Direct Lending: Finding value/ minimising risk
20 October 2015
Direct Lending: Finding value/ minimising risk

**Big picture trends: size; growth; risk/ reward**
Accessing Interest income
Equity investment perspective
Sector issues / opportunity
$23bn of volume via 8 of the leading US & UK Online Direct Lending (ODL) platforms in 2015e*: 100x growth in 5 years

• P2P volumes have grown at 151% CAGR since 2010

Source: AltFi Data, Company websites

*Where data publicly available
Direct Lending: Finding value/ minimizing risk

ODL is a global phenomenon - largest markets: China, US, and UK

Source: www.WDZJ.com, AltFi Data, Company websites
Direct Lending: Finding value/ minimising risk

- **China dominates globally**: 85% of 2015e annual ODL volumes

- **Chinese loans shorter maturity** - Based on loans outstanding China’s share is less pronounced at 68%

- **Continental Europe significantly less developed**: Relative to addressable opportunity, ODL in continental Europe is c 15x less developed than US & UK and 100x behind China
  - Primarily due to relatively tight regulation

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**Regional volumes: Europe ex UK Direct Lending market penetration still c15x behind US&UK and 100x behind China**

**Global volumes Online Direct Lending $bn**

- CAGR: 207%

**Global outstanding balances Online Direct Lending $bn**

- CAGR: 286%

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**Online direct lending annual volumes as % addressable market (2015 addressable market green box $trillion)**

- China 11.5%
- US 2.2%
- UK 1.7%
- EU ex UK 0.1%

**Online direct lending volumes as % GDP**

- China 1.5%
- US 0.13%
- UK 0.14%
- EU ex UK 0.01%

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Source: Liberum, WDZJ, AltFi Data, company data, Bank of England, Fdic, Federal Reserve, ECB, OECD

Source: Liberum, WDZJ, AltFi Data, company data, Bloomberg
• **Chinese market highly fragmented:** top5 platforms only 20% of volumes (vs. c80% in UK).

• **Regionally China growing fastest** – but set to slow given already high market penetration.

• **US & UK volume growth has slowed** from c190% YoY in 2013 to c100% YoY in 2015e

• **Europe ex UK accelerating:** c200% growth in 2015e vs. 140% in 2014e (albeit off a low base)
UK: Online Direct Lending could account for 15-40% of annual lending by 2025 depending on segment

- UK 2015e volumes: est. $4.4bn
- UK concentrated market: Top 6 UK platforms account for 88% of total volume
- Rapid growth: Already seen 13x increase in volumes from 2012-15e
- Zopa reacceleration: volumes in 2015e: 120% YoY growth (vs 45% in 2014)
- By 2025, UK direct lending could reach $100bn (excluding invoice factoring)

Source: AltFi Data, Liberum forecasts
Source: Liberum forecasts
Source: ABFA Association; Bank of England; Liberum forecasts
P2P awareness is static at best over last 12 months – more marketing/ new aggregator products required…

Short term c50% boost in active investors once becomes ISA-able

Over 50% of population think P2P riskier than equities!

P2PFA data shows 87% CAGR in amount per lender account but only 22% CAGR in number of lender accounts

Source: UK P2P Finance Association; Liberum analysis

Direct Lending: Finding value/ minimising risk

UK Consumer survey: awareness of P2P surprisingly static; ISA-ability to drive c50% increase in number of investors

UK consumer survey: % of survey population aware of P2P and % who would consider investing in P2P

UK consumer survey: % survey population who are already lending and % who will lend once ISA-able

UK consumer survey: Estimated capital invested in P2P (non pension assets)

UK consumer survey: % of UK population who think P2P lending riskier than equities

Source: ResearchNow, Liberum estimates

Source: ResearchNow, Liberum analysis
**EU ex UK: Larger addressable market in Continental Europe – volumes set to overtake UK by 2020**

- **EU ex UK 2015e volumes:** est. $1.5bn

- **Smava** (45% of total) on track to originate c $650m in 2015e, sources liquidity from banks

- **Accelerating growth:** Faster 2015e volume growth in 2015e for both Auxmoney (c 500%) and Pret D’Union (c 160%)

- **Regionally EU ex UK has largest growth potential:** 5.2x bigger addressable market than UK but UK 2015e ODL volumes are c2.7x larger*

(*ex UK invoice factoring for comparability)
Yields: Regional avg in relatively tight range of 5.5-8.8% swapped into USD (China an outlier for now)

- In local currency regional averages vary from 4.6-10.8% (dotted bars)
- Converted to USD, range is tighter: 5.5-8.8% (solid bars)
- Available net yields of largest platforms widely intermingled by region

Source: Company data, Liberum estimates

UK: Liberum AltFi Returns Index

Platform net yields swapped into USD (expected seasoned returns)

Source: Company data, Liberum estimates
How risky is consumer debt? Credit cards receivables: consistently positive net returns for last 20+ years

US credit cards:

- **Solid returns:** Avg net yield achieved on US credit cards net of loan losses: 8.2%
- **Stable losses:** Peak losses 1.9x average losses
- **Consistently positive returns:** No year with negative returns in at least 20 years

Similarly for UK credit cards:

- Avg net yield achieved on UK credit cards net loan losses: 6.4%
- Peak losses 1.6x average
- No year with negative returns in at least 16 years
Macro environment currently unusually benign for Direct Lending…

- Unemployment at 7 year lows in US & UK
- Real interest rates are expected to close to zero / negative for next 5 years
- UK credit card delinquencies down c83% from 2009 peak
- High yield credit spreads down 66% from 2009 peak – although relatively sharp jump in spreads recently…

Source: Liberum
Normalising loan losses to TTC levels suggests yields would decline c1%

Even under fairly aggressive stress case assumptions UK consumer and SME net yields stay at/above zero
ZOPA returns: surprisingly resilient through global financial crisis

- ZOPA one of the few Online Direct Lenders to have operated through the financial crisis
- The worst annual cohort, 2008, had annualised loan losses of 2.3% and an average net yield of 5.9%; the worst credit grade (C1) had loan losses of 4.3% and a net yield of 5.6%

Source: ZOPA data
UK vs. US: equalizing gross yields, UK consumer platforms appear to generate better returns

Anecdotally, UK offers better risk reward than US: Comparing Zopa loans of equal gross yield (USD swapped) to Lending Club ‘A grade’ and ‘B grade’ loans shows that equivalent Zopa loans yields an extra 0.4-1.2% of net yield vs. Lending Club

Extra 1/5th of net return at prime end: The difference is most pronounced for the Lending Club ‘A grade’ category with Zopa offering proportionately 1/5th more yield

2009-2012 cohorts used (as fully matured)

**Lending Club A grade loans: gross and net yields vs. equivalent gross yield Zopa loans for 2009-2012 cohorts**

<table>
<thead>
<tr>
<th></th>
<th>Lending Club</th>
<th>Zopa</th>
<th></th>
<th>Lending Club</th>
<th>Zopa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gross yield</td>
<td>Net yield</td>
<td>Loan loss</td>
<td>Gross yield</td>
<td>Net yield</td>
</tr>
<tr>
<td>2009</td>
<td>8.8%</td>
<td>6.2%</td>
<td>2.5%</td>
<td>8.8%</td>
<td>7.3%</td>
</tr>
<tr>
<td>2010</td>
<td>7.2%</td>
<td>6.0%</td>
<td>1.20%</td>
<td>7.2%</td>
<td>6.9%</td>
</tr>
<tr>
<td>2011</td>
<td>7.2%</td>
<td>5.3%</td>
<td>2.0%</td>
<td>7.2%</td>
<td>6.6%</td>
</tr>
<tr>
<td>2012</td>
<td>7.7%</td>
<td>5.3%</td>
<td>2.4%</td>
<td>7.7%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Avg 2009-12 cohorts</td>
<td>7.7%</td>
<td>5.7%</td>
<td>2.0%</td>
<td>7.7%</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

Source: Liberum analysis, Lending Club data, AltFi Data

**Lending Club avg A-grade net yield (2009-12) vs. equivalent gross yield Zopa loans**

![Graph showing the comparison between Lending Club and Zopa's net yields and loan losses over different years.]

Source: Liberum; AltFi data

**Lending Club B grade loans: gross and net yields vs. equivalent gross yield Zopa loans for 2009-2012 cohorts**

<table>
<thead>
<tr>
<th></th>
<th>Lending Club</th>
<th>Zopa</th>
<th></th>
<th>Lending Club</th>
<th>Zopa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gross yield</td>
<td>Net yield</td>
<td>Loan loss</td>
<td>Gross yield</td>
<td>Net yield</td>
</tr>
<tr>
<td>2009</td>
<td>10.8%</td>
<td>7.1%</td>
<td>3.7%</td>
<td>10.8%</td>
<td>7.2%</td>
</tr>
<tr>
<td>2010</td>
<td>10.8%</td>
<td>7.1%</td>
<td>3.72%</td>
<td>10.8%</td>
<td>7.1%</td>
</tr>
<tr>
<td>2011</td>
<td>11.2%</td>
<td>7.5%</td>
<td>3.7%</td>
<td>11.2%</td>
<td>8.4%</td>
</tr>
<tr>
<td>2012</td>
<td>12.2%</td>
<td>7.7%</td>
<td>4.5%</td>
<td>12.2%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Avg 2009-12 cohorts</td>
<td>11.2%</td>
<td>7.3%</td>
<td>3.9%</td>
<td>11.2%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

Source: Liberum analysis, Lending Club data, AltFi Data

**Lending Club avg B-grade Net Yield (2009-12) vs. equivalent gross yield zopa loans**

![Graph showing the comparison between Lending Club and Zopa's net yields and loan losses over different years.]

Source: Liberum; AltFi data
• Bank originated credit assets look attractive (e.g. US credit card net yields)

...But MPL loans perform better:

• After risk-normalising, P2P loans generate 1.6% more yield for loans with avg gross yield of 7.7%

• …Suggests we can conservatively backtest the performance of P2P based on historical bank loan performance data

Source: Federal Reserve, Bank of England, Lending Club, Zopa, Liberum Analysis
Risk/Reward for Direct Lending Proxies are attractive vs. Equities & Property

- Better Sharpe ratio for US credit card assets and UK personal loans than for S&P
- S&P and commercial property had negative returns of -37% and -23% in 2008
- Direct lending no negative annual returns over last 20 years

*Sharpe ratio* = (annual net return less 3m Libor) / (standard deviation of annual returns)
Back-testing: levered Direct Lending returns equal / exceed S&P returns with much lower volatility

- For return vs. volatility ratios use 2 year time periods to make ‘apples to apples’ comparison

- Unlevered, Direct Lending proxy underperforms S&P500 over last 20 years but has **no negative years** and much **lower volatility**

- A 200% debt/equity Levered Direct Lending portfolio **matches the S&P with no drawdowns and much lower volatility** (net of mgmt and performance fees).
  - 200% leverage modest by standards of securitisation market

- **Banks equity index**: a notable **laggard** with much **more volatility**.

**Sharpe ratio and backtesting approach**
- Sharpe ratio: avg excess annual return over 3m Libor as % of annual standard deviation
- Need to use 2 year time periods to measure standard deviation to make P2P loans comparable with Equities and Property. (c 2/3rds of 3y loans repaid by month 24)
- For unlevered P2P returns (bottom left chart) we assume no management fees
- For P2P levered fund (bottom right chart): assume 0.7% mgmt expense and 10% performance fee

**Annual returns vs. standard deviation**

**Direct Lending- proxy** vs. S&P 500 total return index

- Source: Liberum

**Levered** Direct Lending- proxy vs. S&P 500 total return index

- Source: Liberum, IPD, Federal Reserve, Bloomberg

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1. Uses Credit Card Data as proxy for Direct Lending; 1% servicing fee
1. Levered: 200% Debt/Equity at Libor+2.3%; Mgmt fee of 0.7% assets; 10% perf fee.

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Niche lending segments offer the best risk/reward lending opportunities

- Niche platforms’ higher returns potentially make them M&A targets

<table>
<thead>
<tr>
<th>Niche Lending Segment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Bridge Financing</td>
<td>Providing timely secured financing to property entrepreneurs while they arrange longer term cheaper financing</td>
</tr>
<tr>
<td>Insurance Premium Finance</td>
<td>Lending against insurance premiums with premium payment recoverable if loan repayments not made</td>
</tr>
<tr>
<td>Lending against life insurance for terminally ill</td>
<td>Improving quality of late-stage life</td>
</tr>
<tr>
<td>Near prime Auto Financing</td>
<td>Using starter interrupt technology and GPS technology on car collateral to improve credit performance (e.g. Car Finance Company)</td>
</tr>
</tbody>
</table>
Direct Lending: Finding value/ minimising risk

Big picture trends: size; growth; risk/ reward
Accessing Interest income
Equity investment strategies
Sector risks and opportunity
Both Ranger Direct Lending and P2PGI are listed vehicles focused on the Direct Lending Sector; modest leverage

- **P2PGI (ticker P2P)** is a listed fund focused on P2P platforms globally
- 61% of funds are invested in US (56% Consumer; 6% SME); 27% in Europe (16% Consumer; 11% SME)

- **Ranger Direct Lending (ticker RDL)** is a listed fund focused primarily on US secured Online Direct Lending platforms. 100% US asset mix; 84% secured

Source: Bloomberg / analyst reports
Online Direct Lending Funds typically have targeted NAV returns 25% higher than other income funds

- **ODL funds offering higher returns:**
  Sample of 4 London listed Direct Lending funds offer an average total NAV return of 10.1% vs. 8.0% for other income funds
Direct Lending: Finding value/minimising risk

Retail capital channels into Direct Lending are evolving...

<table>
<thead>
<tr>
<th>Description</th>
<th>Example</th>
<th>Inception Date</th>
<th>Pros / cons for Investors</th>
<th>Pros / cons for Platforms</th>
</tr>
</thead>
</table>
| Classic P2P | P2P platform directly connecting with lenders | 2005 | Pros: Low cost  
Cons: Time intensive | Pros: Relatively low churn of lending capital  
Cons: Only likely to attract early adopters/sophisticated investors |
| Diversified Closed-End Investment Trust | Listed Investment trust lending via multiple platforms | 2014 | Pros: Diversified access  
Cons: Higher costs | Pros: Increased access to funding especially for early stage platforms  
Cons: Funding can be easily diverted to other platforms offering better returns |
| Dedicated trusts for larger platforms | Dedicated listed Investment trust lending passively via one platform | 2015e | Pros: Efficient access; accessible via brokerage account  
Cons: Less diversification | Pros: Scalable permanent capital  
Cons: More difficult to attract capital initially for less established platforms – due to relative illiquidity |
| 1-stop-shop P2P portal/Offering convenient structured products | Single account / product for retail investors | Under development | Pros: Convenience; diversified low cost, structured solutions  
Cons: Unavailable via security broker | Pros: Access to broader retail mass market; equity ownership of portal  
Cons: More fluid funding than dedicated trust–contingent on performance |
Direct Lending: Finding value/minimising risk

Big picture trends: size; growth; risk/reward
Accessing Interest income

**Equity investment strategies**
Sector risks and opportunity
At least 4 key drivers underpinning sector long term sustainability…

1. Online credit data as good/better than bank data
   - Ongoing unbundling of credit info ecosystem
   - Enhanced credit data via FinTech innovation

2. 60% relative cost efficiency for smaller loan amounts
   - Online Direct lenders (ODLs) are c60% more efficient vs. traditional lenders

3. Improved User Experience
   - ODLs are using technology to drive convenience and better user experience=> better Net Promoter Scores

4. Government support for ODL sector
   a. ODL reduces systemic risk since no single point of failure
   b. In addition, ODL enables government to channel credit where it is most needed (e.g. SME – British Business Bank, NTMA in Ireland)
Over $220m of equity capital already raised in 2015 by UK platforms

- **RateSetter** estimated forward revenue multiple, a **c20% discount to Lending Club valuation multiple (9.2x)**
- **Funding Circle** valued at over $1bn on **relatively high revenue multiple** – due to US/ global opportunity

- **Direct Lending** now accessing equity capital from **mainstream asset managers**

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### Investors

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount raised</th>
<th>Est. post money Val.</th>
<th>Est. Price/Revenue*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr 15</td>
<td>$150m</td>
<td>$1bn</td>
<td>23.3x</td>
</tr>
<tr>
<td>Mar 15</td>
<td>$31m</td>
<td>$230m</td>
<td>7.7x</td>
</tr>
<tr>
<td>Jun 15</td>
<td>$34m</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Aug 15</td>
<td>$9m</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Estimated forward revenues over the next 12 months at time of transaction

Source: Company data / press reports
Direct Lending: Finding value/ minimising risk

**Significant equity value creation: Average IRR from Series A:**
143%; valuation of c 0.8x run rate loan originations
Substantial growth for LC and ONDK still expected despite share price declines

- LC and ONDK share prices under some pressure post IPO
- Reverse engineering current valuation suggests market still expecting 22-32% revenue CAGR over next 10 years

Source: Bloomberg

Source: Liberum preliminary estimates (not under coverage)
Direct Lending: Finding value/ minimising risk

Equity opportunity to anticipate institutional lending capital – particularly in non-P2P direct lending

Segmenting direct lending landscape

Estimated US 2015e Volume by Category with Examples of each Lender Type

- **Direct Lending (DL):** All non-bank lending executed both offline and online
- **Online Direct Lending (ODL):** Smaller loan size direct lending to SMEs and consumers where the majority of the borrower interaction and underwriting is online
- **Market Place Lending (MPL):** ODL where the platform retains none of the credit risk. Lenders buy whole/ fractional loans via the platform
- **Peer to Peer lending (P2P):** MPL where retail investors can invest in fractional loans via the platform

Institutional lending capital as valuation catalyst

‘For Illustrative purposes only’

- **Origination run rate vs. equity valuation:** Platform revenue and valuation are closely linked to volumes (approximately linear relationship)
- **Institutional lending capital – valuation catalyst:** Investing in platform equity concurrent with institutional loan capital deployment drives exceptional investment returns

*Estimated US annual SME & Consumer 2015 volume $bn;
Source: NFIB, FDIC, Company data, NFIB, Liberum estimates

Source: Liberum analysis

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*Image descriptions and additional data not provided*
Liberum Alternative Finance- what we’re focused on…
Specialist strategic adviser and development partner to the Alternative Finance sector

Working with entrepreneurs and investors in emerging, high-growth AltFi businesses
- **AltFi Focus** on online direct and marketplace lending and equity crowdfunding
- **Raise equity capital** through our Investment Banking and Equities teams
- **Source lending capital** funding for platforms
- Act as a **strategic development partner** and selectively provide venture capital
- **Partner with investors** to source equity and loan investment opportunities and raise funds
- Sponsor the benchmark **Liberum AltFi Indices**

*Selected businesses Liberum have sourced funding for or invested in*
Direct Lending: Finding value/ minimising risk

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Equity investment strategies
**Sector risks and opportunity**
Regulatory Priorities: fraud risk, fee transparency and management incentive alignment

Fraud minimisation via central data repository
- Risk of capital being misappropriated/loan risk not matching description/collateral not matching contract
- In contrast to other Fintech products (e.g. P2P FX and Payments) – payments for P2P lenders are extended overtime => ponzi scheme risk is higher
- Potential solution: Regulator-managed data repository that automatically monitors and cross references all loans to individual bank statements – funded by a small sector levy

Fee transparency
- Retail investors often use the rate offered as risk proxy
- Currently possible for ODL platform to transform a high borrower APR into a low investor net return via large opaque fee margin
- Retail investors may take more risk than intended/have less protection in stress scenario
- Potential solution: require clear statement of annualised platform fees.

Management incentive alignment
- Marketplace lenders typically take no credit risk
- Potential incentive to prioritise short–term growth over credit quality
- Potential solution: portion of staff performance compensation should be continuously deferred until loans have been fully repaid

Annual lender returns pre and post fees %

Alignment of management incentives with lender returns

Fraud prevention / detection platform
- Risk of capital being misappropriated/loan risk not matching description/collateral not matching contract
- In contrast to other Fintech products (e.g. P2P FX and Payments) – payments for P2P lenders are extended overtime => ponzi scheme risk is higher
- Potential solution: Regulator-managed data repository that automatically monitors and cross references all loans to individual bank statements – funded by a small sector levy
Future Central Bank engagement with MPL

- **MPL systemically important** once sufficient scale > e.g. 25% of Consumer and SME lending
- **Targeted monetary policy**: MPL will enable government to target components of the economy e.g. SME credit by region and industry
- **MPL may become part of money supply mgmt**: central banks could buy / sell pools of MPL loans (via ABS market) as part of their open market operations

MPL liquidity will become approx as good as deposits

- **Central bank MPL liquidity**: Central banks should provide unlimited sector liquidity at discount for performing MPLs
  - Bagehot: “In a financial crisis, central banks should lend freely against good collateral at a penalty rate”
- **Inherent structural liquidity**: due to amortisation flowback e.g. 1/3rd of 3yr loans are repaid annually.
- **Payment connectivity**: In future, P2P will connect with mobile wallets and payment systems providing public good investment returns AND immediate access to savings

MPL loans likely to behave as broader money: ‘M5’

Potential future asset liquidity categories

- **M0**: Cash
- **M4**: Bank deposits
- **‘M5’ MPL loans**
- **Equities**
- **Property**
- **Bonds**

MPLs will have real time flows to / from mobile wallets

Future MPL linkages with payment fintech

- **P2P Platforms / Funds**
  - Attractive returns: e.g. 5-10% pa

Rapid Loan repayments imply significant structural liquidity

*With govt/ institutional liquidity backstop
Conclusions

- **Regionally, more growth in Europe:** Continental Europe originations likely to overtake UK by 2020 (currently 3x smaller); China set to slow relatively
- **Better Sharpe ratio vs other asset classes:** MPL asset class offers better risk / reward ratio than equities (up to 4x higher)
- **Focus on lending niches:** smaller & overlooked segments offer best debt and equity opportunities
- **Retail sector access evolving** towards low cost/ convenient solutions; MPL not yet reached mass market; aggregator solution/ packaged products under development
- **MPL loans to partially disintermediate cash:** as means of payment and store of value; opportunity in integration with digital wallets & current accounts (once liquidity challenges addressed).
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