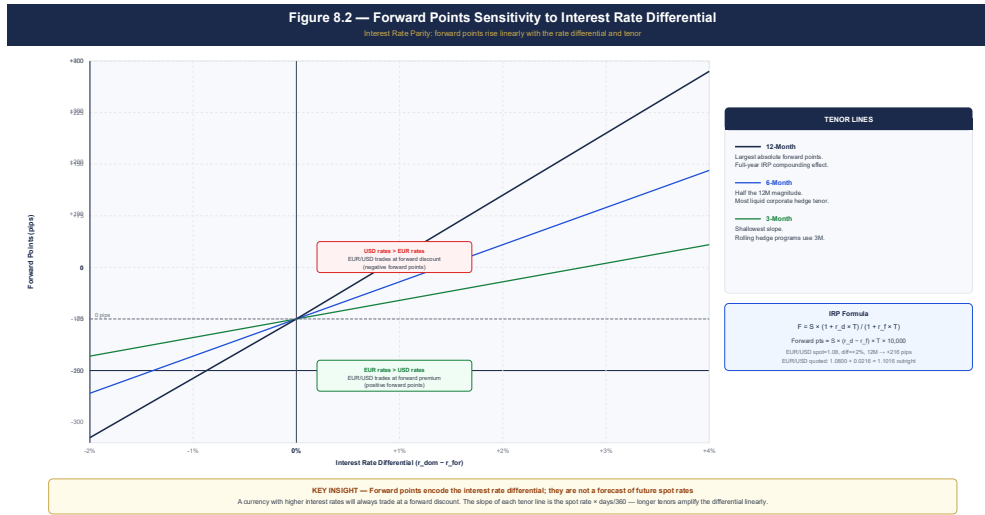
Figure 8.1



Robinson & Ashby — FX Cash Flows: Spot, Forwards, Swaps & Non-Deliverable Forwards

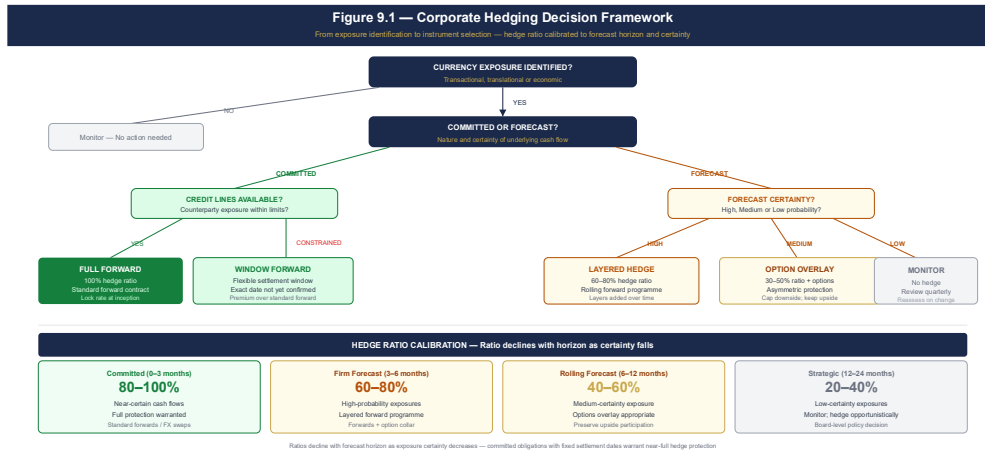
Parallel strategies showing domestic investment versus foreign investment plus forward hedge, demonstrating how covered interest parity prevents arbitrage opportunities

Figure 8.2



Sensitivity analysis showing how forward points respond to changes in interest rate differentials, demonstrating the relationship between rate spreads and forward pricing

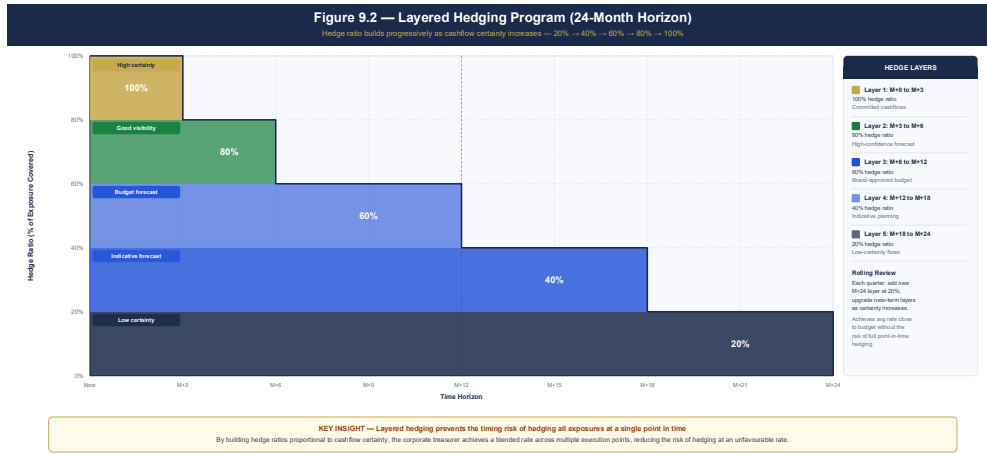
Figure 9.1



Reynolds & Asadi — FX Cash Products: Spots, Forwards, Swaps & Non-Deliverable Forwards

Decision tree showing progression from exposure identification through hedging strategy selection based on commitment level, forecast certainty, and operational constraints

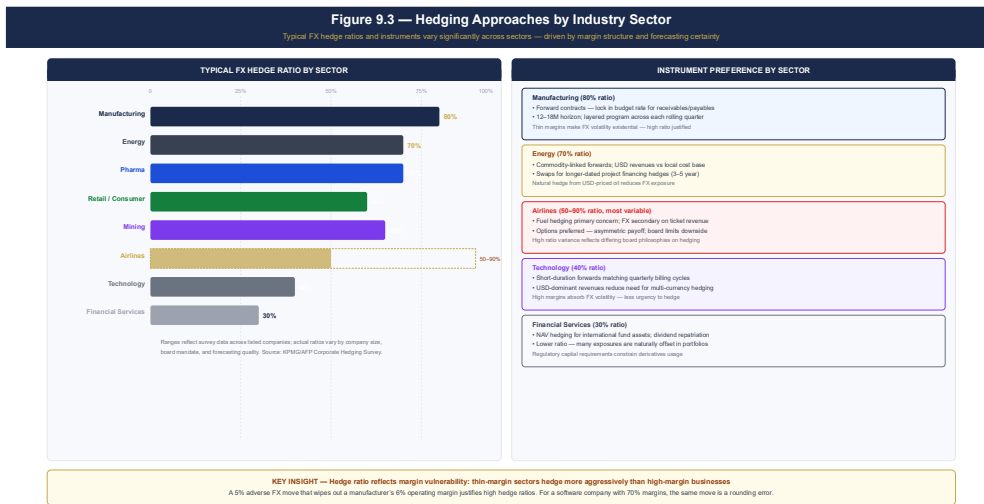
Figure 9.2



Montreal & Arel — FX Cash Products: Spot, Forwards, Swaps & Non-Deliverable Forwards

Illustration of layered hedging approach showing graduated coverage percentages across different forecast horizons, with higher

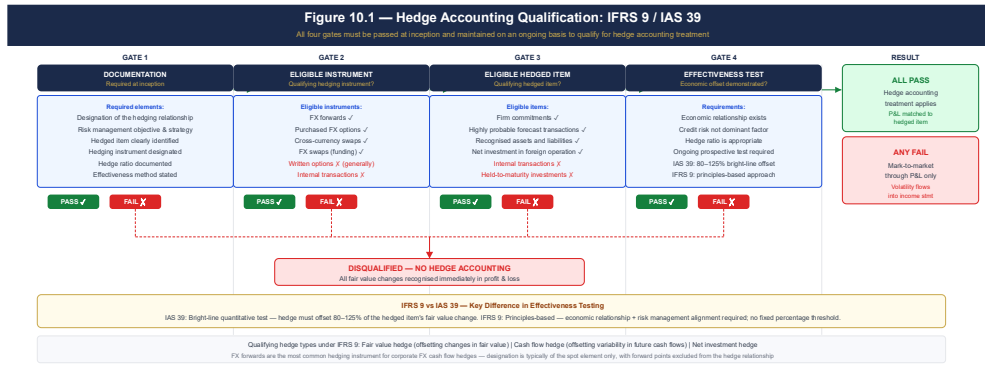
Figure 9.3



Comparative analysis of hedging practices across different industry sectors, showing typical hedge ratios, instrument preferences, and risk management approaches by industry type

Source: NPD GROUP — FX Cash Position, Spot Forwards, Swaps & Non-Deliverable Forwards

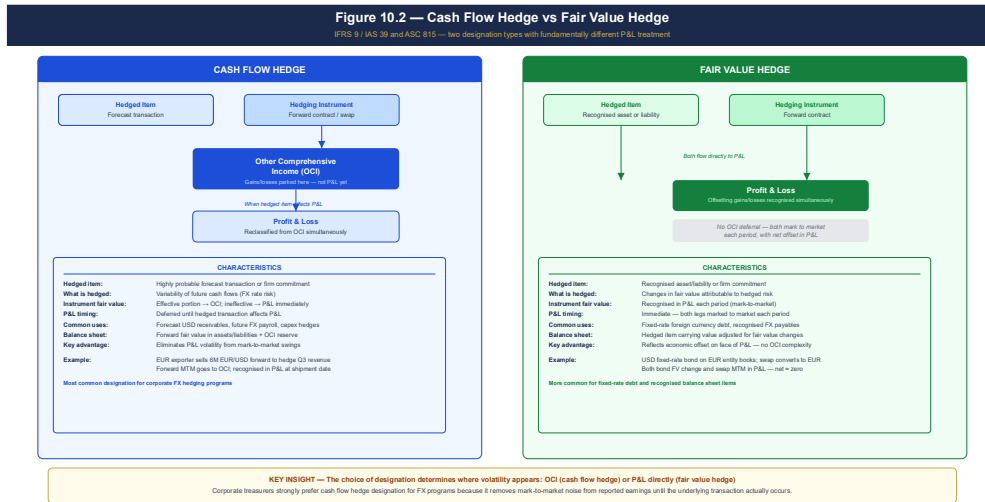
Figure 10.1



Revised & Added — FX Cash Products: Spots, Forwards, Swaps & Non-Deliverable Forwards

Complete flowchart showing hedge accounting qualification process under IFRS 9/IAS 39 including documentation requirements, instrument eligibility, hedged item identification, and effectiveness testing

Figure 10.2



Bloomberg & Avast — FX Cash Products: Spot, Forwards, Swaps & Non-Deliverable Forwards

Side-by-side comparison of cash flow hedge accounting and fair value hedge accounting, showing how effective and ineffective portions flow through financial statements (OCI vs. earnings) for each hedge type

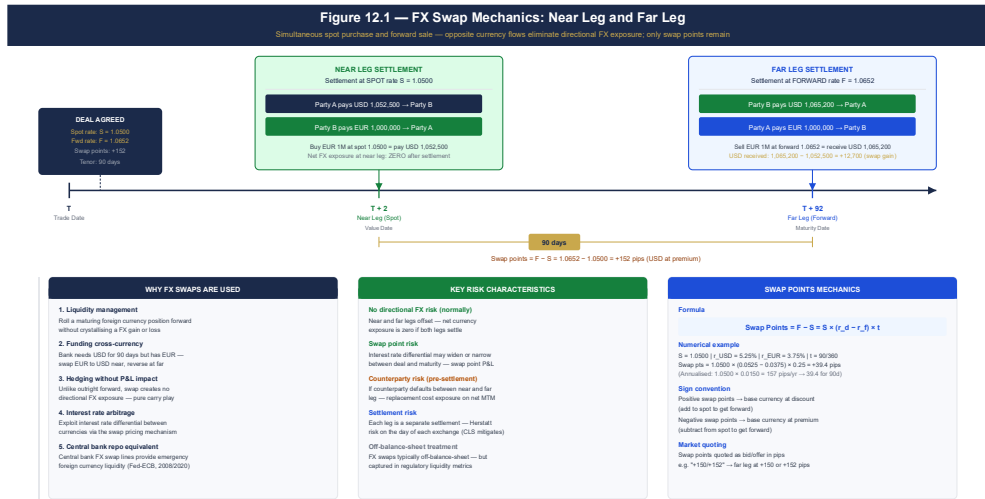
Figure 11.1

Figure 11.1 — Forward Contract Risk Exposure Matrix				
Four major risk categories with associated metrics, controls, and mitigation strategies — all must be managed simultaneously				
RISK TYPE	DESCRIPTION & DRIVER	MEASUREMENT	CONTROLS	SEVERITY
<b>MARKET RISK</b> FX rate moves against the forward position	<b>Rate movement risk</b> FX rate moves adversely before or at value date — the primary P&L driver on all open forward positions Also, interest rate differential changes affect fair value of the forward (forward point sensitivity) Impact: MTM P&L moves through income or OCI (if hedge accounting) Amplified by tenor — longer forwards have higher rate sensitivity	Date (FX sensitivity) VaR (99%, 1-day) Stress test scenarios MTM P&L, daily DV01 (rate risk)	Position limits by currency Stop-loss triggers Hedge of hedge books Back-to-back matching Daily P&L sign-off	<b>HIGH</b>
<b>CREDIT RISK</b> Counterparty default before settlement	<b>Counterparty default exposure</b> Counterparty fails before value date when the forward has positive MTM value — replacement cost risk (pre-settlement) and full principal at value date (settlement risk) Pre-settlement risk: up to MTM value + future potential exposure Settlement risk (inherent): full principal if currency legs not simultaneous CLS Bank eliminates settlement risk for CLS-settled currencies	CVA (credit valuation adj.) PFE (potential future exp.) Creditline utilization % CDS spread monitoring	Bilateral credit limits (SDA) CSA / VM collateral posting CLS settlement (P&P) Credit clearing (pre-settle) Netting agreements	<b>MEDIUM-HIGH</b>
<b>LIQUIDITY RISK</b> Market or funding liquidity constraints	<b>Market &amp; funding liquidity</b> Market liquidity: inability to close or roll a forward at a fair price Bidding threshold conditions — bid-offer widens, quote sizes shrink Funding liquidity: inability to post required variation margin when the forward moves against you — broad unwind at worst prices Exotic or long-dated forwards: illiquid markets, wider spreads EM currencies, capital controls may prevent delivery	Bid-offer spread monitoring Liquidity coverage ratio Margin call scenario analysis Open viewed by tenor	Multi-counterparty quotes Staggered maturity laddering Pre-committed credit lines Cash buffer for margin calls Early unwind if illiquid	<b>MEDIUM</b>
<b>OPERATIONAL RISK</b> Process, system and human failure	<b>Process, systems, and human error</b> Trade booking errors, wrong currency, wrong direction, wrong notional Settlement failures, incorrect SSIs, SWIFT errors, timing mismatches Reconciliation breaks between front office and back office systems Confirmation disputes with counterparties System outages during value date — failed deliveries affect interest payments Rogue trading — unauthorized positions (USBS Newell Abbuhl 2011, §2.36n)	STP rate (straight-through) Settlement fail rate Confirmation aging Reconciliation break count	Four-eyes trade approval Automated SSI verification Daily position reconciliation Segregation of duties Dealer voice recording	<b>MEDIUM-LOW</b>
<p><b>RISK INTERACTION — All four risk types are interconnected; a market dislocation typically triggers all simultaneously</b>                      Example: a counterparty credit event (credit risk) causes market gap (market risk), bid-offer widening (liquidity risk), and missed settlements (operational risk) simultaneously.                      Source: forward risk management requires a unified framework addressing all four dimensions — siloed risk management is inadequate.</p>				

Reynolds & Asadi — FX Cash Products: Spot, Forwards, Swaps & Non-Deliverable Forwards

Comprehensive risk matrix showing four major risk types (Market Risk, Credit Risk, Liquidity Risk, Operational Risk) with associated controls and mitigation strategies

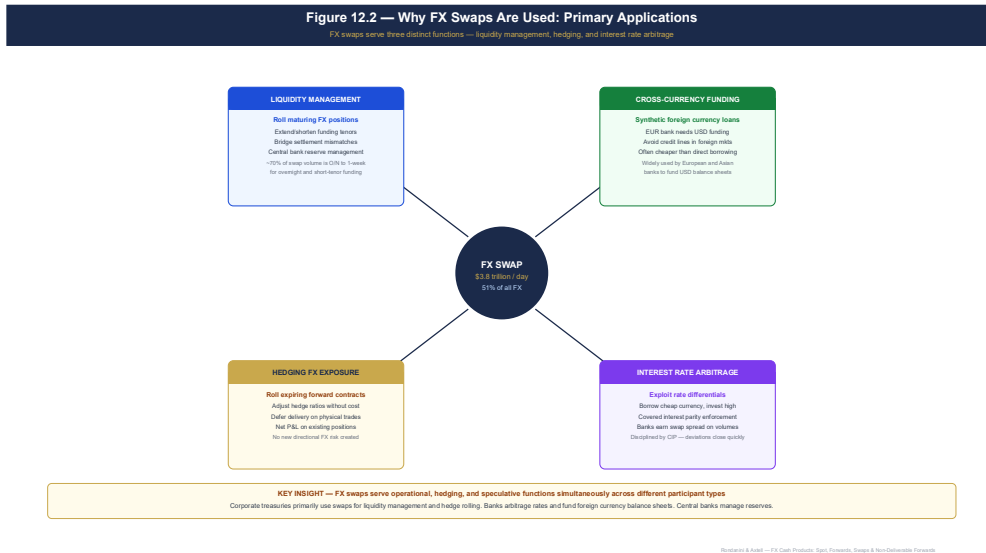
Figure 12.1



Reinhold & Aebi — FX Cash Products: Spot, Forwards, Swaps & Non-Deliverable Forwards

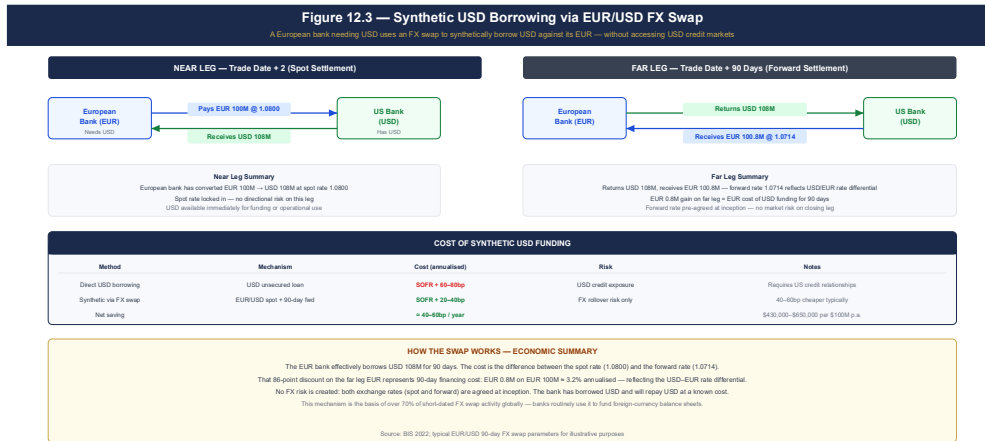
Comparative cost analysis showing FX swap funding at 70% utilization versus traditional money market funding at 85% capacity utilization

Figure 12.2



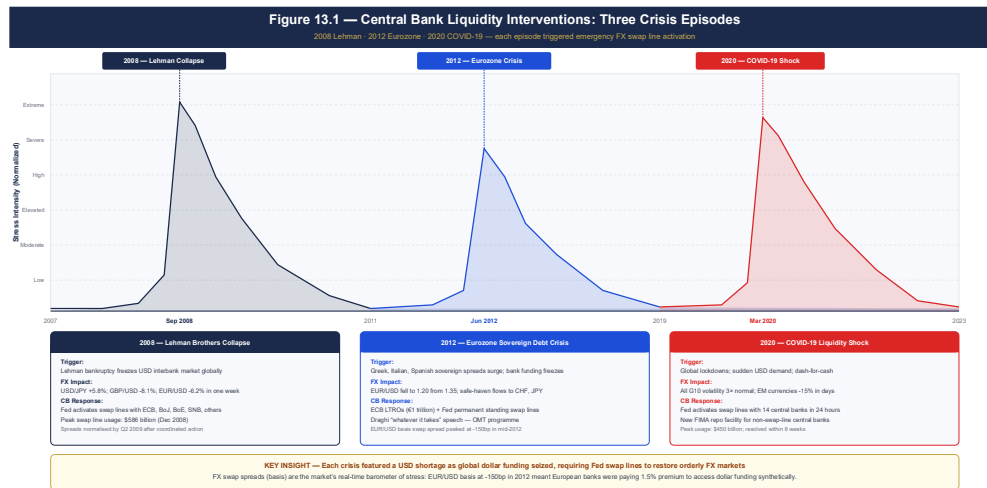
Hub-and-spokes diagram showing why FX swaps are used, connecting multiple funding needs through central swap mechanism

Figure 12.3



Cross-currency funding via FX swap showing synthetic USD borrowing mechanism with near leg and far leg transactions

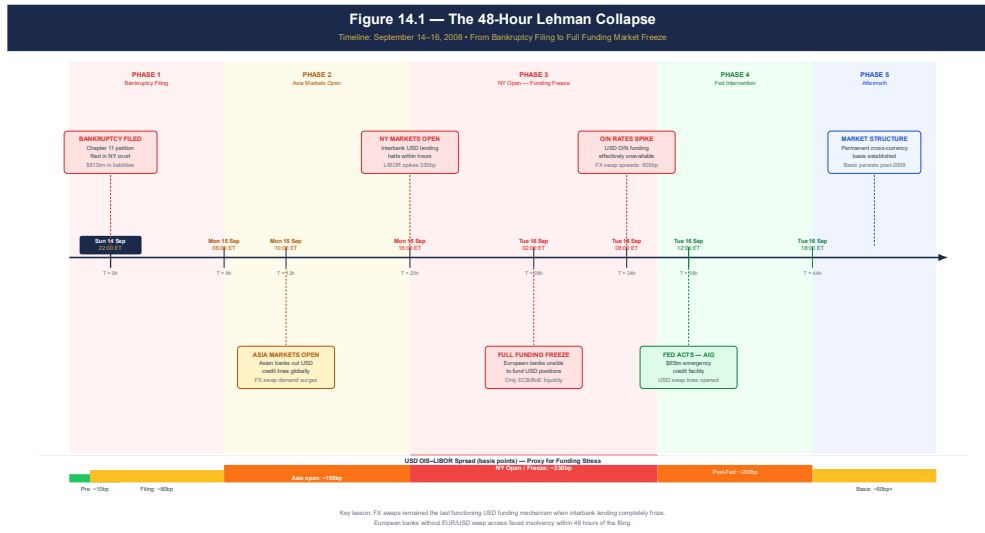
Figure 13.1



Reardon & Alesh — FX Cash Products: Spot, Forwards, Swaps & Non-Deliverable Forwards

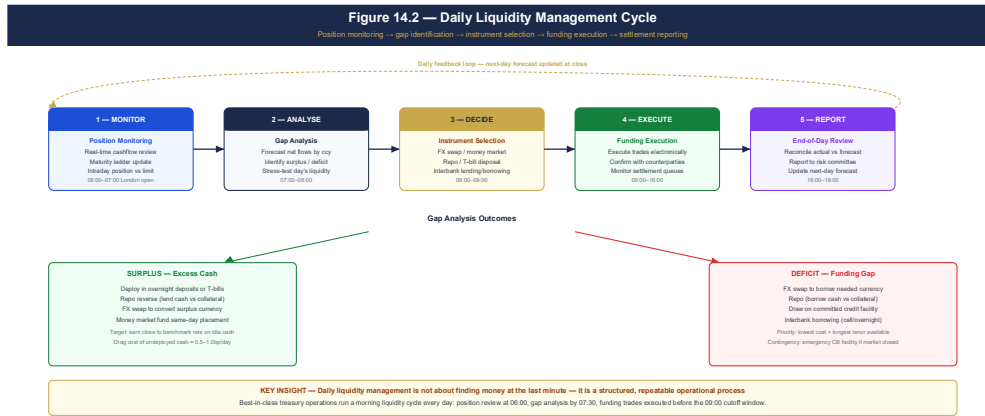
Timeline showing major crisis episodes (2008 Lehman, 2012 Eurozone, 2020 COVID-19) with intensity spikes in swap line utilization and emergency facility activation

Figure 14.1



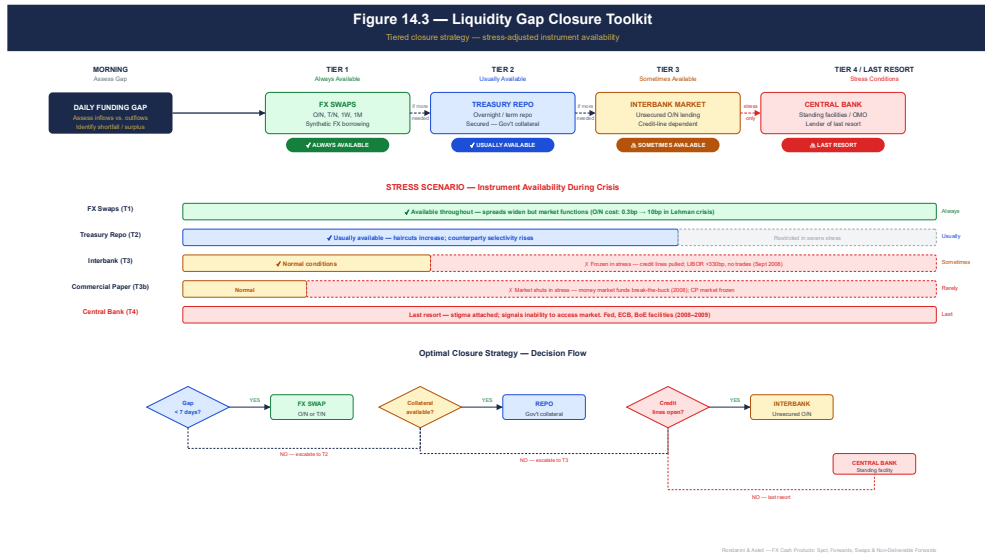
Timeline showing 48-hour evolution from Lehman bankruptcy through funding market freeze to Federal Reserve emergency interventions, demonstrating speed of liquidity evaporation

Figure 14.2



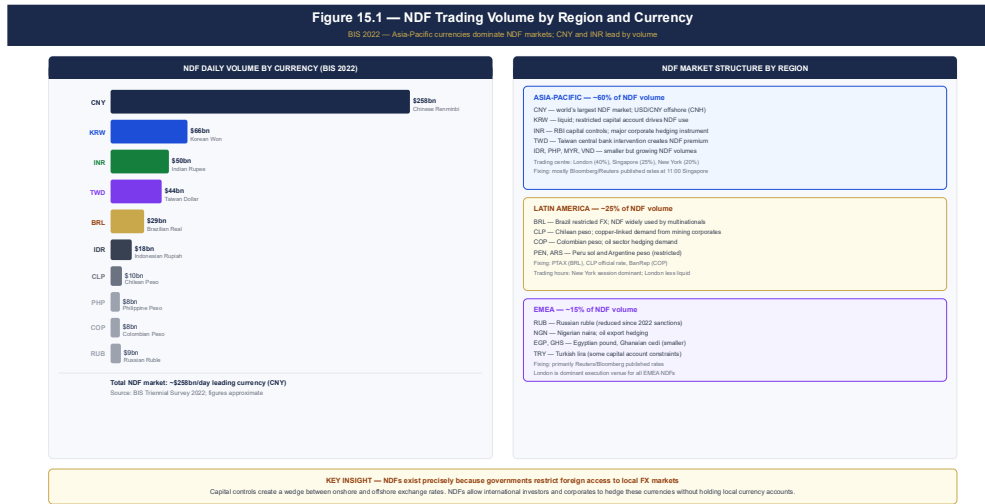
Process flow diagram showing the daily liquidity cycle - from morning position monitoring and gap analysis through instrument selection, funding execution, and end-of-day settlement reporting

Figure 14.3



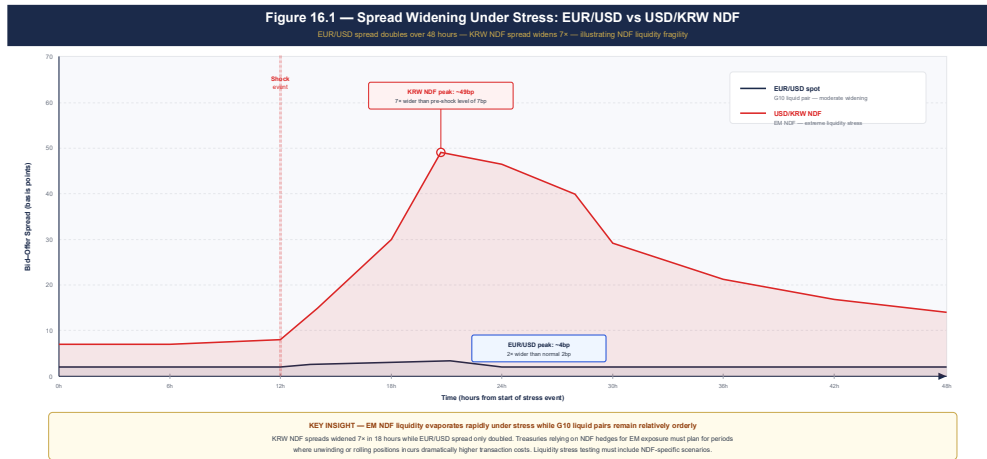
Decision tree showing gap closure toolkit with stress-adjusted availability: FX Swaps (always), Repo (usually), Interbank (sometimes), CP (rarely in stress), Central Bank (last resort)

Figure 15.1



Schematic diagram showing geographic distribution of NDF trading volume with currency specialization by region

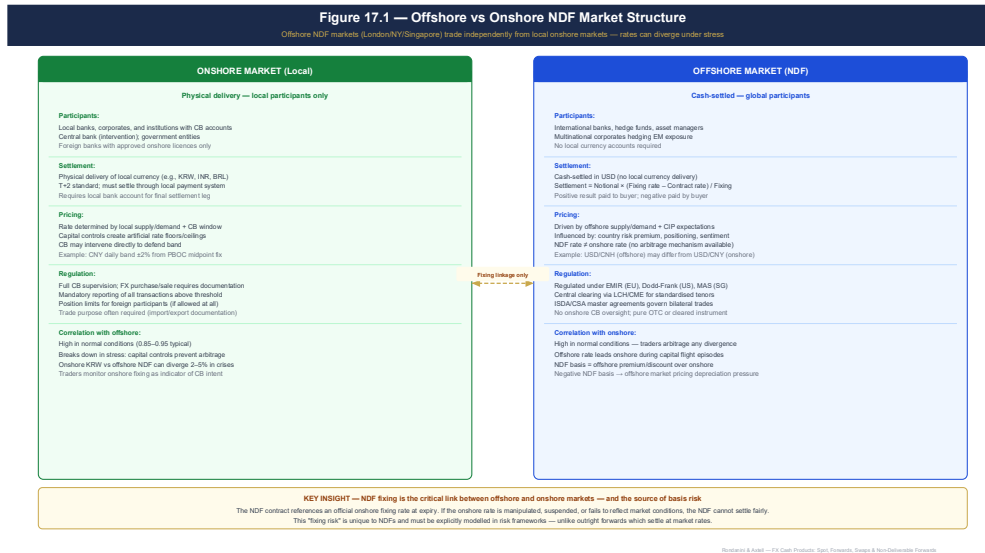
Figure 16.1



Relevant & Risk — FX Cash Products: Spot, Forwards, Swaps & Non-Deliverable Forwards

Comparative timeline showing EUR/USD spread widening 2x over 48 hours vs. KRW NDF spread widening 10x within 2 hours during equivalent stress events

Figure 17.1



Comparison diagram showing offshore vs onshore NDF market structure with correlation (0.85-0.95) between all five NDF risk categories during August 2015, September 2018, March 2020 EM shocks