



Cardis Stored Value Payment Solution

**Independent Expert Report by
Edgar, Dunn & Company**

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**Edgar, Dunn
& Company**

Management Consultants

Executive Summary

Cardis offers a solution to the challenges of high volume, low value electronic payments in multiple channels. The technology underlying the solution provides a flexible and effective answer for these payments in new markets where existing payment systems have failed to penetrate. However beyond these new markets the Cardis solution potentially offers existing EMV based payment products the ability to service low value payments within the existing four party market model.

There is great demand for an effective replacement to cash in the European market. Despite efforts by the European Central Bank (ECB) and the activities of payment schemes, bank issuers and new payment providers cash remains a powerful competitor to electronic payment services. Displacing this cash volume is the greatest business opportunity for any new or existing payment service operating in Europe.

Current attempts to address this challenge for face-to-face payments, including contactless cards, mobile Near Field Communication (NFC) and aspects of pre-paid cards, are flawed. Whilst the technology used is effective and the consumer experience positive they fail to create a driving economic rationale for their implementation. Invariably this is due to a failure to achieve a balance between the economic benefits achieved by each party in the four party market model and therefore their ability to implement a widespread solution. In certain configurations the Cardis solution has the ability to create a compelling proposition for the cardholder and merchant that creates a business case for the acquirer and enables the card issuer's ambitions.

The Cardis technology removes the need for end-to-end processing of individual transactions within the four-party processing model. This alters the economics of payment processing in a fundamental way: the overall cost is significantly lower and varies with the transaction value, making the cost of processing directly proportional to transaction value and thereby allowing penetration into micropayments. More importantly EDC have identified a sub-set of implementation models that provide economic advantage to acquirers and issuers who can then more effectively serve their merchants and cardholders.

Whilst the Cardis solution offers advantage to individual issuer/acquirers it is at its most effective when implemented by a majority of acquirers and issuers. EDC recognise that the challenges of affecting any mass change in the established card payment infrastructure of any country or payment scheme are considerable.

Beyond the existing card based payment market the Cardis solution offers potential to any business wishing to cost effectively provide payment services to their customer base. EDC have reviewed potential applications within the mobile phone and gaming industries but many others can be identified. In these applications Cardis offers an integrated, secure and manageable payments solution that has the flexibility to support a wide variety of

implementation models. Note that in these applications the payments may be of any value - not just low-value.

The technology used within Cardis and the processes and entities required to operate it are based on industry best practice. Moreover there is a high degree of implementation design flexibility. This encourages EDC to believe that an implementation design can be found to address the needs of all parties in the four-party market model and in new payments markets. Given that implementation models often influence the ease of deploying new technology this characteristic of the Cardis solution is beneficial.

Beyond flexibility the Cardis technology also offers additional benefits to all parties in the four-party model. For those issuers attempting to deploy contactless cards it offers an effective answer to the economic challenges currently being encountered. It could make contactless payments not only highly convenient for the cardholder but also economically attractive to the merchant and acquirer. At the point where contactless has not yet been rolled out on a large scale, there is a window of opportunity to add the Cardis solution to the product, remedy the business model issues and accelerate adoption. Furthermore the Cardis solution may enable loyalty and direct marketing benefits and value-added services with new revenue streams for issuers and acquirers. EDC note that the stored value functionality could be attractive for low-cost loyalty programs because the chip can be used to store and release rewards instantly without a need for back-end processing.

If the challenges of motivating merchants, acquirers and issuers within the four-party model can be addressed, a low value payment technique like Cardis offers the payments industry an opportunity to effectively compete with cash. For new entrants to the payments industry it offers a fast-track solution to deployment.

EDC conclude that in specific configurations the Cardis solution has attractive economics for merchants, acquirers and issuers. With careful positioning it could form a key component in all EMV based payment solutions. By supporting the ECB policy objective of replacing cash, Cardis enabled payment products could be positioned as a truly pan-European solution complying with the Payment Services Directive framework for low value payment solutions.

Edgar, Dunn & Company Limited

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