



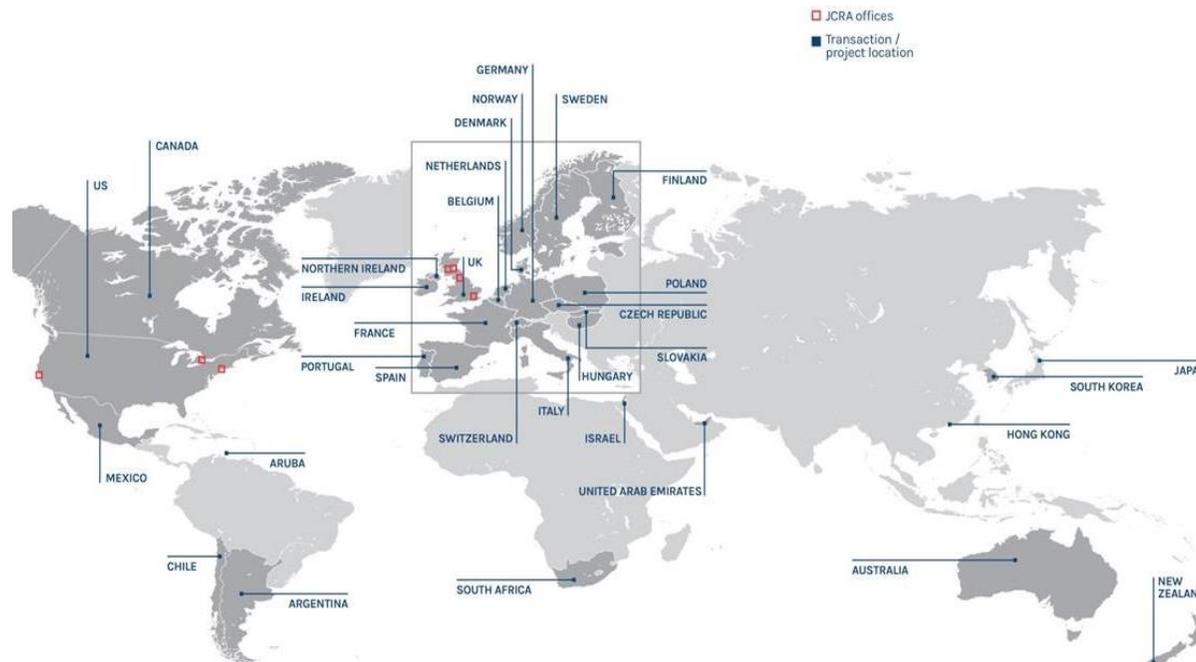
GLOBAL LISTED
INFRASTRUCTURE
ORGANISATION

Professional Advice Innovative Solutions Unrivalled Experience

Infrastructure / Project Finance / Renewables
November 2017

Project Finance | Private Equity | Corporates | Social Infrastructure | Real Estate
Financial Risk Advisors

- Independent financial risk advisors who specialise in hedging that is strategically aligned to what you and your business want to achieve
- With over 28 years' experience structuring and advocating for competitive pricing in derivative products, we formulate and execute interest rate, foreign exchange, inflation and commodity hedging strategies and provide debt advice
- We partner with real estate, project finance and infrastructure, private equity, public sector and corporate clients, here in the UK, Europe and North America
- We help our clients stay one step ahead with a clear understanding of their financial risks





Our Track Record

650+

transactions advised on
each year

28

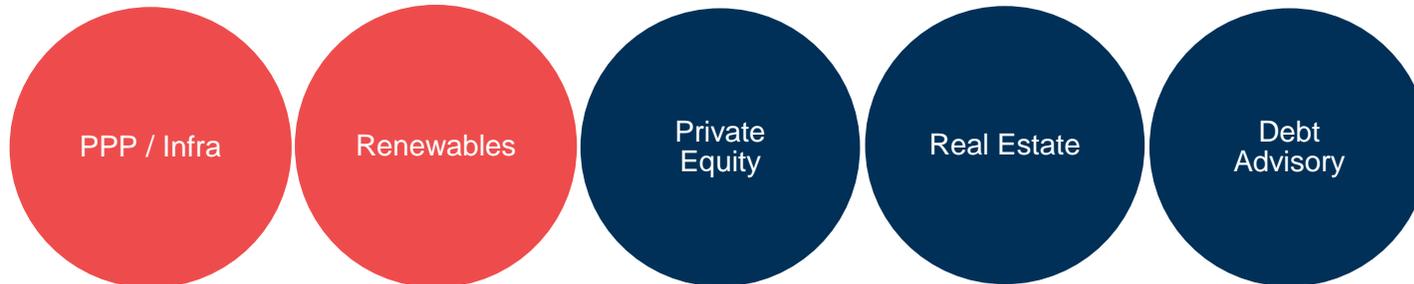
years assisting our clients
with hedging solutions

£60bn

value of transactions we
work on with clients each
year

50+

different global hedging
counterparties that we work
with each year



Areas of Expertise

FX hedging

Guiding you through FX challenges – whether that's evaluating the exposure in relation to competitors, managing the uncertainty around the timing and size of exposures or managing liquidity and credit constraints of hedging.

Interest rate hedging

Evaluating the interest rate risk in the business to create a hedging strategy strategically aligned to your objectives.

Commodity hedging

Using our commercial expertise to fully understand the interactions between the commodity exposure and other commercial arrangements such as debt covenants.

Derivatives regulatory and reporting

JCRA constantly monitors the regulatory environment to ensure you meet AIFMD, EMIR and Dodd-Frank requirements. We act as your safety net, ensuring you never miss a relevant shift in legislation.

Structured finance and debt advice

With unrivalled knowledge of available debt providers and terms that are being written, we support the decision-making process associated with any asset-backed financing transaction. We can manage your process from start to finish, and provide tailored advice and solutions, which recognise that flexibility as well as pricing are key metrics.

Inflation hedging

Inflation risk can impact your cost or revenue base, and can often be seen in long-term contracts. We advise on the best way to mitigate these exposures.

Valuations and hedge accounting

Provision of bespoke valuation services, incorporating CVA and risk reporting, as well as a full range of services for hedge accounting and the preparation of disclosure notes. We also provide specialist accounting advice on optimal reporting strategy under IFRS, USGAAP and new UKGAAP.

Cash management

Working alongside clients to establish the intentions for the cash holdings, determining the objectives and limitations which may dictate how cash is managed.

Dispute resolution and expert witness

Unbiased and expert opinion in hedging disputes based on forensic analysis and cross-sector experience.



Airports



Solar Parks



Onshore Wind



Road PPPs



Biomass



**Energy from
Waste**



Lock PPPs



Rolling Stock



Smart Meters



Hospital PPPs



**Transport
Infrastructure**



Tunnels



School PPPs



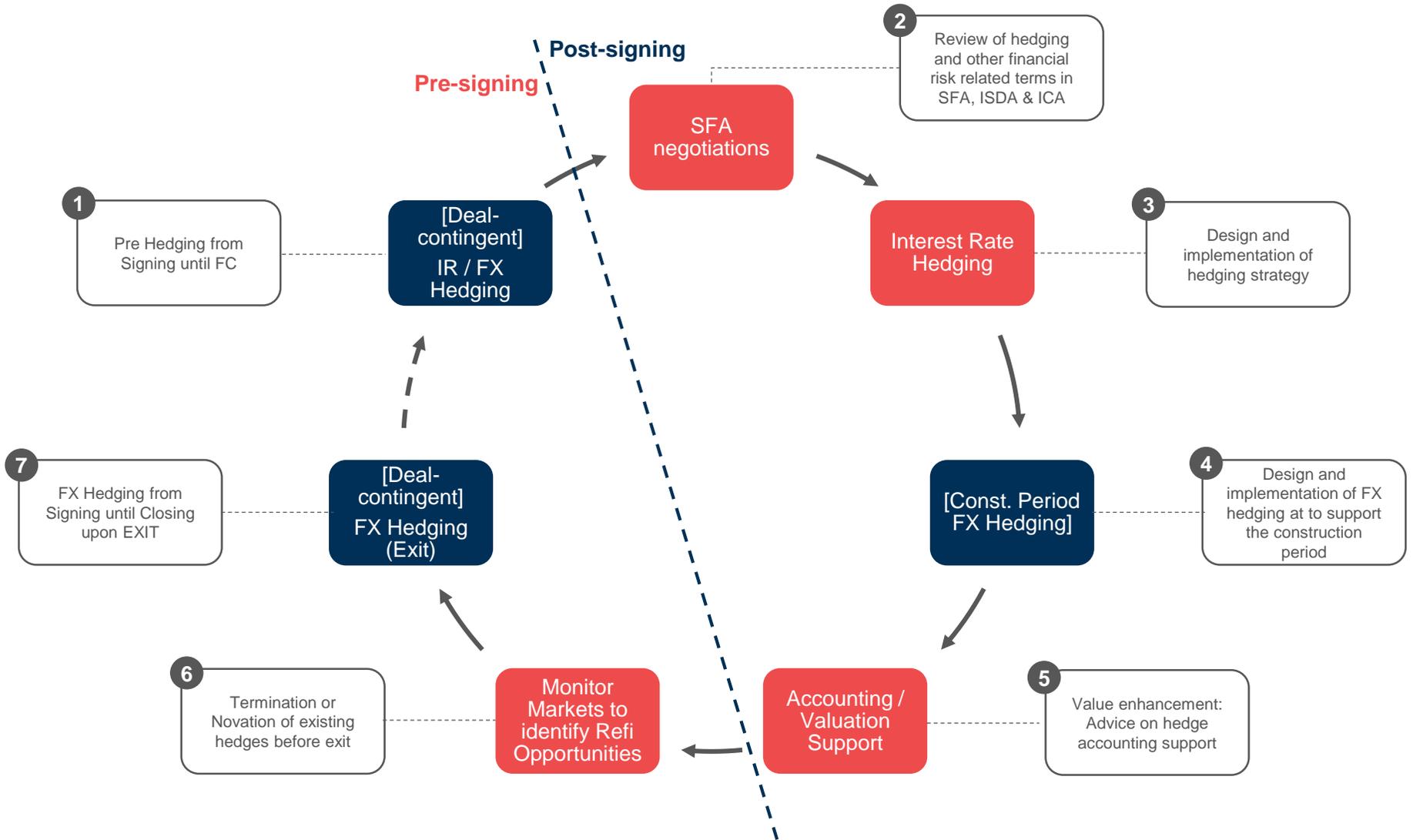
Telecoms



Offshore Wind

Our Approach





A Robust Strategy to Interest Rate Hedging

Analysis

Identify and assess

- Understand your business
- Hedging strategy letter
- Hedge execution protocol

Process

- Loan documentation:
 - Hedging letter
- Covenants:
 - Hedging requirements
- Regulations
- ISDA
- Accounting considerations
- EMIR
- MIFID
- Counterparty downgrade language
- Credit breaks
- Collaboration with lawyers

What this means for you

=

Understanding your business

Execution

Develop the documentation

- Term Sheet with trade parameters
- Ensure banks are ready to trade

Executing the trade

- Benchmarking and negotiation:
 - Mid-Market
 - Trading charges (XVA)
- Run auctions for optimal pricing

Restructure

- Terminate inefficient structures on more favourable pricing terms

What this means for you

=

Execute the strategy

Service

Reporting

- Recorded calls
- Verbal agreements
- Trade reporting

On-going valuations and accounting support

- Mark-to-market (CVA included)
- Hedge accounting under IFRS and/or New UK GAAP
 - Feasibility of hedge accounting designation
 - Active dialogue with external auditors

What this means for you

=

Partnership

A Robust Strategy to FX Hedging

Analysis

Identify and assess

- Understand your business:
 - business plan
 - financial resources
 - competitive position
 - hedging objectives
- Understand the market (though your hedging strategy will never be based on market views)
 - Riskiness and behaviour of currencies
 - Availability of hedging products and counterparties
- Detailed analysis of FX risks and recommendation as to how to hedge these, which takes into account business objectives, credit lines and accounting impact

What this means for you

=

Understanding your business
jcragroup.com

Execution

Develop the strategy

- FX hedging policy and strategy paper delivered
- Implement an auditable, formalised process that ensures an effective FX hedging decision-making process

Implementation

- Live benchmarking to ensure competitive pricing
- Assist with implementation of hedging strategy

What this means for you

=

Execute the strategy

Service

Ongoing support

- Continued support with benchmarking and implementation of hedging programme
- Ongoing assistance with rolling FX hedges to ensure competitive pricing

Monitor

- Constant monitoring of implemented strategy and assessing its performance

On-going valuations and accounting support

- Assistance with accounting of FX derivatives

What this means for you

=

Partnership

Deal Contingent Hedging

Hedging Implications

A desirable product would be one that does not incur any upfront costs and does not create a liability in case the deal does not close.

A *deal-contingent hedge* is an efficient way to hedge financial markets exposure by locking into market levels for the time when the transaction closes. Should closing not occur, the deal-contingent hedge simply expires without leading to any payment obligation for the equity sponsor.



Termination

- What is the fair mark-to-market of a derivative at close out?
- Will the bank release any valuation reserves creating a benefit?
- What potential is there for sharing in this benefit?

Restructuring

- Instead of terminating, is there any way of restructuring or blending an existing derivative into a new structure?
- How can such a solution be structured in the most cash-efficient way?
- Impact of restructuring on bank's balance sheet and reserves?

Novation

- Novation process and novation documentation – in theory simple, but often times very convoluted
- What are appropriate charges for novating a trade?
- How does taking on an off-market position affect a bank's balance sheet position and hence the cost of novation?

JCRA value-add

- **Restructurings, terminations and novations of existing trades add another layer of pricing complexity**
- **JCRA is capable of calculating banks' valuation adjustments and reserve requirements and can hence gauge capital and funding benefits (costs) when derivative positions get closed out, restructured or novated**
- **This puts our clients in a stronger negotiation position and opens up additional avenues for dealing with existing derivative positions**

Summary of Refinancing Considerations

- Will original funders remain in the funding structure?
- Can we restructure existing positions or do we terminated existing hedging up front?
- Can we novate existing hedging to the new lenders?
- Do the new lenders have CSAs in place with existing lenders if we novate?
- Calculate and negotiate CVA, FVA and KVA margins
- Can we negotiate advantageous termination pricing up front?
- Can we compete the new credit and funding costs?
- Is it more efficient to have a co-ordinating bank to restructure the hedges?
- Hedge accounting considerations for the existing and new positions

JCRA Value Add

- Application of innovative solutions to refinancing exercises
- Affordable and commercial results to deal with high value negative mark to markets
- Experience of dealing with a large number of counterparties to ascertain fair novation and termination charges
- Knowledge of different bank approaches and relative efficiency in fulfilling a coordination role
- Opportunity to introduce a third party hedge provider to compete existing banks
- Experience and ability to efficiently run and coordinate the process

Major European Infrastructure Project

Background

- A EUR1bn road project had 4 bidding consortia submitting Best and Final Offer (BAFO) funding solutions. Each consortia's BAFO financial model involved debt, either on an institutional or commercial bank basis plus lending from the EIB. On previous transactions it had been demonstrated that the respective consortia were not basing their final bid submissions on the correct market basis creating inconsistency of pricing between bidders.
- Our role at the pre preferred bidder stage was to ensure each bidder was pricing its debt correctly whilst also assessing other aspects of the proposed funding solution in order to ensure the best possible funding solution for the project.

Our approach

- Once we had established the relevant debt profile we worked with the individual consortia lenders' to ensure the basis for the pricing was 'at market' on a pre-defined static yield curve, thereby enabling each submission to be compared on a like for like basis.
- Market pricing, execution spreads, credit and undisclosed margins were also ascertained. The consortia were also asked to agree in principal the execution protocol to be used at financial close plus proposed hedge execution strategies to be used.

Results

- No errors were made in any of the bid submissions' hedge pricing.
- By benchmarking each of the bidder's financing solutions at the pre-PB stage we were able to negotiate competitive pricing for the execution and credit spreads applicable to the swap(s) well in advance of FC and whilst there was still competition to be mandated for the concession.
- We coordinated the execution process at FC. Prior to FC we, along with the relevant public authority and winning consortia banks, conducted a series of dry-run exercises to provide transparency to the parties involved, and ensure pre-agreed pricing was maintained.

Interest rate and FX hedging for a UK wind farm

Background

- Work alongside a GBP based infrastructure fund and their financial modeller to design an optimal interest rate & FX hedging strategy for a UK wind farm acquisition.
- Recommendation on the optimal IR hedging-term, quantum and effective rate payable in the context of the market environment and the banks' covenant structure.
- Recommendation on the FX hedging in order to hedge EUR construction costs in GBP terms.
- Compete the execution and credit costs within the syndicate for both the IR & FX hedging strategy.
- Produce an execution protocol to ensure fair, competitive and transparent pricing

Transaction Parameters

- 18 month construction phase (60% EUR denominated expenditure), 15 year repayment during operations.
- Variable rate Senior Debt Facility (totalling £115 million) provided by 3 lenders.
- Execution bank chosen via competitive tender. Subsequent hedging to be novated to wider bank syndicate post FC.

Our approach

- Hedging Parameters- review of business plan to establish the key parameters and assumptions to be met.
- Appropriateness - alternative hedging strategies compared to assess their suitability and tested under different interest rate market assumptions (beyond what is currently priced into the yield curve).
- Cost effectiveness - alternatives modelled to assess cost implications on covenants and effective rates of interest paid (including opportunity cost, premium cost, potential break costs).

Results

- Bespoke hedging strategy meeting banking facility covenants and client requirements.
- Clear audit trail of decision making and rationale for hedging strategy choice.
- Transparent and 'at market' pricing on execution – significant improvement on initial pricing offered from hedge counterparties. Competition between IR & FX providers driving best practise.
- Process simplification and timely execution assisting management by:
- Co-ordinating indicative and final implementation pricing
- Ensuring accuracy of hedge documentation
- Cost savings on hedge execution due to price improvement via benchmarking exercise

Accounting Services

Why is it important?

- Under IFRS (IAS39&IFRS9), USGAAP et al (FRS102 UK) derivatives are reported at their fair value (simplistically mark-to-market) causing P&L volatility, unless hedge accounting can be applied. **It's KEY to understand the accounting impacts pre-trade and post-trade.**
- Regulatory reporting (EMIR and Dodd-Frank) is time intensive and needs to be done accurately and in a timely manner.

JCRA value-add

- We provide **pre-trade accounting assistance**, making sure the economics and the accounting are considered together and that the effect of hedging on KPIs is well understood;
- Independent derivatives and debt **valuations, including BCVA** (credit valuation adjustments), we are well known and respected by the main audit firms;
- Assistance with **stakeholders conversations**, both internal (Boards) and external (auditors) with regards to the impacts of hedging activities on financial statements, we provide both highly technical discussions and 'layman' explanations;
- Expertise in **hedge accounting requirements**: we can help you prepare documentation, running effectiveness testing and ineffectiveness measurement;
- Provide with **disclosure** quantifications (risk sensitivity analysis and liquidity risk arising from derivatives)
- Our team supports your reporting and accounting processes, **freeing up your accounting teams and reducing quantitative errors that could lead to a restatement.**



Ian MacFarlane (EMEA & Australasia)

Ian is a Board Director and is responsible for JCRA's activities in Project Finance / Infrastructure outside of North America. Prior to joining JCRA in 1999 he was Head of Treasury at Daiwa Bank (Capital Management) Ltd and was in charge of the interest rate and foreign exchange risk management of the bank's capital. Prior to Daiwa, Ian worked for ANZ Bank in London and Melbourne in financial engineering and treasury.

E: ian.macfarlane@jcrauk.com
T: +44 (0)207 493 3310



Sachin Shah (EMEA & Australasia)

Sachin joined JCRA in 2016 after interning in 2015. Sachin works on derivatives related to interest rates, inflation and foreign exchange. Sachin previously completed internships with Goldman Sachs and BNY Mellon. Sachin holds a Bachelor's Degree in Mathematics, Operational Research, Statistics and Economics (First Class Hons) from the University of Warwick.

E: sachin.shah@jcrauk.com
T: +44 (0)207 493 3310



Lionel Kruger (sub-Saharan Africa)

Lionel is a Director and is responsible for projects in sub Saharan Africa. Lionel works on structuring and negotiating long term hedging solutions from the London office. Prior to joining JCRA in 2016 he ran a successful consulting business in Johannesburg and has thirty years of experience in banking. He has a Bachelors of Commerce (Honours) degree from the University of South Africa.

E: lionel.kruger@jcrauk.com
T: +44 (0)207 493 3310



Hugo Cusani (EMEA & Australasia)

Hugo is an Associate Director in the Project Finance and Infrastructure team. Hugo works on structuring and pricing complex derivatives within interest rates, foreign exchange and inflation. Prior to joining JCRA, Hugo began his career as an intern at BNY Mellon and Bloomberg. Hugo has a Bachelor's degree in Business Economics from the University of Liverpool.

E: hugo.cusani@jcrauk.com
T: +44 (0)207 493 3310



Joe Bailey (EMEA & Australasia)

Joe is an Associate Director and works in the PFI/PPP sectors structuring and pricing hedging solutions with interest rate and foreign exchange derivatives. Joe benchmarks and executes transactions on behalf of clients with hedge providers ensuring that pricing is transparent and reflects fair market levels. Joe has a degree in PPE from Exeter College, Oxford.

E: joe.bailey@jcrauk.com
T: +44 (0)207 493 3310



Ali Vohra (EMEA & sub-Saharan Africa)

Ali is an Associate and works with project finance and infrastructure clients on structuring and pricing complex derivatives related primarily to interest rates but also inflation and currencies. Ali holds a BSc in Economics from the London School of Economics and focused on Behavioural Economics.

E: ali.vohra@jcrauk.com
T: +44 (0)207 493 3310



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