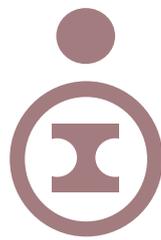




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Prepaid cards-Challenging market or marketing strategy?

Prepaid mobile phone packages are the big attraction in today's mobile market but prepaid services are not new. Operators have offered prepaid plans for years. So why so much ado about prepaid plans these days? Mainly because prepaid plans have become important marketing strategies. Prepaid has turned out to be such a spectacular triumph in Europe that some in the industry now consider it a blueprint for market success, but is it all gold that glitters?

Prepaid in Europe

In 1995 TMN Portugal Telecom's mobile division was the first company to launch a successful prepaid service in Europe after the disastrous attempts of Germany's D1 and Swiss Natel whose pioneering cards were targeted at business people travelling in those countries. Phone calls were charged at high rates and cards were not rechargeable. These characteristics ensured the failure of the cards but the new idea was soon grasped and converted into a more commercial service by TMN who transformed the concept into a mass-market product.

From the very beginning the TMN creation was a success and its subscriber base nearly doubled in the first three months of its service. TMN now has nearly two million subscribers of which more than 67% are prepaid. Other European operators did not want to miss out on

the success of TMN prepaid service and most of them started to offer a prepaid service too.

% Growth of Prepaid	End 1997	Mid - 1998
Austria	16.2	26.7
France	5.1	9.5
Germany	5.6	9.4
Italy	44.7	56.7
Netherlands	1.8	20.2
Portugal	55	66.5
Spain	12.3	22
Sweden	7.4	12.9
Switzerland	20.1	28.2
UK	2.2	5.8
Others	5.9	11.5
Tot West Europe	16	24

Source Wireless Europe 1999

*Table 1: Prepaid growth in Europe
Italy and Portugal show the higher growth rate within Europe.*

Italy was the first country to follow the Portuguese lead while other countries like UK, Belgium, France,

Prepaid Subscribers	End 1997	Mid - 1998	End 1998
Austria	188,000	420,000	1,281,000
France	293,000	729,000	2,700,000
Germany	466,000	997,000	3,040,850
Italy	5,255,000	8,791,000	13,561,000
Netherlands	30,000	469,000	1,430,450
Portugal	1,094,699	1,917,867	2,358,266
Spain	535,000	1,150,000	3,507,500
Sweden	235,000	489,000	1,491,450
Switzerland	210,000	372,000	1,134,600
UK	184,000	572,000	2,849,000
Others	480,000	1,067,000	3,254,350
Tot West Europe	8,970,699	16,973,867	36,608,466

Source Wireless Europe 1999

*Table 2: Prepaid subscribers in Europe
Italy is the most successful European country for prepaid services. Its penetration rate currently at 45% is expected to grow up to 60% in year 2000*

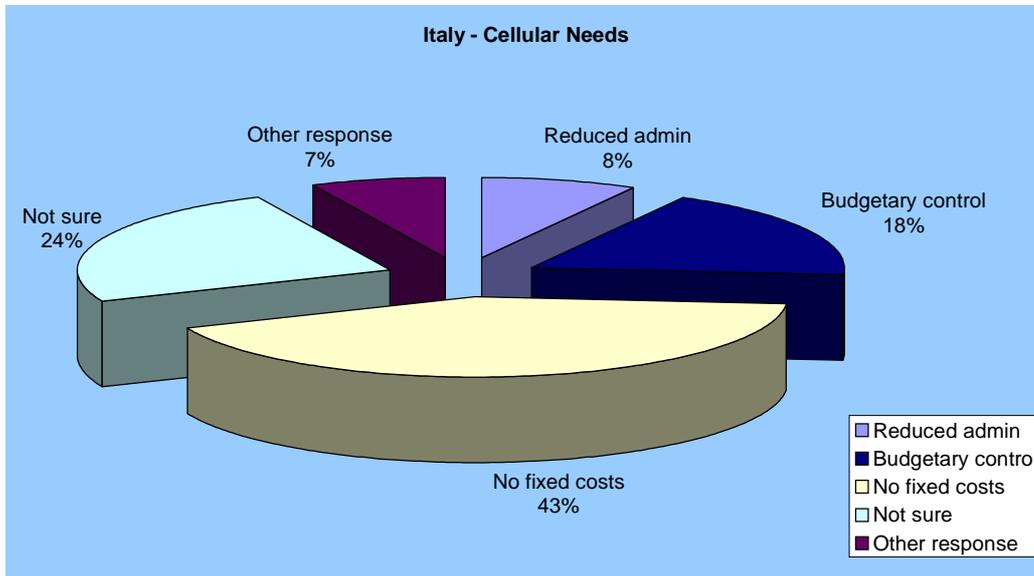


Figure 1: Italian prepaid customers need (source Wireless Europe)
Absence of monthly fee and cost control represent the main drivers for pre-paid customers

Spain and Norway followed suit. Soon operators in the remaining countries of Western Europe were ready to launch prepaid services too, followed in 1998 by the Eastern European mobile operators in Estonia and the Baltic Republics. Nowadays more than 250 cellular operators in 75 nations offer prepaid plans.

To provide a clearer understanding of the mobile prepaid market in Europe in this paper we provide

some highlights of the Italian market, where so far, prepaid card have had the best outcome, and of the UK market, where prepaid packages have recently started to boost the market.

Italy

Italy is the most successful country for prepaid services and mobile penetration. In 1996 the introduction of prepaid cards significantly boosted the number of subscribers of the two existing operators TIM and Omnitel. Today prepaid cards

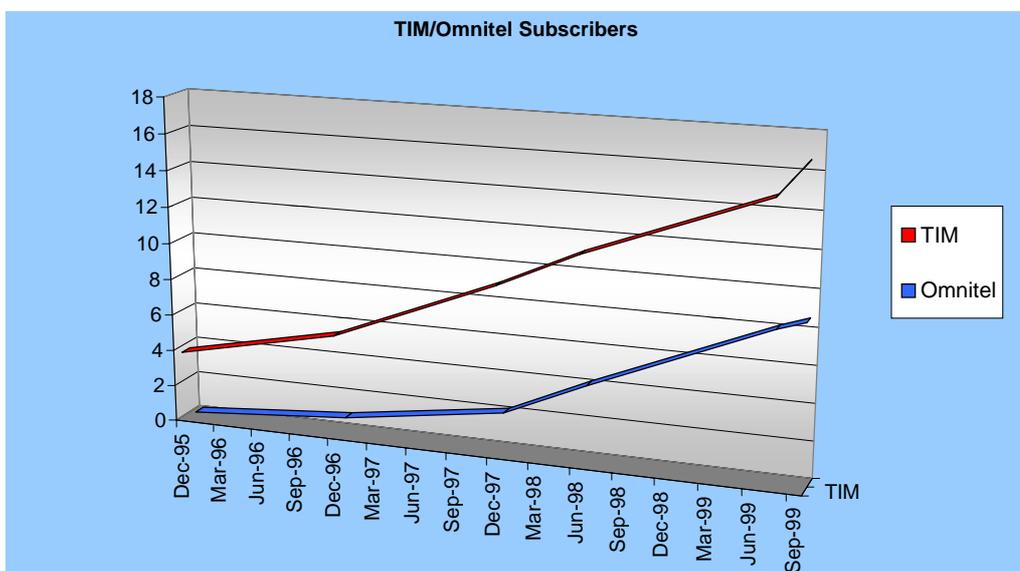


Figure 2: Tim/Omnitel Subscribers (source Tim/Omnitel)
The three active Italian operators have around 26 million subscribers of which more than 17 million are TIM's and nearly 9 million Omnitel's



are the Italian's favourite service; 85% of Omintel's new subscribers and 95% of TIM's new subscribers are prepaid. Italy is one of the most dynamic mobile markets in Europe: with about 26 million subscribers. Its current mobile penetration rate of 45.28% is the highest in Europe after Scandinavia.

The Italian market is becoming increasingly complex and competitive since 1998, due to the introduction of third and fourth operators, Wind and Blutel, (the latter being awarded its mobile licence in July 1999). The market is still rapidly increasing and by the year 2000 prepaid schemes will represent more than 60% of subscriber base.

Italy is the only European country where the ratio between high and low/discounted tariffs is 9 to 1, while in the rest of Europe it is 3 to 1. This large difference is due to the Italian mobile prepaid tariff plans. They vary from the byzantine plans offered by TIM, whose tariffs depend on the time of the day and the number you call (a fixed line, a TIM number or a competitor's customer), to the simpler ones proposed by Wind and Omnitel who offer flat rate tariffs at any time of the day, addressed to the business customers, to the tariff plans for the youngsters and non business customers that reduce call charges in the evening hours and during week-ends.

Certainly, fashion and local culture has had an effect on the Italian prepaid market. In Italy when an item like a mobile phone is seen as fashionable and becomes reasonably affordable, it's only a matter of time before everyone wants one. Prepaid card characteristics and appropriate tariff plans in conjunction with a market where a mobile phone is a status symbol determined the Italian success.

UK

In the UK, through the introduction of prepaid, Vodafone and One2One smashed their previous growth records in the three months before Christmas 1998 while BTCellnet lost much of their market growth due to slow organisation of their prepaid offer. In April 1999 three out of five UK consumers who had a mobile service for less than one year had chosen a prepaid plan. In the UK mobile penetration is around 35% and by 2001 it is expected to grow up to 50% thanks to prepaid.

Vodafone has now 7 million customers of which more than 2.5 million are prepaid, while Orange's 2.45 million prepaid customers represent nearly 50% of its total customers. Britain's smallest mobile phone company, One2One has taken its subscriber base to 3.2 million on the back of 51% of prepaid subscribers. In the UK users are becoming more discerning and operators have

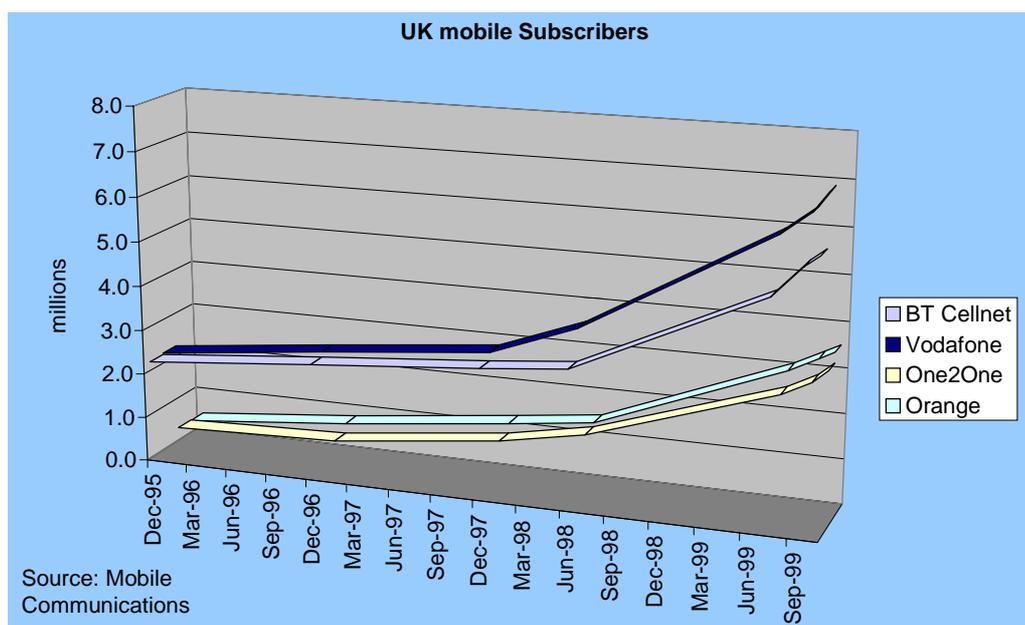


Figure 3: UK Mobile subscribers
British mobile operators have nearly 16 million prepaid customers



learnt from other countries' experience. Prepaid customers dominate new subscriptions among the UK's four operators and between 40 and 60% of new connections are now prepaid. Certainly better tariff schemes and no credit checks drove the growth.

On the customer side

Prepaid was originally designed for customers who were not considered good credit risks for traditional selling and for customers who did not want to subscribe for long periods of time and could not predict how many calls they were going to make. Prepaid turned mobile phones, a device once almost exclusively for business people, into a mass-market item.

Reasons for choosing prepaid	
Manage spending	53%
Better value	24%
Fitted spending/lifestyle patterns	19%
Gift	2%
Other	2%

Source Wireless Europe 1999

Table 3: Reasons for choosing prepaid
Managing spending is the most important driver for prepaid customers

Prepaid Users		
	Postpaid	Prepaid
Sex		
Male	68%	40%
Female	32%	60%
Age		
16-24	14%	23%
25-43	32%	33%
35-44	35%	20%
45+	19%	23%

Source Wireless Europe 1999

Table 4: Prepaid Users
Prepaid customers are principally youngsters, for which prepaid represents the only opportunity to own a mobile phone.

The success of prepaid was determined both by the possibility for consumers to possess a mobile telephone without having to pay high monthly fees and by the possibility of having control over telephone expenses. In other words prepaid was lowering the main entry barriers such as fixed costs and the requirement for some form of budgetary control before subscribing to a cellular

service. Prepaid customers are principally women (aged between 16 and 34) and youngsters and for the latter prepaid often represents the only opportunity to own a mobile. Prepaid usage is mostly personal/leisure, 33% of total mobile market is business users and only a small

Prepaid Usage			
	Tot. Market	Postpaid	Prepaid
Business User	33%	43%	15%
Personal user	46%	38%	62%
Both	20%	19%	23%
Length of service			
	Tot. Market	Postpaid	Prepaid
Under 1 year	23%	15%	38%
1-2 years	30%	27%	34%
3-4 years	28%	32%	20%
4+ years	20%	26%	7%
Spending (per month)			
	Tot. Market	Postpaid	Prepaid
Less than 25 Euro	22%	18%	30%
25-50 Euro	37%	26%	59%
50-100Euro	18%	24%	6%
100+ Euro	23%	32%	6%
Minute of Use (per week)			
	Tot. Market	Postpaid	Prepaid
Less than 30 mins	17%	12%	28%
30-60 mins	37%	36%	38%
60-240 mins	21%	18%	27%
240+ mins	18%	26%	4%
Don't know	6%	8%	3%
Customer General Satisfaction			
	Tot. Market	Postpaid	Prepaid
Very happy	8%	9%	6%
Happy	47%	48%	46%
Neither	39%	38%	40%
Unhappy	5%	4%	6%
Very unhappy	0.6%	0.3%	1.1%
Call Tariff Satisfaction			
	Tot. Market	Postpaid	Prepaid
Very happy	6%	5%	7%
Happy	18%	12%	28%
Neither	43%	45%	41%
Unhappy	20%	21%	18%
Very unhappy	13.0%	16.9%	5.6%

Source Wireless Europe 1999

Table 5: Prepaid characteristics
Prepaid is highly suited for personal usage. Prepaid customer general satisfaction and call tariff satisfaction is higher among prepaid customers than post-paid.

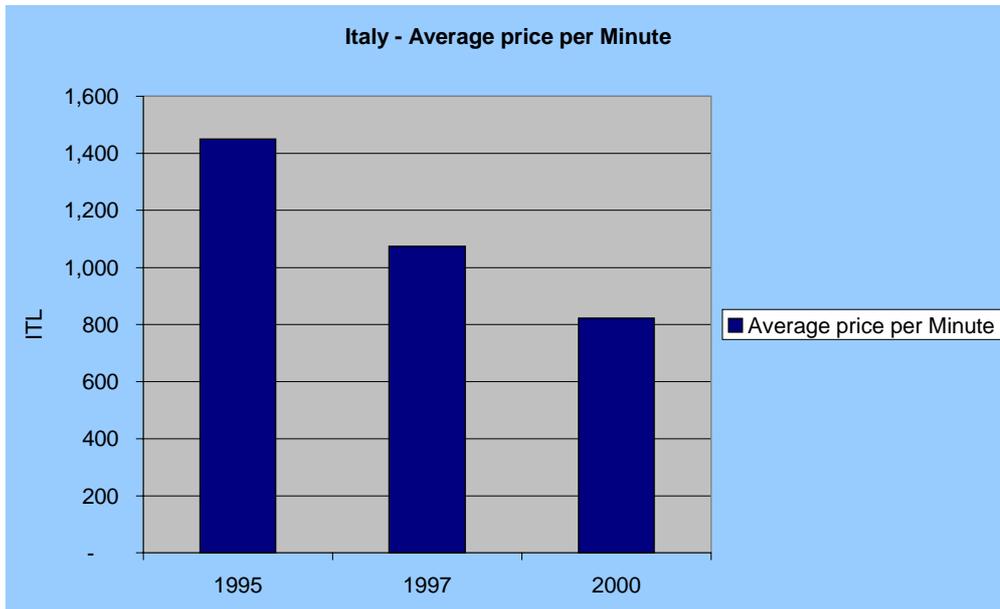


Figure 4: Italy: Average price per minute (source Analysys)
Average price per minute is dramatically falling

percentage of them uses prepaid. Today 68% of new customers in Western Europe take prepaid and around 40% of mobile users utilise some form of prepaid. By 2002 this penetration figure is expected to have increased to around 75%.

Across the top 15 cellular networks in Europe, at low levels of usage (less than 25 minutes outgoing calls per month) prepaid packages are between 25% and 50% cheaper than post-paid

subscriptions (average monthly prepaid expense of \$13 against \$22 of post-paid). At low levels of usage, expenditure on post-paid is taken up by monthly rental charges that are not present in prepaid. Even at a higher levels of usage (75 call minutes per month) some operators' packages still offer around a 20% saving of pre- against post-paid.

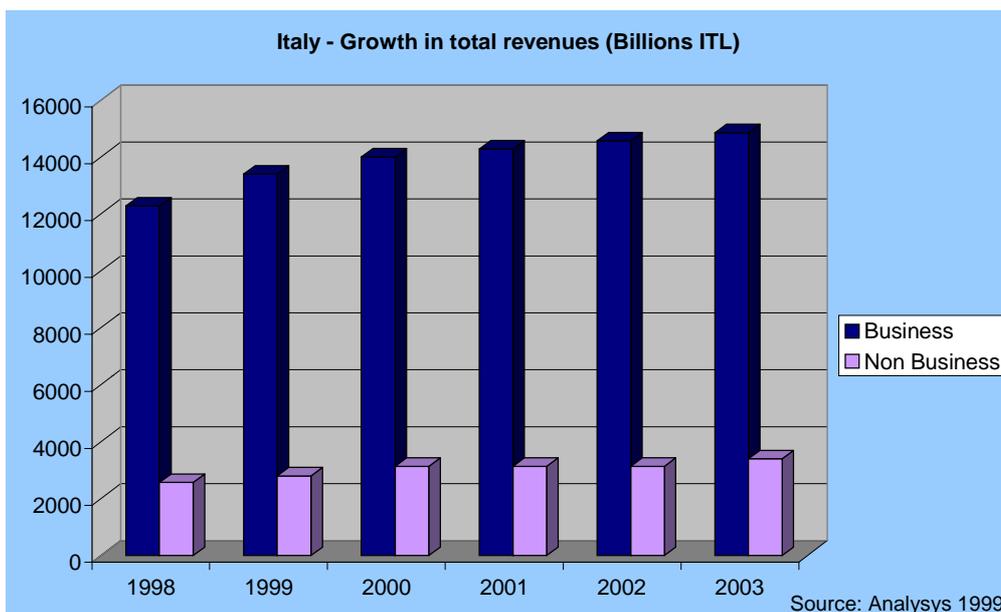


Figure 5: Italy – Revenue growth (source Analysys)
Business revenues still remain the main source of revenues

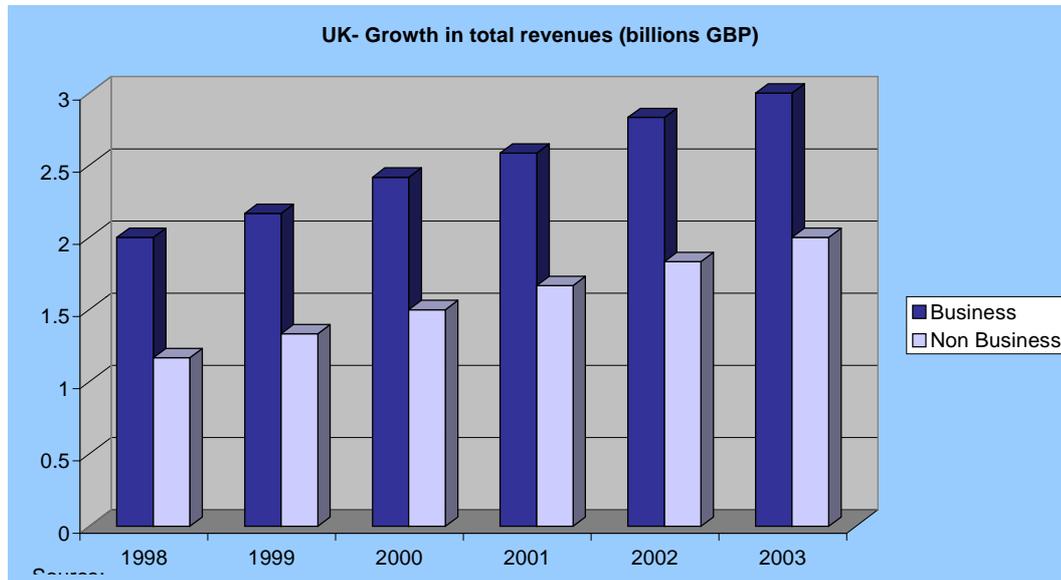


Figure 6: UK – Revenue growth (source Analysys)
Business revenues still remain the main source of revenues

On the operator side

With the extensive growth of prepaid subscriptions, operators achieved expansion of their customer bases but it did not reflect an increase in traffic. ARPU (Average Revenue Per User) has dramatically dropped since the introduction of prepaid, operating costs have lowered due to reduced acquisition costs and prepaid has no bad debt exposure and lower incremental strain on resources (around 50% of enquiries relate to billing alone). Operators' fixed revenue stream (that is monthly rentals from a leisure subscriber) is being replaced rapidly with a variable revenue stream, hence increasing the overall risk profile. The usage pattern also differs – a higher proportion of incoming calls compared with outgoing calls (on an average a post-paid leisure subscriber makes approx. 60% outgoing calls, compared with around 50% for pre-pay user). These differences result in EBITDA margins of around 55%, compared with 50% for the average post-paid subscriber.

In Italy current monthly usage of pre-pay is about 70% of the leisure subscriber. The picture is similar in UK. Prepaid customers dominate new connections amongst all operators but they do not generate as much revenue as contract customers. Prepaid packages include telephones, and as long as the operators can cover the initial cost of the

handset with the initial credit it will be quite a low cost for them.

In 1998, according to Vodafone's figures, each of its contract customers generated gross revenue of £552 - more than twice as much as the £225 generated by each of its pay as you talk customers and in the year to 31 March 1999, ARPU was £369, a reduction of 19% over the previous year, due mainly to the increase in the proportion of customers using prepaid services.

Churn

Prepaid makes churn difficult to measure. A customer may activate the service in one month and not use it for the following one making it difficult for the operator to count properly customer numbers. Mobile users are also not loyal to their service providers. A high percentage of customers switch from a contract service to a prepaid one and operators have had to drop prices and to offer a variety of loyalty schemes to prevent churn. Due to the variety of tariff plans offered and the possibility to swap cards from one telephone to the other, in countries like Italy, most of the customers own more than one prepaid card, each of them belonging to a different operator. Customers use different cards at different times of the day in order to get the best-discounted tariff.



Third Generation mobile technology

What will be the impact of WAP (Wireless Application Protocol) and of third generation mobile technology?

The aim of WAP is to bring standard based applications and Internet content to digital cellular phones. WAP is designed for the mass market but requires the consumer to buy WAP-enabled terminals. In today's saturated mobile device market it's difficult to expect a high percentage of customers in the mass market to change their devices to adopt WAP technology unless it is cheap. In the near future, the mobile Internet services may only make up a small part of the mobile market.

Interest in future services			
<i>Text messaging</i>	Tot. Market	Postpaid	Prepaid
Yes	24%	21%	31%
Maybe	20%	17%	27%
No	56%	62%	44%
<i>e-mail</i>			
Yes	14%	15%	12%
Maybe	10%	11%	9%
No	76%	73%	78%
<i>Financial and banking services</i>			
Yes	17%	19%	15%
Maybe	12%	15%	8%
No	70%	67%	78%
<small>Source Wireless Europe 1999</small>			

Figure 7: Customer interest in future services
For prepaid customers the most attractive services available from a mobile phone are text messaging and financial and banking services.

On the other hand third generation mobile telephony UMTS (Universal Mobile Telecommunication System) holds out the promise of being able to send high speed video, data and voice communications cheaply and securely over a mobile connection. Operators argue customers will be less inhibited about using their mobiles. Eventually subscribers will be as happy to use their mobile phones from home as they would be to use a fixed line connection. This increase in volume will, so operators hope, make up for the cheaper per-minute charges.

But will prepaid customers benefit from this new technology? Is technology progress outstripping the development of demand? When video-on-demand was first touted by the telephone companies as a possible revenue replacer, a survey for one of the main US operators discovered that most residential subscribers had trouble even setting the controls of their video machines and were less than overwhelmed by the opportunity to wrestle with even more complex consumer services.

Conclusion

The introduction of prepaid services has allowed mobile phones to become a mass-market product. Customers who thought they could never afford a mobile phone have now the possibility to use it and to benefit from its continuously growing functionality.

Operators' customer bases have been expanded, prepaid has allowed significant savings on credit checking and on administration (previously nearly 25-30% of potential customer failed credit checking). Bad debt has been almost eliminated. New customers who fail the credit check can simply turn to prepaid subscription satisfying their requirements and allowing operators to protect themselves. New mobile operators entering established markets and having to face telecoms incumbents can, at least, rely on the cash flow deriving from prepaid subscriptions as they begin to deliver the service.

The future of mobile communications looks clear: increased demand fed by cheaper tariffs and lower cost of equipment.

Growth means more penetration both for existing and new operators but it does not mean necessarily more profit as the level of competition in the market increases. Prepaid traffic is lower than post-paid business and leisure traffic, ARPUs are dramatically declining, and without monthly fees operators are not guaranteed a regular income.

As they stand new technologies are not targeted at prepaid customers. Potentially high costs for consumer to buy new devices, higher service costs and more complex interfaces the in utilisation of



mobile devices may cast a cloud over the third generation mobile future.

In the near future prepaid will remain for low and medium use customer while post-paid will be the main vehicle to promote high levels of cellular usage.

	PRO	CONS
Customer	<ul style="list-style-type: none">•Cost Control•No monthly fee•Spending fitted to lifestyle	<ul style="list-style-type: none">•Card renewing not automatic•Card Validity period <i>customer lose credit and telephone number if they do not renew their card</i>•Hidden costs when buying/renewing a card
Operator	<ul style="list-style-type: none">•Lower operating Costs•No bad debt exposure•Increase in customer number•Better cash flow	<ul style="list-style-type: none">•Prepaid customer low usage•Low ARPU•Difficulties in churn measurement

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